Crosswind Learning

Version 6.1 Updated for the 2021
Project Management Professional (PMP)® Exam

Crosswind Success Series: PMP® Exam Bootcamp Manual

www.crosswindpm.com
Tony Johnson, MBA, CAPM, PMP, PgMP, PfMP

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

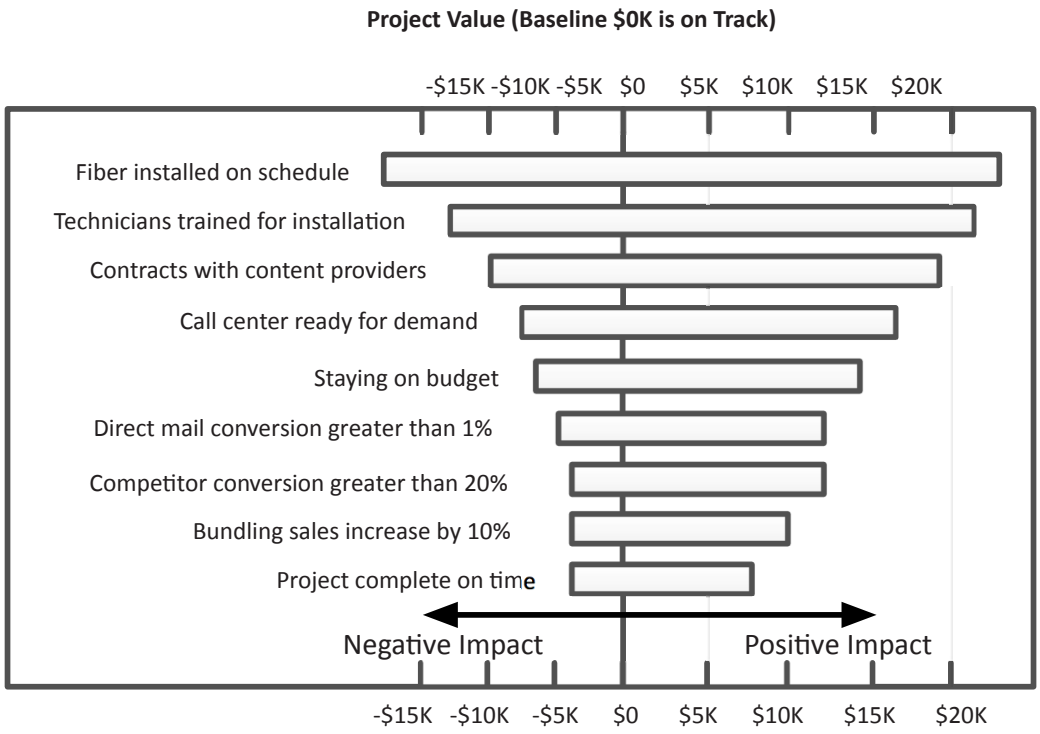

Figure 14-12: Tornado Diagram

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 11-14, Page 434

Sensitivity analysis determines risk impact by considering how much the uncertainty of each project element impacts a particular project objective when the other elements remain at their baseline values.

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 428-436

14.6. Plan Risk Responses (Planning Process Group)

During the Plan Risk Responses process, responses for risks are developed, strategies for addressing risks are determined, and actions for addressing risk exposure are decided for both individual risks and overall project risk.

