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COURSE 4 : Project Execution: Running the Project

Week 1 : Introduction To Project Execution

Learning Objectives

- Explain the importance of project tracking and identify what aspects of a project to track.
- Identify and compare different tracking methods.
- Identify reasons why risks and changes might occur during a project.
- Manage dependencies and risks in an active project.
- Address critical risks through escalation and negotiation.

1.1 Tracking And Measuring Project Progress

1.1.1 The importance of tracking

In previous courses, we've discussed the importance of breaking your project down into milestones and tasks and assigning those tasks to different members of your team. We've also discussed setting a schedule and budget. But once the project execution phase gets going, how do you actually know that the work is getting done? Well, you can do this in a few ways, but primarily, you can **keep tabs on project progress by tracking and measurement**.

Tracking is a method of following the progress of a project's activities. Measuring project performance regularly to identify deviations from the project plan can help ensure that the project stays on track. A deviation is anything that alters your original course of action. Deviations from the project plan can be **positive or negative**.

- Are you ahead of schedule because a technical problem is less complex than you estimated? (Positive)
- Did a natural disaster shut down your testing team? (Negative)

Let's examine some of the ways that tracking is beneficial for your project's success.

- Tracking makes **key project information transparent**, and transparency is essential for **accurate decision-making**. Even the strongest project managers make poor decisions when they lack information or context. Tracking centralizes project information so that everyone can understand the status of each part of the project, which can then help you identify gaps in your knowledge. Also, projects have so many little details. It's hard to keep everything straight. Tracking helps ensure that you don't risk forgetting something.
- Tracking helps **keep all team members and stakeholders in touch with deadlines and goals**. To ensure that **everyone has visibility** into project progress, you should

have a project plan that works both for you and your team. This way you're all on the same page about how the project is progressing.

- Tracking is also crucial for **recognizing risks and issues** that can derail your progress. With effective tracking, you will be able to identify issues in a timely fashion and work with your team to take corrective action. By providing visibility into the various parts of the project, tracking helps you and your team identify and focus on areas at risk.
- Tracking helps build **confidence that the project is set to be delivered on time, in-scope, and within budget**. Having a clear, up-to-date picture of the overall project status keeps the team motivated and focused on staying the course.

So to recap, tracking is important for a few key reasons, like **transparency, risk management, and keeping the project on track**.

1.1.2 Common items to track

I'll take you through a few of **the most commonly tracked items** that I found helpful when managing projects at Google.

- First, you should always track the **project schedule**. This is made up of **tasks and activities** that ensure that the project is effectively heading toward its completion date. After all, your ultimate goal is to **complete your deliverables on time**.
- Equally important is tracking the **status of action items, key tasks, and activities** to ensure that that work is actually getting done.
- Tracking tasks also helps to track your team's **progress toward milestones**. When you're in the middle of a project, new tasks will come up all the time. In order to avoid missing deadlines, it's imperative to track tasks as they progress and as you approach key milestones.
- Next, you'll also need to track **costs** to ensure that you don't overspend or underspend on project tasks. As I mentioned earlier, all projects have budgets, and whether or not you're overseeing the entire budget, you may be overseeing tasks and resources that have budget implications.
- Finally, you'll need to track **key decisions, changes, dependencies, and risks** to the project, including any agreed upon scope changes. This way, your team and stakeholders are aligned on what needs to be done for the project to succeed.

To recap, the **items that are helpful to track** throughout the project execution phase include the project schedule, which contains the key tasks and activities, the status of action items, progress toward milestones, costs, and key decisions and changes.

1.1.3 Different tracking methods

The purpose of your project plan is to guide you through the execution of your project. Therefore, it will always include at least one type of tracking method, and sometimes you might use more than one depending on what your team needs. The tracking methods we'll discuss in this video are a Gantt chart, a roadmap, and a burndown chart.

Whichever type you choose depends on what you deem suitable for your project. It's important to remember to select something that the entire team can easily understand, reference, and keep up to date. Let's compare the tracking methods I mentioned.

Gantt Chart

A Gantt chart **measures tasks against time** and includes useful information, like **who will own each task** and **what the order of the tasks** should be. For this reason, it's a useful chart for staying on schedule and for **projects with many dependencies** or tasks or activities or milestones that are reliant on one another.

It's also a helpful chart for teams with **a lot of people**, because **ownership and responsibilities are explicitly laid out visually**. As you track and move along sequentially over time, this starts to look like a waterfall; hence, why Gantt charts are commonly used in Waterfall project management. Each task is represented by a horizontal progress bar, and the length of the bar is dependent on how much time is allotted to the task. The bars are stacked on top of each other to denote that the task at the top must be completed before the next one below it can be completed. Gantt charts typically **live** in your project plan and are **updated as the project progresses**.

Roadmap

A roadmap is best suited for when you need a way to **track big milestones** in your project. It's useful for **illustrating how a project should evolve over time** to a team and key stakeholders.

A roadmap might list your project's **goals** at the top and a **description of the approach** we'll be taking to meet those goals. The approach details the main tactics your team will use to reach your goal. A roadmap also includes a **high-level project overview**. High-level in this context means a concise summary, usually three-to-four sentences, to clearly state the objectives and priorities for your project. Below the goals, approach, and overview is **a table that maps out what the process will entail**.

Burndown Chart

A burndown chart **measures time against the amount of work done and the amount of work remaining**. Their main uses are to **keep the project team on top of targeted completion dates** and to **keep the team aware of scope creep** as it occurs. Burndown charts are best suited for projects that **require a detailed, broken-down review of each task** associated with a project, and they're great for projects where **finishing on time is the top priority**.

The y-axis or the vertical axis symbolizes the number of tasks left to complete, and the x-axis or the horizontal axis signifies time. Progress gets tracked from the upper left-hand corner of the chart. As the project goes along, you'll track down, working your way towards zero remaining tasks, and to the right, working your way toward your end date. There's typically a dotted line for your expected or projected progress based on the rate your team's expected to close tasks, and a solid line representing your actual progress.

Before you continue on with your project, you'll need to decide which tracker makes the most sense.

- If you need to **communicate milestones to a large team**, you might choose a **roadmap**.
- If you have a project with **multiple dependencies**, you might choose a **Gantt chart**.

- If tracking **tasks against your deadline** is especially important, then the **burndown chart** might be your best option.

And you may even decide to use more than one. Because the tracking method will be determined by the type of project you're working on, your resources, and the project scope, you'll probably end up using several types of tracking methods at some point in your career. In my time at Google, I've regularly **combined methods** and used a few different types together. For example, using a Gantt chart to scope work at the beginning of a project, then switching to a burndown chart in the weeks before a launch to make sure we're good to go.

1.1.4 Choose the right tracking method for your project

So far, you've learned about the importance of tracking project progress. You've also reviewed some of the different tracking methods used by project managers, like project plans, Gantt and Burndown charts, and Roadmaps. This reading will explore and compare these popular tracking methods in more detail so you can feel more confident choosing the best method for your projects.

Gantt charts

The Gantt chart is one of the most popular tracking methods and can be used for all types of projects. Gantt charts typically live in your project charter and are updated as the project progresses.

Gantt charts are useful for:

- Helping a team stay on schedule
- Projects with lots of tasks, dependencies, and milestones
- Projects with large teams, because ownership and responsibilities are explicitly laid out visually

Asana, one of the work management software tools featured in this certification, has useful resources for getting started with Gantt charts. Practice working with Gantt charts on your own with a [free Asana trial](#) or by downloading a free Gantt chart template from [Google Sheets](#) or [Microsoft Excel](#).

Roadmaps

Roadmaps are another common tracking method. Like Gantt charts, Roadmaps also track both individual and project progress toward milestones. However, Roadmaps are best suited for tracking big milestones in your project.

Roadmaps are useful for:

- High-level tracking of large milestones. Roadmaps outline the project as a whole and provide an overall snapshot of key points—just like an actual roadmap contains points of interest and mile markers.
- Illustrating to your team or key stakeholders how a project should evolve over time

Roadmaps can be built using different tools. You can create a Roadmap in a document (like this [example](#)).

Smartsheet has useful resources for getting started with Roadmaps. Practice working with Roadmaps on your own with a [free Smartsheet trial](#) or by downloading this [Roadmap template](#) created with Google Sheets.

Burndown charts

Burndown charts are typically used by Agile Scrum teams. Burndown charts reveal how quickly your team is working by displaying how much work is left and how much time remains to complete the work. The main uses of a Burndown chart are to keep the project team on top of targeted completion dates and make them aware of scope creep if it occurs. The chart should be displayed so everyone can see it and needs to be updated regularly in order to be effective.

Burndown charts are useful for:

- Projects that require a detailed review of tasks
- Projects where finishing on time is the top priority

***Note:** If you'd like to learn about Agile and Scrum, which are popular project management approaches, check out Course 5 of this certificate, [Agile Project Management](#).

A Burndown chart helps you, as a project manager, understand how your team works and what influences their ability to complete tasks on time. This way, you can address issues right away, before they become major problems. They also help you plan more efficiently for the next project by identifying potential problem areas.

Jira is a work management software tool that has useful resources for getting started with Burndown charts. Practice working with Burndown charts on your own with a [free Jira trial](#) or by downloading this [Burndown chart template](#) created with Google Sheets.

Additional Resources:

- Asana help article: [New to Gantt charts? Start here.](#)
- Smartsheet help article: [Everything you need to know about Project Roadmaps](#)
- [Free Product Roadmap templates from Smartsheet](#)
- Jira help article: [Learn how to use burndown charts in Jira software](#)
- ProjectManager.com article: [Burndown Chart: What Is It & How Do I Use It?](#)

1.1.5 Project status reports

In this lesson, you are learning to identify and compare various types of tracking methods. This reading will cover **project status reports** and how you can use them to track and communicate common project elements in a snapshot.

Key components of a project status report

A project status report gives an overview of all of the project's common elements and summarizes them in a snapshot. It is an efficient communication tool to convey the latest status in one place for the team and stakeholders.

Most status reports contain the following components:

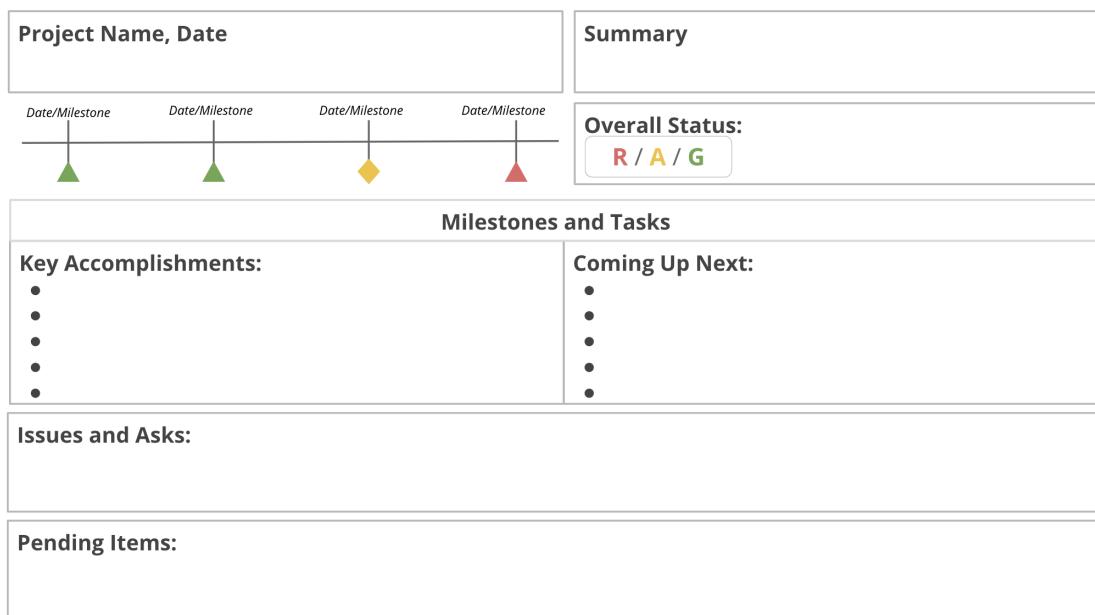
- **Project name:** The project name should be specific to the purpose of the project so that the overall goal of the project can be understood at-a-glance.
- **Date:** You will create project status reports many times during the course of a project's implementation phase. Reports can be created weekly or monthly—it all depends on the stakeholders' needs and pace of the project. Adding the date to each status report acts as a reference point for your audience and also creates a history log of the project's status over time.
- **Summary:** The summary condenses the project's goals, schedule, highlights, and lowlights in one central place for easy stakeholder visibility. Usually, the summary section will be followed by, or grouped with, the timeline summary and the overall project status.
- **Status:** As you can imagine, status is a crucial piece. The status of the project illustrates your actual progress versus your planned progress. In project management, a common way to depict this is through **RAG** (red, amber, green), or Red-Yellow-Green, status reporting. RAG follows a traffic light pattern to indicate progress and status. Red indicates that there are issues that need resolution and that the project may be delayed or go significantly over budget. Amber/Yellow means that there are potential issues with schedule or budget, but that the issues can likely be resolved with corrective actions. And green means the schedule and budget are doing fine and that the project is on track. You can use RAG to indicate the overall project status, as well as milestone status. Every project team and stakeholder may have a slightly different perspective on what the colors mean and how urgent it is to escalate issues when they see an amber/yellow or red status, so it's important to make sure everyone understands what the different color statuses mean for your project.
- **Milestones and tasks:** A summary of the project's major milestones thus far and current tasks helps the team and stakeholders easily visualize the progress of those elements. In a project plan, you will typically depict the tasks and milestones as 'not started,' 'in progress' or 'completed' at an item-by-item level. But, in the project status report, it is common to summarize these items into two categories to better communicate the status. You'll use **key accomplishments** to detail what has happened, and **upcoming** to detail what big milestones you will accomplish next.
- **Issues:** The issues include your project's current roadblocks and potential risks. Status reports are an important opportunity to set expectations with your stakeholders. If your project status is red or amber, you can flag what is preventing you from being where you planned to be. You can also use this opportunity to state your plan to get the project back to green, and ask for any resources or help you may need to do so. You will learn more about communicating big risks and issues in the upcoming videos.

Project status report types

With those key elements in mind, you can format your report in a variety of ways depending on your audience and what you need to communicate.

If you need to share a status report with your team for a project that contains multiple layers of complexity, it may be best to format the report in a **spreadsheet** in order to keep track of all the moving parts.

If you simply need to communicate updates to senior stakeholders, your status report may be best formatted as a **slideshow**, like the one below, containing only an overview of the most key points.



Key takeaways

To recap, project status reports are a powerful tool to:

- Improve and simplify communication across the team.
- Keep everyone, including key stakeholders, informed.
- Request more resources and support (if needed).
- Create structure and transparency by recording the project status in a centralized place.

1.1.6 Explore: Project Plant Pals: Execution and closing

In upcoming activities, you'll get ready to launch Plant Pals. Explore an infographic to learn what's next in the execution and closing phases.

Create a project status report

During the planning phase, you made a project plan for Plant Pals. Now that the project is underway and you're sending out test batches, you'll create a status report to summarize progress, identify problems, and keep stakeholders informed.

Conduct a ROAM analysis

Your status report reveals ongoing issues with product and service quality. To help your team stay organized, you'll categorize them as resolved, owned, accepted, or mitigated. Knowing how you'll handle these issues keeps you on track to complete the project.

Write an escalation email

Removing barriers to progress is one of your most important tasks as project manager—but you can't always do it alone. When your team encounters a major issue, you'll write an escalation email to get support and advice from senior stakeholders.

Create a presentation for your team

When you're done shipping test batches, you'll present the results of a customer satisfaction survey to your team. To make your presentation engaging and memorable, you'll tell a story using key data points, summarizing takeaways, and outlining next steps.

Plan a meeting to discuss open issues

After your presentation, you'll meet with the team to discuss areas to improve as you prepare for launch. To ensure a focused and productive conversation, you'll create a meeting agenda that lays out open issues and lists topics for discussion.

Create a report to close the project

After the official Plant Pals launch, you'll create a project closeout report to document what went well, what went wrong, and how the team solved problems. The report will help you—and other project managers—as you plan for future projects.

1.1.7 Activity: Build and explain a project status report

Activity Overview

In this activity, you will create a status report for project tasks and milestones. Project status reports improve and simplify communication across teams and keep key stakeholders informed. They also create structure and maintain transparency by making the project status available in a central location.

Your status report should include:

- A project summary and date
- Key dates
- Progress towards milestones (completed and upcoming)

- Issues and risks, along with their impact and any actions to be taken

Be sure to complete this activity before moving on. The next course item will provide you with a completed exemplar to compare to your own work. You will not be able to access the exemplar until you have completed this activity.

Scenario

Review the scenario below. Then complete the step-by-step instructions.

Office Green is testing the Plant Pals project before its launch and you are the project manager responsible for the trial's smooth operation. Your goal is keeping track of completed and upcoming tasks and milestones, as well as finding solutions for any issues that arise.

Completed Plant Pals tasks and milestones include:

- The IT Specialist purchased a new software to keep track of incoming orders and installed it on June 15. The installation took three days longer than expected.
- The Fulfillment Director began sending test batches of Plant Pals orders to customers on June 21. The number of orders exceeded targets by 15%.

Upcoming Plant Pals tasks and milestones include:

- Send existing customers an e-newsletter with a tutorial on caring for their plants by July 7. The newsletter must follow Office Green's brand design guidelines.
- Hit at least 95% of delivery dates on time by July 19. The error rate should be under 5%.

Your team is conducting an ongoing customer satisfaction survey for the test batches. The survey results for the first two weeks of shipments reveal three major issues:

- The warehouse team reports that 10% of the plants were not properly potted. This leads to customer complaints, profit loss, and budget issues you did not anticipate. Your Warehouse Operations Manager is responsible for taking action on this issue.
- Due to an issue with the new software, the customer service team is receiving only 30% of requests and complaints. This leads to customer dissatisfaction. The team's IT Specialist is responsible for taking action on this issue.
- There are not enough delivery drivers to deliver all the Plant Pals orders on time. The current delivery completion rate is 80%, leading some customers to cancel their subscriptions. The Human Resources Specialist is responsible for taking action on this issue.

The team must address these issues in order to hit their upcoming project milestones. Your project status report will help them do that.

Step-By-Step Instructions

Step 1: Access the template

To use the template for this course item, click the link below and select "Use Template."

Link to template: [Project status report](#)

Step 2: Review the word bank

Review the word bank below. You will use it to complete the project status report in **Steps 3-6**. Note that part of the status report has already been filled in for you.

Word bank:

- Customer Service Manager
- IT Specialist
- Amber
- Fulfillment Director
- Cancelled subscriptions
- June 15
- July 7
- The warehouse team reports that 10% of the plants were not properly potted
- The current delivery completion rate is only 80%
- Evaluate and adjust the plant potting process
- Purchased and installed new software to keep track of incoming orders
- Hit at least 95% of delivery dates on time

Step 3: Add completed tasks and milestones

Record the tasks and milestones your team has already reached under **Completed Tasks and Milestones**. Select descriptions of milestones, their completion dates, and owners from the word bank and add them to the spreadsheet.

Then add any missing information or resources you want to share with stakeholders under **Comments**. For example, the comment for the milestone “Sent first batch of Plant Pals orders to customers” is, “The number of orders exceeded targets by 15.”

Note: *Comments are not included in the word bank. Review the scenario to determine what information could be useful to stakeholders.*

Step 4: Add upcoming tasks and milestones

Under **Upcoming Task and Milestones**, add any missing descriptions, due dates, and task owners from the word bank. Review the scenario and add comments if need be.

Step 5: Add risks and issues

Under **Top Risks and Issues**, add any missing items, including issues that have arisen, their impact, any actions that should be taken, and the person responsible for fixing them.

Step 6: Add a RAG status

Under **Overall Status (RAG)**, select a RAG status from the dropdown menu. RAG (Red, Amber, Green)—also known as stoplight status—is an acronym that indicates project status. Red means the project is off-track and needs significant changes to correct. Amber means

the project is off-track and needs minor changes to correct. Green means the project is on target. Consider the information you added to the chart to determine whether the project is on target. Then select the appropriate RAG status.

Note: Best practices for selecting RAG ratings can vary by organization. For example, some tend toward higher RAG ratings, preferring them to be too high rather than too low. It's important to understand your organization's customs, so you and your stakeholders can stay on the same page.

Step 7: Save your status report

Save your completed status report to your computer or Google Drive. You'll need it again later in the course.

Completed Exemplar

To view the exemplar for this course item, click the link below and select "Use Template."

Link to exemplar: [Project status report](#)

Assessment of Exemplar

Compare the exemplar to your completed project status report. Review your work using each of the criteria in the exemplar. What did you do well? Where can you improve? Use your answers to these questions to guide you as you continue to progress through the course.

Let's review each section of the project status report:

- The milestone “purchased and installed new software to keep track of incoming orders” was completed on June 15 by the IT Specialist. The report notes that the installation took three days longer than expected.
- The milestone “begin sending test batches of Plant Pals orders to customers” was completed on June 21 by the Fulfillment Director. The report notes that the number of orders exceeded Office Green’s targets by 15%.
- The upcoming milestone “send the first batch customers an e-newsletter with a tutorial on caring for their plants” should be completed by July 7 by the Customer Service Manager. The report notes that the newsletter must follow Office Green’s brand design guidelines.
- The upcoming milestone “hit 95% of delivery dates on time” should be completed by July 19 by the Fulfillment Director. The report notes that the error rate should be under 5%.
- The issue of “10% of the plants were not properly potted” results in profit loss, customer complaints, and budget issues. The Warehouse Operations Manager is responsible for evaluating and adjusting the plant potting process.
- The issue of “the customer service team receiving only 30% of requests and complaints” results in customer dissatisfaction. The IT Specialist is responsible for fixing problems with the new customer service software.

- The issue of “the current delivery completion rate is only 80%” resulted in cancelled subscriptions. The HR Specialist is responsible for hiring and training more delivery drivers.
- The report includes an amber RAG status, since the project issues can be managed through minor changes.

Test your knowledge: Project tracking

1. How does tracking and measuring progress benefit a project? Select all that apply.

- Disregards new risks so the team can focus on current tasks
 Helps team members and stakeholders stay on top of deadlines and goals

 **Correct**

Tracking and measuring progress helps the project team stay on top of project milestones and complete tasks on time. It also makes project information transparent, helps identify risks and issues, and builds confidence that the project will finish on time, in scope, and within budget.

- Builds confidence that the project will finish on time, in scope, and within budget

 **Correct**

Tracking and measuring progress gives an up-to-date picture of the project’s status, which helps to motivate and focus the team. It also helps team members stay on top of deadlines, makes project information more transparent, and helps identify risks and issues.

- Makes project information transparent

 **Correct**

Tracking and measuring progress makes information more transparent, which is essential for accurate decision-making. It also helps team members stay on top of deadlines, helps identify risks and issues, and builds confidence that the project will finish on time, in scope, and within budget.

2. Which items should you track throughout the project execution phase? Select all that apply.

- Individual team members’ schedules
 Progress toward milestones

 **Correct**

In order to avoid missing deadlines, it’s important to track tasks as the team approaches key milestones. You should also track the project schedule, project costs, and key decisions and changes.

- Key decisions and changes to the project

 **Correct**

Keeping track of big decisions, like scope changes, will help keep stakeholders aligned so the project can succeed. You should also track the project schedule, progress towards milestones, and project costs.

- Project costs

 **Correct**

Keeping track of costs ensures that you don't overspend or underspend on project tasks. You should also track the project schedule, progress towards milestones, and key decisions and changes.

3. Which of the following are tools for tracking project progress? Select all that apply.

- Roadmaps

 **Correct**

Roadmaps illustrate how projects should evolve over time and help track big milestones. Burndown charts and Gantt charts are also useful for tracking project progress.

- Burndown charts

 **Correct**

Burndown charts give a detailed breakdown of tasks for projects where finishing on time is the top priority. Roadmaps and Gantt charts can also help you track project progress.

- RACI charts

- Gantt charts

 **Correct**

Gantt charts measure tasks against time and include information like the owner and order of each task. Roadmaps and burndown charts are also helpful tools for tracking project progress.

4. Which of the following are common components of a project status report? Select all that apply.

- Status

 **Correct**

The status of the project illustrates your actual progress versus your planned progress. Other common components of a project status report include the project name, date, summary, milestones and tasks, and any issues.

- Summary

 **Correct**

The summary condenses the project's goals, schedule, highlights, and lowlights in one central place for easy stakeholder visibility. A project status report also generally contains the project name, date, status, milestones and tasks, and any issues.

Roles and responsibilities

Milestones and tasks

 **Correct**

A description of the project's major milestones thus far and current tasks helps the team and stakeholders easily visualize the progress of those elements. The project status report also generally includes the project name, date, summary, status, and any issues.

Costs

Issues

 **Correct**

The issues section includes your project's current roadblocks and potential risks. Other common components of a project status report include the project name, date, summary, status, and milestones and tasks.

1.2 Managing Changes, Risk And Dependencies

1.2.1 Why risks and changes occur

You may remember that **a risk is a potential event that might occur and could impact your project**. When you think about risks in the context of project management, you'll think about them as **hypothetical**. In other words, these might not be events that will definitely happen, but because there's a possibility that they could happen, it's your responsibility as a project manager to identify and plan for those risks.

Let's revisit some examples of risks. A project risk might be a contractor missing a deadline, or introducing a tool that may lead to communication breakdown within your team, or unexpected, additional work because of an unforeseen policy being put in place. **When any risk occurs**, the consequence is **a change to the project plan**.

A change is anything that alters or impacts the tasks, structures, or processes within a project. Changes are typically **unexpected**. More often than not, they have a **negative impact** on the project, and you'll have to learn to navigate that. But sometimes, changes can have a **positive impact**. Changes can **encompass any variance** from the original project plan in regards to the **triple constraint**. This may entail **changing priorities and scope, budget and resources**, or changes to the **project timeline**.

Let's go through a **few types of changes** that can affect your project.

- Some examples of changes may include **new or changing dependencies**. Dependencies are **tasks, activities, or milestones that are reliant on one another**. So if one task isn't completed on time, it may put your other tasks behind. You might be in charge of renovations on a home where there are dependencies. In a bathroom remodel, for instance, a new sink cannot be installed until the vanity and plumbing are in place.

- Next, is **changing priorities**. The scope of the remodel changes if your client's in-laws suddenly have to move in, and you have to move up planned work on the spare bedroom before completing the bathroom remodel.
- Next up, the **capacity and people available could change**. Maybe you have to replace the plumber because you had issues on the job site.
- Another type of change could include a **new limitation on your budget or resources**. For example, you need to reduce design costs in the new bathroom by 10 percent because your quotes for electrical work come in higher than expected.
- Another change could be **scope creep**. Scope creep is when changes, growth, and other factors affect the project scope. For instance, your clients are so happy with the tile in the new bathroom that they'd like to replace the tile in all of their bathrooms.
- Finally, **force majeure**. This is another change that could **occur due to a national or international crisis**. If you aren't familiar with this term, it means an unforeseen circumstance that prevents someone from fulfilling the contract due to a major crisis. Force majeure is pretty uncommon. But for instance, if a union goes on strike, certain vendors won't be able to fulfill their contracts. If there's a pandemic, all production on your new product might be halted.

Changes should be measured against the baseline estimates of scope, budget, and time allotted for your project, given the original requirements. Be mindful that when you change any one of those things, there may be knock-on effects which could be positive or negative. For instance, your clients may believe they have beautiful hardwood floors hiding underneath old living room carpet and want to pull up the old carpet and use the original hardwood floors underneath. You, the project manager on this particular construction job—you've budgeted to have the carpet removed and the old floors sanded and stained. Bad news. You pull up the carpet and find the floors are in bad shape and rotting. They'll need to be replaced or repaired, which could be costly, so your timeline and budget are likely to take a hit.

When it comes to who takes on the responsibility of managing the changing scope, it'll be you—the project manager. But depending on the project, you probably won't do it alone. In order to **properly manage changes**, you'll want to **refer to documents** like your **Statement of Work and the RACI chart**. But you might also have to create some new documentation. You'll want to create or familiarize yourself with the processes for requesting changes for your team or organization. These processes might include a **change request form**.

Let's discuss change request forms. You and your stakeholders will use these forms in order to stay on top of, and adequately manage, any changes. Since a lot of people with different roles on the project can fill out these forms, it's important for the forms to be self-explanatory and very thorough.

Project Plan Change Summary Template

This **OPTIONAL** template aims to make updates about project risks, issues or opportunities easier to organize for the team and stakeholders. Use this template to help prepare for the conversation and make the conversation more efficient.

Project Name	Name of Project
Discussion Owner	Who's taking the lead on this discussion from the team?
Discussion Type	Risk Opportunity
Teams Involved	List stakeholders and other teams involved
Expected Outcome	What are you looking for from this discussion? For example: <i>Other resources Priority call Technical help Schedule change awareness/approval Open discussion with stakeholders</i>
Target Date for Discussion	When is this discussion happening? (most likely dedicated meeting but could be just an email thread)
Impacted Milestones/Goals	Which milestones are involved in the discussion? If possible reference the items from the project plan and use the same wording to help reviewers connect the dots
Short Description	Provide a short description of the situation. Are differences to the plan of record being proposed? If so, what is the basic change?
In-depth Proposal	Proposed trade-offs with current plan
Background information	Describe which events or information drove this discussion request

You can also refer to your **statement of work** for more information about who needs to be involved in that conversation. If you find that one or more of your milestones are at risk of not being completed, then you'll need to get a customer sign-off before the scope, deadline, or budget are changed, and all parties involved need to be informed.

1.2.2 Identifying and tracking dependencies

Dependencies are the links that connect one project task to another, and as we mentioned, they're often the greatest source of risk to a project. Two or more project tasks may have a relationship with one another in which the completion of one task is reliant on the initiation of another task, and vice versa.

Think of these tasks like a line of dominoes toppling each other over, one by one. If one domino falls, it'll knock the next one over and so on and so on. For instance, a construction company may have a number of jobs across the city. Each project requires a foreman and a project manager to be chosen before the requirements, timeline, and budget get signed off and the crew is chosen. You wouldn't choose a crew and tell them to get to work before the work has been clearly scoped and the contracts were signed. That's an example of an **internal dependency**, which describes the relationship between two tasks within the same project.

External dependencies refer to **tasks that are reliant on outside factors**, like **regulatory agencies or other projects**. For instance, if a construction company is scheduled to demolish a building site, they'll have to wait until their project is approved by the city. External dependencies aren't always in the project manager's control, but it's important to be aware of them so that the project stays on track.

Mandatory dependencies are **tasks that are legally or contractually required**. For instance, when that construction company finishes the demolition and starts the rebuild, they'll first have to pour a concrete foundation and then have it inspected by the city to ensure it meets their standards before the construction company can continue to build.

Discretionary dependencies are defined by the project team. These are dependencies that could **occur on their own**, but the **team saw a need to make those dependencies reliant** on one another. For instance, the construction company may be using concrete from a new supplier and want to run a test, pouring a portion of the foundation to get a better estimate of the total amount of product they'll need to complete the foundation, rather than buying too much or too little product up front. The task of pouring a portion of the foundation comes first, because the team needed more information before making a decision.

A project manager has to work diligently to incorporate dependency management. **Dependency management** is the **process of managing all of these interrelated tasks and resources** within the project to ensure that your overall project is completed successfully on time and in budget. To pursue **effective dependency management**, there are **four important steps** that a project manager can take.

- **Proper identification.** A project manager will have to brainstorm all possible project dependencies with their team and categorize them accordingly.
- **Recording dependencies.** After all dependencies are identified, a risk register should be created. A risk register is a table or chart that contains your list of risks and dependencies. The risk register should include a description of the dependency, the date, and all activities or tasks that may be impacted by the dependency.
- **Continuous monitoring and control.** This means you will want to schedule regular meetings to check in on the interrelated tasks, staying up-to-date on any progress being made and double checking for changes that will impact other tasks.
- **Efficient communication.** Keeping the project team and stakeholders updated can help resolve dependencies and keep the project going strong.

Test your knowledge: Dependencies

1. Imagine that a restaurant supplier has been asked to develop a new dessert for their client, a popular restaurant chain. Even though they are *not contractually required* to do so, the project team from the restaurant supplier decides to *get the client to approve the recipe* for the dessert before beginning development on it. From the restaurant supplier's perspective, what two dependencies does this scenario demonstrate?

- Internal dependency
- Mandatory dependency
- Discretionary dependency

 **Correct**

A discretionary dependency is defined by the project team. In this scenario, the project team decides to get the client to approve their new recipe before they invest time, effort, and work on development. This scenario also illustrates an external dependency, which relies on outside factors.

- External dependency

 **Correct**

An external dependency relies on outside factors like another company, project, or regulatory agency. This scenario also illustrates a discretionary dependency, which is defined by the team.

2. What steps help project managers manage dependencies? Select all that apply.

- Efficient communication

 **Correct**

Project managers should update stakeholders regularly to help resolve dependencies. They should also identify dependencies properly, record dependencies, and practice continuous monitoring and control.

- Record dependencies

 **Correct**

Project managers should record dependencies in a risk register to track related tasks. They should also identify dependencies properly, practice continuous monitoring and control, and communicate efficiently.

- Compare dependencies with competitors

- Proper identification

 **Correct**

Project managers should brainstorm dependencies with their teams and group them accordingly. They should also record dependencies, practice continuous monitoring and control, and communicate efficiently.

- Continuous monitoring and control

 **Correct**

Project managers should hold regular meetings to manage and track progress on related tasks. They should also identify dependencies properly, record dependencies, and communicate efficiently.

- Group dependencies by cost

3. Imagine you are a project manager working on a large campaign for a public relations (PR) firm. One of the designers you have contracted with has pulled out of the project at the last minute, requiring your in-house design team to take on more work while you search for a replacement. What type of project change does this represent?

- Scope creep
- Capacity and people available
- Force majeure
- Changing priorities
- New or changing dependencies
- Budget or resource limitation

 **Correct**

If you have to change the people you are using to complete the work, this may affect your team's capacity to complete project tasks on time.

4. You and your stakeholders will use change request forms to stay on top of and manage changes. What information should be included in these forms? Select all that apply.

- A short description of the current situation

 **Correct**

This should include a discussion of the change and any difference you expect to make to the plan of record, like a snapshot of the before and after. You should also include the project name, the discussion owner, the target discussion date, the expected outcome, an in-depth proposal, and any background information.

- Similar changes on past projects

- An in-depth proposal for the necessary changes

 **Correct**

This should address any trade-offs that will be required. This should include a discussion of the change and any difference you expect to make to the plan of record, like a snapshot of the before and after. You should also include the project name, the discussion owner, the target discussion date, the expected outcome, a short description of the change, an in-depth proposal, and any background information.

- The expected outcome of the discussion

 **Correct**

This might be a change in priorities, schedule change, or an official call on how to proceed with an issue. You should also include the project name, the discussion owner, the target discussion date, a short description of the situation, an in-depth proposal, and any background information.

- Background information

 **Correct**

This enables everyone to share the same context. You should also include the project name, the discussion owner, the target discussion date, the expected outcome, a short description of the change, and an in-depth proposal.

1.2.3 Techniques to help manage risks

Let's start with a reminder of the definition of risk management:

Risk management is the process of identifying potential risks and issues which could impact a project, then **evaluating and applying steps to address the effects** of the identified risks and issues.

One way to manage risks, and hopefully, prevent any risks from materializing is to focus on **managing the changes and dependencies**, as well as any **scope creep** in your project. If you can manage those two things, both **changes and dependencies and scope creep**, other types of risks become much easier to manage. If your dependencies are met on time, your team is less likely to fall behind schedule. If your scope is tightly-managed, you're less likely to incur changes to your budget or be forced to extend your timeline.

Brainstorming with your team is one of the most **effective techniques for identifying risks** in a project. Your teammates likely bring skills and experience from previous projects, which can help suss out similarities and keep you from repeating any issues. As we brainstorm with our team, it's best to **create a risk register**. As a refresher, a risk register is **a table or chart that contains your team's list of risks**. You want to pose questions to your team, like what could improve the outcome of the project, or what could hurt or hinder it? You'll list them all as if/then statements. For example, if a given event happens, then here's how the project is impacted.

To help **prioritize risks within your risk register**, you can **calculate your risk exposure**. **Risk exposure** is a way to measure the potential future loss resulting from a specific activity or event. A good method to calculate risk exposure is to build a **probability and impact matrix**. This is one technique, but whatever strategy you use to examine your risk exposure, your risks will need to be prioritized so that you know and your team knows which ones to give immediate attention to. For anything that has a high impact on your project, even if it has a low probability of occurring, make sure to have a mitigation plan in place.

How will you **handle this risk if it actually materializes**? While a risk register is a great tool, it's still likely that some unforeseen risk will arise. It's almost impossible to account for every single risk over the course of a project. That's where the **ROAM technique** can help.

The ROAM technique—which stands for **resolved**, **owned**, **accepted**, and **mitigated**—is used to help **manage actions after risks arise**. Once a risk has materialized, you need to decide what to do with it.

