Strategic Project Management: Theory and Practice for Human Resource Professionals

STRATEGIC PROJECT MANAGEMENT: THEORY AND PRACTICE FOR HUMAN RESOURCE PROFESSIONALS

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INTRODUCTION

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Two skills sets, Human Resources and Project Management have never been as essential to the world of work than in today's workforce. This Strategic Project Management: Theory and Practice for Human Resources text is designed for students learning about Project Management from a Human Resources perspective. The text includes theoretical perspectives, based on empirical data, that justify the practical and procedural aspects of both fields of study. There is a strong connection between theory and practice that helps students to build their understanding of key concepts.

It describes the Project Management and Human Resources theory, processes and applications, and the role the Project Manager and team in implementing these processes. The text is designed to help students develop a deeper approach to learning by studying underlying principles or rationale of approaches and models, links ideas and concepts to practice, and understand and apply the knowledge and skills learned about projects and people.

This resource is designed for college students enrolled in Human Resources Management Programs at one-year, two-year, or three-year graduate diploma level of learning, or students who are completing university level Human Resources programs. It may be of interest to Human Resources Specialists who are full-time or part-time students looking to upgrade their Human Resources credentials in continuing education. This resource will help them understand Project Management's influence in their jobs. As well, students in other business fields may benefit from this integrated Project Management and Human Resources book. Finally, since all industries have moved toward a more Project Management focus, with emphasis on people as the greatest assets, students in most academic programs can increase their knowledge and skills in two important areas of study and work-Project Management and Human Resources.

An increase in Project Management and Human Resources functions in businesses in all industries has led to project managers and teams having a wide variety of skills including how to complete a project, business acumen, leadership, technical knowledge, and human resources skills. Both at a domestic and international level, employees require diverse and broad competencies. Most Project Management texts teach students the technical systems of projects. Yet, many of the Project Management problems such as conflicting priorities, inadequate client satisfaction, poor communication and scheduling delays are behavioural, not technical issues. Most Project Managers in today's workforce recognize that a clear understanding of human behaviour is important in ensuring projects are successful. The types of employees and expertise required for various phases of the project cycle depend on the tasks to be completed, competencies of the team members, and the team dynamics.

Human Resources Specialists are experts with "people" as a resource. Human Resource inclusion in projects helps to identify roles, fulfill goals, assist in acquiring project teams, training and developing team members, and helping to manage the team. The role Human Resources plays in projects increases the quality and timelines of project deliverables. Human Resources involvement in project management is key to turning a group of employees into high-performing teams who are prepared to deliver a successful project.

ACKNOWLEDGEMENTS

This open textbook has been adapted and developed by Debra Patterson, in partnership with the OER Design Studio and the Library Learning Commons at Fanshawe College in London, Ontario This work is part of the FanshaweOpen learning initiative and is made available through a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License unless otherwise noted.

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Attribution

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- Chapter section 7.6 I-depth Look: Work Breakdown Structures (WBS) is partially adapted from Project Management Fundamentals by Great River Learning which is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License, except where otherwise noted.

Other resources have been incorporated into the book and are listed in the references section at the end of the book.

Changes from the adapted work can be found in the Changes From Adapted Source.

Collaborators

Students (listed below) in the Human Resources Management program at Fanshawe College contributed content for this book as part of their learning experience. Their contribution is deeply appreciated. The students are also attributed in the specific sections of the book that they contributed.

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- Lianne Gallie
- Nancy Wilding
- Katie Foster

Supporters

To all those who helped to create this book, your effort and energy helped to adapt and refine the new book that offers a unique Human Resources and Project Management lens. Thank you to Diana Sinatra-Araujo, the Coordinator who shared the vision of the new book; Tarek Ibrahim, Program Manager who provided continuous support to move the project forward, and to the OER Studio team, who worked tirelessly to ensure a high-quality adaptation became a reality. A Special thank you to Shauna Roch who worked tirelessly and creatively to ensure the text was of the highest quality, full of additional engaging and interesting student knowledge, and meets a high standard of curriculum development.

OER Design Studio

This project was a collaboration between the author and the team in the OER Design Studio at Fanshawe. The following staff and students in the Studio were involved in the creation of this project:

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ABOUT THIS BOOK

This open textbook includes sections written by Fanshawe College students enrolled in the MGMT-6048 Managing Strategic Human Resources course in the Human Resources Management program. This textbook development project allows students to engage with the course topics while creating work for the benefit of future learners.

Students researched topics pertinent to the course and/or interviewed experts in the field of Human Resources involved in Project Management. The students who contributed to this resource are first-time authors without publishing experience. The content is written in the student's voice and has not been significantly altered from its original submission.

This textbook is an adaptation of a practical human resources book for project management. It has been re-designed to include theoretical perspectives; and teacher and student resources. The purpose of this textbook is to provide a free resource to college students studying Project Management (PM) principals as they relate to Human Resources. By linking Project Management to Human Resources, the text is able to show the important role that Human Resources play at a strategic and theoretical level. Human Resources focuses on people, both organizing them and managing them to achieve project success.

The book is comprised of eleven chapters which can be delivered over a one semester course. Each chapter discusses a project management concept in the context of the Human Resources field. The chapters themselves cover the definition of Project Management and its cycles and elements. It also describes Project Management from an organizational perspective including the effect of culture and structure on Project Management. The five steps of the processes are then discussed individually in different chapters, in addition to the sub-processes such as: budgeting, scheduling, international PM, and communication. Both the project manager and the project team are introduced, separately, so that their characteristics and relationship are appreciated. Thereafter, in the last chapter, Agile Project Management is presented as a contrast to traditional Project Management.

The text discusses the strategic role Human Resources plays in Project Management, either in a strategic direct way or a supportive indirect way. The text includes recruitment and selection, training and

development, career counselling and coaching, communication, managing, and evaluation and assessment as it weaves through the reading and learning of Project Management.

The text delivers all the necessary theory, knowledge and skills to align Project Management and Human Resources. The text is organized into eleven chapters covering the project management process including the life cycle, risk management, scheduling resources, and budgets. This unique educational resource includes the following:

1. Various Human Resources roles as a support to projects, or how they can be directly involved with the project team and the project
2. Theoretical perspectives of Human Resources and Project Management concepts, approaches and models
3. Critical thinking and reflective thinking activities for students through each chapter
4. HR in Focus sections that hones HR skills and applications to the field
5. Easy to follow steps and processes for Human Resources Specialists to implement throughout the project cycle
6. Check your Knowledge question and answers for each chapter
7. Chapter Key Terms
8. Chapter Summaries for study purposes and chapter synergy
9. Supplemental Resources for teachers and students including active learning classroom activities and exercises
10. Human Resources Strategies designed as Scope Statements including Action Plans (to be used as resources or student activities)
11. Ask An Expert interviews to provide insight, knowledge and resources about the Human Resources world of work
12. Video resources have been embedded in the text, and are listed at the end of the text

The learning activities at the end of each chapter can be completed by the students on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. They may also be used by the teacher as learning activities in class, or for short answer questions on tests/exams.

Accessibility Statement

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The web version of this resource has been designed to meet Web Content Accessibility Guidelines 2.0, level AA. In addition, it follows all guidelines in Appendix A: Checklist for Accessibility of the *Accessibility Toolkit – 2nd Edition*.

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Feedback

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CHANGES FROM ADAPTED RESOURCE

This book was adapted from Strategic Project Management by Debra Patterson. The following content was added to create this version.

Resources

Case Studies	Case studies for each chapter can be found at the end of the book.
Exercises	Exercises were created that can be completed by the students to integrate learning materials for assignments/tests. Or they can be used by the teachers in class to integrate learning or used on tests/exams.
Learning Activities	Learning activities were created that can be completed by the students on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used by the teachers as learning activities in class, or for short answer questions on tests/exams.
Chapter Summaries	Chapter summaries were created and added to the end of each chapter.

Student Contributions

Chapter 12

Chapter 12 of this book was written by students in the Human Resources Management program.

Ask The Expert Sections

The ask the expert sections of this book were written by students in the Human Resources Management program.

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- 2.4 Julie Minifie
- 3.5 Kavya Kumar
- 4.3 Anica Peter
- 5.13 Lianne Gallie
- 6.7 Nancy Wilding

- 8.8 Katie Foster

🔬 In-depth Look

The In-depth look sections of this book were written by students in the Human Resources Management program.

- 1.3: History & Evolution of PM
- 1.5: Science and Art of Project Management and PMI
- 2.5: Hofstede's Cultural Theory
- 3.7 Emotional Intelligence
- 3.8 Myers-Briggs Type Indicator
- 3.9 The DiSc Method
- 3.10 The Big Five
- 4.4 Maslow's Hierarchy of Needs
- 4.5 High Performing Teams
- 4.6 Tuckman's Model – Five Stages of Team Development
- 4.7 Evolution of Tuckman's Model
- 4.8 GRIP Model of Team Effectiveness
- 5.8 SMART Goals
- 7.6 Work Breakdown Structure
- 7.9 Gantt Charts
- 8.5 Poole's Model of Small Group Communication
- 8.7 Recent Research on Developing Virtual Teams
- 9.9 360-Degree Review
- 9.10 Management By Objectives as an Evaluation Tool

CHAPTER 1 – INTRODUCTION TO PROJECT MANAGEMENT FOR HUMAN RESOURCES

Chapter Outline

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1.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you should be able to:

1. Define the characteristics of a project and its relationship to Human Resources.
2. Describe Project Management Institute (PMI) purpose
3. Examine the history of Project Management
4. Compare the difference between traditional and Agile project management.
5. Describe how program management differs from project management.
6. List the functions of a Project Management Office and Project Portfolio Management.
7. Explain the difference between a Project Lifecycle and the PMI Project Processes.
8. Explain the three broad categories of projects.

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There is no greater example of the art and science of Project Management (PM) than those demonstrated in the building of the Pyramids of Egypt. Since then, builders and engineers have applied specific processes systematically which have evolved into PM. The objective of PM, in general, is to establish and deliver the customer's goals in an organized and detailed manner. Whether the business is in production, construction, service delivery or Human Resources, the need for planning and carrying out a project requires clearly-

defined processes. Today, in every field of work, including Human Resources, PM is an essential practice to achieve project success.

HR in Focus

Many activities in Human Resources require planning. Examples include: attracting and retaining new employees, completing an onboarding program, designing and facilitating training and development, completing performance reviews/appraisals, and reviewing employee benefits. Just like Human Resources processes and procedures follow protocols; project management uses conventional processes and procedures to improve the success of short and long-term Human Resources objectives.

Human Resources employees have become more involved with organizations at a strategic level, and with strategic projects. While the general management function may include many tasks, PM is specifically oriented towards processes and requires a specific set of tools and skills. When PM is performed correctly, organizations gain greatly. Project management can reduce risk and improve the likelihood of success. It approaches HR tasks in an organized, detailed, and accountable way. Even when organizations have limited resources and a small chance of success, Human Resources experts with project management skills can help in leading through recessions and economic uncertainty, and ensure future strategic goals are met. Therefore, performing project management requires dedicated Human Resources individuals with good discipline who understand the processes, and are able to follow through to completion. Good HR project managers and their teams keep the project on track and ensure the alignment of project objectives within the strategic objectives of the organization.

Many HR strategic projects involve several departments and collaborative teams. HR experts are often asked to work with projects that impact the entire organization's culture and employees. Also, they may be included to help other project teams related to communication, recruiting members for the project, developing training for the team, and helping the team evaluate the project and its members. For example, if the marketing team is developing a marketing strategy for a new product, HR may provide training in the product uses.

The role HR plays in project management is critical. The starting point in discussing how projects should be properly managed is to first understand what a project is and, just as importantly, what it is not.

1.2. PROJECT MANAGEMENT (PM) DEFINITIONS

Project

An HR project has distinctive attributes that distinguish it from ongoing work or business operations. A **project,** according to the Project Management Institute, is a temporary endeavour undertaken to create a unique project service or results (Project Management Institute, 2017). Specifically, projects are temporary in nature. Therefore, they are not an everyday business process. They are unique and have definitive start dates and end dates. This characteristic is important because a large part of the project effort is dedicated to ensuring that the project is completed at the appointed time. To do this, schedules are created showing when tasks should begin and end. Projects can last minutes, hours, days, weeks, months, or years.

HR projects exist to bring about a product or service that has not existed before. In this sense, a project is unique. Unique means that this is new; it has never been done before. Maybe it's been done in a very similar fashion before but never exactly in this way.

🔍 HR in Focus

The Human Resources department in a company has many functions which may include: payroll, recruitment, employee relations, and training and development. Each function is comprised of specific activities and tasks as well as specific projects. Some project examples could be:

- Recruitment and hiring may design a project to upgrade their orientation program.
- Payroll and benefits might coordinate a project to explore a Human Resources Information System (HRIS).

The projects are different from each other with different team members who have different skills specific to the project. Each project would also have a

different purpose. The design of each project would be unique to the outcomes of the project. Yet, the actual human resources department would be considered an operation with ongoing, repetitive tasks.

Watch this video: What is project management? by the Association for Project Management [2:17] below. The transcript is available on YouTube.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://ecampusontario.pressbooks.pub/ hrstrategicprojectmanagementtheory/?p=27#oembed-1

Program

When a group of projects are arranged towards achieving a certain goal this is said to be a **program.** A program is a collection of smaller projects that deliver or achieve a certain higher goal. The simplest example for a program is an educational degree program in a school or college, where multiple courses correspond to the projects. The program will be completed when all projects (courses) are completed, and the certificate/degree is awarded.

Operations

In contrast to projects, **operations** are ongoing and repetitive. They involve work that is continuous without an ending date and with the same processes repeated to produce the same results. The purpose of operations is to keep the organization functioning, while the purpose of a project is to meet its goals and objectives. Therefore, operations are ongoing while projects are unique and temporary.

A project is completed when its goals and objectives are accomplished. It is these goals that drive the project, and all the planning and implementation efforts undertaken to achieve them. Sometimes projects end when it is determined that the goals and objectives cannot be accomplished or when the product or service of the project is no longer needed and the project is cancelled.

Definition of a Project

The temporary nature of projects indicates a definite beginning and end. The end is reached when the project's objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists.

The term "project" is used several ways in popular culture, from describing everyday tasks (planting a garden, hanging a picture, running errands) to large scale enterprises (building a house, constructing a new highway, purchasing an HRIS). However, when professional HR project managers talk about projects, they use a narrower definition. Let's start out with the six defining characteristics of a project. Just about every book, organization, or standards body in the project management field agrees that a project:

1. is a temporary endeavor, with a defined start and end.
2. has a specific objective.
3. has customers or stakeholders.
4. has constraints, such as time, cost and scope.
5. has measures for success.
6. includes some amount of uncertainty.
7. has a beginning and an end

Watch the video: What is a Project by Prof C [3:23] for more information on how these six aspects help define what a project is and is not. Transcript is available on YouTube.

> 🖺 *One or more interactive elements has been excluded from this version of the text. You can view them online here: https://ecampusontario.pressbooks.pub/ hrstrategicprojectmanagementtheory/?p=27#oembed-2*

Operations vs. Projects

Projects are different from ongoing operations, even though some techniques (such as network diagramming) overlap. Project management addresses temporary endeavors, with a start and end date, while operations management focuses on improving ongoing operations. For example, constructing a new factory is a project, while producing bicycle tires in that factory is an operation. This textbook concentrates on traditional project management techniques. Adaptations related to Agile project management, which is often used for software

development, are mentioned along the way, but Agile is not a main topic in this chapter. This will be discussed in chapter 11.

> ### 💡 Think!
>
> What is a project you have worked on either at school, work, or your own time? How did you set up your project?

1.3. IN-DEPTH LOOK: HISTORY AND EVOLUTION OF PROJECT MANAGEMENT

In-depth Look

Early Days

Between the 1900s and the 1950s, the contemporary Project Management paradigm emerged. The project timeframe was shortened, at this time, due to technological advancements. Automobiles made resource allocation and movement more efficient. Communication sped up thanks to telecommunication technology. The job description was extensively utilized, and Henry Gantt is credited with inventing the Gantt chart that is an element of Project Management. The task specification was eventually used to create the Work Breakdown Structure (WBS) (Kwak, 2003).

Hoover Dam (1931 – 1936) Example

Utah Construction, Pacific Bridge, H.J. Kaiser, W.A MacDonald and Kahn, Morrison-Knudsen, and J. H. Shea established a partnership to operate as general contractors when Congress enacted the Boulder Canyon Act in 1928, allocating $175 million to the Hoover Dam. Because the project encompassed six different organizations, it was critical for the companies to establish a clear project plan. The building location was in the middle of nowhere, with no access to water or electricity. Boulder City was built to house 5,200 people and a considerable amount of construction equipment. The project was successfully completed on time and under budget. The Hoover dam project, which generates more than four billion kilowatt-hours per year, is still one of the highest gravity dams in the United States (Kwak, 2003).

1956: The American Association of Cost Engineers (now AACE International) Formed

Early practitioners of Project Management and the associated specialties of planning and scheduling, cost estimating, and cost and schedule control formed the AACE in 1956. It has remained the leading professional society for cost estimators, cost engineers, schedulers, project managers and project control specialists since. AACE continued its pioneering work in 2006, releasing the first integrated process for portfolio, programme, and Project Management with their Total Cost Management Framework (Haughey, 2021).

1957: The Critical Path Method (CPM) Invented by the Dupont Corporation

Developed by Dupont, CPM is a technique used to predict project duration by analyzing which sequence of activities has the least amount of scheduling flexibility. Dupont designed it to address the complex process of

shutting down chemical plants for maintenance, and then with the maintenance completed, restarting them. The technique was so successful it saved the corporation $1 million in the first year of its implementation (Haughey, 2021).

1958: The Program Evaluation Review Technique (PERT) Invented for the U.S. Navy's Polaris Project

During the Cold War, the United States Department of Defense's US Navy Special Projects Office developed PERT as part of the Polaris mobile submarine-launched ballistic missile project. PERT is a method for analyzing the tasks involved in completing a project, especially the time needed to complete each task and identifying the minimum time required to complete the total project (Haughey, 2021).

1958: The Apollo Project

The National Aeronautics and Space Administration (NASA) was established in 1958. NASA successfully conducted six lunar exploration missions between 1969 and 1972. NASA established the Apollo programme office in 1960 to monitor and schedule Apollo flights using PERT, acquire and contract with suppliers like GE, construct a management system to assess performance, and establish a focal point for the Apollo programme (Kwak, 2003).

1962: United States Department of Defense Mandate and the Work Breakdown Structure (WBS) Approach

The United States Department of Defense (DOD) created the WBS concept as part of the Polaris mobile submarine-launched ballistic missile project. After completing the project, the DOD published the work breakdown structure it used and mandated following this procedure in future projects of this scope and size. WBS is an exhaustive, hierarchical tree structure of deliverables and tasks that need to be performed to complete a project. Later adopted by the private sector, the WBS remains one of the most common and valuable Project Management tools (Haughey, 2021).

1965: The International Project Management Association (IPMA) Founded

IPMA was the world's first Project Management association, started in Vienna by a group as a forum for project managers to network and share information. Registered in Switzerland, the association is a federation of about 50 national and internationally oriented Project Management associations. Its vision is to promote Project Management and to lead the development of the profession. Since 1965, IPMA has grown and spread worldwide, with over 120,000 members in 2012 (Haughey, 2021).

1986: The Challenger Accident at NASA (PPMI was founded)

The Challenger accident that happened in NASA was a "watershed" event and a great deal went into understanding what had gone wrong. That is when NASA moved from learning on-the-job to professional training approaches where it introduced PPMI – Program and Project Management Institute which is now called as Academy of Program/Project and Engineering Leadership (APPEL) (Hoffman, 2008).

1980s: Rise of Computers, Software and Project Management

In the history of Project Management, the emergence of the computer had a significant influence. In the 1980s, computers pushed connection and communication to the centre of Project Management. As

technology advanced in the 1990s, dial-up Internet access became more commonly available. Some Project Management organizations developed Project Management systems, although the new era of computers and Project Management did not begin until the late nineteenth century (Somerville, n.d.).

1998-2000: The Iridium Project

Iridium, Motorola's $5 billion global communication project, promised to deliver global communication service practically everywhere, at any time. The Iridium network was launched in November 1998 and began providing worldwide network services. Iridium went bankrupt in March 2000, and its services were terminated. The project was originally regarded as a technical achievement, but it came to an abrupt and inexplicable end. Full-time project control managers were hired, and software engineers and analysts were transferred to the programme office. In addition, the project control managers used Primavera Project Planner, a sophisticated project management software, to manage complicated and interrelated project schedules (Kwak, 2003).

2000-present: The Y2K Project and Today

The Year 2000 (Y2K) "Millennium Bug "was a possible issue of computers failing to work properly on January 1, 2000. In February 1998, USA, President Clinton signed Executive Order 13073. The directive was issued to provide a consolidated focal point for all Y2K operations to be monitored. The Y2K project had a clear goal and a tight timeline (on January 1st, 2000, at midnight). Almost every organisation in the world that used computers was involved in the initiative, which was undertaken internationally and independently. To address the difficulties of the computer era, various techniques and technologies were developed (Kwak, 2003).

Many firms adopted Project Management principles, tools, and methodologies because of the Y2K crisis. Many businesses established a project office to keep track of and comply with its stakeholders. The Y2K office served as a focal point for all project activities, and its functions were prominently displayed (Kwak, 2003).

Today, organizations are highly competitive, and they operate in constant change. Organizational accountability demands effectiveness and efficiency. Companies rely on Project Management to advance the management and focus of their operations to get the results of effectiveness and efficiency. It helps organizations meet goals, and provide confidence to stakeholders that all resources are being managed responsibly. Following Project Management methods and techniques according to Azzopardi (2022), improves productivity by 20-30 percent, clarifies the project scope, objectives and scope, identifies needed resources, and guarantees accountability of results and performance, and helps the project team focus on success.

Class of 2022 contribution: Mariefer Atienza, Keziah Butal, Nagambika Kumar, Teajuk Seok, Jan Villaruz

1.4. CATEGORIES OF PROJECT MANAGEMENT

There are three broad categories of projects to consider: Strategic Projects, Operational Projects, and Compliance Projects.

Types of Projects

Strategic

Operational

Compliance
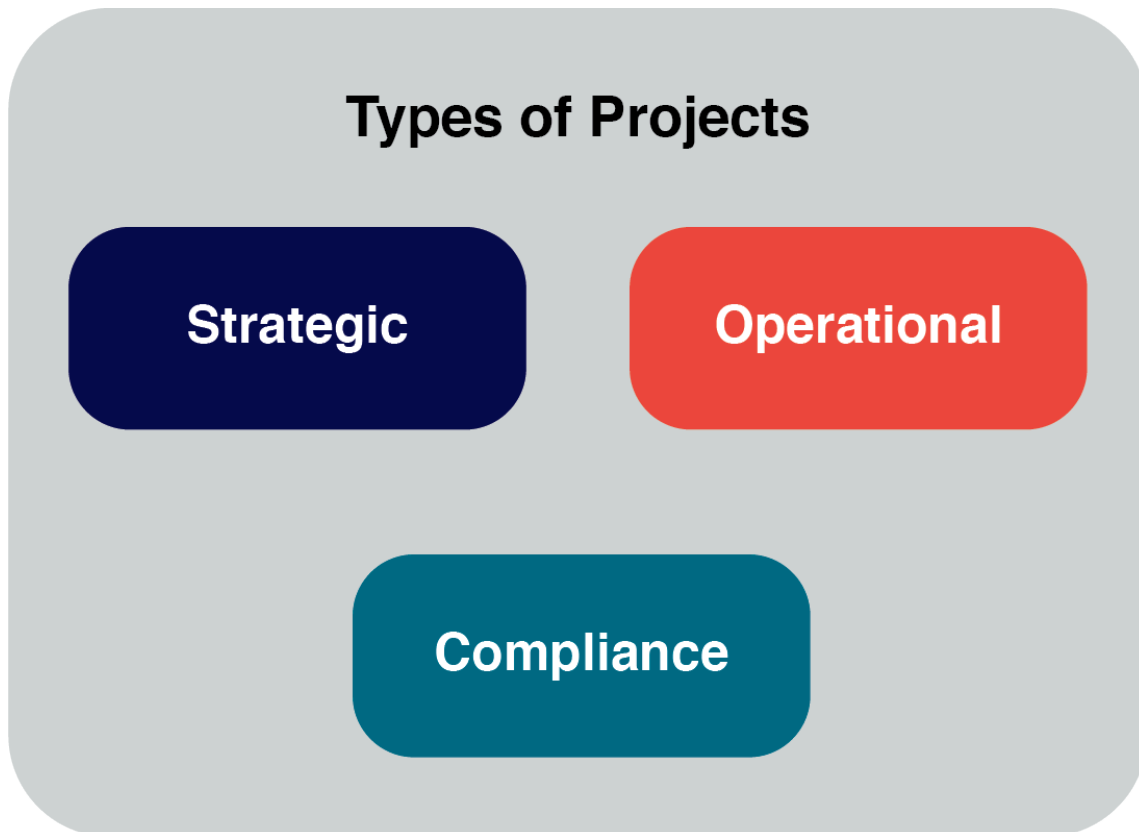
Figure 1-1: Three broad categories of projects

- **Strategic** – Projects involve creating something new and innovative. A new product, new service, new retail location, new branch or division, or even a new factory might be a strategic project, because it will allow an organization to gain strategic advantage over its competitors. Example: HR is involved in the strategic decision to add an international satellite office in a different country from the corporate location. HR would be involved in recruitment and selection, cultural training, providing expatriates with support, aligning performance reviews in the new country with those at corporate office, learning and implementing different laws and policies.
- **Operational** – Projects improve current operations. These projects may not produce radical

improvements, but they will reduce costs, get work done more efficiently, or produce a higher quality product. Example: HR could be involved in purchasing a Human Resources Information System (HRIS) to increase efficiency of payroll, optimize scheduling, provide improved training capacity, and better employee engagement through a self-service option.

- **Compliance** – Projects must be done in order to comply with an industry or governmental regulation or standard. Often there is no choice about whether to implement a project to meet a regulation, but there may be several project options to consider, any of which would result in meeting compliance requirements. Government regulations are date driven and may be subject to penalties if regulations are not met. Example: HR could be involved in designing a company wide program through a project related to sexual harassment through publications, researching legal requirements, training employees, designing policy and procedures, and review and complaint processes.

Traditional Project Management

While project management can be traced back to the building of the Great Pyramids in Egypt, it was really in the post-WW2 industrial boom of the 1950s that project managers started to develop the tools and techniques used in modern project management. These tools were used to complete large industrial and military projects, where the scope of work (what we need to accomplish in a project) was well defined. For example, the scope of what we have to do can be planned out well when we are constructing an apartment building, making a nuclear submarine missile, or building an oil refinery.

These traditional techniques have been elaborated and standardized by organizations such as the Project Management Institute (PMI) in the US and The International Project Management Association (headquartered in Switzerland) and AXELOS (the organization behind the PRINCE2 certification used in Great Britain). These traditional techniques were also adapted to software development. Techniques such as **waterfall** (where phases of projects are sequential) and **function point analysis** (a set of rules to measure functionality to users) were advanced as effective ways to manage software development projects. However, as the world of software development changed—from large, time-consuming projects that were loaded on mainframe computers to fast-moving, fast changing, internet-based applications many programmers found waterfall and similar methods to be limiting. These techniques lacked flexibility and were inadequate to deal with a rapidly changing, competitive landscape. As a result, a "revolution" of sorts was mounted and out of that revolution came several so-called Agile project management methods.

Agile Project Management

Agile project management is a broad term for project management techniques that are **iterative** (repetitive) in nature (divided into specific periods of time). Rather than trying to develop all aspects of a project or

software application and then presenting that result to the customer after a long development cycle (6 to 24 months), Agile techniques use short development cycles in which features of high value are developed first and a working product/software can be reviewed and tested at the end of the cycle (20-40 days). Chapter 11 is dedicated to discussing agile project management.

1.5. SCIENCE AND ART OF PROJECT MANAGEMENT AND PROJECT MANAGEMENT INSTITUTE (PMI)

The Science of Project Management

Project management has been around for centuries, if not millennia. From the building of the pyramids to the construction of the great buildings of 19th century London, people have developed ways to break down large projects into smaller, more manageable chunks, schedule the work and obtain the materials needed for the projects. During that time, many tools were developed to manage projects. However, it was not until the large, highly complex defence projects undertaken by the United States during the 1950s drove a push for a more scientific and data-driven, management approach to projects and was the beginning of the science of modern-day project management.

Q HR in Focus

Project management for HR professionals improves effectiveness and productivity for the HR department, the entire company and its employees. Project management improves workflow and processes. HR project management has never been more important than in today's work world. Wise hiring, managing the changing work culture, and day-to-day operations are all project management priorities.

The Art of Project Management

The art of project management is specific to the skills that are used in projects. When communication and managing people are the priority, this would be the 'art.' Even though the logistics of assumptions, planning, design, and scheduling are considered the 'science,' these components could not be managed in a scientific method. They are guided by the project manager's and team's skills and experience.

In-depth Look

Project Management Institute

The Project Management Institute (PMI) started in 1969 in Atlanta, Georgia as a non-profit organization to share best practices. Today, it is a non-profit organization with over 500,000 members. PMI has chapters throughout the world, each offers additional benefits in the form of professional development and networking opportunities (Project Management Institute, n.d.).

The idea of PMI was developed by the founders Ned Engman, James Snyder, Susan Gallagher, Eric Jenett, and J Gordon Davis while having dinner (Bena, 2019). The idea was to have an organization solely for project managers to exchange ideas and share. The idea was later actualized into an institute (PMI), and articles of incorporation were filed and signed in Pennsylvania (Weber, 2018). The roles of PMI are setting standards for ethics in project management; and training and certification in areas of project management (Bena, 2019).

In the 1960's the only disciplines that engaged in project management were defence, construction, and aerospace (Weber, 2018). PMI's roots are based on these industries. Today, PMI is multi-disciplinary and covers a wide spectrum of disciplines. By 1980, PMI set its standards through a Professional Liaison Committee, Research Policy and Education Committees, American National Standards Committee and Europe's International Project Management Association (Bena, 2019). Later in 1996, project management procedures were developed, and Project Management Body of Knowledge (PMBOK) created. PMI continues to challenge project management professionals to quickly adapt to the changing industry practises and technologies as they deliver value to organizations (Project Management Institute, 2022).

PMI started creating industry standards. This was achieved via a Professional Liaison Committee, which worked with Technology, Research Policy, and Education Committees. Trainings and certification in project management is offered by the institute. The institute puts forward standards and ethics in the industry (Weber, 2018).

PMI suggests for a project-oriented company, human resources management is critical and strategic. The involvement of Human Resources is dynamic as its changes whenever a different project is launched. Different and new techniques are needed from conventionally managed businesses in this changing setting. Human Resources management is very key, and it must have support of management. Human Resources helps with designing policies, procedures and guidelines in a project-oriented manner within an organization. It is critical for Human Resources professionals to collaborate with all stakeholders in gathering information that will help in coming up with the guidelines for the organization and for projects.

Class of 2022 Contributions: Arekhandia Okojie, Linda Adegoke, Purity Maondo, Wuraola Odesanya, Mourya Millian Sahoo

The PMI has codified the standards for project management in the Project Management Body of Knowledge (PMBOK) guide.

The PMBOK guide is organized into nine knowledge domains:

- Project Integration Management
- Project Scope Management
- Project Time Management
- Project Cost Management
- Project Quality Management
- Project Human Resource Management
- Project Communications Management
- Project Risk Management
- Project Procurement Management
- Project Stakeholder Management

(Project Management Institute, 2022)

Managing a project includes identifying your project's requirements and writing down what everyone needs from the project. What are the objectives for your project? When everyone understands the goal, it's much easier to keep them all on the right path. Make sure you set mutually agreed upon goals to avoid team conflicts later on. Understanding and addressing the needs of everyone affected by the project means the end result of your project is far more likely to satisfy your stakeholders. Last but not least, as project manager, you will also be balancing the many competing project constraints.

1.6. PROJECT CONSTRAINTS AND PROJECT PRIORITIES

Project Constraints

On any project, you will have a number of **project constraints** that are competing for your attention. They are cost, scope, quality, risk, resources, and time. When one changes, something else has to change. It is the trade-off.

- **Cost** is the budget approved for the project, including all necessary expenses needed to deliver the project. Within organizations, project managers have to balance between not running out of money and not underspending because many projects receive funds or grants that have contract clauses with a "use it or lose it" approach to project funds. Poorly executed budget plans can result in a last-minute rush to spend the allocated funds. For virtually all projects, the cost is ultimately a limiting constraint; few projects can go over budget without eventually requiring corrective action.
- **Scope** is what the project is trying to achieve. It entails all the work involved in delivering the project outcomes and the processes used to produce them. It is the reason for and the purpose of the project.
- **Quality** is a combination of the standards and criteria to which the project's products must be delivered for them to perform effectively. The product must perform to provide the functionality expected, solve the identified problem, and deliver the benefit and value expected. It must also meet other performance requirements or service levels, such as availability, reliability, and maintainability, and have an acceptable finish and polish. Quality on a project is controlled through quality assurance (QA), which is the process of evaluating overall project performance on a regular basis to provide confidence that the project will satisfy the relevant quality standards.
- **Risk** is defined by potential external events that will have a negative impact on your project if they occur. Risk refers to the combination of the probability the event will occur and the impact on the project if the event occurs. If the combination of the probability of the occurrence and the impact on the project is too high, you should identify the potential event as a risk and put a proactive plan in place to manage the risk.
- **Resources** are required to carry out the project tasks. They can be people, equipment, facilities, funding, or anything else capable of definition (usually other than labour) required for the completion of a project activity.
- **Time** is defined as the time to complete the project. Time is often the most frequent project oversight in developing projects. This is reflected in missed deadlines and incomplete deliverables. Proper control of

the schedule requires the careful identification of tasks to be performed and accurate estimations of their durations, the sequence in which they are going to be done, and how people and other resources are to be allocated. Any schedule should take into account vacations and holidays.

Project Priority

Triple constraint traditionally consisted of only time, cost, and scope. These are the primary competing project constraints that you have to be most aware of. The triple constraint is illustrated in the form of a triangle to visualize the project work and see the relationship between the scope/quality, schedule/time, and cost/resource *(Figure 1-2)*.

Projects may have additional constraints, and as the project manager, one needs to balance the needs of these constraints against the needs of the stakeholders and your project goals. For instance, more money is needed to finish the project if the sponsor wants to add functionality to the original scope. On the other hand, if the budget is cut, there will be a reduction in the quality of the scope. Further, if there are no appropriate resources to work on the project tasks, the schedule may need to be extended, and it may take much longer to finish the work.

In summary, the constraints are all dependent on each other. Think of all of these constraints as the classic carnival game of Whac-a-mole. Each time you try to push one mole back in the hole, another one pops out. The best advice is to rely on your project team to keep these moles in place.
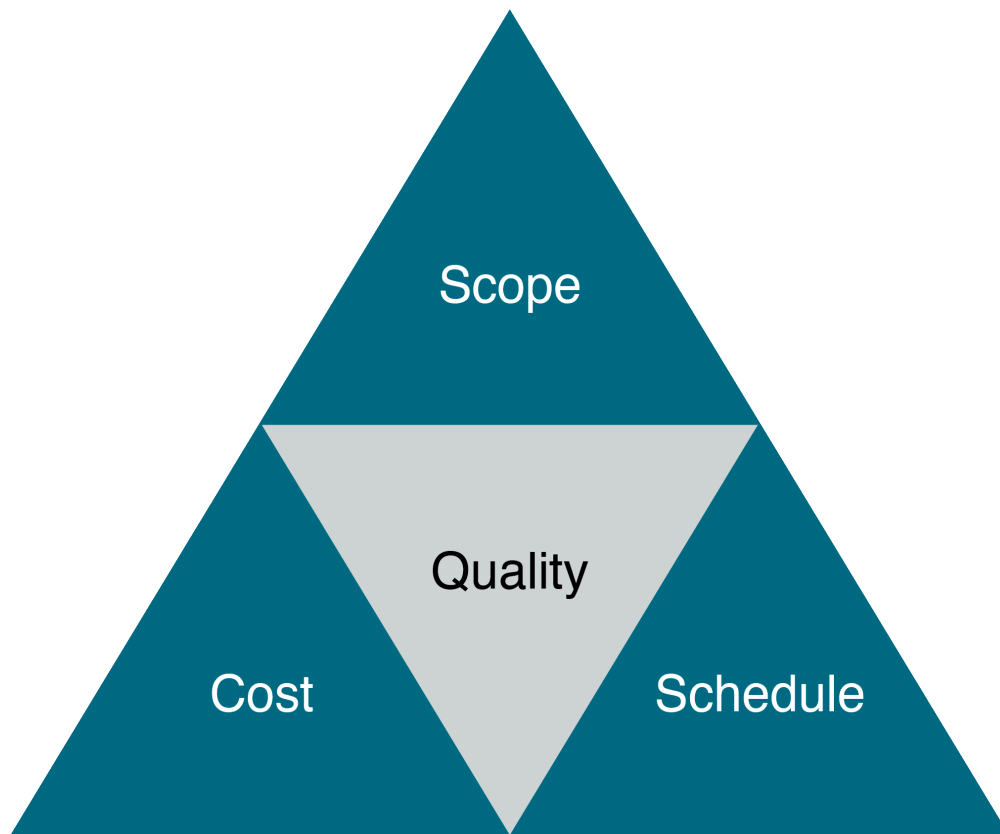
Figure 1-2: A schematic of the triple constraint triangle. Adapted from The triad constraints by John M. Kennedy T. CC-BY-SA 3.0 license.

In this triangle, each side represents one of the constraints (or related constraints) wherein any changes to any one side cause a change in the other sides. The best projects have a perfectly balanced triangle. Maintaining this balance is difficult because projects are prone to change. For example, if scope increases, cost and time may increase disproportionately. Alternatively, if the amount of money you have for your project decreases, you may be able to do as much, but your time may increase.

1.7. LIFE CYCLE

The project manager and project team have one shared goal: to carry out the work of the project for the purpose of meeting the project's objectives. Every project has beginning and middle periods, during which activities move the project towards completion, and an ending that is either successful or unsuccessful.

A standard project typically has the following four major phases (each with its own agenda of tasks and issues): **initiation, planning, implementation, and closure**. Taken together, these phases represent the path a project takes from the beginning to its end and are generally referred to as the project "life cycle" (*Figure 1-3)*.

Initiation Phase

During the first of these phases, the **initiation phase,** the project objective or need is identified; this can be a business problem or opportunity. An appropriate response to the need is documented in a business case with recommended solution options. A feasibility or needs analysis study is conducted to investigate whether each

Figure 1-3: Project management phases.

option addresses the project objective, and a final recommended solution is determined. Issues of feasibility ("can we do the project?") and justification ("should we do the project?") are addressed.

Once the recommended solution is approved, a project is initiated to deliver the approved solution, and a project manager is appointed. Thereafter, the major deliverables and the participating work groups are identified, and the project team begins to take shape. Approval is then sought by the project manager to move on to the detailed planning phase.

Planning Phase

The next phase, the **planning phase**, is where the project solution is further developed in as much detail as

possible, and the steps necessary to meet the project's objective are planned. In this step, the team identifies all of the work to be done. The project's tasks and resource requirements are identified, along with the strategy for producing them. This is also referred to as **"scope management."** A project plan is created outlining the deliverables, milestones, constraints, activities, tasks, lesson plans (if a training plan), dependencies, and timeframes. The project manager coordinates the preparation of a project budget by providing cost estimates for the labour, equipment, and materials costs. The budget is used to monitor and control cost expenditures during project implementation.

Once the project team has identified the work, prepared the schedule, and estimated the costs, the three fundamental components of the planning process are complete. This is an excellent time to identify and try to deal with anything that might threaten the project's successful completion. This is called **risk management.** In risk management, "high-threat" potential problems are identified along with the action that is to be taken on each high-threat potential problem, either to reduce the probability that the problem will occur or to reduce the impact on the project if it does occur. This is also a good time to identify all project stakeholders and establish a communication plan describing the information needed and the delivery method to be used to keep the stakeholders informed.

Finally, you will want to document a quality plan, providing quality targets, assurance, control measures, and evaluation along with an acceptance plan, listing the criteria to be met to gain customer acceptance. At this point, the project would have been planned in detail and is ready to be executed.

Implementation (Execution) Phase

During the third phase, the **implementation phase,** the project plan is put into motion, and the work of the project is performed. It is important to maintain control and communicate as needed during implementation. Progress is continuously monitored, and appropriate adjustments are made and recorded as variances from the original plan.

A project manager spends most of the time in this step in any project. During project implementation, people are carrying out the tasks, and progress information is being reported through regular team meetings. **Gantt charts** are sometimes used in project management to show activities and their dependencies, as well as events and tasks in relation to time. The project manager uses this information to maintain control over the direction of the project by comparing the progress reports with the project plan to measure the performance of the project activities and take corrective action as needed.

The first course of action should always be to bring the project back on course (i.e., to return it to the original plan). If that cannot happen, the team should record variations from the original plan and record and publish modifications to the plan. Throughout this step, project sponsors and other key stakeholders should be kept informed of the project's status according to the agreed-on frequency and form of communication. The plan should be updated and published on a regular basis.

Status reports should always emphasize the anticipated endpoint in terms of cost, schedule, and quality

of deliverables. Each project deliverable produced should be reviewed for quality and measured against the acceptance criteria. Each project deliverable produced needs to be reviewed for quality and measured against the acceptance criteria. Once all the deliverables have been produced and the customer has accepted the final solution, the project is ready for closure. The status report is based on the approved baseline of the project cost, scope, and schedule. It is reported truthfully with any new risks and issues. Accurate reporting allows the management team to support the project and team 'before' the project gets off track.

Closure Phase

During the final **closure or completion phase,** the emphasis is on releasing the final deliverables to the customer, handing over project documentation to the business, terminating supplier contracts, releasing project resources, and communicating the project closure to all stakeholders. The last remaining step is to conduct evaluations and lessons-learned studies to examine what went well, what did not go well, and what could be learned to improve the next time a project of similar nature is completed. Through this type of analysis, the wisdom of experience is transferred back to the project organization, which will help future project teams.

Think!

Think about a project that you have completed in the past? Did you follow the 4 phases of Project Management? If you didn't, would it have been helpful if you had followed the 4 phases?

1.8. ASK AN EXPERT — MONIQUE SAUVÉ

Ask An Expert

Monique Sauvé

Certified Human Resources Leader

Bio
Human Resources Professional with over 20 years of Human Resources experience primary in Health Care.

Affiliation
HRPA; CHRL

Question 1: What is the hardest hurdle you have faced in your career?

Working in Human Resources as a Recruitment and Retention Specialist in a Health Human Resources crisis, dealing with a Nursing shortage during a pandemic had been very challenging. I have had to be very creative in my recruitment strategies, having to pivot and adapt quickly.

Question 2: How would you describe your career story?

Very fulfilling and challenging, I learned very early on in my career that every day is different with its own set of unique challenges. You must be willing to adapt to new situations, pivot and make decisions with confidence utilizing your skills, knowledge, and resources.

Question 3: What are the top three tools you need to stay successful in your day-to-day workspace?

Great written and verbal communication skills, excellent organization skills and the ability to prioritize multiple tasks/projects at once.

Question 4: As an HR professional, which phase of the project is your favorite or most rewarding? Initiation, development, or completion?

Initiating, I like engaging with key stakeholders to seek input before starting a process improvement initiative or project.

Question 5: Do you find that in Human Resources many roles have expanded and what does this process look like?

Absolutely, we have had to do more with less over the last 10 years. Wearing multiple HR hats to provide optimal service. HR has had to adapt organizational processes and policies to adapt to a changing culture.

Question 6: How do you think that project management impacts the retention of quality employees?

Having structure and processes around project management impacts retention. Effective

employee retention can save an organization from productivity losses. High-retention workplaces tend to employ more engaged workers who, in turn, get more done. Engaged employees are more likely to improve customer relationships, and teams that also tend to be more productive.

Question 7: If you could talk to your past-self (at the beginning of your career) and give yourself one piece of advice for project management, what would it be?

Engage key stakeholders upfront, listening to concerns, taking feedback and follow up.

1.10. KEY TERMS

Agile project management: A broad term for project management techniques that are iterative (repetitive) in nature (divided into specific periods of time). 1.4

Closure Phase or Completion Phase: the emphasis is on releasing the final deliverables to the customer, handing over project documentation to the business, terminating supplier contracts, releasing project resources, and communicating the closure of the project to all stakeholders. 1.7

Compliance Projects: Must be done in order to comply with industry or governmental regulations or standards. 1.4

Cost: The budget approved for the project includes all necessary expenses needed to deliver the project. 1.6

Function Point Analysis: A set of rules to measure functionality to users. 1.4

Gantt Charts: is sometimes used in project management to show activities and their dependencies, as well as events and tasks in relation to time. 1.7

Implementation Phase: the project plan is put into motion and the work of the project is performed. 1.7

Initiation Phase: the project objective or need is identified; this can be a business problem or opportunity. 1.7

Life Cycle: The project manager and project team have one shared goal: to carry out the work of the project for the purpose of meeting the project's objectives. 1.7

Operation: Involve work that is continuous without an ending date and with the same processes repeated to produce the same results. 1.2

Operational Projects: Improve current operations. These projects may not produce radical improvements, but they will reduce costs, get work done more efficiently, or produce a higher quality product. 1.4

Planning Phase: is where the project solution is further developed in as much detail as possible and the steps necessary to meet the project's objective are planned. 1.7

Program: A group of projects are arranged towards achieving a certain goal. A cluster of interconnected projects. 1.2

Projects: Temporary initiatives that companies put into place alongside their ongoing operations to achieve specific goals. They are clearly defined packages of work, bound by deadlines and endowed with resources including budgets, people, and facilities. 1.2

Quality: A combination of the standards and criteria to which the project's products must be delivered for them to perform effectively. 1.6

Quality Assurance (QA): is the process of evaluating overall project performance on a regular basis to provide confidence that the project will satisfy the relevant quality standards. 1.6

Resources: are required to carry out the project tasks. They can be people, equipment, facilities, funding, or

anything else capable of definition (usually other than labour) required for the completion of a project activity. 1.6

Risk: is defined by potential external events that will have a negative impact on your project if they occur. 1.6

Risk Management: "high-threat" potential problems are identified along with the action that is to be taken on each high-threat potential problem, either to reduce the probability that the problem will occur or to reduce the impact on the project if it does occur. 1.7

Scope: This is what the project is trying to achieve. It entails all the work involved in delivering the project outcomes and the processes used to produce them. 1.6

Scope Management: a project plan is created outlining the deliverables, milestones, constraints, activities, tasks, lesson plans (if a training plan), dependencies, and timeframes. 1.7

Strategic Projects: Involve creating something new and innovative. A new product, a new service, a new retail location, a new branch or division, or even a new factory might be a strategic project because it will allow an organization to gain a strategic advantage over its competitors. 1.4

Time: is defined as the time to complete the project. Time is often the most frequent project oversight in developing projects. 1.6

Triple Constraint: traditionally consisted of only time, cost, and scope. These are the primary competing project constraints that you have to be most aware of. 1.6

Waterfall: Where phases of projects are sequential. 1.4

1.11. CHAPTER SUMMARY

Human Resources and Project Management are two skill sets that are essential in today's world of work. Human Resources is about "people," the greatest assets in an organization. Project Management looks at processes for improving productivity and performance leading to more profits. Combining the two skills leads to successful organizations.

Projects are a temporary endeavour with a dedicated team of people who are brought together to complete a new product or service or improve on an existing one. The three broad categories of project management include strategic, operational and compliance. Traditional Project Management has been around for centuries and evolved over many years, becoming a primary element of many organizations. Project Management is both a science and an art. The Project Management Institute (PMI) is a worldwide organization that has set standards for Project Management to ensure all projects are guided by best practices. Projects consist of four primary components called the Life Cycle of a project. They include initiation, planning, execution (implementation), and closure.

1.12. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed **by the Students** on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used **by the Teachers** as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. In a **small group**, discuss whether project management works in all companies. Divide your group into two smaller groups. One group defends that "yes", project management will work in all companies. The other group argues that "no" project management will not work in all companies. Each smaller group will spend time developing their argument. Each group will debate their position. And the opposite group will have an opportunity to ask questions and argue against the argument. Each group will summarize their position (either stand with original position, or what influenced the group to change their mind.)

2. Research, **individually**, the Project Management Institutes (PMI) website. www.pmi.org. Explore the Project Management Body of Knowledge (PMBOK). Discuss in **larger group** in class what you learned, and the substance it offers in relation to project management. Discuss whether you believe project management will sustain itself in the future within organizations? And, if Human Resources should be playing a key role in project management?

3. Discuss in a **small group** whether you believe "the art" or "the science" is most important to project management. Offer reasons for your choice.

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. Why is the execution phase of a project important to the strategic plan of an organization?

2. In what ways does Human Resource impact the strategic plan of an organization? And a project?

3. What are the 5 elements that distinguish between project management and program management?

4. What are the three broad categories of projects? Define them.

5. **Individually,** find the Project Management Institute's website: www.pmi.org.

    a. Review the general information and its membership requirements

    b. Review the website to find the Project Management Body of Knowledge (PMBOK)

CHAPTER 2 – CULTURE AND STRUCTURES OF ORGANIZATIONS

Chapter Outline

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2.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you will be able to:

1. Describe the different types of organizational structures
2. Explain the relative advantages and disadvantages of each structure as it relates to project management
3. Summarize an organization's culture and impact on the organization
4. Recognize the importance of Hofstede's cultural dimensions theory
5. Define terms related to business and HR strategy and portfolios
6. Discuss basic concepts related to strategy
7. Distinguish between strategy and operational effectiveness
8. Discuss issues related to aligning projects with strategy
9. Explain the three broad categories of projects
10. Identify project selection methods

2.2. STRUCTURES

There are three broad structures by which an organization can be organized: **functional, matrix, and projectized.** These structures represent a continuum, from structures where the project manager has very little authority (functional) to those where project managers have very broad power (projectized) (*See Figure 2-1*).

There have been many studies about the impact that organizational structure has on project success, and it is not uncommon for corporations to change their organizational structure in order to increase their relative success in executing projects on time, and within budget. This type of change takes great effort and may take a long period of time to fully implement. Instead of changing their entire structure, an organization may elect to create a dedicated project team in order to carry out a critical project without reorganizing the entire enterprise. This way, they can get many of the same benefits of the projectized organization without reorganizing the enterprise. This approach is not without risk, as we'll explore in the section on dedicated project teams.

Functional Organization	Matrix Organization			Projectized Organization
	Weak Matrix	Balanced Matrix	Strong Matrix	

Project Manager Authority
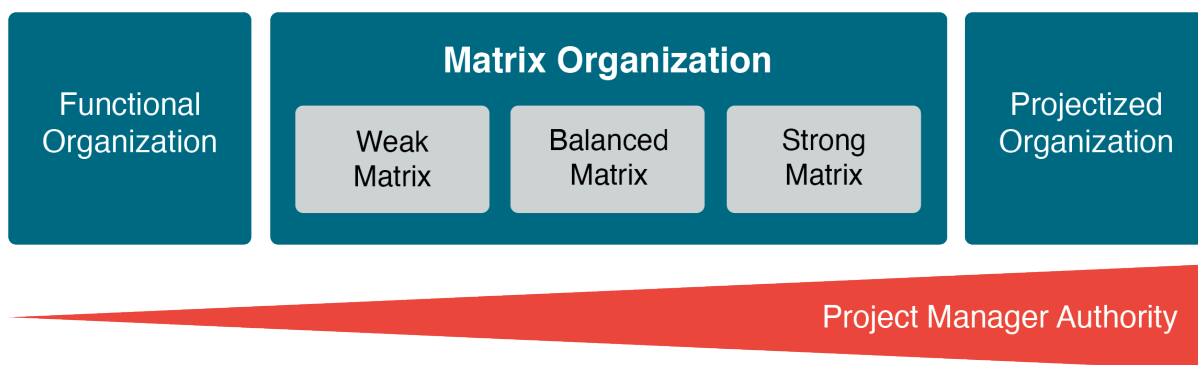
Figure 2-1: Project Manager Authority and Organization Type

Functional Organizations

Perhaps the least project-focused type of organization are **functional organizations.** Large organizations are traditionally organized by function into various departments, with staff in each department reporting to a departmental manager or head of department. This allows for groupings of specialists within the organization where they can work together, share knowledge and prioritize their work. Traditional functional departments might include:

- Human resources
- Accounting
- Procurement
- Marketing

- Sales
- Shipping

These functional units work independently of each other, and the **functional managers (regular managers)** serve as conduits for communications and collaboration (*See Figure 2-2*). This type of structure is very efficient for operations management where continuous process improvement can be conducted on all regular departmental operations. However, it is not optimal for the completion of projects. Human resources departments often work within functional organizations.
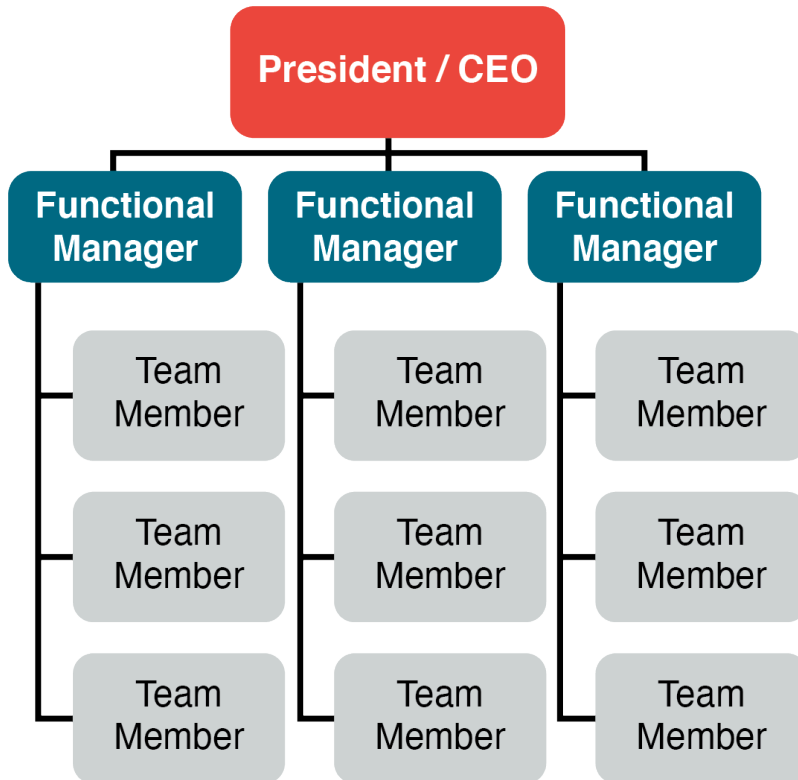
Figure 2-2: Functional Organization Structure

HR in Focus

Primarily, there are six functions within human resources and they include: recruitment and selection, health and safety, employee-employer or industrial relations, compensation/benefits, labour law compliance, and training and

development. The HR function strengthens the employer-employee relationship. Within a functional organization, the HR department provides the structure and aptitude to meet business needs through the company's most valuable asset-the employees.

Projects often require work across disciplines. There are several HR disciplines, however HR specialists in each discipline may fulfill one or more of the six functions. In the functional organization, with staff isolated inside their departmental "silos," communication is directed through the functional managers. These managers often have differing priorities, which can make communications slow and error-prone in a functional organization. However, human resources, as a department, may act as a conduit to the other departments and help them work collaboratively as departments, or with projects.

The success of projects within a functional organization depends on functional managers working together and co-operating. While someone may be designated as the project manager for a particular project, that person may not have much authority (*See Figure 2-3*). Often titles such as Project Coordinator, Project Scheduler, or Project Expediter will be used instead. Regardless of title, those in charge of projects are often put in the role of simply trying to maintain a schedule of what is happening.
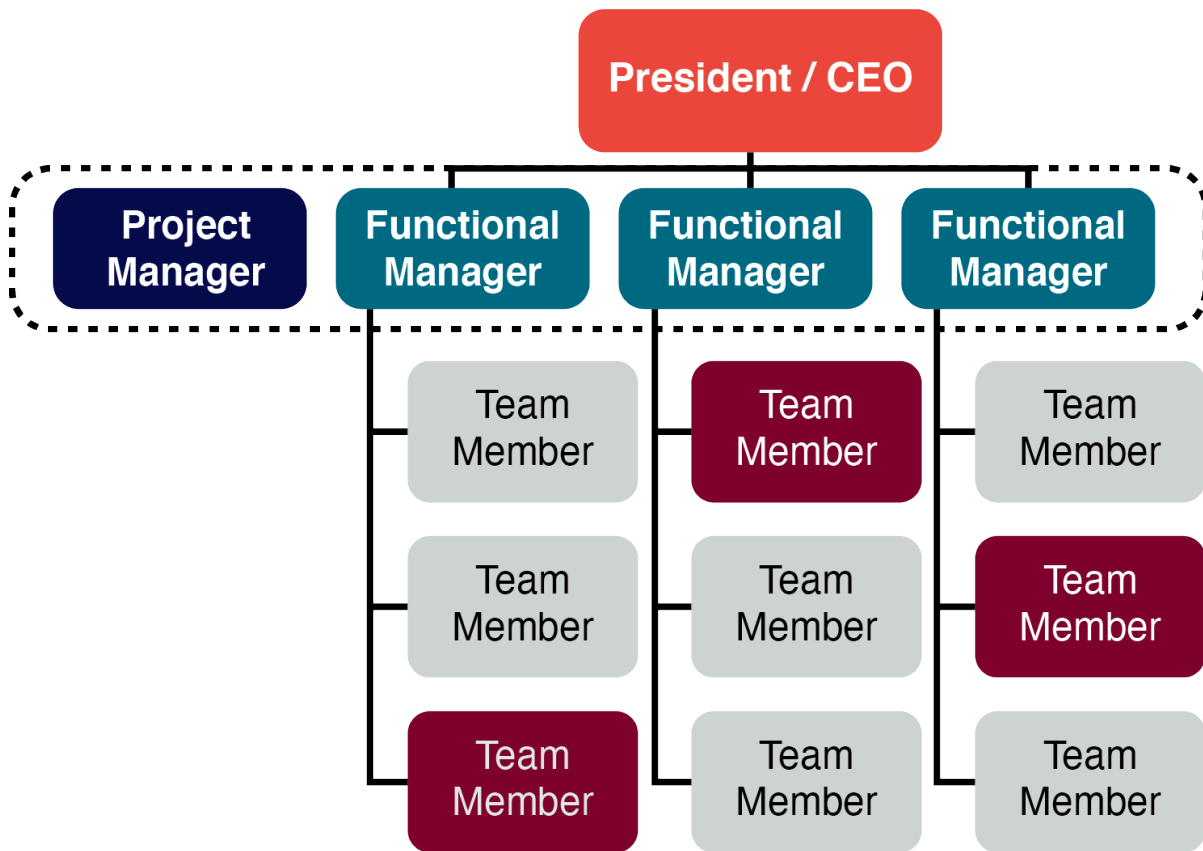
Figure 2-3: A "Project Manager" in a functional organization

The PMI identifies the following project characteristics for projects conducted in functional organizations:

- Project Manager's Authority: Little or None
- Resource Availability: Little or None
- Who Manages the Project Budget: Functional Manager
- Project Manager's Role: Part-time
- Project Management Administrative Staff: Part-time

Projectized Organizations

Projectized organizations are at the opposite end of the organizational spectrum from functional

organizations. Organizational energy and resources are focused on completing projects rather than ongoing operations. In a **projectized organization**, operations are minimal and the project manager has great authority over resources and personnel decisions. Projectized organizations may have organizational units called departments and these groups either report directly to the project manager or provide support services to projects. In the project-based structure, personnel are specifically assigned to the project and report directly to the project manager (*See Figure 2-4*). The project manager is responsible for the performance appraisal and career progression of all project team members while on the project.
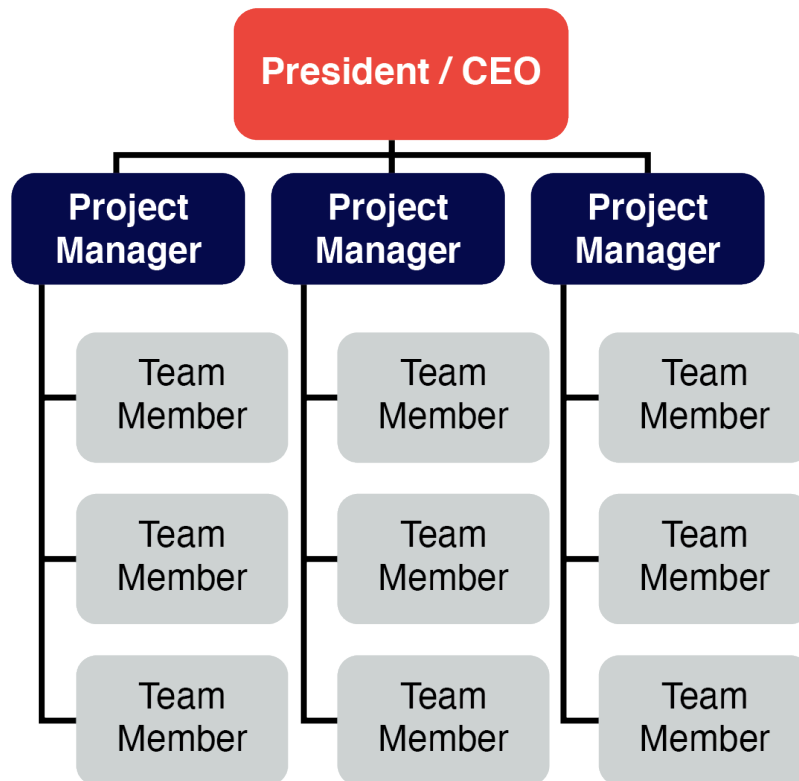
Figure 2-4: Projectized Organizations

HR in Focus : HR & Projectized Organizations

An HR Project Manager in a projectized organization would work with any or all departments on projects. They could manage the project if it was part of an HR function, or they may support the project in relation to "people." In this case, the Project Manager would determine the people who would be needed

for the project, participate in the hiring or assigning of team members, support coordination related to communication between and among the stakeholders, create job descriptions for the team members, ensure all the roles and responsibilities for the team are assigned, understand and provide all the training for the team as it relates to the project, provide reports on performance of team members individually and as a group, or create recognition and reward systems for the project team.

Employees in a dedicated team in this type of environment are able to focus their loyalty to a project rather than their particular discipline. Not all people can succeed in such an organization, as they must adapt to the leadership styles and organizational skills of different project managers. Human resources specialists can support this adaptation by training team members in various leadership styles and how to modify their behaviour to match different project manager leadership styles.

Examples of project-based organizations include construction companies, aeronautical manufacturers, training and development companies, personnel and hiring companies, and many software development companies. This type of organizational structure can put additional stress on employees if they have no home to return to once their project is over, or if they are not selected for a subsequent project. Human resources can play an active role in supporting employees to find other work within the organization, or to provide external job search support.

Projectized organizations are considered ideal for project management since there is a significant reduction in the layers of bureaucracy that a project manager must navigate. PMI identifies the following project characteristics for projects conducted in projectized organizations:

- Project Manager's Authority: High or Absolute
- Resource Availability: High or Absolute
- Who Manages the Project Budget: Project Manager
- Project Manager's Role: Full-time
- Project Management Administrative Staff: Full-time

Matrix Organizations

While the functional structure may work well in times of little change, it has some serious limitations when the success of a company depends on being adaptable. A **matrix structure** tries to combine the strengths a functional organization provides for operations management with the strengths a projectized organization provides for project management. In a matrix organization, the functional and project manager share authority and responsibility. This can lead to several negatives:

- Employees can have two supervisors to which they have to report, breaking the rule of a solitary chain of command.
- Employees have to balance their work between the needs of the projects, they are working on, and their functional unit.
- Supervisors may find that it is more difficult to achieve a consistent rate of progress since employees are often pulled in different directions.
- Costs and communication channels can increase.

However, there are several advantages to a matrix structure in terms of projects:

- It significantly disrupts the communication "silos" of a functional organization, creating a more horizontal structure for teams and increasing the flow of information.
- It allows people to concentrate of their areas of specialty and bring that strength to current projects.

PMI recognizes three types of matrix structures, as described below *(See also Figure 2-5)*.
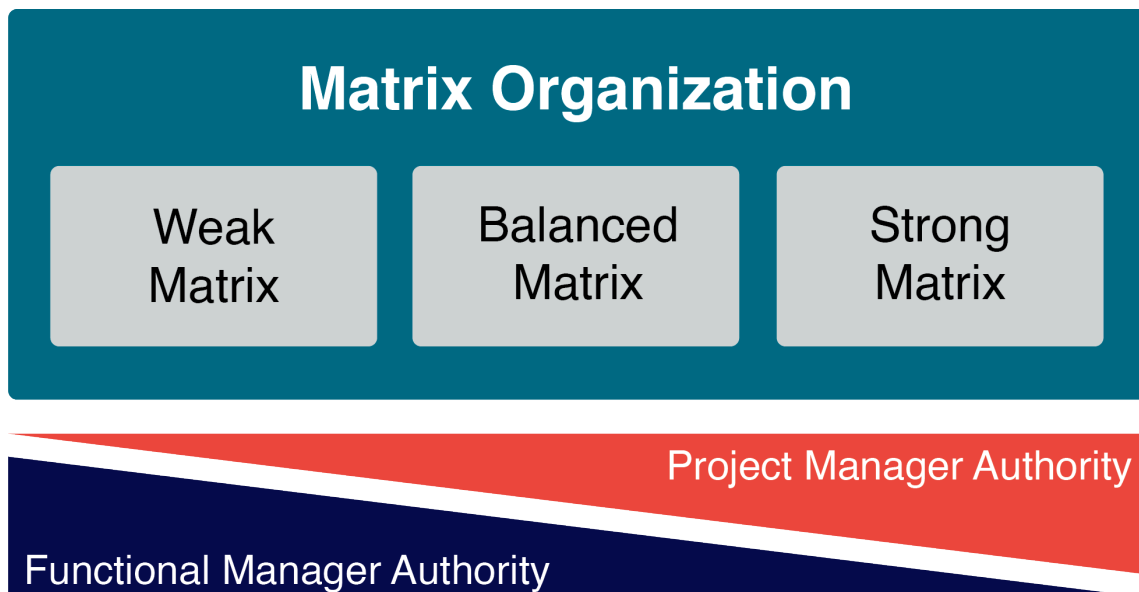
Figure 2-5: Matrix Organization

Weak Matrix: The project manager has less authority over resources and people than the functional managers. Project managers in a weak matrix may go by other titles such as a project coordinator or project scheduler.

Balanced Matrix: In a balanced matrix, the project manager and functional managers equally share authority over resources and staff. This allows the organization to experience the "best of both worlds" by receiving the benefits of a projectized organization and functional organization at the same time. However, this system presents many challenges:

- Functional managers and project managers have to work well together and maintain regular communications. Staff will have two managers to which they have to report, breaking the concept of the chain of command and organization.
- If functional and project managers have conflicting priorities, subordinates may be unable to meet expectations.

Strong Matrix: In a strong matrix, the project manager has more direct control over resources and staffing, while the functional manager will provide support to the project staff in terms of hiring, technical expertise, and professional development. Of all the matrix structures, this is the one in which the project manager has the most authority, and the functional manager has the least.

HR in Focus: Human Resources and Matrix Organizations

Human Resources departments can assist projects and project managers in matrix organization similar to a functional organization or a projectized organization. Human resources specialists can reduce or eliminate the negatives of a matrix organization.

1. They can support team members and supervisors in streamlining the reporting systems to avoid confusion and frustration for all concerned.
2. They can provide assistance in helping the employees balance their work between projects and their functional role within the unit. Extra workers can be hired to temporarily replace project team members. Clear job descriptions can be created to reduce confusion of loyalty to the project and the functional unit, as well as helping to avoid burn-out of

employees attempting to balance two different roles.
3. These strategies also reduce the stress for supervisors and project managers; in turn improve the rate of progress for the projects.
4. Human Resources departments can create clear and coordinated communication channels between all the stakeholders improving relationships, resolving problems, and building trust among the stakeholders.

Dedicated Project Team

Many functional organizations find that they often need to carry out important projects but do not want to change their entire organizational structure. Recognizing the advantages that are achieved by giving authority to a project manager, functional organizations often organize **dedicated project teams** where a project manager can have authority over the staff assigned to that particular project. The project manager and project team members are sometimes located in a special office, away from the desks and duties that they normally have within the functional organization (*See Figure 2-6*). This can be a very effective way to complete projects. However, some difficulties can arise:

- Temporary loss of staff from the functional groups.
- Integration of project team members back into the functional organization after the project is completed can be difficult.
- An "us versus them" mentality, where the people on the project team are deemed to be more special than those working in the functional departments. There have been numerous case studies of conflict arising from dedicated project teams.
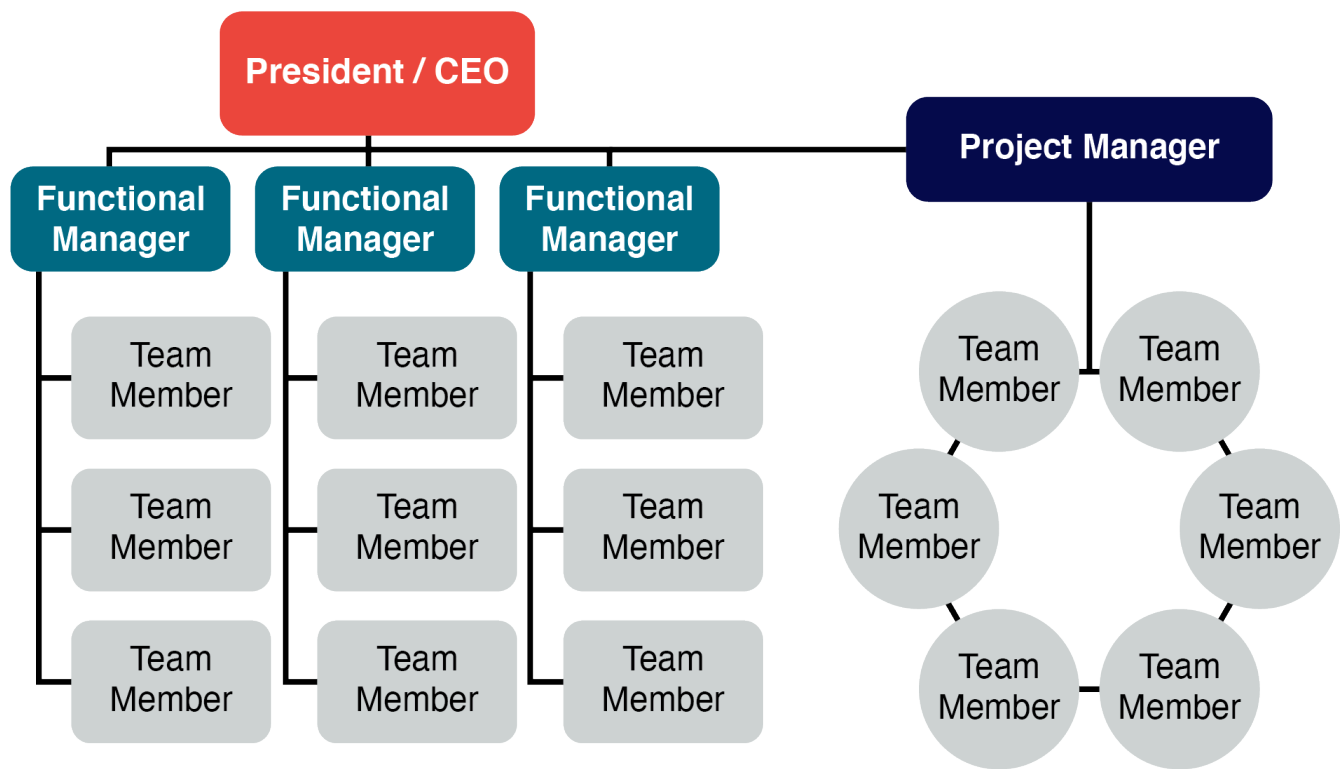
Figure 2-6: Dedicated Project Team

HR in Focus: Human Resources and Dedicated Project Teams

Human Resources departments can help reduce or eliminate difficulties experienced by dedicated teams.

1. They can help replace staff lost to the dedicated team within the functional unit.
2. They can assist both the functional employees and the dedicated team to integrate back into the functional organization after the project is completed by facilitating meetings, discussing and resolving concerns of individual team members, establishing new work goals for team

members, and provide training for supervisors on how to integrate employees back into their unit.
3. They can provide facilitated meetings with all members of the unit to discuss any concerns and allow the unit members to come up with solutions to work in harmony to avoid "us versus them" mentality.

Think!

If you have worked in any job, you may be able to figure out what type of organization you work for by the different structures explained above. What type of organization was your past/current employer? When you are working as an Human Resources Specialist upon graduation, which structure of organization would you like to work for? Why?

2.3. CULTURE

Photo by Brooke Cagle on Unsplash

What Is Organizational Culture?

When working with internal and external customers on a project, it is essential to pay close attention to relationships, context, history, and organizational culture. **Organizational culture** refers to the beliefs, attitudes, and values that the organization's members share and the behaviours consistent with them. Also called corporate culture, it is what sets one organization apart from another and dictates how members of the organization will see you, interact with you, and sometimes judge you. Often, projects have a specific culture, work norms, and social conventions.

Some aspects of corporate culture are easily observed; others are more difficult to discern. You can easily observe the office environment and how people dress and speak. In one company, individuals work separately in closed offices; in another, teams may work in a shared environment. The more subtle components of corporate culture, such as the values and overarching business philosophy, may not be readily apparent, but they are reflected in member behaviours, symbols, and conventions used.

Values are stable, evaluative beliefs that guide a person or an organization in our preferences for outcomes or a certain course of action to be taken. It is about what is believed to be good or bad, right or wrong in

the eyes of the person or organization. When organizational culture is being discussed, it is often referred to as **shared values** or the values that everyone within the organization work toward as common goals. Also, it refers to **shared assumptions,** which are seen as the real essence of the organization. Shared assumptions are unconscious perceptions of people's behaviour that are considered the "right way to think, act and behave." They are ingrained within people and not easy to see.

This is where trained HR Specialists are able to observe employees' behaviours and actions and then support them to "do" the right thing, to act and behave in the correct ways. As well, HR Specialists provide training for Management on how to observe these behaviours. Or even provide training for employees to self-identify with their own actions and behaviours.

Core values are often defined in a company's mission and/or vision statement. Some examples of core values could include responsibility meaning a "green" working environment; accountability to employees and our customers; we are an inclusive work environment; are a leader through our innovation of products, and we are a work-life balance company.

Sometimes, the values statements do not align with what is actually practiced in the organization. The values are what organizations want employees to believe and aspire to in the organization. Some employees may have conflicting values with the organization. The way to influence employees to follow the values of the organization is for senior management to guide and practice the organization's values. In turn, it is hoped that employees will model the same behaviours and act in the same way.

Human Resources trainers can have a huge influence over aligning the employees with the organization's values; and result in an organizational culture that is supported by its employees.

🔍 HR in Focus: Human Resources and Culture

Human Resources departments are strongly connected to corporate culture and help to develop and strong culture within the organization. According to Cabera and Bonache (1999), "two key factors for success in today's competitive environment are continuously espoused to be an organization's culture and its HR practices, both of which influence the behaviour of organizational members" (p. 2). A continuously changing work environment contributes to a changing corporate culture. The HR role continues to evolve as the demographics, competition, workforce norms and values change. It is HR's

responsibility to facilitate the changes. They provide training for all employees, create communication channels between and among all the internal stakeholders, involve the employees in change, help employees to set clear goals and design fair and equitable compensation and benefits systems.

Another role HR plays is developing strategies that help coordinate the business strategy with the HR strategy that focuses on improved performance, knowledge sharing, building trust and creating learning opportunities. HR wants to align the employees with senior management's vision and mission through education and awareness. To understand an organization's culture, several factors need to be considered.

Recruitment and selection of employees by HR Specialists is a way for an organization to increase corporate culture. When HR recruits and selects and retains people with values and beliefs that align with the organization's values and beliefs, this results in a harmonious organization and a strong culture. When interviewing, HR Specialists will look for artifacts, ask about a person's personal values and beliefs, and ask behavioural questions. They are looking for a "fit" with the organization's culture.

Culture and Environments

There are many factors that need to be understood within your project environment (*Figure 2-7*). At one level, you need to think in terms of the **cultural and social environments** (i.e., people, demographics, and education). The international and **political environment** is where you need to understand about different countries' cultural influences. Furthermore, the **physical environment** of the project requires you to consider the impact of time zones. Think about how your project will be executed differently whether it is just in your country or if it involves an international project team that is distributed throughout the world in five different countries.

Of all the factors, the physical ones are the easiest to understand, and it is the **cultural and international factors** that are often misunderstood or ignored. How we deal with clients, customers, or project members from other countries can be critical to the success of the project. For example, the culture of the United States values accomplishments and individualism. Americans tend to be informal and call each other by first names, even if having just met. Europeans tend to be more formal, using surnames instead of first names in a business setting, even if they know each other well. In addition, their communication style is more formal than in the

United States, and while they tend to value individualism, they also value history, hierarchy, and loyalty. The Japanese, on the other hand, tend to communicate indirectly and consider themselves part of a group, not as individuals. The Japanese value hard work and success, as most of us do.

Project Environment	
Cultural	Social
International	Political
Physical	
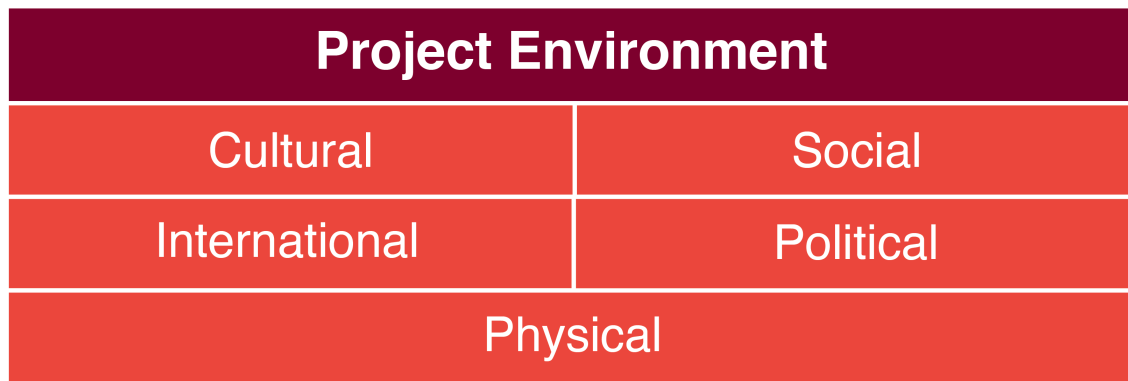
Figure 2-7: The important factors to consider within the project environment.

The importance of understanding the organizational culture and strategy is important to projects. HR Specialists can play a role in assisting project managers in identifying the relationship between organizational culture and selection of projects. If the project does not align with the corporate culture and strategy, it could fail. When independent decisions are made by different departments there is confusion and often conflict. This can lead to unhappy customers. Projects must be aligned with strategy that evolves from the corporate culture. A selection process of priorities to the organization, and that align with its strategy and the project are the success markers. Otherwise, companies waste people's time, energy and money. Products and services need to be of high quality for customers.

How a product or service is received can be very dependent on the international cultural differences. For example, in the 1990s, when many large American and European telecommunications companies were cultivating new markets in Asia, their customer's cultural differences often produced unexpected situations. Western companies planned their telephone systems to work the same way in Asia as they did in Europe and the United States. But the protocol of conversation was different. Call-waiting, a popular feature in the West, is considered impolite in some parts of Asia. This cultural blunder could have been avoided had the team captured the project environment requirements and involved the customer.

It is often the simplest things that can cause trouble since, unsurprisingly, in different countries, people do things differently. One of the most notorious examples of this is also one of the simplest: date formats. What day and month is 2/8/2021? Of course, it depends where you come from: in North America, it is February 8th while in Europe (and much of the rest of the world) it is 2nd August. Clearly, when schedules and deadlines are being defined it is important that everyone is clear on the format used.

The diversity of practices and cultures and its impact on products in general and on software in particular goes well beyond the date issue. You may be managing a project to create a new website for a company that sells products worldwide. There are language and presentation style issues to take into consideration; converting

the site into different languages isn't enough. It is obvious that you need to ensure the translation is correct; however, the presentation layer will have its own set of requirements for different cultures. The left side of a website may be the first focus of attention for a Canadian; the right side would be the initial focus for anyone from the Middle East, as both Arabic and Hebrew are written from right to left. Colours also have different meanings in different cultures. White, which is a sign of purity in North America (e.g., a bride's wedding dress), and thus would be a favoured background colour in North America, signifies death in Japan (e.g., a burial shroud).

Color	Canada	China	Japan	Egypt	France
Red	Danger, stop	Happiness	Anger, danger	Death	Aristocracy
Blue	Sadness, melancholy	Heavens, clouds	Villainy	Virtue, faith, truth	Freedom, peace
Green	Novice, apprentice	Ming dynasty, heavens	Future, youth, energy	Fertility, strength	Criminality
Yellow	Cowardice	Birth, wealth	Grace, nobility	Happiness, prosperity	Temporary
White	Purity	Death, purity	Death	Joy	Naturality

Table 2-1 The meaning of colours in various cultures (Russo & Boor, 1993).

Project managers in multicultural projects must appreciate the culture dimensions and try to learn relevant customs, courtesies, and business protocols before taking responsibility for managing an international project. A project manager must take into consideration these various cultural influences and how they may affect the project's completion, schedule, scope, completion and cost. How the team meets and when they meet must be factored into the project timeline and deliverables.

Creating a Project Culture

Human Resources and Project Managers have a unique opportunity during the start-up of a project. They create a **project culture,** something organizational managers seldom have a chance to do. In most organizations, the corporate or organizational culture has developed over the life of the organization, and people associated with the organization understand what is valued, what has status, and what behaviours are expected. Edgar Schein identified three distinct levels in organizational culture.

1. **Artifacts and behaviours:** something valued by a certain culture. They are symbols and signs of an organization's culture. They are observable. i.e., country's flag, how people dress; how people conduct themselves around others, how people are greeted when entering a building.
2. **Espoused values:** values expressed by an organization, standards, what does the organization stand for

(for example: mission statement, tag lines; honesty, trust, consistency, integrity).

3. **Assumptions:** unknown and generally not written down, employee's beliefs, perceptions, feelings.

Artifacts are the visible elements in a culture and they can be recognized by people not part of the culture. **Espoused values** are the organization's stated values and rules of behaviour. Shared basic **assumptions** are the deeply embedded, taken-for-granted behaviours that are usually unconscious but constitute the essence of culture.

> **Think!**
>
> Can you think of artifacts that are in Canadian culture, or the culture of your home country?

Characteristics of Project Culture

A **project culture** represents the shared norms, beliefs, values, and assumptions of the project team. This is very similar to the corporate culture. Understanding the unique aspects of a project culture and developing an appropriate culture to match the complexity profile of the project are important project management abilities.

Culture is developed through the communication of:

- The priority
- The given status
- The alignment of official and operational rules

Official rules are the rules that are stated, and **operational rules** are the rules that are enforced. Project managers who align official and operational rules are more effective in developing a clear and strong project culture because the project rules are among the first aspects of the project culture to which team members are exposed when assigned to the project.

Creating a Culture of Collaboration within and Instructional Design team in Human Resources

A Project Manager met with his team prior to the beginning of an instructional design project in Human Resources. The team was excited

about the prestigious project and the potential for career advancement involved. With this increased competitive aspect came the danger of selfishness and backstabbing. The project leadership team told stories of previous projects where people were fired for breaking down the team efforts and often shared inspirational examples of how teamwork created unprecedented successes—an example of storytelling. Every project meeting started with team-building exercises (a ritual) and any display of hostility or separatism was forbidden (taboo) and was quickly and strongly cut off by the project leadership if it occurred.

Culture guides behaviour and communicates what is important and is useful for establishing priorities. On projects that have a strong culture of trust, team members feel free to challenge anyone who breaks a confidence, even managers. The culture of integrity is stronger than the cultural aspects of the power of management.

2.5. IN-DEPTH LOOK: HOFSTEDE'S CULTURAL THEORY

In-depth Look

Gerard Hendrik Hofstede (Geert) a Dutch social psychologist, IBM employee, Maastricht University Professor Emeritus of Organizational Anthropology, and International Management, and the first Director of the Institute for Research on Intercultural Cooperation. He is highly recognized for his ground-breaking research on cross-cultural organizations and is credited with creating one of the first and widely used models for evaluating cultural dimensions in a global context.

Hofstede established Hofstede's cultural theory as a foundation for cross-cultural communication. Cross-cultural communication consists of two forms: cross-cultural comparisons of how people from various cultures communicate, and communication dynamics that involve interactions between people of different cultures (Chen & Wang, 2020). Hofstede's cultural theory uses a structure drawn from component analysis (an analysis of two or more independent variables) to highlight the impacts of a society's culture on its members' values and how these values connect to behaviors.

Between 1967 and 1973, Hofstede created his conceptual model using factor analysis (a process where values of observed data are expressed as functions of a number of possible causes in order to find which are the most important). He analyzed the results of an IBM (International Business Machines) global survey of employee values. Four dimensions were identified in the original theory along which cultural values may be examined. The four dimensions are power distance, uncertainty avoidance, individualism-collectivism, and masculinity-femininity. This model has been revised (Geert Hofstede, 2022).

Based on independent research in Hong Kong, Hofstede added a 5th component (long-term orientation) to capture elements of values not included in the original paradigm. In 2010, Hofstede added a 6th component to his theory (indulgence vs. self-restraint).

Hofstede's work established a major research tradition in cross-cultural psychology, and it has been used by consultants and researchers in a wide range of sectors related to communication and international commerce. The theory has been widely applied as a study paradigm in a variety of domains, including cross-cultural communication, international management, and cross-cultural psychology. To this day, it remains a valuable resource in cross-cultural disciplines (Geert Hofstede, 2022).

Hofstede and his research team conducted an extensive study focused on national cultural preferences rather than personal preferences, which formed the basis of Hofstede's Cultural Factor Analysis. In the comparison

scales used by Professor Hofstede, he included 6 major elements: IVR (indulgence versus restraint), LTO (long-term orientation vs. short-term orientation), UAI (uncertainty avoidance index), MAS (masculinity vs. femininity), IDV (individualism vs. collectivism), and PDI (power distance index) (Hofstede's Cultural Dimensions Theory, 2022).

In 1980, when Hofstede's model for describing national cultural differences and their implications was first published. It was at a time when cultural disparities between societies were becoming more significant for both political and economic reasons.

