Introduction to Risk Management for Outsourcing Projects

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Purpose of Presentation

- To provide an Overview of the Risk Management Process
- To describe Specific Risks with Software Outsourcing and Offshoring
Objectives of Risk Management

**Improve the predictability of a project!**

By:
- Raising awareness and visibility of risks
- Managing risks by mitigation actions to prevent major disasters
- Preparing for contingency
What Is A Risk?

- A Risk is a Potential Event with Negative Consequences that Has Not Happened Yet.
  - However a Risk could also be defined as the event with unforeseen positive consequences.

- A Possibility of Loss — Not the Loss Itself!
  - A source of problem during a project
  - Avoid labeling the cost of a risk as a risk (e.g. schedule slippage). Find the sources!
  - Strike at the root of the problem, not the leaves!

- Something that Makes the Project Special
  - In the widest sense everything is a risk
  - There are better ways of handling recurrent problems!
Project Predictability

![Graph showing Project Costs](image-url)

- **Planned**
- **Not Risk Managed**

**Y-axis:** Cost/Planned (%)

**X-axis:** Time (months)

The graph illustrates the comparison between planned and not risk-managed project costs over time. The Planned line is a dotted blue line, while the Not Risk Managed line is a dashed red line. The graph shows a significant divergence between the two lines, indicating the impact of risk management on project costs.
Project Predictability

The chart illustrates the cost of a project over time, categorized by risk management status. The y-axis represents the cost as a percentage of the planned cost, while the x-axis shows the time in months. Three lines are depicted:

- **Planned**: Represented by a dotted line.
- **Risk Managed**: Represented by a green line.
- **Not Risk Managed**: Represented by a red dashed line.

The chart shows how projects that are risk-managed stay closer to the planned cost line compared to those that are not risk-managed, which show a significant divergence from the planned cost.
## Is this Risk Management?

<table>
<thead>
<tr>
<th>Risk</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COTS dependency</td>
<td>Windows XP SP xy, ERP system version yz.</td>
</tr>
<tr>
<td>Human resources</td>
<td>The availability of human resources from xxx is hard to control since many of the people still have work to do in older projects. Unfortunately, that work has usually a higher priority</td>
</tr>
<tr>
<td>Supplier delivery time dependency</td>
<td>The outsourced application components may be delayed due to plan execution slippery.</td>
</tr>
<tr>
<td>...</td>
<td></td>
</tr>
</tbody>
</table>
Who is involved in Risk Management?

- Customer
- End-user
- Project Team
- Management
- Product Management
- Related Projects
- Subcontractors and Suppliers

Risk Management is Communication!
When?

- Business-Case Analysis for Outsourcing
- Preparation for Outsourcing (Partner Selection, Frame Contracts)
- Status and Briefing of Requirements,
- Detailed Contracts and Project Planning
- Milestones in Project Execution
- Transfer and Maintenance

*Risk Management is a continuous Process!*
Successful Software Outsourcing and Offshoring - 10 -

Generic Risk Management Process

- Control Implementation
- Mandate & Goal
- Package
- Monitor
- Track
- Control Planning
- Analyze
- Describe Risks
- Prioritize Risks

What can go wrong in my project?
What are the tasks of RM?
What has to be changed?
What is the risk status?
What did we learn?
What are the important risks?
What shall we do to reduce severity or avoid risk?
What exactly is the risk?

Based on
- SEI,
- Riskit
- Boehm
Risk Analysis Method

- Describe the Risks
  - Brainstorming potential risks
  - Walkthrough of the risk identification checklist

- Analyze and Prioritize Risks
  - Walkthrough risk sheet and estimate the probability and cost of each risk
  - Calculate risk rating of each risk (e.g. likelihood * consequence)
  - Prioritize in risk classes concentrate on class “High”
## Likelihood

