

Risk Management

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Lecture 6



MGM 510

Risk Management



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Negative Risk

- A dictionary definition of risk is “the possibility of loss or injury”
- Negative risk involves understanding potential problems that might occur in the project and how they might impede project success
- Negative risk management is like a form of insurance; it is an investment

Risk Can Be Positive

- Positive risks are risks that result in good things happening; sometimes called opportunities
- A general definition of project risk is an uncertainty that can have a negative or positive effect on meeting project objectives
- The goal of project risk management is to minimize potential negative risks while maximizing potential positive risks

- Some organizations make the mistake of only addressing tactical and negative risks when performing project risk management
- David Hillson, (www.risk-doctor.com) suggests overcoming this problem by widening the scope of risk management to encompass both strategic risks and upside opportunities, which he refers to as integrated risk management
- In a 2014 paper Hillson described the importance of good working relationships, especially between the project sponsor and project manager

Risk Utility

- **Risk utility** or **risk tolerance** is the amount of satisfaction or pleasure received from a potential payoff
 - Utility rises at a decreasing rate for people who are risk-averse
 - Those who are risk-seeking have a higher tolerance for risk and their satisfaction increases when more payoff is at stake
 - The risk-neutral approach achieves a balance between risk and payoff

- **Planning risk management** : Deciding how to approach and 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

- **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



Top Ten Risk Item Tracking

- **Top Ten Risk Item Tracking** is a qualitative risk analysis tool that helps to identify risks and maintain an awareness of risks throughout the life of a project
- Establish a periodic review of the top ten project risk items
- List the current ranking, previous ranking, number of times the risk appears on the list over a period of time, and a summary of progress made in resolving the risk item

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Example of Top Ten Risk Item Tracking

Risk Event	Rank this month	Rank last month	Number of months in top ten	Risk resolution progress
Inadequate planning	1	2	4	Working on revising the entire project management plan
Poor definition	2	3	3	Holding meetings with project customer and sponsor to clarify scope
Absence of leadership	3	1	2	After previous project manager quit, assigned a new one to lead the project
Poor cost estimates	4	4	3	Revising cost estimates
Poor time estimates	5	5	3	Revising schedule estimates

العمل على مراجعة خطة إدارة المشروع بالكامل

عقد اجتماعات مع العميل والراعي للمشروع لتوضيح بعد استقالة مدير المشروع السابق ، قم بتعيين مدير جديد لقيادة المشروع

مراجعة تقديرات التكلفة

مراجعة تقديرات الجدول الزمني

التخطيط غير كافي

تعريف ضعيف

غياب القيادة

تقديرات تكلفة سيئة

تقديرات وقت ضعيفة



- After identifying and quantifying risks, you must decide how to respond to them
- Four main response strategies for negative risks:
 - Risk avoidance
 - Risk acceptance
 - Risk transference
 - Risk mitigation



Technical Risks	Cost Risks	Schedule Risks
Emphasize team support and avoid stand-alone project structure	Increase the frequency of project monitoring	Increase the frequency of project monitoring
Increase project manager authority	Use WBS and CPM	Use WBS and CPM
Improve problem handling and communication	Improve communication, project goals understanding, and team support	Select the most experienced project manager
Increase the frequency of project monitoring	Increase project manager authority	
Use WBS and CPM		

- Risk exploitation
- Risk sharing
- Risk enhancement
- Risk acceptance

- It's also important to identify residual and secondary risks
- **Residual risks** are risks that remain after all of the response strategies have been implemented
- **Secondary risks** are a direct result of implementing a risk response

Plan Risk Responses

The risk register is designed to be written to a level of detail that corresponds with the priority ranking of the risk and its associated response. Frequently, the lower level, low priority risks are placed on a 'watch list' for periodic review and monitoring.

Plan Risk Responses

Contingency Plans

Contingency plans are developed for a specific risk. Contingency plans are generally developed when you have accepted a risk and now have developed a plan 'B' or plan 'C' as a contingent response. These plans are executed only under predefined conditions, and when there is sufficient warning to implement the plan.

Fallback plans are implemented when a contingent response is not effective.

Plan Risk Responses

Residual and Secondary Risks

Residual risks are identified as risks that remain after a risk response strategy was implemented. It is possible that residual risks can be identified in the risk planning process, in which case they are subject to contingency and fallback planning.

Plan Risk Responses

- ❑ if you know that certain key personnel on the project might leave before the project is over, your risk response strategy may include required cross-training of other lower level resources.
 - ❖ There is a potential residual risk that even with cross-training, the lower level resources might not perform to the level expected. In this event, you may have identified a contingent or fallback plan to address the residual risk.

Plan Risk Responses

A secondary risk is a risk that results from implementing a risk response strategy. Secondary risks can be identified in the planning process, or they might occur as a result of discovery.



