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**Project Management Plan**

University of Maryland Global Campus

SWEN 670 – Team A

Fall Semester

Version 1.2

October 29, 2022

Document Control

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Approval Signatures

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# Project Information

The United States Postal Service (USPS) is responsible for providing postal services in the United States. These duties include handling letters and packages from senders to recipients across the US. In response to growing competitive pressures from other corporations, USPS is continuing to leverage sophisticated IT solutions to improve its customer’s experience.

A subscription service called Informed Delivery is an example of one of these solutions. When a customer subscribes, the service provides a daily email containing scanned images of the letter-sized mail pieces that will be delivered the same day. They have also expanded the service to include tracking details for packages arriving on the same day and those arriving soon. The email digest also includes the ability for customers to set a reminder related to a mail piece, access links, or QR/Bar codes under a section called “Do more with your mail.” Additionally, Informed Delivery customers can view the information provided in the Email on the USPS website using the Informed Delivery Dashboard. This dashboard expands on the email digest by allowing customers to view all scanned mail pieces that have arrived in the past seven days.

This project builds upon the success of an original mobile application designed to expand Informed Delivery's value to those with and without visual impairment. The initial release application provided the ability to retrieve Email, including the Informed Delivery digest messages, and convert image-based content to audio by using computer vision services and interpreting user-generated audio as commands to control the application.

To continue these customer-focused improvements, the USPS has requested an additional set of enhancements to provide even greater control over how a user may interact with the USPS Informed Delivery mail digest message and other email messages. The improvements in this scope will focus on search functionality, gesture and voice control, notifications and alerts, improved content recognition (QR codes), chatbot support, integration with digital assistants, and several other features.

## Purpose

The intended audiences of the MailSpeak Project Management Plan (PMP) are the project stakeholders, including the client, project sponsor, senior leadership, and the project team consisting of the Project Manager, Product Manager, Software Developers, Quality Assurance (QA), and Business Analysts. This PMP aims to communicate to the project team and all other stakeholders the specific procedures that the MailSpeak project team will follow throughout the project lifecycle. All tasks under MailSpeak shall adhere to this plan. This plan was developed following the United Global Master Coders Enterprise Project Management Process and any government-required guidance provided by the customer.

The PMP is to be used as a mechanism for the project management team to document how the MailSpeak project team will create deliverables, as well as the entry and exit (acceptance) criteria and approach for each deliverable. During the execution of the project, the PMP will be revisited as needed to incorporate any updates to the plans embedded within this document.

In addition to the PMP, other documentation will be needed throughout the execution of this PMP. These documents will provide additional artifacts that will detail the entirety of this project, including requirement elicitation and validation, technical design decisions, user acceptance testing criteria and development, and other documents necessary to support the application throughout its life cycle.

## Project Documents

This Technical Design Document is part of a set of documents created to aid in developing the USPS Informed Delivery Application and to provide artifacts with vital information for the application’s ongoing support and operation throughout its life cycle.

**The following documents are included in the entire documentation package:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Document | Version | Date |
| 1 | Project Management Plan (PMP) | 1.2 | 9-17-2022 |
| 2 | Software Requirements Specification (SRS) | 1.2 | 10-29-2022 |
| 3 | Technical Design Document (TDD) | 1.2 | 10-29-2022 |
| 4 | Software Test Plan (STP) | 1.1 | 10-29-2022 |
| 5 | Programmers Guide (PG) | 1.1 | 11-05-2022 |
| 6 | Deployment and Operations (DevOps) | 1.1 | 11-05-2022 |
| 7 | User Guide (UG) | 1.0 | 11-05-2022 |
| 8 | Test Report (TR) | 1.0 | 11-05-2022 |

This Project Management Plan (PMP) is NOT a project schedule but rather a consolidation of individual plans focused on each project domain.

## Statement of Need

The Informed Delivery Mobile Application enhancements are designed to provide USPS consumers with and without visual impairment additional features to help them navigate the Informed Delivery digest more efficiently, including advanced search, setting alerts based on incoming mail keywords, and mail arrival notifications. In addition, the Informed Delivery mobile application will attempt to adhere to the standards outlined in Section 508 accessibility guidelines whenever possible. However, this development initiative will not be compelled by all the guidelines set forth under that provision.

## Vision Statement

The vision for these enhancements is to increase the value of the Informed Delivery mobile application for consumers with and without visual impairment by providing features that will help them more easily navigate the interface to complete tasks; search for previously delivered mail from digests messages, and set alerts for new incoming mail in an effort to help them get more value from physical mail delivery.

