IT Security and Risk Management

Risk Management Process

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The Importance of Project Risk Management

- Project risk management is the art and science of identifying, analyzing, and responding to risk throughout the life of a project and in the best interests of meeting project objectives

- Risk management is often overlooked in projects, but it can help improve project success by helping select good projects, determining project scope, and developing realistic estimates

Project Risk Management Processes, Part 1

- **Planning risk management** : Deciding how to plan the risk management activities for the project.

- **Identifying risks**: Determining which risks are likely to affect a project and documenting the characteristics of each

- **Performing qualitative risk analysis**: Prioritizing risks based on their probability and impact of occurrence

Project Risk Management Processes, Part 2

- **Performing quantitative risk analysis**: Numerically estimating the effects of risks on project objectives

- **Planning risk responses**: Taking steps to enhance opportunities and reduce threats to meeting project objectives

- **Controlling risk**: Monitoring identified and residual risks, identifying new risks, carrying out risk response plans, and evaluating the effectiveness of risk strategies throughout the life of the project

Project Risk Management Summary

Planning
Process: **Plan risk management**
Outputs: Risk management plan
Process: **Identify risks**
Outputs: Risk register
Process: **Perform qualitative risk analysis**
Outputs: Project documents updates
Process: **Perform quantitative risk analysis**
Outputs: Project documents updates
Process: **Plan risk responses**
Outputs: Project management plan updates, project documents updates

Monitoring and Controlling
Process: **Control risks**
Outputs: Work performance information, change requests, project
management plan updates, project documents updates,
organizational process assets updates

Project Start   **Project Finish**

Planning Risk Management

- The main output of this process is a **risk management plan**—a plan that documents the procedures for managing risk throughout a project

- The project team should review project documents and understand the organization's and the sponsor's approaches to risk

- The level of detail will vary with the needs of the project

Components in a Project Risk Management Plan

- **Risk Register:** A *risk register* is the document your project team will use to identify, log, and monitor potential project risks.

- **Risk Breakdown Structure:** A *risk breakdown structure* is a chart that allows your team to identify broad risk categories and specific risks that fit within each category. Your team can decide on the broad categories, depending on your project.

- **Risk Assessment Matrix:** A *risk assessment matrix* is a chart matrix that allows teams to score the severity of potential risks based on both the likelihood of each risk happening and the impact to the project if a risk happens.

- **Risk Response Plan:** A *risk response plan* is a document that details how your team plans to respond to each potential risk to try to either prevent it from happening or lessen the impact if it does happen. You can learn more about project risk mitigation.

Components in a Project Risk Management Plan

- **Roles and Responsibilities:** The risk management plan can provide details on the project risk management team, including the lead member for risk management. It also likely details the roles and responsibilities each team member will have in addressing and dealing with specific risks.

- **Risk Reporting Formats:** The risk management plan describes how the project team will document and report its work on monitoring and dealing with risks. It describes the risk register format that the team will use. It might also describe how risks will be added to or deleted from the register and how the project team will provide periodic summarized risk reports to top project and organization leaders.

- **Project Funding and Timing:** The plan will likely have a section describing the overall funding and timing for the project. That section also likely details funding for all project risk management work.

Risk Management Plan and Other Components: What's Required Based on Size of Project

	Small Project (short duration; 2-4 members of project team)	Medium Project (duration of several weeks to several months; medium-sized project team)	Large/Complex Project (duration of year or more; large project team)
Risk management plan		X	X
A basic risk register, to include columns for description of risk, its potential impact and priority, and who is responsible for monitoring	X		
A detailed risk register, to include everything in basic risk register along with details on risk triggers and likely timing of risks, risk mitigation details, and status of mitigation response		X	X
Risk breakdown structure			X
Risk assessment matrix	X	X	X
Risk response plan for priority risks		X	X
Periodic risk management reports to organizational leaders			X

Risk Types

- Market risk

- Financial risk

- Technology risk

- People risk

- Structure/process risk

Risk Management Process
Step 1: Identifying Risks

- The first step of the risk management process is to identify all the potential risks your organization might be exposed to.

- Risk identification occurs at the beginning of the project planning phase, as well as throughout the project life cycle. While many risks are considered "known risks," others might require additional research to discover.

- You can create a <u>risk breakdown structure</u> to identify all your project risks and classify them into risk categories. You can do this by interviewing all project stakeholders and industry experts. Many project risks can be divided up into risk categories, like technical or organizational, and listed out by specific sub-categories like technology, interfaces, performance, logistics, budget, etc. Additionally, create a risk register that you can share with everyone you interviewed for a centralized location of all known risks revealed during the identification phase.