Following the publication of his 1991 book: *Cultures and Organizations: Software of the Mind*, many management practitioners embraced the approach after analyzing his survey data and claims. In 2001, Hofstede released the second edition of *Culture's Consequences* which was completely rewritten. In 2010, Gert Jan Hofstede and Michael Minkov co-authored the third edition of *Cultures and Organizations: Software of the Mind* (Hofstede's Cultural Dimensions Theory, 2022).

The 6 Key Dimensions of Hofstede's Cultural Theory

1.Power-Distance Index

- The power distance index measures how less powerful members of a group or organization accept and anticipate power to be divided unequally.
- Although all cultures have some degree of inequality, Hofstede observes that some societies have higher levels of equality than others.
- In cultures with a high degree of power distance, individuals accept hierarchies in which everyone has a position in a ranking without explanation.
- While cultures with a low power distance strive towards an even distribution of power. This implies that cultures that value and demand more egalitarian or democratic relationships are more likely to do so (Nickerson, 2022).

2. Individualism Versus Collectivism (IDV)

- The relative importance of individual versus group interests is the subject of this dimension.
- Individualism, the high end of this scale, is characterized as a preference for a loosely woven social structure in which people are expected to look out for themselves and their immediate family.
- Collectivism, on the other hand, is a preference for a close-knit social structure in which people may expect their relatives or members of a certain in-group to look after them in exchange for unwavering allegiance.
- Whether people's self-image is defined in terms of "I" or "We" reflects a society's perspective on this dimension.

- The United States of America is regarded as one of the most individualistic countries worldwide (Bruin, 2017).

3. Uncertainty Avoidance Index

- The uncertainty avoidance index measures how much ambiguity and uncertainty are accepted. This dimension looks at how people react to uncertain situations and unexpected events.
- A high uncertainty avoidance index suggests a limited tolerance for risk-taking, ambiguity, and uncertainty. The uncertainty is mitigated by enforcing stringent rules, regulations, and other guidelines.
- While a low uncertainty avoidance index suggests a heightened tolerance for risk-taking, ambiguity, and uncertainty. The unknown is more readily accepted, and there are fewer laws, regulations, and other restrictions (Corporate Finance Institute, 2022).

4. Masculinity vs. Femininity

- This dimension is also commonly known as gender role differentiation. It examines how much conventional masculine and feminine roles are valued in a society.
- In a masculine society, competition, strength, courage, and assertiveness are valued.
- In a feminine society, quality of life, nurturing, and cooperation are valued.
- A high femininity score suggests that in that society, traditionally feminine gender roles are more recognized; a low femininity score indicates that those roles are less significant (Nickerson, 2022).

5. Long-Term Orientation vs. Short-Term Orientation

- This dimension evaluates how society interprets its time horizon.
- Long-term orientation focuses on the future and the willingness to forego instantaneous gratification to attain long-term success. Persistence, tenacity, and long-term growth are the hallmarks of long-term orientation.
- Short-term orientation emphasizes the present over the future and focuses on the immediate future, short-term success, or fulfillment. Short-term orientation highlights immediate results and adherence to tradition (Corporate Finance Institute, 2022).

6. Restraint vs. Indulgence

- This dimension is a relatively new addition to the model. It is described as how far people try to moderate their urges and impulses as a result of their upbringing. Indulgence is a term for a lack of control, while restraint is a term for firm control. This means cultures might be classified as either indulgent or restrained.

- Indulgence refers to a culture that provides for the relatively unrestricted satisfaction of basic and natural human desires such as enjoyment of life and fun.
- Restraint denotes a society that suppresses and regulates the satisfaction of desires through stringent social rules (Bruin, 2017).

Human Resources Dealing with Cultural Differences

Like all other departments, human resources departments are increasingly confronted with the issues posed by the global interconnection of markets. When a single culture dominates, personnel management is not complex since everyone has a similar idea of what is reasonable, wrong, and appropriate conduct. Major misunderstandings might occur when teammates come from different cultural backgrounds or when the manager's and team's experiences are not the same (Belyh, 2019).

1. Recruiting – Distinct people have very different ideas about what makes a good candidate. Individualism macho cultures value people who have strong convictions, are outspoken and are self-assured. In collectivist feminine civilizations, modest and 'well connected' candidates are advantageous (Belyh, 2019).

2. Target Setting – In Germany, the Netherlands, the United Kingdom, the United States, and other low power distance cultures, objectives are set by senior managers; however, in high power distance cultures like Italy, France, and Belgium, targets are set by senior managers (Belyh, 2019).

3. Training – Trainer-centric learning is shared in elevated cultures, whereas trainee-centric learning is highly interactive and familiar in low-power-distance cultures (Belyh, 2019).

4. Appraisal – Most evaluation methodologies were established in the US or the UK, with high levels of individuality and low power distance. In the end, such nations think providing straight; constructive feedback is the best way to enhance performance. Nevertheless, direct feedback is considered unpleasant and insulting in countries with significant power distance and collectivistic traditions (Belyh, 2019).

No community is uniform, and no individual is the same. On the other hand, the Hofstede model Hofstede model may assist employees to be less fearful of the unknown, avoid making mistakes, and gain much-needed courage when working in a foreign nation (MindTools, n.d.).

Class of 2022 Contributions: Pooja Solanki, Jyotika Mishra, Shaily Joshi

Think!

Understanding the cultural difference of different countries might help the understanding of the issue. Interpersonal relationships at work are heavily driven by social conventions. People take the behavioural conventions of their community for granted since they grow up in a certain culture. They do not have to worry about your reactions, tastes, or sentiments as far as they do not stray too far from the societal norm. When they enter a foreign society, though, things appear to be different, and they do not want to offend anyone.

1. Think about a time when you felt safe in a setting. What were your reactions to others in this setting?
2. Think about a time when you did not feel safe in a setting. What were your reactions to others in this setting? What did you do to ensure you did feel safe?

2.6. STRATEGY AND EFFECTIVE PROJECT MANAGEMENT

Effective project management and execution start with choosing the right projects. While you might not have control over which projects your organization pursues, you do need to understand why your organization chooses to invest in particular projects so that you can effectively manage your projects and contribute to decisions about how to develop and, if necessary, terminate a project. Your study of technical project management will primarily focus on doing things the right way. In this chapter, we'll concentrate on doing the right thing from the very beginning.

It's helpful to start with some basic definitions:

- **Project:** The "temporary initiatives that companies put into place alongside their ongoing operations to achieve specific goals. They are clearly defined packages of work, bound by deadlines and endowed with resources including budgets, people, and facilities" (Morgan et al., 2007, p. 3). Note that this is a more expansive definition than the Cambridge English Dictionary definition piece of planned work or activity that is completed over a period of time and intended to achieve a "particular aim". In this, lesson we focus on the trade-offs necessitated by deadlines and limited resources.
- **Program:** "A cluster of interconnected projects" (Morgan et al., 2007, p. 9).
- **Portfolio**: The "array of investments in projects and programs a company chooses to pursue" (Morgan et al., 2007, p. 3).
- **Strategy:** According to Merriam-Webster (n.d.) dictionary, it is "a careful plan or method for achieving a particular goal usually over a long period of time."

As shown in *Figure 2-8*, a portfolio is made up of programs and projects. An organization's strategy is the game

plan for ensuring that the organization's portfolios, programs, and projects are all directed toward a common goal.
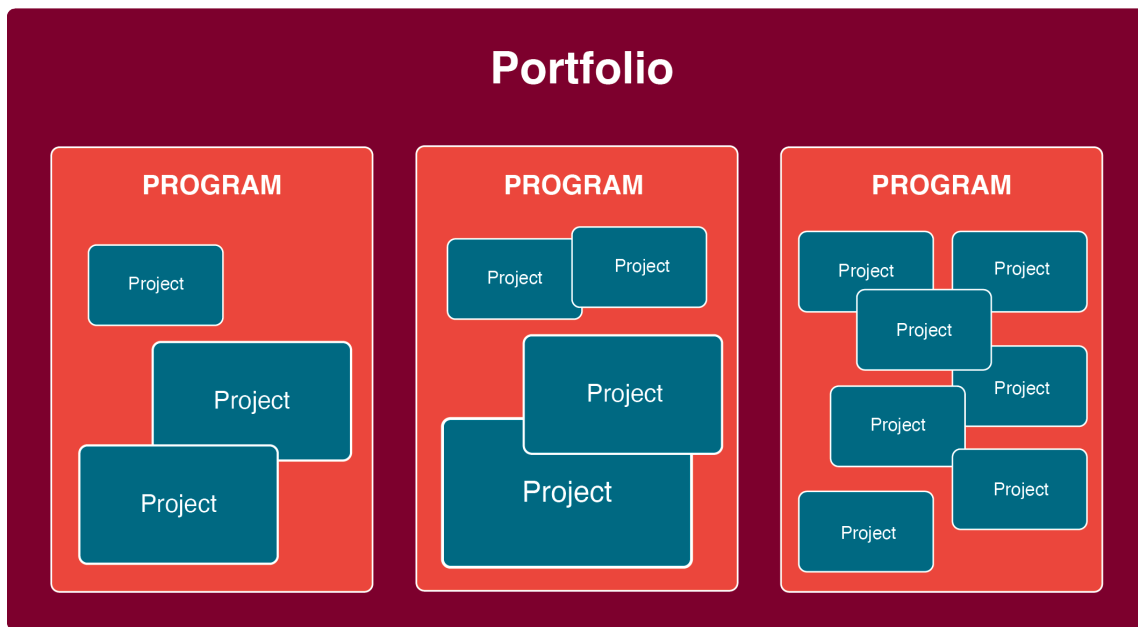
Figure 2-8: Relationship between a portfolio, programs, and projects.

The Essence of Strategy

An organization without a clearly defined strategy can never expect to navigate the permanent white-water of living order. This is especially true if the strategy is motivated by the organization attempting to push its vision onto customers, rather than pulling the customer's definition of value into its daily operations. An organization's strategy is an expression of its mission and overall culture. In a well-run company, every decision about a project, program, or portfolio supports the organization's strategy. The strategy, in turn, defines the company's portfolio and day-to-day operations. Projects and their budgets flow out of the organizational strategy. Morgan et al. (2007) emphasize the importance of aligning a company's portfolio with its strategy:

> Without clear leadership that aligns each activity and every project investment to the espoused strategy, individuals will use other decision rules in choosing what to work on: first in, first out; last in, first out; loudest demand; squeakiest wheel; boss's whim; least risk; easiest; best guess as to what the organization needs; most likely to lead to raises and promotion; most politically correct; wild guess—or whatever they feel like at the time. Portfolio management still takes place, but it is not necessarily aligned with strategy, and it occurs at the wrong level of the organization (2007, p. 5).

HR in Focus: Human Resources' Impact on Organizational Strategy

Human Resources must align with the organization's strategy. Beyond this, Human Resources creates a strategic human resources plan designed to develop complementary goals for the future of the company. These goals involve recruitment and selection, training and development, compensation and succession planning for employees. The HR strategies benefit the employees.

The benefits to employees include:

1. Hiring the right people at the right time for the right position/job
2. Providing fair and equitable pay and benefits
3. Training that best suits the organization, department and employee's skills
4. Creating high-performing teams
5. Furnish security for all employees
6. Make company information accessible for all

The Human Resources role is to create a strategic HR Plan that is results-oriented and that creates a culture that supports the organizational goals. Results-oriented goals ensure the skills of all the employees have been analyzed. One of the best ways to gather this information is through a job analysis. They must develop competitive wages and benefits, manage employee performance, recruit the best talent, and provide training for employees. HR Managers could develop projects to design the strategic HR plan.

As a project manager, you should be able to refer to your organization's strategy for guidance on how to proceed. You should also be able to use your organization's strategy as a means of crossing possibilities off your list. Michael E. Porter, author of the hugely influential book Competitive Strategy, explains that strategy is

largely a matter of deciding what your organization won't do. In an interview with Fast Company magazine, he puts it like this:

> The essence of strategy is that you must set limits on what you're trying to accomplish. The company without a strategy is willing to try anything. If all you're trying to do is essentially the same thing as your rivals, then it's unlikely that you'll be very successful. It's incredibly arrogant for a company to believe that it can deliver the same sort of product that its rivals do and actually do better for very long. That's especially true today, when the flow of information and capital is incredibly fast (Hammonds, 2001).

Ultimately, strategy comes down to making trade-offs. It's about "aligning every activity to create an offering that cannot easily be emulated by competitors" (Porter, 2001). Southwest Airlines, which has thrived while most airlines struggle, is often hailed as an example of a company with a laser-like focus on a well-defined strategy. Excluding options from the long list of possibilities available to an airline allows Southwest to focus on doing a few things extremely well—specifically providing reliable, low-cost flights between mid-sized cities. As a writer for Bloomberg View puts it:

> By keeping the important things simple and implementing them consistently, Southwest manages to succeed in an industry better known for losses and bankruptcies than sustained profitability. Yet none of this seems to have gone to the company's head, even after 40 years. As such, the airline serves as a vivid—and rare—reminder that size and success need not contaminate a company's mission and mind-set, nor erode the addictive enthusiasm of management and staff (El-Erian, 2014).

As well, as developing their own HR strategic plan and projects, Human Resources could be assisting other departments to create projects that align with the organizational strategy. They may be part of the team, leader of the team, or be facilitators in the other department's project planning. They may assist in project selection and help to prioritize the organization's projects for future development.

Aligning Projects with Strategy Through Portfolio Management

Projects are the way organizations operationalize strategy. In the end, executing a strategy effectively means pursuing the right projects. In other words, it's a matter of aligning projects and initiatives with the company's overall goals. And keep in mind that taking a big-picture, long-term approach to executing a new organizational strategy requires a living order commitment to a certain amount of uncertainty in the short term. It can take a while for everyone to get on board with the new plan, and in the meantime, operations may not proceed as expected. But by keeping your eye on the North Star of your organization's strategy, you can help your team navigate the choppy waters of change. This is where Human Resources can assist in facilitating employee's ideas and goals, and helping them come to consensus with a new plan.

Project selection proceeds on two levels: the portfolio level and the project level. On the **portfolio level,**

management works to ensure that all the projects in a portfolio support the organization's larger strategy. In other words, management focuses on optimizing its portfolio of projects. According to Morgan, Levitt and Malek (2007, p. 167), portfolio optimization is "the difficult and iterative process of choosing and constantly monitoring what the organization commits to do."

Morgan, Levitt and Malek (2007, p. 167) see portfolio management as the heart and soul of pursuing a strategy effectively:

> Strategic execution results from executing the right set of strategic projects in the right way. It lies at the crossroads of corporate leadership and project portfolio management—the place where an organization's purpose, vision, and culture translate into performance and results. There is simply no path to executing strategy other than the one that runs through project portfolio management (2007, p. 4-5).

🔍 HR in Focus: Portfolio Management

To manage portfolios effectively, large organizations often utilize Human Resources in scenario-planning techniques that involve sophisticated quantitative analysis. One such technique is based on the knapsack problem, a classic optimization problem. Various items, each with a weight and a value are available to be placed in a knapsack. The challenge of planning is an analogue to choose the types and numbers of items that can be fit into the knapsack without exceeding the weight limit of the knapsack. Portfolio managers are faced with a similar challenge: choosing the number and types of projects, each with a given cost and value, to optimize the collective value without exceeding resource availability. HR employees can provide training in the scenario-planning technique; and support the team making decisions with weighting the projects, and coming to decisions.

2.7. PROJECT SELECTION

Factors that Affect Project Selection

In any organization, project selection is influenced by the available resources. When money is short, organizations often terminate existing projects and postpone investing in new ones.

An organization's project selection process is also influenced by the nature of the organization. At a huge aerospace technology corporation, for example, the impetus for a project nearly always comes from the market and is loaded with government regulations. Such projects are decades-long undertakings, which necessarily require significant financial analysis. On the other hand, at a consumer products company, the idea for a project often originates inside the company as a way to respond to a perceived consumer demand. In that case, with less time and fewer resources at stake, the project selection process typically proceeds more quickly.

Size is a major influence on an organization's project selection process. At a large, well-established corporation, the entrenched bureaucracy can impede quick decision-making. By contrast, a twenty-person start-up can make decisions quickly and with great agility.

Human Resources plays a vital role in making sure organizations articulate their purpose and values for the organization and projects. It is HR that forms the employee experience. HR can support the project selection by offering talents and skills required on projects, compensation requirements for team members, assist with recruitment for team members, and participate on the designated project teams as advisors. Getting the right people on the project creates value to the project. HR can provide data to hire, develop and motivate project teams. In turn, HR plays the role of a service provider to the project to ensure high returns or highly successful projects.

Value and Risk

Keep in mind that along with the customer's definition of value comes the customer's definition of the amount of risk he or she is willing to accept. As a project manager, it's your job to help the customer understand the nature of possible risks inherent in a project, as well as the options for and costs of reducing that risk. It's the rare customer who is actually willing or able to pay for zero risk in any undertaking. In some situations, the difference between a little risk and zero risk can be enormous.

This is true, for instance, in the world of computer networking, where a network that is available 99.99% of the time (with 53 minutes and 35 seconds of downtime a year) costs much less than a network that is 99.999% available (with only 5 minutes and 15 seconds of downtime a year) (Dean, 2013, p. 645). If you're installing

a network for a small chain of restaurants, shooting for 99.99% availability is a waste of time and money. By contrast, on a military or healthcare network, 99.999% availability might not be good enough.

Identifying the magnitude and impact of risks, as well as potential mitigation strategies, are key elements of the initial feasibility analysis of a project. Decision-makers will need that information to assess whether the potential value of the project outweighs the costs and risks. Risk analysis will be addressed further in chapter six. For some easy-to-digest summaries of the basics of risk management, check out the many YouTube videos by David Hillson, who is known in the project management world as the Risk Doctor. Start with his video named "Risk Management Basics: What Exactly Is It?"

The Project Selection Process

No matter the speed at which its project selection process plays out, successful organizations typically build in a period of what Scott Anthony (2009) calls "staged learning," in which the project stakeholders expand their knowledge of potential projects. In an interesting article in the Harvard Business Review, Anthony compares this process to the way major leagues use the minor leagues to learn more about the players they want to invest in. In the same way, consumer product companies use staged learning to expose their products to progressively higher levels of scrutiny, before making the final, big investment required to release the product to market (Anthony, 2009).

You can think of the project selection process as a series of screens that reduce a plethora of ideas, opportunities, and needs to a few approved projects. From all available ideas, opportunities, and needs, the organization selects a subset that warrant consideration given their alignment with the organization's strategy. As projects progress, they are subjected to a series of filters based on a variety of business and technical feasibility considerations. As shown in Figure 2-9, projects that pass all screens are refined, focused, and proceed to execution.

This same concept is applied in **Stage-Gate™** or phase-gate models, in which a project is screened and developed as it passes through a series of stages/phases and corresponding gates. During each stage/phase, the project is refined, and at each gate a decision is required as to whether the project warrants the additional investment needed to advance to the next stage/phase of development. "The typical Stage-Gate new product process has five stages, each stage preceded by a gate. Stages define best-practice activities and deliverables, while gates rely on visible criteria for Go/Kill decisions" (Cooper, et al., 2000).

Learning more many ideas, eliminating some

Learning more about remaining ideas, eliminating some

Approving one or more of the remaining ideas

Planning and Execution
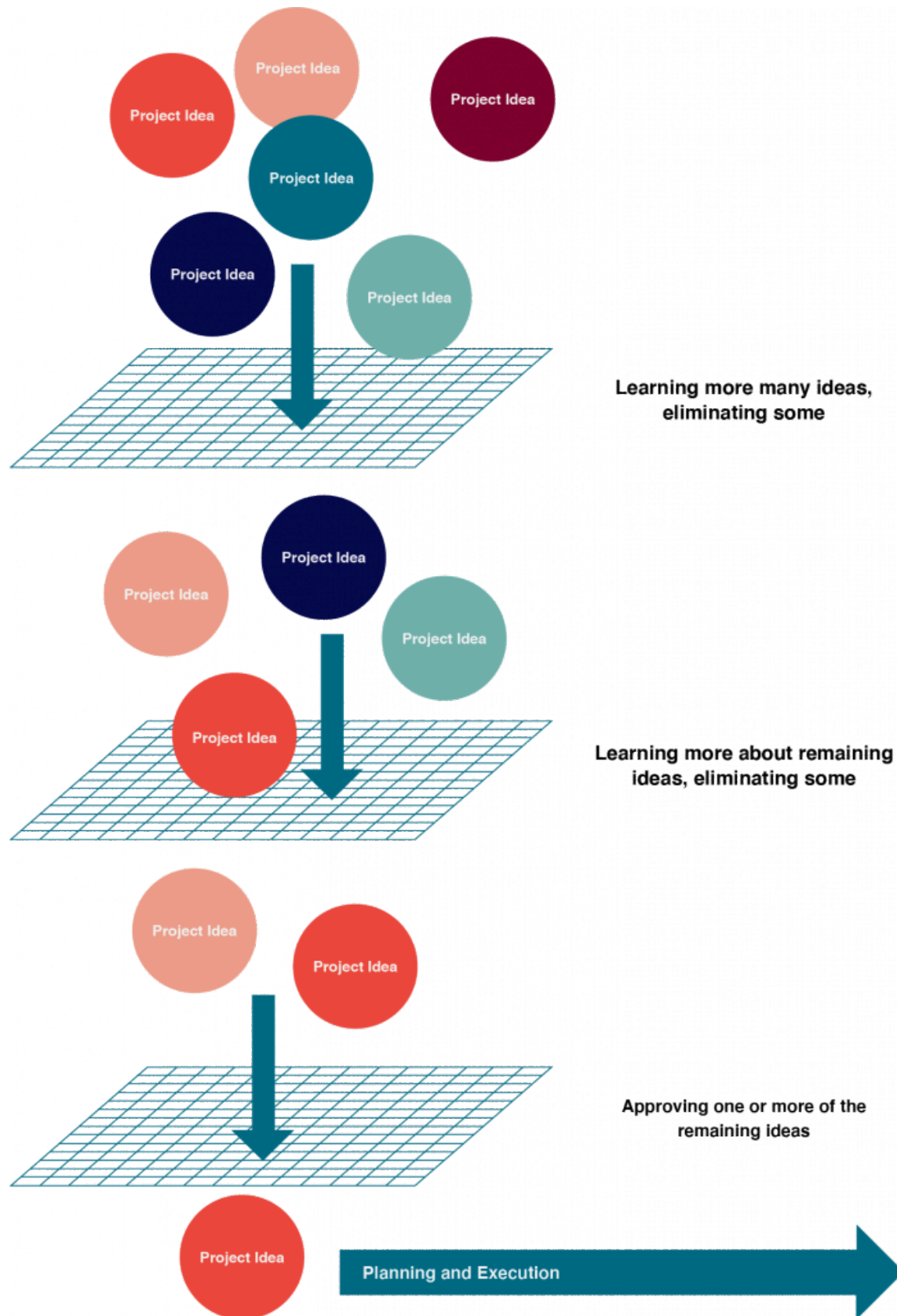
Figure 2-9: A project selection process can be seen as a series of screens

This approach is designed to help an organization make decisions about projects where very limited knowledge is available at the outset. The initial commitment of resources is devoted to figuring out if the project is viable. After that, you can decide if you are ready to proceed with detailed planning, and then, whether to implement the project. This process creates a discipline of vetting each successive investment of resources and allows safe places to kill the project if necessary.

Another approach to project selection, **set-based concurrent engineering**, avoids filtering projects too quickly, instead focusing on developing multiple solutions through to final selection just before launch. This approach is expensive and resource-hungry, but its proponents argue that the costs associated with narrowing to a single solution too soon—a solution that subsequently turns out to be sub-optimal—are greater than the resources expended on developing multiple projects in parallel. Narrowing down rapidly to a single solution is typical of many companies in the United States and in other western countries. Japanese manufacturers, by contrast, emphasize developing multiple options (even to the point of production tooling).

In an article for the International Project Management Association, Joni Seeber discusses some general project selection criteria. She argues that first and foremost, you should choose projects that align with your organization's overall strategy. She suggests a helpful test for determining whether a project meaningfully contributes to your organization's strategy:

> A quick and dirty trick to determining the meaningfulness of a project is answering the question "So what?" about intended project outcomes. The more the project aligns with the strategic direction of the organization, the more meaningful. The higher the likelihood of success, the more meaningful. To illustrate, developing a vaccine for HIV is meaningful; however, developing a vaccine for HIV that HIV populations cannot afford is not. Size matters as well since the size of a project and the amount of resources required are usually positively correlated. Building the pyramids of Egypt may be meaningful, but the size of the project makes it a high-stake endeavor only suitable to pharaohs and Vegas king pins (Seeber, 2011).

Project Selection Methods

Projects are selected by comparing the costs and benefits of potential projects. Some of the selection methods are more subjective than others, but all try to use a standard set of criteria

To determine which project is the best for an organization to pursue. Methods can include:

- **Murder Boards.** A group of experts (internal and external) attempt to "murder" a project proposal by pointing out its flaws and weaknesses. This can be very useful in high-risk projects where there is little data from previous projects from which we can learn, or in situations where the environment has changed significantly since the development of the original scope of the project. Participants in a murder board session are encouraged to be aggressive and not hold back in their attempt to murder the project.
- **Qualitative Scoring Methods**. Scoring methods can take a variety of factors into account. These can range from simple checklists to complex weighted scoring systems. Scoring systems can assist staff with

evaluating the relative merit of different projects while limiting political influence. Scoring models might survey a wide variety of experts and have them rate the project in terms of importance to the company or relative chance of success.

- **Economic Scoring Methods.** These methods assess the ability of the project to help the bottom line, either by increasing profits or reducing costs. These models often look at the cash flow that a project will generate after it is completed.
- **Constrained Optimization Methods.** Constrained Optimization Methods of project selection are mathematically intensive means of analyzing a series of projects and are not easily generalized.

In project management, these methods can include:

- Linear Programming
- Dynamic Programming
- Branch and Bound Algorithms
- Integer Programming

We might also refer to Constrained Optimization Methods as mathematical approaches to project selection. These methods are beyond the scope of this text, but students preparing to take PMI exams should know that if they see any type of programming or algorithms used for project selection, a Constrained Optimization Method is being used.

All the above approaches and methods may required training which HR would provide to ensure the success of the project. Also, they may be involved in the actual method used to help make decisions about projects.

Think!

Have you ever had too many projects on the go at one time? Many students find it difficult juggling academic work with a job, family, and social life. Prioritizing projects is a great way to eliminate stress for us personally, as well, as in project management. If you were to prioritize your projects, which method would you choose? Why?

2.9. KEY TERMS

Artifacts and Behaviours: Something valued by a certain culture. They are symbols and signs of an organization's culture. They are observable. ie. country's flag, how people dress; how people conduct themselves around others, how people are greeted when entering a building. 2.3

Assumptions: Unknown and generally not written down, employee's beliefs, perceptions, feelings. 2.3

Balanced Matrix: In a balanced matrix, the project manager and functional managers equally share authority over resources and staff. This allows the organization to experience the "best of both worlds" by receiving the benefits of a projectized organization and functional organization at the same time. 2.2

Constrained Optimization Methods: Constrained Optimization Methods of project selection are mathematically intensive means of analyzing a series of projects and are not easily generalized. 2.7

Cultural and Social Environments: people, demographics, and education 2.3

Dedicated Project: Teams where a project manager can have authority over the staff assigned to that particular project. 2.2

Economic Scoring Methods: These methods assess the ability of the project to help the bottom line, either by increasing profits or reducing costs. These models often look at the cash flow that a project will generate after it is completed. 2.7

Espoused Values: Values expressed by an organization, standards, what does the organization stand for; ie. mission statement, tag lines; honesty, trust, consistency, integrity. 2.3

Functional Managers (Regular Managers): Serve as conduits for communications and collaboration (see Figure 2-2). This type of structure is very efficient for operations management where continuous process improvement can be conducted on all regular departmental operations. 2.2

Functional Matrix and Projectized: These structures represent a continuum, from structures where the project manager has very little authority (functional) to those where project managers have very broad power (projectized) 2.2

Functional Organizations: Large organizations are traditionally organized by function into various departments, with staff in each department reporting to a departmental manager or head of a department. 2.2

Matrix Structure: Tries to combine the strengths a functional organization provides for operations management with the strengths a projectized organization provides for project management. 2.2

Murder Boards: A group of experts (internal and external) attempt to "murder" a project proposal by pointing out its flaws and weaknesses. This can be very useful in high-risk projects where there is little data from previous projects from which we can learn, or in situations where the environment has changed significantly since the development of the project's original scope. 2.7

Official Rules: These are the rules that are stated. 2.3

Operational Rules: These are the rules that are enforced. 2.3

Organizational Culture: Refers to the beliefs, attitudes, and values that the organization's members share and the behaviours consistent with them. 2.3

Physical Environment of The Project: Requires you to consider the impact of time zones.2.3

Political Environment: Where you need to understand different countries' cultural influences. 2.3

Portfolio: The "array of investments in projects and programs a company chooses to pursue" (Morgan et al., 2007, p. 3). 2.6

Portfolio Level: Management works to ensure that all the projects in a portfolio support the organization's larger strategy. In other words, management focuses on optimizing its portfolio of projects. According to Morgan et al. (2007, p. 167), portfolio optimization is "the difficult and iterative process of choosing and constantly monitoring what the organization commits to doing". 2.6

Project Culture: Represents the shared norms, beliefs, values, and assumptions of the project team. This is very similar to the corporate culture. 2.3

Projectized Organization: Operations are minimal and the project manager has great authority over resources and personnel decisions. Projectized organizations may have organizational units called departments and these groups either report directly to the project manager or provide support services to projects 2.2

Qualitative Scoring Methods: Scoring methods can take a variety of factors into account. These can range from simple checklists to complex weighted scoring systems. 2.7

Set-Based Concurrent Engineering: Avoids filtering projects too quickly instead of focusing on developing multiple solutions through to final selection just before launch. 2.7

Shared Values: The values that everyone within the organization work toward as common goals. Also, it refers to shared assumptions which are seen as the real essence of the organization 2.3

Stage-Gate™ or Phase-Gate Models: In which a project is screened and developed as it passes through a series of stages/phases and corresponding gates. 2.7

Strategy: According to the Merriam-Webster dictionary, it is "a careful plan or method for achieving a particular goal usually over a long period of time." 2.6

Strong Matrix: In a strong matrix, the project manager has more direct control over resources and staffing, while the functional manager will provide support to the project staff in terms of hiring, technical expertise, and professional development. 2.2

Values are stable: Evaluative beliefs that guide a person or an organization in our preferences for outcomes or a certain course of action to be taken.2.3

Weak Matrix: The project manager has less authority over resources and people than the functional managers. Project managers in a weak matrix may go by other titles such as a project coordinator or project scheduler. 2.2

2.10. CHAPTER SUMMARY

Organizations organize themselves in three broad categories of structures including functional, matrix and projectized. Project Managers have varying degrees of authority over projects depending on the structure of the organization. Human Resource departments have varying responsibilities and involvement depending on the structure of the organization.

Organizational culture refers to a company's beliefs, values and attitudes. It is what sets one company apart from another company. Projects also have specific cultures with their own work norms and social conventions. Human Resources is strongly connected to corporate culture and helps to develop a strong culture within the organization. The culture and environment are woven together in projects through social, political, and physical factors. Both Human Resources and Project Management have a great opportunity to work in alignment to create project culture.

The organization's strategy also plays a key role within an organization as it's an expression of their culture and mission. All decisions in successful companies are made with the strategy in mind. Projects flow out of the organization's strategy. Human Resources works with the employees to design complementary goals for the company to move forward and be successful. With Human Resources' support, projects are the way organizations operationalize strategy.

Project selection is dependent on available resources (people, materials, equipment.) Human Resources plays a vital role in making sure organizations articulate their purpose and values for the organization, and for projects. It is Human Resources that forms the employee experience. The project selection process is important to organizations to ensure the right projects are chosen to ensure success for the company. Staged learning is a popular choice of project selection that screens and reduces project choices. Projects are selected based on costs and benefits to the organization. There are

several methods used to determine which projects are best suited for the organization.

2.11. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed **by the Students** on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used **by the Teachers** as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. Discuss in a **small group** whether Human Resources would host workshops to define the culture (first), or the strategic plan (first). Provide a rationale for your choice.
2. A successful project can be dependent on the project and the team, or through the culture of the organization. Which is true? Why? **Pair up** with a student and discuss.
3. **Individually** think about: If you had a choice to work within a functional, projectized, or a balanced matrix organization as a Human Resources Specialist, which would you choose while working on projects. What is the reason for your choice? List your reasons for your choice. Share with fellow classmates in the **larger group.**
4. **Individually**, research on the internet 2 companies' values, beliefs, and attitudes. Compare the two companies. What did you discover about the culture of the organization? **Pair up** and discuss with a partner the contributing factors that could make these companies good cultures for project management.
5. Work in **pairs.** Review Hofstede's Cultural Theory. In your own words, as a group, define Hofstede's Cultural Theory. Apply the theory to various countries (identified by your teacher or yourselves). Choose 3 countries. Given the 6 Key Dimensions, decide which dimensions "fit" which country. Review with the **entire class**. Some examples of

countries (or use your own): Canada, Russia, Sweden, Saudi Arabia, Hong Kong, Australia, Peru, Philippines.

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. Do you think functional managers make better project managers than project managers? Why? Why not?
2. What types of projects are better suited for functional managers than project managers?
3. In a projectized organization, could there be a conflict over whether the functional manager or the project manager contributes to the most profits?
4. What is the difference between a weak matrix and a strong matrix?

CHAPTER 3 – PROJECT MANAGER AS A LEADER

Chapter Outline
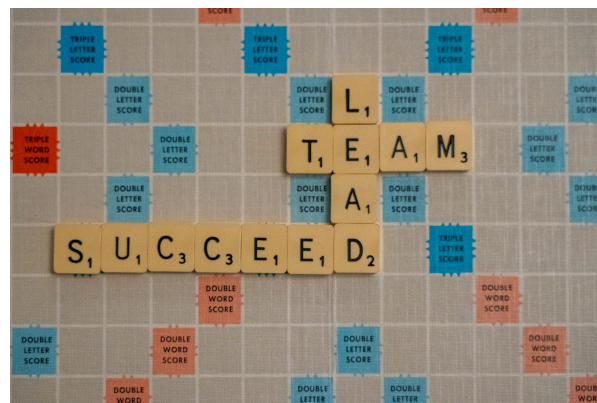
Photo by Nick Fewings is licensed under the Unsplash License

3.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you should be able to:

1. Identify four roles of a project manager.
2. Discuss the essential skills of good project managers.
3. Discuss the important factors needed in managing a team.
4. Describe the five responses to conflict.
5. Identify key personality methodologies for professional success
6. Evaluate key personality assessments including Emotional Intelligence, Myers-Briggs, DISC Method & Big Five
7. Explain Human Resources' role as a project manager

3.2. ROLES OF PROJECT MANAGER

In this section we will talk about some general principles for successful project management.

In an article for MIT Sloan Management Review, Alexander Laufer, Hoffman, Russell, and Cameron show how successful project managers combine traditional management methods with newer, more flexible approaches to achieve better outcomes (Laufer et al., 2015). Their research shows that successful project managers adopt these four vital roles:

1. **Develop Collaboration Among Project Participants:** "Most projects are characterized by an inherent incompatibility: the various parties to the project are loosely coupled, whereas, the tasks themselves are tightly coupled. When unexpected events affect one task, many other interdependent tasks are quickly affected. Yet the direct responsibility for these tasks is distributed among various loosely coupled parties, who are unable to coordinate their actions and provide a timely response. Project success, therefore, requires both interdependence and trust among the various parties" (Laufer et al., 2015, p. 46).

2. **Integrate Planning with Learning:** "Project managers faced with unexpected events employ a 'rolling wave' approach to planning. Recognizing that firm commitments cannot be made on the basis of volatile information, they develop plans in waves as the project unfolds and information becomes more reliable. With their teams, they develop detailed short-term plans with firm commitments while also preparing tentative long-term plans with fewer details" (Laufer et al., 2015, p. 46).

3. **Prevent Major Disruptions:** Successful project managers "never stop expecting surprises, even though they may effect major remedial changes only a few times during a project. They're constantly anticipating disruptions and maintaining the flexibility to respond proactively.... When change is unavoidable, a successful project manager acts as early as possible, since it is easier to tackle a threat before it reaches a full-blown state" (Laufer et al., 2015, p. 47).

4. **Maintain Forward Momentum:** "When unexpected events affect one task, many other interdependent tasks may also be quickly impacted. Thus, solving problems as soon as they emerge is vital for maintaining work progress" (Laufer et al., 2015, p. 48).

Adopting these four roles will set you on the road toward delivering more value in your projects, with less waste, which is also the goal of both Lean project management and Agile project management.

Human Resources as a Job Recruitment & Selection Resource

Human Resources would be vital to the role of designing the job descriptions and specifications for Project Managers. HR Specialists would research project manager's roles, build in the knowledge, skills, abilities (KSAs)s, write a job summary that includes the four above roles, outline the list of responsibilities, emphasis the duties in relation to the project goals, include qualifications, salary and benefits, and any specifications for the role.

The project manager may be an internal or external hire. For an internal hire, the position would be advertised internally. HR, along with others involved in the project, would select the best-suited candidates for interviews, complete the interview process, check references, and hire the person. Also, they would be involved in replacement of the person hired as the project manager. Since projects are temporary (with a beginning and an end), HR would be responsible to outline the contract's specifications. For an external hire, HR would design a suitable strategy for recruitment of candidates including scope of search, recruitment methods and the sequence of activities for the recruitment. Screening candidates would begin. Applicants would be screened against the job description. Interviews would be set up for the best candidates. A decision would be made who to hire. The same would apply as an internal hire. The successful candidate would be made aware the project is temporary (with a beginning and an end). A contract would be set up by the HR department.

Human Resources as a Trainer

Training may be required for an external hire with an onboarding program. The candidate would be briefed and trained on the job responsibilities of the position regardless if it is an internal or external hire. The onboarding program would include: a welcome package, new employee greeting, a mentor/coach, a schedule of critical meetings/events, technical requirements, and a workstation set-up for the employee.

Human Resources as a Team Builder

The Project Manager would be briefed on the project and the need for team members. The HR team will develop the team job descriptions and specifications. The Project Manager would be involved in selecting the team, along with the HR representative, and others who may have a vested interest in the project. Depending on the importance of the project to the organization, the project manager may be given carte blanche to hire who they wish for the team. If the project is small and less significant, HR may recommend employees who would be assigned to the project. In other situations, the project manager may need to report to a functional manager who will control the project, and the project manager reports to the functional manager.

Think!

Think about a meeting you have attended in the past. Did the leader/facilitator guide the meeting well? If not, as an HR Specialist, how would you plan a meeting that members would enjoy?

Human Resources could be involved in the team coming together for a "kick-off" meeting. This first meeting is critical to the early bonding of the team and to the project. It sets the tone for how the team will work together, and with the project manager. The HR Specialist may be a participant, or facilitate the meeting.

Should the HR Specialist facilitate the meeting, important objectives are to provide an overview of the project with the support of the project manager, the schedule of the project, and the procedures. Next, the HR Specialist would want to discuss the interpersonal dimensions of the team by asking: Who are you? What skills and talents do you bring to the team? What are your personal goals in the project, if any? Next, the HR Specialist wants to instill or teach good communication skills, problem solving skills, decision making skills, and team building skills. Finally, along with the Project Manager, the HR Specialist wants to establish good ground rules, how decisions will be made, and the reporting mechanisms.

The balance of the meeting, or a follow up meeting ought to be left to the Project Manager to help the team to define an identify, and developed a shared vision for the project. The project sponsor may want to be involved in this process as the responsibility of the vision lies with the sponsor/stakeholders.

3.3. PROJECT MANAGER CHARACTERISTICS

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The project manager must be perceived to be credible by the project team and key stakeholders. A successful project manager can solve problems and has a high degree of tolerance for ambiguity. On projects, the environment changes frequently, and the project manager must apply the appropriate leadership approach for each situation.

   The successful project manager must have good communication skills. All project problems are connected to skills needed by the project manager:

- Breakdown in communication represents the lack of communication skills
- Uncommitted team members represent the lack of team-building skills
- Role confusion represents the lack of organizational skill

Project managers need a large number of skills. These skills include administrative skills, organizational skills, and technical skills associated with the technology of the project. The types of skills and the depth of the skills needed are closely connected to the complexity profile of the project. Typically, on smaller, less complex projects, project managers need a greater degree of technical skill. On larger, more complex projects, project managers need more organizational skills to deal with the complexity. On smaller projects, the project manager

is intimately involved in developing the project schedule, cost estimates, and quality standards. On larger projects, functional managers are typically responsible for managing these aspects of the project, and the project manager provides the organizational framework for the work to be successful.

Listening

One of the most important communication skills of the project manager is the ability to actively listen. Active listening is placing oneself in the speaker's position as much as possible, understanding the communication from the point of view of the speaker, listening to the body language and other environmental cues, and striving not just to hear, but to understand. Active listening takes focus and practice to become effective. It enables a project manager to go beyond the basic information that is being shared and to develop a more complete understanding of the information.

Negotiation

When multiple people are involved in an endeavor, differences in opinions and desired outcomes naturally occur. Negotiation is a process for developing a mutually acceptable outcome when the desired outcome for each party conflicts. A project manager will often negotiate with a client, team members, vendors, and other project stakeholders. Negotiation is an important skill in developing support for the project and preventing frustration among all parties involved, which could delay or cause project failure.

Negotiations Involve Four Principles

1. **Separate people from the problem.** Framing the discussions in terms of desired outcomes enables the negotiations to focus on finding new outcomes.
2. **Focus on common interests.** By avoiding the focus on differences, both parties are more open to finding solutions that are acceptable.
3. **Generate options that advance shared interests.** Once the common interests are understood, solutions that do not match with either party's interests can be discarded, and solutions that may serve both parties' interests can be more deeply explored.
4. **Develop results based on standard criteria.** The standard criterion is the success of the project. This implies that the parties develop a common definition of project success.

For the project manager to successfully negotiate issues on the project, they should first seek to understand the position of the other party. If negotiating with a client, what is the concern or desired outcome of the client? What are the business drivers and personal drivers that are important to the client? Without this

understanding, it is difficult to find a solution that will satisfy the client. The project manager should also seek to understand what outcomes are desirable to the project. Typically, more than one outcome is acceptable. Without knowing what outcomes are acceptable, it is difficult to find a solution that will produce that outcome.

One of the most common issues in formal negotiations is finding a mutually acceptable price for a service or product. Understanding the market value for a product or service will provide a range for developing a negotiating strategy. The price paid on the last project or similar projects provides information on the market value. Seeking expert opinions from sources who would know the market is another source of information. Based on this information, the project manager can then develop an expected range within the current market from the lowest price to the highest price.

Additional factors will also affect the negotiated price. The project manager may be willing to pay a higher price to assure an expedited delivery or a lower price if delivery can be made at the convenience of the supplier or if payment is made before the product is delivered. Developing as many options as possible provides a broader range of choices and increases the possibility of developing a mutually beneficial outcome.

The goal of negotiations is not to achieve the lowest costs, although that is a major consideration, but to achieve the greatest value for the project. If the supplier believes that the negotiations process is fair and the price is fair, the project is more likely to receive higher value from the supplier. The relationship with the supplier can be greatly influenced by the negotiation process and a project manager who attempts to drive the price unreasonably low or below the market value will create an element of distrust in the relationship that may have negative consequences for the project. A positive negotiation experience may create a positive relationship that may be beneficial, especially if the project begins to fall behind schedule and the supplier is in a position to help keep the project on schedule.

Conflict Resolution

Conflict on a project is to be expected because of the level of stress, lack of information during early phases of the project, personal differences, role conflicts, and limited resources. Although good planning, communication, and team building can reduce the amount of conflict, conflict can still emerge. How the project manager deals with conflict results in the conflict being destructive or an opportunity to build energy, creativity, and innovation.

Conflict is the common side-effect of working in a team or group, and will inevitably happen at any time of the project life cycle. The sources of conflict in a team are generally related to:

- Differences in personalities;
- Undefined expectations;
- Lack of communication;
- Distrust between members of the team; and

- Competing priorities.

Sources of conflict can be turned into opportunities if handled appropriately. Some approaches to address conflict are:

- Withdrawing from the conflict or avoiding the conflict altogether;
- Forcing or competing;
- Smoothing or accommodating;
- Compromising (share the differences); and
- Collaborating and confronting.

Each of these approaches can be effective and useful depending on the situation. Project managers will use each of these conflict resolution approaches depending on the project manager's personal approach and an assessment of the situation. Most project managers have a default approach that has emerged over time and is comfortable. For example, some project managers find the use of the project manager's power the easiest and quickest way to resolve problems. "Do it because I said to" is the mantra for project managers who use forcing as the default approach to resolve conflict. Some project managers find accommodating with the client the most effective approach to dealing with client conflict. The effectiveness of a conflict resolution approach will depend on the situation. The forcing approach often succeeds in a situation where a quick resolution is needed, and the investment in the decision by the parties involved is low.

Adjusting Leadership Styles

Remember that personality traits reflect an individual's preferences, not their limitations. It is important to understand that individuals can still function in situations for which they are not best suited. It is also important to realize that you can change your leadership style according to the needs of your team and the particular project's attributes and scope.

For example, a project leader who is more thinking (T) than feeling (F) (*according to the Myers-Briggs model*) would need to work harder to be considerate of how team members who are more feeling (F) might react if they were singled out in a meeting because they were behind schedule (Myers Briggs, 1962). If individuals know their own preferences and which personality types are most successful in each type of project or project phase, they can set goals for improvement in their ability to perform in those areas that are not their natural preference. Another individual goal is to examine which conflict resolution styles you are least comfortable and work to improve those styles so that they can be used when they are more appropriate than your default style.

HR in Focus: Human Resources as a Trainer and Mentor

HR may provide training for the Project Manager in conflict resolution, negotiation skills and leadership development. They may set up a mentorship for the Project Manager, especially if they are hired from outside the organization. This would be a formal agreement between the Project Manager and an experience person within the organization. HR would establish a match, set up meetings between the parties, discuss goals of the protégé and how the mentor can help. HR would monitor the progress of the mentor relationship. Another example may be a relationship that is a peer mentor. Another Project Manager who is experienced mentors the new Project Manager and they create a support system to ensure growth and development of the new Project Manager and ensure success of the project.

Think!

Imagine yourself as a Project Manager of an HR Project that is going to impact the entire organization. You have a diverse team from several different departments. What do you think the top two characteristics are that you posses that you can bring to the team? Why?

3.4. PROJECT MANAGER MANAGING THE TEAM

In order to successfully meet the needs of a project, it is important to have a high-performing project team made up of individuals who are both technically skilled and motivated to contribute to the project's outcome. One of the many responsibilities of a project manager is to enhance the ability of each project team member to contribute to the project, while also fostering individual growth and accomplishment. At the same time, each individual must be encouraged to share ideas and work with others toward a common goal.

HR in Focus: Human Resources and Performance Evaluation

Through performance evaluation, the manager will get the information needed to ensure that the team has adequate knowledge, to establish a positive team environment and a healthy communication climate, to work properly, and to ensure accountability. HR Specialists would be involved in creating performance evaluation programs and tools for evaluation of the team and the Project Manager. They would establish evaluation forms, guidelines for evaluation specific to the project, standard performance measures, and feedback. Managing the project team includes appraisal of employee performance and project performance involving HR Specialists as advisors. The performance reports provide the basis for managerial decisions on how to manage the project team and Human Resources. HR would be involved in helping to motivate the team to do their best, ensure the evaluation was completed fairly, objectively and consistently.

During or after the completion of the project, HR would be in a position to reward performance based on merit, provide opportunities for advancement to

team members when available, and provide evaluations to other functional managers within the organization.

Employee performance includes the employee's work results such as:

- Quality and quantity of outputs
- Work behaviour (such as punctuality)
- Job-related attributes (such as cooperation and initiative)

After conducting employee performance reviews, project managers should:

- Provide feedback to employees about how well they have performed on established goals
- Provide feedback to employees about areas in which they are weak or could do better
- Take corrective action to address problems with employees performing at or below minimum expectations
- Reward superior performers to encourage their continued excellence

Working with Groups and Teams

A team is a collaboration of people with different personalities that is led by a person with a favoured leadership style. Managing the interactions of these personalities and styles as a group is an important aspect of project management.

Teams can outperform individual team members in several situations. The effort and time invested in developing a team and the work of the team are large investments of project resources, and the payback is critical to project success. Determining when a team is needed, and then supporting the development and work of the team are critical project management abilities.

Teams are effective in several project situations:

- When no individual with the knowledge, skills, and abilities to understand or solve the problem exists.

- When a commitment to the solution is needed by large portions of the project team.
- When the problem and solution span project functions.
- When innovation is required.
- When speed is important.
- When the activities involved in solving the problem are very detailed.

In addition to knowing when a team is appropriate, the project manager must also understand what type of team will function best. Sometimes, individuals can outperform teams. An individual tackling a problem consumes fewer resources than a team and can operate more efficiently—as long as the solution meets the project's needs.

An individual is most appropriate in the following situations:

- When one person has the knowledge, skills, and resources to solve the problem.
- When the actual document needs to be written (Teams can provide input, but writing is a solitary task.)

Personality Types and Tests

Personality types refer to the differences among people, including in such matters as what motivates them, how they process information, and how they handle conflict. Understanding people's personality types is acknowledged as an asset in interacting and communicating with them more effectively. Understanding your personality type as a project manager will assist you in evaluating your tendencies and strengths in different situations. Understanding others' personality types can also help you coordinate the skills of your individual team members and address the various needs of your client. The key methodologies that Human Resources may be involved in either training/teaching or using to hire, train or develop are Emotional Intelligence, Myers-Briggs, DISC Method and The Big Five that will be review on the following pages. Both introductory review

and in-depth studies are included. More In-depth discussions are included in: 3.7 Emotional Intelligence, 3.8 Myers-Briggs, 3.9 DISC Method.

3.5. ASK AN EXPERT — KAVYA KUMAR

Ask An Expert

Kavya Kumar

Certified Human Resources Leader

Bio

Kavya Kumar holds an MBA from the Ivey School of Business at Western University. She is currently an HR Director with TMX Group and has HR Experience from CIBC, Cineplex and Doctors Without Borders Canada.

Affiliation

Certified Human Resources Leader from HRPA

Question 1: How has your past experience with conflict resolution helped you on subsequent projects?

It's important to understand teamwork and collaboration in order to better understand conflict

resolution. Some level of conflict is good, and even healthy. So we must understand what that healthy balance is – how much do you push and pull regarding your ideas about the work before you let it escalate? You have to understand when the conflict is personal versus when it's about ideas to get the work done. If everybody agreed with each other all of the time, some of the best ideas would not move forward. However; when the conflict gets personal, that starts to detract from the work.

Question 2: In your experience, what has been the most common source of conflict while working on a project?

The most common source of conflict usually comes from a miscommunication about what everyone's roles and expectations are for the project. It is important for everyone on the team to be open in this regard so that there are no misunderstandings. So, it is important to start all projects by having everyone explain why they want to be on the team and what interests them about the project.

Question 3: In your experience, what behaviours are indicative of conflict? Similarly, what behaviours promote conflict resolution?

A lack of willingness to engage, to be open, and to share are behaviours that are usually indicative of conflict. Some groups might have members that are more direct and dominant and may talk over other people, whereas other members might be more introverted and process ideas quieter. It is important to note that everyone has a role that they play and everyone has value to add to the group. And it is important for everyone to get a chance to share their ideas, so usually conflict comes around when people stop engaging, stop showing up for meetings, stop contributing ideas, and become surly. The conflict may start off passive-aggressively and then can escalate to a shouting match because of all of the little behaviours that start to add up.

To promote conflict resolution, it's important to sit down with the group and discuss the norms. Who are we as a team? How do we like to work? What are our pet peeves? What do we want to handle? What can we handle? It's important to realize that everyone has a life outside of the scope of the project. Some people might be in school, or have a part-time job or other things going on – so it's important to be honest about what each person can contribute. When each person is open about their strengths and weaknesses, it helps move the project along. Everyone brings their own strengths to the project, so in a sense – projects can be thought of as a relay race. When it comes time to do your part of the role, you're ready to run your leg of the race, and then let the next person take over and complete their portion. For this to work, everyone has to know what their strengths are and be able to have the conversation early on. These conversations also make everyone comfortable with one another and help the team develop an understanding of each other. So, if a person reacts outside of their norm, you would know it's not personal, they may just be stressed.

Question 4: How do you approach employees who seem to inherently seek conflict within the project team?

It's important to think about our perceptions and challenge ourselves to question if this is our perception of the individual or if that is who they really are. As simple as it may sound, the best piece of advice is to "kill them with kindness". It's important to show everyone on the team that you are there for them, even when they get cranky, or angry, you want to let them know you can handle it, and gently push back, as necessary. It's important to demonstrate trust and gain an understanding of where the other person is coming from. It's easy to think "this person looks for conflict", we have to dig deeper into ourselves and figure out why we have that perception and have a serious conversation with that person. There is a book entitled 'Radical Candor' (2019), which discusses giving feedback to your team members, which is often the biggest source of conflict. Sometimes giving feedback can be uncomfortable, especially when the feedback is about the member being disruptive – but these tough conversations help move the project forward. You need to ensure you are not attacking the member, but rather creating a safe space for them to talk about anything that may be going on. And sometimes those conversations do not work, and maybe the person truly is just looking for conflict, in which case you just have to move along, get through the project and ensure you protect your own mental health.

Question 5: What strategies have you found to be most effective when trying to increase teamwork and reduce team conflict?

Similar to what is stated above, it is important to be clear about roles and responsibilities. Even if you think you're being clear, be clearer! Especially if you're working on a new team. The team should come to a consensus on how they want to handle these rules – should they put it in writing? Have a casual conversation? Each team will have different preferences. It may also be beneficial to let the team get outside of the team environment, maybe go for dinner together, to help break the ice and get to know one another, clarify roles, and clarify expectations. This clarity will help reduce confusion, which will in turn reduce conflict. It's also important to help create space for that healthy conflict that was also discussed above. Everyone should feel safe speaking out if they disagree before the project comes to completion. The team may be time-bound, so it's important for everyone to know that they can't continue to make changes. At some point, the project comes to a close, and all team members should be on the same page because everyone has had a chance to discuss.

Question 6: Do you employ different strategies when dealing with cross-departmental conflict than you would if the conflict was between members of the same department?

When dealing with members of your own team, it's easier to have a tight knit group where you can let them know that you are always available for a call to talk through any issues. If someone is not

clear about something, or if they've made a mistake, it's easy to have that conversation and figure out how to move forward. Within a small team, it's easier to have that sort of trust and let the members lean on you in tough times, when they are overworked. Whereas, in cross-departmental conflict, it might be tougher to have that same type of connection, but the approach would be similar – talk to the members, hear their concerns, do some root analysis to figure out what the problem is and where it is coming from. Ask lots of questions (the biggest part of problem-solving is understanding what the problem is)! As HR professionals, we should be that space for others to let them safely say what they want and help them refocus.

Question 7: When do you recommend involving a third party during conflict resolution?

When the relationship is broken, a mediator should get involved. If there is not trust between the parties, the conflict can become deeply personal and can get nasty. When there is no willingness to move forward, a third party must step in. This third party must have no motives other than to help the relationship move forward. Psychologically, most people want to win, the third party helps neutralize the situation and de-escalate the tension. Keep in mind, sometimes the answer will be that the relationship needs to end, and that is okay too.

Question 8: What do students in Human Resources need to do to continue to grow and learn in conflict resolution? Are there any resources on conflict resolution you can recommend for students or professionals to gain further knowledge?

To continue to grow, students should get their hands on quality resources. There is constantly new information, so students should be willing to continue to learn – you are never done learning! It's also important to get some frameworks in your toolkit, and develop your own style of conflict resolution. Conflict will always exist, and sometimes the best way to learn how to deal with it is to experience it and get a sense of how to move forward, in your own way. As HR professionals, we're here to help people move past the conflict, not to say one person is right and the other is wrong. However, keep in mind that your job is not to solve all conflicts – it's just to help move people if they are stuck.

A great resource for students to get their hands on is a book called 'Think Again' by Adam Grant. Grant (2021) discusses how as humans, our natural inclination is to want to be right about everything, because being right is a safe place for us to be. However; the book challenges you to think about whether you actually know all of the information, think about how you are responding, and think about your perceptions. Any books that help challenge your preconceived notions can help move you to think about your behaviours and help with conflict resolution.

3.6. EMOTIONAL INTELLIGENCE

Emotional Intelligence

Emotions are both a mental and physiological response to environmental and internal stimuli. Leaders need to understand and value their emotions to appropriately respond to the client, project team, and project environment.

Emotional intelligence includes the following:

- Self-awareness
- Self-regulation
- Empathy
- Relationship management

Emotions are important to generating energy around a concept, building commitment to goals, and developing high-performing teams. **Emotional intelligence (EI)** is an important part of the project manager's ability to build trust among the team members and with the client. It is an important factor in establishing credibility and an open dialogue with project stakeholders. Emotional intelligence is critical for project managers, and the more complex the project profile, the more important the project manager's emotional intelligence becomes to project success.

Human Resources could provide Emotional Intelligence training for the Project Manager and the team members. This training could be offered at the beginning of the project or during the project. It would support the team in reducing stress, how to react to critics, overcome their fears, assist with communication development, increase social skills and create a positive work setting during the project.

3.7. IN-DEPTH LOOK: EMOTIONAL INTELLIGENCE

In-depth Look

Emotional Intelligence

Emotions play an important role in humans because it influences how we perceive, understand, and respond to our surroundings. Emotion was derived from the Latin word *emovare* which means to change or to move constantly (Gonzalez, 2019a). Humans create their personalities out of emotions which has formed a major part in the growth of learning. It is for the reason scientists began to study the abilities and capacities of humans to reason and understand their own emotions. Humans can efficiently perceive emotions, regulate, and control them.

Wayne Payne is said to have first coined the term Emotional Intelligence (EI) for the first time in 1986 when he wrote his doctoral thesis. He defined Emotional intelligence as the 'study of emotion: building emotional intelligence; self-integration, connecting to fear, pain, and desire' (Gonzalez, 2019b).

His work was improved by two psychologists, John Mayer and Peter Salovey, in 1990. They defined Emotional intelligence as a type of social intelligence that involves the ability to control one's moods and emotions. As well to control other's emotions, distinguish between different emotions, and utilize that information to guide one's thinking and behaviour (Gonzalez, 2019b). Both psychologists realized that humans must be able to handle their own and others' emotions. Since 1990, there has been a surge in interest in learning more about EI and how it affects perception and behavior. Salovey and Mayer were the two key contributors to the introduction of emotional intelligence into academic literature. Based on the findings of the studies, the theorists concluded that components of Emotional Intelligence appear to be talents that can be tested (Broughton, 2017). EI has emerged as a promising new category for understanding behavioral diversity in recent years. Training approaches are being used in companies to help employees become aware of their emotions and develop specific abilities. The concept of EI has piqued the interest of many scholars, and as the field's study has progressed, so has our knowledge of it (Surti & Gangal, 2021).

The concept of Emotional intelligence (EI) was later popularized and improved in 1995 by Dr. Daniel Goleman in his book *Emotional Intelligence*. According to Cole, there are five elements of EI:

1. Self-awareness: This refers to the ability to understand how one feels at any time and the impact that

mood has on others.

2. Self-regulation: This includes regulating or channeling one's emotions, as well as predicting consequences before acting on impulse.
3. Motivation: Motivation is the process of achieving objectives, and enduring challenges while learning.
4. Empathy: Empathy means recognizing the feelings of others and reacting positively.
5. Social Skills: Social skills include managing relationships, motivating individuals, and eliciting desired behaviours from them (Cole, n.d.).

Emotional intelligence (EI) can be referred to as the ability to sense, control and assess emotions. Emotionally intelligent people can relate to others with empathy and understanding and use their emotional awareness to guide their actions and conduct.

Even though the theory of Emotional Intelligence emerged as a new theory, it had its roots on other similar theories and concepts. Theorists like Gardner (1983) advocated more comprehensive methods to understand general intelligence because of the quest to comprehend social intelligence (Fiori & Vesely-Maillefer, 2018). Even though ideas of emotional intelligence were only developed in 1990, there has been a lot of research and writing on the subject since then.

Although no direct correlations have been shown, studies have demonstrated that those with high EI have better mental health, work performance, and leadership abilities. Empathy is often related with EI because it requires a person to connect their own personal experiences and with those of others. Individuals aiming to become more successful leaders have been looking for ways to enhance EI since it became prominent in the last several decades (Emotional Intelligence, 2022).

The major takeaway from the theory of EI is that controlling your thoughts, understanding your own and others' emotions, cultivating a positive attitude, and allowing your conduct to impact the climate at work are all ways to improve.

Some of the most common criticisms of EI is that it merely evaluates adherence to social norms rather than any talent or ability (Grensing-Pophal, 2019). Three other criticisms include not being properly defined, poorly measured, and individuals can fake high intelligence quotient.

According to a research paper by Frank Romanelli, Cain and Smith, (2006) it was questioned whether Emotional Intelligence (EI) was a requirement in academics. The studies showed that in professional fields such as medicine, law, and organizational fields such as Human Resource Management, there is a necessity for learning EI. When dealing with a doctor or lawyer there is a necessity to understand the patient or a victim. In the case of HR, this can be a requirement for recruiting the right person into the organization.

In a study conducted by Drigas and Papoutsi (2019), they tried to find out if Human Resource professionals must have Emotional Intelligence (EI) and if it has any importance in the field. The study suggested Human Resources Specialists who are highly Emotionally Intelligent could select and recruit people with good leadership qualities. Apart from this, they were excellent trainers in their field. It was concluded that Human Resources Specialists ought to include the EI model in their practice for better judgment.

Class of 2022 Contributions: Olabisi dada, Naimy Benny, Devika Chandran Thai Valappil, Varum Thomas, Elohor Nomuoja, Akanksha Akanksha

3.8. IN-DEPTH LOOK: MYERS-BRIGGS TYPE INDICATOR (MBTI)

In-depth Look

The **Myers-Briggs Type Indicator (MBTI),** often simply referred to as Myers-Briggs, is one of most widely used tools for exploring personal preference, with more than two million people taking the MBTI each year. It can be used in project management training to develop awareness of preferences for processing information and relationships with other people. Based on the theories of psychologist Carl Jung, the Myers-Briggs uses a questionnaire to gather information on the ways individuals prefer to use their perception and judgment. Perception represents the way people become aware of people and their environment. Judgment represents the evaluation of what is perceived. People perceive things differently and reach different conclusions based on the same environmental input. Understanding and accounting for these differences is critical to successful project leadership.

The Myers-Briggs identifies 16 personality types based on four preferences derived from the questionnaire. The preferences are between pairs of opposite characteristics and include the following:

- Extroversion (E)-Introversion (I)
- Sensing (S)-Intuition (N)
- Thinking (T)-Feeling (F)
- Judging (J)-Perceiving (P)

Sixteen Myers-Briggs types can be derived from the four dichotomies. Each of the 16 types describes a preference: for focusing on the inner or outer world (E-I), for approaching and internalizing information (S-I), for making decisions (T-F), and for planning (J-P). For example, an ISTJ is a Myers-Briggs type who prefers to focus on the inner world and basic information, prefers logic, and likes to decide quickly. It is important to note that there is no best type and that effective interpretation of the Myers-Briggs requires training. The purpose of Myers-Briggs is to understand and appreciate the differences among people. This understanding can be helpful in building the project team, developing common goals, and communicating with project stakeholders.

On larger, more complex projects, Human Resources would be involved with the project managers using the Myers-Briggs as a team-building tool during project start-up. This is typically a facilitated work session

where team members work with HR to take the Myers-Briggs test and share with the team how they process information, what communication approaches they prefer, and what decision-making preferences they have. This allows the team to identify potential areas of conflict, develop communication strategies, and build an appreciation for the diversity of the team.

Expanding on Myers-Briggs

Origins

Katharine Cook Briggs and her daughter Isabel Briggs Myers created the Myers-Briggs Type Indicator (MBTI) questionnaire. It was first published in the United States in 1943. When Katharine Briggs first met Clarence Myers, who would become Isabel's husband, she was motivated to begin exploring the theory of personality types. She noticed that her husband had a distinctive viewpoint on the world. This aroused her curiosity to start reviewing and studying literature to comprehend various temperaments (The History, n.d.).

Purpose

The purpose of the Myers-Briggs test is to identify or describe how individuals interpret and think about their environment. This theory was based on another theory called Carl Jung's theory of personality types. It is a theory based on the collective unconscious. He believed that people are related to one another and their ancestors because of a shared set of experiences. According to Carl Jung, on whose theory of personality, the MBTI is based, understanding people's conduct required comprehending the personality "type" to which they belonged. He further stated that personality is a product of biological variation at random is false. He thought observed personality differences were regular and predictable. Jung categorized personality into intrinsic "types" in this way (Stein & Swan, 2019).

Organizations most frequently employ it to aid people in growing in self-awareness and enhancing teamwork. In a business setting, MBTI assessment can identify help when it comes to the resolution of conflicts, improvement of communication and decision-making, management of change, career mentoring, and leadership development.

Personality Types

The three main tenets of the MBTI theory are that each individual has a "real" personality, "type," that "type" causes variations in as seen in behaviour, and that "type" is inborn (together referred to as the "inborn claim"). Each of these three statements has to be verified in order for the MBTI theory to be true (Santamaria, 2019).

It is possible to believe that some personality qualities are superior to or more valuable than others when using the Myers-Briggs Type Indicator. Perhaps one personality type is viewed as superior to another, although

this is untrue. No type is inherently good or evil. The MBTI determines a personality type's preferred lifestyle. There are no talents or skills. Additionally, developing one's type just means getting better as a person through time, not necessarily changing one's type.

- ISTJ
  - o Pay attention to both the present and the future effects of issues and decisions.
  - o Think about the effects of decisions on people.
  - o Try new and diverse options. Change can be beneficial.
  - o Learn to be tolerant of others who think differently than you.
- ISTP
  - o Try being open with others and expressing your worries and issues.
  - o Become persistent
  - o Try creating a plan and executing it.
  - o Set objectives and a plan for achieving them.
- ISFJ
  - o Strive to take more chances.
  - o Consider the future with a more optimistic outlook
  - o Become more aggressive and forthright.
  - o Show off your successes and blow your own horn.
  - o Try new approaches to problems,
- ISFP
  - o View things with greater skepticism
  - o Examine the data
  - o Learn to provide critical feedback
  - o Maintain a forward-looking viewpoint
  - o Show more confidence
- INFJ
  - o Develop your political savvy
  - o Be more adamant
  - o Learn to provide constructive criticism.
  - o Request criticism and recommendations
  - o Unwind and relish the moment.
- INFP
  - o Instead of trying to find the perfect solution for every problem, learn to deal with reality.
  - o Say no more often.
  - o Integrate personal beliefs and logic
  - o Create, organize, and carry out action items, tasks, and goals.

- INTJ
    - o Look for criticism
    - o Include others in your concepts and plans.
    - o Consider reality
    - o Gratitude and appreciation for others
- INTP
    - o Emphasis on useful specifics
    - o Create an action plan and follow it to achieve your goals.
    - o Seek other people's assistance.
    - o Meet new people.
    - o Express gratitude
- ENTP
    - o Focus on the here and now.
    - o Thank others and acknowledge them.
    - o Set tasks, priorities, and goals that are reasonable.
    - o Understand when to stop.
- ENTJ
    - o Consider the human aspect.
    - o Express gratitude to people.
    - o Pause to consider.
    - o Acquire the ability to recognize and respect your own and others' sentiments.
- ENFP
    - o Establish priorities and carry them out.
    - o Focus on the specifics.
    - o Put more effort into your tasks rather than your interests.
    - o Create time management objectives and develop time management techniques.

- ENFJ
    - o Recognize that people have limitations.
    - o Gain conflict management skills.
    - o Must be keen to details
    - o Put a stop to self-criticism and seek out unbiased opinions.
- ESFP
    - o Consider the logical effects of your choices.
    - o Depersonalize disputes.
    - o Create goals and a plan.
    - o Maintain a healthy balance between work and social activities.

- ◦ o Concentrate on enhancing time management.
- ESFJ
  - ◦ o Pay attention to differences and find ways to handle the disagreements.
  - ◦ o Keep in mind your own demands and preferences.
  - ◦ o Pay attention logically.
  - ◦ o Take a more logical look at the outcomes and repercussions of your choices.
- ESTP
  - ◦ o Set aside your work and pay greater attention to other people and their emotions.
  - ◦ o Think beyond a band-aid solution to a problem.
  - ◦ o Finish the present projects.
  - ◦ o Maintain a healthy balance between work and recreation.
- ESTJ
  - ◦ o Prior to making a choice, consider all choices, especially the impact on individuals.
  - ◦ o Consider the advantages of change.
  - ◦ o Express gratitude and appreciation to people.
  - ◦ o Give yourself time to consider and list your values.

Strengths

One of the strengths of the basic MBTI and Jungian Type structure is that it avoids a complex theory in terms of intricacy. The 16 "types" identified by Jung, Myers, and Briggs are dynamic entities with enormous descriptive potential, far from being static stereotypes. When the typology is taught to clients, they quickly realize how helpful it is to better understand oneself and others. Even people without a psychiatric background can instantly recognize the four dichotomies as being true (Santamaria, 2019).

In order to eliminate negative or "bad" personality characteristics like neuroticism, the MBTI tries to be normatively neutral; all individual variances are characterized as normal. The Jungian framework that supports the MBTI, in contrast to the Big Five theory of personality, claims to explain the respondent's personality as well as characterize it.

The MBTI is quite straightforward and simplistic. The MBTI only contains 8 categories: Contrasted with the Big Five construct's 36+ components, facets, and scales are Introversion, Extroversion, Sensing, Intuition, Thinking, Feeling, Judging, and Perceiving (Santamaria, 2019). Various psychologists have stated that clients virtually universally state that they considered the introduction to the instrument to be interesting, helpful, and time well spent. The great majority of customers who learn about themselves and their type find relief and pleasant emotions rather than feeling forced into one of the 16 kinds.

The Myers-Briggs test is much more than a simple personality quiz. The benefits of it include awareness and vocabulary for the interpersonal distinctions that characterize us as a person personality test. An approach that

makes it simple to see how people vary and how they are similar. It provides memorable and motivational ideas that clarify complex relationships (Stein & Swan, 2019)

It further provides positive perceptions of all personalities, avoidance of defensiveness, and encouragement to make sincere and long-lasting behavioral adjustments. The MBTI framework was created primarily for the improvement and development of individuals. As a result, the process of evaluation and interpretation offers a chance for personal discovery that is challenging to do with conventional examinations.

MBTI has made a huge contribution to studying the behavioral issues of individuals. It has become a common way in organizations to give detailed information about the best people for each team preferred working style and interactions. Managers may use MBTI data when forming a team to ensure that personality types do not collide, and that weaknesses and strengths should complement one another (Bajic, n.d.).

Challenges

A drawback to the theory is that it is so deceptively basic that after just two weeks of study, a specific group of people considers themselves to be MBTI experts. They fail to grasp the necessity of having a solid grasp of the theory in order to give the test and analyze the results. Clients and professionals mistakenly and inappropriately attribute traits as a result of David Keirsey's misinterpretation of Jung and Myers (Bajic, n.d.).

Another drawback is that many people who have significant flaws or psychiatric disorders try to hide these issues by using the MBTI's positive type descriptors. The MBTI can become an excuse and a sedative rather than inspiring people to pursue personal growth. People make the mistake of thinking that the theory itself is easy because of how straightforward the exam questions are. Instead of treating Jung and Myers' typology as a dynamic system, as Keirsey and he did, they treat it as a static one (Stein & Swan, 2019).

The personality type does have limitations. Regardless of the popularity of the Myers-Briggs test, some psychologists say it is unscientific and meaningless. Others consider it to be a reliable instrument that captures several crucial personality traits, although it has drawbacks.

- Poor Validity

Research on types of personality and managerial behaviors of William Gardner found out that this test is poor at predicting the behavior or personality of an individual. Gardner states that there is a need to refine the construction and measurements of this test because there are issues regarding its theory and operation (Gardner, 1996).

- Missing Pieces of Personality

Some researchers such as Paul Costa and Robert McCrae state that this test is not complete since the categories only includes Big 5 Personality Traits extraversion, agreeableness, conscientiousness, negative emotionality, and

open-mindedness (Ackerman, 2017). In terms of action, feeling, and thinking, there is no exact measurement of emotional stability.

- Bimodal Grouping – personality traits are not constant

There is a significant fault in two groups that people are placed into after taking the Myers-Briggs test: personality traits are not constant. There are significant issues with the MBTI's psychometric properties, claims Ronald E. Riggio, Ph.D. The fact that scores are split into categories—extravert or introvert—affects all typologies which is a problem. Personality traits are continuous, with people having varying degrees of extraversion or introversion (Riggio, 2014). The MBTI's largest fundamental fault is the assumption that personality traits are constant and do not change in time.

In a recent study, researchers used survey data from a large sample of teenagers who participated in the 1960s and again 50 years after. The questionnaire asked them about their personalities (as related to the Big Five qualities). "We saw some very, very big changes in personality attributes over the past 50 years" according to the study's author Rodica Damian of the University of Houston, the changes were obvious to others for emotional stability, conscientiousness, and agreeableness (Suttie, 2018). This study demonstrates that personality does change and that they have continuous aspects.

Suresh Balasubramanian defended the test. He was a general manager of the Myers-Briggs firm. He said, "When you look at the validity of the instrument, it's just as valid as any other personality assessment" (Gholipour, 2019). But if the MBTI has so many restrictions, what does it indicate about other personality tests? Perhaps it's time to develop a new diagnostic method for assessing aptitude.

Finding out a person's true essence requires understanding their complicated individual identity and conduct, as best made clear by Oxford University professor Merve Emre. She criticizes the test, claiming that "assignment to type might function as a tool for annihilating individuality," in her book The Personality Brokers: The Strange History of Myers-Briggs and the Birth of Personality Testing (Arthur, 2018). As can be seen, conventional aptitude tests, such as the MBTI, consider personality traits to be intrinsic and static and exclude accounting for the worldview or cognitive orientation of an individual. It is difficult to see the full person because of this missing component. How will a person grasp the underlying forces that drive them or aid them in advancing their careers if they are placed into a category and only permitted to observe themselves in a few dimensions?

According to some research, she claims a person's characteristics and actions change over life depending on their surroundings, including cognitive orientation. As a result of this thought, the Myers-Briggs test is inadequate, and there is a greater need than ever for a diagnostic instrument that truly evaluates a person's potential. Possible outcomes for better personal, academic, and professional advancement are unlocked by offering a comprehensive perspective of an individual's mental process in connection with their unique qualities, behavior, and perceptions. It is effective to demonstrate not only who someone is but also the why and how behind it.

Project Management

In Project Management, the Project Manager usually is aware that their largest difficulties are often not technical or financial, but rather, interpersonal. The team members will be able to exchange messages with one another more effectively whether they are conscious of their own and the personality types of each other. Additionally, since the management will be aware of how each team member operates best, they will discover it to be less complicated to communicate with them as a manager.

Experienced Project Managers understand they cannot boost morale among all team members in a similar way. A plan that works with one person may fail with another. However, being aware of a person's personality type may be able to motivate and control them. For example, one team member might need logical, clear arguments for the tasks they are asked to complete. With little to no assistance, they might perform better on their own. A team member with a unique personality may need frequent positive reinforcement and acknowledgment in addition to extensive engagement with other team members (Santamaria, 2019).

Human Resources

The Myers-Briggs Type Indicator can assist Human Resources departments in understanding what influences employee turnover, work satisfaction, and occupational behavior. Sensing/Intuition and Thinking/Feeling are the two MBTI functions that have the most influence on occupational behavior since both closely tied to processing preferences for information.

Jobs involving practical analysis and facts, such as those in applied sciences, law, and accounting, would allow a person with a Sensing (emphasis on facts as opposed to potentialities) and Thinking (usage of unbiased analysis as opposed to subjective analysis) type to work to their full capacity. While being reflective and thoughtful, intuitive personality types are drawn to occupations or academic fields that deal with ideas.

Job satisfaction can also be predicted by MBTI (Symanto Communications, 2022). For instance, a Perception type might be contented more if they operate on their own on a variety of projects, whereas a Judgement type may love pursuing independent initiatives the best owing to their preference for tidy and organized labor. It has been shown that extroverts thrive in highly exciting work environments while introverts prefer quieter settings whenever possible to concentrate on their thoughts and inner selves.

Understanding the motives and drivers of your employees will help you managing them better, maintain their focus and productivity, and reduce employee turnover. Additionally, it can aid in sustaining peace and harmony at work and workplace communication.

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3.9. IN-DEPTH LOOK: THE DISC METHOD

In-depth Look

Another theory of personality typing is the **DiSC method,** which rates people's personalities by testing a person's preferences in word associations in the following four areas:

- D personalities: are confident, results-oriented
- I personalities: are open, want to build relationships, influence other people
- S personalities: are dependable people, cooperative, sincere
- C personalities: want quality, things to be accurate, like experts, and being competent (What is DiSC?, n.d., para. 3)

Understanding the differences among people is a critical leadership skill. This includes understanding how people process information, how different experiences influence the way people perceive the environment, and how people develop filters that allow certain information to be incorporated while other information is excluded. The more complex the project, the more important the understanding of how people process information, make decisions and deal with conflict. There are many personality-type tests that have been developed and explore different aspects of people's personalities. It might be prudent to explore the different tests available and utilize those that are most beneficial for your team.

The theory presumes that everyone exhibits these behaviours constantly at varying degrees. For example, A could have an innate preference for Dominance behaviours while B displays more Conscientiousness behaviours. In order to utilize the DISC model effectively, it is crucial to understand each of the categories and how they relate to one another.

The DISC model is based on four basic behavioural styles. Each style is represented by a letter of the alphabet:

D – Dominance (D)

I – Influence (I)

S – Steadiness (S)

C – Conscientiousness (C)

• Results oriented
• Innovative
• Competitive
• Direct

D

• People oriented
• Enthusiastic
• Optimistic
• Creative

I

S

C

• Sincere
• Dependable
• Loyal, patient
• Modest

• Accurate
• Cautious
• Precise
• Analytical
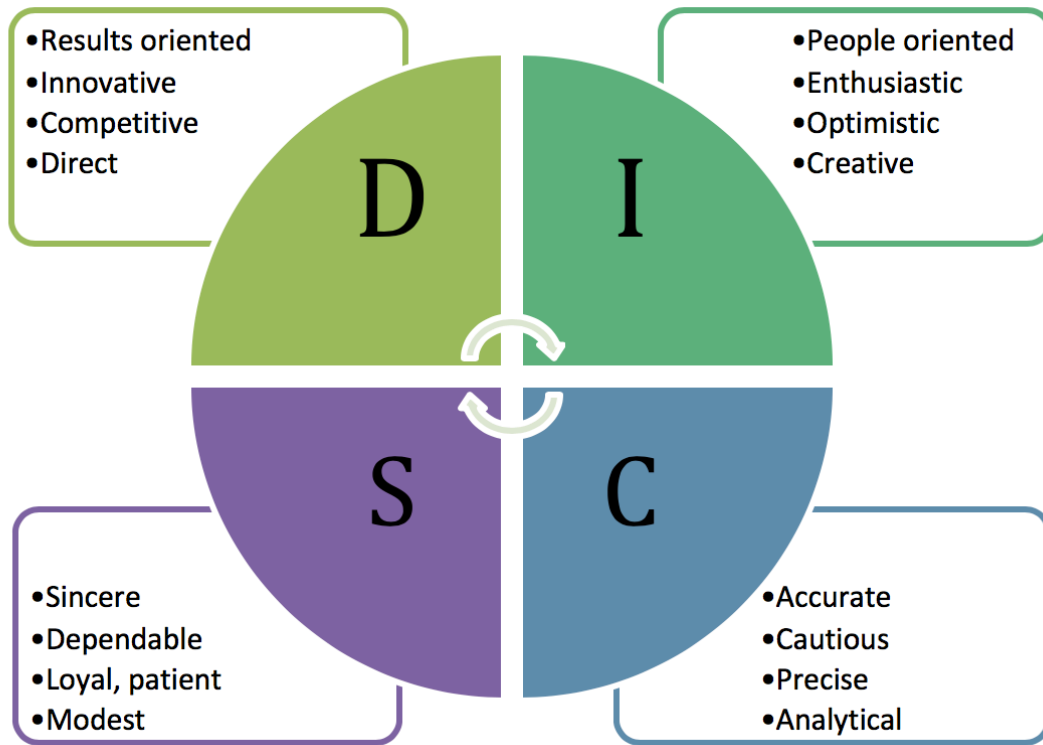
Figure 3-1: "DISC Profile" by Suzan Last CC BY 4.0

These four traits are at heart of the model and refer to the different motivational characteristics that are inherent in us all. It is increasingly being used in a range of contexts, including education and parenting, organizational behaviour, and team dynamics.

- **Dominance:** People who are dominant tend to be decisive, assertive, confident, and competitive. They like to have control over situations and are comfortable making decisions. High dominant traits are associated with directness, assertiveness, independence, and problem-solving skills (Bradberry, 2007).
- **Influence:** People who are influential tend to be persuasive, sociable, and energetic. They enjoy being around people and thrive on social interaction.
- **Steadiness:** People who are steady tend to be loyal, patient, and thorough in their approach to tasks.

They're good listeners and can be counted on for their dependability in both work and personal matters.

- **Conscientiousness:** People who are conscientious tend to be organized, detail-oriented, and thorough in their approach to tasks. They seek orderliness in all aspects of their lives — both at work and home—and orderliness in other people's behaviour.

People have different behaviour, but this difference is not inborn. These differences can be observed, and they are caused by different life experiences. While personality is fixed, behaviour is both flexible and adaptable (DiSC Methodology, 2019)

In theory, we all fall somewhere on each of the four behaviours represented by the letters in the acronym. In practice, one or two of these behaviours tend to be more dominant than the others. It is often helpful to understand which behaviours tend to be most dominant when dealing with people, whether you're trying to get a point across, decide together, or simply get along better with another person.

There are three key processes involved in using this model:

1. Identifying your own dominant characteristics;
2. Identifying others' dominant characteristics;
3. Understanding how these characteristics interact with one another within a group setting.

Identifying your own dominant characteristics

The first step in the process of using this model is to identify your own dominant characteristics. The best way to do this is to carry out a DISC assessment that will give you a general overview of your top three dominant characteristics as well as the second and third most likely ones. It's important to remember that no one person is purely one characteristic but rather has all four. However, it is possible to have different combinations of characteristics that make up your overall behavioural profile.

Identifying others' dominant characteristics

To understand others' behaviour, it is important to first identify their predominant character trait. This can be done by observing how they respond in given situations and what they say they would like versus what they actually do. You can also ask them directly about their thoughts or feelings on a subject. Their responses will give you a better idea of how best to approach them in various situations. If you are lucky enough to know someone well enough, you may even be able to find out what their childhood was like, which can help you understand why certain behaviour patterns develop.

How these characteristics interact with one another

within a group setting

Within a group setting, the DISC model's characteristics can interact with one another in a variety of ways. For example, within a group setting that has a bunch of "D"s, the group will be full of people who might receive high scores on Dominance characteristic but low scores on the "I" characteristic. This kind of group setting will be very task-oriented and goal-driven and will not spend much time socializing or getting to know each other better. Alternatively, in a group setting that has a lot of "S"s, we could have a lot of socializing and not much time spent on tasks. This is because the "S"s is more likely to be friendly and less likely to push for goals. Finally, in a group, including both "D"s and "I"s, we would probably see both task-oriented and socialization—in fact, it would probably be an ideal mix because everyone would get their say during discussions while also having equal opportunities to contribute to the achievement of group goals.

It is important to remember that no one person is purely one characteristic but rather has all four. It is possible to have different combinations of characteristics that make up your overall behavioural profile.

- A D/I person will be dominant but also open to suggestions from others.
- A D/S person will be domineering and closed-minded.
- An I/S person will listen to what other people have to say but may not be very confident in decision-making. They may even feel pressure from the group to make particular decisions.
- An I/C person is more likely to make decisions on their own but will listen to the opinions of others.

Questions to consider when carrying out a DISC profile assessment.

When trying to find out someone's DISC personality, there are a few questions you should always ask:

1. Do they have a tendency to be Dominant or submissive?
2. Do they respond to criticism by attacking the criticism or the person or by taking it in and making changes?
3. How do they feel about Evaluating things quickly or methodically?
4. And finally, when they're under stress, do they become Stressed-out and act without thinking, or does their behaviour become more Assertive and focused on finding new solutions?

Strengths of the DISC Theory

A strength of the DISC Personality System/model instrument is there are measurements in several areas of personality/human behaviour. It looks at each personality type, such as likes/dislikes, strengths, and challenges. It also looks at how the types make decisions, their motivations, and evaluate and influence others, and contributes to the team. According to Profile Assessments (n.d.) "DISC is the leading personality assessment tool, used by over 40 million people. It promotes increased communication skills for individuals, teams, and leaders".

Also, the DISC model is reliable and valid because the research/study was both quantitative and qualitative and was concentrated on human behaviour, empirical research, and a theoretical framework. Its findings were based on the study of the personality traits of a group of people.

"DISC Assessment is used by 75% of Fortune 500 companies due to the accuracy of the test result" (Beedu, 2021).

In summary, the DISC model is a tool that helps people to understand themselves and make adjustments allowing them to adapt their behaviour to others. It improves communication, improves misunderstanding, and increases effectiveness in teams. Teams are more cooperative, productive and perform better.

There are limitations to the DISC Model. Due to the many variations of the test, and not all of them have been vetted, this can lead to inaccurate results.

Also, there has been no large-scale correlation study to show that test results match real-world job performance making it more of an assumption than factual.

If the right information is not provided or chosen by the candidate, the results may be misleading, and the results will be wrong because they do not reflect the personality of the candidate.

"The test is in a multiple-choice format where the options are already given, and you have to choose the option that is nearest to your response. It sometimes feels very limiting to the person answering the questionnaire" (Bhasin, 2020.)

In summary, although the DISC model is able to measure individual/personality traits, the model doesn't predict or explain the success or failure of a person based on the results of his/her DISC assessment. It measures common tendencies but not skills and does not predict success.

