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***BOOKCATALOGUE***

**RISK MANAGEMENT PLAN**

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Version <2.0>

<14/03/2024>

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## VERSION HISTORY

Version #	Implemented By	Revision Date	Approved By	Approval Date	Reason
1.0	<i>Kenneth Goh</i>	<i>13/03/2024</i>	<i>Kenneth Goh</i>	<i>03/13/2024</i>	Initial Risk Management Plan draft
2.0	<i>Mawsters Team</i>	<i>14/03/2024</i>	<i>Mawsters Team</i>	<i>03/14/2024</i>	Review and finalised version

UP Template Version: 14/03/24

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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 BookCatalogue 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 project manager in the team and is monitored and updated throughout the project.

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

## 2 RISK MANAGEMENT PROCEDURE

### 2.1 PROCESS

The project 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 to minimise their impact. The steps for accomplishing this are outlined in the following sections. The Quality Assurance Manager will serve as the Risk Manager for this project.

### 2.2 RISK IDENTIFICATION

Risk identification will involve the project team, and 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 plans, 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 MediaWiki.

Category	Risk
Financial	<ul style="list-style-type: none"><li>Budget</li></ul>
Market	<ul style="list-style-type: none"><li>External Risks</li></ul>
People	<ul style="list-style-type: none"><li>Staff Turnover</li><li>Human Resource Shortage</li></ul>
Structural	<ul style="list-style-type: none"><li>Scope Creep</li><li>Vendor Dependency</li><li>Scope Variation</li><li>Communication Breakdown</li><li>Data Availability</li></ul>

	<ul style="list-style-type: none"> <li>• Schedule Risk</li> <li>• Unstable Workload</li> <li>• Incorrect Deadlines</li> <li>• Generic Specifications</li> </ul>
Technological	<ul style="list-style-type: none"> <li>• Data Security</li> <li>• Technology Failure</li> <li>• Inadequate Testing</li> <li>• Data Loss</li> <li>• Unsatisfactory performance</li> <li>• User Engagement</li> <li>• Compromising Design</li> </ul>

## 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

Risk	Probability %
Inadequate Testing	70
Unstable Workload	65
Data Security	50
Scope Creep	45
Communication Breakdown	45
Technical Resource Shortage	25
Technology Failure	15
Vendor Dependency	10
Staff Turnover	10

Scope Variation	5
Data Loss	5
User Engagement	1

**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

I m p a c t	H	Yellow	Red	Red
	M	Green	Yellow	Red
	L	Green	Green	Yellow
		L	M	H
	Probability			

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.

**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.

**Probability Rating**

- 1 – Low Probability
- 2 – Medium Probability
- 3 – High Probability

**Severity Rating**

- 1 – Low Severity
- 2 – Medium Severity
- 3 – High Severity

**Risk Numeric Rating (Probability Rating + Severity Rating)**

- 2 & 3 – Low Risk
- 4 – Medium Risk
- 5 & 6 – High Risk

Risk	Probability Rating	Severity Rating	Risk Numeric Rating	Risk Level
Inadequate Testing	3	3	6	High
Data Security	2	3	5	High
Scope Variation	1	3	4	Medium
Vendor Dependency	2	2	4	Medium
Staff Turnover	1	2	3	Low
User Engagement	1	1	2	Low

## 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 if the risk does materialize 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.

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

<b>Risk Event</b>	<b>Rank This Month</b>	<b>Rank Last Month</b>	<b>Number of Months in Top 10</b>	<b>Risk Resolution Progress</b>
Schedule Delays	1	2	4	Set realistic timelines and closely monitor progress. Revising schedule estimates.
Scope Creep	2	1	3	Clearly define the project scope and use change control procedures.
Data Security	3	5	3	Implement encryption, access controls, and data anonymization.
Quality Assurance Issues	4	6	2	Conduct more code reviews and automate testing when possible. Address issues immediately
Security Vulnerabilities	5	7	3	Implement best practices and conduct regular security assessment
Data Availability	6	4	2	Communicate and update stakeholder the relevant data needed.
Generic Specifications	7	3	2	Revise inputs and requirements with stakeholders. Prepare prototypes and mockups to clarify.
Unsatisfactory	8	20	1	Conduct regular



performance				checks to make sure work is up to standard
Budget	9	8	2	Regularly update and monitor project budget. Revise cost estimates and seek additional funding if necessary
Stakeholder Communication	10	15	1	Ensure clear and open communication. Update stakeholders (NTU) regularly on progress, risk and changes

### 3 TOOLS AND PRACTICES

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

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## RISK MANAGEMENT PLAN APPROVAL

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

Signature:	_____	Date:	14/03/2024
Print Name:	Kenneth Goh		
Title:	QA Manager		
Role:	_____		

Signature:	_____	Date:	14/03/2024
Print Name:	Nyan Maw Htun		
Title:	Project Manager		
Role:	_____		

Signature:	_____	Date:	14/03/2024
Print Name:	Muhammad Sufyan Bin Mohd Jais		
Title:	Frontend Developer		
Role:	_____		

Signature:	_____	Date:	14/03/2024
Print Name:	Arun Ezekiel		
Title:	Frontend Developer		
Role:	_____		

**APPENDIX A: REFERENCES**

The following table summarizes the documents referenced in this document.

<b>Document Name and Version</b>	<b>Description</b>	<b>Location</b>
Risk Management Log v1.0	Excel sheet documenting risk identified, triggers, responses, strategy, etc.	./Risk Management Log
Risk Mitigation and Contingency Plan v1.0	Probability/Impact Matrix + Risk Mitigation and contingency plan for risks in moderate and high-risk zones	./Risk Mitigation & Contingency Plan