## Stakeholders

The term “Stakeholder” describes the group of individuals directly or indirectly involved in the project and who ultimately may influence or be impacted by the project’s outcome. The following individuals represent internal and external interested parties that will need to participate effectively throughout the project to achieve a successful outcome. Stakeholders can include but are not limited to signatories, customers, sponsors, project team members, independent testers, certifying organizations, external parties, and others with a vested interest in the project outcome.

|  |  |
| --- | --- |
| Stakeholder Name | Project Role |
| Dr. Mir Assadullah | Professor |
| Roy Gordon | Project Mentor |
| Robert Wilson | DevSecOps Mentor |
| Bob Dixon | Customer |
| Mike Conatser | Project Manager |
| Christopher Thorn | Product Owner |
| Kuleni Digga | Software Engineer I |
| Natan Tafese | Software Engineer I |
| Fahed Masood | Software Engineer I |
| Scott Huber | Software Engineer I |
| Harsh Gadani | Software Engineer II |
| Jahan Brahmabhatt | Software Engineer II |
| Ali Fahimi | Software Engineer II |
| Imoh Noah | Software Engineer II |
| Jack Shira | Software Engineer III |

Table 1 Project Stakeholders

## Project Methodology

This project will be executed using a modified Agile Scrum of Scrums which will be adjusted to be less structured due to the nature of the project. All team members are supporting this project as a second job, and thus scheduled meetings will be more challenging to arrange. Teams primarily use the concept of cross-functional teams, where members can support activities like planning, developing code, testing, QA, and other tasks that the current milestone requires. This is because the team has all been through a similar level of training, and the level of effort required for specific roles will be inconsistent across milestones. A highly adaptable team will ensure a higher chance of success for the project.

**Iterations**

Four major fixed milestones of varying length are the project's primary iterations and delivery dates. Feedback from the customer will be recorded and integrated after each iteration, if necessary. Each week, between team planning meetings, will also be treated as an informal sprint where work is planned and re-evaluated internally.

## Project Tools

The execution of the USPS Informed Delivery application enhancements project will depend on using the following tools and services.

|  |  |  |
| --- | --- | --- |
| Name | Version | Description |
| **Flutter** | 3.3.0 | An open-source framework by Google for building beautiful, natively compiled, multi-platform applications from a single codebase. |
| **Dart** | 2.18 | Dart is a client-optimized language for developing fast apps on any platform. |
| **GitHub** | N/A | A software-as-a-service (SaaS) solution that offers software development source code control and versioning. |
| **Microsoft Excel** | N/A | A software-as-a-service (SaaS) application for creating and editing spreadsheets. |
| **Microsoft**  **Teams** | N/A | A software-as-a-service (SaaS) application providing communications infrastructure for creating groups, sharing files, and conducting virtual meetings. |
| **Microsoft Word** | N/A | A software-as-a-service (SaaS) application for creating and editing documents. |
| **Android Studio** | 2021.2.1.16 | An integrated development environment (IDE) used to develop and test mobile applications for Google Android devices. |
| **Google Vision API** | N/A | Published as a service of Google Cloud Services, the Vision API provides the ability to derive information from images using machine learning. |

# Scope Management

## Scope

The goal of this project plan is to develop and extend the USPS Informed Delivery mobile application launched initially by the Software Engineering Project (SWEN) 670 Capstone class for Summer 2022. Therefore, all requirements and documentation produced as a result of the project plan are considered extensions of that project.

This application will be developed using the Flutter framework and the Dart programming language. The source code for this project will be kept on GitHub, and deliverable documents will be uploaded to the University of Maryland Global Campus (UMGC) Software Engineering Project (SWEN) 670 course page. The application deliverables will be produced as application binaries for Android and iOS operating systems.

This project will be delivered throughout four (4) fixed milestones, with the final milestone being completed by 11/5/2022. The only deliverable produced outside the milestone cycle will be weekly Earned Value Management (EVM) reports.

This project will produce the following deliverables:

* Project Plan (this document)
* Software Requirements Specification
* Technical Design Document
* Software Test Plan
* Programmer Guide
* Deployment/Ops Guide
* User Guide
* Test Report
* Weekly Earned Value Management Reports
* Application code and pipelines

## Team A Requirements

The following requirements will be addressed by Team A, with parallel requirements implemented by our sister team, Team B. These requirements will be implemented in tandem with Team B’s requirements.

* **Mail View**
  + Open the resulting email [from search]
  + Call, Email, or send a text message to the sender or contact on command
    - Ensure features in “Do more with your mail” are supported
  + Visit links or barcodes
    - Ensure features in “Do more with your mail” are supported
  + Provide feedback to USPS on the links or barcodes visited
    - Capture Mailer Identification number (MID) ID/Serial and Links visited to provide analytics data to USPS
* **Notifications View**
  + Look out for an email from someone
  + Provide the ability to set an alert for a keyword that is evaluated against:
    - Image of a physical envelope (most important)
    - Email address (secondary)
    - Other text fields (least significant)
  + Alert type should be system notification, when possible, but the in-app alert will work
  + Tapping on the alert should open the app and show the message (ideal)
* **Internal Feedback**
  + Research cyclic consumer behavior to report to USPS and its customers
  + Provide a link to terms and conditions on the USPS website and ensure user agreeance
  + Provide anonymous real-time analytics concerning mail piece IDs in Informed Delivery messages
* **Voice Assistant**
  + Integrate with Google Assistant on mobile devices
  + Ensure that interplay between native voice assistant, in-app voice control, and chatbot is intuitive.