Contribution the theory has made to HR:

Significant contribution of Human Resources officials to any organization is to determine and analyze human potential. DISC theory enables Human Resources Specialists in many ways. It is most helpful during recruitment processes. The different ways in which each candidate reacts to new challenges will help the HR team to analyze the individual "fit" for the organization and its strategies. DISC theory is being used by organizations because of it is practical and a seamless application. The tool's four basic components make it simple to learn and apply, especially for users with minimal familiarity with psychometric testing and little time

to commit to and research a comprehensive model of behaviour and personality. To maximize the value of DISC insights, DISC should be used on the selected applicants prior to the face-to-face interview. The tool's insights can assist to facilitate the dialogue, particularly in areas such as the candidate's preferred working style, strengths, and areas for improvement. The effective application of the DISC instrument enables the discovery of certain behavioural tendencies that would not have been apparent until the individual was already on the job (Isenhour, 2018).

This theory also helps in assessing interpersonal communication skills. This is a very important aspect for any HR, for working relationships within the organization and to stick people together. DISC also helps in keeping the training costs down as it enables to select the right candidates; therefore, the company's budget stays intact (Pyron, n.d.). Human Resources can understand and analyse the strengths and weaknesses of each team member, and this will help in planning processes ahead in a non-judgemental manner. The main advantage of DISC is that it helps Human Resources Specialists understand if a candidate matches the needs and requirements of the corporate culture. To some extent, it will also allow the HR team to provide any needed attention and rightful opportunities to the employees or their teammates (DISC Reports, n.d.). The DISC behaviour model can help individuals understand their natural leadership style and how to modify it for better management results.

Class of 2022 Contributions: Mabel Korsah, Tanaaya Sharma, Jane frances Nwokoro, Charmaine Perez

Human Resources Contribution to Project Management through Personality Tests

Trained Human Resources Specialists can determine roles each individual adopts in the project team. The testing can help teams learn from each other, reach outcomes and identify leaders in the groups. Human Resources is provided with informative insights about how the potential team members will impact the team, how people will work with each other, how they will solve problems individually and together, and manage their emotions while working on the project.

Think!

In relation to the DISC method, which of the personal preferences do you think related to you best? Why?

3.10. IN-DEPTH: THE BIG FIVE

In-depth Look

The Big Five

The Big Five is a modern personality framework (or the Five Factor Model, or the OCEAN model). The Big Five comprises of five personality traits that occur throughout bipolar continuums spanning from 0 to 100, in contrast to the MBTI's either-or nature (Ackerman, 2017).

Science supports the Big Five. Each trait has a high level of construct validity (Ackerman, 2017). This basically indicates that each attribute satisfies the criteria for trustworthy, valid, independent, and comprehensive categories. Additionally, the Big Five has far greater predictive potential than the MBTI.

Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism are the traits that make up the Big Five. The dynamic team of personality psychology, Robert McCrae, and Paul Costa, created the Big Five, giving each trait six sides. These qualities, in contrast to the MBTI typologies, have important implications for specific thoughts, feelings, and behaviors. Understanding the complicated, individual trait or behavior is crucial to knowing individuals (Kelly, 2019).

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3.12. KEY TERMS

Develop Collaboration: The various parties to the project are loosely coupled, whereas the tasks themselves are tightly coupled. When unexpected events affect one task, many other interdependent tasks are quickly affected. Yet the direct responsibility for these tasks is distributed among various loosely coupled parties, who are unable to coordinate their actions and provide a timely response. 3.2

Develop Results Based on Standard Criteria: The standard criterion is the success of the project. This implies that the parties develop a common definition of project success. 3.3

DISC Method: Which rates people's personalities by testing a person's preferences in word associations in the following four areas: Dominance/drive, Inducement/ influence, submission/steadiness and, compliance/ conscientiousness. 3.4

Emotional Intelligence: This is an important part of the project manager's ability to build trust among the team members and with the client. It is an important factor in establishing credibility and open dialogue with project stakeholders. 3.6

Focus on Common Interests: By avoiding the focus on differences, both parties are more open to finding solutions that are acceptable. 3.3

Generate Options That Advance Shared Interests: Once the common interests are understood, solutions that do not match with either party's interests can be discarded, and solutions that may serve both parties' interests can be more deeply explored. 3.3

Integrate Planning with Learning: "Project managers faced with unexpected events employ a 'rolling wave' approach to planning. Recognizing that firm commitment cannot be made on the basis of volatile information, they develop plans in waves as the project unfolds and information becomes more reliable. With their teams, they develop detailed short-term plans with firm commitments while also preparing tentative long-term plans with fewer details. 3.2

Maintain Forward Momentum: "When unexpected events affect one task, many other interdependent tasks may also be quickly impacted. Thus, solving problems as soon as they emerge is vital for maintaining work progress." 3.2

Myers-Briggs Type Indicator (MBTI): It is a tool that can be used in project management training to develop an awareness of preferences for processing information and relationships with other people. Myers-Briggs identifies 16 personality types based on four preferences derived from the questionnaire. 3.8

Prevent Major Disruptions: Successful project managers "never stop expecting surprises, even though they may affect major remedial changes only a few times during a project. They're constantly anticipating disruptions and maintaining the flexibility to respond proactively. 3.2

Separate People From The Problem: Framing the discussions in terms of desired outcomes enables the negotiations to focus on finding new outcomes. 3.3

3.13. CHAPTER SUMMARY

The role of the Project Manager is key to success. The MIT Sloan Management Review suggests four roles of the Project Manager which include collaboration, integration of planning with learning, prevention of disruptions, and maintenance forward momentum. Human Resources supports the hiring of Project Managers, selecting people who have communication skills including listening, negotiation and conflict resolution. Project Managers may need or have different leadership skills depending on the project. It is essential for the Project Manager to have leadership and managing skills to successfully lead and manage the team. Human Resources can develop Performance Reviews and set goals for the Project Manager and the team prior to the project starting.

Emotional Intelligence (EI) is a popular assessment used to select or provide professional development for Project Managers and teams. It is based on self-awareness, self-regulation, empathy, and relationship management. Other popular assessments are Myers-Briggs, The Big Five, the DISC Method and The Big Five. Each has its own way of measuring the leadership and management skills of Project Managers and teams. Human Resources Specialists would be trained prior to offering these assessments. In turn, they would administer the assessments to support the Project Manager and team in their professional development.

3.14. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed **by the Students** on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used **by the Teachers** as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. Form a **small group**. Read the short case study and discuss possible solutions: Short Case: Jagpreet is a project manager who has 5 months to complete a project. They cannot start the project for 6 months due to financial delays. Brenda, the functional manager, has stated the 6 individuals that you, the Human Resources Specialist, has selected for the project, are available now. If the project is delayed longer than 6 months, Jagpreet will need to take whoever is available for the project. What should you do as the Human Resources Specialist? **Individually**, make a list of possible solutions**. Pair up** with a partner and share your solutions.

2. Review the 5 responses to conflict in the text. **Individually**, think of a situation from your past where you were in conflict. How did you handle it? What could you have done differently knowing the 5 responses to the conflict? **Pair up** and discuss with a partner.

3. In a **small group**, discuss the following short case. Short Case: Huda, the CEO, has come to as a Human Resources Specialist, and has asked that Paul, an up-and-coming employee be a Project Manager. Paul is an engineer in the company. He has progressed through several technical jobs. He is knowledgeable in the engineering field. Huda has told you he is a good listener, has

negotiated contracts for the company, is a good problem solver, and was the lead engineer when the company attracted 2 new contacts last year. However, he has never led a team of people, nor worked in project management. Answer the following questions. Can Paul's qualifications be transferred to lead the new engineering project for the company? What is Huda's role in making the request? What is your role as the Human Resources Specialist to ensure a successful project?

4. **Individually**, review Emotional Intelligence, specifically "temperament." Form a small **group.** Think about and describe to your team members:

    a. 3 adjectives that best describe you. Write the down.

    b. 3 adjectives that you believe others use to describe you

5. With your **group,** research more in-depth research that your textbook provides on Temperament as it relates to: 1. Genetic Inheritance 2. Physical Attributes 3. Life Experiences 4. Environmental Conditions.

6. With your **partner,** answer the following questions:

    a. How does each temperamental factor affect you personally?

    b. Which of these factors might you wish to change? Why?

7. In a **group of 3**, each student chose either Emotional Intelligence, Myers-Briggs or DISC Method. Review your chosen assessment. List the advantages/benefits of using the assessment, and the limitations of the assessment. Compare and discuss the results among your group. Decide among yourselves which assessment you would prefer to use as a Human Resources Specialist, and why. Share your choice with the **larger class** providing your rationale for your choice.

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. What is the difference between leadership and managing?
2. What is the most important characteristic of a project manager?
3. What skills would a Human Resources Specialist seek in a potential project manager related to managing a team?
4. How does Human Resources' role impact a project manager?
5. How is Emotional Intelligence beneficial in selecting a project manager?
6. In **pairs,** review Myers-Briggs Type Indicator (MBTI). What are the strengths of MBTI? List the strengths. Discuss with your partner how you would use MBTI in your work as a Human Resources Specialist. Share with the **larger group.**

CHAPTER 4 – PROJECT TEAM

Chapter Outline

4.1. Learning Outcomes
4.2. Successful Team
4.3. Developing Team
4.4. In-depth Look: High Performing Teams
4.5. In-depth Look: Tuckman's Model – Five Stages of Team Development
4.6. In-depth Look: Evolution of Tuckman's Model
4.7. In-depth Look: GRIP Model of Team Effectiveness
4.8. Team Communication
4.9. Team Motivation
4.10. Diversity, Inclusion and Leadership
4.11. Knowledge Check
4.12. Key Terms
4.13. Chapter Summary
4.14. Learning Activities and Exercises for Students/Teachers

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4.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you should be able to:

1. Identify the basic needs of our team members.
2. Explain the stages that a project team goes through and be able to identify the role that a project manager should try to play during each stage.
3. List advantages of teams and strong leadership.
4. Discuss the role of trust in building a team, and describe behaviours that help build trust.
5. List motivators and de-motivators that can affect a team's effectiveness.
6. Explain issues related to managing transitions on a team.
7. Describe the advantages of diverse teams and provide some suggestions for managing them.
8. Examine the development and success of high performing teams
9. Describe Maslow's Hierarchy of Needs
10. Name the 5 stages of team development

4.2. SUCCESSFUL TEAM

As Laufer, Little, Russell and Maas (2018) explain in their book Becoming a Project Leader, "When it comes to projects, one thing is very clear: 'right' does not mean 'stars.' Indeed, one of the primary reasons for project 'dream teams' to fail is 'signing too many all-stars.'" More important than an all-star is a project team member fully committed to the project goals.

Project All stars

Chuck Athas was one such team member. He worked for Frank Snow, the Ground System and Flight Operations Manager at NASA's Goddard Space Flight Center. Officially listed as the project scheduler and planner, Chuck was eager to help Frank once the schedule was completed and needed less attention. "Anything that needed to be done, and he

"Building 29 at Goddard Space Flight Center" by NASA Goddard Space Flight Centre is licensed under CC BY 2.0

didn't care what it was, he would attack with the same gusto and unflappable drive to succeed," Frank said. "Whatever it took to get the job done, Chuck would do. Was there anything he couldn't make happen? Probably something. But with Chuck on the team I felt like I could ask for Cleveland, and the next day he would show up with the deed" (Snow, 2003).

Chuck demonstrated a lack of ego that most all-stars don't have. His can-do attitude is the antidote to the not-my-job thinking that can sometimes cause team cohesiveness and project completion to falter. His adherence to the project goals over his own goals made him an ideal team member (Laufer et al., 2018).

4.3. DEVELOPING TEAM

The project team works with the project manager to develop the project management plans, schedule the work of the project, acquire the needed resources, monitor project progress and see the project through to its successful completion. Team members may be devoted solely to working on the management aspects of a project or may also be performing the work of the project. How well the project team works together will determine the success or failure of a project.

HR in Focus: Team Development

Human Resources Specialists may work with the Project Manager to help recruit, develop, and monitor the team. In managing projects, HR will want to review the strategic plan first with the team. HR can support the team to get organized in the following ways:

- **Define the purpose of the team and project.** The team needs to know the overall purpose and goals. The HR Specialist can help them set goals within the project.
- **Measure the team's performance.** The project manager and the HR Specialist can discuss and establish metrics and reporting of metrics related to performance. These measurements would be discussed with the team to ensure success. The HR Specialist can help to monitor performance throughout the project.
- **Reward the team.** HR Specialists can set up reward systems that are linked to the goals of the project which helps to motivate the team for success.

Team Building Exercises

HR Specialists can help project managers and teams to develop team skills through various activities and

exercises. This assists with the development of interpersonal relationships, collaboration and cooperation between the team members, the team and the project manager.

There are many different types of team-building exercises. Some to consider may be:

- **Goal setting:** The team, along with the project manager, plan a simple project, with goals and outcomes, measures of success.
- **Role definition:** Each team member is given a defined role within a team challenge and plays out the role.
- **Communication exercises:** The team designs a presentation and delivers the presentation.
- **Problem solving exercises**: The team is given a challenge (i.e., plan a trip into space). They must work together to plan the trip and include all the resources needed to survive the trip.

HR plays a significant role in building team collaboration to positively influence the success of projects.

Team Member Motivation

With regard to how project managers may view the motivation of team members, let's take a look at what motivates individuals, teams, and organizations.

Maslow's Hierarchy of Needs

Abraham Maslow provided a model to understand basic human needs which is usually represented as a pyramid (*see Figure 4-1)*. Each need builds on the others: A person's esteem needs are not that important if they are struggling with meeting the biological need to eat. Here are each of the levels in Maslow's hierarchy:

1. **Biological and Physiological:** What a person needs to survive, such as food, water, and shelter.
2. **Safety**: The need to be safe in your person, have financial security, and protection against accidents and illness.
3. **Love and Belongingness**: The need to be loved by one's family and community.
4. **Esteem**: The need to be respected and valued by others.
5. **Self-Actualization:** At the top of the pyramid is the desire to become the best version of yourself that you can. For example, working hard to become the best artist, parent, or project manager you can become.
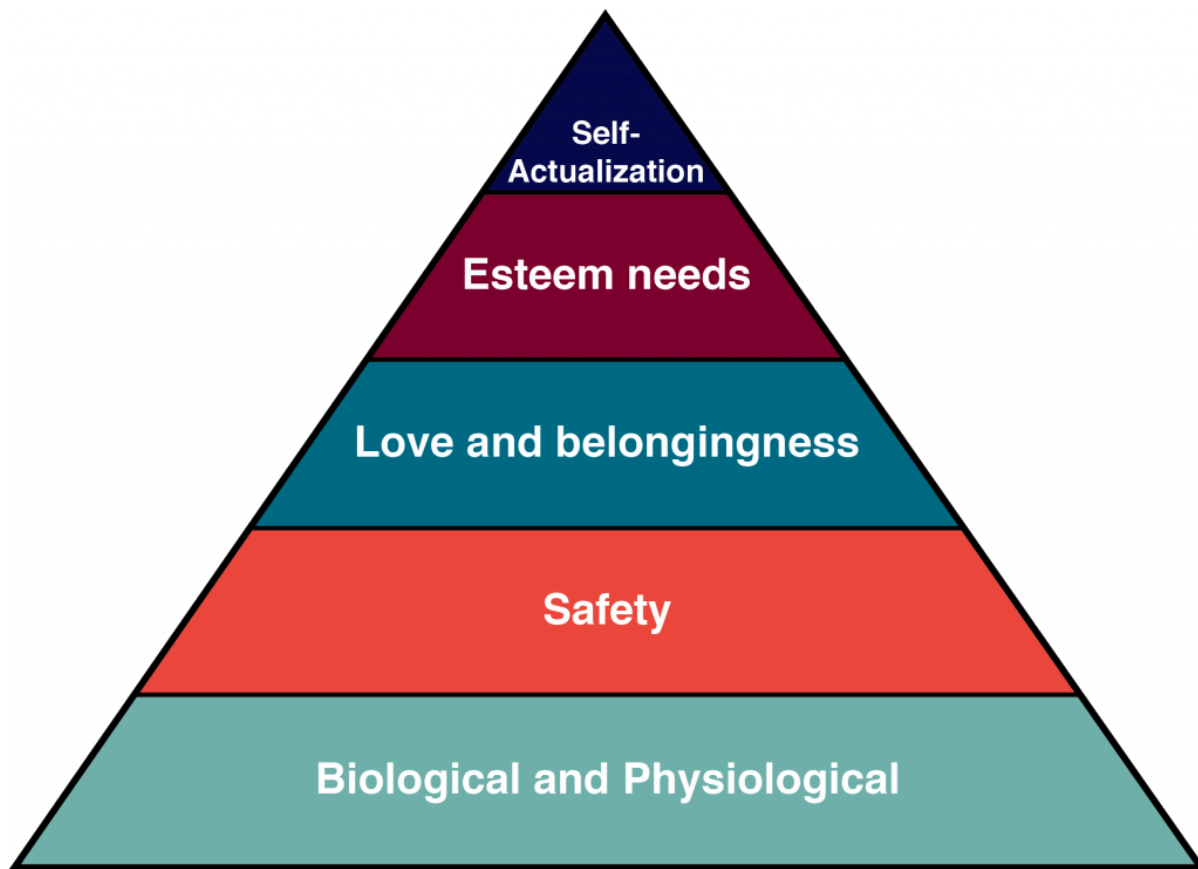
Figure 4-1: Maslow's Hierarchy of Needs

For project managers, this model is useful in several ways. It explains why team members who have problems with their health, family relations or other "lower" needs, will have a problem performing their best on the job. Project managers will also try to meet the esteem needs of their team members by acknowledging their contributions and celebrating successes. This can be an award formally presented at a celebration dinner, or a simple email expressing thanks. Anecdotally, it doesn't seem that the size or formality of the acknowledgement matters much, what is important is that it is given sincerely. An in-depth review of Maslow's Hierarchy of Needs follows on the next page to understand the deeper meaning of motivation for Human Resources Specialists.

In-depth Look

An In-Depth Review of Maslow's Hierarchy of Needs

Maslow's hierarchy of needs is a psychological theory that emphasizes the pursuit of various levels of needs in explaining motivation. "A Theory of Human Motivation," written by Abraham Maslow in 1943, introduced Maslow's hierarchy of needs (Maslow's Hierarchy, 2022).

Maslow's Hierarchy evolved from Maslow's firsthand observations of the Blackfoot Nation, a highly successful and developed society in which he immersed himself prior to developing his theory. Maslow went to spend time with the Blackfoot and found that his theory of human development had been greatly influenced by their culture. To be more specific, he "imitated liberally" (to keep it mildly) the Blackfoot individuals to strain his psychological theory. Later, the theory was further refined in 1954 by Maslow in his book *Motivation and Personality* (Safir, 2020). In sociology, management courses, and psychology classes, this theory has remained popular ever since (Maslow's Hierarchy, 2022).

According to this theory, people are motivated by a hierarchy of needs, starting with basic needs, and then moving on to more advanced needs. The main five points describe this theory, which is most important for human life, such as physiological needs, safety needs, love and belonging, esteem, and self-actualization, respectively. whereas from the bottom of the pyramid, physiological needs come first, safety needs come second, love and belonging come third, esteem comes fourth, and self-actualization comes fifth. Based on its five stages, this model can be divided into two categories (needs): deficiency and growth. It is commonly referred to as deficit needs (needs-D) for the primary 4 steps, and development or being needs (needs-B) for the most elevated steps. Deficit needs are a result of deprivation and are said to persuade individuals when they are deprived of their fulfillment. Moreover, if they are denied for a long time, their motivation will be stronger to fulfil them. For example, a person will become hungrier the longer they go without food (McLeod, 2022).

After a deficiency need is ''met,'' it goes away, and our efforts will at that point be coordinated toward set of needs that we haven't met yet. Then it transfers to our silent requirements. In any case, once the growth needs have been met, they may even become stronger (McLeod, 2022).

Rather than stemming from a need for something, development needs emerge from a craving to develop as an individual. One could be able to achieve the most elevated level of self-actualization once these growth needs have been satisfactorily met (McLeod, 2022).

In 2010, a psychology group tried to improve Maslow's hierarchy. In a recent edition of Perspectives on Psychological Sciences, they presented a revised form of the classic pyramid of needs. 3 The initial hierarchy had five levels, 7 levels in the updated version. The suggested new version's bottom four levels are very similar to Maslow's. However, the proposed new version's high levels include significant differences. The elimination of self-actualization—the greatest levels of the original version —was a scandalous adjustment.

The New Needs Hierarchy

- Parenting

- Mate retention
- Mate acquisition
- Status/esteem
- Affiliation
- Self-protection
- Immediate physiological necessities.

However, the suggested changes to original Maslow's hierarchy were met with criticism. Four different discussion pieces on the initial and altered descriptions of the Maslow hierarchy were featured in the journal issue that contained the new hierarchy.

What are the principles on which it is based?

According to Maslow's physiological, safety, esteem, and self-actualization are the basic 5 requirements that motivate people. People's behaviors are influenced by the internal force (McLeod, 2022).

- **Physiological needs:** Physiological demands are the basic human needs like food, air, water, sleep, clothing, and shelter (McLeod, 2022).
- **Safety needs:** People's feelings of well-being and security, which include personal safety, good health, financial stability, protection from injury and accidents, as well as their negative impact on people's lives is called safety needs (McLeod, 2022).
- **Social needs:** People who have a sense of acceptability and belonging in society have social needs, such as family, friendships, and so on. These are examples of ways people satisfy their social needs to avoid feelings of isolation, loneliness, and so on (McLeod, 2022).
- **Esteem needs:** Self-respect is more important than respect from others.
- **Self-actualization needs:** Reaching one full potential is called self-actualization. Every person's self-actualization is different based on the priorities of people (McLeod, 2022).

As the theory's name suggests, the needs are categorized in a hierarchical order. According to this principle of progression, Needs should be met from the lower part of the pyramid then only they can reach to the next level of the pyramid. If one's need is fulfilled, it is no longer incentive functions according to the principle of deficit (McLeod, 2022).

Strengths of Maslow's Hierarchy of Needs

The strengths of Maslow's hierarchy of needs are as follows:

1. Uncomplicated to comprehend

Maslow's theory is easy to understand and can be related to every people as we will be reached self-actualization starting from the bottom of the hierarchy (Parikh, 2018).

2. Human Nature is considered.

Although the demand is great, the percentage of demand that is met is low. If a man is hungry and food and a car are given as the choice, he will choose the food first and then demand the automobile. As a result, one may argue that greed is established in human nature, as Maslow's Theory of Motivation so eloquently demonstrates (Parikh, 2018).

Based on Abraham Maslow's book, *A Theory of Human Motivation*, human beings have distinct needs which depict various importance and contribute to the well-being of the need hierarchy of needs pyramid. According to the hierarchy of needs theory, people do not think about their higher needs when their basic needs have not been satisfied, meaning satisfaction is the motivation to achieve more significant needs (Simsek, 2019). However, humans tend not to be satisfied since after one gratifies a market, another takes place in their minds; hence, they constantly move from bottom to top of the hierarchy of needs.

Maslow's pyramid has helped the project and human resource managers to ensure team members work at the highest level. Through the theory, managers can understand their employees as an individual to ensure their basic needs are met before striving to meet higher needs, which can help in identifying the required action to keep employees motivated. The theory has also helped managers ensure that when creating a team, their basic needs are satisfied first. When encountering motivation issues, they can find out if their basic needs are satisfied; if not, they lay out strategies to meet them (Simsek, 2019).

Maslow's hierarchy of needs has contributed significantly to project management and human resource due to its practical values. The theory has been successful in the business field as managers can now have the insight to identify employees' needs tailoring their management approach and rewards. However, the theory has received various criticisms. One of the major criticisms of the theory is associated with the unscientific approach of the theory. Other researchers, argue that the theory used insufficient samples and the research methods that Abraham used to conclude its effectiveness; for instance, biographical analysis and personal observation were inadequate and lacked sufficient support (Team, 2017).

The criticism indicates that Maslow's theory of motivation lacks credible empirical and scientific support thus not applicable in most cases. Winter (2016) argues that the Maslow hierarchy lacks partial or little scientific community to validate the theory; hence there lacks clear and consistent support for the available research findings. In addition, the researchers argue that Maslow did not clearly define each need within the hierarchy since measuring satisfaction is difficult.

Maslow's hierarchy of needs makes a lot of sense, especially in project management. However, the theory is supported by minimal evidence for the hierarchical phases. The Phase of self-actualization lacks a precise

classification and evidence except anecdotal, making the approach unreliable. Despite the existing gap in and lack of scientific support for Maslow's theory, the approach is renowned and continues to be applicable, especially in project management.

Project management tends to be based on three major management theories: the dispatching model, management as planning, and the thermostat model. These models are essential to understand in project management; for instance, management as a planning theory has been used widely despite having an implicit view of intentional organizations and continues to be used. Besides, the dispatching model tends to be like the management as planning model but has been more applicable in industrial engineering since the early 20th century (Koskela & Howell, 2002). The thermostat model has been applied more, especially since the 20th century, during the initial stages of project management ideas. The combination of these theories forms a solid management practice used today. These theories were introduced during the initial stages of project management in the 20th century. Still, the approaches tend to be less applicable due to the continuous complexity of project management in the 21st century. Managers and researchers are striving to find new project management strategies, making the initial theories less applicable (Koskela & Howell, 2002).

Implications of the Theory

1. Financial Incentives

Modern management theories do not stress the importance of money as an incentive to get the best out of individuals. The fact that money is not an end but a means to purchase ends enables it to satisfy both physical and safety needs, the lower-order needs. While money is not important to some people, no matter how much of it they might have, the desire for more money can still motivate many.

2. Non–Financial Incentives

Non-financial benefits are prioritized over cash rewards to promote psychological and emotional satisfaction. Some non-financial incentives are as follows:

- Status — In an organization, the status system is a motivator since it is tremendously essential to most employees. It should be tied closely to the strengths and aspirations of the organization's employees.
- Promotion — It is described as a promotion to a post with greater responsibilities and recognition. It depends on one's ability and performance; if the opportunities for promotion exist, people will strive for them.
- Responsibilities — When work is meaningful, it accomplishes people's natural and inherent features, and they put in greater effort to complete it.
- Making work enjoyable and interesting — This promotes interest in work, and employees treat it as if it

were fun.

- Work Recognition — It entails recognition in the form of an act of appreciation. Employees are driven to perform work at a considerably greater level when they receive such praise for their efforts.

(Employee Motivation, 2009)

3. Behaviour Modification

Another method for influencing people in an organization is Organizational Behaviour Modification. Organizational Behaviour Modification involves the following steps: —

- *Identification of critical behaviours:* This involves steps identifying the behaviours of employees at work that have a notable impact on the employee's performance.
- *Behaviour measurement:* The number of times the identified behaviour occurs is used as a baseline. Baseline measurements are used to provide objective-frequency data on critical behaviors.
- *Functional analysis of behaviour*: This involves examining (1) the antecedent cues, or variables that appear to trigger the behaviour, and (2) the repercussions or the consequences that the behaviour has on the individual.
- *Development of intervention strategies*: Focus should be on identifying benefits that can be used as positive reinforcements and developing strategies for offering these reinforcements in exchange for subordinates performing the desired critical behaviour.
- *Evaluation of performance to ensure improvement:* Such evaluations can be used to determine whether the program should be continued and investigated to develop effectiveness.

(Employee Motivation, 2009)

4. Empowerment

Empowerment is helping employees by providing them with opportunities, the resources they need to perform their work, authority over their every day jobs, and accountability for their work and behaviours while at work. All these things assist employees to be happy and effective at their workplace.

Steps of empowerment

1. Identifying the conditions of disempowerment.
2. Putting empowerment methods and techniques into action.
3. Eliminating feelings of disempowerment and providing knowledge about self-efficacy.
4. A sense of empowerment was created.

5.   Empowerment leads to success.

(Employee Motivation, 2009)

Human Resources and Maslow's Hierarchy of Needs

For Human Resources and Project Managers, understanding and applying Maslow's Theory of Motivation is essential. The team will stay motivated, and any motivational issues will be rectified with this approach.

Now that we understand the theory, the best approach to put it into practice is to strive to get everyone on your team to work at their best. Human Resources would work with the Project Manager and the team members to help them get to know each other. Knowing the team members personally and seeking to understand their specific needs will help determine what steps are needed to keep them engaged.

The following steps can be taken to enhance the practice by Human Resources:

- Complete regular surveys to know the needs of the employees as needs always change with time.
- Use job rotation, job-enrichment, job enlargement, and similar other techniques to remove monotonous from the job.
- Offer tasks which are challenging but achievable as well.
- Offer a bit of liberty should be provided to the employees to fulfill their social needs in the organization.
- Organize functions to introduce the newly recruited employees to the organizational culture.

(Maslow Theory of Motivation, n.d.)

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Understanding Team Development

A number of management professionals and academics have studied project team development. Let's review the model that PMI considers the most valuable in understanding team development created by Bruce Tuckman (1965) who observed that teams go through a series of developmental stages: Forming, Storming, Norming, Performing, and Adjourning. Each stage has predictable characteristics.

- **Forming:** The group is brought together for the first time. The team is orienting themselves to the task at hand. At this stage, there may be little agreement on how to approach the project and team members may struggle with understanding the purpose of the project. The project manager needs to provide guidance and direction during this stage.

- **Storming:** Team members are trying to figure out their roles in the group. Conflict and power struggles are common, but so is a clearer vision for the group. During this time of intergroup conflict, the project manager needs to provide support and coaching.
- **Norming:** At this stage, the team will have developed a consensus regarding roles, processes and approach to the work ahead. The project manager should participate by working as a facilitator for the group.
- **Performing:** At this point the group has a clear vision and purpose and is focused on meeting performance goals, project milestones and other benchmarks. The project manager should be able to delegate more and more responsibility to the team, with less supervision.
- **Adjourning:** Once the project is completed, the team should collect lessons learned and transition to other projects or roles. The project manager should provide recognition of the work done by the team and help them transition to their next project (provide recommendations, etc.)

A more in-depth look at Tuckman's Model is discussed in 4.6.

Fast-Tracking Team Development

Project managers who can quickly move the team from the Forming stage to the Performing stage will have huge advantages in terms of performance. To do this, project managers incorporate team-building activities into the project. Starting the project with some team-building activities will let the team start to form, resolve interpersonal conflicts and develop norms of behaviour in a low-risk environment.

Unfortunately, some project managers perceive taking time for team building as a waste of time. However, the time invested here pays off with a much more motivated and better-performing team. There are lots of opportunities to incorporate team-building activities into the planning process. Perhaps the most important process a project manager can facilitate is helping team members learn to trust each other.

Human Resources and Team Project Development

The characteristics and behaviours of teams are important to project success. It is important to choose effective teams that reflect good team compatibility.

Cooperation: Willing and able to work together for the good of the project. They are willing to share resources, be flexible, accommodate each other's needs and meet deadlines.

Communication: They are able to relay information clearly and concisely and be good listeners when discussing project goals, outcomes and tasks to be performed.

Coordination: They need to work together on the project to "keep things on track" and integrate each other's work into the daily outcomes.

Console: They need to maintain positive attitudes and be mentally and psychologically stable; and support each other to be and do the same. They must be able to be empathic, soothe each other, and help each other build self-esteem and self-confidence in the project duties.

Figure 4-2: Project Team Compatibility

Conflict resolution: They need to have the skills to motivate and resolve conflict when it arises. Disagreements are part of any project as each member has different ideas on how to perform tasks in the project. Effective team members can discuss issues, brainstorm ideas for resolve, and continue work in harmony.

Human Resource Specialists are skilled in identifying these compatibility skills and talents. They can support the hiring, along with the Project Manager, to ensure the team members are mutually accountable to each other.

4.4. IN-DEPTH LOOK: HIGH PERFORMING TEAMS

In-depth Look

History of High-Performing Teams

The concept of high-performing teams was born by the Tavistock Institute, UK, in 1950. It became popular in the 1980s with major high-end companies like Hewlett-Packard (HP), General Electric (GE), and Boeing. In early 2000, the prestigious MIT (Massachusetts Institute of Technology) Dynamics Laboratory team investigated the patterns that drive team communication engagement and found out that energy, engagement, and exploration are the most important predictors of a high-performing team.

According to the Harvard Business Review, high-performing teams are highly sought after in the corporate world. The need for high-performing teams is in response to competitive challenges and rapid technological development in the corporate space. High-performing team structures enable the application of multiple skills, talents, and decision-making that help to foster productivity and development for emerging companies (Chapman, 2022).

Evolution and Principles of High-Performing Teams

The theory of high performance was developed by a psychologist named Bruce Tuckman; he explored the stages of team development in relation to team performance. These stages are Storming, Norming, Forming, Performing and Adjourning. He expands on some important points that are important in running an organization. He focuses on the role of leadership and the importance of team decision-making. In 1973, John Adair developed Tuckman's theory to develop the idea of team building using three core tenets of Tuckman's theory: Fulfilling the task at hand, developing a strong group or team that can perform the work. Developing each team member who is integral to the performance of the work (Developing and Sustaining, n.d.).

Role of Personality Types in High-Performance Teams

High-performing teams should include members having different personality types and cultures in the

balanced mixes that would allow for diverse opinions, different viewpoints, and a varied choice of solutions. Most organizations use a personality indicator for teams along with other modes such as a Behavioural Model or a Core Competency Model. This allows the organization to map talents and personality traits that exist already and what may still be required of the team. This enables it to make better assessments and improve team matches (Profiles, 2020). Personality tests are often completed by Human Resources to make these choices.

One of the most commonly used personality type indicator by most organizations is the Myers-Briggs Type Indicator (MBTI) in which 16 personalities are used to loosely map to the 'Big Five Personality Framework' by Carl Jung. MBTI groups people into 4 types: Thinking, Feeling, Sensing, and Intuitive. It is said that people with Feeling and Intuitive traits likely prefer to interact in abstracts and guidelines whereas those with the Sensing and Thinking trait have a preference to communicate in specific terms and exacts (Profiles, 2020).

Human Resources professionals should make an effort to include cognitive diversity into the team. This would mean looking for professionals with various types of personalities. It would also mean that though HR should be looking at education, work experience, information processing styles, and culture in a candidate, at the same time, the personality of a person will play a huge role (Profile Asia Pacific, 2020). If HR includes different personalities in a team, it is crucial to make sure that all the members are communicating well with each other and with compassion. It is important for a team to give a high performance that management or team leaders can acknowledge and work along with the distinct personality styles and communication present in the team (Profiles, 2020).

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4.5. IN-DEPTH LOOK: TUCKMAN'S MODEL - FIVE STAGES OF TEAM DEVELOPMENT

In-depth Look

The *Five Stages of Team Development*, also known as *Tuckman's Theory*, was developed and created by psychologist Bruce Tuckman in 1965. Tuckman stated that the teams must cover five stages of development which are: forming, storming, norming, performing and adjourning (Tuckman's Theory, 2021). An important point he considered is that the team must go over these five stages to achieve its full potential, and according to this theory, the first approach is when the group members first meet, and the last moment happens when the team finishes the project (Tuckman's Theory, 2021).

Originally the model, Bruce Tuckman (1965) only included four stages of team development, these were Forming, Storming, Norming, and Performing. However, in the late 1970s, he included a fifth stage which is adjourning. This last stage is known as mourning or termination (Business, n.d). This model explains how the team develops maturity and ability, establishes relationships among the members, and the changes of the leader when it comes to the leadership styles. The leadership style changes among the distinct stages. It begins with a directing style, then to coaching and participation and in the finishing stage, the delegation stage (Bruce Tuckman's 1965, n.d.). Tuckman's model is an explanation and understanding of how a team develops. As well, it helps to train people in group work enabling them to accomplish their full potential (Bruce Tuckman's 1965, n.d.).

Overview of the model

Tuckman's research was related to psychotherapy and the mental health context. Taking into consideration this review, he separated the articles into three categories:

1. the ones that described therapy groups,
2. those that described human relations training or T-groups in which an intervention was designed to raise the interpersonal sensitivity and support other people to socialize fruitfully
3. those that mixed articles related to the nature of the group existence with those groups solely created to make research on topics about group phenomena (Bonebright, 2010).

In 1965, Bruce W. Tuckman released a literature publication that was reviewed-based named *Development Sequence in Small Groups*. The focal point of the article was on two dimensions of group development: interpersonal relationships, and task activity. Tuckman conjectured a model composed of four stages in which each stage is required to be successful to achieve the effectiveness of the group functioning (Bonebright, 2010).

Concepts

To understand Tuckman's theory first is important to define basic concepts. The definition of a team is a key element of this theory and according to the authors, McShane, Tasa and Steen (2018) which "are groups of two or more people who interact and influence each other and are mutually accountable for achieving common goals associated with organizational objectives and perceive themselves as a social entity within an organization."

One important element for teams is task interdependence which is the extent to which team members must share materials, information, or expertise to perform their jobs (McShane et al., 2018, p. 222). Teams develop feelings, but what are they? According to the Cambridge, Dictionary feeling as a noun is *a fact of feeling something physically* (Cambridge, n.d.). After developing a feeling, something occurs, and it is called behaviours which are important in having effective relationships with team members that are a key element for each stage of Tuckman's theory. According to the New South Wales (NSW) Government behaviour is how someone acts (What is behaviour, 2020). It is what a person does to make something happen, to make something change or to keep things the same. Behaviour is a response to things that are happening and can be on two levels, *internally* – thoughts and feelings and/or *externally* – the environment, including other people. Observing behaviour is the easy part. It is understanding why someone does what they do that is much more complicated (What is behaviour, 2020).

In the storming and adjourning stage conflicts might occur and they are something very common within teams. It is important to understand that conflict among team members may undermine team cohesion and performance (McShane et al., 2018, p. 307). But what is team cohesion? It refers to the degree of attraction people feel toward the team and their motivation to remain members. It is a characteristic of the team, including the extent to which its members are attracted to the team, are committed to the team's goals or tasks, and feel a collective sense of team pride (McShane et al., 2018, p. 227).

Team roles are important to be defined and this occurs during the forming stage, defining the roles is important to work efficiently, but we need to understand the meaning of a role first and it is a set of behaviours that people are expected to perform because they hold certain positions in a team and organization (McShane et al., 2018, p. 225).

Processes and Steps

After analyzing several groups and studying the development of humans in groups, their behaviour and interaction referred to the task activity, Tuckman defines four summarize stages knowing that this can be subject to further change due to them being a statement of data (Tuckman & Jensen, 2010), these stages are:

- **Forming** is a period of testing and orientation in which members learn about each other and evaluate the benefits and costs of continued membership. People tend to be polite, will defer to authority, and try to find out what is expected of them and how they will fit into the team (McShane et al., 2018, p. 232). During this stage, several things occur, such as developing feelings like the excitement of being part of the team, and the behaviour of the team is a reflection of their excitement about the new team and the uncertainty or anxiety they might be feeling about their place on the team; lastly, team focus their energy in task development by creating clear goals, structure, direction and roles to begin creating trust within the team members (Stein, n.d).
- **Storming** is a stage that is marked by interpersonal conflict as members become more proactive and compete for various team roles. Members try to establish norms of appropriate behaviour and performance standards (McShane et al., 2018, p. 233). During this stage, the team focuses on developing ideas; they develop feelings of frustration or anger with members or processes and members try to see how others handle conflict. This stage could be considered the less polite one due to frustration and disagreements. The team develops tasks to redefine the goals and conflict management (Stein, as cited in McShane et al., 2018).
- **Norming** stage is where the team develops its first real sense of cohesion as roles are established and a consensus forms around group objectives and a common or complementary team-based mental model (McShane et al., 2018, p. 233). During this stage, the team develops an increased sense of comfort by expressing their ideas and feelings and constructive criticism for the team's success, members are more conscious of the effort and achieve group harmony and they develop their language. The team focuses their energy on their goals and productivity (Stein, n.d).
- **Performing** is where the team members have learned to efficiently coordinate and resolve conflicts. In high-performance teams, members are highly cooperative, have a high level of trust in each other, are committed to group objectives, and identify with the team (McShane et al., 2018, p. 233). During this stage, the team experiences a feeling of satisfaction and shares insights into personal and group processes, they feel attached to the team and feel confident they behave with a doing attitude and are more fluid among members they accomplish the tasks and celebrate the progress (Stein, as cited in McShane et al., 2018).

These four stages are the result of previous stages that Tuckman proposed as a model of development for various group settings over time, labelled (1) testing and dependence, (2) intragroup conflict, (3) development

of group cohesion, and (4) functional role relatedness. The stages of task activity were labelled (1) orientation to task, (2) emotional response to task demands, (3) open exchange of relevant interpretations, and (4) emergence of solutions (Tuckman & Jensen, 2010).

After 12 years and some criticisms of the Tuckman model, he ran some reviews to examine published research on small-group development that would constitute an empirical test of Tuckman's (1965) hypothesis that groups go through the previously mentioned four stages. As a result of these studies, a fifth stage, "adjourning," was added to the hypothesis (Tuckman & Jensen, 2010).

Adjourning is the final stage that occurs when the team is about to disband. Team members shift their attention away from task orientation to a relationship focus (McShane et al., 2018, p. 233). During this last stage, the team feelings might be concerns and anxiety because of the uncertainty or future. At the same time feelings of satisfaction and mixed feelings. Morale might rise or fall in the ending stage. During this stage some members lose focus and reduce productivity and they focus the tasks in three sections – completion of deliverables, evaluation and closing (Stein, as cited in McShane et al., 2018).
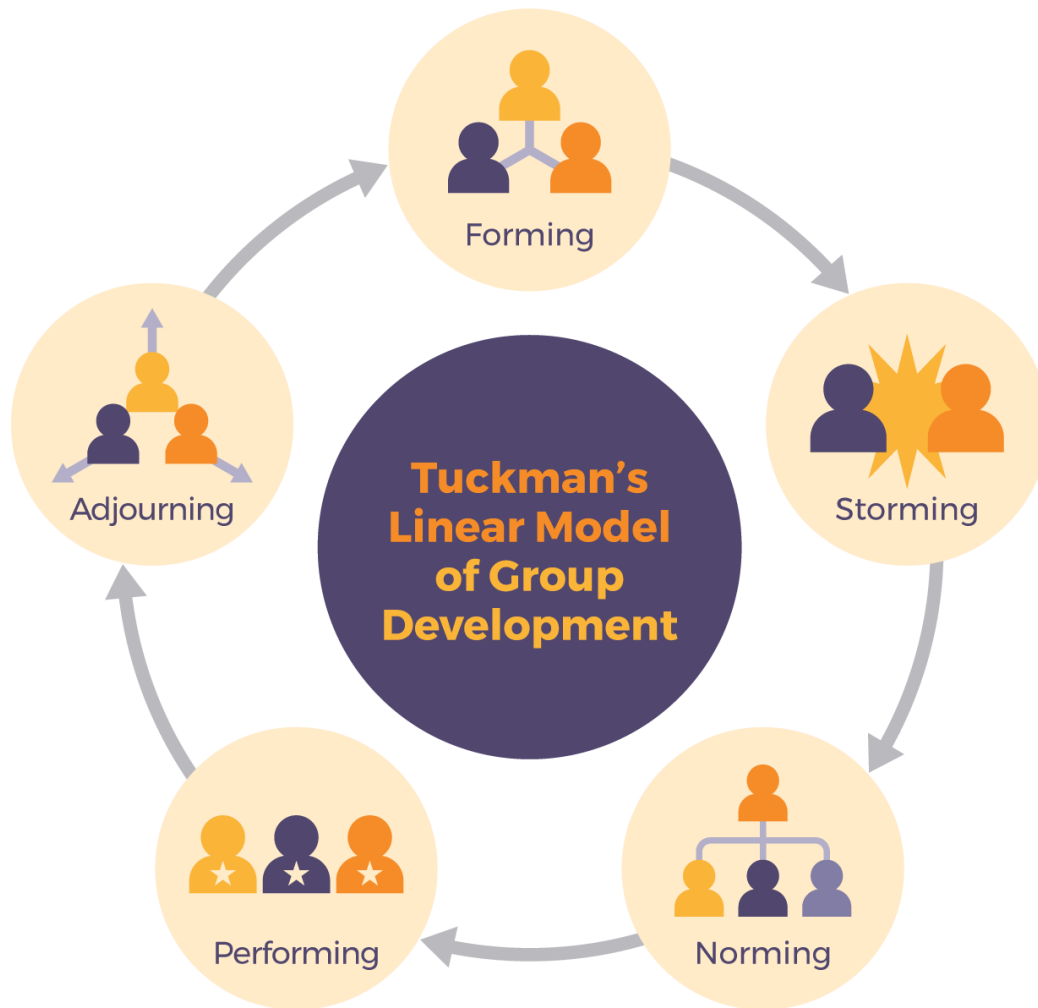
Figure 4-3: "Tuckman's Model of Group Development" by eCampusOntario, CC BY-SA 4.0

Strengths of the 5 Stages of Development

Bruce Tuckman's theory of the five stages of development has been widely used in all aspects of educational and business paradigms. Each stage emphasizes commonly experienced behaviours that are consistently present in the group and team dynamics (Stein, as cited in McShane et al., 2018). In most professional circumstances there will be instances where employees will need to work together to complete a common goal or task. These situations can often be the cause of frustration, anxiety, and burnout for one or all members involved in the group (Mastering 5 Stages, n.d.). This is where Tuckman's theory shows its strengths. Members of a flustered and frustrated group can look at the 5 stages and use the behaviours that they're exhibiting or general feelings of the group to track their progress within the five stages. Tuckman's use of identifying words such as

coping, anticipation, dissatisfaction, and optimism gives members groups the tools to recognize their stage of development. They can begin working toward fixing any current issues or decide if they are ready to move on to the next stage of development (Roy, 2019). Along with the identifying factors in the five stages of development, Tuckman also offers group methods to reduce strain or tensions that have built up over time, highlighting the importance of strong group communication and following cohesion (Kobiruzzaman, 2019).

Weaknesses of the 5 Stages of Development

While it is a highly applicable theory of professional team development, Tuckman's five stages of development have been criticized, recently, by scholars of Human Resource development. For instance, software delivery professional Doc Norton has stated that Tuckman's theory does not work as well in practice as it does in theory. Norton quoted a 2007 study conducted by Monterey Naval Post-Graduate School in which researchers found that only two percent of teams who used Tuckman's five stages of development completed all five stages upon completing the group goal (as cited in Knight, 2007). The issue, as reported by Norton, is that groups do not often follow the stages precisely and may be showing behaviours or doing tasks that can be associated with other stages (Alvares, 2019).

For instance, a group may be completing the task associated with the Norming stage of their group development and are ready to move into Performing. However, many members of the group may be feeling behaviours associated with the Storming stage. Teams need to recognize that no group will be perfect in their implementation of the five stages of development and 98 percent will not even complete all five stages (Knight, 2007). Another disadvantage to Tuckman's theory is that it doesn't offer any instant solutions to internal group issues, though it does go into varying detail about problems that may occur. It only guides teams through best-case scenarios (Kobiruzzaman, 2019). A final critique of Tuckman's theory of the 5 stages of development is that there is no real solution for the communication strain that occurs during the Storming phase. This may leave groups vulnerable to never escaping the frustrating tension throughout the course of the team task (Kobiruzzaman, 2019).

Applying Tuckerman's Stages of Development to Project Management and HRM

A fundamental component of both Human Resources Management and Project Management is the development of high-performing teams. Building teams that are cohesive, goal-focused, and possess both specialized and complementary skills to fall under the domain of both professions (Abudi, 2020; SHRM, n.d.). For Human Resources, examples may include the onboarding process, wherein the Human Resources professional guides new employees through the *Forming* process, introducing them to their coworkers and acquainting them with organizational norms and professional roles. Also, Human Resources supports

employees through team conflicts and mediates between management and workers which is an essential part of the *Storming* stage (Developing and Sustaining, n.d.). In the *Norming* stage, Human Resources professionals work to offer continual support to employees, facilitate discussions, and provide needed training (Developing and Sustaining, n.d.). During the *Performing* stage, all team members are working at an optimal level. Here, the Human Resources professional may be involved by measuring performance metrics, looking at employee engagement metrics, analyzing reward strategies, and engaging in "stay interviews." The Human Resources team is also involved in the *Adjourning* stage, ensuring all team closures are done ethically and are legally compliant, as well as evaluating individual and team performance (James, 2022).

Implications of Tuckman's Model for Project Management Teams

The implication of Tuckman's group development is essential for establishing a cohesive and productive project management team. Each stage relates to a project phase and establishes roles and mutual goals. Below, the theory is applied to the lifecycle of a project and the role of the project manager.

- **Stage 1: Forming** is when the project management team meets, gets acquainted, and receives information about the project at hand. They go through the project charter and their roles within the team. The team leader must be clear in providing direction and establishing team norms during this stage (Abudi, 2015; Abudi, 2020).
- **Stage 2: Storming** is unavoidable and often sees team members competing for recognition or conflicting over ideas and processes related to the project. This may be especially true for project management teams who are new to working with each other. Guidance and coaching from the team leader are essential for the team to progress through this stage. The project team leader must have strong conflict resolution and people management skills to successfully navigate this difficult stage. It is more likely for teams with professionally immature members to struggle with storming (Abudi, 2015; Abudi, 2020).
- **Stage 3: Norming** is a time when the project management team works more cohesively towards their common goals. The leader can step back and allow each member to contribute per their specialization. The team members trust in one another more and become more productive as a team. The project manager's role in this stage is to step in as needed, but to be overall less involved in the day-to-day tasks of the project (Abudi, 2015; Abudi, 2020).
- **Stage 4: Performing** involves the team at its highest functioning and most motivated. The team has become very self-sufficient and relies less on the project manager for day-to-day guidance. However, the project manager still acts as the liaison between the team and the stakeholders, ensuring high-level decisions are being made and implemented (Abudi, 2015; Abudi, 2020).
- **Stage 5: Adjourning** sees the completion of the project and the team relationships must move on to other avenues. Many team members, especially those in high-functioning teams, may feel lost and miss

their team members. The project manager needs to ensure the team's success is celebrated, as well as establish best practices for future projects based on the key learnings from the completed project (Abudi, 2015; Abudi 2020).

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4.6. IN-DEPTH LOOK: EVOLUTION OF TUCKMAN'S MODEL

In-depth Look

Group Development Theory

Based on Tuckman's model created in 1965, other models have been developed by different people. As stated in Tuckman & Jensen (2010), one of them is *Lacoursiere,* in which four stages are stated:

- **Orientation**: includes fears and anxiety and strong positive expectations
- **Dissatisfaction**: includes a rising sense of frustration as well as depression and anger
- **Production**: showed a more rational assessment of the accomplishment
- **Termination**: related concerns about sadness and self-appraisal

As stated by Tuckman and Jensen, these four stages developed by Lacoursiere (1974) differentiated from Tuckman's in three points. First, in the second phase, dissatisfaction was evidenced by the lack of intragroup conflict among the members. Second, Lacoursiere merged "norming" and "performing" in phase three, called production. Finally, the termination stage is the major change between the two models.

Yalom Model

Another one is the model of Dr. Irvin D. Yalom related to group therapy. It was specific to interpersonal relationships. He was a pioneer in making clinical practice more fun and more resourceful. His belief, similar to Tuckman, was that groups go through phases. His model for clinical work followed Tuckman's model of forming, storming, norming, working and adjourning. Working which was a different word was the performing phase where individual growth took place.

Furthermore, Braaten brought with him a new model (1975) related to the group development, however when developing his model, he did use three stages from Tuckman's which were forming, storming, and performing, as well as the other models explained he included a final phase of termination (Tuckman & Jensen, 2010). Braaten's model went as follows:

- The opening phase lacks structure
- The elementary phase is denoted by hostility and conflicts between subgroups
- The grown phase is where norms are sorted out and the evidence of interdependency and trust information
- Termination is related to disengagement and ending (Tuckman & Jensen, 2010).

Interpersonal Styles and Group Development

Lastly, another variation of Tuckman's model was made by Mann (1967) in which he designated five stages of team development (Tuckman & Jensen, 2010). The model stage went as follows:

- Stage 1: Initial complaining
- Stage 2: Premature enactment
- Stage 3: Confrontation
- Stage 4: Internalization
- Stage 5: Separation and terminal review (Tuckman & Jensen, 2010).

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4.7. IN-DEPTH LOOK: GRIP MODEL OF TEAM EFFECTIVENESS

In-depth Look

Team development and effectiveness is a widely popular topic in the professional world with many scholars looking to decipher and develop theories and behaviours to support and improve team outcomes. Along with the 5 Stages of Team Development, there are other useful models to look at when exploring this subject. One such model is the *GRPI* or *GRPI Model of Team Effectiveness*, developed by organizational theorist Richard Beckhard, in 1972. This model provides a simple yet comprehensive framework for understanding the key factors that influence team effectiveness (Lucas, n.d.). The broad categories for the GRIP model include the following:

- *Goals* – Establishing what the team seeks to achieve and ensuring all members understand and are on board.
- *Roles and Responsibilities* – Clarifying roles and responsibilities, what needs to be done and by whom.
- *Interactions/Interpersonal Relationships* – The personal relationships within the team, how they interact and relate to one another, as well as trust and feedback (Lucas, n.d.).
- *Processes and Procedures* – The team's systems, collaboration strategies, and communication channels.

The model does have its limitations. Some believe it is static and does not take on an in-depth approach to team development in the way the *Tuckman's Group Development* does.

Figure 4-4: "GRIP Model" by Suzan Last CC BY 4.0

The Five Dysfunctions of a Team-Lencioni's 2005 Model

Not all teams get along with each other. Sometimes, if conflict is not resolved the team can become dysfunctional. The result is a negative team and unproductive results in the project. It is better to understand team development by troubleshooting potential problems. This is where Lencioni's 2005 model, *The Five Dysfunctions of a Team*, comes into play. This model explores the common issues teams face and places them on a hierarchical pyramid to guide struggling teams through a resolution:
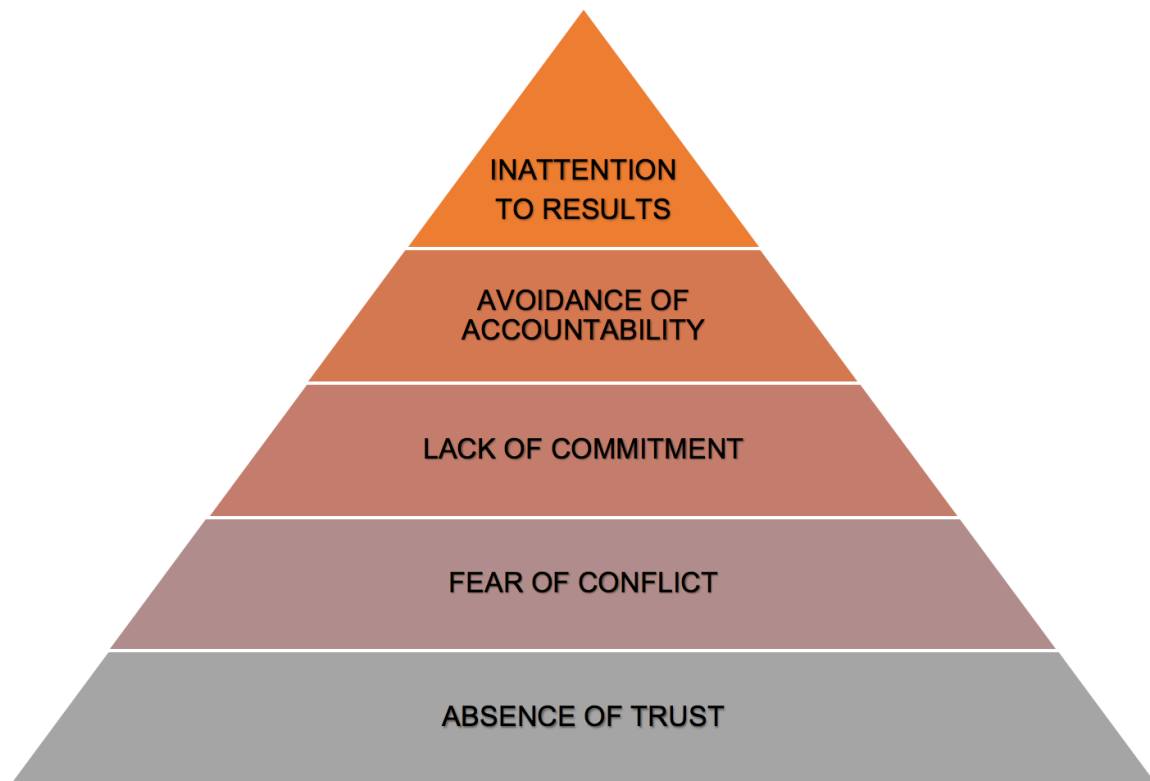
Figure 4-5: "Lencioni Model: Five Dysfunctions of a Team" by Suzan Last CC BY 4.0

- ***Absence of Trust*** is at the bottom of the pyramid. Lencioni considered this the pillar of team dysfunction, without adequate trust, a team cannot function at even a basic level. It is important for team leaders to be representative of desired team behaviours and "go first" to foster a sense of honesty and integrity.
- ***Fear of Conflict*** is next on the pyramid. It is like Tuckerman's Storming stage. If the team members do not trust each other, they will not be able to resolve the conflict phase. Leaders need to facilitate open communication and set clear objectives.
- ***Lack of Commitment*** is next and comes from lack of commitment and unresolved conflict. It can lead to poor decision making, doubt, and negative team cohesion and commitment. Dedicated and effective team members may become frustrated, and leaders need to act on these frustrations to make sure there is closure and clarity of outstanding issues
- ***Avoidance of Accountability*** is next. In this phase there is no conformance to an action plan. The team become resistant to dealing with problems within the team or the project. This could include stakeholders of the project too.
- ***Inattention to Results*** *is at the top of the pyramid.* It epitomizes dysfunction and is demonstrated when all other dysfunctions have not been fully resolved. Team members may put their own individual needs above the project needs and objectives. This leads to unsuccessful project results.

Understanding the more difficult elements of team development and how to overcome them is an essential skill for Project Managers and Human Resources Managers.

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4.8. TEAM COMMUNICATION

Reliable promises, emotional intelligence (EI), and communication as realistic outlooks are all meaningless as trust-building tools if you don't have the skills to communicate with your team members. In his book Mastering the Leadership Role in Project Management, Alexander Laufer (2012) explains the vital importance of team communication:

> because a project functions as an ad hoc temporary and evolving organization, composed of people affiliated with different organizations, communication serves as the glue that binds together all parts of the organization. When the project suffers from high uncertainty, the role played by project communication is even more crucial (Laufer, 2012, p. 230).

Human Resources and Emotional Intelligence (EI)

Emotional Intelligence was discussed earlier. We now will discuss how Human Resources can use Emotional Intelligence to build teams. Emotional Intelligence has four domains: perceiving emotions, facilitating thought, understanding emotions and managing emotions.

> Emotions refer to the feelings a person has in a relationship. For example if a person has a good relationship with someone else, that individual is happy; of the person is threatened, he or she is afraid. Intelligence, on the other had, refers to the ability to reason with or about something. For example, on reasons with language in the case of verbal intelligence, or reasons about how objects fit together in the case of spatial intelligence. In the case of emotional intelligence, one reasons with emotions, or emotions assist ones thinking. That is, emotional intelligence, as measured by the MSCEIT (trademark), refers to the capacity to reason with emotions and emotional signals, and to the capacity of emotion to enhance thought (Mayer, Salovey, & Caruso, 2001, p.2).

HR Specialists can deliver training in EI. They can complete the training themselves; and then train others in the inventories, or they may hire outside consultants trained in EI. The training needs to be reliable, valid and market accepted. Four such skill development approaches are:

- Bar-On's EQi (registered) and EQ-360 (trademark)
- Goleman and Boyatzis' ECI 360
- Mayer, Salovey, and Carusos's MSCEIT (trademark)
- Orioli and Cooper's EQ Map (registered)

Human Resources Specialists may first provide EI training to Project Managers, and then with the team. They

may also provide the training to the group as a whole. It is important that Project Managers understand the talents, skills and potential they bring to the project; as well, as the team members. When Project Managers understand their own emotions and the emotions of others, they have the opportunity to have a high performing team and achieve project success. The results are a vision of the project, and agreed upon outcomes. All members act intentionally and intelligently, and are motivated and enthusiastic. They have the ability to network, and feel a sense of achievement. People will believe the work they are doing is important. The hearts of the team are invested as well as their minds.

HR can also help raise EI within projects by modelling, building new frameworks of the mind, helping them refocus on the vision, and listening. HR can use proven Project Management tools to: provide structure, set clear objectives, norms, boundaries, and roles. By supporting the team to use EI tools engages the members to be professionals.

Human Resources and Supporting Teams to Building Trust

All teams, including project teams, need a certain level of trust. People trust others based on their beliefs related to their own ability, integrity and disposition to be good. Is is also an emotional response. People tend to experience positivity when they trust another person. Project team members generally come together with a medium to high level of trust in their team mates. It is a knowledge-based trust that people are generally good. They also believe that Project Managers and HR Specialists have made good choices in bringing the team together that share common purpose, characteristics, skills and experiences.

Trust is quite fragile, especially in new relationships because people base it on assumptions. To ensure trust builds and does not decrease, HR Trainers could provide initial training to build trust with Trust Building Activities. Some examples are ice breakers, the trust fall, being led around blind folded, and creating pairs obstacle courses. During the project, trust may drop-off. HR Trainers can help re-build trust within the group by providing similar training that was offered at the beginning of the project. One of the easiest ways to build and maintain trust with project team members is to schedule team and trust building activities on a regular basis.

Think!

Trust within a team is important to the success of a project. There are many trust building exercises that Human Resources Specialists can use in

workshops. However, as an HR Specialist who would go about building individual trust? How would you go about establishing trust for yourself within the team?

Human Resources Helping Teams to Develop Communication Skills

Unfortunately, many people think they are better communicators than they actually are. Sometimes a person will excel at one form of communication but fail at others. For instance, someone might be great at small talk before a meeting but continually confuse co-workers with poorly written emails. This is one area where getting feedback from your co-workers can be especially helpful. Another option is taking a class, or at the very least, consulting the numerous online guides to developing effective communication skills. Human Resources Specialists can provide training in various communication skill building. Some examples are included.

Making Small Talk—People often say they dislike small talk, but polite conversation on unimportant matters is the lubricant that keeps the social gears moving, minimizing friction, and making it possible for people to join forces on important matters. If you're bad at small talk, then put some time into learning how to improve; you'll get better with practice. There's no better way to put people at ease.

Writing good Emails—An ideal email is clear, brief, calm, and professional. Avoid jokes, because you can never be certain how team members (especially team members in other countries) will interpret them. A good emailer also understands the social rules that apply to email exchanges.

Talking One-on-One—Nothing beats a face-to-face conversation for building trust and encouraging an efficient exchange of ideas, as long as both participants feel comfortable. In fact, Alexander Laufer suggests using face-to-face conversation as the primary communication mode for your team (2012, p. 230). As a team leader, it's your job to be aware of the many ways conversations can go awry, particularly when subordinates fear speaking their mind.

Telling stories is an especially helpful way to share experiences with your team. Indeed, stories are "a form of communication that has been used to entertain, persuade, inspire, impart wisdom, and teach for thousands of years. This wide range of uses is due to a story's remarkable effect on human emotion, experience, and cognition" (Kerby, DeKorver, and Cantor, 2018).

Storytelling

You've probably experienced the way people lower their defenses when they realize they are hearing a tale about specific characters, with an uncertain outcome, rather than a simple recitation of events, or worse, a lecture. Master storytellers seem to do it effortlessly, but in fact they usually shape their stories around the same basic template. Holly Walter Kerby, executive director of Fusion Science Theater, and a long-time science educator, describes the essential story elements as follows:

A Main Character your Audience can Identify with—Include enough details to allow your audience to feel a connection with the main character, and don't be afraid to make yourself the protagonist of your own stories.

A Specific Challenge—Set up the ending of the story by describing a problem encountered by the main character. This will raise a question in the minds of the audience members and make them want to listen to the rest of the story to find out what happens.

- Can Sam and Danielle recover from a supplier's bankruptcy and figure out how to get three hundred light fixtures delivered to a new office building in time for the grand opening?
- Can Hala, a mere intern, prevent seasoned contractors from using an inferior grade of concrete?

Three to Five Events Related by Cause and Effect—The events should build on each other, and show the characters learning something along the way. Describe the events in a way that helps build a sense of tension.

One or two physical details—People tend to remember specific physical details. Including one or two is a surprisingly effective way to make an entire story more memorable.

- The first new vendor Sam and Danielle contacted agreed to sell them all the light fixtures they needed, but ended up sending only one fixture in a beaten-up box with the corners bashed in.
- Hala, a small person, had to wear an oversized helmet and vest on the

job site, which emphasized that she was younger and less experienced than the contractors.

An Outcome that Answers the Question—The outcome should be simple and easy to understand. Most importantly, it should answer the question posed at the beginning of the story.

- Yes—by collaborating with a new supplier, Sam and Danielle were able to acquire the light fixtures in time for the grand opening.
- No—Hala could not stop the contractors from using inferior concrete, but she did report the problem to her boss, who immediately halted construction until the concrete could be tested, and, in the end, replaced.

Satisfying Ending—Explain how the events in the story led to some kind of change in the characters' world.

- Sam and Danielle learned to focus on building relationships with reliable, financially stable vendors.
- Hala learned that even an intern can safeguard a project by speaking up when she sees something wrong.

Keep in mind that in some high-stakes situations, the last thing you want is more tension. In that case, you want the opposite of a story—a straightforward recitation of the facts. For example, when confronting a team member about poor work habits, or negotiating with an unhappy client, it's best to keep everything simple. Draining the drama from a situation helps everyone stay focused on the facts, keeping resentment and other negative emotions to a minimum (Manning, 2018, p. 64). For more on good techniques for difficult conversations, see Trevor Manning's book *Help! I need to Master Critical Conversations*.

[1] Thanks to Hala Nassereddine for sharing her story of her experience as an intern on a construction site in Beirut, Lebanon.

Human Resources plays a role in the human experience, first through the strategic plan, and then through

communication to all employees. The critical point with projects is to support the project manager and the team with developing formal and informal communication techniques. HR has a unique role to play in uncovering what works with different projects. Teaching two-way communication tools to project teams helps increase positive communication.

Formal Communication can include questionnaires/survey, mentoring, suggestion box, bulletin boards, memos, electronic mail, project handbook, meetings

Informal Communication: informal chat, the grapevine (ie. being involved in information sharing between team and other departments, chat in the lunch room, small talk at the beginning of meetings, unofficial discussions, advice and suggestion offered or given).

Whether formal or informal communication, HR is in a good position to create opportunities to share and gather important information with project teams and build trust between the members and the HR department.

Face-to-Face Communication

As Laufer, Little, Russell and Maas point out in their book Becoming a Project Leader,

> In contrast to interactions through other media that are largely sequential, face-to-face interaction makes it possible for two people to send and receive messages almost simultaneously. Furthermore, the structure of face-to-face interaction offers a valuable opportunity for interruption, repair, feedback, and learning that is virtually instantaneous. By seeing how others are responding to a verbal message even before it is complete, the speaker can alter it midstream in order to clarify it. The immediate feedback in face-to-face communication allows understanding to be checked, and interpretation to be corrected. Additionally, face-to-face communication captures the full spectrum of human interaction, allowing multiple cues to be observed simultaneously. It covers all the senses—sight, hearing, smell, taste, and touch—that provide the channels through which individuals receive information (2018).

Certainly, in today's world of project management, in which distributed digital teams are becoming common practice, it may be impossible to sit down in the same room with all team members. But as much as possible, project managers should push for using technology that allows a fuller communication environment—one in which interactions are not just isolated to text.

Virtual Communication

Technology advancements have improved communication in organizations. People are geographically dispersed and interact sending messages without meeting physically. Project teams meet through voice calls, video calls, video conferencing and social media. More organizations are depending on technology to communicate.

Virtual project teams have the advantage of saving time driving or flying to meetings. Travel and accommodation costs are reduced. Teams can interact conveniently and it takes no time to logon. It is fast. Everyone is just one "click" away. It enables team members to be flexible with their schedules and submit project information on time. Team members can easily contact each other which saves times. It reduces the need for physical space and paying for office space. When all of these are in place, team members become more effective and efficient at their work.

Human Resources Contribution to Face-to-Face and Virtual Communication

Whether face-to-face or virtual communication, HR plays a role with the project team in establishing good communication. They can help set up meeting spaces, guide formal and informal communication, and facilitate meetings. Also, they can provide social media tools, share posts, and provide content that that team members want to share. Overall, HR can spark conversations, educate employees and boost morale for the team.

> ## Think!
>
> As a student and future HR Specialist, do you prefer face-to-face communication? Virtual communication? Why?

4.9. TEAM MOTIVATION

To build believable performances, actors start by figuring out their characters' motivations—their reasons for doing what they do. As a team leader, you can use the same line of thinking to better understand your team members. Start by asking this question: Why do your team members do what they do? Most people work because they have to, of course. But their contributions to a team are motivated by issues that go way beyond the economic pressures of holding onto a job.

In their book *The Progress Principle: Using Small Wins to Ignite Joy, Engagement, and Creativity at Work*, Teresa Amabile and Steven Kramer (2011) argue that the most important motivator for any team is making meaningful daily progress toward an important goal. In their study of 12,000 daily journal entries from team members in a variety of organizations and industries, they found that a sense of accomplishment does more to encourage teamwork, on-the-job happiness, and creativity than anything else. "Even when progress happens in small steps," Amabile and Kramer (2011) explain, "a person's sense of steady forward movement toward an important goal can make all the difference between a great day and a terrible one" (p. 77).

According to Amabile and Kramer 2011, the best managers focus on facilitating progress by removing roadblocks and freeing people up to focus on work that matters:

> When you do what it takes to facilitate progress in work people care about, managing them—and managing the organization—becomes much more straightforward. You don't need to parse people's psyches or tinker with their incentives, because helping them succeed at making a difference virtually guarantees good inner work life and strong performance. It's more cost-effective than relying on massive incentives, too. When you don't manage for progress, no amount of emotional intelligence or incentive planning will save the day (p. 10).

As you might expect, setbacks on a project can have the opposite effect, draining ambition and creativity from a team that, only days before, was charging full steam ahead toward its goal. But setbacks can be counterbalanced by even small wins— "seemingly minor progress events"—which have a surprising power to lift a team's spirits, making them eager to get back to work the next day (Amabile and Kramer, 2011, p. 80). You've probably experienced the pleasure that comes from checking at least one task off your to-do list. Even completing a small task can generate a sense of forward momentum that can propel a team toward larger achievements.

HR in Focus: HR Helping Teams to Gain and Sustain Motivation

Human Resource Specialists can support teams who have setbacks by helping them reflect on the original goal and purpose, review individual and group performance, and recognize the achievements to date. A performance-driven project demands performance. HR can help the team re-commit to their individual and team goals through conversations or workshops. Helping to unify the team leads to success. Team members, through HR support and tools, will see the tangible evidence that their work matters.

For project managers and team members, the value of an outside HR Specialist asking:

1. What do you need more of?

2. What do you need less of?

3. How can I help?

This allows for corrective action and aids in getting the project back on track. As well, these tools and techniques support the project manager to best manage the team.

Through years of practical experience as an executive, consultant, project engineer, and project manager, John Nelson has gained a finely-honed understanding of how to manage teams. According to Nelson's lecture on reliable promising for EPD612: Technical Project Management, University of Wisconsin-Madison (2017), the following are essential for motivators for any team:

A Sense of Purpose—Individually, and as a whole, a team needs an overarching sense of purpose and meaning. This sense of purpose should go beyond each individual's project duties. On the macro level, the sense of purpose should align with the organization's strategy. But it should also align, at least sometimes, with each individual's career and personal goals.

Clear performance metrics—How will the team and its individual members be evaluated? What does success look like? You need to be clear about this, but you don't have to be formulaic. Evaluations can be as subjective as rating a dozen characteristics as good/not-good, or on a score of 1-5.

Assigning the Right Tasks to the Right People—People aren't commodities. They aren't interchangeable, like a router or a hand saw. They are good at specific things. HR Specialists are trained to find

the right people for teams and align them with the right team tasks. Whenever possible, avoid assigning people to project tasks based on capacity—that is, how much free time they have—and instead try to assign tasks that align with each individual's goals and interests.

Encouraging Individual Achievement—Most people have long-term aspirations, and sometimes even formalized professional development plans. As team leader, you should be on the lookout for ways to nudge team members toward these goals. It's not your job to ensure that they fully achieve their personal goals, but you should try to allow for at least a little forward movement. HR are excellent partners when assisting team members to achieve individual and team goals through training, motivation and rewards to achieve success.

Sailboat Rules Communication, in which no one takes offence for clear direction—On a sailboat, once the sail goes up, you need to be ready to take direction from the captain, who is responsible for the welfare of all on board, and not take offence if he seems critical or unfriendly. In other words, you can't take things personally. Likewise, team members need to set their egos aside and let perceived slights go for the sake of the team. When you start a big project, explain that you are assuming *sailboat rules communication*. That means that, in a meeting, no one has the privilege of taking anything personally.

Mentorship—Team members need to be able to talk things over with more experienced people. Encourage your team to seek out mentors. They don't necessarily have to be part of the project. HR is in a good position to set up mentorships with more experienced employees who understand the project goals. They can outline the mentorship process, select the participants, match mentor and mentee, and provide training and follow through throughout the project.

Consistency and Follow-Through—Team morale falls off when inconsistency is tolerated or when numerous initiatives are started and then abandoned. Encourage a team environment in which everyone does what they commit to do, without leaving loose ends hanging. Be on the lookout for gaps in a project, where things are simply not getting done. (Nelson, 2017). HR can play an active role in team encouragement through setting up "pep talks" with the executive team, providing motivational training, and teaching time management and goal setting and follow through.

Think!

What motivates you to learn in school? What are the motivators teachers use to motivate you? What types of motivators will you use as an HR Specialist to assist employees?

4.10. DIVERSITY, INCLUSION AND LEADERSHIP

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The Power of Diversity

The rationale for putting together a team is to combine different people, personalities, and perspectives to solve a problem. HR Specialists know that inclusive and diverse teams make the best business and project decisions, make faster decisions and execute decisions with better results. The difference is the whole point.

Diverse teams are more effective than homogenous teams because they are better at processing information and using it to come up with new ideas. According to David Rock and Heidi Grant (2016), diverse teams tend to focus more on facts, process those facts more carefully, and are more innovative. What's more, researchers investigating creativity and innovation have consistently demonstrated "the value of exposing individuals to experiences with multiple perspectives and worldviews. It is the combination of these various perspectives in novel ways that results in new ideas 'popping up.' Creative 'aha' moments do not happen by themselves"

(Viki, 2016). In his book: *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*, Scott Page (2007) puts it like this:

> As individuals we can accomplish only so much. We're limited in our abilities. Our heads contain only so many neurons and axons. Collectively, we face no such constraint. We possess incredible capacity to think differently. These differences can provide the seeds of innovation, progress, and understanding.

HR in Focus: HR and Diversity

HR Specialists understand the need for diversity. Diversity with teams starts at recruitment and selection. Hiring diverse employees increases creativity and innovation. People with different backgrounds and viewpoints, and experiences makes for a highly competitive organizations. When hiring employees or project teams, HR looks for diverse teams that result in better problem solving and decisions making and highly engaged employees.

Think!

If you were selecting a team for a project, what types of diversity would you be looking for to balance the teams creativity and innovation?

Considerations of Leadership

Good teamwork depends, ultimately, on a leader with a clear understanding of what it means to lead. HR could be involved in the hiring of the project leader to ensure the unique qualities, talents, experience and education are taken into consideration at the hiring level. To judge by the countless books on the topic, you'd think the essential nature of leadership was widely understood. However, few people really understand the meaning of "leadership." HR understands the importance of good leadership. They facilitate the culture of the organization that builds trust among employees. In turn, project teams would build trust on the same

premise. Also, HR needs to set an example for project teams as leaders, and support and encourage the team by treating them with respect and recognition for their achievements in the project.

In his book, Leadership Theory: Cultivating Critical Perspectives, John P. Dugan (2017) examines "core considerations of leadership," zeroing in on misunderstood terms and also false dichotomies that are nevertheless widely accepted as accurate explanations of the nature of leadership. Dugan argues that a confused understanding of these essential ideas makes becoming a leader seem like a far-off dream, which only a select few can attain. But in fact, he argues, anyone can learn how to be a better leader.

Here's what Dugan has to say about core considerations of leadership:

- **Born Versus Made:** This is one of the most pernicious false dichotomies regarding leadership. Dugan explains, "that there is even a need to address a consideration about whether leaders are born or made in this day and age is mind-numbingly frustrating. Ample empirical research illustrates that leadership is unequivocally learnable when defined according to most contemporary theoretical parameters."

- **Leader Versus Leadership:** People tend to conflate the terms leader and leadership, but, according to Dugan (2017), "Leader refers to an individual and is often, but not always, tied to the enactment of a particular role. This role typically flows from some form of formal or informal authority (e.g., a supervisor, teacher, coach). When not tied to a particular role, the term leader reflects individual actions within a larger group, the process of individual leader development, or individual enactments attempting to leverage movement on an issue or goal. Leadership, on the other hand, reflects a focus on collective processes of people working together toward common goals or collective leadership development efforts."

- **Leader Versus Follower**: "The conflation of leader and leadership makes it easier to create an additional false dichotomy around the terms leader and follower," with follower considered a lesser role. "The label of leader/follower, then, is tied solely to positional authority rather than the contributions of individuals within the organization. If we flip the example to one from social movements, I often see an interesting shift in labelling. In the Civil Rights Movement in the United States, there are multiple identified leaders (e.g., Martin Luther King, Jr., Malcom X, Rosa Parks, James Baldwin) along with many followers. However, the followers are often concurrently characterized as being leaders in their own right in the process. In social movements, it seems we are more willing to simultaneously extend labels of leader and follower to a person."

- **Leadership Versus Management:** "Also tied up in leader/leadership and leader/follower dichotomies are arguments about whether leadership and management represent the same or unique phenomena. Once again, the role of authority gets tied up in the understanding of this. Many scholars define management as bound to authority and focused on efficiency, maintenance of the status quo, and tactics for goal accomplishment. An exceptional manager keeps systems functioning through the social coordination of people and tasks. Leadership, on the other hand, is less concerned with the status quo and more attentive to issues of growth, change, and adaptation."

Whether hiring from within or an external hire, HR Specialists are trained to recruit Leaders. When searching for Project Managers they are looking for people who are professional, focus on results, inspire others, take responsibility for their actions, are able to influence others including stakeholders, align the team to work toward a common goal, and have a strong emotional intelligence.

Think!

What skills do you possess to be a good leader? What skills do you think you need to develop to be a good leader? How would you go about developing these skills?

4.12. KEY TERMS

Adjourning: Once the project is completed, the team should collect lessons learned and transition to other projects or roles. The project manager should provide recognition of the work done by the team and help them transition to their next project (provide recommendations, etc.) 4.4

A Sense of Purpose: Individually, and as a whole, a team needs an overarching sense of purpose and meaning. This sense of purpose should go beyond each individual's project duties. 4.10

Assigning the Right Tasks to the Right People: People aren't commodities. They aren't interchangeable, like a router or a hand saw. They are good at specific things. HR Specialists are trained to find the right people for teams and align them with the right team tasks 4.10

Born Versus Made: This is one of the most pernicious false dichotomies regarding leadership. Dugan explains, "that there is even a need to address a consideration about whether leaders are born or made in this day and age is mind-numbingly frustrating. 4.11

Communication: They are able to relay information clearly and concisely, and be good listeners when discussing project goals, outcomes and tasks to be performed. 4.4

Communication Exercises: The team designs a presentation and delivers the presentation. 4.4

Consistency and Follow: Through the team, morale falls off when inconsistency is tolerated or when numerous initiatives are started and then abandoned. 4.10

Cooperation: Willing and able to work together for the good of the project. They are willing to share resources, be flexible, accommodate each other's needs and meet deadlines. 4.4

Coordination: They need to work together on the project to "keep things on track" and integrate each other's work into the daily outcomes.4.4

Conflict Resolution: They need to have the skills to motivate and resolve conflict when it arises. Disagreements are part of any project as each member has different ideas on how to perform tasks in the project. Effective team members can discuss issues, brainstorm ideas for resolve, and continue to work in harmony. 4.4

Console: They need to maintain positive attitudes and be mentally and psychologically stable, and support each other to be and do the same. They must be able to be empathic, provide soothing to each other, and help each other build self-esteem and self-confidence in the project duties. 4.4

Define The Purpose of The Team and Project: The team needs to know the overall purpose and goals. The HR Specialist can help them set goals within the project. 4.4

Encouraging Individual Achievement: Most people have long-term aspirations, and sometimes even formalized professional development plans. As a team leader, you should be on the lookout for ways to nudge

team members toward these goals. It's not your job to ensure that they fully achieve their personal goals, but you should try to allow for at least a little forward movement. 4.10

Formal Communication: Can include questionnaires/surveys, mentoring, suggestion boxes, bulletin boards, memos, electronic mail, project handbook, meetings 4.9

Forming: The group is brought together for the first time. The team is orienting themselves to the task at hand. At this stage, there may be little agreement on how to approach the project and team members may struggle with understanding the purpose of the project. The project manager needs to provide guidance and direction during this stage. 4.4

Goal Setting: The team along with the project manager plan a simple project, with goals and outcomes, measures of success. 4.4

Informal Communication: Informal chat, the grapevine (ie. being involved in information sharing between the team and other departments, chat in the lunchroom, small talk at the beginning of meetings, unofficial discussions, advice and suggestion offered or given. 4.9

Leader Versus Follower: "The conflation of leader and leadership makes it easier to create an additional false dichotomy around the terms leader and follower," with follower considered a lesser role. "The label of leader/follower, then, is tied solely to positional authority rather than the contributions of individuals within the organization. 4.11

Leader Versus Leadership: People tend to conflate the terms leader and leadership, but, according to Dugan (2017), "Leader refers to an individual and is often, but not always, tied to the enactment of a particular role. 4.11

Leadership Versus Management: "Also tied up in leader/leadership and leader/follower dichotomies are arguments about whether leadership and management represent the same or unique phenomena. Once again, the role of authority gets tied up in the understanding of this. 4.11

Measure The Team's Performance: The project manager the HR Specialist can discuss and establish metrics and reporting of metrics related to performance. These measurements would be discussed with the team to ensure success. The HR Specialist can help to monitor performance throughout the project. 4.4

Mentorship: Team members need to be able to talk things over with more experienced people. Encourage your team to seek out mentors. They don't necessarily have to be part of the project. 4.10

Norming: At this stage, the team will have developed a consensus regarding roles, processes and approaches to the work ahead. The project manager should participate by working as a facilitator for the group. 4.4

Performing: At this point, the group has a clear vision and purpose and is focused on meeting performance goals, project milestones and other benchmarks. The project manager should be able to delegate more and more responsibility to the team, with less supervision. 4.4

Problem-Solving Exercises: The team is given a challenge ie. planning a trip into space. They must work together to plan the trip and include all the resources needed to survive the trip. 4.4

Reward The Team: HR Specialists can set up reward systems that are linked to the goals of the project which helps to motivate the team for success. 4.4

Role Definition: Each team member is given a defined role within a team challenge and plays out the role. 4.4

Sailboat Rules Communication: No one takes offence for clear direction—On a sailboat, once the sail goes up, you need to be ready to take direction from the captain, who is responsible for the welfare of all on board, and not take offence if he seems critical or unfriendly. 4.10

Storming: Team members are trying to figure out their roles in the group. Conflict and power struggles are common, but so is a clearer vision for the group. During this time of intergroup conflict, the project manager needs to provide support and coaching. 4.4

4.13. CHAPTER SUMMARY

The project team works with the Project Manager to develop project plans, scheduling of work, acquiring the needed resources, monitor progress and see the project through to a successful completion. Human Resources can support the team to set goals, measure success and reward the team. They may include team motivation, team building exercises, and team development.

Dr. Bruce Tuckman's Team Development is popular with stages of team development including forming, storming, norming, performing and adjourning. One approach that Human Resources utilizes for team development are the 5Cs of Project Team Compatibility. They include cooperation, communication, coordination, consoling, and conflict resolution. Another approach for team development is Emotional Intelligence (EI) working with teams, rather than individuals. Two other important aspects where Human Resources supports team building are through building trusting relationships between the team members and supporting the team to develop communication skills (face to face and virtual).

Human Resources plays a role in putting together teams that are diverse and inclusive. A great team is dependent on the leadership. Ensuring the Project Manager has the qualities, talents, and experiences necessary to lead the team are critical to the success of the project. John P. Dugan's example of leadership suggests anyone can become a leader with core considerations.

4.14. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed **by the Students** on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used **by the Teachers** as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. Form a **small group**. Design a brief strategy for the Project Manager to help recruit, develop and monitor the project team.
2. **Individually**, research one team building exercise on the internet. Share with the **larger group** in the class.
3. Review motivation and team motivation in the textbook. Read the short case. Short Case: The project manager has been working with a team for 2.5 years. The project is exhaustive and has been extended twice. The project manager comes to you, the Human Resources Specialist, and complains the team has lost its motivation on the project because it has taken too long to complete. **Pair up** with a partner and answer the questions. How would you go about helping the project manager rejuvenate the team? Make a list of motivators.
4. **Individually**, review Tuckman's Stages of Team Development in the textbook. Research on the internet another team development approach. Write about the similarities and differences between Tuckman's approach and the different approach you discovered on the internet. Share your newly discovered approach with the **larger group** in the class.
5. **Individually**, review Communication in the chapter. Which style of communication do you prefer (face-to-face or virtual)? **Pair up**

and discuss with a partner your choice and why you made this choice.

6. **Individually**, think about a project you have been involved in at school. It may be a current project, or a recent project you have completed.

      1. What are/were the strengths of the team? Why?
      2. What are/were the weaknesses of the team? Why?
      3. How could you have helped to strengthen the team motivation?

    Pair up with a partner and share your answers.

7. **Individually,** make a list of the 5 steps in Tuckman's Model for group development. Include a brief definition of each step. Within a small group, discuss a group/team that you have worked with in school or work that either was a success (you progressed through the steps); or discuss a group/team that was unsuccessful in working through the 5 steps. Discuss why it was successful? Or, why it was not successful?

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. What is the importance of Myers-Briggs to the hiring process of any employee in a company?
2. What are the 5 stages of Tuckman's Stages of Team Development? Define them.
3. Name and describe the various communication skills that are effective for project teams.

