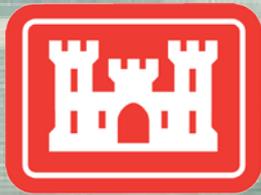


PROJECT SUCCESS IN 6 EASY STEPS: RISK MANAGEMENT

**Doris Marlin, PMP, PMI-RMP
Civil Works Program Mgr.,
PPM CoP, HQ USACE
15 Sep 2016**



®

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Opening Remarks

- Thanks planning for teaming up with PPM CoP
- Put items in Chat – this helps us build the Enterprise approach for Risk Guidance – we need to know what you need to know to do your job.
- Think of a Risk example – I need a few volunteers.
- This is overview – but with some emphasis on what happens in planning and why important to carry through until final.
- Yes – My examples are simplistic but universal.
- Webinar good for 1.5 PDUs, email me and I will send you info on how to claim or put in your chat box.



Risk Management – at USACE

- Cost & Schedule Risk Analysis
- Risk Management Center
- SMART Planning
- Performance / Failure Risk
- ISO 31000
- USACE Risk Framework



USACE Enterprise Risk Management – A Comprehensive Approach – Coming Soon

- Work in Progress
- Many variations
- All with same Goal
- All Complimentary Processes
- Tell us about conflicting processes
- Drivers may be specific based on specialized applications, depending on what is being managed.



Planning CoP Webinars on Risk Management

Webinars on Planning CoP Toolbox, Training Tab

- Risk Informed Decision Making
 - ▶ Why risk management is important to USACE
- [Risk Management in Planning: Tools and Application](#)
 - ▶ Risk Management Plan and Risk Register
- [Risk Management in Planning: An Overview](#)
 - ▶ Risk assessment, risk management & risk communication
- [SMART Planning – The Risk Register](#)
 - ▶ Short introduction to the Risk Register



What is Project Success?



**Project Delivery Risk Management saves
Time, Money and improves Stakeholder Collaboration**



Session – What you will learn

- 6 Steps (PMI – PMBOK)
- Critical Factors for Success
- Risk Register – Communication Tool
- All Phases
- Offense and Defense of Risk-Informed Decision Making
- Every PDT Member Contributes
- Planners contributing to the Life Cycle



PMI Project Risk Management

11

PROJECT RISK MANAGEMENT

Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. The objectives of project risk management are to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project.

Figure 11-1 provides an overview of the Project Risk Management processes, which are as follows:

- 11.1 Plan Risk Management**—The process of defining how to conduct risk management activities for a project.
- 11.2 Identify Risks**—The process of determining which risks may affect the project and documenting their characteristics.
- 11.3 Perform Qualitative Risk Analysis**—The process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact.
- 11.4 Perform Quantitative Risk Analysis**—The process of numerically analyzing the effect of identified risks on overall project objectives.
- 11.5 Plan Risk Responses**—The process of developing options and actions to enhance opportunities and to reduce threats to project objectives.
- 11.6 Control Risks**—The process of implementing risk response plans, tracking identified risks, monitoring residual risks, identifying new risks, and evaluating risk process effectiveness throughout the project.

These processes interact with each other and with processes in other Knowledge Areas as described in detail in Section 3 and Annex A1.

11

PRM: Critical Factors for Success

- Organizational Commitment
[i.e. BUY-IN at all organizational levels]
- PRM is ongoing throughout the Project Life Cycle
- Education of Stakeholders to recognize the value of Project Risk Management
- Individual Commitment / Responsibility
- Open & Honest Communication
- Scale Risk Effort to Project
- Integrate with Project Management



Why Manage Risk

To minimize crisis management

If you think risk management is expensive, try crisis management.

The most strategic thing we can do is execute our program.

We will encounter problems / risks – Risk Management goals are to minimize “uncertainty and impacts”

Risk Management gives PDTs a fighting chance to manage the unexpected.