- If a **risk has been eliminated** and **will not be a problem**, it goes into your "**resolved**" category.
- If you give a **team member ownership over a certain risk** and entrust them to handle it, that risk goes into the "**owned**" category and is monitored through to completion.
- If the risk has been "**accepted**," it has been **agreed that nothing will be done** about it.
- If some **action has been taken such that the risk has been mitigated**, either reducing the likelihood of it occurring or reducing the impact to the project, it goes into the "**mitigated**" category.

After each risk is placed into a category, the team will discuss each risk and decide which should be prioritized.

1.2.4 Case study: Using risk management tools

Thus far, you have learned that **risk management**—the process of identifying, evaluating, and addressing potential risks and issues that could impact a project—is a core part of a project manager's role. You also learned about techniques to identify potential risks and address their effects, including creating risk registers and building mitigation plans. In the following case study, we will imagine how a project manager might utilize these tools.

The project: Paw Snacks Puppy Treats

Paw Snacks is an online retailer of tasty and nutritious pet treats. Over the course of three years, the business has grown from a small startup to a 350-person organization. Paw Snacks wants to expand its offerings even further by adding a new line of treats for puppies.

The issue

Six weeks before the new product line is scheduled to debut, Naja, the project manager leading the launch, receives a frantic phone call from a manager at the commercial bakery hired to produce the treats. The bakery manager informs Naja that the bone-shaped cookie cutters required to shape the treats have not yet arrived. Naja knows that baking needs to start the following day in order to stay on schedule for the launch.

Naja thanks the bakery manager for the warning and asks her teammate, Abe, to call the cookie cutter manufacturer to check on the status of their order. Abe learns that the order is delayed due to a product shortage and that the cookie cutters are now expected to arrive at the bakery two days after the original expected delivery date.

Naja recognizes that this delay threatens her team's ability to launch their product on time. Even worse, her team doesn't have the option to push the launch date, since the Paw Snacks marketing team has already purchased nonrefundable advertising placements for the day of the launch. Luckily, Naja and her team are already prepared for an issue like this one.

Planning for risks ahead of time

Months earlier, long before the team started work on the project, Naja and her team brainstormed potential risks that could impact the project. They created a **risk register**, a table or chart that contains a list of risks and is often paired with a probability and impact matrix. During the process, the team determined that a delay in the cookie cutter order had a medium probability of occurring and would result in a high impact on the project. Naja added the risk to the risk register and assigned Abe to create a **mitigation plan**, which outlines steps to decrease the chances of a risk occurring or decrease the impact of a risk if it does occur. This plan would indicate how the team would handle an issue if it were to materialize. The mitigation plan was then approved by the project sponsor and other stakeholders.

Managing the issue

Now that the cookie cutter issue has occurred, Naja and Abe consult the mitigation plan for this particular risk. In this case, Abe identified two options for handling the risk: The first option is to work with the bakery to slightly increase the number of treats produced in order to make up for the two days they have lost due to the cookie cutter delay. The second option is to place an order with a second bakery to help speed up the pace of production. Naja and Abe discuss the two plans and settle on option one to avoid the work of bringing in a second bakery.

Before moving ahead with the plan, Naja and Abe meet to brainstorm potential risks associated with the new plan. Together, they determine that a smaller order of dog treats will likely have a minor—but manageable—impact on the organization’s projected growth for 2021. They determine that the best course of action is to accept the risk to avoid delaying the project further. To ensure that the project stakeholders are aware of and comfortable with this change, Naja requests a meeting with her project sponsor to communicate the plan, outline the minor risk to projected growth, and recommend accepting the risk. The sponsor agrees and approves Naja’s new plan.

Naja tasks Abe with communicating the adjusted plan to the bakery manager. Though baking begins two days behind schedule, Naja’s new plan helps ensure that the team is prepared to launch the new line on time.

Pro tip: While the term mitigation plan is used more often in project management, you may also hear the term **contingency plan**. These terms are often used interchangeably, but there are some key differences. A mitigation plan is a planned risk response strategy. If a project manager is able to identify the potential known risks that impact any of the key project parameters (schedule, cost, or scope), they should make a plan to mitigate those risks early in the project. A contingency plan, on the other hand, is mostly related to funds the project manager keeps aside (outside of the planned project budget) to support any of these known risk response plans if they go beyond the planned amount or to manage any unforeseen risks during execution.

Key takeaway

In this case study, early risk management planning enabled Naja to act quickly when an issue presented itself at a pivotal time during the project execution phase.

By consulting an existing mitigation plan and weighing two options for moving forward, Naja and Abe were able to make an informed decision about the best path forward. Naja also communicated the growth-related risks associated with the plan to the project sponsor in a timely fashion.

As you manage projects of your own, issues will come up again and again. When you do the heavy lifting of risk management planning before starting work on the project, you will be better equipped to respond to problems quickly.

1.2.5 Activity: Put together a ROAM analysis

Activity Overview

In this activity, you will apply risk management skills to identify risks and put together a ROAM analysis. You can use a ROAM analysis to analyze, prioritize, and manage risks that have already become issues. It's a great tool to keep teams organized, so they know what needs to be done to keep the project moving forward.

In a ROAM analysis, you identify project issues and put them into one of the following four categories:

- **Resolved:** The issue has been eliminated and no longer poses a problem.
- **Owned:** The issue has been assigned to a team member who will monitor it through to completion.
- **Accepted:** The issue is minor or cannot be resolved, so the team chooses to accept and work around it.
- **Mitigated:** The team has taken action to reduce the impact of the issue (or reduce the likelihood of a risk that has not yet materialized).

Be sure to complete this activity before moving on. The next course item will provide you with a completed exemplar to compare to your own work. You will not be able to access the exemplar until you have completed this activity.

Scenario

Review the scenario below. Then complete the step-by-step instructions.

After installing the new software to keep track of orders and shipments, Plant Pals began sending out the first test batch of plants to customers. Your team has been conducting an ongoing customer satisfaction survey. Two weeks into the test shipments, the survey reveals the following issues:

- The warehouse team reports that 10% of the plants were not properly potted. This leads to customer complaints, profit loss, and budget issues you did not anticipate.
- Due to a software issue, the customer relations team is receiving only 30% of requests and complaints. This leads to customer dissatisfaction.
- There are not enough delivery drivers to deliver all the Plant Pals orders on time. The current delivery completion rate is 80%, leading some customers to cancel their subscriptions.

Step-by-Step Instructions:

Step 1: Access the template

To use the template for this course item, click the link below and select “Use Template.”

Link to template: [ROAM analysis](#)

Step 2: Review the template

In the ROAM analysis template, review the project issues and the actions you and your team took in response.

Step 3: Assign each issue a ROAM designation

Consider how you and your team handled the issues. Then select an appropriate ROAM designation for each using the dropdown options: **Resolved**, **Owned**, **Accepted**, or **Mitigated**.

Step 4: Save your ROAM analysis

Save your completed ROAM analysis to your computer or Google Drive. You'll need it again later in the course.

2. Some customers called to cancel their subscription despite your team’s best efforts. How do you categorize this issue?

- Resolved
- Owned
- Accepted
- Mitigated



Your team has tried to resolve this issue, but there is nothing more you can do. This means you have accepted it.

3. There are not enough delivery drivers to ensure all Plant Pals orders are delivered on time. You ask your HR Specialist to hire more drivers. How do you categorize this issue?

- Resolved
- Owned
- Accepted
- Mitigated



The issue is owned by the HR Specialist, who will begin the hiring process.

4. Some plants are being delivered late. Your team reassessed delivery routes to make them more efficient. This has reduced the number of late deliveries, but not eliminated the problem. How do you categorize this issue?

- Resolved
- Owned
- Accepted
- Mitigated



Correct
The issue is mitigated because you lessened its impact.

5. You discover that 10% of Plant Pals orders are not potted properly. In which of the following scenarios is this issue **resolved**?

- The Warehouse Operations Manager makes a plan to update the potting process.
- The warehouse team updated the potting process and there have been no issues for two weeks.
- You assigned your Warehouse Operations Manager to handle the issue as soon as possible.
- You decide that 10% is a reasonable amount of poorly potted plants, so you take no further action.



Correct
This issue is resolved because it is no longer a problem.

Completed Exemplar

To view the exemplar for this course item, click the link below and select “Use Template.”

Link to exemplar: [ROAM analysis](#)

Assessment of Exemplar

Compare the exemplar to your completed ROAM analysis. Review your work using each of the criteria in the exemplar. What did you do well? Where can you improve? Use your answers to these questions to guide you as you continue to progress through the course.

Let's review each issue in the ROAM analysis:

Issue 1: In response to the potting issue, you contacted the warehouse to evaluate and improve the potting process. After two weeks with no additional problems, you consider the matter **resolved**.

Issue 2: Your team handled the customer complaints by listening to their issues and offering to send them free plants. Most of the customers were satisfied with this solution. This issue is **mitigated** because you reduced its impact.

Issue 3: You assign your IT Specialist to fix the issue with the customer service software. This issue is **owned** because the IT Specialist has not yet taken action, but there is a plan in place to take care of the issue.

Issue 4: Some customers have called to cancel their subscriptions. Your team offered them subscription promotions, but cannot get them to reconsider. Since a few cancellations will not have a major impact, you consider this issue **accepted**.

Issue 5: To solve the delivery driver problem, you ask the HR Specialist to schedule a hiring day to hire and onboard more drivers. This issue is **owned** by the HR Specialist because they have not yet hired the drivers.

Issue 6: Your team reassessed delivery routes, which increased efficiency and reduced the number of late deliveries. This risk is **mitigated** because you have lessened its impact.

Issue 7: Your Financial Analyst reassessed spending and found more money to offset the unexpected costs, so the issue is **resolved**.

1.3 Communicating Issues To Stakeholders

1.3.1 Escalating issues

On top of several other tasks, it's a project manager's responsibility to resolve problems and remove constraints that are a detriment to the project's success. One way to do this is to escalate. **Escalation is the process of enlisting the help of higher-level project leadership or management to remove an obstacle, clarify or reinforce priorities, and validate next steps.**

Escalation may seem to have a negative connotation, but that's not the case in project management. In project management, **escalation should be encouraged, used often, and even celebrated**. Escalations are **healthy** and act as a checks and balances tool to make sure appropriate action is being taken. They can result in **speedy decision-making**, and generally, the quicker a problem is resolved, the better off a project will be.

Instead of going back and forth between two team members who can't agree, an objective third party might help make the call and **reduce frustrations within the team**. Finally, escalations **encourage participation**. Encouraging others to participate in solving or owning problems can promote trust and shared responsibility among teammates, which are signs of a healthy, functional team.

Before starting work on a project, the project manager, the team, and the project sponsor should **establish escalation standards and practices**. This means they'll **specify who the issues will be raised to, how issues are raised, and the forum for discussion**. A little upfront work will help escalations run smoothly when and if they're needed.

A project manager should **escalate an issue at the first sign of critical problems** in the project. **Critical problems** are issues that may cause a delay to a major project milestone, issues that cause budget overruns, issues that can result in the loss of a customer, and issues that push back the estimated project completion date. Basically, **anything that will affect your triple constraint** (time, budget, and scope) is something that should be escalated.

Escalation is great for **preventing two common issues** within a project: trench wars and bad compromises.

Trench wars occur when **two peers or groups can't seem to come to an agreement**, and **neither party is willing to give in**. This leads to a standstill of the project and will likely delay certain aspects of the project's progress.

Typically, we think of compromises as a positive way to resolve issues, but there is such a thing as a bad compromise. **A bad compromise** occurs when **two parties settle on a so-called solution**, but **the end product still suffers**. When it comes to compromising on important project goals, it's not productive for either party to settle simply because it's a means to an end. Yes, compromise while also keeping the larger project goals in mind and working towards those together. You may have to help your team or stakeholders make hard choices for the greater good.

1.3.2 Communicating changes to the team

Communicating change to project team members and stakeholders isn't just a matter of keeping your tracking documents up to date. Even the smallest changes will be meaningful to someone on your team and should be communicated. It's also true that you'll need to **tailor your communication tactics based on the subject matter and recipient**.

As a project manager, sometimes you're going to want to have a meeting with your whole team, while other times an email might suffice. Personally, I prefer having a quick coffee or hallway chat with my teammates and then following up with an email, noting what we agreed upon. This is particularly useful when you need quick agreement or if the subject is a little sensitive.

How will you know **which communication tactic is appropriate**? Ultimately, you'll have to **use your own judgment**, but here are some ways you can decide which route to take.

- As a project manager, when **communicating a small change that will affect an individual**, it's a good idea to **send an email**. Be sure to **avoid emotional topics or anything that needs to be discussed in depth**. Just give them a heads up and set a meeting time. Weekly meetings may not be necessary, particularly if your agenda is short. If you set a meeting and then decide against it, you can either pivot to an email or move the topic to a different forum.
- When there's a **big change within your project that impacts more than one person** and is likely to **change the budget, deadline, or scope** of the project, you'll probably want to have a **team meeting**. One useful tactic to keep in mind when navigating these changes in your project is called a **timeout**.

A timeout means taking a moment away from the project in order to take a breath, regroup, and adjust the game plan. A timeout may temporarily disrupt your momentum, but it may be absolutely necessary to set you up for success in the long run. You may want to take a timeout **when the client wants to redefine the scope** of the project or if **team members get reassigned to other projects** and you **need a plan to backfill them**. This **timeout is a chance** for the project team to **evaluate the changes** so they can adjust the plan as needed.

Throughout the process, you will want to **hold meetings** in order to **discuss successes, setbacks, and possible future improvements** to the project. These meetings are called **retrospectives**. Retrospectives are **held throughout the project's life cycle**. A retrospective **focuses on identifying the contributing causes** of an incident or pattern of incidents without blaming one individual.

While conducting a retrospective, you should always **assume that everyone has good intentions and did the right thing with the information they had**, whether or not it worked out well in the end. There's always a chance to learn and do better. As a project manager, it's important to identify effective techniques for communicating changes to an individual teammate or to your whole team.

1.3.3 Writing an effective escalation email

In this lesson, you are learning how to communicate risks and changes to your team and stakeholders. In the previous video, you were introduced to **escalation**: the process of enlisting the help of higher level project leadership or management to remove an obstacle, clarify or reinforce priorities, and validate next steps.

There are many ways to escalate a risk, and it is important to set escalation standards with your stakeholders before beginning work on a project. In this reading, we will focus on the **escalation email**, and go over best practices for writing one.

Escalation email best practices

All projects—even those managed by experienced project managers—occasionally have problems. Your role as the project manager is to help resolve problems and remove barriers that prevent your team from making progress toward your goals. While many problems might be small enough to resolve within your core team, other problems—like a major change in your budget or timeline—may need to be brought to stakeholders for a final decision. Detailing these problems, their potential impact, and the support you need in a clear and direct email to your audience can be an effective communication tool.

Effective escalation emails:

- Maintain a friendly tone
- State your connection to the project
- Explain the problem
- Explain the consequences
- Make a request

Let's discuss these five keys to writing a strong escalation email.

Maintain a friendly tone

When drafting an escalation email, you may feel tempted to get straight to the point, especially when dealing with a stressful and time-sensitive problem. But keep in mind that it is important to address issues with grace. Consider opening your email with a simple show of goodwill, such as “I hope you’re doing well.” When describing the issue, aim for a

blameless tone. Above all, keep the email friendly and professional. After all, you are asking for the recipient's help. Be sure to close your email by thanking the recipient for their time.

State your connection to the project

Introduce yourself early in the email if you have less familiarity with the project stakeholders. Be sure to clearly state your name, role, and relationship to the project. This helps the reader understand why you are reaching out. Keep your introduction brief and to the point—a single sentence should suffice. If you know the person on the receiving end of the escalation email, you can simply reinforce your responsibility on the project before getting straight to the problem.

Explain the problem

Once you greet your recipient and briefly introduce yourself, explain the issue at hand. Clearly state the problem you need to solve. Provide enough context for the reader to understand the issue, but aim to keep your message as concise as possible. Avoid long, dense paragraphs that may obscure your message and tempt the reader to skim.

Explain the consequences

After explaining the problem, clearly outline the consequences. Describe specifically how this issue is negatively impacting the project or how it has the potential to negatively impact the project later in the project timeline. Again, keep your explanation concise and your tone friendly.

Propose a course of action and make a request

This is the central piece of a strong escalation email. In this section, you propose a solution (or solutions) and state what you need from the recipient. A thoughtful solution accompanied by a clear request lets the recipient know how they can help and moves you toward a resolution.

Putting it all together

Let's see how these best practices come together to form a strong escalation email. In the scenario that prompts the email, Sayid, a project manager from a company that sells gift baskets, is having a quality control issue with one of the items in a line of holiday baskets. If the issue is not rectified soon, the product launch will have to be delayed and the company will lose money. In the annotated email example below, Sayid explains the issue to his internal stakeholders and requests a meeting with them.

To:	knelson@graciousgiftbaskets.com, gabrielmendoza@graciousgiftbaskets.com [Your stakeholders]
Subject:	[Action required] Decision needed to make progress on Holiday Scents project
Hi Karen and Gabriel,	
[Keep it friendly and state your connection to the project]	
I hope you are doing well. As you may know, I have been managing our Holiday Scents product line, which is scheduled to launch in October.	
[Explain the problem]	
I would like to bring an issue to your attention. The baskets in this product line will include scented candles, and we placed an order with Candlemakers, Inc. for 5,000 candles to be delivered to the warehouse by Friday to prepare for our first customer shipment. To date, we have received 3,000 of the 5,000 candles. Unfortunately, many of the candles we have received so far fail to meet our quality standards. The packaging is damaged, or the candles themselves are broken.	
[Explain the consequences]	
This puts our customer satisfaction rates at risk. Failure to meet the quality requirements for the candles by Friday will result in postponing the product launch by three weeks. If this delay occurs, we will incur an additional cost of \$20,000 because we will need to order a new shipment of candles and review the quality standards of each to ensure that they meet our contractual agreements.	
[Propose a course of action and make a request]	
I have sourced two backup suppliers that have five-star reviews and a track record of on-time deliveries. I propose we meet with them both right away so we can onboard one of them quickly. That way, we can avoid major delays. Are you available for a meeting tomorrow to discuss options and come to an agreement on next steps? Please respond with the times that work best for you.	
Thank you in advance for your consideration and insight,	
Sayid	

Key takeaway

In this example, Sayid maintains a friendly tone, clearly explains the problem and its potential consequences, and makes a clear request of the recipients. The email is also brief and to the point.

To recap, effective escalation emails apply these five best practices:

- Maintain a friendly tone
- State your connection to the project
- Explain the problem
- Explain the consequences
- Make a request

Escalation is a useful skill for solving problems quickly, and sending a strong escalation email that applies these best practices can help get your team the help it needs.

Weekly Challenge 1

1. Project managers should track the details of their projects to be transparent and manage risks as they arise. What is another benefit of tracking in project management?

- It keeps team members competitive.
- It decreases the overall cost of the project.
- It helps the overall project stay on schedule.
- It increases the number of tasks completed.

 **Correct**

2. A project manager closely tracks the hours and pay rate of a writer contracting on an ongoing project. What item are they tracking?

- Project schedule
- Action items
- Project costs
- Key tasks

 **Correct**

3. Which tracking method is best for teams with a lot of people and projects with many tasks or milestones that are dependent on one another?

- Project status report
- Burndown chart
- Roadmap
- Gantt chart

 **Correct**

4. How does a roadmap differ from a Gantt chart?

- A roadmap tracks big milestones and includes a high-level project overview; a Gantt chart is useful for large projects with many dependencies.
- A roadmap measures time against the amount of work completed and remaining; a Gantt chart is useful for large projects with many dependencies.
- A roadmap is useful for large projects with many dependencies; a Gantt chart measures time against the amount of work completed and remaining.
- A roadmap is useful for large projects with many dependencies; a Gantt chart tracks big milestones and includes a high-level project overview.

 **Correct**

5. A software company builds an application to track employee satisfaction. The client wants to add three new features to the homepage of the application. Which of the triple constraints does this change impact the most?

- Timeline
- Budget
- Scope

 **Correct**

6. Imagine a home improvement chain develops a new line of power tools. One of the designers wants to adopt a new process that will simplify the team's workflow. Which method should they use to convey their idea to team members and stakeholders?

- Change request form
- Gantt chart
- Risk register
- Escalation email

 **Correct**

7. A team starts a new project to launch a website. The first task is to create the designs of the webpage. The second task is to develop the web pages based on the designs. What type of dependency does this indicate?

- External dependency
- Mandatory dependency
- Discretionary dependency
- Internal dependency

 **Correct**

8. What is the process of identifying risks and issues that could impact a project, and taking steps to address their potential effects?

- Dependency management
- Project tracking
- Escalation
- Risk management

 **Correct**

9. When writing an escalation email, you describe how the current obstacle will delay the project in the next phase. Which of the five keys to writing a strong escalation email is this an example of?

- Explain the consequences
- Make a request
- Maintain a friendly tone
- Explain the issue

 **Incorrect**

Review [the reading on escalating risk.](#) ↗

10. Two team members in your project cannot seem to come to an agreement on a new design feature. What common issue does this represent in project management?

- Trench wars
- Bad compromises
- Trade-off agreement
- Risk appetite

 **Correct**

11. As a project manager, you're implementing the ROAM technique for a new risk. You work with stakeholders and team members to formulate a plan to lessen the impact the risk will have on the project. Which ROAM category is this risk now in?

- Resolved
- Owned
- Accepted
- Mitigated

 **Correct**

Week 2 : Quality Management And Continuous Improvement

Learning Objectives

- Explain the key quality management concepts of quality standards, quality planning, quality assurance, and quality control.
- Explain the importance of effective communication with customers and discuss different ways to measure customer satisfaction.
- Define continuous improvement and process improvement and apply them to different project scenarios.
- Describe how to create continuous improvement through data-driven improvement frameworks.
- Compare projects, programs, and portfolios and assess how all three can work together to drive continuous improvement in an organization.
- Explain the purpose of a retrospective and describe how to conduct one.

2.1 Understanding Quality Management

2.1.1 Key quality management concepts

In this program, we've discussed that when you're managing a project, you always have to consider the triple constraint: time, scope, and budget. Each of these three elements will impact the project, and if any one of them suffers, the overall quality of the project suffers too.

There's an important distinction between "quality" and "done." Simply finishing a project isn't enough; the project must meet the customer's standards of quality, rather than just be completed. Like all things in project management, the more effectively you communicate with your team, the more likely your team will produce high-quality deliverables.

Quality is when you **fulfill the outlined requirements for the deliverable and meet or exceed the needs or expectations of your customers**. When it comes to quality, it's important to **deliver a product or service that meets your customer's needs**. To meet their needs, you have to know important **quality management concepts** and oversee the implementation of a project management quality plan.

To set yourself up for success, you should consider the **four main concepts of quality management**, which are: **quality standards, quality planning, quality assurance, and quality control**.

Quality Standards

The quality process begins with setting quality standards. Quality standards provide **requirements, specifications, or guidelines** that can be used to **ensure that products, processes, or services are fit for achieving the desired outcome**.

Set quality standards with your team and your customer at the **beginning of your project**. Take the time to define the quality standards and criteria for your current work so that your team members and stakeholders understand exactly what they are. After you set those well-defined quality standards, you'll want to check-in periodically and make sure everything looks okay and the requirements are met. Remember that well-defined standards and requirements lead to less rework and schedule delays.

Let's put this in an example using the scenario we've been using throughout the program. You're a project manager at Office Green, a company that specializes in plant decor for offices and other businesses, and you're leading a project called Plant Pals, a new service that will provide top clients with desk-friendly plants. Here's an example of a few quality standards for this project.

- **Reliability standards:** Each planter arrives by the agreed-upon time and in good condition, ready to be placed at a desk. The suppliers have enough plants in their warehouses to fulfill the customer demand on time.
- **Usability standards:** Planters won't cause customers allergic reactions or illness and will be suitable for all people and animals, if necessary.
- **Product standards:** The supplier should meet your brand's look and feel, use the specified materials, and be delivered intact. You should adhere to quality standards across all products and processes. For instance, you may have usability standards implemented in the website development process by stating that the website must be easy to navigate, whether from a phone, computer, or tablet.

Quality Planning

Quality planning refers specifically to the **actions of a project manager or the team to establish and conduct a process for identifying and determining exactly which standards of quality are in fact relevant to the project** as a whole, and **how to satisfy them**.

To steer that discussion, you can ask yourself:

- What outcome do my customers want at the end of this project?
- What does quality look like for them?
- How can I meet their expectations?
- How will I determine if the quality measures will lead to project success?

This is where you'll **plan the procedures to achieve the quality standards**. Recall that one of the Project Plant Pals quality standards is reliability, the expectation that each plant arrives on time and in good condition. So as a quality planning measure, you'll need to make plans with your plant provider to test the durability of your planters before you decide to use them.

Quality Assurance

Quality assurance, often shortened to QA, is all about **evaluating if your project is moving towards delivering a high-quality service or product**. Unlike quality standards and quality planning, **QA spans the whole project life cycle**, rather than taking place at a specific phase. Your quality plan should include **regular audits** to confirm that **everything is going to plan** and the necessary **procedures are being followed**. Regular check-ins and reporting to stakeholders will help boost their confidence, and yours, along the way.

Quality assurance is where you'll **make sure that you and your clients are getting the exact product you contracted for**. So with Project Plant Pals, this is where your team will inspect options for planters and perhaps sit in on the durability testing. If you make plans for your plant provider to handle the durability testing on their own, make sure you are tracking their progress and checking in regularly.

Quality Control

The final concept of quality management is quality control, often shortened to QC. Here, techniques are used in order to **ensure quality standards when a problem is identified**, or if the **quality plan is not executed in the desired manner** and **corrective actions should be affected**. Quality control involves **monitoring project results and delivery** to determine if they are **meeting desired results or not**. If not, then alternative actions should be taken.

Quality control is also integral to creating a more successful landing for the next project. After the plants are placed throughout the customers' offices, quality control may look like you or your team member taking a final walk-through of the offices where the plants were delivered. You'd be checking for things like broken planters or plants that were damaged in transit and swapping them out when necessary. You may not do this for every customer, but it's a good idea to do it as you're starting out in case you spot issues to improve upon when you're back in the office.

If you stuck to your quality plan, checking on quality throughout the life cycle of your project (QA), and of course correcting as needed (QC), the likelihood of meeting your quality standards is high, resulting in a high-quality deliverable at the end of your project that satisfies your organizational goals and exceeds the customer's expectations.

2.1.2 Recap: Quality management concepts

You are learning to define quality in your projects. **Quality** is when the outlined requirements for the deliverable are fulfilled and meet or exceed the needs and expectations of customers.

In this reading, we'll review the four main concepts of **quality management** we discussed in the previous video: quality standards, quality planning, quality assurance, and quality control.

- **Quality standards** provide requirements, specifications, or guidelines that can be used to ensure that products, processes, or services are fit for achieving the desired outcome. These standards must be met in order for the product, process, or service to be considered successful by the organization and the customer. You will set quality standards with your team and your customer at the beginning of your project.

Well-defined standards lead to less rework and schedule delays throughout your project.

- **Quality planning** involves the actions of you or your team to establish and conduct a process for identifying and determining exactly which standards of quality are relevant to the project as a whole and how to satisfy them. During this process, you'll plan the procedures to achieve the quality standards for your project.
- **Quality assurance**, or QA, is a review process that evaluates whether the project is moving toward delivering a high-quality service or product. It includes regular audits to confirm that everything is going to plan and that the necessary procedures are being followed. Quality assurance helps you make sure that you and your customers are getting the exact product you contracted for.
- **Quality control**, or QC, involves monitoring project results and delivery to determine if they are meeting desired results. It includes the techniques that are used to ensure quality standards are maintained when a problem is identified. Quality control is a subset of quality assurance activities. While QA seeks to prevent defects *before* they occur, QC aims to identify defects *after* they have happened and also entails taking corrective action to resolve these issues.

Additional reading

To learn more about these concepts, check out these articles:

- [What Are Quality Standards?](#)
- [What Is a Quality Plan?](#)
- [Quality Assurance & Quality Control](#)

Test your knowledge: Quality management

1. As a project manager, you conduct a process to determine which standards of quality are relevant to the project and how to satisfy them. Which quality management concept does this describe?

- Quality control
- Quality assurance
- Quality standards
- Quality planning



Correct

During the quality planning process, the project manager determines exactly which quality standards are relevant to the project plan and the procedures for how to achieve them.

2. Which quality management concept—often set at the beginning of a project—uses multiple guidelines, such as reliability and usability, to ensure its desired outcome?

- Quality standards
- Quality control
- Quality assurance
- Quality planning

 **Correct**

Project managers set multiple quality standards to help the team achieve their desired outcome. When the team defines high-quality standards, the results are clear expectations and less rework.

3. As a project manager, you and your team monitor project results and delivery to determine if the desired results are being met. If issues are identified, you take corrective action to resolve them. Which quality management concept does this describe?

- Quality assurance
- Quality standards
- Quality planning
- Quality control

 **Correct**

Quality control includes the techniques that are used to ensure quality standards are maintained when a problem is identified. Additionally, quality control helps the project manager learn how to successfully lead future projects as they review and improve the current project's results.

4. As a project manager, you and your team conduct a review process. Your goal is to evaluate whether the project is moving toward delivering a high-quality service or product and to prevent defects before they occur. Which quality management concept does this describe?

- Quality standards
- Quality planning
- Quality control
- Quality assurance

 **Correct**

Quality assurance includes regular audits to confirm that everything is going to plan and that the necessary procedures are being followed. Quality assurance spans the whole project life cycle.

2.1.3 Fostering customer relationships with communication skills

According to the Project Management Institute, it's been found that most projects experience a communication breakdown of some kind, even though project managers spend about 90% of their time working on communication alone. It's in a project manager's best interest to communicate tactfully, not only with the members of their own organization, but also with customers and vendors. When done well, strategic communication with a customer or client

can instill a sense of confidence that you're doing a good job and that you're a trustworthy partner.

So how should a **project manager approach communication with a customer**? Using soft skills like **negotiation, empathetic listening, and trust building**, will help foster a good relationship between you and your customers, and a good project manager knows how and when to apply these skills.

A key practice for negotiation, empathetic listening, and trust building is **asking questions**. It's important to ask **open-ended questions** and **actively listen to understand the customer's current state versus their desired state** and what might help them get from here to there. If you ask open-ended questions, you'll find out where you can make your **customers feel more secure**. You'll be able to **negotiate to ensure both of your needs are met**, and you'll **build the necessary trust to have a successful partnership**.

High-performing project managers set clear expectations about when they'll communicate certain things to their customers. For example, you might want to set an expectation that you'll provide weekly progress updates to keep clients informed, rather than expecting them to come to you with questions.

When troubleshooting an issue with the product, it might not be necessary to fill the customer in on an issue that won't affect the outcome. Let's say a designer on your team quit and you had to replace them, you may be able to replace that designer with a new one fairly quickly and not even skip a beat in your project's progress. You can complete the task at hand without giving the customer any additional worry. The level of visibility between customers and clients on a given project may vary, and you'll have to use your judgment regarding what's important to communicate to your client. Sometimes, you'll want to tell your client if there's an issue. If you reach a point in the project where you can't possibly move forward without their help and input, you'll have to communicate the issue to them calmly and with empathy.

Let's put this into Project Plant Pals context, where we're troubleshooting an issue with broken planters. Maybe when we were putting together our quality standards, we left some room for supplier error and accounted for some broken planters. We'll say we figured an acceptable number of broken planters was two out of every 50. But let's imagine that the customer received a shipment and there were five broken planters. At that point, we'll need to meet with the customer and ask important negotiation questions. We'll need to decide if the five broken planters out of every 50 is an acceptable outcome, or we'll need to discuss whether the customer would consider investing in a higher tier of planters that may be less prone to breaking. Presenting a solution like using sturdier planters will affect their budget, and they'll need to adjust accordingly. Is the customer okay with that change? Would that lead to another trade off?

Keeping in mind that the **main goal here is customer satisfaction** throughout the negotiation process, you'll want to be considerate of their feelings and limitations. You can do this by:

- exhibiting empathy
- understanding their frustrations

- addressing them
- finding a solution that's beneficial for both of you.

You may have held a customer-facing role in the past, whether that's in a call center, as a retail associate, as a server in a restaurant, or any number of positions. Even if you haven't, you've probably been an advocate for yourself while conversing with a customer service representative. Because of this, you'll probably have a good idea of what good customer service looks like. **Good customer service** results in **choosing to go back** to the same hair salon, bakery, or coffee shop because you liked the way that you were treated and the service you received (even if you had an issue), versus choosing not to go back to those places if you don't receive that level of care. Your past experiences have taught you to manage relationships and to avoid delivering something that's low quality. It doesn't feel great when you're on the receiving end.

In order to yield better results in future projects, it's necessary to get **feedback from customers**. Sometimes, this feedback will come **during the process**, and sometimes, it'll come **after the project is completed**, depending on how you map it out in the initiation phase. The matter of when you receive feedback may come down to what you actually want to accomplish in your project. If your business is launching an e-commerce site, you will want user feedback so you can make adjustments to optimize the customers' shopping experience. If your business is an on-demand cookie delivery service, you may want to deliver the cookies and then get user feedback to know how your customers felt about the cookies and the delivery experience as a whole. User feedback helps to close any gaps and understanding between the customer's expectation and the project's needs.

2.1.4 Measuring customer satisfaction

If the end goal of our project is to have a great quality product or service for both our own organization and our customer, we need to get an idea of what the customer wants. We already learned how to make sure something is high quality on our end. Now let's find out how to measure what clients want, so we can meet their needs, expectations, and standards.

The **best way to get an idea of what customers and users want is to ask them**, but we don't mean calling each of them up on the phone and literally asking them. That might not be the best use of our time. Fortunately, there are a few ways we can streamline that information. We can conduct a series of **surveys or tests** with customers and users. Some common ones are **feedback surveys** and **user acceptance tests**.

Feedback Surveys

Feedback surveys are a survey in which **users provide feedback on features of your product that they like or dislike**. These surveys can **take place as you design, before you launch**, in order to find out if people like and understand the product, or **after you've launched**, if you want to make sure the user experience is even more satisfying. So your users participate in a survey and give you feedback on what features they like or dislike, and potentially, which aspects they find to be fairly intuitive, and which aspects are a little tougher to navigate. After you get that feedback, you'll either be good to launch, if you haven't yet, or you'll go back and iterate on the product, if it's already on the market.

User Acceptance Tests (UAT)

In broader terms, a user acceptance test, or a UAT, is a **test that helps a business make sure that a product or solution works for its users**. A UAT must meet the agreed upon requirements and deliver the expected results. This test is typically used to assess the end-to-end experience for the user of a new process or product.

A user acceptance test is incredibly important because it **takes place near the end of a product's development**, and therefore, is an overall user experience test of the entire product, software, or service. UATs are sometimes referred to as "**beta tests**."

Let's find out what a user acceptance test agenda might look like.

- In a typical UAT setting, you'll **welcome your users and thank them for participating**.
- Then, you'll **present the product to them**. This includes discussing testing guidelines and demonstrating how the product works.
- Next, you'll **start your UAT test cases**, taking your audience through critical user journeys. **A critical user journey is a sequence of steps a user follows to accomplish tasks in your product**.
- When presenting something you've built, you must **give users a visual representation or mock up of your product or have them go through a demo**. For example, if you're working on a construction-based project and you intend to replace all appliances and hardware in the home, you'll want to give the user some sort of vision of what that might entail. This could include 3D models, digital blueprints, samples, and more. Your UAT demo should focus on a call to action. For instance, the call to action for your project may be the need to test hardware in the client's future home. Maybe the homeowners have requested a dishwasher that can be opened and closed with very little force and doesn't make too much noise. In that case, you'll want to give the client real-life scenarios to work within. Ask them to load the dishes and start the wash cycle. Then ask questions like, "On a scale of one to 10, how much force was required to open and close the dishwasher?" to determine if the washer meets their expectations. During your presentation and walkthrough of the UAT, you should be collecting feedback from the users on their overall experience.
- During this part of testing, your users will be able to help you **identify edge cases**. Edge cases are **rare—outliers that the original requirements didn't account for**. They deal with the extreme maximums and minimums of parameters. For example, imagine that you created an app that allows for unlimited photo uploads, knowing that users will rarely upload more than 1000 photos in a single session. How will the system deal with someone who actually does upload thousands of photos, or millions, in a single upload? It's unlikely, but it could be disastrous for your software.
- After identifying edge cases, the last step of the UAT agenda is to **recap your findings, identify bugs or issues, and prioritize which issues need to be addressed first**. When you've addressed the issue and determined next steps, you'll be able to close and conclude your user acceptance testing.

2.1.5 Ensuring accessibility during feedback collection

So far, you've learned the importance of managing, communicating, and measuring quality. This is a great opportunity to also think about how to ensure the ways you are collecting feedback and the processes in place to measure quality are **fair and accessible**.

