

# Final Project: From Methodology to Execution

## *Digital Project Management*

### Step 1) Study the Scenario

#### Overview

You are a project manager for Yosemite, an eCommerce company that integrates brick-and-mortar stores onto its platform for a fee. It's the third Tuesday in September; 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 and complete this project a week before Christmas in the U.S.

Integrating The Stefano Shop onto Yosemite means building the following features: a storefront on the platform, a social media integration, and a recommendation engine. The Stefano family, which consists of Papa Stefano, Mama Stefano, and Junior Stefano, will also require the training and knowledge to operate their digital store once it has been developed.

At Yosemite, you have access to the Engineering, Vendor Management, and Marketing teams. The Engineering team will need up-to-date information on the store's inventory from the customer. The Vendor Managers can onboard and train whoever will manage the storefront on Yosemite's platform. The Marketing team can set up the social media channels but will have to hand off the account's ongoing management to someone at the Stefano's.

#### Project Budget

The Yosemite storefront, training, and documentation can be delivered for **\$15,000** - a tight budget for the Stefano's. So Papa Stefano asked that you include a cost-benefit analysis in the project scope to reassure him this is a good investment.

For the cost-benefit analysis, your research shows:

- The Stefano Shop's current annual revenue is \$120,000
- The eCommerce industry discount rate is 7%
- Yosemite promises a 30% increase in revenue (\$36,000)
- And the cost of this project will be \$15,000 upfront

#### Getting the Job Done

The Engineering team has to deliver three main features: the storefront, social media integration, and a recommendation engine. Each of those features can be completed in a two-week sprint. The tasks involved in each sprint are design, build, test, and release. You, as the project manager, can recommend building out

all features before the store goes live on Yosemite. Or you can recommend releasing a minimum viable product—a live storefront—then later adding the other features: the social media integration and a recommendation engine.

The Vendor Managers, as part of the storefront deliverable, have the task of inputting all inventory data. That task would take a week and is dependent on the Engineering team completing the first deliverable. Then the Vendor Managers will spend a week onboarding and training the Stefano's on how to use the Yosemite platform. This task should occur before the store goes live. During or after the recommendation engine deliverable is released, the Vendor Managers will have to create a custom sales report that is automatically sent to the Stefano's with results on how the recommendation engine impacts sales. It takes a week to set up the automated report.

The Marketing team is tasked with creating the social media channels and handing off its ownership to Stefano's, which takes a week. But this task must occur before Engineering's second feature: social media integration.

## The Cast of Characters

- **Papa Stefano** - store co-founder; Papa Stefano has a strong presence in the family business but listens to Mama Stefano while making a business decision. He manages the floor and is averse to new technology. While he understands it's time to modernize the shopping experience and would like to gain new customers, he's wary of going over budget.
- **Mama Stefano** - store co-founder and certified accountant; she keeps spreadsheets to track inventory and has convinced Papa to work with Yosemite. Her primary focus is on back-end administrative tasks of the business. Mama is more concerned about getting the store ready in time for Christmas shoppers.
- **Junior Stefano** - The Stefano daughter is a student and is still learning the family business. She hopes to take over the family business one day; Junior creates social media posts on her own accounts for the store. She sees value in taking full advantage of Yosemite's services.
- **Moe** - the Yosemite Vendor Manager tends to be enthusiastic about upselling customers with additional services; not mindful of budget. Moe primarily focuses on promoting and coordinating Yosemite's services, which constitutes a part of the overall project. Additionally, this project is one of many he works on.
- **Aliyah** - the Yosemite Engineering Lead is experienced and skilled. She prefers to work in Agile sprints but understands that not all customers can keep up with that pace. Her expertise in developing and implementing technical solutions enables her to guide the project's timeline and execution strategy, making her vital in determining the project's overall direction and progress.
- **Taylor** - the Yosemite Marketing Manager tends to take on too many assignments and can delay getting tasks completed. Taylor often needs to be informed of their assignments ahead of time. His role and contributions are limited to providing support for the implementation of marketing plans for this project.
- **Lou** - the Yosemite Small Business Program Manager oversees all accounts that fall under the Small Business category; You report directly to Lou. Lou only keeps a high-level overview of this project and its progress. He wants to showcase your project to the entire company if all goes well and expect regular communication, especially when things go wrong.