4. Why are diverse teams valuable to projects?
5. **Individually**, research information about the "Big Five Personality Framework" on the internet. Which of the 4 types do you believe is your strongest type? Why do you believe this to be true?
6. Maslow's hierarchy of needs was born in 1943. It still proves to be one of the most important research and models today. **Individually,** explore on the internet the evolution of A Theory of Human Motivation. Find 2 other theories/models that have been an evolution from Maslow's hierarchy of needs. Do you believe they are better/more improved than the original theory? Why? Why not?
7. The 360 Degree Feedback has become a popular evaluation model for organizations. If you were developing a 360 Degree Feedback survey, what type of questions would ask? **Individually,** explore the internet for existing surveys/questions. Chose 10 questions that you would use in your survey as a Human Resources Specialist. You may wish to combine your questions or compare your questions with other students in **the class.**

CHAPTER 5 – PROJECT LIFE CYCLE, SCOPE, CHARTERS, PROPOSALS

Chapter Outline

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5.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you should be able to:

1. Explain the importance of understanding a project's context, and the potential for that context to change as you begin the initiation process.
2. Describe the living order approach to project planning.
3. Discuss S.M.A.R.T. goals in relation to project planning.
4. Explain the importance of designing good monitoring practices.
5. Describe elements of effective project monitoring and controlling.
6. Decide what to monitor and when, and list some useful items to monitor.
7. Distill monitoring information into reports that are useful to different stakeholders.
8. Identify the process of project closure.

5.2. INITIATION

Project Management, Life Cycle of Projects

Project Management has a dual nature; it is both a series of distinct phases with a clear beginning and end and a continuous, circular process in which each ending leads to a new beginning. Throughout a project, a successful project manager strives to anticipate changing conditions rather than simply responding to them as they arise. Project Management uses specific skills, tools, and knowledge to deliver a product/service to improve the business processes of an organization. The project is led by a Project Manager who has the leadership and management abilities, and experience to complete the project successfully. In the current world, they are the driver behind change and prosperity in an organization.

The **Project Life Cycle** is a series of phases that the project progresses through from beginning to end. It is the foundation of the project. The four major phases include: Initiation, Planning, Execution or Implementation, and Closure. Some projects do include other phases such as Selection, Scheduling, and Monitoring & Control. However, often Selection would be included in Initiation, Scheduling included in Planning, and Monitoring & Control included in Execution.

> ### Think!
>
> Think of a project that you may have undertaken? Was there a life cycle?

Selection of Projects

Project Selection is determined by a team of people, usually at the executive level, of projects that are a priority to the organization and align with the mission, vision and values of the organization. If there are several projects to be approved, the team would prioritize the projects based on importance to the organization. The team would develop criteria they believe to be important. Some projects may be eliminated, others may be put on hold. This depends on the amount of financial resources available at any given time. Some examples of criteria to measure what projects to complete might be time it takes to complete, the budget, and/or future value the project outcomes would bring to the organization.

Let's start with the more traditional view, which describes project management as a series of four sequential

phases, with project initiation coming right after project selection. You can think of these phases, shown in Figure 5-1, as the particle nature of project management.

Traditional View of Project Management

| Project Selection | Project Initiation | Project Planning | Scheduling | Monitoring & Control | Completion & Closeout |

- project charter
- scope statement

- work breakdown structure
- organizational breakdown structure
- risk management
- subcontracting and bidding process

- time and schedule
- project budget

- cost control metrics
- change orders
- milestone reports
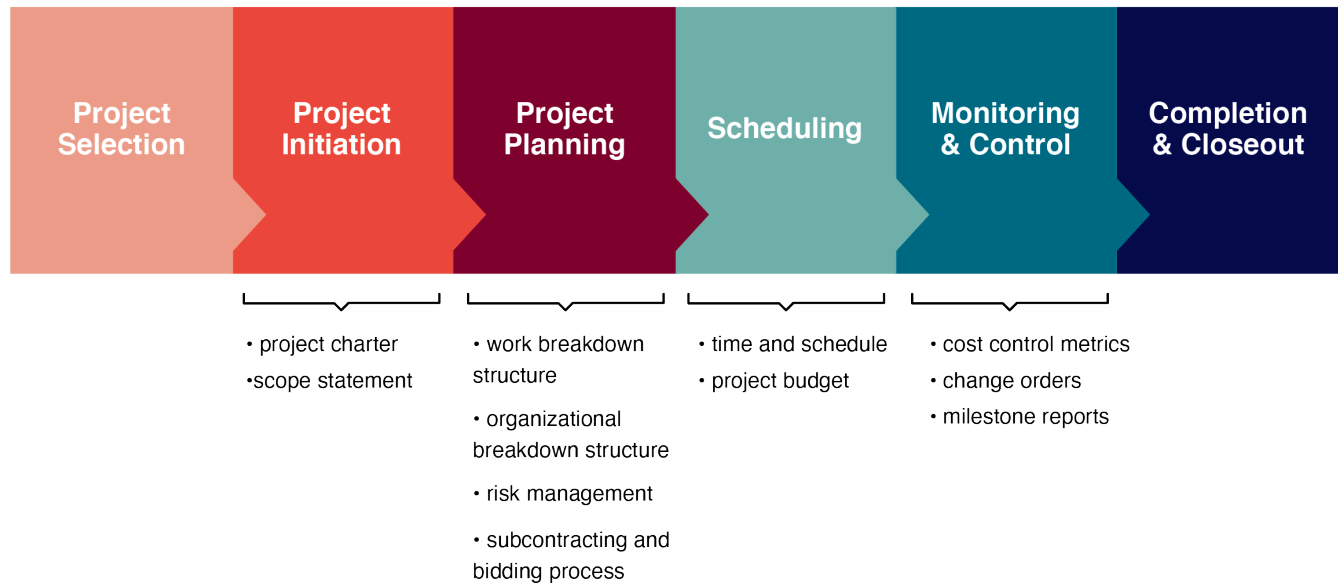
Figure 5-1: Project phases

HR in Focus: Human Resources and Project Management Selection

Human Resources Specialists may be involved in the Project Management of the project from beginning to end. They may be asked to help align the project goals and outcomes with the mission and vision of the organization. They may help with the project selection along with the executive team. They may design the criteria for the executive team to make the decisions on which projects to go forward with, which ones to eliminate, or which ones to place on hold.

Phase 1: Initiation Phase

While project **initiation** marks the official beginning of a project, doing it well also requires looking past the

making stage to the entire life cycle of the project's end result. You can think of this as the wave nature of project management. As illustrated in Figure 3-1, the making stage, in which a project is initiated and executed, is one part of the larger cycle that includes the operating/using/changing stage, in which the customer makes use of the project. Finally, the demolishing stage is when the project is retired so it can be replaced by something new and better.

The team is often selected for the project in the initiation. As well, the team may put together a business case. It shows how the resources will be used (people, finances, equipment, materials). It supports the need for the project or the problem at hand that needs a solution. It should be easy to read, clear and logical to the reader. Many of the elements will be tracked or measured throughout the project. It shows where the accountability lies, and the commitment of the team to deliver the product/service.

Human Resources and Initiation of Projects

In the initial phase of the project management cycle, Human Resources could be involved in the introduction of the plan. This could help outline the purpose, what is included and how the team will make decisions to keep the work moving forward. Human Resources could assign clear roles, through job descriptions, they would look at the skills required, and work with the Project Manager on what type of skills are required for the activities within the project. Next, they would create a structure for the team. Some of the roles and responsibilities could include:

- **Project Manager:** manages the project from planning to execution to closure, and responsible for the success of the project.
- **Project Stakeholders:** Formalize the project scope, deliverables.
- **Project Sponsor:** Could be one of or all of the stakeholders. They would authorize the funds to be used for the project, be a champion of the project.
- **Project Department Managers:** May participate in the planning, provide resources for the project- including employees
- **Project Team Members:** Provide their expertise to the project and contribute to the work being done on the project.

Human Resources would assign a role for each of the roles based on their responsibility, authority and competencies. One type of chart shows the responsibility and accountability for each element of the project. It is sometimes called a RACI matrix. It lists the project tasks and the person responsible.

Example of a RACI (**R**-Responsible, **A**– Accountable, **C**-Consulted, **I**-Informed):

	HR Director	HR Manager	CIO	IT Manager	Web Developer
Define Problem	A	R	I	I	I
Design Solution	I	C	A	R	C
Develop	I	C	A	R	R
Test	I	I	C	A	R
Implement	I	C	I	A	R

There is also software to produce Responsibility Charts, or Human Resources may develop their own chart in a word processing software.

Once Human Resources has supported the Project Manager and the team in the initial phase, they may also help out with Planning Phase.

5.3. PLANNING

Phase 2: Project Planning

After the project has been defined and the project team has been appointed, you are ready to enter the second phase in the project management life cycle: the detailed **project planning** phase.

Project planning is at the heart of the project life cycle, and tells everyone involved where you're going and how you're going to get there. The **planning phase** is when the project plans are documented, the project deliverables and requirements are defined, and the project schedule is created. It involves creating a set of plans to help guide your team through the implementation and closure phases of the project. The plans created during this phase will help you manage time, cost, quality, changes, risk, and related issues. They will also help you control staff and external suppliers to ensure that you deliver the project on time, within budget, and within schedule.

The project planning phase is often the most challenging phase for a project manager, as you need to make an educated guess about the staff, resources, and equipment needed to complete your project. You may also need to plan your communications and procurement activities, as well as contract any third-party suppliers. The purpose of the project planning phase is to:

1. Establish business requirements
2. Establish cost, schedule, list of deliverables, and delivery dates
3. Establish resources plans
4. Obtain management approval and proceed to the next phase

Merriam Webster's definition of **planning** is "the act or process of making a plan to achieve or do something" (Merriam-Webster, n.d. a) This suggests that the ultimate goal of planning is the plan itself. It also presumes that once a plan has been formulated, you only need to follow the plan to achieve the desired outcome. That's fine for ordinary conversation. But when we begin to think about living order project planning, a more expansive understanding of the nature of planning emerges. In living order, planning is a process that prepares the project team to respond to events as they actually unfold. The whole point of planning is to develop strategies to manage the:

- Changes to scope
- Schedule
- Cost

- Quality
- Resources
- Communication
- Risk
- Procurement
- Stakeholder engagement

Planning results in a plan, but the plan is not an end in itself. Rather, a plan is a strategic framework for the scheduling and execution of a project. It's only useful if it includes the information team members require to begin moving forward. And it only remains useful if team members modify the plan as they learn the following about the project:

- Key constraints such as the timeline, cost, and functional requirements.
- Information on project system issues, such as workflow and milestones, which provide a broad look at the project as a whole.
- Plans for periodic check-ins that allow participants and leadership to re-evaluate the project and its original assumptions.

Die-hard geometric order planners take a **deterministic approach,** laboring under the false notion that once everyone agrees on a plan, the plan itself determines what comes next. Indeed, it is tempting to think you can nail down every detail at the beginning of a project and then get going without looking back. But effective living order planners understand that, especially early in a project, these details are nearly always provisional and subject to change. Thus, effective living order planners stand ready to alter their plans in response to what they learn in changing conditions. They also understand that the context in which a project unfolds has varying levels of detail and variability, with potentially thousands of decisions made over the project's life cycle.

As Alexander Laufer and Gregory Howell explained in an article for Project Management Journal, a project leader's work is founded in uncertainty (Howell et al., 1993). **Uncertainty** is not an exceptional state in an otherwise predictable process of work, they argue. Instead, it is a permanent feature of modern work. What's more, the longer the time between planning and implementation, the higher the uncertainty surrounding individual activities. Naturally, the higher the uncertainty in a project, the more difficult it is to plan and the less effective the plans will be at articulating actions and outcomes. Finally, they emphasize that no amount of planning can eliminate the variability intrinsic to the work of a complex project.

> ### ⚡ *Think!*
>
> Think about a time you planned a project. We have all planned projects whether big or small. Perhaps a trip? a wedding? painting your bedroom? building a patio? When we plan a project, in our minds we all put together a plan. Have you ever used any of the planning strategies above before you started your project? Example: cost it out, decide who will help you, decide how much money you want to spend. Everyone has designed a project at some point in their lives. This form of designing projects is just more formal.

Human Resources and the Planning Phase

The Planning Phase makes sure everyone involved is available for tasks, and that everyone is working together to move forward on the work to be completed. Human Resources Specialists can help the Project Manager and the team define all the facets of staffing for the projects. These can include:

Time requirements for team members to complete specific tasks on the project?

Human Resources can assist the team in designing a chronological chart with time frames. Sometimes a **Gantt Chart** is developed. This is a bar chart that shows a project schedule, showing the dependency relationship between tasks and the current status of the project. The Gantt Chart shows the start and finish dates, with names and tasks included on the chart.

There is software available for this type of planning that could include training, qualifications, and attendance. Or, Human Resources can create templates or word documents including the key aspects required in the planning

Does everyone have all the skills required? If not, help them develop the skills.

The skills for team members would be established before employees/consultants are hired for the positions. However, the team needs to have job descriptions and specifications to help guide their work. Also, team members skills may overlap, and to avoid conflict, the team's skills are defined in their roles (who will do what?) to avoid duplication.

What is the onboarding plan to bring the team together?

Onboarding (define) is a similar process Human Resources would use when completing the recruitment and selection of hiring. They want to "bring on the right people" to ensure the project gets completed on time, on budget and within the scope of the project. The onboarding could include the importance and purpose of

the project, who the stakeholders are, and define the roles. Team dynamics are important and team training could be included in the onboarding of the team.

How will performance be measured, both of the project and the team (individually and as a team)?

Human Resources can ensure a performance management system is set up initially, and that all team members are aware of how they will be measured on performance throughout the project. Evaluation of the team is important to encourage high performance and behaviour. Before the "kick off" of the project, the team needs to be aware of their expectations, the standards of the project, who is supporting them, and any limitations that could be in place. The quality of the deliverables to the customer/stakeholder is significant to how well the team produces the product/service. As well, performance can be evaluated on team dynamics, and team strengths in group decision making, problem solving and conflict resolution. This evaluation would be conducted with the Human Resources Specialist and the Project Manager.

As well, individuals need to be evaluated on performance. This could involve an appraisal similar to a function of the employee's performance review. The Human Resources Specialist would identify the team member's strengths and weaknesses, and develop a plan of action during the project. This would be based on how well the team members performed and allows for an assessment of the team members upon completion of the project. This performance review would be conducted with a Human Resources Specialist and the Project Manager.

Finally, the Project Manager needs to be evaluated on performance. Often, the Program Manager or another functional department stakeholder who has a vested interest in the project, along with the Human Resource Specialist, would evaluate the Project Manager. The same criteria applies to the Project Manager as to the team. Were the expectations and standards met? Was the quality of the product and deliverables satisfactory? Beyond this, the Project Manager is evaluated on their ability to manage the team, network with stakeholders, manage the budget, lead and motivate the team, set priorities, work in an ethical manner, and have the ability to problem solve and make good decisions. Some other considerations for evaluation for Project Managers are: Did they innovate? Were they a visionary? Were they hands on/hands off? Were they flexible? Was there trust and loyalty (to the organization and to the team?)

How will results be measured, and how will the Project Manager and the team be rewarded?

Project results are measured through data collection, reports and analysis. Operations is generally involved in evaluation control through formal processes. This control holds people accountable, helps everyone stay focused, and avoid or mitigate problems. Human Resources may be consulted about these controls, and receive reports. However, where they are actively involved is through the rewards for the Project Manager and the team.

Rewards may be established at the beginning of the project. There may be monetary rewards through compensation rewards for individual achievement, or team achievement. There may be group-related performance pay schemes established. As well, there could be commissions, bonuses, or profit-related pay. Non-monetary incentives may be provided through time off, work flexibility and experiential rewards. Other non-monetary rewards could include tuition assistance, gym memberships or membership discounts. Other

rewards built into the organization may be promotions when team members return to their regular jobs. Human Resources would be responsible to ensure all these rewards were granted to team members, as outlined in the Planning Phase.

How will the team be released back to their functional (regular) jobs; or be released from their contracts?

When the project wraps up, team members need to move on. For regular employees this means returning to their regular position within the company. Releasing the team could happen all at once, or in stages, depending on the tasks involved. Reassignment would be planned in advance by Human Resources. If a person was hired in a temporary capacity to replace project team members, they would be given notice. The project team member would return to their regular job. Human Resources may assist in re-orienting the employee back into the position if the project was for a long period of time. The employee would need time to re-adjust and the department employees need to adjust to having the employee back in the department. If the team member was a contract person, it simply means the contract is over. Sometimes, contract workers are able to find employment within the organization with the help of a Human Resources Specialist. Other times, team members a new project may become available; and the cycle starts over again.

How will safety and compliance be measured; and what is the plan for creating safety and compliance for the team?

Simply stated, the team members and Project Manager need to comply to all the safety and compliance standards and regulations that are built into the Safety Plan for the organization. Human Resources Specialists would conduct training sessions, or inform the project team of the guidelines. The Project Manager's role is to ensure that the team abides by the guidelines and enforces compliance.

How will time be managed for the beginning and ending of the project?

Human Resources may be involved in the Planning Phase with the Project Manager to develop a well-defined project plan that includes time lines and meets deadlines. It would be the Project Manager's role to communicate the day-to-day issues related to time management to avoid delays. However, Human Resources could provide training for the Project Manager and/or the team in time management, communication related to avoiding delays, sending out emails ahead of time of tasks to be competed, how to make quick decisions, and problem solving that effective.

5.4. EXECUTION OR IMPLEMENTATION PHASE

Phase 3: Execution or Implementation Phase

During the third phase, the **implementation phase or execution phase,** the project plan is put into motion and the work of the project is performed. It is important to maintain control and communicate as needed during implementation. Progress is continuously monitored in order to make appropriate adjustments as required, which are then recorded as variances from the original plan. In any project, a project manager spends most of the time in this step. During project implementation, people are carrying out the tasks, and progress information is being reported through regular team meetings.

The project manager uses this information to maintain control over the direction of the project by comparing the progress reports with the project plan to measure the performance of the project activities and take corrective action as needed. The first course of action should always be to bring the project back on course (i.e., to return it to the original plan). If that cannot happen, the team should record variations from the original plan and record and publish modifications to the plan. Throughout this step, project sponsors and other key stakeholders should be kept informed of the project's status according to the agreed-on frequency and format of communication. HR would support the team is designing a Communication Plan, and help to monitor the plan to ensure success. The plan should be updated and published on a regular basis for all stakeholders.

Status reports should always emphasize the anticipated end point in terms of cost, schedule, and quality of deliverables. Each project deliverable produced should be reviewed for quality and measured against the acceptance criteria. Once all of the deliverables have been produced and the customer has accepted the final solution, the project is ready for closure.

After you have carefully planned your project, you will be ready to start the project implementation phase, the third phase of the project management life cycle. The **implementation phase** involves putting the project plan into action. It's here that the project manager will coordinate and direct project resources to meet the objectives of the project plan. Human Resources could play a role in helping to coordinate the resources based on team competencies. As the project unfolds, it's the project manager's job to direct and manage each activity, every step of the way. That's what happens in the implementation phase of the project life cycle: you follow the plan you've put together and handle any problems that come up.

The implementation phase is where you and your project team actually do the project work to produce the deliverables. The word **"deliverable"** means anything your project delivers. The deliverables for your project

include all of the products or services that you and your team are performing for the client, customer, or sponsor, including all the project management documents that you put together.

The steps undertaken to build each deliverable will vary depending on the type of project you are undertaking, and cannot therefore be described here in any real detail. For instance, engineering and telecommunications projects will focus on using equipment, resources, and materials to construct each project deliverable, whereas computer software projects may require the development and implementation of software code routines to produce each project deliverable. The activities required to build each deliverable will be clearly specified within the project requirements document and project plan.

The job of project manager is to direct the work, but you need to do more than deliver the results. You also need to keep track of how well your team performs. HR would actively support the Project Manager with Performance Plans, and help monitor them. The implementation phase keeps the project plan on track with careful monitoring and control processes to ensure the final deliverable meets the acceptance criteria set by the customer. This phase is typically where approved changes are implemented.

Most often, changes are identified by looking at performance and quality control data. Routine performance and quality control measurements should be evaluated on a regular basis throughout the implementation phase. HR would support the performance measurement process in an indirect way with the Project Manager. Gathering reports on those measurements will help you determine where the problem is and recommend changes to fix it.

HR in Focus: Human Resources and Execution or the Implementation Phase

During this phase, Human Resources may play a less active role as the project activities are completed by the team. However, they may be involved in monitoring the communication plan, report distribution, and performance of the team.

Communication Plan

Human Resources would assist in setting up the Communication Plan and on a regular basis "check in" with the team on how communication between the team, and the Project Manager, and between the Project Team and external stakeholders is developing. If there are issues, they may act as a support to help get communication channels back on track.

Report Distribution

Human Resources may play a role in monitoring report distribution, and ensuring that reports are flowing where they need to be. For example, who needs the reports, and what time do they need them by? If there are issues, Human Resources may intervene to figure out the issues, and help the team solve the problems.

Performance Plans

Human Resources would have established performance plans with the team and Project Manager at the beginning of the project. They would regularly "check in" and perhaps have mini-performance reviews with the team (individually, or team) to ensure the goals are being met, that deadlines are being met, and the team dynamic is strong. If there are issues, HR may support the team in developing strategies to improve performance through training, individual or team motivational speeches, and through workshops on team building (refreshers.) If there are issues the Project Manager is having difficulty with, the same would apply. If the Project Manager was having difficulty with the team, or an individual, HR could provide support and guidance on how to deal with the issues.

5.5. MONITORING

The best project managers succeed through an artful combination of leadership and teamwork, focusing on people and using their emotional intelligence to keep everyone on task and moving forward. HR could provide training in emotional intelligence to ensure the team are aware of, control, and express their emotions. However, successful project managers also know how to gather data on the health of their projects, analyze that data, and then, based on that analysis, make adjustments to keep their projects on track. In other words, they practice project monitoring, analytics, and control.

Note that most project management publications emphasize the term monitoring and control to refer to this important step of project management, with no mention of the analysis that allows a project manager to use monitoring data to make decisions. But of course, there's no point in collecting data on a project unless you plan to analyze it for trends that tell you about the current state of the project. Often, monitoring and control is part of the Execution or Implementation Phase.

For simple, brief projects, that analysis can be a simple matter—you're clearly on schedule, you're clearly under budget—but for complex projects you'll need to take advantage of finely calibrated data analytics tools. In this chapter, we'll focus on tasks related to monitoring and control, and also investigate the kind of thinking required to properly analyze and act on monitoring data.

Generally speaking, project monitoring and control involves reconciling "projected performance stated in your planning documentation with your team's actual performance" and making changes where necessary to get your project back on track (Peterman, 2016). It occurs simultaneously with project execution because the whole point of monitoring and controlling is making changes as team members perform their tasks.

The monitoring part of the equation consists of collecting progress data and sharing it with the people who need to see it in a way that allows them to understand and respond to it. The controlling part consists of making changes in response to that data to avoid missing major milestones. If done right, monitoring and controlling enables project managers to translate information gleaned by monitoring into the action required to control the project's outcome. A good monitoring and control system is like a neural network that sends signals from the senses to the brain about what's going on in the world. The same neural network allows the brain to send signals to the muscles, allowing the body to respond to changing conditions.

Because monitoring and controlling is inextricably tied to accountability, government websites are a good source of suggestions for best practices. According to the state of California, monitoring and controlling involves overseeing all the tasks and metrics necessary to ensure that the approved and authorized project is within scope, on time, and on budget so that the project proceeds with minimal risk. This process involves comparing actual performance with planned performance and taking corrective action to yield the desired

outcome when significant differences exist. The monitoring and controlling process is continuously performed throughout the life of the project (California Office of Systems Integration, 2008).

In other words, monitoring is about collecting data. Controlling is about analyzing that data and making decisions about corrective action. Taken as a whole, monitoring and controlling is about gathering intelligence and using it in an effective manner to make changes as necessary. Precise data are worthless unless they are analyzed intelligently and used to improve project execution. At the same time, project execution is uninformed by the latest data on changing currents in the project can lead to disaster.

Active Control takes a two-pronged approach:

- **Controlling** what you can by making sure you understand what's important, taking meaningful measurements, and building an effective team focused on project success.
- **Adapting** to what you can't control through early detection and proactive intervention.

The first step in active control is ensuring that the monitoring information is distributed in the proper form and to the right people so that they can respond as necessary. In this way, you need to function as the project's nervous system, sending the right signals to the project's muscles (activity managers, senior managers, clients, and other stakeholders), so they can take action. These actions can take the form of minor adjustments to day-to-day tasks, or of major adjustments, such as changes to project resources, budget, schedule, or scope.

🔍 HR in Focus: HR and Monitoring

Human Resources would be less involved in monitoring the data and analytics of the project. This would be left to the Project Manager and other stakeholders. However, HR could monitor communication, and performance as stated earlier.

Within the communication plan, it is important to monitor the process and identify where there may be weaknesses and strengths. There may be a need to change the approach to have more impact, improve efficiency, and accountability of the communication plan. This could be accomplished through surveys to team members, individual or team interviews, or discussing the communication channels with stakeholders. Human Resources can help everyone involved find clarity in the relationships between the stakeholders.

Performance monitoring would be conducted by HR on a regular basis to

ensure there are no underlying problems that could negatively impact the project. They can collect data if and when a problem arises, and deal with it quickly. They may also gather the data as a baseline to compare with other issues at a later time in the project. Both these monitoring systems, set up at the beginning of the project, is a proactive approach to problem-solving to avoid issues. However, performance monitoring during the project helps to boost productivity and build a successful project by resolving problems quickly and easily.

5.6. PROJECT CLOSURE

Phase 4: Closing Processes

At the end of our project, or the entire project, we must get final approval from the customer, archive our records from the project, compile the lessons learned, and pay any outstanding bills. These and several other activities make up the closing processes. Closing processes include:

- Paying bills
- Releasing team members
- Closing accounts
- Shutting down facilities
- Writing final reports
- Seek approval from the customer
- Prepare an audit on the success of the project through retrospectives (lessons learned)
- Evaluation of team performance and Project Manager's management of the project

There are many tasks involved in closing out a project. The responsibility of closure lies with the Project Manager and the team. HR can be involved with the team with specific activities.

Human Resources and Closure of Projects

Human Resources may assist with several elements of the closure of projects. Through Lessons Learned and Performance Evaluations, the wisdom from the project is transferred back to the organization to help improve future projects.

Lessons Learned

Retrospectives are lessons learned on projects. Human Resources would work with the team (as an outside facilitator). They would act as a guide to lead the team through a workshop and process to identify what went well in the project, what they could have improved upon, and what type of follow-up action plan they could develop with goals and accountability. Human Resources, to perform this activity, needs to remain unbiased.

The Human Resources Specialist would design a workshop or purchase one that uses questionnaires. It focuses on the operation of the project and how the culture of the organization impacted the results. The team

members also review mistakes made and failures within the project. This is important information for future projects. A review of successes is also documented. Each team member and the Project Manager participate equally, with no judgment. Each item addressed could be assigned to a team member who witnessed the success or failure and expands on the success or failure. This person may serve as a contact person for future projects as a consultant.

The person may also communicate the report to other employees in the organization. These Lessons Learned would be documented by the HR Specialist, distributed to the appropriate stakeholders, and archived for future use. These archived documents will serve as tools for future team members to avoid the mistakes made and how successes were achieved. Retrospectives were almost non-existent until recently. They are becoming more important in organizations, therefore, involving Human Resources more in project management.

5.7. EVALUATIONS OF INDIVIDUALS AND TEAMS

Project Team Evaluation – Individuals

Performance management is important in the Planning Phase to encourage team success and project success. Human Resources would develop the performance plans for each team member and the Project Manager. The monitoring would take place regularly to ensure all team members and the Project Manager are performing continuously to the expectations of the roles assigned.

At the end of the project, Human Resources will want to support the team's individual career development. The HR Specialist would set up a meeting with each team member to review the performance plan. They would measure the success against the criteria that was established at the beginning of the project. Given the project's expectations, standards, organizational support and limitations, an effective performance review can be conducted.

Following the individual team member review, the exit strategy would be discussed with the employee. Post-project the employee may return to their regular job, or if a consultant, they are released from the organization. Oftentimes, project employees seek promotions or are offered promotions within the company. Human Resources would support any of these transitions.

Project Team Evaluation – Team

Most often team evaluation is omitted at the end of project. This is unfortunate for the team members. It ought to be an important step in Closure of projects. Human Resources could work with the team on evaluating the team's problem-solving steps and processes, the team's decision-making steps and processes, team unity, trust between team members and between the team and the Project Manager, and communication between and among the team. Project success depends on all these factors as the quality of the product/service is dependent on the team.

This evaluation could be through a survey administered by the HR Specialist. The survey may be only offered to the team and Project Manager, or to other stakeholders who had a vested interest in the project. Following the submission and analysis of the survey, the HR Specialist would meet with the team to review the results. These results would be used to assess the strengths and weaknesses of the team, lessons learned, and the development of the team overtime. This information is helpful for future teams and projects to communicate

better, and, may offer better approaches to team development. The HR Specialist would prepare the report, distribute the reports to the stakeholders, and archive the documents.

Think!

Many of us have been part of a team. In College, you are part of a team/group. You work on group projects together. When all things are equal, and everyone does their "part," the team will be successful in earning great marks. If this does not happen, sometimes, some team members take on larger portions than others in the team. However, everyone earns the same grade.

Do you prefer group work? Do you prefer individual work? Why?

How would you reward a team working on a project, if some team members told you they "did more work" than other team members?

Project Manager Evaluation

If Project Managers were hired with the competencies, skills, leadership and management skills set out by Human Resources, the performance review ought to be positive. If they did a good job of producing a quality product/service to the customer, the performance will be applauded by all concerned. Similar to the team members, if the expectations, standards, support from the organization, and limitations were reviewed, post-project reviews ought to be admirable. In many cases, the same type of performance review would be completed with the Project Manager as the team members.

However, a popular evaluation today is **360-degree review**. It is a process where an employee would receive anonymous feedback from stakeholders based on performance. Trained Human Resources Specialists can conduct the 360-degree review. This method is for personal and professional growth. It is not intended to affect an employee's position or pay. Three rules apply:

1. It is completed confidentially by the identified stakeholders (could be team, customer, functional department managers, the Project Manager themselves, and others deemed and agreed upon).
2. The participation is anonymous and the performance feedback will only go to the Human Resources Specialist, who in turn, will critique the Project Manager based on the results.
3. The review is only based on the time the project began until it finished.

The Human Resources Specialist would ensure the three rules were followed. The HR Specialist would review the report with the Project Manager. A career plan could be created for future career development. A more in-depth review of 360-dgree Feedback Model can be reviewed in section 9.9.

Think!

As an employee, would you want to have a 360-degree evaluation? Why? Who not?

5.8. S.M.A.R.T. GOALS IN PROJECTS

Setting Project Objectives in the Initiation Phases

The project **initiation phase** is the first phase within the project management life cycle, as it involves starting up a new project. Within the initiation phase, the business problem or opportunity is identified, a solution is defined, a project is formed, and a project team is appointed to build and deliver the solution to the customer. A business case/proposal (sometimes called a feasibility study) is created to define the problem or opportunity in detail and identify a preferred solution for implementation. The business case/proposal includes:

- A detailed description of the problem or opportunity with headings such as Introduction, Business Objectives, Problem/Opportunity Statement, Assumptions, and Constraints
- A list of the alternative solutions available
- An analysis of the business benefits, costs, risks, and issues
- A description of the preferred solution
- Main project requirements
- A summarized plan for implementation that includes a schedule and financial analysis

Goals are set in the Initiation Phase. Many organizations use SMART Goals.

In-depth Look

SMART Project Objectives

SMART goals is an acronym which stands for Specific, Measurable, Attainable, Realistic and Timely (Lawlor & Hornyak, 2012). While humans have been setting goals for thousands of years, theories on how to set better goals originated in the 1940s when scholars in engineering and education first wrote about the benefits of setting specific and measurable goals (Lawlor & Hornyak, 2012). Further research in the 1960s, by Edwin Locke, found that employees were more motivated when they were given feedback on their performance and straightforward goals (Lawlor & Hornyak, 2012). Research continued into the 1980s and the first article documenting SMART goals was published in 1981 by Edward T. Doran. Doran is commonly regarded as the founder of the acronym (Lawlor & Hornyak, 2012).

SMART goals seek to address ineffective goal-setting behaviour and poor employee performance due to

inefficiency. Practicing proper goal setting can promote workplace efficiency, and accountability and help employees assess their progress and productivity (Young, 2022).

The first concept in SMART goals is that goals should be "specific" so there is a clearly outlined target the employee wishes to achieve They should also be "measurable", so the progress or success of the goal is clearly outlined ("Achievable" means that goals should be attainable by employees and within their power to complete "Realistic" refers to goals being reasonable given the abilities of employees and the resources available to them. Finally, "timely" means setting a timeframe in which the goal should be accomplished.

Benefits

Applying the SMART goals model can have several benefits. It helps to improve planning skills, which can result in reduced stress. Also, because SMART goals are specific and measurable, the employee can easily track the past, present and future of their desired goal. Employees who use this model have effective goal-setting practices and are more organized in their work and personal lives. Employing the SMART goals model can be beneficial when a specific goal of an individual is challenging. It provides guidance on how to set achievable goals in an efficient way. Additionally, it makes sure these goals are measurable by identifying what acts are best suited to obtain success. In the workplace, this model can increase employee engagement, increase efforts and motivation; as well as provide constructive feedback to help employees progress forward. Overall, it has been proven to boost employee morale and job satisfaction.

Limitations

Despite being widely beneficial, the SMART goals model does have limitations. The primary critique is based on the belief that this model is too narrow in focus and limits an employee's perception of their capabilities and opportunities for growth. By focusing on one specific goal, employees may become narrow-minded and fearful of setting goals that might seem out of reach. Moreover, by focusing on one goal at a time, an employee's professional growth may be prolonged, preventing other goals from being accomplished simultaneously (Wang, 2017). Ultimately, being able to broaden one's views rather than concentrating on one specific goal could differentiate between one's success or failure.

Regardless of this critique, since its inception, the setting of SMART goals has been a common practice in project management and human resources functions. By setting goals that are Specific, Measurable, Assignable, Realistic, and Timely, projects and employee performance can be more efficiently organized, tracked, and completed. For project management, efficient goal setting is essential in outlining the primary vision of the project and setting the direction for the organization's business plan. Related to employee performance, following a SMART goals model enables managers and employees to collaborate on performance goals that are attainable and measurable (Goal Setting, 2022). By setting clear goals that are attached to a

timeline and scheduled for review, managers can track and hold employees accountable for their progress and performance. Employees are given a clear understanding and direction on how they may reach their goals.

Overall, the SMART Goals model allows project management and employee performance tracking efforts and processes to be streamlined and enhanced. Due to this enhancement, SMART Goals has become a prominent model utilized in project development and execution, and employee performance measurement and review

Another theory that can be used in partnership with the SMART Goals model is Locke's goal-setting theory of motivation. Locke's theory is based on the concept that goal setting is linked to task performance, which can be enhanced with specific and challenging goals accompanied by regular feedback (Juneja, 2022). By implementing this model in addition to the SMART Goals model, managers can promote self-efficacy in the workforce that drives goal commitment and completion.

Class of 2022 Contributions: Hannah Fitzgerald, Chloe Erikson, Jillian Elliott, Katrina Fairbarin

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Figure 5-2: "Smart Goals" by Fanshawe College, CC BY-NC-SA 4.0 (click to enlarge)

- **Specific** – A project needs to be specific about what it will accomplish. Unlike many organizational goals, the goal of a project should not be vague or nebulous. An organization may want to '*make London, Ontario a great place to live*', but its projects need to focus on a specific goal. For example, a more specific goal would be to build a downtown farmers' market. A project that is specific is one that can be clearly communicated to all team members and stakeholders. A specific project goal will answer

the five 'W' questions:

1. **W**hat do we want to accomplish?
2. **W**hy are we undertaking this project?
3. **W**ho is involved or will be affected by the project?
4. **W**here will this project be conducted?
5. **W**hich constraints (scope, time, money, risk, etc.) have been placed on our project?

- **Measurable** – How will project progress and success be measured? What will be the measurable difference once our project is completed successfully? These measures should be quantifiable.
- **Assignable** – Who will do the work? Can people be identified who have the expertise in the organization to complete this work? Or can the expertise be hired from outside of the organization?
- **Realistic** – Is it realistic that the organization can achieve this project, given its talents and resources? This is a very important consideration for businesses of all sizes. Yes, it would be great to produce a new driverless car, but is that realistic given the resources that the organization has available?
- **Time-related** – when will the project be completed and how long will it take? These criteria can be very useful when defining a project. If the description for a project does not meet all these criteria, then it is time to go back to the drawing board and make sure that what is being described is really a project, rather than a program or strategic goal.

Regardless of this critique, since its inception, the setting of SMART goals has been a common practice in project management and human resources functions. By setting goals that are Specific, Measurable, Assignable, Realistic, and Timely, projects and employee performance can be more efficiently organized, tracked, and completed. For project management, efficient goal setting is essential in outlining the primary vision of the project and setting the direction for the organization's business plan. Related to employee performance, following a SMART goals model enables managers and employees to collaborate on performance goals that are attainable and measurable (HR Resource Guide, 2022). By setting clear goals that are attached to a timeline and scheduled for review, managers can track and hold employees accountable for their progress and performance. Employees are given a clear understanding and direction on how they may reach their goals. Overall, the SMART Goals model allows project management and employee performance tracking efforts and processes to be streamlined and enhanced. Due to this enhancement, SMART Goals has become a prominent model utilized in project development and execution, and employee performance measurement and review.

5.9. PROJECT SCOPE

After looking at the 4 phases of the Life Cycle of a project, we will move to the Project Scope that is designed at the beginning of the project.

You always want to know exactly what work has to be done before you start it. You have a collection of team members, and you need to know exactly what they're going to do to meet the project's objectives. The scope planning process is the very first thing you do to manage your scope. **Project scope planning** is concerned with the definition of all the work needed to successfully meet the project objectives. The whole idea here is that when you start the project, you need to have a clear picture of all the work that needs to happen on your project, and as the project progresses, you need to keep that scope up to date and documented in the project's scope management plan.

Defining the Scope

The **Scope** is the work that needs to be completed to deliver the product/service. It is the final result of the project. In simple terms, the **Scope Statement** includes Who? What? When? Where? Why? Costs.

> ### Example of a simple Scope Statement:
>
> A party is planned for my parents on September 15th, 2022 from 6:00 p.m.-12:00 p.m. at the ABC Community Centre for their anniversary at a cost of $2,000.00 There will be a dinner and a band.

Deliverables

You already have a head start on refining the project's objectives in quantifiable terms, but now you need to plan further and write down all the intermediate and final deliverables that you and your team will produce over the course of the project. **Deliverables** include everything that you and your team produce for the project (i.e., anything that your project will deliver). The deliverables for your project include all of the products or services that you and your team are performing for the client, customer, or sponsor. They include every

intermediate document, plan, schedule, budget, blueprint, and anything else that will be made along the way, including all of the project management documents you put together.

Project deliverables are tangible outcomes, measurable results, or specific items that must be produced to consider either the project or the project phase completed. Intermediate deliverables, like the objectives, must be specific and verifiable.

Deliverables can be simply stated in project documents. The are the final output along the way of completing the project. Some example may include:

- Designing the product
- Reporting progress
- Complete content strategy
- Proposal written
- Technical support
- Financial Reporting
- Communication Plan
- Product prototype development

One of the project manager's primary functions is to accurately document the deliverables of the project and then manage the project so that they are produced according to the agreed-on criteria. Deliverables are the output of each development phase, described in a quantifiable way.

Project Requirements

After all the deliverables are identified, the project manager needs to document all the requirements of the project. **Requirements** describe the characteristics of the final deliverable, whether it is a product or a service. They describe the required functionality that the final deliverable must have or specific conditions the final deliverable must meet in order to satisfy the objectives of the project. A requirement is an objective that must be met. The project's requirements, defined in the scope plan, describe what a project is supposed to accomplish and how the project is supposed to be created and implemented. Requirements answer the following questions regarding the as-is and to-be states of the business: who, what, where, when, how much, and how does a business process work?

Requirements may include attributes such as dimensions, ease of use, color, and specific ingredients. If we go back to the example of the company producing holiday eggnog, one of the major deliverables is the cartons that hold the eggnog. The requirements for that deliverable may include carton design, photographs that will appear on the carton, and colour choices.

Requirements specify what the final project deliverable should look like and what it should do. Requirements must be measurable, testable, related to identified business needs or opportunities, and defined

to a level of detail sufficient for system design. They can be divided into six basic categories: functional, non-functional, technical, business, user, and regulatory requirements.

Figure 5-3: Project Requirements by Fanshawe College CC-BY-NC-SA (click to enlarge)

Functional Requirements

Functional requirements describe the characteristics of the final deliverable in ordinary non-technical language. They should be understandable to the customers, and the customers should play a direct role in their development. Functional requirements are what you want the deliverable to do.

> Vehicle Example: If you were buying vehicles for a business, your functional requirement might be: "The vehicles should be able to take up to a one-ton load from a warehouse to a shop."
>
> Computer System Example: For a computer system you may define what the system is to do: "The system should store all details of a customer's order."
>
> The important point to note is that what is wanted is specified and not how it will be delivered.
>
> Other examples include:
>
> - Business rules
> - Tracking audit
> - Certification requirements
> - Levels of authorization for project

Non-functional Requirements

Non-functional requirements specify criteria that can be used to judge the final product or service that your project delivers. They are restrictions or constraints to be placed on the deliverable and how to build it. Their purpose is to restrict the number of solutions that will meet a set of requirements. Using the vehicle example, the functional requirement is for a vehicle to take a load from a warehouse to a shop. Without any constraints, the solutions being offered might result in anything from a small to a large truck. Non-functional requirements can be split into two types: performance and development. To restrict the types of solutions, you might include these performance constraints:

- The purchased trucks should be American-made trucks due to government incentives.
- The load area must be covered.
- The load area must have a height of at least 10 feet.

Projects have constraints that can be categorized according to type of requirements. There are three general types of non-functional development constraints:

- **Time:** When a deliverable should be delivered
- **Cost:** How much money is available to develop the deliverable
- **Quality:** Any standards that are used to develop the deliverable, development methods, etc.

Technical Requirements

Technical requirements emerge from the functional requirements to answer the questions: how will the problem be solved this time and will it be solved technologically and/or procedurally? They specify how the system needs to be designed and implemented to provide required functionality and fulfill required operational characteristics.

For example, in a software project, the functional requirements may stipulate that a database system will be developed to allow access to financial data through a remote terminal. The corresponding technical requirements would spell out the required data elements, the language in which the database management system will be written (due to existing knowledge in-house), the hardware on which the system will run (due to

existing infrastructure), telecommunication protocols that should be used, and so forth.

Other examples:

- Software availability
- Security of information
- Internal controls

Business Requirements

Business requirements are the needs of the sponsoring organization, always from a management perspective. Business requirements are statements of the business rationale for the project. They are usually expressed in broad outcomes, satisfying the business needs, rather than specific functions the system must perform. These requirements grow out of the vision for the product that, in turn, is driven by mission (or business) goals and objectives.

Examples include:

- Accurate monthly reporting
- Consistent data produced
- Complete surveys and questionnaires for the accuracy of information

User Requirements

User requirements describe what the users need to do with the system or product. The focus is on the user experience with the system under all scenarios. These requirements are the input for the next development phases: user-interface design and system test cases design.

- Software needs to allow 500 users access simultaneously
- Adequate internet speed
- Software must have ease of use for users
- Data collected needs to be tracked that is consistent

Regulatory Requirements

Regulatory requirements can be internal or external and are usually non-negotiable. They are the restrictions, licenses, and laws applicable to a product or business that are imposed by the government. They required compliance for all, and standards must be met.

5.10. MANAGING THE SCOPE

Time (schedule), cost, and scope are known as the **triple constraints** of project management. It's not possible to change one without changing at least one of the others. If the project takes twice as long as expected to complete, then the cost will almost certainly go up. On the other hand, a decision to cut costs, perhaps by using less experienced labor, could lead to a work slowdown, extending the schedule. Such a decision might also result in a change to the project's scope, perhaps in the form of a lower quality product.
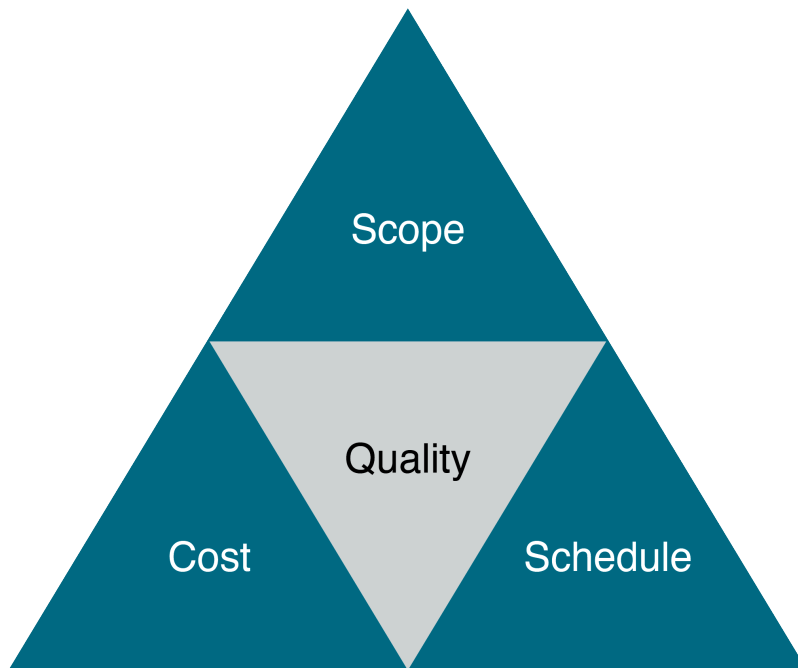
Figure 5-4:A schematic of the triple constraint triangle. Adapted from the triad constraints by John M. Kennedy T. CC-BY-SA license.
In this triangle, each side represents one of the constraints (or related constraints) wherein any changes to any one side cause a change in the other sides. The best projects have a perfectly balanced triangle.

The initiation phase is too early in the project to nail down precise details about time and cost, but it is a good time to think long and hard about scope, which is "all of the work that needs to be done to provide the product or service your project is delivering" (Martinez, n.d.). In this early stage, you and the project stakeholders might do some blue sky thinking about what your project could possibly achieve, without regard to the constraints of time, cost, and scope. But before too long you'll need to zero in on a definition of the project's scope, formalizing it as a scope statement, using the information currently available to you.

Except for the simplest projects, any scope definition will almost certainly evolve as you learn more about the project and the customer's needs. The term **scope evolution** refers to changes that all stakeholders agree on, and that are accompanied by corresponding changes in budget and schedule. Scope evolution is a natural result of the kind of learning that goes on as a project unfolds. This includes learning that arises from fresh insights into the needs of the end user, new regulations, or upheaval in the marketplace. As long as all stakeholders agree on the scope changes (and the associated changes to the budget and schedule), scope evolution ensures that customers actually get what they want out of the project. The more you talk with the client and learn about their needs, the more you will be able to refine the scope.

Indeed, one of the main jobs of a project manager is managing scope evolution. But different types of projects will involve varying amounts of scope evolution. For example, if you're working on a project related to satisfying a specific environmental regulation, the initial definition of the project's scope might be clear, requiring little refinement as the project unfolds, as long as the regulation itself is not altered. But if you are working on a product designed to satisfy a brand-new market demand, you might need to refine the scope continually to ensure that you satisfy your customers' needs.

Perhaps the most common cause of scope evolution is a change in the context in which a project is planned and executed. Alterations in market forces, changing demographics, new or more vigorous competition, and technological advancements can all change a project's context, forcing you to rethink its scope. This potential for changing contexts means that no two projects are the same. You might think Project B is nearly identical to Project A, but then a sudden shift in context can change everything. As shown in Figure 5-5, context is largely defined by the organizational, social, and political structures in which a project occurs.
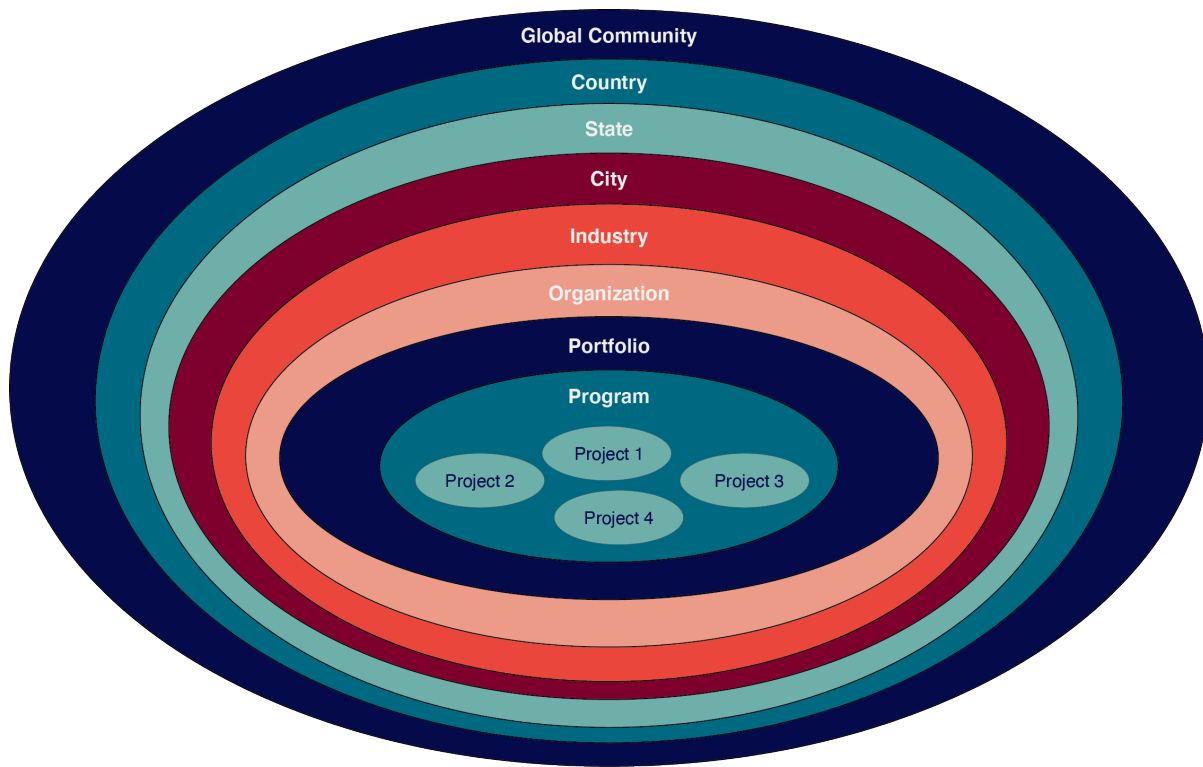
Figure 5-5: Context is largely defined by the organizational, social, and political structures in which a project occurs. (Click to enlarge)

Scope evolution is managed change. It is an approved alteration to the project scope that occurs as the project participants learn more about the project. It results in an official change in the project scope, and therefore to the project budget or schedule, as agreed to by all project participants. This kind of managed change is a natural and rational result of the kind of learning that goes on throughout the course of a project. It is a conscious choice necessitated by new information forcing you to reconsider project essentials in order to achieve the intended project value.

Scope creep is unmanaged change. It is caused by uncontrolled changes to the project scope. Such changes might add value from the customer's perspective, but the time, money, and resources consumed by the change of scope lead to additional overruns. Scope creep tends to happen bit by bit because no one is paying close attention to the project's scope. For example, in a kitchen remodeling project intended to replace countertops and cabinets, deciding at the last minute to replace all appliances might be an example of scope creep.

Creating a Clear Scope Statement (interchangeable with Project Charter)

The key to managing scope is a carefully crafted scope statement, which should be clear and precise. The details

of how you plan to carry out a project may be vague at first, but what you want to achieve should be perfectly clear. Vagueness can lead to small changes to the project's scope, which in turn lead to other changes, until the original project is no longer recognizable.

Writing a **scope statement,** the document that defines the project's scope, is a major part of the initiation phase. However, according to Brad Bigelow (2012, p. 1) in an article for the Project Management Institute, it is "usually expressed in qualitative terms that leave room for interpretation and misunderstanding. Consequently, it's often the biggest source of conflicts in a project".

To avoid such problems, experienced project managers put a lot of effort into learning what should and shouldn't be included in the project, and then articulating these boundaries as clearly as possible in the form of a scope statement. According to Bigelow (2012, p. 2), this work is essential to ensuring a project's success: "No project's scope can ever be entirely free of fuzziness—free from subjectivity and imperfect definitions—as long as human beings are involved. On the other hand, it's also highly improbable that any project will ever survive initiation if its scope is entirely vague, undefined, and subject to unpredictable expectations".

If the scope is poorly defined, then what is or isn't within the project scope is reduced to a matter of perspective. Not surprisingly, these "different perspectives...can often be the root of conflicts within a project" Bigelow (2012, p. 2). Bigelow describes a project in which the team and the customer see things very differently:

When the scope is poorly defined, satisfying the customer can grow increasingly difficult, with the team going off and creating what it thinks the customer wants, only to be told, "No, that's not it."

- A brief justification of the project's **purpose**, including a summary of the **business needs** the project will address.
- A **description** of the project and how it will be accomplished.
- An explanation of the **project's goals.**
- A **business case** explaining the benefits to the organization.
- Acceptance criteria that specify the **conditions the product or service** must satisfy before the customer will accept the deliverables. This could include the **business requirements.**
- **Deliverables,** which are "the quantifiable goods or services that will be provided upon the completion of a project. Deliverables can be tangible or intangible parts of the development process, and they are often specified functions or characteristics of the project" (Bloomenthal, n.d., para. 1.).
- **Milestones** or significant events that will occur at a certain time. They must include an end point (date.)

- An explanation of anything **excluded from the project**—in other words, an explanation of what is out of scope for the project. This list should be "as detailed as is necessary to define the project boundaries to all stakeholders" (Feldsher, 2016, para. 11).
- **Constraints,** such as budget and schedule.
- **Assumptions,** including anything you currently believe to be true about the project. It's also helpful to include ideas "about how you will address uncertain information as you conceive, plan, and perform your project" (Portny n.d., 2018).
- State the known **Risks.** What could go wrong?
- An explanation of any **new or unusual technology** you plan to use throughout the project. This is not a typical part of a scope statement, but "it's likely that stakeholders will appreciate the transparency and feel more comfortable with the project moving forward" (Feldsher, 2016, para. 13).
- Identify the **Roles** of Project Manager, the team and the responsibilities of each person.
- Provide the name(s) of the person(s) who has signing **Authority.** Include the Title.

Practical

- **Engage all stakeholders:** Your goal is to keep people meaningfully engaged in your project. You don't want stakeholders showing up for ceremonial appearances at project meetings. Instead, you want them seriously focused on the prospects for project success.
- **Outcome clarity:** Ask your customer to define success right at the beginning. Then, working with the customer and other stakeholders, define how success will be measured.
- **Use a common vocabulary:** At the beginning of any project, go to your end-customers and learn their vocabulary. Make sure you understand the terms that are important to them and what such terms mean to them. Whenever possible, use your customer's vocabulary, not yours. Also, strive to speak in plain English whenever you can, and avoid techno-speak.
- **Create a glossary of terms:** On projects with a lot of complex jargon, consider creating a glossary of terms. Then publish it in a way that makes it accessible to all stakeholders, updating it as needed. Here's an example of one such glossary: "COSO Framework. "

- Identify what you don't know: When you start a project, there are always things you don't know. The key is to know that you don't know them. The more you strive to recognize this, the better you will be at predicting those unknowns and making provisions for them.
- **Have key team members sign major project documents:** Research shows that the act of signing a document makes people much more committed to delivering on the promises described in the document. Consider asking the entire project team to sign the project charter and scope documents. This simple act can serve as a powerful inducement to completing the project successfully.
- **Proactive concurrency:** In the early stages, avoid the trap of plotting one thing after another, in a linear fashion. Instead, start fast, doing as many things as you can concurrently, as quickly as you can. This will give you a sense of whether or not the scope, budget, resources, and schedule are all in relatively close alignment at the macro scale. If you find they are not, report that to management right away.
- **Permanent urgency:** In the living order in which all modern projects unfold, permanent urgency is the new law of nature. In the traditional, geometric order form of project management, you could assume that you would have sufficient time and resources to do things in a linear, step-by-step manner. But in the modern world, that's rarely the case. Get used to an element of urgency in all projects. Try not to let this paralyze you and your team. Instead, let a sense of urgency spur you on to more agile, alert, and flexible project management techniques.
- **Post the project documents prominently:** Putting important documents front and center helps a team stay focused, especially if you have everyone sign them first. It also encourages the team to update them when necessary.
- **Plan for errors:** You and your team will almost certainly make mistakes, especially in the early stages of a project. Therefore, you should plan for that. Keep thinking ahead to what might go wrong, and how you could correct course.

5.11. PROJECT CHARTER

What is the Project Charter?

A **project charter,** project definition, or project statement is a statement of the scope, objectives, and participants in a project. It provides a preliminary delineation of roles and responsibilities, outlines the project objectives, identifies the main stakeholders, and defines the authority of the project manager. It serves as a reference of authority for the future of the project.

The charter document can be just a couple of pages or 50-100 pages. Ideally, it will be short (less than 5 pages) and written in clear and concise language so that anyone who reads it will have a clear understanding of the project, regardless of their technical background. Most project charters include a place at the end of the document for approval sign-off by the project sponsors or customers (i.e., those people that are paying for the project).

Purpose of the Project Charter

The project charter is used by the project manager during the planning process. The project charter informs the project manager about what skills will be required on the project team, as well as the general scope of work for the project. Some organizations forgo the creation of a project charter, viewing it as a document that merely takes time to create and contains information that "everyone already knows." This can be a big mistake. The charter can be referenced by the project manager and stakeholders if some of the goals of the project are not met or they are asked to do something outside the scope of the project. A well-drafted project charter can prevent political interference in achieving the goals of the project and reduce scope creep.

In summary, the purpose of a project charter is to:

- Provide an understanding of the project, the reason it is being conducted, and its justification.
- Establish early on in the project the general scope.
- Establish the project manager and his or her authority level. A note of who will review and approve the project charter must be included.

What Should Be in the Project Charter?

There are many templates available for project charters, and these vary greatly in content and level of detail.

(The PMI affiliated website ProjectManagement.com offers a number of project charter templates.) At a minimum, good project charters will contain the following sections.

Background (Description of the project, purpose of the project)

The background should provide a broad overview of the project and answer the following questions:

- What is the purpose of the project?
- Where did the project originate? Have we conducted similar projects in the past?
- Who is the project manager, and what level of authority does the project manager have?

Business Case and Business Requirements

The Business Case describes why this project was selected over others and answers the following questions:

- Why was this project selected to move forward (project justification)? What selection criteria were used? (Project selection techniques are covered in a later chapter.)
- What problems is this project solving, or what opportunities is it creating? What are the high-level requirements?

Goals (these could be included in the Requirements)

Listing the goals for the project ensures that the stakeholders will not be disappointed when the project is completed. This section should answer the following questions:

- What are the broad goals of this project?
- How will we know if the project is a success (what are our metrics for success)?
- Are there industry standards that we are trying to meet or benchmarks for performance that we want this project to attain?

Assumptions

- Under what conditions would the project start?
- What's in and what's out of the project.?

Constraints

- What can the project control?
- What can the project not control?

Risks

- What risks are there in undertaking the project? (What could go wrong?)

Deliverables

- What is delivered at the end of the project (broad)? Not tasks and steps. They are the outputs over the life of the project

Milestones

- What are the significant events in the project that occur at certain times (end dates)?

Project Budget (can be a high-level budget in charter)

The project budget section should provide a summary of the budget for the project and information about how it was determined. It answers the following questions:

- What is the initial budget for this project?
- How was that budget developed?
- Are the numbers used for budgeting rough estimates based on top-down estimation techniques, such as analogous or parametric estimating, or are they hard constraints?
- What contingency funds have been allocated?

Key Stakeholders

This section describes the key stakeholders and their interest in the project. This doesn't have to be an exhaustive list of stakeholders but should contain a list of people that are interested in the project, as well as people who will pay for, or benefit from, the project.

Authorization

- Who is/are the sponsors of the project?

- What has the signing authority to approve the Charter and the Final Proposal?

5.12. EXAMPLE OF A SIMPLE PROJECT CHARTER

Example of a Simple Project Charter

Identification Section

List the project name, the date of the current version of the project charter, the sponsor's name and authority, and the project manager's name.

Example:

Project Name: Rice University Computer Store Creation

Project Sponsor: Jane Ungam, Facilities Manager

Date: Jan 12, 2010

Revision: 1

Project Manager: Fred Rubens

Overview of the Project

Provide a simple but precise statement of the project.

Example: Rice University is planning to create a store to sell computer supplies.

Objective

State the objectives of the project clearly and ensure they contain a measure of how to assess whether they have been achieved. The statement should be realistic and should follow the SMART protocol:

- Specific (get into the details)
- Measurable (use quantitative language so that you know when you are finished)
- Acceptable (to stakeholders)
- Realistic (given project constraints)
- Time based (deadlines, not durations)

> Example: The objective of this project is to implement a campus store when class starts in August 2010 with enough inventory (computer supplies, such as memory sticks, mouse pads, and cables) to last through the first two weeks of classes.

Scope

Specify the scope of the project by identifying the domain or range of requirements.

> Example: The scope of the Rice's school supplies store project includes the activities listed below:
>
> 1. Determine what supplies will be sold in the store.
> 2. Establish competitive prices for the computer supplies.
> 3. Source and secure supply vendors.
> 4. Establish marketing, procurement, operations, and any other necessary departments, schools, centers, and institutes

It is equally important to include in the scope what is not included in the project.

Example: The scope of the project does not include:

- Development of any other school store departments
- Store design or construction

Major Milestones

List all major milestones needed to ensure project completion successfully.

Example:

- All vendors selected
- Contracts or orders completed with all vendors
- Supplies delivered to the store
- Pricing determined

Major Deliverables

List and describe the major deliverables that will result from the project.

Example:

- Operations, procurement, marketing, and other teams established
- Store supplies stocked and displayed
- Store staffing completed, including work schedules
- Store operations policies, including hours of operation, established

Assumptions

Outline the assumptions made in creating the project. An assumption is a fact you are unsure of but can either confirm at a later time or are simply stating so that the project can proceed as if the statement were true.

Example:

- Only computer supplies will be sold in the store.
- Customers will be the Rice University student body and faculty.
- Rice University students will manage the project and be responsible for ongoing operations.
- A store sponsor from the university faculty or staff will be assigned to mentor students and provide oversight.
- Store hours of operation will be approved by the Rice University students or store sponsor.
- Supplier deliveries will be arranged or the store sponsor will pick them up with students.
- Students will be empowered to contact vendors for order placement and inquiries via telephone.

Constraints

Define any and all constraints on the project or those working on the project. This is an important part of the project charter. A constraint is anything that limits the range of solutions or approaches.

Example:

- Student availability to meet for project planning is limited to school hours.
- Software is not available for project planning and control.

Business Need or Opportunity (Benefits)

Provide a concise statement of the business need or opportunity that led to the creation of the project. Why was it created? What are the benefits? How does the project contribute to organizational objectives?

Example: The goal of this project is to provide income for the Rice Student Center while supplying necessary items to students and faculty at competitive prices. The school store will be a convenience to students since necessary supplies will be available on campus. This will help students learn to manage their personal supplies.

Preliminary Cost for the Project

Provide a statement indicating how the cost of the project will be defined and controlled.

Example: The procurement team will assemble a proposal based on expected costs for review by the Dean of Undergraduate Studies.

Project Risks

A risk is anything uncertain that may occur that will reduce or decrease the chances of project success.

Example:

1. There is a state election coming and the new government may change the taxation rules for private university retail outlets.
2. The cloud is changing student demand for media such as flash drives in somewhat unpredictable ways. If this happens faster than we forecast, we may be building a store that students don't need.
3. Deliveries of items, such as store shelves, will be delayed if a major hurricane occurs.

Project Charter Acceptance

Provide the names, titles, and signature lines of the individuals who will sign off on the project charter.

Project Stakeholders

Provide the key stakeholders and team members by function, name, and role.

5.13. REQUEST FOR PROPOSAL AND CONTRACTS

After an idea makes it through the project selection process and becomes a funded project, an organization typically issues a **request for proposal (RFP)**, which is a "document that describes a project's needs in a particular area and asks for proposed solutions (along with pricing, timing, and other details) from qualified vendors. When they're well crafted, RFPs can introduce an organization to high-quality vendor-partners and consultants from outside their established networks and ensure that a project is completed as planned" (Peters, 2011). The exact form of an RFP varies from one industry to the next and from one organization to another. You can find many templates for RFPs on the web.

In response to an RFP, other organizations submit proposals describing, in detail, their plan for executing the proposed project, including budget and schedule estimates and a list of final deliverables. Officially, the term **proposal** is defined by Merriam-Webster (n.d. b) as "something (such as a plan or suggestion) that is presented to a person or group of people to consider." Depending on the nature of your company, this "something" might consist of little more than a few notes in an email, or it might incorporate months of research and documentation, costing hundreds of thousands of dollars to produce. When creating a proposal, you should seek to clearly understand and address your client's needs and interests, convincingly demonstrate your ability to meet their needs (quality, schedule, price), and prepare the proposal in a form that meets requirements.

After reviewing all submitted proposals, the organization that issued the RFP accepts one of the proposals, and then proceeds with negotiating a contract with the vendor. The term contract is more narrowly defined as "an agreement with specific terms between two or more persons or entities in which there is a promise to do something in return for a valuable benefit known as consideration" (contract, n.d., para 1). As with proposals, however, a contract can take many forms, ranging from a submitted invoice which can serve as a binding agreement to several hundred pages of legal language.

HR in Focus: Human Resources and Requests for Proposals (RFP)

Human Resources may design the Request for Proposal for the project. It would be a template designed to include:

1. Summary of the project need
2. Summary of the Scope and deliverables
3. Specifications related to requirements
4. Organization and Consultant responsibilities
5. Schedule of the project
6. Costs of project
7. Type of contract being offered
8. Experience required and number of staff required
9. Criteria for how the project will be measured and evaluated

The RFP would be posted on social media sites or other media external to the organization to attract consultants. It would be in the form of an advertisement. This is similar to attracting employees to the organization. Those interested would respond to the advertisement by completing the template provided. It would be submitted to Human Resources.

The next step is the selection of the contractor. Human Resources and other stakeholders would interview candidates. HR would design structured questions to ask the candidates. They may also design criteria for measuring or evaluating the candidates. A winning contractor is selected by the interview panel, and notified. The terms and conditions of the contract would be negotiated between the contractor and the stakeholders. Human Resources would set up the contract for signatures.

Training and orientation may be necessary for the contractor related to the business, the strategy, prior projects and details of the project. Human Resources would ensure there is constant and frequent reviews and feedback given to the contractor.

Contract Types

You should know a little bit about the major kinds of contracts available to you (the client) so that you choose the one that creates the most fair and workable deal for you and the contractor. Some contracts are fixed price:

no matter how much time or effort goes into them, the client always pay the same. In Figure 5-6 the cost to the client stays the same, but as more effort is exerted the profit to the contractor goes down. Some are cost reimbursable, also called cost plus. This is where the seller charges you for the cost of doing the work plus some fee or rate. Figure 5-7 illustrates this by showing that as efforts increase, costs to the client go up but the contractor's profits stay the same. The third major kind of contract is time and materials. That's where the client pays a rate for the time spent working on the project and also pays for all the materials used to do the work. As costs to the client go up, so does the profit for the contractor.

Fixed-Price Contracts

The fixed-price contract is a legal agreement between the project organization and an entity (person or company) to provide goods or services to the project at an agreed-on price. The contract usually details the quality of the goods or services, the timing needed to support the project, and the price for delivering goods or services. There are several variations of the fixed-price contract. For commodities and goods and services where the scope of work is very clear and not likely to change, the fixed-price contract offers a predictable cost. The responsibility for managing the work to meet the needs of the project is focused on the contractor. The project team tracks the quality and schedule progress to ensure the contractors will meet the project needs. The risks associated with fixed-price contracts are the costs associated with project change. If a change occurs on a project that requires a change order from the contractor, the price of the change is typically very high. Even when the price for changes is included in the original contract, changes on a fixed-price contract will create higher total project costs than other forms of contracts because the majority of the cost risk is transferred to the contractor, and most contractors will add a contingency to the contract to cover their additional risk.
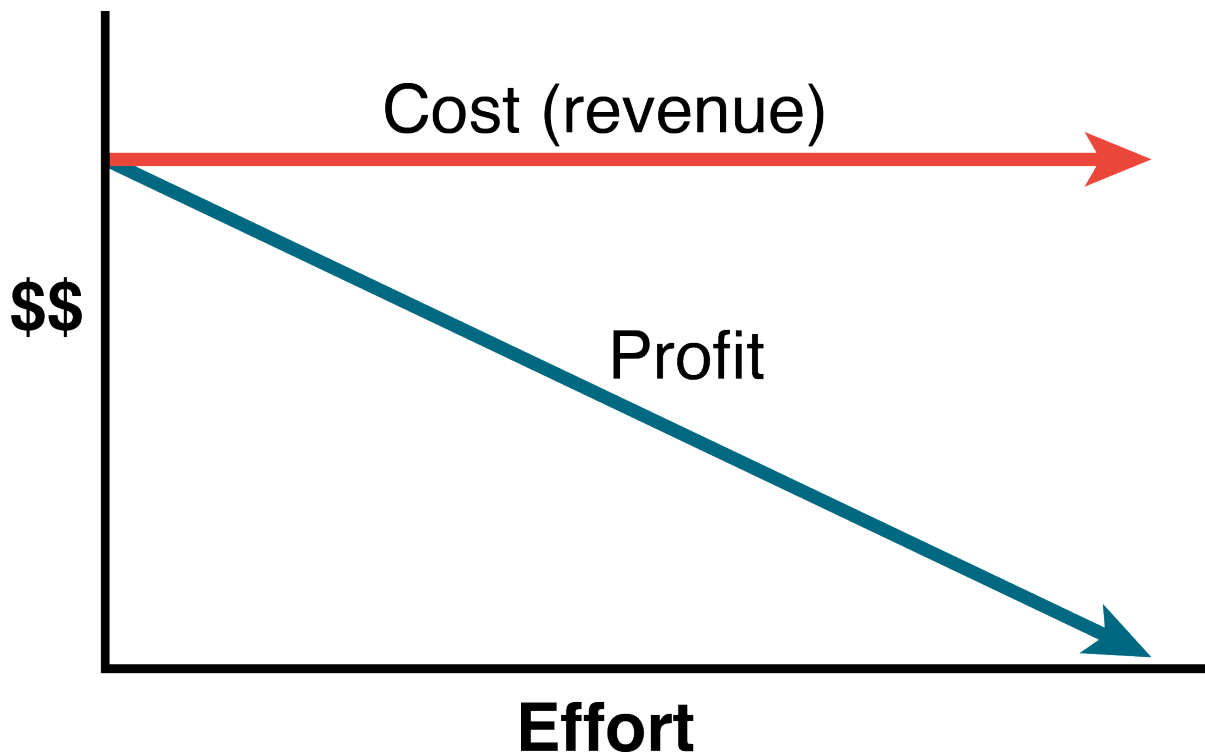
Figure 5-6: A fixed-price contract the cost to the client is constant regardless of effort applied or delivery date.

Type	Known Scope	Share of Risk	Incentive for Meeting Milestones	Predictability of Cost
Fixed Total Cost	Very High	All Contractor	Low	Very High
Fixed Unit Price	High	Mostly Project	Low	High
Fixed Price with Incentive Fee	High	Mostly Project	High	Medium-High
Fixed Fee with Price Adjustment	High	Mostly Project	Low	Medium

Table of Fixed Price Contracts and Characteristics – PM for Instructional Designers by Wiley et al CC-BY-NC-SA

Fixed-price contracts require the availability of at least two or more suppliers that have the qualifications and performance histories that ensure the needs of the project can be met. The other requirement is a scope of work that is most likely not going to change. Developing a clear scope of work based on good information, creating a list of highly qualified bidders, and developing a clear contract that reflects that scope of work are critical aspects of a good fixed-priced contract.
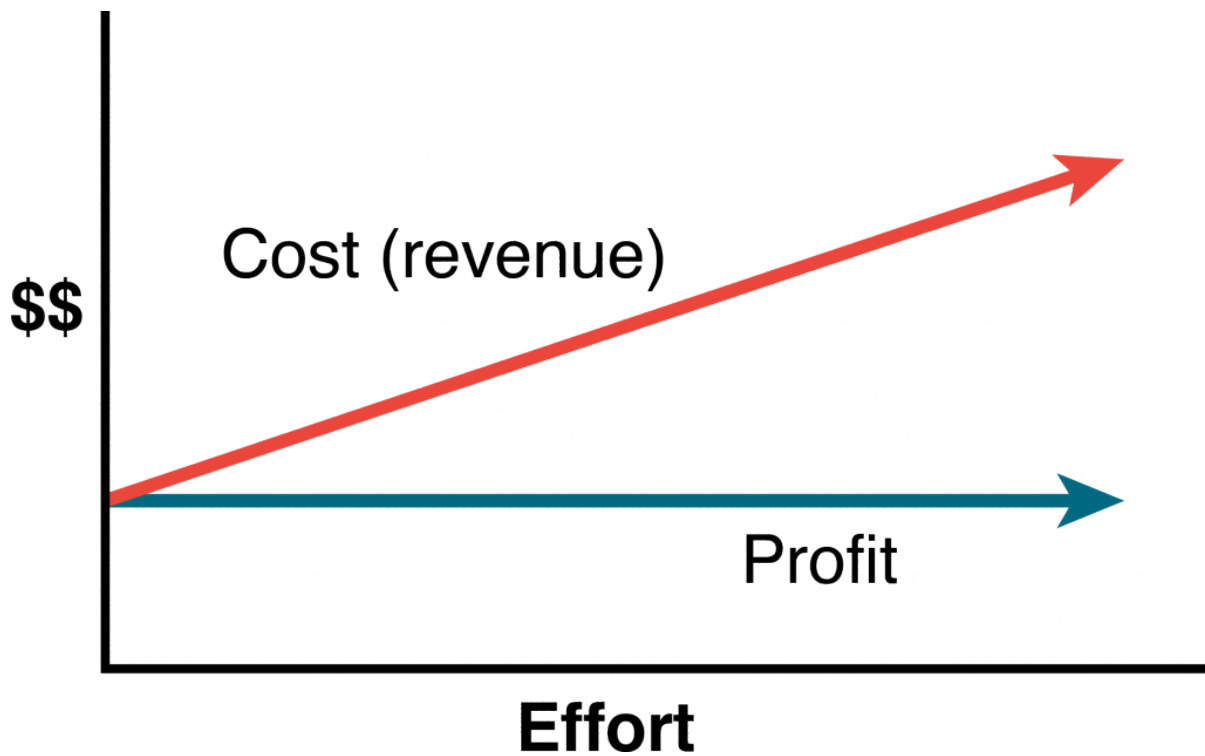
Figure 5-7: In a cost-reimbursable or cost-plus contract, the contractor is guaranteed a fee, but the client's costs can increase based on effort.

If the service provider is responsible for incorporating all costs, including profit, into the agreed-on price, it is a fixed-total-cost contract. The contractor assumes the risks for unexpected increases in labor and materials that are needed to provide the service or materials and, in the materials, and timeliness needed.

The Fixed-Price Contract with Price Adjustment is used for unusually long projects that span years. The most common use of this type of contract is the inflation-adjusted price. In some countries, the value of its local currency can vary greatly in a few months, which affects the cost of local materials and labour. In periods of high inflation, the client assumes the risk of higher costs due to inflation, and the contract price is adjusted based on an inflation index. The volatility of certain commodities can also be accounted for in a price-adjustment contract. For example, suppose the price of oil significantly affects the costs of the project. In that case, the client can accept the oil price volatility risk and include a provision in the contract that would allow the contract price adjustment based on a change in the price of oil.

The Fixed-Price Contract with an Incentive Fee provides an incentive for performing on the project above the established baseline in the contract. The contract might include an incentive for completing the work on an important milestone for the project. Often contracts have a penalty clause if the work is not performed according to the contract. For example, suppose the new software is not completed in time to support the implementation of the training. In that case, the contract might penalize the software company a daily amount of money for every day the software is late. This type of penalty is often used when the software is critical to the project and the delay will cost the project significant money.

If the service or materials can be measured in standard units, but the amount needed is not known accurately, the price per unit can be fixed—a fixed-unit-price contract. The project team assumes the responsibility of estimating the number of units used. If the estimate is not accurate, the contract does not need to be changed, but the project will exceed the budgeted cost.

Cost-Reimbursable Contracts

In a cost-reimbursable contract, the organization agrees to pay the contractor for the cost of performing the service or providing the goods. Cost-reimbursable contracts are also known as cost-plus contracts. Cost-reimbursable contracts are most often used when the scope of work or the costs for performing the work are not well known. The project uses a cost-reimbursable contract to pay the contractor for allowable expenses related to performing the work. Since the cost of the project is reimbursable, the contractor has much less risk associated with cost increases. When the costs of the work are not well known, a cost-reimbursable contract reduces the amount of money the bidders place in the bid to account for the risk associated with potential increases in costs. The contractor is also less motivated to find ways to reduce the cost of the project unless there are incentives for supporting the accomplishment of project goals.

Cost-reimbursable contracts require good documentation of the costs that occurred on the project to ensure that the contractor gets paid for all the work performed and to ensure that the organization is not paying for something that was not completed. The contractor is also paid an additional amount above the costs. There are several ways to compensate the contractor.

- **A Cost-Reimbursable Contract with a Fixed Fee** provides the contractor with a fee, or profit amount, that is determined at the beginning of the contract and does not change.
- **A Cost-Reimbursable Contract with a Percentage Fee** pays the contractor for costs plus a percentage of the costs, such as 5% of total allowable costs. The contractor is reimbursed for allowable costs and is paid a fee.
- **A Cost-Reimbursable Contract with an Incentive Fee** is used to encourage performance in areas critical to the project. Often the contract attempts to motivate contractors to save or reduce project costs. The use of the cost reimbursable contract with an incentive fee is one way to motivate cost-reduction behaviours.
- **A Cost-Reimbursable Contract with Award Fee** reimburses the contractor for all allowable costs plus a fee that is based on performance criteria. The fee is typically based on goals or objectives that are more subjective. An amount of money is set aside for the contractor to earn through excellent performance, and the decision on how much to pay the contractor is left to the judgment of the project team. The amount is sufficient to motivate excellent performance.

On small activities that have a high uncertainty, the contractor might charge an hourly rate for labour, plus

the cost of materials, plus a percentage of the total costs. This type of contract is called time and materials (T&M). Time is usually contracted on an hourly rate basis, and the contractor usually submits time sheets and receipts for items purchased on the project. The project reimburses the contractor for the time spent based on the agreed-on rate and the actual cost of the materials. The fee is typically a percentage of the total cost.

5.14. ASK AN EXPERT — LIANNE GALLIE

Ask An Expert

Lianne Gallie

MSc in Human Resources Management; College Teaching Graduate Certification, CHRL

| **Bio** |
| Owner of Fieldstone HR Consulting, Professor at Fanshawe College and 25 years experience in positions from Administrator to HR Manager. In her business, she provides advice and HR services to small and medium businesses. She has previous work experience in automotive, publich, private, retail and consulting industries. |

| **Affiliation** |
| Board Member of HRPLD Chapter, Coordinator of an HR Networking group, mentor for MentorCity online program with HRPA. |

Question 1: Describe the benefits of developing an excellent monitoring system. What data/analytics would HR monitor in a project?

It gives a real instant view of the project status. It also helps in anticipating an issue by making decisions based on any relevant issue by getting a piece of real-time information.

HR analytics would monitor organization performance starters such as turnover and recruitment. HR analytics also look out for the effectiveness and efficiency of HR day-to-day procedures and initiatives by ensuring that processes are effective.

Question 2: How do you use Project Charters in your work? What do you include? (if you don't use Charters, do you use proposals?

A charter gives stakeholders a clear objective, scope, responsibilities and project goals.

The project I did in the past was implementing the HRIS program with my previous employers. This was to take data on excel, such as tracking employee data on the excel database, hiring date and performance management. All this was on the excel database and won't sustain the organization for a long period. We had to put in a project to implement in HRIS. To get approval for the project, we had to have a charter.

Question 3: What is the biggest challenge you face with projects with human resources?

I think the biggest hurdle for us was presenting the benefits of forming a management team for the whole organization and executing it so we could save time. We were successful in doing so.

Question 4: What do students in Human Resources need to do to continue to grow and learn when dealing with and working on projects?

Upgrade your education and your experience, so wherever you can get an opportunity to take courses, specifically in project management, I recommend further education in all areas of your career.

Question 5: What do you think are the most important aspects of project planning?

I think knowing how many people, what vendors you may need, and the cost are very important, as well as having a clear idea of your outcome and end result, so you have a clear roadmap of where we're starting and where we need to go.

Question 6: Discuss the necessity of developing good data gathering and analysis for projects?

Because of the data analysis, we don't know if our project is on track because of data analysis. We can make informed decisions about whether we need more resources if we've gone over budget, etc. Without data to track things, a project can blow up, cost too much, and never be completed.

Question 7: Do you know project management software? What tools have you worked with?

I know of many management software programs. I tend to use Excel for projects, listing down project steps and then highlighting the cells in different colours to indicate where they are in the project. It would be easier to use project management software instead of Excel for big projects.

Question 8: It has been stated that professionalism and integrity are essential qualities of a project manager who is working on projects. Would you agree? Why? Are there other qualities that you value while working on projects?

Yes, because as a project manager, you will be working with many people, such as staff and external suppliers, you must represent yourself and your company professionally.

In terms of the other qualities mentioned by the expert, a manager must comprehend and know how their staff communicate with one another and be respectful and trustworthy. And honesty is essential for a project manager.

5.16. KEY TERMS

A Cost-Reimbursable Contract with Award Fee: Reimburses the contractor for all allowable costs plus a fee that is based on performance criteria. The fee is typically based on goals or objectives that are more subjective. An amount of money is set aside for the contractor to earn through excellent performance, and the decision on how much to pay the contractor is left to the judgment of the project team. The amount is sufficient to motivate excellent performance. 5.13

A Cost-Reimbursable Contract with a Fixed Fee: Provides the contractor with a fee, or profit amount, that is determined at the beginning of the contract and does not change. 5.13

A Cost-Reimbursable Contract with an Incentive Fee: Used to encourage performance in areas critical to the project. Often the contract attempts to motivate contractors to save or reduce project costs. The use of the cost-reimbursable contract with an incentive fee is one way to motivate cost-reduction behaviors. 5.13

A Cost-Reimbursable Contract with a Percentage Fee: Pays the contractor for costs plus a percentage of the costs, such as 5% of total allowable costs. The contractor is reimbursed for allowable costs and is paid a fee. 5.13

Active Control: Takes a two-pronged approach: Controlling what you can by making sure you understand what's important, taking meaningful measurements, and building an effective team focused on project success. Adapting to what you can't control through early detection and proactive intervention. 5.5

Assignable: Who will do the work? Can people be identified who have the expertise in the organization to complete this work? Or can the expertise be hired from outside of the organization? 5.8

Business Requirements: The needs of the sponsoring organization, always from a management perspective. Business requirements are statements of the business rationale for the project. 5.9

Communication Plan: Human Resources would assist in setting up the Communication Plan and on a regular basis "check-in" with the team on how communication between the team, the team and the Project Manager, and between the Project Team and external stakeholders is developing. 5.4

Deliverable: This means anything your project delivers. The deliverables for your project include all of the products or services that you and your team are performing for the client, customer, or sponsor, including all the project management documents that you put together. 5.4

Deliverables: Include everything that you and your team produce for the project (i.e., anything that your project will deliver). The deliverables for your project include all of the products or services that you and your team are performing for the client, customer, or sponsor. 5.10

Deterministic Approach: Labouring under the false notion that once everyone agrees on a plan, the plan itself determines what comes next. 5.3

Functional Requirements: Describe the characteristics of the final deliverable in ordinary non-technical

language. They should be understandable to the customers, and the customers should play a direct role in their development. Functional requirements are what you want the deliverable to do. 5.9

Implementation Phase: Involves putting the project plan into action. It's here that the project manager will coordinate and direct project resources to meet the objectives of the project plan. 5.4

Implementation Phase or Execution Phase: The project plan is put into motion and the work of the project is performed. It is important to maintain control and communicate as needed during implementation. 5.4

Initiation: Marks the official beginning of a project, doing it well also requires looking past the making stage to the entire life cycle of the project's end result. 5.2

Initiation Phase: The first phase within the project management life cycle, as it involves starting up a new project. Within the initiation phase, the business problem or opportunity is identified, a solution is defined, a project is formed, and a project team is appointed to build and deliver the solution to the customer. 5.8

Measurable: How will project progress and success be measured? What will be the measurable difference once our project is completed successfully? These measures should be quantifiable. 5.8

Non-Functional Requirements: Specify criteria that can be used to judge the final product or service that your project delivers. 5.9

Performance Plans: Human Resources would have established performance plans with the team and Project Manager at the beginning of the project. They would regularly "check-in" and perhaps have mini-performance reviews with the team (individually, or team) to ensure the goals are being met, that deadlines are being met, and the team dynamic is strong. 5.4

Planning: The act or process of making a plan to achieve or do something. This suggests that the ultimate goal of planning is the plan itself. It also presumes that once a plan has been formulated, you only need to follow the plan to achieve the desired outcome. 5.3

Planning Phase: When the project plans are documented, the project deliverables and requirements are defined, and the project schedule is created. It involves creating a set of plans to help guide your team through the implementation and closure phases of the project. 5.3

Project Charter: project definition or project statement is a statement of the scope, objectives, and participants in a project. It provides a preliminary delineation of roles and responsibilities, outlines the project objectives, identifies the main stakeholders, and defines the authority of the project manager. 5.11

Project Department Managers: May participate in the planning, provide resources for the project-including employees. 5.2

Project Life Cycle: A series of phases that the project progresses through from beginning to end. It is the foundation of the project. The four major phases include Initiation, Planning, Execution or Implementation, Closure. 5.2

Project Management: Has a dual nature; it is both a series of distinct phases with a clear beginning and end and a continuous, circular process in which each end leads to a new beginning 5.2

Project Manager: manages the project from planning to execution to closure, and is responsible for the success of the project. 5.2

Project Planning: At the heart of the project life cycle, and tells everyone involved where you're going and how you're going to get there. 5.3

Project Scope Planning: Concerned with the definition of all the work needed to successfully meet the project objectives. The whole idea here is that when you start the project, you need to have a clear picture of all the work that needs to happen on your project, and as the project progresses, you need to keep that scope up to date and documented in the project's scope management plan. 5.9

Project Selection: Determined by a team of people, usually at the executive level, of projects that are a priority to the organization and align with the mission, vision and values of the organization. 5.2

Project Sponsor: Could be one of or all of the stakeholders. They would authorize the funds to be used for the project, be a champion of the project. 5.2

Project Stakeholders: Formalize the project scope, deliverables. 5.2

Project Team Members: Provide their expertise to the project and contribute to the work being done on the project. 5.2

Realistic: Is it realistic that the organization can achieve this project, given its talents and resources? This is a very important consideration for businesses of all sizes. Yes, it would be great to produce a new driverless car, but is that realistic given the resources that the organization has available? 5.8

Regulatory Requirements: These can be internal or external and are usually non-negotiable. They are the restrictions, licenses, and laws applicable to a product or business that are imposed by the government. They required compliance for all, and standards must be met. 5.9

Report Distribution: Human Resources may play a role in monitoring report distribution, and ensuring that reports are flowing where they need to be? to who do they need to go? and on time? If there are issues, Human Resources may intervene to figure out the issues, and help the team solve the problems. 5.4

Retrospectives: These are lessons learned on Agile projects. Human Resources would work with the team (as an outside facilitator). They would act as a guide to lead the team through a workshop and process to identify what went well in the project, what could they have improved upon, and what type of follow-up action plan could they develop with goals and accountability. 5.6

Request For Proposal (RFP): Which is a "document that describes a project's needs in a particular area and asks for proposed solutions (along with pricing, timing, and other details) from qualified vendors. 5.13

Requirements: Describe the characteristics of the final deliverable, whether it is a product or a service. They describe the required functionality that the final deliverable must have or specific conditions the final deliverable must meet in order to satisfy the objectives of the project. 5.9

Scope: The work that needs to be completed to deliver the product/service. It is the final result of the project. 5.9

Scope Evolution: Refers to changes that all stakeholders agree on, and that are accompanied by

corresponding changes in budget and schedule. Scope evolution is a natural result of the kind of learning that goes on as a project unfolds. 5.10

Scope Statement: The document that defines the project's scope, is a major part of the initiation phase. 5.10. Includes Who? What? When? Where? Why? Costs. 5.9

SMART: An acronym for Specific, Measurable, Assignable, Realistic, and Time-Related. The smart criteria have been applied in many different areas of management, including project management. Let's take a look at each of Doran's criteria as they apply to project management. 5.8

Specific: A project needs to be specific about what it will accomplish. Unlike many organizational goals, the goal of a project should not be vague or nebulous. 5.8

Technical Requirements: Emerge from the functional requirements to answer the questions: how will the problem be solved this time and will it be solved technologically and/or procedurally? They specify how the system needs to be designed and implemented to provide required functionality and fulfill required operational characteristics. 5.9

The Fixed-Price Contract with Incentive Fee: Provides an incentive for performing on the project above the established baseline in the contract. The contract might include an incentive for completing the work on an important milestone for the project. 5.13

The Fixed-Price Contract with Price Adjustment: Used for unusually long projects that span years. The most common use of this type of contract is the inflation-adjusted price. 5.13

Time-Related: When will the project be completed and how long will it take? These criteria can be very useful when defining a project. If the description for a project does not meet all these criteria, then it is time to go back to the drawing board and make sure that what is being described is really a project, rather than a program or strategic goal. 5.8

Triple Constraints: Time, cost, and scope. 5.10

Uncertainty: Is not an exceptional state in an otherwise predictable process of work, they argue. Instead, it is a permanent feature of modern work. What's more, the longer the time between planning and implementation, the higher the uncertainty surrounding individual activities. 5.3

User Requirements: Describe what the users need to do with the system or product. The focus is on the user experience with the system under all scenarios. These requirements are the input for the next development phases: user-interface design and system test cases design. 5.9

5.17. CHAPTER SUMMARY

The project Life Cycle is a series of phases including initiation, planning, execution (implementation) and closure. Some organizations include monitoring and control. Selection of projects is determined by a team of people, usually by executives of the organization. This selection is aligned with the vision, mission, and values of the organization. It is also determined by the resources available and the importance of the project. Human Resources may be involved at the strategic level of decision-making, support at the beginning or the end of the project or be involved in the project throughout the entire project life cycle.