- First, if you are **collecting feedback through live interviews**, be sure to include an **offer to provide accommodations** in your correspondence when setting up the sessions. You may get requests for live captioning or an interpreter. Other folks, such as those with anxiety or on the autism spectrum, may ask to see the questions in advance so that they have time to think about and prepare their answers. Remember, what works for one person may not work for another person, even if those two people have the same disability.
- If you're **conducting an interview on location**, **examine the space with an accessibility lens**, like ensuring there's an accessible path into the building and to the room and that hallways are clear of clutter that could block someone using a wheelchair or a walker or someone with a visual impairment from easily and safely moving through.
- If **sending a survey or collecting feedback using technology**, **check that the systems you are using are fully accessible**. If you're unsure, contact the system owner and ask if they are compliant with the latest Web Content Accessibility Guidelines, or WCAG. Be prepared to provide questions and collect responses in an alternate manner, if needed.
- Beyond collecting feedback, as a project manager, it's important for you to **make accessibility part of the conversation from the beginning**, especially if your project pertains to a process or a product. Oftentimes, incorporating accessible features into a product is overlooked or left to the final stages of a project, and can lead to serious implications, like launch delays, or worse, a product that can't be used by a percentage of the population. Ensure your developers are familiar with accessibility requirements at the start. If they're not, help connect them with appropriate resources or experts. Include testers with various disabilities in your usability testing whenever possible, and at the very least, have the product tested for adherence to accessibility guidelines.

2.1.6 User acceptance testing: Goals, best practices, and management

In a previous video, you learned about different ways to measure customer satisfaction, including feedback surveys and **user acceptance testing (UAT)**. This reading will focus on why conducting UAT is essential to the successful launch of any product, service, or software. We will also discuss some best practices for effective UAT and how to manage the feedback you receive.

The goals of UAT

To recap, UAT is testing that helps a business make sure that a product, service, or process works for its users. The main objectives of UAT are to:

- Demonstrate that the product, service, or process is behaving in expected ways in real-world scenarios.
- Show that the product, service, or process is working as intended.
- Identify issues that need to be addressed before considering the project as done.

UAT simulates real-world conditions, so when the feature works as intended during the testing process, you can be more confident that your product, service, or process will work properly once it is launched. It allows a project team to gather detailed information about how users interact with a product, service, or process. UAT helps the team answer such questions as: Do users recognize its purpose and uses? How do they interact with it? How much time do users take to interact with it? Do they notice all of its features? Is the product, service, or process accessible to everyone? UAT also allows the project team to record information about how users feel about their experience with a product, service, or process. Through testing, the team can learn about the emotions it evokes, identities it conveys, appeal it holds, and so on.

Best practices for effective UAT

In order to achieve these goals, UAT needs to be conducted thoughtfully. These best practices can help you administer effective UAT:

- **Define and write down your acceptance criteria.** Acceptance criteria are pre-established standards or requirements that a product, service, or process must meet. Write down these requirements for each item that you intend to test. For example, if your project is to create a new employee handbook for your small business, you may set acceptance criteria that the handbook must be a digital PDF that is accessible on mobile devices and desktop.
- **Create the test cases for each item that you are testing.** A test case is a sequence of steps and its expected results. It usually consists of a series of actions that the user can perform to find out if the product, service, or process behaved the way it was supposed to. Continuing with the employee handbook example, you could create a test case process in which the user would click to download the PDF of the handbook on their mobile device or desktop to ensure that they could access it without issues.
- **Select your users carefully.** It is important to choose users who will actually be the end users of the product, service, or process.
- **Write the UAT scripts based on user stories.** These scripts will be delivered to the users during the testing process. A **user story** is an informal, general explanation of a feature written from the perspective of the end user. In our employee handbook example, a user story might be: As a new employee, I want to be able to use the handbook to easily locate the vacation policy and share it with my team via email.
- **Communicate with users and let them know what to expect.** If you can prepare users ahead of time, there will be fewer questions, issues, or delays during the testing process.
- **Prepare the testing environment for UAT.** Ensure that the users have proper credentials and access, and try out these credentials ahead of time to ensure they work.

- **Provide a step-by-step plan to help guide users through the testing process.** It will be helpful for users to have some clear, easy-to-follow instructions that will help focus their attention on the right places. You can create this plan in a digital document or spreadsheet and share with them ahead of time.
- **Compile notes in a single document and record any issues that are discovered.** You can create a digital spreadsheet or document that corresponds to your plan. It can have designated areas to track issues for each item that is tested, including the users' opinions on the severity of each issue. This will help you prioritize fixes.

Managing UAT feedback

Users provide feedback after performing UAT. This feedback might include positive comments, bug reports, and change requests. As the project manager, you can address the different types of feedback as follows:

- **Bugs or issues:** Users might report technical issues, also known as **bugs**, or other types of issues after performing UAT. You can track and monitor these issues in a spreadsheet or equivalent system and prioritize which issues to fix. For instance, critical issues, such as not being able to access, download, or search the employee handbook, need to be prioritized over non-critical issues, such as feedback on the cover art of the handbook.
- **Change requests:** Sometimes the user might suggest minor changes to the product, service, or process after UAT. These types of requests or changes should also be managed and prioritized. Depending on the type and volume of the requests, you may want to share this data with your primary stakeholders, and you may also need to adjust your project timeline to implement these new requests.

Test your knowledge: Compile feedback to measure satisfaction

1. A project manager should ask open-ended questions when utilizing which of the following three interpersonal skills?

Trust-building

 **Correct**

When a project manager asks open-ended questions, they are more likely to build trust because their teammates will feel more understood. It's also helpful for a project manager to ask open-ended questions when negotiating and listening.

Tool understanding

Negotiating

 **Correct**

By asking open-ended questions during a negotiation, a project manager can better understand the needs and perspectives of the person they're negotiating with. A better understanding will help build a successful partnership. It's also helpful for a project manager to ask open-ended questions when listening and trying to build trust.

- Empathetic listening

 **Correct**

By asking open-ended questions, a project manager can understand someone's frustrations and address those frustrations with a solution that's beneficial to both parties. It's also helpful for a project manager to ask open-ended questions when negotiating and trying to build trust.

2. When is an optimal time to send out a feedback survey?

- Only before a product or service launches
- Only after a product or service launches
- Both before and after a product or service launches

 **Correct**

Sending out surveys before a launch can help you make improvements before mass adoption by customers. Surveying after a launch can help you measure success and make future improvements.

3. What are the main goals of a user acceptance test (UAT)? Select all that apply.

- To demonstrate that the product, service, or process is behaving in expected ways in real-world scenarios

 **Correct**

UAT allows the team to gather detailed information about how users interact with a product, service, or process in conditions that simulate the real world.

- To confirm that the product, service, or process is working as intended

 **Correct**

When a feature works as intended during the testing process, the team can be more confident that the product, service, or process will work properly once it is launched.

- To identify issues that need to be addressed before considering the project to be done

 **Correct**

During UAT, the team will record any technical issues that users may have had. They will also record any change requests from users. The team can then use this information to improve the product, service, or process.

- To persuade potential customers to use the new product, service, or process

4. As a project manager running a user acceptance test (UAT), you take your users through a sequence of steps to accomplish tasks in your product. What is the term for these steps?

- Edge cases
- Feedback survey
- Critical user journey (test cases)
- Acceptance criteria

 **Correct**

A critical user journey gives users a visual representation or mock up of your product or asks them to go through a demo.

5. Which of the following are best practices for running an effective UAT? Select all that apply.

- Create test cases for each item being tested.

 **Correct**

A test case is a sequence of steps and its expected results. (The term *test case* may be used interchangeably with *critical user journey*.) They should also define and write down the acceptance criteria and write UAT scripts based on user stories.

- Write UAT scripts based on user stories.

 **Correct**

A user story is an informal, general explanation of a feature written from the perspective of the end user. They should also define and write down the acceptance criteria and create test cases for each item being tested.

- Let users decide their own plan for the testing process.
- Determine user credentials and access permissions the day of the test.
- Define and write down the acceptance criteria.

 **Correct**

Project managers should write down acceptance criteria for each item they intend to test. They should also create test cases for each item being tested and write UAT scripts based on user stories.

2.2 Pursuing Continuous Improvement

2.2.1 Continuous improvement and process improvement

Continuous improvement is an **ongoing effort to improve products or services**. It helps ensure that a product steadily makes its way toward the best possible outcome. Continuous improvement begins with recognizing when processes and tasks need to be created, eliminated, or improved. Then a project manager must **plan for and implement changes to keep the project on track**. That's where process improvement comes from.

Process improvement is the **practice of identifying, analyzing, and improving existing processes to enhance the performance of your team and to develop best practices or to optimize consumer experiences**. When working with your process improvements, using a **controlled environment** in an experiment can help you understand if the changes you're considering fix your problem.

A control is an experiment or observation designed to minimize the effects of variables. Control groups are representative samples that help you to **determine that the differences between your experimental groups and the norm are due to your changes**, rather than something else. They **eliminate alternative explanations for your results**.

For example, you observe a problem with your process and put forward a hypothesis, which is an educated guess about what's causing the problem and how you'd fix it. Then you change one variable in the system, keeping the control group the same, and observe your results again.

Let's put this in the context of Project Plant Pal scenario. Business is booming for Office Green, and demand for your team's new Plant Pal service is rapidly growing. To meet the demand, suppliers have streamlined their process of packing boxes and putting all plants into a one-size-fits-all box. Let's say you're using just one box size to ship all of your plants. For smaller plants, there's more padding added to the box to fill the extra space, and the plants usually arrive intact. But larger plants have to be squeezed into the boxes and sometimes arrive damaged, according to customer surveys. To fix this problem, you hypothesize a potential solution by posing a question. Would more of the large plants have arrived intact if they were shipped in bigger boxes using the same padding we use for the small plants? Here is where your control comes in. You continue to ship half of the larger plants in the original boxes. This is your control group. And you experiment by shipping the other half in bigger boxes. Nothing else is different about the boxes except the size. The shape, thickness, box supplier, delivery addresses—absolutely everything else stays exactly the same. After the larger plants are delivered, you conduct a new survey. If more larger plants arrived intact, your hypothesis is confirmed. If the results are the same as they were before the experiment, you'll need to try something else to solve the problem of your damaged plants. Working in a controlled environment isn't the only way to ensure continuous improvements. There are various data-driven improvement frameworks, like DMAIC and PDCA.

2.2.2 Data-driven improvement frameworks

Data-driven improvement frameworks are **techniques used to make decisions based on actual data**.

DMAIC

The first data-driven improvement framework we'll cover may be familiar to you since we discussed it in a previous course. Recall that D-M-A-I-C, or DMAIC, stands for **define, measure, analyze, improve, and control**, and it maps out **five steps that you can take when working toward continuous improvements**. When considering how you can improve customer experiences, start with the following:

- First, you'll need to **define** the business problem, goals, resources, project scope, and project timeline.
- Next, **measure**. Here, you'll **conduct performance metrics and data collection to establish baselines and measure success**.
- Then, **analyze**. Work to **find the root causes of problems** and **understand their impact**.
- Next, **improve**. This means **implementing a reasonable solution** to the problem.
- Lastly, **control**. This is where you'll **implement the changes and stay on top of monitoring the updated processes** you've established.

PDCA

PDCA is a **four-step process that focuses on identifying a problem, fixing that issue, assessing whether the fix was successful, and fine-tuning the final fix**. The steps are as follows:

- **Plan**. Here, you'll **identify the issue and root cause** and **brainstorm solutions** to the problem. Let's say that one type of plant isn't selling well, which means the warehouse is full of a particular species. If you don't do something fast, the plants may die soon. What are some viable solutions? You propose moving the items from the bottom of the sales page on the website to the top so those plants are front and center. You could also send out email marketing campaigns featuring that plant, where you offer customers a buy one, get one offer on the plant.
- **Do, or fix the problem**. In this case, your sponsor decided that they didn't feel comfortable giving plants away if they could still profit. You've decided to go with the first option: moving the plant to a more prominent part of the website. Your hypothesis is that the best way to shift older inventory is to put it in a place that customers can't miss.
- **Check. Compare your results to the goal** to find out if the problem is fixed. Now you wait one week and notice if the sales numbers go up for that plant. If they did, your hypothesis is correct and you've saved some plant lives and helped Office Green avoid financial loss.
- **Act, or fine-tune the fix** to ensure continuous improvement. In our example, you decide to reorganize the website. In the future, all overstocked plants will get a prominent place on the website.

Both PDCA and DMAIC are great problem-solving frameworks to apply in your day-to-day life and in the workplace. These frameworks help you to **identify issues, reduce errors, and optimize your processes**.

2.2.3 Differentiating projects from programs

By now, you know that a project manager interacts with their team members on a daily basis. What you may not know is that **project managers are also part of a bigger ecosystem within their business or organization**. Projects are not the only endeavor a project manager may participate in. There are also programs and portfolios.

A project is one single-focused endeavor, a program is a collection of projects, and a portfolio is a collection of projects and programs across the whole organization.

Think of it this way: **projects can exist inside of programs**, which **can exist inside of portfolios**. Note that I said "can" because this won't always be the case. **Projects can also exist as separate, unrelated initiatives**. But if they're a part of something bigger within the organization, **projects can become a program**. The collective and separate successes of all of these three rely on **continuous improvements**.

So who are the people that manage these various endeavors and drive success? Let's think of this organizationally, starting with the project manager.

- **A project manager oversees individual projects** and **has short-term, concrete deliverables**. The project manager is **tasked with continuously improving their assigned project**.
- **A program manager supervises groups of projects**, and even **other project managers**, and **focuses on long-term business objectives**. This program manager is **tasked with continuously improving their assigned collection of projects**.
- **A portfolio manager supervises a grouping of projects and programs** and **provides centralized management to them**. This portfolio manager is **tasked with continuously improving their assigned collection of projects and programs**.

Different companies may have slightly different names for these roles, but the concept is the same. Let's examine an instance where these roles directly create continuous improvement for their organizations. A project manager has decided to offer monthly cross-departmental trainings to members of their team. Their team is small, so they figure it's helpful when people from other departments understand their workload and processes. This way, if someone is out-of-office, there will always be coverage. After a couple months of these trainings, the project manager realizes they not only improve processes in communication, but they act as inadvertent team-builders. Because of the trainings, employees have the opportunity to interact and to get to know one another better. The project manager takes this info to their program manager, and the program manager loves this unexpected insight. Now, the program manager can establish these trainers across all of the projects that they're managing, making these continuous improvements program-wide, rather than just project-wide.

So exactly what would projects, programs, and portfolios look like at Office Green?

- Getting the Plant Pals service launched and running is a project. It's short-term and temporary. Once a service is launched successfully, the project ends. Keeping the service going indefinitely requires the project to become a program.
- The program—running the Plant Pals service—becomes one of Office Green's long-term business objectives, and the company will work on continuously improving the program.
- Now Plant Pals, along with other projects and programs at Office Green, are included in the company's portfolio. As continuous improvements are executed in Project Plant Pals, the program and portfolios and Office Green will notice the benefits of that.

For instance, let's refer to the example of overstocked plants from the previous video. Well, using PDCA—plan, do, check, act—you notice a drop in the sales of one of the plant varieties. So you decide to reorganize the website so the species that isn't selling is featured

at the top, giving a small discount. This change is so successful that you end up making it a best practice. From now on, low-performing and overstocked plant varieties will be featured at the top of the website. This is, in fact, a new process. Running it over and over again will drive continuous improvements. The continuous improvement you made to the project reflected well in your program and portfolio, because now that that it's been tested, the same strategy can be implemented company-wide for all of the company's other sites and products, reducing waste and increasing revenue across the board. If many or all of the projects at Office Green see the same improvement, that directly benefits the program, which is the collective of the projects. If the same strategy is applied to programs at Office Green, the portfolio will directly benefit by having stronger indicators for profitability.

2.2.4 Identify: Project, program, or portfolio

As project manager for a growing team, take a moment to evaluate your team's recent work and identify projects, programs, and portfolios.

Project
<p>Training initiative</p> <p>Your team develops training</p> <p>You and your project team provide a new training to educate other departments about your team's workload and processes.</p> <p></p>
<p>Ticketing initiative</p> <p>Your team develops a ticketing system</p> <p>You and your team develop a new ticketing system to provide support for your team's product.</p> <p></p>

Program
<p>Training initiative</p> <p>Supervisor extends trainings</p> <p>Recognizing the positive effect that the training has on your team, your supervisor extends the training program to all of their projects on a monthly basis.</p> <p></p>
<p>Ticketing initiative</p> <p>Other teams adopt the ticketing system</p> <p>The ticketing system has reduced overhead and work hours. Now, Marketing and Operations is using it internally to support the Sales team.</p> <p></p>

Portfolio

Training initiative

Management formalizes training

The teams who receive the monthly training show increased productivity. So, the CFO appoints a training lead and department to formalize the training across the company.



Ticketing initiative

Ticketing system extends throughout company

The company uses the ticketing system both externally and internally to support all company services and communications.



Test your knowledge: Continuous improvement

1. Fill in the blank: _____ is an ongoing effort to improve products or services. It begins with a project manager recognizing processes and tasks that they should create, eliminate, or improve.

- Experimental improvement
- Process improvement
- Control improvement
- Continuous improvement

✓ Correct

Continuous improvement is an ongoing effort to improve products or services. It begins with recognizing when processes and tasks need to be created, eliminated, or improved.

2. As a project manager, you decide to use a continuous improvement framework to help you measure success. The framework you choose has a step that involves conducting performance metrics and data collection to establish baselines. Which framework does this describe?

- PDCA
- UAT
- KPI
- DMAIC

✓ Correct

DMAIC stands for *define, measure, analyze, improve, and control*. Conducting performance metrics and data collection occur during the *measure* step.

3. Which continuous improvement framework does the following scenario represent?

A project manager identifies an ongoing communication issue where a vendor isn't getting notified about product shipments. To fix the problem, they first plan additional communication strategies. Next, they implement one of their strategies—send an additional email after each shipment. Then, they check to verify that the customer receives the email. Finally, they review the process to fine-tune and ensure continuous improvement.

- PDCA
- UAT
- DMAIC
- KPI

 **Correct**

PDCA stands for *plan, do, check, and act*. The 4-step process focuses on identifying a problem, fixing the issue, assessing whether the fix was successful, and fine-tuning the final fix.

4. What's the main difference between a program and a portfolio?

- A portfolio contains more complex projects than a program.
- A program is a collection of projects, whereas a portfolio is a collection of both projects and programs across an entire organization.
- A program contains better-organized projects than a portfolio.
- A program contains current projects, whereas a portfolio contains previous projects.

 **Correct**

Projects can exist inside of programs, which can exist inside of portfolios.

5. A construction company tests a strategy to reduce costs on a collection of projects. This experiment is part of a long-term business objective. What position would most likely oversee this test across several projects?

- Program manager
- Portfolio manager
- Project manager
- Primary stakeholder

 **Correct**

A program manager supervises groups of projects and focuses on long-term business objectives.

2.3 Using Retrospectives For Project Success

2.3.1 The purpose of a retrospective

In the last video, we discussed continuous improvements. One way to **ensure continuous improvements** is to **conduct a retrospective**, so let's discuss that a little more in depth. **A retrospective is a workshop or meeting that gives project teams time to reflect on a**

project. Retrospectives, sometimes known as retros, should **happen throughout the life cycle of a project**, but mostly are implemented after major milestones, or most commonly, after a project is completed.

Retrospectives give you a chance to **discuss successes and setbacks that took place** within the project or phases. You can think of them as a **form of process improvement** within your project. Retrospectives serve three main purposes:

- **Encourage team building**, because they allow team members to understand different perspectives within their team.
- **Facilitate improved collaboration on future projects**.
- **Promote positive changes in future procedures and processes**.

Retrospectives are **great for team-building** since they **enable teams to understand each other better** and **facilitate better collaboration**, which improves productivity. The emphasis in retrospectives is on **continuous improvement and change**, instead of recycling old—and potentially bad—habits, procedures, and processes.

Retrospectives are helpful because even if we plan for every possible risk, odds are that something will sneak up on us. When something does fall through the cracks and you need to **reflect on it with the team**, you may want to conduct a retrospective. Some additional **reasons that you might want to conduct a retrospective** include **missed deadlines or expectations**, or **miscommunications between stakeholders**. You may also want to hold a retrospective **at the end of a sprint**. As a reminder, a **sprint is a series of ordered tasks ending in a goal**. You could also hold a retrospective **after product launches and landings**. These are all great opportunities to record key lessons that other people might learn from as they work on their own projects.

Identifying the stumbling blocks and successes in a project helps improve future processes, but the way you decide to conduct a retrospective can vary. There's no exact formula or template for a productive retrospective; the way you choose to structure your retrospective will depend on your team and workplace. You may decide to conduct a formal, in-person retrospective if your team prefers to debrief in that setting. You can incorporate sticky notes, documents, or any other kind of physical tools to help your team debrief. Or if you find that your team often gets off track during in-person meetings, you may decide a virtual or online retrospective is a better option. In this case, surveys might help to get thoughts organized.

Although there's no one way to conduct retrospectives, there are certain **best practices** to keep in mind.

- You'll want your retrospectives to **be blameless**. Making sure that everyone feels comfortable giving feedback as candidly as possible will result in the most productive retrospective. To navigate through awkward situations or sensitive subjects, it may be necessary to encourage anonymous or private feedback. A couple of tactics a project manager can use to ensure the process remains blameless are changing perspective and switching from "you" language to "we" language. Changing perspective means putting yourself in someone else's shoes. If your team is quick to blame the delivery company for their plants not arriving at the customer's office on time, think about the situation from the delivery company's perspective. Was the delivery company's route

optimized and tested to avoid traffic? If not, maybe that should have been a task in your project. Using "you" language can get you in trouble because it can feel like everyone in the room is judging the person receiving the blame. For example, telling your project's sponsor that "You didn't make it clear that we didn't have money for a contingency budget when plants die" is not as productive as saying "The lack of a contingency budget wasn't made fully clear from the get-go, and that's something that we can improve upon for next time." The project sponsor may feel attacked and wonder why you, the project manager, didn't ask the right questions in the early stages. Maybe the fact of the matter is that both of you could have done a little bit more to include a contingency budget, and that's okay.

- Make sure you **aren't only focusing on the negative**. Retrospectives are about reflecting on the **positive aspects** of projects too, so talk about what went well. What was fun? What new things will you be able to carry with you into future projects? Maybe the sales and marketing teams don't work together often, but this gave them an opportunity to bond. Maybe you enjoyed working with the Project Plant Pals contracted website designer so much that the team has decided to hire them full-time. Whatever the positives were, they're worth celebrating. You could even order some dinner or dessert as a thank you to everyone.

Finally, you'll want to make sure that you **enact the changes you've discussed**. You'll put the discussed changes in place and decide to handle the project a little differently in the next phase. People don't want to participate in retrospectives if they feel their feedback isn't fully taken into consideration and implemented.

Test your knowledge: Retrospectives

1. A project manager sends out an anonymous team survey for feedback after a customer reports they're not happy with a product feature. Then, the project manager calls a team meeting to discuss the feedback in the survey. During the meeting, the project manager asks the team to use "we" language instead of "you" language. At the end of the meeting, the team discusses what lessons the team will carry into future work.

Which three retrospective best practices are the project manager and team following?

Change perspective

 **Correct**

In this scenario, the project manager helps to create a blameless retrospective by switching the team from "you" language to "we" language. This makes everyone feel comfortable giving candid feedback. The project manager also helps to create a blameless environment by seeking anonymous feedback and focusing on the positive aspects of the project.

Don't focus only on the negative

 **Correct**

By asking the team what lessons they will carry into future projects, the project manager focuses the discussion in a positive direction. The project manager also helps create a blameless environment by changing perspective and seeking anonymous feedback.

- Use a time-boxed agenda
- Be blameless with teammates

 **Correct**

The project manager is trying to figure out what went wrong with the project tasks, and they want to maintain a blameless environment. When the project manager sends an anonymous survey, they help the team feel comfortable giving candid feedback. The project manager also focuses on the positive aspects of the project and helps to create a blameless environment by changing perspective.

2. What are the main purposes of a retrospective? Select all that apply.

- Promote positive changes

 **Correct**

The emphasis in retrospectives is on continuous improvement and change. This helps teams avoid recycling old and potentially unhelpful habits, procedures, and processes. Retrospectives are also useful for encouraging team-building and facilitating improved collaboration.

- Encourage team-building

 **Correct**

Retrospectives are great for team-building because they enable teammates to better understand each other's perspectives. They are also useful for promoting positive changes and facilitating improved collaboration.

- Eliminate all team miscommunications

- Facilitate improved collaboration

 **Correct**

Because retrospectives provide a time for teammates to communicate and reflect on the project together, they facilitate improved collaboration on the current project and future projects. Retrospectives are also useful for promoting positive changes and encouraging team-building.

3. What are some typical reasons for holding a retrospective? Select all that apply.

- Kicked off a new project
- Reached the end of a Sprint

 **Correct**

A Sprint is a series of ordered tasks ending in a goal. The end of a Sprint is a great opportunity to record key lessons that other people might learn from later on in the project. You might also conduct a retrospective when there have been missed deadlines, miscommunications between stakeholders, or after launching a new product.

- Delivered a new product

 **Correct**

Holding a retrospective just after product delivery helps your team record key lessons learned and improve future processes. You might also conduct a retrospective when there have been missed deadlines or miscommunications between stakeholders, or at the end of a Sprint.

- Missed deadlines or expectations

 **Correct**

Even if you plan for every possible risk, odds are that something will still sneak up on you. When something does fall through the cracks and you need to reflect on it with the team, you may want to conduct a retrospective. You might also conduct a retrospective at the end of a Sprint or after launching a new product.

4. Fill in the blank: As a project manager, the way you choose to structure your retrospective will depend on _____.

- your customer
- your project budget
- your team and workplace
- your project scope

 **Correct**

There's no exact formula or template for a productive retrospective. The way you choose to structure your retrospective will depend on your team and workplace. You may decide to conduct a formal, in-person retrospective, or you may decide a virtual or online retrospective is a better option.

Conducting a retrospective

Remember how I said **there wasn't one exact formula or template to follow when conducting retrospectives?** That's because **every team learns, adapts, and grows differently**. Different situations call for different tactics, and when it comes to receiving potentially sensitive feedback, it's best to consider your team's needs.

There are a couple of things to keep in mind before you begin a retrospective.

First, you'll want to **Maintain a positive tone throughout the process**. Remember, even if there are some tough conversations, the objective of a retrospective is to **encourage improvements**, which prepare you for future projects. In general, the retrospective should be considered a **positive experience where team members feel comfortable sharing their feedback**.

Next, you may need to be **considerate of teams outside of your own**. If there are other teams you partner with regularly, they'll need to be involved in the retrospective, as well. For instance, some adjacent teams that were part of the project may feel like they want to voice an opinion about the struggle to maintain communication between teams. If they choose not to be involved in the retrospective, you'll at least want to share your findings with them. After

all, smoothing cross-team interactions and deliverable handoffs is a frequent topic of discussion in retrospectives.

As previously mentioned, you can use various props and tools to conduct your retrospective. Here's an example of what a retrospective might entail.

Link to template: [Retrospective Template](#)

As you'll notice, it's pretty extensive and includes a lot of opportunity for details. You'll want to encourage as much feedback as possible from your team. This retrospective template is a standard document, with room for project managers to fill out and discuss with their teams and use it to guide the conversation.

Go over the chain of events in the same way that they happened in real time.

- What happened during the planning stage?
- What could have gone better?
- Where did your team get lucky?
- How about during the execution stage?

As you do that, fill out the lessons learned section, which is a space for you to elaborate on things you could do differently the next time around. This is a space to include which risks materialized during your project.

- Was there a large gap between the original plan and its execution?
- How did the team feel about it?

Maybe several of your project team members commented on the fact that the website launch didn't meet the original deadline. Because of this, sales team members didn't hit their numbers that month, the marketing department had to change the date on several pieces of content and ads, and the sponsor had to answer to investors who were eager to view the website. Team members are upset now because if you had prioritized the website's completion and spent less time on less important tasks, this may have been avoided. It's difficult feedback, but it's pertinent for future successes to consider why this risk materialized. Next time, you'll make sure to prioritize a task with so many dependencies.

Now that you've gone over how everything went, build a better future for your team by filling out the remaining tables. The first one is **action items** and will address the question "What action should we take as a result of our lessons learned?" You'll start on the left-hand side with the action items you want to address, then make your way through the cells to the right as you include information like: type—as in, is this a tool, a process, a team, or something else? Owner—who will own this action item? And relative links—consider where we're tracking this item. The next table is all about **future considerations**. Are there any risks that could become issues if not addressed in the next quarter? Do you need to pass off ownership of this project to someone else? Include those and make sure to fill out the other cells, including: Type—is this a process, a team, or something else? Contact—who can be a resource on this procedure if we need to reference it later? And again, any links that may seem relevant to this topic. that could be relevant documentation if you're passing the project off or maybe a risk register from your project.

2.3.2 Explore: The steps of a retrospective

Tessa is a project manager at Special Effects Studios, which creates computer graphics for big-budget movies. They are currently editing outer-space scenes for a science fiction film. Tessa sets up a meeting to conduct a retrospective on the progress thus far.

1. Project summary

Before the meeting, Tessa fills in the basic project information:

- Goals and objectives
- Duration
- Team members
- Methodology

Tessa also includes links to key documents including the project charter, production plan, and scene requirements.

2. Key accomplishments

Tessa wants to begin the meeting on a positive note by encouraging the team to list out what went well. They are most proud of the anti-gravity effects they added to the scene, as well as the collaborative dedication that they each put into the process. The team also thanked Tessa for their meticulous note taking and project documentation.

3. Lessons learned

The team also discusses things that need improvement, as well as instances when they were fortunate that things went in their favor. They missed some opportunities early on to research what life in space is really like, and that slowed down the process of developing the right effects. The deadline for the scene also shifted out one month, which was a lucky break for their timeline.

4. Action items

After the team lists out their lessons learned, Tessa asks them to turn their lessons into action items. They agree to create a list of space experts to consult with on an ongoing basis, and they want to book time in a reduced gravity aircraft so they can experience weightlessness first-hand. Two team members volunteer to work on these action items.

5. Future considerations

Now, Tessa asks the team to think about the next scenes on their list, and the risks that could come up and impede their success. The team identifies specific considerations for their research process, timeline, and team dynamic. Tessa notes these as items for further mitigation plans.

6. Resources and notes

Since this retrospective will serve as a reference for how the project went and what it accomplished, Tessa adds the project notes which the team said they found valuable. They

also include the names of vendors and software that the team used to create the special effects.

Weekly Challenge 2

1. As a project manager, you're overseeing a product launch. You meet with customers to determine the product's quality standards. Then, you create processes and documentation necessary to achieve the expected quality. Which quality management concept do these tasks represent?

- Quality planning
- Assurance standards
- Assurance planning
- Quality control

 **Correct**

2. Which quality management concept involves monitoring project results to determine if these results are the ones desired or not?

- Quality control
- Quality standards
- Quality assurance
- Quality planning

 **Correct**

3. To receive authentic and honest feedback from customers, what strategy should a project manager use?

- Ask open-ended questions and listen to the customer's current state versus their desired state
- Ask for stakeholder feedback and relay it to customers in hopes to close the gap between the customer's expectation and the project's needs
- Ask for feedback after the project finishes because customers won't fully understand the product until it's complete
- Incentivize customers with a gift card because they're more likely to respond

 **Correct**

4. As a project manager, you're doing a user acceptance test (UAT) to test your product. You present your users with the visual mockup of the product and walk them through each step they need to take to use the product. What UAT quality control step does this scenario represent?

- Acceptance criteria
- User story
- Critical user journey
- Edge case journey

 **Correct**

5. A project manager engages in continuous improvement to enhance team performance. What is the purpose of the project manager's continuous improvement?

- To improve the product at the last stage of the quality management process
- To enable team improvement
- To enable process improvement
- To ensure that a product makes its way towards the best outcome

 **Correct**

6. As a project manager, you identified a process-based problem you'd like to improve. Before implementing a solution, you conduct performance metrics and data collection. This establishes baseline data that will determine success. What DMAIC step did you apply?

- Measure
- Define
- Control
- Analyze

 **Correct**

7. As a project manager, you learn a customer is not satisfied with the quality of a finished product. You have already identified the root cause and brainstormed solutions to the problem with the team. Now, you and the team attempt to fix the problem by implementing a solution. Which PDCA step did you apply?

- Plan
- Do
- Check
- Act

 **Correct**

8. As a project manager, you work on a collection of projects and programs across the organization. What is the term for this collection of projects and programs?

- Program
- Library
- Portfolio
- Project

 **Correct**

9. A team successfully delivers a product feature to a client, but misses the deadline. What should the project manager do to investigate why the product feature was late?

- Hold a retrospective
- Add a team member
- Increase the budget
- Meet with stakeholders

 **Correct**

10. As a project manager holding a retrospective, you discuss the successes and setbacks of the project and compile a document with team member's feedback. As the project manager, how should you use this feedback?

- Ask the program manager how to use the feedback
- Pass it along to the team
- Pick out the best feedback and assign awards to team members accordingly
- Create a plan that should be implemented for future projects

 **Correct**

Week 3 : Data-Informed Decision-Making

Learning Objectives

- Explain the value of data for a project manager and discuss the common types of project data.
- Explain how to identify and prioritize the data a project requires to meet business needs.
- Demonstrate how to analyze data to inform project decision-making.
- Tell a project's data-informed story to stakeholders and project team members.
- Describe what types of visuals and demonstration techniques make an effective and accessible presentation.

3.1 Gathering Data For A Project

3.1.1 The value of data

Data is a collection of facts or information, and through **data analysis**, you'll learn how to **use data to draw conclusions and make predictions and decisions**. We use data daily to help us make decisions and improve performance. For example, my friend is a runner who participates in annual five-kilometer and ten-kilometer runs. When she's training for a run, she uses the data on her GPS watch to measure her time and distance. She can even calculate her pace by measuring the minutes-per-kilometer. She uses the minutes-per-kilometer data to track her performance over time so that she can focus on improving for the future.

Similarly, companies use data and data analysis to improve and bring value to their organization in a variety of ways. For example, companies source data on customer behavior and customer demand to provide better services and create new products. Netflix is a great example of a company that uses data intelligence to predict what customers want. By observing data points surrounding types of genres, ratings, and number of repeated viewings, Netflix recommends TV shows that they believe customers might like, therefore improving the customer's viewing experience.

In the same way, as a project manager, you can use data daily to:

- make better decisions
- solve problems
- understand performance
- improve processes
- understand your users

Let's talk about how this can play out in our Plant Pals project at Office Green. If you have the data on customer buying patterns and identify that your best-selling products are all tropical plants, you'll be able to make better decisions when placing new plant orders with

your supplier. You'll also be able to better understand your users and their preferences to improve your offerings and performance.

Another daily benefit of data within your project team is the opportunity to improve processes. If you have the data from your project tracker of the number of tasks completed, the number of escalations, or the number of issues that come up surrounding an internal process, you'll be able to deduce where the majority of issues are stemming from. This data will help inform your decision on where to focus your attention to improve the process. While these are simple examples, through critical analysis, application, and execution, data becomes a powerful tool to guide any project in the right direction.

3.1.2 Common types of project data

As we discussed earlier, data is the collection of facts that can help inform decisions. You may start to notice how the project data impacts the team's daily activities and the overall progress and the success of the project. This is done by using various types of metrics.

A metric is a quantifiable measurement that is used to track and assess a business objective. Metrics are **based on selected goals**. They **vary per project and serve as a key type of project data**. There are many types of project data you can use to determine progress and efficiency. You can group project metrics into **productivity metrics and quality metrics**.

Productivity Metrics

Productivity typically **measures progress and output over time**. Productivity metrics allow you to **track the effectiveness and efficiency of your project** and include metrics like **milestones, tasks, projections, and duration**.

Let's break down each metric.

- As you may recall from an earlier course, **a milestone** is an **important point** within the project schedule that indicates progress and usually **signifies completion** of a deliverable or phase of the project.
- **A project task** is an **activity that needs to be accomplished within a set period of time**.
- **A projection** is **how you predict an outcome based on the information you have now**. For example, you can predict that with the resources you have at the start of the project, the project will be completed in six months.
- The **duration** of a project is the **total time it takes to complete a project from start to finish**. Duration can also be used for milestones and determining if you'll meet project deadlines. This data is broken down into hours, days, weeks, months, and sometimes years.

Quality Metrics

Quality metrics relate to **achieving acceptable outcomes** and can include metrics such as the **number of changes, issues, and cost variance**, which all **affect quality**. Let's discuss each metric.

- **The number of changes** during the project or project scope helps to **monitor risks**. Changes **show any inconsistencies from the initial requirements of the project**. A series of compounding small changes may indicate a bigger issue and provide early warning signs of these issues. Using a **change log to keep a record** of these changes is a useful tool for communicating with stakeholders about why something is taking a long time or costs more than expected. **A change log is a record of all of the notable changes on a project.**
- **An issue is a known and real problem that may affect the ability to complete a task.** For example, an issue might be the delay of legal approval for an advertisement you were hoping to launch or the missing number of confirmed seats to secure a venue for a business conference.
- **Cost variance** illustrates **the difference between the actual cost and the budget cost**. Simply put, cost variance compares what you plan to spend versus what you actually spent. Let's put it in an example. If you budgeted to only host 250 attendees at an upcoming business conference but 275 people showed up and the venue charges you for those additional guests, the actual costs will be higher than your initial budget or estimate.