Impact of Variables to Project Time

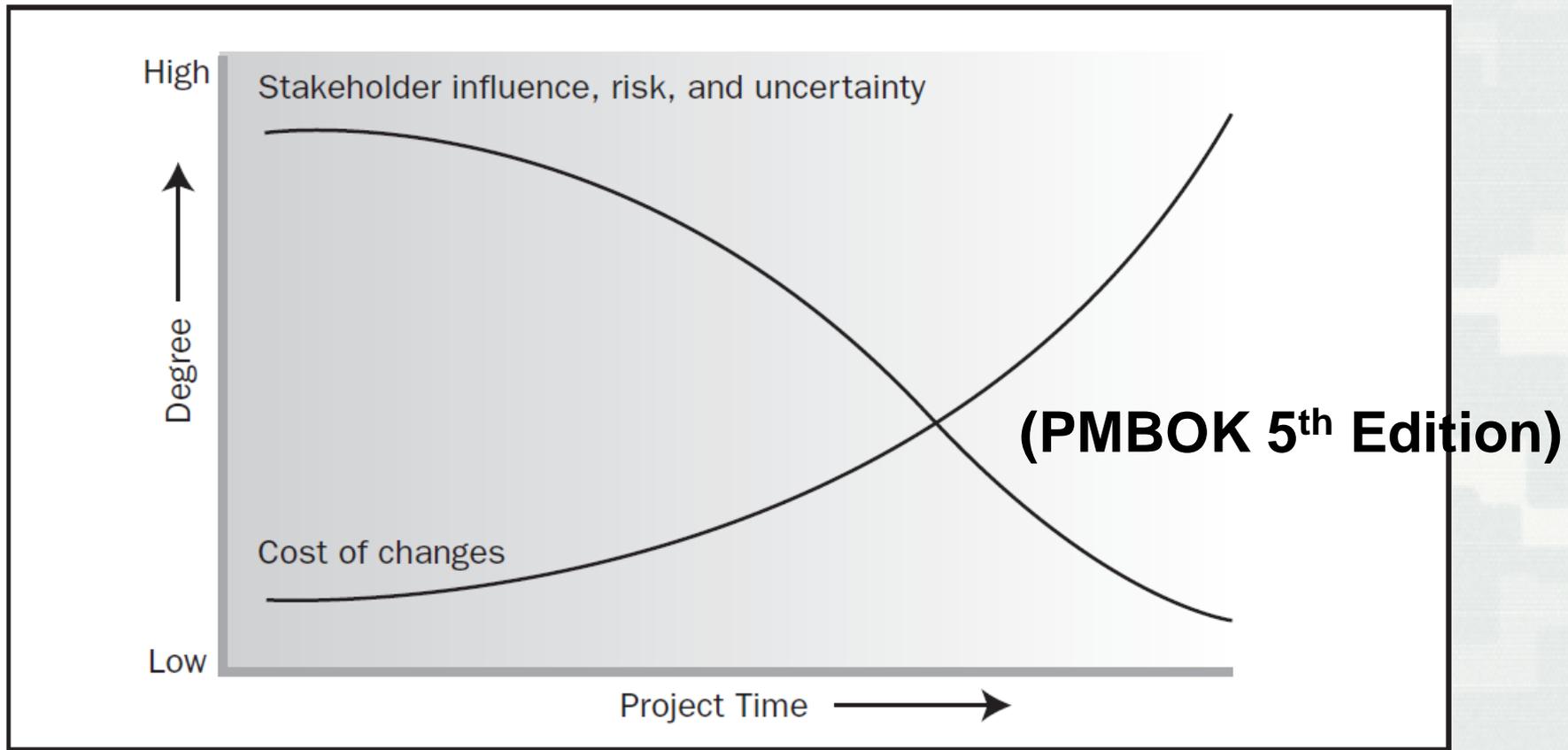


Figure 2-2. Impact of Variable Based on Project Time

Risks increase project costs and extend the schedule if not managed early.

