



PETPAL

RISK MANAGEMENT PLAN

Version *1.0*

09/26/2024

VERSION HISTORY

Version #	Implemented By	Revision Date	Approved By	Approval Date	Reason
1.0	Tan Shu Hua, Samantha	09/26/24	Mishra Apurva	<04//10/24>	Risk Management Plan

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1. INTRODUCTION

1.1 PURPOSE OF THE RISK MANAGEMENT PLAN

A risk is an event or condition that, if it occurs, could have a positive or negative effect on a project's objectives. Risk Management is the process of identifying, assessing, responding to, monitoring, and reporting risks. This Risk Management Plan defines how risks associated with the *PetPal* project will be identified, analyzed, and managed. It outlines how risk management activities will be performed, recorded, and monitored throughout the lifecycle of the project and provides templates and practices for recording and prioritizing risks.

The Risk Management Plan is created by the Quality Assurance (QA) Manager in the Planning Phase of the PetPal Unified Process and is monitored and updated throughout the project.

The intended audience of this document is the project team, project sponsor and management.

1.2 SCOPE OF THE RISK MANAGEMENT PLAN

The scope of this Risk Management Plan encompasses all phases of the PetPal project, from initial planning to deployment. Risks identified in relation to project scheduling, budgeting, resource allocation, technical functionality and security will be actively tracked and mitigated. This plan ensures that all critical aspects of the project are monitored for potential risk exposure throughout the project's lifecycle.

1.3 RISK MANAGEMENT OBJECTIVES

The objectives of this Risk Management Plan are to ensure that all potential risks are identified and mitigated in a timely manner, to minimize the impact of risk on project timelines and budgets, and to ensure the successful delivery of the PetPal application. By following a structured risk management process, the project team aims to prevent critical risks from derailing the project and to promote a proactive risk culture throughout the team.

2 RISK MANAGEMENT PROCEDURE

2.1 PROCESS

The QA Manager working with the project team and project sponsors will ensure that risks are actively identified, analyzed, and managed throughout the life of the project. Risks will be identified as early as possible in the project so as to minimize their impact. The steps for accomplishing this are outlined in the following sections. The QA Manager will serve as the primary risk manager, responsible for leading risk identification, analysis, and response activities. The QA Engineer will assist in monitoring technical risks and ensuring quality standards are met. Team members will contribute to risk identification and reporting, while the project manager will oversee the resolution of escalated risks. The entire project team shares the responsibility of being vigilant for potential risks and communicating them effectively.

2.2 RISK IDENTIFICATION

Risk identification will involve the project team, appropriate stakeholders, and will include an evaluation of environmental factors, organizational culture and the project management plan including the project scope. Careful attention will be given to the project deliverables, assumptions, constraints, WBS, cost/effort estimates, resource plan, and other key project documents.

A Risk Management Log will be generated and updated as needed and will be stored electronically in the project library located at our MediaWiki site.

2.3 RISK ANALYSIS

All risks identified will be assessed to identify the range of possible project outcomes. Qualification will be used to determine which risks are the top risks to pursue and respond to and which risks can be ignored.

2.3.1 Qualitative Risk Analysis

The probability and impact of occurrence for each identified risk will be assessed by the project manager, with input from the project team using the following approach:

Probability

- High – Greater than 70% probability of occurrence
- Medium – Between 30% and 70% probability of occurrence
- Low – Below 30% probability of occurrence

Impact

- High – Risk that has the potential to greatly impact project cost, project schedule or performance
- Medium – Risk that has the potential to slightly impact project cost, project schedule or performance
- Low – Risk that has relatively little impact on cost, schedule or performance

H			
M			
L			
	L	M	H

Risks that fall within the RED and YELLOW zones will have risk response planning which may include both a risk mitigation and a risk contingency plan.

