Effective Risk Management, Measurement, Monitoring & Control

Project Management Focus
Effective Risk Management, Measurement, Monitoring & Control is the process of:

- **proactively planning** for risks
- **identifying** risks
- **diligently** conducting sound risk management,
- **fully analyzing** risk
- **customizing risk response** being sensitive to the 1st impact and the earliest timing
- **Monitoring** risks until they no longer exist &/or the project objectives are achieved or cancelled
- **Effectively and Efficiently controlling** risk outcomes

Each of the above are done with a **keen focus** to further the mission, goal and objectives of a project/program/initiative.
Risk Management

1. Involves planning for Risk ahead of its occurrence.
2. Involves making Risk an integral part of all project meetings as opposed to an afterthought or separate meeting.
3. NOTE: Included in Risk Planning is the:
   - Setup of the Probability & Impact Measurement (PIM) Scale.
   - The PIM Scale is “quantitative” & shows the weight the business places on pain/gain by threshold.
   - Request the PIM from Senior Management or question them to create the PIM Scale.
4. Identification of Risk Responses based on predicted Risk PIM scores.
5. Planned inclusion of Risk Discussion within the course of the meeting topics.
Effective Risk Management, Measurement, Monitoring & Control

Risk Cycle

1. Risk Planning
2. Risk Identification
3. Qualitative Risk Analysis
4. Quantitative Risk Analysis
5. Risk Response
6. Risk Monitoring & Control

Risk Measurement

- Involves **proactive** identification of the Risk
- Involves **Qualitatively** Identifying the Probability & Impact of the Risk
- Involves **Quantitatively** Identifying the Probability and Impact of the Risk
- Involves **Calculating** the Probability & Impact Measurement (PIM) Score.

**include:**

- **Identifying the Risk Trigger(s):** the WBS Item where the impact will be 1st realized.
- **Identifying the Risk Trigger Date(s):** the Earliest Date when the impact will be realized where action can effect the outcome.
Risk Monitoring & Control

- Involves **accurate perception** of Risk Status as the project timeline progresses.
- Involves **active control** of time, cost, resources, quality & circumstances to influence the impact of a Risk to the project objective.
- Involves the **timely implementation** of Risk Response to ensure the best outcome for a Risk to a project objective.
Effective Risk Management, Measurement, Monitoring & Control
PIM Scale, Risk Log, Risk Triggers & Risk Trigger Dates

Once risks have been identified, planned for, and measured – monitoring and controlling occurs.

During monitoring & controlling – Risk Triggers and Risk Trigger Dates are used in conjunction with the PIM score.

Should a risk elevate into a PIM score which requires as Risk Response, the Risk Triggers will indicate the impacted area and the Risk Trigger Date will indicate when the planned risk response will be started (whether proactively planned or done as a risk is identified).

---

### Risk Measurement, Monitoring & Management

**Project Name:**

**Summary:**

**RISK MEASUREMENT, MONITORING & MANAGEMENT**

**Instructions:**

Effective Risk Management, Measurement, Identification & Control is the process of positively planning for and identifying risks, diligently conducting sound risk management, analysis, response and monitoring and ultimately controlling risk to ensure both the success and the objectives of a given project are achieved. It is required to be an integral part of Project Management Plans. This document should be updated and maintained throughout the project to ensure that the risks are managed effectively.

<table>
<thead>
<tr>
<th>THREAT SCALE</th>
<th>OPPORTUNITY SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low</strong></td>
<td><strong>Low</strong></td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td><strong>Medium</strong></td>
</tr>
<tr>
<td><strong>High</strong></td>
<td><strong>High</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RISK IDENTITY</th>
<th>PROBABILITY</th>
<th>IMPACT</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RISK TRIGGER</th>
<th>ACTUAL IMPACT</th>
<th>IMPACT</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
<th>VSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
</tr>
</tbody>
</table>

---

© 2009, Karen Yvonne Lوص، PMP - ALL RIGHTS RESERVED
Effective Risk Management, Measurement, Monitoring & Control

Risk Response - THREATS

Once risks have been identified, planned for, and measured – monitoring and controlling occurs. During monitoring & controlling – Risk Triggers and Risk Trigger Dates are used in conjunction with the PIM score. Should a risk elevate into a PIM score which requires as Risk Response, the Risk Triggers will indicate the impacted area and the Risk Trigger Date will indicate when the planned risk response (whether proactively planned or done as a risk is identified) will be started.

As discussed, Risks have two faces – OPPORTUNITIES and THREATS. Key in the approach to a THREAT is the Risk Response that is designed to manage a risk into an acceptable level that best benefits the project objective.

Examples of RISK RESPONSES to THREATS are:

Avoid - Includes not performing an activity that could carry risk; and vigorously eliminating the possibility of the THREAT. Actively seek to eliminate any uncertainty. This type of THREAT is placed in the schedule and plans are made based on its occurrence, until (if the avoidance was successful) it is overcome.