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

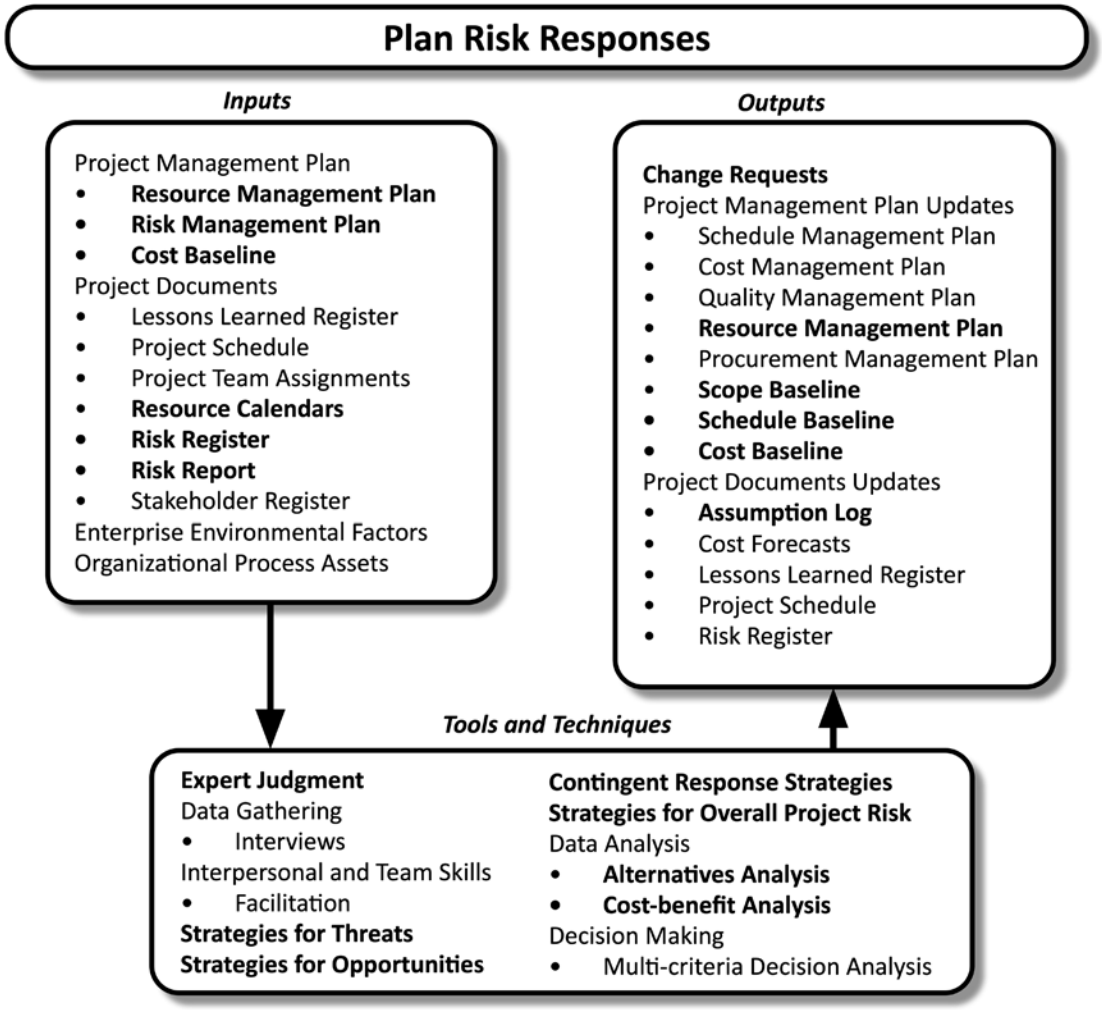

Figure 14-13: Plan Risk Responses Data Flow Diagram

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 11-16, Page 437

Plan Risk Responses (Planning)		
Key Inputs	Resource Management Plan	The resource management plan is a component of the project management plan that documents the manner in which the team and physical resources are determined, quantified, and acquired. It is referenced to coordinate resources assigned to risk responses with other resources.

