**1. Defines a plan and organizes chaos**

Projects are naturally chaotic. The primary business function of project management is organizing and planning projects to tame this chaos. A clear path mapped out from start to finish ensures the outcome meets the goals of your project.

**2. Establishes a schedule and plan**

Without a schedule, a project has a higher probability of delays and cost overruns. A sound schedule is key to a successful project.

**3. Enforces and encourages teamwork**

A project brings people together to share ideas and provide inspiration. Collaboration is the cornerstone of effective project planning and management.

**4. Maximizes resources**

Resources, whether financial or human, are expensive. By enforcing project management disciplines such as project tracking and risk management, all resources are used efficiently and economically.

**5. Manages Integration**

Projects don’t happen in a vacuum. They need to be integrated with business processes, systems, and organizations. You can’t build a sales system that doesn’t integrate with your sales process and sales organization. It wouldn’t add much value. Integration is often key to project value. Project management identifies and manages integration.

**6. Controls cost**

Some projects can cost a significant amount of money, so on-budget performance is essential. Using project management strategies greatly reduces the risk of budget overruns.

**7. Manages change**

Projects always happen in an environment in which nothing is constant except change. Managing change is a complex and daunting task. It is not optional. Project management manages change.

**8. Managing quality**

Quality is the value of what you produce. Project management identifies, manages, and controls quality. This results in a high-quality product or service and a happy client.

**9. Retain and use knowledge**

Projects generate knowledge (or at least they should). Knowledge represents a significant asset for most businesses. Left unmanaged knowledge tends to fade quickly. Project management ensures that knowledge is captured and managed.

**10. Learning from failure**

Projects do fail. When they do, it is important to learn from the process. Project management ensures that lessons are learned from project success and failure.

**Adapted from**[20/20 Project Management. Optimising Performance](https://2020projectmanagement.com/)

These reasons and many other factors are why companies employ people with project management skills. The latest PMI-commissioned talent gap analysis by Anderson Economic Group (AEG) points to outstanding opportunities in jobs and career growth for project managers within the 11 countries studied. By 2027, the project management-oriented labor force in seven project-oriented sectors is expected to grow by 33 percent or nearly 22 million new jobs. By 2027, employers will need nearly 88 million individuals in project management-oriented roles. China and India will represent more than 75 percent of the total project management-oriented employment. (See [Project Management Job Growth and Talent Gap 2017–2027](https://www.pmi.org/learning/careers/job-growth)). This week will provide you with an overview of project management and the project management process.

Project management is the discipline of planning, organizing, motivating, and controlling resources to achieve specific deliverables. The main challenge of project management is to achieve project goals and objectives while keeping in mind the project scope, time, quality, and cost.

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. —Section 1.3, page 4 from the Fifth Edition of the PMBOK Guide.

Project management actually began in the early 1950s. The demand for project management and project managers as individuals arose from observing the benefit of organizing work within the project and the critical need to coordinate across different departments and professionals. This unit will introduce you to the formal definition of project management and project management processes.

**Learning Outcomes**

By the end of this unit you should be able to:

* identify the characteristics that define a project
* discuss how program management differs from project management
* identify the different types of project management methodologies
* describe the phases of the project life cycle
* describe the project management triangle
* identify the importance and contents of a project charter
* explore the basic requirements for the CAPM and PMP certifications

**Learning Resources**

**Required Readings**

* Project Management: The Managerial Process – Larson and Gray
  + Chapters 1, 2, 3

**Recommended Readings**

* PMBOK
  + Ch. 1: Introduction
  + Ch. 2: The Environment in which projects operate
  + Ch 3: The role of the project manager
  + Ch 4: Project Integration Management
  + Part 2 The Standard for Project Management – Initiation Process Group
* Project Management Fundamentals (Christianson, 2016)
  + Ch. 1: Project Management Defined
  + Ch. 3: Project Management and the Organization
  + Ch. 4: Project Charter
* PMI (2017) Project Management Job Growth and Talent Gap 2017–2027

**What is a Project?**

The term “project” is used in 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). However, when professional project managers talk about projects, they use a narrower definition.

The official Project Management Institute (PMI) definition of a project is…  “a temporary endeavor undertaken to create a unique product, service or result. “

The key characteristics that define a project are:

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

Watch [What is a Project](http://pmf.video/video1) for more information on how these six aspects help define what is (and is not) a project.