Transfer - Includes assigning the THREAT to another entity; or, if required, keeping the impact of the THREAT while assigning the responsibility for the THREAT to another entity. It is best, however, to not take responsibility for the THREAT or any activity associated with it in order to insure that the THREAT’s affects are not experienced on your project’s Success Metrics.

Accept – Includes (as a rule) accepting small risks right away, and large catastrophic risks, because the cost of guarding against them is greater than the total loss from them or the projected gain. For this type of THREAT retain the risk in your schedule and budget for it’s certainty within its working packages. In the subsequent working packages, revise your schedule to achieve the success metric regardless of the certain THREAT.

Some of the above risk approaches may not be possible because the trade-offs will not be are acceptable to senior management. Be sure to socialize your risk responses with your senior management and obtain their buy-in/direction.
Effective Risk Management, Measurement, Monitoring & Control

Risk Response - OPPORTUNITIES

As discussed, Risks have two faces – OPPORTUNITIES and THREATS. Key in the approach to an OPPORTUNITY is the Risk Response that is designed to encourage the certainty of its occurrence in order to ensure that the project benefits. OPPORTUNITIES in Risk Management are, then, “those future events that, if they happen, can reduce project cost and/or schedule, or improve project technical performance.”

Examples of RISK RESPONSES to OPPORTUNITIES are:

**EXPLOIT** – Includes aggressively pursuing in order to eliminate any possibility that this will not happen. This type of opportunity is planned, followed in weekly/day-to-day action items, until it is caused to occur or it fails. The activity to exploit and the decision on the opportunity are reflected in the schedule; the opportunity itself is only reflected in the schedule if it occurs.

**ENHANCE** – Includes encouraging situations, by modifying your outcomes and exposure as to encourage the opportunities to evolve). This type of opportunity is planned and only included in the schedule if it occurs.

**SHARE** – Includes sharing the opportunity that mutually benefits another organization with that organization in order to join teams to ensure it occurs. You may either assign the ownership and credit for the benefits to that team, while realizing the benefits only; or divide the credit & work between the two teams. This then helps to ensure the likelihood of success.

**Accept** - Includes accepting the opportunity as it comes (sometimes with little to no effort on the project team’s part). This type of opportunity is to be included in the project baseline as it is “expected to occur with certainty.”

---

Effective Risk Management, Measurement, Monitoring & Control

Risk Response – MITIGATION & CONTINGENCY

It will not be enough to simply know the risks your project faces. After identifying them and recording the risk responses, you will need to develop well though out MITIGATION and CONTINGENCY plans to pursue in case the RISK occurs.

**OBJECTIVE:**

Mitigation is designed to reduce the probability that a risk will occur for THREATS.

Mitigation is designed to increase the probability that a risk will occur for OPPORTUNITIES.

**REMEMBER:**

Both OPPORTUNITIES and THREATS have MITIGATION and CONTINGENCY plans.

MITIGATION and CONTINGENCY plans are ONLY applied to RISKS with a HIGH or MEDIUM PIM Score.

**EXAMPLE:**

There is a RISK that includes a **TIME CONSTRAINT**

Example: Orders for materials not placed before December 15th may be shipped after January 5th.

**MITIGATION**

Schedule the item associated with the risk to start earlier in the schedule.

This will be beneficial because...

★ FOR A THREAT it increases the time to accomplish.

★ FOR AN OPPORTUNITY it will clear the obstacle, ensuring the OPPORTUNITY occurs.

**EXAMPLE:**

There is a RISK that includes a **RESOURCE CONSTRAINT** (and therefore a COST CONSTRAINT)

Example: Your company is planning a Reduction In Force (RIF) in the Spring which is mid-lifecycle in your EXECUTION phase. Your expenditures will be expected to reduce coinciding with the RIF.

**CONTINGENCY:**

You may choose to enter into a CONTRACT for resources to perform the EXECUTION phase. You may choose to also request they push the project into the next phase.

**FOR A THREAT & FOR AN OPPORTUNITY**

1. Guard costs with a FIRM FIXED PRICE contract.
2. Bring the team aboard early to push the project’s planned value versus earned value.
3. Request that you obtain billing for the resources **before** the end of the current phase.
4. For TIME & MATERIALS guard costs by requesting a performance based contract.
5. Request work in a 24/7 teamed iterative method where metrics are measured weekly.

This will be beneficial because ...

★ Your costs will increase during this time as will your earned value.

★ Your expenditures will be inflated in the billing summary.

