

Practical Project Risk Management

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Project Risk Management Can Seem Overwhelming

But it doesn't have to be!

2

Outline of the Presentation

1. Overview: terminology and classic project risk management
2. Risk management "Rules of Thumb"
3. Integrated planning and project risk management
4. Summary
5. Questions?

3

1. Overview: Risk Terminology and Classic Project Risk Management

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What's Risk?

"Risk" = Uncertainties

Risk is always in the future

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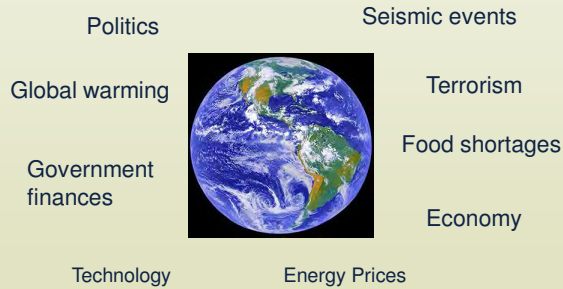
What Does Risk Look Like?

"Opportunities", "upside risk"

"Downside risk", sometimes just "risk"

6

We Face Many Risks, Many on a Global Scale, and Many Man-Made



7

What's Project Risk?

“(Project) Risk is an uncertain event or condition that, if it occurs, has an effect on at least one project objective.”

“Objectives can include scope, schedule, cost, and quality.”

“A risk may have one or more causes and, if it occurs, it may have one or more impacts.”

PMBOK, 4th edition

8

There Are Many Sources of Project Risk

External risks:

- Market shifts
- Government action
- Budgets
- User advocacy
- Congress
- Technology advances
- Threat
- Lawsuits

Example from PMP certification training

Internal Risks:

- Staffing assignments
- Cost estimates
- Design risks
- Technical feasibility
- Integration
- Reliability
- Maintenance levels
- Stocking levels/Provisioning
- Operational politics
- Labor conflict
- Cash flow
- Safety
- Licenses/patent rights
- Contractual failure
- Attrition

9

What is Project Risk Management?

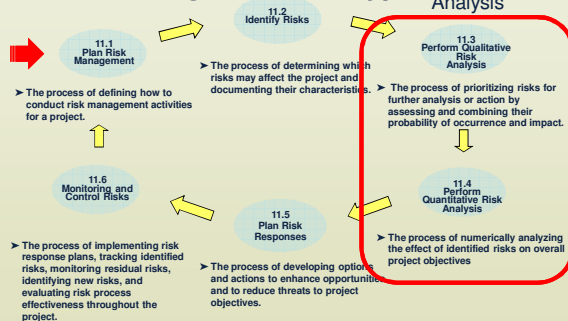
“Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning and monitoring and control on a project.”

“The **objectives** ... are to increase the probability and impact of positive events, and decrease the probability and impact of negative events in the project.”

PMBOK, 4th edition

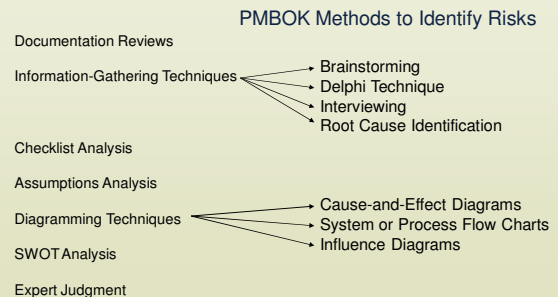
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A Six-Step Risk Management Process (e.g. PMI's) is Typical



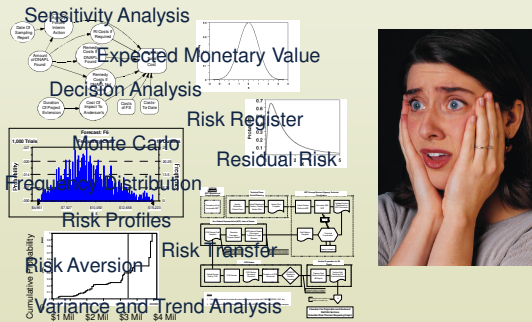
11

Seems Simple, But Each Step Includes Many Different Methods



12

This is Why Project Risk Management Seems Overwhelming



13

In Highlight...

- Risk is future uncertainty
- Project risk is the things that can impact our ability to meet project objectives
- Project risk management is used to plan for and deal with project risk
- The steps are fairly standard, but...
- It can easily become quite complex
- Sadly, that leads to risk management not being used as much as it should

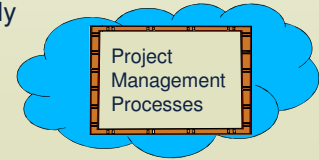
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2. Risk Management “Rules of Thumb”

15

What are “Risk Management Rules of Thumb”?