## Work Breakdown Structure (WBS)

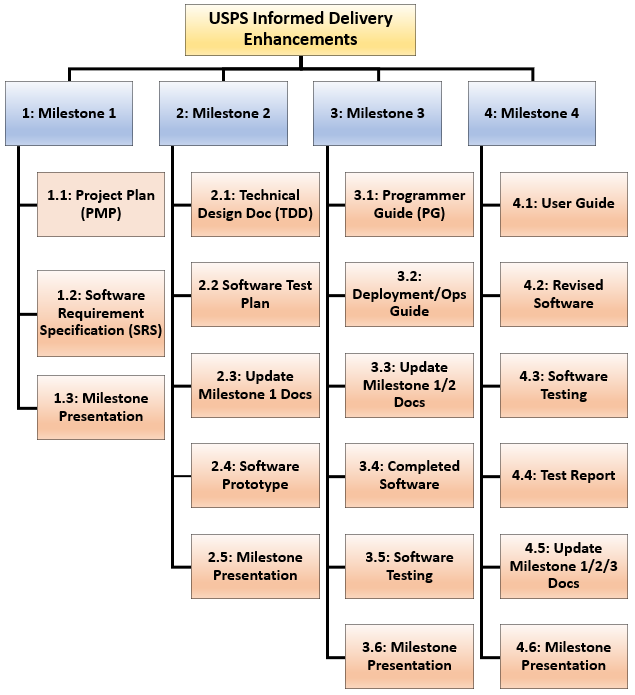


Figure 1 Work Breakdown Structure

## Deployment Plan

The software team will implement a Continuous Integration (CI) and Continuous Delivery (CD) pipeline to generate the application deliverables in an automated way. These deliverables will be uploaded to the UMGC SWEN 670 course page and immediately installable on Android and iOS devices.

There will be two release points for this project, at the end of Milestone #3 and Milestone #4. The original release will address the defined requirements, and the subsequent release will address customer feedback and bug fixes.

## Change Management

Managing changes to project requirements is a critical risk mitigation factor. Therefore, this project will use a formal change process with an established entity called a Change Control Board (CCB). This group will consist of select individuals from the project team responsible for receiving change requests, evaluating their impact on the project, and ultimately determining the status of submitted change requests in this project cycle.

|  |  |
| --- | --- |
| Stakeholder Name | Project Role |
| Dr. Mir Assudullah | Project Sponsor |
| Mike Conatser | Project Manager |
| Christopher Thorn | Product Owner |
| Ali Fahimi | Software Engineer II |
| Jack Shira | Software Engineer III |

Table 2 Change Control Board Membership

|  |  |
| --- | --- |
| Priority | Description |
| Low | The requested change is not necessary for the project's successful outcome but would add to the user experience. |
| Medium | The requested change should be implemented to meet the expectations of the users. |
| High | The requested change is necessary to satisfy a requirement |

Table 2 Change Priority Ratings

## Internal Change Requests

If anyone on the Team requests a change to the established plan or requirements, the input will be collected and discussed internally for need and viability. Once approved internally by the Project Manager and Product Owners, the change request will be discussed with the customer for approval during the weekly Customer Sync meeting. If the Team feels the need is urgent, it will be discussed with the customer before the weekly meeting.

After being discussed and accepted by the customer, the change request is treated as an External Change Request.

## External Change Requests

If new top-level requirements are required by course management during project execution, the teams will communicate and vote to determine which Team makes sense to take it on. Teams anticipate that they will receive the responsibility if the request is similar to what a team is already doing. However, if a large number of change requests occur, the workload between the teams will be considered and distributed in a way that the Project Manager and Product Owners see fit to keep the product on schedule.

As changes are understood and accepted by the Team, Issues will be created in GitHub to make the required updates to any affected documentation or application component and integrated into a current or future sprint.

## Change Submittal Process

1. Change Requests (CR) must be submitted in written form and contain a detailed description of the change requested.
2. A member of the CCB will review the CR to perform an impact analysis and assign a change priority rating, as shown in table 2 above.
3. The findings will be shared with the CCB, and the board will determine whether the CR will be approved and included in the current scope or added to a future backlog.