Repeat the Risk Steps throughout the Project Life Cycle

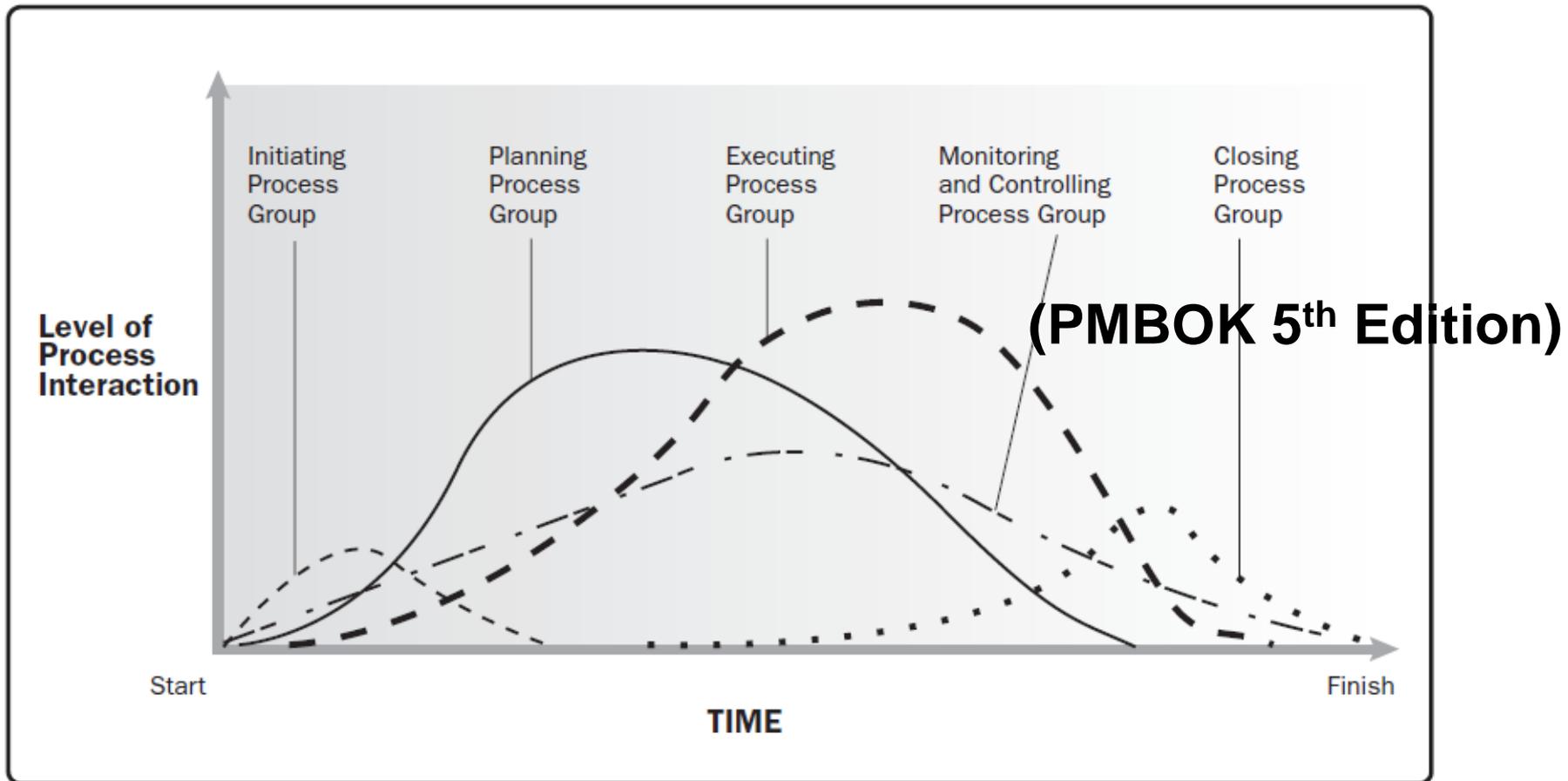


Figure 3-2. Process Groups Interact in a Phase or Project

Credentials

Marlin background

PMI PMP

Why PMI-RPM

**When I saw how much time,
money and relationships
could have been saved on
past projects,
I became a believer in
Project Risk Management**



Quick “must say” statements

“Risk” in USACE is like the blind men describing different parts of the Elephant

Risk in the COE – A Culture Change / inconsistent terminology

The LCCM Initiative and the Risk Team

Cost CX Items: Schedule & Output of CSRA

Stolen Shamelessly from Prabha Sharma, SWF, & Marc Glowczewski, LRP

Planning Toolbox, PMI, & The PMI Instructors



What is Success? Why 6 Steps?

It Depends on your Project Objectives

Why 6 Steps?

The Process is your friend.

None of us, are smarter than all of us.

Experience can't catch everything

Not enough to rely on just experience of leadership

– PDTs need to have a systematic process that catches risks and then responds effectively

**Project Delivery Risk Management saves
Time, Money and improves Stakeholder Collaboration**



Inter-related Project Objectives

Stakeholder Satisfaction

Scope

**Risk &
Quality**

COST

**Sched
ule**



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Objectives / Deal Breakers

Katrina Recovery – Schedule

Downtime NSA – Customer

Ground water plume for Host Nations

Melaluca Quarantine - Quality

Returning Troops / School Breaks – Schedule

Webb Telescope – Quality

Gas Station – Stuttgart - Schedule

PCBs / Transformers -



Once you know these Deal Breakers

- You can Prioritize
- Risk Tolerance Levels
- Stakeholder Interests
- Stakeholder Levels of Influence
- Determines your risk budget and your timing, expertise, communications

This becomes a basis for your Communication Plan,

When you must elevate an issue, and how to be on a journey of a common understanding (not agreement) with your stakeholders.

