Digital Project Management

Inhalt

1. Welcome to Nanodegree Program!

1.1. Welcome

1.1.1. Welcome to Udacity

Welcome to Udacity!

I am Sebastian, the founder of Udacity.

Our mission is to power careers through tech education. We're honored that you've chosen us to help in your career journey. Whether embarking on a new path. Curious about a new field. Or advancing in your own field. I want you to know, you're in the right place. We are here to help you accomplish your goals.

I can't wait to see where this journey takes you!

Video

1.1.2. The Udcacity Experience

If this is your first Nanodegree program, welcome. If you have taken a Nanodegree program with us before, you already know a little bit of what to expect. Udacity is always improving our learning experience for students. So you can watch this to see what is changed or skip ahead. You can also read this in the FAQ located in the resources tab.

Let's get started.

We truly believe you couldn't have chosen a better place to learn. A lot of people have worked tirelessly to create the course material and platform features, as we all want you to get the most of your learning journey. Our pledge is to provide you with resources and services that will further enable you to succeed in your Nanodegree program. As you go through the lessons, you may find some to be difficult and may feel discouraged. If this happens, we encourage you to take advantage of your community channels and mentor services to help clarify the concepts, or just to share your doubts. Our mentors are there to help you! You will get advice and guidance to ensure you are on track to complete the projects. We WANT you to succeed and graduate with a Udacity Nanodegree certificate.

We value the trust you have put in us by making this investment in your future career. We take it seriously and we are here to help you achieve whatever you came here to accomplish.

Video

1.1.3. How to succeed!

Video

1.2. Getting Help

1.2.1. What it takes

What it Takes

Completing a Udacity program takes perseverance and dedication, but the rewards outweigh the challenges. Throughout your program, you will develop and demonstrate specific skills that will serve you for a lifetime. Congratulations on taking the first step towards developing the skills you need to power your career through tech education!

The videos, text lessons, and quizzes you encounter in the classroom are optional but recommended. The project at the end of this course will test your ability to apply the skills and strategies you have learned in the classroom to real-world problems. It will also provide tangible outputs you can use to demonstrate your skills for current and future employers.

The project is designed to be challenging. Many students initially struggle, but with a little grit, they are able to learn from their mistakes and build their skills. Data from nearly 100,000 Udacity graduates show that commitment and persistence are the highest predictors of whether or not a student will graduate.

At some point, nearly every student will get stuck on a new concept or skill, and doubt may set in. Don’t panic. Don’t quit. Be patient, and work through the problem. Remember that you are not alone and the problem that you are encountering is likely one that many others have experienced as well. Whether you are stuck or simply looking for encouragement, you’ll find Udacity Mentors and students there to help.

1.2.2. Getting help

Getting Help

As questions come up during this course, click on the Help button on the left sidebar of your classroom. You’ll see four options, each for a separate type of support:

- **Technical Mentor** Help: is available on Knowledge, our expert Q&A platform, by clicking on "Mentor Help". You can search for answers to questions similar to yours or post new questions related to your project or lessons. Udacity’s expert technical mentors answer all new questions.
- **Udacity Support Community**: Receive peer support and find answers to your non-technical questions quickly through Udacity Support Community. Receive peer support from our global community of lifelong learners that help each other succeed by sharing their experience and expertise. Start a discussion here.
- **General Account Help**: This is where you can get details on non-technical issues such as 3rd party tools, billing, deadlines, and more. You can even find additional help here via. live chat. Simply click on Account Help or visit our Help Center to find answers.

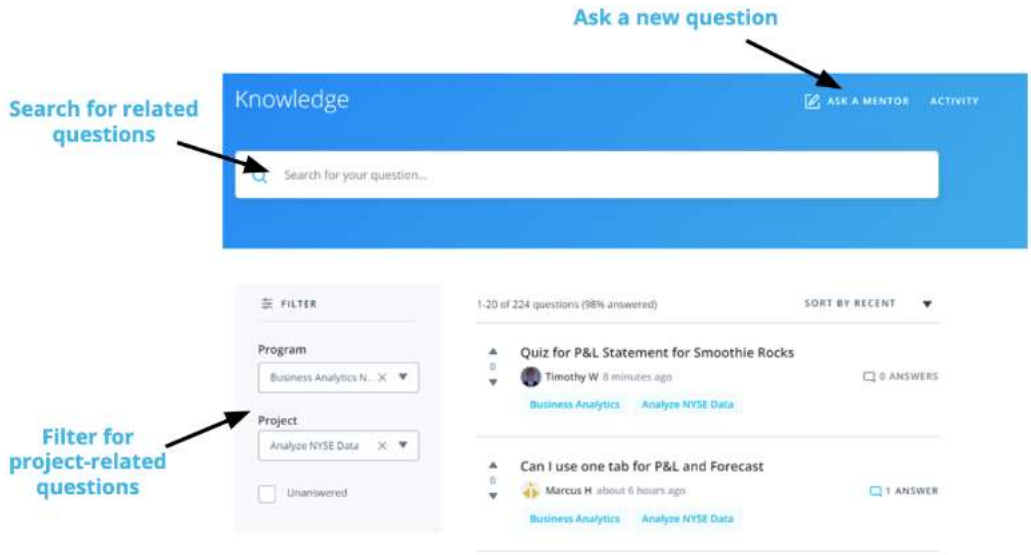
1.2.3. Mentor Help

Mentor Help

Technical Mentor Support: is provided through Knowledge, our expert Q&A platform. You can search for answers to questions similar to yours or post new questions related to your project or lessons. Udacity's expert technical mentors answer all-new questions.

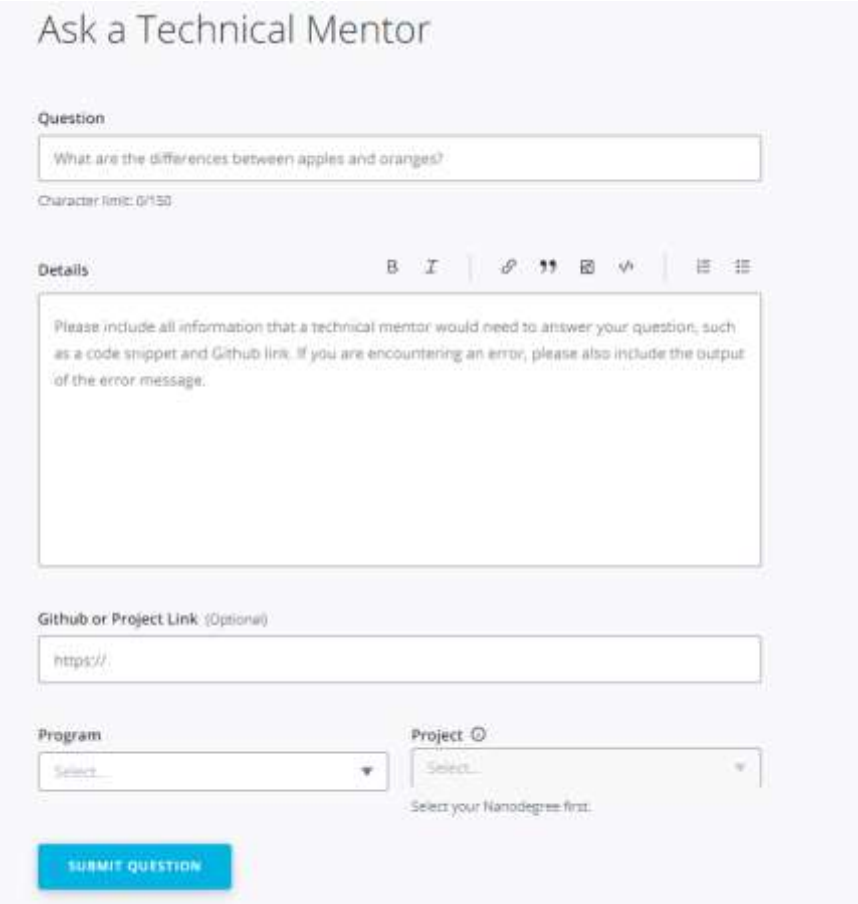
How to Use Knowledge

To ensure you're getting the quality and prompt support you need, it's helpful to follow these best practices and guidelines for Knowledge.



- Search for Similar Existing Questions: with tens of thousands of students enrolled in our programs, many of your questions may have already been asked and answered. To look for existing answers to similar questions that may provide the immediate support you need, use the filter on the left side of your screen to select your course and related project or write in the key terms related to your question in the search bar at the top of the page.
- Ask a New Question: if you want to ask a new question, select "Ask a Mentor" at the top of the page. Kindly remember that Knowledge is for technical questions only; for other types of support and feedback, please write to support at support@udacity.com.

When you ask a new question, the platform immediately assigns it to one of our expert mentors spread across the globe to ensure prompt replies. Of note, when a mentor answers your question, you will see "Mentor" next to their name to differentiate their support from comments your fellow learners may also provide.



If you don't see your question, simply create a new post. You are likely to get an answer within 24 hours and you'll be helping future students who may encounter the same problem.

How to Ask a Good Question?

Students that follow these tips typically receive the strongest initial support and avoid back-and-forth with mentors:

- Ask Specific Questions: if you have closely related questions that form part of a general theme, it's okay to ask them all together. But consider using bullet points to separately list each of the questions in your post. Keeping your questions organized helps ensure mentors provide clear answers to each specific question. If your questions are less closely connected, it's best to submit new, separate questions for each one.
- Provide Details and Links: explaining what (if anything) you've already attempted to solve the problem helps mentors know where to start when answering your question. Likewise, if your question is not related specifically to a project, but rather to an exercise, quiz, or lesson, it's helpful to include information such as lesson or quiz name, screenshots, and classroom links.

Overall the key to asking a good question is to imagine yourself trying to answer your own question. Imagine you were coming to it without any prior knowledge. Does the question make complete sense? Or are there gaps around the context?

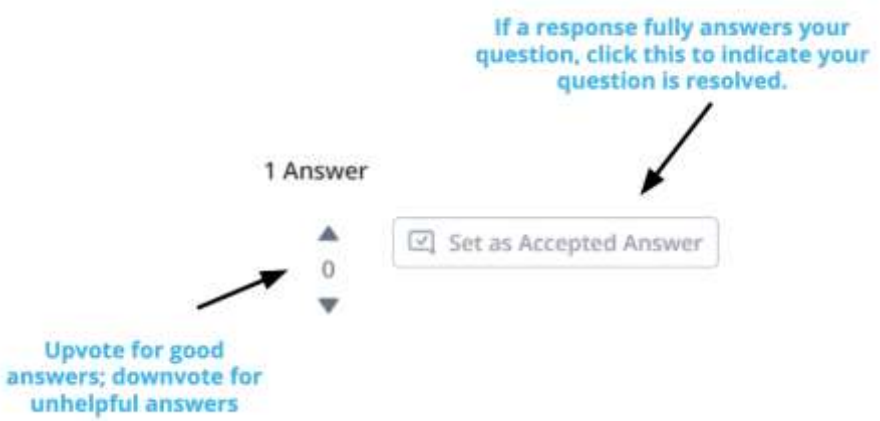
- Start with a Clear Question Title: attempt to summarize your entire question in one sentence. You may even write the title at the end, just before posting the question. This will help you summarize the issue before you include details in the question itself.

- Share Code Correctly: by using the “Code Block” option to properly format your code. If your question concerns a piece of external code, include a link to the file on Github.

In fact, Github lets you create a link to a specific line in a file. To do so, just click to the left of the line number, and then select copy permalink in the ellipsis that appears in the margin. Paste the permalink right into the Github box on your question submission form.

- Figuring out Errors: if your question is about an error message or stack trace, include the entire error message, by either formatting the error message using the “Code Block” option or creating a Gist or a Paste on Pastebin, and including a link to it in the description.
- Avoid Screenshots of Code or Error Messages: do not use screenshots of code or error messages. They are hard to read and the text cannot be copied to debug it.

If you receive a helpful answer, kindly select it as the “accepted answer.” For questions from other students, if you see other helpful answers kindly select the “upvote” option. Conversely, if you don’t think an answer strongly answers a question, select the “downvote” option.



Getting Additional Support

At times, students want support from a different mentor. As everyone learns differently, we want to make this a simple process for learners like you.

If you receive an answer that you are not satisfied with and want a different mentor to chime in, kindly select the option at the top of the page in Knowledge. If you reply directly in the comments section, without clicking on the link at the top of the page, your question will not be answered by another mentor.

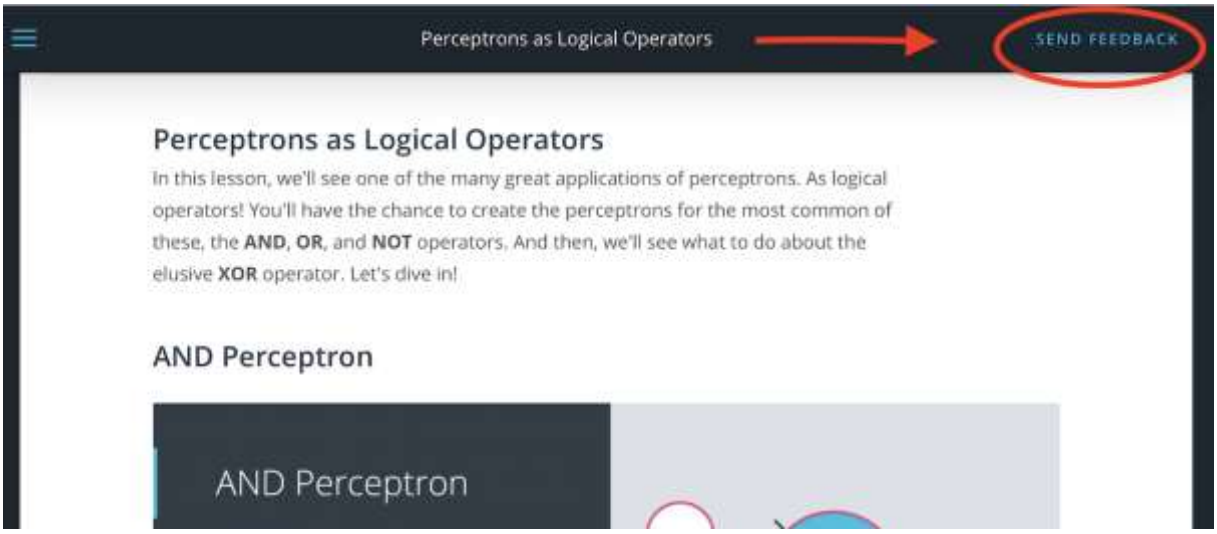
1.2.4. Submitting Classroom Feedback

If you would like to share feedback on your learning experience or need to report any errors in the classroom content, click the 'Submit Feedback' button on the upper-right corner of the classroom. This feature is available in all of your lessons and allows you to provide comments on specific sections of the lesson you're on.

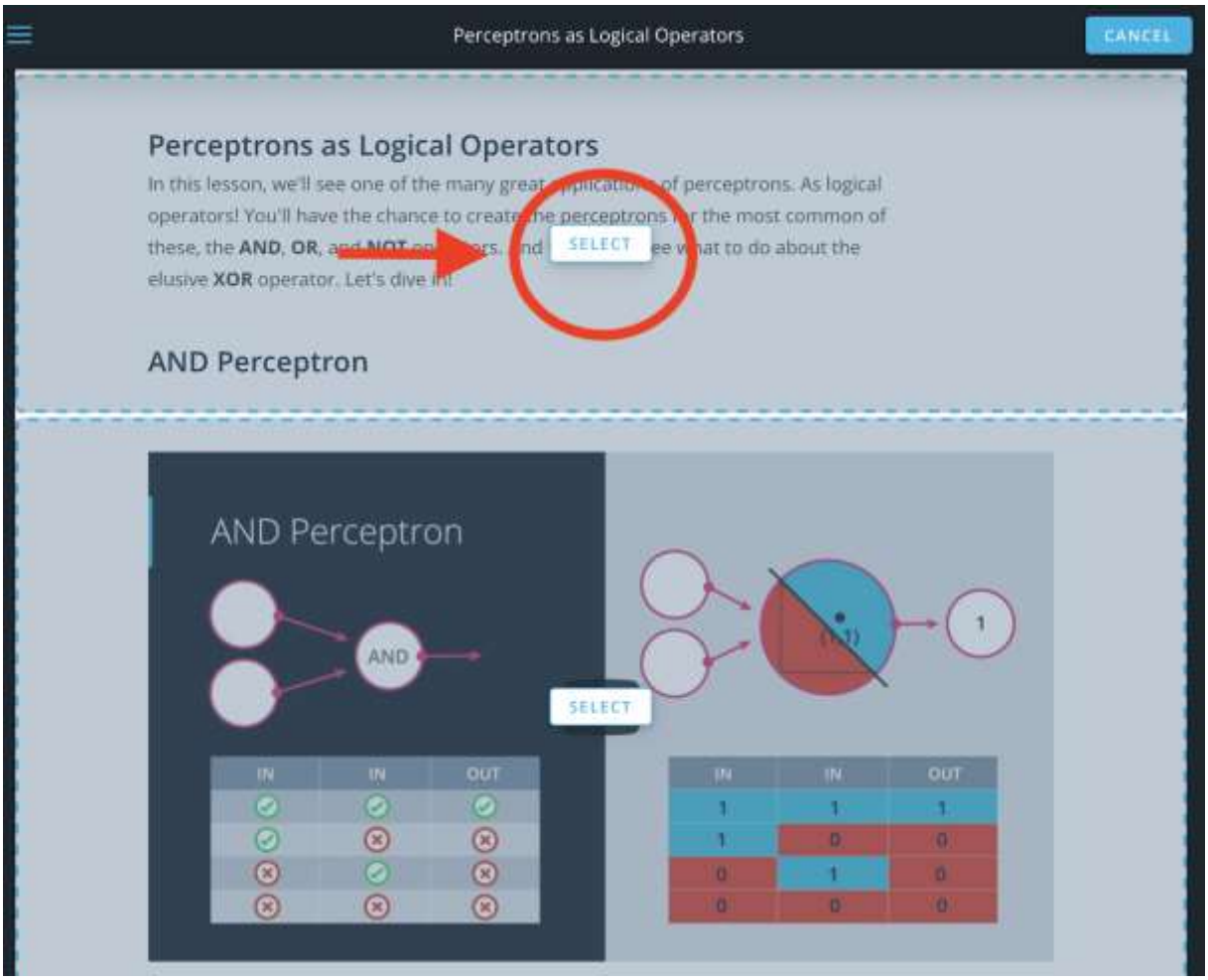
NOTE: When you report feedback through the classroom, you won't receive a direct response, but don't worry! Your feedback will be documented and shared with the appropriate team for review. We strive to create the best learning experience for each unique individual and we'll take your feedback into account as we continue to improve the program!

How Classroom Feedback Works

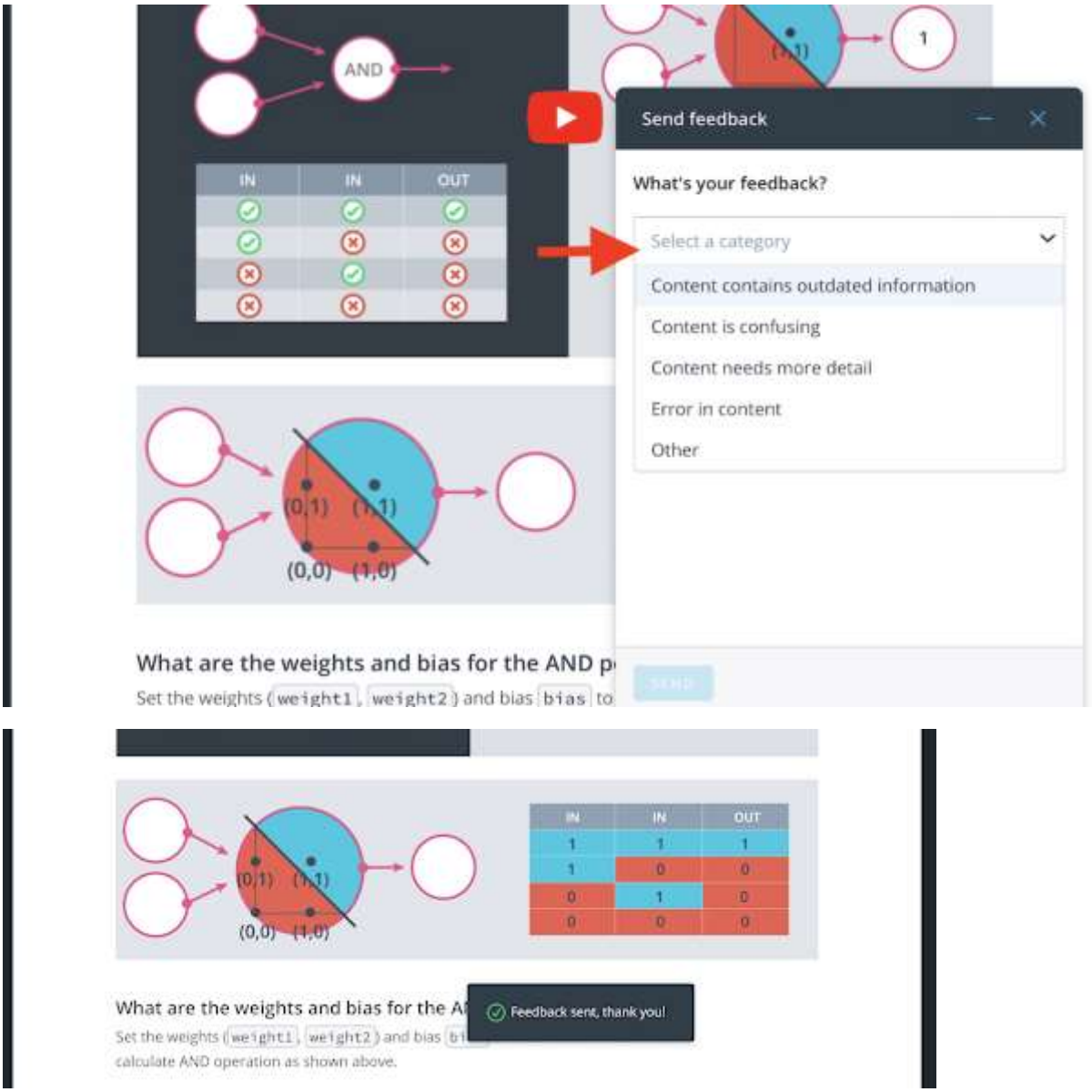
Click the 'Submit Feedback' button on the upper-right corner of the classroom:



This will highlight different sections on the current concept that you're in. Click 'Select' on the section you would like to provide feedback on:



Once you select a section, you will see a feedback box appear on the bottom-right corner of the classroom where you can fill in additional information that you would like to share with us. Once you click 'Send,' you will see a confirmation message that your feedback has been sent and received.



And that's it! As a reminder, you won't receive a direct response for classroom feedback submission, but please know that your comments have been shared with the appropriate team for review.

1.2.5. Help Center

Get help with your account, browse categories of FAQs, and more!

Get Account help

Read detailed help articles on account-related topics like billing, third-party tools, project deadlines, graduation, and more.

Choose the type of help you require

For your specific questions, look through categories of Frequently Asked Questions and find answers quickly.

Get in touch with us

Reach out to our Support team directly via Live Chat. Click on Account Help in the Classroom or visit our Help Center to get started.

1.2.6. Udacity Support Community

Welcome to Udacity's Support Community!

Become a part of our global community of lifelong learners that help each other succeed by sharing their experience and expertise. Receive peer support and find answers to your non-technical questions quickly through Udacity Support Community.

Find answers to your questions

Search Udacity Support Community for answers to commonly asked questions.

Receive peer support

Ask the community by posting a question and following discussions.

Share your expertise

Get recognized for sharing your insights, experiences, and tips with fellow learners.

Checkout status of your Support tickets

Manage and streamline your view of the support tickets, community conversations, and people you follow in the 'My Profile' section.

Solved, helpful, and recommended posts

Let other learners know which posts solved your problem, highlight helpful responses, and get the answers you want faster with recommended posts.

Build your reputation in the community

Explore and participate in Support Community programs to earn points, levels, and badges. Have fun and unlock rewards along the way.

Join the Support Community now

1.2.7. Plagiarism

Plagiarism and Academic Dishonesty

Overview of Plagiarism at Udacity

Defining Plagiarism

Any act claiming or implying another person's work as your own.

Examples:

- Submitting a project you didn't create to copying code into a program without citation.
- Any action in which you misleadingly claim an idea or piece of work as your own, when it is not.

Copying and Combining Code

Using another person's work in your own work

Examples:

- Following a guide that someone may have created for completing a Udacity project, whether from a video or website.
- Taking a part of someone else's project and changing some variable and function names, - regardless of whether you give the source credit or not.
- If you have not done the work yourself and attempt to mask it.

Using Someone Else's Code to Inform your Solution

You should never knowingly view someone else's work until you have completed the project yourself - nor should you share your project with someone who has not yet completed theirs. However, once you have completed your project, you are encouraged to see how other people have approached the same challenge in a different way. This allows you to compare your different strategies and ways of thinking.

Submitting Identical Works Post Collaboration

If you decide to work together with another student on a project, you are then expected to write your code separately. Submitting identical projects or submissions with identical portions is considered plagiarism as described in the Udacity Honor Code.

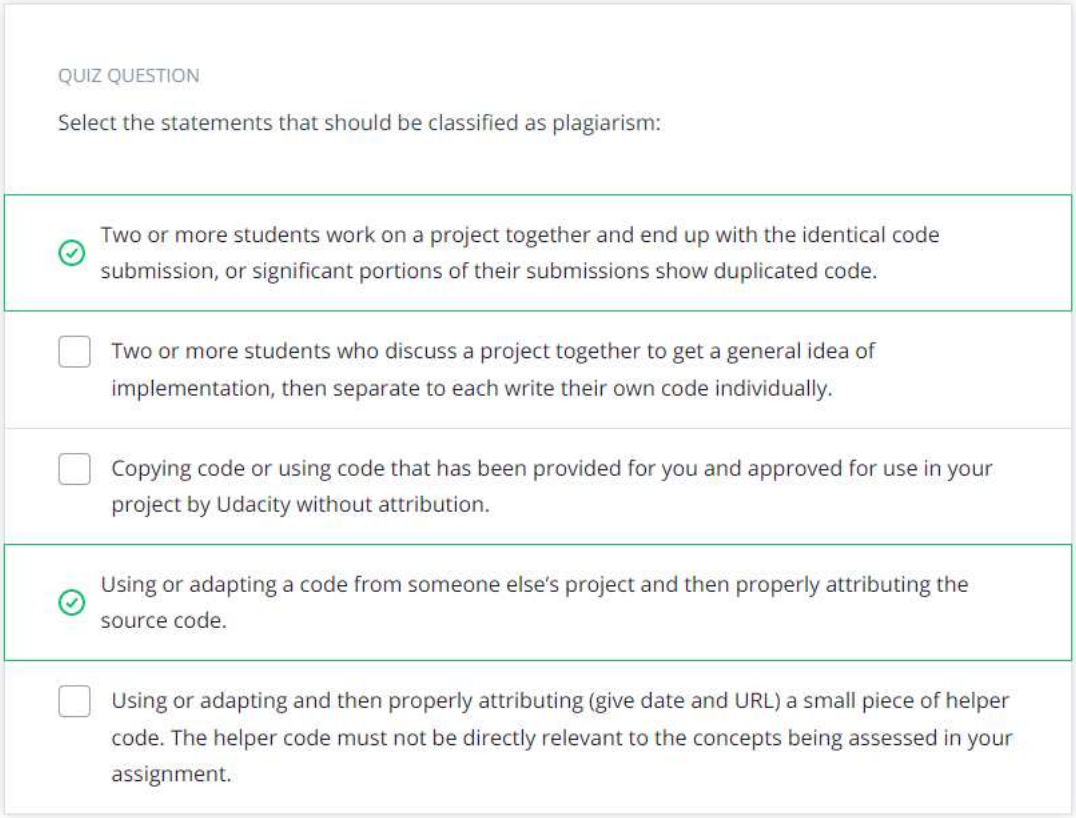
Seeking Help without violating the Honor Code

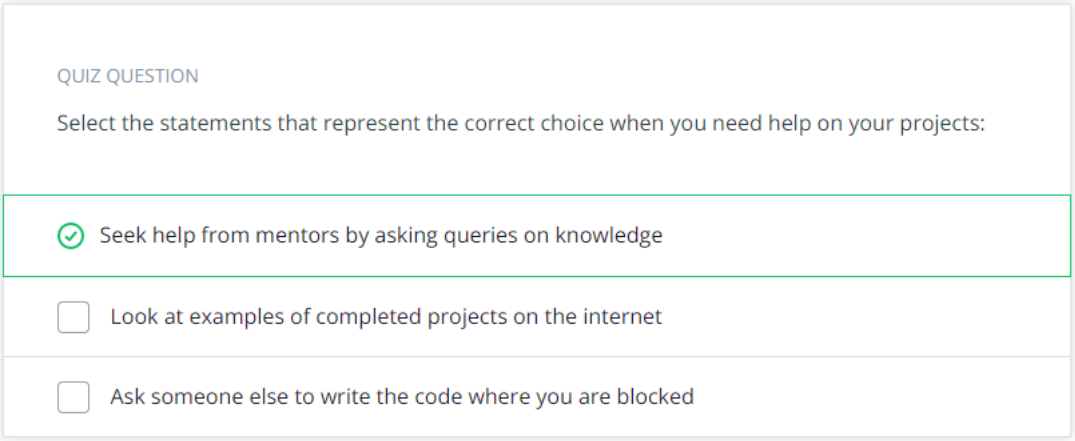
To be clear, you are encouraged to seek help by talking to Mentors on Knowledge, other students, and alumni. You're also welcome to use frameworks and libraries to assist you, as long as they aren't removing important goals from the project that you should know how to do yourself.

If you are struggling and need help, we encourage you to ask technical questions on Knowledge to explore why your approach is not the correct approach. Mentors typically provide answers within an hour of questions being posted, so you can expect quick guidance on your question.

If you're ever in doubt as to whether or not something would be considered plagiarism, ask a Mentor on Knowledge. Our goal is for every student to graduate armed with a toolbox of skills that they can apply across a variety of concepts and problems. The best way to achieve this is to ensure every student does their own work and is able to demonstrate their skills in each project submission.

1.2.8. Quiz: Plagiarism at Udacity





2. Introduction to Digital Project Management

2.1. Introduction

2.1.1. Meet your Instructor

Meet Your Instructor

Welcome to the Digital Project Management course! Your instructor in this course is Walyce Almeida. In this next video, you can learn a little about Walyce's background and how she uses digital project management in her work.

Video

Walyce Almeida has over a decade of experience working in digital media and marketing. She then transitioned to technology, and currently works at Amazon Web Services organizing projects that support technical documentation.

Throughout this course, Walyce will share personal anecdotes drawn from her own experiences as well as real-world examples. These stories will help you connect theory to actuality, and show practical uses of digital project management in today's world.

2.1.2. What is Digital Project Management?

What Is Digital Project Management and Why Does It Matter?

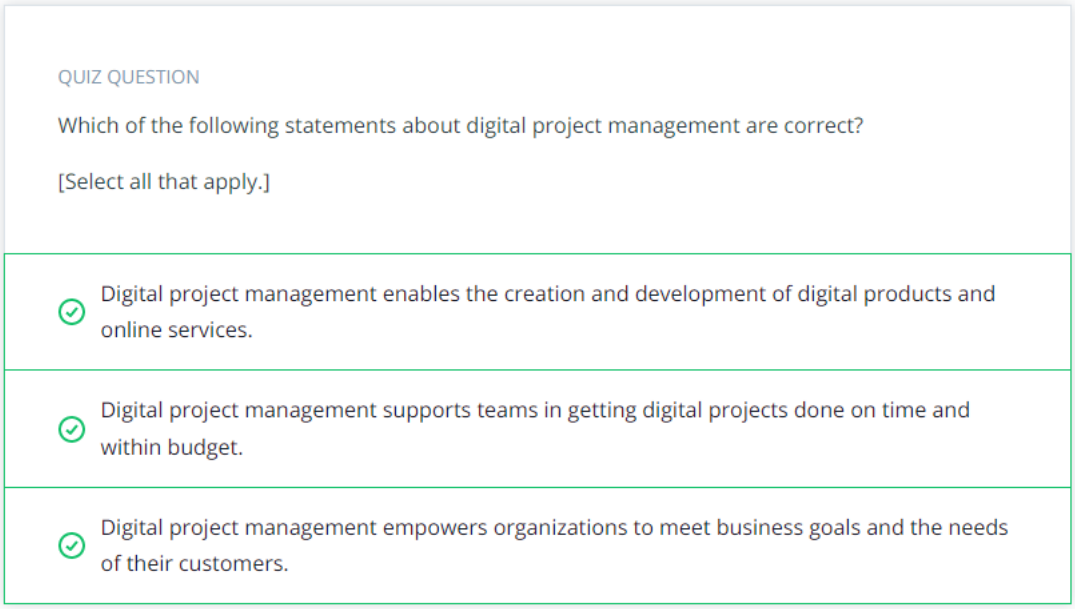
Video

Digital Project Management...

- Supports the execution of technical projects
- Enables the development of digital products and online services
- Helps teams get digital projects done on time and within budget
- Empowers organizations to meet business goals

New Terms

- Digital project management enables the creation and development of online content, products, and services that help companies stay in business and grow.



2.1.3. When to use Digital Project Management

When to Use Digital Project Management

Video

Digital Project Managers Deliver...

- Digital projects that meet business goals
- A product that is in a digital format or is web-based
- A process that supports digital products or is provided online
- Projects by leveraging web-based technology and collaborating with people in different functions

2.1.4. Business Stakeholders

Business Stakeholders

Video

Who Cares about Digital Projects?

Business stakeholders care about how digital projects can support or achieve business goals. They are the people at a company who:

- set high-level goals for the business related to profits, productivity, reputation, and so on.
- lead departments or teams, managing the people who execute projects.
- authorize project initiation and the resources needed for them, such as a budget.

How Can Digital Project Managers Help?

Digital project managers are crucial to the business stakeholders. Digital project managers manage ideas from methodology to execution by:

- helping determine what specific type of project could help meet those goals.
- looking after a project's components from the ground level.
- showing the stakeholder what kinds of resources and skills a project needs.

New Terms

- Business Stakeholders: People in decision-making positions or positions of influence within your company who care about how digital projects can support or achieve business goals.

2.1.5. Course Outline

Course Outline

Video

There are two lessons in this course:

Lesson 1: Navigating Your Professional Project Management Goals

In this lesson, we'll learn:

- The basic skills that are necessary to begin a career in digital project management.
- Common roles that use digital project management skills, i.e. project managers, product managers, and program managers.
- An advanced project management certification you should consider if you are interested in taking your career further in this discipline.
- How to apply project management to your own career trajectory with a five-step plan.

By the end of this lesson, you'll be able to define core project management skills, related career paths that use those skills, and determine the path you'd like to take.

Lesson 2: Digital Project Management Lifecycle

In this lesson, we will learn:

- What differentiates digital from traditional project management.
- The business needs that justify initiating a digital project.
- The project management lifecycle, a structure that this course is based on.

By the end of this lesson, you will be able to identify common business cases, recognize the type of digital project each one calls for, and define the five key stages of a digital project's lifecycle.

2.2. Navigating your professional goals in Project Management

2.2.1. Introduction

Introduction

Video

Digital project management is a fast-growing field. There has been a spike in job postings for this role as well as other roles requiring project management skills. The top three industries with the most demand for digital project managers are media, technology, and retail.

Additional Resources

The statistics mentioned in the video above are obtained from the following sources:

2.2.2. Lesson Outline

Video

You may be unsure of whether you simply want to attain basic project management skills or develop a full-fledged career in digital project management. This lesson will hopefully help you make a decision on what works best for your professional growth.

We will learn:

- What are the basic skills an entry-level project manager would need.
- What are some other potential career paths related to this field.
- Continuing education to achieve an advanced project management certification.
- And how to treat your own career plan as a personal project.

By the end of this lesson, you will be able to identify core project management skills, define related career paths, and determine if you need formal certification. You should be able to develop a professional goal and plan ways to hit that target.

2.2.3. My Project Management Journey

Video

Throughout my career in journalism, I approached hurdles by creating projects that would result in a solution. The solution would be a product or process that helped make my job and that of colleagues easier. But some of those projects required technical expertise, business savviness, and leadership skills that I felt I needed to further develop. Becoming well-versed in digital project management helped fulfill that need.

2.2.4. Project Management Skills

Video

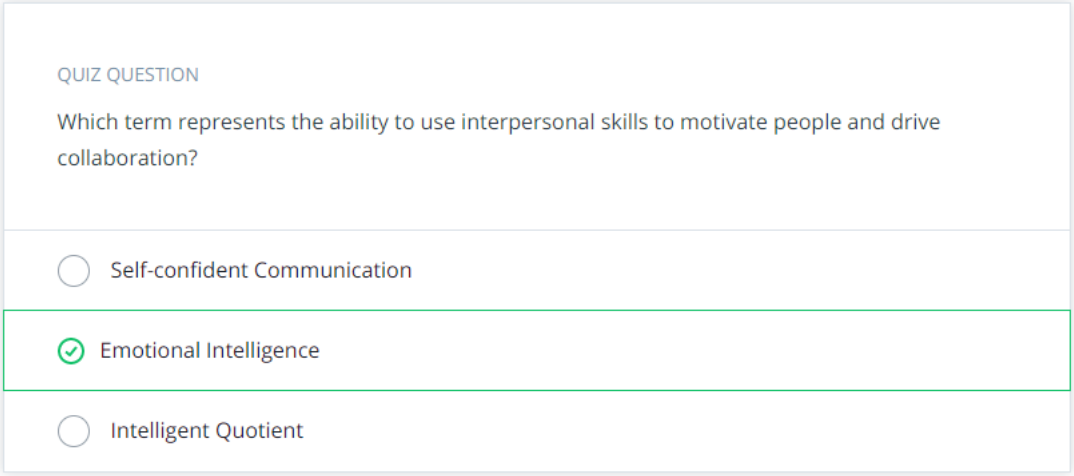
Core Skills for Digital Project Managers

- Communication in different methods
- Interpersonal skills to drive collaboration
- Basic algebra and problem-solving skills
- Ability to leverage digital tools

New Terms

- Emotional Intelligence: The ability to handle emotions in a productive and positive way.

2.2.5. Quizzes: Project Management Skills



2.2.6. Career Paths in Project Management

Video

Here are the three main roles that use digital project management skills:

1. **Project Manager:** A project manager coordinates people and resources to get projects done on time and within budget.
2. **Product Manager**: A product manager uses technical and creative methods to develop or improve digital products.
3. **Program Manager**: A program manager selects a set of projects and initiatives based on business priorities and facilitates their execution.

Video

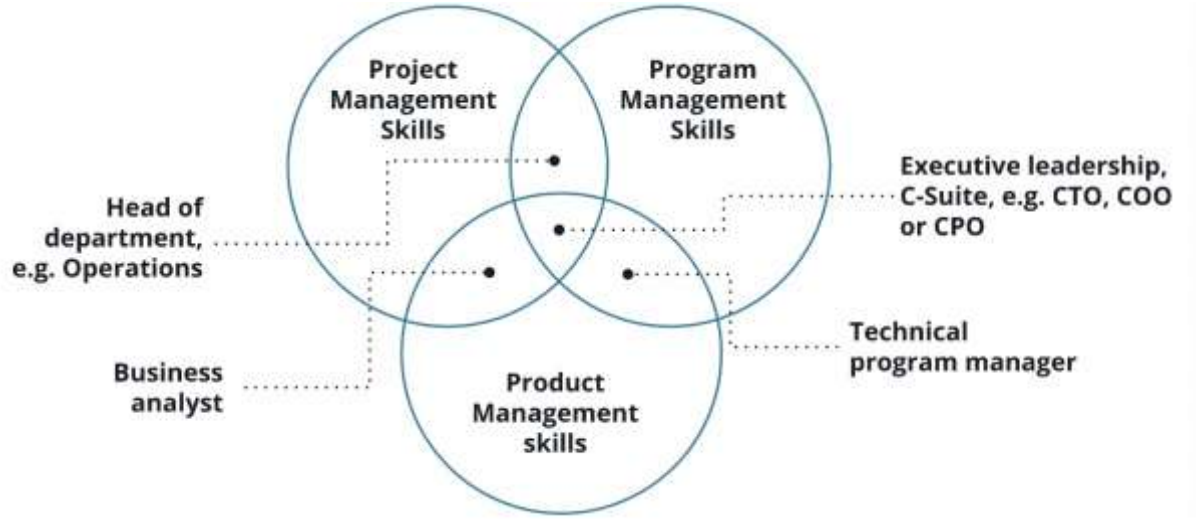
Which Job Role Is Higher up on an Organization Chart?

These roles don't exist in a hierarchy. The level of the role depends on the importance and scale of the results you will deliver. You grow in your career based on the size of the projects you work on and the impact they create for your organization.

Additional Roles that Combine Skills of These Three Roles

With a combination of certain skills and responsibilities of the three main roles, you get additional occupations that utilize project management. The additional roles include business analyst, technical

program manager, head of departments, and executive leadership, as shown in the Venn diagram below:



New Terms

- **Product Manager**: An occupation that involves designing and developing products for customers.
- **Project Manager:** An occupation that involves coordinating people and resources to execute projects on time and within budget.
- **Program Manager:** An occupation that involves selecting and executing projects and ongoing initiatives that support business operations.

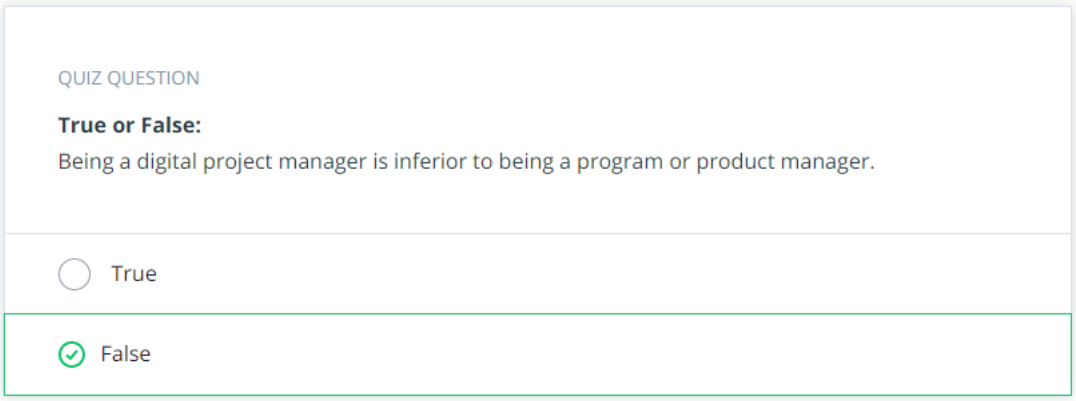
2.2.7. Quizzes: Career Paths in Project Management

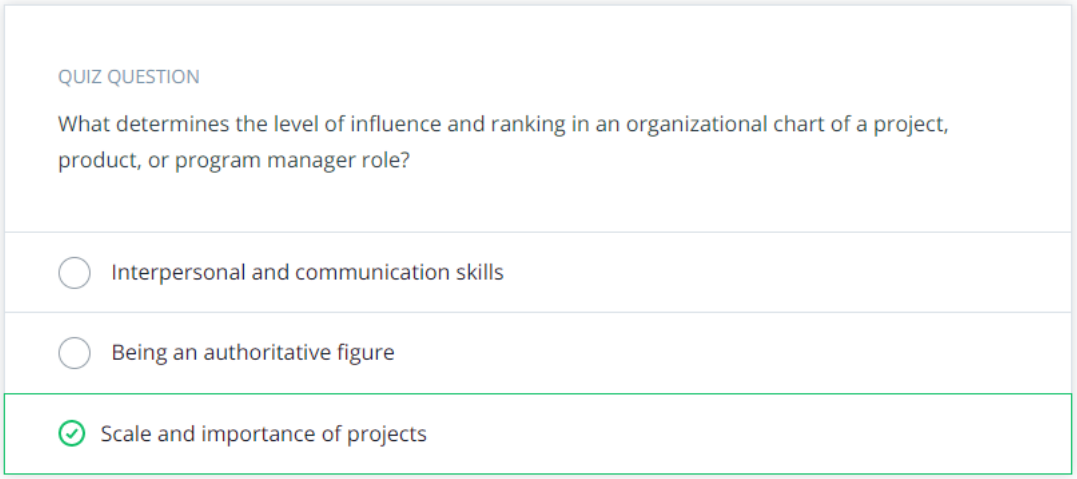
QUIZ QUESTION

Which of the following job functions may utilize digital project management skills?