Initiation marks the beginning of the project; planning is when plans are documented, schedules are developed, and deliverables/requirements are defined; execution (implementation) is when the project is put into motion and the work is performed, and closure is when the customer approves the project, reports are compiled, bills are paid, and an evaluation/audit is performed. Monitoring and control involve making changes where necessary based on progress through collection of data.

Human Resources may support the team through the initiation phase by helping the team set goals. **S.M.A.R.T**. goals is an approach used to establish goals prior to the project beginning. S: Specific, M: Measurable, A: Attainable, R: Realistic, and T: Time-related. They would establish Performance Plans with the team to be monitored and reviewed throughout and at the end of the project. In the Planning Phase, Human Resources could support the team in getting organized and developing work plans. During the execution (implementation) phase, Human Resources may play a less active role; however, they set up Communication Plans and provide "check-ins" between and among the team and Project Manager. They may also help with communication for the distribution of reports. Human Resources could play an active role in the Closure of a project through the

evaluation of the team and Project Manager (individual and group). They could also facilitate Lessons Learned and support archiving of documents.

The foundation of a project is defining the Scope (sometimes interchangeable with a Charter), which is the work that needs to be completed to deliver the product/service. The Deliverables include everything that the team needs to produce for the project. The Project Requirements describe the functionality that the final deliverable must have (specific conditions) the deliverables must meet to satisfy the objectives. There are various Project Requirements that include business, functional, non-functional, technical, regulatory, and user requirements. The Charter, if required, is a statement of the scope, objectives, and participants in the project. It provides a list of roles and responsibilities, outlines the objectives, identifies the stakeholders, and defines who has the authority over the project. A request for a proposal is a document released by the organization to vendors to submit a proposal to complete a project that includes pricing, timing, and details on how the vendor would complete a project successfully.

Human Resources may be involved in helping the organization define the Scope, Charter, or Proposal. They may be directly involved with the process, design the templates or facilitate the process for the development of any of these elements of Project Management.

5.18. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed **by the Students** on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used **by the Teachers** as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. Form a **small group**. Design a communication plan that supports a 6-month project with a Project Manager, 10 team members, the CEO, Finance Manager, Marketing Manager, Sales Manager and Operations Manager. What types of reports would be required for each person(s)? Decide how often you would distribute reports. Build the plan in a chart form. Work with your small group of people to brainstorm ideas, design a communication plan, and present to the **larger group** in the class.

2. Form a **small group**. The Project Manager has asked you, the Human Resources Specialist, to design a closing process for the team and themselves. What type of checklist would you develop for the team? Review the chapter. Make a list.

3. Form a **small group**. The Project Manager has asked you, the Human Resources Specialist, to facilitate a Lessons Learned workshop with the team. Design a workshop lesson plan for the team. Work with a small team to design the Lesson Plan. Include objectives, description of content, timing, materials/equipment.

4. Form a **small group**. You prepared Performance Plans for the Project Manager and team members at the beginning of a project. It is now time to evaluate the team and project manager. The project was cancelled due to financial overtures, due to overspending by the Project Manager. How would you prepare for individual performance reviews? Team review?

Project Manager performance review?

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. What are the main elements of a project scope statement?
2. Why are good monitoring practices important to a project?
3. If a project is not well planned, what could the possible consequences be?
4. How does Human Resources impact the initiation phase? Planning phase? Execution phase? Closure stage? of a project.
5. Who are all the stakeholders involved in a project?
6. What is a RACI? Why is it important to a project?
7. What is a Gantt Chart? How does a Gantt Chart support the project? The Project Manager? The project teams?
8. Describe the 360-degree performance review. What are some advantages to this approach? What are the disadvantages to this approach?
9. Define SMART Goals.
10. What is a Scope? What is a Scope Statement?
11. List the elements of a Scope Statement. Briefly define each element.
12. What is a triple constraint?
13. How is a Charter different from a Scope Statement?
14. What is an RFP?
15. **Individually,** develop a personal plan or an educational plan that includes SMART goals. Review your text related to the 5 steps of SMART goals. Develop your plan.

CHAPTER 6 – RISK MANAGEMENT

Chapter Outline

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6.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you should be able to:

1. Distinguish between risks and issues.
2. Describe the role of risk management in project success.
3. Identify types of risks based on the project phases.
4. Explain the risk management process.
5. Describe the five responses in risk management.

6.2. RISK MANAGEMENT AND PROJECT SUCCESS

Successful project managers manage the differing perceptions of risk, and the widespread confusion about its very nature, by engaging in systematic risk management. According to the Financial Times (n.d.), **risk management** is "the process of identifying, quantifying, and managing the risks that an organization faces". In reality, the whole of project management can be thought of as an exercise in risk management because all aspects of project management involve anticipating change and the risks associated with it.

The tasks specifically associated with risk management include "identifying the types of risk exposure within the company; measuring those potential risks; proposing means to hedge, insure, or mitigate some of the risks; and estimating the impact of various risks on the future earnings of the company" (Financial Times, n.d.). Engineers are trained to use risk management tools like the risk matrix shown in figure 6-1, in which the probability of the risk is multiplied by the severity of consequences if the risk does indeed materialize.

IMPACT

		A	B	C	D	E
		Negligible	Minor	Moderate	Minor	Severe
E	Very Likely	Low Medium	Medium	Medium High	High	High
D	Likely	Low	Low Medium	Medium	Medium High	High
C	Possible	Low	Low Medium	Medium	Medium High	Medium High
B	Unlikely	Low	Low Medium	Low Medium	Medium	Medium High
A	Very Unlikely	Low	Low	Low Medium	Medium	Medium

(PROBABILITY)

Figure 6-1: A risk matrix is a tool engineers often use to manage risk (click to enlarge).

This and other risk management tools can be useful because they provide an objective framework for evaluating the seriousness of risks to your project. But any risk assessment tool can do more harm than good if it lulls you into a false sense of security. You don't want to make the mistake of believing that the tools available for managing risk can ever be as precise as the tools we use for managing budgets and schedules, even as limited as those tools are.

Perhaps the most important risk management tool is your own ability to learn about the project. The more you know about a project, the better you will be at foreseeing the many ways the project could go awry and what the consequences will be if they do, and the better you will be at responding to unexpected challenges.

6.3. THE 5 STEPS OF THE RISK MANAGEMENT PROCESS

Managing risks on projects is a process that includes: planning and identifying the potential risks, a risk assessment, development of a risk response strategy, and monitoring and controlling risks. Identifying the potential risks is important-you can simply ask yourself: What could go wrong with the project? Risk assessment includes both the identification of potential risk and the evaluation of the potential impact of the risk. There are tools, both qualitative and quantitative to measure risk.

A risk response plan is designed to eliminate or minimize the impact of the risk events—occurrences that have a negative impact on the project. Monitoring the risks is important to reassess the likelihood and any consequences that may result because of the event. Identifying risk is both a creative and a disciplined process. The creative process includes brainstorming sessions where the team is asked to create a list of everything that could go wrong. All ideas are welcome at this stage with the evaluation of the ideas coming later.

1. Risk Management Planning

The Project Manager and a group of team members, as well as stakeholders, build a plan that is the way to perform the project. They come to an understanding and agreement on the parameters and risk levels of the project. They have key parameters that include scheduling, performance, capability, technology, etc. The results are documented.

2. Risk Identification

Identifying risks is the most important part of the risk management process and has the biggest impact on the process. It is the first step in the process. If a risk is not identified it cannot be assessed or evaluated. A more disciplined process involves using checklists of potential risks and evaluating the possibility that those events might happen on the project. Some companies and industries develop risk checklists based on experience from past projects. These checklists can be helpful to the project manager and project team in identifying both specific risks on the checklist and expanding the thinking of the team. The past experience of the project team, project experience within the company, and experts in the industry can be valuable resources for identifying potential risk on a project.

Identifying the sources of risk by category is another method for exploring potential risk on a project. Some examples of categories for potential risks include the following:

- Technical
- Cost
- Schedule
- Client
- Contractual
- Weather
- Financial
- Political
- Environmental
- People

Risk Breakdown Structure

You can use the same framework as the work breakdown structure (WBS) for developing a **risk breakdown structure (RBS)**. A risk breakdown structure organizes the risks that have been identified into categories using a table with increasing levels of detail to the right. The people category can be subdivided into different types of risks associated with the people. It is a hierarchical structure of potential risks. A team of people (usually experts in the field that is guiding the project) get together and brainstorm: "What could go wrong?" A **risk register** is a list of all the risks that have been previously identified,.

Examples of people risks include the risk of not finding people with the skills needed to execute the project or the sudden unavailability of key people on the project. Other risks may include technology breakdowns, inclement weather, financial cutbacks, changes in laws and legislation, progress slows down and the project is behind schedule.

3. Risk Assessment

After the potential risks have been identified, the project team then assesses each risk based on the probability that a risk event will occur and the potential loss associated with it. Not all risks are equal. Some risk events are more likely to happen than others, and the cost of a risk can vary greatly. Evaluating the risk for probability of occurrence and the severity or the potential loss to the project is the next step in the risk management process.

Having criteria to determine high-impact risks can help narrow the focus on a few critical risks that require mitigation. For example, suppose high-impact risks are those that could increase the project costs by 5% of the conceptual budget or 2% of the detailed budget. Only a few potential risk events meet these criteria. These are the critical few potential risk events that the project management team should focus on when developing a project risk mitigation or management plan. Risk evaluation is about developing an understanding of which potential risks have the greatest possibility of occurring and can have the greatest negative impact on the project (Figure 9-3). These become the critical few.

Impact

High ➝ Low

High

Likelihood

Low

High impact and likely to occur	**Low impact and likely to occur**
High impact and unlikely to occur	**Low impact and unlikely to occur**
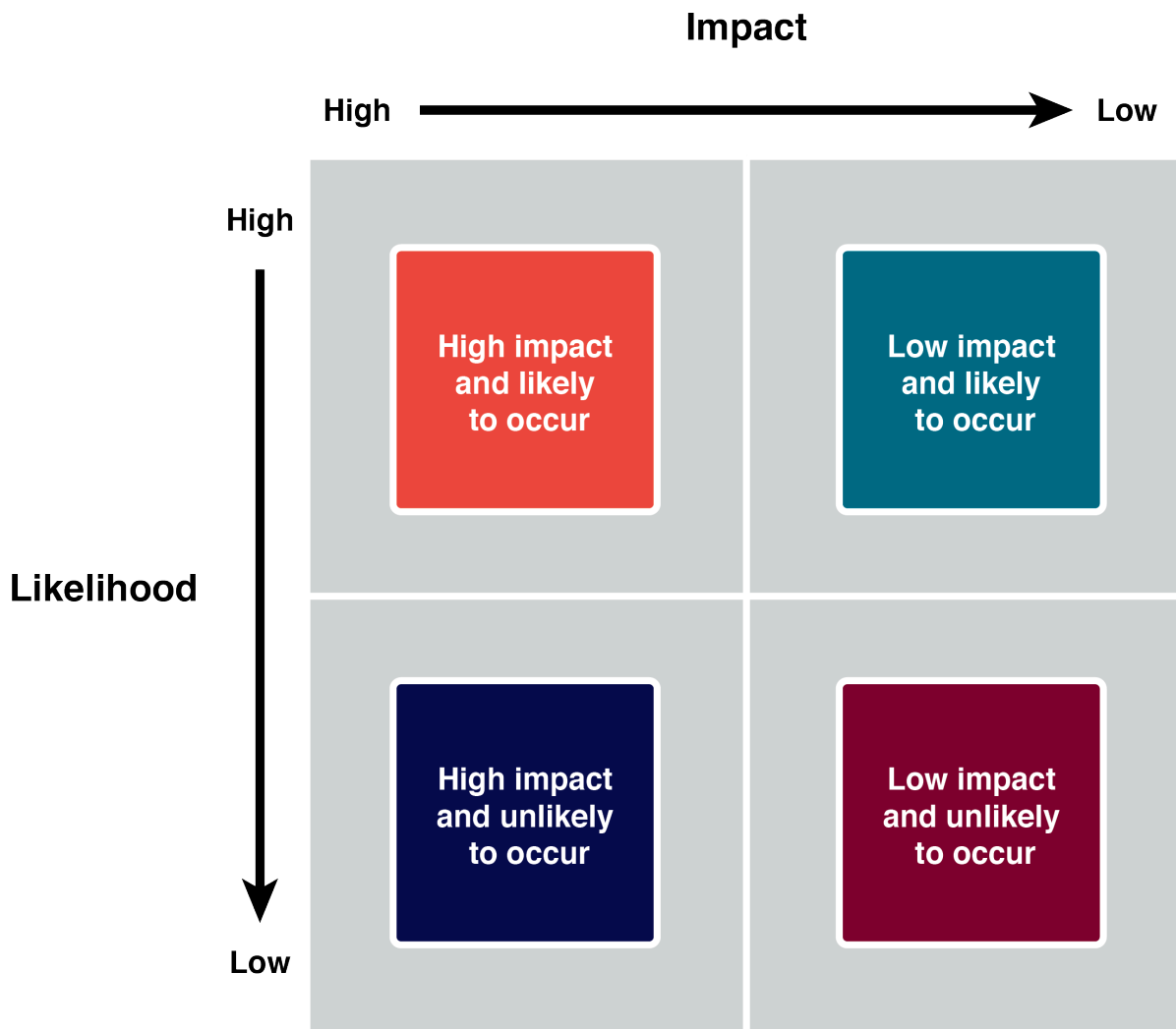
Figure 6-2: Risk and Impact

There is a positive correlation—both increase or decrease together—between project risk and project complexity. A project with new and emerging technology will have a high-complexity rating and a correspondingly high risk. The project management team will assign the appropriate resources to the technology managers to ensure the accomplishment of project goals. The more complex the technology, the more resources the technology manager typically needs to meet project goals, and each of those resources could face unexpected problems.

Risk evaluation often occurs in a workshop setting. Building on the identification of the risks, each risk event is analyzed to determine the likelihood of occurrence and the potential cost if it did occur. The likelihood and impact are both rated as high, medium, or low. A risk mitigation plan addresses the items that have high ratings on both factors—likelihood and impact.

Example: Risk Analysis of Equipment Delivery

A project team analyzed the risk of some important equipment not arriving at the project on time. The team identified three pieces of equipment that were critical to the project and would significantly increase costs if they were late in arriving. One of the vendors, who was selected to deliver an important piece of equipment, had a history of being late on other projects. The vendor was good and often took on more work than it could deliver on time. This risk event (the identified equipment arriving late) was rated as high likelihood with a high impact. The other two pieces of equipment were potentially a high impact on the project but with a low probability of occurring.

Example: Risk Assessment Charts

Project managers need to check all the risks, eliminating those that may be redundant, and those that need attention. Some Project Managers use scenario analysis, a method that can predict the possibility of an event happening that could disrupt or weaken the project. Project Managers ask themselves: What is the likelihood this event can happen? What would the impact be on the project if the event happened? How easy would it be to detect the event in time so as to reduce the chance of the event causing problems?

Likelihood:	The probability that the event will happen
Impact:	The effect the event would have on the project, and to what degree.
Detection Difficulty:	The amount of time the team would have to respond to the event to avoid or reduce the impact

Rating Scales are used in two ways:

Rank and Order Scales:	Criteria used from high impact to low impact. Example: very low, low, moderate, high, very high
Numerical Scales:	1 = very low, 2 = low, 3 = moderate, 4 = high, 5 = very high

Or, sometimes, the criteria includes both the impact scales and the numerical scales. The Project Manager and/or the team need to establish the criteria up front and distinguish what 1 means, versus a 2, and so on. See the sample risk assessment table below.

This is an example of a simple Risk Assessment Matrix for a vacation being planned with the family of 4 to Vancouver for 10 days.

Risk Event	Likelihood	Impact	Detection Difficulty	Risk Rating	When
Somebody gets sick	2	3	1	6	1 week ahead of trip
Flight cancelled	2	4	4	32	24 hours ahead of trip
Somebody does not have the money to go on the trip	1	2	1	2	2 months ahead of trip
Family conflict about destination	1	1	1	1	Discussed and agreed 3 months ahead of trip

Risk Event –What is the actual risk event that you have identified?

Likelihood – How likely is the event to occur? Scale: 1 = Not Likely to 5 = Very Likely

Cost Impact – What is the cost of the event? Scale: 1 = Low cost to 5 = High Cost

Time Impact – How much time will be lost? Scale: 1 = Little Time to 5 = Lots of Time

Scope Impact –How will the event effect the quality of the project? Scale: 1 = Little Effect to Major Effect

Risk Rating – Multiply the individual ratings from each category to get an overall Risk Rating

Not all project managers conduct a formal risk assessment on a project. One reason, as found by David Parker and Alison Mobey in their phenomenological study of project managers, was a low understanding of the tools and benefits of a structured analysis of project risks (Parker & Mobey, 2004). The lack of formal risk management tools was also seen as a barrier to implementing a risk management program. Additionally, the project manager's personality and management style play into risk preparation levels. Some project managers are more proactive and develop elaborate risk management programs for their projects. Other managers are reactive and are more confident in their ability to handle unexpected events when they occur. Yet others are risk averse and prefer to be optimistic and not consider risks or avoid taking risks whenever possible.

On projects with a low-complexity profile, the project manager may informally track items that may be considered risk items. On more complex projects, the project management team may develop a list of items perceived to be higher risk and track them during project reviews. On projects of even greater complexity, the process for evaluating risk is more formal, with a risk assessment meeting or series of meetings during the life of the project to assess risks at different phases of the project. On highly complex projects, an outside expert may be included in the risk assessment process, and the risk assessment plan may take a more prominent place in the project implementation plan.

Generally, for complex projects, statistical models are sometimes used to assess risk because there are too many different possible combinations of risks to calculate them one at a time. One example of the statistical model used on projects is the Monte Carlo simulation, which simulates a possible range of outcomes by trying many different combinations of risks based on their likelihood. The output from a Monte Carlo simulation provides the project team with the probability of an event occurring within a range and for combinations of events. For example, the typical output from a Monte Carlo simulation may indicate a 10% chance that one of the three important pieces of equipment will be late and that the weather will also be unusually bad after the equipment arrives.

4, Risk Response Plan

After the risk has been identified and evaluated, the project team develops a risk response plan, which is a plan to reduce the impact of an unexpected event. The project team mitigates risks in various ways:

- Risk avoidance (avoid or eliminate the risk)
- Risk acceptance (accept the risk, and move forward, deal with the consequences, if any)

- Risk mitigation (reduce the probability of the risk, reduce the consequences)
- Risk transfer/share (let someone else deal with it, move the risk somewhere else, i.e., supplier)

Each of these techniques can be an effective tool in reducing individual risks and the risk profile of the project. The risk response plan captures the risk each identified risk event and the actions the project management team will take to reduce or eliminate the risk.

Risk Avoidance usually involves developing an alternative strategy that has a higher probability of success but usually at a higher cost associated with accomplishing a project task. A common risk avoidance technique is to use proven and existing technologies rather than adopt new techniques, even though the new techniques may show promise of better performance or lower costs. A project team may choose a vendor with a proven track record over a new vendor that is providing significant price incentives to avoid the risk of working with a new vendor. The project team that requires drug testing for team members is practicing risk avoidance by avoiding damage done by someone under the influence of drugs.

Risk Acceptance involves partnering with others to share responsibility for the risky activities. Or, hiring someone else to take on that part of the project. Many organizations that work on international projects will reduce political, legal, labor, and others risk types associated with international projects by developing a joint venture with a company located in that country. Partnering with another company to share the risk associated with a portion of the project is advantageous when the other company has expertise and experience the project team does not have. Or, they may contract out a portion of the project to a company with greater skills and experience to ensure success.

Risk Mitigation (reduction) is an investment of funds to reduce the risk on a project. On international projects, companies will often purchase the guarantee of a currency rate to reduce the risk associated with fluctuations in the currency exchange rate. A project manager may hire an expert to review the technical plans or the cost estimate on a project to increase the confidence in that plan and reduce the project risk. Assigning highly skilled project personnel to manage the high-risk activities is another risk-reduction method. Experts managing a high-risk activity can often predict problems and find solutions that prevent the activities from having a negative impact on the project. Some companies reduce risk by forbidding key executives or technology experts to ride on the same airplane.

Risk Transfer (or sometimes shared) is a risk reduction method that shifts the risk from the project to another party. The purchase of insurance on certain items is a risk-transfer method. The risk is transferred from the project to the insurance company. A construction project in the Caribbean may purchase hurricane insurance that would cover the cost of a hurricane damaging the construction site. The purchase of insurance is usually in areas outside the control of the project team. Weather, political unrest, and labour strikes are examples of events that can significantly impact the project and that are outside the control of the project team.

See the example in the table below of a risk response plan for a company that provides computer software and hardware.

Event	Response	Contingency	Trigger	Responsibility
Somebody gets sick	Accept: If sick, cannot go on trip	Find another family member to go on trip	Family member tells us about sickness	Sick family member
Flight cancelled	Mitigate: Check with airlines regularly	Find another flight or airline to book tickets	Notice from airline about cancellation	Airline
Somebody does not have the money to go on the trip	Avoid: Ensure everyone has the money before tickets are booked	Find another family member who has the money for the trip	Notification from family member	Family member
Family conflict about destination	Avoid: Ensure at planning meeting everyone agrees on destination	Family member does not go on trip and find another family member to go	Family member changes their mind before tickets purchased	Family member

Follow the Event Questions to complete Risk Response Plan:

Risk Event – What is the actual risk event that you are planning for

Response – How do expect to respond to that event – Mitigate, Share, Avoid, Transfer or Retain

Contingency – What do you do if your initial response doesn't work (Plan B)

Trigger – When do you implement your contingency (Plan B)

Responsibility –Who is responsible for initiating the contingency (Plan B)

5. Monitoring and Control of Risk

After the risk plan, the assessment and response plans are developed, the monitoring and controlling starts. These elements involve thinking about what might trigger an event (risk) how do team members monitor the changes and how do they track the changes to ensure the project continues to meet the goals of the project. The tracking and reporting of these changes needs to be in a logical format.

The Project Manager and team use simple charts that explain the trigger, and how it will be monitored and tracked. A simple worksheet allows them to make a list. A database could be set up to track and report the changes.

The 5-Step Risk Management Process will improve the completion of the project through charts (visible), good communication among all the stakeholders, and capturing lessons learned when the project closes.

6.4. CONTINGENCY PLAN, RISK RESPONSE PLAN

The project risk plan balances the investment of the mitigation of risks against the benefit for the project. The project team often develops an alternative method for accomplishing a project goal when a risk event has been identified that may frustrate the accomplishment of that goal. These plans are called **contingency plans.** They are a Plan B. If plan A falls apart, what is Plan B?

The risk of a truck drivers' strike may be mitigated with a contingency plan that uses a train to transport the needed equipment for the project. If a critical piece of equipment is late, the impact on the schedule can be mitigated by making changes to the schedule to accommodate a late equipment delivery.

Contingency funds are funds set aside by the project team to address unforeseen events that cause the project costs to increase. Projects with a high-risk profile will typically have a large contingency budget. Although the amount of contingency allocated in the project budget is a function of the risks identified in the risk analysis process, contingency is typically managed as one line item in the project budget.

Some project managers allocate the contingency budget to the items in the budget that have high risk rather than developing one line item in the budget for contingencies. This approach allows the project team to track the use of contingency against the risk plan. This approach also allocates the responsibility to manage the risk budget to the managers responsible for those line items. The availability of contingency funds in the line item budget may also increase the use of contingency funds to solve problems rather than finding alternative, less costly solutions. Most project managers, especially on more complex projects, manage contingency funds at the project level, with the approval of the project manager required before contingency funds can be used.

More on the Risk Response Plan

The Risk Response Plan includes who, what, when, and the cost of action. Without a risk response plan, there could be impacts that are costly with time, money and quality. This can cause a reactionary approach to the project, which is also costly. The project may get delayed or even cancelled. Making decisions under pressure is stressful, and people can make more mistakes. Therefore, the risk response plan helps the team evaluate what to do, quickly, to respond to an event happening. They ask themselves: What is the best alternative if something goes wrong? This helps with a smooth adjustment of the plan. This, in turn, increases the chance of success. All stakeholders would agree to the Risk Response Plan. In summary, the below checklist is important in project planning.

The steps to developing a Risk Response Plan include:

1. Identify the risk event
2. Identify whether the response will avoid the risk? share/transfer the risk? mitigate (reduce) the risk? accept the risk?
3. Develop the contingency plan
4. Decide what would "trigger" the team to implement the contingency plan (sometimes time is used)
5. Assign who is responsible for monitoring the potential risk
6. Wise Project Managers ensure they have a Risk Response Plan in place before the project begins.

HR in Focus: Human Resources and Risk Management

The HR Specialist may be involved in helping to build the Risk Management Plan from beginning to end. They may facilitate the process for the project team, allowing the team to focus on the content, brainstorming and critical thinking. They may be only included in potential risk events that include people in the team or external to the team. These could include risks of poor employee behaviour, the team losing a member, a team member's sickness, discipline for team members who are not performing, handling discrimination in the group, security risks, employee disparity in salaries, and handling an injury on the job.

As professionals, the HR Specialist would assist the team in identifying all the possible employee risks (employee behaviour, management style and leadership, and salaries as examples). They would look for ways to reduce or eliminate these risk situations. The involvement of HR in the Risk Management Plan protects the employees in the team and the organization.

6.5. RISKS IN PROJECT PHASES

Risks can happen at any point in the project. Project risk is dealt with in different ways depending on the phase of the project.

Initiation Phase

Risk is associated with things that are unknown. More things are unknown at the beginning of a project, but risk must be considered in the initiation phase and weighed against the potential benefit of the project's success in order to decide if the project should be chosen.

Example: Risks by Phase in John's Move

In the initiation phase of his move, John considers the risk of events that could affect the whole project. Let's assume that John's move is not just about changing jobs, but also a change of cities. This would certainly incur more risks for the project. He identifies the following risks during the initiation phase that might have a high impact and rates the likelihood of their happening from low to high.

1. His new employer might change his mind and take back the job offer after he's given notice at his old job: Low.
2. The current tenants of his apartment might not move out in time for him to move in by the first day of work at the new job: Medium.
3. The movers might lose his furniture: Low.
4. The movers might be more than a week late delivering his furniture: Medium.
5. He might get in an accident driving from Chicago to Atlanta and miss starting his job: Low.

John considers how to mitigate each of the risks.

1. During his job hunt, John had more than one offer, and he is confident that he could get another job, but he might lose deposit money on the apartment and the mover. He would also lose wages during the time it took to find the other job. To mitigate the risk of his new employer changing his mind, John makes sure that he keeps his relationships with his alternate employers' cordial and writes to each of them thanking them for their consideration in his recent interviews.
2. John checks the market in Atlanta to determine the weekly cost and availability of extended-stay motels.
3. John checks the mover's contract to confirm that they carry insurance against lost items, but they require the owner to provide a detailed list with value estimates and they limit the maximum total value. John decides to go through his apartment with his digital camera and take pictures of all of his possessions that will be shipped by truck and to keep the camera with him during the move so he has a visual record and won't have to rely on his memory to make a list. He seals and numbers the boxes so he can tell if a box is missing.
4. If the movers are late, John can use his research on extended-stay motels to calculate how much it would cost. He checks the moving company's contract to see if they compensate the owner for late delivery, and he finds that they do not.
5. John checks the estimated driving time from Chicago to Atlanta using an Internet mapping service and gets an estimate of 11 hours of driving time. He decides that it would be too risky to attempt to make the drive by himself in one day, especially if he didn't leave until after the truck was packed. John plans to spend one night on the road in a motel to reduce the risk of an accident caused by driving while too tired.

John concludes that the medium-risks can be mitigated and the costs from the mitigation would be acceptable in order to get a new job.

Planning Phase

Once the project is approved and it moves into the planning stage, risks are identified with each major group of activities. A risk breakdown structure (RBS) can be used to identify increasing levels of detailed risk analysis.

Legend:

RA: Risk Aviodance   RA: Risk Sharing   RA: Risk Reduction   RA: Risk Transfer

Level 1	Level 2	Level 3 — Risks	Mitigation
Packing	Pack Kitchen	Cuts from handling sharp knives	Buy small boxes for packing knives (RR)
		Cuts from cracked glasses that break while being packed	Discard cracked glass (RA)
		Transporting alcoholic beverages	Give open bottles to Dion or Carltia (RA)
	Pack Living Room	Damage to antique furniture	Supervise wrapping and loading personally (RR) and require movers to insure against damage (RT)
		Lose parts while taking apart the entertainment center	Buy box of large freezer bags with a marker to bag and label parts (RR)
		Break most valuable electronics — TV, DVD, Tuner, Speakers	Buy boxes of the right size with sufficient bubble wrap (RR)
	Pack Bedroom		Buy or rent a mirror-box with styrofoam blacks at each corner (RR)
		Lose perscription drugs or pack them where they cannot be found quickly	Seperate prescription drugs from transportation in the car (RA)
	Pack Remaining Items	Damage to house plants	Ask Carlita to care for them and bring them with her in the van when she visits in exchange for half of them (RS)
		Transportation of flammable liquids from charcoal grill	Give to Dion or Carlita (RA)

Figure 6-3: Risk Breakdown Structure (RBS) for Packing John's Apartment

John decides to ask Dion and Carlita for their help during their first planning meeting to identify risks, rate their impact and likelihood, and suggest mitigation plans. They concentrate on the packing phase of the move. They fill out a table of risks, as shown in Figure 6-3.

Implementation Phase

As the project progresses and more information becomes available to the project team, the total risk on the

project typically reduces, as activities are performed without loss. The risk plan needs to be updated with new information and risks checked off that are related to activities that have been performed.

Understanding where the risks occur on the project is important information for managing the contingency budget and managing cash reserves. Most organizations develop a plan for financing the project from existing organizational resources, including financing the project through a variety of financial instruments. In most cases, there is a cost to the organization to keep these funds available to the project, including the contingency budget. As the risks decrease over the length of the project, if the contingency is not used, then the funds set aside by the organization can be used for other purposes.

To determine the amount of contingency that can be released, the project team will conduct another risk evaluation and determine the amount of risk remaining on the project. If the risk profile is lower, the project team may release contingency funds back to the parent organization. If additional risks are uncovered, a new mitigation plan is developed including the possible addition of contingency funds.

Closeout Phase

During the closeout phase, agreements for risk sharing and risk transfer need to be concluded and the risk breakdown structure examined to be sure all the risk events have been avoided or mitigated. The final estimate of loss due to risk can be made and recorded as part of the project documentation. If a Monte Carlo simulation was done, the result can be compared to the predicted result.

6.7. ASK AN EXPERT — NANCY WILDING

Ask An Expert

Nancy Wilding

Canadian Registered Safety Professional

Bio

Nancy has worked in the field of Human Resources for over 30 years. She has been a Health & Safety Officer with the City of Orillia for 9 years.

Affiliation

City of Orillia

Question 1: Please tell me how you started in Human Resources?

I started about 30 years ago in an administrative role. I was also involved with recruiting and safety. The company was growing and needed help.

Question 2: What is your favourite part about your role?

I started out in my career working in all aspects of Human Resources, and now am entirely Health & Safety. In HR there are a lot of grey areas. I like H&S better because it is black and white; more definitive. I like that the rewards are tangible and immediate.

Question 3: Can you explain what your organizations' vision, mission, and goals are?

The City of Orillia's vision is to create a progressive, professional and proud culture. Health and Safety contributes to the culture. We react strongly if someone gets hurt and will do something to fix it.

Question 4: Why do you think Risk Management is important in project planning?

It's important to health and safety because lives depend on it. It doesn't get more important than that. Risk management saves lives, prevents injury, and prevents illness.

Question 5: Of the 5 steps: Risk management planning, Risk Identification, Risk Assessment, Risk Response Plan, and Monitoring and Control of Risk, which would you say is the most difficult and why?

Risk identification would be the most difficult. It requires you to think about things that haven't happened yet and anticipate what might go wrong. It requires you to identify potential hazards, do research and determine best practices. Once the risks are identified, it is easier to then prepare a response and determine how to control the risk.

Question 6: Can you tell me about a time when you completed a Risk Management plan and how did it go? Was it successful and went as planned or did you need to make changes along the way?

The City's Job Hazard Analysis Process is a risk management plan. It involves every manager in the City, using the tools I provide. I had to train every manager on how to complete it. It is also included in the health and safety orientations. It was a two-year process upon implementing. We have a spreadsheet that every manager has to fill out for every position that reports to them. It was successful, we got a report for every job. The biggest challenge is keeping it up to date. The plan is to update each position every 5 years.

Question 7: When do you most often use Risk Management plans, or what would they be best suited for in Human Resources?

I use Risk Management plans to identify and control hazards of the work for each position. The job hazard analysis is provided to each employee, which includes inventory of job hazards and controls the City has in place. The list of controls depends on the position. The Plan also helps us prove to Ministry of Labour that we have done our due diligence. It is given to every new employee and to any employees starting a new role.

Question 8: Which of the 5 steps previously mentioned do you find most useful in Risk Management planning?

Risk Identification is critical, but Control & Monitoring of Risk is most productive. That is the one that actually makes the workplace safer. It is good to identify what the risk are, but actually doing something about it is most effective.

Question 9: Provide an example of when your organization was faced with an unprecedented event during a recent project. Did your team avoid, accept, mitigate, or transfer the risk? Describe what happened.

The risk of COVID came out of the blue. When it first started, our Pandemic Plan procedure was not as extensive as it needed to be. Changes had to be made to it all the time. We mitigated the risk mainly by following the health care protocols from the professionals (Simcoe Muskoka District Health Unit, WHO), and did manage to avoid the risk. We followed all public health measures, implemented new measures as required and always stayed on top of it. We communicated with all staff constantly. Everybody who could, worked from home. Huge steps were taken to reduce the risk of work related COVID infections.

Question 10: Can you recall a time that a project in your organization failed because imposing risks were not prepared for? If so, please explain the events.

Whenever someone gets hurt its because we didn't anticipate the risk. I keep an incident log to track all incidents within the City of Orillia staff. 2/3 of incidents are due to environmental factors that you can't anticipate or plan for, like the weather. About 1/6 of the incidents are because of people not following procedures. Another 1/6 is because we didn't anticipate the risk and therefore didn't have a control in place. Steps are taken to resolve any incidents that happen.

Question 11: Does your workplace team have a specific guideline to measure the level of risk when planning and completing projects?

We do for job hazard analysis. It's basically a big excel spreadsheet that identifies the risk, evaluate the risk, puts control in place, and any further controls if needed.

6.8. KEY TERMS

Contingency Plans: The project risk plan balances the investment of the mitigation against the benefit for the project. The project team often develops an alternative method for accomplishing a project goal when a risk event has been identified that may frustrate the accomplishment of that goal. 6.4

Risk Acceptance: Involves partnering with others to share responsibility for risky activities. Or, hiring someone else to take on that part of the project. 6.3

Risk Avoidance: This usually involves developing an alternative strategy that has a higher probability of success but usually at a higher cost associated with accomplishing a project task. 6.3

Risk Breakdown Structure (RBS): A risk breakdown structure organizes the risks that have been identified into categories using a table with increasing levels of detail to the right. 6.3

Risk Management: The process of identifying, quantifying, and managing the risks that an organization faces. 6.2

Risk Mitigation (reduction): This is an investment of funds to reduce the risk on a project. On international projects, companies will often purchase the guarantee of a currency rate to reduce the risk associated with fluctuations in the currency exchange rate. 6.3

Risk Register: A list of all the risks that have been previously identified. 6.3

Risk Transfer (or sometimes shared): A risk reduction method that shifts the risk from the project to another party. The purchase of insurance on certain items is a risk-transfer method. 6.3

6.9. CHAPTER SUMMARY

Risk management is the process used to identify and manage the risks of the project. In other words, identify "What could go wrong?" Risk Management Planning has a big impact on being able to anticipate risk and create a contingency plan. Developing Risk Assessments helps the team assess each risk and the probability (likelihood) and impact of whether the event will happen. The team can develop a Risk Response Plan that helps to reduce the impact of unexpected events by avoiding, accepting, mitigating or transferring/sharing the risk. It is important that the Project Manager monitors the Risk Plan throughout the project and act on any changes. Human Resources may be involved with the project team to develop the Risk Management Plan from beginning to end and help the team facilitate the process. Risks can happen at the beginning, in the middle, or at the end of the project.

6.10. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed **by the Students** on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used **by the Teachers** as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. **Individually**, think about a school project you worked on that was successful. Make a list of the risks (major and minor) that you overcame before starting the project, and during the project. **Pair up** and share your list.
2. Form into **small groups**. Identify a simple project ie. Building a garden, painting a bedroom, building a deck, planning a trip, etc. Make a list of all the tasks that would need to be completed before the project starts. Make a list of all the risks (major and minor) that could happen. No wrong answers! Decide how you will respond to each of the risks. Develop a Contingency Plan for 3 of the risks.
3. **Individually**, research the internet. Use key words "best practices for risk management." What did you discover? How would this information be helpful to you in a project? **Pair up** and share with a partner what you discovered.

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. Risks can be eliminated from a project if they are planned well. Agree? Disagree? Why?
2. What is the different between avoiding a risk and mitigating a risk?
3. Is contingency planning a good idea? Why? Why not? Explain.
4. How is a Risk Breakdown Structure helpful in Risk Management?
5. List the steps in a Risk Response Plan.
6. How would Human Resources Specialists support the project through the Risk Management process?

CHAPTER 7 – SCHEDULING RESOURCES AND BUDGETS

Chapter Outline

7.1. Learning Outcomes
7.2. Scheduling Terms
7.3. Scheduling Resources, Benefits, Constraints
7.4. Defining Activities
7.5. Work Breakdown Structures
7.6. In-Depth Look: Work Breakdown Structures (WBS)
7.7. Time Estimation
7.8. Managing the Schedule with Gantt Charts and Network Diagrams
7.9. In-depth Look: Gantt Charts
7.10. Estimating Resources
7.11. Estimating Costs
7.12. Understanding Budgets
7.13. Creating a Project Budget
7.14. Contingency Funds
7.15.Managing Budget
7.16. Knowledge Check
7.17. Key Terms
7.18. Chapter Summary
7.19. Learning Activities and Exercises for Students/Teachers

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7.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you should be able to:

1. Define terms related to scheduling.
2. Demonstrate how cost and time are summarized in a WBS.
3. Demonstrate the process of decomposition and numbering used to create a WBS.
4. Explain the difference between a deliverable and work package.
5. Differentiate top-down estimation and bottom-up methods.
6. Apply skills of building a Gantt Chart within a project
7. Define basic terms such as budget, estimate, price, cost, and value.
8. Discuss the relationship between cost and budget.
9. Apply basic concepts related to budgeting.
10. Identify different types of costs, and discuss issues related to contingency funds, profit, and cost estimating.
11. Explain the benefits of contingencies.

7.2. SCHEDULING TERMS

Making sure all stakeholders use the same terminology is crucial in all phases of project management, but it is especially important when you are trying to get a group of diverse people to agree to a schedule. After all, a schedule only works as a form of communication if it is written in a language everyone understands. And since contract terms are often tied to schedule, a lack of common agreement on the meaning of specific terms in a schedule can have far-ranging effects.

Terminology is so important that many state governments publish their own project management glossaries. As you embark on a new project, it would be wise to find out if the organization you work for, or the vendors you will be working with, have compiled such a glossary. If such organizational resources exist, use them as a starting point for your own project glossary. Otherwise, you can always turn to the Project Management Institute's lexicon (available here: "PMI Lexicon of Project Management Terms") or glossaries provided online by consulting firms or other project management resources such as the following:

Project Management Terms

- Project Management Glossary of Terms
- Project Management Glossary

The following definitions of scheduling-related terms are taken from a variety of sources.

Term	Definition
Milestone	"A significant event in the project; usually completion of a major deliverable" (State of Michigan: Department of Technology, Management & Budget, 2013, p. 13). An important distinction is that a milestone is a zero-duration activity; e.g., "acceptance of software by client" is a milestone, preceded by many contributing activities.
Activity	"An element of work performed during the course of a project. An activity normally has an expected duration, an expected cost, and expected resource requirements" (Project-Management.com, 2016). Beware that some organizations subdivide activities into tasks while others use task and activity synonymously.
Duration	"The amount of time to complete a specific task given other commitments, work, vacations, etc. Usually expressed as workdays or workweeks" (State of Michigan: Department of Technology, Management & Budget, 2013, p. 9).
Resource	"Any personnel, material, or equipment required for the performance of an activity" (Project-Management.com, 2016).
Cost	"An expenditure, usually of money, for the purchase of goods or services" (Law, 2016).
Slack	"Calculated time span during which an event has to occur within the logical and imposed constraints of the network, without affecting the total project duration" (Project-Management.com, 2016). Or put more simply, slack, which is also called float, is the amount of time that a task can be delayed without causing a delay to subsequent tasks or the project's overall completion date.

7.3. SCHEDULING RESOURCES, BENEFITS, CONSTRAINTS

Resources are people, materials and equipment that come together to complete a project. Project Managers need to ensure all the resources required are available for the project. Constraints are when the resources are not available or limited. It is important to understand constraints as they can affect the outcomes of the projects. Project Managers need to balance the resources and constraints to ensure success.

People: Providing enough qualified people on a project is the most important resource. Human Resources would be active in supplying or supporting the hiring of qualified people for the project. People are hired based on the skills they bring to the project.

Materials: The materials required for the project need to be planned for in advance, ordered/brought in as needed in the project. As well, the delivery of products and timing of delivery need to be considered.

Equipment: Equipment needs to be purchased, leased, or rented for the project. It needs to be available when needed.

Once people, materials or equipment are placed on the schedule, it is important they are allocated as needed. Project Managers tend to classify resources and determine what and who they need, where they need the resource, and when it is needed. Much of this planning is done in advance. However, project resource schedules are critical.

Project Managers use a classification of scheduling in two ways:

Time-constrained resources: This would mean there is an imposed time frame for the project (the time cannot be changed.) Example: Planning a wedding. Once the date is decided, it will not change. Or planning a New Year's Eve party. We must hold it on January 31st.

Resource-constrained: There is an assumption that all the resources will be available when and where they are needed. If the resources are not available or not adequate, the project could be delayed. Example: Two people are scheduled to paint a room. The contractor scheduled 8 hours with 2 people. One person was sick. Now, it will take 1 person 16 hours to paint the room. The cost is "time which is money," and the contractor may need to pay the 1 person overtime.

Benefits of Scheduling People, Materials, Equipment

1. If resources are time-constrained or resource-constrained, it is important for Project Managers to plan a schedule ahead of time. This leaves time to look at different options.

2. Resource schedules allow time to prepare budgets and work plans (tasks, activities). Project Managers can then quickly assess if unanticipated events occur.

3. Project Managers can predict how much flexibility they have with resources over a period of time. This would be helpful if team members are sick or need to removed themselves from the project for a period of time.

7.4. DEFINING ACTIVITIES

An **activity** is a process of further breakdown of the work package elements of the work breakdown structures (WBS). It documents the specific activities needed to fulfill the deliverables detailed in the WBS. These activities are not the deliverables themselves but the individual units of work that must be completed to fulfill the deliverables. Activity definition uses everything we already know about the project to divide the work into activities that can be estimated. You might want to look at all the lessons learned from similar projects your company has done to get a good idea of what you need to do on the current one.

Expert judgment in the form of project team members with prior experience developing project scope statements and WBS can help you define activities. If you are asked to manage a project in a new domain, you might also use experts in that particular field to help define tasks so you can understand what activities are going to be involved. You may want to create an activity list and then have the expert review it and suggest changes. Alternatively, you could involve the expert from the very beginning and ask to have an activity definition conversation with him or her before even making your first draft of the list.

Sometimes you start a project without knowing a lot about the work that you'll be doing later. Rolling-wave planning lets you plan and schedule only the portion that you know enough about to plan well. When you don't know enough about a project, you can use placeholders for the unknown portions until you know more. These are extra items that are put at high levels in the WBS to allow you to plan for the unknown.

7.5. WORK BREAKDOWN STRUCTURES

The **Work Breakdown Structure (WBS)** is a hierarchical outline of all the deliverables involved in completing a project. The WBS is part of a project scope statement. The creation of a WBS is one of the first steps in organizing and scheduling the work for a project.

The WBS is a breakdown of a project into sub-deliverables and, eventually, work-packages. Each level of the WBS, represents more detailed information about a project. *Figure 7-1* shows how a simple project is broken down into major deliverables and then into sub-deliverables. Figure 7.2 shows a more complex project broken down into major deliverables and then into sub-deliverables. Both Figures show WBS Numbering and Decomposition.
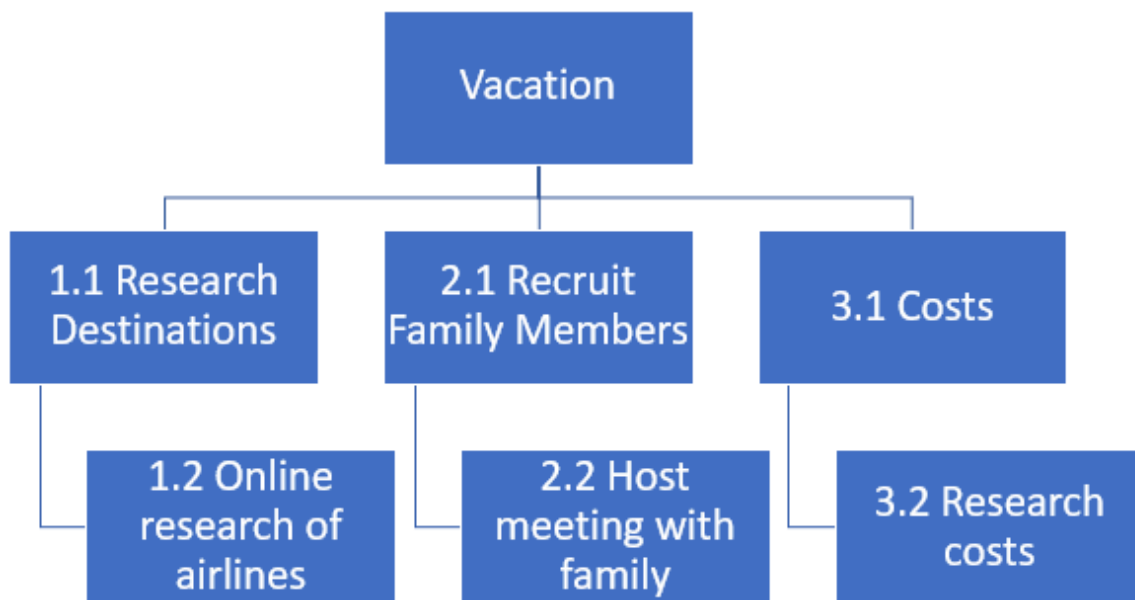

Figure 7-1: Simple WBS. The WBS is an outline that shows how the deliverables, sub-deliverables and work packages relate to the final project.
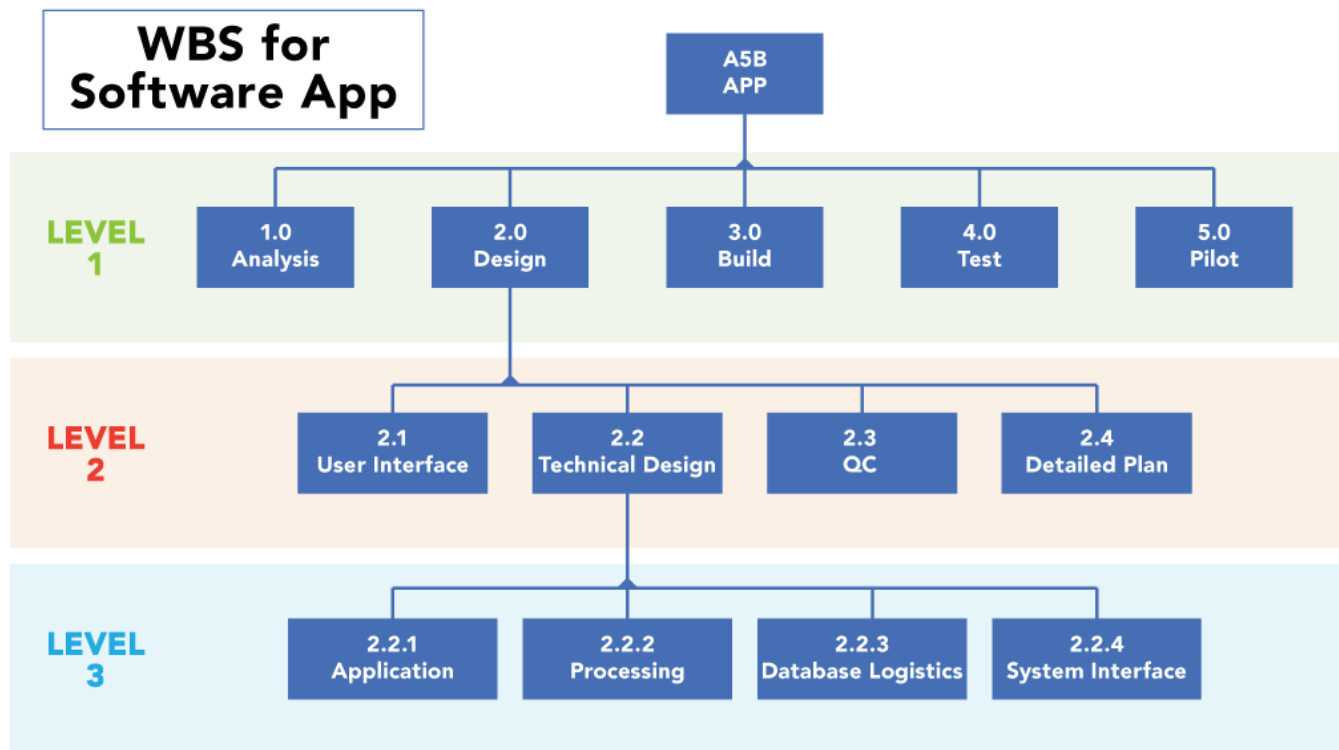
Figure 7-2: Complex WBS

7.6. IN-DEPTH LOOK: WORK BREAKDOWN STRUCTURES (WBS)

In-depth Look

In 1957, U.S Navy's Fleet Ballistic Missile Program was running behind schedule and needed help to resolve the issue. Therefore, the team formed a Program Evaluation and Review Technique (PERT) to keep track of tasks. In 1962, the Department of Defense and NASA published the description of Work Breakdown Structure (WBS). However, it was not named until 1968. Later in 1993, WBS was introduced in corporate and other organizational projects. In June 1999, the Project Management Institute (PMI) issued a project charter to form WBS practice standards and the Planning Process Groups that begins with three essential steps:

1. Scope Planning
2. Scope Definition
3. WBS development

To complete projects quickly, many organizations miss the step of forming WBS plans. If the project is delivered without proper planning and visibility, it will affect the team members and the work quality. Therefore, it is clear that WBS and planning will help the organization analyze and collect more information and predict the project's outcome (Eby, 2021).

Work Breakdown Structure (WBS) has been defined as an "organization tree which presents a subdivision of effort required to achieve a specific objective, such as a program, project and contract" (Project Management Institute, 2008 as cited in Zecheru & Olaru, 2016 – mo matching reference for Zeheru). Likewise, Irdemoosa, Dindarloo and Sharifzadeh (2015) mentioned that WBS is efficient in project management planning. It breaks down projects into different sections, positively impacting the project schedule, risk analysis and responses, and project organization to produce a deliverable(s) successfully.

There are three (3) levels of work breakdown structure that are important to understand. According to Donato (2021), the WBS structure levels are:

1. Level 0: project title/final product deliverables
2. Level 1: major deliverables
3. Level 2: breakdown of the deliverables (where possible)

4. Level 3: deliverables that can be assigned to the team to finish

Principles of WBS

According to Grazia Merlo (2015) a WBS offers clarity, can be broken into manageable sections and helps to monitor projects through principles that guide the design of a WBS. They include:

1. **100% Rule**

Defines the total scope of the projects and all the deliverables to reduce any gaps in the project.

2. **Mutually exclusive**

Ensure there are no overlaps in the scope of the project between and among all the elements.

3. **Deliverables, Not Actions**

The desired end product, service or result of the project can be predicted accurately.

4. **A reasonable level of details**

A hierarchy of 2-4 levels is plenty. A practical limit of WBS granularity may be reached when it is impossible to define deliverables.

The strengths of WBS

1. Gives a visual representation of the projects
2. Provides an overview to everyone in the team about the progression of the project
3. Breaks the work into manageable chunks
4. Best for allocating cost and time estimates
5. Identify the risk of missing out on something in a more efficient manner
6. Mutual exclusivity is taken into consideration to eliminate confusion
7. Improves productivity as it will identify the skills needed to finish assignments on time
8. Boost transparency and will make the team responsible for all tasks that have been completed or that need to be completed
9. Each work package (lower level of WBS) is a measurable unit; therefore, it provides an exact status report of a project (Eby, 2021).

Business project managers and team members use WBS to make sure everything is well organized. Others use the WBS too. These are the creative, and technical groups that rely on WBS to track their progress. As well, event and commercial project planners, software developers, scope planning managers, and system engineers use WBS to keep them updated regarding the project's progression (Eby, 2021).

WBS does have criticisms. Project Managers want to ensure that the work is not too detailed or extensive; it will slow down. For any changes to be made on the WBS affects the deliverables and the project's scope. If changes are made to the deliverables, and there is no change request, this could be detrimental. Listing activities and tasks in the WBS is not advisable (Mathis, 2022). There is no limit placed on the amount of information that is required. Use of too few details does not serve the project as a tool, or too much information can become bureaucratic.

The implications of the WBS for practice are primarily positive, although, as previously discussed, it does present limitations. For Human Resources and Project Management, it serves as a planning tool to determine aspects of a project, such as roles, responsibilities, and activities that need to be completed within a specific time frame. A follow-up to assess what was achieved and what can be improved upon. A well-executed WBS can be beneficial in providing a visual representation of projects, which helps project managers visualize the project (the big picture) while also visualizing the individual pieces that work together to create a successful project. If a WBS is well-executed, it can serve Human Resources and Project Management by providing a breakdown of a project which can be personalized to the needs of each project/organization. For example, a WBS can be customized to be highly detailed or simply a general outline of the project (Luijbregts, n.d.). Overall, the WBS has the potential to be a valuable tool in project management and Human Resources practice.

WBS can be applied usefully to enhance practice in several ways. The first is to realize the project's unique needs to determine the level of detail that the WBS should entail. As discussed previously, providing too little information or too much can negatively affect the usefulness of a WBS and could potentially be detrimental to the project. Determining the needs of your project and the level of detail required of a WBS can lead to a well-organized project and enhance the practice of Human Resources and Project Management.

If followed as precisely and accurately as possible, a WBS has the potential to keep the entire project team, including stakeholders, informed of the project and its progress (Willis, 2015). It provides a clear outline of the activities that need to be completed for the project, which gives team members clarity about what needs to be done and what outcomes are to be expected.

Another way to ensure that a WBS provides an enhanced experience is to use it in conjunction with other tools. A WBS provides an overview or breakdown of what needs to be done/accomplished. A project will require a plan/schedule, which is a Gantt chart that helps the Project Manager and team schedule the tasks and activities.

Deliverables vs. Work Packages

- **Deliverables and sub-deliverables** are things such as physical objects, software code, or events. In a

WBS, deliverables and sub-deliverables are represented by nouns. **Work packages** are assignable units of work that will be performed to create the related deliverable. A work package can be assigned to one particular project team member, one outside contractor, or another team. The work packages maybe further broken down into activities or tasks by the project team or the experts who will perform that work (see WBS dictionary later in this section).

- **Work packages** are action-oriented and will be represented by phrases containing verbs. The cost of a deliverable is the sum of all of its related sub-deliverables. As well, a work package is somewhat similar to specific tasks that need to be completed and can be delegated to the appropriate person.

Since the WBS provides a natural way to summarize (or "rollup") the costs and labour involved for various sub-deliverables, it also provides the project team with the information need to determine whether some deliverables would be better performed by an outside specialist who could deliver the item or service more cost-effectively.

WBS Numbering

Project managers use the WBS during project execution to track the status of deliverables and work packages. The items in a WBS are numbered so it is easy to understand the deliverable, or sub-deliverable, to which any particular work package is related.

This numbering system allows for easy reference and filtering. For example, an electrician working on the Warehouse project only needs to receive details and updates that are related to work packages that start with 2.2 (the Electrical sub-deliverable). This would be the same number that the Accounting Department would use for billing.

Decomposition

Decomposition is the process used to break the project scope of work into the deliverables, sub-deliverables, and work packages involved in completing the project.

The process of decomposition begins with identifying the highest-level deliverables. These deliverables are then broken into sub-deliverables. Many layers of sub-deliverables may be needed for a project. A general rule of thumb is that if the WBS has more than 5 layers of sub-deliverables, the project team should reassess and try to simplify the WBS structure (often by changing the way higher-level deliverables are grouped and broken down).

Once the lowest level of deliverables has been reached, the next step is to break the sub-deliverables into work packages. The work packages describe the work that needs to be done to create the sub-deliverable. Remember that work packages typically contain verbs and can be assigned to a person, team or contractor.

Once the project team has drafted the WBS, they should ask themselves: "If all the work packages were completed, and all the deliverables in this WBS were delivered, would the project be complete?" If the answer is no, then pieces of the WBS are still missing. If the answer is yes, then the project team can move on to creating the WBS dictionary, getting bottom-up estimates on time and resource requirements, and planning how to schedule the work.

The WBS Dictionary

The WBS dictionary (also referred to as an activity list) provides detailed documentation about each work package, including;

- Who is responsible for completing the work package?
- What resources will be needed to complete the work package?
- What deliverable(s) is the work package contributing to?
- What deadlines or milestones are associated with this work package?
- What are the acceptance criteria for this work package?

When the WBS is created, not all of the information about the work packages is known (for example, the estimates for labour and material costs). Remember from Chapter One that the planning process continues throughout the execution of the project. As a result, the WBS dictionary is a "living document" that will be augmented, edited and updated as the project moves forward. *Figure 7-3* is an example of a WBS Dictionary entry; note that several items will be added later in the planning process. The dictionary in *Figure 7-3* includes the following columns: item number, description, constraints, responsibility, milestone, schedule, resources, cost, quality, acceptance criteria, references and guidelines.

Hammer and Chisel Incorporation											
WBS Dictionary											
Item Number	Description	Constraints	Responsible	Milestone	Schedule	Resources	Cost	Quality	Acceptance Criteria	References	Guidelines
1.1											
1.1.1											
1.1.2											
1.1.3											

Figure 7-3: WBS Dictionary entry example.(Click to enlarge)

Class of 2022 Contribution: Adenike Afolabi, Hanin Al-JjowJ, Sabinne Serban, Kanica Arora

7.7. TIME ESTIMATION

Estimates have a huge influence on a project and are a large source of project risk. Watch this video on time estimates to learn about how estimates are used for project planning by Prof C [3:04] below. The transcript is available on YouTube.

> 📇 *One or more interactive elements has been excluded from this version of the text. You can view them online here:* *https://ecampusontario.pressbooks.pub/ hrstrategicprojectmanagementtheory/?p=190#oembed-1*

Top-down estimation	Also referred to as macro, estimation methods are used to determine if a project is feasible, to calculate funding requirements, and to determine the resources needed to complete a project. These methods are not extremely accurate but provide a relatively fast way to make an estimate of the time and costs required for a project.
Bottom-up estimation	Also referred to as micro, estimation methods are used to provide a detailed, and more accurate, estimate and are usually derived from the detailed list of work packages or activities found in the work-breakdown structure.

As the video mentions, all estimates contain risk. If estimates are too low, then a project will take more time and money to complete than what was budgeted. Obviously, a bad situation. If estimates are too high, then a project will take less time and money than originally estimated. This might seem to be a desirable situation, but good project managers will realize that estimates that are too high will cause an organization to over allocate resources to a project, thereby preventing other projects from being pursued due to organizational resource shortages.

Therefore, it is important to have the most accurate estimates possible. The project team needs to understand the value of accurate estimates and avoid the natural human tendency to pad estimates. Once unbiased estimates for a project have been generated, the project manager can calculate what time buffers and budgetary reserves should be added to the project plan to deal with uncertainty.

Accuracy of Estimates

Prior to project authorization, estimates for project cost need to be given, but these estimates can be rough estimates. As the project progresses, more definitive estimates will be needed and can be generated.

PMI defines the following ranges for estimates:

|	
Rough Order of Magnitude (ROM)	ROM estimates are made at the initiation of the project and can be +/- 50 percent from the actual or final cost.
Budget Estimate.	Budget estimates are used in project planning and can be within a range from -10 to +25 percent from the actual or final cost.
Definitive Estimate	Definitive estimates are generated as the project progresses and the variability of the estimate is reduced (*see Figure 7-4*). Definitive estimates are within a range from -5 to +10 percent from the actual or final cost.
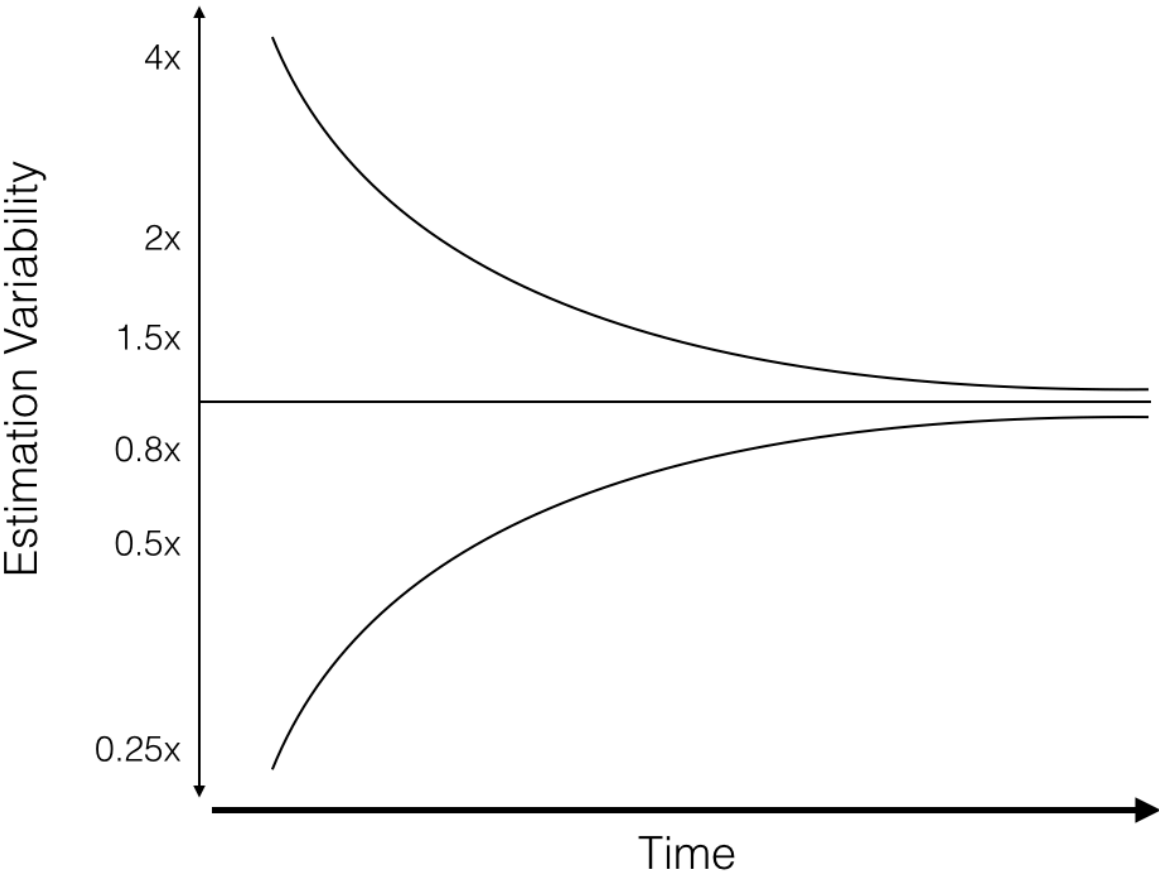
Figure 7-4: Estimates contain a high degree of variability at the inception of a project, and that variability decreases as the project is defined and moves toward completion.

Top Down (Macro) Estimation

Top-down, or macro, estimation methods allow for a quick estimate of project costs based on historical information.

Analogous Estimating

Analogous estimating uses information from a previous project to estimate the cost of completing a similar project in the future. This provides a quick estimate, but should be used with caution. Analogous estimating only works when comparing projects that are similar in scope and will be completed in similar conditions.

> For example, a small IT business developed a website for a local restaurant for which they charged $4000. Another restaurant approaches the IT firm and asks for a rough cost estimate for a similar site. The IT firm can tell the second restaurant that such work will cost approximately $4000. Of course, the caveat is that this second website will have a similar number of pages, functions, and graphics as the first site.

The advantage of analogous estimating is that it allows for a very quick estimate to be provided for a customer. If in the example above, the second restaurant had only budgeted $200 for a website, they would have quickly determined that they have not budgeted enough, and the IT firm would be able to quickly determine that this is not a serious customer. However, if the second restaurant is okay with this approximate price, the IT firm can work with the restauranteur to develop a detailed cost proposal.

Analogous estimating, is not accurate if:

- The projects differ in scope.
- There is a difference in the conditions under which the work will be performed.
- There is a difference in the cost of resources (materials, labor).

Parametric Estimating

Parametric estimates, also called the ratio method, uses historical information or industry benchmarks as the basis for making an estimate. Parametric estimates are made by multiplying the size of a project by an established cost per unit.

Cost Estimate (Union Labor)	Cost per Square Foot
Labor and Materials	$234.09
Contractor Fees (GC, Overhead, Profit)	$58.52
Architectural Fees	$26.34
Total Building Cost (per Square foot)	**$318.95**

Cost Estimate (Open Shop)	Cost per Square Foot
Labor and Materials	$217.51
Contractor Fees (GC, Overhead, Profit)	$54.38
Architectural Fees	$24.47
Total Building Cost (per Square foot)	**$296.36**

Table 7-1: Hospital construction costs – Data from Reed Construction (http://www.cmdgroup.com/) 2014.

For example, industry data is available for the per square foot construction cost for many types of buildings. An architect can use this information to make a parametric estimate by multiplying the cost per square foot by the size of any new building being considered. If an organization wants to build a new hospital using union labor, a rough estimate of the construction cost can be calculated using the information in Table 5.1: 20,000 ft$_2$ clinic × $318.95/ft$_2$ = $6,379,000. The organization can then use this estimate as an approximate cost and start securing the money for the project. Once the funding is secured, an architect can develop a complete plan and produce a more accurate project budget, using a bottom-up estimation method.

Learning Curves

Projects that require an activity to be repeated several times throughout the project will benefit from a so-called **learning curve.** Learning curves, also known as improvement curves or experience curves, are important when labor is one of our main resources.

Consider a large construction project for a new highway. The first hundred feet of highway may be fairly slow to complete. But as workers become more experienced, and figure out better ways to organize their work, the time required to construct the next one hundred feet of new highway will be less.

Learning curves were first observed in aircraft production and are also used heavily in operations management. Each time production doubles, a learning rate can be calculated. *See Table 7.2* for the calculation of a learning curve. When output doubles, from the first screen installed to the second, a learning rate is calculated. Another learning rate is calculated when the output doubles from the second screen installed to the fourth, and so on. The average learning curve can then be calculated. Later, if this company is contracted to install projector screens as part of a project, they can use this learning curve in their labor estimates.

There is a limit to the improvement of a learning curve. Eventually, the learning curve will "bottom out" and no more improvement gains can be achieved.

Table 7-2

Number of screens installed	Time to install projector screen	Learning Rate
1	500	
2	440	88.0%
3	420	
4	400	90.9%
5	390	
6	380	
7	370	
8	360	90.0%
9	355	
10	350	
11	345	
12	344	
13	342	
14	340	
15	339	
16	338	93.9%
Average	90.7%	*Data from Table 7-2 shown on graph 7-4. Notice that the longer production occurs, the less improvement from one installation to the next.*
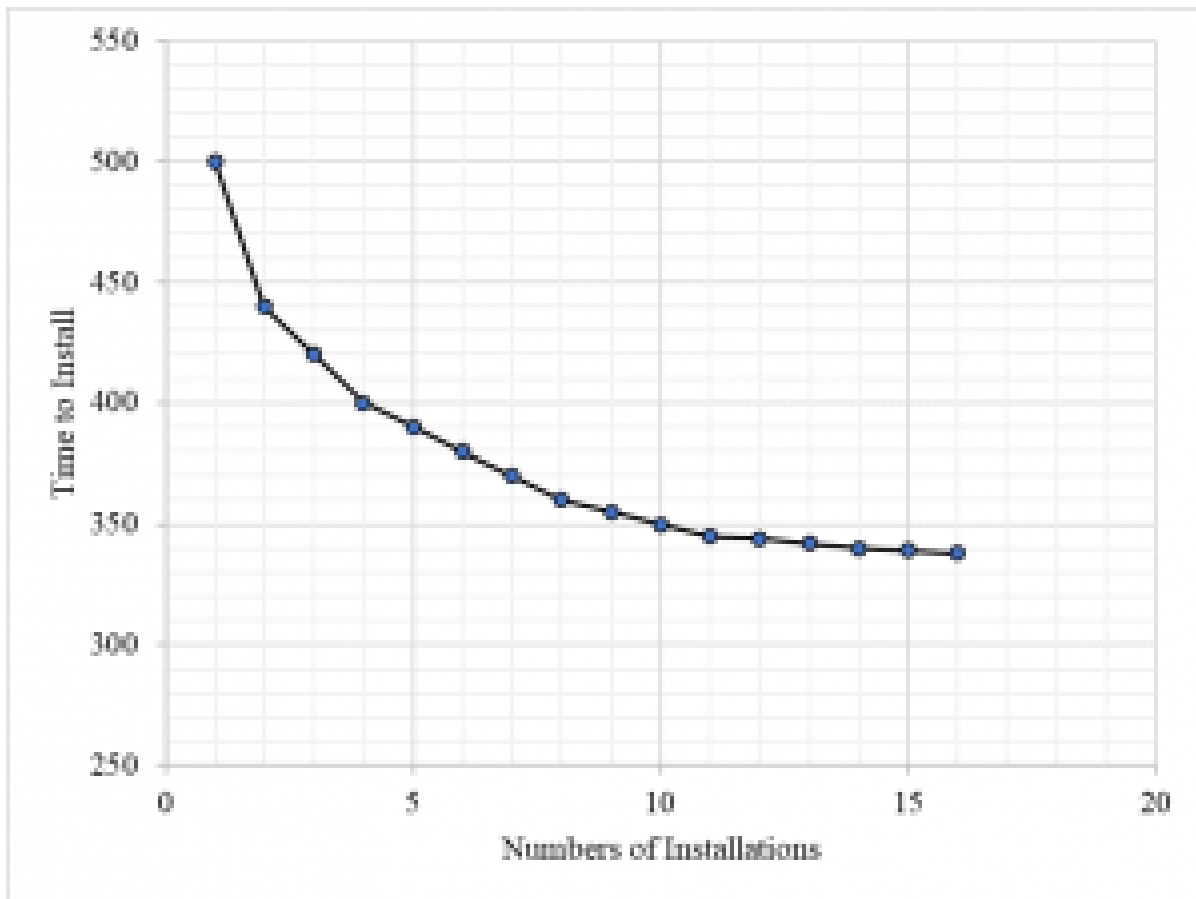
Figure 7-5: Learning curve calculation – Each time production is doubled, the learning rate for that doubling is calculated: (screen 2 time/screen1 time), (screen 4 time/screen 2 time), (screen 8 time/screen 4 time), and (screen 16 time/screen 8 time).

However, there are several things that can be done to extend and improve the slope of a learning curve:

- Incentivize workers to improve the processes they are using to complete their tasks. These incentives are "built in" for companies that are employee owned, where employees share in the reward if profits increase.
- Make investments in new technology and equipment.
- Invest in training and education for new workers, so they are not "learning on the job."
- Give workers the flexibility to make changes to how materials are sourced, delivered, and organized.
- Re-engineer the deliverables so they are easier to produce.

Learning curves usually hold if the work is continuous. If there is a break in the work, gains in productivity when work resumes will not be as great as if the work had continued uninterrupted.

Bottom Up (Micro) Estimation

Bottom up, or micro, estimation techniques are used when the project is approved or is very likely to be approved. Bottom up estimation techniques generate estimates for individual work packages or sub-deliverables, which are then summarized to reflect total costs. Bottom up estimates are more accurate, detailed and take more time to generate. Instead of relying on historical information, bottom-up estimates rely on people with experience who can provide time and cost estimates for a particular work package or sub-deliverable.

These basic guidelines should be followed when generating bottom up estimates:

- Have people familiar with the work make the estimate.
- If possible, use several people to make estimates.
- Estimates should be based on normal conditions and a normal level of resources.
- Estimates should not make allowances for contingencies.

The project manager or team will add buffer times and contingency funds to the project after estimates are collected and analyzed.

Single Point Estimate

Single point estimation is an estimate obtained from just one estimator. This can work well with experienced estimators and work packages that are straight forward. Single point estimates are quick to generate and summarize in a project plan. The risk with single point estimates is that the estimator will overlook some aspect of the work and inadvertently provide an inaccurate estimate.

Three-points estimate

Instead of asking an estimator for just one estimate, a three-points estimate asks the estimator to provide three-time estimates for each activity:

- An optimistic time estimate (if all goes well, what is the shortest time period one could realistically expect for the completion of this activity?). This will be designated in calculations as *a*.
- The most likely time estimate (if all goes normally, what is the average time one would expect it would take for an activity to be completed?). This will be designated in calculations as *m*.
- A pessimistic time estimate (if work goes poorly, what is the longest time period one could realistically expect for the completion of this activity). This will be designated in calculations as *b*.

These three estimates can be used as inputs to calculate an estimated time for the activity or work package to be completed.

7.8. MANAGING THE SCHEDULE WITH GANTT CHARTS AND NETWORK DIAGRAMS

The project schedule is important as it serves as a baseline to measure time and costs. There are two common visual methods to display schedules.

1. The Gantt Chart

A **Gantt chart** is a type of bar chart developed by Henry Gantt that illustrates a project schedule. Gantt charts are easy to read and are commonly used to display scheduled activities. These charts display the start and finish dates of the terminal elements and summary elements of a project. Terminal elements and summary elements comprise the work breakdown structure of the project. Some Gantt charts also show the dependency relationships (i.e., precedence network) between activities.

Gantt charts show all the key stages of a project and the duration as a bar chart, with the time scale across the top. The key stages are placed on the bar chart in sequence, starting in the top left corner and ending in the bottom right corner (*Figure 7-6)*. A Gantt chart can be drawn quickly and easily and is often the first tool a project manager uses to provide a rough estimate of the time that it will take to complete the key tasks. Sometimes it is useful to start with the target deadline for the completion of the whole project because it is soon apparent if the time scale is too short or unnecessarily long. Thus, the detailed Gantt chart is usually constructed after the main objectives have been determined. An In-depth look at Gantt Charts follows on 7.9.
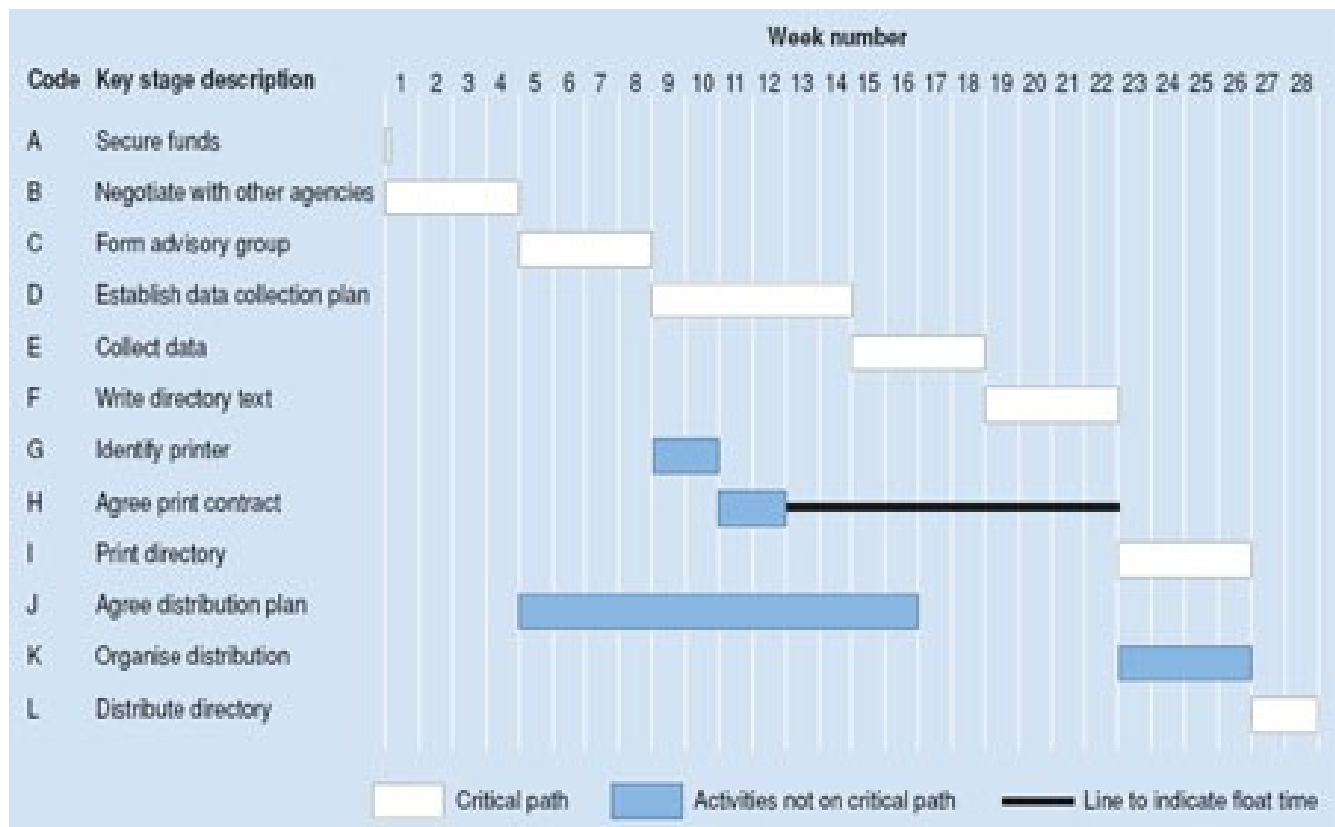
Figure 7-6: Gantt Chart

2. The Network Diagram

Some project managers use network diagrams when scheduling a project. The **network diagram** is a way to visualize the interrelationships of project activities. Network diagrams provide a graphical view of the tasks and how they relate to one another. The tasks in the network are the work packages of the WBS. All of the WBS tasks must be included in the network because they have to be accounted for in the schedule. Leaving even one task out of the network could change the overall schedule duration, estimated costs, and resource allocation commitments.

The first step in creating a network diagram is to arrange the tasks from your WBS into a sequence. Some tasks can be accomplished at any time throughout the project, where other tasks depend on input from another task or are constrained by time or resources.

The WBS is not a schedule, but it is the basis for one. The network diagram is a schedule but is used primarily to identify key scheduling information that ultimately goes into user-friendly schedule formats, such as milestone and Gantt charts.

The network diagram provides important information to the project team. It provides information about

how the tasks are related (Figure 7-7), where the risk points are in the schedule, how long it will take as currently planned to finish the project, and when each task needs to begin and end.

All network diagrams have the advantage of showing task interdependencies, start and end times, and the critical path (the longest path through the network). However, the AOA network diagram has some disadvantages that limit the use of the method.
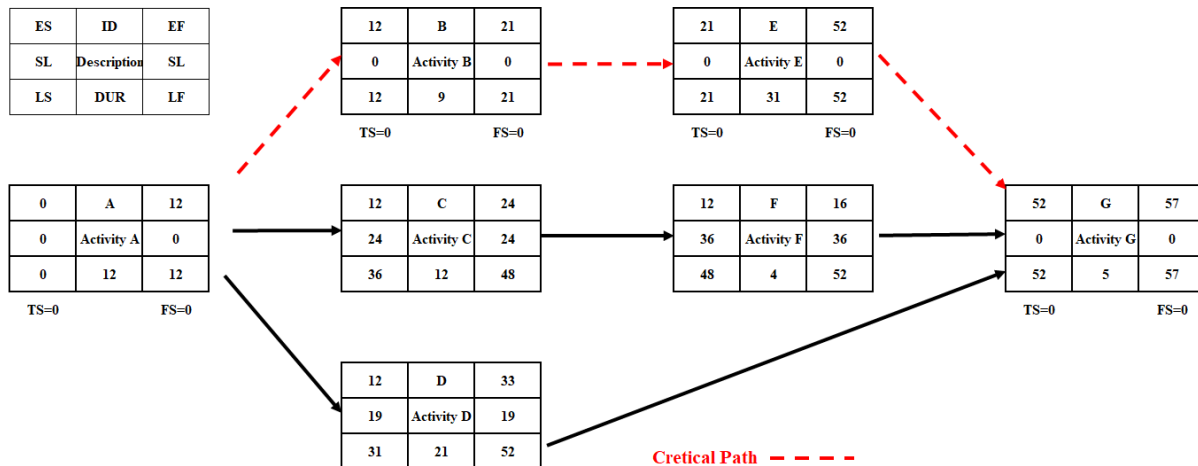
Figure 7-7: An example of an activity on node (AON) diagram

Forward and Backward Pass

Once a network diagram has been made, and estimated activity durations have been assigned to each activity, the following attributes of each activity can be calculated:

- Early start time (ES)
- Late start time (LS)
- Early finish time (EF)
- Late finish time (LF)
- Slack or float (SL or FL)

These activity attributes are calculated using two processes: the forward pass and the backward pass. Watch the video: Project Management Networks Part 2: Forward and Backward Pass by Prof C [7:08] to learn how to make these calculations. Transcript available on YouTube.

> 📄 *One or more interactive elements has been excluded from this version of the text. You can view them online here:*
> https://ecampusontario.pressbooks.pub/hrstrategicprojectmanagementtheory/?p=194#oembed-1

The forward and backward pass are also used to fully calculate the critical path(s) in a project. Note: there can be instances where the start of an activity is on the critical path, but the finish is not on the critical path. This is unusual but can happen depending on the types of relationships that are involved.

The Critical Path

The critical path (dashed red line as seen in figure 7-7) describes the sequence of tasks that would enable the project to be completed in the shortest possible time. It is based on the idea that some tasks must be completed before others can begin. A critical path diagram is a useful tool for scheduling dependencies and controlling a project. In order to identify the critical path, the length of time that each task will take must be calculated.

Milestones

One way to avoid getting lost in a sea of details is to focus on your project's milestones, which can serve as a high-level guide. You can use pull planning to identify your project's milestones, and then use the critical path to figure out how to hit those milestones. It gives a reality test to whether your milestones are in fact achievable. Then you're off and running, in living order.