**Activity 1.1 Project Definitions**

**The Objectives of Project Management Work**

The first challenge of project management is to make sure that a project is delivered within defined constraints (timing, resources, money). The second, more ambitious challenge is the optimized allocation and integration of inputs needed to meet pre-defined objectives.

**Types of Project Management Methodologies**

There are many project management methodologies and frameworks devised to manage a project. These are some of the most popular:

|  |  |
| --- | --- |
| Waterfall | a traditional methodology that is sequential and requirement-focused, with each project stage completed before moving on to the next |
| Agile | a framework that prefers a faster and more flexible way of working; it is iterative and incremental in response to changing requirements |
| Scrum | an approach used in agile project management, which focuses on teams, daily standup meetings and sprints, which are short iterations of work |
| PRINCE2 | *Projects In Controlled Environments -* the official methodology for governmental projects in the UK, based on seven principles, themes, and processes |
| Lean | as anticipated, a way to cut waste and, in so doing, increase value; it focuses on key processes to continuously have a positive impact on value by optimizing separate technologies, assets, and verticals |

Regardless of the type of project management used, a project manager is typically involved to ensure that everything runs smoothly and the agreed-upon methodology is being followed correctly.

**The Project Management Triangle**

The biggest issues in a project are typically related to three things—time, cost, and scope, which collectively are referred to as the triple constraint. A project plan must adjust to the triple constraint, or project management triangle (time, cost, and scope limitations) that apply to every project.

The time constraint refers to the amount of time available to complete a project. The cost constraint refers to the budgeted amount available for the project. The scope constraint refers to what must be done to produce the project's end result (and not done). These three constraints are often competing constraints: increased scope typically means increased time and increased cost; a tight time constraint could mean increased costs and reduced scope, and a tight budget could mean increased time and reduced scope.  
This concept is a cornerstone of project management, and therefore managers must pay special attention to the schedule, budget, and work breakdown structure during the planning phase.

Watch the following video to learn more about the triple constraint and how a Project Priority Matrix can be used to communicate trade-offs between time, cost, and scope. As you watch the video, [complete this table](https://courselink.uoguelph.ca/content/enforced/894144-MGMT_3300_DE01_F24/units/unit01/assets_01/Unit%2001%20Spreadsheet.docx?ou=894144), filling in the cells to indicate what a selection in an area means with time, cost, and scope. A few have already been completed for you. After you have completed the table, click on ‘Reveal the Answer’ below to compare your responses.

**Reveal the Anwer**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Accept** | **Constrain** | **Enhance** |
| **Time** | Will allow the project to be late | Must meet deadline | Get done sooner if possible |
| **Cost** | Will allow the project to cost more | Can’t spend a dime more | Complete more cheaply if possible |
| **Scope** | Will allow the scope to be reduced | Have to meet specs | Increase scope if possible |

**The Five Phases of the Project Lifecycle**

Projects have a lifecycle; they all go through a series of five phases, as noted below.

Open allClose all

**Phase 1: Project Initiation (Defining)**

This is the starting phase of the project when you must prove the project has value and is feasible. This stage includes creating a business case to justify the need for the project and a feasibility study to show that it can be executed within a reasonable time and cost. This is also the time to create a [scope management document](https://www.projectmanager.com/templates/project-charter-template) (a document that sets out exactly what the project is going to deliver).

This stage of the project culminates in a [project kickoff meeting,](https://www.projectmanager.com/blog/kickoff-meeting-agenda) where you bring together the team, stakeholders, and other relevant parties to lay out the project goals, schedule, processes, and chain of communication.

**Phase 2: Project Planning**

The second phase is [project planning](https://www.projectmanager.com/project-planning), which occurs after the project has been approved. The deliverable of this phase is the **project plan**, which will be the guide for the execution and control phases. The [project plan](https://www.projectmanager.com/templates/project-plan) must include every component associated with the execution of the project, including the costs, risks, resources, and timelines.

During this phase, the work required to complete the project (known as the project scope) is defined using a [work breakdown structure](https://www.projectmanager.com/work-breakdown-structure)**(WBS)**. The WBS divides the project into activities, milestones, and deliverables which allows project managers to create schedules and assign tasks to their team members. Project managers also generate cost, time estimates, network diagrams, and a human resource plan during this phase.

**Phase 3: Project Execution**

The third phase is project execution, where most of the work happens. This is the phase where project managers complete the project activities and milestones to produce the deliverables to the client’s or stakeholder’s satisfaction by following the plan created in the previous stage. Along the way, the project manager [reallocates resources](https://www.projectmanager.com/resource-management) as needed to keep the team working. They work to identify and **mitigate risks**, deal with problems, and incorporate any changes.