Risk Breakdown Structure

- A **risk breakdown structure** is a hierarchy of potential risk categories for a project

- Similar to a work breakdown structure but used to identify and categorize risks
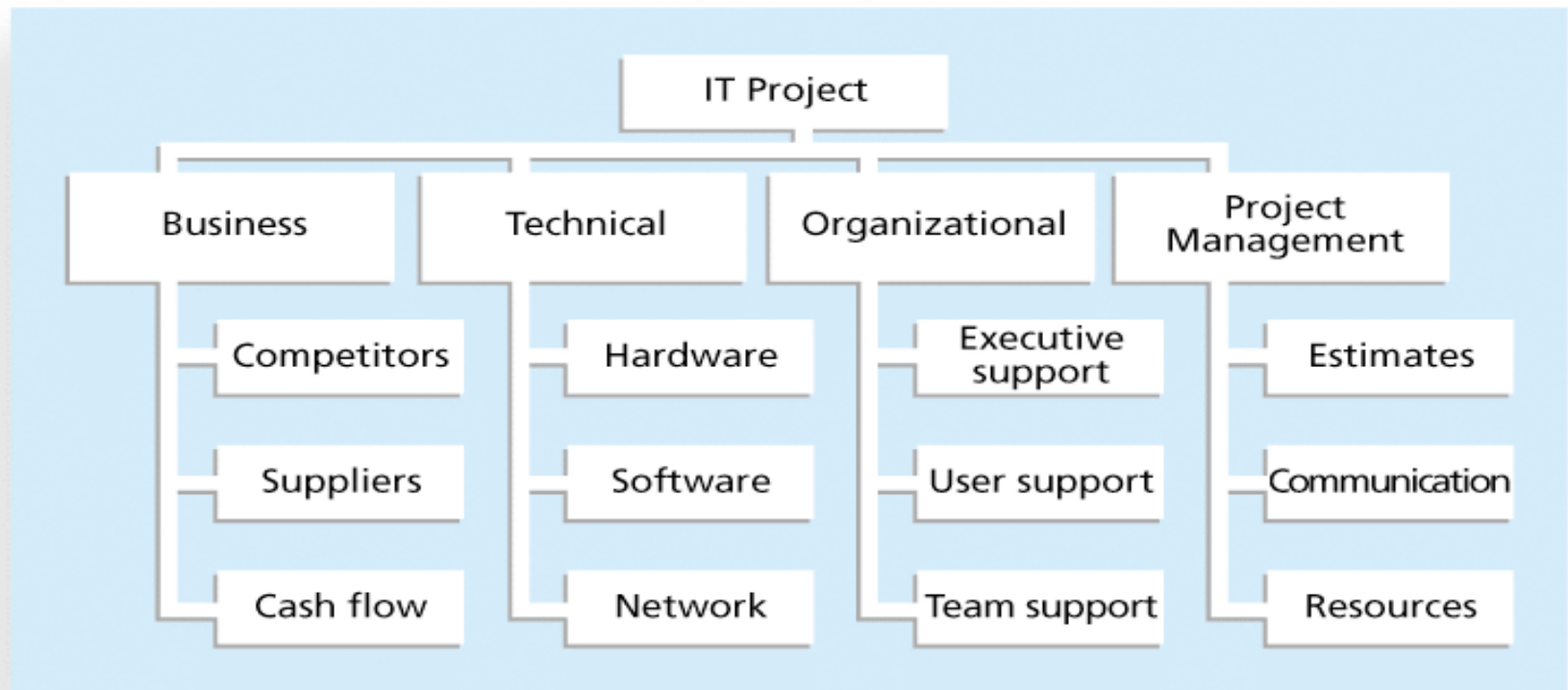
Identifying Risks

- Identifying risks is the process of understanding what potential events might hurt or enhance a particular project

- Another consideration is the likelihood of advanced discovery

- Risk identification tools and techniques include:

  - Brainstorming

  - The Delphi Technique

  - Interviewing

  - SWOT analysis

Brainstorming

- **Brainstorming** is a technique by which a group attempts to generate ideas or find a solution for a specific problem by collecting ideas without judgment.

- An experienced facilitator should run the brainstorming session

- Be careful not to overuse or misuse brainstorming.

  - Psychology literature shows that individuals produce a greater number of ideas working alone than they do through brainstorming in small, face-to-face groups

  - Group effects often inhibit idea generation

Delphi Technique

- The Delphi technique in risk management is the process of consulting field experts to predict how risky a certain action would be. Between a panel of experts and several rounds of feedback and response modification, a conclusion is reached by the panel.

Interviewing

- **Interviewing** is a fact-finding technique for collecting information in face-to-face, phone, e-mail, or instant-messaging discussions

- Interviewing people with similar project experience is an important tool for identifying potential risks

SWOT Analysis

- SWOT analysis (strengths, weaknesses, opportunities, and threats) can also be used during risk identification

- Helps identify the broad negative and positive risks that apply to a project

STRENGTHS WEAKNESSES OPPORTUNITIES THREATS

Thank you