## Step 2) Write a Project Scope

The project scope consists of the following sections: business objectives and project value, deliverables and milestones, a timeline, resources, costs, and a proposed methodology. Use the above scenario to identify the information relevant to the project scope.

<p><i>In three to four sentences, describe the business objectives for Yosemite and for the customer, The Stefano Shop.</i></p>	<p><i>The business objective for Yosemite is to expand the platform service to include more stores and generate revenue by charging a fee for the integration. Increasing stores aimed to improve customer satisfaction of the Yosemite services as more customers tend to benefit from easy online transactions.</i></p> <p><i>As for the Stefano Shop, they aim to digitize their store operation and sales so that they can survive the new digital age and also improve their sales by reaching wider customer base.</i></p>
<p><i>List project milestones and deliverables.</i></p>	<p><i>The project has three technical deliverables: a storefront on the platform, a social media integration, and a recommendation engine.</i></p> <p><i>The project has one non-technical deliverable: Training and Knowledge Documentation to operate the digital store at Yosemite platform for the stakeholders at Stefano shop.</i></p>
<p><i>What resources as the project manager do you have to complete the project?</i></p>	<p><i>The resources I have access to are Engineering, Vendor Management, and Marketing teams. Each of these teams play vital role in completing the project. Although not explicitly mentioned, but Yosemite Co. specified a budget to be used to get the project done.</i></p>
<p><i>Do the Cost-Benefit Analysis. Write out the formula, show the steps to get the cost-benefit ratio, and state whether the investment is positive or negative.</i></p>	<p><i>To calculate the cost-benefit formula:</i></p> <ol style="list-style-type: none"> <li><i>1. Present value of future benefit = Future Benefit / (1 + discount rate)<sup>n</sup></i> <ol style="list-style-type: none"> <li><i>a. Future benefit = \$36,000</i></li> <li><i>b. = \$36,000 / (1.07) = \$33,645</i></li> </ol> </li> <li><i>2. Present value of future cost = Future Cost / (1 + discount rate)<sup>n</sup></i> <ol style="list-style-type: none"> <li><i>a. Upfront budget: \$15,000</i></li> </ol> </li> <li><i>3. Cost benefit ratio = present value of future benefit / present value of future cost</i> <ol style="list-style-type: none"> <li><i>a. &gt; 1 net positive value</i></li> <li><i>b. &lt; 1 net negative value</i></li> <li><i>c. = 1 break even</i></li> </ol> </li> </ol> <p><i>Cost benefit ratio = \$33,645/\$15,000 = 2.24 &gt; 1</i></p> <p><i>The investment I positive since the cost-benefit ratio is greater than 1 by a magnitude of 2. That means the investment is highly profitable for Stefano business.</i></p>

<p><i>What are the minimum and the maximum number of weeks required to complete the project?</i></p>	<p><i>Although not mentioned, we need 1 week for capturing requirements from client.</i></p> <p><i>Engineering Team needs 6 weeks for all features.</i></p> <p><i>Vendor Management Team needs 1 week for each of the data-entry and training, and creating automated sales report i.e.3 weeks.</i></p> <p><i>Marketing team needs 1 week to create and handover the social media accounts.</i></p> <p><i>However, the Vendor Management Team can start their task when Engineering Team completes the first feature in two weeks. The same goes for marketing team which they can start whenever the Social Integration feature is complete.</i></p> <p><i>That means we need a minimum of 8 weeks to complete the project.</i></p> <p><i>While the maximum cap is 12 weeks, since we start at the 3<sup>rd</sup> Tuesday of September and must deliver the project one week before end-year which is 17<sup>th</sup> of December same year.</i></p>
<p><i>What methodology do you propose to use for organizing the project: Waterfall or Agile? Explain your answer.</i></p>	<p><i>Agile will be utilized for this project. The choice of agile is with respect to the requirements of the project. It is expected to prioritize certain tasks and keep it open to change as the client may hope for new features and changes to be made in some certain features to reflect their usage and needs. Additionally, the Engineer Lead has high experience in implementing Agile based methodology.</i></p>
<p><i>What kind of meetings will you have with stakeholders and how often? Explain your answer based on the project methodology you have chosen.</i></p>	<p><i>At the start of the project, we will hold a sprint planning meeting to identify the requirements and get to know each other. At the beginning of each sprint, we hold a meeting with internal teams (Engineering, Vendor, Marketing) to prioritize the tasks. Another meeting will be daily standup with the members assigned to an "in progress" sprint. Sprint Review meetings at the end of each sprint will be conducted with the client to ensure the requirements have met. Also at the end of each sprint, the retrospective meeting will be held internally, and the conclusions will be shared with Business Program Manager.</i></p>