Partnering to Manage Project Risks.

Now you can generate your Risk Definition Matrix

**Project Delivery Risk Management saves
Time, Money and improves Stakeholder Collaboration**



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Definitions of Risk Probability and Impact Matrix

Define Based on Project Objectives and Stakeholder Risk Tolerance –
Not every project is the same

	Low	Medium	High
Schedule			
Cost			
Performance			
Quality			
Other			



Definition of Impact Table by Objective (PMBOK Example)

Table 11-1. Definition of Impact Scales for Four Project Objectives

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 /0.05	Low /0.10	Moderate /0.20	High /0.40	Very high /0.80
Cost	Insignificant cost increase	< 10% cost increase	10 – 20% cost increase	20 – 40% cost increase	> 40% cost increase
Time	Insignificant time increase	< 5% time increase	5 – 10% time increase	10 – 20% time increase	> 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.

Congratulations !

You are halfway through Step 1
Plan Risk Management

**Project Delivery Risk Management saves
Time, Money and improves Stakeholder Collaboration**



1. Plan RISK Management

Purpose: To define how risk management activities will be conducted.

This is your “Risk Management Playbook”



Plan Risk Management

the Critical Factors for Success

- Acceptance by Stakeholders
- Alignment with project constraints
- Balance between costs vs efforts
- Risk Management Efforts Aligned with Project Needs

Ref: The PMI Instructors

This Lesson – Key to Plan Risk Management Success



Risk Management Plan (RMP) Contents

1. Methodology (includes metrics for types of risk)
2. Roles & Responsibilities (include levels of authority to use contingency)
3. Budgeting
4. Timing
5. Risk Categories
6. Definitions of Risk Probability & Impact
7. Probability & Impact Matrix
8. Stakeholder Tolerances (and revisions)
9. Reporting Formats
10. Tracking
11. *Risk Response Planned Actions
- Triggers
12. *Risk Register
13. CSRA Report - Appendix



The RMP is a component of the PMP

2. Identify Risks

Purpose: To identify risks and determine which risks may affect the project, and then document their characteristics.

PMBP Phase: Planning

Output: Risk Register



Identify Risks Critical Factors for Success

- Identify Risks and Document them Early
- Perform process repeatedly
- Be comprehensive and thorough when identifying risks
- Seek multiple perspectives
- Complete a risk statement
- Assign risk tracking responsibility by name
- Identify initial risk responses



RISK STATEMENT

As a result of (this cause), this [risk] may occur and have this {effect}.

EXAMPLE:

As a result of an intense storm, an extreme storm surge event can occur and flood the subway tunnels in NYC, shutting down the financial district for an extended period of time, at a loss of billions of dollars.