# Time Management

## Schedule

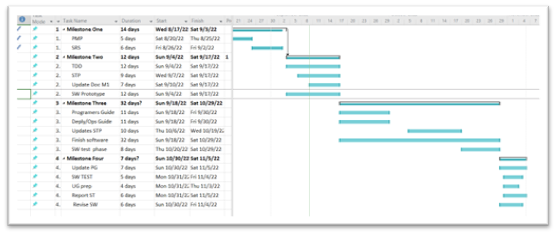


Figure 2 Project Schedule by Milestone

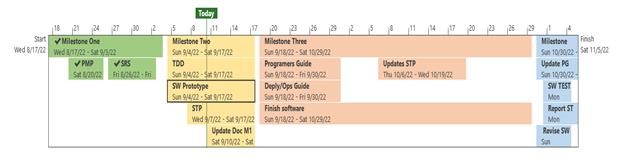


Figure 3 Condensed Project Schedule by Milestone

A summarized schedule for each of the phases and activities within the project

Note: Refer to the Appendix for a detailed project schedule.

## Milestones

Milestones are significant events within the project schedule and depend on the statement of work (SOW) and project deliverables. Therefore, the MailSpeak project manager may impose additional internal milestones during activity sequencing or schedule development as checkpoints to help control the project. Attached to this document is a Microsoft Project schedule that contains the Work Breakdown Structure (WBS) and major milestones for the project.

A *milestone* is “a major event in the project” and represents the completion of a set of activities.

|  |  |  |
| --- | --- | --- |
| Milestone | Description | Delivery Date |
| Milestone 1 Submission | Submit completed versions of the Project Management Plan (PMP) and Software Requirements Specification (SRS). | 9/3/2022 |
| Milestone 2 Submission | Submit completed versions of the Technical Design Document (TDD), Software Test Plan, update PMP and SRS as needed, and software prototype. | 9/17/2022 |
| Milestone 3 Submission | Submit completed versions of the Programmer Guide (PG), Deployment/Ops Guide, update documents from milestones 1 & 2 as needed, and complete software deliverables. | 10/29/2022 |
| Milestone 4 Submission | Submit completed versions of the User Guide, Test Report, updates to documents from previous milestones as needed, and complete software deliverable that addresses any bugs identified during the previous milestone review. | 11/5/2022 |

Table 3 Project Milestones

## Phases

List and describe the major project phases within the following table.

| Phase | Description© |
| --- | --- |
| Project Initiation | Business Case, Feasibility Study, Project Charter, Stakeholder Analysis, Team Assembly |
| Project Planning | Project Plan, Task Planning, Risk Identification, Communication, Scheduling, Quality Control |
| Project Execution | Manage Software Development Life Cycle (SDLC) process, Project Deliverables, Change Requests, Performance Data, Issue Log, Risk Register, Documentation Request, Monitor Control |
| Project Closure | Collect government furnished equipment GFE, Disable Accounts, Finance Closeout, Contractor Performance Assessment Reporting System (CPARS) Assessment |

Table 4 Project Phases

## Dependencies

|  |  |  |
| --- | --- | --- |
| Activity | Depends on | Dependency |
| Project Plan, Task Planning, Risk Identification | Business Case, Feasibility Study, Project Charter, Stakeholder Analysis, Team Assembly | Start-to-start |
| Manage SDLC process, Project Deliverables, Change Requests, Performance Data, Issue Log, Risk Register, Documentation Request, Monitor Control | Project Plan, Task Planning, Risk Identification | Finish-to start |
| Collect GFE, Disable Accounts, Finance Closeout, CPARS Assessment | Manage SDLC process, Project Deliverables, Change Requests, Performance Data, Issue Log, Risk Register, Documentation Request, Monitor Control | Finish-to-finish |

Table 5 Project Activity Dependencies

## Assumptions

* There are limited changes to the scope and requirements during the initial stage of the project
* The baseline from the previous work has all the features expected to be fully operational
* The Team can acclimate to the coding requirement of the Dart programming language
* The requirements are mainly addressed within the project life span
* The application can fully be supported by both Android and iOS

## Constraints

* The project is a second job to most team members, and the project life span from start to finish is short for the number of requirements expected.
* Project members' skills working with Dart programming language may be limited.
* The project being run from remote locations and in different time zones somehow hinders the progress of the project

# Cost Management

The USPS Informed Delivery Enhancement Project has no realized cost to the Customer throughout the project. For reference, the cost analysis of salaries was retrieved in August 2022 from salary aggregation website levels for employees of Amazon. Team A members will work on the project for eleven consecutive weeks, an average of 1-2 hours on each of the five weekdays.

The cost analysis/predictions are for the total life span of the project, which is 11 weeks. The table covers weekly work hours, hourly pay per professional, and a weekly pay analysis. Depending on the interest of the project stakeholders, the Team can present a cost analysis report on every milestone completion by the project manager or assigned member.