## Step 3) Identify Your Stakeholders and Team

Classify the influence level and amount of authoritative power of each stakeholder as either high or low. Then accordingly, explain how you plan to engage this stakeholder and how they might affect the project in a negative or positive way. Your assumptions should, at a minimum, reference the profiles in *The Cast of Characters* section in Step 1.

### Power-Influence Classification Grid

Stakeholder	Estimated Project Influence ("High" or "Low")	Estimated Project Importance ("High" or "Low")	Assumptions and Risks
Aliyah, Engineering Manager	High	High	<ul style="list-style-type: none"> <li>High experience in developing technical solutions helps the project direction and timeline to be efficient.</li> <li>Adapts to customer needs leading to Satisfied customer.</li> </ul> <p>Risks:</p> <ul style="list-style-type: none"> <li>The pace of Agile sprints may not be suitable for all customers.</li> </ul>
Papa Stefano	Low	High	<ul style="list-style-type: none"> <li>Willingness to digitize the shopping for customer increase will be supportive.</li> </ul> <p>Risks:</p> <ul style="list-style-type: none"> <li>Aversion to new technology may hinder the successfulness of the project.</li> <li>Cautiousness for going overbudget may limit the investment in necessary upgrades or improvements.</li> </ul>

Mama Stefano	High	Low	<ul style="list-style-type: none"> <li>She's willing to cooperate and support the project within the designated timeline.</li> </ul> <p>Risks:</p> <ul style="list-style-type: none"> <li>primary focus on getting the store ready for Christmas shoppers indicates that time is of the essence for her.</li> </ul>
Junior Stefano	Low	Low	<ul style="list-style-type: none"> <li>She's likely enthusiastic about the project's digital aspects and may actively engage in social media integration.</li> </ul> <p>Risks:</p> <ul style="list-style-type: none"> <li>Inexperience might lead to errors or oversight</li> </ul>
Moe, Vendor Manager	Low	Low	<ul style="list-style-type: none"> <li>aims for success to promote Yosemite's services</li> </ul> <p>Risks:</p> <ul style="list-style-type: none"> <li>Might push for additional features or services which can conflict with project budget.</li> </ul>
Taylor, the Marketing Manager	Low	Low	<ul style="list-style-type: none"> <li>Aims for success to execute marketing plans effectively.</li> </ul> <p>Risks:</p> <ul style="list-style-type: none"> <li>Tends to take on too many assignments and can delay getting tasks completed.</li> </ul>
Lou, the Program Manager	Low	High	<ul style="list-style-type: none"> <li>Seeks project success for the purpose of</li> </ul>

			<p>showcasing achievements to the company stakeholders.</p> <p>Risks:</p> <ul style="list-style-type: none"><li>• Limited involvement might result in delayed intervention if issues arise within the project.</li></ul>
Me, the Project Manager	High	Low	<ul style="list-style-type: none"><li>• Keen to follow best practices in managing the project and bringing team together.</li></ul> <p>Risks:</p> <ul style="list-style-type: none"><li>• Preparing documents to be shared with program manager might be delayed since I have difficulty keeping document deadlines.</li></ul>

Create a RACI chart for the project. It will break down the deliverables from the project scope into tasks, but you will have to show who should be responsible, accountable, consulted, and informed for each row.

