

Infrastructure Development Authority Punjab

Project Risk & Issues Management Manual

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TABLE OF CONTENTS

1	Purpose of Document	1
2	Risk Definitions	2
3	Risk Management Process	6
4	Issue Management Process	9

1 PURPOSE OF DOCUMENT

The purpose of this document is to outline the risk & issue management approach for IDAP's projects. It provides standard terminology, clear roles and responsibilities, a detailed description of the risk & issue management processes, and the standard templates used in these processes. It is designed to guide the project team and stakeholders.

Risks are broadly defined as events or conditions that may occur during the life of the project and can have a positive or negative impact on the project. In a management context, the term Risk is associated with events that have negative consequences. Therefore, for clarity, we will use the term Risk for negative impact events and Opportunity for positive impact events. The objective of the project team will be to minimize Risks and maximize Opportunities to ensure the best outcome for the project.

General considerations for Risk Management:

- Projects once approved, should commit to undertaking the risk management process and methods described in this document. The Project Manager is accountable for completing activities outlined in this document by the Sponsor or Steering Committee.
- The time and budget required to complete risk management activities described in this document should be included in the overall Project Schedule and Budget.
- The cost and complexity of the risk management methods used in a project depend on the cost and complexity of the project. Factors contributing to project complexity include the following: team size, budget size, timeline length, strategic or political importance, impact on stakeholders, the number of agencies and suppliers involved, the number of dependencies on other projects.
- In identifying risk management methods for a project, aim to balance the cost of using these methods with their effectiveness in protecting the project from risk.
- Determine who should be involved in risk management activities. Options are to (i) limit activities to the Project Manager, and team or (ii) include stakeholders.

When a Risk event takes place, it turns into an issue. Like risk, an issue can either be something that has a negative impact or a positive impact. In either case, it is necessary for the project team to respond to the issue immediately. If the issue emerged from a known risk, a plan of action would already be in place, and the team can take immediate action. Otherwise, an assessment needs to be carried out to work out the appropriate response.

2 RISK DEFINITIONS

Risk management requires the precise and consistent use of terms that can be used by project teams. In this section, we provide the key definitions that will be used in the Risk management process. These definitions are only indicative and need to be customized and approved for each project. Use the Risk Definition Form to set the parameters for the project before starting the Risk management exercise for the project.

CATEGORIES

Effective risk management requires an exhaustive and thorough analysis of projects to identify all possible Risks. The Risk breakdown structure (RBM) provides standard categories which can help project teams in identifying and classifying risks. The associate RBM codes will be assigned to identified risks – if a Risk does not fall in any of the given categories it will be allocated a code value of 1 If it is external or 2 If it is internal.

Risk breakdown structure (RBM)				
1. External sources of risks in Projects				
1.1 Legal risks	1.2 Sponsor	1.3 Economic risks	1.4 Social risks	1.5 Natural risks
1.1.1 Local regulations	1.2.1 Policy change	1.3.1 Economic policy	1.4.1 Seasonal Work	1.5.1 Climate
1.1.2 Permits, approvals	1.2.2 Funding	1.3.2 Inflation	1.4.2 Strikes / Disturbances	1.5.2 Extreme Weather
1.1.3 Changes in law	1.2.3 Expectations	1.3.3 Exchange Rate	1.4.3 Security	1.5.3 Natural disaster
1.1.4 Environment				
2. Internal source of risk in projects				
2.1 Management	2.2 Project Mgt	2.3 Human Factor	2.3 Resources	2.5 Contractual risks
2.1.1 Unrealistic goals	2.2.1 Scope	2.3.1 Productivity	2.3.1 Availability	2.5.1 Type of contract
2.1.2 Requirements	2.2.2 Quality	2.3.2 Availability	2.3.2 Logistics	2.5.2 Time frames
2.1.3 Communication	2.2.3 Budget	2.3.3 Skill level	2.3.3 Capability	2.5.3 Unrealistic prices
	2.3.4 Integration			2.5.4 Conflicts

PROBABILITY

Probability is the likelihood of a risk occurring. Below are definitions for very high, high, medium, low and very low probability. These standard probability definitions can be used for most projects.