**Phase 4: Monitoring and Controlling**

In your textbook and for the purposes of this course, phases three and four are combined. In phase four (a subset of the execution phase),  project managers [monitor the project’s progress and performance](https://www.projectmanager.com/project-tracker) to ensure it stays on schedule and within budget; they communicate changes to project stakeholders through regular **progress reports**.

**Phase 5: Project Closure**

The fifth phase is project closure, in which the final deliverables are presented to the client or stakeholder. Once approved, resources are released, documentation is completed, and everything is signed off in the **project closure report**. At this point, the project manager and team can conduct a post-mortem to evaluate the [lessons learned](https://www.projectmanager.com/templates/lessons-learned-template) from the project and learn from the experience.

The image below shows the ‘ebbs and flows’ of the phases during the project lifecycle, as well as the activities associated with each phase.

Project Management: The Managerial Process 7E Author(s): Gray, Clifford F. and Larson, Erik, W. Publisher: McGraw-Hill Education, New York, NY

**What Exactly Does a Project Manager Do?**

A project manager is an individual tasked with planning and executing the project. As noted, there are many ways to manage a project—and depending on the methodology used, a project manager can operate in vastly different ways. However, most project managers share common roles and responsibilities. Some of the more traditional duties of a project manager include the following:

|  |  |
| --- | --- |
| scope management | defining the work needed to complete the project |
| task management | planning tasks and defining their deliverables |
| resource management | using people, capital, materials, and all other resources efficiently |
| team management | assembling and leading a team |
| schedule management | analyzing the duration of activities to create a project schedule; once the execution phase begins, the project status must be monitored to update the [schedule baseline](https://www.projectmanager.com/blog/schedule-baseline-make-one) |
| quality management | establishing a quality policy for the project’s deliverables and implementing quality assurance and quality control procedures |
| cost management | estimating costs and creating a budget |
| stakeholder management | satisfying stakeholders' expectations and communicating with them throughout the project life cycle |
| risk management | identifying, monitoring, and minimizing project risk |
| status reporting | monitoring and [tracking progress](https://www.projectmanager.com/project-tracker) and performance by generating reports and other documentation |

Project managers learn about their role through certification from the Project Management Institute (PMI), which has codified standards in the often updated Project Management Book of Knowledge (PMBOK).

**Project Manager vs. Manager**

There are some key differences between project managers and managers. In general, project managers are focused on a specific project, and managers address a broad range of ongoing operational issues. In addition, most project managers are entry-level management positions and typically do not have “ownership” of the employees they employ. As such, project managers do not review salary, schedule vacations, or dole out discipline. This is the job of the manager.

Project managers are typically privy to significant amounts of confidential human resource and finance-related information. This is similar to managers financially, but with respect to personnel, the access is more tightly controlled. The project manager does more than 90 percent of the day-to-day management of the employee typically, including setting priorities for the group and following up on them.

**The Project Management Institute (PMI)**

The Project Management Institute (PMI) is a leading not-for-profit professional membership association for the project management profession. The association aims to provide tools, networking opportunities, and best practices to those seeking help to successfully manage their projects and portfolios. It started in 1969, and currently, the resources and research programs by PMI are helping more than 2.9 million professionals working in almost every country to excel in their respective professions.

In addition, PMI is also the organization that oversees the documentation of the Project Management Body of Knowledge (PMBOK) Guide. The PMBOK Guide is a book that contains all the standards and guidelines established by the Project Management Institute for successful project management. The PMBOK is the recognized standard from PMI that shares established norms, methods, and processes that constitute good practices of project managers. It is a document that has evolved through the contributions of high-quality practitioners. This text defines project management and other important concepts and describes the relevant processes for managing a project. This text defines the content for which project managers will be held accountable in certification exams.