**Note**: Final product release, incurs license costs for the Apple App store ($99/year), Google Play store ($25 one time), and Google Cloud Vision API ($1.50/1000 units after first 1000 units processed in the current month)

|  |  |  |  |
| --- | --- | --- | --- |
| Role | Total hour per week | Variant/Salary per hour | Total cost per week |
| ***Project Manager/Scrum Master*** |  |  |  |
| Project Manager (L5) | 10 hrs. | $46 | $460 |
| ***Product Owner*** |  |  |  |
| Product Owner | 10 hrs. | $73 | $730 |
| ***Software Engineer*** |  |  |  |
| Software Engineer III | 10 hrs. | $83 | $830 |
| Software Engineer II | 10 hrs. | $75 | $750 |
| Software Engineer II | 10 hrs. | $75 | $750 |
| Software Engineer II | 10 hrs. | $75 | $750 |
| Software Engineer II | 10 hrs. | $75 | $750 |
| Software Engineer I | 10 hrs. | $62 | $620 |
| Software Engineer I | 10 hrs. | $62 | $620 |
| Software Engineer I | 10 hrs. | $62 | $620 |
| Software Engineer I | 10 hrs. | $62 | $620 |
|  | 11**0 hrs.** |  | **$ 7500 per week** |

Table 5 Project cost breakdown

Total Weekly hours**: 110hrs**

Total weekly cost: **$7,500**

Total project cost**: $82,500**

# Quality Management

The following quality processes will ensure that the USPS Informed Delivery app enhancement project meets client expectations. The purpose of this plan is to:

* Describe how the project's quality will be managed
* Determine quality policies and procedures relevant to the project for both project deliverables and project processes
* Define who is responsible for what
* Define quality assurance activities

## Quality Measurement Approach

As part of the USPS Informed Delivery project, a quality measurement strategy will be developed to ensure that quality is planned for both the product and the processes. The project's quality objectives will be met using an integrated quality approach to define quality standards, measure quality, and continuously enhance quality.

The company's current network infrastructure evaluation standards and criteria determine the USPS Informed Delivery project's product quality. The deliverables and standards of the project are the primary focus, and the criteria used will ensure that the final product meets any previously established quality standards and completely satisfies the target audience.

The project deliverables for USPS Informed Delivery will be defined with a focus on process quality. The successful delivery of the product depends on establishing process quality standards that guarantee all activities conform to an organizational standard.

To define and document all organizational and project-specific quality standards for both product and processes, all members of the MailSpeak project team will collaborate with the Quality Group. Upon project completion, all quality documentation will be incorporated into the USPS Informed Delivery Project Plan and transferred to operations.

Throughout the project's lifetime, quality will be measured with metrics for both the product and the processes. Project success will be partly measured by the project manager looking over the product and process metrics. Among the metrics are the following:

* + Product performance
  + Process performance
  + Cost
  + Resources
  + Schedule
  + Customer Satisfaction

## Quality Requirements

Product Quality:

The USPS Informed Delivery project team and Quality Group will determine standards and requirements for the product's quality. USPS Informed Delivery documentation for all devices will be the basis for the criteria. The Quality Group must review any newly identified product-specific quality standards and, if approved, incorporate them into the documented organizational measures. The project team will ensure all stakeholders are adequately informed and record any newly identified quality standards in the USPS Informed Delivery Project Plan.

Process Quality:

The project team and Quality Group will establish the quality standards and requirements for the process. Most quality standards and requirements for the process will be based on the existing USPS Informed Delivery process standards. The USPS Informed Delivery project team will collaborate with the quality group to establish acceptable standards, document these standards for incorporation into both organizational process documents and the USPS Informed Delivery Project Plan, and ensure that all stakeholders have access to the appropriate information.

## Quality Assurance

The USPS Informed Delivery Project's quality assurance primarily focuses on the processes followed to acquire the USPS Informed Delivery product. However, the project's entire lifecycle will use an iterative quality process to guarantee the product's high standard of excellence. Measurement and analysis of process metrics and data, as well as ongoing process improvement, are all components of this iterative process.

Throughout the project, the USPS Informed Delivery Project Manager and the project team will conduct assessments at predetermined intervals to guarantee proper implementation and execution of all processes.

|  |  |
| --- | --- |
| Role | Quality Assurance Responsibility |
| Project Sponsor | Approve all quality standards for the USPS Informed Delivery Project.  Review and approve all project tasks and deliverables. |
| Project Manager/Quality Manager | Assure availability of essential project resources for identified quality activities.  Ensure resolution of quality issues escalated  Facilitate resolution of quality issues, escalating as needed. |
| Quality Group | Work with the Project Sponsor and Project Manager to develop and implement the Quality Management Plan.  Recommend tracking techniques and methods to establish acceptable quality levels.  Create and maintain project quality logs. |
| Project team and stakeholders | Assist the Project Manager, Project Sponsor, and Quality Specialists in establishing acceptable quality standards. |

# Staffing Management

The MailSpeak Project will consist of a matrix structure with support from internal resources that will be allocated to this project. All work will be performed internally, and no outside third-party contractual assistance will be required.