While these data points are commonly **tracked by project managers**, there are dozens more that you can leverage to inform decisions in your project. The great news is that there's a lot of sophisticated software and tools dedicated to project management and data analysis, so you'll have help keeping track of all of these different types of data in one centralized location.

- Project management tools like **Workfront and JIRA track activity and provide readable results** so you can measure the overall health of your project.
- Data analysis tools like **Tableau** are useful for data visualization.

3.1.3 Review: Common types of data

Metric	Description	Example
Milestone	A milestone is a productivity metric. Milestones are important points within the project schedule that indicate progress and often signify when a team completes a deliverable or phase of the project.	A project manager might use a tool like Smartsheet to visualize where milestones fall within a project timeline.
Task	A task is a productivity metric. Project managers assign tasks to project team members for them to accomplish within a set period of time.	Work management software like Asana can help project managers create and assign tasks. They can also generate reports to track their team's productivity over time.

Projection	A projection is a productivity metric. This metric helps you analyze current information to predict future outcomes.	A project manager might use a spreadsheet and its built-in charting tools to analyze current productivity data and make projections about future productivity trends.
Duration	Duration is a productivity metric. A project's duration is the total time it takes to complete a project from start to finish. Duration can also be used for tasks.	Project management software can help project managers monitor the duration of a project alongside certain milestones.
Number of changes	Number of changes is a quality metric. Changes show any inconsistencies from the initial requirements of the project.	A project manager might use a tool like a change log or a spreadsheet to measure the number of changes from stakeholders and look for areas to improve communication.
Issue	An issue is a quality metric and is known as a real problem that may affect the ability to complete a task.	Project management software like Jira and Workfront can generate reports that help project managers track both the number of issues and the team's ability to resolve them quickly.
Cost variance	Cost variance is a quality metric and illustrates the difference between the actual cost and the budgeted cost.	A budgeting spreadsheet can help a project manager log costs over time and compare them against the actual budget.

3.1.4 Common data metrics for project management

There are many types of project data you can use to determine your team's progress and efficiency, evaluate the success of your project, and inform project decisions. While you don't need to be a data expert, knowing how to measure, track, and evaluate the right kind of data will help you deliver the most value and impact.

This reading will recap some of the common types of data from the previous video and introduce a few more key data points that can help you manage projects and work with stakeholders. This reading will also introduce a few ways to interpret the data so that you can reduce risks and make the right decisions about your teams and projects.

The benefits of analyzing data in project management

As a project manager, you can use data daily to make better decisions, solve problems, improve performance and processes, and understand your users.

For example, if you have data on customer buying patterns, you can identify your best-selling products, and you'll be able to make smarter decisions when placing new

product orders with your suppliers. This data will also help you better understand your users and their preferences so you can improve your product offerings and performance.

You can also use project team data to help you refine your processes. For example, if your team is experiencing an issue, analyzing data from your project tracker about the number of tasks completed, escalations, or internal process problems can help you find the source. This will allow you to make an informed decision about where to focus your efforts to improve processes.

Through critical analysis, application, and execution, data becomes a powerful tool to guide any project in the right direction.

Data, metrics, and analytics

Three images: Numbers grouped in a circle to represent data; a graph with rulers lining the x and y axis to represent metrics; two people working on a puzzle to represent analytics.

Data is information. It's the numbers and feedback available to you about different aspects of your project. **Metrics** are how you measure your data. They define the important or specific information (data) you need to know about your project, such as productivity, quality, or engagement. Once you determine your project's metrics, you analyze the data according to those metrics to find patterns and answer questions about your project. This process is called **analytics**: using data to answer questions, discover relationships, and predict unknown outcomes.

When analyzing data, ask: What do the metrics mean to you? How do you want to use the metrics you've chosen? Can you find patterns to make predictions about your project? Can you find ways to improve—or **optimize**—certain aspects of your project? What lessons can you draw from your project's data?

What follows are some common categories of metrics used in project management and a brief explanation of what they are and how they're useful to a project. Keep in mind that your use of different metrics isn't limited to these categories. All of your project data is interrelated. The same metric can also provide different information when applied to different aspects of your project.

Productivity metrics

Productivity metrics typically measure progress and output over time. They allow you to track—or predict—the effectiveness and efficiency of your project team.

To track your team's productivity over time, analyze the **number of tasks or milestones completed** in a given time frame. Ask questions like, what percentage of tasks are completed on time, and how long do they usually take? Or, if tasks were not completed on time, how much longer than anticipated did it take to complete all the tasks?

On-time completion rates can help illustrate to clients and stakeholders how the project is progressing and when they can expect certain deliverables to be ready. If your project's completion rates are high, it means you're doing a good job of meeting your completion goals. If the rates are low, it means you're missing deadlines. Analyzing data can help you

make decisions about things like improving or implementing new processes, or re-evaluating how you estimate project scope, complexity, and timeline.

Calculating **duration** (how long something takes) can be useful for setting and evaluating tasks and milestones and determining if you'll meet project deadlines. Tracking task duration can improve the accuracy of estimating a project's timeline. This data is broken down into hours, days, weeks, months, and sometimes years.

You can also analyze current information to predict future outcomes and make **projections** (or **forecasts**) about productivity trends, project durations, costs, performance or quality. This kind of data empowers you to proactively manage your project and its resources and measure the accuracy of your projections over time. For example, analyzing your team's overall **performance** or **velocity** can answer questions such as, is the team completing its tasks and milestones? What percentage of tasks is the team finishing on time?

Predicting the future may be impossible, but building a better understanding of it and refining your method for making projections is achievable and valuable.

Quality metrics

Quality metrics relate to achieving acceptable outcomes and can include metrics such as number of changes, issues, and cost variance, all of which affect quality.

Changes refer to differences in any aspect of the project from what was originally planned or required. **Issues** are problems that may affect task completion—and often result in a change. Track the number of changes and issues to identify patterns, refine processes, and share information about the project with stakeholders.

Cost or budget variance is the difference between the actual amount of money spent on a project and the amount that was budgeted for the project. Over time, this data can help you understand how well you're estimating budgets for your projects. A low variance means you've estimated your project budget accurately. A high variance means you should reevaluate your estimation process. You could be under- or over-estimating costs for your budget, or you may not be tracking expenses effectively.

Happiness and satisfaction

Project managers at Google use a sub-set of metrics called **happiness metrics** that also relate to quality. These are metrics that relate to different aspects of the user's overall satisfaction with a product or service, like **visual appeal**, how likely they are to **recommend**, and **ease of use**. Happiness metrics can generally be captured with a well-designed survey or by tracking revenue generated, customer retention, or product returns.

Customer satisfaction scores reflect user **attitudes**, **satisfaction**, or perceived **ease of use**. These scores measure how well the project delivered what it set out to do and how well it satisfies customer and stakeholder needs. Customer satisfaction scores generally represent a combined metric—the sum of several different happiness metrics. For example, on a satisfaction survey, a customer might separately rate a product's appearance as 6/10,

ease of use as 7/10, and likeness to recommend or use again as 8/10. The overall customer satisfaction score would then be 7/10.

You will need to determine what scores are acceptable for your project by discussing with stakeholders what the most important aspects of the project are.

Adoption and engagement

Another set of metrics related to quality are adoption and engagement. **Adoption** refers to whether or not a product, service or process is accepted and used. **Engagement** refers to the degree to which it is used—the frequency of use, amount of time spent using it, and the range of use. It might help to think of these in terms of throwing a party: your adoption metrics would reveal to you whether or not people accepted the invitation and showed up. The engagement metrics would tell you how active they were at the party—whether they participated in activities or interacted with other attendees, if they invited their friends to come with them, and how long they stayed.

Adoption metrics for a product or service release, like an app, software program, delivery service, or gym membership, would be similar to the party example. However, they can be a bit more complex if you need to track metrics for more than one thing, like whether users make additional purchases or sign up for premium features.

Each project will need to define its own set of successful adoption metrics, such as:

- Conversion rates
- Time to value (TTV)
- Onboarding completion rates
- Frequency of purchases
- Providing feedback (rating the product or service)
- Completing a profile

Engagement metrics tell you to what degree a product, service, or process is being used. They reveal the frequency and type of customer interaction and participation over time. Engagement metrics might include the daily usage rate of a design feature or tracking orders and customer interactions.

As a project manager, you're not only concerned with the end user's level of engagement. It's just as important to monitor stakeholder and team member engagement as well. Measuring stakeholder participation by tracking the **frequency of communication, responses** to emails or updates, **attendance** at meetings, or **level of input** can give you a sense of whether or not stakeholders are finding value in the project. A lack of meaningful engagement could put your project at risk. Stakeholders may not be aware of changes or the overall progress of the project, and therefore the final outcome of the project may not meet their expectations. Measuring team member engagement is vital to the success of your project because the more engaged they are, the more productive they are, and the more likely they are to produce high-quality results.

Ideally, you want your adoption and engagement metrics to increase or to at least meet the goal metrics that were established with stakeholders earlier in the project. If there is no

increase, or the metrics drop, then your rates are low and therefore not as successful. Check out the resources below for a more in-depth understanding of how and why to measure adoption and engagement.

Key takeaway

Data, metrics and analytics are all important to the success of your project. You'll need to have some familiarity with how to collect and measure data, and how to use the data to tell you about different aspects of your project. Depending on the project and its unique goals, some metrics will be more important than others. It's your job to make sure you understand which metrics your stakeholders are most interested in and what elements impact your team's ability to deliver quality results on time and within budget.

Want to learn more? Check out the following resources:

- [**A Comprehensive Guide To Project Management Metrics**](#)
- [**Data-Driven Project Management: The 4 Most Important Data Points to Look At**](#)
- [**Project Analytics: Benefits, Challenges and First Steps**](#)
- [**Project Analytics to Improve Project and Portfolio Decision Making**](#)
- [**Project Management Metrics**](#)
- [**Productivity Metrics: Why They're Important & 4 Examples**](#)

3.2 Prioritizing And Analyzing Data

3.2.1 Discerning important data

Did you know that the average temperature for most humans is 98.6 degrees? So if your temperature reached 100.4 degrees Fahrenheit or higher, there would likely be signals that something's not quite right, like a sweaty forehead, muscle aches, or even dehydration. Your brain would begin to receive signals that something is off because it's the brain's job to pay attention to the signals that indicate there's a problem threatening your overall health. That's how you should think about data when it comes to managing your project.

There are all kinds of information and facts that you can gather as a project manager, but it's important for you to be aware of the signals that threaten the overall success of the project.

A signal is an observable change, and it can help you to determine the overall health of your project and identify early signs that something isn't quite right.

Being aware of the different types of data you have access to and knowing which signals to respond to are key to deciding what data is most important. Maybe you're asking yourself, "How do I determine what data is important?" Great question. As a project manager, it's up to you to look for signals and to prioritize data to deliver positive results. There are a couple of ways you can begin to do this.

- **Identify which tasks contribute most to the overall goal.** This will help you determine the importance of which data points—in this case, tasks and activities—you should focus on.

- **Prioritize the data or metrics that are most valuable to stakeholders.** For example, let's say you have an ongoing project at a manufacturing company to release a portable home appliance by the third quarter. Your stakeholder is concerned about whether or not you'll meet the deadline. Okay, start by thinking, what data do you have about the project? You know that it's the first quarter and you're already \$2,000 over budget. But you also know that you're 30 days ahead of schedule according to your burndown chart, which measures time against the amount of work done and the amount of work remaining. You may think your project is running as scheduled, but there are additional things to consider. For one, the number of tasks has increased by ten percent over the last three weeks because your stakeholders want to add more features to the appliance. And now your team's productivity is slowing down because they're starting to burn out from the late nights and long hours required to add in those new features. Now how do you feel about meeting that third quarter deadline? Not so good, right? What do you do? You might be tempted to focus on the signal that you're \$2,000 over budget, but if your stakeholders communicated that they're more concerned with meeting the deadline than they were about being over budget, then you'll want to keep an eye on key signals related to time and scope rather than budget, and then hone in on those signals to identify and prioritize areas to improve.

The relevant data tells you you'll be able to **meet the deadline**, provided that **stakeholders stop requesting** new product features that result in more tasks for your team to complete. You can use your productivity metrics to forecast how you'll manage an increase in scope with your team's current productivity rate and communicate this to your stakeholder. To avoid having to reset expectations with stakeholders again and again, you can **keep your project plan up to date** with the project's priorities and ensure that this information is **accessible to everyone**. Stakeholders can look to your project plan for a high-level overview of answers to important questions, success criteria, artifacts, and the overall health of your project. Remember, there are a lot of data points available to you. **Using signals, focusing on the tasks that have the biggest impact on the project goal, and aligning to your stakeholders' priorities are a good way to help you prioritize the right tasks.**

3.2.2 Data ethics considerations

In the previous video, you learned how to use knowledge to discern data and how signals help prioritize data. This reading will cover the importance of **data ethics** and two key principles: **data privacy** and **data bias**.

Data ethics

As a project manager, data collection and analysis will be a key part of your projects. As you've learned, you'll collect data from a variety of sources, including focus groups, interviews and questionnaires. The data you collect will usually hold **PII (personally identifiable information)**—information that could be used to directly identify, contact, or locate an individual. A lot of times, you will also need to report on the data you collect to stakeholders, customers, and your project team. Collecting, analyzing, and sharing this data in an ethical way is extremely important for maintaining the integrity of your organization, your projects, and your position.

Data ethics is the study and evaluation of moral challenges related to data collection and analysis. This includes generating, recording, curating, processing, sharing, and using data in order to come up with ethical solutions.

Businesses apply data ethics practices so they can:

- Comply with regulations
- Show that they are trustworthy
- Ensure fair and reasonable data usage
- Minimize biases
- Develop a positive public perception

Data ethics is rooted in several principles. In this reading, we will focus on two of these principles: **data privacy** and **data bias**.

Data privacy

Data privacy is a key part of data ethics. Data privacy deals with the proper handling of data. This includes the purpose of data collection and processing, privacy preferences, the way organizations manage personal data, and the rights of individuals. It focuses on making sure the ways we collect, process, share, archive, and delete data are all in accordance with the law.

As a project manager, it is your responsibility to protect the data you collect. You can help ensure the privacy of data collected from users, stakeholders, and others for your projects by:

- **Increasing data privacy awareness.** Make sure every member of your project team—plus the vendors, contractors, and other stakeholders from outside of your company—are made aware of your organization's data security and privacy protocols.
- **Using security tools.** Free security tools, like encrypted storage solutions and password managers, can decrease your project's vulnerability to a data breach. In a lot of applications, like ones that are part of Google Workspace and Microsoft OneDrive, privacy settings can be adjusted to only give access to specific individuals.
- **Anonymizing data.** Data anonymization refers to one or more techniques such as blanking, hashing, or masking personal and identifying information to protect the identities of people included in the data. This helps protect individuals' personal information by keeping them anonymous. Once the information has been anonymized, it can then be used and shared freely. Types of data that should be anonymized include names, telephone numbers, social security numbers, email addresses, photographs, and account numbers.

Data bias

Another important data ethics practice is making sure that the data you collect does not indicate any biases. **Data bias** is a type of error that tends to skew results in a certain direction. Maybe the questions on your survey had a particular slant to influence answers, or maybe your sample group was not fully representative of the population you want to study. Bias can also happen if a sample group lacks inclusivity. For example, if your sample does not include people with disabilities. The way you collect data can also bias a dataset. Say you give people only a short time to answer questions, this can lead to rushed responses. When people are rushed, they tend to make more mistakes, which can affect the quality of their data and create biased outcomes. As a project manager, you have to think about bias and fairness from the moment you start collecting data to the time you present your conclusions.

Types of biases

There are different types of biases to keep in mind when setting up your data collection processes. Here are four of the most common types of biases that could impact your data:

- **Sampling bias** is when a sample is not representative of the population as a whole. For example, maybe your sample did not include people above the age of 65. Or maybe you excluded people from certain socioeconomic groups.
- **Observer bias** is the tendency for different people to observe things differently. For example, stakeholders from different parts of the world might view the same data differently and draw different conclusions from it.
- **Interpretation bias** is the tendency to always interpret situations that don't have obvious answers in a strictly positive or negative way, when, in fact there is more than one way to understand the data. Data that does not provide an obvious set of conclusions makes some people feel anxious, which can lead to interpretation bias. For example, a team member might interpret inconclusive survey results negatively, while other team members might be able to think more carefully and assess the data from different angles.
- **Confirmation bias** is the tendency to search for or interpret information in a way that confirms pre-existing beliefs. For example, you might ask only specific stakeholders for feedback on parts of your project because you know they are the most likely to have the same perspective as you.

Each of these types of bias affect the way you collect and make sense of the data, so it is important to be aware of them when setting up your data collection processes.

Key takeaway

According to the Project Management Institute's [Code of Ethics & Professional Conduct](#), "Ethics is about making the best possible decisions concerning people, resources, and the environment. Ethical choices diminish risk, advance positive results, increase trust, determine long term success, and build reputations. Leadership is absolutely dependent on ethical choices."

A key way you can show your leadership skills is by exercising sound judgment when it comes to data ethics. In order to tell a project's data-informed story to stakeholders, project

team members, and others in an ethical way, you have to make sure you think about both privacy and bias-related concerns in how you conduct, analyze, and share that data.

3.2.3 Using data analysis to inform decisions

We use data every day to help us make both simple and important decisions in our lives. For example, imagine that you're saving money for a big purchase. Maybe you decided that the best way to reach your goal sooner is to create a budget. After spending time reviewing your budget, perhaps you find that your weekly expenses are higher than your weekly allowances and that many of your expenses are from ordering food and dining out. You realize that in order for you to reach your goal, you'll need to start spending less money on eating out and find more cost-effective ways to buy food. With this new information, you've found a way to save up for your big purchase.

Similar to how you might create an **adjusted budget to reach a desired outcome**, it's your role as a project manager to **select appropriate data to help inform your decision-making**. You can do this using a process called **data analysis**.

Data analysis is the process of collecting and organizing information to help draw conclusions. It's used to **solve problems, make informed decisions, and support goals**. Businesses use data analysis to reveal **important insights and patterns** within their data that help **inform actions and drive results**.

Gathering data is only part of the process. The other part is analyzing the data. What you learn from your analysis becomes knowledge that powers smart solutions for your project. Project managers will often apply data analysis to look for repeated behaviors and to find a solution based on data predictions. For example, let's imagine that a ride-share company has a group of data analysts working on using patterns in rider behavior to improve customer support. They noticed a high demand for drivers midweek during rush hour in one specific city. As a result, riders are having a hard time getting drivers to pick them up during peak hours. As a project manager, you've been asked to come up with a solution to help meet the increased demand for drivers. You work with your team to determine which data points would be most appropriate to review. You might decide to track peak traffic times, the number of average daily rider requests, and the number of available drivers. These data points can help inform how to solve for the high demand during rush hour. After analyzing the data, your team realizes that one solution could be to offer incentives to drivers to pick up riders in the city during peak times. The new incentives make drivers feel appreciated, and the increase in drivers increases customer satisfaction. And you came to this solution thanks to the insights gleaned from data analysis.

In this example, you collected types of data: qualitative and quantitative.

- **Quantitative data includes statistical and numerical facts about the number** of rider requests that came in. Requests in the city increased at specific points over a period of time.
- **Qualitative data describes the subjective qualities or things that can't be measured with numerical data**, like user feedback about the service or product.

In project management, you will use both qualitative data and quantitative data points to **inform decisions, make improvements, and share insights**.

3.2.4 The six steps of data analysis

In an earlier video, you learned that **data analysis** is the process of collecting and organizing information to help draw conclusions, solve problems, make informed decisions, and support your goals. In this reading, we will go over the key parts of the data analysis process.

There are six main steps involved in data analysis: **Ask, prepare, process, analyze, share and act**. Let's break these down one by one.



During the **Ask** phase, ask key questions to help frame your analysis, starting with: What is the problem? When defining the problem, look at the current state of the business and identify how it is different from the ideal state. Usually, there is an obstacle in the way or something wrong that needs to be fixed. At this stage, you want to be as specific as possible. You also want to stay focused on the problem itself, not just the symptoms. For example, imagine you are doing data analysis for a gym that is losing memberships. You could ask: Why do we keep losing members? But a better and more specific question would be: What factors are negatively impacting the member experience? That way, when you set off to do your research, you know exactly what to look for.



Another part of the **Ask** stage is identifying your stakeholders and understanding their expectations. There can be lots of stakeholders on a project, and each of them can make decisions, influence actions, and weigh in on strategies. Each stakeholder will also have specific goals they want to meet. It is pretty common for a stakeholder to come to you with a problem that needs solving. But before you begin your analysis, you need to be clear about what they are asking of you. For example, if your manager assigns you a project related to analyzing the gym's business risk, it would be a good idea to confirm whether they want you to analyze all types of risks that could affect the gym or just risks related to weather or seasonal trends.



After you have a clear direction, it is time to move to the **Prepare** stage. This is where you collect and store the data you will use for the upcoming analysis process.

Let's turn back to our gym membership example. To collect data on the member experience, you decide to send surveys to the gym's members asking for feedback about their experience. To make sure you get specific answers, you ask them to offer feedback in three distinct categories: upkeep of the facility, customer service, and membership cost. You also leave room for them to write in a response. When you get the member surveys back, it is important that you have an organized system for tracking and filing them.



This stage is when it is time to **Process** your data. In this step, you will “clean” your data, which means you will enter your data into a spreadsheet, or another tool of your choice, and eliminate any inconsistencies and inaccuracies that can get in the way of results. While collecting data, be sure to get rid of any duplicate responses or biased data. This helps you know that any decisions made from the analysis are based on facts and that they are fair and unbiased. For example, if you noticed duplicate responses from a single gym member when sorting through the surveys, you would need to get rid of the copies to be sure your data set is accurate.

During this stage, it is also important to check the data you prepared to make sure it is complete and correct and that there are no typos or other errors.



Analyze

Now it is time to **Analyze**. In this stage, you take a close look at your data to draw conclusions, make predictions, and decide on next steps. Here, you will transform and organize the data in a way that highlights the full scope of the results so you can figure out what it all means. You can create visualizations using charts and graphs to determine if there are any trends or patterns within the data or any need for additional research.

In our gym membership example, let's say you notice 50% of the members wrote in an additional response on the survey citing that the equipment is outdated. The survey also showed that 75% of the responses cited "expensive membership fees." When looking at the 50% of responses citing "outdated equipment" and 75% of responses citing "expensive membership fees" side by side on a graph, you may be able to deduce that these responses inform one another. Members feel like the experience just isn't worth the price. You might conclude that the gym should invest in new equipment if they want to keep members and add value to the membership fee.



Share

Once you have asked questions to figure out the problem—then prepared, processed, and analyzed the data—it is time to **Share** your findings. In this stage, you use **data visualization** to organize your data in a format that is clear and digestible for your audience. When sharing, you can offer the insights you gained during your analysis to help stakeholders make effective, data-driven decisions for solving the problem.



Act

And finally, you are ready to **Act!** In the final stage of your data analysis, the business takes all of the insights you have provided and puts them into action to solve the original business problem.

Conducting a data analysis is an essential process for understanding a business' needs and challenges and determining effective solutions. These six foundational steps—**ask, prepare, process, analyze, share, and act**—will help set you up for success!

Test your knowledge: Prioritizing and analyzing data

1. As a project manager, you collect opinion-based feedback surveys in an effort to improve a product. What do you call this type of data?

- Qualitative data
- Key performance indicator (KPI) data
- Quantitative data
- Projection data

 **Correct**

Qualitative data describes subjective qualities or things project managers cannot measure with numerical data.

2. As a project manager, you track the number of open and closed tasks per team member. What do you call this type of data?

- Interview data
- Observational data
- Quantitative data
- Qualitative data

 **Correct**

When you track the number of tasks in progress and completed, you are gathering quantitative data. Quantitative data includes statistical and numerical facts.

3. As a project manager, how can you help ensure the privacy of data collected from your users, stakeholders, and others for your projects? Select all that apply.

Use security tools.

 **Correct**

Free security tools, like encrypted storage solutions and password managers, can decrease your project's vulnerability to a data breach. In many applications, privacy settings can be adjusted to only give access to specific individuals. Increasing the data privacy awareness of those working on your project and anonymizing data can also help you ensure the privacy of the data you collect.

Collect as much data about your users as possible.

Increase data privacy awareness.

 **Correct**

Make sure every member of your project team—plus vendors, contractors, and other stakeholders from outside of your company—are made aware of your organization's data security and privacy protocols. You can also help ensure the privacy of the data you collect by using security tools and anonymizing data.

Anonymize data.

 **Correct**

Data anonymization refers to techniques that help protect individuals' personal information by keeping them anonymous. Types of data that should be anonymized include names, telephone numbers, social security numbers, email addresses, photographs, and account numbers. Increasing the data privacy awareness of those working on your project and using security tools can also help you ensure the privacy of the data you collect.

4. Fill in the blank: During the _____ step of the data analysis process, you collect and store the data you will analyze.

- ask
- prepare
- process
- analyze
- share
- act

 **Correct**

During the *prepare* step, you collect and store the data you will use for the upcoming analysis process.

3.3 Presenting And Visualizing Data

3.3.1 Presenting data to tell a project's story

Presenting is a powerful way to communicate your ideas and support your decisions throughout the project journey. Think of presenting as **telling the story of your project**.

Storytelling is the process of turning facts into narrative to communicate something to your audience. Storytelling is how you **bring data to life** and is a **useful way to tell stakeholders** within your organization about your project. In a way, we're all storytellers using information and experiences to share ideas with others. **Stories usually have a beginning, middle, and end.** To tell a great story using data, we'll go over some best practices to make sure your **story is complete, accurate, and compelling**. In general, there are six main steps to storytelling.

Step 1: define your audience

In this first step, it's important to know **who you're presenting to**. Are you presenting to project sponsors or executives? Or to team members? **Define your audience and find out what matters most to them.** Begin by asking yourself qualifying questions like:

- What would my audience want to know about the project?
- What are their most urgent concerns?
- Which key data points influence the story and project outcome?

This will set you up to know the **type of story** you want to tell and the **type of data** you should use to tell it.

For example, years ago, I was working on a project for Google Maps. Our goal was to apply a label to every business in the world: restaurants, hotels, gas stations—you name it. There are many, many, many businesses in the world, and I only had a small team of engineers to work with. For this project, we tailored our storytelling to an audience of vice presidents from Google Maps and Google Search. Both were important to consider, because we were helping users find and connect to businesses through the Google Maps app and through Google Search. I'll return to this example as I take you through the steps of storytelling.

Step 2: Find the data that connects to the question you want to answer

You'll need to begin searching for data from trustworthy resources to support the point you're trying to make. Leverage the relevant project resources in documents like your project plan or work management software to download and analyze key data points. For my Google Maps project, the question we were trying to answer was: Where should we focus our attention first? So to find the right data for this question, we turned to the many businesses in our internal database and the available information about what types of businesses users were searching for.

Step 3: Filter and analyze the data

Now that you've collected your data, you'll need to vet it for credibility and filter the information. For my Maps project, we used search queries to determine the types of businesses that users searched for most often, which included restaurants, cafes, and hotels. There were other categories—gas stations, museums, etc.—but they collectively made up a much smaller percentage of geo-specific search traffic.

Step 4: Choose a visual representation

Visualizations are a great way to help people remember the information you're presenting and are an essential piece of storytelling. You can use data in different ways to tell a story, like using dashboards, charts, infographics, and mappings, and we'll go over these examples in more detail in the next video. For my Maps project, we decided on a pie chart to help tell our story.

Step 5: Shape the story

After you've analyzed your data and know how you'd like to visualize it, it's time to tie it all together into **one cohesive narrative**. Take some time to think about what you're hoping to achieve, the points you want to make, and the questions and concerns you want to answer. For the Maps project, we used the pie chart to show that most geo-specific search queries are covered by a relatively small number of businesses. So we built a story about that data. We wanted agreement from our VPs to work on improving the data behind this set of categories in a few major markets. It needed to illustrate that if we improved the category data, we'd succeed in improving the search results for more than 50% of geo searches.

Step 6: Gather your feedback

Similar to how you may ask a friend to practice with you before an interview, you want to be sure that before you present, you do a trial run. Try getting feedback from someone who's not connected to the project. Find out if it was interesting. Did it make sense? What questions did they have? Their feedback can help you identify areas of your story that were unclear or unmemorable and give you a final chance to make adjustments.

Test your knowledge: Presenting and visualizing data

1. When crafting a story, what is the first step a project manager takes to think like the people they are presenting to and better understand their questions and concerns?

- Collect the data.
- Shape the story.
- Define the audience.
- Choose a visual representation.

 **Correct**

The first step a project manager should take to create a data-informed story is to define who they are presenting the information to and their common questions. After defining the audience, they will collect, filter, and analyze the data. Then they will choose a visual representation, shape the story, and gather the feedback.

2. During what storytelling step does a project manager design an infographic or chart to present the data?

- Collect the data.
- Shape the story.
- Choose a visualization representation.
- Gather the feedback.

 **Correct**

In the fourth step, a project manager creates a data-informed story that is a visual display of the data. Then, they can tie the data into the visualization to shape the story into a cohesive narrative.

3. During what storytelling step does a project manager vet data for credibility?

- Filter and analyze the data.
- Choose a visual representation.
- Define the audience.
- Shape the story.

 **Correct**

Before creating a visual representation, the project manager should ensure the data is accurate and that it applies to the presentation's goal.

4. When turning data into a story, a project manager first defines their audience. What is the second step?

- Choose a visual representation.
- Collect the data.
- Shape the story.
- Gather feedback.



After defining the audience, a project manager should collect the data that connects to a question they want to answer. Then, they can filter and analyze the data they gathered.

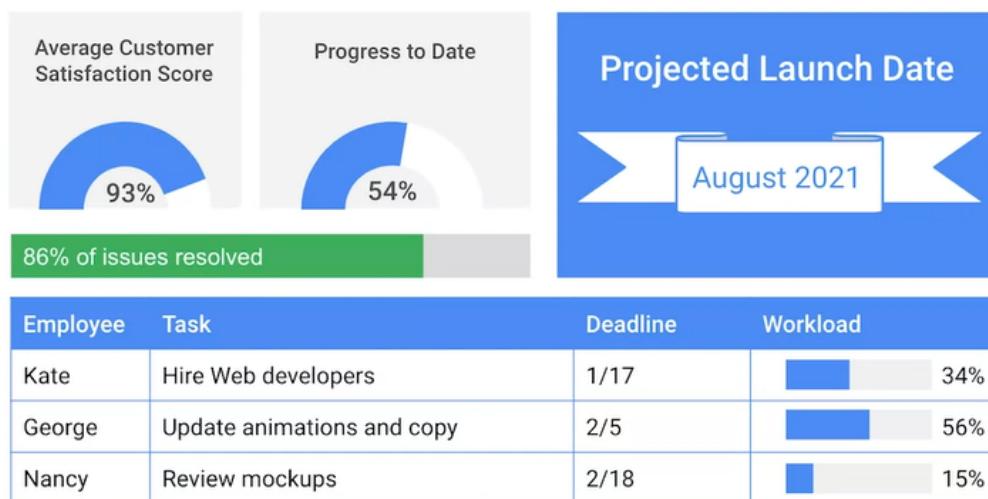
3.3.2 Data visualization tools

Data visualization is the graphical representation of information to facilitate understanding. That can include **graphs, maps, and tables**. Project managers use these visual representations for a few reasons. They're useful for **communicating data to others** because they help:

- **filter information** by focusing the audience on the most important data points and insights.
- **condense long ideas and facts into a single image or representation,**
- **help the viewer make sense of and remember the information being presented.**

Visualizations help aid information processing and enhance memory. It plays an active role in the storytelling process by helping communicate project insights to your audience. Let's go into some familiar types of data visualizations that project managers use throughout the entire life cycle of the project.

Dashboard



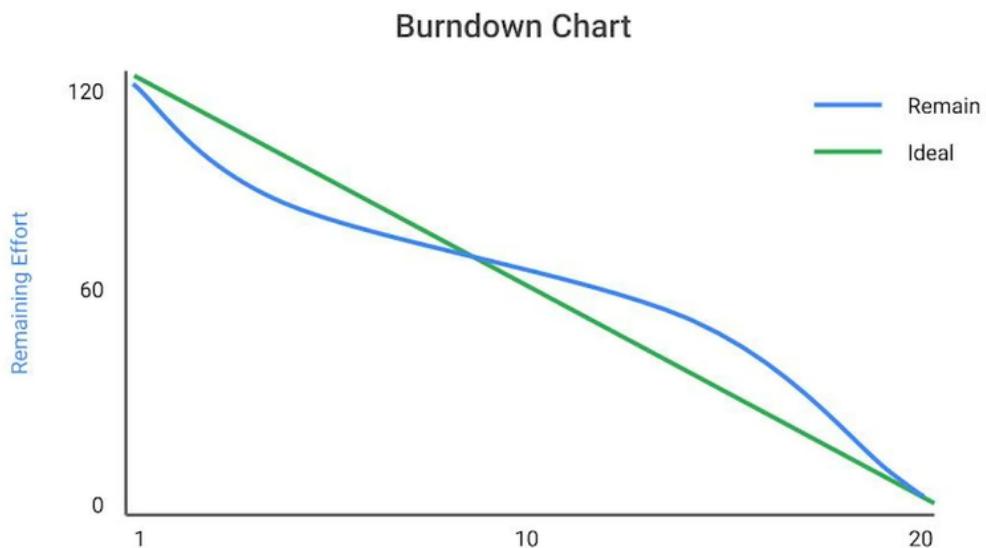
A dashboard is a **type of user interface**, typically a graph or summary chart, that **provides a snapshot view of your project's progress or performance**. It acts as a **centralized**

location for project stakeholders to draw quick insights. It can **display a tight summary of metrics, stats, and key performance indicators**, or KPIs.

A **KPI** is a measurable value or metric that demonstrates how effective an organization is at achieving key objectives. They serve as a great aid in helping your team and stakeholders understand if you're on the right track. In other words, they signal if you're making progress to reach your success criteria. In your dashboard, you may have a summary of your top KPIs or metrics and your progress to date. For instance, if one of your objectives is for your project to reach a 95% customer satisfaction score at the end of a three-month period, you may track that goal via thousands of customer satisfaction surveys. Rather than displaying a spreadsheet of each response, a dashboard is a good place to summarize those results and showcase the average customer satisfaction score to see how you are pacing to your goal. Similarly, you could also include other key KPIs that signify progress, like a countdown that shows the number of days until project launch or the percentage of the number of issues resolved.

Many project dashboards may also **summarize project plans, documents, and reports in one place** and provide a **visual of the status of each of them**. For example, if your project plan has hundreds of tasks with varying degrees of completion, your dashboard may summarize the amount of tasks or milestones completed at that point in time and the percentage of tasks that are **in progress, complete, or not started**. As you may start to notice, dashboards are great visualizations for efficient status updates because they **enable you to group, summarize, and highlight top project data points**.

Burndown Chart



A burndown chart is a **line chart that measures the time against the amount of work done and the amount of work remaining**. The outstanding work is usually on the vertical axis, with the time visualized horizontally. This serves as a strong visualization to help the team picture the amount of tasks left to complete.

Column Chart

Similar to line charts, column charts are another popular graph used to signal project performance and progress. **Column charts are useful for comparing different activities or comparing progress over time.** For instance, you can show different outputs, like the number of customers and the number of plants delivered, year-over-year, to demonstrate growth in change.

Pie Chart

Pie charts are useful when **showing the composition** of something or the parts-to-whole relationship.

All of these simple charts offer visualizations that enable you to draw quick insights and help tell stories.

Infographics

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215,000

Number of unfilled IT support jobs across the U.S. ¹

Based on the training that Google developed to prepare its own IT support staff, the certificate program consists of five courses.
Hosted on Coursera, they cover key topics in IT support:



Troubleshooting



Customer Service



Networking



System Administration



Security



Operating Systems

Infographics are **visual representations of information**, such as data or facts, and are **typically in the form** of what we call at Google a "one-pager" or a "one-sheeter." The difference is that they're typically **concise summaries of that data**. This is often done primarily through **graphics or drawings**, **emphasizing the biggest points with added text for further explanation**.

Use infographics to present complex information quickly, professionally, and clearly, especially when you may not be present to share all the details yourself. Infographics should be able to communicate strong information without the need for extra support and explanation. These are just a few examples of data visualization in project management.

Remember, you'll want to use visuals to demonstrate and illustrate situations like changes over time, frequency, relationship correlations, and to analyze value and risks. Another important tip is to make sure that these **visualizations are accessible**. As we mentioned before, you'll want to ensure that your data story is understood by everyone.

3.3.3 Different ways to visualize data

Earlier, we discussed best practices for collecting and analyzing data. When it is time to present your data to your audience, you don't just want to tell them about your findings and what they mean, you want to *show* them. **Data visualization** helps us organize data and turn it into information that is clear and easy for our audience to digest.