- Risk Management Rules of Thumb are risk concepts that exist in my mind when I am planning and executing a project or seeing others do the same
- These create awareness outside the frames I typically use for project management



16

What are My Risk Management Rules of Thumb?

1. Most people are overoptimistic
2. Every project has intrinsic risk
3. There are many predictable risks
4. Avoid having major downside risks on the critical path, and...
5. Keep a close eye on slack

17

Risk Rule 1: Optimism Clouds Our Thinking – We Underestimate Risk

“Kahneman and Tversky (1979a, b) found that

human judgment is generally optimistic due to overconfidence and insufficient consideration of distributional information about outcomes.

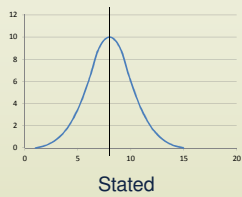
Therefore, **people tend to underestimate the costs, completion times, and risks of planned actions,** whereas they tend to overestimate the benefits of those same actions.

Such error is caused ... where focus is on the constituents of the specific planned action instead of on the actual outcomes of similar ventures that have already been completed.”

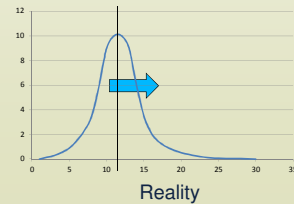
Wikipedia.org Reference Class Forecasting

18

What Does This Mean?



Good examples: most of the recent large-scale man-made disasters (Iraq war, financial system collapse, BP spill in the Gulf, Fukushima nuclear plant)



19

Risk Rule 2: Every Project Has Intrinsic Risk

“Project risk has its origins in the uncertainty present in all projects.”

↑
Underline mine

PMBOK, 4th edition

20

Higher-Level Sources Contribute to Intrinsic Project-Level Risk



21

The Nature of the Project Itself Introduces Intrinsic Project Risk

High(er) Risk Projects

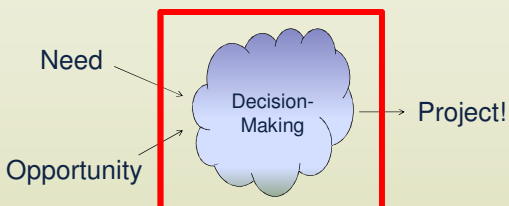
- Untried technology or work processes
- Large group of stakeholders with little agreement
- Exploratory project with indefinite objectives
- Multi-discipline task with team with little experience

Low(er) Risk Projects

- Proven technology or work processes
- Focused and aligned group of stakeholders
- Clearly defined project, appropriate expectations
- Experienced team with strong record on similar projects

22

Decision-Making Can be a Major Source of Intrinsic Project Risk



What happens here? It can depend wildly on the organization and individuals involved

23

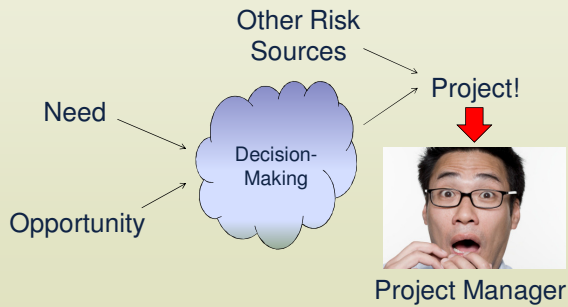
Decision Errors are Common

1. Plunging in
2. Frame blindness
3. Lack of frame control
4. Overconfidence in judgment
5. Shortsighted shortcuts
6. Shooting from the hip
7. Group failure
8. Fooling yourself about feedback
9. Not keeping track
10. Failure to audit your decision process

* From *Decision Traps: The Ten Barriers to Brilliant Decision-Making & How to Overcome Them*, Russo and Schoemaker, 1989

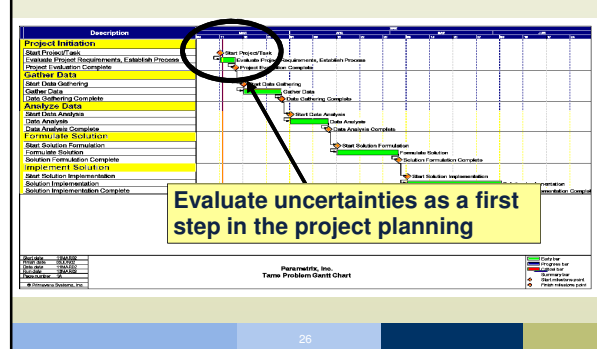
24

The Challenge for You, Regardless of Source, You Still Have to Succeed



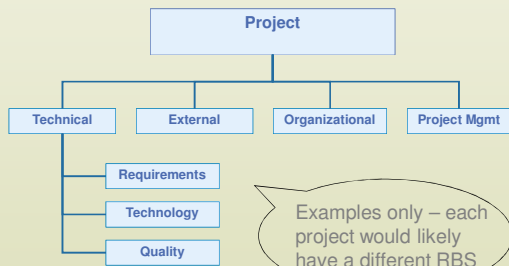
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Evaluate the Nature of Uncertainties at the Project Beginning