Staffing requirements for the MailSpeak Project include the following:

**Project Manager / Scrum Master** (shared) – responsible for all MailSpeak Project management. The Project Manager / Scrum Master is responsible for providing a framework for project methodology & plan, directing the team towards a common goal, monitoring progress, ensuring stakeholder satisfaction, managing time & money, and resolving roadblocks within the team.

**Product Owner** (1 position) – responsible to act as the internal representative/interface for the needs of the customer, creating and managing the team backlog so it meets the needs of the customer, and providing quality assurance by overseeing and reviewing all completed work by the Team to ensure it passes customer acceptance.

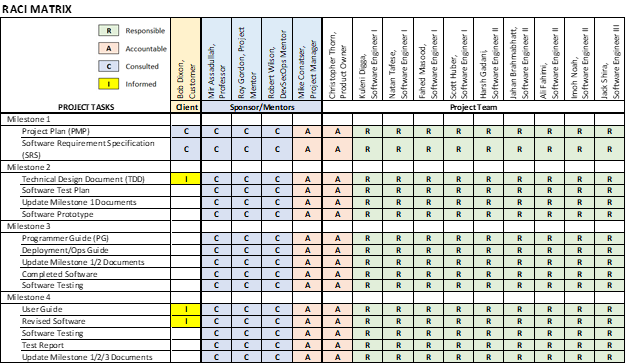
**Software Engineer I** (4 positions) – responsible for coding and programming for the MailSpeak Project. Responsibilities include issue assignment based on preferences, completing project documentation, software development, quality assurance testing, presentation of functionality during milestone reviews, and aligning responsibilities to high-priority items in the product backlog.

**Software Engineer II** (4 positions) – responsible for coding and programming for the MailSpeak Project. Responsibilities include issue assignment based on preferences, completing project documentation, software development, quality assurance testing, presentation of functionality during milestone reviews, and aligning responsibilities to high-priority items in the product backlog. Additionally, this position will be responsible for mentoring and reviewing code prepared by the Software Engineer I position.

**Software Engineer III** (1 position) – responsible for coding and programming for the MailSpeak Project. Responsibilities include issue assignment based on preferences, completing project documentation, software development, quality assurance testing, presentation of functionality during milestone reviews, and aligning responsibilities to high-priority items in the product backlog. Additionally, this position will be responsible for mentoring and reviewing code prepared by the Software Engineer I and II positions.

**DevSecOps Engineer** (shared) – responsible for managing the code repository policies and managing the application build/release pipelines. As time allows, this position is also responsible for issue assignments based on preferences, completing project documentation, software development, quality assurance testing, presentation of functionality during milestone reviews, and aligning responsibilities to high-priority items in the product backlog.

## RACI Matrix



# Communications Management

Microsoft Teams will be the primary communication method. This platform was built around and has extended traditional video conferencing technology to focus on increasing a user’s ability to collaborate quickly with individuals or groups, which is crucial to mitigating risks associated with working with a large group over a distance. Communication on this platform will be facilitated by using Teams and Channels. A Team is a grouping mechanism for individuals with a common goal.

|  |  |
| --- | --- |
| Team | Distribution |
| @Team A | Includes all members of Team A |
| @Team B | Includes all members of Team B |
| @Customer | Includes Dr. Mir Assadullah and Roy Gordon |
| @Project Manager | Mike Conatser |
| @devsecops | Shane Knowles, Mike Conatser, Robert Wilson, and Johnny Lockhart |
| @Product Owners | Tatiana Kozhevnikova and Christopher Thorn |

Table 7 MS Teams

| Channels | Distribution |
| --- | --- |
| General | Channel for posting information to share between both teams. |
| Team A Channel | Channel for posting information for sharing with Team A. |
| Team A Standup | Channel for responding to requests for daily standup meeting information for Team A. |
| Team B Channel | Channel for posting information for sharing with Team B. |
| Team B Standup | Channel for responding to requests for daily standup meeting information for Team B. |

Table 8 MS Teams Channels

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Communications Matrix | | | | | | |
| Communication Type | Description | Frequency | Format | Participants/ Distribution | Deliverable | Owner |
| Daily Standup Meetings | Text-only meeting, which is created in each Team’s channel every day. Team communicates progress and voices roadblocks. | Daily | Virtual | Project Team | Share a brief message about what you have done, what you plan to do, and any issues you need to resolve | Project Manager |
| Team Planning Meetings | Meetings are held for each Team to help work through issues and set expectations for the week as a combined sprint planning, retrospective, backlog refinement meeting | Weekly | Virtual | Project Team | Reflect the progress of the Team on the product backlog | Project Manager |
| Customer Sync Meetings | Meeting to provide EVM and progress report, and resolve any project issues. | Weekly | Virtual | Project Manager and Customer | Update customer of the sprint progress. | Project Manager |
| Milestone Review Dry-Run Meetings | “Dry Run” prior to milestone presentation to customer and UMGC faculty | Held prior to milestone review | Virtual | Project Team | Prepare for a formal milestone review | Project Team |
| Milestone Review Meetings | Meeting to present progress to date with customer and UMGC faculty | Scheduled | Virtual | Project Team |  | Project Team |