Plan Risk Responses (Continued)		
Key Inputs (Cont.)	Risk Management Plan	The risk management plan is a component of the project management plan that details the manner in which risk management activities are configured and implemented. Typically it addresses risk strategy, risk methodology, roles and responsibilities, financing (the budget for risk-related activities, contingent reserves, and management reserves), timing of risk processes, risk classification for grouping individual risks (typically, this is accomplished by using a risk breakdown structure), the probability and impact of individual risks (often supported by a probability and impact matrix), reporting formats, and tracking. It may also include a determination of the manner in which risk thresholds are established and applied.
	Cost Baseline	The cost baseline is the authorized version of the time-phased budget for the project, excluding management reserves, and subject to change control. It contains details related to contingency reserves allocated for risk responses.
	Resource Calendars	Resource calendars delineate project resource availability and are referenced to allocating resources for risk responses.
	Risk Register	The risk register records each identified risk. It typically includes the potential owner of and potential response(s) to each identified risk and may include a title, category, status, cause(s), trigger(s), impacted activity(ies), date of identification, date range for probable occurrence, and response deadline. It may contain data useful for planning risks responses (root cause, triggers, immediacy, need for analysis) and/or recommended responses.
	Risk Report	The risk report details the origins of overall project risk and recaps key data about unique project risks (typically the number of threats and opportunities and other summary metrics). It includes a prioritized catalogue of all identified risks and a brief overview of project risk and may include an analysis of individual risk distribution. It is referenced since the overall level of project risk and the distribution of individual risks can impact the selection of risk responses.

Plan Risk Responses (Continued)		
Key Tools & Techniques	Expert Judgment	Expert judgment is judgment based on expertise acquired in a specific area. It is often more significant and accurate than the best modeling tools available and can be provided by stakeholders, company personnel external to the project, professional organizations or groups, and consultants. It is important to consider expertise related to risk response strategies (both threat and opportunity), contingent response strategies, and overall project risk strategies.
	Strategies for Threats	Strategies for threats include escalation, avoidance, transference, mitigation, and acceptance.
	Strategies for Opportunities	Strategies for opportunities include escalation, exploitation, sharing, enhancement, and acceptance.
	Contingent Response Strategies	Strategies for contingent risks are defined by the team and are only executed if triggered by predefined events. An example of a contingent risk is failure to meet an intermediate milestone in accordance with the schedule.
	Strategies for Overall Project Risk	Strategies for overall project risk include avoidance, exploitation, transference/sharing, mitigation/ enhancement, and acceptance.
	Alternatives Analysis	Alternatives analysis can be used to compare alternative risk responses to determine the most appropriate response.
	Cost-benefit Analysis	Cost-benefit analysis is a financial tool that determines the scenario that best fits the needs of the project by comparing the cost of each scenario to its expected benefits. If the impact of an individual risk can be quantified, the cost effectiveness of alternative responses can be determined.
Key Outputs	Change Requests	Change requests are requests for modification that have not been formally approved through the change control process. Modifications to the cost and schedule baselines or to other impacted components of the project management plan may be requested.
	Resource Management Plan	The resource management plan is a component of the project management plan that documents the manner in which the team and physical resources are determined, quantified, and acquired. The resource management plan is updated with approved modifications to resource allocation and updates to resource strategy.

Plan Risk Responses (Continued)		
Key Outputs (Cont.)	Scope Baseline	The scope baseline is the authorized version of the scope statement, WBS (to the level of work package with individual identification codes), and WBS dictionary. The scope baseline is subject to change control. The scope baseline is approved with approved changes arising from agreed-upon risk responses.
	Schedule Baseline	The schedule baseline is the authorized version of the schedule model. It contains baseline start and baseline finish dates, is subject to change control, and is used as the basis of comparison to actual results. Approved changes to schedule estimates arising from agreed-upon risk responses update the schedule baseline.
	Cost Baseline	The cost baseline is the authorized version of the time-phased budget for the project, excluding management reserves, and subject to change control. It is evolved from a summation of approved budgets for specific schedule activities. Cost estimates are aggregated by work packages, then into higher components of the work breakdown structure (WBS), and then for the entire project. The cost baseline is updated with approved changes to cost estimates arising from agreed-upon risk responses.
	Assumption Log	The assumption log is a document that lists the assumptions and constraints identified during the creation of the project charter. The assumption log is updated with the addition, modification, or removal of any assumptions and constraints determined during plan risk responses.

Situational Question and Real World Application
Failure to effectively address the Plan Risk Responses process could result in a failure to develop responses and strategies for identified project risks, which could negatively impact the schedule and budget.