## RACI Chart

Hint: The Accountable (A) and Responsible (R) stakeholders are the same person for all tasks, except “Engage stakeholders”

Tasks	Stakeholders				
	Me, Project Manager	Lou, Program Manager	Taylor, Marketing Manager	Moe, Vendor Manager	Aliyah, Engineering Manager
Build storefront	C	I	I	I	R, A
Input Inventory Data	I	I	I	R, A	C
Build social media integration	I	I	C	I	R, A
Train Stefano's on platform	I	I	I	R, A	C
Create social media channels	C	I	R, A	I	I
Train Stefano's on social media use	C	I	R, A	I	I
Build recommendation engine	I	I	I	C	R, A
Create Automated Sales Report	I	I	I	R, A	C
Engage stakeholders	A	R, C	I	I	I



## Step 4) Create a Project Plan

In this step, you will reference the project scope, stakeholder analysis, and RACI chart to create a project plan for the proposed methodology.

Build a model of your plan for managing the Yosemite project. **It should be a snapshot in the planning phase of the project.** You can use the dates in your current year when creating the project plan.

Display this model in one of the two frameworks, a Gantt chart for Waterfall or a Scrum board for Agile. After you pick one model, be sure to include the information outlined in your project scope, stakeholder analysis, and RACI chart:

- Deliverables
- Tasks
- Assignments
- Schedule and order of tasks

### Additional Instructions for a Waterfall Project Plan

If you choose a Waterfall project plan in Step 2, you should include tasks related to stakeholder engagement, team management, and closure activities. Assume that each additional task can take 1-3 days to complete, so it will affect your schedule. The additional tasks are

- A kickoff meeting,
- Scheduled status reports, and
- Documenting knowledge.

Create a **Gantt chart** for your project by filling in the *Gantt Chart Template* provided in the classroom. Export or save the spreadsheet as a .xls or .xlsx file. Add this spreadsheet to your project submission folder.

### Additional Instructions for an Agile Project Plan

If you choose an Agile project plan in Step 2, you should organize the columns using Scrum phases:

- Sprint Planning
- Backlog
- Work In Progress
- QA
- Release
- Sprint Review

Include relevant tasks that occur in the initial and end phases of a Sprint. Those tasks include:

- Creating a Lessons Learned document
- Adding features to a backlog
- Presenting demos
- Adding tasks to a sprint
- Emailing status reports
- Reviewing Lessons Learned
- Creating documentation for a demo
- Hosting a Retrospective meeting

Create a new **Scrum board** on Trello and make it public.

- To make your board public, click on Private > Change Visibility: Public > “Yes, make board go public”.
- To grab the public URL, go to Show Menu > ...More > Link to This Board.

Paste the URL here:

<https://trello.com/b/3XFy8qm/udacity-digital-pm-final-project>

## Why choosing Agile:

To complete this project successfully I prefer using Agile over waterfall to manage the project.

The reason behind this choice is as follows:

- The project is dynamic and open to refinements.
- The project has independent parts that can be initiated independently.
- The project is open to accept new solutions and technologies.
- Each deliverable can be released separately, while continuing the development.
- It is easier to communicate the needs and requirements with the client and then correspond efficiently to them.

## Step 5) Analyze Risk and Select Response Strategy

### Risk Scenario 1

The Stefano Shop project relies on the customer providing Yosemite with information on all products in its inventory. The Vendor Manager has reported that the Stefano's have not delivered that information when requested due to their analog way of handling inventory. They promised to deliver the inventory information in a few more days.