Table 9 Communications Matrix

The Project Team Directory for all communications is as follows:

| Stakeholder Name | Project Role |
| --- | --- |
| Mike Conatser | Project Manager |
| Christopher Thorn | Product Owner |
| Ali Fahimi | Software Engineer II |
| Imoh Noah | Software Engineer II |
| Jack Shira | Software Engineer III |
| Kuleni Digga | Software Engineer I |
| Natan Tafese | Software Engineer I |
| Fahed Masood | Software Engineer I |
| Scott Huber | Software Engineer I |
| Harsh Gadani | Software Engineer II |
| Jahan Brahmabhatt | Software Engineer II |

Table 10 Project Team Directory

## Communications Conduct

The communication for the project is ongoing frequent posts, discussions, and meetings on Microsoft Teams. Team communication is available not only for the project team but also for the customer and mentors to communicate project issues. Each Team has an individual channel to share files and discuss the Team's progress. In addition, stakeholders have a shared Channel called the General channel with documents, GitHub backlogs, and calendars visible.

## Meetings

Team planning meetings are held with each Team every Sunday. In addition, the project Manager meets with customers every Monday. Document review question meetings with the customer before the start of every milestone and a milestone presentation after each milestone is complete.

Teams record all meetings with the Team, and the video will be available for 20 days for later reference. A daily standup reporting system is another feature in each Team's Teams channel to update personal contributions and seek help in resolving roadblocks.

## Email

The school (UMGC) email address is mainly to contact team members at the start of the project and to invite everyone to Microsoft Teams. An email will only be used otherwise by the Project Manager to coordinate with the Customer or in situations when team members temporarily do not have access to Teams.

## GitHub Backlog

Team members will utilize their GitHub backlog to communicate their status on tasks needed to complete the milestone. Team members will assign themselves to a task to indicate that they will work on it, and update task status to In Progress, In Review, and Done as applicable to communicate their work status.

# Risk Management

The risk management process for the USPS Informed Delivery App Enhancements Project included a methodical approach to identify, assess, prioritize, and manage those risks that pose the greatest threat to the project. Using this framework, the project team will proactively classify risks and determine a mitigation tactic before they have an opportunity to influence the project outcomes negatively.

**Purpose of Risk Management**

A risk is a condition that, if it occurs, could have a positive or negative impact on one or more project objectives. A Risk Management strategy provides a framework for processing these events. The following tasks identified in the risk management plan define how risks connected to the USPS Informed Delivery App enhancements project will be managed using one of the five risk mitigation strategies outlined below. Additionally, the plan outlines how risk management tasks will be accomplished, documented, and monitored throughout the project's lifecycle and provides templates and practices for recording and prioritizing risks.

The risk management plan includes the following tasks:

* **Identify** – develop a comprehensive list of all known uncertainties with the potential to impact the project and record them in the risk register (Appendix D.). Techniques such as brainstorming, cause and effect (Ishikawa) diagrams, and expert judgment can be used to develop a thorough understanding of this project's risks.
* **Classify –** use qualitative techniques to prioritize identified risks and quantitative techniques to determine the potential impact of those risks.
* **Plan –** integrate risk response into project plans by using the following techniques: creativity, decision-support, and implementation. Creativity techniques help identify potential responses, decision-support techniques are used to find the optimal response, and implementation techniques are used to identify a specific action based on a risk response.
* **Monitor –** risk monitoring activities will be integrated into project status tracking activities to ensure that stakeholders remain informed, risk plans should be periodically updated when major changes are incorporated into the project schedule, risks should be reprioritized periodically as needed to eliminate those with the lowest priority, and the risk register should be updated as new risks are identified.
* **Mitigating Actions –** based on the risk classification, the following mitigating options are available:
  + **Acceptance** – acknowledge that a risk exists and is impacting the project but implement no mitigating action.
  + **Avoid** – mitigate the risk by adjusting the scope, schedule, or budget.
  + **Control** – implement an action limiting the risk's impact on the project.
  + **Transfer** – transfer the risk out of the project to another stakeholder.
  + **Continue monitoring –** in the case of low-impact risk, continue to monitor to ensure the risk’s possible impact does not increase.
* **Communicate –** open and transparent communication about the impact and status of project risks with stakeholders throughout the execution of a project is critical to a successful outcome.

Following the closeout process, the Project Manager will perform a post-mortem on the risk management activities for the USPS Informed Delivery App Enhancements Project to identify lessons learned that can be documented for future projects.