Category	Definition	Score
Very High [VH]	Risk has great than 70% probability of occurrence	5
High [H]	Risk has between 50% and 70% probability of occurrence	4
Medium [M]	Risk has between 30% and 50% probability of occurrence	3
Low [L]	Risk has between 10% and 30% probability of occurrence	2
Very Low [VL]	Risk has below 10% probability of occurrence	1

IMPACT

Impact describes the loss or benefit for the project if the risk occurs. Below are definitions for very high, high, medium, low and very low impact. Note that the definitions vary by the impact type. For example, budget impact is measured in Rupees, and schedule impact is measured in weeks or months. Note also that some risks can have more than one type of impact on a project.

Impact Type	Very High	High	Medium	Low	Very Low
Score	5	4	3	2	1
Scope [S]	> 15 %	10 – 15 %	5 – 10 %	< 2 – 5 %	< 2 %
Time [T]	> 15 %	10 – 15 %	5 – 10 %	< 2 – 5 %	< 2 %
Cost [C]	> 15 %	10 – 15 %	5 – 10 %	< 2 - 5 %	< 2 %
Quality [Q]	Not fit for use	Major rework	Significant rework	Minor rework	Minor compliance issues

TIMELINE

The timeline indicates when the risk may occur. Below are definitions for near term, medium term, and far term. Timeline definitions vary by project.

Category	Definition
Near Term [N]	Risk could occur in less than 6 weeks
Medium Term [M]	Risk could occur in between 6 weeks and 18 weeks
Far Term [F]	Risk could occur later than 18 weeks

STATUS

Status of Response indicates the progress and success of risk response activities to date for a risk. Below are definitions for four types of status. These standard definitions can be used for most projects.

Category	Definition
No Plan [N]	There is no plan to respond to the risk
Plan [P]	There is a plan to respond to the risk, but no action has been taken yet
Plan Enacted [PE]	The plan for responding to the risk has been enacted, but effectiveness is not known
Enacted Effective [EE]	The plan for responding to the risk has been enacted, and it has effectively eliminated or mitigated the risk

PRIORITY

Priority scores should be calculated by averaging the Probability and Impact scores. In case the risk has more than one impact (Scope, cost, time, quality) the risk priority score will be the highest score of any of the individual priority scores. The coding of priority scores are as follows: Red (4-5), Yellow (2.5-3.5) and Green (1-2). The priority for a risk can change over the project lifecycle either because actions have been taken to reduce its probability and/or impact or because the timeline for the risk has passed and it is no longer valid. Priority scores for risk should be review periodically and reported in the Risk Status Report and Risk Log.

Very High	3	3.5	4	4.5	5
Medium High	2.5	3	3.5	4	4.5
Medium Low	2	2.5	3	3.5	4
Low	1.5	2	2.5	3	3.5
Very Low	1	1.5	2	2.5	3
	Very Low	Low	Medium	High	Very High

RESPONSE TYPE

Risk response includes two main tasks: (i) planning how to respond to risks and (ii) executing and monitoring action plans for responding to risks. What follows is a description of how risk response activities will be undertaken on the project.

There are four main types of risk response:

Accept[A]	Document and communicate the risk, but do not plan to take action
Avoid[AV]	Change the Project Plan and Schedule to avoid the risk altogether
Transfer[T]	Transfer the risk to another party through insurance or contracting out
Mitigate[M]	Take action to reduce the probability and impact of a risk to a reasonable threshold. These two types of plans can be part of mitigation <ol style="list-style-type: none">Prevention: These are activities the team can do before the risk occurs to reduce its probability and impact. Planned prevention activities answer the question “what can we do now?” Prevention activities are included in the project work breakdown structure.Contingency: These are activities the team can do once the risk occurs to reduce its impact. These activities can be written in a Contingency Plan. Contingency activities answer the questions “what can we do if the risk happens?”. A contingency plan would be put into action when its associated Risk trigger is activated. Risk triggers are indications that a risk has occurred or is about to occur. Triggers are sometimes called risk symptoms or warning signs.