<p><i>How might this risk affect the project?</i></p>	<p><i>The biggest risk is the delay in handing the completed project on time which is strictly specified to be 1 week before Christmas. That is, delay in getting the inventory data might potentially push back other tasks that depend on the inventory data. Delay in the beyond the deadline put by the client might result in a loss of predicted sales during Christmas.</i></p>
<p><i>Which of these Risk Response Strategies would you have chosen if you had anticipated the risk prior to initiating the project: Avoid, Mitigate, Transfer, Actively Accept, Passively Accept, Escalate. Explain how you would apply the strategy.</i></p>	<p><i>In dealing with this case, a crucial risk response is to mitigate potential delays in inventory data delivery. This involves proactive measures such as requesting the inventory data ahead of time and preparing contingency plans for possible data delivery delays. For instance, preparations can include setting up a temporary storefront using available information if such delays occur. It's essential to emphasize to the client the importance of timely data provision, clearly communicating that any delay could impact the project launch negatively, affecting both parties.</i></p>

### Risk Scenario 2

When the Engineering team began designing the recommendation engine—a feature that takes up 20% of the current budget—they informed you that the task was more complicated than anticipated. The Engineering Manager said it would take a total of four weeks and cost an additional \$3,500 to upgrade the AI service that powers the recommendation engine. That fee would have to be covered by the customer. Or the recommendation engine feature could be dropped from the project.

<p><i>How might this risk affect the project?</i></p>	<p><i>The complexity and cost overrun regarding the recommendation engine pose potential challenges. Implementing the additional upgrades within the current budget might strain resources, affecting other aspects of the project tightening the expected schedule and cost. Alternatively, dropping the feature could impact the overall value proposition of The Stefano Shop's digitization.</i></p>
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*Which of these Risk Response Strategies would you apply to the above risk: Avoid, Mitigate, Transfer, Actively Accept, Passively Accept, Escalate. Explain how you would apply the strategy.*

*Mitigate would potentially be the correct choice. As a project manager, I'd initiate discussions with the Engineering team to explore avenues for simplifying the recommendation engine within the existing budget. Simultaneously, I'd engage stakeholders, including the customer, to communicate the situation transparently, discussing the implications of either leveraging a simplified version or potentially dropping the feature to ensure alignment with the project's goals and constraints. This approach helps in actively addressing the risk while also mitigating its impact by preparing for alternative courses of action.*

## Step 6) Plan Knowledge Share and Report Project Status

### Knowledge Documentation

Throughout the project and before its closure, you asked the team to create documentation for the company Yosemite and the customers, the Stefano's. In your project plan, what documentation tasks did you include? List below what documentation tasks you came up with, who you assigned them to, how you scheduled them, and why it is important to document this task. Add more rows to the table if you see fit. Add these tasks to your project plan if you haven't already done so.

Task	Assignee	Deadline/Place in Timeline	Reason for Documenting This Task
Create Requirement capturing document	Project Manager	Before Sprint 1	To define the needs, expectations, and specifications of the project.
Create Lessons Learned document for Recommendation Engine Integration delivery	Project Manager	End of Sprint 1	To reflect on the difficulties faced during this particular sprint and take precautions for the next sprint.

Create Lessons Learned document for Storefront delivery	Project Manager	End of Sprint 2	To reflect on the difficulties faced during this particular sprint and take precautions for the next sprint.
Create Lessons Learned document for Social Media Integration delivery	Project Manager	End of Sprint 3	To reflect on the difficulties faced during this particular sprint and take precautions for the next sprint.
Create FAQ about Storefront, Social Media Integration and Recommendation Engine Integration for 'Stefano' the client	Vendor Team	End of Sprint 1,2,3	To provide an efficient support for the client and also relieve our team members from getting huge, repeated queries.
Create Troubleshooting document for internal user in Yosemite	Engineering	End of Sprint 3	To allow the customer support to have a comprehensive knowledge of the technical issues and proper responses to these issues before raising the issue to the engineering team.
Project Status Report	Project Manager	Weekly throughout the project	To update the stakeholders about the project status and keep them updated about any problems that may arise.
Create Automated Sales Report document	Vendor Manager	End of Sprint 3 after the Engineering team released Recommendation Engine Integration	To allow client to understand how the recommendation engine impacts sales.

## Status Report

In the Monitor and Control phase of project management, it is your responsibility to track how well the project is going and report to stakeholders the project status.