Appendix A - Acronyms and Abbreviations

1. API - Application Programming Interface
2. CCB – Change Control Board
3. CD - Continuous Delivery (CD)
4. CI - Continuous Integration (CI)
5. CIA - Confidentiality, Integrity, and Availability
6. CPARS – Contractor Performance Assessment Reporting System
7. CR – Change Request
8. EVM – Earned Value Management
9. FR - Functional Requirement
10. GCP – Google Cloud Platform
11. GFE - government furnished equipment
12. GUI – Graphical User Interface
13. iOS – iPhone Operating System
14. MID - Mailer Identification number
15. NFR – Non-functional Requirement
16. NIST – National Institute of Standards and Technology
17. OCR - Optical Character Recognition
18. QA – Quality Assurance
19. QR – Quick Response
20. RACI – Responsible, Accountable, Consulted, Informed
21. RMF – Risk Management Framework.
22. SDLC - Software Development Life Cycle
23. SOW – statement of work
24. SWEN - Software Engineering Project
25. UI – User Interface
26. UMGC – University of Maryland Global Campus
27. USPS – United States Postal Services
28. WBS – Work Breakdown Structure

Appendix B - Detailed Project Schedule

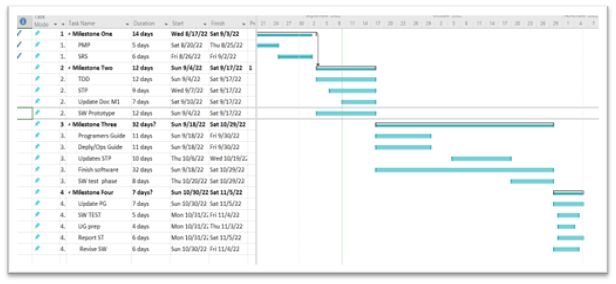


Figure 4 Detailed Project Schedule (Listing all project phases, activities, and tasks) by Milestone

# Appendix C - Condensed Project Schedule

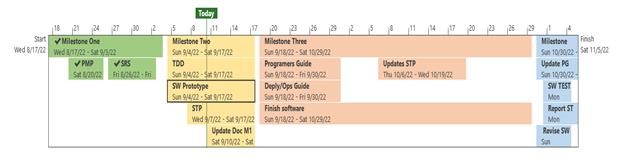


Figure 5 Condensed Project Schedule

Appendix D – Risk Register

| **ID** | **DATE RAISED** | **RISK DESCRIPTION** | **LIKELIHOOD OF OCCURRENCE (Low,Med,High)** | **IMPACT IF OCCURS (Low,Med,High)** | **SEVERITY (Low,Med,High)** | **OWNER** | **MITIGATING ACTION** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 8/24/2022 | All team members are participating in the project as a second job. This may cause strain on scheduled meetings and availability for team members to complete their tasking. The result of this would be that team members are less informed about the current needs of the project and their tasking, causing other team members to either have to be overloaded or have the quality of deliverables suffer. | High | High | High | Project Manager | Teams will be used extremely frequently in text form to communicate expectations and information as it comes in, rather than waiting for meetings. Daily stand-up channel is used to communicate progress and problems. |
| 2 | 8/24/2022  Updated (9/17?2022) | Most team members are unfamiliar with mobile development via Flutter using Dart. This may cause an increased learning curve when development begins, causing schedule slippage and forcing later sprints to have increased development productivity. | Med | Med | Low | Project Manager | Developers will begin investigations into coding tasks early in Milestone 2 in order to test the environment and document lessons learned. |
| 3 | 8/24/2022  Updated (9/17?2022) | Team size is larger than recommended for even a scrum of scrums technique (11 per Team, 2 teams), which may cause confusion among the Team as far as tasking and cause members to assume certain tasks may be the responsibility of someone else. This would cause an increased need for undesirable micromanagement and put strain on the schedule if work deadlocks occur. | Med | Med | Med | Project Manager | Weekly planning meetings will have an initial division of tasks to every team member, while still allowing the freedom of task choice. |
| 4 | 8/24/2022 | Development on the ios platform is not as viable for team members without an OS X operating system. This will put extra strain on team members who do have access to OS X, which may force their schedules to be more dependent on work done by others. This will require additional planning when that development starts to occur, and their workload will have to be adjusted to ensure ios is properly developed and tested. | High | Low | High | Project Manager | Team members with ios platforms will need to own these development tasks. |
| 5 | 9/17/2022 | Scope creep due to the demonstration of prototypes to the customer and other project stakeholders. | Med | Low | Low | Project Manager | Project Manager will continue to monitor and evaluate mitigation plans. |
| 6 | 10/01/2022 | Access to Apple Developer License to the team is not as available as desired, so certain functions like Siri and Apple App Store release may slip beyond the project timeline. | High | High | High | Project Manager | Project Manager accepted the outcome of this risk and communicated scope changes to the customer. |