In an excellent blog post on the usefulness of milestones, Elizabeth Harrin (2017) explains that milestones should be used "as a way of showing forward movement and progress and also show people what is going on, even if they don't have a detailed knowledge of the tasks involved to get there. In that respect, they are very useful for stakeholder communication and setting expectations" (Harrin, 2017). You can use milestones, she explains, to track your progress, focus on:

- starting of significant phases of work
- ending of significant phases of work
- marking the deadline for something
- showing when an important decision is being made (Harrin, 2017)

Milestones are especially useful as a form of communication on the health of a project. A version of a project schedule that consists only of milestones allows stakeholders to get a quick sense of where things stand. You

may want to report on milestones in the project's dashboard, which should serve as an at-a-glance update for the project.

7.9. IN-DEPTH LOOK: GANTT CHARTS

In-depth Look

While grappling with the problem of tracking different tasks and activities in departments of governments during the war effort in 1917, Henry Gantt realized scheduling should be based on time and not quantities. A simple bar chart was the solution. In graphic form, management was enabled to show progress in their work and indicate where action could be taken and keep on time.

In the second decade of the 20th century, Gantt charts were created as a visual tool to show projects scheduled and actual progress and was named after Henry Gantt. The Gantt chart has been accepted as a project management tool in today's world. The Gantt charts were used first on Hoover Dam's large construction projects in 1931 and the interstate highway network in 1956 (Henry Gantt's Legacy, n.d.). Today, Gantt chart tools are referred to as road map tools, and Gantt charts have become elaborate and complex with the use computers.

Gantt charts started as an effective mechanism for recording workers' progress towards tasks. Each worker kept a daily chart. If it is in black, the standard was met; in red standard is not met. This expanded into the chart of others on the quantity of work per machine, per worker, cost, and control.

These blueprints were drawn by hand. The plan was less useful than it could have been because most projects are always changing. Now that computers and project management programs are available, it is easy to produce, update, and print Gantt charts. Gantt charts are the most common way to keep track of project schedules today. It is helpful to show information about activities, such as how tasks relate to each other, how long each task takes, what resources are needed, etc. (Duke, 2022).

Gantt charts can be used to plan and schedule projects. They help to figure out how long the project should take and what materials are need. It can help keep track of the relationships between tasks (Mindtools, n.d.). The project manager can see immediately what needs to be done by a certain date, and if the project is behind schedule, on time, or ahead of schedule.

Activities and schedules are shown on the graph, and it is easy to see where tasks, subtasks, and master tasks start in a project. It is easy to see dates and deadlines for tasks, and easy to see plans for the day, week, month, quarter, and year. This makes it simple to manage the project team and all the small tasks in a large project. It shows who is on the team, their job, and progress.

Gantt charts assist teams in planning work around deadlines and allocating resources effectively. They organize projects, enhance the overall visibility of the project, and keep everyone on track. Gantt charts clarify the project and team requirements by presenting tasks across a calendar and highlighting dependencies. Project

managers use major milestones on potential risks Gantt charts to keep track of their projects (Team Gantt, 2022). They show, among other things, how the start and end dates of tasks fit together. Milestones and dependent tasks.

This will assist you in estimating the duration of a project, identifying the required resources, and organizing them in the order in which they will be completed perfectly. A horizontal bar chart is used in project management to represent a project plan's progression visually. It provides structure and foresight for the execution phase, eliminating inefficient activities and patterns (Duke, 2022).

It is simple to schedule tasks, simple to comprehend, and provides a clear and visual representation of time frames. Gantt charts have disadvantages. Not all Gantt charts are perfect, and setup can be time-consuming and tedious (Duke, 2022). They can become complex and difficult to interpret for large projects. Or, sometimes, they have insufficient level of details.

Another method that may be utilised to comprehend the project is the Project Planning Timeline. This method is just as significant as the Gantt chart in that it helps to plan the project in the same way as Gantt charts. It is simpler to comprehend the project information and timeframes in one line (Lucid, 2022).

The Gantt Chart makes the Human Resource Department and project team processes easier by using the following steps (Duke, 2022):

1. The project team and Human Resources should first outline its goals and determine the objectives.
2. Human Resources can ensure they have enough resources to achieve the project goals and discuss with the team.
3. Design the Gantt Chart. Tasks can be divided into smaller tasks to simplify completion. Example for Human Resources projects: tasks for hiring employees (advertise, receive applications, evaluation, interview, and selection).
4. Human Resources can assess and help the team organize the tasks separated in the Step 3 and specify the completion time for each task with the project team.

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7.10. ESTIMATING RESOURCES

Primary resources are people, equipment, and often, places, money, or anything else that you need in order to do all of the activities that you planned for. Every activity in your activity list needs to have resources assigned to it. Before you can assign resources to your project, you need to know their availability. Resource availability includes information about what resources you can use on your project, when they're available to you, and the conditions of their availability.

Remember that some resources, like consultants or training rooms, have to be scheduled in advance, and they might only be available at certain times. You'll need to know this before you can finish planning your project. If you are starting to plan in January, a June wedding is harder to plan than one in December, because the wedding halls are all booked up in advance. That is clearly a resource constraint. You'll also need the activity list that you created earlier, and you'll need to know how your organization typically handles resources. Once you've got a handle on these things, you're set for resource estimation.

The goal of activity **resource estimating** is to assign resources to each activity in the activity list. There are five tools and techniques for estimating activity resources.

- **Expert judgment means** bringing in experts who have done this sort of work before and getting their opinions on what resources are needed.
- **Alternative analysis** means considering several different options for how you assign resources. This includes varying the number of resources as well as the kind of resources you use. Many times, there's more than one way to accomplish an activity and alternative analysis helps decide among the possibilities.
- **Published estimating data** is something that project managers in a lot of industries use to help them figure out how many resources they need. They rely on articles, books, journals, and periodicals that collect, analyze, and publish data from other people's projects.
- **Project management software** such as Microsoft Project will often have features designed to help project managers estimate resource needs and constraints and find the best combination of assignments for the project.
- **Bottom-up estimating** means breaking down complex activities into pieces and working out the resource assignments for each piece. It is a process of estimating individual activity resource need or cost and then adding these up together to come up with a total estimate. Bottom-up estimating is a very accurate means of estimating, provided the estimates at the schedule activity level are accurate. However, it takes a considerable amount of time to perform bottom-up estimating because every activity must be assessed and estimated accurately to be included in the bottom-up calculation. The smaller and more

detailed the activity, the greater the accuracy and cost of this technique.

Resource Management

Resource management is the efficient and effective deployment of an organization's resources when they are needed. Such resources may include financial resources, inventory, human skills, production resources, or information technology (IT). In the realm of project management, processes, techniques, and philosophies for the best approach for allocating resources have been developed.

These include discussions on functional versus cross-functional resource allocation as well as processes espoused by organizations like the Project Management Institute (PMI) through the methodology of project management outlined in their publication A Guide to the Project Management Body of Knowledge (PMBOK). Resource management is a key element to activity resource estimating and project human resource management. As is the case with the larger discipline of project management, there are resource management software tools available that automate and assist the process of resource allocation to projects.

🔍 HR in Focus Human Resources Assistance with Scheduling

The most important resource to a project is its people—the project team. Human Resources Departments help projects as they require specific expertise at specific moments in the schedule, depending on the milestones being delivered or the given phase of the project. An organization can host several strategic projects concurrently over the course of a budget year, which means that its employees can be working on more than one project at a time.

Alternatively, an employee may be seconded away from his or her role within an organization to become part of a project team because of a particular expertise. Moreover, projects often require talent and resources that can only be acquired via contract work and third-party vendors. Procuring and coordinating these human resources, in tandem with managing the time aspect of the project, is critical to overall success and an important role for Human Resources Specialists.

In order to successfully meet the needs of a project, it is important to have a high-performing project team

made up of individuals who are both technically skilled and motivated to contribute to the project's outcome. One of the many responsibilities of Human Resources is to provide support to the project manager and to enhance the ability of each project team member to contribute to the project, while also fostering individual growth and accomplishment. At the same time, each individual must be encouraged to share ideas and work with others toward a common goal. Goal planning, brainstorming techniques, and project planning are all skills that can be taught by Human Resources Specialists through workshops.

Human Resources Specialists can provide training or skill development in performance evaluation for the Project Manager. Through performance evaluation, the manager will get the information needed to ensure that the team has adequate knowledge, to establish a positive team environment and a healthy communication climate, to work properly, and to ensure accountability.

As well, the Human Resources department can provide training in performance appraisal systems and performance motivators and controls. The HR Specialist could also be involved directly in the performance appraisals with the Project Manager. They provide a different perspective based on behaviour and characteristics of team members, while the Project Manager's perspective is based on the performance and outcomes of the project. Managing the project team includes an appraisal of employee performance and project performance. The performance reports provide the basis for managerial decisions on how to manage the project team.

Employee performance includes the employee's work results, such as:

- Quality and quantity of outputs
- Work behaviour (such as punctuality)
- Job-related attributes (such as cooperation and initiative)

After conducting employee performance reviews, project managers and HR Specialists should:

- Provide feedback to employees about how well they have performed on established goals
- Provide feedback to employees about areas in which they are weak or could do better
- Take corrective action to address problems with employees performing at or below minimum expectations
- Reward superior performers to encourage their continued excellence

Techniques for Managing Resources

One resource management technique is **resource levelling.** It aims at smoothing the stock of resources on hand, reducing both excess inventories and shortages. The required data are the demands for various resources, forecast by time period into the future as far as is reasonable; the resources' configurations required in those demands; and the supply of the resources, again forecast by time period into the future as far as is reasonable.

The goal is to achieve 100% utilization. However, that is very unlikely when weighted by important metrics and subject to constraints; for example, meeting a minimum quality level but otherwise minimizing cost.

Resource Levelling

Resource levelling is used to examine the unbalanced use of resources (usually people or equipment) over time and for resolving over-allocations or conflicts.

When performing project planning activities, the manager will attempt to schedule certain tasks simultaneously. When more resources such as machines or people are needed than are available, or perhaps a specific person is needed in two tasks, the tasks will have to be rescheduled sequentially to manage the constraint. Resource levelling during project planning is the process of resolving these conflicts. It can also be used to balance the workload of primary resources over the course of the project, usually at the expense of one of the traditional triple constraints (time, cost, scope).

When using specially designed project software, levelling typically means resolving conflicts or over-allocations in the project plan by allowing the software to calculate delays and update tasks automatically. Project management software levelling requires delaying tasks until resources are available. In more complex environments, resources could be allocated across multiple concurrent projects, thus requiring the process of resource levelling to be performed at company level.

In either definition, levelling could result in a later project finish date if the tasks affected are in the critical path.

7.11. ESTIMATING COSTS

Ultimately cost, the number management typically cares about most in a for-profit organization, is determined by price. For many projects, it's impossible to know the exact cost of an endeavor until it is completed. Stakeholders can agree on an intended value of a project at the beginning, and that value has an expected cost associated with it. But you may not be able to pin down the cost more precisely until you've done some work on the project and learned more about it.

To estimate and manage costs effectively, you need to understand the different types of costs:

Direct Costs:	"An expense that can be traced directly to (or identified with) a specific cost center or cost object such as a department, process, or product" (Business Dictionary, n.d.). Examples of direct costs include labor, materials, and equipment. A direct cost changes proportionately as more work is accomplished. Examples: trainer fees, training materials (booklets)
Indirect Costs:	Expenses incurred to create a product/service that are not directly related to the project, yet are costs of the project. They could include materials and supplies in the daily operation of the organization, and contribute in some way to the project. Examples: office equipment, cell phones.
Direct Project Overhead Costs:	Costs that are directly tied to specific resources in the organization that are being used in the project. Examples include the cost of lighting, heating, and cleaning the space where the project team works. Overhead does not vary with project work, so it is often considered a fixed cost
General and Administrative (G&A) Overhead Costs:	The "indirect costs of running a business," such as IT support, accounting, and marketing" (Tracy, n.d., para. 1).

Types of Contracts

The type of contract governing your project can affect your consideration of costs. The two main types of contracts are fixed-price and cost-plus.

- **Fixed price** is the more predictable of the two with respect to final cost, which can make such contracts appealing to the issuing party. But "this predictability may come with a price. The seller may realize the risk that he is taking by fixing a price and so will charge more than he would for a fluid price, or a price that he could negotiate with the seller on a regular basis to account for the greater risk the seller is taking" (Symes, 2018).

- **Cost-plus** refers to a contract where a company is reimbursed for its expenses, plus earns a profit (in a percentage.) It is sometimes called "mark up" or "profit margin." The full cost of the product is covered and a rate of return is guaranteed by the increase.

Many contracts include both fixed-price and cost-plus features. For example, they might have a fixed price element for those parts of the contract that have low variability and are under the direct control of the project team (e.g., direct labor) but have variable cost elements for those aspects that have a high degree of uncertainty or are outside the direct control of the project team (e.g., fuel costs or market driven consumables).

It is important to come up with detailed estimates for all the project costs. Once this is compiled, you add up the cost estimates into a budget plan. It is now possible to track the project according to that budget while the work is ongoing.

Tools for Estimating Cost

Often, when you come into a project, there is already an expectation of how much it will cost or how much time it will take. When you make an estimate early in the project without knowing much about it, that estimate is called a rough order-of-magnitude estimate (or a ballpark estimate). This estimate will become more refined as time goes on and you learn more about the project. Here are some tools and techniques for estimating cost:

- **Determination of Resource Cost Rates:** People who will be working on the project all work at a specific rate. Any materials you use to build the project (e.g., wood or wiring) will be charged at a rate too. Determining resource costs means figuring out what the rate for labor and materials will be.
- **Vendor Bid Analysis:** Sometimes you will need to work with an external contractor to get your project done. You might even have more than one contractor bid on the job. This tool is about evaluating those bids and choosing the one you will accept.
- **Reserve Analysis:** You need to set aside some money for cost overruns. If you know that your project has a risk of something expensive happening, it is better to have some cash available to deal with it. Reserve analysis means putting some cash away in case of overruns.
- **Cost of Quality:** You will need to figure the cost of all your quality-related activities into the overall budget. Since it's cheaper to find bugs earlier in the project than later, there are always quality costs associated with everything your project produces. Cost of quality is just a way of tracking the cost of those activities. It is the amount of money it takes to do the project right.

Once you apply all the tools in this process, you will arrive at an estimate for how much your project will cost. It's important to keep all of your supporting estimate information. That way, you know the assumptions made when you were coming up with the numbers. Now you are ready to build your budget plan.

Estimating Costs to Compare and Select Projects

During the conceptual phase when project selection occurs, economic factors are an important consideration in choosing between competing projects. To compare the simple paybacks or internal rates of return between projects, an estimate of the cost of each project is made. The estimates must be accurate enough so that the comparisons are meaningful, but the amount of time and resources used to make the estimates should be appropriate to the size and complexity of the project.

The methods used to estimate the cost of the project during the selection phase are generally faster and consume fewer resources than those used to create detailed estimates in later phases. They rely more on the expert judgment of experienced managers who can make accurate estimates with less detailed information. Estimates in the earliest stages of project selection are usually based on information from previous projects that can be adjusted—scaled—to match the size and complexity of the current project or developed using standardized formulas.

Analogous Estimate

An estimate that is based on other project estimates is an **analogous estimate.** If a similar project cost a certain amount, then it is reasonable to assume that the current project will cost about the same. Few projects are exactly the same size and complexity, so the estimate must be adjusted upward or downward to account for the differences. The selection of projects that are similar and the amount of adjustment needed is up to the judgment of the person who makes the estimate. Normally, this judgment is based on many years of experience estimating projects, including incorrect estimates that were learning experiences for the expert.

Less-experienced managers who are required to make analogous estimates can look through the documentation that is available from previous projects. If projects were evaluated using the Darnall-Preston Complexity Index (DPCI), the manager can quickly identify projects that have profiles similar to the project under consideration, even if those projects were managed by other people.

The DPCI assesses project attributes, enabling better-informed decisions in creating the project profile. This index assesses the complexity level of key components of a project and produces a unique project profile. The profile indicates the project complexity level, which provides a benchmark for comparing projects and information about the characteristics of a project that can then be addressed in the project execution plan. It achieves this objective by grouping 11 attributes into four broad categories: internal, external, technological complexity, and environmental.

Comparing the original estimates with the final project costs on several previous projects with the same DPCI ratings gives a less-experienced manager the perspective that it would take many years to acquire by trial and error. It also provides references the manager can use to justify the estimate.

Example: Analogous Estimate for John's Move

John sold his apartment and purchased another one. It is now time to plan for the move. John asked a friend for advice about the cost of his move. His friend replied, "I moved from an apartment a little smaller than yours last year and the distance was about the same. I did it with a 14-foot truck. It cost about $575 for the truck rental, pads, hand truck, rope, boxes, and gas." Because of the similarity of the projects, John's initial estimate of the cost of the move was less than $700, so he decided that the cost would be affordable and the project could go forward.

Parametric Estimate

If the project consists of activities that are common to many other projects, average costs are available per unit. For example, if you ask a construction company how much it would cost to build a standard office building, the estimator will ask for the size of the building in square feet and the city in which the building will be built. From these two factors—size and location—the company's estimator can predict the cost of the building. Factors like size and location are parameters—measurable factors that can be used in an equation to calculate a result. The estimator knows the average cost per square foot of a typical office building and adjustments for local labour costs. Other parameters, such as the quality of finishes, are used to further refine the estimate. Estimates that are calculated by multiplying measured parameters by cost-per-unit values are parametric estimates.

Activity-Based Estimates

An activity can have costs from multiple vendors in addition to internal costs for labor and materials. Detailed estimates from all sources can be reorganized so those costs associated with a particular activity can be grouped by adding the activity code to the detailed estimate (Table 7-3). The detailed cost estimates can be sorted and then subtotaled by activity to determine the cost for each activity.

Table 7-3: John's Move example – Detailed Costs Associated with Activities

Category	Description	Activity	Quantity	Unit Price	Cost
Packing Materials	Small Boxes	2.1	10	$1.70	$17.00
Packing Materials	Medium Boxes	2.1	15	$2.35	$35.25
Packing Materials	Large Boxes	2.1	7	$3.00	$21.00
Packing Materials	Extra Large Boxes	2.1	7	$3.75	$26.25
Packing Materials	Short Hanger Boxes	2.1	3	$7.95	$23.85
Packing Materials	Box Tape	2.1	2	$3.85	$7.70
Packing Materials	Markers	2.1	2	$1.50	$3.00
Packing Materials	Mattress Bags	2.1	2	$2.95	$5.90
Packing Materials	Lift Straps	2.1	1	$24.95	$24.95
Packing Materials	Bubble Wrap	2.1	1	$19.95	$19.95
Packing Materials	Furniture Pads	2.1	4	$7.95	$31.80
Packing Materials	Rental	2.1		0	$400.00
Packing Materials	Gas at 10mpg	2.1	200	$2.25	$45.00

7.12. UNDERSTANDING BUDGETS

A budget is part of the overall plan in a project. A **budget** is a decision made on the amount of money that will be spent on a project and how it will be spent.

A **Project Budget** is a combination of all the activities, milestones and tasks in the project plan; and the costs that the project must accomplish. Simply stated, it is the money the team needs to complete the project. It is important to the project to:

1. **Secure the funding:** it tells the stakeholders exactly how much is needed to complete the project
2. **Financial viability in a direct way to the company:** increase the operating margin and improve overall project success
3. **Cost control can be maintained:** the project can be measured through actual costs versus the approved budget. This shows how the budget is progressing (ahead, behind, on budget.)

Budget Ahead by 401(k) 2012 CC-By-SA

It helps the Project Manager keep the spending of money in check. It must be realistic, flexible (where possible), clearly communicated and well-planned for all stakeholders to agree. A budget is generally approved by a person of authority in the organization.

Budgeting is an exercise in refining your focus. You start with a wide-angle estimate, in which the details are necessarily fuzzy, and bit by bit, zero in on a sharper picture of project costs. You might be temperamentally inclined to try to nail down every figure in an early draft of a budget, but in fact, you should only develop a budget when decisions are made what the budget costs are for the project. Your overall precision can and should advance as the project advances.

This is especially important in the earliest stages of the budgeting process when you are working out rough estimates. Take care to estimate at the appropriate level of precision: Don't make the mistake of thinking you can estimate costs to the exact penny or dollar. $378,333.27 is not a realistic or intelligent estimate. Ultimately, overly precise budgets represent a communication failure. By proposing a budget to the customer that contains overly precise figures, you risk giving a false sense of accuracy regarding your understanding of and knowledge of the project.

When you are still working out estimates in the early stages of the budgeting process, it's helpful to include an uncertainty percentage. A typical approach is to include a +/- percentage, such as $400,000 +/- 10%. The percentage may initially be large but should gradually decrease as the project progresses and the level of uncertainty declines.

For IT projects, which are notoriously difficult to estimate, consider going a step further and adding an uncertainty percentage to every line item. Some items, such as hardware, might be easy to estimate. But other items, such as labour to create new technology, can be extremely difficult to estimate. These line item variances can influence the total estimate variance by a significant amount in many projects.

But even when you have a final budget, you need to prepare for uncertainty by including an official contingency fund, a percentage of the budget set aside for unforeseen costs. Contingency funds are described in more detail later in this chapter.

Successful project managers use the budgeting process to create stakeholder buy-in regarding using available resources to achieve the intended outcome. By being as transparent as possible about costs and resource availability, you'll help build trust among stakeholders. By taking care to use the right kinds of contracts—for example, contracts that don't penalize stakeholders for escalating prices caused by a changing economy—you can create incentives that keep all stakeholders focused on delivering the project value rather than merely trying to protect their own interests. The relationship between costs and contracts is discussed in more detail later in chapter 7.

Creating a Project Budget

This blog post by Tim Clark includes some helpful tips on creating a project budget: https://www.liquidplanner.com/blog/7-ways-create-budget-project/.

7.13. CREATING A PROJECT BUDGET

A simple budget can be created in 5 steps:

1. **Break the project into small tasks and milestones:** Create a task list. This will help the team understand all the details of what needs to be accomplished. Example: Trainer Fees at $2500.00 does not tell the person in authority any details. Trainer Fees: 5 trainers x $50.00/each per hour = $250.00 per hour for 5 trainers. 10 hours of training x $250 per hour = $2500.00 is an example of a good project breakdown of costs.

2. **Estimate each task and milestone:** Research comparable costs and give each task/milestone an estimation. This is a good time to identify all the resources (people, materials, equipment) work performed, and work out the costs.

3. **Add the estimates all together:** Calculate the total costs by either adding them up. If you use an excel sheet, you can sum to get the total.

4. **Add in any contingencies, taxes, other costs:** This can include overhead costs, reserve funds, and governmental taxes.

5. **Seek approval:** Speak to the person of authority, review the project budget in detail, and get approval with a signature.

You can use a checklist to ensure you have covered all the budget expenses before seeking approval:

1. Can I define the project and its end goal?
2. Are there any ground rules, constraints, and assumptions I should consider?
3. Do I have sources of data (Task List, WBS, Cost Estimates, Schedule) to rely on?
4. Is the estimating methodology in use acceptable?
5. Do I know who is going to work on the project?
6. Do I have a list of resources and their rates to complete the project?

checklist

7. Can I compare my estimate against the best practices industry standard?
8. Do I have contingency reserves to account for risk?
9. Who are the key project team members to help me in the estimating/budgeting process?
10. Am I on the same page with Project Stakeholders?
11. Can I compare the budget with the original estimates and reconcile the differences?

(Viter, 2021)

Watch the video: How to Create a Project Budget by Project Manager [3:05] below. Transcript available on YouTube.

One or more interactive elements has been excluded from this version of the text. You can view them online here: https://ecampusontario.pressbooks.pub/ hrstrategicprojectmanagementtheory/?p=204#oembed-1

7.14. CONTINGENCY FUNDS

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In addition to creating the project plan, you need to create a **contingency plan,** which is a plan for addressing key possible obstacles to project success. As discussed in Ch. 6 – Risk Management, a contingency plan defines alternate paths for the project in case various risks are realized.

A contingency plan typically includes a **contingency fund**, which is an amount of resources set aside to cover unanticipated costs. Contingency plans and funds are necessary because even the most seasoned project planner sometimes succumbs to excessive optimism, assuming everything will go well and that all resources will be available when needed. Also, no matter how thoroughly you plan a project, you will inevitably miss at least a few small issues.

Examples of issues that might necessitate the use of a contingency fund:

- Inadequate initial estimates
- Small items not covered in the planning
- Errors in initial estimates
- Small deviations due to inevitable delays

Note that a contingency fund is not designed to manage major deviations or scope changes.

A simple and effective form of contingency planning is setting aside a contingency fund consisting of a fixed percentage of all resources (time, money, people) in addition to the amounts spelled out in the final budget. Ten percent is a typical amount, but that can vary depending on the size and type of project, as well as the type of industry.

One of the chief difficulties of contingency planning is getting people to agree on exactly what is and is not covered by a contingency fund, and how it applies in specific circumstances. A considerable amount of research has been done on this topic, but there is still no clear consensus. For that reason, before launching a major project, you would be wise to investigate the ins and outs of contingency planning at your organization in particular, and in your industry in general.

Contingency planning is closely related to risk management, which is discussed in Chapter 6. When you are working on small projects of limited complexity, you can probably assume that a fixed percentage contingency plan will cover most risks. However, for highly complex, technically challenging projects, it's important to distinguish between generic budget planning contingencies (using a fixed percentage) and the more sophisticated modelling of risk for uncertainty.

If money is not available from other sources, then cost overruns typically result in a change in the project's scope or a reduction in overall quality. To prevent this, organizations build contingency funds into their budgets. Technically, a contingency fund is a financial reserve that is allocated for identified risks that are accepted and for which contingent or mitigating responses are developed. The exact amount of a contingency is typical 10% to 15% of the total budget.

Contingency funds are often available to pay for an agreed-upon scope change. However, some project managers make a practice of treating a contingency fund as a "Get Out of Jail Free" card that they can use to escape any cost limitations. Some, as a practical matter, will artificially inflate a contingency fund to ensure that they have plenty of resources to draw to manage any unforeseen future risks. But that is never a good idea because if you wind up with a large contingency fund that you ultimately don't spend, you have essentially held that money hostage (i.e., lost opportunity costs) from the rest of the enterprise. That can be as damaging to your organization's mission as a cost overrun that prevents you from finishing a project.

As explained, contingency funds are a form of risk management. They are a necessary tool for dealing with uncertainty. Unfortunately, as necessary as they are, it's not always possible to build them into your approved budget. For example, if you are competitively bidding on a contract that will be awarded on the lowest cost, then including a contingency fund in your estimate will almost certainly guarantee that your company won't win the contract. It is simply not practical to include a contingency fund in a lump sum contract.

In the living order approach to this problem, the owner maintains a shared contingency fund instead and makes it available, upon justification, for all project stakeholders. This approach helps ensure that project participants will work collaboratively with the project sponsor to solve any problems they might notice, confident that there is money available to address problems that threaten project value or to leverage opportunities that will provide greater project value.

For example, in a lecture on Lean and integrated project delivery, David Thomack, a long-time veteran of

the construction industry, explained how the Boldt Company and other stakeholders involved in a $2 billion healthcare project protected millions of dollars in contingency funding, which was then ultimately shared among all stakeholders (Thomack, 2018). Such shared contingency funds are typically spelled out in the project contract and are an effective tool to manage risk and uncertainty. Although some organizations only manage out-of-pocket project costs, the best practice is to manage total cost, including costs associated with staff (engineering, purchasing, testing, etc.) working on the project.

7.15.MANAGING BUDGET

Budgets are an outcome of developing estimates. Once a budget is approved, the Project Manager needs to manage the budget. The Project Manager is responsible for monitoring the financial performance of the project and making financial decisions. Sometimes the Project Manager has full authority over spending; while other times, expenditures need to be approved by another authority in the organization.

Projects seldom go according to plan in every detail. It is necessary for the project manager to be able to identify when costs are varying from the budget and manage those variations.

Evaluating the Budget During the Project

A project manager must regularly compare the amount of money spent with the budgeted amount and report this information to managers and stakeholders. It is necessary to establish an understanding of how this progress will be measured and reported.

The Project Manager regularly evaluates whether the project is ahead, behind or on track with spending. The budget would include estimates and then "actual expenditures" within a certain period of time. This could be a month, quarterly or yearly. The Project Manager would be responsible for reporting financial information to accounting departments and other stakeholders.

If the budget is overspent, the Project Manager would need to take corrective action. It is important that the Project Manager be transparent in reporting good news, as well, as bad news. The Project Manager may seek ideas from accounting personnel, and the project team on how to get the project back on track. Constructive feedback is valuable to reviewing problem areas, and adjusting to ensure success.

Example: Reporting Budget Progress on John's Move

In the John's move example, he estimated that the move would cost about $1,500 and take about 16 days. Eight days into the project, John has spent $300. John tells his friends that the project is going well because he is halfway through the project but has only spent a fifth of his budget. John's friend Carlita points out that his report is not sufficient because he did not

compare the amount spent to the budgeted amount for the activities that should be done by the eighth day.

As John's friend pointed out, a budget report must compare the amount spent with the amount that is expected to be spent by that point in the project. Basic measures such as the percentage of activities completed, percentage of measurement units completed, and percentage of budget spent are adequate for less complex projects, but more sophisticated techniques are used for projects with higher complexity.

7.17. KEY TERMS

Activity: An element of work performed during the course of a project. An activity normally has an expected duration, an expected cost, and expected resource requirements. 7.2. The process of further breakdown of the work package elements of the work breakdown structures (WBS). 7.4

Alternative Analysis: This means considering several different options for how you assign resources. This includes varying the number of resources as well as the kind of resources you use. 7.10

Analogous Estimate: An estimate that is based on other project estimates. 7.11

Analogous Estimating: Uses information from a previous project to estimate the cost of completing a similar project in the future. This provides a quick estimate but should be used with caution. Analogous estimating only works when comparing projects that are similar in scope and will be completed in similar conditions. 7.7

Budget: This is a decision made on the amount of money that will be spent on a project and how it will be spent. 7.12

Budget Estimate: Budget estimates are used in project planning and can be within a range from -10 to +25 percent from the actual or final cost. 7.7

Bottom-Up Estimating: This means breaking down complex activities into pieces and working out the resource assignments for each piece. It is a process of estimating individual activity resource needs or costs and then adding these up together to come up with a total estimate. 7.10

Bottom-Up, or Micro, Estimation: Techniques are used when the project is approved or is very likely to be approved. Bottom-up estimation techniques generate estimates for individual work packages or sub-deliverables, which are then summarized to reflect total costs. 7.7

Contingency Fund: This is a number of resources set aside to cover unanticipated costs. 7.14

Contingency Plan: Which is a plan for addressing key possible obstacles to project success. As discussed in Ch. 6: Risk Management, a contingency plan defines alternate paths for the project in case various risks are realized. 7.14

Cost: An expenditure, usually of money, for the purchase of goods or services 7.2

Cost Control Can be Maintained: The project can be measured through actual costs versus the approved budget. This shows how the budget is progressing (ahead, behind, on budget.) 7.12

Cost-Plus: Refers to a contract where a company is reimbursed for its expenses, plus earns a profit (in a percentage.) It is sometimes called "mark up" or "profit margin." The full cost of the product is covered and a rate of return is guaranteed by the increase. 7.11

Cost of Quality: You will need to figure the cost of all your quality-related activities into the overall budget. Since it's cheaper to find bugs earlier in the project than later, there are always quality costs associated with

everything your project produces. Cost of quality is just a way of tracking the cost of those activities. It is the amount of money it takes to do the project right. 7.11

Definitive Estimate: Definitive estimates are generated as the project progresses and the variability of the estimate is reduced (see Figure 5-4). Definitive estimates are within a range from -5 to +10 percent from the actual or final cost. 7.7

Deliverables and Sub-Deliverables: These are things such as physical objects, software code, or events. In a WBS, deliverables and sub-deliverables are represented by nouns (see Figure 5-2) 7.6

Determination of Resource Cost Rates: People who will be working on the project all work at a specific rate. Any materials you use to build the project (e.g., wood or wiring) will be charged at a rate too. Determining resource costs means figuring out what the rate for labour and materials will be. 7.11

Direct Costs: "An expense that can be traced directly to (or identified with) a specific cost center or cost objects such as a department, process, or product" (Business Dictionary, n.d.). 7.11

Direct Project Overhead Costs: Costs that are directly tied to specific resources in the organization that is being used in the project. Examples include the cost of lighting, heating, and cleaning the space where the project team works. 7.11

Duration: The amount of time to complete a specific task given other commitments, work, vacations, etc. Usually expressed as workdays or workweeks. 7.2

Equipment: Equipment needs to be purchased, leased, or rented for the project. It needs to be available when needed. 7.3

Expert Judgment: This means bringing in experts who have done this sort of work before and getting their opinions on what resources are needed. 7.10

Financial Viability in a Direct Way to The Company: Increase the operating margin and improve overall project success 7.12

Fixed Price: This is the more predictable of the two with respect to the final cost, which can make such contracts appealing to the issuing party. 7.11

Gantt Chart: A type of bar chart, developed by Henry Gantt, that illustrates a project schedule. Gantt charts are easy to read and are commonly used to display scheduled activities. These charts display the start and finish dates of the terminal elements and summary elements of a project. 7.8

General and Administrative (G&A) Overhead Costs: The "indirect costs of running a business," such as IT support, accounting, and marketing" (Tracy, n.d., para. 1). 7.11

Indirect Costs: Expenses incurred to create a product/service that is not directly related to the project, yet are costs of the project. 7.11

Learning Curves: Also known as improvement curves or experience curves are important when labour is one of our main resources. 7.7

Materials: The materials required for the project need to be planned for in advance, ordered/brought in as needed in the project. As well, delivery of products and timing of delivery need to be considered. 7.3

Milestone: A significant event in the project; usually completion of a major deliverable. An important

distinction is that a milestone is a zero-duration activity; e.g., "acceptance of software by a client" is a milestone, preceded by many contributing activities. 7.2

Network Diagram: A way to visualize the interrelationships of project activities. Network diagrams provide a graphical view of the tasks and how they relate to one another. 7.8

Parametric Estimates (Ratio Method): Uses historical information or industry benchmarks as the basis for making an estimate. Parametric estimates are made by multiplying the size of a project by an established cost per unit. 7.7

People: Providing enough qualified people on a project is the most important resource. Human Resources would be active in supplying or supporting the hiring of qualified people for the project. People are hired based on the skills they bring to the project. 7.3

Project Budget: A combination of all the activities milestones and tasks in the project plan; and the costs that the project must accomplish. 7.12

Project Management Software: Such as Microsoft Project will often have features designed to help project managers estimate resource needs and constraints and find the best combination of assignments for the project. 7.10

Published Estimating Data: Something that project managers in a lot of industries use to help them figure out how many resources they need. They rely on articles, books, journals, and periodicals that collect, analyze, and publish data from other people's projects. 7.10

Resource: Any personnel, material, or equipment required for the performance of an activity 7.2

Reserve Analysis: You need to set aside some money for cost overruns. If you know that your project has a risk of something expensive happening, it is better to have some cash available to deal with it. Reserve analysis means putting some cash away in case of overruns. 7.11

Resource-Constrained: There is an assumption that all the resources will be available when and where they are needed. If the resources are not available or not adequate, the project could be delayed. 7.3

Resource Estimating: This is to assign resources to each activity in the activity list. There are five tools and techniques for estimating activity resources. 7.10

Resource Management: The efficient and effective deployment of an organization's resources when they are needed. Such resources may include financial resources, inventory, human skills, production resources, or information technology (IT). 7.10

Rough Order of Magnitude (ROM): ROM estimates are made at the initiation of the project and can be +/- 50 percent from the actual or final cost. 7.7

Secure The Funding: It tells the stakeholders exactly how much is needed to complete project 7.12

Single Point Estimation: Estimate obtained from just one estimator. This can work well with experienced estimators and work packages that are straight forward. 7.7

Slack: Calculated time span during which an event has to occur within the logical and imposed constraints of the network, without affecting the total project duration. Or put more simply, slack, which is also called

float, is the amount of time that a task can be delayed without causing a delay to subsequent tasks or the project's overall completion date. 7.2

Three-Points Estimate: Instead of asking an estimator for just one estimate, a three-points estimate asks the estimator to provide three-time estimates for each activity. 7.7

Time-Constrained Resources: This would mean there is an imposed time frame for the project (the time cannot be changed.) 7.3

Vendor Bid Analysis: Sometimes you will need to work with an external contractor to get your project done. You might even have more than one contractor bid on the job. This tool is about evaluating those bids and choosing the one you will accept. 7.11

Work Breakdown Structure (WBS): Hierarchical outline of all the deliverables involved in completing a project. The WBS is part of a project scope statement. The creation of a WBS is one of the first steps in organizing and scheduling the work for a project. 7.5

Work Packages: These are action-oriented and will be represented by phrases containing verbs (see Figure 7-1:). 7.5

7.18. CHAPTER SUMMARY

Scheduling includes all the resources (people, materials, equipment). It all needs to come together at the right time and in the right place. Project Managers use two classifications for scheduling: Time-constrained resource: where there is an imposed time frame i.e. – a wedding; and Resource-constrained resource: where the people, equipment or materials may not be available when needed i.e. – a person is sick from work and cannot complete the tasks. When there are constraints, they cause delays, and in turn, cost money. Therefore, pushing up the costs or time to complete the project.

Work Breakdown Structures (WBS) outline the deliverables involved in the project. It is part of the scope statement. It is one of the first steps in organizing and scheduling. As the project is broken down into sub-deliverables, it becomes clearer what the tasks are for the project. The smallest breakdown is called the work package. They are small assignable units of work that are performed to create the deliverable. The work packages can be broken down further into activities. Activities are defined as tasks. Often, the WBS is coded (numbered). Each deliverable is assigned a number for ease in understanding, referencing, and filtering. This is often called the WBS Dictionary (or Activity List.)

Top-down estimations are at the macro level to calculate resources for the project. Bottom-up estimations are at the micro level and provide detailed information from the work packages. Gantt Charts are bar charts that illustrate a visual project schedule. They are easy to read and often used in scheduling activities. Network Diagrams are used to show a visual of the interrelationships of project activities. Resource estimating is used to assign resources to each activity in the activity list, regardless of which process is used.

Human Resources can play an important role in supporting, with expertise in

scheduling. They can help with enhancing the team's ability to contribute to the project, while fostering individual growth and accomplishment. They can also provide training in project planning and scheduling processes. Scheduling is reflecting in performance, and Human Resources can monitor progress on the schedules by aligning it with the Performance Plans.

Budgets for projects are important. It is important to know and complete budgets that include direct costs, indirect costs, overhead costs, and general administrative costs, and is dependent on the contract type (fixed or cost-plus). Project Managers use various tools for estimating that include cost rates, vendor bid analysis, reserve analysis and cost of quality.

A project budget is a combination of all the activities' milestones and tasks in the project plan, and the costs that project must accomplish. Simply stated, it is the money needed to complete the project. Creating a budget consists of breaking the project into small tasks, estimating each task, adding the estimates together, adding in contingencies/taxes/other costs; and seeking approval. Contingency funds are often used for unanticipated costs. Once approved, a budget needs to manage and monitored by regularly comparing the amount spent and reporting budget progress.

7.19. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed by the Students on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used by the Teachers as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. Work with a **small group**. Design a Work Breakdown Structure to bake pizza.
2. In a **small group**, each person thinks about and identify an example (in your own life) of a time when you were dealing with a 1. Time-constraint 2. Resource-constraint . Share the examples with the group.
3. Form a **small group**. (Activity 3,4,5 can be used separately or as a 3-part activity) Design a budget for a trip with a total cost of $5000.00 for you and one other person. Include direct costs, indirect costs, overhead costs, and administrative costs. Continue with Activity 4.
4. Open an excel sheet. Design a Gantt Chart for the trip you costed out with another person for $5000.00. What did you learn from completing this activity? Continue with Activity 5.
5. Design a Work Breakdown Structure for your trip with another person. Use sub-deliverables to Level 3.

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. Define a Gantt Chart. What makes them valuable to the Project Manager?
2. What is the difference between time-constrained resources and resource-constrained?
3. List the benefits of scheduling people, materials, and equipment?
4. What is the benefit of using a Work Breakdown Structure in project planning?
5. What is the rationale for the use of coding in Work Breakdown Structures?
6. What is the difference between a deliverable and a work package?
7. Give an example of a project you might use for top-down estimating. Give an example of a project you might use for bottom-up estimating. Which approach would you use for projects? Explain.
8. What are some examples where Human Resources could be involved in scheduling? Do you think it is a good idea for Human Resources to be involved in scheduling? Why? Why not?
9. Why is it important for costs to be monitored and maintained in a project?
10. Is it realistic to estimate costs in the early stages of the project planning? Why? Why not?
11. List the 5 steps of a simple budget.
12. Do you believe companies should utilize contingency funds? Explain your answer.
13. Work in a **group of 3.** Design a Work Breakdown Structure to build a bicycle. First, identify all the major components (3 levels.) Then, build the WBS (pencil/paper or in an excel sheet).
14. Gantt Charts are a reliable and simple recording mechanism to show progress on a project. Work in a **small group**. In what type of Human Resources' projects would you need a Gantt Chart? What would the benefits be to using the Gantt Chart?

CHAPTER 8 – ROLE OF COMMUNICATION

Chapter Outline

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8.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you should be able to:

1. Identify types of communications.
2. Recognize the importance of the level of detail in communication for project success.
3. Describe the important role of virtual teams in today's work world.
4. Discuss the special challenges of virtual teams.
5. Discuss the role of communication in building trust, and describe behaviour that help build trust.
6. Prepare a communication plan matrix
7. Examine Poole's Model of small group communication.

8.2. ROLE OF COMMUNICATION IN PM

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Communication Management

Communication management is about keeping everybody in the loop. The communications planning process defines the types of information you will deliver, who will receive it, the format for communicating it, and the timing of its release and distribution. A great deal of a project manager's job is spent on communication, so it's important to make sure everybody gets the right message at the right time.

The first step in defining your communication plan is figuring out what kind of communication your stakeholders need from the project so they can make good decisions. This is called the **communications requirements analysis.** Your project will produce a lot of information. You do not want to overwhelm your stakeholders with all of it. Your job is to figure out what they feel is valuable. Furthermore, communicating valuable information doesn't mean you always paint a rosy picture.

Communications to stakeholders may consist of either good news or bad news. The point is that you don't want to bury stakeholders in too much information but you do want to give them enough so that they're informed and can make appropriate decisions.

Communication Methods

Communications technology has a major impact on how you keep people in the loop. Methods of communicating can take many forms, such as written reports, conversations, emails, formal status reports, meetings, online databases, online schedules, and project websites. You should consider several factors before deciding what methods you'll choose to transfer information. The timing of the information exchange or need for updates is the first factor. Do you need to procure new technology or systems, or are there systems already in place that will work? The technologies available to you should figure into your plan of how you will keep everyone notified of project status and issues. Staff experience with the technology is another factor. Are the project team members and stakeholders experienced at using this technology, or will you need to train them?

Finally, consider the duration of the project and the project environment. Will the technology you're choosing work throughout the life of the project or will it have to be upgraded or updated at some point? And how does the project team function? Are they located together or spread out across several campuses or locations? The answers to these questions should be documented in the communication plan.

All projects require a sound communication plan, but not all projects will have the same types of communication or the same methods for distributing the information. The communication plan documents the types of information needs the stakeholders to have, when the information should be distributed, and how the information will be delivered.

Types of Information Communicated

The types of information you will communicate typically include project status, project scope statements and updates, project baseline information, risks, action items, performance measures, project acceptance, and so on. It's important that the information needs of the stakeholders be determined as early in the planning phase of the project management life cycle as possible so that as you and your team develop project planning documents, you already know who should receive copies of them and how they should be delivered.

🔍 HR in Focus: Human Resources and Communication

For Human Resources Specialists communication is a two-way process to disseminate information, plans, problems, and solutions. When communication is flowing freely and clearly, the project team has a clear understanding of the project goals, outcomes, and tasks. Human Resources may be involved as part

of the team and facilitate good communication styles, protocols and skill development through communication training.

Some considerations that Human Resources may discuss with team members are planning ahead what needs to be said (write it down), deliver the message about the facts (not feelings), send the message and be specific, send messages in a timely manner, be direct, and above all, learn to listen to others.

Human Resources may offer workshops to the Project Manager and team to develop relationships at the beginning of the project that might include:

- Social cues and body language
- Active listening
- Conflict Resolution
- Personality Assessments and how it relates to communication
- Challenges of effective communication
- Etiquette in the workplace
- How to avoid roadblocks to effective communication
- Avoid jargon and prejudices and bias

Human Resources can play a critical role in a project's team by improving innovation, trust between members, improving the performance of the team, and building a culture of teamwork.

8.3. TYPES OF COMMUNICATION

Team Communication

Completing a complex project successfully requires good communication among team members. If those team members work in the same building, they can arrange regular meetings, simply stop by each other's office space to get a quick answer, or even discuss a project informally at other office functions. Many projects are performed by teams that interact primarily through electronic communication and are, therefore, called virtual teams. To avoid miscommunication that can harm trust and to include team members in a project culture, the project team needs a plan for communicating reliably and in a timely manner. This planning begins with understanding two major categories of communication.

Synchronous Communications

When all parties are taking part in the communication exchange at the same time, the communication is synchronous. A telephone or Zoom conference call is an example of synchronous communication.

The following are examples of synchronous communications:

- **Live meeting:** Gathering of team members at the same location.
- **Conference call:** A telephone call in which several people participate.
- **Audio conference:** Like a conference call, but conducted online using software like Zoom or Microsoft Teams.
- **Computer-assisted conference:** Audio conference with a connection between computers that can display a document or spreadsheet that can be edited by both parties.
- **Video conference**: Similar to an audio conference but with live video of the participants. Some laptop computers have built-in cameras to facilitate video conferencing.
- **IM (instant messaging):** Exchange of text or voice messages using

pop-up windows on the participants' computer screens.
- **Texting:** Exchange of text messages between mobile phones, pagers, or personal digital assistants (PDAs)—devices that hold a calendar, a contact list, a task list, and other support programs.

Modern communication technologies make it possible to assemble project teams from anywhere in the world. Most people work during daylight hours, which can make synchronous meetings difficult if the participants are in different time zones. However, it can be an advantage in some circumstances; for example, if something must be done by the start of business tomorrow, team members in Asia can work on the problem during their normal work hours while team members in North America get some sleep.

Asynchronous Communications

Getting a team together at the same time can be a challenge—especially if they are spread out across time zones. Many types of communication do not require that the parties are present at the same time. This type of communication is asynchronous.

There following are several methods of asynchronous communications:

- **Mail and Package Delivery**
- **Fax**
- **Email**
- **Project Blog:** A blog is an online journal that can be private, shared by invitation, or made available to the world. Some project managers keep a journal in which they summarize the day's challenges and triumphs and the decisions they made. They return to this journal at a later date to review their decision-making process after the results of those decisions are known to see if they can learn from their mistakes. Many decisions in project management are made with incomplete knowledge; therefore, and reflecting on previous decisions to develop

this decision-making skill is important to growth as a project manager.

8.4. WRITTEN COMMUNICATION: REQUESTS FOR PROPOSALS AND PROPOSALS

Requests for Proposals and Proposals

As a project manager, you might be responsible for writing **Requests for Proposals (RFPs)** for your organization's projects, or proposals in response to RFPs publicized by other organizations. You might also be responsible for drafting parts of a contract such as language describing the scope of work. At the very least, you will need to be conversant enough with contract terminology so that you can ensure that a contract proposed by your organization's legal department adequately translates the project requirements into legal obligations. Whatever form they take, to be useful, RFPs, proposals, and contracts must be specific enough to define expectations for the project, yet flexible enough to allow for the inevitable learning that occurs as the project unfolds in the uncertain, living order of the modern world. All three types of documents are forms of communication that express a shared understanding of project success, with the level of detail increasing from the RFP stage to the contract.

How To Write a Request for Proposal:

1. Explain the project (scope) and the needs and opportunities of the project
2. Write an introduction to the RFP
3. Define the Mission, Vision, Values of the company, supply a brief history of the organization
4. Define the requirements of the project
5. Discuss how the potential contractor is to respond to the request
6. Explain how the organization will go about selecting the winning candidate
7. Outline the timelines of the project

8. Edit and revise as necessary

Throughout the proposal and contract stages, it's essential to be clear about your *specific expectations* regarding:

- Deliverables
- Schedule
- Expected level of expertise
- Price
- Expected quality
- Capacity
- Expected length of relationship (short- or long-term)

Take care to spell out:

- Performance requirements
- Basis for payment
- Process for approving and pricing changes to the project plan
- Requirements for monitoring and reporting on the project's health

How to Write a Proposal

At minimum, a proposal should include:

Table of Contents:	Organized well for easy flow and easy access.
Executive Summary:	A brief summary of the project Who? What? When? Where? Why? Costs?
Business Objective:	The result that the proposal wishes to achieve, and/or the organization through the project
Business Need/ Opportunity:	What opportunities are there for the company? Why are you completing this project?
Product Description:	Describe the product/service that will be produced or completed
Scope:	At the proposal stage, assume you can only define about 80% of the scope. As you proceed through the project, you'll learn more about it and be better able to define the last 20%.
Schedule:	You don't necessarily need to commit to a specific number of days at the proposal stage, but you should convey a general understanding of the overall commitment, and whether the schedule is mission-critical. In many projects, the schedule can turn out to be somewhat arbitrary, or at least allow for more variability than you might be led to believe at first. You may use a Gantt Chart as a visual display of the scheduling; or a Network Diagram. The Gantt Chart would be a result of developing a Work Breakdown Structure first. Milestones would be included as well to show end dates of events.
Risk Management Plan:	To build confidence that if a risk event happens, you are well prepared to deal with it through a contingency plan.
Deliverables:	Make it clear that you have some sense of what you are committing to, but only provide as many details as necessary.
Cost/Resources/ Budget:	Again, make clear that you understand the general picture, and provide only as many specifics as are helpful at the proposal stage. This builds confidence in the approval process.
Terms:	Every proposal needs a set of payment terms, so it's clear when payments are due. Unless you include "net 30" or "net 60" to a proposal, you could find yourself in a situation in which customers refuse to part with their cash until the project is complete.
Clarifications and Exclusions:	No proposal is perfect, so every proposal needs something that speaks to the specific uncertainty associated with that particular proposal. Take care to write this part of a proposal in a customer-friendly way and avoid predatory clarifications and exclusions. For example, you might include something like this: "We've done our best to write a complete proposal, but we have incomplete knowledge of the project at this point. We anticipate working together to clarify the following issues"—and then conclude with a list of issues.
Roles and Responsibilities:	Define and explain the roles of team members and Project Manager. Outline briefly each role with a short job description.
Authorization:	Ensure there is a place for the Project Sponsor to sign with name and title for approval.

If you are on the receiving end of a proposal, remember a potential supplier probably has far more experience than you do in its particular line of business. Keep the lines of communication open and engage with suppliers to use their expertise to help refine deliverables and other project details.

Assessing New Communication Technologies

New technologies for communicating electronically appear with increasing frequency. Using a new technology that is unfamiliar to the team increases the technical complexity, which can cause delays and increase costs. To decide if a new technology should be included in a communications plan, seek answers to the following questions:

- Does the new communication technology provide a competitive advantage for the project by reducing cost, saving time, or preventing mistakes?
- Does the project team have the expertise to learn the new technology quickly?
- Does the company offer support such as a help desk and equipment service for new communication technology?
- What is the cost of training and implementation in terms of time as well as money?

Communication Plan Template

So how do you create a communication plan?

1. Identify your stakeholders (to whom).
2. Identify stakeholder expectations (why).
3. Identify communication necessary to satisfy stakeholder expectations and keep them informed (what).
4. Identify time-frame and/or frequency of communication messages (when).
5. Identify how the message will be communicated (the stakeholder's preferred method) (how).
6. Identify who will communication each message (who).
7. Document items – templates, formats, or documents the project must use for communicating.

Table: Simple Communication Matrix

Title	Scope Statement	Work Breakdown Structure	Budget	Quality	Change Management Procedures	Change Approvals
Project Chartering Committee	Y					
Client Representative	Y	Y	Y	Y	Y	Y
Project Manager	Y	Y	Y		Y	Y
Technology Team		Y		Y		
Finance Team			Y		Y	
Schedule Coordination Team		Y		Y	Y	

Adapted from "Simple Communication Matrix" in Project Management for Instructional Designers by Wiley, et al. is licensed under CC BY-NC-SA 4.0

🔍 HR in Focus: Human Resources and RFP and Proposals

Human Resources Specialists may collaborate with Project Managers and other stakeholders prior to writing RFP and Proposals. If a background in writing, HR Specialist can share ideas and steps in writing. They would first work with or discuss the content of the RFP or Proposal to understand the content, vision, need and outcomes. HR may offer a workshop to facilitate the writing of the RFP or Proposal for the stakeholders to hone their understanding of the project, and be able to clearly communicate the worthiness of the RFP or Proposal. HR may polish the proposal by incorporating the content required, adding mission, vision and values of the organization, adding cover pages and

logo, use colour, and check for grammar and spelling. Format and readability are important to a professional RFP or proposal.

As well, HR may offer courses to Project Managers on writing a RFP or Proposals. They could teach Project Managers how to align their outcomes with the client's motivation for the project, provide tools and resources on writing, brainstorm for ideas about projects, and write a RFP or Proposal that is competitive.

8.5. IN-DEPTH LOOK: POOLE'S MODEL OF SMALL GROUP COMMUNICATION

In-depth Look

Marshall Scott Poole is a senior research scientist and professor of communication and director of I-CHASS at the University of Illinois. Poole was researching for his dissertation attempting to discover when small groups follow the single-sequence model. He studied many groups, highlighting important decision making. He discovered that very few of these groups made use of the the single-sequence models. From this research, he compiled information following Poole's Model of Small Group Communication.

Small Group Communication

Employees experience a sense of belonging in the organization when they feel valued and that they actively contribute to decisions that influence the business (Chron Contributor, 2021). Ideally, these small groups of individuals have a variety of strengths, job functions, and knowledge. Being an active member in a small group also encourages responsibility and accountability, as each member will have an important role when working on projects. It gives employees a chance to showcase their areas of expertise, improving confidence and enhancing feelings of self-efficacy (Chron Contributor, 2021). Within organizations, there are often unintentional barriers between different departments, levels of management, or according to job duties. Encouraging the creation of small groups between and among peers helps teams encourage an environment of cohesiveness, teamwork, and allows employees to form long-lasting friendships. Working with others stimulates employees, motivates them to apply their knowledge and skills, and can even create career advancement.

Poole's Model of Small Group Communication

Poole's Model consists of various activity tracks. These tracks do not need to occur in a logical sequence. They may overlap, or start-and-stop, and are used for interpreting the communication style that a group uses. The following are different activity tracks that are used by groups:

- **Task track:** This is the initial stage. It is an understanding period, where the group sets goals and tries to

figure out its procedure (Communication Theory, n.d.). Poole suggests that task factors (e.g., the novelty of the problem) influence what path the group takes to reach a decision, the number of steps it takes to reach this decision, and the complexity of the decision making process (Beck et al., 2021). Some groups may be extremely task focused and not pay much attention to building personal relationships and trust (Beebe & Masterson, 2016).

- **Relation track:** This is an interpersonal relation between members of the group. In this track the group members pause and focus on the decision-making. They interact and relax as friends, and maybe share stories. Some social factors (e.g., cohesiveness) influence how group members interact with each other and how much conflict they experience when working through the decision-making process (Beck et al., 2021). Some groups may take a lengthy amount of time building a relationship with each other before committing to decision-making or discussing their tasks (Beebe & Masterson, 2016). In this activity track there may be relational issues, such as the following:

    1. Work-focused relationships.
    2. Conflict relationships (opposing ideas and conflict resolution techniques).
    3. Integration issues.
    4. Ambiguity issues (Harris & Nelson, 2018).

- **Topic track:** This track focuses on issues regarding group communication. It can be argumentative or cooperative. It also refers to the specifics the group is discussing at a specific time.
- **Break points:** These are group shifts through tracks during conversations which are turning points and help the group reach a consensus. When a breakpoint occurs, groups must accommodate them and turn their focus to getting back on track. Breakpoints can be in the form of delays. When recycling through the same issues the group decides they need to reevaluate or repeat part of the task, or disruptions, where conflicts or group failures may stop or pause work altogether and postpone the discussion to a later date. Normal breakpoints do not interrupt the ability to decide or impede the task at hand. Meetings may be adjourned, the topic may shift during discussion, or the focus may be on another aspect of the task, or it could be a coffee break (Harris & Nelson, 2018).

Principles

The basis of Poole's research is focused on explaining development and change in organizations (Harris & Nelson, 2018). A large facilitator of organizational change is effective communication that flows amongst employees at all levels. Poole derived his theory from the traditional phase models and gives credit to these approaches, but says it is only one option in the larger sequence of how decisions can be made, and groups can develop (Harris & Nelson, 2018).

This theory seeks to explain that not all small groups communicate and reach decisions in the same way. What works for one small group, may not work for another. It is important that management and individuals

in supervisory roles understand this when directing their employees. They may follow different sequences and methods during deliberation. Poole believes that decision-making is too complex to be explained by a single-sequence of phases or specific chain of events. Groups can be in communication for the purpose of completing a task or deciding. However, they may also be performing other functions that add value to the discussion and overall success of the team.

Poole believes his theory is adaptive rather than linear and helps us understand why certain groups deviate from traditional phases such as Fisher's model of small-group communication (Harris & Nelson, 2018). While most draw from Tuckman's model of linear group development, Tubbs and Fisher offer different models. In Tubb's model, there is an emphasis on conflict and groupthink. Whereas in Fisher's model is made on group decision-making. Poole's theory is derived from this basis but believes the process is much more complex (Polites, 2021). He explains that groups may at times follow conventional rules when in deliberation, but effective communication and decision-making does not need to be clear cut in every situation.

Human Resources and Project Management

How does Poole's model help us understand small-group communication more effectively? By providing a descriptive approach to group communication, Poole helps Human Resources and Project Managers to realize why certain types of statements are made by team members and how the team develops together over time. Exercising use of his model can help Human Resources and Project Managers become better evaluators of communication styles and approaches. As well, the team itself can better evaluate when performing tasks in a small group setting, allowing for improvement in how they participate now and in the future.

Understanding how groups communicate and reach decisions can be helpful to Human Resources and Project Managers. A group that has been assigned a task, deadline, training modules, etc. must effectively utilize good forms of communication and deliberation skills in to contribute to the teams' success. When groups come to conclusions efficiently, it helps the project keep pace according to the timeline they created.

Poole's theory explains that when attempting to reach decisions, groups are also focusing on building their relationship and improving their bond with one another (Harris & Nelson, 2018). The more cohesive a team becomes, the better success they will have in future projects and assignments. From a Human Resources perspective, management wants their employees to work together as a team effectively, with all members utilizing their strengths and contributing ideas. Poole's theory supports this desire and clarifies the importance of allowing for deviance from the task at hand, as this is the time when relationships strengthen, and group members get to know each other as individuals (Harris & Nelson, 2018). Understanding and applying the methods that Poole's theory explains can help identify when groups are being successful in their communication efforts and make changes when collaboration is not going accordingly.

Poole was not the first to come up with a communication theory. There were several people before him. Some of the models were more basic and have evolved over time. Shannon-Weaver was the first to come up with a communication theory back in 1948. Her theory was linear in nature and had 4 different steps:

1. The sender encodes a message and chooses a communication channel.
2. The encoder, a part of the channel, converts the code into signals.
3. The decoder takes those signals and translates them into a message for the receiver.
4. The receiver gets the message and interprets it (as cited in Novak, 2019).

Lasswell's communication theory came out shortly after and was also linear, but studied mass communication versus the smaller group or 2-person communication theory of Shannon-Weaver. Then in 1960, Berrie developed a theory similar to Shannon-Weaver, but evolved it slightly to consider things that can happen during the communication between the sender and the receiver. Nearly 10 years later came Barnium's Communication model in 1970. Barnum was the first one to deviate from the linear model and use a circular model. According to Novak (2019), "it is a never-ending cycle between sender and receiver where their roles switch depending on who is speaking." Then there is the Schramm Communication model which is different from the others. In this model nobody is labeled the sender and receiver as it focuses more on the message and less on who is sending and who is receiving the message.

Since these communications models were created, communication has changed drastically. No longer is it just individuals speaking to each other either in person or over the phone. We now consider communication in written form such as emails and text messages and social media as this can be the form of communication that happens much more frequently than in-person communication. In fact, Aydinyan (2018) found that text messaging was used by 89% of survey respondents for daily communication.

Strengths

1. Poole's model of small group communication allows for variance when it comes to communicating, deliberating, and reaching decisions in the workplace. His theory supports differences when it comes to the types of communication utilized, the phases that occur when working towards a goal, and how conflict is resolved by the group members.
2. Poole's theory is adaptive in that group members can affect the outcomes based on how they communicate or how they react. The group members will change things to make it work for them and what they are trying to accomplish. Poole's theory understood this, and it was part of his theory that this would happen.
3. Since Poole's theory is much more free-flowing, it can adapt to various groups and group dynamics.

Limitations

Poole's Model of small-group communication has limitations. First, some people found it was confusing. For the most part, up until Poole's Model, Communication was looked at as a linear process. While Poole was not

the first to not use a linear approach, he was one of the firsts. Also in his model, there were many moving parts. In total there are 36 clusters which can make it difficult to follow.

The second limitation is that not everyone followed the same path. It was up to the group to determine which step was followed; and therefore, which cluster group or cluster set was used. This could be confusing. Leaving it up to the group to determine may lead to different results if they map it out.

Regardless of the challenges, Poole's model of small group communication has been around since the 1980's, and is useful for Human Resources professionals, Project Managers, and groups. It explains how important it is for groups to get along and communicate as friends to have the most effective communication style. This is important to understand how staff members/employees communicate effectively and help to create a better working environment. The more cohesive a team is the better they will be in communicating. This leads to success in their tasks and projects. Poole's model allows for variance when it comes to communicating in the workplace and for how decisions are reached. It recognizes that all groups are different and may not follow the same path. Poole's model can be adapted to each unique group for ultimate success.

Class of 2022 contribution: Andreanna Whitty, Cassandra Lytle, Eryn Kell

8.6. COMMUNICATION WITH VIRTUAL TEAMS
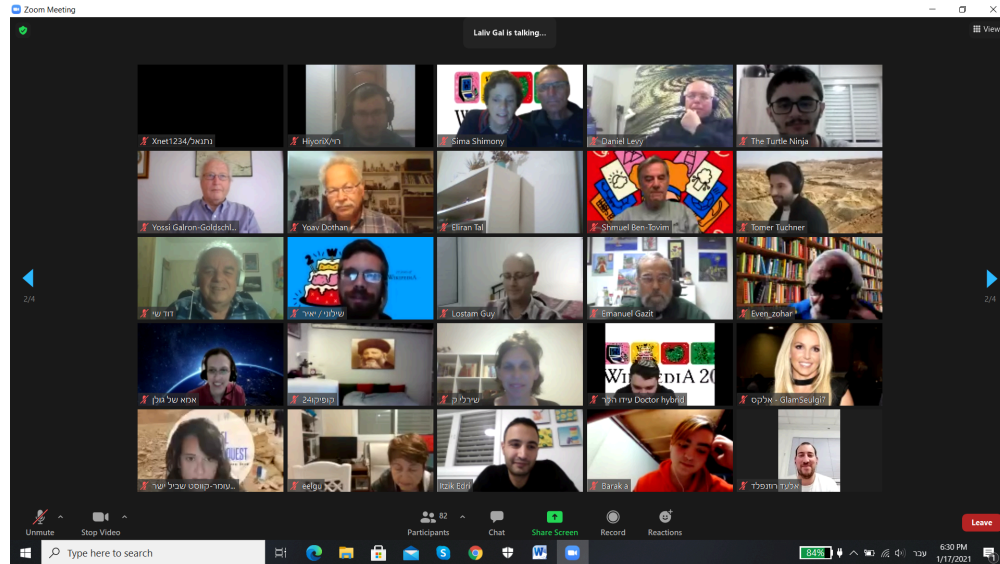
Wikipedia Birthday Celebration by Deror Avi via Wikimedia Commons CC BY-SA 4.0,

Managing Virtual Teams

Managing a team of people who work side-by-side in the same office is difficult enough. But what about managing a virtual team—that is, a team whose members are dispersed at multiple geographical locations? In the worldwide marketplace, such teams are essential. Deborah L. Duarte and Nancy Tennant Snyder explain the trend in their helpful workbook, Mastering Virtual Teams:

> Understanding how to work in or lead a virtual team is now a fundamental requirement for people in many organizations.... The fact is that leading a virtual team is not like leading a traditional team. People who lead and work on virtual teams need to have special skills, including an understanding of human dynamics and performance without the benefit of normal social cues, knowledge of how to manage across functional areas and national cultures, skill in managing their careers and others without the benefit of face-to-face interactions, and the ability to use leverage and electronic communication technology as their primary means of communicating and collaborating (Duarte & Tennant Snyder, 2006, p. 4).

When properly managed, collaboration over large distances can generate serious advantages. For one thing, the diversity of team members as per Siebdrat et al. (2009) "exposes members to heterogeneous sources of work experience, feedback, and networking opportunities." At the same time, the team's diversity enhances the "overall problem-solving capacity of the group by bringing more vantage points to bear on a particular project" (Siebdrat et al., 2009, p. 65). Often, engaging with stakeholders via email allows for more intimacy and understanding than face-to-face conversations, which, depending on the personality types involved, can sometimes be awkward or ineffective.

However, research has underscored the difficulties in getting a dispersed team to work effectively. A study of 70 virtual teams found that 82% did not meet their intended goals (Govindarajan & Gupta, 2001). Furthermore, research has shown that virtual team members are not satisfied with the virtual communication technology and do not view it "as an adequate substitute for face-to-face communication" (Purvanova, 2014).

Given these challenges, what's a virtual team manager to do? It helps to be realistic about the barriers to collaboration that arise when your team is scattered around the office park or around the globe.

The Challenges of Virtual Distance

Physical distance—the actual space between team members—can impose all sorts of difficulties. Some studies have shown that teams who are located in the same space, where members can build personal, collaborative relationships with one another, are usually more effective than teams that are dispersed across multiple geographical locations.

> Potential issues include difficulties in communication and coordination, reduced trust, and an increased inability to establish a common ground.... Distance also brings with it other issues, such as team members having to negotiate multiple time zones and requiring them to reorganize their work days to accommodate others' schedules. In such situations, frustration and confusion can ensue, especially if coworkers are regularly unavailable for discussion or clarification of task-related issues (Siebdrat, et. al., 2009, p. 64).

Even dispersing teams on multiple floors of the same building can decrease the team's overall effectiveness, in part because team members "underestimate the barriers to collaboration deriving from, for instance, having to climb a flight of stairs to meet a teammate face-to-face." Team members end up behaving as if they were scattered across the globe. As one team leader at a software company noted, teams spread out within the same building tend to "use electronic communication technologies such as e-mail, telephone, and voicemail just as much as globally dispersed teams do" (Siebdrat, et. al., 2009, p. 64).

Human Resources may help the Project Manager and team work through the challenges by providing supports and resources to the team.

Efficiently Managing a Virtual Team

Communication options like video conferences, text messages, and email can do wonders to bridge the gap. But you do need to make sure your communication technology is working seamlessly.

Patterns of communication are important for Project Managers and the team. Example: communicating facts is fine in an email. If there are issues with a team member, better to have a virtual meeting. Conference calling, intranets services within organizations, private chat rooms through intranet, telephone, videoconferencing, and social media platforms provide effective means to communicate between and among Project Managers and teams, and the organization.

Conference calls:	when the team is working with mutual documents, presentations, charts, etc.
Videoconferencing:	when the team need to "see" each other. It helps to develop relationships.
Email:	when the Project Manager, team or stakeholders need to communicate facts about the project, or one-to-one communication.

How to Enrich Execution of a Project

Develop a code of conduct: Have the team and Project Manager agree to what information needs share, when, and to whom it needs to be addressed. Establish authority rules as to who can make day-to-day decisions about their work and related to what activities, and what needs approval before moving forward.

Develop norms: Project Managers and team members cannot always see each other. They need to delve into the communication and ask many questions, and deepen the conversations. It is important to be clear, concise and countercheck that everyone understands instructions and other communication.

Get team to show their work: Do not rely on what is being said that is done. Ask for proof. Send a sample, send a picture, or have a video call.

Be flexible: Time zones differences and cultural differences can cause issues related to "showing up" for meetings. Be flexible with timing. Flex the time of meetings to meet other team member's time zones.

Stay in touch: Ensure the Project Manager, team members and stakeholders are in regular communication through standard scheduling that is inclusive.

HR in Focus

Human Resources Specialists can provide training for the Project Manager and team in how to effectively self-manage, set up an efficient communication plan, and offer ongoing support by participating in meetings. If there are difficulties with communication, Human Resources may wish to be a "sounding board", provide guidance and support to individual members, or the team as a whole. If struggles persists, Human Resources may offer external counselling services to help individuals.

The Special Role of Trust on a Virtual Team

As we discussed in Chapter 4: Managing Teams trust is important to teams, and plays a significant role in communication. So, what's the secret to making virtual teams work for you? We've already discussed the importance of building trust on any team. But on virtual teams, building trust is a special concern. Erin Meyer describes the situation like this: "Trust takes on a whole new meaning in virtual teams. When you meet your workmates by the water cooler or photocopier every day, you know instinctively who you can and cannot trust. In a geographically distributed team, trust is measured almost exclusively in terms of reliability" (Meyer, 2010).

All sorts of problems can erode a sense of reliability on a virtual team, but most of them come down to a failure to communicate. Sometimes the problem is an actual, technical inability to communicate (for example, because of unreliable cell phone service at a remote factory); sometimes the problem is related to scheduling (for example, a manager in Japan being forced to hold phone meetings at midnight with colleagues in North America); and sometimes the problem is simply a failure to understand a message once it is received. Whatever the cause, communication failures have a way of eroding trust among team members as they begin to see each other as unreliable.

And as illustrated in Figure 8-1, communicating clearly will lead your team members to perceive you as a reliable person, which will then encourage them to trust you.
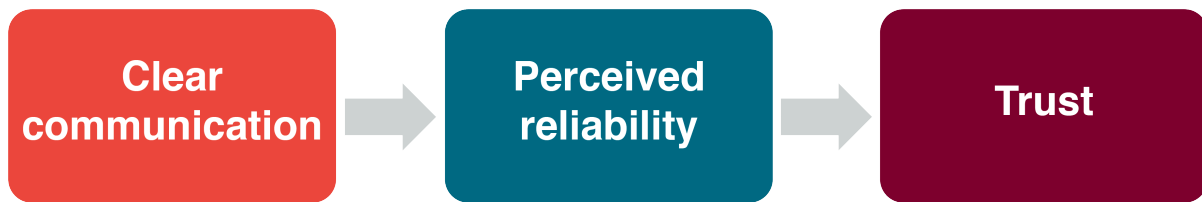
Figure 8-1: The benefits of clear communication

Leigh Thompson (2015), a professor at Northwestern University's Kellogg School of Management, offers a number of practical suggestions for improving virtual team work, including the following:

- Verify that your communication technology works reliably, and that team members know how to use it.
- Take a few minutes before each virtual meeting to share some personal news, so that team members can get to know each other.
- Use video conferencing whenever possible, so everyone can see each other. The video image can go a long way toward humanizing your counterparts in distant locales. If video conferencing is not an option, try at least to keep a picture of the person you're talking to visible, perhaps on your computer. Studies have shown that even a thumbnail image can vastly improve your ability to reach an agreement with a remote team member.

8.7. IN-DEPTH LOOK: RECENT RESEARCH ON DEVELOPING VIRTUAL TEAMS

In-depth Look

Research related to virtual teams and how they communicate has been slowly evolving over the past 20 years. Researchers have attempted to study how communication is affected using virtual teams, yet no theories have been fully formed and presented to the academic world. During the COVID-19 pandemic, the use of virtual teams increased exponentially as many organizations made the shift from in-person work to a work-at-home model. As the world exits the pandemic, research around virtual team communication will begin to trickle out of academic institutions. We may finally have a tried-and-true theory behind virtual team communication. Below, is some of the research that has been completed on the topic of virtual teams and what makes them effective.

A Model to Develop Effective Virtual Teams

In 2008, Lin, Standing and Liu released a literature review on virtual teams in the hopes of developing a model for studying effective virtual teams. At the time of writing, virtual communication technology is still evolving. In their review, they found that, in the absence of face-to-face communication, even the most basic of communication has profound effects on the performance of the team (Lin & Liu, 2008). However, the effectiveness of communication increased significantly when teams incorporated video communication over the use of audio only or text (Lin et al., 2008). Further, without having pre-existing relationships amongst the team, the nuances of communication can be lost in transmission. This was also found to be solved when teams used video over just text or email communication. In addition to communication, (Lin et al., 2008) also found that coordination, relationship building, and cohesion were key components in assessing how effective a virtual team performed. Through their research, they determined that communication was the starting point for an effective virtual team and formulated an integrated model of virtual team effectiveness. Lin, Standing and Liu's research has set the stage for recognizing communication's role in virtual teams.

Strategies for Building Effective Virtual Teams: Trust Is Key

In their 2017 article on strategies for building effective virtual teams, Ford & Ford examined what has been

found to be effective by organizations and other researchers. When developing virtual teams, trust within the team should be a main consideration as studies have shown that when members have trust within one another they are more proactive, focused, optimistic, and provide effective feedback.

Trust within this article is defined as an expectation that the other party will perform the required action, without having to be monitored or controlled to do so (Ford & Ford, 2017). This means that first impressions are very important since they can signal trust or distrust, even in the form of minor cues such as replying to questions. The authors divide strategies for building trust into three categories: the organization, the leader, and the team.

For teams, trust is created through acts that show members are reliable, dependable, agreeable, conscientious, and eager to work with others (Ford & Ford, 2017). For virtual teams, it is especially important for all members to trust that other members want to be on the team and there are no freeloaders, otherwise the whole team can fall apart. Virtual teams are not going away. It is important for organizations to use the best strategies to ensure effective teamwork and based on this study – building trust is a key strategy!

A Conceptual Framework of Virtual Team Effectiveness from the Socio-Technical Perspective

While many studies have explored the definition of virtual teams, there is a lack of research indicating what describes an effective virtual team. Huynh and Nguyen (2018) define an effective virtual team as one that is geographically dispersed, shares a common purpose, utilizes communication technology, collaborates, and works with similar communication methods. The main purpose of this study is to propose a conceptual framework on how to study the effectiveness of virtual teams using socio-technical system (STS) and the Input-Mediators-Outputs-Inputs model Input (IMOI). The IMOI model outlines inputs, mediators and outputs. Inputs represent the organizational, team and individual criteria that form the composition of the team while mediators signify factors that can affect the direction of team success. Outputs can be described as the process of converting team inputs into organizationally valued outcomes. The STS framework states that an organization encompasses both technical and social elements but is also affected by environmental factors. The study proposed that the STS was the preferred perspective when developing a conceptual framework to study virtual team effectiveness.

Thus, with the help of the IMOI model, researchers included five components within the suggested framework including technological readiness, intent to learn, transactive memory system (TMS) and team performance. TMS refers to the reduction in knowledge gaps through information exchanged by employees. Huynh & Nguyen (2018) suggest that the factors included within their framework are multi-relational and can be used to study a variety of virtual team situations. Future recommendations include conducting further research to examine additional social and technical factors that affect virtual team effectiveness.

Adding Knowledge to Virtual Team in the New Normal: From

Leader-Team Communication towards the Satisfaction with Teamwork

The COVID pandemic caused many, if not all, businesses to adapt in accordance with the local health unit bylaws. This caused a major shift from the once generally in-person atmospheres and roles to a much more virtual workplace environment. There was a sudden need for solely interactively based communication strategies, and there was a lapse in employee morale in the process (Vatamanescu et al., 2022).

As time has progressed, companies have implemented the necessary technical and communicative plans as a means to account for this. While it has taken time, all parties have learned to adapt to these new form of operations. This was based on providing employees with the necessary tools to work from home, an increase in communicative strategies, and, where necessary, the introduction of new technology to the meet the company's needs (Vatamanescu et al., 2022).

The downfall of the recent change in events – the loosening of COVID restrictions, has resulted in the transition of employees resuming their role back at the workplace versus at home. Many individuals have grown accustomed to their current work situation and have an unwillingness to return. This has indicated a strong need for a focus on the organizational culture within the workplace environment. In order for the company to progress and continue its level of productivity, the company must also consider the current culture and examine whether there is a need for improvement and training – as the company is unlikely to be successful otherwise (Vatamanescu et al., 2022).

The moral of virtual communication, at this point in 2022, to have harmony in the workplace, communication an extremely important factor. However, the organizational culture must also be strong. Changes and adaptation need to be made. The research has indicated a strong need for companies to ensure that their employees have established an understanding of the current resources in place to ensure their success in their role through open communication amongst their fellow peers and superiors to continue building on virtual communication and teams. Communication is key – companies need to maintain a strong focus on the ways they choose to relay information to their employees, and while also observing the manner in which the employees are engaging amongst themselves, regardless of whether it is in-office or in a virtual setting.

Class of 2022 contribution: Jennifer Scane, Bella Rozintseva, Naomi Nitzke, Julia Porter

8.8. ASK AN EXPERT — KATIE FOSTER

Ask An Expert

Katie Foster

Bio
Technology & People Ops Coordinator at Diply

Question 1: How would you describe your career story?

I have held several positions including some in the retail field, providing support in chat rooms for the gaming industry, IT, and now HR. I originally wanted to be in the animation industry, but her career path is never straight and narrow, and my pursuit led me here. All of my positions have been people focused in one way or another, which is very helpful in the field of HR.

Question 2: Who or what has had an impact on your career?

A restructuring at Diply led me from IT to HR. I owe the leaders and managers thanks, and they recognized my skills would be an asset in the HR department rooted they have given me the chance to learn and grow, and I know that sometimes it can be hard to break through an industry that is new to you.

Question 3: How has communication changed in the age of COVID?

One of the biggest changes is the transition from face-to-face communication to virtual communication like Google meetings and Zoom. In an office setting, it is easier to find someone and ask them to have a chat. Being virtual you can still do that, but you don't get the same kind of eye contact or response as you might otherwise.

Question 4: With work changing to hybrid and remote models, how can organizations maintain effective communication with their teams?

We actively use a company chat system to communicate better where we are working from. Our company as provided us with the choice of either working from home or a theory returning to the office. Most of the employees have chosen to continue working from. home as the environment is constantly changing, it's important to regularly check in and clearly communicate expectations.

Question 5: What qualities do effective communicators in todays workplaces possess?

Effective communicator should be able to efficiently get to the point of what they're trying to say. Knowledge of reading, writing, and grammar are also important. Communicator should also empathize with those around them. Another important thing to know is the right time to use a certain method of communication. You'll often hear the saying that the meeting could have been an email instead, some cases it's true. When you have had a meeting or chat with lots of information, sending a follow-up email with key information can help people remember the essential takeaways.

Question 6: How can you measure or assess communication skills?

When I look at interview candidates, I assess their skills by listening to how they answer questions and paying attention to how they interact with me in conversation. I also like to give them a scenario asked how they would handle it. For example, a recent question I've started to include is: what kind of information would you include in a pandemic policy update? If the answer is too short it only includes the bare minimum, it is clearly not effective. Similarly, if you don't want to be too wordy as employees are probably less likely to read it.

Question 7: With the remote model, what struggles have you faced when communicating with teams?

I have already touched on the fact that we don't get as much face-to-face communication as we used to. When we ask for place to respond to something sent the company Slack, you don't get answers from everyone. Sometimes the answers come in the form of symbols or emojis that can't tell us whether someone fully understood what they read. Also, not everyone has the same set up medical which can lead to technical difficulties and other challenges.

Question 8: What does the ideal future of HR look like related to communication between employees, and HR between the rest of the departments?

Some degree of remote work will exist the industries that allow it. In recent surveys conducted, our employees have expressed interest in personal work options and events. People during working from home, but still connecting in other ways. Many departments are using HRIS systems to help automate their processes. We are moving in the direction of less paper, but also more value on the written word.

Question 9: Any advice for those pursing HR related to communication styles? Skills needed?

Don't be afraid to show what you're capable of. Practice being succinct. It can be difficult for those who are already in the field too, at times. It's important to be an active listener, and to let employees know that you are here to help; and it's OK for them to ask for help as needed. When new opportunities arise take them!

8.10. KEY TERMS

Business Need/Opportunity: What opportunities are there for the company? Why are you completing this project? 8.4

Business Objective: The result that the proposal wishes to achieve, and/or the organization through the project. 8.4

Communications Management: This is about keeping everybody in the loop. The communications planning process concerns defining the types of information you will deliver, who will receive it, the format for communicating it, and the timing of its release and distribution. 8.2

Communications Requirements Analysis: The first step in defining your communication plan is figuring out what kind of communication your stakeholders need from the project so they can make good decisions. 8.2

Executive Summary: A brief summary of the project Who? What? When? Where? Why? Costs? 8.4

Product Description: Describe the product/service that will be produced or complete. 8.4

Scope: At the proposal stage, assume you can only define about 80% of the scope. As you proceed through the project, you'll learn more about it and be better able to define the last 20%. 8.4

8.11. CHAPTER SUMMARY

Communication Planning is about keeping everyone in the loop on the project. Communication can be in the form of written or verbal. Human Resources can support the project team through training in communication skills. There are various types of communication including team communication, synchronous communication, and asynchronous communication.

Requests for Proposals (RFP) is a written form of communication to request approval for a project. Human Resources may be responsible for designing the RFP, reviewing the RFP, and helping the organization decide on the best proposals to approve.

Communication Plans are important to who does what and when and how often! Virtual teams are popular today and require some different sets of skills through video conferences, text messages and email. Trust building is essential for virtual teams as they are not physically working in the same space. Project Managers need to ensure clear communication when working with virtual teams.

8.12. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed **by the Students** on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used **by the Teachers** as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. **Pair up** with a partner. Think about what type of communication you prefer (person to person or virtual). **Individually**, write down your reasons for your choice. Share them with your partner.
2. **Individually**, research the internet related to "communication as a two-way process." What did you discover? Share with the **larger group** in class.
3. Form a **small group**. Design a Communication Plan for a small project ($100,000.00.) The project is to complete a renovation in a friend's home. There are 5 members on the team, and a Project Manager. The project is 6 months in total duration. Think about all the stakeholders involved. Who will communicate with whom? When? How Often? About what?
4. Form a **small group**. You have been charged with the responsibility, as the Human Resources Manager, to develop an Onboarding Program for your company. You need to build a team. How many team members would you assemble? Who do you need to communicate with? How often? Develop a Communication Plan.
5. Form into **small groups**. Divide the groups into 2 sides. One side is "in favour of the statement" and the other side is "against the statement." Statement: "Virtual Communication has become mainstream in the last few years. It is better than face-to-face communication." Each group will research the advantages and disadvantages of each approach. Each

team will argue why their position is best. Each group is allowed a brief time to counter the argument. Each group will summarize their position (influenced to change given new information or position remains the same.)

6. In a **group**, work together to develop a communication plan for a virtual team. Virtual teams may be more popular post COVID19. If you were the Lead in a virtual team for your Human Resources department, and you had 10 Human Resources Specialists across Canada in 9 provinces, what would be your first steps in setting up the team? What would your expectations be of the team? How would you manage the ongoing work of the team?

7. Poole's Model of small group communication is popular. In a **small group**, each person researches the internet. Find other small group communication models. Review your findings with your group members. What are the similarities with each model you found on the internet, and Poole's Model? What are the differences?

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. Define Communications Management.
2. How can Human Resources support a project team with communication?
3. What is the difference between synchronous communication and asynchronous communication?
4. What are the steps involved in setting up a Request for Proposal?
5. What is Human Resources' role in Request for Proposals, if any?
6. What is the purpose of a code of conduct on a project?
7. What problems could occur on a project if the Project Manager has not gained the trust of the team members? How could the Project Manager

improve trust?
8. **Individually,** make a list of the benefits of a communication plan to management? Employees? External stakeholders?

CHAPTER 9 – PROJECT CLOSURE AND EVALUATION

Chapter Outline

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9.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you should be able to:

1. Discuss the importance of getting the fundamentals right and keeping them right throughout a project.
2. Explain the value of project reviews and audits.
3. Describe issues related to correcting course mid-project and decisions about terminating a project.
4. Discuss the project closure phase.
5. Recognize the importance of concluding a project with evaluations and lesson learned.
6. Describe 360-Degree Review and Management By Objectives as it relates to evaluation of projects.

9.2. REASONS FOR CLOSING PROJECTS

Terminating Projects

If an audit reveals the painful truth that it's time to terminate a project, then it's important to realize that this is not necessarily a bad thing:

> Canceling a project may seem like a failure, but for a project to be successful, it must provide value to all parties. The best value is to minimize the project's overall negative impact on all parties in terms of both time and money. If the only option is to proceed with a scaled-down project, one that delivers late, or one that costs significantly more, the result may be worse than canceling the project. It may be more prudent to invest the time and resources on an alternate endeavour or to reconstitute the project in the future using a different team and revised parameters (Williams, 2011).

Common Reasons for project Termination:

1. Low profitability and or lowered market potential
2. Competing projects become a higher priority
3. Severe delays to schedule
4. Change of market needs
5. Technical issues that can not be resolved
6. Increase in damaging cost
7. High uncertainty of technical success or commercial gain

When considering terminating a project, it's helpful to ask the following questions:

1. Has the project been made obsolete or less valuable by technical advances? For instance, this might be the case if you're developing a new cell phone and a competitor releases new technology that makes your product undesirable.

2. Given progress to date, updated costs to complete, and the expected value of the project's output, is continuation still cost-effective? Calculations about a project's cost-effectiveness can change over time. What's true at the beginning of the project may not be true a few months later. This is often the case with IT projects, where final costs are often higher than expected.

3. Is it time to integrate the project into regular operations? For example, an IT project that involves rolling out a new network system will typically be integrated into regular operations once network users have transitioned to the new system.

4. Are there better alternative uses for the funds, time, and personnel devoted to the project? As you learned in project selection, the key to successful portfolio management is using scarce resources wisely. This involves making hard choices about the relative benefits of individual projects. This might be an especially important concern in the case of a merger, when an organization has to evaluate competing projects and determine which best serve the organization's larger goals.

5. Has a strategic inflection point, caused by a change in the market or regulatory requirements, altered the need for the project's output?

6. Does anything else about the project suggest the existence of a strategic inflection point—and therefore a need to reconsider the project's fundamental objectives?