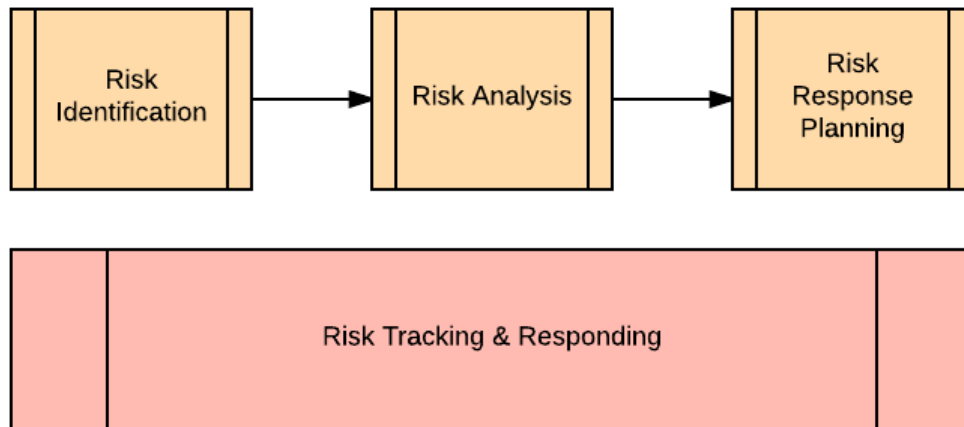
There are four main types of opportunity response:

Accept[A]	Passive acceptance of opportunity without taking any actions to increase the likelihood of occurrence of a level of benefit.
Exploit[E]	Add work or change the project to make sure the opportunity occurs
Share[S]	Allocate ownership of opportunity to a third-party and share the expected benefits
Enhance[EN]	Take actions to increase the probability and positive impact of the opportunity. These two types of plans can be part of enhancement <ol style="list-style-type: none">Promotion: These are activities the team can do before the opportunity occurs to increase its probability and benefit. Planned promotion activities answer the question “what can we do now?” Promotion activities are included in the project work breakdown structure.Contingency: These are activities the team can do once the opportunity occurs to increase its impact. These activities can be written in a Contingency Plan. Contingency activities answer the questions “what can we do if the opportunity materializes?”. A contingency plan would be put into action when its associated opportunity trigger is activated. Opportunity triggers are indications that an opportunity has occurred or is about to occur.

3 RISK MANAGEMENT PROCESS

This section outlines the risk management process for the project, including how a risk is identified, analyzed, logged, tracked, and reported. It identifies roles, activities, the sequence of activities, inputs, outputs, and how and where information is stored. Related templates are provided in appendices.

The four steps in the risk management process are Risk Identification, Risk Analysis, Risk Response Planning, and Risk Tracking & Responding. Note that the first three steps happen in sequence, and the final step, Risk Tracking & Responding, occurs throughout the process.



The risk management process may involve just the Project Manager or a larger team with a steering Committee. In the case of smaller projects, all the risk relates tasks will be managed by the Project Manager or his/her designated project team member. In large or complex project, the project will have a full-time Risk Manager who manages the risk management process. All yellow and red priority risks should have response plans that are approved by the Project Manager or the Project Steering Committee.

Required documentation used in the risk management process includes a Risk Identification Form, Risk Assessment Form Risk Log, and Risk Status Report. Risks are reported in a Risk Status Report separately from the project's overall Status Report.

The following table describes the steps in the risk management process above. Note that an activity assigned to the Project Manager can be completed by the Project Manager or a designated project team member.

