Crosswind Learning

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Project Management Professional (PMP)® Exam

Crosswind Success Series: PMP® Exam Bootcamp Manual

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Version 6.1 aligned with the Project Management Institute, *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide)* - Sixth Edition, Project Management Institute Inc., 2017

Chapter 14

Project Risk Management

During Project Risk Management, the project team strives to decrease the probability and impact of individual negative risks (threats), increase the probability and impact of individual positive risks (opportunities), and keep overall project risk within an acceptable range.

Individual risk is the negative or positive effect of a random event or condition on one or more project goals. Management of individual risk seeks to minimize threats and enhance opportunities. Unmanaged threats typically result in issues that negatively impact the schedule, the budget, and/or performance. Unmanaged opportunities typically result in failure to accrue additional project benefits for stakeholders.

Overall project risk is the negative or positive effect of individual risks and other sources of uncertainty on the project as a whole. Management of overall project risk seeks to keep risk within an acceptable range. Unmanaged overall project risk typically results in decreasing the chances of attaining project goals.

Note that risks continue to emerge throughout the life of the project, so the Project Risk Management processes should be conducted iteratively. As the project evolves, identified risks should be monitored and managed and emergent risks should be identified and addressed.

Effective risk management for the project requires that the project team knows the acceptable amount of risk exposure that is informed by measurable risk thresholds that reflect organizational and stakeholder risk tolerance. Risk thresholds specify the degree of acceptable variation around a project goal and are included in the definitions of project risk impact levels.

Trends

There are a number of trends emerging in project risk management:

There is a growing focus on the two types of **non-event risks**: variability and ambiguity.

- **Variability** is represented by an event where key characteristics are uncertain
  An example of variability that could occur during a construction project is unseasonable weather. Variability risk can be addressed with the use of Monte Carlo simulation followed by activities designed to minimize the range of possible outcomes.
- **Ambiguity** is represented by a lack of certainty regarding the future
  An example of ambiguity that could occur on a mortgage lending system project is future regulations. Ambiguity risk can be addressed by obtaining expert external input, benchmarking against best practices, incremental development, prototyping, and/or simulation.

The **management of emergent risks** (unknowable unknowns) is receiving increased notice. Emergent risks are risks that are recognized only after they occur. The only way to manage these risks is through project resilience. To achieve project resilience, the project must have the right level of budget and schedule contingency for emergent risks (in addition to the contingency for known risks), flexible project processes with an emphasis on change management, an empowered project team with clear-cut goals, frequent review of early signs of emergent risk, immediate response to an identified emergent risk, and clear input from key stakeholders regarding areas of allowable scope or strategy adjustment as a response to identified emergent risk.

Another trend is **integrated risk management**. A coordinated approach to risk across the organization ensures balance and consistency in the management of risks. If a project is part of a program or portfolio, risks should be owned and managed at the appropriate level. That said, **some risks identified at higher levels may be delegated to the project team and some project risks may be escalated to higher levels**.

Tailoring

Project tailoring, the manner in which the processes of a knowledge area are exercised, is employed to address the distinctive nature of each project. Successful project tailoring for project risk management is predicated on a careful consideration of:

- Project size
- Project complexity
- Project importance
- The development approach to the project (predictive or adaptive)

Agile/Adaptive Environment

For high-variability projects:

- Incremental products are frequently reviewed
- Cross-functional teams are utilized to escalate knowledge sharing
- Project requirements are maintained as a living document and updated frequently
- Based on improved understanding of risks over the progression of the project, work may be re-prioritized.