Human Resources Specialists, through monitoring the project with the Project Team, could assist with the decision to terminate a project. Not in a direct manner, however, they can facilitate the process with the team and/or the stakeholders. The HR Specialists would want to know the history of the project. They would help the group reach a decision, plan a different outcome and ensure a process where everyone agrees and commits to a certain outcome. They would act as guides in this situation, rather than a participant by facilitating a workshop and getting answers to the above questions.

HR in Focus: Supporting Team through Termination of Projects

Determining whether to terminate a project can be a very difficult decision for people close to a project to make. Everyone's perspective on a project has a huge effect on your judgment of its overall success. That is why a review conducted by an objective, external auditor can be so illuminating. Human Resources Specialists need to be sensitive to the feelings of the group/team. The characteristics of the HR Specialist would be to listen, use verbal and nonverbal communication, show empathy, focus on the issues not feelings, and provide a structure and process that leads to a shared conclusion about the project.

The HR Specialists needs to control the flow of the meeting as it may be emotional, ask questions for clarity from all participating members, and may provide direct interventions. They need to remain neutral, use an encouraging tone, and de-escalate members who may be angry or just sad about the possibility of termination.

If the project is terminated as agreed to by stakeholders, at this point, HR Specialists may offer individual facilitation to resolve one-to-one issues about the termination. Perhaps, the individual wishes to set personal goals for themselves post project, simply debrief about the project, the process and their personal experience.

The HR Specialist wants to help create a culture of respect and teamwork going forward that aligns with strategic goals of the organization. One way to achieve this is to empower the employees to move forward with new goals.

9.3. CONTRACT CLOSING AND AUDITS

Project Closure

Just as a project comes to a close, contracts also come to a close. **Contract closure** is concerned with completing and settling the terms of the contracts set for the project. It supports the project completion process because the contract closure process determines if the work described in the contracts was completed accurately and satisfactorily. Keep in mind that not all projects are performed under contract, so not all projects require the contract closure process. Obviously, this process applies only to those phases, deliverables, or portions of the project that were performed under contract.

Contract closure updates the project records, detailing the final results of the work on the project. Contracts may have specific terms or conditions for completion. You should be aware of these terms or conditions so that project completion isn't held up because you missed an important detail. If you are administering the contract yourself, be sure to ask your procurement department if there are any special conditions that you should be aware of so that your project team doesn't inadvertently delay contract project closure.

One of the **purposes of the contract closure** process is to provide formal notice to the seller, usually in written form, that the deliverables are acceptable and satisfactory or have been rejected. If the product or service does not meet the expectations, the vendor will need to correct the problems before you issue a formal acceptance notice. Before the contract is closed, any minor items that need to be repaired or completed are placed on a punch list, which is a list of all the items found by the client or team or manager that still remain to be done.

Project Audits

A **project audit** is a formal review of the project that assesses the standards of the project management and ensures the standards were maintained throughout the project. They are carried out by the Project Manager and the team, Human Resources if they have been involved since the beginning, the Financial Department, and other invested stakeholders. Hopefully, quality audits have been performed during the course of the project, and the vendor was given the opportunity to make corrections earlier in the process than the closing phase. It's not a good idea to wait until the very end of the project and then spring all the problems and issues on the vendor at once. It's much more efficient to discuss problems with your vendor as the project progresses because it provides the opportunity for correction when the problems occur.

The project team will then work on all of the items on the **punch list** (list of issues/items that require immediate attention), and building a small schedule to complete the remaining work. If the number of items

on the punch list is too large or the amount of work is significant, the project team continues to work on the project. Once the punch list becomes smaller, the project manager begins closing down the project, maintaining only enough staff and equipment to support the team that is working on the punch list.

If the product or service does meet the project's expectations and is acceptable, formal written notice to the seller is required, indicating that the contract is complete. This is the formal acceptance and closure of the contract. It's your responsibility as the project manager to document the formal acceptance of the contract. Many times, the provisions for formalizing acceptance and closing the contract are spelled out in the contract itself.

If you have a procurement department handling the contract administration, they will expect you to inform them when the contract is complete and will in turn follow the formal procedures to let the seller know the contract is complete. However, you will still note the contract completion in your copy of the project records.

9.4. RELEASING THE RESOURCES

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Releasing the Project Team

Releasing project team members is an official process. However, it should be noted that at the conclusion of the project, the team is released from the project, and they will go back to their functional managers or get assigned to a new project. Human Resources could bring the team together to review how each members skills and experience impacted the project.

They may provide an opportunity for a celebration for the project members if the project was a success. This provides closure as a reward for a job well done. This could take many forms such as a party, brief vacations, or bonuses awarded. HR Specialists would facilitate a debriefing of the project and invited feedback about what worked, what did not work, and what would they do next time to improve. This helps planning for new projects.

The Project Manager will want to keep their managers, Human Resources, or other project managers, informed as they get closer to project completion, so that they have time to adequately plan for the return of their employees. Let them know a few months ahead of time what the schedule looks like and how soon

they can plan on using their employees on new projects or return to their prior positions. This gives Human Resources and the other managers the ability to start planning activities and scheduling activity dates.

Human Resources Role for Re-Entry after Project Closure

Human Resources would work with the team prior to the closure of the project to ensure they return to their workplace roles within the company. This step is a final step in the original plan established for each team member prior to the project initiation. Each member may have a different outcome for return to work.

1. Meet with the Project Manager and team together to develop timelines for return to regular job, dependent on the closure date of the project.
2. Meet with each team member individually to discuss return to work plan.
3. Develop a return to work plan for each team member/Project Manager including the job they are return to, return date, salary/benefit discussion, set new goals with employee (some team members may return to their regular jobs, some team members may be assigned to new projects, some team members may be offered promotions).
4. Depending on the team and project success, team members may wish to have a reference for future. This can be completed by the Project Manager, with input from Human Resources if they have been directly involved with the project and the team.
5. Human Resources would inform the Functional Manager of the return date of the team members, advice them to prepare for the return, and ask the Functional Manager to set up a meeting with the team members to update them on any changes that have taken place in the department during the employees absence.
6. Documentation of the return to work plan is archived.
7. If the team member was hired externally, the contract is finalized. Human Resources would ensure the person is paid for all work

completed. The individual is terminated.

These step address any anxiety team members may have about returning the workplace. This is an opportunity to build trust and provide reassurance. Communication is key, and with the right steps in place, employees will have a smooth transition back to their regular jobs.

Final Payments

The final payment is usually more than a simple percentage of the work that remains to be completed. Completing the project might involve fixing the most difficult problems that are disproportionately expensive to solve, so the final payment should be large enough to motivate the vendor to give the project a high priority so that the project can be completed on time.

If the supplier has met all the contractual obligations, including fixing problems and making repairs as noted on a punch list, the project team signs off on the contract and submits it to the accounting department for final payment. The supplier is notified that the last payment is final and completes the contractual agreement with the project.

Releasing Materials and Equipment

The Project Manager is responsible to ensure all materials not used and all equipment that has been borrowed, leased or rented is returned to the owner.

9.5. REPORTING AND LESSONS LEARNED

The Final Report provides a final summary of the project performance. The main goal is to improve on future projects. The report captures any changes and lessons learned from the finished project.

It could include the following:

- Summary of the project and deliverables
- Data on performance related to schedule, cost, and quality
- Summary of the final product, service, or project and how it supports the organization's business goals
- Risks encountered and how they were mitigated
- Recommendations
- Lessons learned
- Appendix

Exactly where your work falls in the project's life cycle depends on your perspective as to what constitutes "the project" in the first place. The designers and constructors of a building might consider the acceptance of the building by the owner as project closure. However, the results of the project—that is, the building—lives on. Another contractor might be hired later to modify the building or one of its systems, thus starting a new project limited to that work.

If project closure is done thoughtfully and systematically, it can help ensure a smooth transition to the next stage of the project's life cycle, or to subsequent related projects. A well-done project closure can also generate useful lessons learned that can have far-reaching ramifications for future projects and business sustainability. The closeout information at the end of a project should always form the basis of initial planning for any future, similar projects.

Although most project managers spend time and resources on planning for project start-up, they tend to neglect the proper planning required for project closure. The Lessons Learned from prior projects is important to be reviewed at the beginning of the next project, not when something goes wrong. This is a reason for involvement of Human Resources to deliberately ensure data is collected with specific information to be included in the Final Report, including the Lessons Learned. Ideally, project closure includes documentation

of results, transferring responsibility, reassignment of personnel and other resources, closing out work orders, preparing for financial payments, and evaluating customer satisfaction. Of course, less complicated projects will require a less complicated close-out procedure. As with project audits, the smooth unfolding of the project closure phase depends to a great degree on the manager's ability to handle personnel issues thoughtfully and sensitively. In large, on-going projects, the team may conduct phase closures at the end of significant phases in addition to a culminating project closure.

Project closure is traditionally considered the final phase of a project. It includes tasks such as

1. Transferring deliverables to the customer
2. Cancelling supplier contracts
3. Reassigning staff, equipment, and other resources
4. Finalizing project documentation by adding an analysis summarizing the project's ups and downs
5. Making the documentation accessible to other people in your organization as a reference for future projects
6. Holding a close-out meeting/lessons learned
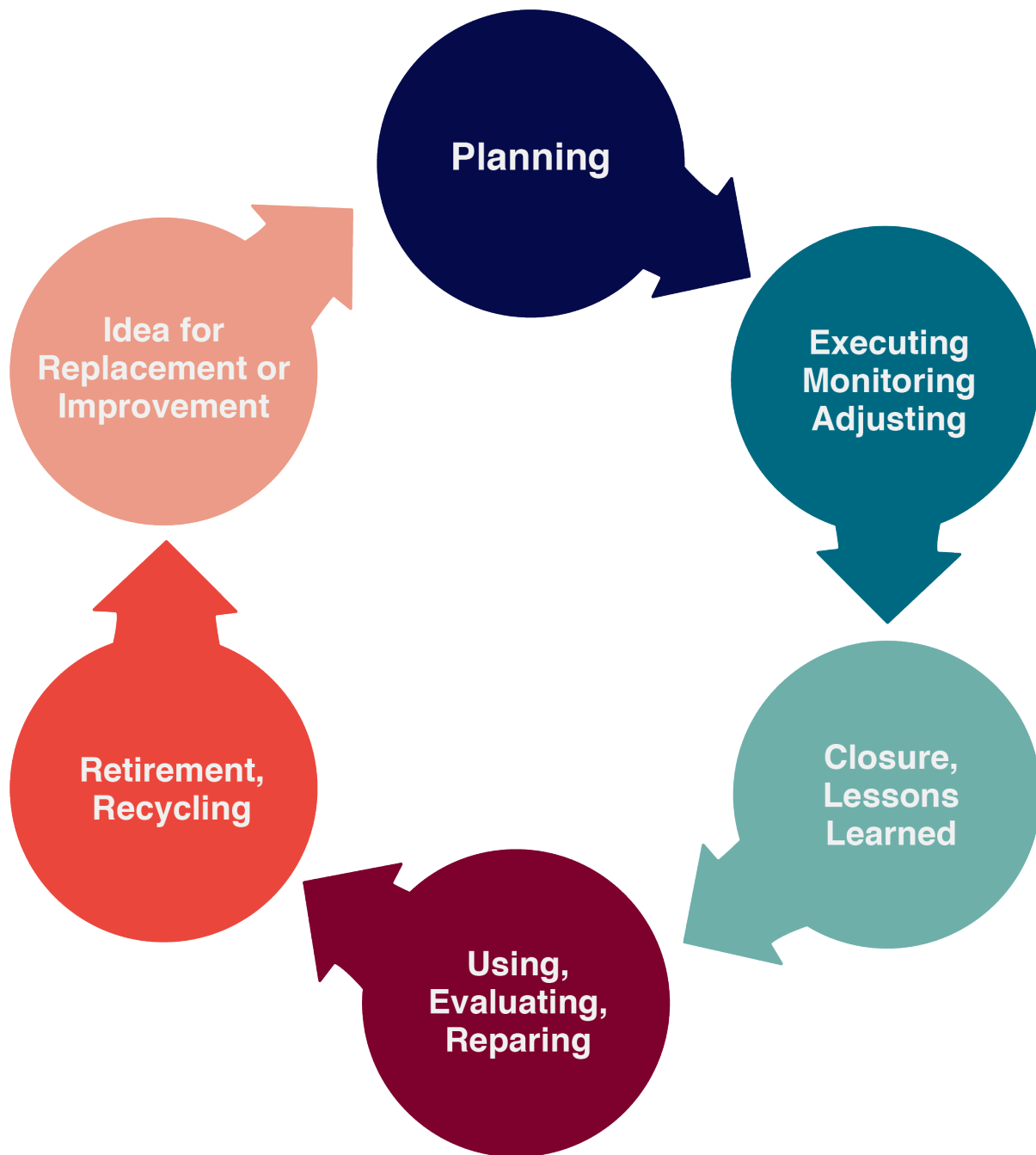7. Celebrating the completed project

Figure 9-1: Seen from a living order perspective, closure is an extension of the learning and adjusting process that goes on throughout a project.

HR in Focus: HR and Lessons Learned

The Close-Out Workshop or Lessons Learned Workshop is an opportunity to end a project the way you started it—by getting the team together. Human Resources would be involved to assist in designing the meeting and facilitating the meeting. It is important that this meeting be not seen as recommendations, rather a time to ponder the project by looking back from the beginning to the end. During this important event, the team should review what went well, what didn't go well, and identify areas for improvement. All of this should be summarized in the final close-out report. This is a time of reflection for the team and other stakeholders. The team/stakeholders want to capture the successes over the entire life cycle of the project (selection, planning, execution, closure). The Human Resources Specialist would guide the team/stakeholders through a process that described what happened in the project, how each event impacted the project, and what might have happened differently to improve the project. This is essential information for future projects to clone successes and avoid mistakes.

A final close-out meeting with the customer is also essential. This allows the organization to formally complete the project and lay the groundwork for potential future work. The customer may be included in the stakeholder/team workshop, or another workshop is held with the Project Manager, major stakeholders and the customer. Attendance at these workshops would be determined prior to the workshops by the Human Resources Specialist and the Project Manager.

As new projects are beginning, it is important that the Lessons Learned be reviewed prior to the project start date. While the new project is being planned, the Lessons Learned can easily be review, and integrated into the new project goals.

9.6. RETROSPECTIVES

Retrospectives are fairly new to the closure of projects. They are a structured workshop/meeting which gives the team time to reflect on the entire project. Through the workshop they learn about their successes and failures that will help other project teams to improve on success. Many people, including Human Resources, believed that too much time and energy was spent on closure that only included deliverables and financial outcomes. Many argued a separate report would be beneficial to include lessons learned. The process mirrors the traditional audit process.

For retrospectives, Human Resources would be a neutral party who acts as a guide and facilitator. The Human Resources Specialist would lead the team through an analysis of all the projects tasks that went well, what went wrong, and how would we improve the next time. It also includes an action plan for the future with goals and recommendations.

Retrospectives Process

The retrospectives includes questionnaires. It may include the operational impacts, however, as important would be inclusion of the impact the project had on the culture of the organization. The Human Resources Specialist would send out the questionnaires. These are answered anonymously and confidentially by each person. The answers would be analyzed. Where there were issues that were identified in the questionnaire, the Human Resources Specialist would note them. Some examples of issues might be poor organization, inner team conflict, poor leadership by the project manager, time management issues, discrimination or harassment. Then, the HR Specialist would meet with the team individually, project manager and any other stakeholders one-to-one. The Human Resources Specialist is then able to delve deeper into the issues and the impact they had on the project. They would write a report on the findings.

Once this is completed, the information gathered, the Human Resources Specialist would facilitate a Retrospective Workshop. First, they would review the report and findings. They may ask the participants to add any important information that was deleted or missed. Next, the HR Specialist would ask the participants to prioritize the information (issues). They are often not called issues as it denotes negativity. Sometimes they are called lessons. Example: Lesson #1: Time management could have been improved (and include an example.) This promotes a more positive spin on the issue.

Next, each issue/lesson is designated to an owner of the issue/lesson. The participant can volunteer to own the issue/lesson because it interests them. The person must also have some familiarity with the issue/lesson. This designate serves as a contact person for anyone who wishes information about the issue/lesson. They may

provide a more detailed report, speak to other members of ongoing or future projects. The goal is to provide information that will benefit other existing or future projects that will improve the organization as a whole.

🔍 HR in Focus Retrospectives Process

These lessons learned would be archived and accessible for other project members. The Human Resources Specialist may build a repository that allows all employees to quickly find and sort through lessons learned. This way it is valued and utilized by employees of the organization. Examples of questions designed by HR:

The major questions:

1. What did we do well?
2. What did we do that was not done so well?
3. What did we learn?
4. What would we do differently the next time?
5. What still bewilders us?

Other Worthy Questions:

1. What assisted you in being a success as a team member?
2. What were your expectations from (team members) and (project manager)?
3. What processes/steps did you use that were useful?
4. What were the hindrances that held you back from doing good work?
5. If you could change something (a priority) what would it have been?
6. What caused you problems?
7. Was there anything that caused you stress?
8. What went well? What didn't?

Still Other Worthy Questions: (organizational)

1. Were you provided training at the beginning of the project? What training?
2. Did you feel supported by upper management at the beginning? during?

the project?

3. Was Human Resources available to you at the beginning? during? the project?
4. Did Human Resources help you bring closure to the project?
5. Did Human Resources help you re-integrate back into the organization?
6. Were there enough staff on the project?
7. Did everyone have the right skills and experience to perform their jobs on the project?
8. Did your team have access to resources during the project? (people, materials, equipment, finances)
9. Did you feel the project was aligned with the vision, mission and values of the organization?

Not all questions need to be asked in every project. The Human Resources Specialist would pick the questions relevant to the project and the project team. Many of these questions could be used in a Retrospective Workshop.

Retrospectives can provide valuable information the project teams can use for future project work. They lead to improvements in the processes and outcomes. Future project teams can utilize best practices advancing the success of projects.

9.7. PERFORMANCE EVALUATION

Performance Evaluation

The purpose for the **performance evaluation** is to assess how the project manager and the project team performed during the project. It is a structured, in-depth process to gather information about the people involved, assess contributions to the project, and provide feedback to stakeholders on performance. The performance evaluation of a project team is similar to that of traditional performance evaluation for employees.

Steps in the Performance Evaluation Process

Step 1. Development of an evaluation form: The form needs to be fair and objective (standardized) that includes KSA (knowledge, skills, abilities), quality of work, work habits, work behaviours, quantity of work, .

Step 2. Identification of the performance measures: Standard performance measures that allows HR Specialists to evaluate performance objectively. Sometimes a job description allows as a measurement tool.

Step 3. Define the guidelines for feedback: The is the opportunity for a discussion about the strengths and weaknesses of the project member. As well, offering support for improvement is important. This is a time to acknowledge pride in the success and the contribution made by the team member. It is critical to the team member's esteem and confidence in moving forward in their traditional job or a new project. It is also a time for the team member to provide feedback on their performance. The Human Resources Specialist wants to ensure they encourage open dialogue, there is an exchange of information, and an opportunity to better understand each other's perspective of the work completed.

Step 4. Create reward and disciplinary steps: Often at closure of projects, there are bonuses for team members. This is the time to explain the bonus, and how and when it will be given. As well, Human Resources Specialists need to be prepared for handling team members who performed poorly. The discipline action would be discussed prior to the project beginning–a verbal warning, a written warning, if no improvement, termination. At the end of the project, if there were any disciplinary actions, they would be discussed with the team member, consequences that had been implemented, and any action that had been taken. Plans for improving performance would be reviewed too.

Step 5. Establish a schedule: It is a best practice to establish a performance schedule at the beginning of a project. Human Resources would establish the evaluation form, performance measurement, and guidelines for feedback prior to the team beginning the project. The performance evaluation would be explained to the team to allow them a reference point at the beginning to monitor their own performance. It is highly suggested that Human Resources schedule regular "check in" performance evaluations throughout the project. This

may dependent on the duration of the project. Short projects may only have a post performance evaluation. Longer projects may have 2-3 scheduled performance evaluations. The post evaluation then is a follow up that brings closure to the project.

The critical point is that the entire process needs to be a structured, formal, and fair approach that promotes growth and development, and acknowledges the contribution of the team members to the project.

9.8. PERFORMANCE APPRAISALS

Value of Performance Appraisals

Evaluation of the team including each member and the Project Manager post project is an important step in encouraging modifications in conduct of members, support the team member's career growth, and continue their benefit to the organization through continuous learning. Each member is measured, using specific criteria, that measures the goals of the projects against the criteria. Prior to the project, as indicated in 9.7, all the criteria, expectations, and standards are developed. The supports from the organization are put in place for success.

Performance Appraisals Can Fail

There is evidence to support that performance evaluation is not effective in many organizations. Mackenzie, Wehner and Correll's study (2019) in the Harvard Business Review reveals, " ....while we may strive to be as meritocratic as possible, our assessments are imperfect and all too often biased. As innocuous as the typical form [appraisal form] may seem, our research has found that it often allows for our implicit biases to creep in." The failures are attributed to ambiguous standards, bias of the raters, time consuming and wrong selection of the criteria. Sometimes, the performance appraisals are confusing as well as the process itself. Other reasons for failure are:

- The performance evaluation is left only to the Project Manager who lacks skills in evaluation,
- The evaluation may be carried out by the team member's direct supervisor who had nothing to do with the project,
- Projects are only measured on scope, costs, times and deliverables, and there is no focus on the performance of the team

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Project success depends on the team performing at a quality level to satisfy the customer. It is Human Resources role in the organization to educate stakeholders on the importance of performance evaluation for all projects. As well, it is important that Human Resources be involved in all the steps of the Performance Evaluation, including the performance appraisal. Stakeholders need to understand the skills of the Human Resources Specialist, and be valued by the project stakeholders. Human Resources professional skills and involvement ensure all the criteria, standards and processes are in place prior to the project starting, during the project, and post project. They will guarantee the individual and team goals are aligned with the organizational goals, and that the implementation of the performance evaluation are met to satisfaction by all stakeholders.

There are key aspects of a project evaluation that need reviewed prior to the project. At this stage, Human Resources involvement is to meet with stakeholders and the team to find answers to specific questions.

Questions to Ask Prior to Project to Establish Expectations and Criteria:

1. Are the standards in place for measurement of performance?
2. Are the goals clear for the team members? (use SMART goals process: Specific, Measurable, Achievable, Realistic, Timely)
3. What are the challenges going into this project?
4. Does everyone understand their own roles and responsibilities? And, the standards they need to meet?

5. Does the team understand how to deal with stress management and conflict resolution?
6. Has this team worked together before? If so, what was the dynamic among the team members? If not, will they trust each other?
7. Do the team members understand what a high-performing team looks like? The characteristics? (high performing team: aligned with the purpose of the project, have clear roles, trusting, good communication skills, able to collaborate, encourage diverse thinking, manage conflict well, willing to learn, adaptable, flexible)

Answers to these questions helps the Human Resources Specialist build an evaluation plan, review process, and appraisals. As well, where there may be deficiencies, Human Resources can provide training and support to build a high-performing team ie. Stress management training, trust building workshops, training in SMART goals, conflict resolution training)

Meeting this criteria, answering the above questions and developing the evaluation plan will support the teams and the success of the project. Progress of the team is measured through regular contact with Human Resources during the project. The final evaluation and appraisals are conducted post project.

Performance Appraisal Functions

Performance appraisals focus on the team member's strengths and weaknesses, and developing strategies for improvement. Also, the evaluation appraisal includes assessment of how well the team members performed on the project. Some projects attach performance appraisal to salary increases, promotions and bonuses. An accurate performance appraisal helps Human Resources determine a wage increase or decrease in wages, often referred to as **pay for performance.** Training and development can be identified during a post evaluation to further the team member's opportunities within the organization, or for future projects. The documentation from the appraisal supports future work assignments, any disciplinary action required, and promotions or

terminations. They serve as recognition of work performed. This helps esteem and empower team members for future work.

Overall, performance reviews fulfill several purposes and help bring the team together and align with the organization. Human Resources wants to ensure a strong culture of working together for the good of the entire organization, and performance appraisals are one way to provide positive results of this strategic goal.

Individual Performance Reviews

The Human Resources Specialist and team member need to be prepared. It is the role of the HR Specialist to assist the team member with preparation. The Human Resources Specialist needs to gather all the information related to the employee while working on the project. As well, prepare any notes, set the agenda, schedule the time that is convenient for both parties, and set expectations for the review with the team member. The Human Resources Specialist may meet with the Project Manager prior to the individual appraisal. This may serve helpful in gathering information unknown to the HR Specialist. This meeting may also be a hindrance and set the tone for rater bias (positive or negative). The HR Specialist needs to consider the advantages and the disadvantages of meeting with the Project Manager prior to the team member appraisal. Then, make an informed decision on how to proceed.

Human Resources Specialists are trained in asking the right questions. Some of these may include:

1. What accomplishments are you personally proud of while completing the project?
2. What obstacles stood in your way?
3. What impact did your contributions have on the team as a whole? On the project as a whole? On the organization?
4. How do you feel HR supported you throughout the project?
5. What development goals do you see for yourself going forward?
6. How can the organization support you with these goals? How can HR support you with these goals?

These types of questions are not judgmental. They do not make the team member feel uncomfortable. Rather, they are offered in a coaching manner to encourage the employee to answer. The team member feels they are having a conversation, contributing to the performance appraisal, and you are working together with

them. Some Human Resources offer the specific questions ahead of the performance appraisal so the team member has time to contemplate the answers in advance. It may also make the team member feel more comfortable, and it speeds up the performance appraisal process.

However, it is important to write out the specific questions prior to the meeting. As well, they need to ensure they are being a good listener. The performance appraisal needs to end with an agreed upon next steps between the raters and the team member.

Along with providing the questions in advance to the team member, the Human Resources Specialist may ask the team member to complete a self-evaluation using a structured approach. This eliminates any surprises for the team member, allows for discussion if the HR Specialist and the team member have difference conclusions about the work performed, and the team member may feel it is more fair when they have input into the process.

During and at the end of the performance appraisal it is important that the HR Specialist offers praise as a motivator, tell the team member they are valued, and be supportive (show they care). A good technique for engaging the employee is to ask, "What can I do to help?" This shows the team member the organization wants to help them get what they want out of the next project, or the next role within the organization.

Team Performance Reviews

A team performance review is an extension of the individual performance review. In a team review, it is not always possible to separate an individual's contribution. However, a Human Resources Specialist may set up the review where individuals can offer their personal achievements and how it contributed to the success of the project as a whole. Team performance reviews assist in breaking down barriers between individual team members, and encourages a joint effort of the evaluation of work performed.

The Human Resources Specialist would set up a group workshop/meeting. Questions could be forwarded to all the team members prior to the meeting. These questions may be similar to the questions asked in an Individual Performance Review. Along with individual goals that were established prior to the project, the team may have established team goals. The HR Specialist would establish a direct correlation between the work individuals completed, and the outcome; as well, as the team goals. They must also be careful to ensure there is equal participation. Some team members tend to contribute more than others. Recognition of the team goals provides an equal playing field for those who may have contributed less. And, at the same time, the individual goals are recognized in the workshop for the extra effort.

Some typical team performance questions could include:

1. Where the deadlines met or exceeded?
2. Was the budget met? Increased? Reduced?
3. Was the customer satisfied with the product/service?
4. What did you enjoy most about working with your team?
5. Was there anything you did not enjoy working with your team?
6. Did the team communicate effectively? How? Or what were the issues?
7. How did you help each assist each other?
8. Were you able to ask your team for help when needed? What did you ask for?
9. How did you motivate each other?
10. Did you share ideas with each other? How were you valued and respected for your ideas?

Project Managers would be involved in the team performance review as a participant. This is sometimes difficult for team members as they may not "speak up" when the project manager is present. However, the HR Specialist needs to ensure to create a safe space for exchange of information. The important consideration by Human Resources is the design of the team performance review. It must be specific to the team goals, and the individual goals. High performing team members need to be recognized, yet not at the expense of those who contributed less. All the moving parts need to work together to ensure all team members are recognized.

Project Manager Performance Review

Project Managers are often involved in performance reviews of the team members. When a Project Manager receives a traditional performance review other stakeholders may be involved. They may include a Regional Project Manager (someone who manages many projects at the senior level), executives of the organization who have a vested interest in the project, the customer, and Human Resources. The same best practices apply to a Project Manager's performance review. Human Resources would design the criteria and questions, set up the meeting, and invite all the participants. They usually would facilitate the meeting.

The differences between the team members' performance review and that of the Project Manager is leadership and management of the project. They are evaluated based on budgets, deadlines, process improvements, relationships and communication, risk management, and customer satisfaction. They could

be asked all the same questions as the individual team members, plus questions related to leadership and management of the project.

A popular performance review process is multi-rater appraisal or **360-degree evaluation.** It includes several sources and combines the ratings. People see things from different perspectives. The customer sees the quality of the product. The finance department sees the project from a financial perspective and wants to ensure compliance, on-budget, and no overages. Human Resources views the project from a "people perspective." They want to ensure the team members were treated fairly and equitably, communication was efficient, and relationships were built with harmony. As the name suggests, 360-degree evaluation attempts to receive feedback from many angles. Others who may be included in the evaluation process are outside managers, peers, team members of the project.

Once Human Resources has designed the criteria and questions, the information is compiled into a document.

Human Resources want to ensure quality and acceptance by building in protections:

1. Ensure there is anonymity.
2. Make the appraisers accountable by following the rating scales appropriately.
3. Check for invalid responses. Some appraisers may discuss the evaluation with another appraiser, and give them a higher or lower rating (collusion).
4. Use weighted averages or combine all the evaluations.
5. Check for prejudices or preferences related to age, gender, ethnicity, or other group factors.

This approach is not without its faults. There are advantages and disadvantages.

Advantages:

1. It is a comprehensive model because the information is gathered from several sources.
2. There is less bias and prejudice because it does not come from one person's judgement.
3. The feedback from various perspectives helps improve self-development.

Disadvantages:

1. The model is complex (having to combine all the reviews).
2. The feedback can be intimidating because it comes from many sources (a feeling of being "ganged up" on by other employees).
3. Raters are not trained in the model.
4. Raters may give invalid ratings (lie, collude with others).

Human Resources needs to ensure everyone providing a rating understands the process and its importance to the Project Manager. All the raters need to remain objective when observing and providing feedback. Training will improve the process to ensure the responses accurately reflect the Project Manager's leadership and management skills. Once the raters are selected, trained and understand the process, Human Resources can move on to set up the performance review.

The document(s) is sent to the appraisers to be completed. No names are included on the documents. The information is then compiled and used as the tool for performance review. The performance review is conducted included all those with a vested interest. The information from the 360-degree evaluation is reviewed with the Project Manager. Other important information would be included from the Project Manager. This could include a self-evaluation where the Project Manager is asked to evaluate themselves on a pre-designed self-review document.

360-degree can be a valuable tool for performance reviews as long as the information is used fairly. Although there are many approaches to performance reviews, the important things to remember are to involve the person in the process from setting goals before the project begins, monitoring the team members success frequently throughout the project, and ask the team members for input on their perspective of the success of the project. This all leads to higher satisfaction, shows support and care for the team members, and establishes rewards for a project well done.

9.9. IN-DEPTH LOOK: 360-DEGREE REVIEW

In-depth Look

The model of 360º Feedback has murky origins, with some research dating back to the 1920s (Hedge et al., 2001). The version we know today originated during the time of World War II through the German military (Fleenor & Prince, 1997). The 360º Feedback system began to gain traction in the 1980s, and by the 1990s it was beginning to be more frequently used by businesses of all kinds. However, the first trademarked publication originates from the book *360º Feedback: The Powerful New Model for Employee Assessment & Performance Improvement*, written and published by Mark Edwards and Ann Ewen in 1996. In this book, Edwards and Ewen detail the creation and coining of the term in the mid-1980s, as well as the subsequent trademark battle that ensued from 1993 to 1996. Together, Edwards and Ewen developed and utilized the 360º Feedback model in their work for their consulting firm, TEAMS, Inc. in a variety of ways. Throughout their book, they recommended that the model was utilized in assessments, appraisals, and in supervisor evaluations as well with large amounts of data to support these recommendations (Bracken et al., 2016).

The 360º Feedback model seeks to create unity in the workplace through multi-source assessments. The model achieves this through offering different perspectives on a person's skills, behaviours, abilities, and performance, as well as alleviating the biases often found with single-source assessments. The model also provides the opportunity for individuals to rate themselves as well as others Through all of this, the 360º Feedback model seeks to reinforce the visions, values, and goals of the organization it is being utilized by (Fleenor & Prince, 1997).

No research supports the idea that the 360º Feedback model was a descendant of another theory. The 360º Feedback model was developed out of desire to improve upon single-source assessment and evaluations.

The 360º Feedback model has evolved significantly over the years, as employment trends and standards have changed. Empowerment in the workforce, a desire to offer employees evaluations beyond annual reporting, and an increasingly competitive job market have forced the 360º Feedback model to evolve to become even more frequently adapted by companies seeking to improve their assessment and Human Resources systems (Fleenor & Prince, 1997).

While the 360º Feedback model is a relatively malleable theory and can therefore be changed to suit each business's needs, there may be more changes in the future. Digital workforces, where all assessments and feedback would be provided virtually, would need to be implemented most likely via specific software built to support the 360º Feedback model.

The 360º Feedback model is based on the principle that feedback on a situation is different depending on

people's specific perspectives. All perspectives must be evaluated to have a well-rounded assessment. It is a form of multi-rater feedback where feedback is collected from multiple sources to understand how people within an organization are functioning (Tee & Ahmed, 2014).

This feedback model is also based on data and data-based feedback principles. Specifically, David Nadler wrote a book about data-based methods of feedback and how it contributed to the development of the organization, and the concept of using data to conduct assessments in the workplace emerged (Hedge et al., 2001).

There are several benefits that this model provides to both workers and employers.

1. It demonstrates the differences between how workers see themselves and how others see them, which increases workers' self-awareness and allows them to make improvements to their performance (McCarthy & Garavan, 2001).
2. It helps motivate employees as an appraisal tool. Workers and employers can meet to discuss the goals or objectives that are being evaluated. Workers may become more motivated to increase their productivity and performance as they are not only being evaluated by their employers, but also by themselves and their peers (McCarthy & Garavan, 2001).
3. It focuses on methods over outcomes, which allows workers to focus on improving the quality of their work rather than the result.
4. The 360º Feedback model offers insights to the productivity and the methods that workers use to conduct their work.
5. It gives managers insights into how the employee views themselves and their work.

The 360º model makes contributions in all sectors when running results to generate information. For example, when running a report building on workplace sustainability, the results can contribute to facilitating organizational culture and generate outstanding feedback to excel company needs.

The contribution also assists in other ways, such as allowing insight into the "what and how" of execution measures and connections within industries. Altering workforce demographics, identifying generational and work technique discrepancies among various affiliates, and the increasing significance of factors such as employee attention, integrity and leader quality have contributed significantly to this trend (Bracken & Church, 2013).

Using the 360º model has generated some criticism, such as discomfort around the overall process and truth that the report relies on. Some biases can be disproportionate as individuals can be ingenuine throughout the process. Business owners or some decision-makers are concerned that a 360º feedback process will make everyone disconcerting, constructing separations in the functionality of professional relationships. Ultimately this will negatively affect productivity. (Lepsinger et al, 2009.) "Results show that cultural values indeed predict self–observer rating discrepancies. Thus, systemic and contextual influences such as culture need to

be considered when interpreting the importance and meaning of self–observer rating discrepancies in 360º instruments" (Eckert et al., 2010)

The 360º feedback model can produce constraints and gaps within the expectations of outcomes while also developing indecisiveness. Alternatively, it may establish a concern that the process could lead to unrealistic administrative or personal transformation anticipations. The 360º model can be very long and intricate. Digesting details while organizing data can create limitations for "human information-processing capabilities." Other restrictions contain self-image concerns as associations may acquire objections over results, employee discontentment and distorted views based on results (Lepsinger et al., 2009)

The Critical Incident Method is a great alternative to the 360º feedback theory. It mainly focuses on keeping a report of all the critical incidents that are related to the employee that occur at the workplace. This method is equal to if not better than, the 360º theory when it comes to improving understanding of the issue, especially because it highlights very specific examples, but the 360º theory only provides feedback to the employee in a general form which may lead to lack of evidence (Balle, n.d.).

The implications of the Critical Incident Method are the following (Balle, n.d.):

- Reveals an employee's mental and physical capabilities, as well as the skills that they have to see if they are really qualified for their job.
- Saves time and effort if only using this method to evaluate employees.
- Specific analysis of the employee and their behaviour at work would be provided.
- Determines whether the employee is deserving of the job is made easier.

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9.10. IN-DEPTH LOOK: MANAGEMENT BY OBJECTIVES AS AN EVALUATION TOOL

In-depth Look

Management by Objectives is most often seen as only a management strategy. However, it is a popular evaluation strategy too. Management by Objectives, otherwise known as "MBO," is a management strategy that was popularized by Peter Drucker in the 1950's. Drucker is known as one of the most influential people in modern corporate management. The theory of MBO evolved from Drucker's questioning of the classical and human relations schools of management (Communication Theory, n.d.). In both schools of thought, effectiveness was not acknowledged as an important organizational foundation. Instead, it was a natural outcome. Drucker theorized that effectiveness should be the foundation of every company, and not efficiency as theorized by the schools of thought (Communication Theory, n.d.). He developed MBO whereby executive management discussed organizational goals and set objectives for employees based on those goals to be evaluated upon completed of the goals and objectives.

The theory behind MBO is basic. The theory states that employees who participate and have input into designing their objectives will feel more valued by an organization. In turn, they will be more adept to fulfill the objectives and contribute to the success of the organization. The theory hypothesizes that allowing employees to participate in goal setting enhances participation, commitment, and loyalty among employees (Gordon, 2022). The process of Management by Objectives can be described in five steps.

1. Senior management discusses their business goals for a particular time and then lists several objectives based on their goals.
2. Senior management announces company objectives to their employees. Employees review the company objectives, discuss, and recommend amendments, and determine a plan that will nurture their ability to reach their objectives.
3. Management monitors employee progression toward the agreed upon objectives and assists where needed.
4. When the business cycle is complete, management and employees talk about how well the objectives were met through an evaluation process. During this process, management will compare what the employee completed and compares it to the initial agreement performance agreement.
5. Employees are recognized and rewarded with raises, bonuses, promotions, or new responsibilities based

on how they performed.

The focus of this theory is centered around rewards, rather than punishment. Therefore, it requires management to provide unwavering support to their employees (Gordon, 2022). If results are not met after evaluation, managers attempt to take corrective action to motivate employees and modify objectives as needed. For this theory and management style to be successful, objectives need to be specific, measurable, achievable, relevant, and time-bounce, otherwise known as "SMART" (Miller, 2021).

Advantages

Management by Objectives has several advantages. Some of the advantages include an enhanced understanding of tasks and duties by employees, a reduction in ambiguity around task responsibility, increased communication within the organization, increased employee focus, motivation, and job satisfaction, individualized results expectations, and alignment of effort toward company goals.

Disadvantages

However, MBO has been the subject of criticism for a few reasons. Some of the disadvantages of MBO include poor stimulation to innovate, ignorance of the environment and the resources available to complete the goals, polarization between people and departments who are not motivated to assist beyond their own goals, misplaced importance given to goal setting rather than the completion of those goals, the time consuming nature of implementation and maintenance, and the inability to identify and quantify all objectives necessary for organizational success (Communication Theory, n.d.).

Project Management

Despite its criticisms, MBO has been a key foundation to Project Management today and challenges some of the more traditional planning processes (D'Entremont, 2012). MBO helps Project Managers move away from decisions being made strictly by management. Instead, it promotes including the entire organization in the planning process. Also, MBO helps Project Managers focus on the larger picture, instead of getting lost in the small details. Ultimately, MBO improves organizational communication and allows management and employees to collaborate on obtainable objectives to maximize resources and obtain optimal results (D'Entremont, 2012).

Human Resources

Human Resources could be responsible for establishing the company objectives and strategies through facilitation with management and employees. They would be responsible for conveying the strategy to the organization to ensure a clear understanding and idea of what success is to the organization, and how it will be measured. Human Resources would play a major role in supporting the organization to identify the company culture.

Human Resources may be involved in training management and then the employees in the MBO approach. They would design the forms used to design the goals and the evaluation forms. Human Resources may assist the management team in setting up the goals with the employees. An important step in MBO is the monitoring and evaluation of the performance and the progress of the employees. Human Resources, along with management, or perhaps independently, may provide the monitoring and evaluation processes.

Human Resources would follow through with the same processes and steps for projects within the organization by training the Project Manager and team in the MBO approach, providing the forms to set up the goals and objectives, assisting with monitoring progress throughout the project, and completing evaluations upon completion of the project.

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9.12. KEY TERMS

360-Degree Evaluation: Attempts to receive feedback from many angles. Others who may be included in the evaluation process are outside managers, peers, team members of the project.9.8

Contract Closure: Concerned with completing and settling the terms of the contracts let for the project. It supports the project completion process because the contract closure process determines if the work described in the contracts was completed accurately and satisfactorily 9.3

Pay for Performance: An accurate performance appraisal helps Human Resources determine a wage increase or decrease in wages.9.8

Performance Evaluation: This is to assess the project manager, the project team performed during the project. 9.7

Project Audit: A formal review of the project that assesses the standards of the project management and was maintained throughout the project.9.3

Punch List: List of issues/items that require immediate attention; and building a small schedule to complete the remaining work.9.3

Purposes of The Contract: The closure process is to provide formal notice to the seller, usually in written form, that the deliverables are acceptable and satisfactory or have been rejected. 9.3

Retrospectives: Are fairly new to the closure of projects. They are a structured workshop/meeting which gives the team time to reflect on the entire project. 9.6

The Close-Out Workshop or Lessons Learned Workshop: An opportunity to end a project the way you started it—by getting the team together. 9.5

The Final Report: Provides a final summary of the project performance. The main goal is to improve on future projects. The report captures any changes and lessons learned from the finished project. 9.5

9.13. SUMMARY

Performance appraisals is a process of creating a project environment where people can perform their best during the project to meet the project outcomes. Prior planning by Human Resources to set criteria, outline the performance appraisal plan, and inform the team members is important. As well, Human Resources needs to "check in" with team members to see how they are progressing with the project. At the end of the project, the performance reviews are conducted.   Individual, team and Project Manager performance reviews are standard post projects. The information derived for the performance review can come from various sources. The performance review must be free from bias and prejudice. The appraisers must understand and/or be trained in how to complete performance appraisals. The 360-degree approach is popular whereby information is sought from many sources and compiled into one report.

9.14. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed **by the Students** on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used **by the Teachers** as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. Form a **small group**. Individually think about a team project that was completed in the past. Write out the issues you encountered. Write out the successes you had. Think about what you would have done differently on the project. Share with your group.
2. Form a **small group**. Research Elon Musk's SpaceX on the internet. What successes has SpaceX had? What failures has it endured? Offer suggestions on how you might avoid any further complications in the future and make some forecasts that would help SpaceX. List your recommendations.
3. **Pair up** with a partner. Individually think about a small project (school or personal) that you have completed in the past. Write down the Lessons Learned. Did you complete a retrospective (either in writing or in your mind)? What was it? Did you take an action to improve the results for the next time you want to complete a similar project? What were they? Share with your partner.
4. Form a **small group**. Imagine a project has closed. You, as the Human Resources Specialist, have been charged with the role of conducting a close-out workshop/lesson learned workshop. Design a simple outline of a Lesson Plan that you would complete with the project team. Include objectives, description of activities, timing, and materials you would use.
5. Form a **small group**. You, as the Human Resources Specialist, are

preparing to conduct a team performance evaluation. What are the steps you would take to prepare?

6. **Individually**, design a list of questions you would prepare in advance for an individual performance review of each team member of a project. Share with the larger group in class.

7. Form a **small group**. There are advantages and disadvantages to the 360-degree performance review. Do you agree it is a good approach? Do you disagree it is a bad approach? List your reasons for your answer.

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. What information is found in a project closure review/audit?
2. What are some of the problems that Human Resources many encounter with a project closure review? How does Human Resources remain objective if involved in the project?
3. Why is it important for Human Resources to differentiate between Project Reviews and Performance Reviews that include the team's salaries? Explain?
4. What is the purpose of Lessons Learned at the closure of a project? Why do you think so many companies skip this step in the closure process?
5. If a project is terminated, does that mean it was a failure? Why? Why not?
6. How do Human Resources' Specialists support the termination of projects?
7. What reports need completed at the end of projects?
8. Why do Performance Appraisals fail?

9. What are the disadvantages of the 360-degree performance appraisal?
10. You have just been promoted to a leader in your organization. You enjoy working with your employees in a hands-on manner. Management By Objectives (MBO) is a course you just completed. Your supervisor uses MBO as a leadership style. They insist you use the same leadership style. You have 50 employees to supervise**. Individually,** decide: What plan would you put together to lead/manage these employees using MBO? How will you know you have been successful? Share the plans with one other student in a **pair.**

CHAPTER 10 – INTERNATIONAL PROJECTS

Chapter Outline

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10.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you should be able to:

1. Apply the factors of the environment affecting project management at an international level through case studies.
2. Describe how organizations select international projects and teams.
3. Choose cross-cultural issues of international projects related to specific international projects.
4. Define cultural shock and how to manage it with international employees.
5. Explain how human resources helps employees get ready for international projects through training.

10.2. ENVIRONMENTAL FACTORS IN PROJECTS

Overview of International Projects

International projects are different from domestic projects because of the cultural, regulatory, social, geographical, reporting, and infrastructural diversity. Project Managers need to understand the best practices for international projects. There are critical issues to think about related to communication, legal and political factors. As well, most Project Managers managing international projects have special skills and competencies.

These project managers have a different set of expectations than domestic project managers. They need to leave their homes, leave their families and friends, learn and speak a foreign language, abide by a different culture and laws, and experience extensive travel.

Defining the Countries

- **Home Country and Home Country Nationals:** Country where the corporate headquarters is located. The project manager and team would leave the home country for an international project. Example: The corporation is in Canada. The project team leaves the Canadian company and country.
- **Host Country and Host Country Nationals:** Refers to a foreign country where the corporation invests. The project manager and team relocate to the host country (foreign country) to complete the project. Host country nationals are project employees who are native to the country, and work and live in their home country. Example: Project team go to India from Canada to work and live. A host country national would be a project team member who is native to India.
- **Third Country National**: Project manager and team who are not from the home country or the host country. However, work for the corporation. Example: Saudi Arabian manager working for a New Zealand subsidiary of a Chinese owned corporation.

HR in Focus: International Human Resources Management (IHRM) and Project Management

Human Resources works closely with international projects and the Project Managers. The complexities of international projects include more activities and responsibilities than domestic projects.

Expatriates are the employees who have been hired to work temporarily in a foreign country. They are also called international assignees. The Project Manager and the team members are considered expatriates, sometimes called "expats" for short.

Differences between Domestic and International Human Resources Involvement:

Domestic Human Resources	International Human Resources
HR Planning	HR Planning
Recruitment and Selection	Recruitment and Selection
Performance Management	Performance Management
Training and Development	Training and Development
Compensation	Compensation
Industrial/Employee Relations	Industrial/Employee Relations
	A broader perspective of the world
	More involvement in the employee's lives
	Risks for the employees
	Change in attitude about expatriates (home country workers) and local workers
	Taxes at an international level for compensation
	International relocation and orientation
	Foreign country human relations
	Language translation and training
	Administration for expatriates
	Arranging training (pre, during, post assignment)
	Help with immigration and travel

Human Resources Specialists work with the organization at the strategic level for international projects.. It is important that everyone involved in an international project understand the environmental factors.

Environmental Factors Affecting International Projects

- **Legal and Political**: Expatriates need to work within the laws and regulations of the host country. The political stableness of the country affects how a project would be carried out.
- **Economic:** The gross national product (GDP) of a country tells the organization the level of development of a country. Financial stability is important to project success. When there are risks for the project, a strong risk management plan needs to be in place.
- **Security:** International acts of terror are a reality today. Crime is another issue. Risk management plays an important role here as well when a project is being implemented in a foreign country. Sometimes

project managers experience ethical issues related to security. Two most frequent ethical issues are bribery and corruption. Security precautions need to be in place to keep employees safe.

- **Geography:** The planning of the project in a different country needs to take into consideration the geography of the country. The organization needs to look at the weather (rain, freezing temperatures, very hot temperatures, jungles, deserts). Sleep issues can arise for employees with too much daylight, or not enough day light. Extreme weather can play havoc with equipment as well.

- **Culture:** All project employees visiting another country must respect the values, customs, traditions, social standards, and beliefs of the people of the foreign country. If these are not observed by the team, there is a likelihood of failure. Language differences can become a problem. If a project manager and team do not speak the foreign language, it is difficult to communicate; and words get lost in translation. Sometimes, project managers will work with people from the foreign country. Language and cultural skills are necessary for success. Culture affects all human resources areas including recruitment and selection, training, and compensation.

- **Infrastructure:** This pertains to the foreign country's capacity to supply the services that are necessary for the project. Some of these could include telecommunication, power, technology, transportation systems, and education facilities.

HR in Focus: Human Resources and Environmental Factors

Given the challenges with international projects, it is important to ensure the employees are well prepared for the assignment. Human Resources would be involved at the strategic level along with stakeholders to review the environmental factors before a project was selected. Stakeholders are the people involved in the project and have a stake in the outcome of the project. They have authority and influence over the project. They include Presidents, executive teams, financial personnel, project manager, project team members, customer, resource managers, and human resources. They may provide training for the stakeholders in the environmental factors before the selection is made. When the project team is hired, again, the Human Resources Specialists need

to convey (generally through training) the environmental factors that will affect the foreign assignment of the project.

10.3. SELECTION OF PROJECTS

Project Selection

Stakeholders need to weigh the environmental factors when considering the selection of a project. If the Project Manager and team are already hired, they would be involved in this process.

The environmental factors are the criteria for the project. Each criterion is weighted based on the risk factor. The scores are assigned values. The organization would decide of low, medium, high risk. Example: Total Risk Rating: 10 = low risk, 20 = medium risk, 30+ = high risk. Once the risk rating is calculated, the stakeholders decide to go forward with the project or terminate it.

Example: Risk Matrix For Selection of Foreign Project

Risk Matrix for Selection of Foreign Project (2 examples of projects are compared). Corporate office is in Canada.

	Political	Cultural Differences	Education	Technology	Risk Rating
Philippines	4	5	4	4	320
Iceland	2	1	1	1	2

Risk Rating Scale: 1-very low, 2-low, 3-adequate, 4-high, 5-extremely high.

The stakeholders would choose not to complete the project in the Philippines. They would be forward with the project in Iceland.

10.4. SELECTION OF EMPLOYEES (EXPATRIATES)

If Project Managers and the team are not selected with the skills and experience necessary for an international project, the costs are high. The project, itself, can experience problems, and the reputation of the organization can suffer. Human Resources develops special screening processes to ensure a successful project, and ensure the team are successful. The term **expatriates** is used for employees leaving their home country to work in a host country. They are sometimes called **expats** for short.

HR in Focus: Selection of Expatriates

HR looks at a group of characteristics that each team member needs to possess for a foreign country assignment. Sometimes, employees are selected that have prior experience with foreign country projects, prior overseas travel, are in good health (emotionally, mentally, physically), speak or understand the foreign country's language, or even have a connection through heritage. However, often, the best people for the project are highly skilled, competent, experienced employees with none of the above characteristics.

The Human Resources Specialists would first identify the criteria for the staffing of the project. Several factors are considered:

- **Technical:** Technical and managerial skills are critical.
- **Soft skills**: Skills that include psychological readiness, international experience, language of the foreign country, ability to provide training to others.
- **Competence:** Cross-cultural abilities that help the person adapt in new surroundings. In other words, can perform successfully in a different culture. Some of these may include empathy, diplomacy, language ability, good attitude, adaptable, flexible. They must also have emotional stability, and an open mind about different cultures.

- **Ability to adjust to foreign country**: Ability to adapt and transition to different cultures. There are 4 phases: (sometimes called culture shock or culture adjustment). This is discussed later in the chapter.

It is important that Human Resources understand the 4 phases of Culture Shock; and support people through the stages. Understanding culture shock helps ensure they have an enriched experience while working on the international project.

Family Moving with Project Team

Sometimes, for longer term projects, the family moves with the expatriate. The family, especially the spouse or partner, carry a heavy weight with the move. They, too, will leave family and friends. If they work outside the home, they will need to leave their job and their colleagues. Children's education gets interrupted. The family is a significant factor when considering an expatriate assignment to a project in a different country.

It is important for Human Resources to work with the Project Manager and team, as well as the family. Human Resources supports the family unit by helping the spouse or partner find a new job, find housing comparable to the one they left, assist in finding appropriate schools for the children, and providing transportation. This is a time-consuming task for Human Resources as they not only work with the Project Manager and the team, but the entire family unit. However, it is a critical step in guaranteeing a successful project.

10.5. A LOOK AT CROSS-CULTURAL CONDITIONS AND HUMAN RESOURCES

Women pray during the Hindu festival of Karva Chauth inside a temple in the northern Indian city of Chandigarh by Ajay Verma CC-BY-NC-SA

It is important to take a closer look at cross-cultural conditions as it relates to projects and how it aligns with human resources. **Culture** affects all aspects of life within a specific population of people including beliefs, values, the norms of the society, and its people's customs. It even relates to how a society dresses, the manners used by its people, their rituals, religions, and the language spoken and written. A culture may be an entire country, a region within the country, ethnic groups, and religious groups. Culture is without borders.

Examples of Cultural Differences

Canadian culture advocates equality between men and women, peace and safety for its citizens, being polite and friendly, and the love of hockey. Canada is a widely diverse country with many ethnic groups. It is a country of dual nationality, French Canada and English Canada, which dominates political and societal issues. It is a constitutional monarchy which means the British Monarch is the head of state, although the Monarchy has limited powers. Maple syrup and pancakes are some of the Canadian's favourite foods (Commisceo, 2022a).

Indian culture: where its people value religion, joint family structures (entire family through generations live together), marriage and arranged marriage, symbols such as fasting, and festivals for every season. Architecture is important as symbols of culture and religion. They have a relaxed approach to timekeeping and punctuality. People remove their shoes before entering a home. Indian food many not require utensils. Southern food tends to be spicier than food from the North. Indian clothing made with colourful silks are worn that has origins of Ancient India (Zimmermann, K.A. & Gordon, J. ,2022).

Swedish culture: is very egalitarian meaning all people are equal regardless of gender, race, religion, or age. They have one of the best rights for children in the world and offer dual parental leave from work for 18 months. They are humble and believe boasting is not acceptable. They are great listeners, they speak softly and calmly, do not show emotions publicly, are not excessive or "flashy", and competition is not encouraged (Commisceo, 2022c).

Italian culture enjoy patriotism. In other words, people remain a geographic expression. This means they identify with their own home region, rather than to the country. Being an old country, they have assimilated many other cultures into their own such as French, Austrian, Greeks, Arabs, Albanians, and Africans. Food is important and maintains ties among friends and family members. There are social classes, and big differences between the rich and poor. There are class boundaries in what people eat, what they wear, and the amount of leisure time spent. Prestige is important. Soccer is important to everyone. They tend to show outward emotion in public. They like to embrace and kiss when greeting people (Commisceo, 2022b).

THINK!

If you were leaving your home country to work/live in a host country, what do you think would be the most challenging thing for you? Why? How would you overcome this?

National cultures provide a keystone for helping human resources to understand different values, habits, customs, and etiquette. Project teams need to not only be aware of different cultural aspects, but they also need to adjust to them when working abroad.

While working on multicultural projects, project managers can have difficulties with ethics of certain cultures. Human resources can serve as a sounding board to work through these ethical dilemmas. It is important that human resources specialists' study international cultures to gain a deeper understanding and provide support the project managers and the team. Cultural diversity is important to more productive and higher performance. Also, it offers an opportunity for personal and professional growth.

Preparing expatriates for assignments abroad is no easy task. It is almost impossible to understand all the differences in all the countries in the world. Still, the effort needs to be made to bridge the gap between cultures.

Human Resources may offer cultural briefings with project managers and teams. They may provide cross-cultural training, bring in trainers to teach the team who have or do live in the foreign country, and send the team to the foreign country for visits prior to the project starting. Regardless, the project team and the project need to be carried out in a way that honours the foreign country's customs, traditions, and values.

10.6. CULTURE SHOCK AND COPING

Culture shock is a feeling of uncertainty and being disoriented when a person is in an unfamiliar way of life in a different culture than their own culture. It is caused by a number of things. These could include a greeting (hand shake versus bowing), different food, language differences, finding their way around in a new city/town, or not following the local customs. Often a person may feel a sense of frustration, anxiety and be confused. Many people are homesick.

There are many ways to deal with stress management related to culture shock. The success is depending on the person, the situation and the environment. Many people engage in social activities, physical activities, and spiritual/religious activities.

The 4 phases of Culture Shock

According to Participate Learning (2018) the 4 phases of culture shock are :

Honeymoon: The person(s) feels overwhelmed and positive. They are excited about the new challenge in a different culture. They want to experience all the new things: food, the people, the language. The person(s) feels this has been a great decision and a great adventure. Each person is different in their response. However, everyone is affected to some degree.

Frustration: The person(s) feel fatigue because they do not understand the signs, gestures, language, and communication styles. It may be difficult to order food, shop for food, not be able to follow the transportation system. Some people begin to feel homesick and become depressed.

Adjustment: Over time, the person(s) begins to become familiar with their surroundings. They are more comfortable with the people, culture, language, and food.

Acceptance: After some weeks or months of dealing with frustration and emotional struggles, the person(s) begins to adapt and accept their new culture. They may not understand everything about the culture, however, function within it in a healthy way. They find and use resources to cope. They feel more at ease and accepted by the new community.
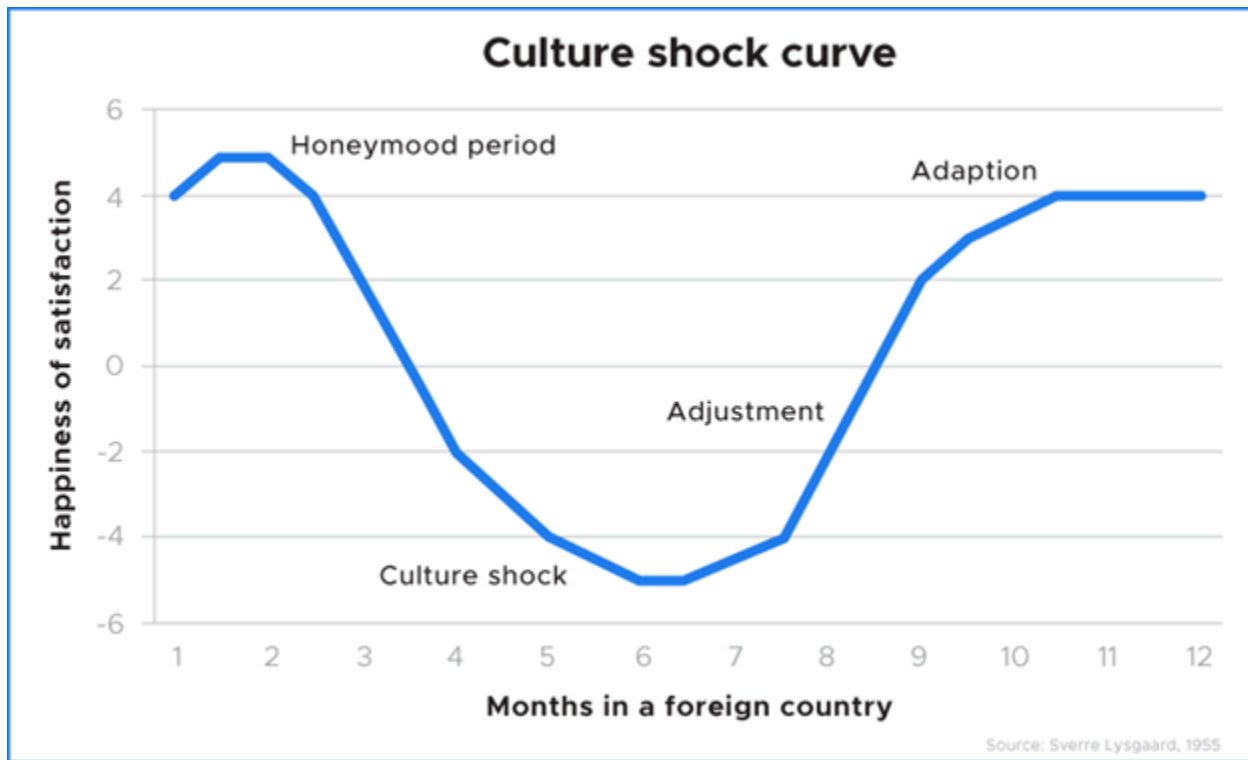
Culture shock curve

Figure 10-1: Culture Shock Curve (Lysgarrd, 1955)

Some would suggest there is a fifth stage called re-entry shock. This happens to people when they return to their home country. They need to re-adjust again.

Dealing with Culture Shock

Human Resources is engaged in many different coping strategies when dealing with the project team abroad. Success depends on the individual and the specific situation. Human Resources may help the team set goals including getting physical exercise, practicing meditation, and writing in a journal. They may develop a plan with the team to immerse themselves in the culture for a while, and then draw back to create stability with things that are familiar to them. Examples for Canadians in Mexico might be going to a movie theater where only Spanish is spoken a few times, and then visit an English-speaking theater a few times. Eat in authentic Mexican restaurants, and then find a restaurant that cooks Canadian food.

The first step Human Resources wants to impart to the project team is that they need to acknowledge that they will experience culture shock. Then, they help them modify their behaviours accordingly. Also, they may provide support to lower the team's expectations of "fitting into" the culture too soon. They encourage the team to focus their attention on the priorities first and reward themselves with small achievements. Over time, most people start to live a more normal life in the foreign country. Most people move to the adjustment phase and then to acceptance.

Other considerations are to instill in the team that while they are abroad, initially, they may not perform as efficiently. Therefore, good stress management techniques are important for the project team. They want to assure the team they are not alone; and the entire team is experiencing the same emotions. Human Resources could work with the entire project team to manage their stress through group workshops, individually, or both.

In these situations, and over time, if a person is still not reaching the adjustment or acceptance phase, this becomes more serious for the team member and the project. If a person is still experiencing stress from the move to a foreign country, they may need professional counselling. Human Resources can arrange counselling through wellness programs. It is important that Human Resources be aware of the person's emotional health and watch for severe signs such as drug abuse, emotional breakdowns, and increased alcohol use. Constant contact with the project team is a way to observe the changes. Regular chats and meetings with the project team allow Human Resources to monitor the team's progress in adjustment and acceptance to the new environment.

Some people experience the same culture shock when they return to their home country. Human Resources needs to ensure a healthy and stable return to the team's previous jobs. Some team members may have less responsibility upon return, others might become bored, or some may not have a job to return to when returning. Perhaps the organization has changed since their departure, and the team find it difficult to adapt to the organizational changes. While others often receive financial perks for accepting assignments abroad, and those perks disappear upon their return. The team may need to adjust to a lower standard of living. Regardless of the return experience, human resources need to work with the project team until they feel effective in their job upon return.

Think!

As a Human Resources Specialist, what do you think the first thing is that you would want to address with an expat once they have been hired for an international assignment? Why would you choose this?

10.7. TRAINING INTERNATIONAL PROJECT TEAMS

When a project team fails abroad, it is a huge cost to the organization. Training international project teams is important to the overall health of the team, and the success of the project. The training provided by Human Resources covers a wide range depending on the length of the project.

This type of training could be called **cultural fluency** which is the degree of understanding and interaction required with people from different cultures and backgrounds. The longer the project team is in the foreign country, the longer and more in-depth the training will be. The length of the project is not the only consideration. The training depth could be more extensive if the foreign country is more diverse that the home country. Example: A Canadian would require less cultural fluency to complete a project in Australia than in China.

Types of Training for International Project Teams

Pre-departure training helps the project team adjust to the new demands of working and living in a foreign country. At minimum, it needs to include understanding of the host country's eating habits, family life, etiquette, equality standards, education, religion, dress codes, and holidays. Human Resources would provide mini-workshops that cover the topics of importance to provide an essential understanding.

The Project Manager may need to perform training in the foreign country to other company representatives. In this case, Human Resources would offer train-the-trainer for the Project Manager before the assignment. The Project Manager then becomes a person who can transfer knowledge to other people.

Longer term international projects would require further training. Human Resources may provide the training or hire consultants to provide training in the history and culture of the foreign country, language training, and cross-cultural training. Human Resources may arrange for the team to visit the foreign country and stay with host families, or at the very least in hotels where they are able to immerse themselves in the local community.

Language training for short and long term projects is important. Project teams need to be able to speak, write and listen in basic terms to the foreign language. This is considered respectful. In some situations, translators could be hired to help with communication. In either case, Human Resources would be responsible to contract out or hire the translators to teach the basic language skills or provide translation at the host country. For longer term projects, the team would complete more extensive language training to be able to speak semi fluently.

- **During the assignment,** human resources need to provide ongoing supports for individual development, and team development. This project team is generally a high-performing group of employees who are selected for specialized projects to increase or enhance some type of international operation. This team needs to be guided, supported and be in constant communication with human resources to assure their performance and well-being are being sustained. Ongoing communication between the organization's employee and human resources requires regular and routine check ins, either formal or informal.
- **Re-entry or returning** from the foreign country has its own set of challenges. Often called repatriates, people returning to their home country from a foreign country, experience culture shock or sometimes referred to as re-entry shock. It is similar to culture shock only in the reverse. The project team will prepare to return to the home country with help from the human resources team. However, adjustment can be difficult. Repatriation is the final step in the international project management assignment. A well-planned repatriation plan affects the successful closure of a project. Human Resources plans an orientation for the returning project team. This may include a reflection of the experience, re-introduction to the organization and discussing changes, and chatting about next steps.

Some organizations offer individual counselling as well as group counselling either provided by human resources, or contract out the service to consultant's skilled in repatriation. In this case, human resources would facilitate the process. These steps would be considered **debriefing sessions**. This enables the project team to debrief and have reality checks with 'where they are at in their return', financially, emotionally, mentally, and physically.

> **Other fundamental logistics are put in place for the project team that include:**
>
> 1. Relocation to home, or a new home
> 2. Financial and tax assistance (loss of bonuses, perks, tax changes)
> 3. Support to form or re-establish social and professional networks
> 4. Career counselling
> 5. Reverse culture shock (re-entry shock) for project team (and families)
> 6. Assistance with finding schools for children
> 7. Workshops to discuss organization changes
> 8. Stress management training

All the above would be set up and delivered or contracted to specialists to support the repatriation of the team.

Some project teams are part of multinational project teams and will move on to a different county. In this case, the training begins all over again.

Training and development play a crucial role in retaining high-performing individual team members, and International Project Managers. Regardless of its complexity, all training for these employees ensures a highly trained project team to meet the increasing need of international projects.

10.9. KEY TERMS

Ability to Adjust to Foreign Country: Ability to adapt and transition to different cultures. There are 4 phases: (sometimes called culture shock or culture adjustment). 10.4

Acceptance: After some weeks or months of dealing with frustration and emotional struggles, the person(s) begins to adapt and accept their new culture. They may not understand everything about the culture, however, function within it in a healthy way. They find and use resources to cope. They feel more at ease and accepted by the new community. 10.6

Adjustment: Over time, the person(s) begins to become familiar with their surroundings. They are more comfortable with the people, culture, language, and food. 10.6

Competence: Cross-cultural abilities that help the person adapt to new surroundings. In other words, can perform successfully in a different culture. Some of these may include empathy, diplomacy, language ability, good attitude, adaptability, flexible. They must also have emotional stability and an open mind about different cultures. 10.4

Cultural Fluency: The degree of understanding and interaction required with people from different cultures and backgrounds. 10.7

Culture shock is a feeling of uncertainty and being disoriented when a person is in an unfamiliar way of life in a different culture than their own culture. It is caused by a number of things. 10.6

Debriefing Sessions: This enables the project team to debrief and have reality checks with "where they are at in their return", financially, emotionally, mentally, and physically. 10.7

During The Assignment: Human resources need to provide ongoing support for individual development, and team development. 10.7

Expatriates: These are employees who have been hired to work temporarily in a foreign country. They are also called international assignees. 10.2

Expatriates or Expats: Is used for employees leaving their home country to work in a host country. 10.4

Frustration: The person(s) feel fatigued because they do not understand the signs, gestures, language, and communication styles. It may be difficult to order food, shop for food, not be able to follow the transportation system. Some people begin to feel homesick and become depressed. 10.6

Home Country and Home Country Nationals: Country where the corporate headquarters is located. The project manager and team would leave the home country for an international project. 10.2

Honeymoon: The person(s) feels overwhelmed and positive. They are excited about the new challenge in a different culture. They want to experience all the new things: food, the people, the language. The person(s) feels this has been a great decision and a great adventure. Each person is different in their response. However, everyone is affected to some degree..10.6

Host Country and Host Country Nationals: Refers to a foreign country where the corporation invests. The project manager and team relocate to the host country (foreign country) to complete the project. Host country nationals are project employees who are native to the country, and work and live in their home country. 10.2

International Projects: These are different from domestic projects because of the cultural, regulatory, social, geographical, reporting, and infrastructural diversity. 10.2

Pre-Departure Training: Helps the project team adjust to the new demands of working and living in a foreign country. 10.7

Re-Entry or Returning: From the foreign country has its own set of challenges. Often called repatriates, people returning to their home country from a foreign country, experience culture shock or are sometimes referred to as re-entry shock. 10.7

Soft Skills: Skills that include psychological readiness, international experience, the language of the foreign country, ability to provide training to others. 10.4

Technical: Technical and managerial skills are critical. 10.4

Third Country National: Project manager and team who are not from the home country or the host country. However, work for the corporation. 10.2

10.10. CHAPTER SUMMARY

Domestic and international projects differ because of the cultural diversity needed to work in different countries. Therefore, human resources involvement with an international project team is more exhaustive. When making decisions about selecting projects and the selection of the project team, all stakeholders need to be aware of the six environmental factors that will affect the project and the team. Staffing requirements for international projects are critical to the success of the project, and the well-being of the team. Special criteria for international teams is established prior to hiring. Families need to be considered as part of the success of the project if they are moving with the team members to the foreign country. Cross-cultural awareness and training is important for the team members.

Culture shock is natural for all team members after leaving their home country. It may be of varying degrees. However, they all will go through the four stages. These stages are monitored closely by human resources to ensure they move through the phases successfully. Training is crucial for all team members whether a short term project or a longer term project. All team members need to have some level of cultural fluency. Training is offered to team members before they leave for their home country, is provided ongoing during the international assignment, and again, when the team returns as they will experience re-entry shock. International projects are complex for both human resources and the team. With a well-planned strategy, the project will be successful, and the team will have an enriched experience.

10.11. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed **by the Students** on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used **by the Teachers** as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. Form a **small group**. Do you believe that outsiders (expatriates) working in the local community of another country can influence an international project? Why? Why not?
2. Form a **small group**. Discuss the importance of honouring a country's values, beliefs, and customs. Discuss what value it will bring to an international project.
3. (may work in a class that has international students). **Individually**, find someone who has moved from another country. The teacher may assign (pair up) students from abroad. This could be used as an assignment too. Interview this person. Ask them: 1. How they experienced culture shock? 2. What did they learn about culture shock? 3. What advice would they give someone else who was moving from their home country to a new country?
4. Form a **group of 4**. **Individually**, Research: Spain, India, Brazil, and Australia. What are the customs and beliefs of each country? Discuss with your group members what you discovered. How could you, as a Human Resources Specialist, prepare an expatriate for each of these countries. Would the preparation be the same? Or different?
5. **Individually,** select a county that might be dangerous for expatriates. Look up the travel advisory for this country. Discuss with the **larger group** in class the safety issues you discovered.

6. Form a **small group**. Human Resources is involved in training at all stages of an international project. What type of training would you design for expatriates Pre-Departure? During the project? Upon closure of the project?

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. How does the environment affect projects implemented at an international level?
2. What is culture shock? What are the stages? How can Human Resources support or reduce the negative aspects of culture shock?
3. How can Human Resources support international expatriates prepare for international assignments?
4. List the differences between domestic and international involvement with employees on projects?
5. How do Human Resources Specialists go about hiring expatriates for international projects? What skills, experience, talents do they look for?
6. Sometimes it is best to hire team members locally for international projects. Why would this be the best decision for the project in some cases? When would it not be a good choice to hire locally?

CHAPTER 11 – AGILE PM

Chapter Outline

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11.1. LEARNING OUTCOMES

Learning Outcomes

By the end of this chapter, you should be able to:

1. Explain the difference between traditional and Agile project management.
2. Explain fundamentals of Agile software development, including sprints and product stories.
3. Explain Agile project scope.
4. Discuss issues related to sustainable procurement in Agile projects.
5. Explain the role of self-organizing teams in Agile.
6. Describe challenges related to resource allocation in Agile.

11.2. DEFINITION

As described in chapter 1, Agile Project Management is iterative (repetitive) short processes focused on customer feedback and satisfaction. In such processes, the customer is allowed to verify that the features are being developed as they want, and suggest improvements. It also offers the customer the opportunity to release the product/service or software earlier than originally planned if the version presented at the end of a cycle is deemed good enough.

This is one of the many reasons Agile is favoured for software development or projects or exploratory projects. Agile products/services can be brought to market quickly. Then, continuously improved with subsequent updates. For many years, some "traditional" and Agile project managers viewed each other with a certain amount of skepticism about the value of each other's methods. However, in recent years, project managers have seen the value of the techniques used in both of these two "camps" of project management. As a result, it is not unusual to see the design of a building using Agile techniques, and software development projects conducting a traditional risk analysis.

Figure 11-1: Iterative Process

In the world of software development, a related methodology, Agile, is becoming increasingly popular. Although Agile had its roots in software development, companies have also expanded its use into a variety of project types, including product development, capital projects, and service projects.
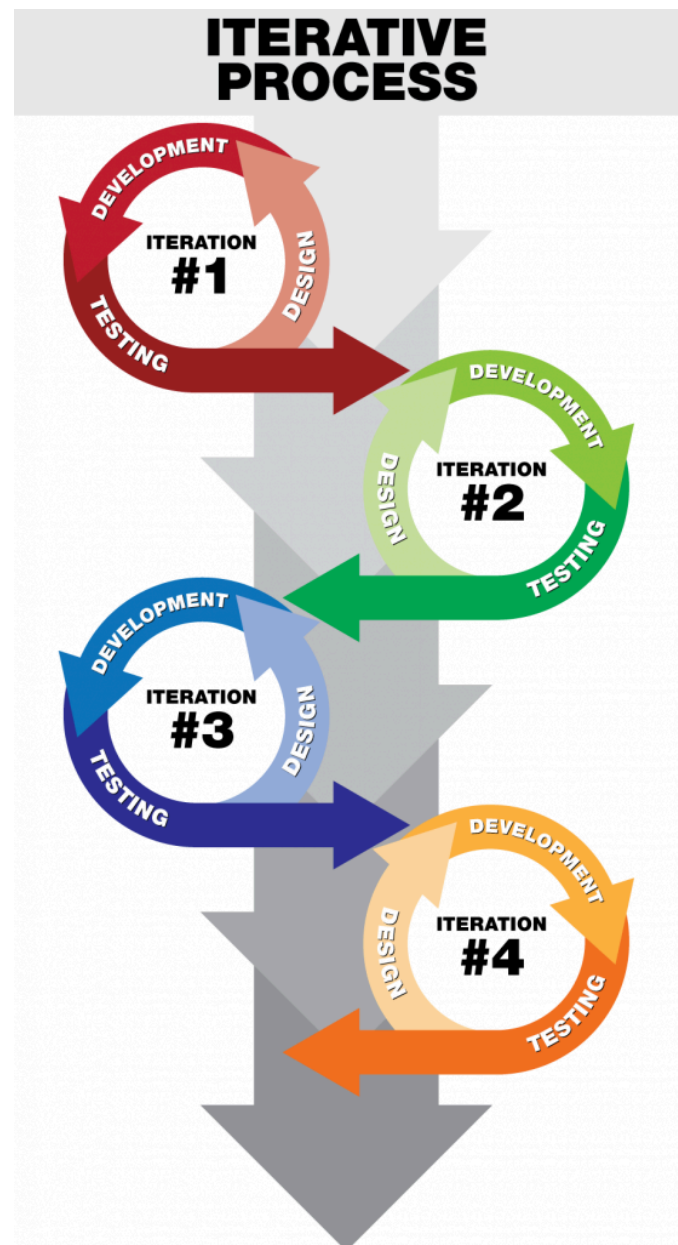
The many flavours of Agile include:

- **Agile Scrum**: Designed for completing complex projects, as described on ScrumGuides, Scrum is the most widely used form of Agile. When people talk about Agile, they are usually talking about Scrum.
- **Extreme Programming**: Emphasizes short development cycles with frequent releases of software for evaluation, after which a new development cycle begins. You can read more about extreme programming at "Extreme Programming: A Gentle Introduction"
- **Rapid Product Development**: Emphasizes "simultaneous, coordinated activities by multi-functional teams, striving for smooth transitions between phases for the most rapid time-to-market" (ORC International: Expert Advisory Services, n.d.).

All forms of Agile emphasize an **iterative approach** (*figure 11-1*) to product development, with the project specifications evolving along with the customer's notion of the software requirements. A project starts with a conversation between the developer and the product owner about what the customer wants the software or product/service to do. In Scrum terminology, the customer is the product owner, and the features that the product owner wants are known as product stories.

With a description of the product stories in hand, the Agile developer gets to work, creating pieces of the project that address individual product stories. After a one- to two-week cycle of development (known in **Scrum** as a sprint) the developer hands off the new software/piece of the project to the product owner. They can try it out and make suggestions for improvement.

Anyone who has owned a cell phone knows that updates that come out are often full of "bugs." Some things just do not work. The customer is relied upon to send messages to the Troubleshooting blogs or customer service with issues. The company relies on these customers to share the issues. They, then, go back to development and attempt to fix the "bugs." This is called agile project management. There are new features added to the phone. Customers complain about issues. The development team goes back to a scrum, identifies the issues and fixes them.

The developer then begins another sprint, incorporating those suggestions into a new iteration. After every sprint, the product owner has the chance to redirect the team to new product stories, or to revise the team's understanding of the existing product stories. Through these repeated interactions, which provide fast, focused feedback, the developer and the product owner zero in on an application that does what the product owner needs it to do. If time and money are tight, as they often are, the product owner has regular opportunities to make choices about which product stories are the most important, and which can be dispensed with if necessary.

Agile development is essentially a learning process through which the developer and the product owner create a shared understanding of how many features they can create, given the allotted time and money. It's very much a living order approach to project management, in that the early stages involve some ambiguity and many unknowns. According to Robert Merrill (2017), a Senior Business Analyst at the University of Wisconsin-Madison, and an Agile coach, "Agile is a way to manage projects in the face of unpredictability and

constraints—often very rigid time and budget constraints. The fast feedback allows the team to create the best possible software within the given constraints" (Merrill, 2017).

11.3. SCOPE IN AGILE

Robert Merrill (2017), a Senior Business Analyst at the University of Wisconsin-Madison, and an Agile coach, advises taking a three-part approach to scope on Agile projects, determining the following:

1. **Minimum viable features**—If we can't deliver this much within schedule and budget constraints, the project should be cancelled.
2. **Features we can't think about now**—Although these might be featuring the client wants, they are not something we can create, and so we can't waste time and mental energy thinking about them.
3. **Everything else**—This is our unpredictability buffer, which we maintain to protect schedule and budget.

Note that these categories are not frozen; they can be changed during each iteration planning cycle. Scope in an Agile project is variable, but carefully and visibly managed.

The Agile Perspective on Scope Creep

Agile welcomes changes to product requirements even late in the development process. Indeed, the founders of Agile made an openness to late-breaking changes, which is one of their Principles Behind the Agile Manifesto.

In this environment of constant iterations and revisions, Agile developers have a different perspective on scope creep (product owner changes the requirements, and something new gets added). A blog post for OptiSol (2015) spells out some ways to identify what is and isn't scope creep in Agile. Making changes "before the team has started to think about the details" would not be considered scope creep in Agile, nor would replacing one feature with another, as long as the new feature doesn't add new work for the team. However, swapping a new feature for a feature that is already complete is definitely a form of scope creep, because it creates new work. The same is true of replacing a small feature with something more complex (OptiSol, 2015).

11.4. AGILE PROCUREMENT

Agile procurement is a collaborative approach that focuses on outcomes. The government and organizations works together to design procurements in an iterative approach to get results. Changes are welcomed, the product is delivered frequently, and people work together throughout the project. It is a new approach that is dynamic in nature. Bottom line is that it is collaborative, less strict than traditional project management, and is less conforming to the rules.

Robert Merrill points out that "many procurement processes naturally follow or even mandate a negotiation-based approach that is directly at odds with the kind of living order thinking found in the Agile Manifesto, which emphasizes 'collaboration over contract negotiation'" (pers. comm., June 15, 2018). Nevertheless, some organizations and governments are beginning to rethink their procurement processes in hopes of making them more Agile and, as a result, less costly.

11.5. AGILE TEAMS

Agile software development, as an example, was founded as a way to help team members work together more efficiently and companionably. In fact, three of the twelve founding principles of the methodology focus on building better teams:

- It was believed the most efficient and effective method of conveying information to and within a development team is face-to-face conversation. However, there is a trend to using virtual Agile team which is equally effective.
- The best architectures, requirements, and designs emerge from self-organizing teams.
- At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behaviour accordingly (Beck et al., 2001).

Self-Organizing Teams

The term "self-organizing teams" is especially important to Agile. Nitin Mittal (2013), writing for Scrum Alliance, describes a **self-organizing team** as a "group of motivated individuals, who work together toward a goal, have the ability and authority to take decisions, and readily adapt to changing demands".

But that doesn't mean Agile teams have no leaders. On the contrary, the Agile development process relies on the team leader (known as the ScrumMaster in Scrum) to guide the team, ideally by achieving "a subtle balance between command and influence" (Cohn, 2010). Sometimes that means moving problematic team members to new roles, where they can be more effective, or possibly adding a new team member who has the right personality to interact with the problematic team member. In a blog for Mountain Goat Software, Mike Cohn (2010) puts it like this:

> There is more to leading a self-organizing team than buying pizza and getting out of the way. Leaders influence teams in subtle and indirect ways. It is impossible for a leader to accurately predict how a team will respond to a change, whether that change is a different team composition, new standards of performance, a vicarious selection system, or so on. Leaders do not have all the answers. What they do have is the ability to agitate teams (and the organization itself) toward becoming more agile.

Human Resources and Self-Organizing Teams

Self-organizing teams tend to make decisions among themselves who will do what on the project. This team has cross functional skills. There are typically no designated roles or job titles. The team takes on different

tasks as needed and the nature of the work. They are all responsible for the outcome of the project. So, how would HR fit in?

Despite the structure of the organization, what the team is proposing to complete, HR is still responsible, along with the Project Manager to recruit and select the team based on the skill sets required for the project. There are still questions that need answered to help the team organize. Human Resources Specialists could be involved in a meeting/workshop to help the team self-organize.

Questions to be answered by the Self-Organizing Team:

1. Who is going to be responsible for getting feedback, and for giving feedback?
2. Who is responsible to ensure the team is learning and growing?
3. Who is responsible to ensure the team is following a learning culture?
4. Is it necessary to have HR involved in the team? At the beginning of the project? During the project? At Closure of the project?
5. How will the self-organizing team handle feedback all on their own?

HR in Focus: Self-Organizing Teams

Depending on how the questions above are answered, the team may choose to involve Human Resources related to some of the functions:

1. Help the team learn about their own strengths and weaknesses through assessments and personality tests.
2. Be a champion of the project and assist in motivation of the team; and train the team in how to motivate each other.
3. Help the team identify gaps in the team or their weak points, and how they can improve.
4. Train the team in how to provide feedback through small talk, team events, fun activities, listening to each other, conduct retrospectives.

5. Support the team in providing 360 degree feedback and peer reviews, or teach them to use these tools for themselves.

The self-organizing team can move forward with skills and learning and decide who will perform each function. Moving into the project, HR remains an important part of the project in a hands off manner by encouraging and supporting a culture of feedback. At any time, the team needs more support, Human Resources steps in to help with communication, re-training, or to help the team make constructive changes. In some cases, an Human Resources Specialist may become part of the self-organizing team.

11.6. ROLES AND RESPONSIBILITIES

Although self-organizing teams decide who will do what work, there are specific roles in the scrum process.

Roles and Responsibilities in the Scrum Process

Product Owner: Represents the customer and acts on behalf of the customer. This person could be a manager from within the company, or a manager from the customer's company. Their role is typical of any manager which is to ensure the outcome of the project is successful. The manager may work with the team to make lists of the features required. They develop the goals. The have the authority to make changes and set priorities at the end of each sprint. They can accept or reject any of the changes. As well, they make the decision when the project is complete.

Development Team: A group of people who work together to deliver the product/service. They have cross functional skills and are the group who accomplishes the sprint goals. They build the product, or design the service. All the necessary expertise is within the team to complete the scrum. They have a high degree of accountability, and at the same time a high level of autonomy. They are self-organizing and usually small. There is a collective responsibility of developing, testing and finishing the project. They do not choose a lead because all the decisions are collectively made by the team.

Scrum Master: A person who helps the team learn and apply the Scrum process. They do whatever they can to help the team meet their goals. They also are invested in the Product Owner, and ensure this person is kept up to date and involved. The Scrum Master may or may not be a manager. They serve the team. They remove obstacles and protect the team from any outside interference. They guide the team with the Scrum process. Their role is to coach, guide and educate. They help to motivate and encourage the team.
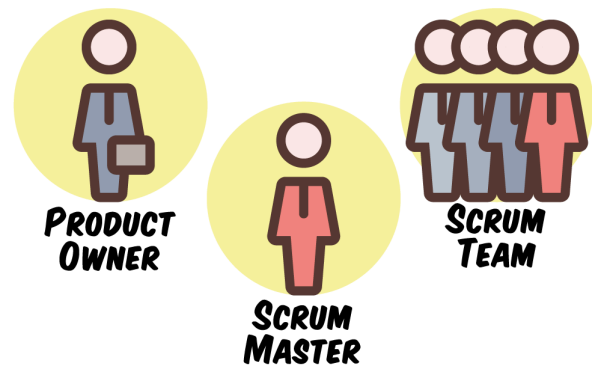
HR in Focus: Human Resources and Scrum in Motion

The Human Resources Specialist would design a roles and responsibilities document (similar to a job description, however, must less detailed). They would be involved in the recruitment and selection of the Scrum Master and the Development Team. They would assist the team by training them in the Scrum Development Process. Once the team is training, HR may remove themselves from the project. Or, if the team chooses, may ask the HR Specialist to be involved where they believe they may be of value.