In this reading, we will go over a variety of charts and graphs you can use to visually represent data.

Visualizing your data

Before translating your data into a chart or graph, you should be clear on what you want to show your audience. Figure out what data you want to use and *why*. You might want to **inform** your audience about a new trend or a valuable piece of information, or **show relationships** between data sets. Or maybe you need to **compare values**, understand the **composition** of something, or **analyze trends and behaviors over set periods of time**.

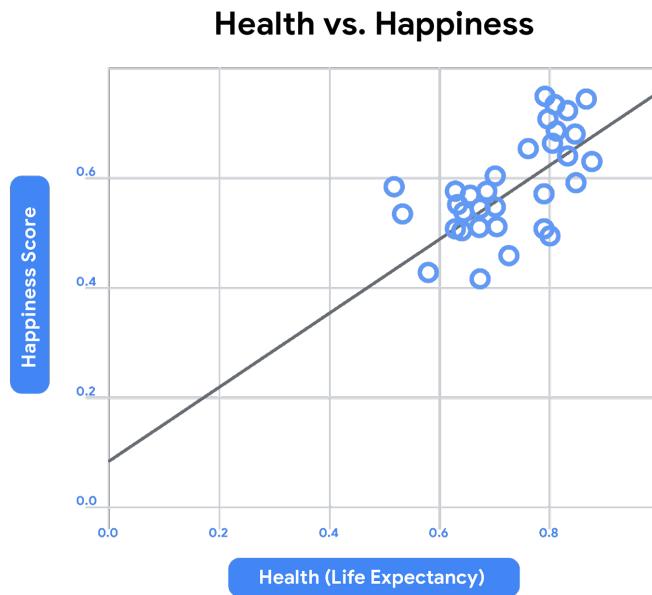
The type of data you have, and the information you want to show or understand, will help you figure out the right data visualization to use. Let's go over some scenarios and discuss which charts and graphs would be best for each.

Show relationships

A **scatter plot**, sometimes referred to as a scatter chart or scatter graph, uses dots to represent values for two different variables. The position of each dot on the horizontal and vertical axis indicates values for an individual data point. Scatter plots will sometimes have a line drawn across its center. This line is known as the trend line and highlights the direction the points are trending towards.

Scatter plots show the relationship between data sets, and can help us understand the impact of one factor on another. For example, the scatterplot below shows the relationship between the life expectancy of people living in a country and how happy those people are. The first variable, the happiness score, is reflected on the vertical axis —also called the

y-axis. The second variable, life expectancy, is on the horizontal axis —also called the **x-axis**. By looking at this scatterplot, we can tell that as a person's happiness score increases, so does their life expectancy.



Scatter plot best practices:

- Start the y-axis at 0 to represent data accurately.

Comparing values

Bar graphs use size contrast to compare two or more values. In the example below, the time of day is compared to someone's level of motivation throughout the whole work day. By comparing this data, we can tell that this person's motivation is low at the beginning of the work day, and gets higher and higher by the end. Bar graphs are also a great way to clarify trends and identify patterns.



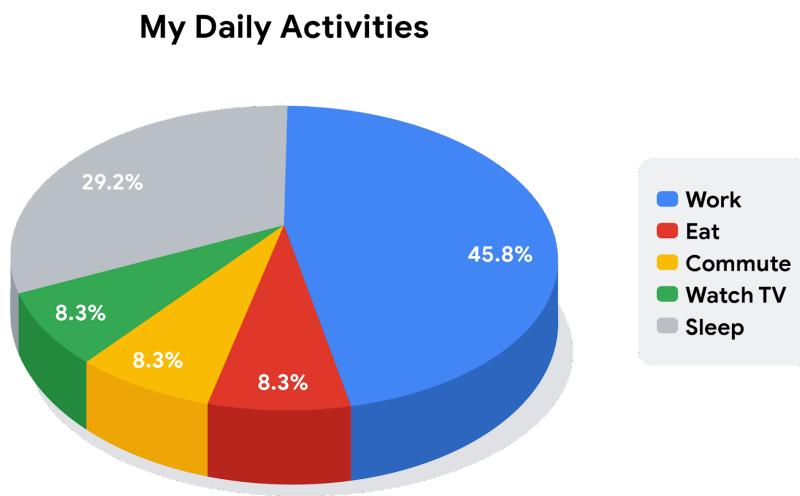
Bar graph best practices:

- Use consistent colors throughout the chart

- Use accent colors to highlight important data points or changes over time
- Use horizontal labels so it is easier to read

Demonstrating composition

Now let's check out another visualization you will probably recognize—the **pie chart**. Pie charts show us the **composition** of something. In other words, how much each part of something makes up the whole. The **pie chart** below shows us all the activities that make up someone's day. Half of it is spent working, which is shown by the amount of space that the blue section takes up. From a quick glance at this pie chart, you can easily tell which activities make up a good chunk of the day and which ones take up less time.

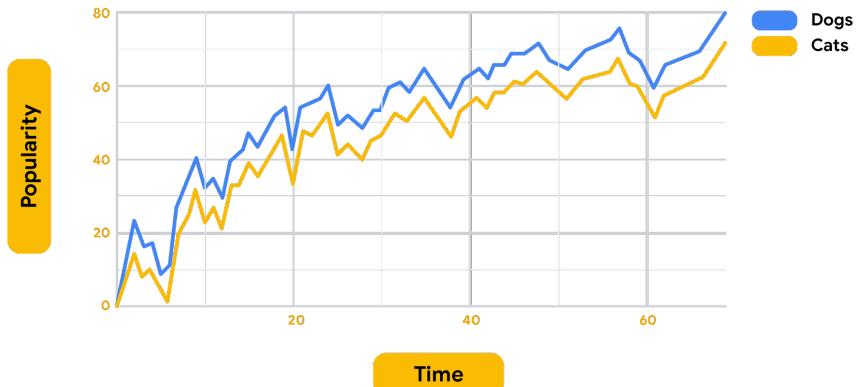


Pie chart best practices:

- Avoid including too many categories so it is easy to compare slices
- Make sure that the slice values add up to 100%
- Order slices according to their size

Analyzing trends and behaviors

Tracking trends can help us understand shifts or changes in our data. **Line graphs** are a great tool for visually showing change over time, but they can be paired with other factors, too. In the line graph below, we are using two lines to compare the popularity of cats and dogs over a period of time. Because the graph is using two different line colors, we can instantly tell that dogs are more popular than cats. We will talk more about using colors and patterns to make visualizations more accessible to audiences later, too. Even as the lines move up and down, there is a general trend upwards, and the line for dogs always stays higher than the line for cats.



Line graph best practices:

- To avoid clutter, don't show more than four categories.
- Organize highly variable data at the top of the chart to make it easy to read

Scatterplots, bar graphs, pie charts, and line graphs are common data visualizations you will use throughout your career as a project manager. To practice creating these charts, check out [this step-by-step overview for creating charts using Google Sheets](#) or this [resource](#) for Microsoft Excel.

3.3.4 Effective presentation techniques

An effective presentation helps convey the important work that you and your team are accomplishing on your project. And throughout the project, you'll likely have many opportunities to present—from your initial kickoff meeting to your weekly status updates to your final project presentation.

- As you begin to craft your narrative, **think about your audience**. Ask yourself: What do I want my audience to know, think, or do as a result of this presentation?
- Create your presentation around **the big picture**, and **keep it simple**.

Now let's discuss three ways to help you give an effective presentation. Those are being **precise, flexible, and memorable**.

- First, to give an effective presentation, you need to be **precise about your key points**. Identify the problem you're solving for your audience and remove any content that dilutes your narrative. One way I ensure that my slideshow presentations are as precise as they can be is by using a technique called "designing for five seconds." The idea is that your audience should be able to understand a slide within five seconds. So I keep my presentation slides simple, including only the most relevant data points, to avoid overloading my audience with text they don't have time to read.
- To give an effective presentation, you also need to be **flexible**. Flexibility is a huge part of your job as a project manager. For example, it's possible that a stakeholder may have to leave your presentation unexpectedly or that other attendees may arrive late. Consider the approach you'd take if you had to shorten your presentation from an hour to 30 minutes, or even just five. Know the most important points you want to

make, and be prepared to share only those points, should the unexpected occur. Preparing ahead of time also helps you be more flexible when presenting. Ample preparation helps you to avoid small mistakes that can potentially distract from your narrative, like stumbling over sentences or struggling to pull up a slideshow presentation. To prepare ahead of time, you might practice delivering your presentation to members of your team and invite them to offer feedback, ask questions, or share concerns. Preparing ahead of time also gives you space to identify and come up with answers to the types of questions your audience might have about your presentation. It also gives you time to imagine and prepare for possible objections your audience might have to the decisions you want to make.

- Lastly, be **memorable**. Develop a strategy that helps make your narrative **unforgettable**. Think back to effective storytelling. This is the point where you want to tie in your data analysis, effective visualization, and put the finishing touches on your narrative to bring it all together. Use stories or include repetition to help your audience remember the information moving forward. Another helpful tip is to be aware of your **body language** when presenting. Maintain an **upright posture and rest your hands** at your side. When making a point, try elevating your **tone of voice for emphasis**. Pace yourself by using **intentional pauses** and speak about half the speed you would normally speak while keeping your sentences short. Make **eye contact** with your audience and keep your **facial expressions warm and friendly**. Finally, have **confidence**.

3.3.5 Preparing an effective presentation

At various points throughout a project, you will likely be required to deliver a presentation to team members, key stakeholders, senior leaders, or customers. Use the following tips and best practices to help you prepare an effective presentation.

Preparation

Get clear on your goals and the purpose of your presentation.

Be clear and specific about what you want to get out of the meeting, then frame the discussion with that goal in mind. For instance, “We need two engineers who have worked in this industry before,” instead of “We need more resources.”

Seek input and set expectations.

Ask your manager or check with stakeholders regarding your presentation goals. Get their input and feedback ahead of time.

- If you were invited to present, make sure you understand in advance exactly what the requestor is hoping to gain from your presentation.

Create a delivery plan.

Identify a headline for each slide, which is the one-sentence main point that you are trying to illustrate with that slide.

- Create a couple of supporting points that add interest to the headline, such as anecdotes, charts, data, etc.
- Build in signposts. These are ways to clue the audience in to where you are going and what to expect with your presentation.
- Limit the number of slides in the main presentation. At the same time, consider creating backup slides for potential challenges, difficult questions, trade-offs, or alternative solutions. You can hide these backup slides at the end of your presentation if you don't need them, or add them into your presentation if you do.

Be mindful of your audience's time.

Invite only participants who need to be there.

- Send the presentation ahead of time, if possible.

Develop a strategy for making your presentation memorable.

Use stories and repeat key points.

- Start with a strong intro. Spend extra prep time on the beginning. The beginning is when your nerves are typically the highest, and delivering the introduction successfully can help you quickly gain confidence.

Practice

Guide your audience through your presentation.

Help them notice what you notice, and transition between slides by using phrases like “Building on this point . . .” or “As I mentioned before . . .”

Do a mock presentation with your team.

If there will be more than one presenter, coordinate what each person will cover and how you will manage handoffs.

- Practice a question-and-answer (Q&A) session, anticipating the kinds of questions your participants might ask so you are prepared with a quick and confident response. In addition, practice what you will say if you are asked a question that you don't know the answer to.
- Be prepared to run the whole meeting yourself. If a co-presenter fails to show up, are you prepared to step in?

Schedule time to practice.

- Once you've outlined what you want to say, practice it—ideally in front of a mirror—or record yourself. This may help you identify awkward phrasing that could be improved and other issues.

Be prepared for surprises.

Show that you can adapt and that you know your subject matter.

- If time runs short, can you quickly summarize the key points?
- Can you pivot the content according to what is most important to your audience?

Presentation and pace

Get right to the point.

Identify what problem you are solving and state it up front.

- Tell the audience why you are in the room with them and what you will be covering.
- Lay down the ground rules. For example, how do you want to handle questions and comments? Will you take them throughout your presentation or afterwards?

Check your pace.

Be mindful of clues from your audience and adjust accordingly.

Follow up

- If appropriate, send a follow up email with summary notes, action items, and time frames.
- Debrief with your manager or key audience members on what they heard from the presentation. Ask them what went well and what could have gone better.
- Review next steps.

3.3.6 Making presentations accessible

Just like you need to be strategic, prepared, and clear about which data you want to share, you also need to be intentional about **ensuring your presentations are accessible** and can be consumed and understood by everyone. Let's dive into some accessibility tips to set you up for success, starting with the design of your presentation.

Create clear, simple slides

Avoid using too many graphics, too much text, or too much animation. Visual complexity makes it harder for people to absorb information during your presentation, especially for those with a visual or cognitive impairment.

- If your slide uses animation, make sure that you don't leave people behind by making important content disappear.
- If people read more slowly or rely on an interpreter, they might need a bit more time to absorb the content.
- Avoid using repetitive animation, like flashing or flickering, since it can be distracting and can trigger seizures.

Simple doesn't have to mean boring, though. A simple slide can still be beautiful and informative. Just don't try to crowd too much information or activity into a single slide. If you generally don't use slides when giving a talk, consider giving it a try—even if you create just one slide with your main points. If you rely only on your voice, that is, you don't provide any visual accompaniment, some people might have difficulty understanding, whether because of a language barrier or hearing or cognitive impairment.

Include alternative text, also called "alt text," for any images, drawings, or diagrams

Doing so describes the information relayed in a graphic to make it accessible to people who rely on screen readers. To add alt text in Google Slides or PowerPoint, simply select the object, right-click, and then select "alt text." The same consideration applies to charts. Charts can be difficult to decipher, especially if they use a small font in order to fit more data. If your slide includes data-heavy charts or graphs, be sure to specify the takeaway either on the slide itself or in the speaker notes.

Use text for critical information

Never rely only on color or other visual formatting to convey critical information on a chart or slide. Relying too heavily on visual formatting excludes anyone who is color-blind or unable to see the screen. For example, to highlight a new section of a flowchart, don't simply use a different color. Along with the color change, add a textual cue, such as the word "new." If your presentation relies heavily on images, consider including a written summary at the end of the presentation so that people can read your main points easily in one place.

Provide captions for all audio or video recordings

If you're using a YouTube video, check that the YouTube automatic captioning is accurate. If it's not, request closed captioning through a captioning service. Use real-time captioning for your presentation, if available. Along with helping deaf or hard-of-hearing audience members, real-time captioning is useful if there are diverse accents and languages in the room, if the presenter speaks too quickly, if there are microphone issues, or if you have chatty audience members who are distracting their neighbors.

For contrast and text size, more is better

The difference between text and its background color is called contrast ratio. A high-contrast ratio makes it easier for people to read text or decipher images, especially if they're sitting far away or have low vision or color blindness. An ideal contrast ratio is 7:1. There are contrast checker tools available online, so be sure to check those out. Recommendations for text size vary, but bigger is usually better. Before your presentation begins, go to the back of the room and make sure you can read your slides. Also, the use of all capital letters makes reading texts more difficult for some people, such as people with dyslexia. When possible, avoid using all caps. This is a simple change that can go a long way.

Share content in advance

If possible, send slides to your audience a few days before your presentation. This gives the audience a chance to review the content, and if needed, make arrangements to

accommodate their own needs and preferences. For example, visually-impaired audience members might want to follow along with your slides on their own device with screen-reading software. If you aren't able to share your slides in advance, consider sending a document with a bulleted outline of your presentation. If you're using acronyms or technical or obscure terminology, include a glossary with definitions. This information is especially helpful for sign language interpreters and captioners.

3.3.7 Activity: Create a presentation

Activity Overview

In this activity, you will create a six-slide presentation to convey the results of a customer survey through data visualization.

Remember that a good presentation doesn't just summarize raw data. It analyzes the data for key takeaways and tells a story that explains their impact on your project. Telling a clear story makes your presentation informative, engaging, and memorable.

Be sure to complete this activity before moving on. The next course item will provide you with a completed exemplar to compare to your own work. You will not be able to access the exemplar until you have completed this activity.

Scenario

Review the scenario below. Then complete the step-by-step instructions.

Plant Pals recently shipped test batches of plants to customers in advance of the formal service launch. To gauge customer satisfaction with the product and the service, your team surveyed 50 customers over a period of four weeks. After two weeks, the survey revealed three major issues concerning product quality, delivery timelines, and customer support. This feedback helped you make improvements to later test shipments.

Now that you have the full survey results, you're preparing a presentation to communicate key insights to your core team. Since the feedback is a direct response to the team's efforts, you want to make sure they understand what the results mean. The presentation will help you decide on next steps for your support model and delivery protocols for the official launch.

The survey uncovered four interesting data points regarding support and delivery that you want to bring to your team:

Data point 1: For the yes or no question, “*Did your shipment arrive on time?*,” the percentage of customers who answered “yes” breaks down as follows:

Week 1	78%
Week 2	80%
Week 3	86%

Week 4 90%

Data point 2: For the multiple choice question, “*What is your preferred time of day to receive a shipment from Plant Pals?*,” the responses break down as follows:

Before 9 AM	50%
9 AM - 12 PM	30%
12 PM - 4 PM	10%
4 PM - 7 PM	5%
After 7 PM	5%

Data point 3: For the scaled question, “*On a scale of 1 to 5, with 1 being the lowest and 5 being the highest, how satisfied are you with customer support?*,” the average scores were:

Week 1	2.3
Week 2	2.5
Week 3	4
Week 4	4.6

Data point 4: For the free response question, “*In general, how do you suggest we improve our customer support?*,” the answers break down as follows:

41%	Offer live chat support
30%	Share more step-by-step guides and tutorials
19%	Extend support hours
10%	Other

When analyzing these data points, keep in mind the milestones you set and the issues you encountered. Remember that your team did the following after the first two weeks of survey results:

- Fixed a software issue that resulted in the customer relations team receiving only 30% of requests and complaints
- Hired more delivery drivers and reassessed delivery routes with the goal of bringing the on-time delivery rate from 80% to 95%
- Sent customers an e-newsletter with a tutorial on caring for their plants

Step-By-Step Instructions

Step 1: Access the template

To use the template for this course item, click the link below and select “Use Template.”

Link to template: [Presentation](#)

Step 2: Summarize the survey

In the text box on **Slide 1**, write a short description of the customer survey. Be sure to include the goal of the survey, the timeline, and the number of customers who participated. This should be a high-level overview, so you don’t need to go into too much detail.

Step 3: Pick a data visualization

Think about what kind of information the data point provides. Then consider what type of chart or graph conveys those findings most clearly. Select from the following visualization models:

- **Bar or column chart:** Best for comparing two or more values
- **Pie chart:** Best for demonstrating composition
- **Line graph:** Best for analyzing trends and behaviors over time

Check out the reading on [Different ways to visualize data](#) for more information on each option.

Step 4: Visualize the first data point

Once you’ve decided which model to use, create your bar graph, pie chart, or line graph and insert it into the next slide. You can create your visualizations in a couple of different ways:

From Google Slides or PowerPoint:

1. Go to *Insert* and select *Chart*. Then select *Bar*, *Column*, *Line*, or *Pie* from the options.
2. If using Sheets, select the chart and a dropdown arrow will appear in the upper-right corner. Click the arrow and select *Open source* to open a spreadsheet. If using PowerPoint, an Excel spreadsheet will open automatically.
3. To modify the chart’s data, delete the placeholder information from the spreadsheet and enter the data from one of the tables above.
4. If you’d like, you can also change the layout, colors, and labels. In Sheets, select *Edit chart* by clicking the three dots in the upper-right corner of the chart. In PowerPoint, adjust the chart using the toolbar at the top of the screen.
5. Finally, to reflect changes made in Sheets in your presentation, go to Slides to select the chart. Then click *Update* in the upper-right corner. Changes made in PowerPoint will display automatically.

For more information about creating charts in Google Slides, visit [this resource](#). To learn more about creating charts in PowerPoint, check out [these step-by-step instructions](#).

Note: You can also create charts starting from Google Sheets by visiting [this resource](#). If you prefer to use Excel, check out [this video](#).

Step 5: Determine key takeaways and action items

Now that you've created your visualization, consider what the chart or graph communicates about the data point. Perhaps it clarifies a trend or reveals a percentage to be larger than it seemed. Compare this data to the list of project milestones and mitigated issues from the scenario. Then write action items and key takeaways from your analysis at the bottom of the slide.

For example, imagine that one of your survey questions asked, "Was your order what you expected?," and only 60% of respondents answered "yes." A related action item might be, "review website photos and descriptions for accuracy."

Step 6: Visualize the remaining data points

Repeat Steps 3-5 for the remaining data points. When you are finished, you should have a six-slide presentation of your findings and action items.

Step 7: Write a conclusion

A strong presentation should conclude by tying together the main points and addressing next steps. Write a few sentences or bullet points outlining the issues the team resolved successfully and recommendations for further improvement.

Step 8: Save your presentation

Save your completed presentation to your computer or Google Drive. You'll need it again later in the course.

Completed Exemplar

To view the exemplar for this course item, click the link below and select "Use Template."

Link to exemplar: [Presentation](#)

Assessment of Exemplar

Compare the exemplar to your completed presentation. Review your work using each of the criteria in the exemplar. What did you do well? Where can you improve? Use your answers to these questions to guide you as you continue to progress through the course.

Note: Your presentation reflects your own creative vision, so it likely differs from the exemplar in certain ways.

Let's review the exemplar components:

Summary slide: The summary outlines the number of participants, the timeline, and the purpose of the survey: "We surveyed 50 Plant Pals test batch customers over a four-week

period to learn about their satisfaction with the product, delivery process, and customer support.”

Data point 1: This data point uses a line graph, since the results track the number of on-time deliveries over four weeks. The delivery rate of 90% in week four is still short of the 95% target, so the action item is to investigate additional causes for late deliveries.

Data point 2: This data point uses a column chart (also called a vertical bar chart), since the results compare preferred delivery windows throughout the day. (A pie chart can also work for this data point.) The action item is to schedule more deliveries for the preferred windows.

Data point 3: This data point uses a line graph, since it tracks satisfaction with support over time. Satisfaction went up significantly after the team fixed the software issue. The action item is to monitor responses to support tickets to identify areas for further improvement.

Data point 4: This data point uses a pie chart, since it shows the percentages of total responses to the question. The action items include shifting more resources in tutorials and live chat, since a large percentage of respondents found them helpful.

Conclusion slide: The conclusion wraps up the presentation by summarizing the main points. It points out the team’s successes and gives recommendations for further improvements.

Weekly Challenge 3

1. What best describes the goal of collecting data on the best selling product of the month to place new orders with your supplier?

- To better understand team performance
- To better understand user preferences and performance
- To provide a team building experience for the company
- To reduce product prices

 **Correct**

2. In which of the following categories can project managers group metrics? Select all that apply.

- Reliability metrics
- Documentation metrics
- Quality metrics

 **Correct**

- Productivity metrics

 **Correct**

3. Fill in the blank: Using a(n) _____ keeps a record of any inconsistencies from the initial requirements of a project.

- Issue log
- Shared drive
- Change log
- Communication plan

 **Correct**

4. What tactics can project managers use to prioritize data? Select all that apply.

- Set hard deadlines
- Align metrics to stakeholder priorities

 **Correct**

- Identify and respond to signals

 **Correct**

- Prioritize tasks that contribute most to the project goal

 **Correct**

5. Fill in the blank: _____ is the process of collecting and organizing information to help draw conclusions.

- Project management
- Data analysis
- Risk analysis
- Documentation

 **Correct**

6. As a project manager, you schedule a meeting with a co-worker to practice a presentation for stakeholders. Which step of the storytelling process are you implementing?

- Choosing a visual representation
- Gathering feedback
- Communication
- Defining your audience

 **Correct**

7. Why should project managers use visual representations of data? Select all that apply.

- To help the viewer make sense of and remember the information the project manager presents

 **Correct**

- To summarize information and condense long ideas and facts into a single image or representation

 **Correct**

- To manipulate the data so the audience only reviews positive information

- To filter information by directing the audience to the most important data points and insights

 **Correct**

8. Which of the following are ways to help you give an effective presentation? Select all that apply.

- Be memorable

 **Correct**

- Be forceful

- Be flexible

 **Correct**

- Be precise

 **Correct**

9. As a project manager processing data, you consult with others to make sure you are not selecting and interpreting data in a way that supports your own pre-existing beliefs. This tactic helps avoid which data bias?

Observer bias

Interpretation bias

Sampling bias

Confirmation bias

 **Correct**

10. As a project manager analyzing data, you review, transform, and organize the data you've collected. Then, you create graphs with the data to identify patterns and draw conclusions. Which data analysis best practice does this represent?

- Prepare
- Analyze
- Ask
- Process

 **Correct**

11. As a project manager creating a story, you ask yourself questions like: "Does this presentation make sense?", "Is the presentation interesting?", and "Which areas of the story are unclear or unmemorable?". In what storytelling step should you ask these questions?

- Find the data
- Gather the feedback
- Define the audience
- Filter and analyze the data

 **Correct**

12. How do graphs and charts help present data? Select all that apply.

- Inform the audience about a new trend or valuable piece of information

 **Correct**

- Demonstrate the relationships between data sets

 **Correct**

- Compare values and demonstrate how individual parts contribute to a whole

 **Correct**

- Puzzle the audience to think more intensely and remember the data

Week 4 : Leadership And Influencing Skills

Learning Objectives

- Explain the importance of project teamwork and the factors that influence team effectiveness.
- Discuss the stages of team development and how to manage team dynamics.
- Explain how to build high-functioning teams that work together to meet project goals.
- Discuss the role of the project manager in fostering an ethical and inclusive team culture.
- Explore techniques and sources of power that can help influence others.

4.1 Cultivating Effective Teams

4.1.1 The necessity of project teamwork

As a project manager, **leadership is a big part of the job**. But being a great project manager is about more than simply leading a team to complete a project. It's about **supporting the people on your team to do their best work**, and **enabling people to build things they're proud of**.

The best leaders are able to get people to work together. That's why a project manager's ability to develop and lead teams that work well together is so important.

Team

Though there are many different definitions of the word team, here's how we describe it here at Google. **A team is a group of people who plan, solve problems, make decisions, and review progress in service of a specific project**, or objective. Team members **rely on each other to get things done**. For example, a software engineering team might be tasked with creating one seamless software experience that meets users needs. Beyond coordinating with the project manager, members of the software engineering team will also coordinate with one another as they work toward their shared goal.

Workgroups

Teams differ from workgroups, which we define as **being based on organizational or managerial hierarchy**. Though people within a workgroup might be **working toward a common goal**, their work is **more likely to be coordinated, controlled or assigned by single person or entity**. For example, a workgroup focused on quality assurance testing might be tasked with running a set of test plans. The group manager might split up that work and assign each quality assurance tester a plan to review. But unlike a team, the testers will work independently of one another to complete their tasks. And will coordinate mainly with the manager and the development team of the feature they're testing.

Teams and work groups each have unique benefits within a larger organization. But for the purpose of this program, we'll focus on teams. More specifically, we'll discuss how project managers develop and lead effective teams by fostering a culture of teamwork.

Teamwork

Teamwork is an **effective collaborative way of working in which each person is committed to and heading toward a shared goal**. Teamwork maximizes the individual strength of each team member to bring out the best in each person. As you might imagine, teamwork is a crucial part of successful project management. There are a few reasons for this.

- Teamwork **fosters creativity**. A team might leverage the diverse perspectives, skills and experiences of their members to devise better solutions and build products that address more diverse user needs than they might have if they were working independently of each other.
- Teamwork **encourages accountability**. The knowledge that the execution of your tasks directly impacts the tasks of the rest of the team can be a powerful motivator.
- Teamwork **helps you get stuff done**. Big complex projects need smart, capable people to complete tasks and to reach milestones to meet the project goals.

As the project manager, it's your job to encourage others to actively engage in working together as a team to foster creativity, encourage accountability and to get stuff done. Teamwork is an effective collaborative way of working and when done right, it can positively impact both measurable team results and the team culture.

4.1.2 The factors that impact team effectiveness

Teams are made up of individuals and individuals are driven by different motivators. Whether that's serving their organization, supporting their family or simply working on projects they think are cool. You'll need to **learn about the people on your team**, in order to best determine **how to motivate everyone at the same time**.

A few years ago, researchers here at Google set out to identify the dynamics of effective teams. And through this research, they identified **five factors that have an impact on team effectiveness**. In order of importance, those five factors are: **psychological safety, dependability, structure and clarity, meaning and impact**.

Psychological safety

Psychological safety refers to an **individual's perception of the consequences of taking Interpersonal risks**. In other words, they believe **it's safe to take risks within their team** and they **don't risk being labeled as ignorant, incompetent, negative or disruptive**. On teams with **high psychological safety**, teammates feel **comfortable taking risks** around fellow team members, **seeking differing opinions** and **resolving interpersonal conflict** when it comes up.

For example, on my team at Google, we like to say be direct and kind. We've worked really hard to build a team culture, in which we can hold one another accountable while

maintaining a shared space that is **safe, secure, and peaceful**. What I found is that, when opportunities to take risks do arise, like pitching an out-of-the-box idea to my directors, for example, this culture of mutual respect has already laid the groundwork to get direct feedback without frustration or worrying that I might embarrass myself. And that's been invaluable in maintaining a high level of psychological safety for the team.

Dependability

On dependable teams, members are **reliable and complete their work on time**. Creating a dependable team requires the **combination of setting, negotiating and meeting expectations**. Yes, your team needs to meet the expectations set for them. At the same time, you as a project manager need to establish a two way relationship with your team. You have to be able to **clearly communicate expectations** and **ensure that the team feels comfortable negotiating** with you when needed.

For example, it's likely that a person on your team works on two or more projects with competing deadlines. If they're afraid to share their own constraints with you, then their work on both projects might suffer. Alternatively, if they come to you with their concerns and open understanding and negotiation around priorities could help ease their burden.

Structure and clarity

Structure and clarity refers to an **individual's understanding of job expectations, knowledge of how to meet those expectations and the consequences of their performance**. Each team member has a **clear sense of their individual role, plans and goals**. And they have a **sense of how their work affects the group**. You, as the project manager, can help foster a sense of structure and clarity on the team.

For example, if a project structure in tracking is sloppy, unorganized and incohesive, then the team's output is likely to be sloppy, unorganized and incohesive. This can cause tension within the team. Alternatively, if you diligently engage in project tracking, your team will have clarity, feel more united and will be able to effectively collaborate.

Meaning

Google's researchers defined meaning in this context, as **finding a sense of purpose either in the work itself or in the results of that work**. For example, your teammates might find meaning in supporting themselves financially, helping the team reach its goals or wanting their products to reach a new community of users.

Impact

Our researchers define impact as **the belief that the results of one's work matters and creates change**. It can be challenging for people to notice how their work can shift an entire ecosystem forward. Part of your role as the project manager is to help individual teammates identify how they drive impact both within the team and beyond it. Project tracking can be a helpful tool for visualizing progress and impact. Meeting milestones for example, demonstrates to the team how their individual tasks contribute to the larger project goals. For example, my team focuses on routing within Google Maps. The big idea is to focus on

helping people to get to where they're going on time. So, everything we do should make that experience incrementally better. And that's how we add impact.

Test your knowledge: Effective teams

1. Which five factors have the greatest impact on team effectiveness?

- Psychological safety, methodology, structure and clarity, mastery, and impact
- Psychological safety, dependability, structure and clarity, meaning, and impact
- Dependability, methodology, structure and clarity, mastery, and impact
- Dependability, structure and clarity, understanding, meaning, and impact

 **Correct**

Teams are most productive when project managers use these five factors to create an effective work environment.

2. Which three of the following statements are generally true of teams that feel a sense of psychological safety?

- Team members feel comfortable taking risks.

 **Correct**

The most effective teams know they can take risks without negative consequences. They also know they can seek different opinions and feel comfortable resolving interpersonal conflict.

- Team members know they can seek different opinions.

 **Correct**

The most effective teams know they can seek other opinions without negative consequences. They also feel comfortable taking risks and resolving interpersonal conflict.

- Team members don't require frequent communication with the project manager.

- Team members are comfortable resolving interpersonal conflict.

 **Correct**

The most effective teams can communicate respectfully and solve internal conflicts. They also know they can seek different opinions and feel comfortable taking risks.

3. Which key factor of team effectiveness involves setting, negotiating, and meeting expectations?

- Psychological safety
- Impact
- Meaning
- Dependability

 **Correct**

Dependable teams set and meet expectations, are reliable and communicative, and complete their work on time.

4. Which key factor of an effective team provides a clear sense of roles, plans, goals, and how individual work affects the group?

- Impact
- Psychological safety
- Structure and clarity
- Meaning

 **Correct**

Teams with structure and clarity understand job expectations and consequences, leading to more effective collaboration.

5. In what way does a team's sense of meaning impact their effectiveness?

- Teams understand expectations and consequences.
- Teams feel safe taking risks.
- Teams find a sense of purpose in their work or its results.
- Teams complete their work on time.

 **Correct**

Teams do their best work when they find their jobs meaningful.

4.2 Effective Project Leadership

4.2.1 Leading high-functioning teams

There are a few key ways that project managers help **build high- functioning teams** who work together to meet project goals. They:

- create systems that turn chaos into order
- communicate and listen
- promote trust and psychological safety
- demonstrate empathy and create motivation
- delegate responsibility and prioritize
- celebrate team's success

Let's go through each of those points one by one.

Create systems that turn chaos into order

Good project managers lead their teams by creating systems that turn chaos into order. You can do this by **creating, implementing, and improving: standardize, measurable, repeatable and scalable workflows and processes** for your team. For example, if you find that you're usually chasing down teammates for progress on their work, you might set up a process for how and when a teammate should let you know that they've completed a task. Think of creating systems as a kind of connect the dots puzzle. Being a project manager is

sort of like that, but there are no numbers, just dots and a partial image. But we don't need the numbers. We can notice the dots, know their importance and string them together to help everyone visualize the project as a whole. You find the system through the chaos and help other people to find it, too.

Communicate and listen

As the project manager, it's your job to ensure that everyone on your team is on the same page regarding the status of your project. For example, you might communicate with the team via daily or weekly status update emails and regular team meetings. Team meetings also provide a space for listening, whether you're gathering feedback on a workflow or process, or fielding questions from the group. You can also solicit feedback or questions via status update emails, since some people might feel more comfortable speaking in private.

In addition to communicating and listening to the wider team, it's also your responsibility to **regularly connect with individual teammates**. You do this by **gaining an understanding of communication styles** and by **asking people on your team how they prefer to communicate**. What's important to know is that everyone communicates differently. For example, I might make small talk with colleagues who I know enjoy it. Or I might get straight to the point with colleagues who prefer not to chat.

Promote trust and psychological safety

Project managers also lead by promoting trust and psychological safety within their team. As a reminder, **psychological safety refers to an individual's perception of the consequences of taking an interpersonal risk**. Team members need to trust that they're safe and speaking up if they have feedback or concerns about the project as a whole or about their individual tasks. It's your job to create a team atmosphere where different opinions are welcome, and all members remain respectful of one another during challenging conversations. For example, during weekly status meetings, you might schedule time for open, thoughtful and inclusive discussions. You might model this by asking for help solving a problem that's impacting the team. You should encourage contributions from all team members regardless of role or rank. By doing this, you make clear to your teammates that they should feel comfortable challenging processes and workflows. And you make clear that critiques of the project and plans are welcomed and valued no matter who they come from. While it can feel challenging to provide and accept feedback, it's a healthy part of project management and usually makes for a better project outcome.

Demonstrate empathy and create motivation

On an individual level, project managers lead by practicing empathy and creating motivation for their team members. It's possible you've heard the phrase, "there's no I in team," and while that's true that teams need to work together to be effective, it's also important to remember that teams are made up of individuals with differing motivations and lives outside of work. You can **demonstrate empathy** for your teammates by **being present, listening, and asking questions**. During one on one conversations, avoid making assumptions about what the other person is thinking and feeling. If you're quiet and curious, there's always more to learn. In addition to showing empathy for my team, I also like to **create motivation** by **recognizing a job well done through public forums**. Like in a meeting or a group email.

Recognition tells people that they're doing the right things, and motivates them to keep up the good work. Be sure to recognize good work, and not just heroic efforts.

Delegate responsibility and prioritize

Most projects will likely have multiple tasks taking place simultaneously. And it's your job to keep the team focused and heading toward the project goals and deliverables.

- **By delegating responsibility** for specific tasks to individuals on your team, you **provide your teammates with the opportunity to add value using their particular set of skills**. You also **give yourself space to focus on the project as a whole**.
- **By prioritizing tasks**, you **reduce ambiguity and provide clarity for your team**. If you think that a task is important, but your team doesn't, they might work on whatever tasks they like. By prioritizing and making that prioritization known, you keep the team focused. Work with your team to build consensus around priorities, explaining your rationale can help you get their buy-in and increase their commitment to the work.

Celebrate team's success

Lastly, project managers lead by celebrating team success, both at the end of the project and throughout it. This includes celebrating big and small wins like reaching a milestone or receiving positive feedback from stakeholders. Celebrating success is an important tool for motivating the team because it increases morale and boosts the team's engagement. You might celebrate the team with a group lunch, a small gift or even just a congratulatory email. Simple gestures like these demonstrate appreciation for the team's hard work. And when people feel appreciated, they tend to work harder and their teams perform better.