	High	<ol style="list-style-type: none"> 1. Data breaches or security vulnerabilities 2. Dependency on third-party services (Firebase, AWS) causing outages or failures 	<ol style="list-style-type: none"> 1. Insufficient user testing leading to usability issues 2. Inability to meet Project Deadline 3. Increased server load from higher user base or malicious attack 	<ol style="list-style-type: none"> 1. Feature Creep
	Medium	<ol style="list-style-type: none"> 1. Unavailability of project members. 2. Incomplete Documentation 3. Limited scalability under high traffic conditions 	<ol style="list-style-type: none"> 1. Inconsistencies in code design 	<ol style="list-style-type: none"> 1. Miscommunications between team members 2. Inability to meet intermediate milestones of

				project development
Low	1. Minor bugs			
	Low	Medium	High	

Figure 1: Impact-Probability Matrix

2.3.2 Quantitative Risk Analysis

Analysis of risk events that have been prioritized using the qualitative risk analysis process and their effect on project activities will be estimated, a numerical rating applied to each risk based on this analysis, and then documented in this section of the risk management plan.

2.4 RISK RESPONSE PLANNING

Each major risk (those falling in the Red & Yellow zones) will be assigned to a project team member for monitoring purposes to ensure that the risk will not “fall through the cracks”.

For each major risk, one of the following approaches will be selected to address it:

- **Avoid** – eliminate the threat by eliminating the cause
- **Mitigate** – Identify ways to reduce the probability or the impact of the risk
- **Accept** – Nothing will be done
- **Transfer** – Make another party responsible for the risk (buy insurance, outsourcing, etc.)

For each risk that will be mitigated, the project team will identify ways to prevent the risk from occurring or reduce its impact or probability of occurring. This may include prototyping, adding tasks to the project schedule, adding resources, etc.

For each major risk that is to be mitigated or that is accepted, a course of action will be outlined for the event that the risk does materialize in order to minimize its impact.

2.5 RISK MONITORING, CONTROLLING, AND REPORTING

The level of risk on a project will be tracked, monitored and reported throughout the project lifecycle.

A “Top 10 Risk List” will be maintained by the project team and will be reported as a component of the project status reporting process for this project.

All project change requests will be analyzed for their possible impact to the project risks.

Any changes to the risk management log should be communicated to the QA Manager and discussed by the team members during project meetings.

Management will be notified of important changes to risk status as a component to the Executive Project Status Report.

3 TOOLS AND PRACTICES

A Risk Log will be maintained by the QA Manager and will be reviewed as a standing agenda item for project team meetings.

RISK MANAGEMENT PLAN APPROVAL

The undersigned acknowledge they have reviewed the **Risk Management Plan** for the *PetPal* project. Changes to this Risk Management Plan will be coordinated with and approved by the undersigned or their designated representatives.

Signature: _____ Date: 26/09/24
Print Name: Tan Shu Hua, Samantha
Role: QA Manager

Signature: _____ Date: 04/10/24
Print Name: Mishra Apurva
Role: Project Manager

Signature: _____ Date: 05/10/24
Print Name: Tan Jing Jie
Role: QA Engineer

Signature: _____ Date: 05/10/24
Print Name: Nithya Hariharan
Role: Frontend Developer

APPENDIX A: REFERENCES

The following table summarizes the documents referenced in this document.

Document Name and Version	Description	Location
<i>CDC UP Risk Management Plan Template</i>	<i>Template and guide used for the curation of PetPal Risk Management Plan</i>	<i>Retrieved from NTU Learn</i>

APPENDIX B: KEY TERMS

[Insert terms and definitions used in this document. Add rows to the table as necessary. Follow the link below for definitions of project management terms and acronyms used in this and other documents.]

<http://www2.cdc.gov/cdcup/library/other/help.htm>

The following table provides definitions for terms relevant to the Risk Management Plan.

Term	Definition
Quality Assurance (QA)	<i>A process designed to ensure that the project delivers a high-quality product.</i>
Risk Management Log	<i>Component of risk management framework to track issues.</i>