The source for the above text is the Project Management Institute, *A Guide to the Project Management Body of Knowledge*, (*PMBOK® Guide*) – Sixth Edition, Project Management Institute Inc., 2017, Pages 395-400

In this chapter, we discuss the following:

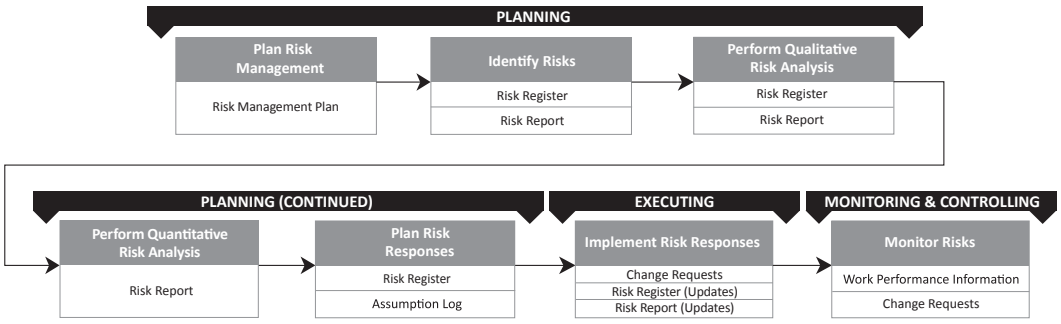

Figure 14-1: Risk Processes

The source for the above figure is the Project Management Institute, *A Guide to the Project Management Body of Knowledge*, (*PMBOK® Guide*) – Sixth Edition, Project Management Institute Inc., 2017, Figure 11-1, Page 396

Crosswind "Must Knows" for Project Risk Management

☑	
	Key Inputs, Tools & Techniques, and Outputs for Plan Risk Management
	Key Inputs, Tools & Techniques, and Outputs for Identify Risks
	Key Inputs, Tools & Techniques, and Outputs for Perform Qualitative Risk Analysis
	Key Inputs, Tools & Techniques, and Outputs for Perform Quantitative Risk Analysis
	Key Inputs, Tools & Techniques, and Outputs for Plan Risk Responses
	Key Inputs, Tools & Techniques, and Outputs for Implement Risk Responses
	Key Inputs, Tools & Techniques, and Outputs for Monitor Risks
	The definition of a risk, an opportunity, and a threat
	The risk breakdown structure (RBS) and risk categorization (internal, external, technological, and organizational)
	Know the definition of uncertainty
	Be familiar with the concepts and differences of pure risk and business risk
	Benefits and risks of contracting
	Characteristics of a risk seeker, a risk-neutral person, a risk tolerant person, and a risk-averse person and how they relate to risk attitude
	What a risk register contains and its purpose
	Risk reviews and risk triggers
	Probability as it relates to risk management
	Impact as it relates to risk management
	How to calculate expected monetary value (EMV) and make a project selection decision based on the outcome
	Monte Carlo simulation
	Characteristics of management reserves (unknown unknowns) and contingency reserves (known unknowns)
	What residual and secondary risks are and how they are created

	Risk owners and their responsibility
	Characteristics of a risk response plan including recognition of the strategies (avoid, transfer, mitigate, escalate, exploit, share, enhance, acceptance, and contingent response strategy)
	What a work-around is in relation to Plan Risk Responses

Although helpful, this list is not all-inclusive in regard to information needed for the exam. It is only suggested material that, if understood and memorized, may increase your exam score.

14.1. What is Risk?

Know the definition of a risk, an opportunity, and a threat.

A risk is an event that can impact the project positively or negatively and has some degree of uncertainty. The risk event may or may not occur.

The objective of assessing risk is to determine its impact. Once determined, the team works to offset any negative impact and enhance any positive impact.

An example of a negative risk (threat) is a reliance on a piece of software that does not work as planned, forcing the team to come up with an alternative.

An example of a positive risk (opportunity) is sales of a new product exceeding expectations.

14.2. Plan Risk Management (Planning Process Group)

Know the Key Inputs, Tools & Techniques, and Outputs for Plan Risk Management.

During the Plan Risk Management process, the risk management plan is created. The project manager and the team proactively plan the manner in which risks will be identified, ranked, and addressed.

The project team uses the organization's risk management policies and procedures as a guide when creating the risk management plan.