4.2.2 Providing “air cover” to your team

As you have learned so far, project managers build teams that meet project goals in many different ways, from delegating responsibility and prioritizing tasks to promoting trust and psychological safety.

But there is another skill great project managers have that we will cover in this reading: the ability to provide **air cover** to protect their team. Air cover refers to support for and protection of a team in the face of out-of-scope requests or criticism from leadership.

What is air cover?

A lot of what we have covered throughout this program has focused on leading and managing a project team. Much of project management involves overseeing the work of others, but it also involves managing the needs and expectations of those above you. Those people are your stakeholders, project sponsors, and other leaders within your organization.

Though the needs and requests of your stakeholders are crucial to the project's success, there may come a time when you will need to prioritize the needs of your team over the wants of your stakeholders. This is called providing “air cover” for your team, and it is an important part of managing a project. The ability to effectively provide air cover requires a

trusting relationship between a project manager and their stakeholders. In this relationship, the project manager aims to demonstrate their abilities to lead a team and communicate effectively.

There is some risk involved in providing air cover. Sometimes a project manager provides air cover and the project team is still unable to deliver on the goals of the project. In this case, stakeholders may question the project manager's ability to complete projects successfully. So, when preparing to defend your team against out-of-scope requests, be sure that you are confident in your team's progress toward the project goal.

Providing air cover: A case study

Imagine, for example, that you are a project manager for a brand of coffee sold in supermarkets throughout your region. You and your team have been tasked with launching three new flavors of ground coffee: vanilla, hazelnut, and mocha.

However, well into the execution phase, your project sponsor sets a meeting with you to make an out-of-scope request: They would like to add a caramel-flavored coffee to the product lineup. Your team is already at maximum capacity preparing to launch the agreed-upon flavors, and a fourth flavor would add an unreasonable amount of work and stress to your very busy team.

Let's discuss how you might provide air cover for your team in a situation like this one.

Saying “No” without explicitly saying “No”

One way to provide air cover to your team is to say “no” to your sponsor’s request without *explicitly* saying “no.”

There are a few ways to do this:

- You can gently push back with a polite explanation that their request won’t be possible to complete under the current constraints—the scope, time, and/or cost—of the project.
- You can politely offer to get back to the stakeholder with your response. This gives you time to better understand the request and to consult with trusted team members to lay out the benefits and costs of this request. And, if you are lucky, this might even give the stakeholder the opportunity to reconsider their request or forget about it entirely.

Whether you choose to push back immediately or get back to your stakeholder with your response, it is crucial to offer alternative solutions. Maybe the project timeline can expand to accommodate the request. Or maybe you and your team have a strong relationship with another team at the organization that can help fulfill the request. Whatever the alternative, brainstorming other options can help soften the blow and provide stakeholders with new ideas.

For example, you consider telling your sponsor that the current project timeline will only allow for the launch of three new coffee flavors, and that the launch of a fourth flavor would

only be possible by pushing the launch date back by two months. If you were to respond to your sponsor in this way, you would be both gently refusing their request and offering them an alternative that could work for your team.

While a simple “no” response might frustrate the person making the request, gentle pushback paired with alternative options can protect your team from new work while preserving your professional relationship with stakeholders. If your stakeholders trust your leadership abilities and perspective, then they will be more likely to accept your pushback and alternative solutions.

Intervening from behind the scenes

Another way project managers provide air cover for their teams is to master the challenge of delicately intervening from behind the scenes when a stakeholder is making unrealistic requests or offering unreasonable critiques.

Continuing with our coffee company example, you know how hard your team has been working to launch the new products. To avoid causing the extra stress that might come with the knowledge that the stakeholder wants to increase their workload, you avoid sharing this request with your entire project team.

This doesn’t mean you need to come up with a solution all by yourself, however. Instead of calling a team meeting to discuss the stakeholder’s request for a new flavor, you consult with only two trusted members of your team to help brainstorm solutions. One of these team members mentions that they know two new flavors are slated to be added to the fall product lineup in six months, and that perhaps the caramel flavor could be launched then instead of with the current group. This would give your team more time to work on developing the product while still fulfilling the stakeholder’s request.

Ultimately, you bring the suggestions of adding the flavor to the fall product lineup or pushing back the launch date of the current lineup to the project sponsor, and they accept your solution to launch the new flavor in the fall.

Managing the expectations of your stakeholder while looping in relevant teammates on a need-to-know basis was essential here. This allowed your team to focus on their work without the possibility of an increased workload or an unnecessary distraction.

Key takeaway

Providing air cover for your team takes practice. It requires a careful balance of the needs of your stakeholders and the needs of your project team. As you become more experienced in leading projects, you will develop a stronger sense of how to manage nuanced situations like these and provide the air cover your team needs to do their best work.

4.2.3 Team development and managing team dynamics

Imagine that you’re starting a new project with a brand new team of people. No one on the team has worked together before, so this will be a new experience for everyone. To better understand how your team might develop over time, let’s discuss the **psychologist**

Bruce Tuckman's five stages of team development: Forming, storming, norming, performing and adjourning. These stages of development illustrate how teams grow from a disparate group of people into a high functioning unit. You might even recognize the characteristics of each stage from previous experiences working on a team.

Forming Stage

Tuchman's first stage of team development is the forming stage. At this point everything feels shiny and new. Individuals on the team are just getting to know one another, and they're eager to make a good impression. And typically they're excited for the work to begin. During this stage, you as a project manager should **clarify project goals, roles, and context about the project**. People are seeking guidance and it's your job to provide that guidance.

Storming Stage

The second stage of team development is the storming stage, this is where things get a bit trickier. As people settle into their roles and the work on their project begins, the people on your team are interacting more and maybe disagreeing a bit. This is where feelings of frustration might emerge. Individuals might take issues with certain processes they feel are inefficient, or other teammates they disagree with, especially when the team is navigating tasks that are much more complex than they first appeared. It makes sense, right? If you're working closely with a new group of people for the first time, there's bound to be some interpersonal conflict. Teammates might disagree on time, and effort estimations, vary in their levels of independence, or prefer to prioritize certain tasks over other equally important tasks. As the project manager, it's your job to **focus on conflict resolution**. Listen as the team addresses problems to solve and share insights on how the team might better function as a unit.

Norming Stage

After storming comes Tuchman's third stage, the norming stage. At this point, the **team has resolved some of its internal conflict by establishing new norms** like processes and workflows that make it easier for everyone to get things done. The team feels better equipped to work together efficiently and effectively. You, as the project manager should **codify the team norms, ensuring that the team is aware of those norms and reinforce them when needed**. For example, if you've agreed to discuss solutions to issues during weekly team meetings, ensure that your weekly agenda budgets time for this topic each week.

Performing Stage

Tuchman's fourth stage is the performing stage. During this time, the team works together relatively seamlessly to complete tasks, reach milestones and make progress toward the project goal. In the performing stage, you as the project manager should **focus on delegating, motivating and providing feedback** to keep up the team's momentum.

Adjourning Stage

The fifth and final stage of team development is the adjourning stage. In this stage **the project is wrapping up** and it's **time for the team to disband**. It can be a bittersweet time for the team and you might want to mark the end of the project with a celebration. You as the project manager should set up time to celebrate the final milestones and success of the project as a group. And be sure each member of your team knows what's next for them.

To recap, Tuckman's five stages of team development are forming, storming, norming, performing and adjourning. These stages of team development come together to form a helpful framework you can use to **assess and recognize team dynamics**, and then adjust your management style accordingly.

Team dynamics refer to **the forces both conscious and unconscious, that impact team behavior and performance**. Managing team dynamics is a big part of determining how to motivate your team. It might be tempting to assume that people can go full-speed ahead into a project. But in reality, it's important to take time to understand the dynamics of your team overall and how individual team members are fitting in. This is especially important during the more precarious forming and storming stages.

Let's break down why managing team dynamics is so important.

- First, **teams have individuals with different skill sets, varying degrees of autonomy, and competing priorities**. It's your job to **forge consensus and set clear purposes, goals, dependencies and accountability**. When teams function cohesively, they can focus on the tasks and objectives at hand.
- It helps you to **create a collaborative and psychologically safe environment**. When team members feel safe, they're willing to help one another, and accept help when they need it. This benefits the entire project by keeping schedules on track. Though it can take time to get to the performing stage, using the norming stage as a time to foster a collaborative environment can help you get there quicker.

Understanding and managing team dynamics can also help you **understand how to motivate your team**. Motivated team members are likely to contribute more to discussions, complete their tasks and actively participate in other project activities. A positive team atmosphere can help employees feel empowered. More comfortable taking calculated risks, and more likely to seek out innovative solutions to complex problems. Remember, so much of team dynamics happens under the surface. Identifying and understanding the stages of team development can help you make sense of how dynamics are playing out on your team.

Test your knowledge: Managing team development and dynamics

1. Imagine you are a project manager and two of your team members disagree about how to approach a workflow problem. The debate leads to a personal conflict, so you listen to their arguments and propose a compromise that will move the project forward. During which stage of team development does this scenario take place?

- Forming
- Norming
- Performing
- Storming



Correct

During the *storming* stage, you should listen to your team and try to resolve conflicts.

2. Imagine you are managing a local craft festival and one of the vendors requests a larger booth at the last minute. You delegate the issue to your operations coordinator because you're confident they can resolve it effectively. During which stage of team development does this scenario take place?

- Storming
- Performing
- Norming
- Forming



Correct

During the *performing* stage, you should focus on delegating, motivating, and maintaining the team's momentum.

3. Imagine you are managing a team of people who haven't worked together before. You decide to schedule a lunch for the team to get acquainted and learn about the project. During which stage of team development does this scenario take place?

- Storming
- Performing
- Forming
- Norming



Correct

During the *forming* stage, individuals on the team are just getting to know one another. At this time, you should provide guidance and clarify roles, goals, and context.

4. Imagine as a project manager on a new project, you introduce a new task check-in process to the team. The team picks up the process quickly, and you decide to continue it for the remainder of the project. During which stage of team development does this scenario take place?

- Norming
- Forming
- Storming
- Performing

 **Correct**

During the *norming* stage, you should codify norms, communicate them to the team, and reinforce them when needed.

5. What should project managers do to manage team dynamics? Select all that apply.

- Allow team members to set their own task dependencies.
- Understand how to motivate the team.

 **Correct**

Teams function more cohesively when team members understand their roles and goals. Project managers should also forge a consensus, set clear goals, and create a safe and collaborative environment.

- Create a safe and collaborative environment.

 **Correct**

When team members feel safe, they're willing to help one another and accept help when they need it. Project managers should also forge a consensus, set clear goals, and motivate the team.

- Forge a consensus and set clear goals.

 **Correct**

Team members have different skill sets and competing priorities. Project managers should set clear goals so that teams can focus on the tasks at hand. Project managers should also create a safe and collaborative environment and motivate the team.

4.2.4 Ethical and inclusive leadership

Leading a project team comes with the responsibility to create a psychologically safe environment for the people around you. Through **ethical and inclusive leadership**, you can **create a team culture that works for everyone and motivates the people around you to do their best work**.

Ethical leadership is a form of leadership that promotes and values honesty, justice, respect, community and integrity. You promote ethical leadership by **defining and aligning values within your team and demonstrating how adhering to those values benefits the mission** of the organization. For an example of this, consider how work culture has evolved in recent years. Around the world, employees working for organizations of all kinds have been calling on their employers to adopt ethical policy changes and to state their

positions on current events. **Companies can demonstrate ethical leadership by creating forums where employees can raise their viewpoints, be heard and receive follow-ups from company leaders on employee concerns.**

Ethical leadership is closely tied to inclusive leadership. If **ethical leadership's aim is to create forums where employees' concerns can be heard**, inclusive leadership aims to **put what we've heard into action to create an environment that encourages and empowers** each and every member of our community. That in turn leads to more innovation and better solutions.

Here's how we think about inclusion here at Google. Inclusive leadership is **when everyone's unique identity, background and experiences are respected, valued and integrated into how the team operates**. These differences **improve the team culture, collaboration, innovation and output**. Inclusive leadership is related to diversity in that **diversity is the set of differences each of us possesses**, whether visible or invisible that gives us each a unique perspective on the world and our work. **Inclusion is what the team does with that diversity of thought and perspective.**

At Google, we've identified **three ways that managers can lead inclusively**. These include

- fostering a culture of respect
- creating equal opportunity to succeed
- inviting and integrating diverse perspectives

To **foster a culture of respect**, it's your job as a project manager to serve as **a role model, set the tone for the team and take action when needed**. That means:

- modeling the values of your organization
- taking appropriate action if misconduct occurs
- creating an environment in which team members feel comfortable speaking up with concerns
- recognizing team contributions regularly

To **create equal opportunity to succeed**, you should **ensure that each person on the team has access to the information and resources they need to do their best work**. You do this through:

- regular communication
- accessible documentation
- regular check-ins with the team to listen, share information, ask and answer questions and provide support

As a project manager, you're in the perfect spot to identify work that might be a good fit for a person who really wants it, but who shies away from asking for it. Knowing an individual's aspirations will help you highlight these opportunities.

Finally, to **invite and integrate diverse perspectives**, it's your role to **cultivate a culture in which each team member's perspective can be openly shared, heard and integrated into work related decisions**. You do this by:

- creating a sense of psychological safety on the team
- inviting teammates to share their thoughts, ideas and concerns, regardless of their role or rank on the team

Developing ethical and inclusive leadership skills requires regular practice. So whether you're leading a project team of two, or 20, or 200, you should be diligent in building up your inclusive leadership skill set by creating an environment in which your team feels safe, heard and valued. You can do this by fostering a culture of respect, creating equal opportunity to succeed and inviting and integrating diverse perspectives.

4.2.5 A framework for ethical decision-making

Ethical leadership is a form of leadership that promotes and values honesty, justice, respect, community, and integrity. As the leader of a project team, you will be expected to help your team succeed by leading with ethics. Building respect and trust with the teams you work with—from individuals to external partners to project stakeholders—begins with practicing ethical conduct.

In this reading, you'll gain an understanding of a common framework for ethical decision-making that can help you ensure your actions align with the ethical standards of your organization.

Ethics within your organization

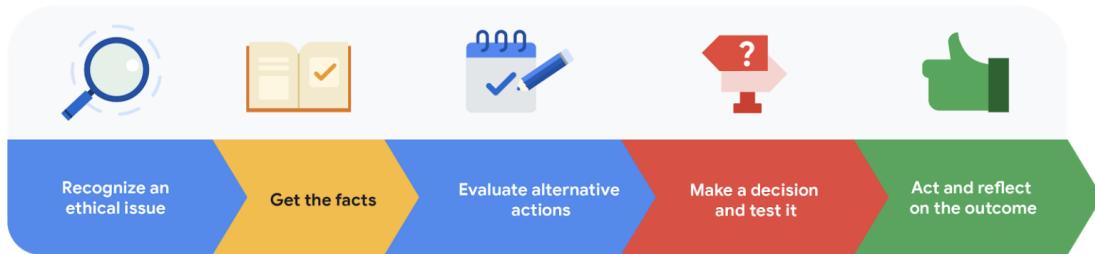
Ethics can be defined as the principles of conduct governing an individual or a group. However, there is no single, universally-accepted grouping of ethical standards—these definitions differ based on the culture and community at your company. In the working world, ethical standards may differ based on profession, industry, and organization. Usually, an organization will have its own code of conduct which specifies the standards to which it holds its employees accountable.

Here at Google, our code of conduct makes clear the expectations that we have for our employees and board members. It is possible that the organizations you will join throughout your career will have codes of conduct, too.

Part of the challenge of leading with ethics is ensuring that your actions align with the ethical standards of your community, both within your organization and beyond it. In your role as a project manager, a clear framework for ethical decision-making can help guide you to make positive decisions throughout your project.

A common framework for ethical decision-making

The [Markkula Center for Applied Ethics at Santa Clara University](#) developed the following framework as a helpful guide for ethical decision-making.



Recognize an ethical issue

According to this framework, you can begin to question the ethics of an issue by asking yourself questions about the nature of the issue. Could your decision negatively impact another person or group of people? Does the issue go beyond what is legal or efficient? From there, you can proceed onto fact gathering.

- **Example:** A vendor you have worked with in the past sends you a generous holiday gift shortly before you are about to select a vendor for a particular task in your project. If you accept the gift, would others be negatively impacted? To determine the answer to this question, get more facts.

Get the facts

Decide what you should do about the issue, and seek answers as needed. Consult with the right people to consider all of the options available to you.

- **Example:** Continuing with the example above, you should check to see if your company has ethics guidelines regarding accepting gifts from external parties. If not, consult with your HR representative about the matter.

Evaluate alternative actions

You can evaluate alternative actions by asking yourself the following questions:

- “Which option will produce the most good and do the least harm?”
- “Which option best respects the rights of all who have a stake?”
- “Which option treats people equally or proportionally?”
- “Which option best serves the community as a whole, not just some members?”
- “Which option leads me to act as the sort of person I want to be?”

Note that your answers to these questions are subjective, and you may want to elicit the opinion of others before deciding on an alternative action.

- **Example:** In the case of the vendor gift example, the answer to the question “Which option treats people equally or proportionally?” might be “decline the gift,” given that accepting it might influence your decision about who to award the contract to.

Make a decision and test it

Once you have chosen an option, test it by imagining the reaction to your choice from a person whose opinion you value.

- **Example:** Once you have decided to decline the gift, discuss your decision with your manager, HR representative, or a trusted colleague.

Act and reflect on the outcome

Consider how to carry out your decision with thoughtfulness and care, and after you act, consider the results of your decision.

- **Example:** Respectfully decline the vendor's gift, noting your reason (for example, your company's ethical guidelines state that employees are not permitted to accept gifts valued at more than \$20 from vendors or contractors).

Key takeaway

A framework like this one can help you feel better-equipped to make ethical decisions regarding your project and team, which is a central component of ethical leadership.

Like so much of project management, ethical leadership takes diligence and practice, and it is crucial to build this skill. As you become more comfortable leading project teams, you will strengthen your ability to make decisions that you can feel good about. Gaining trust and respect from the people you work with can make it easier to influence without authority. If those around you trust your decision-making, they may be more likely to try to help you achieve project goals, even if you aren't their direct manager.

4.3 The Elements Of Influencing

4.3.1 Steps to effective influencing

Influencing is the ability to alter another person's thinking or behaviors. We'll discuss the concept of influencing in the context of our Plant Pals project at Office Green.

Let's say that your team would like to partner with a well-known chocolate manufacturer to create a bundle deal. With this deal, the client could choose to add on a high-quality chocolate bar with each plant they purchase. You decide to send an initial email to a partnership Manager at the chocolate manufacturer to gauge their interest in the idea, and ultimately influence them to work with you. So, how do you go about writing that email that effectively influences your audience to consider your idea?

There are **four tried and true steps of effective influencing**. Leadership expert, Dr. Jay A Conger identifies the steps to effective influencing as: **establish credibility, frame for common ground, provide evidence and connect emotionally**.

Establish credibility

The first step to effective influencing is to establish credibility. During this step, you **make the case for why your audience should listen to you**. According to Dr. Conger, credibility comes from two sources: **expertise and relationships**. You need to:

- demonstrate to your audience that you're an expert on a given topic, whether that's through professional experience, extensive research, or something else
- demonstrate relationship credibility by establishing that you're honest, trustworthy, and someone who they want to work with.

To establish credibility, you might kick off your Office Green email by **greeting the recipient by name**, then writing something like:

"I'm Elita, a lead project manager at Office Green. Your colleague, Alex, passed on your contact information. Alex and I worked together to launch new services at Office Green before she joined your organization."

In these opening lines, you've established expertise credibility by introducing your role at office green and by suddenly highlighting that you've launched new services in the past. To demonstrate relationship credibility, you've established that you and the recipient have a shared contact who has worked closely with you in the past and can vouch for your trustworthiness and emotional intelligence.

Frame for common ground

The second step is to frame for common ground. In this step, you'll **make the case for how your idea can benefit your audience**. To determine this, you'll need a **strong understanding of your audience and their values**. In essence, what about your idea will appeal to them, and how will they stand to benefit from agreeing to your idea?

In our Office Green email, you might establish that you've researched their organization extensively and believe that this new service might align with their current offerings. For example, you might write something like this,

"We're launching a service to provide top clients with desk plants and we'd like to explore a bundle offering to pair high-quality chocolate with each plant order. I've admired your organization's push in recent years to work with other lifestyle and wellness brands and I think there may be a great opportunity for us to collaborate."

In this portion of the email, you've established that you've done your research on the organization and that their previous partnerships indicate that working together might be a great fit.

Provide evidence

The next step is to provide evidence. In this step, you'll **make your case through hard data and persuasive storytelling**. Numbers aren't strong enough on their own. They need stories to live in them up. In our Office Green email, you might appeal to your recipient with a line like

"We recently surveyed clients to gauge interest in this kind of offering, and your brand came up again and again."

In this example, you provided evidence through the results of client surveys which showed overwhelmingly positive brand recognition for our shared audience.

Connect emotionally

The last step is to connect emotionally. In this step, you'll demonstrate to your audience that **you're emotionally committed to your idea and you'll do your best to match their emotional state**. In our Office Green email, you might demonstrate an emotional connection by tapping into their brand ethos. For example, you might write something like

"We've been following your profile on Instagram and love your posts on chocolate's connection to living a well and balanced lifestyle. Perhaps we can discuss combining forces to bring this message to an even wider audience,"

and then you end your note with a friendly closer, something like

"If you're interested, I'd love to connect and share what our partner program is all about."

Dr. Conger also identified **four common mistakes** that people make when attempting to influence others.

- They'll often **approach their audience too aggressively**, and that tends to put people off ideas entirely.
- They might also **resist compromise**, which is crucial for any kind of mutual agreement.
- They'll **focus too much on developing their argument for the idea** and not enough time establishing credibility, framing for common ground, providing evidence and connecting emotionally.
- They'll **assume that they can work out an agreement through just one conversation**.

These mistakes can jeopardize your attempts to influence others and limit your ability to build relationships, so be mindful of these common mistakes when preparing to pitch another person on your big idea.

4.3.2 Reflection: Effective influencing

Consider the following scenario:

Imagine you are the project manager of a team that's creating a new website for a local bookstore called BookEnds. Keiko, the bookstore's owner, thinks some of the new features will confuse customers and asks you to modify the website design. You relay the requests to your team, and the lead developer responds to Keiko's concerns with the following email:

Dear Keiko,

You clearly didn't read our proposal very closely. The new features streamline the checkout process, which means fewer dropped sales. It also suggests new titles to customers based on purchase history. We used a similar design for the Paperback Palace website and their sales increased by 20% within six months. Your customers will adapt. We've been making websites for more than a decade, so we know what we're doing. If you want something different, you should hire someone else. I hope this satisfies your concerns.

Sincerely,

Avery Hill, Web Solutions Software Team Lead

As a thought experiment, let's compare this scenario to Jay A. Conger's four common influencing mistakes:

- Approach the audience aggressively
- Resist compromise
- Fail to establish credibility, frame for common ground, provide evidence, or connect emotionally (Conger's four steps of effective influencing)
- Assume one conversation is enough to come to an agreement

Write a paragraph describing the influencing mistakes in the Web Solutions Software email. Use Conger's four common influencing mistakes to guide your response.

The software team does some things right.

- They establish credibility by pointing to their years of experience.
- They also provide concrete evidence of how the design works for other clients.
- However, they undercut their case with aggressive and dismissive rhetoric. The team lead doesn't respond to Keiko's concerns or meet them where they are emotionally. Instead of seeking compromise, they react defensively.
- Finally, they shut down the conversation rather than opening a dialogue.

4.3.3 Using sources of power to influence

Earlier, you learned how your approach can impact your ability to influence others. But influencing is about more than just your approach. In fact, so much of your ability to influence others comes from your own **sources of power**. Throughout your career, you'll rely on your sources of power to influence others to do great work in service of the project goals.

In his book, *The Elements of Power: Lessons On Leadership and Influence*, the researcher Terry Bacon, determined that **most power sources fall into two buckets, organizational and personal**. From these power sources, we **picked out the ones we feel are most important to cover here**.

Organizational sources of power

Let's start with organizational sources of power, which **include your role, information, network, and reputation**.

- **Role refers to your position within an organization, or team.** In a project management role, you have a certain level of power over the project, and therefore more influence.
- **Information refers to your level of access, and control over information.** As a project manager, you possess a huge amount of information about your work, and your stakeholders, which can work to your benefit. Now it may be tempting to assume that as a leader, you have all of the answers, but to be a good influencer, you should ask questions, and consider all ideas. You may even hear new insights, and notice issues in a different way. Share information with your team regularly so that they can provide input on the full picture.
- **Network refers to people you're connected with professionally and personally.** Strong connections within your organization and beyond it can boost your ability to influence others, and help your project continue on. If you demonstrate that you're well-connected and have a good chance of getting stakeholders support, or budget approval for your plans, then you're more likely to get your audience on your side. You should use your network to help colleagues make new connections. Your team's effectiveness will increase as you take on the responsibility of helping each person develop their skills and expand their network, which in turn increases their own influencing power.
- **Reputation refers to how others perceive you overall.** As you might expect, people with positive reputations tend to be more influential than those with negative reputations. One way I've noticed this play out is through collaboration. If you're a good collaborator, you can boost your reputation by becoming known for being easy to work with, keeping your commitments, and helping others achieve their own goals.

Personal sources of power

It's also important to identify power sources that come from you. These are referred to as personal sources of power, which **include knowledge, expressiveness, history and character**. I like to think of these as your own **personal superpowers**.

- **Knowledge refers to the power that you draw from your expertise in certain subjects, your unique abilities, and skill sets, and even your ability to learn new things.** What comes to mind when you think about an influential leader? Typically, they have a lot of knowledge in their field and you're more likely to trust their opinion. When you're considering how to use your own knowledge as a source of power, reflect on the expertise you already have, and consider areas where you still want to grow and learn more.
- **Expressiveness refers to your ability to communicate with others.** This is a big one. As you learned earlier, so much of influencing comes down to how you approach your audience. Maybe you're a great storyteller, or maybe you're really good at connecting emotionally with people. Strong communication skills like these can significantly increase your ability to influence others.
- **History refers to the level of personal history there is between yourself and another person.** A strong relationship with the person you hope to influence can go a long way. As a project manager, you'll be managing team dynamics and building team relationships, which can help you build up personal history with the people around you.

- **Character refers to other people's view of the qualities that make you: you like honesty, integrity, kindness, and so much more.** Character is a huge one, you'll derive an enormous amount of power from high estimates of your character. What personal characteristics do you value within yourself? These are the qualities that have the power to make you a strong, supportive leader for the people around you.

Knowledge, expressiveness, history, and character, are just four personal sources of power, but it's important to remember that there's so much wrapped in each one of these. There's **trustworthiness, authenticity, wisdom, and on and on**. There's so many attributes to draw power from.

As you build your career, try to identify your own superpowers. Find the combination of influencing techniques that best suits your particular circumstances. It takes practice to polish your skills, and lean into various superpowers when working with others, but if you invest time in thinking, and troubleshooting your influencing strategy, it will pay off.

4.3.4 Creating an effective influencing statement

Introductions in literature are important. Think of the opening lines of a good book—they help set the tone for what the reader can expect going forward. Introductions are important in project management too, especially when you are hoping to influence a stakeholder to consider and approve a new plan or idea.

In this reading, we will help you apply techniques you can use to influence others. We will take you through the steps of creating a strong **influencing statement** that opens the conversation and sets you up for success with your audience.

What is influencing?

First, let's review what it means to influence another person. **Influencing** is the ability to alter another person's thinking or behaviors. If you have ever tried to persuade another person to understand your point of view, then you know that influencing is easier said than done.

Conger's four steps

In his article, *The Necessary Art of Persuasion*, Jay A. Conger identified four steps to effectively influence another person to consider new ideas.

As you learned earlier, those steps are:

1. **Establish credibility**
2. **Frame for common ground**
3. **Provide evidence**
4. **Connect emotionally**

Throughout your career in project management, there will be times when you will need to influence someone to consider an idea, approve a plan, or complete a project task. Conger's four steps provide a useful framework for thoughtfully approaching conversations that are important to project success and influencing stakeholders. Let's explore each step further before applying them to an influencing statement:

1. Establish credibility

When trying to persuade another person to listen to you, it helps to establish credibility. Ask yourself, why should this person listen to you? According to Conger, it is best to draw credibility from both expertise and relationships.

You can build credibility by showing a level of expertise on the topic at hand. It also helps to have “a history of sound judgement.” If you find that you lack expertise on a subject, don’t worry! You can work to increase your knowledge through education or research, or you can even ask an expert for help.

You can also build credibility through strong relationships with your audience and others around you. Conger found that influential leaders tend to show their trustworthiness and willingness to do right by their colleagues over time, and in turn, people are more likely to listen to them.

2. Frame for common ground

The next step in effectively persuading people is to frame for common ground. You can do this by making a case for how your idea would benefit your audience, and you can determine how your ideas will benefit your audience by gaining a strong understanding of them and what they value. Pay close attention to what matters to your audience by listening carefully and gathering information during meetings and conversations. Then frame your ideas based on your audience’s needs and interests.

3. Provide evidence

The third step is to provide evidence that supports your ideas. As Conger notes, though numbers are important, the best persuaders pair numbers with vivid language. They share stories, examples, and metaphors to help influence their audiences. Using vivid language can help bring your figures to life and draw stakeholders’ interest to your proposal.

4. Connect emotionally

The fourth step is to connect emotionally with your audience. In this step, you illustrate that you are emotionally invested in the idea that you are presenting. But crucially, Conger notes, you must also do your best to determine and match the emotional state of your audience.

Applying Conger’s steps to an influencing statement

Conger’s four steps—establish credibility, frame for common ground, provide evidence, and connect emotionally—are meant to be applied throughout important conversations with those whom you aim to influence. But to set yourself up for success during these conversations, you can apply the four steps to the influencing statement that sets the stage for your idea.

Let’s discuss how Conger’s four steps come together in the following example:

Carmen is a project manager at a small marketing agency. She would like to convince a human resources director at her organization to approve a new process for onboarding new graphic design employees.

Though the company has an existing onboarding process, this process is the same for all new hires, regardless of role. As a project manager working in the human resources department, she learns that it is hard for newly-hired graphic designers to onboard since there are only a few people who hold graphic design roles at the company. Carmen identifies that there is a lack of information available for new graphic design hires to turn to for learning about procedures and software specific to their role.

Carmen would like to propose that all new graphic design hires receive a digital welcome packet containing guidelines for installing software, processes to be aware of, and other design-specific onboarding documents. Carmen developed a similar process in her role at a previous company, and it received a positive response from employees. She thinks a similar process will work for her new organization too, so she sets up time with her director to present her idea.

To influence her director to approve the new process, Carmen opens her presentation with a strong influencing statement:

I'd like to propose a new onboarding process for graphic design hires.

(Provide evidence) *In reviewing our new hire surveys, 80% of recent graphic design hires have assigned a negative rating to our onboarding process. When I followed up with respondents, I learned that our graphic designers lack access to relevant information that could help them acclimate to our organization faster. To address this issue, I would like to create a digital welcome packet containing design-specific onboarding documentation.*

(Frame for common ground) *I have met with leaders on the graphic design team to discuss this idea, and they agreed that a design-specific onboarding process might help increase the productivity of new hires, since a better onboarding process would enable them to be better prepared to take on projects in their first few weeks on the job.*

(Establish credibility) *In my previous role, I designed a similar, role-specific onboarding process, which increased our new hire satisfaction rates by 60%. I think a new process could benefit employees here, as well.*

(Connect emotionally) *It can be overwhelming to join a new company. A smoother, more personalized onboarding experience might help set the tone for the kind of support new graphic design hires can expect from our team.*

Key takeaway

In this influencing statement, the project manager:

- **Provided evidence** from company surveys to set the stage for her proposal.
- **Framed for common ground** by noting how a new onboarding process might increase employee productivity.

- **Established credibility** by outlining her previous experience with launching similar processes.
- **Connected emotionally** by encouraging her audience to reflect on past experiences they may have endured as a new hire.

By opening with a strong influencing statement, you can set yourself up for a successful conversation that is more likely to persuade your audience and achieve your goals.

Weekly Challenge 4

1. A group of quality assurance testers receives a new project. They will communicate solely with the project manager and development team to complete tasks. What term below represents this group?

- Work Group
 Team
 Users
 Client

 **Correct**

2. A project manager works hard to improve team members' sense of purpose towards a project. What factor are they trying to improve for team effectiveness?

- Dependability
 Structure and clarity
 Meaning
 Impact

 **Correct**

3. You are leading a team that keeps failing to hit its weekly targets. To help them get back on track, you ask them to record the time they spend on each task for five days. You then use this data to better scale the team's work to hit upcoming targets. Which aspect of effective team building does this scenario demonstrate?

- Promote trust and psychological safety
 Delegate responsibility and prioritize tasks
 Demonstrate empathy and create motivation
 Create systems that turn chaos into order

 **Correct**

4. In what ways can project managers listen and communicate effectively? Select all that apply.

- Ask team members how they prefer to communicate.

 **Correct**

- Celebrate team success and milestones.
- Create motivation by rewarding good work.
- Hold regular team meetings.

 **Correct**

5. A project manager dedicates five minutes at the end of each team meeting to discuss issues with a task or project. What is this stage of Bruce Tuckman's five stages of team development?

- Forming
- Adjourning
- Norming
- Storming

 **Correct**

6. Your company enacted new, family-friendly policies in order to support and retain employees. Benefits include longer paid leave, flexible work hours, and on-site daycare. Which leadership quality do these changes demonstrate?

- Authoritative leadership
- Strategic leadership
- Inclusive leadership
- Democratic leadership

 **Correct**

7. A tech company wants to use another firm's processor in its new laptop. The project manager writes to the firm's CEO about the mutual benefits and projected sales numbers. Which steps of effective influencing is the project manager demonstrating? Select all that apply.

- Provide evidence

 **Correct**

- Establish credibility
- Frame for common ground

 **Correct**

- Connect emotionally

8. As a project manager, which of the following are your organizational sources of power? Select all that apply.

Reputation

 **Correct**

Character

Role

 **Correct**

Network

 **Correct**

9. Which step in the ethical decision-making framework could include a question such as “Which option treats people equally or proportionally?”

Evaluate alternative actions.

Make a decision and test it.

Consider the personal benefits.

Get the facts.

 **Correct**

10. As a project manager, you want to provide air cover for your team by not explicitly saying “no” to a stakeholder’s request. Which of the following are possible strategies to achieve this? Select all that apply.

Explain to the stakeholder that their request is not possible under the current constraints of the project.

 **Correct**

Refer the stakeholder to project management best practices such as how to effectively complete a project.

Offer to respond to the stakeholder once you gather more information, which may provide time for the stakeholder to reconsider their request.

 **Correct**

Have each teammate email the stakeholder giving their perspectives on why the request cannot be completed.

Week 5 : Effective Project Communication

Learning Objectives

- Describe tools that provide effective project team communication.
- Explain how to organize and facilitate meetings to ensure project success.
- Explore best practices for communicating project status updates to project stakeholders and team members.

5.1 Communication Tools And Techniques

5.1.1 Communicating in different ways

As the project manager, you are the one who connects your team to the information they need. Throughout the project, you'll serve as the main resource for your team when it comes to **communicating and clarifying goals, action items, progress, and updates**. It's important to make sure that you are **carrying information forward consistently and coherently** so that **everyone understands what the current state of the project is and what happens next**.

Teams communicate in a myriad of ways. Though project managers are constantly communicating through check-ins and meetings, project documents such as project plans including schedules, trackers, and meeting notes, they're also hubs for team communication. It's your responsibility to be clear about:

- how those documents get used
- who has access to those documents
- how often the documents get updated

Of course, in addition to those responsibilities, you'll also have to **field e-mails, instant messages, and attend meetings**. All of these things are critical in driving a project forward.

As a project manager, you are the one who **coordinates incoming and outgoing information**.

- You **connect individuals to the necessary details and context** and **track who needs to receive what information and when**.
- You'll need to **communicate certain information to your team multiple times and in various ways**. Some people learn by listening, some people learn by watching, and others learn by doing. Communicating in various ways ensures that you're sharing knowledge to your team in a format that's **digestible and easy for them to take in**. Your team will have a lot of tasks to focus on. **Be proactive and reinforce important information multiple times, in multiple ways** so that no one is left out of the loop.

There are many tools for communicating with your team to make it easy to keep in contact and be on the same page throughout the duration of the project. Some of these include:

- e-mail and messaging
- in-person meetings
- video conferencing
- work management and collaboration tools

Your organization might have some of these tools in place already, or you might have the opportunity to select some for a project. In either case, it's good to be familiar with what's out there.

5.1.2 Principles of effective email writing

Email has long been the primary method of communication for many people in business, yet messages are easy to misunderstand or ignore. In this reading, we will discuss four principles of effective email writing that will help your emails to stand out, be remembered, and elicit the response you need. These principles are:

- State what you want clearly.
- Keep the content short and concise.
- Structure your writing.
- Check grammar, punctuation, and spelling.