(Select all that apply.)

- ✓ Program Manager
- ✓ Business Analyst
- ✓ Product Manager
- ✓ Head of Operations





2.2.8. Do I Need a PMP?

Video

The Project Management Institute (PMI) is a credible organization that maintains the business standards, ethical guidelines, and best practices in the project management discipline. It curates these standards into a textbook, called the Project Management Body of Knowledge (PMBOK), which is re-released every year with new updates. By registering with the PMI and studying the PMBOK, you can take the Project Management Professional certification exam to become an expert in the field.

Consider Becoming PMP-Certified

You should pursue becoming certified by the Project Management Institute if you would like:

- To be recognized as an expert project manager.
- To access a treasure trove of methods and tools to better execute projects.
- To become skilled in creating your own project management methodology.

You could delay or skip becoming PMP-certified if you:

- Only need a few basic project management skills in your current role or career path.
- Do not have the time and resources to study and take the exam.

New Terms

- Project Management Lifecycle: A set of ordered stages that projects go through.

- PMP: An acronym for the Project Management Professional certification.

Additional Resources

- You can review the PMI's eligibility requirements and exam guidelines on the How to Apply for the PMP page.
- A precursor to getting a PMP is the Certified Associate Project Manager (CAPM) certification. Learn more about the CAPM certification here: CAPM certification: Cost, salary, training, and more.

2.2.9. Turning Your Career Path Into a Project

Video

Here are the five steps to "project-manage" your professional goals into an actionable plan that delivers results:

1. **Set the Main Career Goal:** Consider the career paths we discussed and select a job function and industry that energizes you.
2. **Break Down Goal into Actionable Objectives:** List the types of skills and topics you need to learn as well as the type of projects that would give you the experience needed to get closer to your main career goal. This list will serve as to-do items you can cross off every time you achieve an objective.
3. **Set Milestones in a Schedule:** Convert your list into a plan with start dates and deadlines by which you should achieve each objective from Step 2. A schedule will keep you accountable to yourself.
4. **Find a Mentor:** Share your plan with a mentor who might have experience in the job function and industry you are pursuing. They should help refine your goals to be more realistic and keep you on track with your plan.
5. **Document Your Achievements:** Practice articulating the value of your achievements and add them to your portfolio. This helps you remember what you've learned. And by sharing your achievements publicly, the visibility will open doors to new opportunities.

2.2.10. Lesson Review

Video

By now, you should have considered your professional goals and how this course can support you.

In this lesson, we learned:

- That digital project managers develop communication and interpersonal skills as well as an ability to apply basic algebra to handling data in spreadsheets.
- Common job functions digital project managers take on and how they grow their career by taking on larger-scale and more vital projects.
- That you have the option to seek advanced certification in project management offered by the Project Management Institute.
- A set of five steps to help you "project-manage" your career by setting objectives and creating a plan to reach your target goal.

Now that you have an idea of where you'd like to take your career, we can dive deep into the project management lifecycle and learn ways to improve the way you structure and execute projects.

2.2.11. Glossary

For your reference, here are all the new terms we introduced in this lesson:

- **Emotional Intelligence**: The ability to handle emotions in a productive and positive way.
- **Product Manager**: An occupation that involves designing and developing products for customers.
- **Project Manager:** An occupation that involves coordinating people and resources to execute projects on time and within budget.
- **Program Manager:** An occupation that involves selecting and executing projects and ongoing initiatives that support business operations.
- **Project Management Lifecycle:** A set of ordered stages that projects go through.
- **PMP:** An acronym for the Project Management Professional certification.

2.3. Digital Project management Lifecyle

2.3.1. Introduction

Video

The project management lifecycle provides steps in a logical order for organizing projects in an efficient manner and for maximizing their benefits. Each step comes with specific tasks anyone can learn how to do. The Digital Project Management course is structured according to that lifecycle to help you master each step and set you up for success.

2.3.2. Lesson Outline

Video

Before becoming a skilled project manager, it's important to recognize situations and environments ripe for digital projects. In this lesson, we will learn:

- How to distinguish what makes digital project management different from the traditional discipline with its methods, end results, and approach to change.
- Five different circumstances a business may face and the case each one makes for why a digital project would be the right response.
- The key stages a digital project would go through, from Initiation to Closure.

A savvy project manager will be aware of their work environment and anticipate the kinds of digital projects that will be compatible with the current business case. They will also imagine the kinds of resources and methods needed to execute that project by understanding the stages that the project would experience.

2.3.3. Traditional vs Digital Project Management

Video

Digital project management is a methodology for carrying out a project with collaborative online or cloud-based tools for an end result that is or optimizes a digital product or process while being prepared to adapt to change.

Key Differences from Traditional Project Management

- **"Online or cloud-based tools":** Digital project management takes full advantage of using tools that enable collaboration, communication, project scheduling, and tracking all via the Internet. Traditional may still go the analog route.
- **"A digital product or process":** The end result in digital project management is a product or process that is in a digital format or accessed via the Internet. Traditional projects result in manufactured or constructed products and processes that occur in person or make use of mechanics.
- **"Prepared to adapt to change":** Digital project management adopts methods and tools to quickly exploit new technology and update project plans. Traditional project management tries to anticipate needs and add contingency plans, but ultimately it cannot easily pivot a project's direction.

New Terms

- **Digital project management:** A methodology for carrying out a project with collaborative online or cloud-based tools for an end result that is or optimizes a digital product or process while being prepared to adapt to change.
- **Cloud-based:** Services or products made available on-demand via a network of online servers hosted by a cloud service provider.
- **Digital product:** An Internet-based website, app, game, or other content-based platforms that people interact with via a digital screen.
- **Project plan:** A project plan contains a list of tasks needed to execute a project, the people assigned to each task, and a schedule by which the project should get done.

2.3.4. Business Justifications for a Digital Project

Business Justifications for a Digital Project

Digital projects exist within a business context. Below you will learn about five cases that justify a digital project. Becoming aware of the context allows project managers to anticipate business needs and select the right project.

Part 1: Digital Transformation and Change Management

Video

Digital Transformation

Digital transformation is the conversion of tools and processes into Internet-based resources. A digital project manager, in this case, could convert the delivery of products or services into or via a digital format, or lead the adoption of digital tools to optimize or even automate workflows and processes.

Change Management

Change management is the implementation of structures, mechanisms, and a culture in place that helps people adapt to any kind of change that could threaten the business. A digital project manager could, for example, update procedures and policy, adjust processes until a particular goal has been achieved, or implement resources due to new investment.

Part 2: Product Development, Technical Competitive Advantage, and Legal Compliance

Video

Product Development

Digital product development is the delivery of digital content to an Internet-connected device or the creation of a service or platform that is online. In this case, a digital project manager supports a product manager by coordinating the team's schedule and resources as well as helping prioritize tasks.

Technological Competitive Advantage

Technological competitive advantage is inventing new technology or innovating the use of existing technology to become the dominant competitor in business. A digital project manager might create project plans to fulfill an innovative idea or enable research and development.

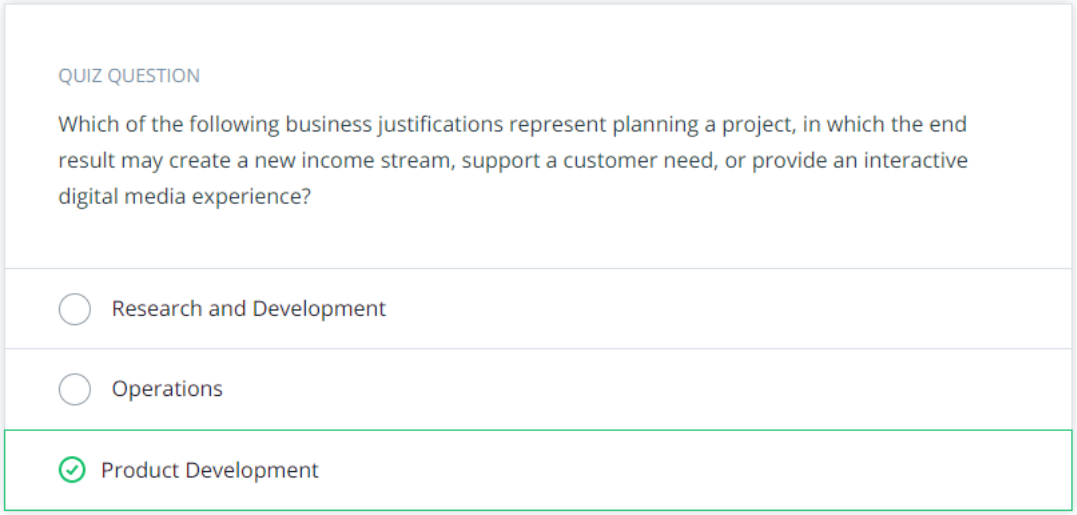
Legal Compliance

Legal compliance is the act of understanding regulations and ensuring your project or business is following relevant rules and policies. Digital project managers may identify legal requirements related to the business, document knowledge, and create projects that implement any features or processes that follow those rules.

New Terms

- Digital transformation: The conversion of tools and processes into Internet-based resources.
- Change management: The implementation of structures, mechanisms, and a culture in place that helps people adapt to any kind of change that could threaten the business.
- Digital product development: The delivery of digital content to an Internet-connected device or the creation of a service or platform that is online.
- Technological competitive advantage: Inventing new technology or innovating the use of existing technology to become the dominant competitor in business.
- Legal compliance: The act of understanding regulations and ensuring your project or business is following relevant rules and policies.

2.3.5. Quizzes: Business Justifications for a Digital Project



QUIZ QUESTION

A digital project manager who is focused on Change Management might sit within a variety of departmental teams.

[Select all the departments that might apply.]

- ✓ Business development
- ✓ Legal
- ✓ Operations

QUIZ QUESTION

Below are some of the business justifications we just discussed. Can you match each of them with the correct description?

Submit to check your answer choices!

Description	Business Case
Conversion of tools and processes into Internet-based resources	Digital Transformation
Leveraging invention and innovation to become the dominant competitor	Technological Competitive Advantage
Ensuring your project or business is following relevant rules and policies	Legal Compliance

2.3.6. Key Stages of the Project Management Lifecycle

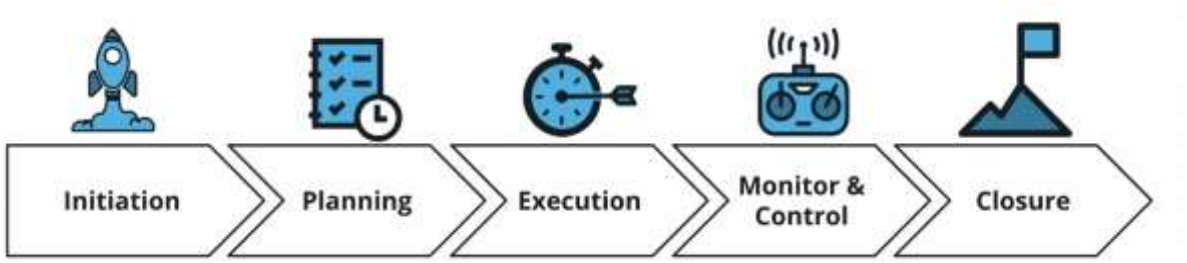
Once you identify the situations that justify the need for a project, you will plan for and carry out the project.

Video

Key Stages in the Project Management Lifecycle

1. **Initiation**: In this stage, a project manager selects a project worth investing in, finds out who will be involved in the project, and ties project goals to business objectives.
2. **Planning**: Project managers focus most on the Planning stage. They set the project scope, which consists of the timeline, budget, and quality standards. They come up with plans to acquire the right resources, organize the teams, and lay out the tasks necessary to keep the project within scope.

3. **Execution**: While the team is executing the project, the project manager manages resources, communicates with stakeholders, and responds to project disruptions or risks, so the project can keep moving forward.
4. **Monitor & Control**: In this stage, the project manager tracks the progress of tasks, whether requirements have been met, and creates reports for stakeholders to follow along.
5. **Closure**: Project managers close projects out by creating, sharing, and archiving documentation on how the project was done and its outcome.



The lessons in the Digital Project Management course are structured around these 5 stages. In those lessons, we will discuss the project management lifecycle in more detail. And along the way, we will dive deeper into what the project manager is responsible for so that you will acquire a new skill or method for your toolbox in each phase.

New Terms

- **Project Management Lifecycle**: The key stages that a digital project typically goes through. These stages include initiation, planning, execution, monitoring and controlling, and closure.
- **Initiation**: The first stage in the project management lifecycle that involves selecting and kicking off a project.
- **Planning**: The second stage in the project management lifecycle that involves coming up with a plan for how to, when, and who will execute the project.
- **Execution**: The third stage in the project management lifecycle in which those responsible for a project put the project plans into action to produce a product or process.
- **Monitor & Control**: The fourth stage in the project management lifecycle in which a project's performance is recorded and action is taken to keep the project on track.
- **Closure**: The fifth and final stage in the project management lifecycle, which involves verifying a project has been completed, formally delivered to the intended recipient, and properly archived.

2.3.7. Quizzes: Key Stages of the Project Management Lifecycle

QUIZ QUESTION

Below are the key stages in the project management lifecycle we just discussed. Can you place them in their correct order?

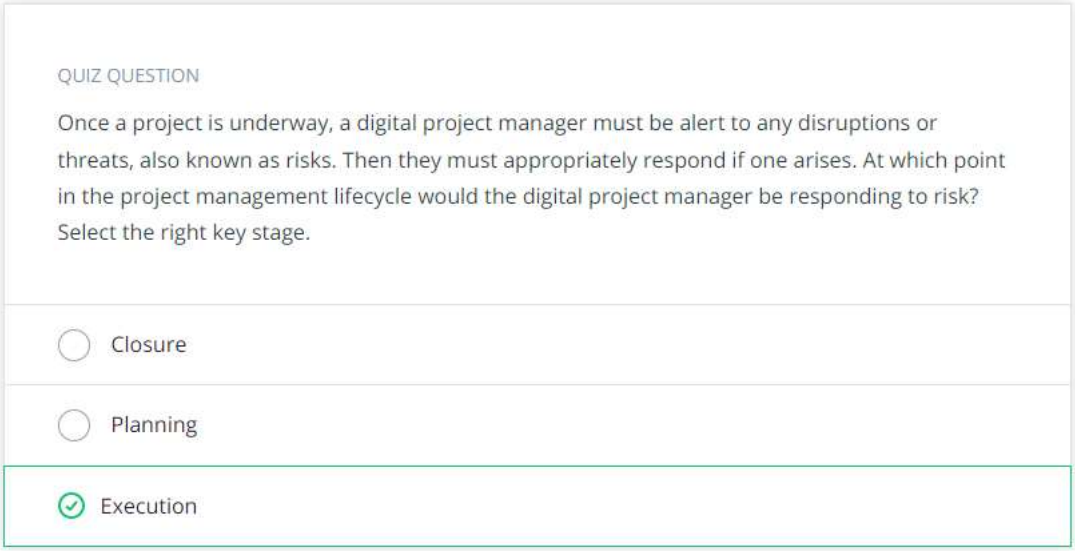
Submit to check your answer choices!

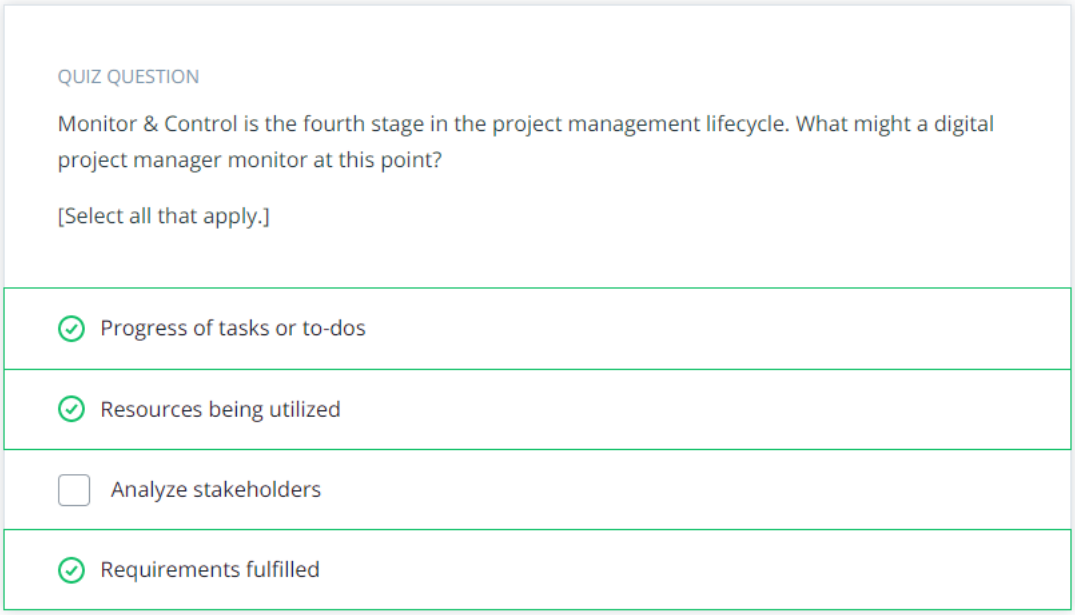
Order	Key Stage
1	Initiation
2	Planning
3	Execution
4	Monitor & Control
5	Closure

QUIZ QUESTION

A project scope is a document that outlines a project's goals, timeline, budget, quality standards, and resources. At which point in the project management lifecycle would this document be created? Select the right key stage.

- ✓ Planning
- ○ Initiation
- ○ Monitor & Control





2.3.8. Lesson Review

Video

The topics discussed in this lesson orient us in the greater project management field and give us a starting point for future projects. In this lesson, we learned:

- What distinguishes digital from traditional project management so we understand the type of work that falls under the digital project manager's purview.
- Business cases that justify developing a digital project so we know when it is our moment to step up.
- The five key stages in the project management lifecycle so we have a solid structure to base projects on.

How It All Comes Together

This course challenges you to think about your career and how digital project management might fit into it. It raises your awareness of the business stakeholders and situations that would necessitate a digital project. And by learning about the project management lifecycle, you can begin to envision

the type of work you could do to step up in those situations. If you are energized by the idea of powering businesses by developing digital products or processes, then consider diving deeper into the Digital Project Management course next.

2.3.9. Glossary

For your reference, here are all the new terms we introduced in this lesson:

- **Digital project management**: A methodology for carrying out a project with collaborative online or cloud-based tools for an end result that is or optimizes a digital product or process while being prepared to adapt to change.
- **Cloud-based:** Services or products made available on-demand via a network of online servers hosted by a cloud service provider.
- **Digital product**: An Internet-based website, app, game, or other content-based platforms that people interact with via a digital screen.
- **Project plan:** A project plan contains a list of tasks needed to execute a project, the people assigned to each task, and a schedule by which the project should get done.
- **Digital transformation:** The conversion of tools and processes into Internet-based resources.
- **Change management:** The implementation of structures, mechanisms, and a culture in place that helps people adapt to any kind of change that could threaten the business.
- **Digital product development:** The delivery of digital content to an Internet-connected device or the creation of a service or platform that is online.
- **Technological competitive advantage:** Inventing new technology or innovating the use of existing technology to become the dominant competitor in business.
- **Legal compliance:** The act of understanding regulations and ensuring your project or business is following relevant rules and policies.
- **Project Management Lifecycle:** The key stages that a digital project typically goes through. These stages include initiation, planning, execution, monitoring and controlling, and closure.
- **Initiation:** The first stage in the project management lifecycle that involves selecting and kicking off a project.
- **Planning:** The second stage in the project management lifecycle that involves coming up with a plan for how to, when, and who will execute the project.
- **Execution:** The third stage in the project management lifecycle in which those responsible for a project put the project plans into action to produce a product or process.
- **Monitor & Control:** The fourth stage in the project management lifecycle in which a project's performance is recorded and action is taken to keep the project on track.
- **Closure:** The fifth and final stage in the project management lifecycle, which involves verifying a project has been completed, formally delivered to the intended recipient, and properly archived.

3. Digital Project Management

3.1. Introduction to Digital Project Management

3.1.1. Introduction and Course Outline

Video

Lesson 1: Introduction to Digital Project Management

This is the lesson you're in right now! In this lesson, we introduce you to:

- The big picture – what is this course about and why does it matter?
- The prerequisites you'll need to have before you take this course.
- The history of digital project management to provide context for this course.
- The tools and environment you'll need for the course.
- And finally, the project you'll build at the end of the course.

By the end of this lesson, you'll have context on what this course is about and what you'll need in order to succeed.

Lesson 2: Project Management Methodologies

In this lesson, you'll learn:

- To define what is a methodology and framework within project management and learn about the most common ones that digital project managers use.
- How to select the right project management methodology for your next project.
- How these common methodologies and frameworks have been applied in real-world use cases.

By the end of this lesson, you'll be able to define common methodologies and frameworks related to Waterfall and Agile, as well as apply a checklist for choosing the best methodology for your next digital project.

Lesson 3: Setting Up Your Digital Project

In this lesson, you'll learn:

- How to communicate your vision for a project and set up expectations.
- Who you should consider as an important and relevant participant in the project.
- And how to evaluate your team's competency for the sake of your project.

By the end of Lesson 3, you'll be able to write a project scope, identify key stakeholders, plan how to keep them engaged, and determine your team's execution quotient.

Lesson 4: Building Realistic Plans

This lesson is the core aspect of digital project management. In it, you'll learn:

- The importance of planning and gathering requirements on which your project plans will be based.
- How to determine whether a project is worth a monetary investment.
- And how to create project plans for both the Waterfall and Agile methodologies.

By the end of the lesson, you'll be able to recall methods for gathering requirements such as the Intake Form, conduct a cost-benefit analysis, create an Agile project plan in a Scrum board, and create a Waterfall project plan using a Gantt Chart.

Lesson 5: Getting Things Done

In Lesson 5, we go over two crucial responsibilities for a digital project manager while a project is being executed. You'll learn:

- How to identify and strategically respond to risks.
- And how to create and carry out a communications plan to engage project participants.

By the end of this lesson, you'll be able to define and apply the most appropriate risk response strategy and create a Status Report that communicates relevant and up-to-date information to your stakeholders.

Lesson 6: Monitoring and Control

In this lesson, you'll learn:

- How to help our team become top performers by referencing the Tuckman Ladder model.
- How to identify the right metrics to track and ensure your project meets the business goals.
- How to track your team's performance against the project metrics.

By the end of Lesson 6, you'll be able to select a strategy for nurturing and developing your team, develop S.M.A.R.T. goals to ensure your project is successful, and set up key performance indicators (KPIs) by which you can monitor the team's performance.

Lesson 7: Closure

This lesson covers the final stage in the project management lifecycle, Closure. In this lesson, you'll learn:

- How to determine whether your project is done and who you should pass it off to.
- What kind of knowledge a project generates and how to best document it.
- How to celebrate and leverage the achievement of a closed project for the benefit of your career.

By the end of this lesson, you'll be able to determine project closure, identify a post-project owner, create documentation that facilitates knowledge share, and articulate the value of your project in the STARI format.

Final Project: From Methodology to Execution

In the final project, you will have an opportunity to solidify what you've learned throughout this course by:

- Following along the Final Project Submission Template and completing the deliverables related to each stage of the project management lifecycle.
- And optionally doing the Standout assignment at the end of the project.

How It All Comes Together

Throughout this course, you will learn about each stage of the project management lifecycle in more detail. With each lesson, you will learn how to put together certain documents and apply methods and tools that digital project managers commonly use for digital projects. You'll master one deliverable at a time, so when you reach the final project, you'll be ready to execute our requirements.

3.1.2. Prerequisites

Video

What You Should Already Know

To succeed in this course, you should already be able to:

- **Define the core skills and the basic career path for a project manager.** You should understand how the digital project manager role differs from similar occupations and the basic skills a digital project manager relies on to do their jobs.
- **Recognize the business needs that prompt a digital project.** You should be able to name five common business justifications and understand the types of projects that would be developed in each use case.
- **Name the key stages in the project management lifecycle.** You should understand at a high level what each stage entails and know some of the main objectives for each one.

If all of those sound familiar, you should be ready for this course!

Resources

- If you do feel unsure about any of the above skills and want to spend time strengthening them, please check out the Introduction to Digital Project Management course.

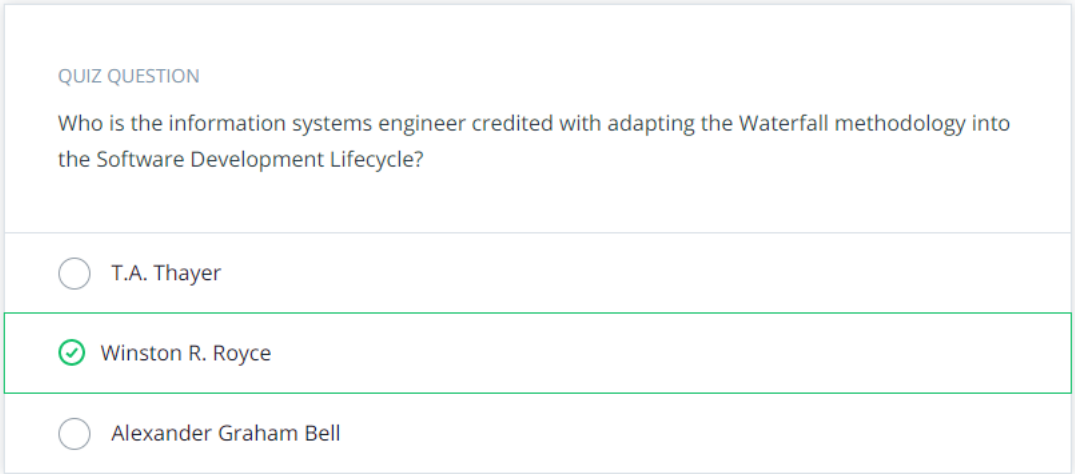
3.1.3. History of Digital Project Management

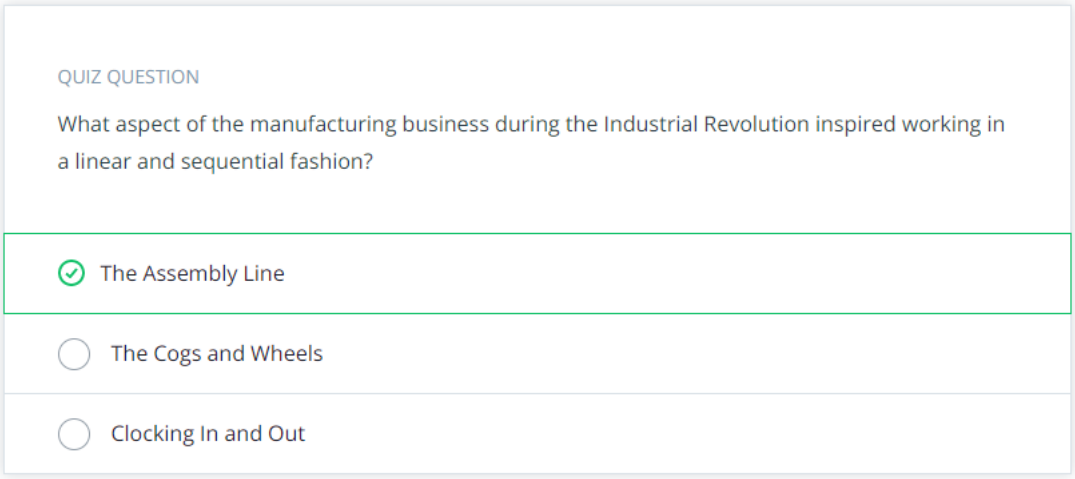
Video

Project management, as we understand it today, formed during the Industrial Revolution, when thinkers, engineers, and managers began designing more efficient and streamlined factory lines. This linear and sequential fashion for project management inspired the Waterfall methodology that early technology companies abided by. In the 1970s, we began seeing the rise of software development which adapted Waterfall into the Software Development Lifecycle (SDLC).

But as the world entered the Internet age in the 1980s, companies began facing a competitive landscape that was more constantly and frequently changing due to new technology. They needed to develop digital projects more rapidly and maintain nimble in this new, fast-paced environment. So technology teams - expanding beyond just software engineers - adopted new frameworks, such as Scrum, that were more flexible than the SDLC.

Those early, more flexible methods were built into a 2001 document called the Agile Manifesto, which was created by a group of technology professionals that wanted to provide a set of principles to get projects done in a more efficient way. Since then, other methodologies and frameworks have sprouted for the purposes of digital project management, but Agile and Scrum have become the dominant choice.





New Terms

- **Industrial Revolution**: A time period at the turn of the century where work shifted from agriculture to large-scale industry with a factory system using a mix of manual labor and mechanics on an assembly line.
- **Methodology:** A set of methods or guiding principles for a field of study or discipline.
- **Framework** gives structure to a methodology by providing a set of steps or a plan for how to realize an idea.
- **Waterfall**: A methodology that organizes projects in a linear and sequential way.
- **Software Development Lifecycle**: A framework that applies the Waterfall methodology to the field of software development.
- **Agile**: A methodology that organized projects in an iterative and adaptable way.
- **Scrum**: A framework that gives Agile projects rules and events that occur in short time periods repeatedly until a project is complete.

Additional Resources

- If you want to learn more about the history of digital project management, we recommend that you check out the following two articles in the Harvard Business Review: The Secret History of Agile Innovation and Embracing Agile.
- If you want to learn more about Agile's adoption rates, read BusinessWire's coverage of the 15th State of Agile Report.

3.1.4. Tools & Environment

Video

This course will require you to write, use spreadsheets, and build project plans. Please be sure to read the instructions on the exercise pages carefully.

Tools You May Need

- Word processing software:
  - Microsoft Word or Google Docs
- Diagramming tools:
  - Microsoft Excel or Google Sheets
  - Trello, an online project management software

3.1.5. Project Preview

Video

The Final Project is structured in a way that takes the project management lifecycle into consideration. You will be given a Project Submission Template to download and read a scenario about a small business undergoing digital transformation. Then you will follow instructions in the template to create a set of deliverables that correspond with the Initiation, Planning, Execution, Monitor & Control, and Closure stages of the lifecycle.

3.1.6. Glossary

For your reference, here are all the new terms we introduced in this lesson:

- **Industrial Revolution**: A time period at the turn of the century where work shifted from agriculture to large-scale industry with a factory system using a mix of manual labor and mechanics on an assembly line.
- **Methodology**: A set of methods or guiding principles for a field of study or discipline.
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- **Scrum**: A framework that gives Agile projects rules and events that occur in short time periods repeatedly until a project is complete.

3.2. Project Management Methodologies

3.2.1. Introduction

Video

Teams in the media, technology and retail industries collaborate on large, complex projects that are successfully completed thanks to digital project management. The methodologies and frameworks we are covering in this course break down big projects into smaller, realistic steps. And organizing these steps into stages makes projects of all sizes and levels of complexity much more manageable. It allows you to focus on a deliverable or set of requirements without missing any important details.

3.2.2. Methodology vs Framework

In my personal story on the previous page, I mentioned “methodologies and frameworks”. You might be wondering, what exactly are “methodologies" and "frameworks”? Are they not the same thing? To begin, let me define these terms.

Video

A methodology is like a compass that guides the steps you should take, and a framework is like a map that tells you what steps those are and in what order.

Methodologies pre-define the way a project should be organized because it will always point North, while frameworks allow for more creativity, because you can choose to go to your end destination out of many route options and take the most optimal path to get there.

New Terms

- **Methodology**: A set of methods or guiding principles for a field of study or discipline.
- **Framework**: A structure providing a set of steps or a plan for how to realize an idea.

3.2.3. Lesson Outline

Video

Before you can initiate a project, you must understand basic methodologies and frameworks to build digital projects. In this lesson, we will learn:

- About some of the most common methodologies in digital project management and frameworks that fit under each methodology's umbrella.
- A set of questions that help you evaluate the best methodology to use for a digital project so you can weigh relevant factors.
- How these methodologies and frameworks have been applied in real-world examples.

By the end of this lesson, you will be able to define common methodologies and frameworks related to Waterfall and Agile and apply a checklist for choosing the best methodology for your next digital project. By understanding these applications, you'll be able to make the best choice, and possibly even develop your own custom approach to project management.

3.2.4. Waterfall methodology

Video

Waterfall is a traditional methodology for setting up projects in a linear and logical way so that the next stage depends on the previous one being completed. It could organize projects using the stages of the project management lifecycle: Initiation, Planning, Execution, Monitor & Control, and Closure. Or its stages could be organized by the nature of the product or process being built, such as software.

Software projects use a framework called the **Software Development Lifecycle (SDLC).** Regardless of the stages, Waterfall projects require knowing most of the details of a project upfront. Then, all tasks associated with each stage must be completed before cascading down to the next stage.

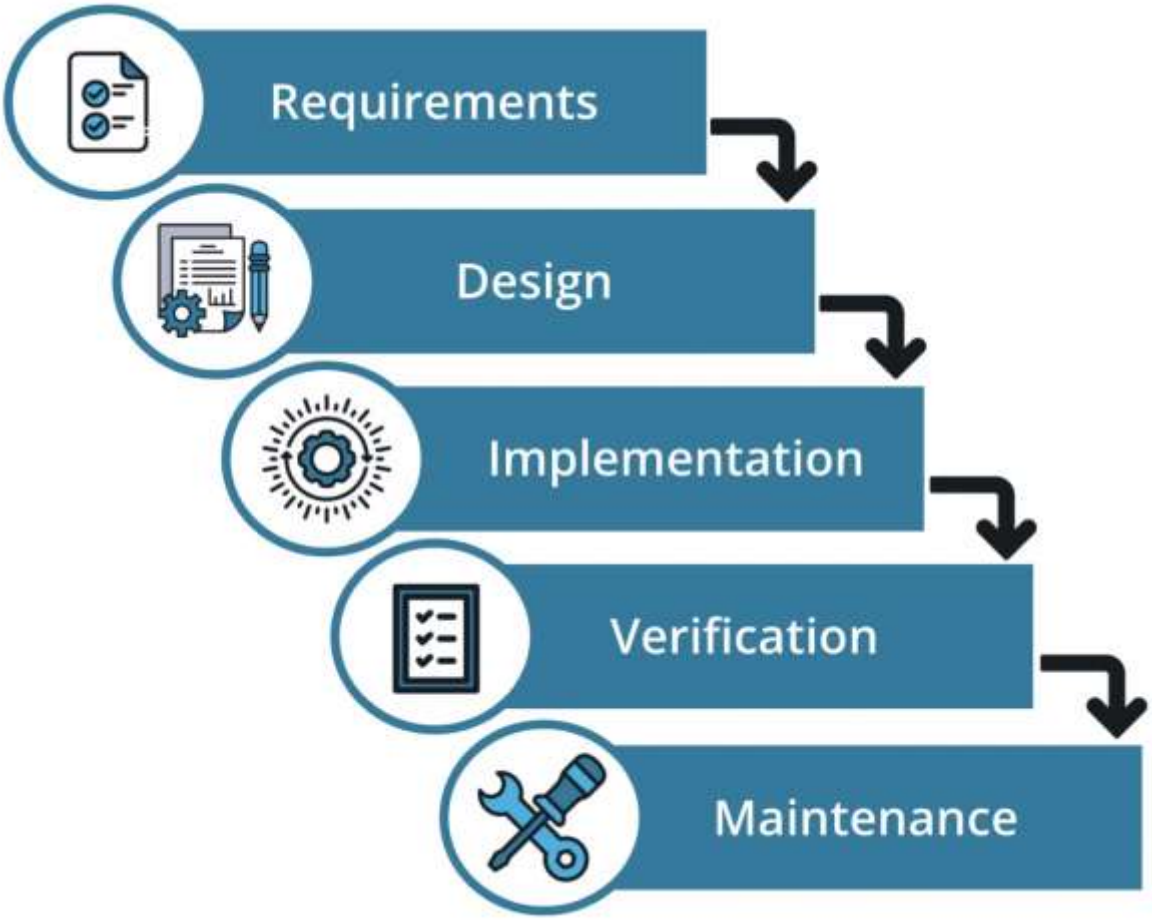
Waterfall Pros and Cons

Waterfall's characteristics include **predictability** and **sequential order**. That makes Waterfall **suitable** for projects that:

- have clear expectations,
- has rigid requirements, and
- may be complex, large-scale, or long-term.

Some of the **disadvantages** of Waterfall include:

- It is not welcoming of creative, new ideas.
- Its projects take more time to complete.
- Any changes to the project plan could potentially cause a Domino Effect, in which the entire project may have to start again.



Stages in the Software Development Lifecycle (SDLC)

1. **Gathering Requirements**: Listing the deliverables needed to be achieved in the software project.
2. **Design**: Finding the right set of programming languages and technical resources that would allow requirements to be realized.
3. **Implementation**: Coding or building the software project.
4. **Verification**: Testing the functionality of the software to ensure it meets expectations and to identify any bugs or errors that need fixing.
5. **Maintenance**: The final product is handed over to the people who will continuously use it, and a team of software developers will fix future bugs and update the software so it continues to work.

New Terms

- **Software**: Code-based programs that enable operating computers and digital devices.
- **Software Development Lifecycle (SDLC):** A framework with linear and sequential steps that go into creating a software product.
- **Gathering Requirements**: The first stage in the SDLC, where the deliverables that are needed to be achieved in the software project are listed.
- **Design**: The second stage in the SDLC, where the right set of programming languages and technical resources that would allow requirements to be realized are identified and chosen.
- **Implementation**: The third stage in the SDLC, where the engineers and developers code and/or build the software project.

- **Verification**: The fourth stage in the SDLC, where the functionality of the software is tested to ensure it meets expectations and any identified bugs or errors are fixed.
- **Maintenance**: The fifth stage in the SDLC, where the final product is handed over to the people who will continuously use it, and a team of software developers will fix future bugs and update the software so it continues to work.

Additional Resources

There are other methodologies and frameworks that can sometimes be used in digital project management that we will not cover in this course because we will be focused on the most common ones. However, if you are curious and would like to deepen your knowledge, I recommend researching:

- The **Lean** Methodology, if you'd like to build a startup from the ground up;
- **Extreme Programming**, or XP, if you would like to become an ultra-efficient software developer;
- And the **Prince2** methodology for enterprise-level projects at large corporations.

3.2.5. Agile Methodology

Part 1: Agile Overview and Scrum Framework

Video

Agile is an adaptable and iterative methodology that delivers results through collaboration and uses feedback to improve the next cycle of the project. It can be an ongoing process that allows an organization to continue evolving a product or process until it meets business goals.

Agile Pros and Cons

Agile projects are designed to have a collaborative, cross-functional team focused on a narrow set of goals so the team can quickly deliver a product or process. That makes Agile **suitable** for projects that:

- can build a product or process in a short-term period
- needs or wants immediate feedback from end users
- may be evolved over time, getting better with each new iteration

Some of the **disadvantages** of Agile include:

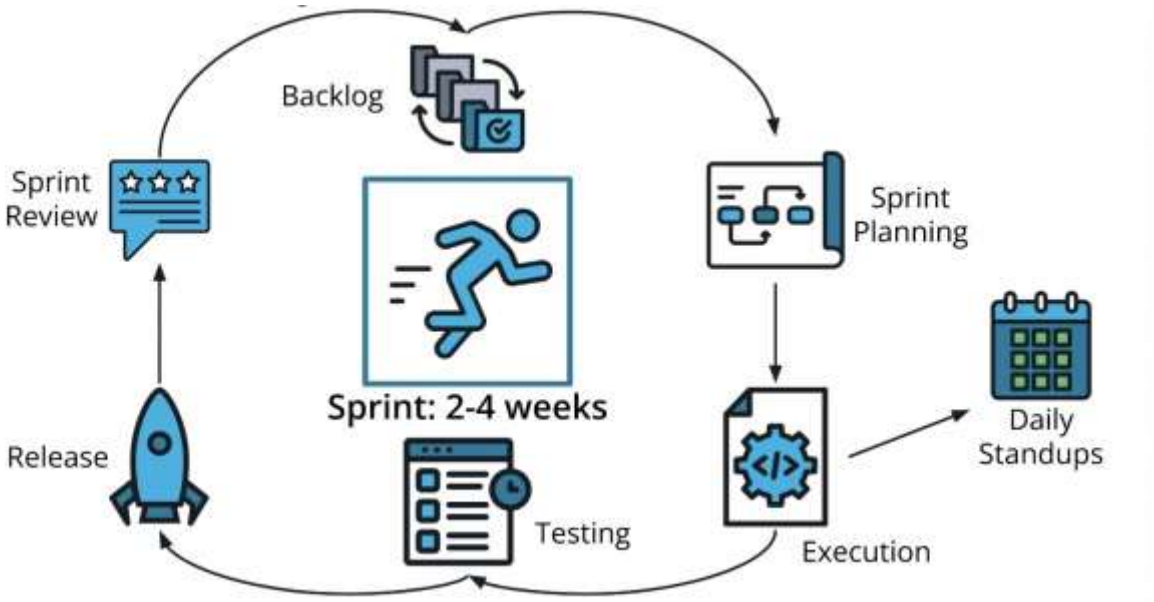
- The project goals, deadlines, and requirements are unclear.
- Without a clear vision of what you want to achieve, it could cause your team to lose sight of the end goal and their responsibilities.

Part 2: Scrum Stages Continued

Video

Scrum is a framework that provides a structure for Agile projects to reach their end goals. It has a set of rules and events that divides up work into a cycle of stages so that one goal or requirement can be achieved in a short period of time. This period is called a **Sprint**.

A Sprint typically lasts **two to four weeks**, and it can repeatedly occur until all the requirements or goals of a project have been completed.



Scrum Framework Stages and Events

- **Sprint**: The time period Scrum projects typically work within is two to four weeks.
- **Backlog**: All the requirements for developing a product or process, also known as deliverables, are gathered into the backlog by the project manager.
- **Sprint Planning**: A meeting hosted by the project manager to prioritize the deliverables that will be worked on and in which order.
- **Execution**: This is where the team actually builds out the project's deliverables.
- **Daily Standups**: Throughout a Sprint, the project manager hosts a 15- to 30-minute huddle, where the team provides a status report of their tasks.
- **Testing**: Inspired by the Software Development Lifecycle, testing is the stage in Scrum projects where the team briefly tests the product or process and checks for errors.
- **Release**: If the deliverable is ready, it is launched and the team gathers feedback from users interacting with the product or process.
- **Sprint Review**: The final stage of Scrum projects, in which the project manager hosts a Retrospective meeting where the team discusses what they learned from the Sprint they just completed.

Part 3: Real-World Scrum Example

Video

Angel Studios developed a video game called Midtown Madness in 1999. The director of the game, Clinton Keith, wrote a book about how he incorporated the Scrum framework to develop this fun, interactive product. In it, he described organizing a large department into small Scrum teams that were cross-functional and could work simultaneously on overlapping priorities. Each team could act mostly autonomously and all deliverables for the game were built at a much faster pace than with traditional methodologies.

Credit: Agile Game Development With Scrum: Teams, Game Developer

New Terms

- **Agile**: A methodology that organized projects in an iterative and adaptable way.