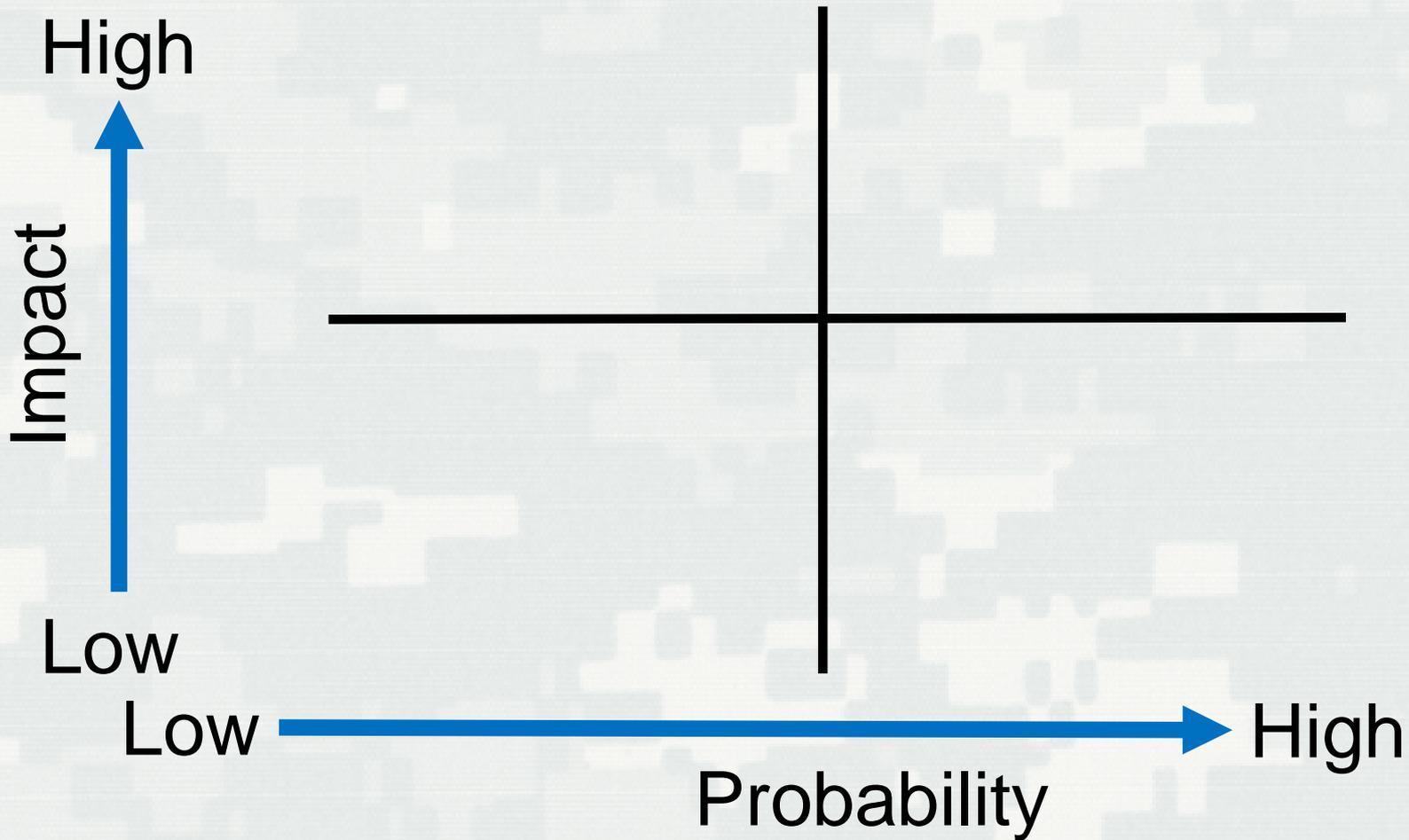
Uncertainty – The lack of knowledge of future events.

Probability – The likelihood of occurrence.

Impact – To have an effect



Probability and Impact



Risk Register

	1	2
Risk		
Description		
Assumptions		
Consequences		
Potential Responses		
Probability / Impact (H-M-L)/(H-M-L)		



Project Risk Management Success or Failure?

Case Study: EUCOM Secure Communications Interruption



Illustrates

- Risk needs more attention (is greater) if using NEW methodology or NEW technology
- Risk Transfer
- Risk Register should carry through all Life Cycles / All Phases – Plan for long term



LRP April 2016 PRB Slide

Project Risk Register
 Sheraden Park Section 206 Aquatic Ecosystem Restoration
 14APR16