26

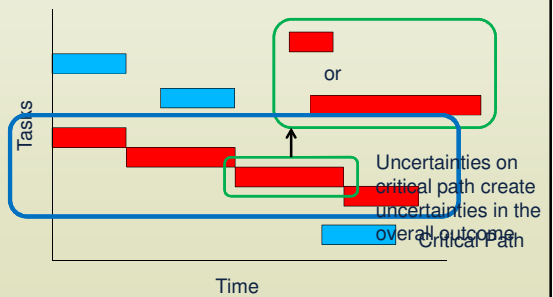
Risk Rule 3: Many Risks are Predictable



Reduced From PMBOK, 4th ed. Section 11, Figure 11-4

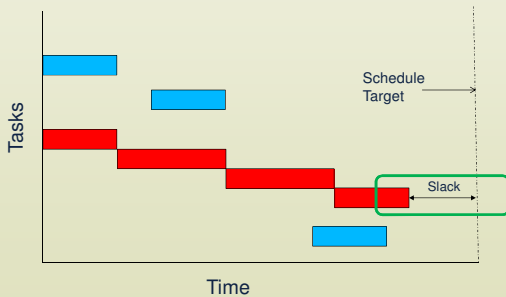
27

Risk Rule 4: Avoid Major Risks on the Critical Path or in Cost Drivers



28

Risk Rule 5: Keep a Close Eye on Slack – Watch for Reducing Slack



29

“Risk Rules of Thumb”, Repeated:

1. Most people are overoptimistic
2. Every project has intrinsic risk
3. There are many predictable risks
4. Avoid having major downside risks on the critical path, and....
5. Keep a close eye on slack

30

In Case You Are Having a “Well, Duh.” Moment....

- Put these five ideas in your mind
- Observe some other projects and pay close attention to the words used
- You’ll see what I am talking about
- My own example....

31

3. Integrated Project Planning and Risk Management

32

Message

Using a careful and systematic project planning process with integrated risk thinking will help you address project risk and have better plans

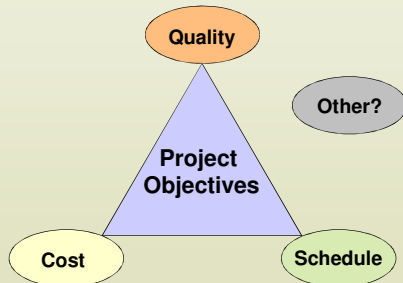
33

Does This Integrated Process Really Work? Absolutely!

- Example 1: Columbia River Channel Deepening Biological Assessment Reconsultation – 6 months to deliver time-critical BA. All budget, schedule, quality objectives met.
- Example 2: Statewide Bridges Environmental Documentation Project – baseline reports for 450 bridges (PMI Project Excellence Award for 2006)

34

Let’s Start. Your First Step Should be to Clarify the Project Objectives



35

As Part of That, Describe the Deliverables You are to Create



Report or Document?

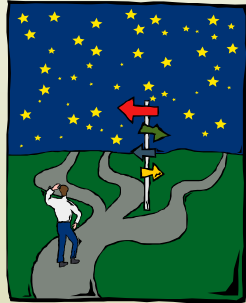


Physical Product?

36

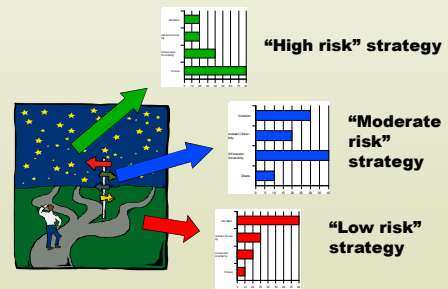
Then Start Identifying Strategies to Meet the Objectives

- There typically are many ways to get through a project
- Each way is a strategy – an assumed approach
- A strategy underlies the project plan – change the strategy, change the plan



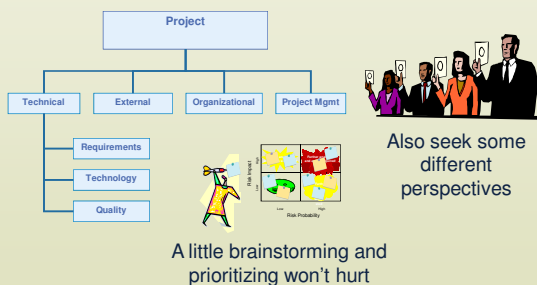
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Each Strategy to Deliver the Project Will Have a Different Risk Profile