Principles of effective email writing

State what you want clearly

When you set out to compose an email, it is because there is something that you want from your reader. You might want to receive a simple answer, to persuade someone of something, or to arrange a meeting. Before composing an email, think about what you want, when you need what you want, and the best way to get what you want when you want it.

Here are some tips on how to clearly state what you want in your email:

- Include your request in the subject line of your email.
- State your request within the first two paragraphs of your email message.
- Indicate the specific call-to-action associated with your request (for example, reply, review, RSVP).
- Write clear, concise sentences when providing details.
- Define terms. Avoid using acronyms and terminology that users may not know. Provide additional information as necessary to avoid misunderstanding.

Keep the content concise

Make your words work for you. Remove any writing that doesn't help to define what you want or contribute to your reader's needs.

- Summarize the content you want to convey, and remove anything in your email that doesn't contribute to your goal.

- Aim to write “question-less” and “self-standing” emails. This means that the message contains enough information to stand on its own. The reader shouldn’t have any questions about what you want and when you want it.
- Know your audience. Some people—such as executives and other busy leadership—may not want to read emails of more than a few sentences or click on external links for further information. Try to tailor your emails accordingly.

Structure your writing

Structure has to do with the visual flow, or aesthetics, of your email. A well-structured email conveys critical information to the reader quickly and allows them to scan the explanatory text—or ignore it altogether. Here are some tips for effectively structuring your email:

- **Use bullets.** Bullets break up the visual flow. If you have more than one of something, consider using bullets. Write strong action verbs at the start of each bullet.
- **Use labels.** Labels help guide the reader to what information is most important.
- **Add hyperlinks.** Hyperlinks allow readers to directly access additional information, rather than adding lengthy details to your email.
- **Write a strong topic sentence.** Place the main idea of the paragraph in the topic sentence.

Check grammar, punctuation, and spelling

Grammar, punctuation, and spelling are critical. Turning grammar and spelling suggestions on in your email application can help you quickly identify errors. Be sure to correct any errors before sending off.

Applying effective email writing principles

Example 1

Subject : Annual Team Building Retreat - Register Now!

Team,

I am thrilled to invite you all officially to the 2021 Annual Team Building Retreat. As in previous years, we are taking time out to celebrate and strengthen our team spirit—to learn from each other and to plan for the challenges ahead.

We've got something special planned for this retreat! Beyond the staples of world-class training, fabulous working sessions, and executive presentations, we've also arranged:

An Annual Awards Dinner at the Hotel San Francisco; pre-booked rooms for those who want to stay at the hotel after dinner; and an afternoon at Shoreline Lake with sailing, rowing, and paddle boats available.

We hope you can join us for all three excursions. Don't forget to register and sign up per the instructions on the site.

Our theme this year is Transform. We look forward to sharing a transformational week with you all!

Best,

Issac Soto

In order to learn how to apply these principles, let's check out the following example email:

Issac was given the task of sending an email about the company's annual team building retreat. *Please note: Blue, underlined text indicates a hyperlink to an external site or document.*

This email example is not as effective as it could be. The date and location of the event are not included. The main link Issac wants the reader to click—to register for the event—is buried at the bottom of the email. The other links in the message are also overwhelming because there are so many. There are no bullets or labels to help organize the information. Additionally, there are a few spelling and punctuation errors.

Let's examine how Issac's email could be revised to be more effective.

Example 2

Subject: Annual Team Building Retreat - Register Now!

Team,

I am thrilled to invite you to the 2021 Annual Team Building Retreat, October 13–15 at the [Hotel San Francisco](#). This is an opportunity to celebrate and strengthen our team spirit and to learn from one another as we plan for the challenges ahead. To end the event, we will hold our Annual Awards Dinner.

Sign up now!

- [For the retreat](#)
- [For hotel rooms](#)
- [For lakeside activities](#)

Best,

Issac Soto

In this example, there is a clear, concise description of what the email is about at the very beginning of the email. The dates and location of the event are clearly stated at the beginning of the email. The opening paragraph is directly followed by a label in bold: **Sign up now!** Then, bullet points help set apart the hyperlinks for better visibility, and the hyperlinks clearly state what the reader will access when they click. Lastly, the grammar, spelling, and punctuation are all accurate.

Key takeaway

When you write an email, think about the people you are sending it to and what they need in order to quickly read and correctly understand it. Remember to:

1. State what you want clearly.
2. Keep the content concise.
3. Structure your writing.
4. Check grammar, punctuation, and spelling.

Keeping these principles in mind when you draft emails will help you communicate more effectively with your team members, stakeholders, customers, and others. It can also demonstrate your level of professionalism and competence and inspire others' confidence in your abilities.

5.1.3 Common communication tools

Let's explore some of the common tools for effectively communicating with your project team and stakeholders. In this video, we'll focus on **messaging, virtual meetings and work management and collaboration tools**.

Messaging and email

Email is standard for business communications, so it's important to streamline the number of emails that you send out. At Google, I get tons of emails a day. It's a lot of work to figure out which ones I need to read immediately, which ones can wait and which ones require a reply right away. It's important that you understand how to use email in a professional context. A quick internet search will provide you with lots of tips and examples.

Here's some of my key tips for you to keep in mind:

- **Carefully select who you're sending an email to** and be conscious of **why you're sending it**.
- Make sure the **subject field clearly states what the email is about**. If it's **urgent or requires a response**, add that to the subject and the first line of the email.
- Keep your messages as **short as possible and stay on topic**.
- If there's **a lot of information to share**, consider placing the information into a digital document you can **link or attach** to the email. Then summarize what you want readers to focus on.
- If there's a **specific action** you need from the recipient, **state it clearly** so that they understand what's expected of them and when.
- Your language choices matter, so **avoid slang, acronyms, and shortcuts** for words that might be more appropriate for texts.
- **Write in an appropriate tone** for the person receiving the email.
- It's generally best practice to be **friendly, motivating, clear, and specific**.

As I mentioned earlier, most people, especially other managers, directors and executives get lots of emails. With that in mind, you may want to consider **instant messaging tools like Google Meet or Slack**. This can be an alternative to email when you just **have a quick question**, or update or as a way to **alert someone to please check their inbox**. Instant messaging helps reduce back and forth emails or phone calls that can quickly clear up miscommunications or let you know if and when you should take an issue to a meeting.

Be mindful of when you decide to use instant messaging. This kind of quick communication could lead to **distraction and informality**. It can easily become an outlet to share non-work related information or information that is sensitive or confidential. It can also be **difficult to track instant messages**. Later on, if you need to reference information that you chatted about, you might not be able to easily find it with instant messaging. It's a good idea to ask people's preferences on how they like to be communicated with. Even if instant messaging is faster the person might prefer to use email. With experience, you'll be able to determine the most effective ways to communicate with your team.

Virtual Meeting

Virtual meeting tools like **Google Meet** and **Zoom** are great for communicating, especially as remote work becomes more standard. Better yet, each of these tools are easy to access and easy to learn how to use. Well run online meetings can be extremely effective, they allow you and your team to interact in real-time. Which can help **boost morale and create a sense of team** when it's not possible to be together in person. Virtual meetings can be highly engaging, as attendees can access and share files during the meeting.

Work management and collaboration tools

There are work management and collaboration tools like Google Drive, Asana, and Smartsheet. These kinds of tools make it easier to share information among teams, even better with work management and collaboration tools. Information sharing goes both ways. Team members can easily **update their progress without the need for extra meetings** or phone calls. These tools can accomplish many different things like **tracking progress on tasks, deliverables, and milestones**. They can also help you to **manage a budget, build helpful charts and diagrams, manage contracts and licenses and keep stakeholders informed**.

Work management and collaboration tools allow you to **focus your communications within the context of specific tasks, project details and timeline**. Rather than writing an email and linking to the relevant information when you're working and communicating in a tool, the information is already there in one place for easy reference and decision making. Another great aspect of these kinds of tools is that the work gets done in real time. These tools allow remote teams to collaborate and communicate as though they're physically working in the same office together. Encouraging your teams to check in and update their progress regularly helps to maintain the real-time feel of interacting with coworkers.

There are many different types of work management software that automatically make project planning and tracking a lot easier. And they are much more efficient than manual project tracking. A quick word of caution before we move on the use, access or sharing of confidential or need to know information externally, including financial and business data, user data and information about our products and services is likely prohibited unless you're given explicit permission. When using shared work management tools, just be mindful of who wants and needs access versus who doesn't need access, to do your part in keeping important data safe.

There are so many different ways to share information to your team, whether through meetings, emails, instant messages, spreadsheets, and trackers. By becoming familiar with some of the more common communication tools, you can choose the right one for your project needs.

Test your knowledge: Project communication

1. How should a project team communicate?

- The project team should communicate regularly and in various ways.
- The project team should switch communication tools frequently to increase engagement.
- The project team should stick to email communication since it is standard practice in business.
- The project team should use one mode of communication and rely on it consistently.

 **Correct**

A project team must communicate in multiple ways. A project team can communicate through email, virtual meetings, and various project management tools. This helps the team effectively engage and inform one another throughout the project's duration.

2. Which of the following communication tools could a project manager use to create a project tracking report?

- Zoom
- Slack
- Asana
- Google Meet

 **Correct**

Asana is a work management and collaboration tool that project managers use to plan, report, and track project progress. Asana also supports remote teams and allows coworkers to get work done and communicate in real-time.

3. What are the benefits of communication tools for project managers and project teams? Select all that apply.

- They share external user access to financial, business, and user data files.
- They provide clarity and consistency of project details like key dates, tasks, and milestones.

 **Correct**

When project managers use communication tools to provide clarity and consistency of important project details, their teams can better provide effective guidance and feedback. Communication tools also help project managers effectively format information to share.

- They offer various ways to properly format communication.

 **Correct**

As a project manager, you may need to communicate certain information with the team multiple times and in different ways. When you properly format communications, you help team members more easily digest information to stay engaged and informed. Communication tools can support this type of effective information sharing.

- They help project teams measure individual success compared to others on the team.

4. What information should you include in the *subject* field of an email? Select all that apply.

- Whether the email requires an immediate response

 **Correct**

You need to include your request in the subject line of every email. To do that, you should ensure the subject field states whether the email requires an immediate response. You also want to state what the email is about and address whether the email is urgent.

- Whether the email is urgent

 **Correct**

Email is standard for business communications, and people receive many emails daily. To communicate effectively, you need to be efficient: Streamline the number of emails you send, and ensure each email's subject is clear and direct. The subject field should include the topic, level of urgency, and response expectations.

- What your job title and contact information is

- What the email is about

 **Correct**

The email subject field should clearly state what the email is about. If it's urgent or requires a response, you should also add that to the subject and the first line of the email.

5.2 Organizing And Facilitating Project Meeting

5.2.1 How to organize effective meetings

While the size, purpose, and format of meetings may differ, **effective meetings always have the following elements in common**. They're **structured, intentional, collaborative, and inclusive**.

Structured

First, effective meetings are structured. This means they:

- **start and end on time**
- **attendees have been carefully selected**
- **the meeting topics are prioritized**
- **the designated note taker has been assigned.**

Managing the meeting time and audience lets participants know that they're **valued and appreciated**. Remember that everyone's time is valuable. If someone's presence is unnecessary, you don't need to invite them to the meeting. Maybe you can share the notes. Include people who can contribute to the discussion and anyone who will be directly affected by the topics discussed.

Structured meetings also **have an agenda with prioritized topics**. So the most important items are **given appropriate attention**. It's good to think about and set expectations for how long you expect the group to spend on a given topic. This is defined as **timeboxing**, which just means you're **setting a time limit for discussion**. In a **timebox**, you **give each topic a buffer of a few minutes to make sure you're not over packing your agenda**.

Keep the meeting time in mind and make sure you schedule enough time for the topic you need to cover. If there are several topics you need to address, consider scheduling a few shorter meetings with just one or two topics as their focus. After your first few team meetings, think about the pacing to know if you need to be more generous with the time given to each topic or if the group has time for a little more. If you get through your topics before your time is up, don't be afraid to call a meeting early. Everybody loves having their time back.

Finally, a structured meeting should have a designated note taker. So you or anyone else can refer to the meeting notes later and find out what was discussed. The note taker could be you or another meeting attendee. For this reason be clear about how, when, and to whom the meeting outcomes are shared. Again, this all depends on the type of meeting you're having and who is attending.

Intentional

The next point to consider is that effective meetings are also intentional. This means they **have a clearly stated purpose and expectations**, which should be in the meeting agenda as well as the meeting invite. So everyone understands why they're attending. The **agenda needs to set clear expectations for what needs to occur before and during the meeting. It helps attendees prepare, keeps everyone focused on the right topics, and clarifies meeting expectations and goals**.

The purpose of your meeting might be to make a decision, assign tasks, propose/ invent an idea, or something else. Your **meeting's purpose**, or goal, describes the **reason you're meeting and what you'd like to achieve**. A **well designed agenda increases the group's ability to address problems and prevents wasting time**. For example, you may be reviewing last month's business sales and setting goals for the next month. Maybe your group needs to choose coordinators for an upcoming event. Or your goal could be to have your supervisor prioritize a list of tasks. The purpose might change from meeting to meeting, or it could stay the same. If input is needed by attendees, be sure to send any pre-reading materials in advance of the meeting so that everyone shows up prepared to participate.

Depending on the purpose, meetings can be **formal or informal**, have as few as two or three group members or have hundreds of attendees. Whatever it is, make sure you **state a clear thoughtful purpose and strive to achieve that purpose** by the end of the allotted time.

Collaborative

Collaboration is when **people work together to produce or create something**. There are lots of ways to make your meetings collaborative, even if the purpose is for one person to share important information with the rest of the group.

- **Be sure the agenda isn't just full of presentations** where participants are talked at. Be sure the agenda is clear about the objectives of the session. Will a decision be made, or is the session for information and discussion?
- **Have a digital shared meeting document and encourage participants to write any comments** or thoughts directly in the document. But more importantly, remind them that the notes will be shared. This encourages active listening and participation in real time during the meeting.
- **Respect and embrace each individual's preferred communication style** even in meetings, especially in collaborative meetings. Let folks know they're welcome to respond verbally, through the chat, in the meeting notes, or in any other format you'd like to include.

Inclusive

Inclusivity is the practice or policy of **including people who might otherwise be excluded or marginalized**. When it's done well, inclusion leads to **excellent collaboration**, ensuring that **every participant's contributions are valued**. As a project manager, you play a critical role in ensuring that meeting attendees feel supported and included. So offering additional resources for ways to participate is helpful.

For both in-person and virtual meetings, consider appointing a meeting moderator or facilitator. This person will guide the meeting and help participants ask questions in real-time, while someone else is presenting. This way the presenter can stay focused on their topic while the moderator pays attention to the participants and can help guide participants on when they can chime in. It's also a good idea to leave space in the meeting for participants who've been quiet. At the close of a topic or before the meeting ends, you might consider going around the room once in a while and asking each person to comment on a particular issue or question. I like to call this a final flight check before everyone takes off and goes their separate ways.

A **key component of inclusivity** is **ensuring that your meetings and presentations are accessible**. Another thing to consider is the level of internet access when conducting virtual meetings. For those without strong internet access, provide a phone dialing option. Most online meeting tools, including Google Meet and Zoom, have this option. Let participants know it's okay to turn off their cameras if they need to improve the connection or adjust the video quality. Focusing on inclusion helps build a sense of belonging and serves as a reminder that we live in a world with many different kinds of people. Creating a meeting space where people have different views, backgrounds, and experiences can do their best work and be there for one another is key. These tips aren't exhaustive by any means, but hopefully they can be useful to start empowering others to meaningfully join in and contribute.

When done right, meetings can be incredibly useful communication tools. That's why it's important to be purposeful when designing meetings that are structured, intentional, collaborative, and inclusive. This will earn you a reputation for writing efficient, inclusive, successful meetings where everyone feels appreciated, which is great for your project and your career.

5.2.2 Facilitating inclusive and accessible meetings

In the previous video, we discussed how to organize an effective meeting. Recall that effective meetings generally have four elements in common: they are structured, intentional, collaborative, and inclusive. In this reading, you will explore the fourth element: how to make your meetings more inclusive.

Creating an inclusive environment

Inclusion of employees from different backgrounds and identities is extremely important for any organization looking to build a strong sense of connection in the workplace. Also, when team members feel included, they tend to want to do their best work. This is great for the organization, too. Creating an inclusive environment can be particularly challenging in meetings because they can be intimidating for participants. As a project manager, it is part of your job to facilitate meetings that are inclusive of all participants and that create a sense of emotional safety and value for everyone's active input. In order to help facilitate inclusive meetings that feel empowering to everyone, you should put procedures in place that are consistently followed and predictable.

- **Formalize initial check-ins for the group that build understanding and ensure everyone knows their input is needed.** Create a process that consistently asks each person for an update on their work and/or how they are doing in their daily lives. Questions should be open-ended and vary over time to include some humor, analogies, and “finish the sentence” opportunities. As the project manager, your modeling will set the tone for the team dynamic, so always check-in with your team and model professionalism, vulnerability, and empathy. Popular check-ins include: “A highlight of my week has been . . .” and “This week I have gratitude for . . .”
- **Give everyone your full attention.** Listen carefully to what everyone has to say and be careful not to interrupt someone who is speaking. Body language—such as maintaining eye contact and turning your body in the direction of a speaker—can help someone feel safe in voicing their opinion. Avoid head shaking, looking away, or looking at your phone when someone is speaking.
- **Help all participants to be heard.** Solicit ideas from participants, and ask questions to encourage participation. If someone gets interrupted, redirect everyone’s attention to that person and prompt them to finish their thought. If someone has not spoken yet, ask them what they think. It is important to note that, for some people, speaking up in meetings can be daunting. This can be especially true in virtual meetings or conference calls. This is also true for people who are not the majority in the room and may feel like they are representing an entire group of people who look, sound, or present like them. You may also find that people who are entry-level may be nervous about speaking up too since they are just beginning their careers. You can help people feel more comfortable and supported by letting them know ahead of time that they will be asked to share during a meeting so that they can prepare in advance. You can also solicit input after a meeting from anyone who did not speak.
- **Help participants feel comfortable sharing different perspectives.** Encourage differing or opposing ideas by making clear that alternate viewpoints are valued. To set the tone for this, start the meeting by encouraging competing perspectives. Try to

get at least three points of view on an issue that might have some variation in the room. Follow up after the meeting with a request for additional thoughts.

- **Use images that reflect the diversity of the world.** In your presentation materials and handouts, select images that illustrate diversity in race, gender, age, ability, cultural background, religion, geographical location, and so on. The people in your images should represent diverse backgrounds to further support inclusion, allowing everyone in the room to feel welcome and represented.

Making meetings accessible to everyone

Meetings can't be inclusive if not everyone can fully participate. It is important to make sure that your meetings are accessible to everyone. Accessible means that something is easily used, accessed, or adapted for use by people experiencing disabilities. In meetings, this means that people experiencing disabilities are not excluded from participating or understanding the information shared.

When planning your meetings, you should consider the needs of people experiencing the following types of disabilities:

- **Visual impairments and blindness**
- **Hearing loss and deafness**
- **Mobility disabilities**, which means having difficulty getting around, such as people who require wheelchairs or canes
- **Neurological disorders**

These tips can help you ensure that the following participants have full access to your meetings:

People with visual impairments

Presentation materials

- Use a large font size (minimum 22 points).
- Use high-contrast colors.
- Provide alternative text descriptions for all images, pictures, graphics, tables, and so on.
- Provide low-vision or blind attendees with an accessible electronic format of the presentation.
- Provide presentation materials in an accessible electronic format to participants ahead of time.
- Describe all meaningful graphics in your presentation (such as photos, images, charts, and illustrations).

Handouts and printed materials

- Use a large font size (minimum 18 points).
- Use black lettering on white, matte paper.
- Use a simple font and avoid compressed fonts and italics.
- Use 1.25 to double spacing between lines.

People who are deaf or hard of hearing

- Always face the person you are communicating with. This is especially helpful for audience members who are speech readers.
- Speak clearly, at a moderate pace and volume, and allow the other person time to respond. Avoid exaggerating, slowing your speech, or speaking loudly.
- Ask for clarification if you don't understand something the person is communicating.
- Include all of the information presented in a spoken presentation on slides.
- Add closed captions or subtitles to videos. [YouTube Help](#) provides instructions for adding your own closed captions to your videos.

People with mobility impairments

- Provide ample circulation space in your meeting room so that people using mobility devices can easily pass through.
- Offer accessible seating locations throughout the room.
- For presentations, use half-round seating so that all participants may face in the direction of the speaker.

People with neurological disorders

- Provide an agenda or task list to allow time for participants to understand content and expectations
- Make sure any video call platform you use allows closed captioning
- Be sure to record the meeting, and provide easy access to the recording to all meeting participants
- For handouts or presentations, use simple page layouts that are easy to understand and use.
- For resource materials, break up passages of text with images, graphs, or illustrations to highlight the context
- Avoid using presentations with moving or flickering content, or background audio that cannot be turned off

Key takeaway

Creating meetings that are inclusive and accessible to all participants will improve your team's engagement, productivity, and morale.

5.2.3 Checklist for productive meetings

You may have attended a few meetings that you did not think were the best use of your time. Frequent and unproductive meetings tend to have a negative impact on individual and team productivity and well-being. In this reading, you will learn best practices for ensuring productivity before, during and after meetings.

Plenty of things can make meetings unproductive, but an internal study at Google revealed that productive meetings have three elements in common:

1. Active participation from attendees
2. A clear and concise agenda that is followed throughout

3. The correct attendees (meaning the participants can contribute to achieving the meeting's goal)

Follow this checklist to help achieve these aims and facilitate more productive meetings for you and your project team:

Before the meeting

- Prepare an agenda that states the purpose and goals of the meeting, and share the agenda with participants.
- Only invite people who need to be there and who can help reach the goals of the meeting. Make participants' roles and responsibilities for the meeting clear. Add non-essential participants as optional to the meeting invitation.
- If you are working with people in different time zones, share the time zone burden by alternating recurring meeting times.
- Evaluate the need for the meeting and cancel if it isn't necessary. Consider whether the meeting content can be covered via email.
- Schedule shorter meetings. Meetings tend to expand to the time allotted to them, so try to get more done in a shorter amount of time.
- Set aside time to prepare for the meeting. Read the necessary materials, review the agenda, and come ready to participate.

During the meeting

- At the beginning of the meeting, clearly state the meeting goals. Stick to the agenda throughout the meeting to avoid getting derailed. For recurring meetings, review the action items from the previous meeting to ensure accountability.
- Encourage participants to put phones and laptops away during meetings and silence notifications, if possible.
- Practice and demonstrate active listening. Respond verbally (e.g., "That makes sense. Tell us more.") and non-verbally (through head nodding and eye contact) to show engagement.
- Encourage participation and give everyone a chance to speak, including remote participants. Ask open-ended questions like, "What does everyone think?" instead of "Does everyone agree?"
- Help everyone relax and feel more comfortable by starting meetings with open-ended, personal questions like, "How was your weekend?"
- Capture key points, action items, and decisions from the meeting, and assign action items to the appropriate meeting participants.

After the meeting

- Recap key decisions, action items, timelines, and notes and send out to participants.
- Schedule necessary follow-up meetings with relevant context.
- Assess the need for and frequency of recurring meetings. Schedule meetings less frequently, if possible.

Pro Tip: If you are new to the company or team, find out about and try to apply their typical meeting practices before making any major changes.

Key takeaway

Productive meetings generally require active participation from attendees, a clear and concise agenda that is followed throughout, and the correct attendees. Following the best practices for before, during, and after meetings described here can help you have more productive meetings. When less time is needed for meetings because meetings are more productive, more time can be devoted to project tasks.

Test your knowledge: Effective meetings

1. Fill in the blank: For a project manager to organize an effective meeting, they must carefully select all attendees and prioritize meeting topics in a(n) _____.

- agenda
- schedule
- communication plan
- project plan

 **Correct**

An agenda includes a meeting's prioritized topics, as well as a clearly-stated purpose and expectations. The project manager needs to prepare a clearly-written agenda and share it with all attendees in advance of the meeting. This ensures the meeting is intentional and structured.

2. Which of the following statements best describe effective meetings?

- They are virtual, quick, frequent, and straightforward.
- They are structured, intentional, collaborative, and inclusive.
- They are in-person, engaging, motivational, and anticipated.
- They are clear, important, relevant, and frequent.

 **Correct**

Effective meetings always have these elements in common, even if the size, purpose, and format of the meetings are different. To ensure meetings have these elements, project managers need to be purposeful when designing and organizing meetings.

3. What are some actions to take to ensure productivity *during* a meeting? Select all that apply.

- Determine the need for the meeting.
- Practice and demonstrate active listening.

 **Correct**

During the meeting, you can model active listening to demonstrate engagement. Use verbal statements like, "That makes sense. Tell us more." You can also use non-verbal statements like head nodding and eye contact.

- Capture key points, action items, and decisions.

 **Correct**

During the meeting, there are several items you should document. Along with assigning action items to the appropriate people, you should also capture key points and decisions. *After* the meeting, you can share these notes with participants and schedule follow-ups if needed.

- Email a recap of key decisions to participants
- Prepare an agenda.
- Encourage participation.

 **Correct**

During the meeting, you should always give everyone a chance to speak, including remote participants. You can also encourage deeper participation when you ask open-ended questions like “What does everyone think?”

4. Why is it important to clearly state a meeting's purpose and expectations in the agenda? Select all that apply.

- To replace a meeting with a detailed communication
- To keep participants focused on the right topics

 **Correct**

The purpose of a meeting might be to make a decision, assign tasks, propose an idea, or something else. The meeting's purpose, or goal, describes the reason for the meeting and what the team should discuss. This helps participants focus on the right topics.

- To ensure everyone understands why they're attending

 **Correct**

It is important that each meeting has clear expectations, goals, and a well-articulated purpose. When participants receive the meeting invite and agenda, this information helps them understand why they have been asked to attend.

- To help meeting attendees prepare

 **Correct**

It is a best practice to share a meeting agenda with participants in advance. The information about meeting goals and expectations helps attendees prepare.

5.2.4 Common types of project meetings

Every project has meetings, lots of meetings. While every meeting is unique, being familiar with the most common types of project management meetings will help you better identify the goals, structure, and activities best suited for each one. There are **four general types of project management meetings: project kick-off, status updates, stakeholder reviews, and project reviews**.

Project kick-off meeting

This is often considered the **official beginning of a project and serves as a way to align the team's understanding of the project goals with actual plans and procedures**. Members of your team are the major attendees of your kickoff meeting. But the participation of senior management and key stakeholders is also required for securing buy-in and ensuring alignment with project goals.

Status update meetings

Status update meetings are one of the most common types of meetings. This category includes **regular team meetings** where the primary goal is to **align the team on updates, progress, challenges, and next steps**. During the meeting, the project manager may distribute or present project performance reports and formal status updates on key elements of the project. This allows the team and stakeholders to gain visibility into current performance levels and task progress.

One of the project manager's key responsibilities is to be aware of the status of the project at any given time and to ensure that others are up to speed or know where to find the latest information. In order to do that, status updates become a critical tool throughout the life cycle of a project to check in on the project. Typically, you'll assess the status of each of the following topics during this meeting.

- **Task updates.** It is important for the attendees to know, what is the status of the most urgent tasks? How many tasks have been completed, and how many open items remain?
- **Schedule status.** Are we behind schedule? Ahead of schedule? Or on pace with our projections?
- **Budget status** and any new items that impact your bottom line.
- **Current or anticipated issues.** For example, changes, risks, resource issues, vendor issues, and so on. Particularly changes to quality and scope. It's always a good idea to raise these items on a recurring basis so that no one is caught off guard and you can discuss solutions together.
- **Action items.** An **action item is a task on your list that needs to be completed**. Assigning action items is a great way to wrap up the meeting and make sure the project keeps forging ahead. Remember, every action item has an owner and a due date.

The status meeting is a fundamental project tool that keeps the project on track. Most project managers recommend using a relatively fixed agenda and time with this meeting. To keep the team engaged, follow the agenda, and hold the meeting to a tight schedule. Because the project manager should be able to report up-to-date information to the project sponsors or clients at any time, it's important to conduct status meetings regularly.

Status meetings are beneficial because they provide an opportunity for **recognizing milestones, sharing information, and raising concerns** to the team. **How often** you decide to schedule these meetings depends on several factors, such as the **project's complexity, number of team members**, and the **level of information** required by the

project sponsor, clients, or others. Don't be afraid to change up the cadence as your project progresses.

Stakeholder meeting

Stakeholder engagement is essential for a successful project management. The goal of a stakeholder meeting is to **get buy-in and support**. Stakeholders, each have their own set of tools, know-how, and expertise. Stakeholder meetings are where these contributions are outlined and utilized.

You'll need to **start by understanding a stakeholder's challenges or problems**. Then **respond accordingly and make necessary adjustments** to resolve those challenges. Winning and sustaining the support of your stakeholders is important to your project's success. In some cases, you might want to have stakeholder meetings on a **one-on-one basis**. This allows you to dive deeper on relevant details with each stakeholder. Then you can cover the topics that are most interesting and concerning to that particular person.

Other times you'll need to **engage stakeholders in groups**. If you have a large number of stakeholders to manage, focus the meeting on your project's most influential stakeholders. Identify appropriate stakeholders for high touch communication. For example, you may focus the meeting on senior managers from each of the groups you need to engage. Other stakeholders can be informed using other methods, such as email or meeting notes. While there are a number of potential topics to cover when meeting with stakeholders, most meetings are limited to communicating critical information. You should always be able to present a project update. Start the meeting with a short overall project's status update of 2-5 minutes.

Another key reason to meet with stakeholders is to **seek out and listen to feedback**. Or you might meet with stakeholders to **make a decision or resolve a major issue** surrounding your project. In this case, you'll often meet with senior leaders and the project sponsor. Decisions could include go, or no-go decisions, a choice between options, or signing off on investments.

Stakeholder meetings are generally more formal. It's normal to prepare reading materials and documents to review ahead of time to help get people in the right mindset for the meeting. Stakeholder meetings can be regular and recurring, or just a one-off project meeting. The frequency will depend on why the stakeholder is involved in the project. Are they playing an advisory role such as a consultant in a RACI, or just someone to inform and keep in the loop? Does their involvement center around just one activity on the project, or do they need to stay involved on a longer-term basis? You'll need to decide on a case-by-case basis.

Retrospective meeting

The end of the project or the end of the project phase is an excellent opportunity to **review how the project unfolded**. This is called a retrospective. A typical retrospective meeting agenda includes **reviewing lessons learned about what's going well, what you should keep doing, and what can be improved**. Equally important to reviewing lessons learned is taking the **opportunity to celebrate the project's success**.

Knowing the difference between these project meeting types allows you to maximize productivity and ensure that you're not wasting time. You'll get the right outcome for each type of meeting, which will help drive decisions and lead to proactive positive actions.

5.2.5 Identify: Types of project meetings

As project manager for an event management company, you're planning a charity auction for student scholarships. As the project unfolds, pick the right type of meeting for each situation.

Project scenario	Best Meeting Type
One of the school leaders knows a famous artist who may be willing to donate a painting to the auction. You meet with them to discuss getting the artist involved.	Stakeholder Meeting
Your team navigated some major challenges in planning the auction. You bring them together to discuss lessons learned and areas for improvement.	Retrospective
You don't have enough staff to work the event and want to hire more support. You escalate the issue to senior leadership to discuss your solution.	Stakeholder Meeting
You're checking in on the status of the promotional materials. You also need to assign team members to check in with the venue, caterer, and auctioneer.	Status Update
The auction was a huge success, so you gather the team to celebrate your achievements.	Retrospective
You need to align your stakeholders on project goals, so you invite your team, the project sponsor, parents, and school leaders.	Project Kickoff
Your attendees don't have a lot of time, so you plan to start the meeting with a high-level project update. You'll also provide a handout with fundraising projections.	Stakeholder Meeting
The travel agency that agreed to supply two weekend getaways may have to pull out. You tell your team about this risk so they can make a backup plan.	Status Update

Weekly Challenge 5

1. When communicating with your team, it's important to remember that people process information and learn in various ways. What do these ways include? Select all that apply.

Email

Watching

Correct

Listening

Correct

Doing

Correct

2. Which three of the following are benefits of work management and collaboration tools, such as Asana and Smartsheet?

Complete work in real time.

Correct

Focus communication within the context of specific tasks.

Correct

Share information and documents easily.

Correct

Run effective virtual meetings.

Send instant messages to teammates.

3. A project manager schedules a meeting with their team members. What can they include in the description of the meeting to ensure it is structured and intentional?

The budget and timeline of the project

Team members' opinions of each other

The agenda and task priorities of the project

Stakeholder feedback on the team members

Correct

4. What is a benefit of making project meetings more accessible?

- Project managers will get good reviews and a bonus.
- Stakeholders will provide better feedback for the project manager.
- Team members feel included during the project meetings.
- Project managers get to assign more tasks to team members.

 **Correct**

5. A project manager wraps up the execution phase of a project and needs to schedule a meeting to reflect on what went well and potential improvements for the future. What type of meeting can they schedule?

- Project kickoff
- Project status updates
- Retrospective
- Stakeholder review

 **Correct**

6. Which of the following is a best practice when trying to keep your content concise in an email?

- Leave out key information in the email so that the reader has engaging questions.
- Send the same email content to both executives and teammates.
- Think of all questions the reader may have and answer them in the email.
- Remove any details in the email that don't contribute to your readers' needs.

 **Correct**

7. A project manager prepares a document for team members to reference during the meeting. How can they ensure that the document is accessible?

- Use single-line spacing between lines.
- Make all text bold so that it is easier to read.
- Use regular font size for all text in the document.
- Avoid compressed fonts in the document.

 **Correct**

8. A project manager schedules a recurring meeting with team members across different time zones. What best practice can they employ to ensure the meeting is productive?

- Alternate the meeting time across time zones so that all team members feel equal priority.
- Prioritize the stakeholder's availability when scheduling the meeting.
- Keep the meeting times as early as possible for the project manager.
- Keep the meeting time for all team members exactly the same for the duration of the project.

 **Correct**

9. In a status update meeting, what questions does the project manager typically address? Select all that apply.

- What lessons can the team learn about what's going well?
- How many tasks have been completed and how many remain?

 **Correct**

- Are there any current or anticipated issues?

 **Correct**

- Is the team behind schedule, ahead of schedule, or on-schedule?

 **Correct**

- Are there any new costs that affect the bottom line?

 **Correct**

10. In what type of meeting does the project manager meet with participants one-on-one in order to cover topics most relevant to them and to better understand their concerns?

- Stakeholder review
- Status update
- Project kickoff
- Retrospective

 **Correct**

Week 6 : Closing A Project

Learning Objectives

- Determine when a project is complete and explain why closing a project is important.
- Describe the steps of the closing process for stakeholders, the project team, and project managers.
- Create project closing documentation and communicate it with the project team and stakeholders.

6.1 Understanding Project Closure

6.1.1 The importance of project closure

Project closing consists of the **process performed to formally complete the project, the current phase, and contractual obligations**. The first thing you should know is that **completing a project is not the same thing as closing a project**. Just because a project is done doesn't mean it's closed. In a restaurant, just because you've ordered your meal and finished it, doesn't mean your dining experience is over. You have to pay the bill before you leave. It's the same idea with projects.

There are **three criteria that make up a project closing**.

Assure all work is done

First, you must assure all work is done. There's a chance one of your tasks may have been overlooked. Let's say there was a change made that called for reprioritizing work during the project. For instance, when your team completed user acceptance testing for Project Plant Pals, everything was finished and wrapped up. But months later, a customer searches for allergy information about the plants on Office Green's site, but that information is nowhere to be found. If you did a review before wrapping the project, you might have found that this task, creating allergy documentation, was overlooked and therefore not completed. In doing a review of the project, you double- and triple-check that all work is done to avoid having to revisit the project later on.

Ensure all agreed upon project management processes are executed

Sometimes, managerial tasks get overlooked. If the task itself is finished, the procedural or administrative work that needs to take place afterwards might slip your mind. An example might be getting contracts signed and processed. It might have been months since the project was completed, but when you revisit the contract with your plant provider, you realize that neither of you ended up actually signing it. This is a crucial misstep that leaves both parties vulnerable, and it's now taking place way after the new services official launch.

Formal recognition and agreement that the project is complete by key stakeholders

If you don't have formal approval from all stakeholders that a project is over, certain stakeholders may still request adjustments to the project because they'll think it's still active. This may affect various members of your team. For instance, if Office Green's contracted web developers believe that the project is still active, they may still be dedicating time and even billing hours of work on this project, which means wasted money for Office Green.

In the same way that all of the previous phases of the process, like initiation, planning, executing, monitoring, and controlling serve a purpose, closing serves its own, equally important purpose. Closing a project is important because it **ensures that nothing has fallen through the cracks. If a project isn't closed, your team's efforts, time, and credibility may be negatively impacted.**

To avoid negative impacts to your team, there are a **couple of different types of projects** that you'll want to know about and **avoid**. These are the **never-ending project** and the **abandoned project**.