WBS/ID	Threat/Opportunity Event	Condition / Issue	Probability	Severity	Risk Category	Strategy	Strategy Description	Project Implications	Rough Order Impact Project Cost(\$)	Rough Order Impact Project Schedule (mo.)
1	Delay of Contract Award	Delay of contract award may push project into FY17 execution, where the funds set aside for the project are at risk at being reprogrammed by LRD to more viable Section 206 projects	Likely	Catastrophic	High	Mitigation	Communicate with local sponsor to explain severity of risk and impact of delays to overall health of the project.	Cost & Schedule	\$50K +	24mo. +
2	Active Construction Site adjacent to Public Park	Construction of this project will occur directly adjacent to a public park with the potential of public interaction with construction equipment and personnel.	Likely	Marginal	Moderate	Transference	Contractor will be required to physically secure the site, and put into place safety management plans	Safety/Health		
6	Loss of funds	Loss of funds due to LRD reprogramming may occur if contract award slips into next FY.	Seldom	Critical	Moderate	Mitigation	Local sponsor has been notified of potential loss of funds and is cooperating in meeting schedule milestones.	Cost & Schedule	\$25K-\$50K	6mo. - 24mo.
8	Local Sponsor LERRDs submission	Project has not received a complete LERRDs submission from local sponsor, which causes uncertainty in overall Total Project Cost. Without complete LERRDs submission, TPC unknow, total Local Sponsor Cost Share unknown.	Likely	Marginal	Moderate	Mitigation	Have communicated with local sponsor regarding importance of submitting LERRDs in a timely manner. Have also requested and received some order of magnitude LERRDs numbers	Cost	\$10K-\$25K	-
3	Real Estate Acquisition	Local Sponsor may not be able to timely provide real estate required for the project.	Unlikely	Marginal	Low	Acceptance	Schedule will be adjusted, and waiver will be sought to solicit without real estate	Cost & Schedule	\$10K-\$25K	3mo. - 6mo.
4	Vandalism of Equipment	Previous project in Sheraden Park experienced equipment damage and vandalism. This may cause increase in construction bids	Likely	Negligible	Low	Transference	Contractor's responsibility to protect equipment from damage of vandalism, may result in higher bids due to increased contractor risk	Cost & Schedule	\$0-\$10K	0mo. - 3mo.
5	NPDES Permit Expiration	NPDES Permit has been extended once already, extension expires on 5DEC2017	Seldom	Marginal	Low	Mitigation	Contingency Planning to start permit renewal 6 months prior to expiration (JUN2017)	Cost & Schedule	\$10K-\$25K	3mo. - 6mo.
7	Local Sponsor Cost Share	Project has not received full local sponsor cost share, however is in balance with current expenditures on the project. Without full cost share, project will be unable to complete.	Unlikely	Critical	Low	Mitigation	Have communicated with local sponsor regarding funding requirements and potential project impacts	Schedule	-	6mo. - 24mo.
9	Ecosystem Benefits not realized	Possibility that ecosystem benefits proposed for project are not realized.	Unlikely	Negligible	Low	Mitigation	Adaptive monitoring plan drafted	Cost & Schedule	\$0-\$10K	0mo. - 3mo.



Events & Issues

WBS/ID	Threat/Opportunity Event	Condition / Issue
1	Delay of Contract Award	Delay of contract award may push project into FY17 execution, where the funds set aside for the project are at risk at being reprogrammed by LRD to more viable Section 206 projects
2	Active Construction Site adjacent to Public Park	Construction of this project will occur directly adjacent to a public park with the potential of public interaction with construction equipment and personnel.
6	Loss of funds	Loss of funds due to LRD reprogramming may occur if contract award slips into next FY.
8	Local Sponsor LERRDs submission	Project has not received a complete LERRDs submission from local sponsor, which causes uncertainty in overall Total Project Cost. Without complete LERRDs submission, TPC unknow, total Local Sponsor Cost Share unknown.



Probability + Severity = Risk Category

Probability	Severity	Risk Category
Likely	Catastrophic	High
Likely	Marginal	Moderate
Seldom	Critical	Moderate
Likely	Marginal	Moderate



Response Strategy

Strategy	Strategy Description
Mitigation	Communicate with local sponsor to explain severity of risk and impact of delays to overall health of the project.
Transference	Contractor will be required to physically secure the site, and put into place safety management plans
Mitigation	Local sponsor has been notified of potential loss of funds and is cooperating in meeting schedule milestones.
Mitigation	Have communicated with local sponsor regarding importance of submitting LERRDs in a timely manner. Have also requested and received some order of magnitude LERRDs numbers



Implications and Impacts

Project Implications	Rough Order Impact Project Cost(\$)	Rough Order Impact Project Schedule (mo.)
Cost & Schedule	\$50K +	24mo. +
Safety/Health		
Cost & Schedule	\$25K-\$50K	6mo. - 24mo.
Cost	\$10K-\$25K	-



3. Perform Qualitative Risk Analysis

Purpose: To prioritize risks for further analysis or action, which is done by assessing and combining the probability of occurrence and impact of risks

Process Group: Planning

Output: Risk Register Update (plus)

Ref: The PMI Instructors 

4. Perform Quantitative Risk Analysis

Purpose: To numerically analyze the effects of identified risks on the project objectives

Process Group: Planning

Output: Risk Register Update (plus)

Ref: The PMI Instructors 

5. Plan RISK Responses

Purpose: to develop options and actions to enhance the risks that may bring opportunities and reduce those risks that are a threat to the project objectives.