- **Scrum**: A framework that provides a cyclical structure for Agile projects to reach their end goals.
- **Sprint**: A two-to-four-week time period in which one goal or requirement can be achieved.
- **Backlog**: The list of all the requirements for developing a product or process, also known as deliverables.
- **Sprint Planning**: A meeting hosted by the project manager to prioritize the deliverables that will be worked on and in which order.
- **Execution**: A stage in the Scrum framework where the team actually builds out the project's deliverables.
- **Daily Standups**: A 15- to 30-minute meeting where the team provides a status report of their tasks.
- **Testing**: The stage in Scrum projects where the team briefly tests the product or process and checks for errors.
- **Release**: The stage in Scrum projects where the deliverable is launched and the team gathers feedback from users interacting with the product or process.
- **Sprint Review**: The final stage of Scrum projects, in which the project manager hosts a Retrospective meeting where the team discusses what they learned from the Sprint they just completed.
- **Deliverables**: A tangible product or quantifiable process that can be built by the project team.
- **Sprint Retrospective**: A meeting in which Scrum teams discuss what they learned in a completed Sprint.

Additional Resources

- To dive deeper into Agile, check out Udacity's Foundations of Agile and Agile Frameworks course.
- Also, consider another Agile framework that is visually driven called Kanban. Learn more about it in this article: Kanban Methodology: The Simplest Agile Framework.

3.2.6. Quizzes: Waterfall and Agile

QUIZ QUESTION

Below are the project management methodologies and frameworks we just discussed. Can you match each of them with the correct description?

Submit to check your answer choices!

Description	Methodology/Framework
Linear, Sequential and Predetermined Methodology	Waterfall
Iterative, Cyclical, and Cross-Functional Methodology	Agile
Five Phases Including Design and Verification	SDLC
Structured with Events for Execution in Sprints	Scrum

QUIZ QUESTION

Which project management methodology or framework would potentially have to start from scratch if one stage cannot be done correctly?

- ✓ Waterfall
- Scrum
- Agile

QUIZ QUESTION

True or False: The SDLC framework has a stage to test the functionality of the deliverables and verify they meet expectations and technical standards.

- ✓ True
- False

3.2.7. Choosing Project Management Methodology

Now that we've covered two of the most common project management methodologies, let's take it one step further.

In the following videos, we will review the main differences between Waterfall and Agile, then we will go over a checklist for choosing the best methodology for a given project.

Part 1: End Result and Dependencies; Delivery Frequency and Cadence

Video

Q1: Do you have a clear or evolving idea of what the end result should be?

- If you have a clear vision of the end result, choose **Waterfall**.
- If your project is open to refinement and improvement along the way, go with **Agile**.

Q2: Does the project have strict dependencies or is it open to adapting when new needs come up?

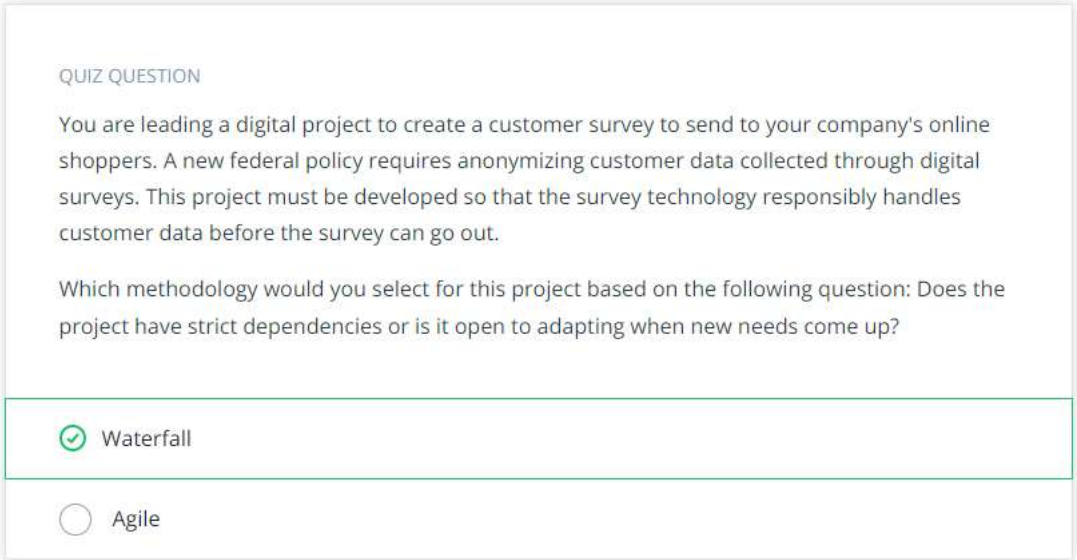
- The rigidity of **Waterfall** projects works best when we know it's requirements won't change. So Waterfall is best for a permanent solution.
- **Agile** projects are more flexible to adapt to new situations and works great for a quick response, but may not be the best approach for a permanent, long-term solution.

Q3: Will the project have one main output or be broken down into smaller deliverables?

- **Waterfall** projects aim for one successful output. So if your product or output cannot be broken down, then Waterfall is best.
- But if you can implement incremental changes to a process, or release one feature of a product at a time, then **Agile** is the answer.

Q4: Will your project have a quick turnaround per release or will it require lengthy development?

- **Waterfall** projects dedicate time to ensure all details are figured out in each stage of the project lifecycle. If your project needs to go through the whole lifecycle to ensure it gets built well, then choose Waterfall, even if it does take more time.
- But if you can repeat similar tasks in short sprints to accomplish multiple deliverables, then choose **Agile**. You can continue developing the project with each new iteration.



Part 2: Internal and External Stakeholders; Budget and Documentation

Video

Q5: Do you have upfront research on the target customer or do you need customer feedback more immediately to build a more useful product?

- **Waterfall** projects dedicate time upfront to extensive requirements gathering.
- **Agile** projects can release a feature for a product or process to see how the end user experiences it. Then they can make updates in the next iteration.

Q6: What methodology and tools is the team used to working with?

- Most teams are accustomed to working in a linear fashion because it's more straightforward.
- But **Agile** is becoming popular amongst modern companies, thanks in large part to easy-to-use tools made for Agile.

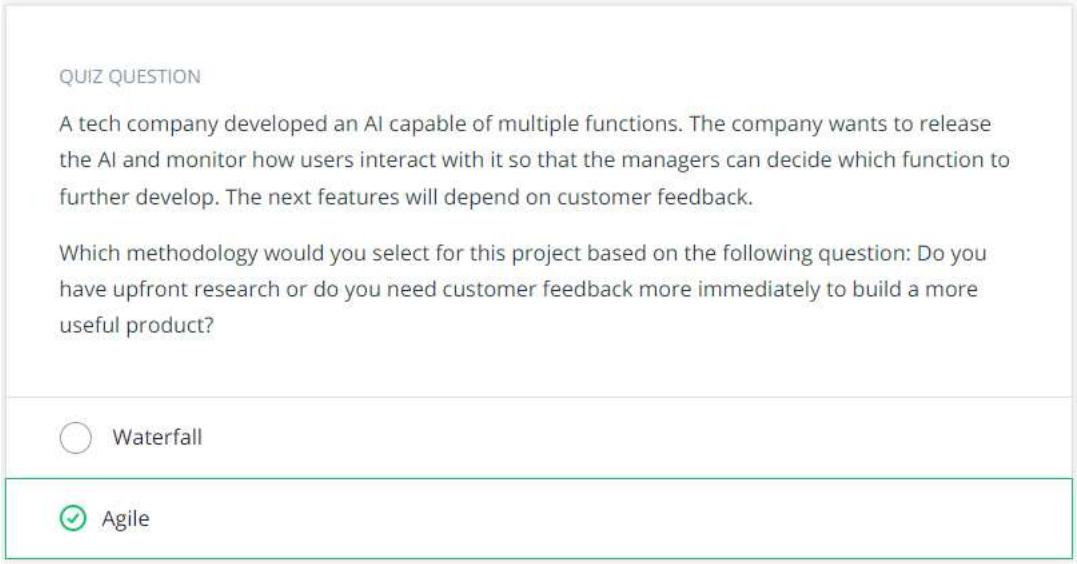
Q7: Has the budget been set upfront or is there room for justifying further investment based on demand?

- A **Waterfall** project sets a strict budget. Project managers also include contingency plans in case any changes to the project causes more expenses.
- If there is room to allow user behavior to determine more investment, we should choose **Agile**. An Agile project might use metrics on how users respond to a release in order to determine whether to invest money into additional releases.

Q8: Will the project require thorough documentation?

Both Waterfall and Agile projects should be documenting the processes to execute the projects and what the end result was. But...

- **Waterfall** projects tend to dedicate time for thorough documentation.
- **Agile** projects tend to be fast-paced because the environment is ever-changing. So it requires quick and easy documentation.



Part 3: Team Members and Quality; How to Use the Checklist

Video

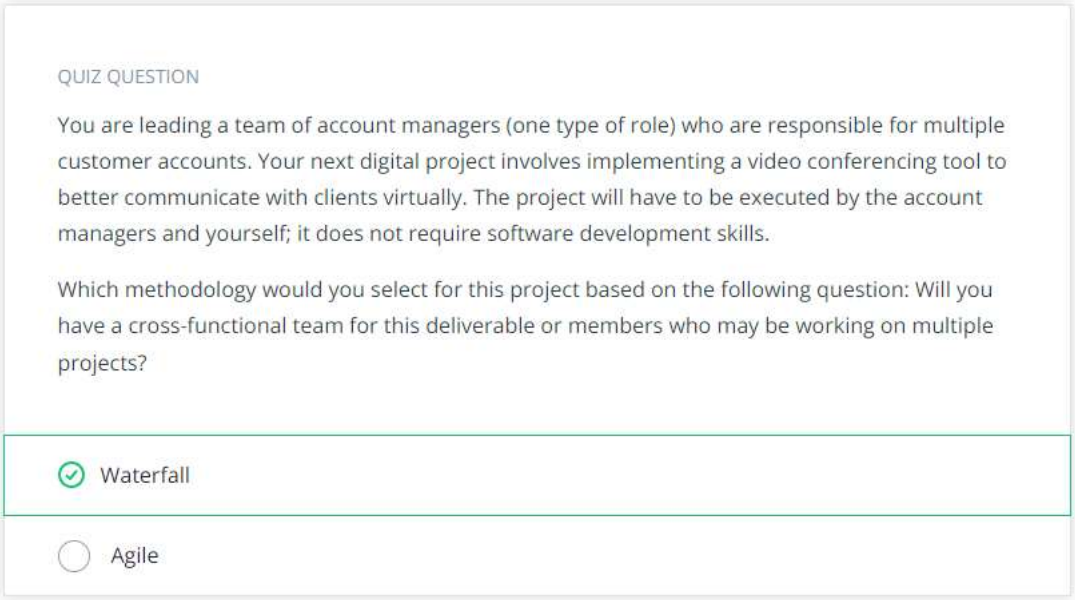
Q9: Will you have a dedicated team to just this project's deliverables or members who may be working on multiple projects?

While collaboration occurs in both methodologies, it looks slightly different in each.

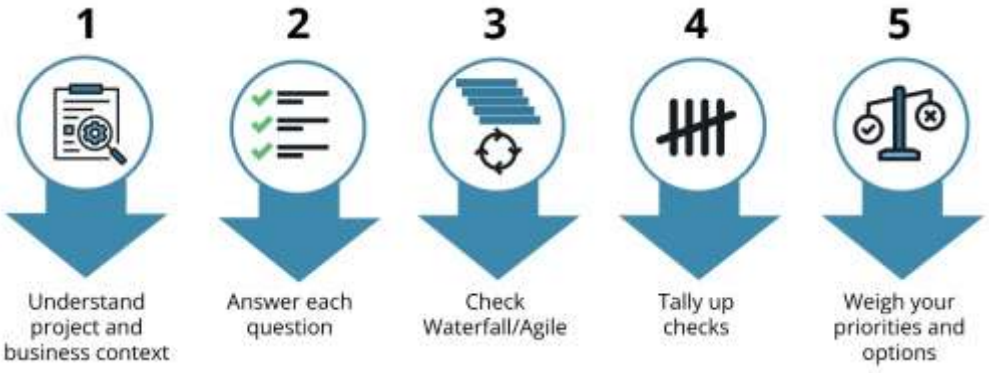
- The rigidity of **Waterfall** projects might mean that each team member has one role in which they perform a specific type of task for multiple projects. They would be called upon only when the project requires their work.
- In **Agile**, you should have a dedicated, cross-functional team, who wear multiple hats and contribute at the same time to one project.

Q10: Does the project need to meet a high standard of quality or need a speedy go-to-market release?

- **Waterfall** projects dedicate time to testing the quality of the output of a project and will continue developing the product or process until the standards are met, prior to ever releasing to the public. So if your project cares more about getting it right the first time around, you can choose Waterfall.
- **Agile** can also care about quality, but in a different way. It might be more important to be the first to get this type of project out in the market, then use feedback from users to improve the quality of the product or process in future iterations.



How to use the checklist



1. Understand the proposed project and business context.
2. Go through each question in the checklist and come up with your best answer.
3. Mark your answers to the questions as matching up with Waterfall or Agile.
4. Tally up how many answers fit under each methodology.
5. Before making a final decision, weigh your priorities and options to determine if any factor under a methodology is more important than the other factors.

New Terms

- **Dependency**: In project management, dependencies are the relationships between tasks and requirements. E.g., one has to be completed first before the next one can get started.
- **End User**: The people who are interacting with the digital product or online-based service developed in a project; often these are the intended audience.
- **User Experience** describes how the end user interacts with the digital product or service and how they feel about that interaction.
- **Cross-functional**: A team of people with different functions, skillsets, and subject-matter expertise.
- **Go-to-Market**: A plan for how to position your product or service to potential customers and get them to purchase or pay for it.

3.2.8. Demo: Choosing Project Management Methodology

Video

In 2009, the Christian Science Monitor, a Boston-based newspaper, announced it would switch from printing a daily paper to posting news on its website. The CEO of the organization set out a five-year roadmap with several objectives that would support their digital transformation. Below is a checklist that tallies up which methodology best matches certain aspects of the CS Monitor's major project.

Checklist Questions	Agile?	Waterfall?
1. Do you have a clear or evolving idea of the end result?	Yes, because we need to refine the website over time.	
2. Does the project have strict dependencies or is it open to adapting?		Yes, because the dependency is strict and the deadline is rigid.
3. Will the project have one main output or be broken down into smaller deliverables?	Yes, because the project can be broken down into multiple, smaller deliverables.	
4. Will your project have a quick turnaround per release or will it require lengthy development?	Yes, because each deliverable can be completed in a 1-4 Week Sprint.	
5. Do we have upfront research or need customer feedback?	Yes, need user feedback for the website.	
6. What methodology and tools is the team accustomed to working with?		Yes, because I assumed that the team is accustomed to Waterfall based on historical context.

7. Has the budget been set upfront or is there room for justifying further investment?	Yes, because budget may expand.	
8. Will the project require thorough documentation?		Yes, documentation for maintaining the website needs to be thorough.
9. Will you have a cross-functional team dedicated to just this project's deliverables or will your staff be working on multiple projects?	Yes, there is a dedicated team.	
10. Does the project need to meet a high standard of quality or need to be released into the market quickly?		Yes. Given that this project is expected to last for five years, it's likely they care about high standards more than speed.
Total Number of "Yes"	**6**	**4**

The results of the checklist gravitate toward Agile. In addition, I also need to weigh if any particular factor is more important than the others. The most important aspects of this project are

- Refining and evolving the website over time, and
- Allowing for collaboration that could coordinate between ramping down print production and building up the website.

Both these elements are more likely in an Agile project. So my final evaluation is to go with **Agile**.

3.2.9. Exercise: Choosing Project Methodology

Exercise: Choosing the Right Project Methodology

Instructions

You've just seen a demo on how to use the checklist to select a project methodology. In this exercise, you will

1. Review a scenario in which you will have to select the best project management methodology to meet the business objectives and project requirements.
2. As a warm-up, answer some of the checklist questions in the free-response fields below to identify factors in the scenario that lends toward a particular methodology, and compare your answers with mine.
3. Go through the full checklist; more instructions are provided below.
4. Write which project management methodology you would propose based on the checklist's final tally and analysis.

Scenario

You are a project manager at a social media company called Luny. You have just joined their product team and got assigned to the second phase of a project to develop a new set of features in their existing mobile app. You will have to propose a project methodology to work for the second phase.

Documentation on the first phase of the mobile app shows Luny followed the Waterfall methodology. Although it took an average of 3 weeks to build out all the requirements in Phase 1, there was no early feedback from potential app users. So when the app was launched, it did not

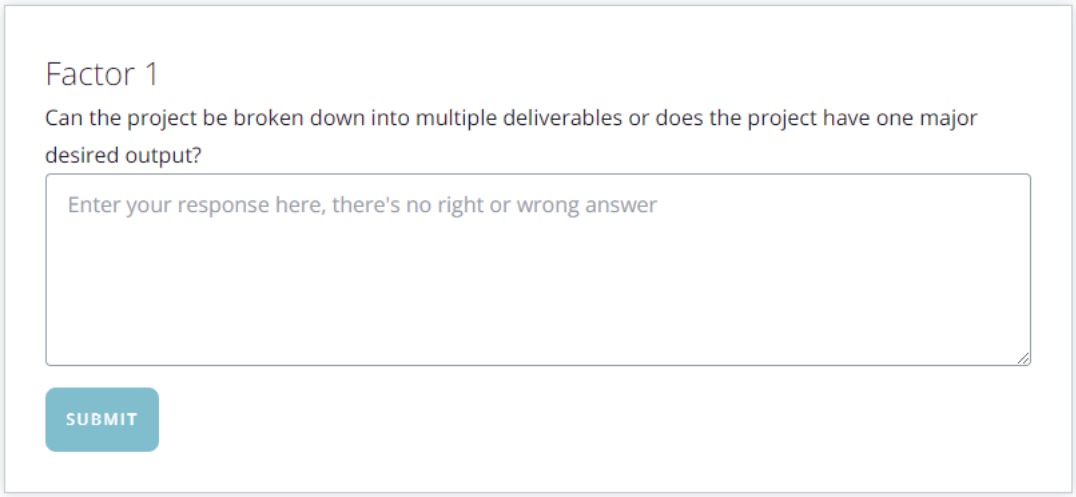
receive as many sign-ups as stakeholders expected. The next features should be completed in short Sprints.

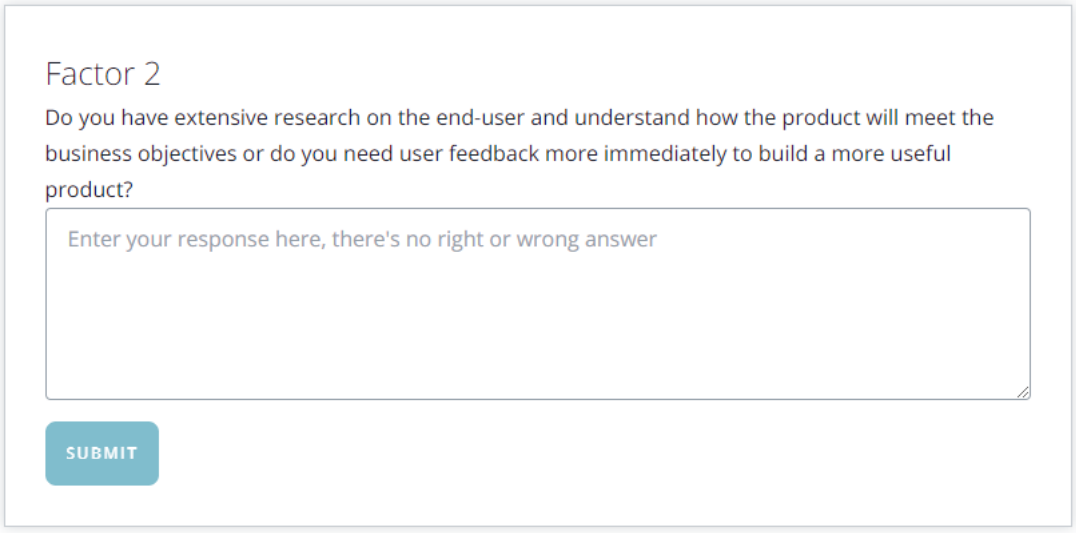
You work with a product manager, a UX designer, and a dedicated Engineering team. This allows you to focus on one deliverable at a time. You also have a budget cap for each deliverable, which limits the number of features your team can release. You are not limited by a strict deadline, but the CEO does want to see a steady growth of new app users.

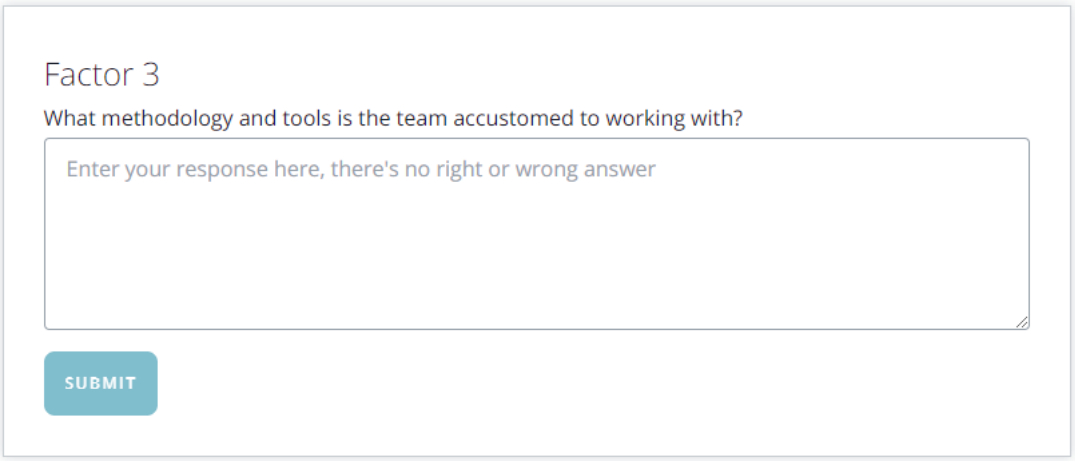
Moreover, the team is demoralized from the initial phase, and key internal stakeholders have different interests. The product manager, for example, wants to prioritize upcoming features based on quality in order to retain current app users. But the company's CEO requested prioritizing features that can be done quickly to increase new sign-ups as well as thorough documentation to inform similar future projects.

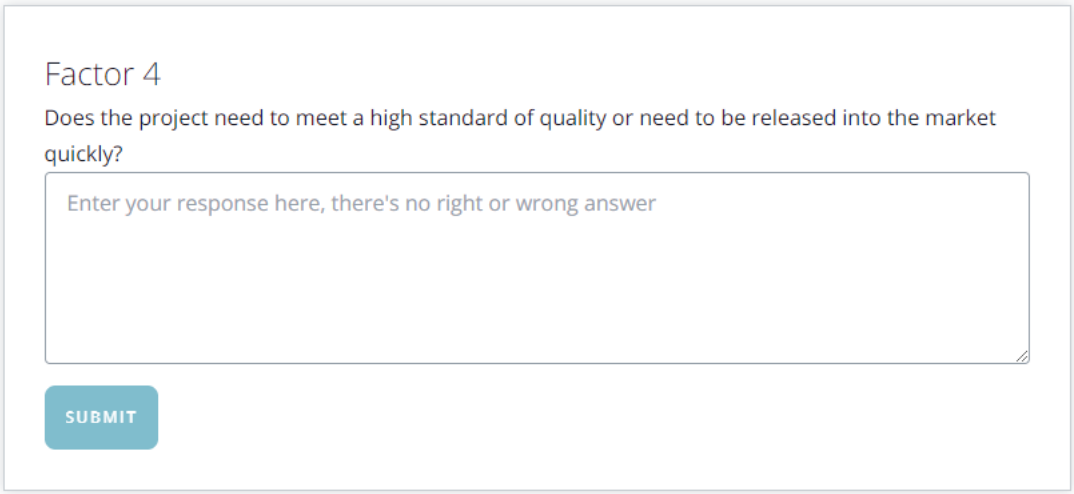
Considering the Factors

Now that you have read the scenario, consider some of the factors from the checklist on choosing the right methodology and respond to the questions below.









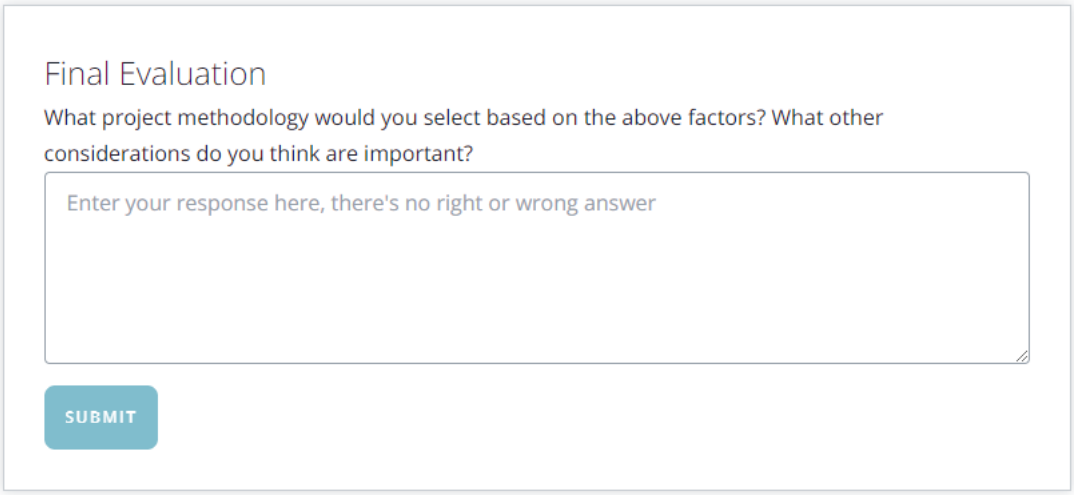
Complete the Full Project Management Methodology Checklist

Now that you have warmed up, you can complete the full checklist before making a final evaluation on what methodology you would recommend.

Download the Project Management Methodology Checklist Template.

You can either make a copy of the template via Google Docs or download it as a .docx file from the Resources section on the left-side panel.

If needed, go to the Demo: Project Management Methodology page to recall how to use the checklist.



3.2.10. Solution; Choosing the Right Project Methodology

Solution: Choosing the Right Project Methodology

Reviewing the Scenario and Checklist

Here are my answers to each of the questions in the checklist. Normally, we can compare the Agile indicators and the Waterfall indicators and see which side weighs more.

Checklist Questions	Agile?	Waterfall?
1. Do you have a clear or evolving idea of the end result?	Yes, because we need to refine the product.	
2. Does the project have strict dependencies or is it open to adapting?	Yes, because the project is flexible and open to adapting.	
3. Will the project have one main output or be broken down into smaller deliverables?	Yes, because the project can be broken down into multiple deliverables.	
4. Will your project have a quick turnaround per release or will it require lengthy development?	Yes, because each deliverable can be completed in a 1-4 week Sprint.	
5. Do we have upfront research or need customer feedback?	Yes, need user feedback.	
6. What methodology and tools is the team accustomed to working with?		Yes, the team is accustomed to Waterfall.
7. Has the budget been set upfront or is there room for justifying further investment?		Yes, the project has a set budget.
8. Will the project require thorough documentation?		Yes, documentation is a requirement from the CEO.
9. Will you have a cross-functional team dedicated to just this project's deliverables	Yes, there is a dedicated team.	

or will your staff be working on multiple projects?		
10. Does the project need to meet a high standard of quality or need to be released into the market quickly?	Yes. The CEO prefers speed.	
Total Number of "Yes"	7	3

My Project Methodology Selection

My final evaluation is to go with **Agile** management.

While the team was accustomed to working in a Waterfall approach, past documentation shows requirements can be broken down into Sprints. The budget limits how many features can be worked on, but if we release one feature at a time, then we'll be able to quickly get it out in the market and regain some lost customers. Moreover, we'll be able to get useful customer feedback that helps us better prioritize the next feature. And that will help uplift our demoralized team. Finally, two main challenges to getting the project done quickly is the need for documentation and meeting the product manager's high-quality standard. But we can use the retrospective meetings of Agile development to create Lessons Learned documents and incorporate feedback into the next Sprint.

Alternative Considerations

While going through the checklist to select a methodology, the answers do not always point to a clear choice. In a situation with ambiguity, you may have to consider what matters most to the most important stakeholders.

For example, your organization may care more about reducing resistance to change than fast releases and immediate feedback. If that were the case, sticking to the methodology the team is accustomed to weighs more than any of the factors that suggest otherwise.

So if your final evaluation of the Luny scenario is different than mine, that's okay. You may have a strong argument for how it could meet the business objectives and keep the project well-organized.

3.2.11. Real-Life Hybrid Example

Real-Life Hybrid Example

Once you've mastered the main project management methodologies and learned some common frameworks, you will start to see ways to get more creative. In real life, you can create a hybrid or custom methodology or framework in order to meet the unique needs of your project.

In the video below, I will show you a real-world example that adopts a hybrid application of project management methodologies. I've broken down the different parts of the project and hypothesized which methodology was used in each part.

Video

InfoSys is one of the largest IT consulting companies in the world. They set a goal to enable their workforce to work from home, which was an enterprise-level and complicated change management endeavor. To meet this goal, they created a project with milestones that would each be reached using a variation of the Waterfall and Agile methodologies.

New Terms

- Enterprise-level: A project or team that delivers results for an entire company.

Additional Resources

- If you want to learn more about the InfoSys use case, I recommend reading the Harvard Business Review article, Break Down Change Management into Small Steps, describing this and other related projects developed at InfoSys.

3.2.12. Lesson Review

Video

In this lesson, we have learned:

- How to define what is a methodology and framework within project management and about the most common ones digital project managers use.
- How to select the right project management methodology for your next project.
- How these common methodologies and frameworks have been applied in real-world use cases.

Now, you are able to define common methodologies and frameworks related to Waterfall and Agile, as well as apply a checklist for choosing the best methodology for your next digital project.

3.2.13. Glossary

Glossary

For your reference, here are all the new terms we introduced in this lesson:

Methodology: A set of methods or guiding principles for a field of study or discipline.

Framework: A structure providing a set of steps or a plan for how to realize an idea.

Software: Code-based programs that enable operating computers and digital devices.

Software Development Lifecycle (SDLC): A framework with linear and sequential steps that go into creating a software product.

Gathering Requirements: The first stage in the SDLC, where the deliverables that are needed to be achieved in the software project are listed.

Design: The second stage in the SDLC, where the right set of programming languages and technical resources that would allow requirements to be realized are identified and chosen.

Implementation: The third stage in the SDLC, where the engineers and developers code and/or build the software project.

Verification: The fourth stage in the SDLC, where the functionality of the software is tested to ensure it meets expectations and any identified bugs or errors are fixed.

Maintenance: The fifth stage in the SDLC, where the final product is handed over to the people who will continuously use it, and a team of software developers will fix future bugs and update the software so it continues to work.

Agile: A methodology that organized projects in an iterative and adaptable way.

Scrum: A framework that provides a cyclical structure for Agile projects to reach their end goals.

Sprint: A two-to-four-week time period in which one goal or requirement can be achieved.

Backlog: The list of all the requirements for developing a product or process, also known as deliverables.

Sprint Planning: A meeting hosted by the project manager to prioritize the deliverables that will be worked on and in which order.

Execution: A stage in the Scrum framework where the team actually builds out the project's deliverables.

Daily Standups: A 15- to 30-minute meeting where the team provides a status report of their tasks.

Testing: The stage in Scrum projects where the team briefly tests the product or process and checks for errors.

Release: The stage in Scrum projects where the deliverable is launched and the team gathers feedback from users interacting with the product or process.

Sprint Review: The final stage of Scrum projects, in which the project manager hosts a Retrospective meeting where the team discusses what they learned from the Sprint they just completed.

Deliverables: A tangible product or quantifiable process that can be built by the project team.

Sprint Retrospective: A meeting in which Scrum teams discuss what they learned in a completed Sprint.

Dependency: In project management, dependencies are the relationships between tasks and requirements. E.g., one has to be completed first before the next one can get started.

End User: The people who are interacting with the digital product or online-based service developed in a project; often these are the intended audience.

User Experience describes how the end user interacts with the digital product or service and how they feel about that interaction.

Cross-functional: A team of people with different functions, skillsets, and subject-matter expertise.

Go-to-Market: A plan for how to position your product or service to potential customers and get them to purchase or pay for it.

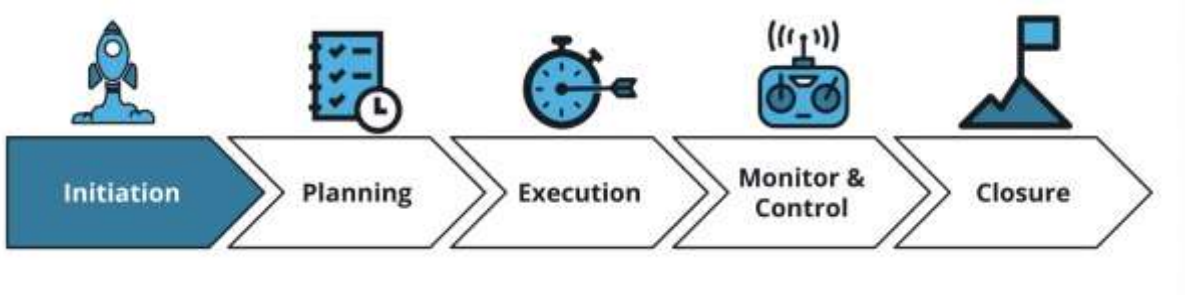
Enterprise-level: A project or team that delivers results for an entire company.

3.3. Setting Up Your Project

3.3.1. Introduction

Video

Initiating a project is about gathering all the elements and people you have available for a project and setting up realistic expectations for you and your stakeholders. It also helps with ensuring you’re producing the best possible outcome given your resources.



In this first stage of the project management lifecycle, you, as the digital project manager, may:

- Select the project you will be leading,
- Align the project goals with business objectives through the project scope,
- Find the stakeholders who care about this project, and
- Establish your team with the people who will execute the project.

3.3.2. Lesson Outline

Video

To ensure your project is able to produce the best possible outcome, there are a few steps digital project managers must take in the first stage of the project management lifecycle, Initiation. In this lesson, we'll learn:

- How to communicate your vision for a project and set up expectations.
- Who you should consider as an important and relevant participant in the project.
- And how to evaluate your team's competency for the sake of your project.

By the end of this lesson, you'll be able to write a project scope, identify key stakeholders, plan how to keep them engaged, and determine your team's execution quotient.

3.3.3. Five Key Questions to ask

Video

Digital project managers must first be sure they have a strong case for continuing on with a particular project. Below are five key questions you should ask to give you more knowledge and context, which you will later translate into a practical project scope document.

Ask These Five Key Questions

- What are the main business goals this project should serve and why?
- What is the timeline? When should the project start and end?
- How much of a budget does the project have?
- Which resources can be accessed for this project?
- Who should and can participate in the project?

New Terms

- Business goals: A set of strategic, tactical, and operational targets a business seeks to achieve.
- Resources: The elements needed to carry out tasks or projects, including people, time, money, and tools.

- Project Scope: A document that defines the goals, deliverables, timeline, and resources that a project must be based on or executed with.

3.3.4. Writing a Project Scope

Project scope statements used to be multiple pages long. But nowadays, companies tend to prefer the memo style, which is a one-page document.

What Is a Project Scope?

Video

A **project scope statement** is a memo that captures high-level concepts and some essential details about a project shared with stakeholders and team members. It should include the following information, some of which you may have gathered when asking stakeholders key questions about your project:

- **Business goals:** A set of strategic, tactical, and operational targets that the business seeks to achieve with this project.
- **Final deliverables:** The expected end result, i.e. a product or process.
- **Type of work planned:** A high-level description of the functions needed in a project, e.g. engineering, editorial, etc.
- **Timeline:** The expected start and estimated end dates for the project, as well as the frequency of releases if there are multiple deliverables.
- **Budget:** The amount of money available to fund the project and cover its expenses.
- **Resources:** The elements needed to carry out tasks or projects, including people, time, money, and tools.
- **Acceptance Criteria:** Specific standards or thresholds a project's deliverables must meet before the project can be considered complete.

Additional, optional information includes

- **Assumptions**: Events or circumstances you believe will come true in your project but don't yet have the evidence to prove it.
- **Constraints**: Any requirement or criteria that cannot be included in a project because it would go beyond the project scope.
- Project management **methodology or framework** on which you plan to structure the project plan.

Prepping for the Project Scope Demo

Now that you know what the key components of a project scope are, let's see how to extract useful information to write a project scope. I have written a project scenario in text for you to review. But in real life, you would be gathering this information from your stakeholders.

Please go ahead and read the text below:

Tory Fitness Scenario

Personal trainer Tory Amos built a successful business offering in-person exercise instruction and wellness services. Her company, Tory Fitness LLC, will now expand the business by delivering a digital format of her baseline fitness plans via the company website. Customers will have the option to choose one of three plans: getting lean, building muscle, and toning up. All three plans will include detailed exercise instructions, both written out and made available visually. Putting together these

plans will require gathering Tory's existing materials and packaging them into one of the three plans. It will also require editing the written material and creating visual assets featuring Tory. The new offering will be advertised at a Women's wellness conference in three months, in which Tory will be the keynote speaker. She expects that all three plans are complete, along with her approval of the exercise and wellness tips included, and that the plans are available behind a paywall on the website with an attractive preview to entice customers to purchase the plans. The budget is $9,000, a third of which is dedicated to the editorial aspects of the plans. That may not be sufficient for creating videos, but the visual assets can include custom photos and illustrations. Our team consists of a graphic designer, an assistant trainer who helps plan, a web editor, a project manager with strong writing skills, and Tory herself. There is also a freelance photographer on call. We also do not currently have a mobile app, but the website is viewable on the phone.

Now, let's break down each element of this scenario. In the next video, I will show you what would go into Tory Fitness' project scope.

Demo: Writing a Project Scope

Video

In the video, we came up with answers to each of our key questions based on our scenario:

- What are the main business goals?
- What are the main deliverables?
- How would the project be executed?
- What timeline and budget do we have to work with?
- Who are your team members?
- Who are your stakeholders?
- What are the project owner's acceptance criteria?

Based on these answers, we can write our project scope for the Tory Fitness Digital Transformation project in a one-paragraph, memo style:

Project Scope for Tory Fitness Digital Transformation Project

The main business goal is to convert Tory's in-person service into an online product that can be sold to customers. The project's deliverables are three fitness plans with exercise instructions available for purchase on the website. The project requires editorial work to produce fitness plans with clear language and strong visuals. The project must be completed in three months with $3,000 for the editorial work and $6,000 for all other requirements. We are a small team of 6 able to create and edit great quality fitness plans and advertise them on the website. Other stakeholders include the Tory Fitness family, who is invested in the success of this project. Our existing customers are valuable and we would like to grow with new customers. The project will be considered complete when the business founder has approved the fitness plans content and there is a preview of them on the website.

New Terms

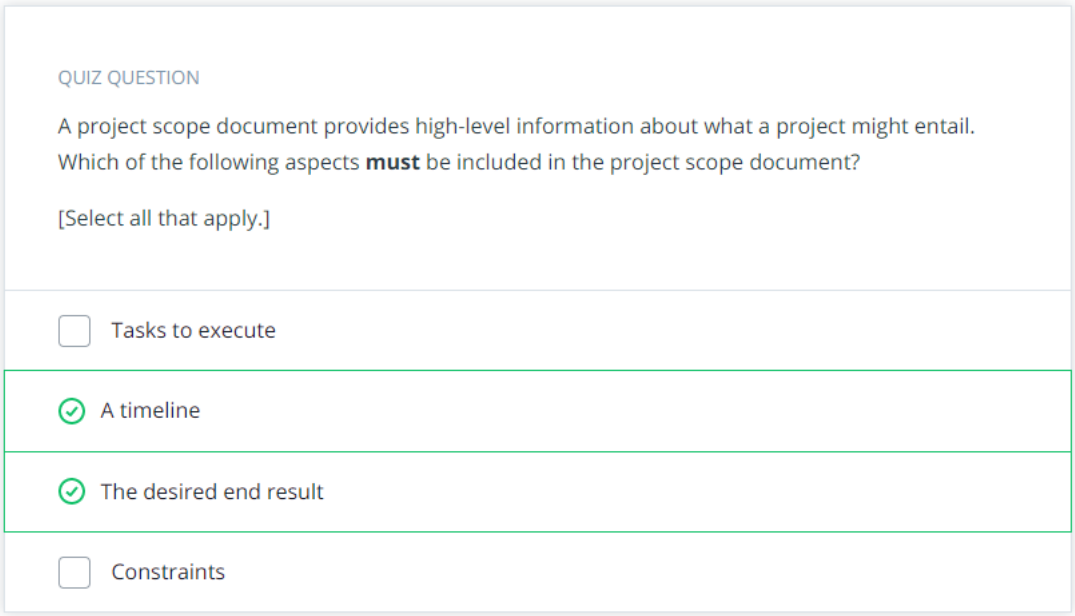
- **Memo**: A one-page document that provides concise information on a project or event.
- **Final deliverables**: The expected end result, i.e. a product or process.
- **Type of work planned**: A high-level description in a project scope document of the functions needed in a project, e.g. engineering, editorial, etc.

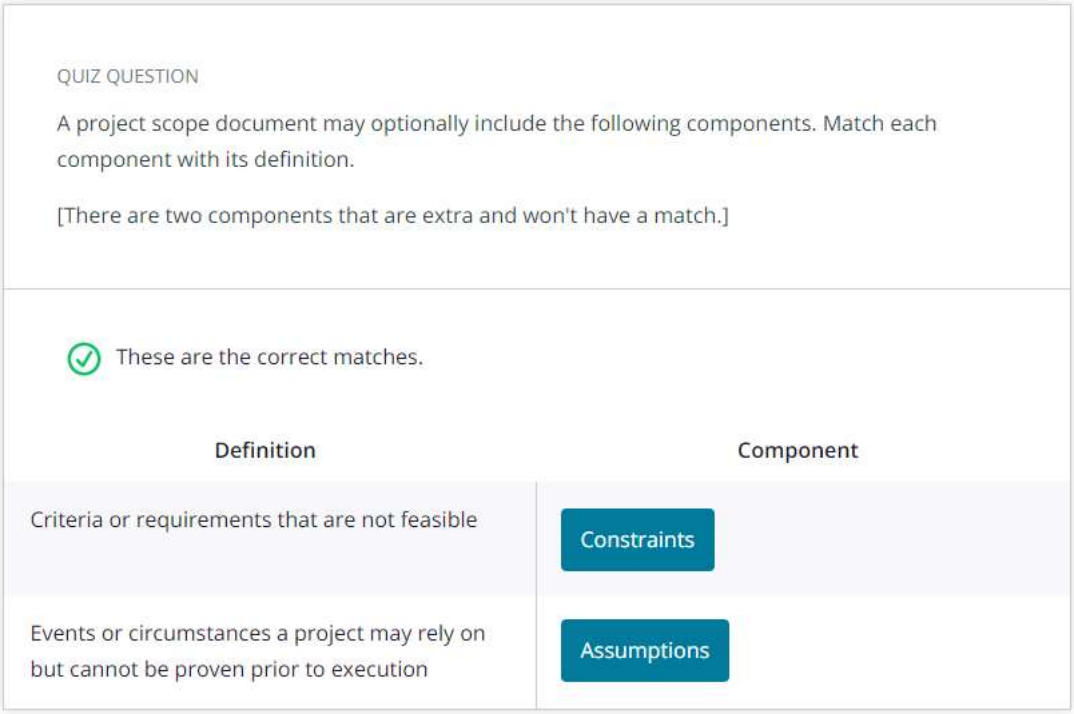
- **Timeline**: The expected start and estimated end dates for the project, as well as the frequency of releases if there are multiple deliverables.
- **Budget**: The amount of money available to fund the project and cover its expenses.
- **Acceptance** Criteria: Specific standards or thresholds a project's deliverables must meet before the project can be considered complete.
- **Assumptions**: Events or circumstances you believe will come true in your project but don't yet have the evidence to prove it.
- **Constraints**: Any requirement or criteria that cannot be included in a project because it would go beyond the project scope.