Step	Description	Document Action
1. Risk Identification		
1.1	Any project team member can identify a risk.	Record Risk in RM-02 (Risk Identification Form) and submit to Project Manager
1.2	The project manager will carry out the preliminary review and decide if a detailed risk assessment is required.	Record Risk in RM-04 (Risk Log). Assign an evaluator to carry out detailed assessment using RM-03 (Risk Assessment Form) if required
2. Risk Analysis		
2.1	The evaluator will carry out analysis and assess the timeline, probability, and impact of the Risk and send assessment to Project Manager.	Evaluator completes assessment using RM-03 (Risk Assessment Form) and determines the priority score for the Risk
2.2	Project Manager will review RM-03 (Risk Assessment Form) and finalizes the priority score.	Update RM-03 (Risk Assessment Form) and RM-04 (Risk Log)
3. Risk Response Planning		
3.1	For all Red and Yellow priority Risks - Project Managers will review the Risks with project team members and decide on the mitigation strategy.	Update RM-03 (Risk Assessment Form)
3.2	Preventive and Contingent actions will be prepared by project team members.	Update RM-03 (Risk Assessment Form)
3.3	Project Manager and/or Project Steering Committee will approve the actions and assigns the Risks to designated team members.	Approval of RM-03 (Risk Assessment Form), Update RM-04(Risk Log)
4. Risk Tracking & Responding		
4.1	Risk Log will be reviewed by Project Manager and project team to update the status of Risks, to identify if any Risk trigger condition has been reached and to determine if a Risk has turned into an Issue.	Update RM-04 (Risk Log)
4.2	Actions carried by Risk owners will be reviewed for effectiveness, any additional actions required will be approved by the Project Manager or the Project Steering Committee.	Update RM-04 (Risk Log), RM-03(Risk Assessment Report)
4.3	Regular Risk Status report will be generated by the Project Manager and circulated according to the project communication plan.	Generate RM-05 (Risk Status Report)

RISK PROCESS TIMEFRAMES

Process	Procedure	Timeframe
Risk Identification	Identify new Risks using RM-01 (Risk Identification Form)	Anytime during the project lifecycle
Risk Analysis	Determine if detailed risk assessment is required and assign to the evaluator to prepare RM-03 (Risk Assessment Form).	Within five days of receiving from Risk identifier
Risk Assessment Form	Approval of RM-03 (Risk assessment Form) by Project Manager or Steering Committee.	Within five days of submission by evaluator
Risk Status Report	Review Risks in RM-04 (Risk Log) and actions taken by Risk owners and prepare RM-05 (Risk Status Report)	Weekly
Risk Log	Update the RM-04 (Risk Log)	Weekly

ROLES AND RESPONSIBILITIES

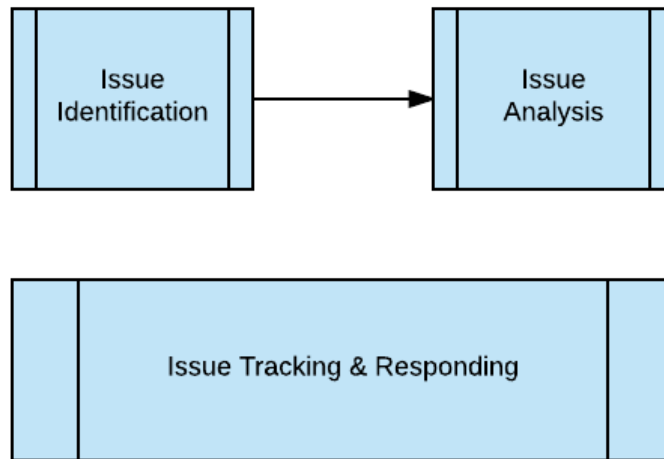
This section outlines roles and responsibilities for those involved in risk management.