38

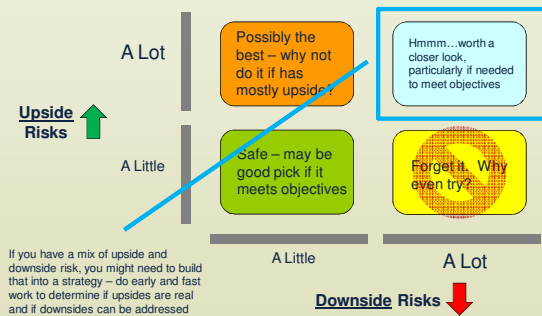
How Do You Gauge the Risk Profile? Predictable Risks are a Start



Reduced From PMBOK, 4th ed. Section 11, Figure 11-4

39

Once You Have Analyzed the Risks, How Do You Pick a Strategy?



If you have a mix of upside and downside risk, you might need to build that into a strategy – do early and fast work to determine if upsides are real and if downsides can be addressed

40

Pick a Strategy That May Best Meet the Objectives and Balance Risks



Initially you are likely assuming a strategic direction – but be aware that you are making assumptions about that direction. Don't lock in!

41

With that Strategy, Start Detailing, Noting Constraints, Resources

Write this:

<p><i>Project Description</i></p> <hr/> <p><i>Objectives</i></p> <ul style="list-style-type: none"> • Objective 1 • Objective 2 • Objective 3 <p><i>Constraints</i></p> <ul style="list-style-type: none"> • Constraint 1 • Constraint 2 • Constraint 3 	<p><i>Delivery Strategy</i></p> <hr/> <p><i>Resources</i></p> <hr/>
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42

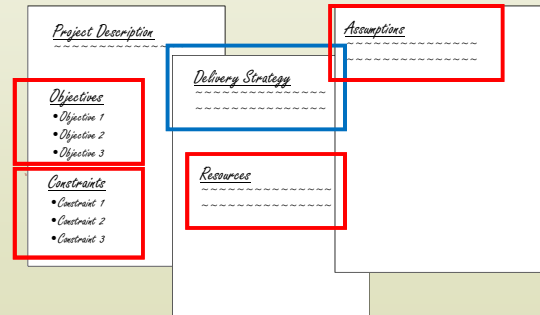
Be Careful to Note Your Assumptions All the Way Through

- Assumptions are a fundamental way we deal with risk (they allow us to plan)
- Key assumptions always involve things like resource availability, time needed, client and agency review, extent of changes, etc.
- Why? We'll test later

Assumptions

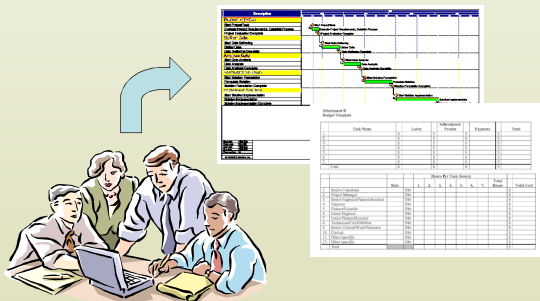
43

Why the Detail? All the Elements Involve or Introduce Risks



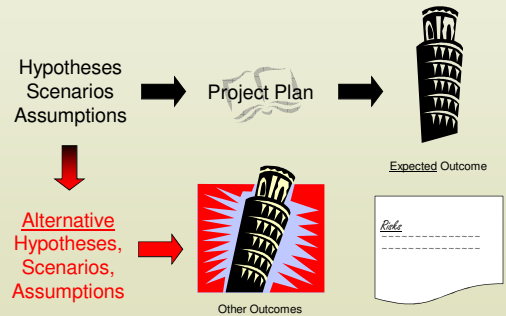
44

With Basic Elements, Develop a Rough Sequenced Schedule, Budget



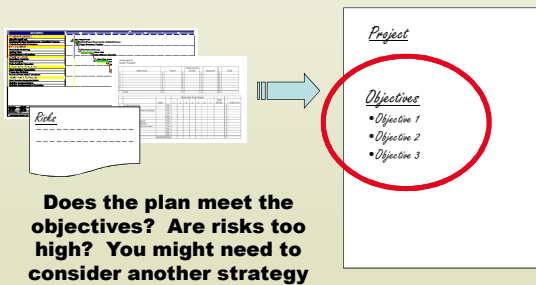
45

Now Perform A Basic Risk Analysis, Testing Assumptions, Other Factors



46

Compare First Cut at a Plan Against the Objectives, Consider the Risks



47

Depending on Where You Stand, You May Need to Restategize



48

Questions?

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through the end of the day, then...

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