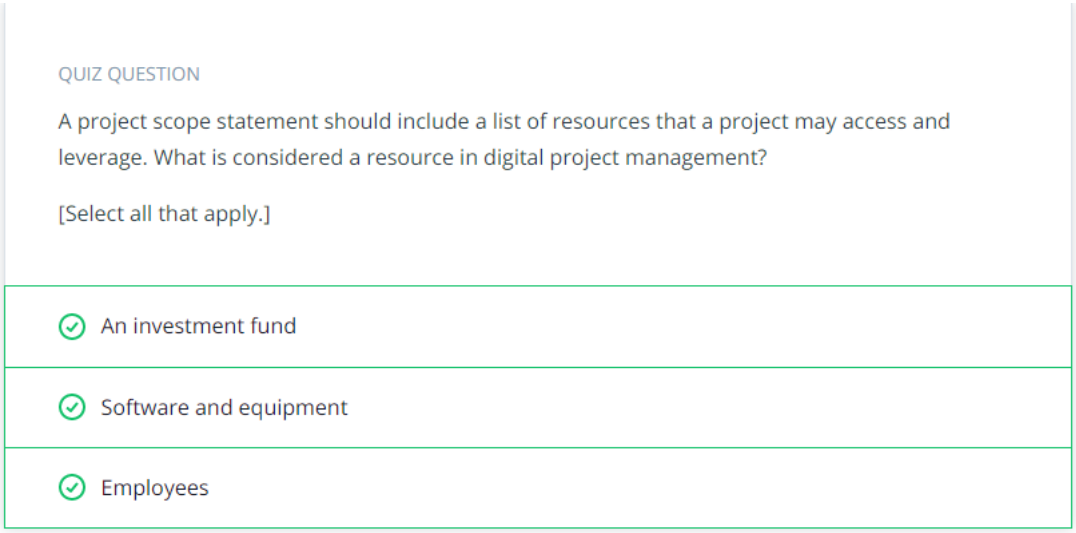
Additional Resources

- Learn more about How to Write a Business Case, a more in-depth document to justify investing in a project.

3.3.5. Quizzes: Writing a Project Scope







3.3.6. Exercise: Writing a Project Scope

Exercise: Writing a Project Scope

Instructions

Recall the information you've read in previous exercise scenarios about Luny and your project. Then answer the questions below to identify the details that would make up your project scope.

Scenario

You are a project manager at a social media company called Luny. You joined their product team and got assigned to the second phase of a project to develop a new set of features in their existing mobile app. You successfully proposed completing the second phase with the Agile methodology, despite the fact that the company has released the first phase with Waterfall.

The first phase did not incorporate early feedback from potential app users. So when the app was launched, it did not receive as many sign-ups as stakeholders expected. Now the product manager argues that high-quality features will help retain customers, while the CEO argues quick releases will help gain new customers. But everyone is in agreement that there should be 5 features released that accomplish one or both of these goals.

You work with a product manager, a UX designer, and a dedicated Engineering team. This allows you to focus on one deliverable at a time. You also have a total budget of $75,000, which means each feature can cost $15,000. You are not limited by a strict deadline, but the CEO does want to see a steady growth of new app users.

Finally, you found documentation from Phase 1 of the Luny app. And you discovered additional stakeholders including the Customer Service Manager, who needs to stay up-to-date on how each new feature will affect customers.

3.3.7. Solution: Writing a Project Scope

My Final Project Scope

Phase 2 presents an opportunity to further the product development of our social media app. The main objective is to create high-impact features, which will meet our customer acquisition and retention goals. To meet these goals, Phase 2 has a budget of $75,000. I will lead a team of engineers, a product manager, and a UX designer through an Agile methodology to release 5 features. Each release will be executed in Sprints of 2-4 weeks, until we have met our business goals. This means the project could be completed as soon as 10 weeks, or take up to 20 weeks. We will prioritize the features based on customer feedback of Phase 1 and after each new release. We will also need input from our internal stakeholders. And I plan to keep the CEO and Customer Service Manager in the loop of new developments.

Note

Your project scope is probably different from mine; that is okay as long as you include:

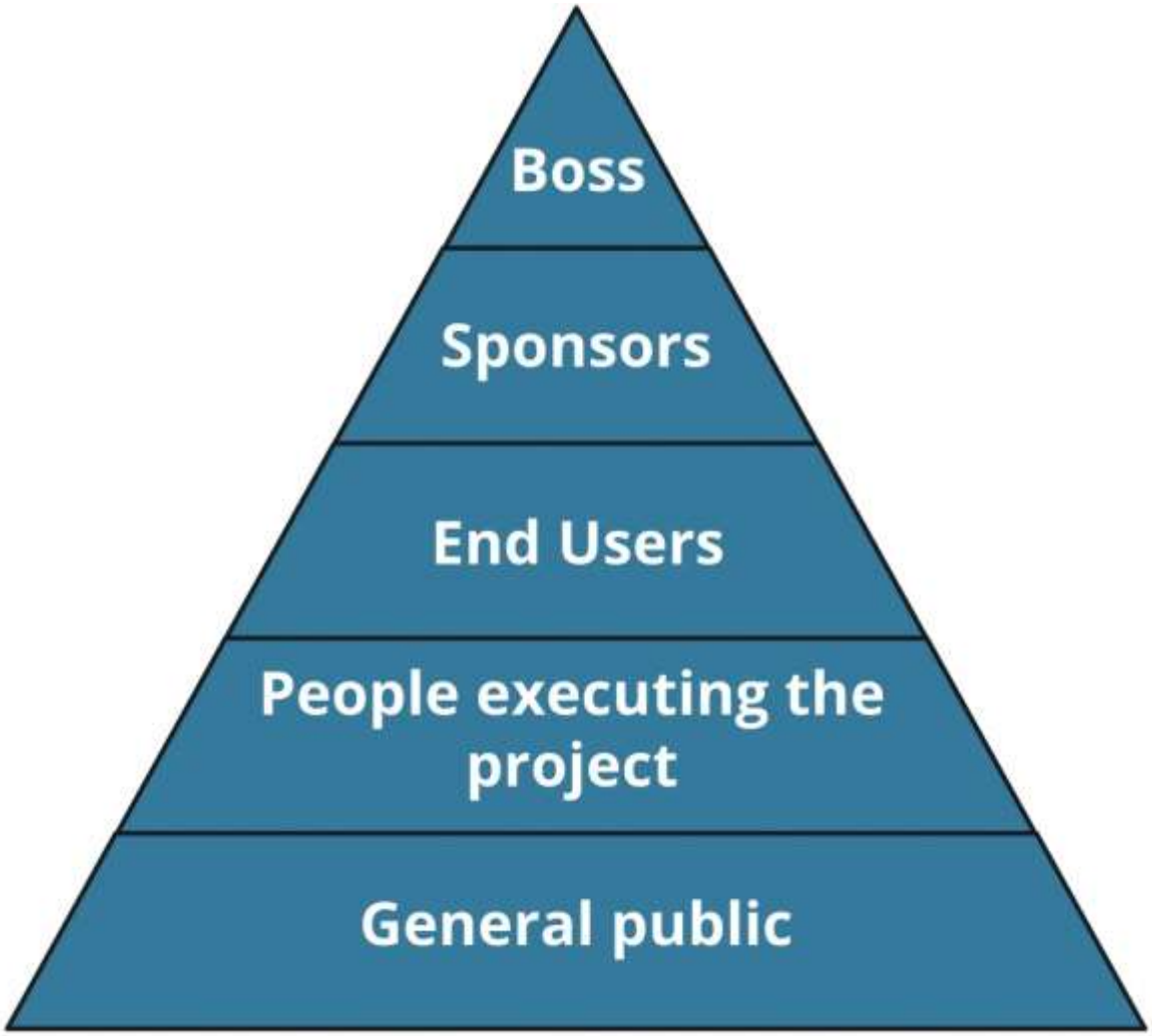
- The business value and objectives
- Main deliverables or milestones
- The timeline, budget, and available resources
- A proposed methodology for the project plan
- Stakeholder engagement (which we will later expand upon)

3.3.8. Identifying Key Stakeholders

Video

A stakeholder is anyone who would be or perceives they would be affected by your project or has an interest or investment in the project's completion. They can provide resources to execute a project at a high quality and consult on what would make a project most useful.

Categories of Stakeholders



- **Boss**: The main person, board, or organization that owns the project and the person you may report to.
- **Sponsors**: Clients, investors, board members, or shareholders who are investing their money or assets into the project and are expecting a return on their investment.
- **End Users**: The people who would be continuously utilizing or later purchasing the product or process that the project produced.
- **People Executing the Project**: The people on your team or in your organization who will be executing the tasks in a project plan and any third party who provides goods or services for that project.
- **General Public**: Governmental agencies that have requirements for a project and neighboring communities that are potentially affected by that project.

New Terms

- **Stakeholder**: A person who is interested or invested in a project's completion or would be affected by that project.
- **Sponsors**: Clients, investors, board members, or shareholders who are investing their money or assets into the project and are expecting a return on their investment.
- **End Users**: The people who would be continuously utilizing or later purchasing the product or process that the project produced.

3.3.9. Stakeholder's Power and influence

Once you identify relevant stakeholders, you will evaluate how that stakeholder might make or break your project. Then, you will build a Power-Influence Grid to document what you've learned from your analysis.

Part 1: Analyzing Stakeholders, Power-Influence Grid Intro, and Power Level

Video

You can evaluate your stakeholders by considering the following four points:

1. How important is the project to each stakeholder and why?
2. How can this stakeholder influence the project in both negative and positive ways?
3. What kind of information does that stakeholder need in order to stay informed about your project?
4. Plan the best ways to communicate the information they need in order to remain engaged throughout the project and to maximize their positive contributions.

One method of working through this analysis is creating a Power-Influence Grid.

The Power-Influence Grid Components

The Power-Influence Grid has a column for each of the following:

- Your stakeholder names
- The power level
- The influence level
- Your assumptions on this stakeholder's potential impact

	Power Level	Influence Level	Assumptions and Risks
Stakeholder Name	High	Low	Potential impact
Stakeholder Name	Low	High	Potential impact
Stakeholder Name	Low	High	Potential impact

The "Power" Section in the Power-Influence Grid

Rate the level of authority and decision-making power that each person has with either a "high" or "low" mark. Reference your company's organizational chart to help inform your designation for each stakeholder in this column of the Power-Influence Grid.

Part 2: Determining Influence Level

Video

The "Influence" Section in the Power-Influence Grid

Determine every stakeholder's ability to influence a project by observing the behavior and dynamics amongst the stakeholders. Consider the following factors:

- **Personality style**: Are they well-liked and responsive?
- **Interpersonal skills**: Are they effective communicators? Can they be persuasive?
- **Relationships**: Who shares a bond with and whose opinion is respected by those in authority?

Part 3: Determining Assumptions and Risks

Video

The "Assumptions and Risks" Section in the Power-Influence Grid

In a few sentences or bullet points, write your assumptions about how and why a stakeholder wants a project to be successful and what they are willing to do to support it. Also, annotate your assumptions on how the stakeholder might pose a risk to the project being successful. Anticipate the best way to engage the stakeholder and include your insights in the "Assumptions and Risks" column in the Power-Influence Grid.

New Terms

- **Power-Influence Grid**: A table used to document stakeholder analysis. It records each stakeholder's name, his/her power and influence levels, and your assumptions on this stakeholder's potential impact.
- **Power**: The level of authority and decision-making power that a person has over a project.
- **Influence**: A person's ability to influence decision-makers through their personality style, interpersonal skills, and relationship with those in authority.
- **Assumptions**: Your hypotheses about how and why a stakeholder wants your project to be successful and what they are willing to do to support it.
- **Risks**: Your assumptions on how the stakeholder might pose a risk to the project being successful.

Additional Resources

- Learn how to leverage emotional intelligence to become a more influential leader in this book Political Savvy: Systematic Approaches to Leadership Behind the Scenes by author Joel R. DeLuca.

3.3.10. Quizzes: Analyzing Stakeholders

QUIZ QUESTION

A stakeholder may be interested or invested in your project. How could a stakeholder potentially affect your project?

- ○ Cause the project to be irrelevant or obsolete
- ○ Cause the project to be completed at a high quality
- ○ Cause the project scope to increase
- ○ Cause the project to focus on business goals
- ✓ All of the above

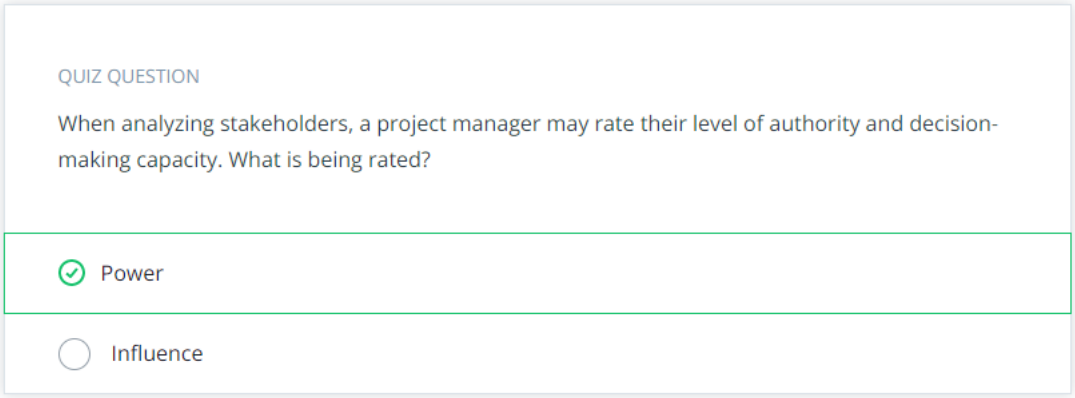
QUIZ QUESTION

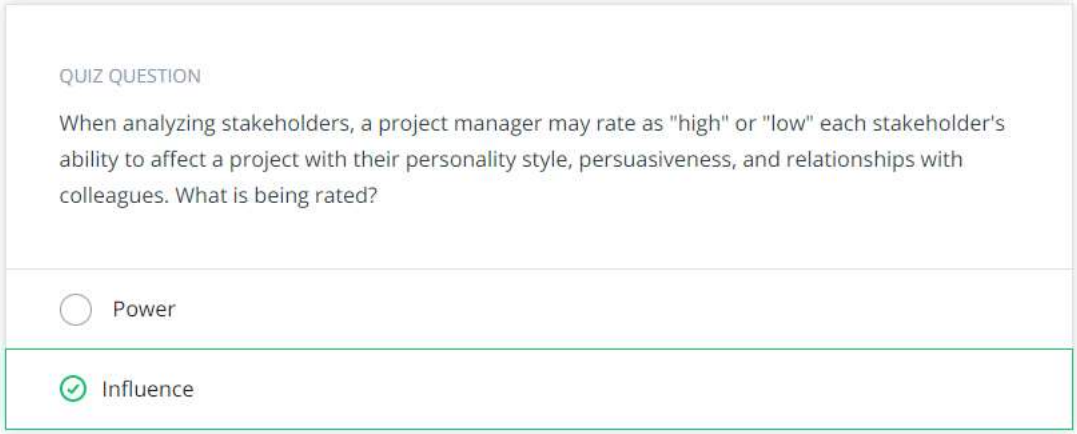
You are working on a digital startup that develops mobile-first video games. You have a cross-functional team made up of developers, designers, and product managers. You are organizing a project to make a free educational game for public middle schools.

Below are the categories of people who could potentially be considered key stakeholders in your digital project. Can you match different people to the category they belong to?

Submit to check your answer choices!

Stakeholder Category	Potential Stakeholder
Boss	The startup CEO
Sponsor	Angel Investor
End Users	Middle school students
People Executing Your Project	A cross-functional team
General Public	Local public schools





3.3.11. Exercise: Power-Influence Grid

Instructions

Read descriptions of three main stakeholders you will have to engage as a project manager at Luny. Then determine how each character would fare in the Power-Influence Grid.

The Cast of Characters

The CEO, Alina, is an early adopter and aggressive risk-taker. She co-founded Luny and quickly got it off the ground with a bold vision and few resources. The CEO's dream is to transform Luny from a scrappy startup to a thriving tech company. One of the CEO's main concerns is not acting quickly enough to attract new customers to the mobile app.

The Customer Service Manager, Jennifer, is more of a friendly spectator at Luny. She is thrilled to see the company grow and offers kind encouragement to all her colleagues. She cares about her customers and is good at following up and solving problems. But as a spectator, she is not always proactive about asking for what she needs to do her job better.

The Product Manager, Sebastian, is a natural-born leader. He is inspiring and can easily get buy-in from stakeholders. His main concern with the mobile app is putting out features of high quality. He is creative and comes up with brilliant ideas. But he is hard to pin down for administrative meetings and documentation.

QUIZ QUESTION

Select the **Power Level** for each stakeholder. Is it "high" or "low"?

Low

Stakeholders	Power Level
Alina, the CEO	High
Jennifer, the Customer Service Manager	Low
Sebastian, the Product Manager	High

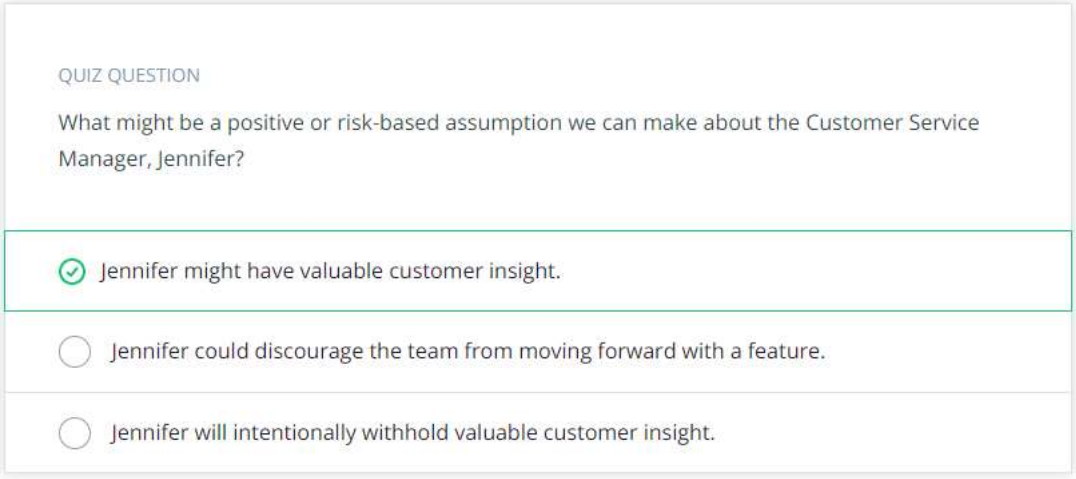
QUIZ QUESTION

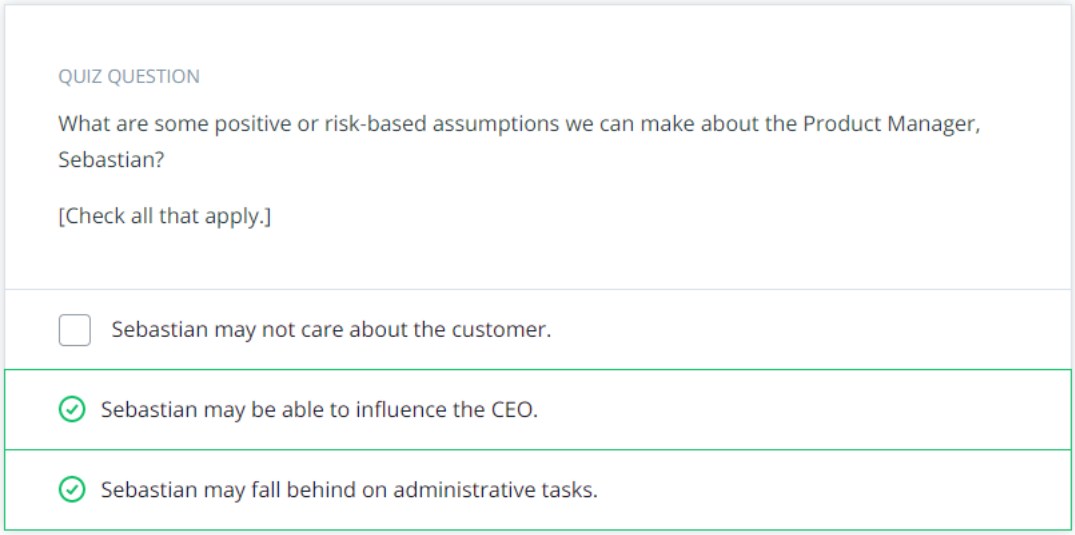
Select the **Influence Level** each stakeholder may have on this project. Is it "high" or "low"?

Low

Stakeholders	Influence Level
Alina, the CEO	High
Jennifer, the Customer Service Manager	Low
Sebastian, the Product Manager	High

In the last column of a Power-Influence Grid, we have to write our assumptions on how this stakeholder would support the project and the potential risks they might pose.





3.3.12. Solution: Power-Influcne Grid

Solution: Power-Influence Grid

Here are the steps to analyze each of the main stakeholders in order to fill out the Power-Influence Grid:

1. Identify their authoritative ranking and decision-making power based on their job title and position in the project.
2. Identify their personality style and interpersonal skills.
3. Deduce how information from the first two steps would affect the project execution.

See my Power-Influence Grid below:

Stakeholder	Power Level	Influence Level	Assumptions and Risks
CEO	High	High	• Authoritative and may override prioritizaiton of features.

			• Will ensure we move swiftly. • Is a bold risk-taker. • May take risks without being calculated.
Customer Service Manager	Low	Low	• No real authoritative power in the organization. • Friendly, but may not be persuasive. • Has valuable customer insight.
Product Manager	High	High	• Has decision-making power over the product's features. • Is able to get executive buy-in; highly influential. • Cares about the quality of the customer-facing features. • May fall behind on administrative tasks.

Recap and Additional Considerations

In the Power-Influence Grid, the level of **power** is typically determined by a stakeholder's ranking in an organizational chart and their authority over the project. If they can make final decisions that affect the project's direction, their power level is high.

The level of **influence** may be a bit more subjective but should be based on observable behavior. If a stakeholder has effective communication skills, they may be a persuasive figure. Their level of influence would be high.

The final column of the grid is more **open-ended**. For "Assumptions and Risks", a project manager analyzes stakeholders and lists their assumptions on how that person may support or hinder a

project's progress. This is where our grids may differ. Stakeholder analysis relies on your emotional intelligence. That means you might see characteristics in someone that others don't see. Or you might know the best way to communicate and bring out the best in someone in a way that others cannot.

3.3.13. Evaluating Teams's Competency

Part 1: Execution Quotient

Video

Digital project managers may have to evaluate whether a team is competent enough to complete all the requirements of a project. They do this by determining the Execution Quotient (XQ), a measurement of how many skills your team has and at what level of experience in order to execute the tasks in a project.

A method for determining a team's XQ is the RACI chart, a grid that lists all tasks necessary to achieve project requirements and how each team member can contribute to that task.

Part 2: The RACI Chart

Video

The RACI chart is built in three main steps:

1. Translate the project's requirements into the tasks that your team will be performing.
2. List the members of your team and any stakeholders who will be actively engaged in the project.
3. For each task, mark who you think will be responsible, accountable, and who should consult or be informed on the task's progress.

	Stake-holder name	Stake-holder name	Stake-holder name	Stake-holder name
Task Name				
Task Name				
Task Name				

Each stakeholder will receive a RACI designation according to the task in the row in question. The designations are:

- **(R)esponsible**: Stakeholders who will have the duty of executing actual tasks; there can be more than one responsible stakeholder per task.
- **(A)ccountable**: The stakeholder, normally a manager, who has the duty of approving whether a task is truly being complete; there can only be one accountable person per task.
- **(C)onsult:** Anyone who has valuable insight necessary to successfully execute a task; there can be more than one consult for each task.
- **(I)nformed:** A stakeholder who expects to receive information and updates about a particular task. Most stakeholders will fall into this category.

New Terms

- Execution Quotient: A measurement of how many skills your team has and at what level of experience in order to execute the tasks in a project.
- RACI Chart: A grid that lists all tasks necessary to achieve project requirements and how each team member can contribute to that task.
- Requirements: The detailed tasks, functions, and features for your end product or process.
- Responsible: A designation in the RACI chart for team members or stakeholders who are responsible for executing tasks in a project.
- Accountable: A designation in the RACI chart for team members or stakeholders who are accountable for the tasks being done well and completely in a project.
- Consult: A designation in the RACI chart for team members or stakeholders who have insights that could assist the execution of a task in a project.
- Informed: A designation in the RACI chart for team members or stakeholders in a project who could benefit from being informed on a task's progress.

Additional Resources

- Project managers can practice their leadership skills by becoming good at evaluating their team's XQ and providing the necessary support to achieve good quality projects. Learn more: The Leadership Quotient: How IQ, EQ, and XQ Come Together for Great Leadership, by Michael Edwards, LinkedIn

3.3.14. Demo: Tory Fitness RACI Chart

Video

Here's the RACI chart shown in the video for the Tory Fitness project team:

Task	Tory, Founder	Project Manager	Assitant Trainer	Web Editor	Graphic Designer	Photographer
Curate fitness material into accessible plans	**A, C**	**I**	**R**	**I**	**I**	**I**
Edit fitness plans language	**A**	**R**	**C**	**I**	**I**	**I**
Create illustrations	**C**	**I**	**A**	**I**	**R**	**I**
Take and edit photos	**C**	**A**	**I**	**I**	**I**	**R**
Add to website for purchase	**I**	**I**	**A**	**R**	**I**	**I**

3.3.15. Quizzes: Team Competency

QUIZ QUESTION

A digital project manager may evaluate the team's Execution Quotient (XQ). What does the XQ determine?

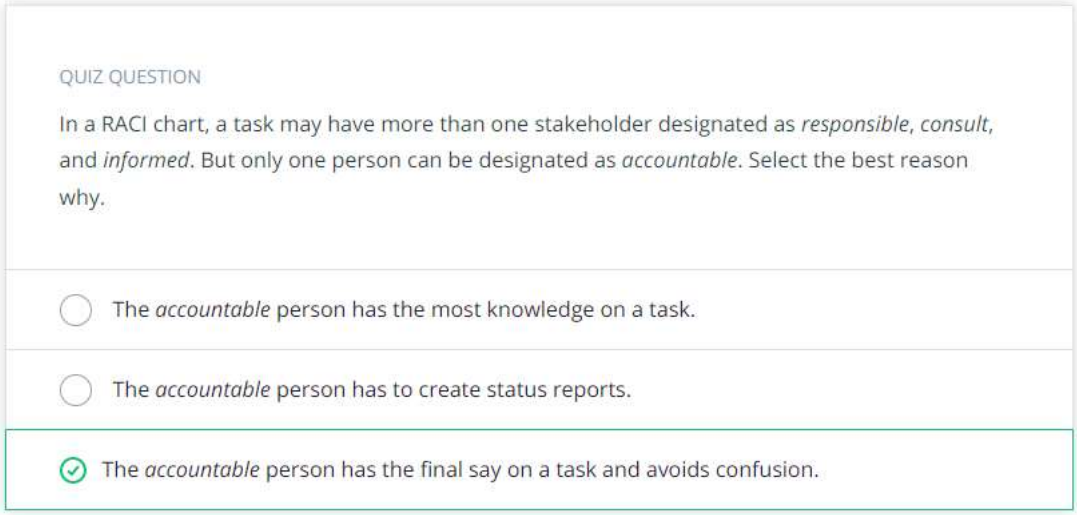
- ○ Whether a team has the resources they need to execute tasks
- ✓ Whether a team has the capabilities to meet a project's requirements
- ○ Whether a team has a strong dynamic

QUIZ QUESTION

Below are the designations we just discussed a digital project manager can give each stakeholder in a RACI chart. Can you match each of the RACI designations with the correct description?

Submit to check your answer choices!

Description	RACI Designation
Executes the task	Responsible
Approves tasks completion	Accountable
Provides insight for a task	Consult
Benefits from project progress	Informed



3.3.16. Exercise: Creating a RACI Chart

Instructions

Review the job descriptions of your stakeholders and team members. Then you will be given a set of tasks below for which you will have to assign the RACI role to the correct person.

The Cast of Characters - Job Descriptions

- The **CEO**, Alina, makes final strategic business decisions for her company Luny.
- The **Customer Service Manager**, Jennifer, manages inquiries that come in from customers via Luny's several platforms. She troubleshoots the problems customers face and tries to resolve them.
- The **Product Manager**, Sebastian, determines and leads the development of products, and prioritizes product features that meet business objectives and customer needs.
- You are the **project manager** on the product team ensuring that the project gets done on time while meeting requirements. You track the progress of the project and report to stakeholders.
- The **UX Designer** researches customer needs and designs features based on that data as well as business requirements.
- The **Lead Engineer** decides which code and technical resources to use when building the system on which digital products and features will live.
- The **Engineers** design, build, test, and deploy code and technical resources.

QUIZ QUESTION

For Luny, one of the proposed product features requires creating fun video content to market the app to new users. Which role in the above *Cast of Characters* would be responsible for executing that task?

- ○ The UX Designer
- ○ The Project Manager
- ○ The Customer Service Manager
- ✓ None of the above

QUIZ QUESTION

Let's focus on *accountability* - the "A" in RACI. Below is a list of potential tasks or requirements for upcoming deliverables at Luny. Match the role to the task each person would own.

Submit to check your answer choices!

Task/Requirement	Role
Making a project plan	Project Manager
Testing an algorithm	Lead Engineer
Making the app intuitive	Product Manager
Pivoting the product's business model	CEO

Create a RACI Chart

With the practice you've had above, now fill in a full RACI chart in this template. You can either make a copy of the template via Google Doc or download it as a .docx file from the Resources section on the left-side panel.

The template includes the following tasks:

- Create a Customer Insights Report
- Email Project Progress Reports
- Design an Interface Style Guide
- Setting the Company Values
- Choosing a Cloud Service to Host the App
- Prioritizing New Features
- Deploying an API Integration

Note: We will talk more about Project Progress Reports, or Status Reports, later. So don't worry if you haven't heard of this term before; make your best guess regarding who you think should be responsible for this task.

Once you've completed your RACI chart, check out the Solution page and compare your chart to mine.

3.3.17. Solution: Creating a RACI Chart

Solution: Creating a RACI Chart

Here are the steps I took to fill out a RACI chart:

1. Identified all team members and stakeholders who might be involved in my project.
2. Listed the types of tasks and requirements that may come up in our app development project.
3. Determined which team member/stakeholder:
    a. Is responsible for executing tasks (**R**)
    b. Is accountable for those tasks getting done right (**A**)
    c. Can consult on the task (**C**)
    d. Should be informed on a task (**I**)

See my RACI chart below based on The Cast of Characters - Job Description section.

Video

Task	CEO	Customer Service Manager	Product Manager	Project Manager	UX Designer	Lead Engineer	Engineers
Create a Customer Insights Report	**I**	**R, A**	**I**	**I**	**C**	**I**	**I**
Email Project Progress Reports	**I**	**I**	**C**	**R, A**	**I**	**C**	**I**
Design an Interface Style Guide	**I**	**I**	**A**	**I**	**R**	**I**	**I**
Setting the Company Values	**A**	**R**	**R**	**C**	**I**	**R**	**I**
Choosing a Cloud Service to Host the App	**C**	**I**	**I**	**I**	**I**	**A**	**R**
Prioritizing New Features	**A**	**I**	**R**	**C**	**I**	**C**	**I**
Deploying an API Integration	**I**	**I**	**C**	**I**	**I**	**A**	**R**

Considerations

The RACI chart includes general tasks and gives you an idea of what everyone is responsible for. We may confidently recognize who is responsible and accountable for tasks based on the nature of their roles. Identifying stakeholders who need to be informed or consulted for certain tasks would depend on the impact that task has on their work.

In other words, your R's and A's should match my chart exactly, but your I's and C's might differ from mine. As a general rule of thumb, there should be **only one "A" for each task**.

In the real world, project managers do not have to create a RACI chart alone. They can use this as a tool to engage stakeholders and deepen their understanding of a particular field.

3.3.18. Lesson Review

Video

To set up a project, a digital project manager should ensure the project is defined and clearly communicated to the right people. In this lesson, we learned how to:

- Communicate the vision for a project in a project scope statement, by identifying business goals, summarizing a description of work and resources, and defining expectations.

- Identify stakeholders and fill out a Power-Influence Grid to evaluate their potential impact on a project.
- Determine a team's Execution Quotient and use a RACI chart to determine that the right people are assigned to the right tasks.

Having defined your project scope and analyzed your stakeholders, you will successfully set up your project and be ready to move on to the planning stage next.

3.3.19. Glossary

For your reference, here are all the new terms we introduced in this lesson:

Business goals: A set of strategic, tactical, and operational targets a business seeks to achieve.

Resources: The elements needed to carry out tasks or projects, including people, time, money, and tools.

Project Scope: A document that defines the goals, deliverables, timeline, and resources that a project must be based on or executed with.

Memo: A one-page document that provides concise information on a project or event.

Final deliverables: The expected end result, i.e. a product or process.

Type of work planned: A high-level description in a project scope document of the functions needed in a project, e.g. engineering, editorial, etc.

Timeline: The expected start and estimated end dates for the project, as well as the frequency of releases if there are multiple deliverables.

Budget: The amount of money available to fund the project and cover its expenses.

Acceptance Criteria: Specific standards or thresholds a project's deliverables must meet before the project can be considered complete.

Assumptions: Events or circumstances you believe will come true in your project but don’t yet have the evidence to prove it.

Constraints: Any requirement or criteria that cannot be included in a project because it would go beyond the project scope.

Stakeholder: A person who is interested or invested in a project's completion or would be affected by that project.

Sponsors: Clients, investors, board members, or shareholders who are investing their money or assets into the project and are expecting a return on their investment.

End Users: The people who would be continuously utilizing or later purchasing the product or process that the project produced.

Power-Influence Grid: A table used to document stakeholder analysis. It records each stakeholder's name, his/her power and influence levels, and your assumptions on this stakeholder's potential impact.

Power: The level of authority and decision-making power that a person has over a project.

Influence: A person's ability to influence decision-makers through their personality style, interpersonal skills, and relationship with those in authority.

Assumptions: Your hypotheses about how and why a stakeholder wants your project to be successful and what they are willing to do to support it.

Risks: Your assumptions on how the stakeholder might pose a risk to the project being successful.

Execution Quotient: A measurement of how many skills your team has and at what level of experience in order to execute the tasks in a project.

RACI Chart: A grid that lists all tasks necessary to achieve project requirements and how each team member can contribute to that task.

Requirements: The detailed tasks, functions, and features for your end product or process.

Responsible: A designation in the RACI chart for team members or stakeholders who are responsible for executing tasks in a project.

Accountable: A designation in the RACI chart for team members or stakeholders who are accountable for the tasks being done well and completely in a project.

Consult: A designation in the RACI chart for team members or stakeholders who have insights that could assist the execution of a task in a project.

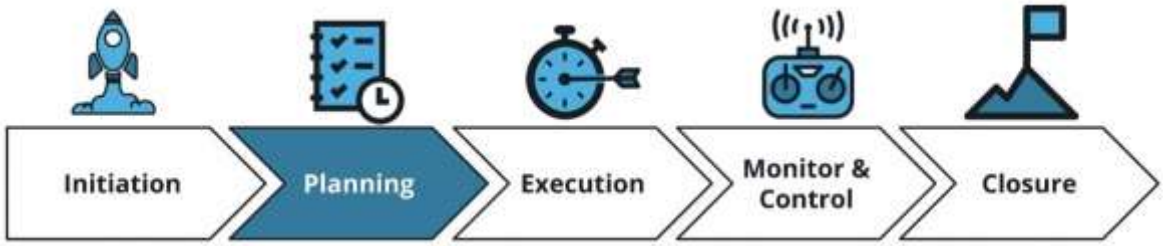
Informed: A designation in the RACI chart for team members or stakeholders in a project who could benefit from being informed on a task's progress.

3.4. Building Realistic Plans

3.4.1. Introduction

Video

Planning is crucial to digital project management. It allows you to set up a project with an efficient workflow and appropriate resources. Well-planned projects are more likely to return the desired results.



In the Planning stage, you put your project plan together by

- Gathering all the requirements,
- Determine the cost and benefit of the project, and
- Mapping out the schedule.

This is what we will learn in this lesson.

3.4.2. Lesson Outline

Video

This lesson will cover some of the steps that help us build realistic plans to keep us on track within our budget and schedule. We will learn how to:

- Create a list of the detailed tasks, functions, and features for your end product or process.
- Determine whether a project is worth investing in.
- Create project plans with schedules and task assignments for both the Agile and Waterfall methodologies.

By the end of this lesson, you will be able to recall different methods for gathering requirements, especially with the use of an Intake Form, conduct a cost-benefit analysis, create a Scrum Board, and create a Gantt Chart.

3.4.3. Gathering Requirements

Part 1: Ways to Gather Requirments

Video

Requirements are the detailed tasks, functions, and features for your end product or process. Requirements can be expected user interaction, technical specification, or a particular business goal that needs to be met.

To ensure a project meets the expectations of stakeholders, a digital project manager can gather requirements that fit within the project scope. There are several methods for doing so, such as research, interviews, surveys, and brainstorming sessions, but we are focusing on the Intake Form.

An **Intake Form** is a type of document with empty fields, similar to an application, in which stakeholders can answer questions about what requirement they would like to add to a project and why.

Here is an example of an Intake Form:

Project Intake Form

Requester: Name, Title, Team*

Jennifer, Manager, Customer Service

Type of Request: Product Feature, Internal Project, Other Task*

Product Feature

Date Need By

ASAP

Estimated Duration

6 weeks

Estimated Cost and Benefit

An AI-enabled chatbot would cost about $12,000.

Opportunity/Problem

As we are growing the number of users on our website, mobile app, and other services, the customer service team is not able to help customers as quickly as before. All our offerings have a "contact us for help" feature. And we are increasingly receiving more inquiries and are now backed up.

Proposed Work/Solution*

I recommend implementing a third-party AI-enabled chatbot on our website that would help guide customers to the answers they need quickly. And if customers have a more complex need, the customer service team will have more time to focus on those matters.

Part 2: Sorting through and Prioritizing Requirements

Video

The disadvantage of gathering requirements is that we receive an overwhelming amount of items. So the digital project manager will have to sort through all the items that came in and choose which of the requirements fit the project scope.

After you've gathered all feasible requirements, you as the project manager will be responsible for prioritizing those requirements. **Prioritization** is the act of choosing which requirements to work on and ranking their order. Here are three basic questions to help you decide what should be prioritized:

1. Are any requirements foundational and necessary in order to fulfill other requirements?
2. Are any requirements considered important for achieving business goals?
3. Is the requirement something we can execute at the moment?

In real life, the need for prioritization also depends on your project methodology:

- Prioritization in a **Waterfall** project happens typically only once at the planning stage of the project.
- In an **Agile** project, you might re-prioritize after every iteration of your project.

New Terms

- **Requirements**: The detailed tasks, functions, and features for your end product or process. Requirements can be expected user interaction, technical specification, or a particular business goal that needs to be met.
- **Intake Form:** A type of document with empty fields in which stakeholders can answer questions about what requirement they would like to add to a project and why.
- **Prioritization**: The act of choosing which requirements to work on and ranking their order.

3.4.4. Quizzes: Requirements Gathering

QUIZ QUESTION

Below are some of the categories for requirements we just discussed. Can you match each of them with the correct description?

Submit to check your answer choices!

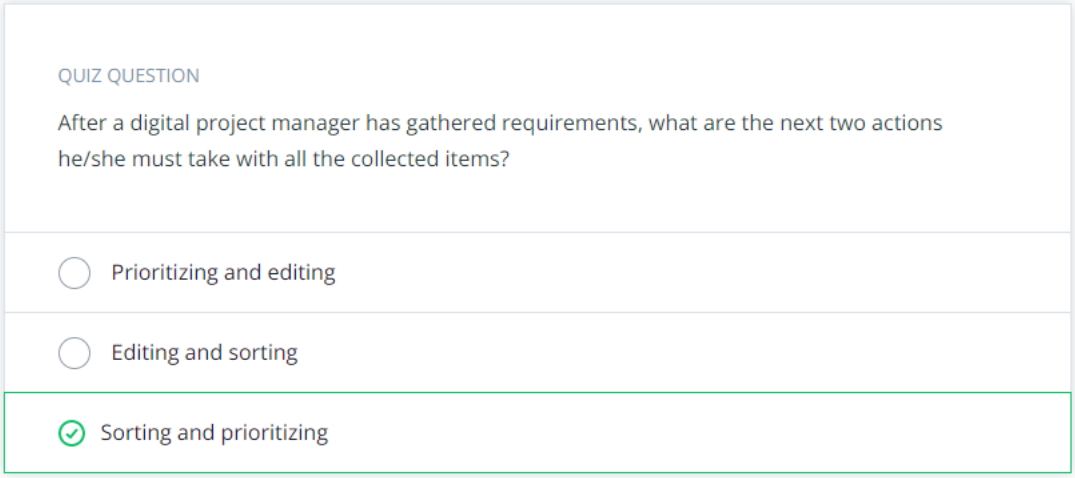
Description	Requirement Types
Users click on a plus sign to create a new social media post.	User Action
An app's programming language must be Java.	Functional: Specification
A download speed of less than 25 megabytes per second is unacceptable for an app.	Functional: Quality
Have 300 users sign up by the end of the year on the app.	Business

QUIZ QUESTION

Which of the following would be considered a method for gathering requirements?

[Select all that apply.]

- ✓ Interviewing stakeholders
- ✓ Reading research relevant to your project
- ✓ Brainstorming with team members
- ✓ Creating an Intake Form



3.4.5. Cost-Benefit Analysis

Part 1: What Is Cost-Benefit Analysis?

Video

A cost-benefit analysis is a decision-making process to determine whether you should approve a project or a certain expense in a project. It uses a formula that simplifies project costs and benefits into a single ratio.

Part 2: Calculating the Cost-Benefit Ratio

Video

Calculating the Cost-Benefit Ratio

Step 1: Get the present value of the expected or future benefit. The formula is

Future Benefit / (1 + discount rate)n

Step 2: Get the present value of the project cost. The formula is

Future Cost / (1 + discount rate)n

It is usually the given budget if the cost is paid upfront.

Step 3: Get the cost-benefit ratio. The formula is

Present value of expected benefit / Present value of project cost

Interpreting the Cost-Benefit Ratio

- Above 1 → net positive value; benefit > cost; the project will be profitable.
- Equal to 1 → break even
- Below 1 → net negative value; you will lose money on this project and should probably not invest in it.

Part 3: Tory Fitness LLC Cost-Benefit Ratio Example

Video

In a full cost-benefit analysis, you'll make further considerations that the cost-benefit ratio by itself cannot do. For example, it does not take into account the amount of time you may have to wait to actually get the benefit. Also, not all benefits are monetary.

The cost-benefit analysis can also be broken down for parts of a project, such as individual Sprints or releases for an Agile project.

New Terms

- **Cost-Benefit Analysis**: A decision-making process to determine whether you should approve a project or a certain expense in a project. It uses a formula that simplifies project costs and benefits into a single ratio.
- **Future Benefit**: The monetary value of the results you believe investing in the project will bring at a particular point in the future.
- **Present Value**: A part of the cost-benefit analysis that determines how much future money is worth today.
- **Discount Rate**: A method to understand the worth of the future benefit or cost in present terms used in a cost-benefit formula.

3.4.6. Quizzes: Cost-Benefit-Analysis

Practice Calculating the Cost-Benefit Ratio

Read the following scenario and then answer the questions below to practice identifying aspects of the Cost-Benefit Ratio formula.

Scenario

You are a digital project manager for a t-shirt company just starting out. The team manager asked you to conduct a cost-benefit analysis on whether building a website with a particular vendor would be worth it.

The vendor estimates that by building the website, the company could sell triple the number of t-shirts annually. It will take 9 months to build, and it will cost your organization $8,700 today.