Role	Responsibilities
Project Manager	Preliminary analysis of risks for inclusion in risk log, review of risk status and risk related actions. Assignment of Risk Assessment Form. Preparation of Risk Status report updating Risk Log.
Identifier	Any team member can identify a risk
Project Steering Committee	Review and approve Risk Assessment Form and actions for high impact risks

4 ISSUE MANAGEMENT PROCESS

This section outlines the issue management process for the project including issue identification, issue assessment, issue tracking and resolution. The purpose of Risk management to reduce the likelihood and impact of negative events. Negative event will still take place, but the project team will be able to detect them early and take planned actions to minimize their impact. If risk management is effective, then there will be fewer issues that emerge from causes that were not covered in the Risk register. The issue management process aims at early detection and fast response to issues. Related templates are provided in appendices.

The three steps in the Issue management process are Issue Identification, Issue Analysis, and Issue Tracking & Responding. Note that the first two steps happen in sequence, and the final step, Issue Tracking & Responding, occurs throughout the process.



The issue management process may involve just the Project Manager or a larger team with a Steering Committee. The issue related action will be monitored by the Project Manager or his/her designated project team member. All issues will be brought before the Steering Committee to get approval for actions proposed in the Issue Assessment Form.

Required documentation used in the Issue management process includes an Issue Log, Issue Status Report, Issue Identification Form and Issue Assessment Form. Issues are to be reported in an Issue Status Report separately from the project's overall Status Report.

The following table describes the steps in the issue management process above. Note that an activity assigned to the Project Manager can be completed by the Project Manager or a designate project team member.

Step	Description	Document Action
1. Issue Identification		
1.1	Issue can be identified by any project team member.	Record Issue in RM-06 (Issue Identification Form) and submit to Project Manager
1.2	The Project manager will carry out preliminary review or assign the task to an evaluator.	Record Issue in RM-08 (Issue Log). Assign an evaluator to complete detailed assessment using RM-07 (Issue Assessment Form). If Issue is related to a known Risk, then update RM-04 (Risk Log) and report in the weekly RM-05 (Risk Status Report).
2. Issue Assessment		
2.1	The evaluator will carry out analysis and suggest the recommended actions to the Project Manager.	Evaluator completes assessment using RM-07 (Issue Assessment Form) and suggests changes required in the project.
2.2	Project Manager reviews RM-07 (Issue Assessment Form) and finalizes the actions to be taken.	Update RM-07 (Issue Assessment Form) and RM-08 (Issue Log)
2.3	Project Manager and/or Project Steering Committee approve the actions and assigns the Issue to designated team members.	Approval of RM-07 (Issue Assessment Form), Update RM-08(Issue Log)
3. Issue Tracking & Responding		
3.1	Actions carried out by Issue owners are reviewed for effectiveness, any additional actions required are approved by the Project Manager or the Project Steering Committee.	Update RM-08 (Issue Log)
3.2	All outstanding issues are reported in RM-09 (Issue Status Report) generated by the Project Manager and circulated according to the project communication plan.	Generate RM-09 (Issue Status Report) on a weekly basis, update RM-08 (Issue Log)

ISSUE PROCESS TIMEFRAMES

Process	Procedure	Timeframe
Issue Identification	Identify new Issue using RM-06 (Issue Identification Form)	Anytime during the project lifecycle
Issue Assessment	Review if evaluation required and assign to evaluator to prepare RM-07 (Issue Assessment Form).	Within five days of receiving from Issue identifier
	Approval of RM-07 (Issue assessment Form) by Project Manager or Steering Committee.	Within five days of submission by evaluator
Issue Status Report	Review Issue in RM-08 (Issue Log) and actions taken by Issue owners and prepare RM-09 (Issue Status Report)	Weekly
Risk Log	Update the RM-08 (Issue Log)	Weekly

ROLES AND RESPONSIBILITIES

This section outlines roles and responsibilities for those involved in Issue management.

Role	Responsibilities
Project Manager	Approve Issue Identification Form, assign Issue Assessment Form, prepare Issue Status Report and update Issue Log
Identifier	Any team member can identify an Issue
Project Steering Committee	Review and approve Issue Assessment Form