**What is PMI certification?**

PMI offers a wide range of credentials and certifications - both entry-level and specialist certification schemes that are specifically designed to help professionals recognize their knowledge and competency, and then use it to grow in their profession. The Project Manager Professional (PMP) certification is one of the most well-recognized certifications for project management. If you would like to know more about the available certifications and the certification process, check out the information available on the [PMI website](https://www.pmi.org/?utm_job_number=36&utm_campaign_name=branded_sem&utm_region_name=north_america&utm_program_origin=planned_campaign&utm_program_type=continuous_campaign&utm_campaign_intent=acquisition&utm_funnel_stage=customer_acquisition&utm_initiative=brand&utm_product=none&utm_marketing_channel=paid_media&utm_marketing_subchannel=search_ppc_branded&utm_start_date=05012019&utm_end_date=12312030&utm_source=google&utm_custom_field_one=pmi_branded_north_america&utm_custom_field_two=branded_abbreviations&utm_custom_field_three=352268357272&utm_custom_field_four=pmi&utm_custom_field_five=e&gclid=Cj0KCQjwpdqDBhCSARIsAEUJ0hOEbkafZkLKTnlEWj7aflvfG_2z_Iz6jqN3CqgmBQR1RL6-CU4GgtgaAoBaEALw_wcB).

**Project Management Tools – Project Charter**

The first crucial document in the project management process is the **project charter**. A project charter is a formal, typically short document that describes a project in its entirety — including the objectives, how it will be carried out, and identifying stakeholders. It is a crucial ingredient in planning the project because it is used throughout the project lifecycle. (Source: [Project Management Guide FAQ](https://www.wrike.com/project-management-guide/faq/what-is-a-project-charter-in-project-management/))

**Process Inputs and Outputs**

PMI describes the inputs needed for each process, tools used in the process, and the resulting deliverables once the process is complete. For example, the Develop Project Charter process has the following inputs, tools, and deliverables: (Source: [PMF Textbook](https://oercommons.s3.amazonaws.com/media/courseware/relatedresource/file/PMF_Textbook.pdf), pg 20)

**Project Charter Inputs**

* enterprise environmental factors (for example, organizational structure and culture)
* project contract (if applicable)
* project statement of work
* organizational process assets (lessons learned from other projects, etc.)

**Project Charter Tools**

* project management information systems
* project management methodologies (PMBOK standards, for example)
* project selection methods (discussed in a later unit)
* expert judgement (the experience of project managers)

**Project Charter Overview**

The project charter typically documents:

* reasons for the project
* objectives and constraints of the project
* the main stakeholders
* risks identified
* benefits of the project
* general overview of the budget

**How to Create a Project Charter**

1. **Understand the project goals and objectives:** identify the project vision and determine the scope of the project.
2. **Define the project organization:** list all of the essential roles for the project, including customers, stakeholders, and the day-to-day project team.
3. **Create an implementation plan:** outline major milestones, dependencies, and the timeline for the entire team and stakeholders.
4. **List potential problem areas:** This isn’t about being a downer – it’s more about being realistic. Adding potential risks and issues to the project charter helps everyone think ahead and even prevents potential roadblocks.

**Tips for Writing a Project Management Charter**

Ready to create your own project charter? Here are a few other helpful tips to keep in mind as you work through the above steps.

1. **Rely on insights from your team.**Don’t feel like you need to work out all this information independently. Pull together some of your project team members to pick their brains about goals, milestones, and potential problem areas. Gathering their insights will help you create a far more accurate project charter.
2. **Keep it short and straightforward.** It’s tempting to get lost in the amount of information available. But, keep in mind that your project charter is supposed to be a high-level overview of your project and not a breakdown that covers every detail. Each section of your charter should only require a sentence or two. Additionally, charts and bulleted lists will help you present the information in an organized and digestible way.
3. **Create a template.** After you realize how helpful a project charter is, you’ll undoubtedly want one for all your team’s projects. Don’t waste time reinventing the wheel. Create a simple template that you can copy and use for all your project charters. It will eliminate some manual effort, and ensure you don’t miss any elements.

**Templates and Examples**

Go to **Toolbox** from the **Tools** menu on the **Navbar** for this week’s templates and examples. Your instructor has posted the project charter for the course in the Toolbox.

Now that you have completed the instruction and activities for this unit, take some time to reflect on what you have learned, apply it to the real-life home renovation example, and reflect on your knowledge before you move on to Unit 02.

**Activity 1.3 Life Example – Home Renovation Project**

Imagine you would like to take on the project of flipping a house. In the next 12 months, you need to purchase, renovate, and sell a house for a profit. To make a profit, you need to research, plan, organize, schedule, and manage your resources.