The standard discount rate is 7%. And you expect new sales will come in one year from today. Current annual sales amount to $4,000.

QUIZ QUESTION

First, identify the future benefit from the scenario above. What is the present value of the future benefit?

- $3,738.32
- ✓ $11,214.95
- $8,130.84

QUIZ QUESTION

Second, identify the present value of the project cost from the scenario above. What is the Present Value of the project cost?

- ✓ $8,700
- $8,130.84
- $4,000

QUIZ QUESTION

Third, calculate the Cost-Benefit Ratio using information from the scenario above. What is the final ratio?

- 0.77
- 1.0
- ✓ 1.29

3.4.7. Creating a Project schedule

Creating a Project Schedule

Part 1: Steps to Create a Project Schedule, Waterfall and Agile Task Sequencing

Video

To help ensure teams can accomplish all the requirements for a digital project on time, we need to create a schedule. It helps visualize when each person would work on a task, whether you have added too many tasks on the same date, and if any tasks are at risk of falling behind schedule.

Steps to Build a Schedule in General

1. **List tasks**: Break down requirements into a list of actions your team can take to execute a project.
2. **Order tasks:** Figure out the order of the tasks based on the requirement's priority.
3. **Estimate duration:** Estimate how long each task would take.
4. **Create timeline:** Add dates to those tasks to create a timeline in either a Waterfall or Agile methodology.
5. **Assign tasks:** Add an assignee to each task.

Organizing Tasks in Waterfall

Waterfall puts all tasks in a linear and sequential order, one after the other according to the logical stages of either the project management lifestyle or the Software Development Lifecycle.

All requirements have to be worked on in each stage. E.g., if you have three requirements, you will do Initiation-related tasks for all three requirements, then move on to do all Planning-related tasks for all requirements, and so on.

Organizing Tasks in Agile

Agile may also adopt the stages in the Software Development Lifecycle, but all tasks for each stage are done one requirement at a time. A similar set of tasks can occur for each requirement in one iteration or Sprint, giving the Agile methodology its cyclical pattern.

Part 2: Tory Fitness Project Schedule Example

Video

In the Tory Fitness example, we have seen that, in both Waterfall and Agile projects, you can overlap tasks that don't depend on each other and execute them in parallel. This way, you can fit tasks into short time periods or Sprints.

New Terms

- **Schedule**: A list of tasks with assignees, start and end dates.
- **Tasks**: Actions that can be taken in a digital project.

Additional Resources

- If you want to learn more about creating a project schedule, we recommend reading How to create a project schedule: A complete guide by Teamwork. This article breaks it down into six steps.
- Besides the RACI chart, another document that digital project managers can create to later reference in a project schedule is the Work Breakdown Structure. This document displays tasks in a project in a hierarchical diagram. Learn more in this article: What is Work Breakdown Structure?

3.4.8. Quizzes: Project Schedule

QUIZ QUESTION

Below are the steps that go into building a schedule as we just discussed. Can you rank the steps in a logical order?

Submit to check your answer choices!

Order	Steps
1	List tasks
2	Order tasks
3	Estimate duration
4	Create timeline
5	Assign tasks

QUIZ QUESTION

What is the main difference between Agile and Waterfall project schedules? Fill in the blanks ("[___]") below:

Waterfall projects order tasks [___], while Agile projects order tasks [___].

- ✓ in a sequence according to project stages; in a repeatable cycle for each requirement
- ○ on a monthly schedule; on a weekly schedule
- ○ for one team; for multiple teams

QUIZ QUESTION

Tasks in both Waterfall and Agile projects can in part be structured by which of the following frameworks?

[Select all that apply.]

- [ ] Metamorphosis Lifecycle
- [x] Software Development Lifecycle
- [x] Project Management Lifecycle
- [ ] Milestones and Phases

QUIZ QUESTION

The stages in Scrum projects are inspired by the Agile methodology and the Software Development Lifecycle. Scrum is commonly used for digital projects.

Match the following stages and events of the Scrum framework to the related stage in the SDLC.

Sprint Review

Scrum	SDLC
Sprint Planning	Design
Release	Maintenance
Execution	Implementation
Backlog	Gathering Requirements
Testing	Verification

3.4.9. Scrum Schedule Overview

Your project plan now includes prioritized tasks, a schedule, and assignees. Next, I'll demonstrate how to diagram the project plan, so the rest of your team and stakeholders can follow along with what they should be doing and when.

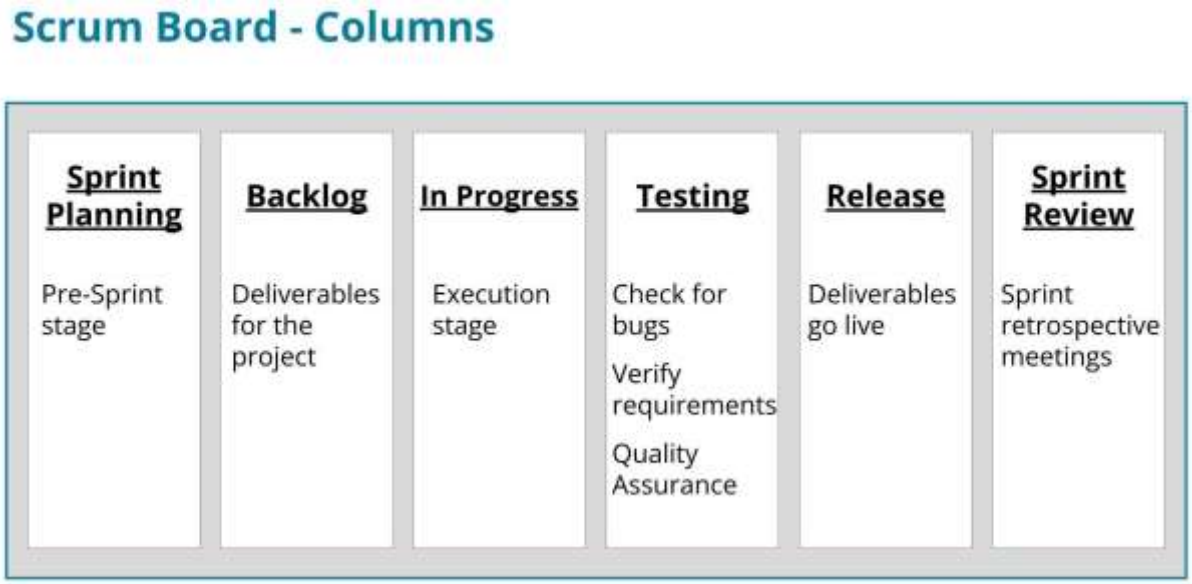
I will start with a Scrum board for an Agile project, then move on to the Gantt chart for a Waterfall project.

Part 1: Scrum Board Overview

Video

One way to diagram or visualize a Scrum project plan is by building an interactive board made of columns and cards.

- Columns represent the stages of your project's lifecycle.
- Cards, which resemble sticky notes, represent one or a set of tasks that, when completed, take the card from one column to the next.



Scrum Stages for an Interactive Board

- **Sprint Planning**: The stage in which digital project managers add requirements to the Backlog and prioritize the tasks into a set of Sprints.
- **Backlog**: A holding place for project requirements until a requirement gets pulled into the current Sprint in progress.
- **In Progress**: The stage in which a set of tasks, organized into a Sprint, are now being executed.
- **Testing**: The stage in which the deliverable created in a Sprint is tested to ensure it meets expectations and any detected errors are fixed.
- **Release**: The stage in a Sprint in which the deliverables are released to the intended end user.
- **Sprint Review**: The final stage in a Sprint, in which a team holds a Retrospective meeting to discuss what they learned in the last Sprint and demonstrate any released deliverables.

Part 2: Scrum Board Cards

Video

Cards on an interactive board resemble Post-It notes and may contain the following information:

- Task name or the name of a set of tasks
- A checklist with the tasks or sub-tasks
- The name of the person assigned to each task
- A start and end date for each task or set of tasks
- And a prioritization label to show which Sprint the card belongs to

New Terms

- **Scrum Board**: An interactive project plan structured into columns that represent the stages in a Scrum project.
- **Sprint Planning**: A Scrum project's stage in which digital project managers add requirements to the Backlog and prioritize the tasks into a set of Sprints.
- **Backlog**: A holding place for all project requirements in a given Sprint.
- **In Progress**: A Scrum project's stage in which a set of tasks organized into a Sprint are now being executed.
- **Testing**: A Scrum project's stage in which the deliverable created in a Sprint is tested to ensure it meets expectations and any detected errors are fixed.
- **Release**: A Scrum project's stage in a Sprint, in which the deliverables are released to the intended end user.
- **Sprint Review**: A Scrum project's final stage in a Sprint, in which a team holds a Retrospective meeting to discuss what they learned in the last Sprint and demonstrate any released deliverables.
- **Columns**: A feature in a project plan visualized on a board that represents the stages in a project management lifecycle.
- **Cards**: A feature in a project plan visualized on a board that represents one or a set of tasks.

Additional Resources

- The Scrum board is a visualization inspired by the project management framework Kanban. If you want to learn more about Kanban, we recommend this article: The Kanban Method: The Ultimate Beginner's Guide!
- In this course, we build a Scrum board on Trello.com, but here is a list of other Kanban Board tools to consider.

3.4.10. Demo: Scrum Board in Trello

Part 1: Creating a New Board, Making it Public and Adding Columns

Video

You can use an interactive tool or software, such as Trello, to set up a project plan. In the video above, we went over how to perform the following actions in Trello:

- Create a new board using the Create button in the top navigation bar
- Set board title and background
- Make the board public
- Share the URL of your board
- Create a column for each Scrum stage with the appropriate header label

Part 2: Adding Cards, Task Checklists and Assignees

Video

Cards on an interactive board resemble Post-It notes. In the video above, we went over how to perform the following actions in Trello:

- Create a card
- Create a checklist with tasks
- Add assignee to the task

Part 3: Adding Dates and Copying Checklists

Video

In a tool like Trello, there are features that make the board interactive. In the video above, we went over how to perform the following actions in Trello:

- Add start and end dates to a card using a clickable calendar
- Add start and end dates to a task
- Copy checklists unto other cards that might necessitate the same set of tasks

Additional Resources

- In the videos above, we build a Scrum board on Trello.com, but you can find a list of other Kanban board tools to consider in this article: 9 Best Kanban Board Tools for Effective Team Management.

3.4.11. Trello Board Screenshots

Trello Board Screenshots

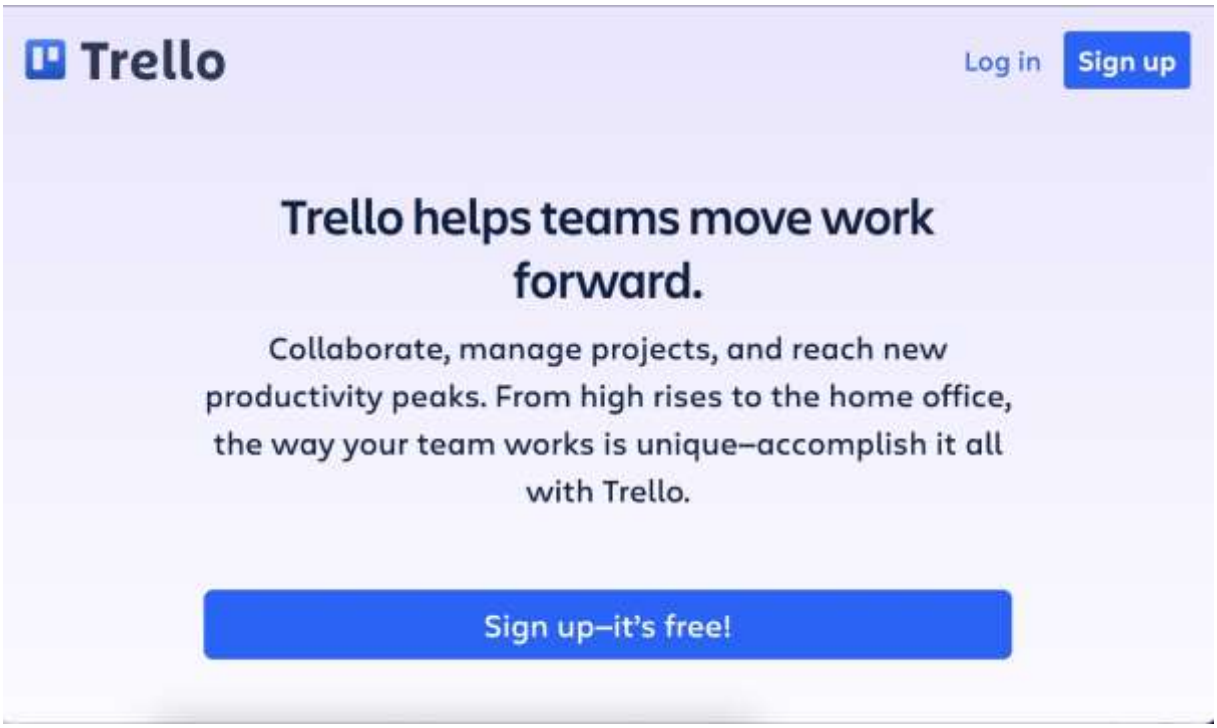
Here are some screenshots from my demo on the previous page. You can **skip this page** if you already feel confident about creating your own Trello board.

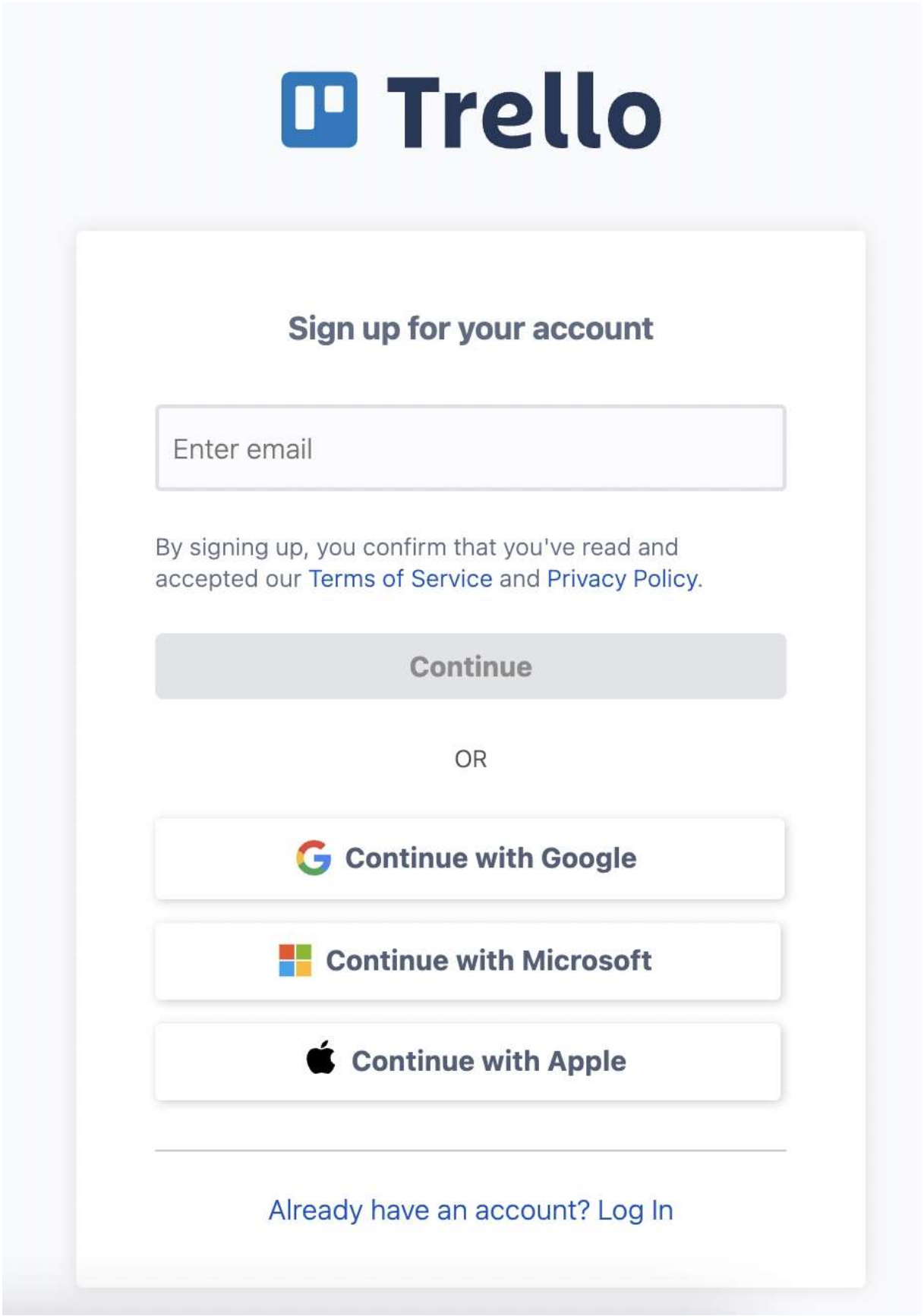
You can right-click on the image and open it in a new tab to expand it if you need to.

Set up a Trello Account

Before you can create a Scrum board, you should first set up a Trello account.

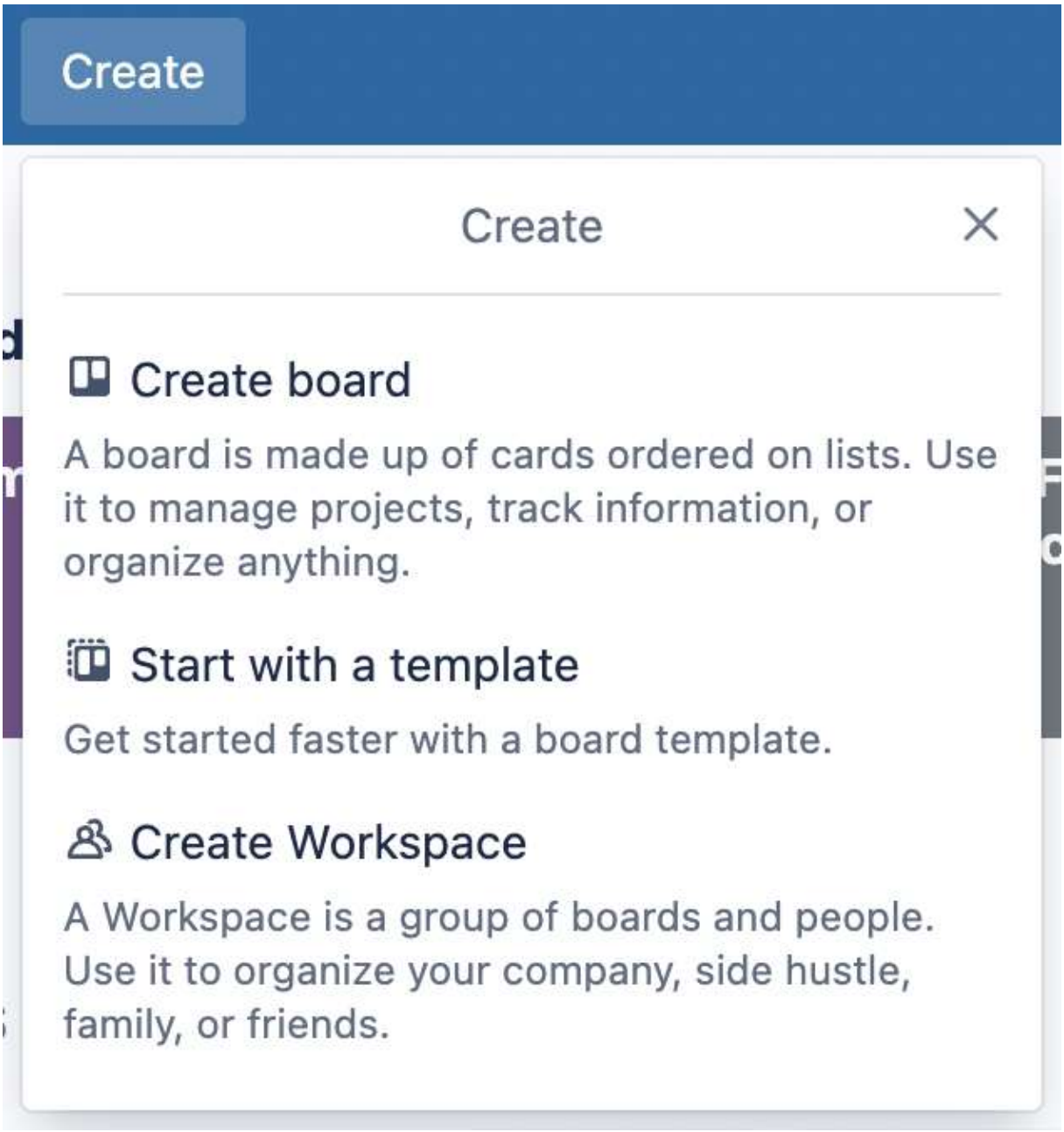
- Go to Trello.com.
- Click on Sign Up.
- Enter your email address and follow the instructions to create an account.


Trello
Log in
Sign up
Trello helps teams move work forward.
Collaborate, manage projects, and reach new productivity peaks. From high rises to the home office, the way your team works is unique–accomplish it all with Trello.
Sign up–it's free!



Create New Board with Title

- Click the Create button in Trello's top navigation bar.
- Type in the title of your board.


Create
Create
Create board
A board is made up of cards ordered on lists. Use it to manage projects, track information, or organize anything.
Start with a template
Get started faster with a board template.
Create Workspace
A Workspace is a group of boards and people. Use it to organize your company, side hustle, family, or friends.

Create

Create board

Background

Board title *

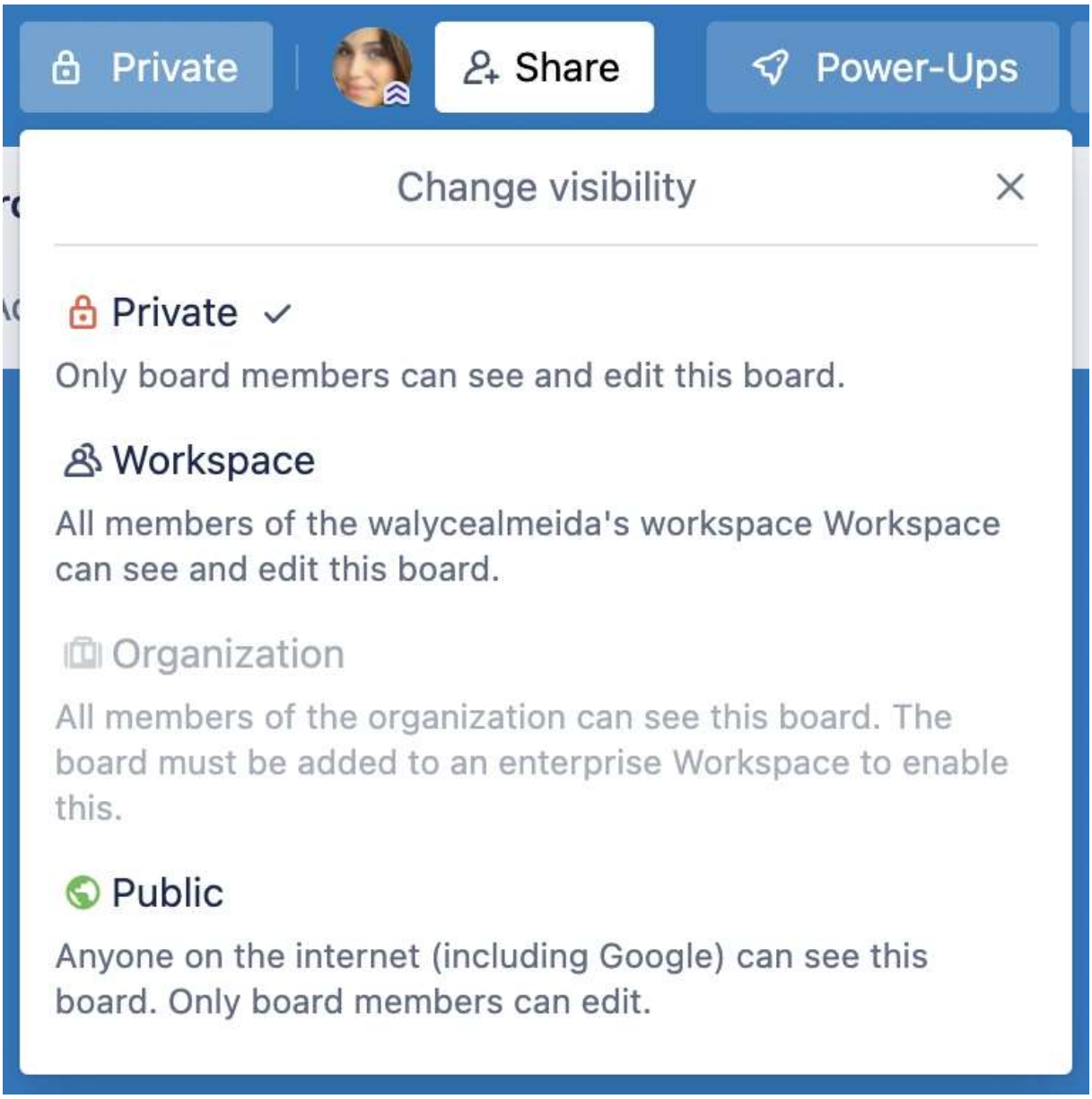
Please fill out this field.

Visibility

Workspace

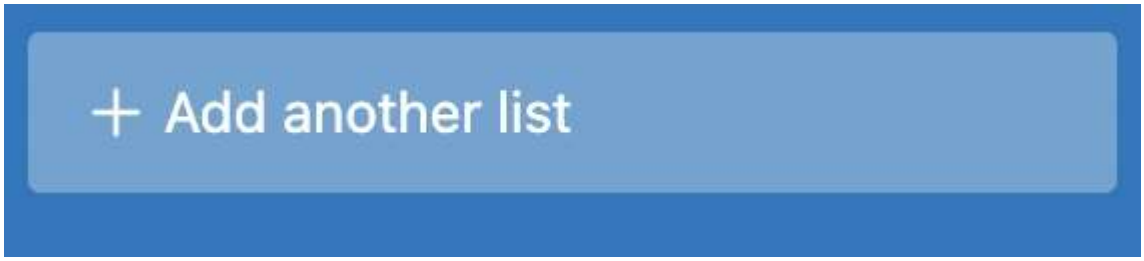
Make Your Board Public

- Click on the Private button in your board's menu.
- Then select Public from the drop-down.



Create Columns for Project Stages

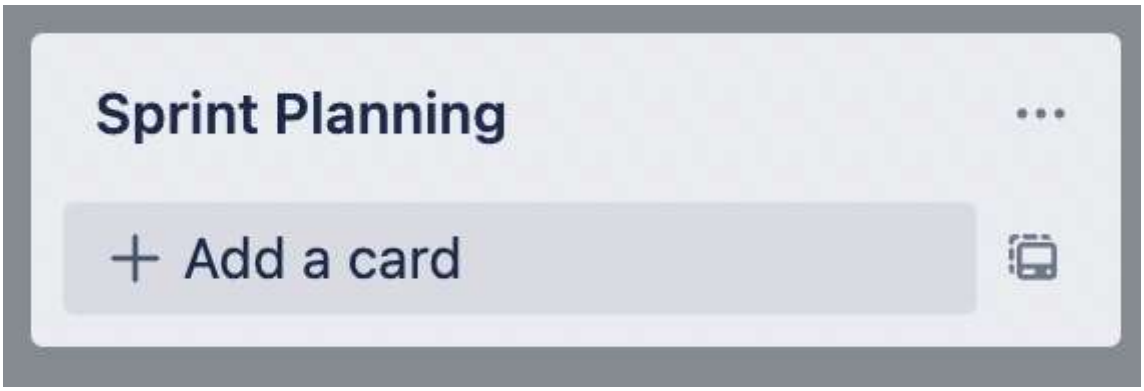
- Create a column by clicking + Add another list in the board's blank space.
- Create six columns and label each one according to the stages of a Scrum project: Sprint Planning, Backlog, In Progress, Testing, Release, and Sprint Review.



Create a column by clicking + Add another list in the board's blank space

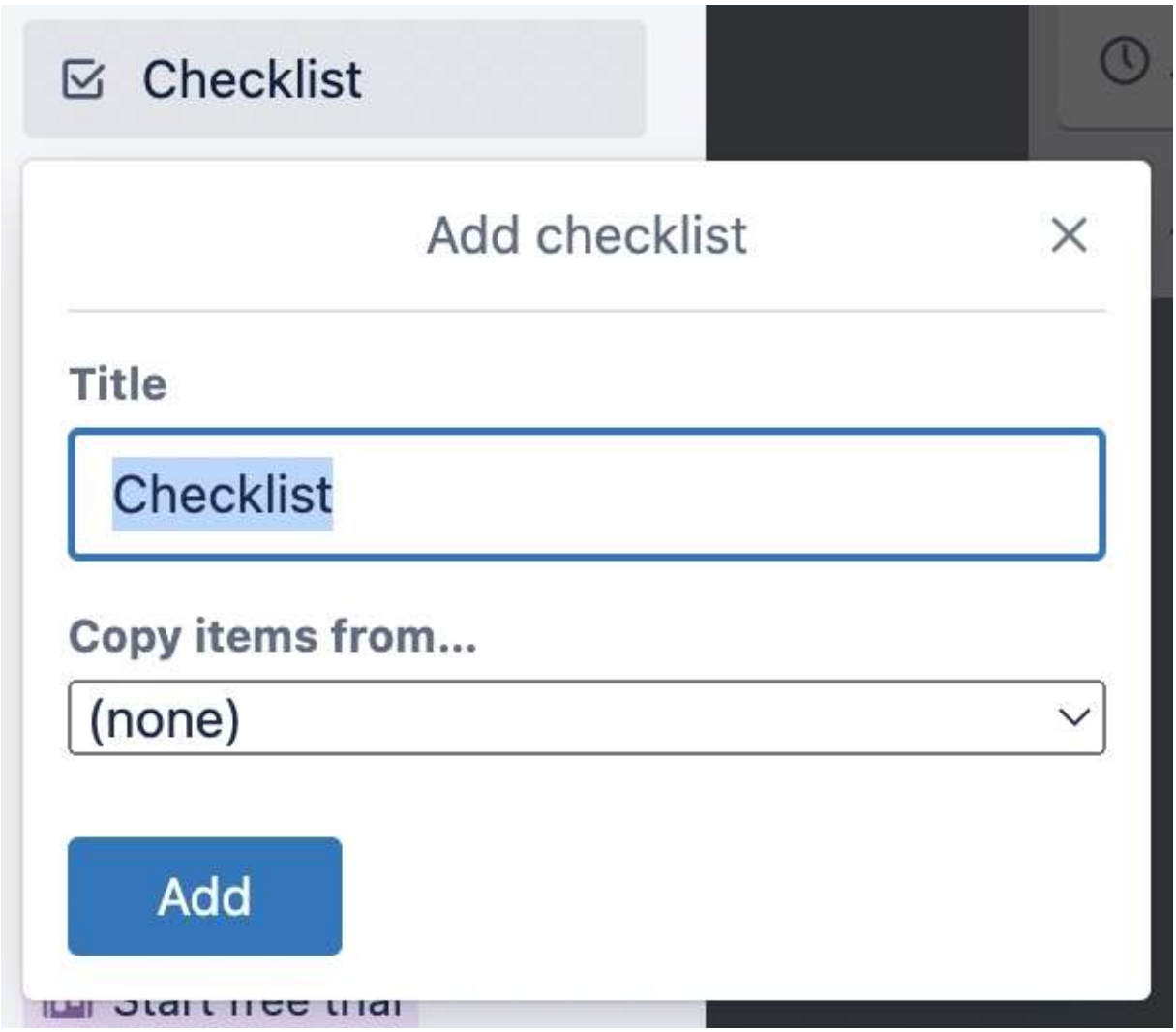
Add Cards to Columns

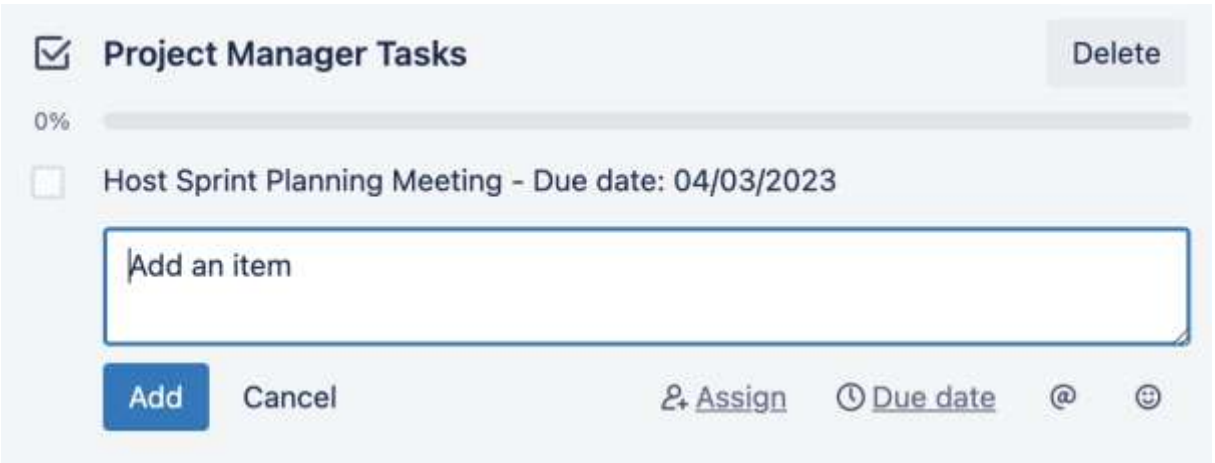
- Create a card by clicking on + Add a card in each column where the card should exist with relevant tasks.



Add Tasks inside Cards

- Click on each card to open up the full view of the card.
- Click on Checklist from the card's right-hand side to add a place in the card where you can list tasks. Name the checklist for the type of work being done or for the person the tasks would be assigned to.
- Click on Add an item to open a text field where you can type the task, start and end dates, as well as the name of the assignee.

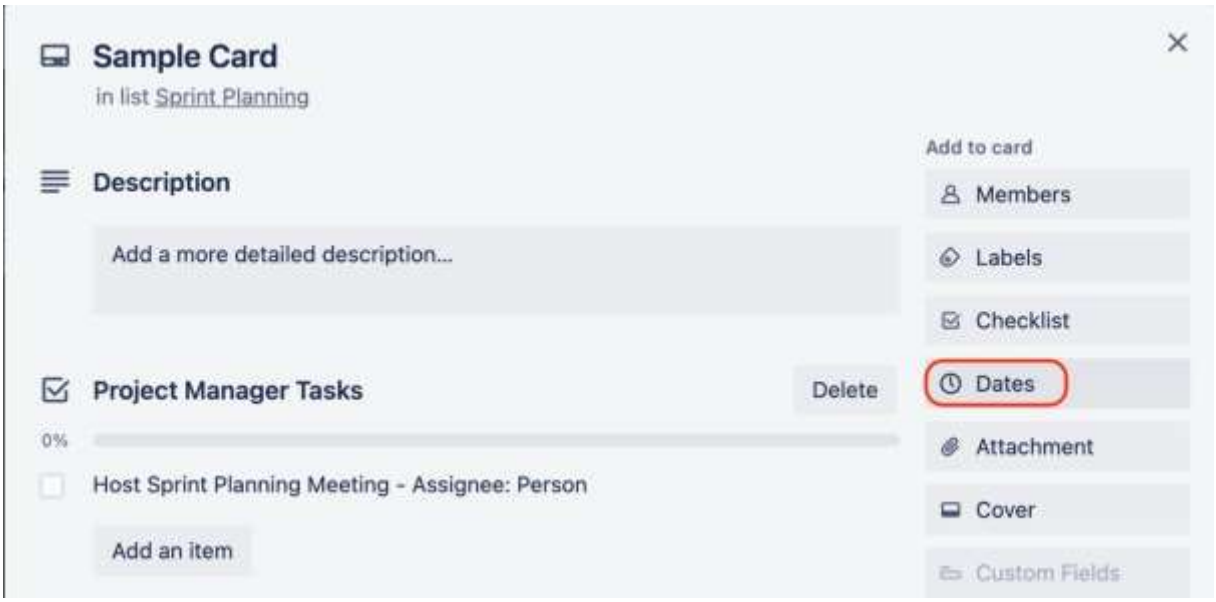


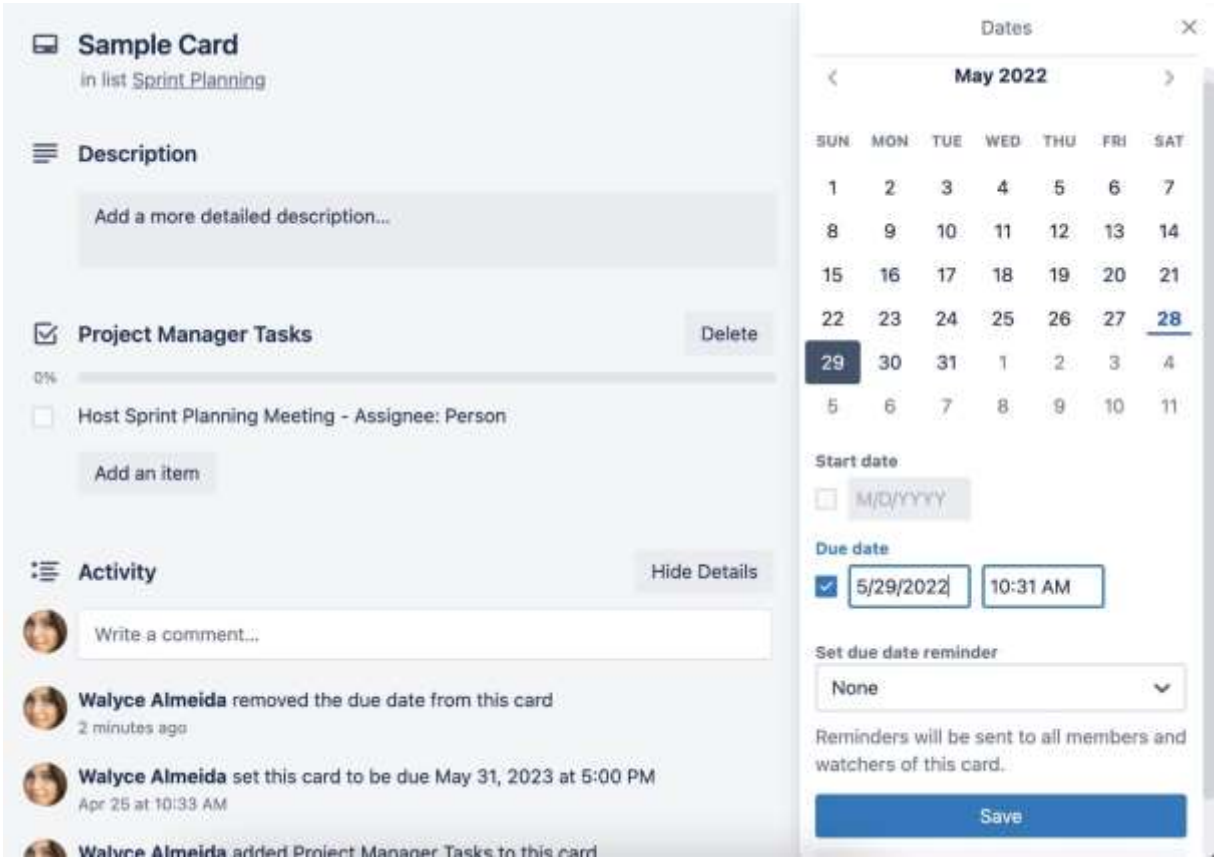


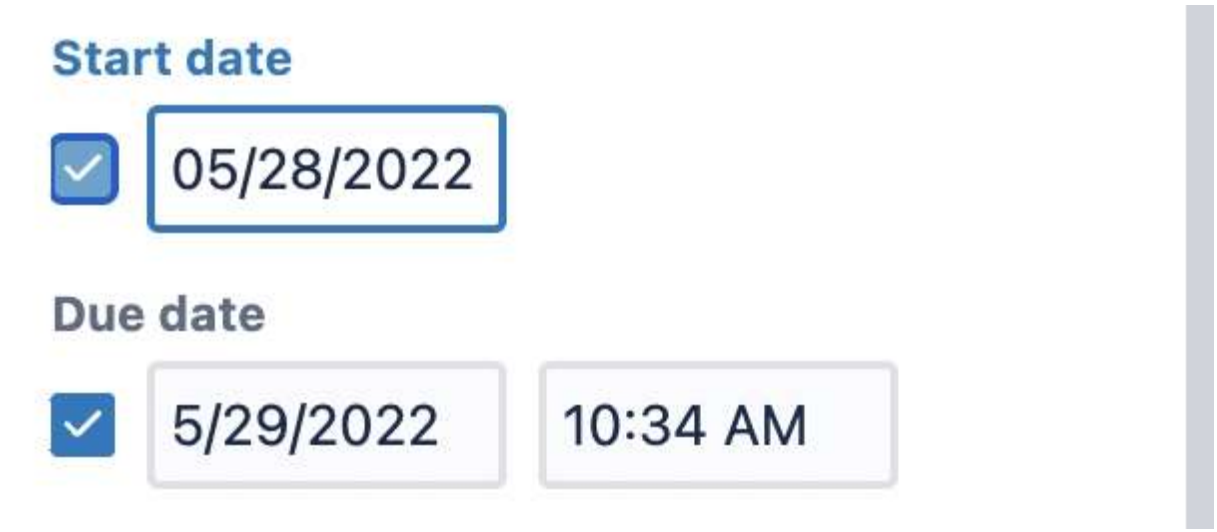
Add Dates at the Card Level

- Click on each card to open up the full view of the card.
- Click on Dates from the card's right-hand side to add start and end dates to the card.
- A pop-up calendar will appear on top of the card's right-hand side. The calendar will select a due date by default and have that box checked.
- To adjust the due date, type in the due date field the correct end date for this card. Or you can choose a day in the calendar.

- To add a start date, check the box above the due date. Then type in the start date field the correct date for the card or choose a day in the calendar.
- Click on the Save button below your dates. The pop-up will go away and the start and end dates will now appear underneath the card's title.







3.4.12. Demo: Tory Fitness Scrum Board

Demo: Tory Fitness Scrum Board

Here is the board I created for the Tory Fitness scenario.