<table>
<thead>
<tr>
<th>Level</th>
<th>Likelihood</th>
<th>Your Approach and Processes...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not Likely:</td>
<td>...Will effectively avoid or mitigate this risk based on standard practices</td>
</tr>
<tr>
<td>2</td>
<td>Low Likelihood:</td>
<td>...Have usually mitigated this type of risk with minimal oversight in similar cases</td>
</tr>
<tr>
<td>3</td>
<td>Likely:</td>
<td>...May mitigate this risk, but workarounds will be required</td>
</tr>
<tr>
<td>4</td>
<td>Highly Likely:</td>
<td>...Cannot mitigate this risk, but a different approach might</td>
</tr>
<tr>
<td>5</td>
<td>Near Certainty:</td>
<td>...Cannot mitigate this type of risk; no known processes or workarounds are available</td>
</tr>
<tr>
<td>Level</td>
<td>Technical</td>
<td>Schedule</td>
</tr>
<tr>
<td>-------</td>
<td>-----------</td>
<td>----------</td>
</tr>
<tr>
<td>1</td>
<td>Minimal or no impact</td>
<td>Minimal or no impact</td>
</tr>
<tr>
<td>2</td>
<td>Minor perf shortfall, same approach retained</td>
<td>Additional activities required; able to meet key dates</td>
</tr>
<tr>
<td>3</td>
<td>Mod perf shortfall, but workarounds available</td>
<td>Minor schedule slip; will miss need date</td>
</tr>
<tr>
<td>4</td>
<td>Unacceptable, but workarounds available</td>
<td>Program critical path affected</td>
</tr>
<tr>
<td>5</td>
<td>Unacceptable; no alternatives exist</td>
<td>Cannot achieve key program milestone</td>
</tr>
</tbody>
</table>

Given the risk is realized, what would be the magnitude of the impact?
Risk Mitigation and Contingency Planning

- **List Mitigation Actions**
  - Start with most severe risks
  - List possible actions to reduce probability and/or cost
  - Some risks can be avoided (e.g. avoid a specific requirement)

- **Contingency Planning**
  - Only for the most severe risks that *cannot* be mitigated
  - List actions to take should the risk materialize
Monitor

- Risks identified as “High” are tracked at the Program Level. The status of each step in the risk reduction plan is updated and reported at the regularly scheduled reviews by the Project Manager.
  - Actions are initiated as required where risk reduction plan activities are not being accomplished.
  - Special briefings of program risks to program management will also be scheduled as needed.

- “Medium” Risks are monitored on Project Management level.

- Re-Assess Risks regularly:
  - Probability and damage of controlled risks changed?
  - New risks identified? Analyze them.
Supplier Selection Risk Factors

- Supplier selection process / criteria
- Supplier capability evaluation
- Executive (or customer) influence on selection
- Number of supplier candidates
- Selection process documentation
<table>
<thead>
<tr>
<th><strong>Risk Factors</strong></th>
<th><strong>Low Risk Cues</strong></th>
<th><strong>Medium Risk Cues</strong></th>
<th><strong>High Risk Cues</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supplier Selection Risk Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Supplier selection criteria</td>
<td>organization weighs technical, process and cost implications when selecting supplier</td>
<td>organization advocates mitigating technical and process related risks while selecting low cost supplier</td>
<td>organization expects low cost supplier will be selected</td>
</tr>
<tr>
<td>2 Supplier evaluation</td>
<td>potential suppliers' technical and process capabilities were reviewed by technical</td>
<td>supplier alternatives were reviewed based on questionnaires or other high level materials</td>
<td>supplier capabilities reviewed by a small team of technical experts, who recommended selection without looking at alternatives</td>
</tr>
<tr>
<td>3 End user involvement in supplier eval.</td>
<td>end users were directly involved in evaluation of the supplier</td>
<td>end users reviewed the results of the evaluation</td>
<td>end users were not involved in the supplier evaluation</td>
</tr>
<tr>
<td>4 Executive (or customer) influence</td>
<td>executives have expressed no written or verbal support for any particular supplier</td>
<td>executives have made written or verbal comments favoring a particular supplier</td>
<td>executives have made a written or verbal mandate of a particular supplier or customer has selected the supplier</td>
</tr>
<tr>
<td>5 Number of supplier candidates</td>
<td>several qualified suppliers from which to choose</td>
<td>just a few qualified suppliers</td>
<td>this candidate is the sole potential supplier, thus evaluation is almost irrelevant; or all supplier candidates have poor prior</td>
</tr>
<tr>
<td>6 Selection process documentation</td>
<td>the evaluation and selection process follows an approved, documented organization</td>
<td>the evaluation and selection process were based on external recommendations</td>
<td>no documented evaluation and selection process was used</td>
</tr>
<tr>
<td>7 Evaluation criteria</td>
<td>supplier evaluation criteria consider defined requirements</td>
<td>supplier evaluated using pre-defined evaluation criteria</td>
<td>no evaluation criteria used in supplier selection process</td>
</tr>
</tbody>
</table>