11.7. SCRUM PROCESS AND MEETINGS

We live in a fast-paced world. It is highly competitive in the world economy. Organizations need to move with speed and be flexible. Hence the need to shift away, somewhat, from traditional project management. The scrum process is considered a holistic approach, similar to the game of rugby. It is a faster way to develop new products and services. It tends to be creative and market driven. Traditional project management is sequential. In the scrum approach the steps are segmented where the customer is highly involved, and several people are involved with varying skills at different times.

The hand-picked team, decided by Human Resources and other stakeholders, is a multidisciplinary team. This team, self-organized, holds a series of meetings to work through the project. The project goes through several phases. The phases may even overlap sometimes. The team can stay in close touch and respond quickly. The project is a continual trial and error process through meetings and development.

Q HR in Focus: Human Resources and Training in Scrum Meetings

With the new approach being popular, Human Resources would be training project managers and team members in the foundations of Agile Management and the Scrum process. One of the best ways to train Scrum Meetings is through lectures of the process, videos "mirroring" a Scrum Meeting; and role plays where the team can participate in a mock Scrum Meeting.

Scrum Meetings

Release Meeting: Establish the goals and broad plan for the project. The team decides how the project will be completed and the expectations. The meeting may include risks, features to be developed and **backlog.** A backlog is the amount of work a member commits in a certain amount of time before the next sprint. It is a list of everything that needs completed that is distributed to the team.

Sprint Planning: At the beginning of each sprint, the Product Owner and the team negotiate where to start, which features are most important to least important, and who is responsible for each component. They also decide on how long it will take to complete the sprint. The team works with the team to break down the pieces of the project. Everything is recorded. The goals cannot be changed once the sprint is over.

Daily Scrum: This is the core of Agile project management. There are daily meetings which are called "scrum." Every day, at the same time, in the same place, the team meets (usually standing and sometimes in a circle) and take turns answering important questions:

1. What happened since we last met?
2. What are we going to be doing between now and the next Scrum?
3. Are there any obstacles, and if so, what are they?

These meetings only last 15-20 minutes. Everything is written down on a whiteboard, and recorded later. Meetings must start on time, it is limited in time, and only the core questions are answered. After the meeting, some of the members may meet to work out the obstacles. The purpose of the daily scrum meetings is to

quickly find out what everyone has done since yesterday, what you are going to be doing between today and tomorrow, and what could stop you from doing what you are doing. The team decides what they will do, not the Scrum Manager. The Scrum Master ensures the logistics of the meeting are handled.

Sprint Review: At the end of the scrum meeting, if there is a sample of the product/service to "show and tell", the members show their specific work. They ask and receive feedback related to changes, improvements; and are praised for their work to date by the team. The product owner may approve work done to date.

Sprint Retrospective: The team reflect on how well they think the last sprint went and set up an action plan to improve, if necessary. The Scrum Master facilitates the meeting. The team is always working toward continuous improvement of the project.

11.8. ESTIMATING RESOURCES

Example of Estimating Resources in a Software Agile Management Project

In theory, resource management in Agile should be simple. After all, in Agile, resources and time are usually fixed. The team has a fixed budget, a fixed number of programmers (if software), and a fixed amount of time to create working software. The variable in all this is the software itself. Throughout the cycle of sprints—as the customer tries out new software, and requests alterations—the software features can change dramatically. When the budget is exhausted, the project ends. However, because Agile developers create working software bit-by-bit, the customer is assured of having at least some usable features by that point.

So again, resource management in Agile should be simple—in theory. But in reality, the key resource in software development is the people who create the software. In addition, where people are concerned, things rarely go as planned. Some programmers work faster than others, and individuals can vary tremendously in their output from one week to the next, especially when dealing with personal problems, like illness or family conflict. Robert Merrill (2017), a Senior Business Analyst at the University of Wisconsin-Madison, and an Agile coach, puts it like this:

> Agile is more about people than computers. People are not interchangeable; they have good days and bad days. They get along or they don't. Cognitive abilities vary tremendously. If you aren't successful in helping teams' gel and stay focused, you're going to spend lots of extra money, or the project may blow up. You need to get the teams right (Merrill, 2017).

As Gareth Saunders (2015) explains in a thoughtful blog post on the topic, this is all complicated by the amount of "business as usual" tasks that developers typically have to fit into their schedules on top of their work on specific Agile projects. This includes tasks like "admin, team communications, support, mentoring, meetings, and consultancy—offering our input on projects managed by other teams" (Saunders, 2015). As a result, as a project manager, Saunders (2015) struggles to answer the following questions:

1. How do we know how much time each team member has to work on projects?
2. When we're planning the next sprint, how do we track how much work has been assigned to a team member, so that they have neither too little nor too much work? (Saunders, 2015)

In theory, answering these questions should not be difficult. For instance, if you have, "five developers, each with 6 hours available for work each day". That gives us 30 hours per day, and assuming 9 days of project work

(with one full day set aside for retrospective and planning) then within each two-week sprint we should be able to dedicate 270 hours to development work" (Saunders, 2015). In reality, however, business as usual tasks can eat up 40% of a programmer's working week, with that percentage varying from week to week or month to month.

Difficulties in estimating a team member's capacity for work on a project is something every project manager faces. But in Agile, estimating capacity can be especially difficult. In Agile, project managers (or Scrum Masters) ideally exert minimal direct influence on day-to-day work, because teams are supposedly self-organizing—that is, free to manage their work as a group, and pull work when they are ready for it. This means Agile project managers need to take the long view on resource management by practicing good resource capacity management, which involves "planning your workforce and building a skill inventory in exact proportion to the demand you foresee. It lets you optimize productivity and as a concept perfectly complements the Agile methodology" (Gupta, 2017).

Interested in learning more about managing resources in Agile? Start with these links:

- You can read more about resource capacity management from Project Management.com.
- Gareth Saunders' blog post, and the accompanying comments, walk you through some of the challenges of Agile resource management.

11.9. AGILE VERSUS TRADITIONAL PROJECT MANAGEMENT

Traditional management is the bulk of writing in this textbook. It is a solid and exhaustive planning process that happens before the project begins. It is understood that is there is a plan made before the project starts, there is a higher probability the project will be successful. All the details are carefully explored and defined through the Work Breakdown Structure. A risk plan will alleviate most issues, or at least allow for a quick response to take corrective action. The estimates and budgets are developed. A schedule is established, resources (people, materials, equipment) are all allocated. Control and monitoring of the plan is ensured throughout the project, and decide "how" up front. All these steps and components are part of the overall plan before the plan is executed. There is a quite high degree of predictability that the project will be successful. Project Managers and teams are trained, and have a very clear vision of the project prior to its beginning. A well developed Scope further reduces chances of failure. The teams are traditional. established teams.

Agile Management has drifted away from the traditional approach. As mentioned, it is more of a rolling wave type of planning and scheduling. The final design of the project may not have all the details at the beginning. The incremental iteratives are developed over time. Agile Management is more experimental changes can happen at any time. The projects tend to evolve over time. The team work to solve problems and finds solutions, not implemented. There is a continuum of the design. Sometimes, the scope is quite flexible, meaning it could expand or contract over time. Often with Agile Management the project is unpredictable and uncertain about its success. The teams are self-organized.

Traditional project management will always be in the mainstream for projects. Although some Project Managers find it challenging and stifling to use traditional project management; other Project Managers are challenged by the scope and plan being to loosely organized in Agile Management.

Which management structure is the ultimate winner is unknown. Time will tell.

11.11. KEY TERMS

Agile Development: Essentially a learning process through which the developer and the product owner create a shared understanding of how many features they can create, given the allotted time and money. 11.2

   Agile Procurement: A collaborative approach that focuses on outcomes. 11.4

   Agile Project Management is Iterative (Repetitive): Short processes focused on customer feedback and satisfaction. In such processes, the customer is allowed to verify that the features are being developed as they want, and suggest improvements 11.2

   Agile Scrum: Designed for completing complex projects, as described on ScrumGuides, Scrum is the most widely used form of Agile. When people talk about Agile, they are usually talking about Scrum. 11.2

   Backlog. A backlog is the amount of work a member commits in a certain amount of time before the next sprint. It is a list of everything that needs to be completed that is distributed to the team. 11.7

   Daily Scrum: This is the core of Agile project management. There are daily meetings which are called "scrum." Every day, at the same time, in the same place, the team meets (usually standing and sometimes in a circle) and take turns answering important questions: 11.7

   Development Team: A group of people who work together to deliver the product/service. They have cross-functional skills and are the group that accomplishes the sprint goals. They build the product or design the service. 11.6

   Extreme Programming: Emphasizes short development cycles with frequent releases of software for evaluation, after which a new development cycle begins. You can read more about extreme programming at "Extreme Programming: A Gentle Introduction" 11.2

   Human Resources Specialist and Scrum in Motion: would design a roles and responsibilities document (similar to a job description, however, must be less detailed). They would be involved in the recruitment and selection of the Scrum Master and the Development Team. 11.6

   Product Owner: Represents the customer and acts on behalf of the customer. This person could be a manager from within the company or a manager from the customer's company. 11.6

   Rapid Product Development: Emphasizes "simultaneous, coordinated activities by multi-functional teams, striving for smooth transitions between phases for the most rapid time-to-market" (ORC International: Expert Advisory Services). You can read more about Rapid Product Development in this "Introduction to Rapid Product Development." 11.2

   Release Meeting: Establish the goals and broad plan for the project. The team decides how the project will be completed the expectations. 11.7

   Scrum Master: A person who helps the team learn and apply the Scrum process. They do whatever they

can to help the team meet their goals. They also are invested in the Product Owner, and ensure this person is kept up to date and involved. 11.6

Self-Organizing Team: As a "group of motivated individuals, who work together toward a goal, have the ability and authority to make decisions, and readily adapt to changing demands" (Mittal, 2013). 11.5

Sprint Planning: At the beginning of each sprint, the Product Owner and the team negotiate where to start, which features are most important to least important, and who is responsible for each component. They also decide on how long it will take to complete the sprint. The team works with the team to break down the pieces of the project. Everything is recorded. The goals cannot be changed once the sprint is over. 11.7

Sprint Retrospective: The team reflects on how well they think the last sprint went and set up an action plan to improve, if necessary. The Scrum Master facilitates the meeting. The team is always working toward continuous improvement of the project. 11.7

Sprint Review: At the end of the scrum meeting, if there is a sample of the product/service to "show and tell", the members show their specific work. They ask and receive feedback related to changes, improvements; and are praised for their work to date by the team. The product owner may approve work done to date. 11.7

11.12. CHAPTER SUMMARY

Agile Project Management is an iterative (repetitive) short process focused on customer feedback and satisfaction. Agile management has become popular in many industries although it started in the software industry. It is a fast and flexible approach to project management. Teams host Agile Scrums (short meetings) to discuss the next steps in the project. They include the product owner, the team, and the Scrum Master. The Scrums are held daily with feedback from all who are present. They only last about 15-20 minutes. Often, those present remain standing and ask questions about "what happened since we last met? What are we going to do between now and the next Scrum? Are there any obstacles, and is so, what are they?" The Scrum Master takes care of the obstacles (removes them). Human Resources can be actively involved with Agile Management through training; and be actively involved in the Scrum Meetings as a Facilitator.

11.13. LEARNING ACTIVITIES AND EXERCISES FOR STUDENTS/TEACHERS

The learning activities can be completed **by the Students** on their own as a learning opportunity to integrate the materials from the textbook for assignments or tests/exams. Or, they may be used **by the Teachers** as learning activities in class, or for short answer questions on tests/exams.

Learning Activities for Students/Teachers

1. **Individually**, think about a school project you are working on now. How could you go about setting up a Scrum Meeting? Try it! Set up a meeting! Be the Scrum Master! Following the meeting, ask your team members if they prefer a Scrum Meeting over a traditional meeting. Report back to the **larger group** in class and discuss your findings and preferences.
2. Form a **small group**. **Individually**, think about a project (work or academic) you have completed (make a choice) where the: 1. Scope was vague. 2. The technology was vague 3. The scope and the technology were vague. Discuss this with your team members. Would Agile Management have been useful for this project?
3. Form into a **small group**. Ask each other: Would you prefer to be part of an Agile Management team or a Traditional Project Management team? Explain.
4. Form into a **small group**. Answer this question: Do you believe that you could work in a self-organizing team? Why? Why not?

These exercises can be completed **by the Students** to integrate learning materials for assignments/tests. Or they can be used **by the Teachers** in class to integrate learning or used on tests/exams.

Exercises for Students/Teachers

1. Under what circumstances would it be useful to utilize Agile Management?
2. What is the iterative development process? What is the value of iterative development?
3. What are the advantages of Agile Management over Traditional Project Management?
4. What are the disadvantages of Agile Management?
5. What are the differences between a Project Manager and a Scrum Master?
6. Why are self-organizing teams used in Agile Management rather than traditional project teams?
7. Would it be difficult to use Agile Management on a 3-million-dollar project? Why? Why not?
8. What are the 3 different roles in the Scrum process?
9. How could Human Resources support the roles and responsibilities of the Scrum process?

HUMAN RESOURCES STRATEGIC PROJECTS-TEACHER/STUDENT RESOURCES

Chapter Outline

12.1 LEARNING OUTCOMES

Learning Objectives

By the end of this chapter, you should be able to:

1. Compare the Human Resources Strategies in Chapter 12 with other strategies.
2. Discuss the Human Resources Strategies in class and analyze their validity.
3. Assess the Human Resources Strategies and revise for improvements with groups, individuals or with the teacher.

Note to Teachers and Students:

Graduate students designed the following Human Resources Strategies as Scope Statements/Proposals. They are for reference only. Teachers and students may use these Human Resources Strategies as tools for learning, practice exercises, revise them, assess their validity, and compare them with other Human Resources strategies.

12.2 ONBOARDING STRATEGY (WITH TECHNOLOGY)

Scope

There is a lot to learn when joining a new company. An effective onboarding process provides employees with the necessary tools, skill sets, knowledge, and behaviours to perform effectively in their new roles. Webinars support onboarding strategies by familiarizing new employees with their role(s), the company's principles, and benefits. When new hires feel they are valued team members, they are encouraged to be committed to the company's success which helps increase employee retention.

Key Stakeholders

A supervisor, HR representative, or senior manager typically performs onboarding and acquaints new hires with various aspects of the organization.

Business Case

Webinars are delivered virtually, which may mean cost savings as they don't incur expenses such as lodging, handouts, food and drink, transportation, and other event-related costs. In contrast to in-person training, webinars offer additional flexibility; they can reach various-sized audiences, be role-specific or general, and can be provided on-demand at any time. Importantly, webinar onboarding allows work to continue – reducing time lost through employee-led in-person training. Setting up online webinar-based training online is simple and often provides analytics that tracks key metrics, including the numbers of staff members that participated in and completed. Additionally, employing webinars is one of the most acceptable ways to establish standards and brand for a company so that employees can take pride in their job.

Project Description

Onboarding is the procedure of assembling the appropriate personnel and resources to guarantee that a new project is finished on schedule, within budget, and according to scope. The project is to maintain a high-quality and informative onboarding strategy. The presentation type that can be used is a webinar, which uses

electronic devices. A webinar is an online presentation for training and lectures made by an organization and distributed to a selected audience via computers and the Internet.

Resources

Software:

- Webinar software
- PowerPoint slides or another presentation program

Hardware:

- Computer or laptop
- Web camera
- Microphone
- Internet connection

Deliverables

- Training Session Plan: A series of webinars over at least two weeks (10 business days), five hours daily, that cover employee positions and related tasks.
- Delivery: Online over two weeks, five hours per day.
- Strategic Communication Plan: Team leaders will deliver the strategic communication plan, working from a database and communicating through email.
- Feedback Report: A designated drop box will be available to collect participants' anonymous feedback and/or questionnaires and be accessed by team leaders.

Action Plan

1. Find webinar software, and choose the most dependable, cost-effective, and appropriate option for our business.
2. Carefully plan, promote, create necessary content and topic, and establish webinar technologies for a more interesting and innovative design that guarantees the employees' utmost interest and involvement.
3. Integrate the company's learning management system (LMS) with the chosen webinar application upon the approval of the CEO.
4. Plan a parallel run to test everything and ensure everything functions as intended to prevent future

errors and problems.

5. Create efficient feedback forms or a question-and-answer session to assess the effectiveness of each training and its effects on the staff.

Class of 2022 Contributions: Christine Del Rosario, Genny Rose Ragpala, Prakul Khera

12.3. EMPLOYEE RECRUITMENT STRATEGY

Scope

This project's purpose is to help the business assess its current and future staffing needs. The plan outlines the company's missing abilities and competencies. The primary goal of the project is to help businesses locate applicants who have the necessary training, experience, and abilities for open positions. Educate management about new innovative recruitment strategies.

Key Stakeholders

Recruitment is an important function in any company irrespective of the business practices and its industry. To make sure that the company recruits the best talent for the job, it is important to make sure that there is a recruiting strategy in place. The recruitment of talent in the company would be based on the strategy. It would help in achieving company's goals and would support the needs of all its stakeholders. It is important to integrate the feedback given by the stakeholders in the recruitment strategy. The key stakeholders in a recruitment strategy are hiring managers, executives, employees, and HR team.

Business Case

When looking to fill an open position in the company it is important to have a recruitment strategy. There are several benefits to using such techniques which would help in easing the recruitment process. The benefits that are being brought into the company by the implementation of the recruitment strategy are:

- *Improved quality of applicants:* The strategy would help in improving the quality of the candidates. It only shows job openings to those candidates who are skilled with specific task companies are in search of. This would reduce the number of under qualified applicants.
- *Reduced cost per hire***:** Since the job opening is only visible to those with specific skills. The number of applicants to be interviewed in-order to fill in the open position would be less. This would result in reduced cost in hiring.
- *Diversity in workplace***:** This would make sure that there isn't any under-utilized group such as minorities and people with disabilities. In addition, a workplace with the diverse environment will have numerous advantages.

Project Description

The main objective behind the project is to formulate a recruitment strategy in accordance with the feedback being given by the stakeholders. This will help in hiring the best candidate for the job from the applicant pool which was designed to be visible to candidates with expertise required by the company. Not only does it help in finding the perfect candidate for the job, but also helps in bringing down the overall cost of hiring as well. This would help in hiring the best candidate with the same vision as that of the company at a low cost which would help the company grow further.

Resources

Plan and content creation is done by the selected team members, content creators, software testers, and content editors. Managers, supervisors, and human resource specialists to gather data about the current system.

Deliverables

1. Analyze the company's present hiring and recruitment procedures.
2. Design a Recruitment Strategy plan with stakeholders' advantages for the employer and employees, and talent management.
3. Develop the Recruitment Strategy plan.
4. Seek various resources such as Financial, Human, and other resources for the Recruitment Strategy.
5. Implement the Recruitment Strategy plan.
6. Provide feedback and evaluate the Recruitment Strategy.
7. Monitor the Recruitment Strategy for potential changes, improvements, and/or modifications.

Action Plan

1. Project manager – Conduct preliminary meetings with all the stakeholders and key staff members to overview the Job Analysis and project requirements.
2. Meet with the HR Department and other relevant departments/staff to discuss and analyze the needs assessment for relevant data regarding the current recruitment problems.
3. As early in a project as feasible, assemble a project team and ensure they understand the project goals or agenda along with their roles and responsibilities.
4. Develop a nine-point agenda or goals for the new recruitment initiative.
5. Conduct extensive market research regarding the new recruitment strategies and review the best practices.

6. Consult with external vendors from the shortlist to provide the latest product technology for strategic recruitment and market analysis for the most suitable recruitment methods.

7. Prepare a presentation for the management team concerning the project plan and an audio-visual description of the project goals and benefits to the company.

8. Recalibrate new recruitment strategies in alignment with company policies and strategic goals.

9. Compile all research resources and prepare a rough draft for the project plan using PMBOK as a guide.

10. Facilitate final meetings between all stakeholders and management to discuss the Project Plan and the last-minute additions.

11. Finalize Project Plan- Conduct Last minute review of the Project Plan and present the project plan in an acceptable formal format.

12. Submit Project Plan to Management for approval and constructive feedback.

13. If approved, Kickstart the implementation phase at the authorization of management. If disapproved, review and make the required amendments to the plan.

14. Resubmit it to management for approval and, upon approval, implement it.

15. Evaluate the Recruitment Strategy plan and monitor it for potential modifications or changes required during the project.

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12.4. EMPLOYEE SELECTION STRATEGY

Scope

Create a selection strategy to select the right candidate most suitable for vacant positions within an organization through interviewing and evaluating their qualities and work experience. The candidates will be required to meet specific job requirements. The candidates' credentials and talents will match to organizational needs. The selection of the right candidate will be an asset to the organization, in turn helping the organization reach its goals and mission.

Key Stakeholders

The Line Manager, the Recruiter and the Candidate will probably be the main participants. Senior management, directors, senior team members, HR, important client or customer connections, or anybody else who must be considered, are examples of second-tier stakeholders.

1. Recruitment and Selection – Sources, Recruiters, Recruiting Coordinators and Recruiting Managers
2. Hiring Team – Hiring Manager/Team Managers and Interviewers
3. Management – Directors or VPs, Budget Allocation Team (sometimes when the compensation goes overboard) and Human Resource Business Partners
4. Compensation and Benefits
5. Vendors – Background Verification

Business Case

Only when effective matching can selection be done, and an organization will receive high performance from its workforce. The selection process involves choosing the appropriate personnel for the right jobs, which significantly impacts the organization and workforce. This also affects the economy and competitiveness in the dynamic environment(Roshani, n.d.).

Organization

1. Selection of suitable candidates results in lower absenteeism and labour turnover rates.

2. Good selection process can increase the organization's productivity. Effective hiring boosts organizational effectiveness and overall worker performance.
3. People who are unfit and unqualified can be eliminated.
4. By identifying qualified applicants, effective selection minimizes the loss of time, effort, and resources.
5. Making the right choices is essential for developing a qualified workforce.

Employees

1. Increases employee motivation, helps build trust with the company and boosts employee morale.
2. Helps achieve goals/targets, contributing to overall team building and increased performance.
3. Enhances culture of healthy competition amongst peers.
4. Builds a culture of learning and growth.
5. Gives more opportunities for career growth and progression.

Management

1. A wise choice of executives may strengthen the company's managerial structure.
2. Helps build management capability and strengthens succession planning.
3. Reduces rehire time, efforts, and costs.
4. Employee testing, interviews and background checks help eliminate the chances of a "wrong hire."

Project Description

The process of selection is the second step in the staffing process. It involves choosing the candidates who best meet the qualifications and aptitude for the job. The main objective of this process is to match individual characteristics such as ability, experience, and so on with the job's requirements. The wrong selection also leads to absenteeism and retrenchment.

Outcome

The project's goal is to put policies and processes in place to hire the best candidate for the job without having to do it repeatedly. This also means aligning the selection process to the needs of the organization.
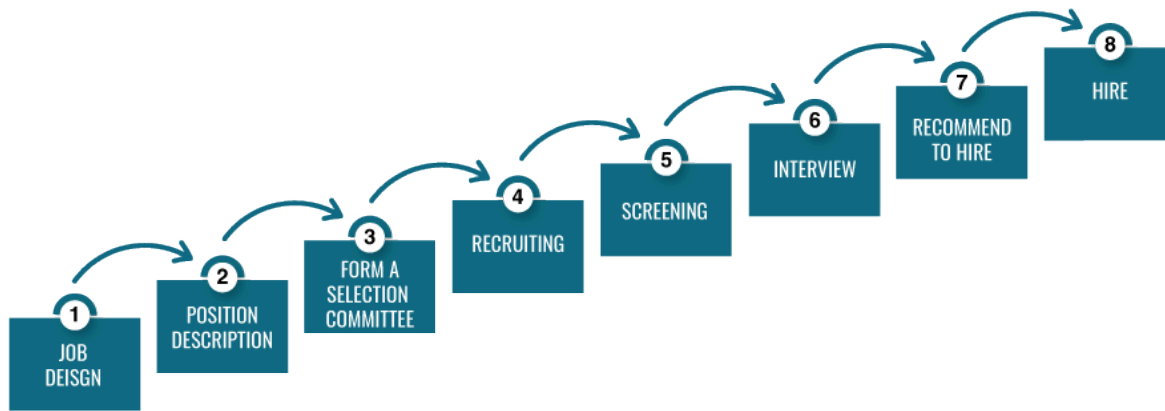
The eight steps to an effective selection process include:

1. Job Design
2. Job Description
3. Create Selection Team
4. Recruitment
5. Screen applicants
6. Complete interviews
7. Make recommendations to hire
8. Hire applicant

Resources

- *People Involved:* recruitment and selection team, management, payroll/compensation department, vendors (if applicable)
- *Tools required:* Human Resources Information System, interview room (physical or virtual), testing/assessment tools, sourcing media (ie LinkedIn, Indeed, etc.)
- *Resources required:* salary information, job description, testing/assessment questionnaires, background/legal checks, external analysis (competition)

Deliverables

1. Benchmarks
2. Standard job posting form, contents
3. ATS (Applicant Tracking System)
4. Structured interview manual
5. Assessment & Selection criteria
6. The weighting system for the assessment
7. Project performance report

Action Plan

1. *Classify the selection benchmarks* – Design a selection benchmark or criteria with the hiring manager, such as Education requirements, KSAO Requirements, relevant Labour Market trends, target applicant pool, and selection method.

2. *Create a standard selection process & timeline* – This can be done by planning a timeframe on the steps needed for the selection. This should be discussed with the hiring team to set expectations.

3. *Standard job posting form, contents* – Job posting guides provide information and guidance to job seekers. A job board can offer application guidelines, requirements, qualifications, etc. Job sites post their job advertisements online, including the latest job openings and postings. The guides also help potential job seekers decide what jobs interest them and which may be more suitable.

4. *Choose the proper ATS (Applicant Tracking System)* – After analyzing and reviewing areas that need to increase efficiency throughout the current recruitment process, the project team will examine which ATS solutions can help improve the recruitment process.

5. *Standard screening criteria* – Candidate screening is a process to find the best candidates who have applied. This screening helps the recruiter shortlist or screen candidates. Recruiters might test for basic knowledge or any other capability related to the job.

6. *Structured interview manual* – Update job analysis and description data of each job and define the necessary competencies with high performers based on these data. Then, a grading scale is established, and a standardized interview guide is produced.

7. *Structured interview questions* – A structured interview is where they ask a very set of questions.

Candidates would be aware of the type of questions they would be asked. You will be informed beforehand of a set of formulas.

8. *Conduct preliminary interview* – The candidate's abilities, academic competencies, and interests are assessed during the preliminary interview. Interviews can be conducted over the phone or via video conferencing.

9. *Extensive interview procedure* – Design a standardized interview process and precise method for in-depth interviews, and train interviewers about the output to apply to actual interviews.

10. *Conduct is written and physical tests for shortlisting candidates* – Written tests are used in the selection process, such as aptitude, intelligence, reasoning, personality, and others. The purpose of these tests is to evaluate a potential applicant objectively. We should not be biased in any way in this assessment.

11. *Assessment & Selection criteria* – This summarizes the tasks that you will perform in your role. The results create a combined picture story of the behavioural profile. HR and the manager discuss the strengths and weaknesses of this profile in detail. Once satisfied, they approve and sign the shape, utilized as the foundation for hiring or succession planning.

12. *The weighting system for the assessment* – Agree with the stakeholders on which evaluation items to give more importance and score during the interview of candidates for employment and create an evaluation table based on the consensus result.

13. *Project performance report* – Review the effectiveness of new recruitment strategies based on specific quantitative outcomes (e.g., the actual number of applicants versus the number of recruits) and prepare a communication report for evaluating project performance at the management level.

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12.5. JOB ANALYSIS STRATEGY

Scope

A job analysis covers a thorough examination of the characteristics needed for the position, as well as the responsibilities of each employee. Human Resources conducted a comprehensive analysis of the job and a study of the sort of individual needed to carry out the job. A job analysis can assist the employer in determining the job applicants who have the greatest chance of succeeding as high achievers (Outmatch, n.d.).

Key Stakeholders

A qualified job analyst or consultant may carry out the analysis of jobs on behalf of the company or through the HR representative from the Human Resources division (HR Guide, n.d.).

Business Case

Job analysis is the process of objectively defining the requirements of a job so that the best candidate for the job is identified and hired. It involves determining the position's worth by evaluating the salary requirements, benefits, and working conditions. The importance of a job analysis strategy to an organization is the ability to analyze the job to better understand the work required of each job and improve the job. Job analysis is an integral part of the job evaluation process; without it, it is difficult to determine whether an employee is meeting expectations, underperforming, or demonstrating poor job performance (Strah, Rupp, & Morris, 2022).

The job analysis strategy is important because a thorough job analysis as it is a critical first step in designing an effective job that maximizes the employee's productivity and satisfaction. A job analysis involves critiquing the job, identifying the tasks required, listing the required knowledge and skills, and describing what the job entails. It is a multi-stage process that begins by determining what the job entails and then moves on to a job analysis checklist to verify the specifications and identify skills and abilities needed to perform the job successfully, assess the abilities of the applicant, and finally create the job specifications (Okolie, 2018).

Project Description

As a result of this information, forecasting future human resource needs, job modifications, job evaluations, determining proper compensation, and preparing job descriptions is facilitated (Dalvi, n.d.).

It plays an important role in manpower management programs. Nearly every phase of employee relations can benefit from the information provided by Job Analysis (Dalvi, n.d.).

The phases include Manpower Planning, Recruitment, Wage & Salary Administration, Job Reengineering (Industrial & Human), Employee Training, Performance Appraisals, and Health & Safety.

Resources

As a human resource tool, job analysis helps employees comprehend their assigned duties and responsibilities concerning their skills. When doing job analysis, it is important to understand the job hierarchy. The hierarchy helps to organize the information gathered. This ensures that the most important information is first and the least important information follows. The primary resource for job analysis is the availability of information gathered through checklists, interviews, observations, or questionnaires. The presence of qualified personnel to carry out the analysis is also a significant resource for the completion of the project (HR Guide, n.d.).

Deliverables

1. Systematic plan
2. Team hired
3. Assessment
4. Identify new roles and gaps
5. Job Descriptions/Specifications
6. Evaluate

Action Plan

1. Establish the rationale for the job analysis.
2. Examine the history of the organization.
3. Identify the need for job analysis and develop a systematic plan for recruiting employees.
4. Hire and develop a team capable of achieving aggressive business goals.
5. Competency assessment for all candidates.
6. Discuss the new job roles and identify any gaps that can be addressed.
7. Develop job descriptions and specifications.

8. Evaluate the performance of employees and perform their appraisal/promotions accordingly based on job analysis.

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12.6. COMPENSATION STRATEGY (TOTAL REWARDS PLAN)

Scope

A comprehensive rewards strategy is a plan put in place by a company that offers financial, advantageous, and developmental benefits to staff members who meet certain objectives. The combination of the strategy includes pay and benefits with chances for career growth in a positive organizational structure (Gardner, n.d.). A successful total rewards system motivates staff to perform more work, stay with the company longer, and recruit new talent.

The purpose goal of a compensation strategy (total rewards plan) is to stay competitive as an organization. Organizations conduct surveys and an audit and, based on the result, compare the results to the others in the industry. Another goal is to be able to retain the existing talents in the organization.

Key Stakeholders

For the purpose of this strategy, identified stakeholders needed to bring on board to have a holistic approach to this plan/proposal. They are as follows:

- The employees – different departments
- Line managers – different departments
- Management
- Human Resources Manager

Business Case

A comprehensive rewards strategy helps in retention and attracting employees, increases engagement and satisfaction of employees, and all these ultimately lead to improvement in business performance.

A wide range of potential workers will be drawn to a comprehensive rewards strategy that may be able to meet all of the demands. As a result, this speeds up the hiring process for new employees, and a business may draw from a wider pool of candidates. Employees who grow and change from one period of life to the next while still having their requirements covered by an efficient, comprehensive rewards program have a high

likelihood of being satisfied at work. By rewarding excellence, a comprehensive rewards strategy helps firms compete more effectively in their sector.

The company may also effectively compete for talent and establish itself as the employer of choice in its industry. The company achieves its objectives and surpasses its competitors if it can find and keep skilled personnel. In other words, top-performing firms frequently arise from highly engaged, productive personnel.

Project Description

A total reward plan offers an effective and exclusive reward package for employees who achieve specific organizational goals. The reward can either be monetary (money) or non-monetary (other benefits). A total reward plan emphasizes empowering or motivating employees. It includes aspects that workers value. It could include flexible work, fair reward systems, and an increase in pay and benefits package. The five components of the total rewards plan are compensation, benefits, well-being, recognition, and development, and are correlated to Maslow's hierarchy of needs (Gardner, n.d.).

According to the Society for Human Resource Management (n.d.), an effective total rewards plan may be developed through a four-step process. The steps include:

1. Assessment of the current benefits and compensation system
2. Designing a rewards plan that will be ideal for the organization
3. Execution of the new strategy to the employees
4. Evaluation of the effectiveness of the plan and modifications made where necessary

A total rewards plan is important for any organization. It ensures higher employee retention rates, improved performance and productivity, increased employee satisfaction, and improved business performance (Society for Human Resource Management , n.d.).

Resources

Upper and mid-management officers in the organization are the resources. They can include experts in project management, finance, employment law, payroll and compensation, human resources professionals with extensive rewards experience, external consultants, a union official (if the organization is unionized), representation from the non-unionized workforce and IT experts.

Deliverables

- Create a compensation committee and develop a program outline.

- Build a compensation philosophy and design a compensation program.
- Conduct a job analysis for all positions and rank jobs within each department.
- Establish salary range and pay structure.
- Develop all necessary compensation policies.
- Meet with stakeholders and obtain top executive approval.
- Document and communicate the full compensation program to all employees and managers.
- Implement a compensation plan and monitor for adjustment when needed.

Action Plan

1. Form a compensation committee and develop a program outline.

    1.1. Set a compensation committee and appoint a compensation manager from the human resource department.

        1.1.1. Explain the job description for each member of the team.

        1.1.2. Determine the cost of consultant outsiders versus working within.

    1.2. Set objectives for the compensation program.

    1.3. Establish a target date for implementing and completing the compensation plan.

2. Build a compensation philosophy and design a compensation program.

    2.1. Outline basic principles that will underline the compensation plans.

        2.1.1. Decide how competitive the organization should be across industry rates.

        2.1.2. Decide the extent to which employee benefits should replace or support cash compensation.

3. Conduct a job analysis for all positions and rank jobs within each department.

    3.1. Conduct a general task analysis for all departments.

        3.1.1. Get information from top managers from various functions to determine the organizational structure and functions of each department.

        3.1.2. Interview department managers and key employees to determine their job function(s).

        3.1.3. Develop a model job description for exempt and non-exempt positions.

        3.1.4. Review job description with department managers, adjust if necessary and develop a final draft.

    3.2. Rank the jobs within each department, and then rank jobs between and among departments.

        3.2.1. Compare ranking with industry market standard and adjust when necessary.

        3.2.2. Build a matrix organizational review and compare data with the company's structure and industry-wide market.

        3.2.3. Prepare a flow chart for all ranks and present data and chart to the compensation committee for evaluation and adjustment.

4. Establish salary range and pay structure.

4.1. Create the various level, from entry-level to senior level, and assign grades to each.

4.2. Create a market pay line and establish the pay ranges for each position and job classification.

4.3. Make sure it is in accordance with company policies.

5. Develop all necessary compensation policies.

5.1. Generate a company policy.

5.1.1. Create and document special policies for the selected group.

5.1.2. Create and document a strategy for other pay adjustments like promotion, annual review etc.

5.1.3. Create and develop procedures to back up the policies.

5.2. Meet with the committee to review and adjust policy if needed.

5.2.1. Determine if the compensation plan is fair, equitable, and defensible.

6. Meet with stakeholders and obtain top executive approval.

6.1. Present all data to executives and key stakeholders for deliberations, review, adjustment, and approval.

7. Document and communicate the full compensation program to all employees and managers.

7.1. Use several methods of communication to share the plan.

7.1.1. Make a presentation to everyone, send emails, put fliers in common areas etc.

7.1.2. Expect loads of questions, answer them, and give more explanation where necessary.

7.2. Properly document the end product of the process for future reference.

8. Implement a compensation plan and monitor for adjustment when needed.

8.1. Work with HRIS staff to establish effective implementation procedures.

8.2. Monitor feedback from all and make changes and modifications where needed.

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12.7. EMPLOYEE BENEFITS STRATEGY

Scope

Employee benefits are designed and viewed as management of high-risk insurance at a low cost. They reduce the financial load on the business. It has been demonstrated that employee perks improve efficiency. The rationale is that people perform better when they have a certain level of protection for themselves and their families.

Key stakeholders

Customers, employees, government, investors, local communities, and suppliers can be the key stakeholders. Employees as stakeholders can help the business to earn and boost more profit. It can also increase innovation and creativity among the workforce.

Business case

Savings and benefit structures designed to replace income lost during retirement and incapacity, benefits for dependents after a breadwinner's passing, and resources to pay for medical care all contribute to financial security. Resources are derived from a combination of individual and family labour, employee benefits offered by employers, and government initiatives.

Employee benefits can motivate employees to work hard and boost the business's profit. A business which has more attractive employee benefits it can attract highly qualified employees easily.

Project Description

The strategic project relates to employee benefits. It is accomplished by supporting the cost of the employee's share of contributions by the employer to the pension plan, benefits plan, and employee health. Furthermore, the aim can be achieved by improving the quality of life and increasing the self-reliance of every employee and strengthening the institution by enabling the recruitment and retention of professionals. The intended outcome of the strategic project is employees will feel motivated, which will improve their work performance and improve the relationship between employees and employers.

Resources

A strategic plan is needed, followed by the organization's implementation of the plan. It is important to have a clear idea of the organization's objectives. During the project, a budget is required.

Deliverables

One deliverable of the project is to provide satisfaction to the employee with their work and workplace by giving them benefits. Another deliverable of the project is the initial design of the strategic plan and the report of the investment. Another deliverable will be a report which will generate an evaluation of the plan.

Action

1. Align the benefits strategy with the long-term business strategy
2. Do research related to mandatory benefits given to employees and extra benefits other companies offer employees
3. Set goals for the benefit program
4. Get feedback from employees on what benefits meet their needs and preferences
5. Develop a strategic plan and produce a report of estimated expenses of benefits
6. Meet with the finance department for a budget; and HR about existing policies, design new policies if necessary
7. Be flexible. People are diverse and value different things. Design a basic plan, and allow employees to match the rest of the benefits to their needs
8. Introduce the new benefits to employees through clear and transparent communication
9. Be prepared for questions about the benefits, provide support
10. Track what benefits the company uses most, analyze information
11. Receive feedback from employees in a report on the success of the plan
12. Compare with expected results.

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12.8. TRAINING AND DEVELOPMENT STRATEGY

Scope

This project will focus on employee performance, career development, and the organization's effectiveness. The training program will be geared towards solving performance issues, offering career development for the staff, improving overall organization effectiveness, and yielding a return on investments for the organization.

Key Stakeholders

- Administrative Leadership of the organization – Provide needed financial support
- Human Resources Specialists and Supervisors – Will be key stakeholders in giving suggestions and approving strategies for a better outcome
- Staff – Key receivers of the training program to improve performance
- Customers – Will be impacted directly as the end receivers of the goods and services offered by the organization

Business Case

Introducing training and development to an organization can be a difficult process. Several hurdles must be overcome, such as lack of time, money, and resources. These issues are often compounded by a lack of awareness among senior management about the value of training and development. To best set up a successful training and development program for an organization, it is important first to understand the benefits gained by implementing a training and development program.

Training and development can benefit an organization in many ways. It can increase employee productivity and performance, which in turn increases revenue growth and profits. Training and development also reduce turnover rates. It allows employees to have the opportunity to grow professionally, which in turn helps retain quality employees. Training and development also enhance the organization's image of caring about its employees' growth and well-being. Lastly, training and development provide a platform for organizations to learn from their mistakes through case studies or company failures so they may avoid repeating mistakes in the future.

Project Description

The significant effects of job training and training design, along with its delivery style, have a substantial influence on organizational performance. This further positively affects organizational performance (Khan et al., 2011). The Training and Development project will be used to improve the organization's performance. This project is created with a specific purpose: to improve the performance of one department or all departments in the company.

The Training and Development project is an activity aimed at helping the company improve its operations and processes. In other words, it takes the form of workshops, seminars, lectures, or programs designed to help employees learn new skills and gain valuable knowledge about their work. It can also be thought of as a process wherein the organization identifies its training needs and creates ways to meet them.

Investing in the training and development of employees provides a competitive advantage for our organization and benefits the individual who is diligent about their career. If a company is not caring about their employees, then the employees will feel that their organization does not care about them (Garger, 1999). The Training and Development project will provide a resource for employees, supervisors, and managers to develop leadership skills, communication skills and knowledge of the new technologies necessary for success within their respective roles. Not only will our employees perform better, but they will also be more motivated and passionate about their work. This means that they will be more committed to the goals and policies of the organization.

Resources

Human Resource Specialists, Managers and Supervisor who supervise employees, Human Resources Specialists, technology, trainers, trainees (employees), budget, computers, seating hall/facility, and writing supplies.

Deliverables

1. Training plan
2. Risk plan
3. Evaluation strategy
4. Research companies
5. Budget
6. Reports

Expansion of Deliverables

Deliverables	Person-In-Charge	Status (Not Started, Planning, In Process, Completed)
Brainstorming (what training is needed, the type of training, etc.)	Project Team	Completed
Develop a training plan	Project Manager	Completed
Develop a contingency plan (in case of a risk factor)	Team Member 1	In process
Develop/choose a training evaluation plan/strategy	Project Manager	
Research best training companies/best trainers for the chosen training	Team Member 2	Completed
Select a venue	Team Member 1	In process
Budgeting	Team Member 3	Completed
Status report (where the project is now)	Project Manager	In process
Create a training schedule	Team Member 2	In process
Plan the training (prepare the venue, trainers, food, materials, etc.)	Project Team	Planning
Reserve the venue/facility	Team Member 3	Not Started
Contact the chosen establishment to prepare the food	Team Member 3	Not Started
Execute the training	Project Team	Not Started
Execute closure (evaluate the training)	Team Member 2	Not Started
Create a project closure report	Project Manager	Not Started

Action Plan

1. Meeting with managers as they would give insights on what we are missing and will provide a rough idea of what type of training and development strategy will be most suited.
2. Create a platform where employees can share their suggestions on training and development and what is needed for better growth at the workplace.
3. Creation and selection of training and development strategies will provide the most results and help employees in career development and job growth. Proposing the strategy to the upper management for

their approval.

4. Selecting the most suitable trainers to provide training and sharing with them our training and development strategy. Planning the venue and modes of training.

5. Developing a budget for training and seeking funding for the same through drafting a proposal.

6. Developing a training schedule and ensuring everything is in order at the venue and technology is error-free.

7. Posting information on the employee dashboard about the new training and development strategy like how it will be useful, how it will help the employees and business to grow, why it is necessary, what to expect and schedule, etc.

8. Implementation of the Training and Development Strategy and ensuring the process is noise-free. Providing all the required materials to the employees.

9. Gathering data on employee improvement and comparing it with the previous production.

10. Providing feedback to employees and then setting quarterly or yearly checkpoints for the most efficiency.

11. Drawing out the report on current improvement and sharing it with upper management to get feedback.

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12.9. CAREER DEVELOPMENT STRATEGY

Scope

Human Resources develops a Career Development Strategy for all employees as an essential role in helping employees achieve their professional and personal goals. The Career Development Strategy helps employees to grow and shape their careers on their competencies and interests. All employees will be provided guidance for their future based on their Human Resources career goals and abilities.

Key Stakeholders

Human Resources takes the lead in designing career paths with all employees. Supervisors within each department will provide input on each employee's career path. Each employee will define their interests, strengths, and areas of improvement.

Business Case

Many companies cannot attract and retain the right people for the right job. Some companies may lack diversity in their management, have a multi-generational workforce, have a need for an organizational culture change, or have limited opportunities for advancement in a smaller organization.

Some companies are in a talent crunch. According to a Verizon survey (2021) 62 percent of people who plan to re-enter the workforce after the pandemic are looking for positions that offer more opportunities for advancement and skill development.

Career planning improves the organization's ability to attract and retain highly valuable employees. Employees become more motivated and are highly productive when they have a career plan. As well, people feel more fulfilled and have a sense of belonging. When employees have a career plan, they have job satisfaction and are more apt to remain loyal to the employer. In turn, this allows the organization to be more competitive in the economy.

Project Description

A career strategy is used to follow a progression of steps that may lead to a supervisory position. The career path followed a hierarchical structure in an organization. This is no longer the norm in organizations. Today, careers

are treated as a series of experiences that provide employees with opportunities to develop skills and knowledge. The reason for this change is that in today's ever-changing work environments, employees need a diverse set of skills and competencies that are achieved through meaningful experiences. Jobs are no longer linear; employees are expected to have more diversity in their career paths.

Resources

Managers, Supervisors, and mid-management of the organization who supervise employees, Human Resources Specialists, technology, database, mentors who may support employee growth, and colleagues who are interested in the same career paths.

Deliverables

1. Meet with and discuss Career Development Strategy with all stakeholders
2. Design a Career Development Strategy with stakeholders
3. Develop the Career Development approach
4. Seek financial resources and other resources for the Career Development Strategy
5. Implement the Career Development approach
6. Provide feedback and evaluate the Career Development Strategy
7. Monitor the Career Development Strategy for improvements, changes, and modifications

Action Plan

1. Meet with managers. They know what employees want and need. The manager ought to have had meetings with employees to discuss goal setting. Managers are best at aligning employee interests with organizational goals. Employees will gain clarity on their goals.
2. Provide opportunities for employees to share stories about their motivators, setbacks, achievements, and disappointments (these can be posted as podcasts, videos or written). Employees will gain ideas for their career growth.
3. Design fair and consistent policies and procedures for career development within the organization.
4. Seek legal advice related to the Career Development Strategy to avoid gender stereotyping and discrimination (promotions and pay).
5. Seek funding, if necessary, by writing a proposal for a Career Development Strategy.
6. Human Resources helps Managers/Supervisors view employees as organizational resources through discussions or workshops.
7. Communicate the Career Development Strategy and its function to all employees.

8. Develop toolkits for employees (employee development, developing leaders, etc., post the policies and procedures).

9. Post information on the organization's intranet or website related to the Career Development Strategy (job rotation, job postings, staff promotions, professional development, training opportunities, certification programs, reimbursement policies, forms, skills analysis forms, and other career resources).

10. Begin to collect information on employees' interests and coordinate with the business needs. Meet with employees individually (either Human Resources or direct Supervisors) and find out their career goals.

11. Compare the results of the employees and find common ground with the business strategy.

12. Review the performance plans of all employees to identify areas of improvement.

13. Define if employees have the required skills to perform or advance in their jobs.

14. Design a Career Development Plan with templates for all employees that include strengths, areas of improvement, personal information, list any achievements, short- and long-term goals, current skills, resources, and required action (training, education, professional development).

15. Meet with employees and work together to complete the Career Development Plan.

16. Define if employees are seeking a job promotion, job enhancement or job enlargement.

17. Develop training opportunities and provide training or provide educational opportunities for employees. Other employees may seek out coaching or mentoring.

18. Outline the next steps to be taken by a Supervisor, Human Resources, or the employee.

19. Provide employees with all the resources they need to be successful.

20. Record the Career Plans of all employees using a database.

21. Set up checkpoints when the Career Plan will be reviewed.

22. Ensure all Managers/Supervisors have copies of the Career Plan and ensure they provide support and guidance to employees.

23. Evaluate the Career Plan at least yearly and record all the information.

24. Analyze the metrics related to career progression and determine the return on investment (ROE) to the organization. Examples: turnover and retention rates and quantify them in financial terms.

12.10. EMPLOYEE ENGAGEMENT STRATEGY

Employee Engagement Strategic Project Plan

Scope

To effectively implement employee engagement strategies that strengthen employee morale, sense of autonomy and responsibility in decisions that impact work life and encourage positive employee and employer relationships.

Goals

Establish best practices for promoting employee engagement, including:

- Professional development opportunities
- Succession planning
- Support and guidance from leadership
- Incentivize loyalty through direct and indirect compensation
- Provide positive work-life integration and flexibility
- Incorporate a strong employee engagement approach into the organizational culture (Breitling et al., 2021; Schwind et al., 2019).

Critical Success Factors

- Improved task and membership behaviours
- Improved organizational citizenship behaviours
- Stay interviews indicate improved KRA metrics

Key Stakeholders

The most important stakeholders in this project are the employees themselves in all departments affected by

the initiative. This project also concerns frontline managers, regional managers, and executives who need to be on board and available to assist and support the project. The human resources team is the lead on this project, and their expertise is needed for its success (Qualtrics, n.d.).

Business Case

Employee engagement positively affects all parts of an organization, from management to workers to even shareholders. Employee moods change, becoming more team-oriented, selfless, and optimistic while engaged. Management supports the benefit of engaged employees; they have a better relationship with their supervisors. Engaged employees show higher levels of commitment and confidence in the company's future. A study used by the Society for Human Resource Management reported that only 33% of employees felt engaged in their workplace, while 52% felt that they are 'just showing up' to their workplace (Society for Human Resource Management, n.d.).

Project Description

Creating a more engaging workplace for employees, managers, and the organization is a long-term project. It starts at the strategic business level, where organizations begin to foster an engaging environment. This may include day-to-day changes such as giving managers and employees more freedom in their position or something large-scale like rewriting organizational goals and values (Society for Human Resource Management, n.d.). Engaged managers may start taking on new and higher-level tasks within the organization and help establish new organizational values and goals for employees. Engaged employees are more valued within an organization (fiscally and emotionally). They are engaged because of opportunities like mentorships, positive and ongoing feedback, profit-sharing, clearer communication, and a multitude of other practices when engaging employees (Society for Human Resource Management, n.d.).

Resources

Creating an engaging work environment requires a great deal of effort from all levels of the organization. Employee engagement is highly dependent on compensation in most industries. Organizations must be willing to increase employees' wages and create better fiscal incentives such as employee stock options, profit sharing, or routine bonuses (Society for Human Resource Management, n.d.). Organizations may find they need to hire consultants to help create an engaging workplace. Implementing new training for managers and human resources may be necessary. These companies must also be prepared to invest in environmental and equipment

upgrades to further support employees, such as providing new tools or PPE for employees. Some employees may need to relocate to a new work setting.

Deliverables

- **1. Analysis**

  ○ Conduct a needs assessment and employee interviews to establish areas of focus.

- **2. Design**

  ○ Establish realistic timelines and training schedules.
  ○ Format WBS and Gantt Chart.
  ○ Prepare budgeting and expenditure information.
  ○ Develop a communication plan.

- **3. Development**

  ○ Develop engagement initiatives based on key areas established by the needs assessment.
  ○ Prepare progress and status reports.

- **4. Implementation**

  ○ Implementation of all goal-specific employee engagement initiatives.

- **5. Evaluation**

  ○ Budget report, Key Indicators, Employee interviews, Final report, and Team Performance Report.

Tasks / Action Plan

1. Set up a meeting between the HR department and project team to specify the project's objectives and main organizational goals.
2. Determine who will be part of the project team and define the team leader.
3. Determine who will deliver the interviews according to their skills and experience in the field.
4. Define what employees and areas will participate in the interviews.

5. Elaborate and structure a specific questionnaire to follow in the interview to determine the topics we need to assess, being sure of its reliability and validity.

6. Create a detailed schedule considering employee accessibility, length of time, and location availability.

7. Schedule with the team project members to develop the Gantt Chart, consider who will be accountable for each task and estimate timing. In the same meeting, the WBS chart and dictionary will be developed, considering the main activities, level, code, and description of each.

8. Arrange an internal meeting with the Financial Department and the project team to establish the budgeting and how the resources will be allocated in each section.

9. Define the budget for specific project activities.

10. Develop a communication plan for all the projects considering communication channels, employee targets and dates of each activity.

11. Identify the major outcomes of the interviews and classify them by importance level.

12. Define an action plan from the outcomes covering each aspect and how it will be encountered.

13. Execute a preliminary report highlighting the findings and outcomes, informing the progress of the project to the management.

14. Create or strengthen an internal social media campaign for building internal connections, promoting innovation, and boosting employee motivation.

15. Develop a kick-off meeting with key employees to determine the level of acceptance of the engagement implementations.

16. Improve internal communications channels considering the outcomes of the kick-off.

17. Re-launch of the final model in the internal communications channels and social media.

18. Generate a final budgeting report considering all the project expenses and how the budget was distributed.

19. Design an executive presentation highlighting and explaining the achievement of the key indicators that will be the ratio of absenteeism, presentism, work satisfaction, work-life balance, workplace injury and/or stressors, employee commitment and motivation.

20. Set up a final session with the executive board and the project team to demonstrate the results and improvements in the organization levels, proving how the investment has positively impacted the company's performance.

21. Coordinate a one-to-one session with team members to provide feedback on their performance and accomplish their target goals.

22. Compose a final report with the meeting results demonstrating the project's performance.

Class of 2022 Contributions: Allison Smith, Daniela Martinez Munoz, Marshall Howman, Tania Toribio Olivares

12.11. HEALTH AND SAFETY STRATEGY

Scope

The organization plans to: Protect the safety of employees, contractors, students, and visitors against accidents and risks associated with the outside world, Accept all significant decisions, rules, and regulations issued by governmental bodies and other administrative experts pertaining to global health and security (which will be regarded as the bare minimum requirements). Throughout the planning, organizing, leading, and carrying out of the exercises, consider safe working conditions and occupational welfare practices; decide on and carry out effective health initiatives that are appropriate for university activities; additionally, collaborate with staff members of the Risk and Safety Office.

Key Stakeholders

An adequate health and safety management system may reduce risk and guard against workplace accidents. A thorough workplace health and safety program has several advantages for businesses and employees. A company that regularly complies with health and safety laws, regardless of how big or little, will empower its employees, accomplish business development, and lower workplace exposures and accidents. The key stakeholders of occupational health and safety in a firm include Labor inspectors, OHS specialists, the employer, and the employees. Depending on the size of the firm and the type of activity performed in the company, there could also be a first aid expert.

Business Case

The advantages of workplace health and safety for the working environment – Maintaining a protected work environment is viewed as a consistent test by specific firms. Coronavirus has of late upped the ante on this fight. Perhaps, yet, this moment is the best second to consider it more to be a chance for progression. A broad workplace health and security program incredibly helps the two supervisors and agents. Whether small, medium-sized, or massive, an organization that reliably consents to wellbeing and security guidelines will attract representatives, accomplish financial development, and decrease work environment mishaps and openings.

The employees that complete the undertaking consistently are a further important resource. They might share their inclinations and experience by taking part in composed conversations on the working

environment's government assistance and security. Because of the delegates' feedback, the government assistance and security program will be improved, giving workers "a voice" in the interim. They will feel secure and spurred to guarantee a more secure workplace. That will simply be one advantage of a strong security and prosperity program.

Project Description

The following project aims to develop an organization's health and safety strategies. The primary purpose of a health and safety strategy is to create a series of actions and measures that all the employees in the company should follow to improve the health and safety of all employees. The main factors present in a health and safety strategy are outcomes, which are the objectives set by the organization to obtain health and safety. Actions are acts that are to be followed by all employees to reach the objectives. Measures are the Key Performance Indicators of a company.

This project's intended outcome is to prevent workplace safety and health incidents. This can be done by educating all the employees about all the possible hazards that can be avoided during their employment (EHS Insight, 2020).

Resources

- Internal Trainers by the Human Resources Professionals
- Instructor-led seminars by Managers
- Online Training by Managers, Supervisors, and mid-management of the organization who supervise employees
- All employees
- Resource persons

Materials to be used include seminar classrooms, projectors, training manuals, internet, video conference software (Zoom) and laptops.

Deliverables

1. Determine what measures or strategies can be taken
2. Financial support
3. Implementation
4. Training
5. Feedback and monitoring

Action Plan

1. Meet with all stakeholders within the organization. This includes the employer, supervisors, contractors, and workers.
2. Ask stakeholders for opinions and perspectives on Health and Safety Strategy.
3. Create an Organizational Health and Safety Management Systems (OHSMS) Plan.
4. Establish a joint health and safety committee that reflects labour and management to provide a non-adversarial environment where both parties can work together to create a safer and healthier workplace.
5. Write a proposal and get approval for the OHSMS Plan from management.
6. Establish a joint health and safety committee that reflects labour and management to provide a non-adversarial environment where both parties can work together to create a safer and healthier workplace.
7. Design Occupational Health and Safety Program.
8. Carry out a risk assessment that includes hazard identification, risk analysis, evaluation, and control
9. For the risk control process, establish preventative and corrective measures such as elimination, substitution, engineering, administrative, and personal protective equipment controls.
10. Provide recommendations on engineering controls that may reduce risk exposure, such as isolating machines and modifying the work environment.
11. Provide recommendations on administrative controls such as changes to organizations policies and practices, training, management involvement, and surveillance.
12. Create safety awareness sessions that inform employees about and remind them of the importance of health and safety.
13. Establish practices that remind employees of health and safety through posters, signs, newsletters, bulletin boards, decals, etc.
14. Design OHS policies that align with legal requirements and communicate said policies to all stakeholders within the organization.
15. Outline individual duties for health and safety. Incorporate policies that hold every individual responsible for safe work practices.
16. Ensure policy reflects individual legal responsibilities.
17. Include emergency and evacuation plans.
18. Include incident reporting and investigation process.
19. Establish recurring review and assessment practices of all policies by the Health and Safety Committee.
20. Design Occupational Health and Safety Training Program.
21. Carry out a needs analysis to identify individual and organizational deficiencies that can be addressed with training through surveys, questionnaires, observations, etc.
22. Ensure employee participation by asking for employee input and opinions on training.
23. Establish practices that encourage positive safety behaviours by rewards and incentives that reinforce positive safety behaviours.

24. Set challenging, achievable, specific safety goals to direct attention and actions towards desired safety behaviours.
25. Establish training objectives to determine training content.
26. Select training providers.
27. Determine training delivery methods (on-the-job, off-the-job, or technology-based training).
28. Conduct training evaluation to determine if the transfer of training occurred and to what extent the training program had added value to the employees and the organization (Kelloway et al., 2020).

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CASE STUDIES

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CHAPTER 1: CASE STUDY

Aerospace Canada Corporation Project Selection

You work as a Human Resources Manager for Aerospace Canada Corporation (ACC). Your company is a Canadian nonprofit corporation that operates federally funded research and development. You provide technical advice on space missions to the Canadian military. You work closely with the ARC Space Force and the National Space Office. You provide technical analysis and assessments for space programs that serves Canada's interests.

The company has 5 Chief Executive Officers, 10 Board of Trustees, 8 Research and Development employees, 20 Space Systems employees, 15 Performance Engineers, 20 Classified IT Design Engineers, 10 Electrical engineers, 7 Information Systems Security Officers, 5 Technical Software Engineers, 14 Cyber Systems Engineers, 10 Buyers, 5 Systems Directors, 12 Program Assistants, 8 Quality Assurance Engineers, 4 Remote Sensing Scientists, 20 Project Leaders, 12 Human Resources Specialists, 5 Administrative Accounting Specialists, 32 Administrative Support employees.

ACC has over 400 projects that are funding each year. They have used several models in the past for project selection to meet their goals and respecting their budgets and resource constraints, and minimizing risk. The business development and research team are responsible for reviewing all the projects and selecting the optimal portfolio for the upcoming year. In the past, the focus has always been on maximum returns on the budget and to remain at or above the market norms. These decisions reflected a priority based on sales only.

ACC is looking to implement a new strategy for project selection. It has been discussed that the business development and research team should not be involved with the project selection. However, no one knows exactly who should be involved, how to set up a new system, or who should be making these important decisions for ACC.

Questions

You are the Human Resources Manager of ACC. You have been privy to the

information that has been shared at the executive level. You believe that you can have an impact on the project selection that will support the goals of honouring sales, while providing growth, reducing risk, and maximizing profits.

1. Who would you speak to at ACC to show your interest?
2. How would you go about marketing your HR department to help with this task?
3. What would be included in your proposal to spear head this plan?
4. Who would you involve in the project selection process?

CHAPTER 2: CASE STUDY

Toyota Motor Corporation

Toyota Motor Corporation (TYO: 7203) has often been referred to as the gold standard of the automotive industry. In the first quarter of 2007, Toyota (NYSE: TM) overtook General Motors Corporation in sales for the first time as the top automotive manufacturer in the world. Toyota reached success in part because of its exceptional reputation for quality and customer care. Despite the global recession and the tough economic times that American auto companies such as General Motors and Chrysler faced in 2009, Toyota enjoyed profits of $16.7 billion and sales growth of 6% that year. However, late 2009 and early 2010 witnessed Toyota's recall of 8 million vehicles due to unintended acceleration. How could this happen to a company known for quality and structured to solve problems as soon as they arise? To examine this further, one has to understand about the Toyota Production System (TPS).

TPS is built on the principles of "just-in-time" production. In other words, raw materials and supplies are delivered to the assembly line exactly at the time they are to be used. This system has little room for slack resources, emphasizes the importance of efficiency on the part of employees, and minimizes wasted resources. TPS gives power to the employees on the front lines. Assembly line workers are empowered to pull a cord and stop the manufacturing line when they see a problem.

However, during the 1990s, Toyota began to experience rapid growth and expansion. With this success, the organization became more defensive and protective of information. Expansion strained resources across the organization and slowed response time. Toyota's CEO, Akio Toyoda, the grandson of its founder, has conceded, "Quite frankly, I fear the pace at which we have grown may have been too quick."

Vehicle recalls are not new to Toyota; after defects were found in the company's Lexus model in 1989, Toyota created teams to solve the issues quickly, and in some cases the company went to customers' homes to collect the cars. The question on many people's minds is, how could a company whose success was built on its reputation for quality have had such failures? What is all the more puzzling is that brake problems in vehicles became apparent in 2009, but only after being confronted by United States transportation secretary Ray LaHood did Toyota begin issuing recalls in the United States. And during the early months of the crisis, Toyota's top leaders were all but missing from public sight.

The organizational structure of Toyota may give us some insight into the handling of this crisis and ideas for the most effective way for Toyota to move forward. A conflict such as this has the ability to paralyze productivity but if dealt with constructively and effectively, can present opportunities for learning and improvement. Companies such as Toyota that have a rigid corporate culture and a hierarchy of seniority are at risk of reacting to external threats slowly. It is not uncommon that individuals feel reluctant to pass bad news

up the chain within a family company such as Toyota. Toyota's board of directors is composed of 29 Japanese men, all of whom are Toyota insiders. As a result of its centralized power structure, authority is not generally delegated within the company; all U.S. executives are assigned a Japanese boss to mentor them, and no Toyota executive in the United States is authorized to issue a recall. Most information flow is one-way, back to Japan where decisions are made.

Questions

Will Toyota turn its recall into an opportunity for increased participation for its international manufacturers? Will decentralization and increased transparency occur? Only time will tell.

1. How could Human Resources help make changes in the organizing facet of planning, organizing, leading, and controlling framework (or, simply, P-O-L-C) framework to prevent future mishaps like the massive recalls related to brake and accelerator failures?
2. Do you think Toyota's organizational structure and norms are explicitly formalized in rules, or do the norms seem to be more inherent in the culture of the organization?
3. What are the pros and cons of Toyota's structure?
4. What are the most important elements of Toyota's organizational structure?
5. Should the organizational culture change? And, if so, what role would Human Resources play to create this change?

Attribution

CHAPTER 3: CASE STUDY

Discussion: How Great Leaders Inspire Action

This discussion is based on a TED Talk by Simon Sinek, as well as drawing on readings from the management chapter. Fascinated by leaders with the capacity to inspire and have an impact in the world, Sinek has discovered some remarkable patterns in how these leaders think, act, and communicate. He wrote Start With Why: How Great Leaders Inspire Everyone to Take Action to explore the idea of the "golden circle," which is what he calls "a naturally occurring pattern, grounded in the biology of human decision-making, that explains why we are inspired by some people, leaders, messages, and organizations over others."

Watch Sinek's TED Talk How great leaders inspire action

> *One or more interactive elements has been excluded from this version of the text. You can view them online here: https://ecampusontario.pressbooks.pub/ hrstrategicprojectmanagementtheory/?p=319#oembed-1*

Discussion Questions

1. Select the portion of Sinek's TED Talk that made the greatest impact on you personally as you listened. You can read the transcript to find his exact words and make sure you capture his message. Why did you select

this portion?

2. Thinking about what you learned from the readings in this chapter, answer the following question: How important is it for managers and leaders in business to understand Sinek's concluding statement, below?

"Because there are leaders and there are those who lead. Leaders hold a position of power or authority, but those who lead inspire us. Whether they're individuals or organizations, we follow those who lead, not because we have to, but because we want to. We follow those who lead, not for them, but for ourselves."

3. In what ways do you think Human Resources Specialists can support good leadership within a project?

Attribution

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CHAPTER 4: CASE STUDY

Tokyo 2020 Summer Olympics Case Study

This case study and case problems that follow were adapted from the publicly available volunteer strategy for the 2020 Tokyo Olympics.

Japan hosted the 2020 Summer Olympics from July 24 to August 9 in Tokyo. The event, commonly known as Tokyo 2020, was the second hosting by the country after the 1964 Tokyo Olympics. Most games will be played at venues within the prefecture of Tokyo or areas nearby. Twenty-eight of 32 competition venues are clustered around Tokyo within a 5-mile radius of the Olympic village, the residence facilities for athletes and staff. Eleven new venues are currently under construction. The Tokyo Metropolis is the largest metropolitan city in Japan. In fact, the Greater Tokyo area and its surrounding cities represent the most populous city in the world. Tokyo has a population of 39 million residents, with an economy equivalent in size to the eighth largest economy in the world.

Volunteer Program

The Tokyo 2020 Olympics has a vision statement, "Unity in Diversity." The 2020 Olympics Committee promotes this vision in the volunteer program by encouraging volunteer participation from people with diverse backgrounds. One of the program's goals is that through the volunteering experience, people will continue to remain active in their volunteering roles in their communities after the games.

The committee has implemented the volunteer program of the London 2012 Games as its template for running its volunteer program. The program has volunteers organized into two groups with different roles for the games: game volunteers and city volunteers.

1. **Game Volunteers** aid in the operation at the competition venues, media centers, and Olympic villages. The tasks involve providing support in the following areas: operation of games at the venues, security checks at the Olympics facilities, operation of the Olympics village, registration and issuance of IDs for the Olympic athletes and staff, and equipment checks and distribution of them to the venues. They are active prior to and for the duration of the games. Table 1 depicts a sample of the job descriptions and specifications for "games volunteers" for the 2020 Tokyo Olympics (TMG & TOCOPG, 2016).
2. **City Volunteers** guide those visitors with tourism and transportation information and, provide them with directions to game venues. City volunteers are deployed for athletes, staff members, and visitors at major transportation points, such as airports, major train stations, and popular tourist attractions.

Special booths are set up at those locations to welcome athletes, staff personnel, and spectators to Japan.

Volunteer leaders of either group are responsible for checking attendance of team members and acting as liaisons in the event of emergencies.

Job Descriptions and Specifications for "Games Volunteers" for the 2020 Tokyo Olympics.

Activity	Description (Examples)
Guidance at venues	Guide spectators and those affiliated with the games at venues, check tickets, provide support for regulating entrance to venues, etc.
Doping control	Provide support for doping inspectors as they test athletes who have finished competition.
Driver	Transport those affiliated with the games between venues by car.
Workforce registration	Sign in workforce at venues. Check the workforce member's shift by referring to their personal ID and relay necessary information to them.
Uniform distribution	Pass out uniforms to workforce members (volunteers and others) at a uniform distribution facility.
Media support	Provide support to Japanese and foreign media covering the games at venues, the Press Center, and other locations.
Language services	Provide communication support to those affiliated with the games, including athletes, the media, and foreign dignitaries.
Support for teams	Support the teams that come from around the world. Start preparations prior to the teams entering the Olympic Village to facilitate a comfortable stay.
Logistics support	Support the management and organization of goods brought to competition venues, the Olympic Village, etc.

Note. The table content of job descriptions and specifications came from the publicly available volunteer strategy provided by Tokyo Metropolitan Government and Tokyo Organizing Committee of the Olympic and Paralympic Games 2020.

Questions

Case Problems

The Olympic Committee has approached your group as an event volunteer/team program team to develop a plan for recruiting team of volunteers in accord with the Olympic vision of "Unity in Diversity." You are the Human Resources Specialist on the team. The committee is interested in how to encourage people with diverse backgrounds to volunteer for the games. Particularly, they aim to achieve two specific goals: 1) enlist first-time volunteers and 2) reach out to groups, such as seniors or new immigrants, who have been largely neglected as potential volunteers.

1. Discuss the role of trust in building this team of volunteers.
2. How would you plan motivation for this team?
3. According to the literature on volunteers for a major sport game, seven benefit categories were identified that volunteers experienced from participating in a major sport event (Doherty, 2009; Kim et al., 2018).

Match each benefit category on the left with corresponding items (two items per benefit) on the right.

1. Community contribution	1. Giving something back to community
2. Skill enrichment	2. Watching sport events while on volunteer duty
3. Being part of the game	3. Gaining unique experiences
4. Extrinsic rewards	4. Games volunteer uniforms
5. Positive memories	5. Acquired practical skills
6. Social development	6. Helping the community succeed
7. Experience the organization of running a sport event	
8. Meeting different people	
9. Working together with other volunteers	
10. My skills are being utilized	
11. Aiding athletes to perform	
12. Food and souvenirs	

Below are some constraints that keep people from volunteering for the games. Match the constraints with solutions that the committee recommends.

1. I have no time to volunteer.	Share compliments from the participants and attendees about volunteers and recognize their contributions publicly.
2. I want to volunteer, but I do not know how to begin.	Disseminate recruitment programs via multiple channels and provide simple application process online and offline.
3. I do not feel I am making any impact as a volunteer.	Provide flexible volunteer schedule options that allow for work-life balance. Pick-up and drop-off services are provided by running a shuttle bus in the area.
4. I have no other people to volunteer with me.	Create a group volunteer program and promote opportunities for social interactions via volunteering.

Attribution

CHAPTER 5: CASE STUDY

Florida Trip

You and your family of 5 have been planning a trip for a year. You want to go to Florida for 2 weeks in December over the holiday season. Your family's preference is to travel to the Naples's area. You will rent a condo with 3 bedrooms. It must have a pool. You will need to fly to the Naple's airport. You also would like to have a car for the 3 weeks. The plan is to visit many of the destination tourist sites. Your family cannot exceed $10,000.00 in total for the trip. There may be more details about the trip that you need to plan. You can be creative and build these into the plan.

Question

Following the scope project planning, develop a Scope Statement for your family that includes:

1. Project objective
2. Deliverables
3. Milestones
4. Technical requirements
5. Limits and exclusions
6. Reviews with customer (your family)

CHAPTER 6: CASE STUDY

Aspen Music Festival and School

Disclaimer: This case study is formulated to be used solely for educational purposes and based on both factual and fictional information.

Background

The Aspen Music Festival and School (AMFS)is an annual classical music festival held in Aspen, Colorado. The history of this world-renowned music festival goes back to its inception in 1949. The 8-week long music extravaganza highlights more than 400 musical events. The event programming is diverse in size and type, ranging from orchestral performances to solo performances. The AMFS has four featured orchestras performing each summer; two are entirely composed of Aspen Music School students. This annual festival draws more than 70,000 attendees, young and old, to Aspen for many unforgettable summer days of classical music.

The festival occurs on the pastoral 38-acre Bucksbaum Campus located just outside of Aspen. The grounds are surrounded by groves of aspen and fields bordered by a little creek. The event features family concerts and other daytime programming designed specifically for children as pre-concert activities in the Meadows hospitality tent. One of the highlights of this year is Beauty and the Beast presented by The Aspen Musical Production Group.

Aspen has a public transportation system that is free within city limits. In the summer, it operates special routes and schedules to serve concertgoers until 7 p.m. on weekdays and 6 p.m. on weekends. Each night during the festival, two or three events are performed after dusk that end almost at the same time. The festival organizers states that many festival attendees have preferred to walk along the path between the venues and the town center after the events, as the distances are short (about 20 minutes) and downhill for most visitors. The sidewalk is well lit after dark, but on one side of the two-lane road, and some sections of the sidewalk are too narrow for four people to walk comfortably abreast. There is no physical separation between the sidewalk and roadway except for the dividing lines. The speed limit in the area is 25 miles per hour; the local traffic is sparse after 6 p.m. Additional information about the festival is located in the Appendix.

Facilities

The facilities available are as follows:

- Benedict Music Tent accommodates 2,050 seats
- David Karetsky Music Lawn, open fields outside the Music Tent
- Harris Concert Hall holds 500 seats
- Castle Creek Campus, a 38-acre site with teaching studios, 68 practice rooms, two rehearsal halls

Food and Drinks

Food consumption is allowed only at the designated dining facilities in the concert venues. Food concessions, giveaways, and preparations are not permitted in the event area. No drinks are permitted in the event area. Similarly, no alcohol is distributed or sold in the event area. Bottled water is allowed in the concert venues.

Town of Aspen

Aspen is located in Pitkin County, Colorado, United States. As of 2015, 6,658 residents resided in Aspen. During the summer season however, the population can increase to more than 16,000. Aspen is 8,000 feet (2,400 m) above sea level and a 3.5-hour drive from Denver, Colorado. The average daily high is usually around 76 degrees.

Geologic Hazards

In table 9-3, the 2017 risk mitigation report prepared by the country officials lists the following hazards relative to their possible occurrence and severity. For further information, please refer to tables 9-1 and 9-2 below.

Table 9-1: Categories for Estimating Probability of Future Hazard Occurrences

Probability Categories	
Highly Likely	Near 100% chance of occurrence next year or it happens every year.
Likely	10-100% chance of occurrence next year or it has a recurrence interval of 10 years or less.
Occasional	1-10% chance of occurrence in the next year or it has a recurrence interval of 11 to 100 years.
Unlikely	Less than 1% chance of occurrence next 100 years (recurrence interval of greater than every 100 years).

Table 9-2: Categories for Estimating Magnitude of Future Hazard Occurrences

Magnitude Categories	
Catastrophic	Multiple deaths; property destroyed and severely damaged; and/or interruption of essential facilities and service for more than 72 hours.
Critical	Isolated deaths and/or multiple injuries and illnesses; major or long-term property damage; and/or interruption of essential facilities and services for 24-72 hours.
Limited	Minor injuries and illnesses; minimal property damage; and/or interruption of essential facilities and services for less than 24 hours.
Negligible	No or few injuries or illnesses; minor quality of life loss; little or no property damage; and/or brief interruption of essential facilities and services.

Table 9-3: The 2017 Pitkin County's Report of Aspen Natural Hazards – Estimated Probability and Magnitude

Hazard	Probability	Magnitude
Avalanche	Highly Likely	Critical
Wildfire	Likely	Critical
Flood	Occasional	Catastrophic
Winter Storm	Highly Likely	Limited
Lightning	Likely	Catastrophic
Dam Failure Flooding	Unlikely	Catastrophic
Drought	Occasional	Limited

Note. Probability refers to how likely the hazard is to occur in the future, accounting for historical frequencies or statistical assessment of probability. Magnitude is defined as the degree to which a hazardous event is severe in terms of its impacts on public safety, community, and personal assets and properties, key infrastructures, and natural resources.

Questions

1. What types of risk are particularly pertinent to this event in the process of risk identification? Select all that apply
2. Once the types of risk are determined for an event, they can be organized according to two key dimensions of risk. This method of risk organization allows the event management team to conduct an accurate assessment of the risks. Which of the following are the two key dimensions of risk considered in the risk assessment?
3. Based on your answers to Questions 1 and 2, rate the likelihood and consequence of each risk identified in Question 1 on the scale of 1 (e.g., rare) to 5 (e.g., almost certain).
4. In the hierarchy of risk controls, which of the following is the measure of risk control applied when power cords and electrical wires are properly covered, and uneven surface areas are visibly marked.?
5. Which of the plans should contain the measures taken to safeguard files relevant to event management?

Attribution

CHAPTER 7: CASE STUDY

Susan and Steve have decided to tie the knot, but they don't have much time to plan their wedding. They want the big day to be unforgettable. They want to invite many people and provide a great time. They've always dreamed of a June wedding, but it's already January. Just thinking about all of the details involved is overwhelming. Susan has been dreaming of the big day since she was 12, but it seems that there's so little time for all the tasks to be completed. When they were choosing the paper for the invitations, the couple realized that they needed help.

Susan:	Steve, we need some help.
Steve	Don't worry. My sister's wedding planner was great. Let me give her a call. [Steve calls the wedding planner Sally.]
Wedding Planner	Hello Susan and Steve.
Steve	We want everything to be perfect.
Susan	There is so much to do! Invitations, food, guests, and music.
Steve	Oh no, we haven't even booked a place!
Susan	And it has to be done right. We can't print the invitations until we have the menu planned. We can't do the seating arrangements until we have the RSVPs. We aren't sure what kind of band to get for the reception, or should it be a DJ? We're just overwhelmed.
Steve	My sister said you really saved her wedding. I know she gave you over a year to plan.
Steve	But I've always dreamed of a June wedding, and I'm not willing to give that up. I know it's late, but Sally can you help us?
Wedding Planner	Take it easy, guys. I've got it under control. We've a lot of people and activities to get under control. You guys really should have called six months ago, but we'll still make this wedding happen on time.

Much work has to be done before June. First, Sally figures out what work needs to be done. She starts to put together a to-do list:

- Invitations
- Flowers
- Wedding cake
- Dinner menu

- Band
- Reception venue preparation
- Transportation

Since many different people are involved in the making of the wedding, it takes much planning to coordinate all the work in the right order by the right people at the right time. Initially, Sally was worried that she didn't have enough time to make sure that everything would be done properly. However, she knew that she had some powerful time management tools on her side when she took the job, and these tools would help her to synchronize all the required tasks.

Questions

Please answer the following questions about the business case:

1. List some activities to accomplish the above to-do-list and organize them under major deliverables in WBS.
2. What method should Sally estimate (bottom-up, top-down) the time for these activities? Explain.
3. Discuss what tools that Sally can use to manage the schedule.

Attribution

CHAPTER 8: CASE STUDY

The Ultimate Cost of Poor Communication

Preparation

Research an example from the news of a situation in which a breakdown of teamwork and/or communication had serious or disastrous consequences. For example, in this article from the Daily Mail a two-year-old boy died from internal bleeding as the direct result of a total breakdown in communication between his physicians.

Instructions

Write a minimum of one short paragraph and a maximum of two paragraphs. Word totals for this post should be in the 100–200-word range. Whether you agree or disagree, explain why with supporting evidence and concepts from the readings or a related experience. Include a reference, link, or citation when appropriate.

Discussion Questions

1. Provide a brief description of the situation. Include a link to the article or site, as above, where we can find and read the details. (In order to insert this link, copy and paste the URL from your browser window into the text box where you are making your post. You do not have to do anything special; it will automatically be converted to a Web link.)
2. Describe or discuss the result of the breakdown in communication and/or teamwork.
3. What, if anything, do you believe as a Human Resources Specialist you could have been done to prevent this breakdown?

Attribution

CHAPTER 9: CASE STUDY

Avery Construction Company – Project Astro

A large project valued at $5 million is ending at the Avery Construction Company. You are the Human Resources Manager. Avery Construction has many projects being completed at any given time.

Chang, the Project Manager of the $5 million project (nicknamed: Project Astro) comes to you to discuss how to close out the project. His last project had no closure. The project team finished the prior project on a Friday and the following Monday they started another project. Change was not pleased about this situation. However, the company works at a fast pace and there was no time for any audit, closure, evaluation, or celebrations. Chang's team is a high-performing team, and their work is highly valued by the executives of the company. Change does not want this to happen again. This time, he has insisted his team take 5 days to close out the project in a meaningful way.

He asks you to develop a plan for the team that will honour the team, tie up all the loose ends, and provide them with a satisfactory closure process.

Question

1. Design a plan for the team to close out Project Astro. You will present your plan to Chang in a written format. You will include yourself in the plan as the Human Resources Specialist.

CHAPTER 10: CASE STUDY

Premier International

You are the Human Resources Manager of Premier International, an international hotel chain. Your organization is opening an office in Madrid, Spain. Craig Baldwin, Hospitality Director has accepted the responsibilities for the expansion to the new hotel in Spain. Craig's salary is $160,000/hear, plus he earns bonuses each year of 5%.

He has travelled Europe extensively on many short-term assignments to other hotels owned by Premier International. However, this will be his first long term assignment for 3 years.

Craig and his wife Karen just purchased a new home last year (their mortgage payments are $2300.00/ month.) Betty is an emergency room nurse at the local hospital and works full time. She earns $125,000/ year, plus a good benefit package. She is nervous about job security. They have 4 children, Brian (16), David (12), Greta (8) and Harry (6). They are all in school, and considerations about continued quality schooling are important. They have heard there is a Canadian School of Madrid (private school), in the city. None of the family speak Spanish. Craig and Karen have many questions about what to expect.

Question

Working together in a team and design a package that would allow Craig and his family to move to Madrid. They insist they want to maintain their present lifestyle (both at their current salaries.)

Address these issues, plus 2 more that are not included:

1. Education for the children
2. Compensation for Craig and Karen and incentives/benefits
3. Karen's employment concern
4. Language and culture training/shock

5. Transportation
6. Housing
7. Visas
8. Relocation allowances
9. Health, medical, insurance
10. Other
11. Other

CHAPTER 11: CASE STUDY

Case #1

You have been working as part of a team to introduce a new Human Resources Information System (HRIS) to your company. The team, including yourself, have spent 6 months working toward the goal of having the HRIS set up and piloted within 7 months. You are the HR representative on the team. The rest of the team relies heavily on you to host meetings, resolve conflicts, build the team dynamics, and provide expertise from an HR perspective. You have not been directly involved in the project since the first month it was launched. You stay in touch with the team when they ask you to be involved.

    The Project Manager comes to you and says that the "go-live" schedule within a month is not going to happen. She explains that the business requirements for the HRIS are not close to being completed, and some of the requirements have yet to be started. As well, she explains that she has never felt the Scope was realistic to meet the schedule demands, and project team has lost their motivation and commitment to the project. They all have lost a sense of their priorities; and communication between and among the team is at an all-time low.

    She asks you for help. What do you do?

> **Question**
>
> In small teams, analyze the case/situation and provide 6 recommendations that you can make to the Project Manager.

Case #2

Read the following case study: PM Governance Combined with Agile Tools Improves Delivery and Quality of Financial Services Programs and answer the questions below.

Questions

1. What are some of the agile tools and techniques that PM Solutions could have proposed?
2. What is the Kanban approach?
3. As a Human Resources Specialist, how could help set up the Agile Project Management approach?
4. For the proposed solution to work, what style of governing should the team should adapt?

STUDENT RESOURCES

CHAPTER VIDEOS-TEACHER/STUDENT ADDITIONAL RESOURCES

Transcripts for videos can be found on YouTube.

Chapter 1: Introduction to Project Management for Human Resources

- What is Project Management? by the Association for Project Management [2:18 minutes]
- What is PMP? Project Management Professional by Knowledge Hut [5:50 minutes]
- How to Write a Project Management Charter by Project Manager Videos [4:55 minutes]

Chapter 2: Culture and Structures of Organizations

- Culture vs. Strategy (Ben Kobulnicky) [7:21 minutes]
- Project Identification and Selection (Leading Edge Group1) [5:52 minutes]
- 5 Organization structure Influence project management | Functional Matrix Projectized organization: Kavin Kumar [4:13 minutes]
- What is Organizational Culture? (Denison Consulting): [4:24 minutes]

Chapter 3: Project Manager as a Leader

- What is Project Manager? And Project Manager Roles and Responsibilities (AIMS Education, UK) [2:06 minutes]

Chapter 4: Working with Teams

- How to Build a Project Team (Project Management Videos) [4:05 minutes]
- Characteristics of a High-Performance Team (MBC Development) [7:41 minutes] *Transcript unavailable – no spoken audio only background music.*
- Managing Virtual Teams: Management and Leadership (Litmos heroes) [1:05 minutes]

Chapter 5: Project Life Cycle, Scope, Charters, Proposals

- Project Management Overview: Defining a project | Lynda.com (LinkedIn Learning) [2:39 minutes]
- What is Project Scope? Project Management in Under 5: (Online PM Courses-Mike Clayton) [3:30 minutes]
- How To Manage Your Project Priorities-Project Management (Project Management Videos) [4:18 minutes]
- Project Management: What is a Work Breakdown Structure? (Project Management Videos) [4:43 minutes]
- Project 2016 Tutorial Using WBS Codes Microsoft Training (TeachUComp) [4:23 minutes]
- How to Estimate Your Project (Project Management Videos) [3:28 minutes]
- Project management, top-down, bottom-up, BAC, PERT. Estimating tools (Laure Abourachid) [3:12 minutes]
- Outsourcing: Is it good or bad? (daraddicted) [5:06 minutes]

Chapter 6: Managing Risk

- RiskX: The risk management process (RiskX: Risk Management for Projects) [7:18 minutes]

Chapter 7: Scheduling Resources and Budgets

- What are Project Constraints? (Online PM Courses, Mike Clayton) [3:41 minutes]
- Resource Allocation, Resource Levelling, Resource Smoothening in Project Management (All about civil engineering by Pracin Mane) [8:48 minutes]

Chapter 9: Project Closure and Evaluation

- How and Why to Close a Project-Project Management Training (Project Management Videos) [3:43 minutes]
- The Impact of Project Audits on Organizational Effectiveness (michaelstanleigh) [5:45 minutes]
- What is change control? Project Management in Under 5 (Online PM Courses-Mike Clayton) [5:09 minutes]
- Steps in the Control Process (EduNote) [3:05 minutes]
- What is Project Management? (Association for Project Management) [2:18 minutes]

Chapter 10: International Projects

- International Project Management-RITX [1:28 minutes]
- What is a Multinational Company? [2:39 minutes]
- China Super Railway Projects In Other Countries That Shock The World [11:27 minutes]

Chapter 11: An Introduction to Agile Management

- Agile Project Management Tutorial-What Is Agile Project Management? Simplilearn[9:18 minutes]
- Scrum in under 5 minutes [4:31 minutes]

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VERSIONING HISTORY

This page provides a record of edits and changes made to this book since its initial publication. Whenever edits or updates are made in the text, we provide a record and description of those changes here. If the change is minor, the version number increases by 0.1. If the edits involve a number of changes, the version number increases to the next full number.

The files posted alongside this book always reflect the most recent version.

Version	Date	Change	Affected Web Page
1.0	01 November 2022	First Publication	N/A
1.1	12 January 2024	Added Chapter Overviews to the parts.	All Parts