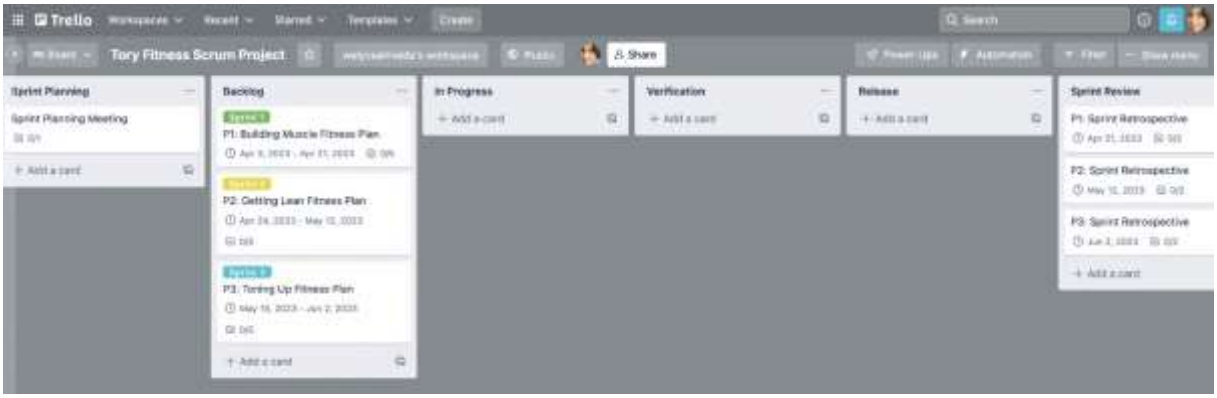
Video

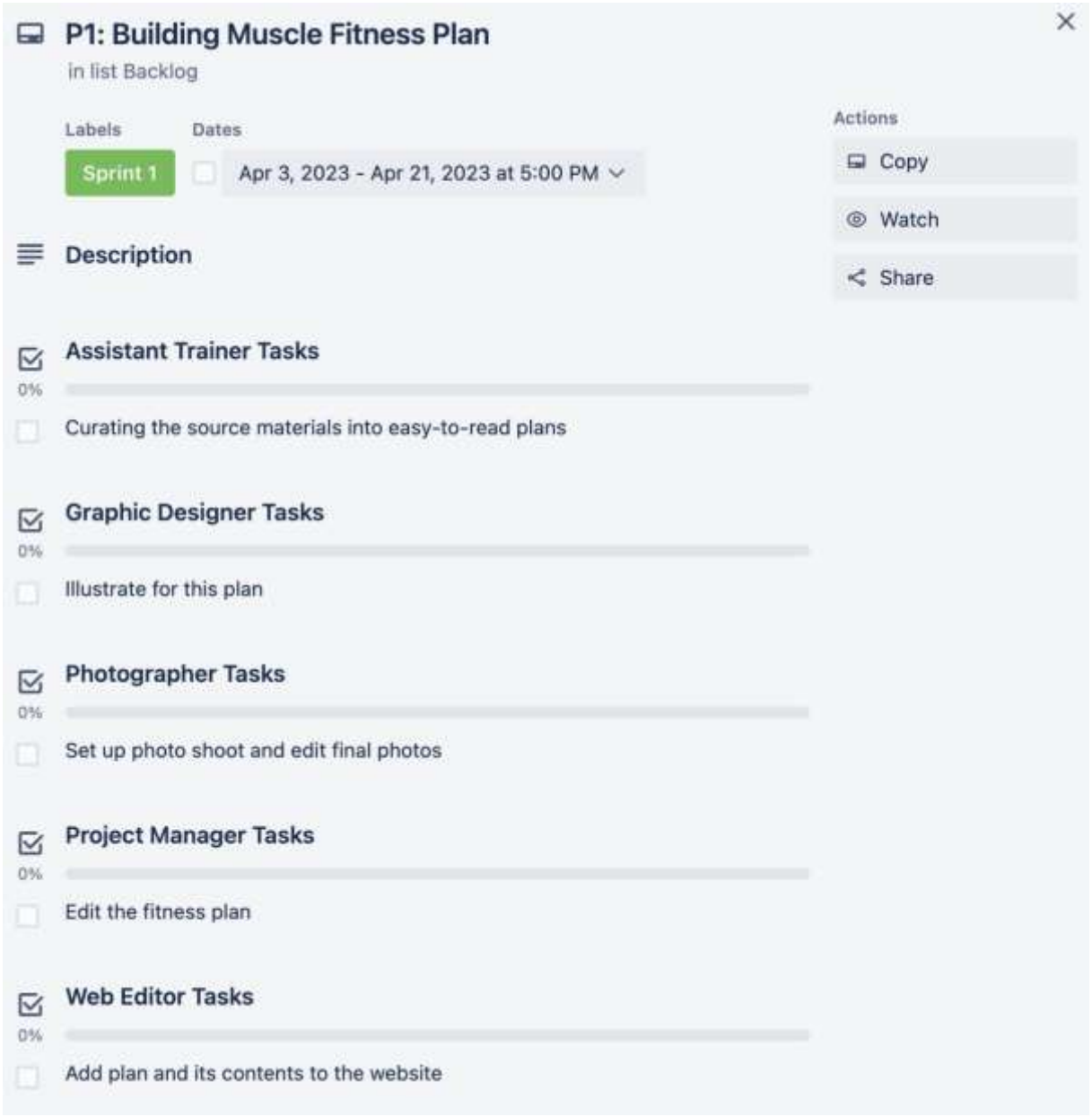
Below are the steps I took to create the Tory Fitness Scrum board:

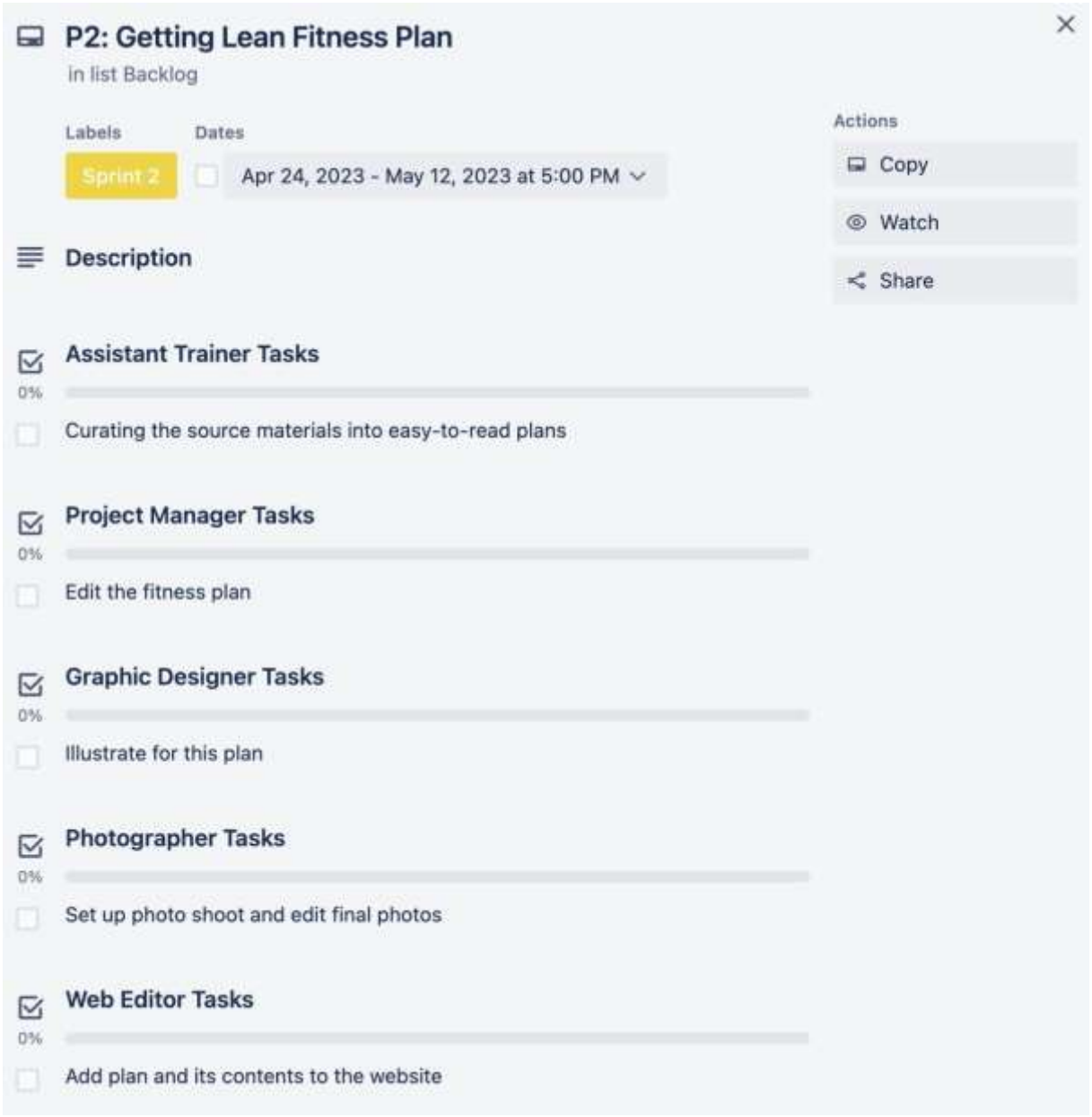
1. I added columns for the stages of a Scrum project.
2. In the Sprint Planning column, I added a Sprint Planning Meeting card with a task for the project manager and the due date.
3. I added three cards to the Backlog column, one for each of the three deliverables or fitness plans.
4. Each deliverable card has a Sprint label to show the prioritization.
5. Each deliverable card has start and end dates that show a Sprint lasting 15 days; the end date of the last Sprint is June 2nd. The final deadline for the project is June 30th.
6. Each card has a checklist of tasks for all the assignees: the assistant trainer, graphic designer, photographer, web editor, and project manager.
7. There are three Sprint Retrospective cards in the Sprint Review column to hold the project manager's tasks, such as hosting a Sprint Retrospective meeting and creating a Lessons Learned document.
8. The due date of each Sprint Review card matches the end date of each Sprint's deliverable card.

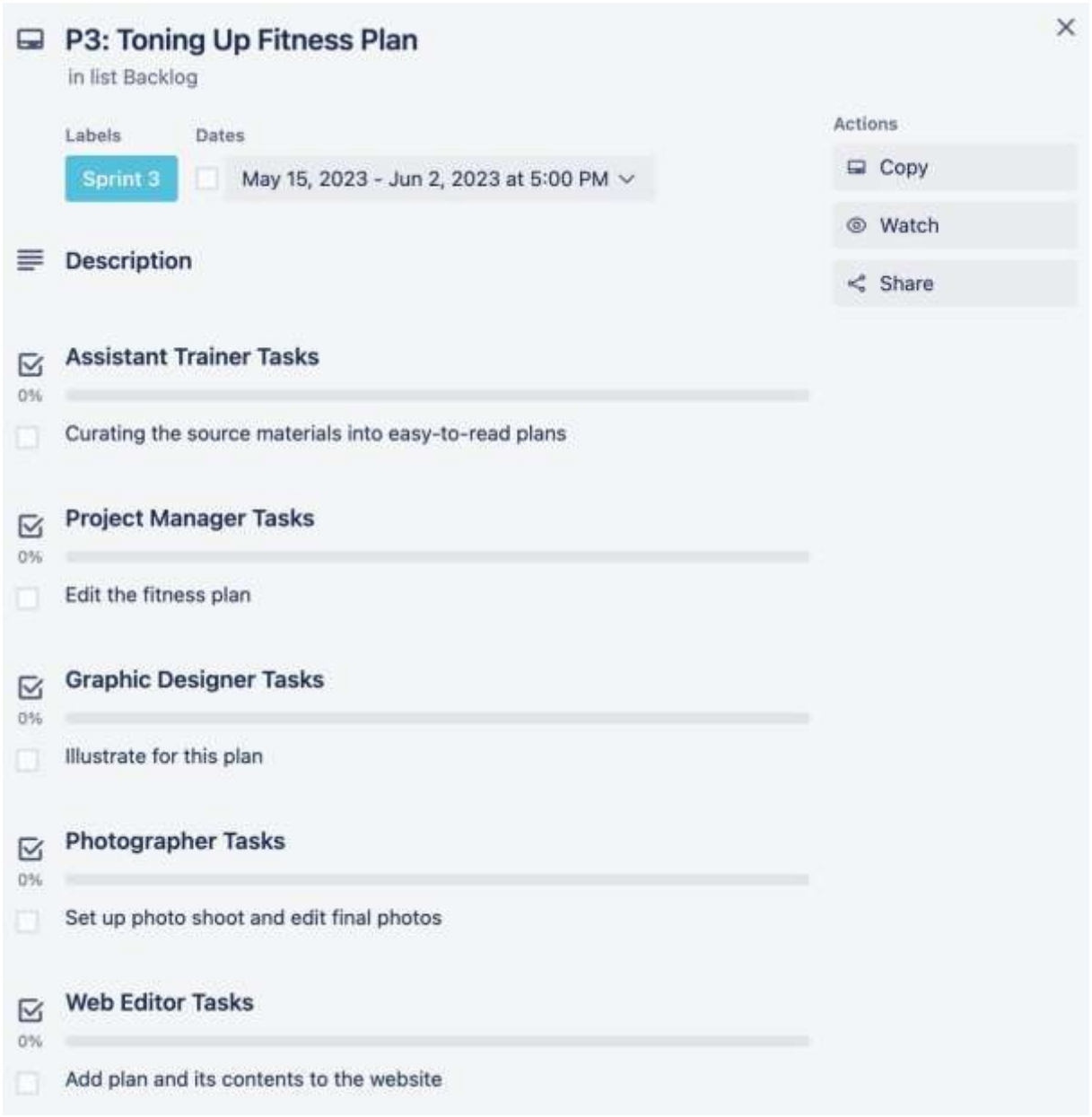
9. During the Sprint, each deliverable card gets pulled from the Backlog column and progresses through the subsequent columns on the Scrum board.

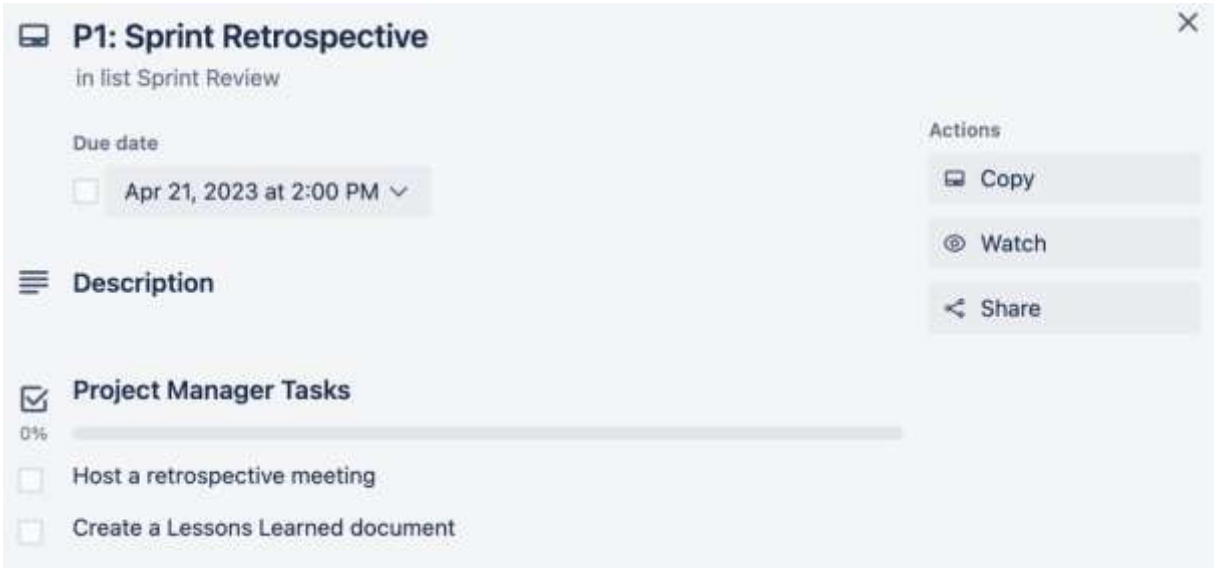
Here are some screenshots of my Tory Fitness Scrum Project board shown in the video above, in case you want to take a closer look at any of them. You can right-click on the image and open it in a new tab to expand it if needed. Feel free to skip them if you want to.




P1: Building Muscle Fitness Plan
in list Backlog
Labels
Sprint 1
Dates
Apr 3, 2023 - Apr 21, 2023 at 5:00 PM
Actions
Copy
Watch
Share
Description
Assistant Trainer Tasks
0%
Curating the source materials into easy-to-read plans
Graphic Designer Tasks
0%
Illustrate for this plan
Photographer Tasks
0%
Set up photo shoot and edit final photos
Project Manager Tasks
0%
Edit the fitness plan
Web Editor Tasks
0%
Add plan and its contents to the website


P2: Getting Lean Fitness Plan
in list Backlog
Labels
Sprint 2
Dates
Apr 24, 2023 - May 12, 2023 at 5:00 PM
Actions
Copy
Watch
Share
Description
Assistant Trainer Tasks
0%
Curating the source materials into easy-to-read plans
Project Manager Tasks
0%
Edit the fitness plan
Graphic Designer Tasks
0%
Illustrate for this plan
Photographer Tasks
0%
Set up photo shoot and edit final photos
Web Editor Tasks
0%
Add plan and its contents to the website


P3: Toning Up Fitness Plan
in list Backlog
Labels
Sprint 3
Dates
May 15, 2023 - Jun 2, 2023 at 5:00 PM
Actions
Copy
Watch
Share
Description
Assistant Trainer Tasks
0%
Curating the source materials into easy-to-read plans
Project Manager Tasks
0%
Edit the fitness plan
Graphic Designer Tasks
0%
Illustrate for this plan
Photographer Tasks
0%
Set up photo shoot and edit final photos
Web Editor Tasks
0%
Add plan and its contents to the website


P1: Sprint Retrospective
in list Sprint Review
Due date
Apr 21, 2023 at 2:00 PM
Actions
Copy
Watch
Share
Description
Project Manager Tasks
0%
Host a retrospective meeting
Create a Lessons Learned document

The P2 and P3 Sprint Retrospective cards are similar, just with different due dates, as shown in the Tory Fitness Scrum board overview screenshot.

If you feel comfortable with this Scrum board, try out the exercise on the next page, where you will create a Scrum board on Trello for Luny.

3.4.13. Exercise: Scrum Project Schedule

Exercise: Scrum Project Schedule

Instructions

You've determined to build the Phase 2 project of the Luny app with the Agile approach. In this exercise, you will build a Scrum board using Trello. You will complete the following steps:

1. Read the exercise scenario and look at the Scrum board template.
2. Determine which details go into which sections of the Scrum board by answering the questions below.
3. Create a Scrum board on Trello.
4. Come back to this page and answer the last question about the project duration.

Scenario

The project scope for Luny delineates 5 features for Phase 2. A potential feature for the Luny project is placing strategically targeted ads in the mobile app so that the users find ads more useful and less of a nuisance. The goal is to make the user experience of interacting with ads more pleasant and thus help keep users on the app. This feature has the following requirements listed in the order of dependency:

1. Decide where ads would be best placed
2. Make the ads more relevant to users based on keywords
3. Give users the ability to control the keywords by setting their preferences

You'll lead the team through typical Scrum events including Sprint planning, prioritizing Sprints in the backlog, executing, testing, and reviewing the Sprint.

The typical **product development** process involves the following steps:

1. Perform customer research
2. Map the customer journey
3. Make a prototype
4. Create wireframes (i.e. a visual skeleton of where the content would go in a digital product)
5. Design overlay (i.e. the visual appearance, such as font, colors, and size of the content)

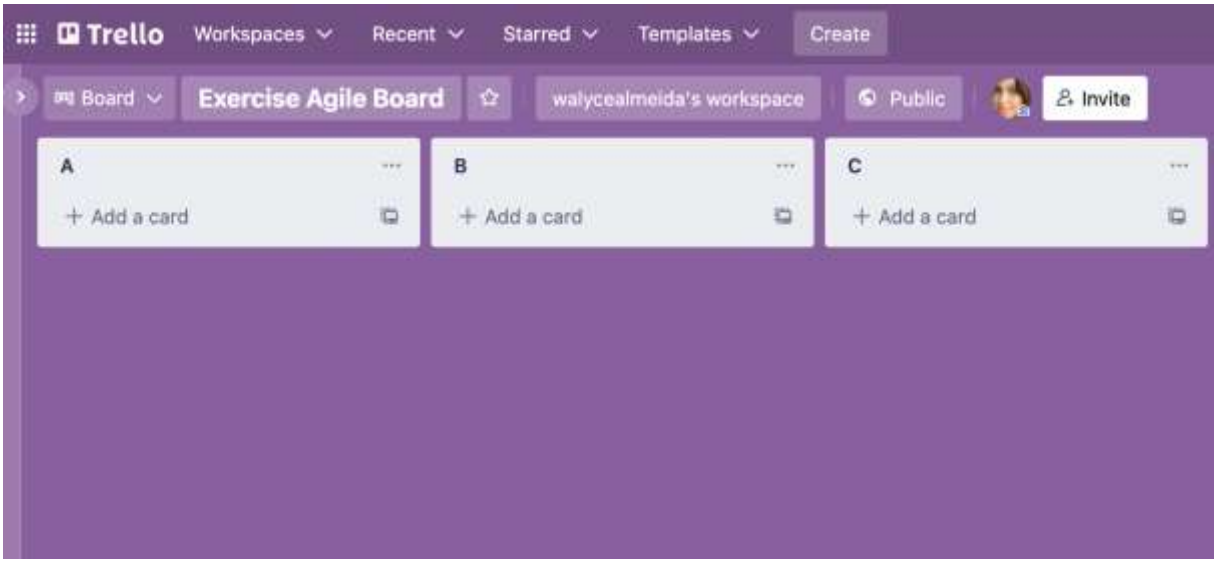
The Engineering team's process involves the basic steps in the software development process:

1. Design the feature/functionality
2. Build the feature
3. Test the feature
4. Release the feature into a staging environment before a live launch

The leaders of the Product/Engineering team are the Product Manager and Lead Engineer. The team members include you, the UX designer, and the engineers. The Product Manager likes to be involved in customer research and journey mapping. The Lead Engineer likes to design functionality to kickoff the software development process.

The product development process and software development process each take two weeks and can be completed simultaneously.

Here is a screenshot of a Scrum board template. Use this template to answer the questions below:



QUIZ QUESTION

Which of the details from the exercise scenario go into the Scrum board's **column headers**?

- Feature requirements
- Sprint stages
- Software development process

QUIZ QUESTION

Each card you add to the backlog column will represent a major requirement and will contain a series of tasks. Match each requirement card with the task that belongs to the card.

Submit to check your answer choices!

Task	Requirement Cards
Research user behavior of app settings	Ad Settings in Preferences
Design keyword-based code	Keyword Algorithm
Release app feed with new ad spots	Ad Placement in App

QUIZ QUESTION

The exercise scenario indicates that a potential feature for the Luny project is making ads more strategic in the mobile app. Below is a list of tasks to fulfill that feature. Match the following tasks to the correct assignee, the person who would be responsible for executing the task.

Submit to check your answer choices!

Task	Assignee
Map customer journey interacting with ads	Product Manager
Design keyword-based algorithm functionality	Lead Engineer
Design ad style and format	UX Designer
Test functionality	Engineer
Make prototype	UX Designer

QUIZ QUESTION

How many weeks would it take to complete a Sprint for all three requirements?

- 2 Weeks
- 9 Weeks
- 6 Weeks

New Terms

- **Wireframe**: A visual skeleton of where the content would go in a digital product.
- **Design Overlay**: The visual appearance of the content once the design has been applied to a set of wireframes.

3.4.14. Solution: Scrum Project Schedule

Here is an overview of my Luny Scrum board. You can right-click on the image and open it in a new tab to expand it if needed.

My Scrum Board Components

Columns = Sprint Ceremonies

- Sprint Planning
- Backlog
- In Progress
- Test
- Release
- Sprint Review

Cards in Backlog = Sprints based on feature requirements

- Sprint 1: Ad Placement in App
- Sprint 2: Keyword Algorithm
- Sprint 3: Ad Settings in Preferences

Tasks assigned to the **Product/UX** members in each Sprint:

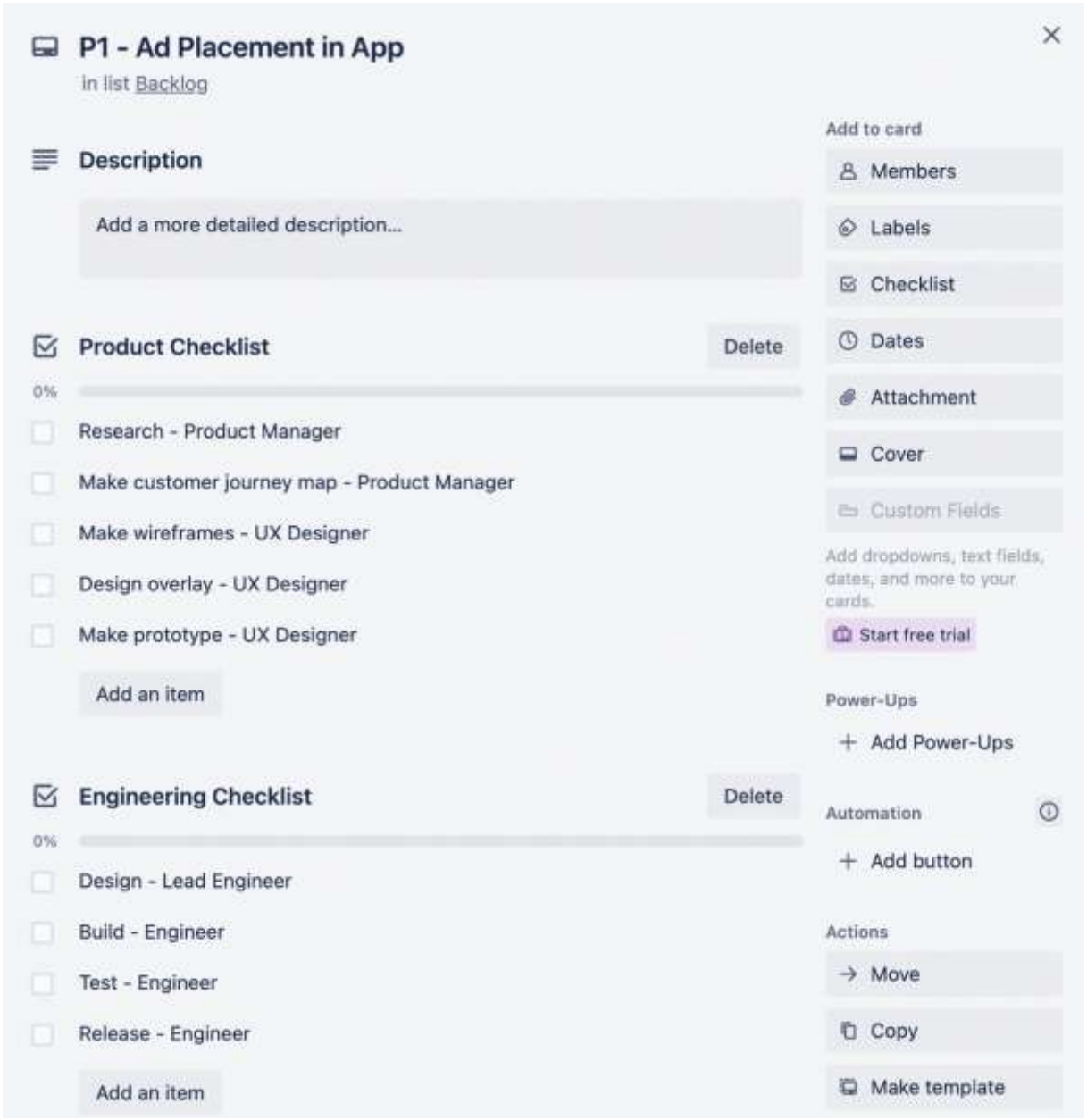
- Research customer
- Map customer journey
- Make prototype
- Create wireframes
- Design overlay

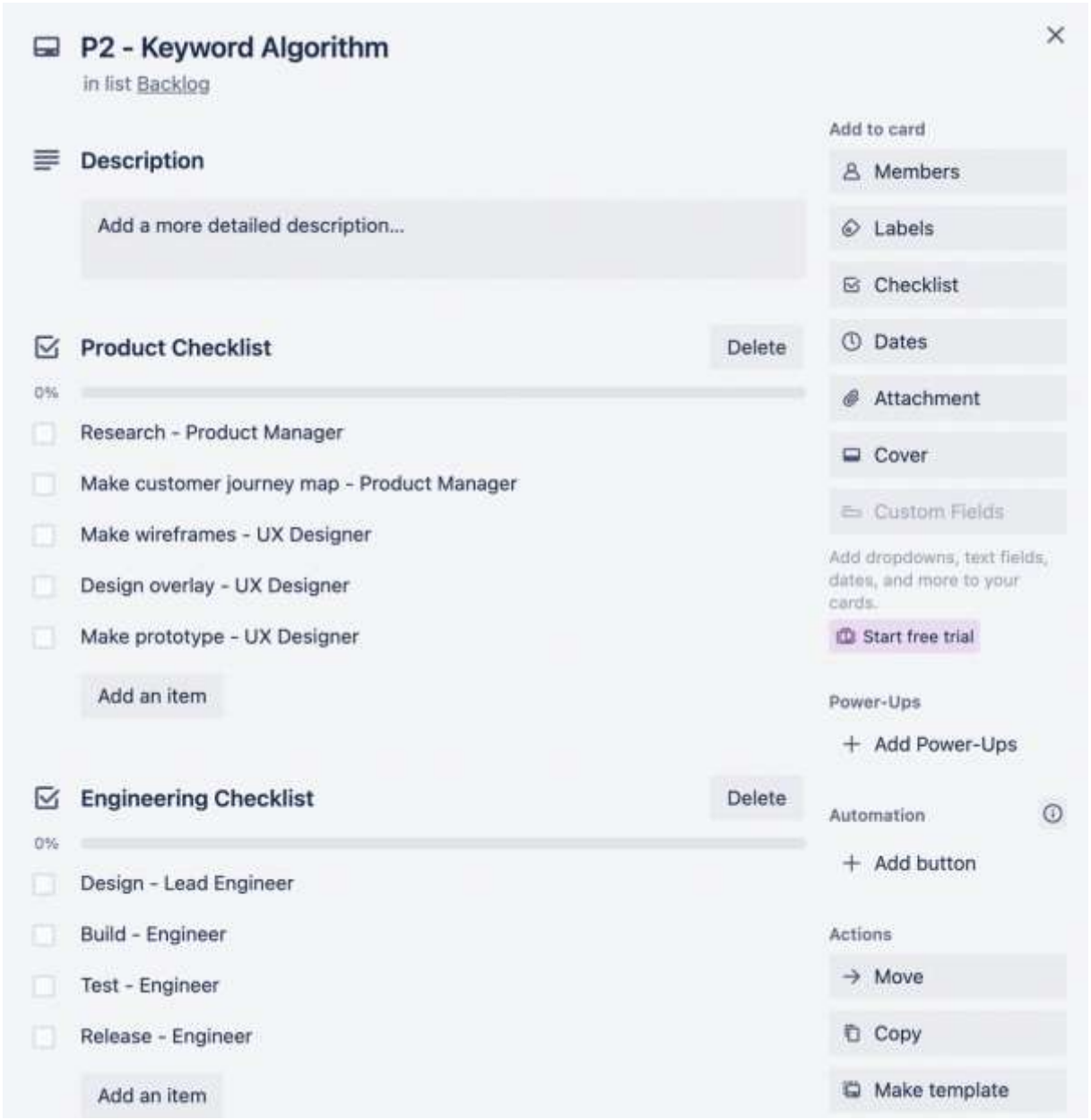
Tasks assigned to the **Engineering** members in each Sprint:

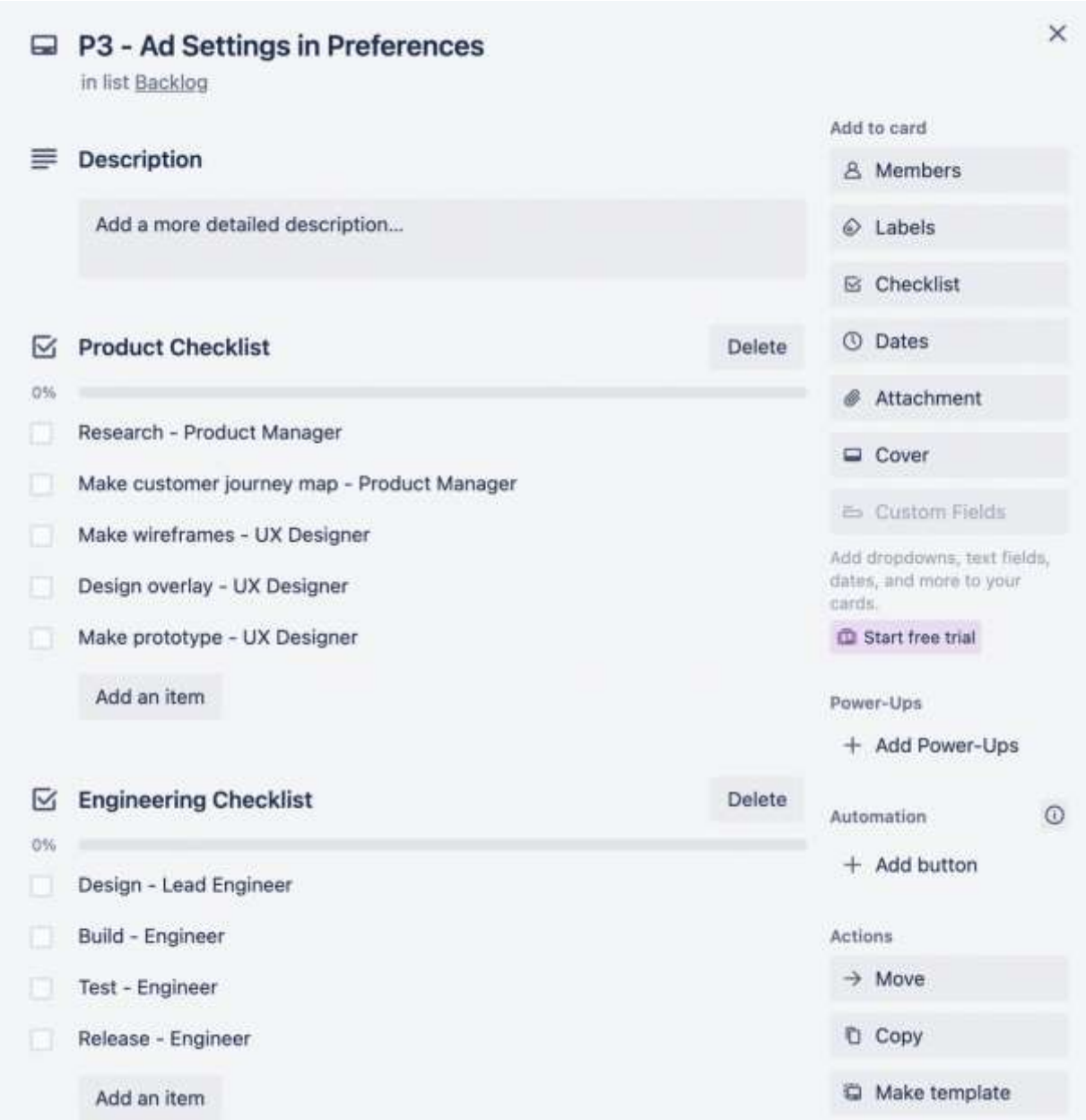
- Design functionality
- Build/code
- Test functionality
- Release into a staging environment

Below, you will find the screenshots of each card that contains a task or set of tasks. I did not add start and end dates to my cards. If you have done so, make sure that each of your Sprints lasts for 2 weeks, because, as mentioned in the scenario, the 2-week product development process and the 2-week software development process can both occur at the same time.

Please also make sure your Sprint dates do not overlap, because you only have one cross-functional team to work on all these three features and it is best practice in Agile to finish one feature/requirement completely in one Sprint before the whole team moves on to the next Sprint.


P1 - Ad Placement in App
in list Backlog
Description
Add a more detailed description...
Product Checklist
Delete
0%
Research - Product Manager
Make customer journey map - Product Manager
Make wireframes - UX Designer
Design overlay - UX Designer
Make prototype - UX Designer
Add an item
Engineering Checklist
Delete
0%
Design - Lead Engineer
Build - Engineer
Test - Engineer
Release - Engineer
Add an item
Add to card
Members
Labels
Checklist
Dates
Attachment
Cover
Custom Fields
Add dropdowns, text fields, dates, and more to your cards.
Start free trial
Power-Ups
Add Power-Ups
Automation
Add button
Actions
Move
Copy
Make template


P2 - Keyword Algorithm
in list Backlog
Description
Add a more detailed description...
Product Checklist
Delete
0%
Research - Product Manager
Make customer journey map - Product Manager
Make wireframes - UX Designer
Design overlay - UX Designer
Make prototype - UX Designer
Add an item
Engineering Checklist
Delete
0%
Design - Lead Engineer
Build - Engineer
Test - Engineer
Release - Engineer
Add an item
Add to card
Members
Labels
Checklist
Dates
Attachment
Cover
Custom Fields
Add dropdowns, text fields, dates, and more to your cards.
Start free trial
Power-Ups
Add Power-Ups
Automation
Add button
Actions
Move
Copy
Make template



Considerations

My Scrum board is a basic example of what an Agile project plan would look like. The columns represent Scrum ceremonies bookended by Sprint Planning and Sprint Review. The start and final columns can include tasks such as:

- A kickoff meeting and daily stand-ups
- Sprint prioritization in Planning
- Demonstration of prototypes or functionality to stakeholders in Sprint Review
- Sprint retrospective meeting in Sprint Review
- Creation and review of a Lessons Learned document
- Documentation of knowledge for internal stakeholders and external customers
- And so on.

If you are not familiar with some of the tasks mentioned above, don't worry. We will talk more about them in later lessons.

In addition, there are other ways to organize cards on the board. Instead of creating one card to consolidate tasks per Sprint, you could create a card for each task and label it by the Sprint it belongs to.

So executing this one main feature necessitates a Sprint of two weeks for three requirements. It will take a total of six weeks. If this feature does not meet the project scope and business objective, it may not be prioritized and other features will take precedence.

3.4.15. Waterfall Schedule Overview

Video

Waterfall projects often make use of the Gantt chart, a spreadsheet that accompanies a list of tasks, assignees, and start/end dates with a group of shaded cells representing the duration of each task.

					WEEK 1					WEEK 2			
TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	M	T	W	Tr	F	M	T	W	Tr
Phase/Milestone													
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]	Shade days to match task dates								
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]									
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]									
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]									
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]									
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]									
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]									
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]									
Add Phase/Milestone As Needed													
[add tasks as needed]													

Gantt Chart Sections

- A column to list the tasks by their title.
- A row in the Task column to represent the phase or milestone that the next set of tasks falls under.
- A column to list the name of the assignee for each task.
- A column with each task's start date.
- A column with each task's end date.
- A column for the number of weekdays it takes to get the task done. (This count should include the day the task begins and ends.)
- A set of columns for each weekday in a week that should be shaded in to correspond with a task's start date and duration.

Organizing Tasks in a Gantt Chart

- You can organize tasks by phases, or the stages of your project management lifecycle, e.g., initiate, plan, execute, or the stages of the Software Development Lifecycle, e.g., design, implement, verify.
- Alternatively, you can organize your tasks by the major milestones, or deliverables in a project, such as the features you plan to add to an app.

Additional Considerations

Video

If you see that a plan might not meet a deadline, here are a few things you can do:

- Check in with stakeholders to ensure that the delayed estimated completion date isn't truly a problem.
- Think Agile and see what can be released early so that it minimizes the urgency to release one whole project by the deadline.
- Consider if any tasks can get started earlier in the timeline.
- Work with your team to find faster ways to accomplish the same task.

New Terms

- **Gantt Chart**: A spreadsheet-based project plan that lists tasks, assignees, start/end dates, and estimated duration accompanied by shading of cells to visually represent the task's duration.
- **Shading**: A visualization in a Gantt chart that fills in a number of cells that matches a task's duration.

Additional Resources

- Digital project managers now have access to tools that help create more interactive Gantt charts, some even with automation features, without needing to build a spreadsheet from scratch. Here is a list of software for building digital Gantt Charts by Richard Sutherland.

3.4.16. Demo: Waterfall Gantt Chart

Part 1: Adding Project Info, Phases/Milestones, Tasks, and Dates

Video

Steps to fill out the Gantt Chart Template

1. Fill in the project title, project manager's name, and project start date.
2. Determine the stages of your project or key deliverables. Then create rows to represent each phase or milestone based on that information.
3. List your tasks that fit under each phase or milestone.
4. Add in the start date for the first task. Then add the estimated duration for each task.
5. With the start date and duration, you can now calculate the end date for each task and work down each row of tasks. Be sure to include the day the task begins and ends.
6. Determine and fill in the estimated completion date (in the header of the template) for the whole project according to the end date for the very last task in the chart.

Part 2: Shading the Gantt Chart Calendar

Video

The calendar section of the Gantt chart adds weeks sequentially to demonstrate how many total weeks your project may take. The columns represent the weekdays Monday through Friday for each week. Shading requires filling in with a color the individual cells that correspond with the start date and duration for each task. Shading starts with the first task. Then the next task's shading will begin in the subsequent week and row.

3.4.17. Demo: Tory Fitness Gantt Chart

Video

Below are the steps I took to fill out the Gantt chart Template for the Tory Fitness project. If you want, you can make a copy of my Tory Fitness Gantt Chart Demo Google Sheet, or download a .xlsx format of this chart from the Resources section on the left-side panel.

1. Filled in the project title, my name, and project start date.
2. Created rows for the main milestones of the project based on the three fitness plans.
3. Listed tasks that fit under each fitness plan.
4. Added duration for each task, then added the start date for the first task.
5. With the start date and duration, the start/end dates for all following tasks were determined. I considered which tasks could overlap and carefully set their start/end dates.
6. Then the end date of the very last task was copied and pasted into the estimated end date for the whole project in the template header.
7. Finally, I shaded the cells corresponding with the start dates and task duration, carefully filling in cells to represent the overlapping tasks.

3.4.18. Exercise: Waterfall Project

Instructions

Although you've already built a Scrum board for Phase 2 of the Luny app project, in this exercise, you will build a Gantt chart following the Waterfall approach. This will help you understand the differences between the two methodologies and solidify the breadth of your project management skills.

Please complete the following steps:

1. Read the exercise scenario and look at the Gantt chart template. Please note that the details of this scenario are slightly different from those of the Scrum Project Schedule exercise.
2. Determine which details go into which sections of the Gantt chart by answering the questions below.
3. Create a Gantt chart using the template provided below.
4. Come back to this page and answer the last question about the project duration.

Scenario

The project scope for Luny delineates 5 features for Phase 2. A potential feature for the Luny project is placing strategically targeted ads in the mobile app so that the users find ads more useful and less of a nuisance. The goal is to make the user experience of interacting with ads more pleasant and thus help keep users on the app. This feature has the following requirements listed in the order of dependency:

1. Decide where ads would be best placed
2. Make the ads more relevant to users based on keywords
3. Give users the ability to control the keywords

Below is the set of tasks for both the Product and Engineering teams. Next to each task in parenthesis, I've provided the number of business days it takes to complete each task (duration).

The typical **product development** process involves the following steps:

1. Perform customer research (1)
2. Map the customer journey (1)
3. Make a prototype (2)
4. Design the look (1)

The Engineering team’s processes involve the basic steps in the **software development** process:

1. Design the feature/functionality (2)
2. Build the feature (5)
3. Test the feature (2)
4. Release the feature into a staging environment before a live launch (1)

The final task for the entire project is "Go live" or "Live launch", the act of releasing the final project to the end user. In the real world, how long that "Go live" task would take can vary according to the complexity of the digital project deliverables. But in this course, we can assume that it takes one day and is done once all three deliverables are complete.

The leaders of the Product/Engineering team are the Product Manager and Lead Engineer. The team members include you, the UX designer, and the engineers. The Product Manager likes to be involved in customer research and journey mapping. The Lead Engineer likes to design functionality to kickoff the software development process.

For each requirement, both the product and software development processes need to occur. Each process takes one week for the Product team and two weeks for the Engineering team to complete, in that order without any overlapping.

