1. Risk Management Planning

1. Risk Management Planning

Risk management planning is the process of deciding how to approach and perform the risk management activities for a project.

Objectives of Risk Planning

- Ensure that the risk management effort is proportionate to both the risk and importance of the project to the organization.
- Provide enough resources for risk management activities.
- Establish basis for evaluating risk.

Inputs	Tools & Techniques	Outputs
.1 Enterprise environmental factors	.1 Planning meetings	.1 Risk management plan
.2 Organization's process assets		
.3 Project scope statement		
.4 Project management plan		
.5 Stakeholder risk tolerances		

1.1 Inputs to Risk Management Planning

.1 *Enterprise Environmental Factors.* Attitude towards risk and risk tolerance of organization and stakeholders. Different organizations and individuals have different tolerances for risk. These may be expressed in policy statements or revealed in actions.

.2 *Organizational Process Assets:* Some organizations may have predefined standard approaches: risk categories; methods of analysis; roles, responsibilities and authority levels for decision-making; methods for qualitative and quantitative risk analysis. The standard approach must be adapted to each project by the project manager or the risk management team.

.3 *Project Scope Statement:* Description of what will be accomplished by the project (deliverables).

.4 *Project Management Plan:* Project integrated management plan describes approached to managing other aspects of project (time, cost, etc.)

1.2 Tools and Techniques for Risk Management Planning

.1 *Planning meetings.* The Plan is developed through meetings. Attendees include the **project manager**, the **project team leaders**, **anyone** in the organization **with responsibility to manage the risk** planning and execution activities, **key stakeholders** and others as needed. They adapt the risk management plan template to the current project as well as use appropriate other inputs to the process.

1.3 Outputs from Risk Management Planning

.1 *Risk management plan.* The risk management plan documents shows how risk identification, qualitative and quantitative risk analysis, response planning, monitoring and control will be structured and performed during the project life cycle.

The risk management plan does not address responses to individual risks – this is accomplished in the risk response plan.

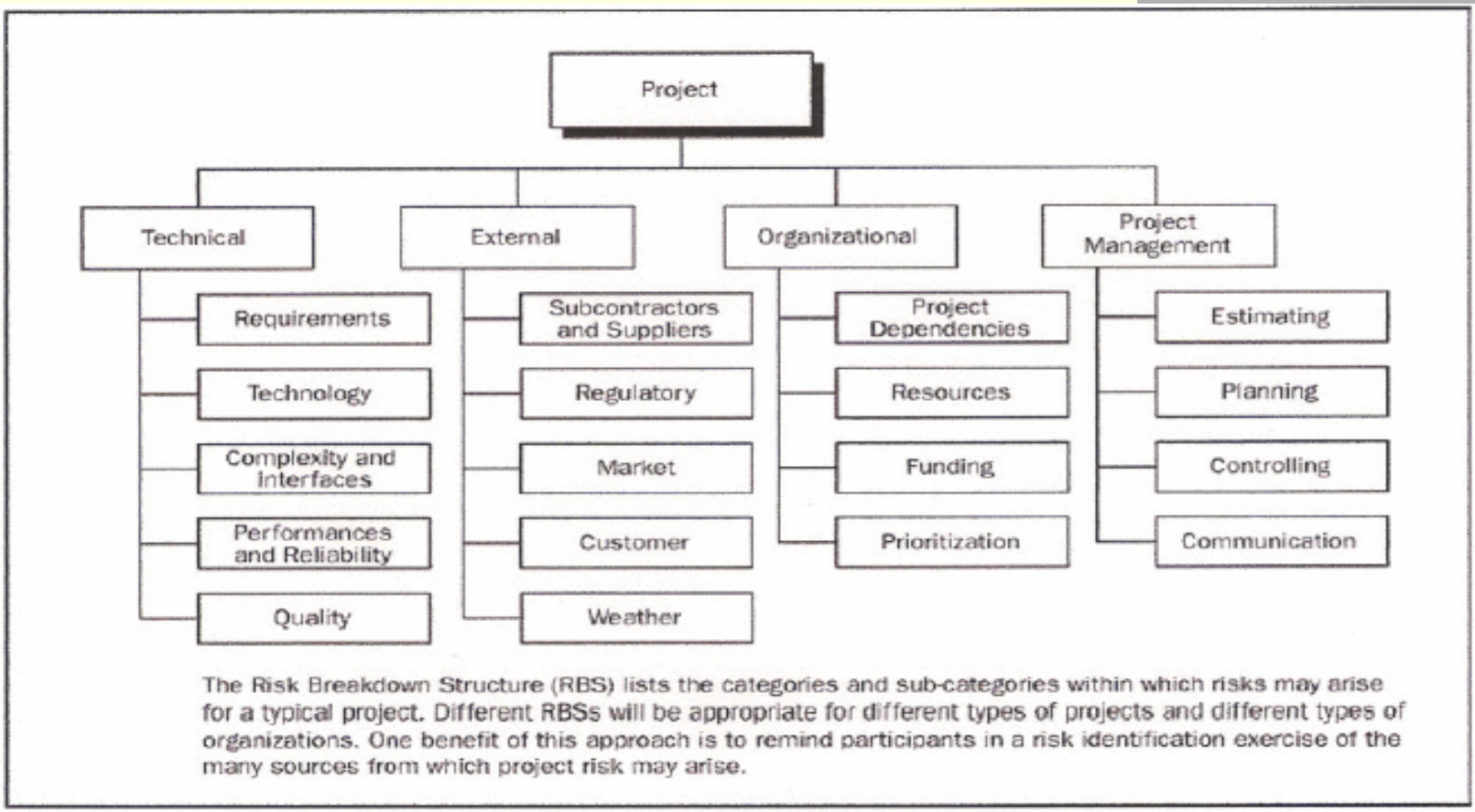
The risk management plan may include:

- *Methodology*. defines the approaches, tools and data sources that may be used to perform risk management on this project.
- *Roles and responsibilities.* Defines the lead, support and risk management team membership for each type of action in the risk management plan and clarifies responsibilities of each role.
- *Timing*. Defines when and how often the risk management process will be performed through the project life cycle and establish the risk management activities to be included in the project schedule.

1.3 Outputs from Risk Management Planning *(continued)*

- *Budgeting*. Assignment of resources and estimating of cost to perform the risk management plan.
- *Risk Categories.* Define a structure of risk categories to assure comprehensiveness and consistency. This could be a typical structure used by the organization but adapted to the current project, such as the risk breakdown structure (see fig 11.4).

Risk Breakdown Structure: Risk Categories



The Risk Breakdown Structure (RBS) lists the categories and sub-categories within which risks may arise for a typical project. Different RBSs will be appropriate for different types of projects and different types of organizations. One benefit of this approach is to remind participants in a risk identification exercise of the many sources from which project risk may arise.

Figure 11-4. Example of a Risk Breakdown Structure (RBS)

1.3 Outputs from Risk Management Planning *(continued)*

- *Definition of Risk Probability & Impact*. The different levels of impacts and probabilities must be defined for consistency and credibility when performing qualitative analysis.
  - Probability: Reflects the likelihood of a risk taking place. An appropriate scale can be used (very unlikely --- almost certain; 0.1, 0.3, 0.5, 0.7, 0.9).
  - Impact: Reflects the significance of the risk effect on a project objective (positive/negative). A scale of very low to very high can be used, or a numerical scale can be selected. The numerical scale can be either linear or nonlinear.
  - Probability & Impact Matrix: A matrix that can be used to rank the risk on the basis of its effect on the project through the combined effect of probability and impact severity.

Definition of Impact Scale

Defined Conditions for Impact Scales of a Risk on Major Project Objectives
(Examples are shown for negative impacts only)

Project Objective	Relative or numerical scales are shown				
	Very low /.05	Low /.10	Moderate /.20	High /.40	Very high /.80
Cost	Insignificant cost increase	<10% cost increase	10-20% cost increase	20-40% cost increase	>40% cost Iincrease
Time	Insignificant time increase	<5% time increase	5-10% time increase	10-20% time iIncrease	>20% time increase
Scope	Scope decrease barely noticeable	Minor areas of scope affected	Major areas of scope affected	Scope reduction unacceptable to sponsor	Project end item is effectively useless
Quality	Quality degradation barely noticeable	Only very demanding applications are affected	Quality reduction requires sponsor approval	Quality reduction unacceptable to sponsor	Project end item is effectively useless

This table presents examples of risk impact definitions for four different project objectives. They should be tailored in the Risk Management Planning process to the individual project and to the organization's risk thresholds. Impact definitions can be developed for opportunities in a similar way.

Figure 11-5. Definition of Impact Scales for Four Project Objectives

Probability and Impact Matrix

Probability	Threats					Opportunities				
0.90	0.05	0.09	0.18	0.36	0.72	0.72	0.36	0.18	0.09	0.05
0.70	0.04	0.07	0.14	0.28	0.56	0.56	0.28	0.14	0.07	0.04
0.50	0.03	0.05	0.10	0.20	0.40	0.40	0.20	0.10	0.05	0.03
0.30	0.02	0.03	0.06	0.12	0.24	0.24	0.12	0.06	0.03	0.02
0.10	0.01	0.01	0.02	0.04	0.08	0.08	0.04	0.02	0.01	0.01
	0.05	0.10	0.20	0.40	0.80	0.80	0.40	0.20	0.10	0.05

Impact (ratio scale) on an objective (e.g., cost, time, scope or quality)

Each risk is rated on its probability of occurring and impact on an objective if it does occur. The organization's thresholds for low, moderate or high risks are shown in the matrix and determine whether the risk is scored as high, moderate or low for that objective.

Figure 11-8. Probability and Impact Matrix

1.3 Outputs from Risk Management Planning *(continued)*

- *Revised Stakeholders' Tolerances:* Stakeholders' tolerances may be revised during the planning process to reflect requirements of the specific project.
- Reporting Format: Describes the format and the content of risk reports. This ensures that the outcome of risk management processes are properly documented, communicated, and analyzed.
- Tracking: Documents how risk management experience gained from the risk management activities can be useful to the current project, future projects, and lessons learned. Documents if and how risk processes will be audited.