Plan Risk Responses

For example, you implemented a risk avoidance strategy by replacing an unreliable vendor with a highly dependable vendor on a project. However, unknown to you at the time, the dependable vendor was in negotiations to be bought out by a larger company. The secondary risk with the dependable vendor may include elements such as unexpected price changes, changes in resource availability, or a complete change in the business model.

Potential risk areas

Knowledge Area	Risk Conditions
Integration	Inadequate planning; poor resource allocation; poor integration management; lack of post-project review
Scope	Poor definition of scope or work packages; incomplete definition of quality requirements; inadequate scope control
Time	Errors in estimating time or resource availability; poor allocation and management of float; early release of competitive products
Cost	Estimating errors; inadequate productivity, cost, change, or contingency control; poor maintenance, security, purchasing, etc.
Quality	Poor attitude toward quality; substandard design/materials/workmanship; inadequate quality assurance program
Human Resources	Poor conflict management; poor project organization and definition of responsibilities; absence of leadership
Communications	Carelessness in planning or communicating; lack of consultation with key stakeholders
Risk	Ignoring risk; unclear assignment of risk; poor insurance management
Procurement	Unenforceable conditions or contract clauses; adversarial relations

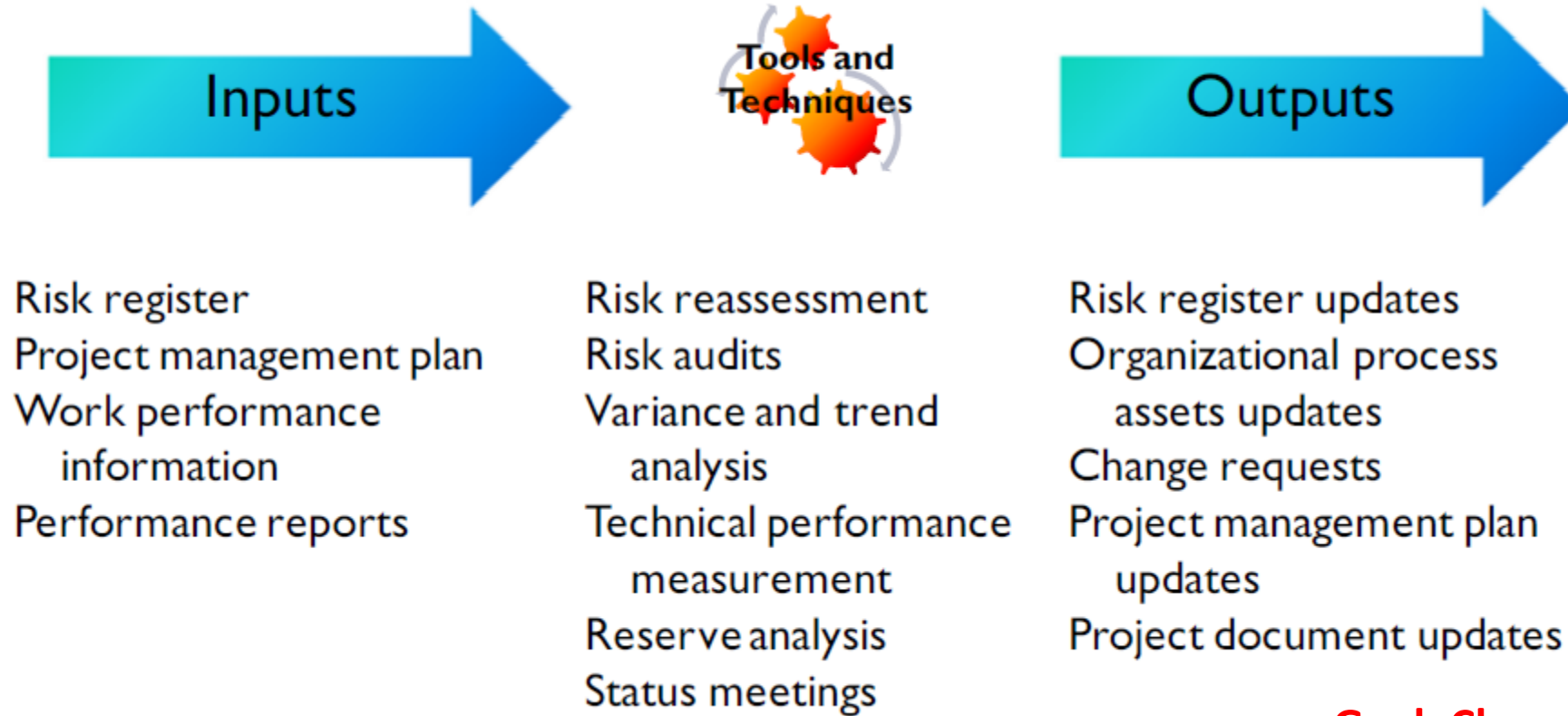


Results of Good Project Risk Management

- Unlike crisis management, good project risk management often goes unnoticed
- Well-run projects appear to be almost effortless, but a lot of work goes into running a project well
- Project managers should strive to make their jobs look easy to reflect the results of well-run projects