Here is a screenshot of a Gantt chart template. You can right-click on the image and open it in a new tab to expand it if needed. Use this template to answer the questions below:

Waterfall Gantt Chart Template

Project Title:	Luny Phase 2	Start Date:	[dd/mm/yyyy]
Project Manager:	Walyce Almeida	Estimated Completion Date:	[dd/mm/yyyy]

TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	WEEK 1 M	T	W	Tr	F	WEEK 2 M	T	W	Tr	F
Phase/Milestone														
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]	Shade days to match task dates									
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]										
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]										
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]										
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]										
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]										
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]										
[task]	[assignee]	[dd/mm/yyyy]	[dd/mm/yyyy]	[number of days]										
Add Phase/Milestone As Needed														
[add tasks as needed]														

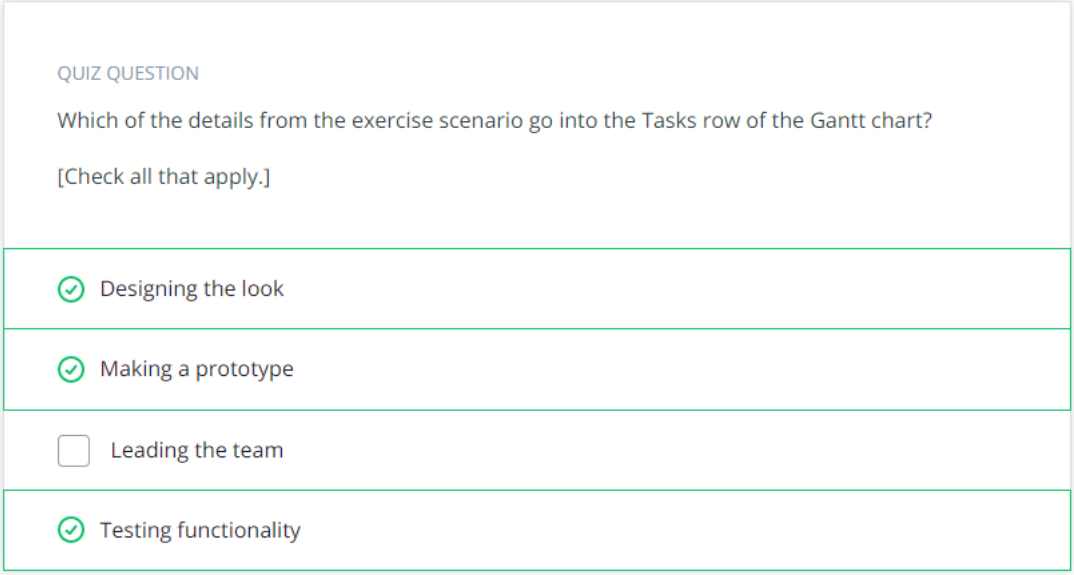
QUIZ QUESTION

Which of the details from the exercise scenario go into the Phases/Milestones row of the Gantt chart? The ___ would be the project Phases, while the ___ would be the Milestones.

Process times; Team members

✓ SDLC stages; App features for Phase 2

Journey mapping; Prototyping

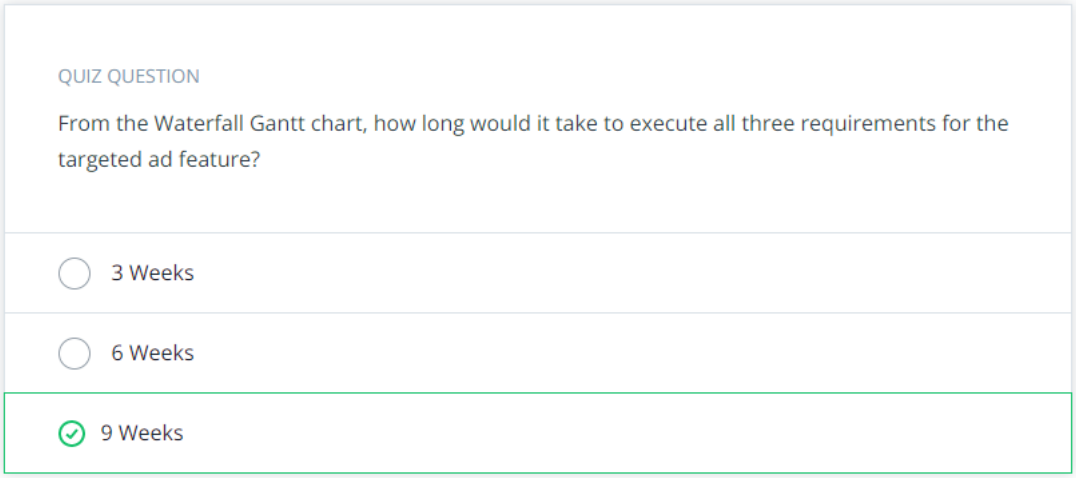


Build Your Gantt Chart

Now, you will build a Waterfall project plan for the targeted ads feature. Refer to the exercise scenario to recall which tasks to include.

Download this Gantt Chart Template.

You can either make a copy of the template via Google Sheet or download it as a .xlsx file from the Resources section on the left-side panel.



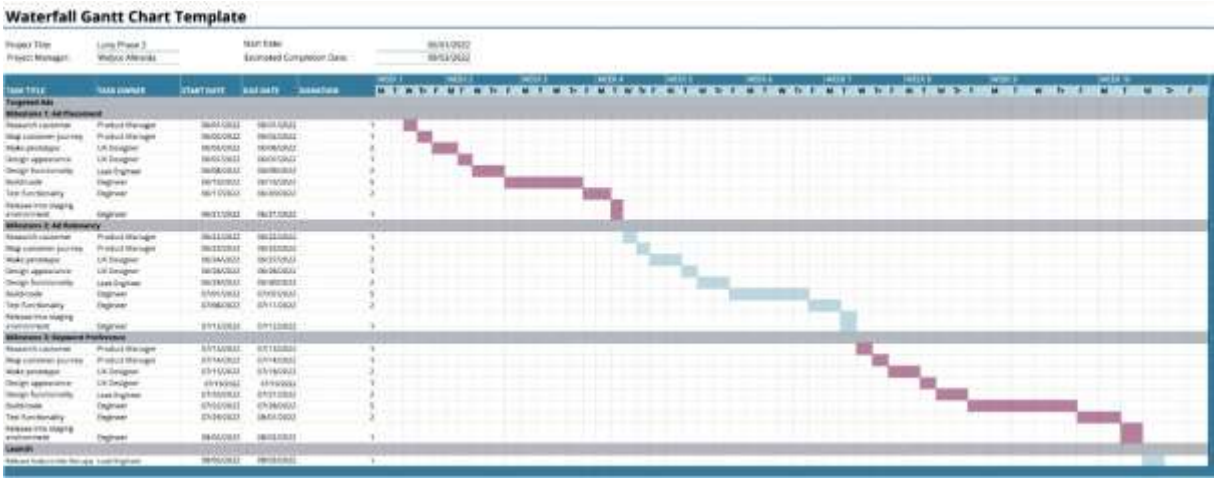
New Terms

- **Duration**: The estimated number of days it takes to complete a task. This is often included or reflected in a project plan.
- **Go Live or Live Launch**: The act of releasing a project's final output, such as a product or feature, to the intended end user.

3.4.19. Solution: Waterfall Project Schedule

Solution: Waterfall Project Schedule

Here is an overview of my Luny Gantt chart. You can right-click on the image and open it in a new tab to expand it if needed.



View my Luny Phase 2 Gantt Chart Solution by either making a copy of the Google Sheet or downloading the .xlsx format of this chart from the Resources section on the left-side panel.

My Gantt Chart

Milestones* = Feature Requirements

1. Ad Placement in App
2. Keyword Algorithm
3. Ad Settings in Preferences

*This is how I have chosen to organize and group the tasks in my Gantt chart.

Phases = SDLC or Project Management Lifecycle Phases

1. Initiation
2. Planning
3. Execution
4. Monitor & Control
5. Closure

Tasks assigned to the **Product/UX** members:

1. Research customer
2. Map customer journey
3. Make prototype
4. Design appearance

Tasks assigned to the **Engineering** members:

- Design functionality
- Build/code
- Test functionality
- Release into the staging environment
- Live launch**

**The Live launch is a one-time event that takes a day to occur because all three requirements are being made accessible to the public.

Considerations

My Gantt chart is a basic example of what a Waterfall project plan would look like. It does not include any activities that occur during a project outside the main deliverables outlined by the requirements. Other tasks that could show up in a project plan include:

- Hosting meetings, such as a kickoff meeting and regular check-ins
- Reporting on project progress
- Demonstrating prototypes or functionality to stakeholders
- Documenting knowledge for internal stakeholders and external customers
- And so on...

So while executing the main deliverables may have taken 9 weeks, the project as a whole could have a longer duration to accommodate these additional tasks.

3.4.20. Lessson Review

Video

Projects have the best possible chance of getting done well, on time, and within budget when there is a thoughtful plan put together. In this lesson, we learned:

- The importance of identifying, gathering, and prioritizing requirements. It helps us understand what tasks a project will entail.
- That digital project managers can determine whether a cost or investment in a project is worth the money.
- How to build a project schedule or project plan in both Agile and Waterfall methodologies.

By now, you should be able to determine when and how to use an Intake Form, conduct a cost-benefit analysis, create a Scrum Board, and create a Gantt Chart.

3.4.21. Glossary

For your reference, here are all the new terms we introduced in this lesson:

Requirements: The detailed tasks, functions, and features for your end product or process. Requirements can be expected user interaction, technical specification, or a particular business goal that needs to be met.

Intake Form: A type of document with empty fields in which stakeholders can answer questions about what requirement they would like to add to a project and why.

Prioritization: The act of choosing which requirements to work on and ranking their order.

Cost-Benefit Analysis: A decision-making process to determine whether you should approve a project or a certain expense in a project. It uses a formula that simplifies project costs and benefits into a single ratio.

Future Benefit: The monetary value of the results you believe investing in the project will bring at a particular point in the future.

Present Value: A part of the cost-benefit analysis that determines how much future money is worth today.

Discount Rate: A method to understand the worth of the future benefit or cost in present terms used in a cost-benefit formula.

Schedule: A list of tasks with assignees, start and end dates.

Tasks: Actions that can be taken in a digital project.

Scrum Board: An interactive project plan structured into columns that represent the stages in a Scrum project.

Sprint Planning: A Scrum project's stage in which digital project managers add requirements to the Backlog and prioritize the tasks into a set of Sprints.

Backlog: A holding place for all project requirements in a given Sprint.

In Progress: A Scrum project's stage in which a set of tasks organized into a Sprint are now being executed.

Testing: A Scrum project's stage in which the deliverable created in a Sprint is tested to ensure it meets expectations and any detected errors are fixed.

Release: A Scrum project's stage in a Sprint, in which the deliverables are released to the intended end user.

Sprint Review: A Scrum project's final stage in a Sprint, in which a team holds a Retrospective meeting to discuss what they learned in the last Sprint and demonstrate any released deliverables.

Columns: A feature in a project plan visualized on a board that represents the stages in a project management lifecycle.

Cards: A feature in a project plan visualized on a board that represents one or a set of tasks.

Wireframe: A visual skeleton of where the content would go in a digital product.

Design Overlay: The visual appearance of the content once the design has been applied to a set of wireframes.

Gantt Chart: A spreadsheet-based project plan that lists tasks, assignees, start/end dates, and estimated duration accompanied by shading of cells to visually represent the task's duration.

Shading: A visualization in a Gantt Chart that fills in a number of cells that matches a task's duration.

Duration: The estimated number of days it takes to complete a task. This is often included or reflected in a project plan.

Go Live or Live Launch: The act of releasing a project's final output, such as a product or feature, to the intended end user.

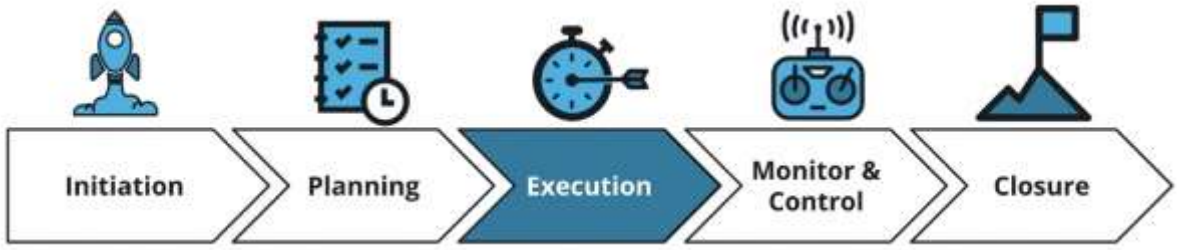
3.5. Getting Realistic Plans

3.5.1. Introduction

Video

By the Execution stage in the project management lifecycle, you should have shared a project plan with your team and stakeholders that includes tasks and assignees. The assignees will be putting in the most amount of effort in this stage. But it doesn’t mean a digital project manager can sit back and relax during Execution.

Besides ensuring your team has everything they need to do the job, a digital project manager has to be in constant communication with stakeholders and take action when risks threaten the project from being completed.



3.5.2. Lesson Outline

Video

During Execution, a digital project manager must be on high alert, tracking all aspects of a project and taking action to ensure it stays on track. In this lesson, we will learn how to:

- Identify risks and apply one of six different strategies designed for responding to risk.
- Create and carry out a communications plan that keeps stakeholders engaged.

By the end of this lesson, you will be able to define and apply the most appropriate risk response strategy and create a Status Report that communicates relevant and up-to-date information to your stakeholders.

3.5.3. Risks and Response Strategies

Part 1: Risk Types and Response Strategy Overview

Video

Risks are any circumstance or events that may or will affect the goals or deliverables in your project.

There are different ways to categorize risks:

- Risks can be **positive or negative**. The positive ones create opportunities for the business to go beyond its goals, while negative risks interrupt a business' ability to reach its original goals.
- Risks can be **internal or external**. The internal ones originate inside your organization, while the external ones are caused by factors outside of your organization.
- Risks can also be **knowable or unknowable**. The knowable ones are things we can anticipate, while the unknowable ones are risks we may not be able to predict.

Part 2: Six Risk Response Strategies Explained

Video

Here are the six types of risk response strategies:

- **Avoid** relates to adjusting plans so it prevents the risk from ever happening to or having an impact on your project. This strategy essentially makes the risk irrelevant to your project.
- **Transfer** is the act of moving the risk to a different recipient by adding into the project plan a way to direct the risk in a certain direction.

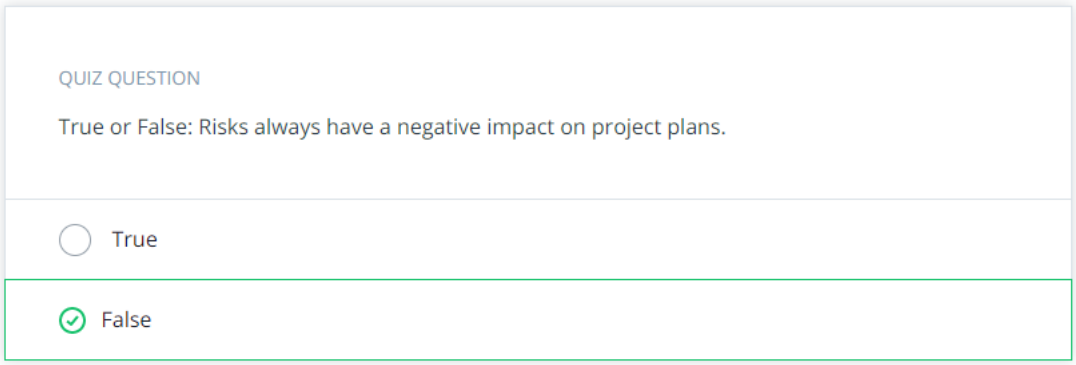
- **Mitigate** relates to proactively adjusting plans or acquiring new resources to lessen the potential consequences as much as possible or preparing for the impact of the risk.
- **Accept** involves passively acknowledging that it will happen, or creating thresholds that trigger actions when the risk causes a certain type or level of problem.
- **Escalate** is the act of presenting the risk to someone with the right authority or skillset to properly respond. In this case, the digital project manager cannot sufficiently do so.
- **Exploit** involves creating an opportunity or solution out of a risk to take advantage of a problem's impact.

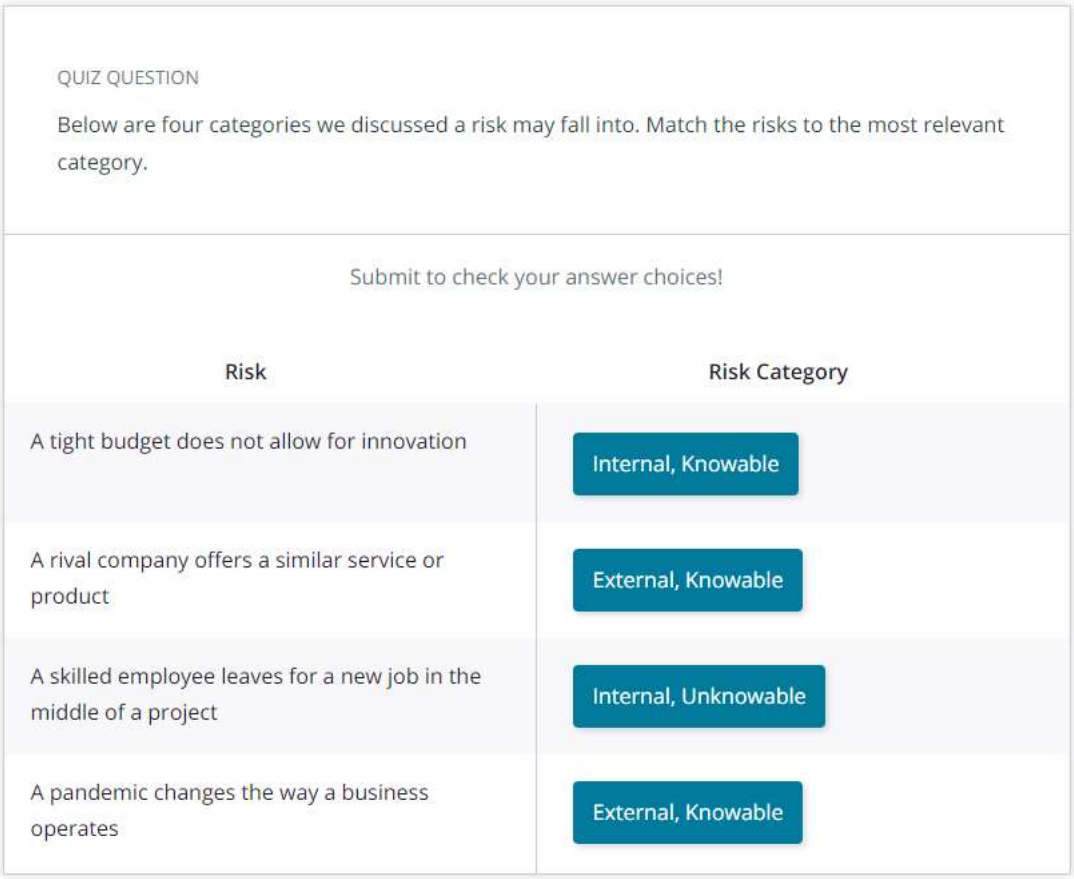
New Terms

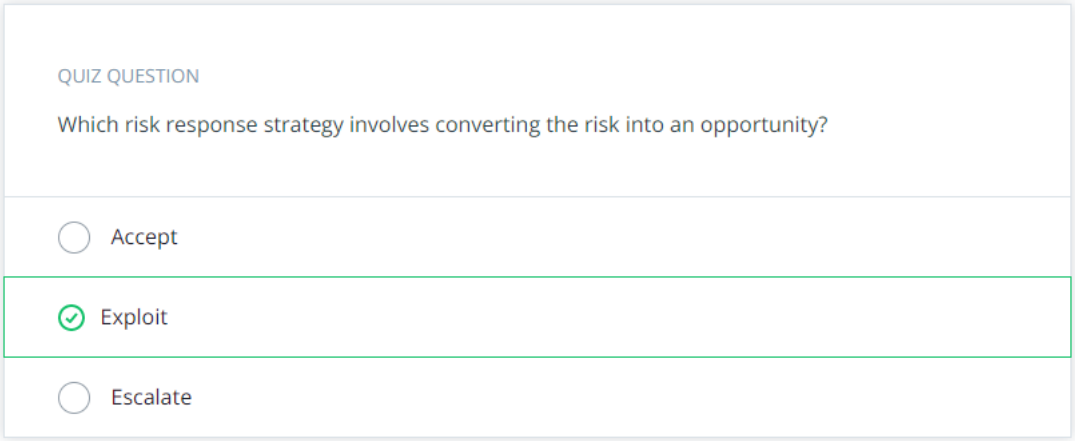
- **Risk**: Any circumstance or events that may or will affect the goals or deliverables in your project.
- **Avoid**: A risk response strategy that relates to adjusting plans so it prevents the risk from ever happening to or having an impact on your project. This strategy essentially makes the risk irrelevant to your project.
- **Transfer**: A risk response strategy in which the risk is moved to a different recipient. This is done by adding into the project plan a way to direct the risk in a certain direction.
- **Mitigate**: A risk response strategy that relates to proactively adjusting plans or acquiring new resources to lessen the potential consequences as much as possible or preparing for the impact of the risk.
- **Accept**: A risk response strategy that involves passively acknowledging that it will happen, or creating thresholds that trigger actions when the risk causes a certain type or level of problem.
- **Escalate**: A risk response strategy that involves presenting the risk to someone with the right authority or skillset to properly respond. In this case, the digital project manager cannot sufficiently do so.

Exploit: A risk response strategy that involves creating an opportunity or solution out of a risk to take advantage of a problem's impact.

3.5.4. Quizzes: Risk and Response Strategies







3.5.5. Exercise: Risk and Response Strategies

Instructions

You will consider risks to the Luny project and plan a response. Below is a scenario with more information about Luny, your stakeholders, and the current business environment. Read the scenario and analyze the best risk response approach in each situation.

Scenario

The CEO of Luny asked you to conduct a competitive analysis, in which you researched market trends and existing competitors. In your report, you included some analysis in your research and this is what you found:

Luny built its app responsibly so that young users would not become addicted to screen time. Parents feel comfortable allowing their kids to spend time on Luny's app. It is their main strength.

Luny is still reeling from the mixed reactions to the app launch in Phase 1. Many people signed up, but many of those also left. You need customer feedback on upcoming feature releases to better improve each new Sprint.

Despite that weakness, you noticed a spike in new user sign-ups from different English-speaking countries around the world. This creates an incentive to improve the app's global reach technically and content-wise.

But, you also discovered a rival social media company that exploits tech features that encourage users to spend more time on screen. And Luny's advertisers have expressed concerns about the effectiveness of ads on your app.

QUIZ QUESTION

Conducting research, such as on existing competitors, at the early stages of a project is related to which risk response strategy?

- ✓ Mitigate
- ○ Avoid
- ○ Transfer

QUIZ QUESTION

Which of the following details from the exercise scenario could pose a risk to your project?

[Check all that apply.]

- ✓ Lack of interest from users in providing feedback
- ✓ Current users switching over to the rival app
- ✓ Sponsors spending less money to advertise in Luny's app
- ✓ Opportunities possibly shifting the project scope's focus

3.5.6. Solution: Risks and Response Strategies

Solution: Risks and Response Strategies

There are risks that we discover right at the start of a project and others as we are fulfilling a project. How far along you are in a project can inform which risk response strategy to use. You can also select

a strategy based on the type of risk you've discovered. But the earlier you respond to a potential risk, the better chances you have of creating a positive outcome.

It's important to engage with stakeholders and use tools such as the Power-Influence Grid or the RACI chart to understand internal risks due to existing or lack of resources. To understand external risks, you can research market patterns and industry rivals that may affect your project or organization.

In the previous exercise scenario, the scenario analysis revealed these potential risks:

- Lack of interest from users in providing feedback
- Current users switching over to the rival app
- Sponsors spending less money to advertise in Luny's app
- Opportunities possibly shifting the project scope's focus

We focused on two of those risks.

My Solution to the New Demographic Risk

Luny's Phase 2 project may have already prioritized the features based on the current target demographic. And the Product team may have already conducted customer research and done customer journey mapping on them. The project risks scope creep, which is when a project might go beyond what was delineated in the scope statement, such as going over schedule, over budget, and beyond the requirements. In this case, Luny risks scope creep by elongating our timeline to accommodate for new research on the new potential users. And we might have to adjust our Sprint prioritization.

However, this risk is not necessarily a negative one. Having a new set of users interested in Luny's app is an opportunity to grow our user base. So the best risk response strategy here would be to **Exploit** the opportunity.

My Solution to the Rival App Risk

As the Luny project manager, the Product Manager and CEO need to know about our competitors. So this is a risk I would **Escalate**. I view the threat of a competitor with a similar app as an opportunity to truly define what differentiates our product. While this might change the way we prioritize features or adjusts our requirements, it will redefine what we consider to be good quality features. And it may make the most business sense to strengthen Luny's unique place in the market.

Considerations

For the positive risk of identifying a new demographic of potential users, Exploit seems like the most productive response. However, an organization could choose instead to **Accept** the risk by not acknowledging it and staying on course with its original project plans hoping that the new potential users will join in anyway.

For the negative risk of identifying a rival company with a similar product, the decision-makers are responsible for the best response to this risk, which is why I would Escalate. However, the team could choose to **Avoid** the risk by completely shifting to a new business category such as mobile gaming, instead of social media. But that would mean letting go of the investment made in Phase 2 so far. The other response is passively **Accept** the risk by moving forward with the project's original plans while being aware that the competition could present other future risks.

New Terms

- **Scope Creep:** A situation where a project might go beyond what was delineated in the scope statement, such as going over schedule, over budget, and beyond the requirement.

3.5.7. Creating a Communicatons Plan

Video

A **communications plan** essentially pulls together your approach to creating and sharing project information with relevant people. It should consider the following four sections:

1. **With Whom to Communicate**: You should be communicating with your stakeholders and team. Reference the stakeholder analysis you input into the Power-Influence Grid to recall what type of information each person may need or want.
2. **What to Communicate**: You can plan at the start of your project which types of information should be documented and include them as tasks in your project plan. You may consider the following questions:
    - What stage is your project in?
    - What percentage of the work is done?
    - Is there something ready to be tested or previewed?
    - Are there any existing or possible risks?
    - Have there been any changes to the project scope?
    - What information did we gather in meetings?
3. **When to Communicate**: Information can be communicated when an update occurs as well as according to the cadence of your project management methodology.
4. **How to Communicate**: Decide what method or tool of communication works best for the information you're sharing and is compatible with the way your team works.

- You can communicate with meetings, dashboards, email, and so on. In digital project management, we have the advantage of using interactive online tools to format the information. These tools allow stakeholders to easily access or automatically receive **information that has been synthesized in a visual or easy-to-understand way.**

New Terms

- **Communications Plan**: A tool in project management that pulls together the project manager's approach to creating and sharing project information with relevant people. It considers who needs to be communicated with, what to communicate, when, and how.

Additional Resources

- Learn more about creating a thorough communications plan for digital projects: How to Create a Project Communication Plan? by Project Central
- Learn about how communication breaks down with a lack of a plan in this article by Grace Windsor: How to Tackle Poor Project Communication.

3.5.8. Status Report

Part 1: Status Report Overview

Video

Digital project managers may use a **Status Report**, a structured document that provides a summary of a project's progress. While the level of detail can be customized according to the preference of the stakeholders or the type of project, it typically contains the following sections:

- **Basic Information**: This section in a Status Report contains the project title, project manager's name, company name, and date of the report's creation.
- **Project Summary**: This section is basically a condensed version of your project scope, containing two to three sentences on what the project is about and what it is achieving.
- **Highlights and Blockers**: This section is written in bullet points.
    - Under highlights, you can celebrate the positive achievements that have occurred so far in the project and show appreciation for team members.
    - Under blockers, you can list existing challenges or risks that are currently preventing a project task from being completed.
- **Project Health Check**: This section has three parts.
    1. The Scope column lists time, cost, and quality.
    2. The Status column is where you can signify whether those aspects of the project scope are on track, at risk, or off-track using colors like green, yellow, and red.
    3. The last column is where you can provide a few more details about what tasks, milestones, or deliverables in a project have been completed and what is left to do.

Part 2: Tory Fitness Status Report Example

Video

The video above demonstrates what a Status Report might look like if created in the middle of the Tory Fitness scenario.

New Terms

- **Status Report:** A structured document that provides a summary of a project's progress.
- **Highlights**: A bullet-point summary of achievements in a Status Report.
- **Blockers**: A bullet-point summary of active or potential risks in a Status Report.
- **Project Health Check**: A visual section in a Status Report that depicts what aspects of a project scope are on track, at risk, or off-track and provides a description of tasks completed and pending.

Additional Resources

- Learn more about Status Reports by reading How Project Status Reports Facilitate Successful Development by Onix Systems.

3.5.9. Quizzes: Communications Plan

QUIZ QUESTION

When creating a Communications Plan, a digital project manager could reference which of the following documents to determine *with whom* to communicate and *why* they should communicate with each stakeholder?

- ○ Project Scope Statement
- ○ RACI Chart
- ✓ Power-Influence Grid

QUIZ QUESTION

Below are the types of information we just discussed could be included in ongoing communications with stakeholders in a project. Can you match pieces of information with the correct information type or category?

Submit to check your answer choices!

Information Type	Available Information
Stage	Monitor & Control
Work Completed So far	73% of Tasks
Preview	Prototype
Risk	Mitigate Strategy
Meetings	Lessons Learned

3.5.10. Exercise: Sending a Status Report

Exercise: Sending a Status Report

Communications with stakeholders should occur regularly so they are engaged both when things are going well and when risks disrupt a project. In this exercise, you will communicate with stakeholders regarding one of the risks you previously uncovered as the project manager for Luny.

Instructions

Read the scenario below and build a Status Report based on the details of the risk and its implications for your project.

Scenario

You have completed the first two of five features for Luny's Phase 2 project. One of the features, you may recall, involved targeted ads. The other feature dealt with making a more optimized social media feed in the app. These two features have helped improve the quality of the app.

But you discovered new potential users around the world who may be easier to attract due to their expressed interest in the early version of Luny's app. The Product Manager and you decided to pause the third Sprint to present a new proposal to the CEO on which features should be included.

From the meeting with the CEO, it was determined that the next three Sprints should be dedicated to building features for the new demographic of users that have shown the highest level of interest - Spanish speakers. So the next app feature will be to support Spanish-language capabilities.

When gathering new requirements from the UX Designer and Engineering team, they expressed the need for more resources and time to fulfill that feature. The UX Designer needs an editor who is fluent in Spanish in order to research customers' needs and design interfaces to accommodate special characters. The Lead Engineer said they need a Sprint of four weeks in total in order to properly design, code, test, and deploy the app's ability to support a new language. You also calculated that meeting all the requirements will cost an additional $15,000 over budget in order to provide a high-quality customer experience for the new Luny mobile app users.

Below you can find a screenshot of the Status Report template. You can reference this template for the questions that follow:

UDACITY

Project Status Report

PROJECT TITLE: _____ COMPANY NAME: _____

PROJECT MANAGER: _____ DATE: [date when you discovered the risk]

PROJECT SUMMARY

Write a summary of the events that have occurred so far in two to three sentences.

PROJECT HIGHLIGHTS/BLOCKERS

Highlights:

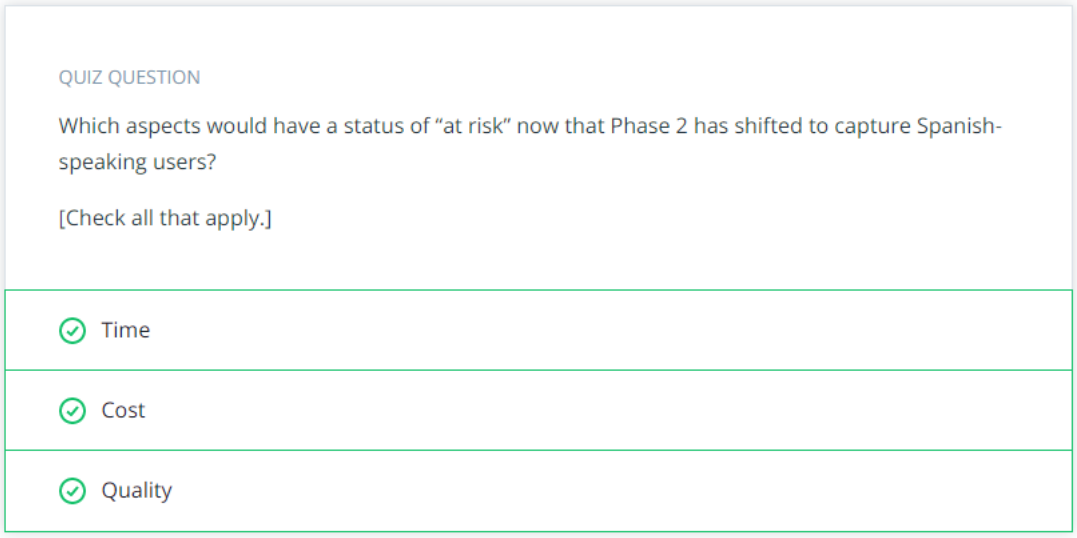
- Write positive things that have happened up to this point in the project such as main deliverables completed

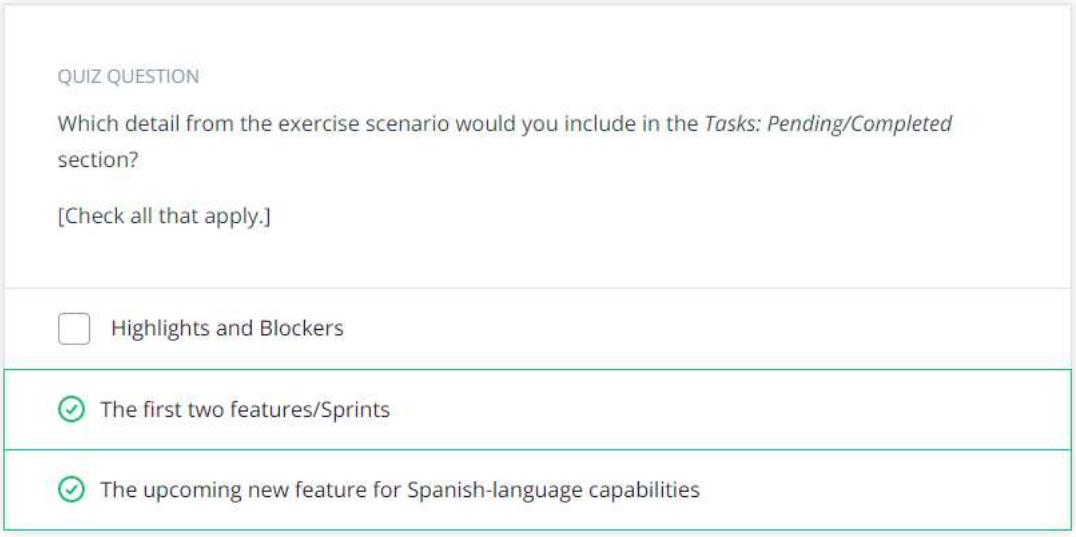
Blockers:

- Write any challenge or risk that could or is delaying future tasks from being completed

PROJECT HEALTH CHECK

Scope	Status	Tasks: Completed/Pending
Time	On Track At Risk Behind	**Completed:** • List tasks that have been completed thus far **Pending:** • List tasks that are still pending / not completed
Cost	On Track At Risk Over	
Quality	On Track At Risk Under	





3.5.11. Solution: Sending a Status Report

Solution: Sending a Status Report

Below you can find the Status Report that I completed. Alternatively, you can also download a PDF file of this solution from the Resources section on the left-side panel.

Project Status Report

PROJECT TITLE: Phase 2 Project COMPANY NAME: Luny

PROJECT MANAGER: Walyce Almeida DATE: March 9, 2022

PROJECT SUMMARY

Phase 2 of the Luny social media mobile app is underway. We have successfully completed two features that have met our quality standards and attracted new users. But we uncovered an exciting new opportunity that shifted our focus to a new demographic of users who speak Spanish. So we will be basing the next few features on a new vision to go global.

PROJECT HIGHLIGHTS/BLOCKERS

Highlights:

- Two successful feature releases that have improved the quality of the app
- Analysis revealed a new opportunity for Spanish-language users

Blockers:

- To build Spanish-language capabilities and meet our quality standards, we may need more time and resources
- May have to pause project to re-prioritize Sprints

PROJECT HEALTH CHECK

Scope	Status	Tasks: Completed/Pending
Time	At Risk	Completed: Development of feature 1 Development of feature 2 Pending: Incorporating a Spanish editor to UX Customer research Design interface Design, code, and test for language capability
Cost	At Risk	
Quality	At Risk	

Considerations

In an Agile/Scrum project plan, there are daily stand-ups in which a project manager can gather information to include in a Status Report. Then toward the end of a Sprint, there can be a retrospective meeting in which the team reflects on the project thus far. That is another opportunity to collect details. The end of the Sprint would be an ideal cadence to share the report with stakeholders.

3.5.12. Real-Life Edge Case

Video

Sometimes a strong Communications Plan is the solution to challenges that may come up in a project. It helps disseminate knowledge of best practices and build confidence in teams with the transparency of how things are going.

3.5.13. Lesson Review

Video

A digital project manager will be actively communicating project progress with stakeholders during the Execution stage of a project. In this lesson, we learned how to:

- Identify risks and determine how to respond with one of six strategies.
- Build an effective Communications Plan and share important project information using a Status Report.

These are useful tools to help us get things done on time, within budget, and with high quality. Risk response strategies help us minimize the negative effects of a risk on our project. And the communications plan and status reports serve to engage our stakeholders and coordinate our team.

3.5.14. Glossary

Glossary

For your reference, here are all the new terms we introduced in this lesson:

Risk: Any circumstance or events that may or will affect the goals or deliverables in your project.

Avoid: A risk response strategy that relates to adjusting plans so it prevents the risk from ever happening to or having an impact on your project. This strategy essentially makes the risk irrelevant to your project.

Transfer: A risk response strategy in which the risk is moved to a different recipient. This is done by adding into the project plan a way to direct the risk in a certain direction.

Mitigate: A risk response strategy that relates to proactively adjusting plans or acquiring new resources to lessen the potential consequences as much as possible or preparing for the impact of the risk.

Accept: A risk response strategy that involves passively acknowledging that it will happen, or creating thresholds that trigger actions when the risk causes a certain type or level of problem.

Escalate: A risk response strategy that involves presenting the risk to someone with the right authority or skillset to properly respond. In this case, the digital project manager cannot sufficiently do so.

Exploit: A risk response strategy that involves creating an opportunity or solution out of a risk to take advantage of a problem's impact.

S**cope Creep**: A situation where a project might go beyond what was delineated in the scope statement, such as going over schedule, over budget, and beyond the requirement.

Communications Plan: A tool in project management that pulls together the project manager's approach to creating and sharing project information with relevant people. It considers who needs to be communicated with, what to communicate, when, and how.

Status Report: A structured document that provides a summary of a project's progress.

Highlights: A bullet-point summary of achievements in a Status Report.

Blockers: A bullet-point summary of active or potential risks in a Status Report.

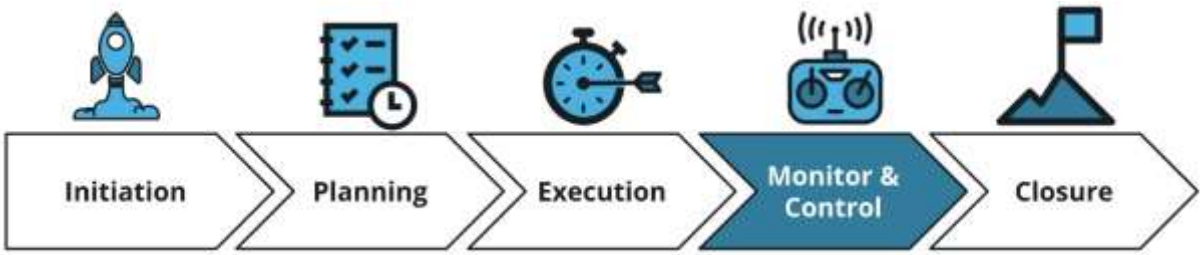
Project Health Check: A visual section in a Status Report that depicts what aspects of a project scope are on track, at risk, or off-track and provides a description of tasks completed and pending.

3.6. Monitor and Control

3.6.1. Introduction

Video

The second to last stage in the project management lifecycle is Monitor & Control. In this stage, the digital project manager's main responsibility is to track and maintain the progress of the project. It's also a chance to be the type of leader who trusts your team and also guides them towards fulfilling the vision laid out in the project scope statement.



3.6.2. Lesson Outline

Video

Digital project managers must monitor how a project is progressing, but more importantly how their team is doing. Then based on what you learn, you can control the circumstances or project plans to ensure it gets done well, on time, and within budget. In this lesson, we will learn how to:

- Help our team become top performers by identifying the stages of team development.
- Break down what we learn about our business into S.M.A.R.T. goals for our project.
- Use objective data to measure how your team is actually performing in a project.

By the end of this lesson, you will be able to select a strategy for nurturing and developing your team into confident and skilled workers, identify S.M.A.R.T. goals to ensure your project is successful, and set up a measurable target as a key performance indicator.

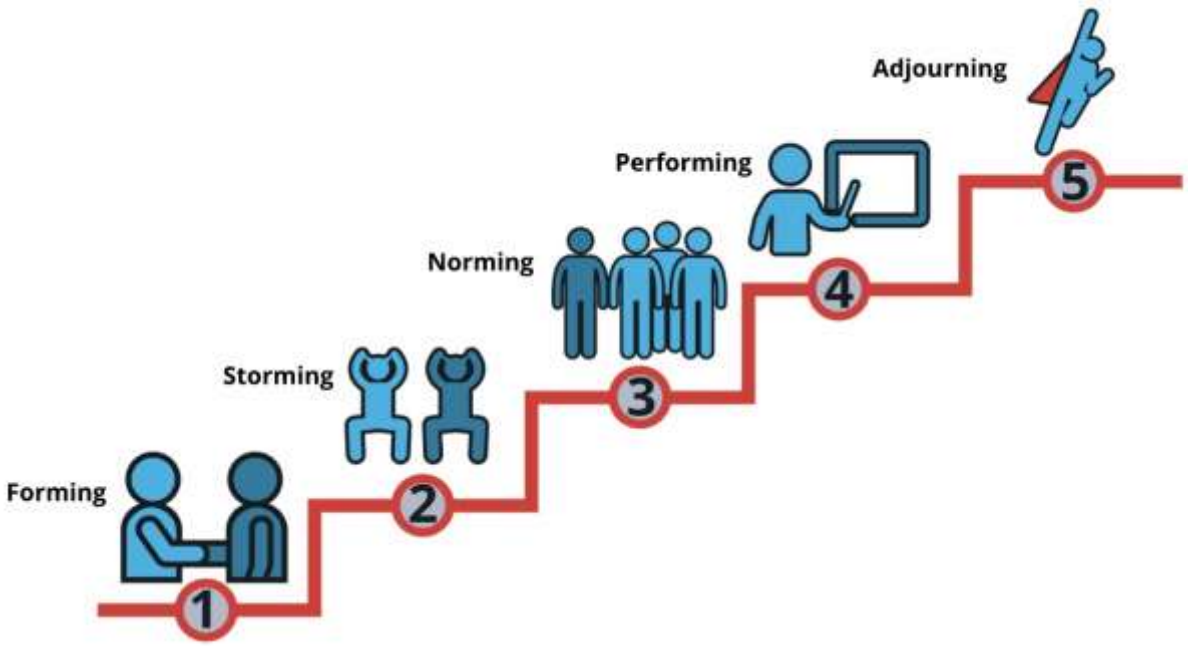
3.6.3. Developing Your Team

Video

A digital project manager can practice their leadership skills in the Monitor & Control phase of a project by earning the trust of their team and understanding the team dynamics. When you develop your team, they are more likely to perform well and keep the project on track.

The Tuckman Ladder

One method of monitoring the team development is by recognizing what stage of the Tuckman Ladder model they are in. The model outlines five stages people naturally experience when starting on a new project. Then according to the stage, you can apply ways that support each individual and the group. The model's stages are as follows:



- **Forming**: When the team comes together for the first time.
- **Storming**: When team members realize which part of the project they don't enjoy doing, and which team members they may not get along with the best.
- **Norming**: When team members have learned to get along and are playing their roles in a project in order to meet the organizational goals.
- **Performing**: When team members are working efficiently together.
- **Adjourning**: When a team has completed their project and they may have to part ways after building strong bonds.