Risk Management Known and Unknown Table

Name	Created For	Description	Example
Contingency Reserves	Known Unknowns	Schedule and budget reserves for risk events whose occurrence can be forecasted.	An event whose occurrence increases the cost of production (a cost increase for materials) and/or increases the project duration (the software architect was ill for two weeks during a critical stage in planning), or scope creep
Management Reserves	Unknown Unknowns	Reserves for risk events whose occurrence cannot be forecasted, but which may occur.	An event such as a natural disaster or terrorist attack.

Know the characteristics of management reserves (unknown unknowns) and contingency reserves (known unknowns).

14.6.1. Risk Owner

The risk owner is the person responsible for implementing the response if a risk event occurs.

Know who risk owners are and what they are responsible for.

14.6.2. Risk Response Strategies

The following strategies are recommended for use in planning risk responses. For the exam, each response type should be recognizable in a situational question (memorization of the types and their characteristics is recommended). A mnemonic device (aid for memorization) is **SEE** the **ATM**, which contains the initial letters of the response types (share, exploit, enhance, avoid, transfer, mitigate).

Know the characteristics of a risk response plan including recognition of response strategies.

Risk Response Strategies for Positive Risks or Opportunities		
Risk Response Tool	**Description**	**Example**
Share	The share strategy involves **splitting the benefit (and responsibility)** of the risk with a third party to maximize an opportunity (or minimize a threat).	The technology company formed a partnership with a marketing company to launch a sales campaign supporting the product under development.
Exploit	The exploit strategy involves **ensuring the success** of the opportunity or project.	The new project had the best resources assigned to maximize the probability of success.
Enhance	The enhance strategy takes steps to **improve the size or capacity of the risk event** (opportunity) by determining the key components of the risk and maximizing those components.	With sales exceeding projections, the organization hired more sales people to ensure that as many customers as possible knew of their products.

Risk Response Strategies for Negative Risks or Threats		
Risk Response Tool	**Description**	**Example**
Avoid	The avoid strategy involves modifying the plan so that risk doesn't have to be considered.	Selecting alternative potential vendors to ensure the organization has sufficient inventory
Transfer	The transfer strategy **reassigns risk** exposure **to another party.** Note that all risk is not necessarily eliminated and that additional risk might be created.	**Example #1:** Hiring an outside organization to produce a product component rather than building the component **Example #2:** Buying insurance against the risk
Mitigate	The mitigate strategy involves minimizing the negative characteristics of the risk.	Eliminating outside sources and doing work internally mitigates the risk of the vendor failing to produce project deliverables in a timely manner

Risk Response Strategies for both Positive and Negative Risks		
Risk Response Tool	**Description**	**Example**
Escalation	The escalation strategy involves **entrusting the opportunity**, which is outside the project scope, to program management, portfolio management, or another relevant area of the organization.	The manager of the project to build a revolutionary new habitat for the zoo's big cats escalated the affiliated funding campaign to the program manager.
Acceptance	The acceptance strategy involves **tolerating the risk**. It is a valid option if there are no other options available.	Determining that, if a union goes on strike, the project will have to be delayed until the strike is settled.
Note that there is active acceptance, which involves a risk response, and passive, which does not involve a risk response.		

Contingent Response Strategy		
Risk Response Tool	**Description**	**Example**
Contingent Response Strategy	The contingent response strategy involves defining responses that will only be enacted if triggered by predefined events, such as a change in project conditions or the need to accommodate worst-case situations.	The team developed a contingency plan to add staff to the project if the important development milestone was missed.

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 437-448

14.7. Implement Risk Responses (Executing Process Group)

Know the Key Inputs, Tools & Techniques, and Outputs for Implement Risk Responses.

During the Implement Risk Responses process, risk response plans are implemented.

Note that implementation of a specific risk response may result in residual risk (risk remaining after implementation of a risk response) and/or secondary risk (risk resulting from implementation of a risk response).

Also note that if the risk response is not effective, a work-around may be necessary.