Process Group: Planning

Output: Risk Register Update (plus)

Ref: The PMI Instructors 

Plan Risk Response

the Critical Factors for Success

- Ensure Open and Appropriate Communication
- Clearly Define Risk Related Roles & Responsibilities
- Plan for Resources, Budget, and Schedule Activities as needed
- Integrate Responses into PMP
- Address Interaction between Risks & Responses
- Develop Appropriate Responses
- Address Both Positive and Negative Risks

Ref: The PMI Instructors

This Lesson – Key to Planning Successful Risk Responses



Strategies for Negative Risk or Threats

- Avoid – Alter project to remove possibility of the risk
- Transfer – Shift the impact of the risk to a 3rd party (insurance or contract action)
- Mitigate – Reduce the probability and/or impact of the risk to an acceptable level.
- Accept –
 - ▶ Passively (do nothing)
 - ▶ Actively – Add contingency (money or time to prepare for the risk)



Strategies for Positive Risk or Opportunities

- Exploit – Make sure that the positive risk occurs.
- Share – Utilizing a third party that can help make sure that the organization can take advantage of an opportunity.
- Enhance – Increase the probability or impact of a positive risk.
- Accept –
 - ▶ Passively (do nothing)
 - ▶ Actively – Add contingency (money or time to prepare for the risk)



Risk Informed Decision Making

Risk Management Offense and Defense



6. Monitor and Control Risks

Purpose: To track identified risks, identify new ones, monitor residual risks, execute the risk response plans and evaluate their effectiveness throughout the project's life cycle.

Process Group: Monitor & Control

Outputs: Multiple Document Updates

Ref: The PMI Instructors 

Critical Factors for Success

- Follow risk management plan
- Assume first plan is the your worst plan i.e. you know more as project progresses
- Good risk identification and update process
- Effective Project Controls
- Two-way communications
- Development of lessons learned for future projects

This Lesson – Key to PDT Success (pull from List that Doris has from PM Institute)



Risk Register (partial list)

	Step 2	Step 3	Step 4	Step 5	Step 6
	Identify Risks	Qualitative	Quantitative	Plan Responses	Monitor & Control
1	List Risks				Outcomes of reassessments, audits, responses
2	Root Causes	Refine Causes			
3	Descriptions	Categories			
				Owners & Responsibilities	
4	Owners				



Ten Mile Creek



N

®
NG®

Soil Cement Slope and bench being placed – east side of reservoir



Soil Cement Slope being placed – east side of reservoir



Illustrates

- Risk must identified and carried on Risk Register through multiple project phases
- Need for a Risk Response Plan
- Trigger, Owner, Budget, Time, Expertise



Project Delay



Enhance Risk – Positive Opportunity



End of Year Contract Awards

BCOE

Real Estate

Sponsor Funding

Construction Permits

Contract Support – Acquisition Planning



*If you fail to
plan,
you plan to fail.*

- John Rohn
- Ben Franklin
- Winston Churchill





That's great . . . but . . .

What do I do with that,
exactly?



Risk Management Made Practical

- Plan for risk – prepare a risk management plan.
- Conduct risk identification meetings – collaborate with the stakeholders (PDT).
- Perform analysis of risks – qualitative and/or quantitative.
- Communicate the real risks and manage them.
- Plan responses to heavy-hitting risks.
- Monitor and control



Risk Management Made Practical

- Respond to risks as they occur.
- Consider secondary and residual risks.
- Conduct regular risk review meetings.
- Revisit risks from original identification. Place risks with dynamic changes on management “watch lists.”
- Track your projects with an eye on the risks.
- Control your projects appropriate to the risks (i.e. change control).



Thank You

- *Questions*
- *Discussion*
- *Answers*



USACE PLANNING TOOL BOX & RISK REGISTER

“Steal Shamelessly”

<http://www.usace.army.mil/CECW/PlanningCOP/Pages/ArticleTemplate.aspx>





- Visitors: Public, Agencies, Congress, Tribes
- How to Partner with Us
- Planning Overview
- Current Initiatives
- Planning Ahead Newsletter

Planning Links

- Agreements
- Centers of Expertise
- Civil Works Review Board
- Chief's Reports
- Model Certification
- Peer Review
- Pilot Studies
- Planning Guidance
- Planning Guidance Notebook
- WRDAs and Related Laws
- Required Annual Planning Reports

Locate Office and Projects

Planning Toolbox your homepage!