New Terms

- **Tuckman Ladder:** A model that explains the maturity of teams by five stages of development.
- **Forming**: The first stage in the Tuckman Ladder, in which the team comes together for the first time.
- **Storming**: The second stage in the Tuckman Ladder, in which team members realize which part of the project they don't enjoy doing, and which team members they may not get along with the best.
- **Norming**: The third stage in the Tuckman Ladder, in which team members have learned to get along and are playing their roles in a project in order to meet the organizational goals.
- **Performing**: The fourth stage in the Tuckman Ladder, in which team members are working efficiently together.
- **Adjourning**: The fifth stage in the Tuckman Ladder, in which a team completed their project and may have to part ways after building strong bonds.

Additional Resources

- Learn more about creating an inclusive team that welcomes diverse points of view. Read The Quest to Build a Belonging Organization by Ibrahim Jackson.
- Learn more about Managing virtual teams for high performance by the PMI.
- Figure out your leadership style by taking the 16 Personalities assessment.

3.6.4. Quizzes: Developing Your Team

QUIZ QUESTION

Below are the stages in the Tuckman Ladder we just discussed. Can you match each of them with the correct description?

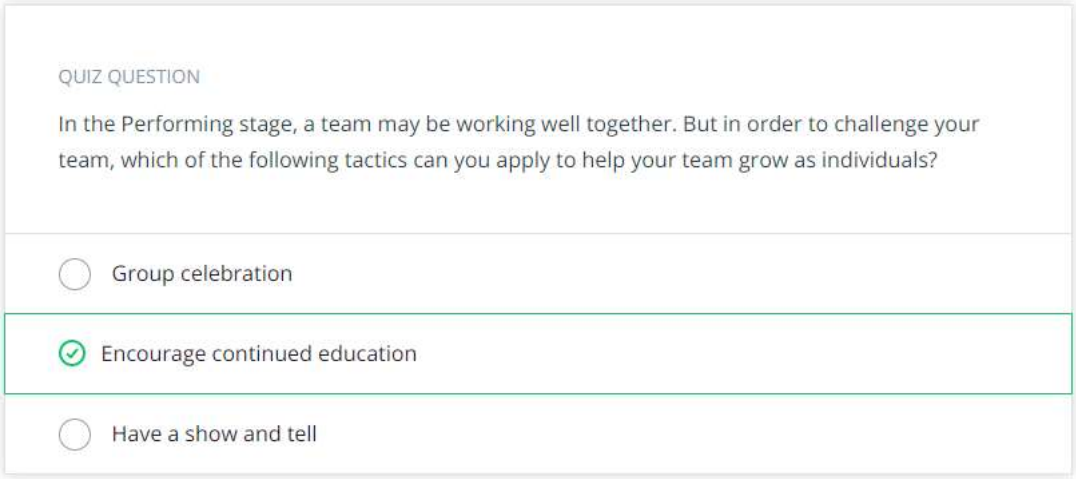
Submit to check your answer choices!

Description	Tuckman Ladder Stages
Team members are meeting for the first time	Forming
Team members may face conflict	Storming
Team members are learning to get along	Norming
Team members are working efficiently together	Performing
A team completed their project	Adjourning

QUIZ QUESTION

In the Storming stage, a team may have conflicts with each other and the project roles. Which of the following tactics can you apply to support your team in this stage?

- [x] Refer to the team's shared values or tenets
- [ ] Read the project scope
- [ ] Have a show and tell



3.6.5. Making Goals SMART

Part 1: Why Make Project Goals SMART?

Video

Digital project managers have to monitor whether a project is going to deliver the desired results that meet business goals. You can do this by converting what you know about the business into measurable project goals. One method for understanding whether a project's planned outcome aligns with business needs is with S.M.A.R.T. goals.

Part 2: SMART Goals Explained

Video

S.M.A.R.T. is an acronym that stands for **specific, measurable, attainable, relevant, and time-bound**. Each letter prompts a set of questions that help clarify what a business is truly trying to achieve through a digital project. Use the acronym to ask the following questions about your project:

- **Specific**: Ensuring your project goal is detailed and specific.
    - What is the specific result the organization wants?
- **Measurable**: Ensuring your project goal is measurable with a quantifiable metric.
    - How can this result be measured?
- **Attainable**: Ensuring your project goal is feasible to execute.
    - How do we know we can attain this result?
- **Relevant**: Ensuring your project goal fulfills the business needs.
- How does this project match the business goals?
- **Time-bound:** Ensuring your project goal can be done within a reasonable timeline.
    - What timeline do we have to achieve this desired result?

New Terms

- **S.M.A.R.T. Goals**: A method to uncover how a project aligns with business needs by prompting clarifying questions based on each word in the title's acronym: specific, measurable, attainable, relevant, and time-bound.
- **Specific**: A part of the S.M.A.R.T. Goals acronym that represents ensuring your project goals are detailed and specific.
- **Measurable**: A part of the S.M.A.R.T. Goals acronym that represents ensuring your project goals are measurable with a quantifiable metric.

- **Attainable**: A part of the S.M.A.R.T. Goals acronym that represents ensuring your project goals are feasible to execute.
- **Relevant**: A part of the S.M.A.R.T. Goals acronym that represents ensuring your project goals fulfill the business needs.
- **Time-bound:** A part of the S.M.A.R.T. Goals acronym that represents ensuring your project goals can be done within a reasonable timeline.

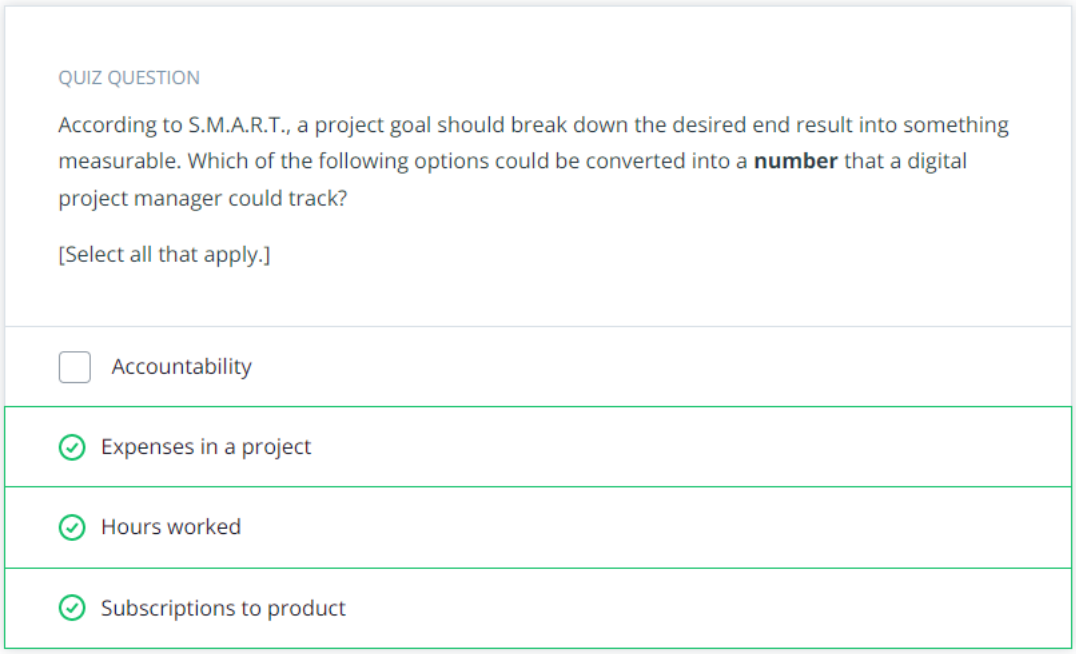
3.6.6. Quizzes: Making Goals SMART

QUIZ QUESTION

Below are the words represented in the S.M.A.R.T. Goals acronym that we just discussed. Match the question prompts that correspond to each part of S.M.A.R.T.

Submit to check your answer choices!

Question Prompt	S.M.A.R.T.
Detailed desired result	Specific
Quantifiable, trackable result	Measurable
Feasible result	Attainable
Aligned with business needs	Relevant
Reasonable deadline	Time-bound



3.6.7. Monitor Performance with KPIs

Part 1: KPI Definition and Types

Video

Setting S.M.A.R.T. goals help you determine the target desired end result of your project. Then, you can set up a Key Performance Indicator (KPI), which quantifies the performance of your project so that it can be measured against your set target. You can then track your KPIs throughout the project to determine whether it is close or far from achieving your target.

Types of KPIs

- **Cost-Performance Index:** A formula that tells us if a project's costs are on target, under, or over the budget.
- **Schedule-Performance Index**: A formula that tells us if a project is running on time, early, or will go over the intended schedule.
- **Resource capacity:** You can track the number of resources needed for your project, which could include the right number of team members, and determine if your project is running low on resources, comfortable, or has a surplus.

And so on...

Part 2: Calculating Cost-Performance Index

Video

The **Cost-Performance Index** is just one example of a KPI. It is a commonly used formula to measure the rate of expenses against the project budget.

Here are the main terms in the Cost-Performance Index formula:

- Planned Value (PV): The total amount of money that was planned to be spent on a project.
- Percentage work completed: The percentage of deliverables or tasks out of the total completed so far.

- Earned Value (EV): The monetary value of tasks completed so far by multiplying the planned value by the percentage of work completed.
- Actual Cost (AC): The money spent on a project so far.

Steps in the Cost-Performance Index Formula

1. Find the total **Planned Value (PV)**. Usually, it's the project budget.
2. Calculate the **percentage of work completed** by counting the tasks that have been checked off so far and dividing by the total number of tasks. Multiply the result by 100 to get the percentage.
3. Find the **Earned Value (EV)** of work completed by multiplying the total Planned Value (PV) by the percentage of work completed.
   EV = PV * % of work completed
4. Get the Actual Cost (AC) by tracking project expenses.
5. Find the Cost-Performance Index by dividing the Earned Value by the Actual Cost.

   CPI = EV/AC

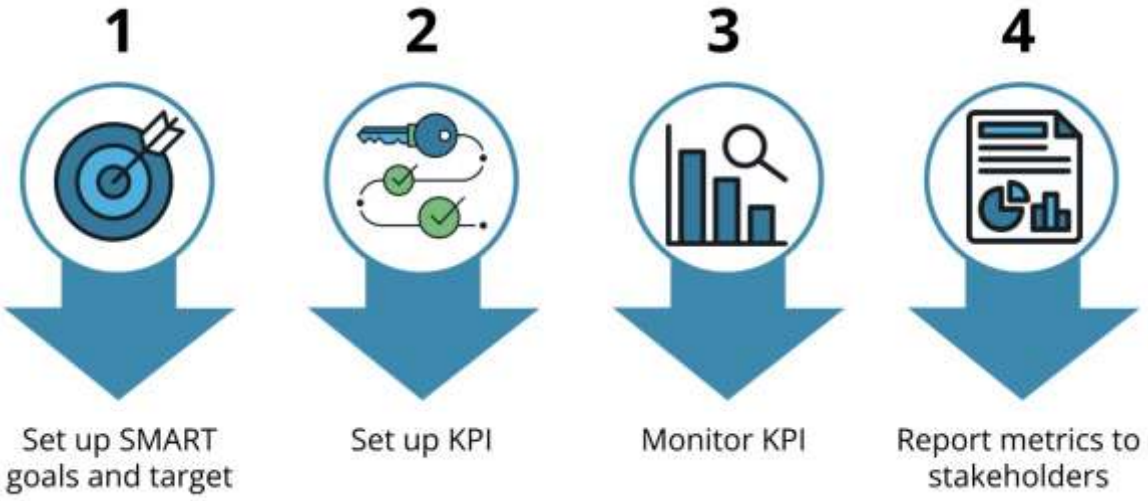
Part 3: Tory Fitness Cost-Performance Index Example and KPI Recap

Video

In the Tory Fitness scenario, we applied the Cost-Performance Index to determine if the money spent on the first two deliverables out of three were too much, on target, or not enough.

The project deliverables and cost involved are simple in this case, so even without any formula and complex math, you would know how much you can spend on the last plan in order to finish the entire project within budget. But in real life, your project could be way more complex, and the cost-performance index formula, which reduces everything into one number, could make it more straightforward for you to determine whether you are over or within budget.

Recap on Monitoring Performance with KPIs

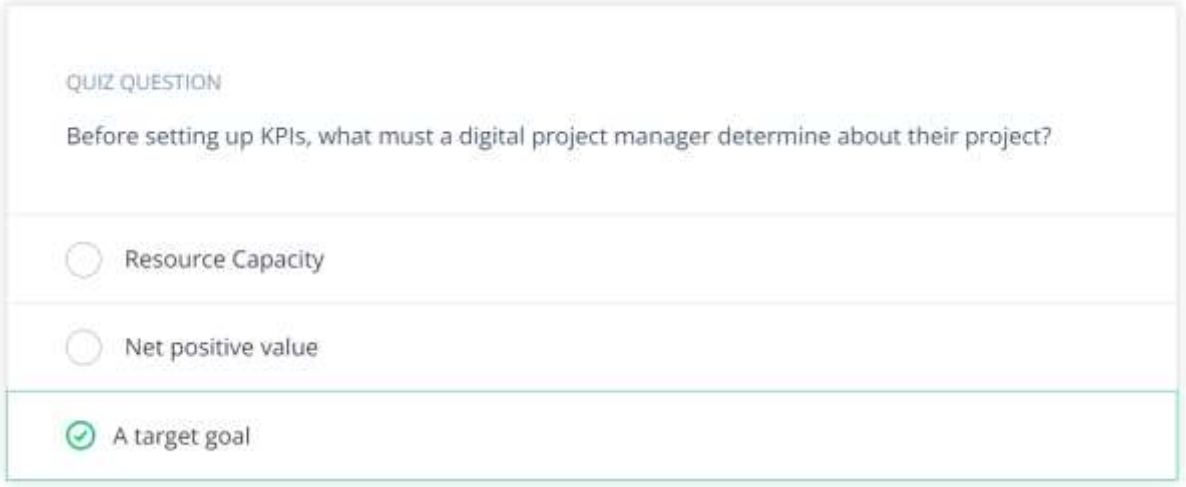


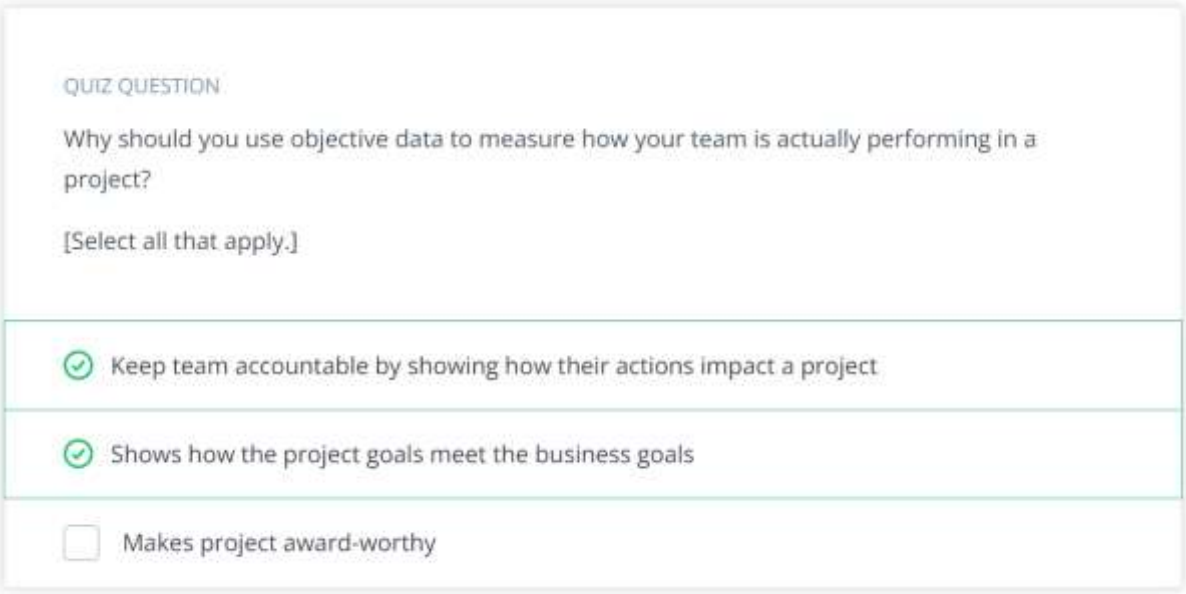
New Terms

- **Key Performance Indicators (KPIs):** A method to quantify the performance of a project so that it can be measured against a set target.
- **Cost-Performance Index:** A KPI formula that tells us if a project's costs are on target, under, or over the budget. This index is calculated by dividing the Earned Value by the Actual Cost.

- **Schedule-Performance Index:** A KPI formula that tells us if a project is running on time, early, or will go over the intended schedule.
- **Resource Capacity:** A KPI that tracks the number of resources needed for a project to determine if it is running low on resources, comfortable, or has a surplus.
- **Planned Value (PV):** Part of the Cost-Performance Index calculation that gets the total amount of money that was planned to be spent on a project - the budget.
- **Percentage work completed**: Part of the Cost-Performance Index calculation that gets the percentage of deliverables or tasks out of the total completed so far.
- **Earned Value (EV):** Part of the Cost-Performance Index calculation that gets the monetary value of tasks completed so far by multiplying the planned value by the percentage of work completed.
- **Actual Cost (AC):** Part of the Cost-Performance Index calculation that gets the money actually spent on a project so far.

3.6.8. Quizzes: KPIs





3.6.9. Exercise: Managing KPIs

Exercise: Managing KPIs

As the Luny project manager, you want to set a gold standard for managing Agile projects. So for this lesson, you will align the company's business objectives with the team's performance by coming up with SMART goals and relevant Key Performance Indicators (KPIs).

Instructions

Read the scenario below, which includes an updated Project Scope. Then answer questions to define your goals and determine if the given metrics show that Phase 2 is on track with its KPIs.

Scenario

You've recently updated the Project Scope for Phase 2 to accommodate for the changes caused by a positive risk the company decided to exploit:

Phase 2 presents an opportunity to further the product development of our responsible social media app and scale it to new users who care about our mission of networking in moderation. The main objective is to create high-impact features, which will meet our global customer acquisition goal of 100,000 people.

To meet these goals, I have been leading a team of engineers, a product manager, and a UX designer through an Agile methodology to release five features, two of which are now complete. Phase 2 has a total updated budget of $90,000, of which $34,000 was spent on the first two features.

Each additional release will be executed in Sprints of 4 weeks. And Luny's leadership has given us a new deadline of 6 months to fulfill project Phase 2. The final features have been prioritized based on customer feedback so far and our research on the global users. We found that, without targeting a global demographic, we were able to catch the attention of Spanish speakers.

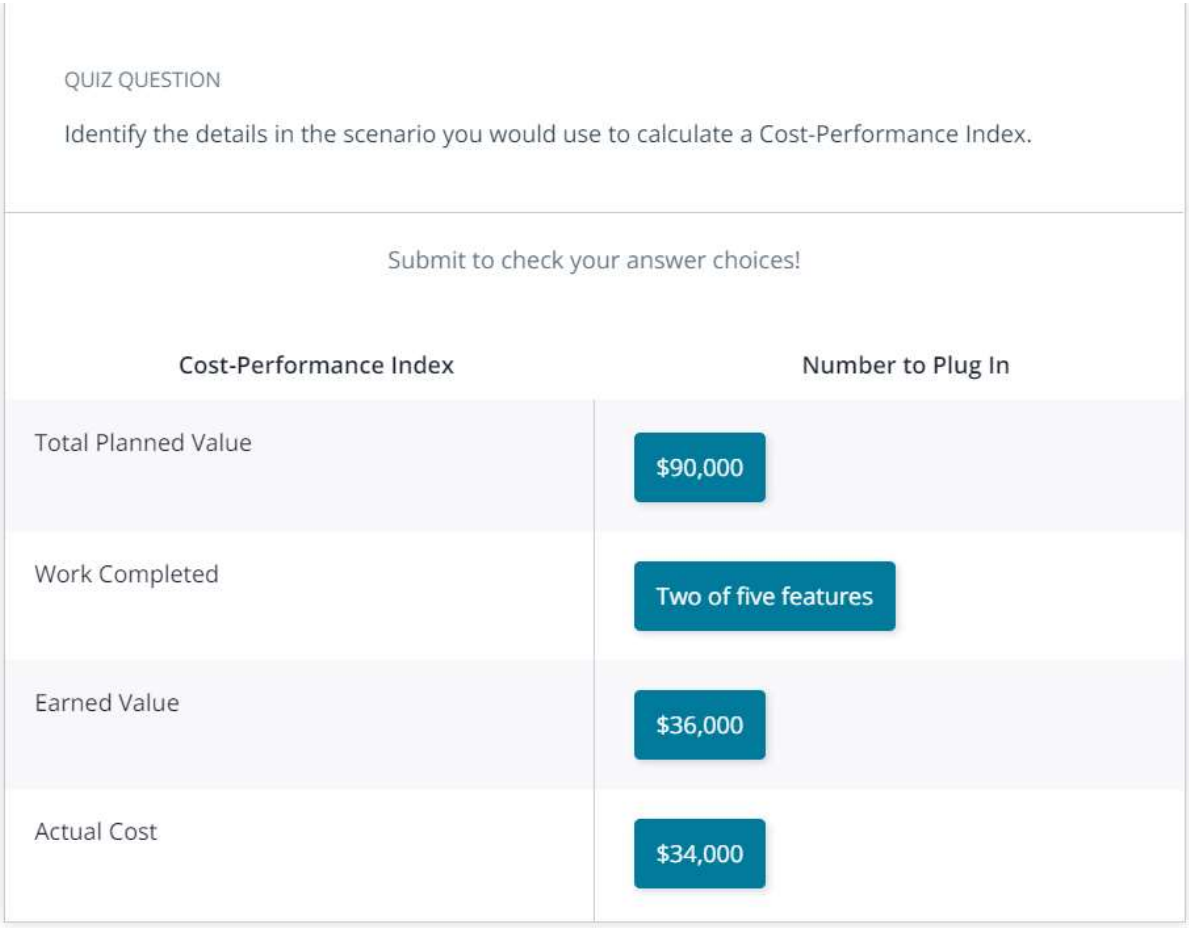
So the next features will focus on exploiting growth in regions targeting this new demographic. As we move forward, I will continue to keep the CEO and other stakeholders in the loop of new developments.

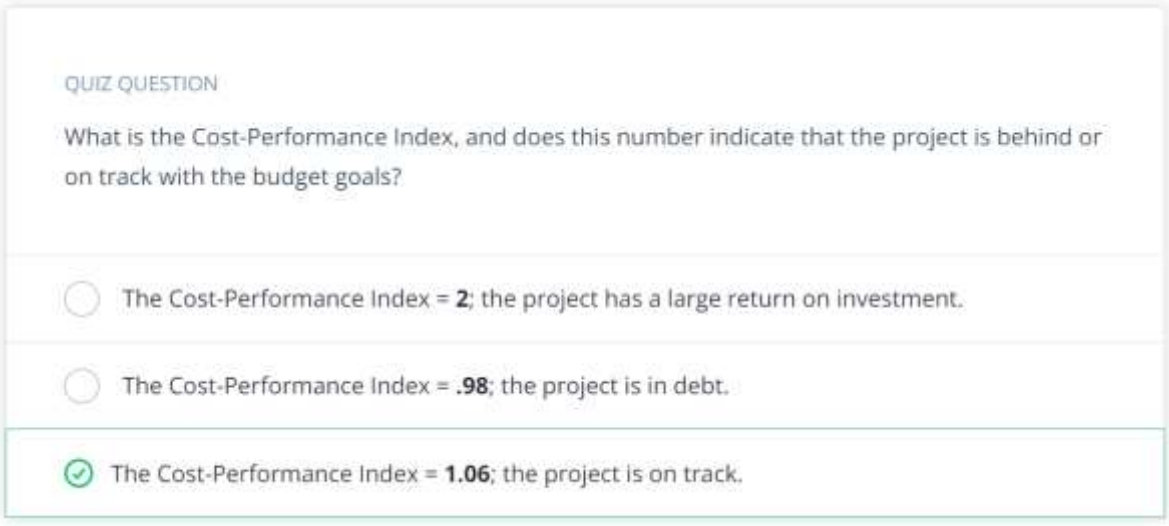
QUIZ QUESTION

Identify details from the scenario that should be considered in creating SMART goals. Then match each detail to the corresponding step in this goal-setting process.

Submit to check your answer choices!

S.M.A.R.T.	Project Scope
S - Specific	Grow a global audience with attractive app features
M - Measurable	100,000 new users in six months
A - Attainable	Accommodate Spanish speakers - a demographic in which we've already seen the potential for new user growth
R - Relevant	Growing amongst people who care about our mission
T - Time-based	Achieve goal in six months





3.6.10. Solution: Managing KPIs

S.M.A.R.T. Goals

From looking at the scenario, I could determine that:

S - Specific: The Product/Engineering team has a specific goal to acquire new app users from around the world.

M - Measurable: The goal can be measured by the number of users brought on per new feature release or on a regular cadence (i.e. weekly, monthly, quarterly). So if our goal is to bring on 100,000

new users in six months, the project should aim to acquire about 34,000 users for each of the next three features, or 34,000 users every two months.

A - Attainable: This goal was created based on research that showed interest from Spanish-speaking regions. Without a targeted strategy, the app was able to acquire users in the new demographic. So growing this demographic is attainable with a focused strategy.

R - Relevant: Your organization's goal is to grow the number of engaged users on the app. The project has a specific goal to attain users in a new demographic by catering features to that audience. This makes the project relevant to the company's target achievement.

T - Time-Bound: The project has been given a deadline of six months to achieve our goal.

My Solution to the Cost-Performance Index

The Phase 2 project has been granted a total budget of $90,000, but $34,000 has been spent on the first two features in the project scope.

Here's how I calculated the Cost-Performance Index:

1. Find the Total Planned Value
    - In this case, it's a budget of $90,000.
2. Determine how much of the project's work has been completed as a percentage.
    - Two of five features have been completed, so that is 2 / 5 * 100%, which is 40%.
3. Find the Earned Value
    - EV = Total Planned Value * the work completed %
    - EV = $90,000 * 40%
    - EV = $36,000
4. Determine the Actual Cost
    - $34,000 for the first two features
5. Now get the Cost-Performance index
    - CPI = Earned Value / Actual Cost
    - CPI = $36,000 / $34,000
    - CPI = 1.06
    - A positive CPI indicates we are on track.

3.6.11. Lesson Review

Video

In this lesson, we learned how to:

- Enhance your team's performance by anticipating their needs based on the stages of team development as outlined in the Tuckman Ladder model.
- Align your project goals with business goals by using the S.M.A.R.T. Goals method.
- Monitor the performance of your project and team with KPIs to ensure it fulfills goals.

You are now ready to exercise your leadership in a digital project and leverage metrics to ensure your next project is successful.

3.6.12. Glossary

For your reference, here are all the new terms we introduced in this lesson:

- **Tuckman Ladder:** A model that explains the maturity of teams by five stages of development.
- **Forming:** The first stage in the Tuckman Ladder, in which the team comes together for the first time.
- **Storming:** The second stage in the Tuckman Ladder, in which team members realize which part of the project they don't enjoy doing, and which team members they may not get along with the best.
- **Norming:** The third stage in the Tuckman Ladder, in which team members have learned to get along and are playing their roles in a project in order to meet the organizational goals.
- **Performing:** The fourth stage in the Tuckman Ladder, in which team members are working efficiently together.
- **Adjourning:** The fifth stage in the Tuckman Ladder, in which a team completed their project and may have to part ways after building strong bonds.
- **S.M.A.R.T. Goals:** A method to uncover how a project aligns with business needs by prompting clarifying questions based on each word in the title's acronym: specific, measurable, attainable, relevant, and time-bound.
- **Specific:** A part of the S.M.A.R.T. Goals acronym that represents ensuring your project goals are detailed and specific.
- **Measurable:** A part of the S.M.A.R.T. Goals acronym that represents ensuring your project goals are measurable with a quantifiable metric.
- **Attainable:** A part of the S.M.A.R.T. Goals acronym that represents ensuring your project goals are feasible to execute.
- **Relevant:** A part of the S.M.A.R.T. Goals acronym that represents ensuring your project goals fulfill the business needs.
- **Time-bound:** A part of the S.M.A.R.T. Goals acronym that represents ensuring your project goals can be done within a reasonable timeline.
- **Key Performance Indicators (KPIs):** A method to quantify the performance of a project so that it can be measured against a set target.
- **Cost-Performance Index:** A KPI formula that tells us if a project's costs are on target, under, or over the budget. This index is calculated by dividing the Earned Value by the Actual Cost.
- **Schedule-Performance Index:** A KPI formula that tells us if a project is running on time, early, or will go over the intended schedule.
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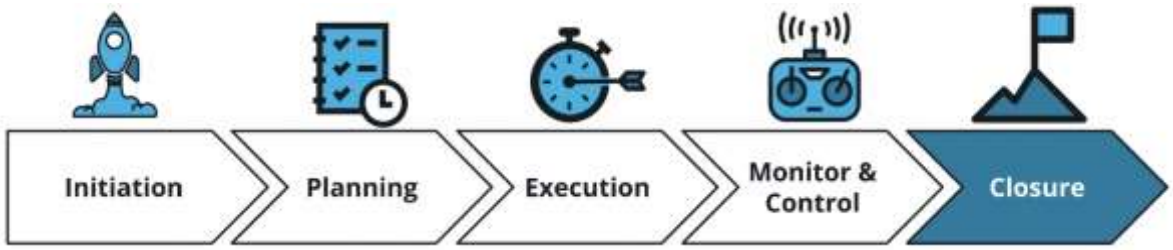
3.7. Closure

3.7.1. Introduction

Video

Completing the main project deliverable alone is not the end of the road. Properly closing a project ensures it continues to generate results and value that meets your business goals. Digital project managers do this by creating and sharing knowledge about the project and its deliverables with the right stakeholders as well as archiving information that can be later referenced.



3.7.2. Lesson Outline,

Video

In this lesson, we will learn how to:

- Review the requirements and the quality of our deliverables.
- Identify different types of documentation and define the kinds of use cases those documents are meant for.
- Demonstrate your achievements in a portfolio and discuss your projects in a way that helps advance your career.

By the end of this lesson, you will be able to determine whether a project is ready to close and find a post-project owner who can extend the shelf life of the project's results. You will also be able to create documentation that facilitates knowledge share and articulate the value of your project in the STARI format.

3.7.3. Determining the Project Closure

Video

Digital project managers know a project is done when:

- They have verified all the project deliverables fulfill the requirements,
- They have ensured all the project deliverables meet the quality standards of the requirements and have no errors, and
- They have identified a person who has the expertise and skills to maintain and own your project deliverable.

New Terms

- **Closure:** The fifth and final stage in the project management lifecycle, in which requirements are verified and knowledge is shared and archived.
- **Post-project Owner:** A person who has the expertise and skills to maintain your project deliverable to continue generating results and value.
- **Quality standards:** Specifications or guidelines on the grade or attributes that would make a project deliverable excellent.

3.7.4. Quizzes: Project Closure

QUIZ QUESTION

Digital project managers have to verify all the deliverables meet the project's requirements. Which of the following artifacts created throughout a digital project may contain some requirements?

[Select all that apply.]

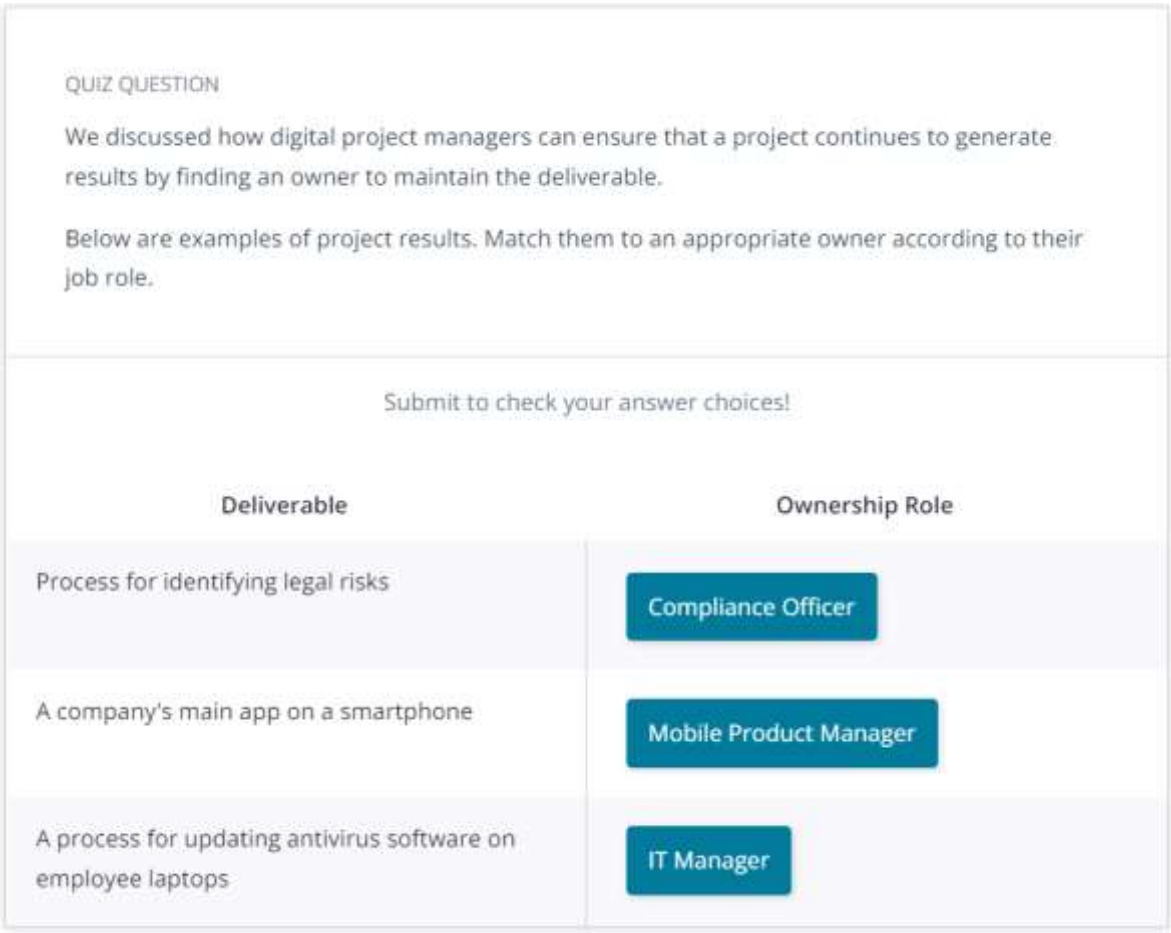
- ✓ Stakeholder Analysis
- ✓ Project Scope
- ✓ Intake Form Submissions
- ☐ Digital Transformation

QUIZ QUESTION

Fill in the blank ("[___]") with the most appropriate phrase:

Not only should a project fulfill requirements, but it should also meet the [___], which are the grade of excellence or specific attributes that a project deliverable possesses.

- ○ Project schedule
- ○ Power-Influence Grid
- ✓ Quality standards



3.7.5. Creating Documentation for Knowledge Share

Part 1: Documentation Types, Project Process and Product Development Documentation

Video

Knowledge share is the act of documenting and distributing information generated in a digital project so that it enables others to learn from it and build similar skills. Digital projects may generate materials about a product or process, data about the project tasks and results, and other information about decisions, stakeholders, and the end user. It is the digital project manager's responsibility to facilitate knowledge share and control who can access what information. Below are six types of documentation around which you could organize knowledge share.

- **Project Process** documentation shows information about how a project was organized and kept within scope.
- **Product Development** documentation shows what the product is and the thinking that went into developing it.

Part 2: Internal and External User Documentation, Technical and System Documentation

Video

- **Internal User** documentation is accessed by an internal end user who works inside your organization and needs to know how to use the tool being created in your project.
- **External User** documentation is accessed by end users outside the organization who will be purchasing and using the product or process that’s created in your project.

- **Technical** documentation contains code or detailed information on the technical resources that went into deploying a release, likely for a software product.
- **System/Infrastructure** documentation shows how the product or process is supported by your organization's technological system or infrastructure and vice-versa.

Credit: Software Documentation Types and Best Practices by AltexSoft Inc.

Part 3: How to Share and Archive Knowledge

Video

Digital project managers can anticipate knowledge share of the right information with the right people. In the Planning stage of a project, they can assign documentation tasks to team members. In Execution or Closure, the digital project manager can then ensure that information is distributed to stakeholders and archived for later reference.

Archiving knowledge is storing and organizing your documentation on a digital device that is not accessed for daily operations, but instead retrieved as a reference for future projects. Moreover, a digital project manager should be responsible for the project information that may be sensitive or confidential according to legal policies.

New Terms

- **Knowledge Share**: The act of documenting and distributing information generated in a digital project so that it enables others to learn from it and build similar skills.
- **Project Process**: A knowledge share documentation type that shows information about how a project was organized and kept within scope.
- **Product Development**: A knowledge share documentation type that shows what the product is and the thinking that went into developing it.
- **Internal User**: A knowledge share documentation type that would be accessed by an internal end user who works inside your organization and needs to know how to use the tool being created in your project.
- **External User**: A knowledge share documentation type that would be accessed by end users outside the organization who will be purchasing and using the product or process that's created in your project.
- **Technical**: A knowledge share documentation type that contains code or detailed information on the technical resources that went into deploying a release, likely for a software product.
- **System/Infrastructure**: A knowledge share documentation type that shows how the product or process is supported by your organization's technological system or infrastructure and vice-versa.

Archiving: The act of storing and organizing documentation of project knowledge on a digital device that is not accessed for daily operations, but instead retrieved as a reference for future projects.

Additional Resources

- To learn more about knowledge share, read 5 Ways to Use Knowledge Management in Your Projects by actiTime.
- Learn more about How the Sprint Retrospective supports Adaptation by Scrum.org.

3.8. Final Project: From Methodology to Execution

3.8.1. Project Overview

Project Overview

In this project, you will apply the project management skills you've acquired in this course to help a family-run business complete its digital transformation.

You are a project manager for Yosemite, an eCommerce company that integrates brick-and-mortar stores onto its platform for a fee. You have been assigned to work with The Stefano Shop, a family-run business that had been a local success but was struggling to stay open. The primary business goal is to digitize the store's operations and sales.

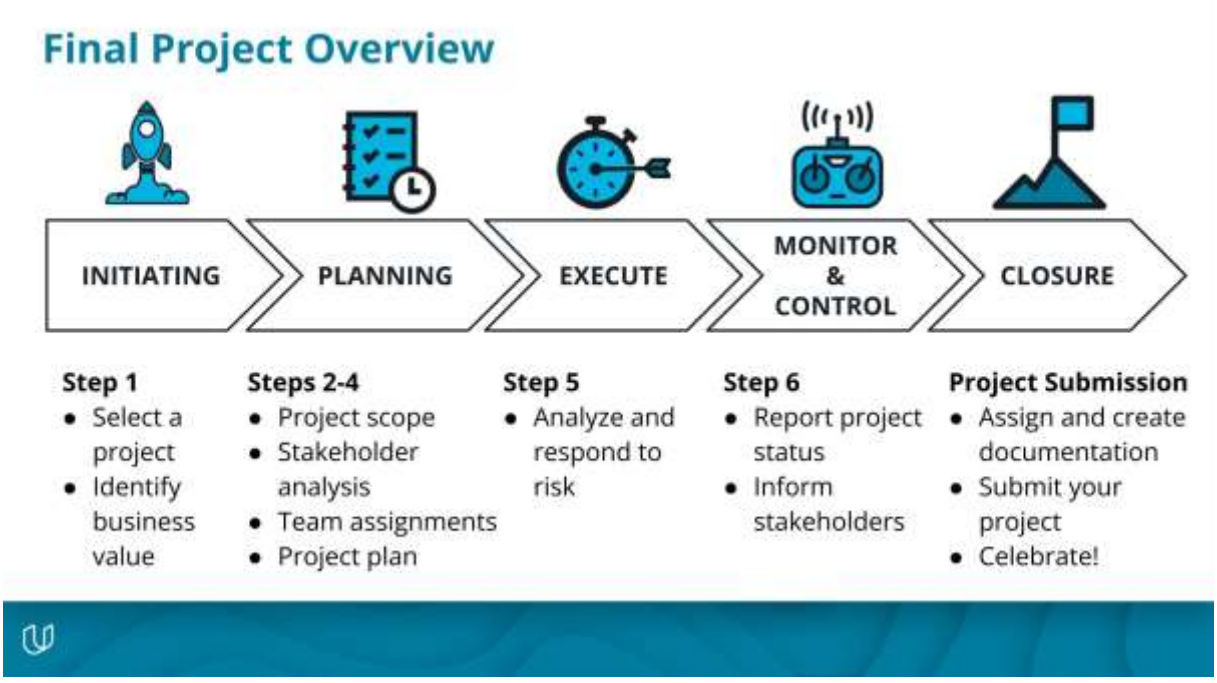
In the following video, you will see the main steps for the final project and the deliverables you will need to create throughout each section.

Video

Main Steps of the Final Project

In this project, you will walk through the project development life cycle. In each step, you will create common deliverables in project management. You will follow these steps in this project:

1. **Study the Scenario.**
2. **Write a Project Scope.** Answer a series of questions to define the scope of your project.
3. **Identify Your Stakeholders and Team.** Create a Power-Influence Classification Grid and a RACI chart to analyze your key stakeholders.
4. **Create a Project Plan.** Display your project plan in one of the two frameworks, a Gantt Chart for Waterfall or a Scrum Board for Agile.
5. **Analyze Risk and Select Response Strategy.** For two risk scenarios, analyze the risk and explain how you would respond to it.
6. **Plan Knowledge Share and Report Project Status.** Add documentation tasks to your project plan. Create one status report for each scenario in Step 5.



3.8.2. Project Starter Materials

On this page, you will be able to access and download the relevant starter materials.

1. Please make a copy of the Project Instructions and Submission Template. You can find all the project instructions and record all your responses in this template. If you cannot access the Google Docs file, you can alternatively download a .doxc format of this template from the Resources section on the left-side panel.
2. For Step 4: Create a Project Plan, you may use either a Gantt chart for the Waterfall methodology or a Scrum board for the Agile methodology:

- Downloading the Gantt Chart Template
    - Make a copy of the Gantt Chart Template from Google Sheets.
    - Alternatively, download the Gantt Chart Template as an Excel file from the Resources section on the left-side panel.
- Setting up a Scrum board
    - Go to Trello.
    - Create a new board by clicking on the Create button on top.

3.8.3. Check Your Work and Optional Standout Suggestions

Check Your Work

Once you submit your project, we'll review your work and give you feedback if there's anything that you need to work on. If you'd like to see the exact points that your reviewer will check for when looking at your work, you can have a look over the project rubric.

Standout Suggestions [Optional]

Video

Optionally, consider creating the deliverable for Step 4 in an alternative project management methodology, if you would like to make your project stand out.

In Step 4, you were asked to approach creating a project plan as either Waterfall or Agile. For Waterfall, you had to fill out a Gantt chart. And for Agile, the deliverable was a Scrum board featuring Scrum events. So to go above and beyond, build a new project plan in the other methodology. For example, if you completed the final project with a Waterfall Gantt chart, now create an Agile Scrum board.

3.8.4. Submit your Project

Submitting Your Project

1. Once you've completed the project, gather the following project deliverables for submission:
    a. Save the Project Instructions and Submission Template as a PDF document.
    b. If you created a Gantt chart, export the Google Sheet or save the Excel document as a .xls or .xlsx file.
    c. If you created a Scrum board, remember to set your board as public and paste the URL in your Project Instructions and Submission Template.
    d. If you did complete the optional standout suggestions, save the Standout Submission Template as a PDF and the Standout Waterfall Gantt Chart as a .xls or .xlsx file if applicable.

2. If you have more than one file to submit, you can place all your files in an empty folder and zip/compress the folder for submission. You do not need to compile all your files into one single PDF.
3. Once you're ready to submit, click the SUBMIT PROJECT button and upload your file or compressed folder.