Monitor and Control Risks



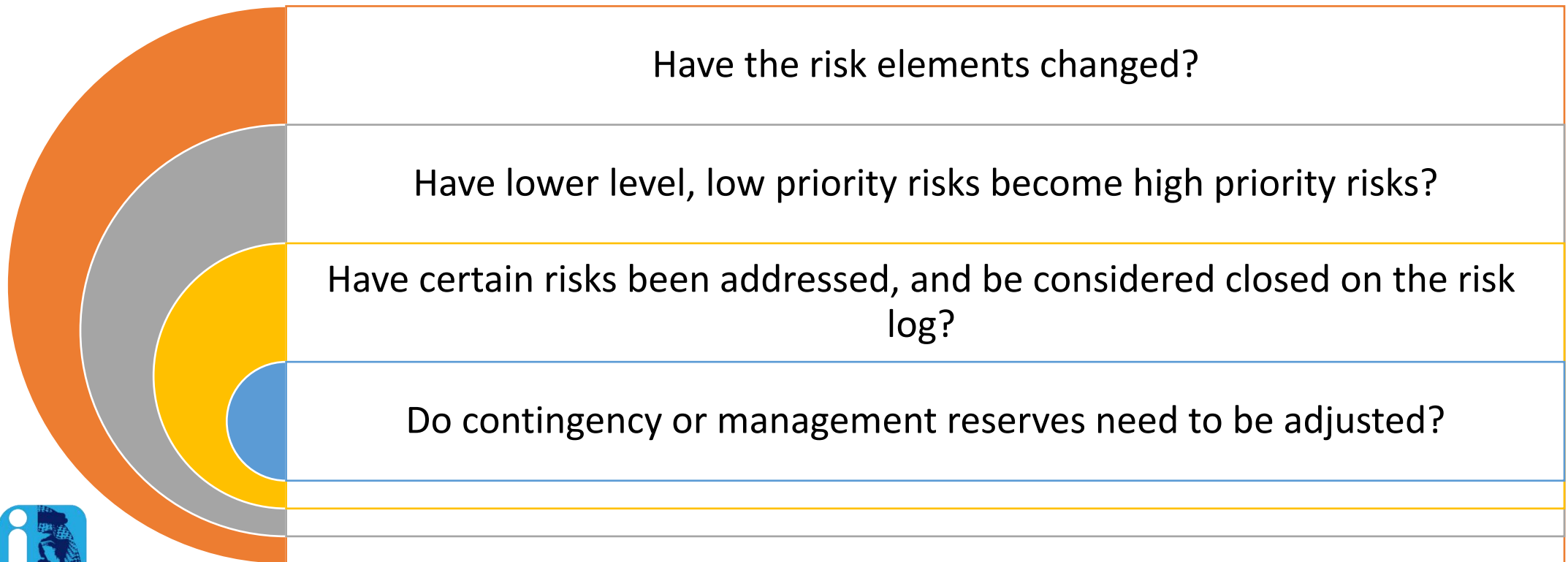
Goal: Change requests, updates

Monitor and Control Risks

As in other monitor and controlling activities, it is assumed you have performed all the necessary elements to identify and quantify project risk, and have created the necessary strategies to respond to risk on the project.

Monitor and Control Risks

Part of the process of monitoring and controlling risks is to perform risk reassessments of the project on a regular basis:



Risk Audits and Reviews

- ❑ In most large organizations, there are individuals who specialize in risk auditing and conducting risk reviews.
- ❑ You would do well to learn as much as you can from these individuals about project risk - it will help you do a better job of identifying risks and planning risk responses.
- ❑ Usually, risk audits are periodically scheduled throughout the project.
- ❑ They are typically conducted by people outside of your immediate organization.

Why do you think that is so?

Risk Audits and Reviews

There are several reasons why auditors are not part of the project team:

Provides for an objective review of risks

Provides a fresh pair of eyes to review risk elements from a different perspective

Can help identify risks not considered by the team

Risk reassessment or risk reviews

- ☐ Periodic and scheduled
- ☐ Should occur to determine if any risk priorities or ratings have Changed

Risk audits

- ☐ Carried out throughout project life
- ☐ Typically performed by experts outside project team

Additional Risk Tools

Variance and Trend analysis compares planned results to the actual results. Variance tools such as earned value analysis can be used for monitoring overall project performance. As a result, potential forecasts of deviation at the project's completion from cost and schedule targets are possible.

Technical Performance Measurement compares technical accomplishments during project execution to the project management plan schedule of technical achievement. Quantifiable measurements are taken and compared against actual results.