- **The never-ending project** exists when **the project deliverables and tasks cannot be completed**. This may occur when tasks are delegated to team members who **don't have the skills necessary** to complete the tasks or when **deadlines aren't properly communicated**, maybe when user acceptance testing yields too many non-launch blocking bugs, or when your client is unsatisfied, despite meeting their requirements. Pay special attention to protecting the scope of your project, and you're much more likely to close a project successfully. If it feels like the customer wants much more from you than this project is slated to deliver, maybe the best option is to commit to a follow-up project and close the current one.
- **The abandoned project** exists when **inadequate handoff of the project deliverables occurs**. Basically, the **final deliverable never makes it to your customer**. It wouldn't make sense to build a product and then not be able to market it or sell it. Making plans to ensure an adequate handoff or transition deliverables is crucial to ensure customers are happy and projects are properly closed.

In summary, you'll want to do everything you can to properly close a project because it may leave you on the hook for incomplete contracts, incomplete scope, or non-compliant practices.

6.1.2 Case study: The impact of skipping project closure steps

In the video, we discussed the importance of the last phase of the project life cycle: closing the project. You learned that, in order to close a project, you must ensure that:

- All work is done.
- All agreed-upon project management processes have been executed.
- You have received formal recognition and agreement from key stakeholders that the project is done.

In this reading, we will discuss the impact of skipping important project closure steps.

Sometimes project closure is improperly conducted or never happens at all. This can have a major impact on your organization's overall profitability and success. Skipping the closure phase can compromise a project that had otherwise been running smoothly. No matter how successful the project may look in its final stages, your job as a project manager is not complete until all steps of the closure phase have been completed.

Case study: Tilly's Toys

In order to better understand what can happen when a project is not properly closed out, let's examine a possible scenario: Tilly's Toys, a small children's toy manufacturer, developed a new interactive piggy bank that speaks and plays songs to help children learn number recognition, counting, and adding. Below are several oversights that occurred as a result of not properly closing out the project.

Oversight #1: Not all of the work was completed.

What happened: When Tilly's Toys received the final toy box from the packager, they realized that it did not include the safety disclaimer that the toy includes small parts and should not be used by children under the age of three. The design of this disclaimer had been included in the original Statement of Work but was never completed.

Impact on the organization: When the missing disclaimer was discovered, Tilly's Toys was not able to use any of the boxes that had been created. They incurred significant costs to have the packager create all new boxes including the disclaimer. Having to recreate the boxes also meant that they were not able to meet their original launch date, which would have had the toys in stores before the holiday season. This oversight cost the organization additional revenue and extended the project timeline and resources.

Oversight #2: The organization did not complete an important agreed upon project management process.

What happened: Tilly's Toys customer, a regional chain of toy stores, required that all contractors working on the project sign a non-disclosure agreement (NDA). The NDA stated that the contractors would not disclose any information about the toy until its launch date. One of the educational experts contracted to review the toy was never given this NDA. Not having received—or signed—this important form, the contractor posted about the new toy on social media months before the toy's launch date.

Impact on the organization: Sharing information with the public before the toy was launched was a breach of contract between Tilly's Toys and their customer. This breach put Tilly's Toys at significant legal risk.

Oversight #3: Stakeholders and the project manager did not provide formal recognition and agreement that the project was done.

What happened: Ames, the project manager, communicated with the customer throughout the toy's development about their objectives for the toy. After the previous oversights were rectified and Ames assumed his team was done with the project, he released the team to

work on other projects. Shortly after, the customer sent a list of additional changes they wanted to see in the toy's design.

Impact on the organization: Ames had to tell the customer that it was too late to implement their design requests. The customer was unhappy and told Ames that they may consider using a different toy manufacturer in the future.

Avoiding the impact of project closure oversights

Oversights or skipping steps in the closing phase of a project can:

- Impact the product's or service's scheduled launch dates.
- Put your organization at legal risk.
- Result in significant financial losses to your organization.
- Undermine your team's credibility, and yours.
- Damage your relationship with the customer or client.

All of the steps of the project life cycle—initiating the project, making a plan, executing and completing tasks, and closing the project—are essential for a successful outcome. Unfortunately, closing the project is a phase that too often gets skipped, which can negatively impact both the project manager and their organization. To avoid these issues, make sure to plan for this phase just as you would any of the other project life cycle phases.

Test your knowledge: Closing a project

1. Which of the following criteria must be met in order to close a project? Select all that apply.

Project work has been completed

 **Correct**

In order to close a project, all project work must be done. This includes big and small tasks. Beyond project tasks, it's important that everyone agrees the project is over and that no procedural or administrative work is outstanding.

Project team members have started new positions

Key stakeholders have acknowledged and agreed that the project is complete

 **Correct**

All stakeholders must agree that a project is done. Otherwise, certain stakeholders may think the project is still active and request adjustments. Beyond stakeholder confirmation, it's important that project work is wrapped up and that no procedural or administrative work is outstanding.

Agreed-upon project management processes have been executed

 **Correct**

Project managers must ensure all managerial tasks are complete before closing a project. This includes all procedural and administrative work, like processing contracts. Beyond management tasks, it's important that everyone agrees the project is over and that project work is wrapped up.

2. Which type of projects should a project manager avoid getting involved in because it can negatively impact their team? Select all that apply.

- Challenging projects
- Short-term projects
- Never-ending projects

 **Correct**

Since a never-ending project has never been successfully closed, it may negatively impact the team or organization. Project managers should pay close attention to protecting the project scope to avoid never-ending projects.

- Abandoned projects

 **Correct**

Project managers should avoid projects that can cause liabilities to their organization and leave them with extra work. Since an abandoned project is an incomplete project, it may negatively impact the team.

3. What type of project exists when an incomplete handoff results in a final deliverable that never reaches the customer?

- Scope-protected project
- Abandoned project
- Never-ending project
- Closed project

 **Correct**

An abandoned project exists when there is an incomplete handoff. As a result, customers never receive the final project deliverable. That's why project managers need to plan for a smooth handoff to satisfy customers and properly close projects.

4. What type of project exists when project deliverables and tasks cannot be completed?

- Never-ending project
- Closed project
- Scope-protected project
- Abandoned project

 **Correct**

The never-ending project may create negative impacts for the team, since project deliverables and tasks cannot be completed. This may result from unclear deadlines, tasks delegated to the wrong team member, product bugs, and more.

6.2 The Steps Of The Closing Process

6.2.1 The closing process for clients and stakeholders

A formal closing process is important not only because improper closing may leave you on the hook for incomplete contracts or incomplete scope, but also because you want stakeholders to feel like their needs were met. As we mentioned earlier, a project team's relationship with customers, users, vendors, and so on can be impacted by loose ends. If relationships are impacted negatively, your team's credibility may be impacted.

Typically, stakeholders set the goals and scope of the project alongside the project manager, so a good project manager will always want to make sure those stakeholders are satisfied with the quality of deliverables and the end product too. So how can you make sure that clients and key stakeholders are happy with the project closing?

First, you'll want to decide if your project warrants a small closing process at the end of each milestone or a formal and more comprehensive closing phase near the very end. You may even decide to do both the small closing process at the end of each milestone and a more formal closing phase at the very end. You'll determine this by asking yourself if a particular milestone is final, meaning the milestone will not need to be readdressed at a later time in the project. If so, having a short, formal closeout will ensure that everyone is clear on the outcomes of that particular milestone. For example, let's put this in the context of the Project Plant Pals website launch. Launching the website is an official milestone, so having a formal close out to the website launch might make sense. Yes, there will still be ongoing updates and maintenance to the site, but it won't be launched again. The launch is a one-time event. You need to make sure you're handing over deliverables, putting together the proper documentation, and alerting all stakeholders that you've reached that milestone and that portion of the project is now closed.

If you decide to conduct closing processes after each phase or milestone, here is what that will look like for your team. First, you'll ensure that the project has satisfied the strategic goals that it was intended to meet. To begin, you'll want to:

- Refer to prior documentation such as your statement of work, request for proposal, risk register, and RACI chart. You recall that these documents were discussed in previous sections, so feel free to revisit those as a refresher. While doing so, ask yourself, was all of the required work in the elapsed phase done? Were all identified issues addressed? Did every team member complete their assigned tasks?
- Put together closing documentation such as creating closeout reports, which we'll cover in depth later. You'll build and review that documentation with team members to make sure that every aspect of the project has been discussed. You'll also review notes from any retrospectives you and your team participated in. This way, your team members will get a chance to speak about the aspects they liked or didn't like, and they'll leave with a sense of closure.
- Conduct administrative closure of the procurement process. Close any contracts necessary, deliver the payments to vendors, and retrieve all final deliverables from contracted workers. This is really important so that external stakeholders and contracted workers can understand that the phase or the project is

officially over. Then you'll want to formally recognize the completion of the phase, if necessary.

- **Make sure all stakeholders are aware that a phase or project is ending.** This may be as simple as **sending out an email** notifying them that you've achieved this milestone or may **warrant a larger meeting**.
- **Complete any necessary follow-up work.** This includes things like **gathering final feedback** and **conducting closing surveys**. This way, you'll proactively help stakeholders with future issues by following up and offering support.

If you've decided to **close at the very end of your project**, your process may be a little bit different. Here is what that might look like.

- **Provide the necessary training, tools, documentation, and capabilities to use your product.** This includes things like **manuals and how-to guides**, which gives your customers and users an understanding of how to use your product or service after the project is closed.
- **Ensure that the project has satisfied its goals and desired outcomes.** Review the project to make sure that all tasks and deliverables were completed and nothing is missing. Did you accomplish what you set out to do? Is the full scope of work completed?
- **Document acceptance from all stakeholders** like clients and sponsors. Ensuring that you have written proof that stakeholders are happy with the deliverables and outcomes is very important. This could be in retrospectives, a project completion document, or any other formal signoff.
- **Review all contracts and documentation** with your project team. This includes things like your SOW, RFP, RACI chart, risk register, and the procurement documents that we discussed earlier. Including your whole team in this review process will help you make sure that nothing is missed.
- Document your lessons learned by **conducting a formal retrospective**. Include your team, any other teams involved, your stakeholders, and outside vendors in this meeting.
- **Disband and thank the project team.**

The next important step in closing a project for the stakeholders is **impact reporting**. **Impact reporting is a presentation that's given at the end of a project for key stakeholders**, which typically **includes the stakeholders you had in the initial kick-off meeting**. The purpose of impact reporting is to **demonstrate how the project went** and **discuss the impact of your product or service**. It's important for the project manager because you'll be able to demonstrate the success of your project on your terms and present the work you did to add value to the business.

6.2.2 Demonstrating project impact to stakeholders

Previously, you learned why completing the closing phase of the project life cycle is important. As we discussed, a formal closing process is essential because improper closing may leave you at risk for incomplete contracts and scope. It is also important to make sure that all stakeholders feel like their needs are met and to review areas for improvements in the future.

In this reading, we will further discuss how to demonstrate the impact of your project to your stakeholders through **impact reporting**. Impact reporting is a presentation or formal report prepared for key stakeholders at the end of a project.

Highlight key performance areas

The purpose of your impact report is to show your key stakeholders the impact your project had on the organization. Goals, objectives, budget, schedules, and key performance indicators (KPIs) need to be determined at the beginning of your project. Your impact report should demonstrate how well you did against those early targets. In your report, you should also answer the question: What was the problem we were trying to solve, and how did we solve it? This will help you showcase the value your project outcome brought to the business.

Highlight these key performance areas to demonstrate to your stakeholders how you achieved successful results and outcomes:

- First, describe the goals and objectives you set for the project and what you hoped to have achieved by the end.
- Then, describe how you met those objectives against your KPIs. A KPI is a measurable value that demonstrates how effective a company is at achieving their objectives. In your impact report, review how you defined the success of your project at the beginning, and highlight the outcomes you achieved that demonstrate this success.
- Finally, showcase your schedule and budget performance by outlining your cost savings and efficiencies. Demonstrate that you met the deadlines set in your project scope and that your project was completed within budget.

Use metrics to showcase your results

Use facts and statistics to highlight the results you achieved related to the performance areas described in the section above. Examples of common metrics you might include to demonstrate a positive impact could include:

- Improvement in schedule performance
- Revenue growth
- Positive return on investment (ROI)
- Increased external user counts
- Increased percentage of internal users
- Cost vs. margins
- High percentage of customer satisfaction
- Reduction in overhead
- Reduction in technical issues
- Time saved

Metrics and data points are one of the best ways to present impact. Throughout your project, collect data and track progress in each of the areas you want to measure. If you can complement your metrics with the appropriate visuals and tie them back to the project's larger goals, you can quickly demonstrate your project's success and value.

Prepare an effective impact report presentation

An effective presentation can help your stakeholders understand your project's impact. In order to successfully convey all of the information you have prepared:

- **Be concise.** While you should share metrics that illustrate how you achieved your project goals, you do not need to include extraneous details. For clarity, organize information by using bullet points instead of paragraphs.
- **Understand your audience.** Make sure that your report does not use too much technical language or jargon to help your stakeholders understand it.
- **Use visuals.** Use a digital presentation application, such as Google Slides, Microsoft PowerPoint, or Canva to present your impact report. Add diagrams, such as charts and graphs, to illustrate your results. Use images to add visual interest. Add icons to draw attention to information and help your stakeholders quickly understand information.
- **Describe your learnings.** Discuss lessons you learned during the course of the project and any areas you have identified for improvement.
- **Keep your stakeholders engaged.** Grab and keep your stakeholders' attention by varying the way that you present your data:
 1. **Show:** Play videos of demos, testimonials, or case studies.
 2. **Storytell:** Tell a story or anecdote related to the data in the report.
 3. **Engage:** Ask for audience participation through questions, surveys, or quizzes.

Key takeaways

As a project manager, impact reporting is a great opportunity to demonstrate the impact of your project and the value you bring to your organization. By highlighting key performance areas, using metrics to showcase results, and preparing an effective presentation, you can impress your stakeholders and convince them of your project's success.

6.2.3 The closing process for the team

I've talked to you about retrospectives quite a bit throughout this program, and that's because there really is no better tool for reflection and improvement. Retrospectives are such an important aspect of the project, and it's important to really emphasize that to you. Throughout the course, I'm referring to the formal practice, but a lot of us conduct informal retrospectives daily without even knowing it. Whether we're talking about our day with our friends or family or thinking about how we can improve past interactions, we are constantly reflecting and working toward progress. Let's revisit formal retrospectives for a moment to explore how they tie into the formal project closing process.

You might remember that **a retrospective is a meeting aimed to discuss successes, failures, and possible improvements on the project**. They can **occur after a major milestone completion and at the end of a project**. In order to understand the importance of closing a project, let's discuss the **three main retrospective benefits** for your team.

- **Encourage team-building** because they **allow team members to understand differing perspectives**.
- **Facilitate improved collaboration on future projects**

- Promote positive changes in future procedures and processes.

So it's no surprise that a retrospective is a critical part of closing a project. Whether your team has chosen to close the project after each phase or comprehensively at the end, you'll **conduct retrospectives as a part of that process**. There may be temptation within your project team to resist reflecting before forging ahead into the next phase, but you can't grow and improve if you don't spend time reflecting. **Reflecting is a great way to learn which practices you should keep doing and which ones you can improve upon.**

As a project manager, you want to build a culture within your team and company to aim for **constant improvements**. This means that you'll need to **solicit feedback that will help you to do better in your next project**. This feedback might touch on any aspect of the project, from **planning, scheduling, execution, communication, or team dynamics**. You might receive feedback about processes you led, and that's okay. Working through feedback is crucial to your growth as a project manager. It's important to create a safe space for that feedback so that folks can really share what they're thinking and the team can grow together. This is a key piece to help improve collaborations on future projects.

Part of **encouraging continuous growth** is to **recognize and celebrate a job well done**. The way you celebrate will change depending on where you're at in the project and what feels most appropriate to your team. Taking a moment to reward yourself with a token of appreciation turns the celebration into a team-building exercise. **Being appreciative ensures that the work you're doing feels uplifting and rewarding**, rather than monotonous and tiring. It also fuels positive change. So when closing a project, **don't forget the fun elements**. Make sure to play a game, eat some cake, and celebrate some quality time together, because you've earned it.

6.2.4 The closing process for the project manager

For a project manager, it's important to close the project properly for a number of reasons. **Closing provides an opportunity to reflect on how you and your team performed, ensure every task is completed, and prevent confusion around the project in the future.**

One of the most important aspects of thoroughly closing a project is the **project closeout report**. A project closeout report is a document created by project managers for project managers. A project closeout report serves three major purposes.

- It's a blueprint to document what the team did, how they did it, and what they delivered.
- It provides an evaluation of the quality of work.
- It evaluates the project's performance with respect to budget and schedule.

Similar to the retrospective, the project closeout report **can be used to determine best practices when it comes to future projects**. Think of it as a transfer of knowledge from **you to future project managers**. For instance, once a project closes, there's a chance a similar project or a continuation of that project will come up within the organization, and maybe a different project manager is assigned to this new project while you go on to other

things. If you create an in-depth closeout report, it will help the newly-assigned project manager immensely to know what happened previously on a similar project.

Your **closeout report could include things that worked out well and things that didn't work** out so well. Creating a closeout report will also **reduce the time you spend answering questions as the new project manager gets up to speed**. It's safe to assume that the people reading your report in the future will be unfamiliar with the project, so be as detailed as possible. That way the new project team will be able to form an understanding of the purpose, execution, and outcome of the project based on your report alone.

In your project closeout report, you'll want to include the following things:

- **An executive summary:** a description of the process and what the purpose of the project was. This should be short and concise; a few sentences to a paragraph, maximum. If an executive did not have time to read the entire document and only had time to read this executive summary, would they be able to understand the project highlights?
- **A list of key accomplishments:** think of this as a way to highlight the team's accomplishments, as well as the overall impact of the project.
- **Lessons learned:** what went well, and why? What went wrong, and why? What were the major effects of key problem areas, such as scope creep and schedule slip?
- **Open items:** things you didn't quite get to or ideas for changes you'd make if you'd had the time.
- **Next steps:** are there expected follow up projects, and is there any ongoing maintenance required?
- **Schedule and important deadlines:** what were your milestones, and how did you choose them? How long did the project take? Did the project stay on track? And any information about major setbacks. Be sure to list resources and team members. Explain who is involved and what their roles were. This is also a key way to acknowledge people who contributed to the project's completion.
- **Resources and project archive section.** This will include links to things like your original project plan, any documented stakeholder communication and feedback (like meeting notes), and documentation used to track, monitor, and report, and any technical information related to the project deliverables like user guides and manuals.

6.2.5 Explore: The closing process

Special Effects Studios just delivered an important scene to a film. As project manager, it's time for you to close out this phase of the project and report on its impact.

1. Conduct closing processes for this phase

Put together closing documentation

Compile your closeout report and add the notes from your recent team retrospective. Together, these documents represent the consensus of your team regarding what went well and what needs improvement.

Refer to prior documentation

Revisit the statement of work for the scene, as well as the risk register and the project plan. Check that your team completed each of their assigned tasks, and that you delivered on all of the required work.

Complete any necessary follow-up work

Ensure that your team follows up on the action items that you established during your retrospective. Follow up with your outside vendors to uncover any final pieces of feedback about the project phase.

Make sure all stakeholders are aware that this phase is ending

Compose an email to all stakeholders to let them know you're finished with the scene. As a bonus, you can include a 30-second clip to preview the deliverable.

Conduct administrative closure of the procurement process

The scene required some specialized vendors and it's time to close out their contracts and pay them. It's also time to return props that were on loan from a science fiction museum.

2. Who benefits from project closeout reporting?

Closing report detail	People who benefits
Retrospective meeting and documentation From the team retrospective, you include a recap of action items assigned to specific team members, as well as likes/dislikes from the team discussion.	Project team
Report on tasks completed per team member You create a chart showing the distribution of tasks across the entire team, demonstrating collective work toward your common goal.	Project team
List of items for ongoing maintenance Knowing that the scene has some dependencies on other parts of the film yet to be finalized, you make sure to document how these are accounted for in future work.	Project manager
Feedback on how project was structured and executed You document feedback from the retrospective on how you managed the project. You also add recommendations on how to improve work on future scenes.	Project manager
Summarize project accomplishments against key performance indicators (KPIs) You review how you defined the scene's success at the beginning of the project, and highlight key outcomes that show you achieved that success.	Stakeholder

<p>Report on schedule and budget performance You use project data to create a chart showing the project timeline and budget, highlighting areas where you had costs savings and efficiencies.</p>	Stakeholder
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6.2.6 Activity: Create a project closeout report

Activity Overview

In this activity, you will create a project closeout report to leave behind documentation for future project managers. It should detail what your team did, how they did it, what they delivered, and what work remains. It also provides an opportunity to explore where you could improve in the future.

Be sure to complete this activity before moving on. The next course item will provide you with a completed exemplar to compare to your own work. You will not be able to access the exemplar until you have completed this activity.

Scenario

Review the scenario below. Then complete the step-by-step instructions.

As the project manager for the Plant Pals operations project, you helped develop and implement an Operations and Training plan. You and your team worked on the project for six months and reached a number of milestones. The project is now complete and it's time to create a project closeout report for future project managers to use as a resource. In your closeout report, you will document key accomplishments, open and ongoing items, lessons learned, next steps, and task and milestone duration.

Step-By-Step Instructions

Step 1: Access the template

To use the template for this course item, click the link below and select “Use Template.”

Link to template: [Project Closeout Report](#)

Step 2: Write an executive summary

Under **Executive Summary**, describe the project’s purpose, major milestones, and ultimate outcome. The summary should be at least a few sentences, but no longer than a short paragraph. High-level stakeholders, like the Project Sponsor, will read your closeout report and sign off on it. So, it’s important that the summary be both brief and informative.

Step 3: Record lessons learned

Consider the key accomplishments listed in the template and think about the project as a whole. (You may find it helpful to consult your completed slide deck from the [Create a](#)

[presentation](#) activity for **Steps 3-5.**) Then record the following information under **Lessons Learned:**

- At least two things that went well during the project
- At least two things that went wrong during the project (and their solutions)

Be sure to include as much detail as possible. Because the report will be a resource for future project managers, you should describe roadblocks and how you handled them. That way, they can continue to improve on the process.

Step 4: Add open items

Record 2-3 unresolved issues or items that need more work under **Open Items**.

For example, you might let the next project manager know that Plant Pals still needs to increase its on-time deliveries by 5%.

Step 5: Discuss next steps

In the **Next Steps and Future Considerations** section, record 2-3 follow-up items to help future project managers plan their projects. This is the place to mention any ongoing work, maintenance, and ideas for the future.

For example, you might suggest creating a training schedule for future employees.

Step 6: Create a project archive

Finally, under **Resources and Project Archive**, link to important documents that could help new project managers with future planning. Be sure to include your project plan and the documents you've created throughout this certificate program:

- Project Plan (created in [Project Planning: Putting It All Together](#))
- ROAM Analysis
- Status reports
- Escalation email
- Presentation of customer feedback
- Relevant meeting agendas

Completed Exemplar

To use the exemplar for this course item, click the link below and select “Use Template.”

Link to exemplar: [Project Closeout Report](#)

Assessment of Exemplar

Compare the exemplar to your completed closeout report. Review your work using each of the criteria in the exemplar. What did you do well? Where can you improve? Use your answers to these questions to guide you as you continue to progress through the course.

Let's examine the exemplar:

- The project closeout report includes a date, status, project team members and the project duration.
- There is a brief **Executive Summary** that outlines the scope of the project, the completed deliverables, and issues that arose.
- The **Key Accomplishments** section includes tasks and milestones the team reached during the project. These include not only the work the team did, but the goals and results of their efforts. For example, *"Implemented feedback from customer surveys, increasing on-time deliveries by 10% and satisfaction with customer service by more than 42%."*
- **Lessons Learned** include things that went well and issues that arose throughout the project. For example, the employee training in advance of launch went well, which boosted employee efficiency. Things that went wrong include both the problem and the solution: *"On-time deliveries went from 80% to 90% during the test launch, by hiring more drivers and reassessing delivery routes."*
- The **Open Items** section includes areas of the project that need improvement, as well as operations procedures that require ongoing maintenance.
- The **Next Steps and Future Considerations** section includes next steps that future project managers should act on. For example, *"Create an ongoing training schedule for employees."*
- The **Project Timeline** includes start and end dates for each task and milestone.
- The **Resources and Project Archive** section links to important project documents.

Weekly Challenge 6

1. What are the impacts of not formally closing a project?
 - Not enough work for the team if the project isn't closed
 - Project stakeholders work with project managers to complete the project
 - The project team will move on to the next project
 - A strained relationship and lack of credibility with customers, users, and vendors

 **Correct**

2. A project manager has completed a full review of remaining tasks and confirms work is complete. What task should they complete next to close out the project?

- The project manager should make sure all project management processes have been executed.
- The project manager should skip asking for sign off since all the work is finalized.
- The project manager should adjust the deadline of the project schedule for extra review.
- The project manager should send a final email to all stakeholders that the project is closed.

 **Correct**

3. Consider the following project closing scenario:

The project manager does a final review of tasks and deliverables to ensure they are complete. They make sure there is written proof from stakeholders documenting that they are happy with the outcome. The project manager leads a meeting with the team to document what went well, what could be improved, and overall lessons learned. Finally, the team is disbanded, and the project manager thanks them for their work.

What step of the project closing phase is the project manager *missing*?

- Document acceptance of the project outcome
- Ensure the project has satisfied its deliverables, goals, and desired outcomes
- Review all contracts and documentation
- Conduct a formal retrospective with the project team

 **Correct**

4. What project closeout report section explains what went well and what went wrong during the project?

- Next steps
- Key accomplishments
- Lessons learned
- Resources and project archives

 **Correct**

5. What should a project manager do at the end of a project to document acceptance from all stakeholders?

- Review the risk register with the stakeholders
- Review the budget with stakeholders
- Ensure training documentations are finalized with the stakeholders
- Ensure you have written proof that all stakeholders are happy with the outcome

 **Correct**

6. What opportunities does the project closeout document provide for project managers? Select all that apply.

- The team will be able to prevent confusion about the project in the future.

 **Correct**

- The team will be able to ensure every task is complete.

 **Correct**

- The team will be able to reflect on performance.

 **Correct**

- The team will be able to celebrate more in the future.

7. What is a benefit of retrospectives?

- They manage stress for project managers.
- They allow team members to share details on past projects.
- They help identify areas for improvement.
- They help with a team member's performance review.

 **Correct**

8. User acceptance testing for a product results in more unblockable bugs and the client is unsatisfied with the product. What type of project does this describe?

- Never-ending
- Unwritten
- Unapproved
- Incomplete

 **Correct**

9. Fill in the blank: The project closeout report is made by project managers primarily for _____.

- team members
- vendors
- stakeholders
- project managers

 **Correct**

10. Which of the following are benefits of hosting a retrospective at the closing of a project? Select all that apply.

- Facilitates improved collaboration

 **Correct**

- Promotes positive changes

 **Correct**

- Encourages team building

 **Correct**

- Decreases the following project's budget

Glossary - Terms and Definitions

A

Abandoned project: A project in which inadequate handoff or transition on the project deliverables occurs

Acceptance criteria: Pre-established standards or requirements that a product, service, or process must meet

Accessible: Something that is easily used, accessed, or adapted for use by people experiencing disabilities

Action item: A task that needs to be completed

Adoption metrics: Metrics that indicate whether or not a product, service, or process is accepted and used

Air cover: Support for and protection of a team in the face of out-of-scope requests or criticism from leadership

Analytics: The process of answering business questions, discovering relationships, and predicting outcomes based on the analysis of data

B

Bad compromise: A situation that occurs when two parties settle on a so-called solution but the end product still suffers

Bar chart: A type of chart that uses color and length to compare categories in a data set; useful for comparing values

Bug: A technical issue

Burndown chart: A line chart that measures the time against the amount of work done and the amount of work remaining; useful for projects that require a granular, broken-down look at each task

C

Change: Anything that alters or impacts the tasks, structures, or processes within a project

Change log: A record of all notable changes on a project

Character: The qualities or features that make up and distinguish a person, like honesty, integrity, and kindness

Collaboration: People working together on an activity

Confirmation bias: A type of data bias that refers to the tendency to search for information that confirms preexisting beliefs

Conger's four steps: Refers to Jay A. Conger's four-step approach to effectively persuade and influence another person to consider new ideas: establish credibility, frame for common ground, provide evidence, and connect emotionally

Continuous improvement: An ongoing effort to improve products or services; begins with recognizing when processes and tasks need to be created, eliminated, or improved

Control: An experiment or observation designed to minimize the effects of variables

Cost variance: The difference between actual cost and budgeted cost

Critical user journey: The sequence of steps a user follows to accomplish tasks in a product

Customer satisfaction score: A metric that indicates how well the project delivered what it set out to do and how well it satisfies customer and stakeholder needs

D

Dashboard: A type of user interface—typically a graph or summary chart—that provides a snapshot view of a project's progress or performance

Data: A collection of facts or information; the numbers and feedback available about different aspects of a project

Data analysis: The collection, transformation, and organization of data to draw conclusions, make predictions, and drive informed decision-making

Data bias: A type of error that is influenced by one's inherent beliefs

Data ethics: The well-founded standards of right and wrong that dictate how data is collected, shared, and used

Data privacy: The act of protecting a data subject's information and activity any time a data transaction occurs

Data visualization: A graphical representation of information to facilitate understanding

Data-driven improvement frameworks: Techniques used to make decisions based on actual data

Dependability: A quality indicating team members are reliable and complete their work on time

Dependencies: Tasks, activities, or milestones that are reliant on one another

Dependency management: The process of managing interrelated tasks and resources within a project to ensure that the overall project is completed successfully, on time, and on budget

Deviation: Anything that alters the original course of action

Discretionary dependencies: Dependencies that could occur on their own, but the team saw a need to make those dependencies reliant on one another

Diversity: The set of differences each individual possesses, whether visible or invisible, that gives them a unique perspective on the world and their work

DMAIC: The five steps to take when working toward continuous improvements: define, measure, analyze, improve, and control

Duration: The amount of time it takes to complete or produce something

E

Edge case: Rare outliers that the original requirements of the project didn't account for; deals with the extreme maximums and minimums of parameters

Engagement metrics: Metrics that indicate the degree to which a product or service is used—the frequency of use, amount of time spent using it, and the range of use

Escalation: The process of enlisting the help of higher-level project leadership or management to remove an obstacle, clarify or reinforce priorities, and validate next steps

Ethical leadership: A form of leadership that promotes and values honesty, justice, respect, community, and integrity

Expressiveness: Refers to one's ability to communicate with others

External dependencies: Asks that are reliant on outside factors, like regulatory agencies or other projects

F

Feedback survey: A survey in which users provide feedback on features of a product that they like or dislike

Force majeure: An unforeseen circumstance that prevents someone from fulfilling a contract due to a major crisis

G

Gantt chart: A project-tracking visual that is useful for staying on schedule; ideal for projects with many dependencies and larger project teams

H

Happiness metrics: Metrics that relate to different aspects of the user's overall satisfaction with a product or service

Headline: The one-sentence main point that illustrates a slide

History: Refers to the level of personal history between oneself and another person

Impact: The belief that the results of one's work matter and create change

Impact report: A presentation guided by a deck or slideshow that shows key stakeholders the value that's been added by the project

Inclusive leadership: A form of leadership where everyone's unique identity, background, and experiences are respected, valued, and integrated into how the team operates

Inclusivity: The practice or policy of including people who might otherwise be excluded or marginalized

Influencing: The ability to alter another person's thinking or behaviors

Influencing statement: A conversation opener that sets a person up for success with their audience

Infographic: A visual representation of information or data intended to present information quickly and clearly

Information: An organizational source of power that refers to one's level of access and control over information

Internal dependencies: The relationship between two tasks within the same project

Interpretation bias: A type of data bias that refers to the tendency to always interpret ambiguous situations as either negative or positive

Issue: A known and real problem that may affect the ability to complete a task

K

Knowledge: Refers to the power drawn from one's expertise in certain subjects, unique abilities and skill sets, and ability to learn new things

Key performance indicator (KPI): A measurable value that demonstrates how effective a company is at achieving business objectives

L

Legend: The bottom or side section of a chart that gives a small description of each section

Line chart: A type of chart that displays information as a series of data point markers; helpful for showing trends and behaviors over set periods of time or overall

M

Mandatory dependencies: Tasks that are legally or contractually required

Metric: A quantifiable measurement that is used to track and assess a business objective

Milestone: An important point within the project schedule that indicates progress and usually signifies the completion of a deliverable or phase of the project

N

Network: The people one is connected with professionally and personally

Never-ending project: A project in which the project deliverables and tasks cannot be completed

O

Observer bias: A type of data bias that refers to the tendency for different people to observe different things

On-time completion rate: A productivity metric that helps illustrate to clients and stakeholders how the project is progressing and when they can expect certain deliverables to be ready

P

PDCA: A four-step process that focuses on identifying a problem, fixing the issue, assessing whether the fix was successful, and fine-tuning the final fix; stands for: plan, do, check, and act

Pie chart: A type of chart divided into sections that each represent a portion of a whole; useful for making comparisons

Portfolio: A collection of programs and projects across a whole organization

Probability and impact matrix: A tool used to prioritize project risks

Process improvement: The practice of identifying, analyzing, and improving existing processes to enhance performance, meet best practices, or optimize consumer experiences

Productivity metrics: Metrics that track the effectiveness and efficiency of a project, including items like tasks, milestones, projections, and duration

Program: A collection of projects

Project closeout report: A document that describes what the team did, how they did it, and what they delivered; evaluates the quality of work and the project's performance with respect to budget and schedule

Project closing: A process performed to formally complete a project, the current phase, and contractual obligations

Project status report: An update that gives an overview of all of a project's common elements and summarizes them at a given point in time

Project task: An activity that needs to be accomplished within a set period of time

Projection: A prediction of a future outcome—such as future productivity trends, project durations, costs, performance, or quality—based on current information; also called a forecast

Psychological safety: An individual's perception of the consequences of taking an interpersonal risk

Q

Qualitative data: Information about subjective qualities that can't be measured with numerical data

Quality: Refers to when the outlined requirements for the deliverable are fulfilled and meet or exceed the needs and expectations of customers

Quality assurance: A review process that evaluates whether a project is moving towards delivering a high-quality service or product; also called QA

Quality control: Techniques used to ensure quality standards when a problem is identified; also called QC

Quality metrics: Metrics that relate to achieving acceptable outcomes, such as number of changes, issues, and cost variance

Quality planning: The actions of the project manager or team to establish and conduct a process for identifying and determining exactly which standards of quality are relevant to the project as a whole and how to satisfy them

Quality standards: Requirements, specifications, or guidelines that can be used to ensure that materials, products, processes, and services are fit for achieving the desired outcome

Quantitative data: Statistical and numerical facts

R

RAG status report: A report that follows a traffic light pattern to indicate progress and status: “red” indicates there are critical issues that need resolution, “amber/yellow” means that there are potential issues with schedule or budget, and “green” means the project is on track

Reputation: Refers to how others perceive a person overall

Retrospective: A meeting in which project teams discuss successes, failures, and possible future improvements on a project

Risk: A potential event that could occur and impact a project

Risk exposure: A way to measure potential future loss resulting from a specific activity or event

Risk management: The process of identifying, evaluating, and addressing potential risks and issues that could impact a project

Risk register: A table or chart that contains a list of risks

Roadmap: A project-tracking visual that is useful for high-level tracking of large milestones

ROAM technique: A strategy used to help manage actions after risks arise; stands for resolved, owned, accepted, and mitigated

ROCCC: An acronym used in data ethics best practices to ensure that data is reliable, original, comprehensive, current, and cited

Role: One's position within an organization or team

S

Sampling bias: A type of data bias in which the sample isn't representative of the population as a whole

Scope creep: When changes, growth, and other factors affect a project's scope

Signal: An observable change

Signpost: A way to clue the audience in to where a presentation is going and what to expect

Stacked bar chart: A type of bar chart that can show part-to-whole variables simultaneously; useful when comparing numerical information; also called a marimekko chart

Storytelling: The process of turning facts into narrative to communicate something to an audience

T

Team: A group of people who plan work, solve problems, make decisions, and review progress in service of a specific project or objective

Team dynamics: The forces, both conscious and unconscious, that impact team behavior and performance

Teamwork: An effective, collaborative way of working in which each person is committed to and heading towards a shared goal

Test case: A sequence of steps and its expected results

Timeboxing: Refers to setting a time limit

Timeout: Refers to taking a moment away from the project to regroup and adjust the game plan

Tracking: A method of following the progress of project activities

Trench wars: Conflicts that occur when two peers or groups can't come to an agreement and neither party is willing to give in

U

User acceptance test: A trial that helps a business make sure a product or solution works for its users; also called a UAT

User story: An informal, general explanation of a feature written from the perspective of the end user

W

Work groups: People in an organization who work toward a common goal; based on and assigned by organizational or managerial hierarchy