Applying what you have learned this week, you know that this is a project because your flip is a temporary task with a unique deliverable and a distinct beginning and end. There are time constraints, funding, and deliverables. Your timing, budget, or project scope cannot be changed without impact on each other. For example, you may need to cut costs on renovating the bedrooms to splurge on the kitchen renovation because it has a higher return for your investment. The ‘scope’ constraint is all of the details – the type of house, the number of renovations, and how all the details will impact the desired return on investment/profit. Like other projects, the **Our Flip** project will have five steps:

|  |  |
| --- | --- |
| 1. **Initiating** | You make the decision to ‘flip’ a property. You select the property that you intend to renovate, determine the budget and your desired profit, and decide which aspects are important to your renovation. |
| 1. **Planning and Design** | Design and commence planning your renovations. |
| 1. **Executing** | Choose and schedule contractors to complete the renovations, select the supplies, and set expectations regarding quality and design. |
| 1. **Monitoring and Controlling** | You ensure thatall of your vendors and contractors are aligned with dates, details, and expectations for their services. |
| 1. **Completion** | The completed property is sold and you determine the profit. |

As you move through this course, this example will be expanded in more detail. For now, it serves as a reminder that project management skills are life skills that, once developed, can be applied to multiple life situations.

**Personal Reflection and Application**

Think back to your learning experience during this week and respond to the survey before continuing to Unit 02.

Unit 1 quiz

**Question 1**(1 point)

*Saved*

When the project scope and/or technology are not fully known or stable, the best choice of method for such projects is

Question 1 options:

|  |  |
| --- | --- |
|  | traditional project management. |
|  | plan-driven project management. |
|  | schedule-driven project management. |
|  | agile-driven project management. |
|  | budget-driven project management. |

**Question 2**(1 point)

*Saved*

At first glance, project managers perform the same functions as other managers. That is, they plan, schedule, motivate and control.

Question 2 options:

|  |  |
| --- | --- |
|  | True |
|  | False |

**Question 3**(1 point)

*Saved*

Project management appears to be ideally suited for a business environment requiring accountability, flexibility, innovation and repeatability.

Question 3 options:

|  |  |
| --- | --- |
|  | True |
|  | False |

**Question 4**(1 point)

*Saved*

A(n) \_\_\_\_\_\_\_\_\_ is a series of coordinated, related multiple projects that continue over an extended time intended to achieve a goal.

Question 4 options:

|  |  |
| --- | --- |
|  | program |
|  | portfolio |
|  | product family |
|  | process |
|  | folder |

**Question 5**(1 point)

*Saved*

Project managers must have many competencies, among them leadership, teamwork and negotiation. Leadership, teamwork, and negotiation are examples of the \_\_\_\_\_\_\_\_\_ dimension of the project management process.

Question 5 options:

|  |  |
| --- | --- |
|  | sociocultural |
|  | soft skills |
|  | technical |
|  | tools |
|  | planning |

**Question 6**(1 point)

*Saved*

Project managers employ lots of useful tools, many supported by software. WBS, schedules, and budgets are tools taken from the \_\_\_\_\_\_\_\_\_ dimension of the project management process.

Question 6 options:

|  |  |
| --- | --- |
|  | sociocultural |
|  | soft skills |
|  | technical |
|  | tools |
|  | planning |

**Question 7**(1 point)

*Saved*

Project managers are expected to ensure that appropriate trade-offs are made between the time, cost, and \_\_\_\_\_\_\_\_\_\_ requirements of the project.

Question 7 options:

|  |  |
| --- | --- |
|  | performance |
|  | quality |
|  | specifications |
|  | functional |
|  | scope |

**Question 8**(1 point)

*Saved*

Project management is being driven by

Question 8 options:

|  |  |
| --- | --- |
|  | elevated profit motive. |
|  | knowledge explosion. |
|  | increased customer focus. |
|  | more projects being done in-house. |
|  | knowledge explosion and increased customer focus. |

**Question 9**(1 point)

*Saved*

Any project life cycle is made up of stages. The project's schedule and budget will be determined in the \_\_\_\_\_\_\_\_\_\_\_ stage of the project life cycle.

Question 9 options:

|  |  |
| --- | --- |
|  | conceptual |
|  | closing |
|  | defining |
|  | planning |
|  | executing |

**Question 10**(1 point)

*Saved*

In today's customer-focused organizations, the customer is recognized as the final authority of what constitutes quality. Nevertheless, customer tastes and feature preferences vary from customer to customer. Increased competition has placed a premium on customer satisfaction and the development of \_\_\_\_\_\_\_\_\_\_ products and services.

Question 10 options:

|  |  |
| --- | --- |
|  | unique |
|  | quality |
|  | customized |
|  | creative |
|  | consistent |

SAS