Planning News Flash

has recently made changes to all cost share agreement models for specifically authorized projects and the Continuing Authority program. See the memo dated 9/13/12, subject: [Recent Modification of Cost Share Agreement Models](#). The memo highlights the following changes made:

- deferral in the event of excess study costs;
- deferral if total costs exceeds a specified amount;
- Federal program funds;
- Section 902 - Maximum Cost of Projects.

In addition, several other changes were incorporated into the models, as applicable, so check the History and Applicability file for a model to get the entire list of changes made to that model. Further, if interested in the FY13 PPA PROSPECT classes, the classes are scheduled for 4/22/13 - 4/26/13 in San Diego, CA at the Coronado Naval Base and 7/29/13 - 8/2/13 in Alexandria, VA at Ft Belvoir. Check with your training coordinator for registration procedures for #315 - Development of Project Partnership Agreements.

Theodore A. "Tab" Brown, P.E., SES
Chief, Planning Community of Practice





PLANNING LINKS

SMART Webinars and Presentations

Last updated: 19 November 2012

SMART planning is:
S: Specific
M: Measurable
A: Attainable
R: Risk Informed
T: Timely

SMART Guide

- [Planning SMART Guide](#)
- [Feasibility Study Kickoff](#)
- [Alternatives Milestone](#)
- [Tentatively Selected Plan Milestone](#)
- [Agency Decision Milestone](#)
- [Final Report Milestone](#)
- [Chief's Report Milestone](#)
- [Tips, Tools & Techniques](#)
- [Additional Directives & Guidance](#)
- [Webinars and Presentations](#)

- [Foundations of SMART Planning](#) (November 2012)
This 17 minute video provides an introduction to the foundations of SMART Planning and the SMART planning feasibility study process. The video is hosted by the USACE Corps Connection YouTube channel. Download the Foundations of SMART Planning [PowerPoint presentation](#).
- [SMART Feasibility Studies: Milestones and Process](#) (November 2012)
This 16 minute video provides more detail on the milestones and process for conducting feasibility studies applying the SMART planning principles. The video is hosted by the USACE Corps Connection YouTube channel. Download the SMART Feasibility Studies: Milestones and Process [PowerPoint presentation](#).
- [SMART Planning and Rescoping Charettes](#) (July 2012)
This presentation provides an overview of the SMART Planning Feasibility Study Process and introduces the planning charette as a tool for Project Delivery Teams to launch or rescoped their study. [PPT File](#)
- [SMART Planning - The Risk Register](#) (June 2012)
This recorded webinar provides an short introduction to the Risk Register tool for PDTs to identify - and address - study and project risks. The link opens the webinar in a new window in Adobe Captivate. The webinar cannot be downloaded.



PLANNING LINKS

Tips, Tools & Techniques

Last updated: 29 November 2012

SMART planning is:
S: Specific
M: Measurable
A: Attainable
R: Risk Informed
T: Timely

Lessons learned and helpful hints from other Project Delivery Teams (PDTs) that are striving to plan SMART.

Tips

- o [Nine Habits of Highly Effective Studies](#)
- o [The Sponsor's Role](#)
- o [Preparing for a SMART Planning Charette – Checklist for Districts & PDTs](#)
- o [Preparing for a SMART Planning Charette – Checklist for Vertical Teams](#)

Tools

- o [Level of Detail by Project Purpose](#)
- o [SMART Planning Charette Handbook](#)
- o [Project Management Plan](#)
- o [Review Primer](#)
- o [Decision Management Plan](#)
- o [Using a Risk Register](#)
- o [Using a Decision Log](#)
- o [Developing the Feasibility Report](#) – includes an example Report Synopsis Outline
- o [Glossary of Terms and Acronyms](#)



Techniques

- o [Multi-Objective Planning](#)

SMART Guide

- [Planning SMART Guide](#)
- [Feasibility Study Kickoff](#)
- [Alternatives Milestone](#)
- [Tentatively Selected Plan Milestone](#)
- [Agency Decision Milestone](#)
- [Final Report Milestone](#)
- [Chief's Report Milestone](#)
- [Tips, Tools & Techniques](#)
- * [Nine Habits of Highly Effective Studies](#)
- * [The Sponsor's Role](#)
- * [Preparing for a SMART Planning Charette](#)
- * [Level of Detail by Project Purpose](#)
- * [SMART Planning Charette Handbook](#)