Reserve Analysis compares the amount of contingency reserves remaining to the amount of risk remaining at any time in the project.

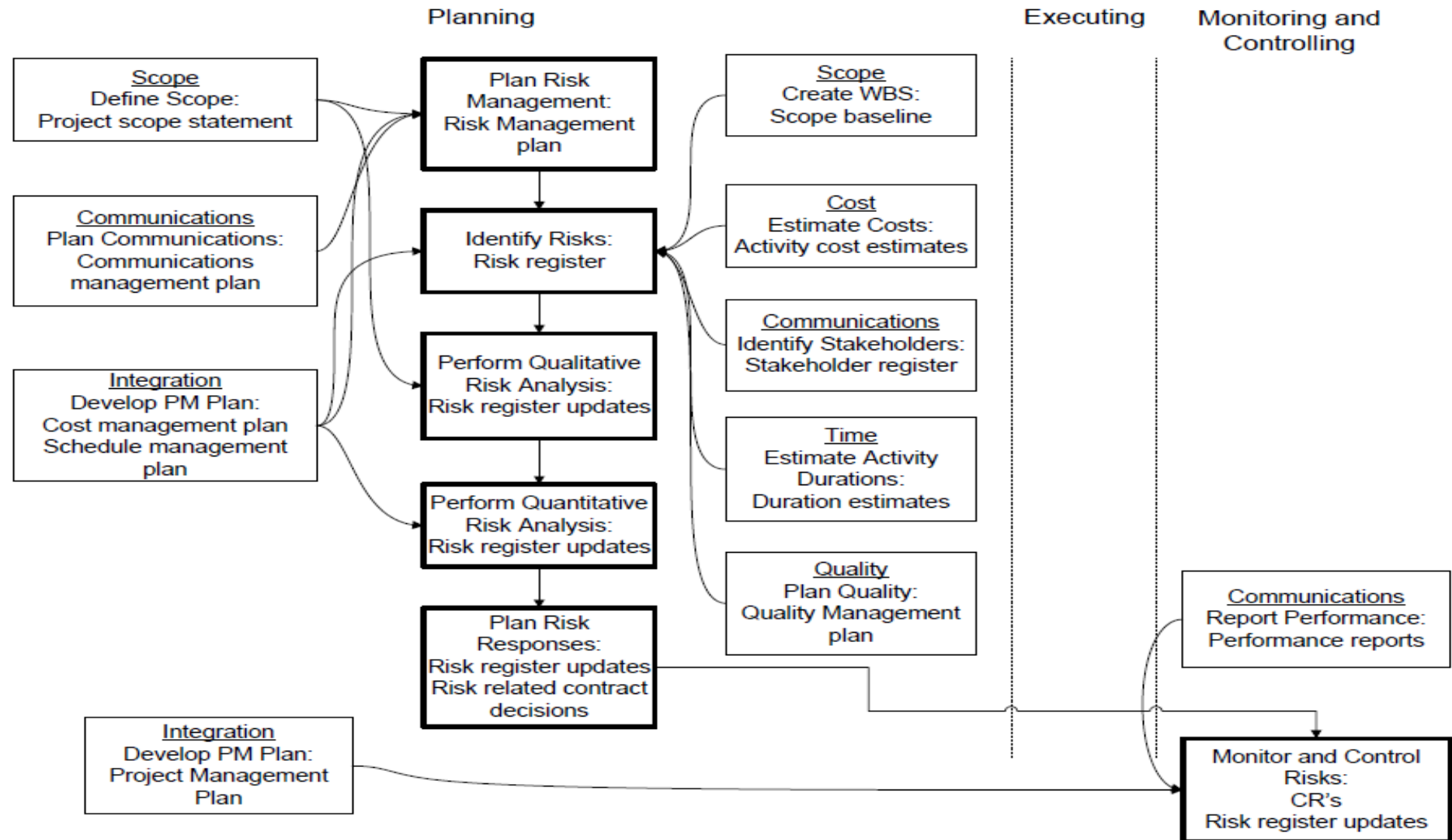
reserve analysis and the funds set aside for contingencies apply only to the specific risks on the project for which they were set aside

Workarounds

- ❑ Workarounds are usually employed when no contingency plan exists, and are generally executed 'on the-fly' to address some unplanned event.
- ❑ The result of implementing a workaround can be the identification of an undiscovered risk for which the contingency and fallback planning can now be addressed.

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Project Risk Management: Key Process Interactions



- ❑ The benefit of using a risk breakdown structure
- ❑ Information gathering techniques: brainstorming, Delphi technique, interviewing, root cause identification, and SWOT analysis
- ❑ Importance and components of the risk register
- ❑ Deciding on the best risk response strategy: avoid, transfer, mitigate, exploit, share, enhance, or accept risk events