<i>Where in your project timeline did you schedule or add the task for creating and sending a status report?</i>	<i>The status report is scheduled to be at Sprint Review. The information gathered for the Status Report, especially the project highlights and blockers, can be presented or discussed during the Sprint Review meeting. The condensed project scope (Project Summary) can also be briefly reviewed with stakeholders to ensure alignment with the completed work.</i>
<i>How do you plan to communicate the report to stakeholders, and how often?</i>	<i>I plan to use meeting to share the report status which is at the end of each sprint. I also plan to share it through email before end of the sprint to let stakeholders be aware of the fine progress and any problems that could potentially affect the project health. For this sake, I put a weekly schedule to share the project status which can match the end of sprint and mid of sprint.</i>

Create two **status reports** using the *Status Report Template* provided in the classroom based on the risks described in Step 5.

1. The first status report should be created on the day you discovered the Stefano's did not deliver the inventory information to the Vendor Manager on time.
2. The second status report should be created in the middle of the Engineering team building the recommendation engine. That is when you were informed by the Engineering Manager that the project would be more time-consuming and costly.

# Project Status Report #1

PROJECT TITLE: Digitizing Stefano's Shop

COMPANY NAME: Yosemite

PROJECT MANAGER: Nawras Khudhur

DATE: 09/10/2023

## PROJECT SUMMARY

Enhance Yosemite's platform by integrating more stores to boost revenue via integration fees and elevate customer satisfaction through seamless online transactions. The Stefano Shop seeks digital transformation for survival in the digital age and expanded sales outreach. Project objectives include a storefront, social media integration, and a recommendation engine, alongside critical training documentation for Stefano's stakeholders. The Engineering, Vendor Management, and Marketing teams are pivotal resources ensuring project success.

## PROJECT HIGHLIGHTS/BLOCKERS

### Highlights:

- The Engineering team have completed the Storefront for Stefano shop. That includes the design, build, test and releasing it.

### Blockers:

- Stefano's did not deliver the inventory information to the Vendor Manager on time.
- The delay might potentially push back other tasks that depend on the inventory data affecting the overall schedule.

## PROJECT HEALTH CHECK

Scope	Status	Tasks: Completed/Pending
Time	At Risk	<b>Completed:</b> <ul style="list-style-type: none"><li>● The storefront is ready to use.</li></ul> <b>Pending:</b> <ul style="list-style-type: none"><li>● Inventory data entry is pending.</li></ul>
Cost	On Track	
Quality	On Track	

# Project Status Report #2

PROJECT TITLE: Digitizing Stefano Shop

COMPANY NAME: Yosemite

PROJECT MANAGER: Nawras Khudhur

DATE: 30/10/2023

## PROJECT SUMMARY

Enhance Yosemite's platform by integrating more stores to boost revenue via integration fees and elevate customer satisfaction through seamless online transactions. The Stefano Shop seeks digital transformation for survival in the digital age and expanded sales outreach. Project objectives include a storefront, social media integration, and a recommendation engine, alongside critical training documentation for Stefano's stakeholders. The Engineering, Vendor Management, and Marketing teams are pivotal resources ensuring project success.

## PROJECT HIGHLIGHTS/BLOCKERS

### Highlights:

- Two successful feature releases (storefront and social media integration) made it possible for Stefano to digitize their business.

### Blockers:

- Upgrading the AI service that powers the recommendation engine needs a double the amount of time scheduled and cost an additional \$3,500.
- The time and cost are to be burdened by the client or drop the feature altogether.

## PROJECT HEALTH CHECK

Scope	Status	Tasks: Completed/Pending
Time	Behind	<b>Completed:</b> <ul style="list-style-type: none"><li>● Storefront has been completed and released.</li><li>● Training Stefano's on the storefront has been completed.</li><li>● The social media integration has been completed and released.</li><li>● Social Media Channels created and handed over to Stefano's</li></ul> <b>Pending:</b> <ul style="list-style-type: none"><li>● Building recommendation engine.</li><li>● Custom Sales Report Setup (After Recommendation Engine)</li></ul>
Cost	Over	
Quality	At Risk	