★ Your reduction in billables will be easier as less resources will be needed for the next phase.
**EXAMPLE:** Christmas Present Delivery via XYZ Special Delivery (PROJECT)

**Story:** 1 month before Christmas we ordered presents on-line. The delivery carrier selected was XYZ Special Delivery because of their cost and customer service (quality decision). XYZ Special Delivery is known for great customer service because they allow customers to re-route their delivery choices (at a fee) to Overnight for emergency circumstances when there are not 4 business days available. XYZ Special Delivery has shipped all packages and have provided us an expected delivery timeline within 3-5 business days and not later than 1 week before Christmas (Thur. 12/25/08). This is very important to us because in our GrandMom’s house all presents must be wrapped and under the tree before Christmas Day (project objective). If we get them under the tree early, GrandMom often gives out cash as a Thank You (performance incentive). So, at the latest delivery time, we can still wrap the presents (the work packages) in time for Christmas Day.
**EXAMPLE:** Christmas Present Delivery via XYZ Special Delivery (PROJECT)

**Story:** 1 month before Christmas we ordered presents on-line. The delivery carrier selected was XYZ Special Delivery because of their cost and customer service (quality decision). XYZ Special Delivery is known for great customer service because they allow customers to re-route their delivery choices (at a fee) to Overnight for emergency circumstances when there are not 4 business days available. XYZ Special Delivery has shipped all packages and have provided us an expected delivery timeline within 3-5 business days and not later than 1 week before Christmas (Thur. 12/25/08). This is very important to us because in our GrandMom’s house all presents must be wrapped and under the tree before Christmas Day (project objective). If we get them under the tree early, GrandMom often gives out cash as a Thank You (performance incentive). So, at the latest delivery time, we can still wrap the presents (the work packages) in time for Christmas Day.

**Risk 1:** XYZ Special Delivery does not deliver after 5pm or on weekends.

**Risk 2:** XYZ Special Delivery has experienced a surge of delivery requests for the Christmas Holiday but has not increased delivery personnel for the surge (potential resource constraint).

**Risk 3:** XYZ company allows customers to re-route their delivery choices (at a fee) to Overnight for emergency circumstances when there are not 4 business days available.

**Risk 4:** If we meet the project objective we get a performance incentive: in our GrandMom’s house all presents must be wrapped and under the tree before Christmas Day (project objective). If we get them under the tree early, GrandMom often gives out cash as a Thank You (performance incentive).
**EVALUATION & ANALYSIS:**

**Question:** When is the Risk Trigger?

**Answer:** The milestone in the schedule for DELIVERY. DELIVERY is the Risk Trigger because all subsequent work packages that lead to the objective hinge on us receiving the presents.

**Question:** When is the Risk Trigger Date?

**Answer:** The Risk Trigger Date should be the EARLIEST date where the Risk can be realized AND a Risk Response can effect the outcome. Therefore, the Risk Trigger Date IS NOT 1 week prior to Christmas (Thur. 12/18/08) because there are 4 business days available. Chosing this date will allow us no risk response except ACCEPT. If the Risk Trigger Date is 12/17/08, we could receive packages as early as 12/18/08 (overnight) and – if we waited until the close of business ofn 12/17/08 we would receive them 12/22/08 – each providing us time to wrap the presents and place them under the tree.

**RECOMMENDATION:**

**Question:** What is the Risk Response?

**Answer:** The Risk Response is MITIGATE. In this instance, the risk can be anticipated. As a result, the risk response can be properly planned. The Risk Response action would then be: REQUEST OVERNIGHT SHIPPING @ EMERGENCY FEE on 12/17/08.
**Effective Risk Management, Measurement, Monitoring & Control**

**RISK EXERCISE – ON YOUR OWN**

**EXAMPLE:** Christmas Present Delivery via XYZ Special Delivery (PROJECT)

**Story:** 1 month before Christmas we ordered presents on-line. The delivery carrier selected was XYZ Special Delivery because of their cost and customer service (quality decision). XYZ Special Delivery is known for great customer service because they allow customers to re-route their delivery choices (at a fee) to Overnight for emergency circumstances when there are not 4 business days available. XYZ Special Delivery has shipped all packages and have provided us an expected delivery timeline within 3-5 business days and not later than 1 week before Christmas (Thur. 12/25/08). This is very important to us because in our GrandMom’s house all presents must be wrapped and under the tree before Christmas Day (project objective). If we get them under the tree early, GrandMom often gives out cash as a Thank You (performance incentive). So, at the latest delivery time, we can still wrap the presents (the work packages) in time for Christmas Day.

**Risk 1:** XYZ Special Delivery does not deliver after 5pm or on weekends.

**Risk 2:** XYZ Special Delivery has experienced a surge of delivery requests for the Christmas Holiday but has not increased delivery personnel for the surge (potential resource constraint).

**Risk 3:** XYZ company allows customers to re-route their delivery choices (at a fee) to Overnight for emergency circumstances when there are not 4 business days available.

**Risk 4:** If we meet the project objective we get a performance incentive: in our GrandMom’s house all presents must be wrapped and under the tree before Christmas Day (project objective). If we get them under the tree early, GrandMom often gives out cash as a Thank You (performance incentive).

**ON YOUR OWN**

Create the RISK LOG from the above story, selecting 1 of the above 4 identified risks. Use the PIM in this presentation. Be sure to:

1. Provide the Risk Impact, Risk Description, Risk PIM, Risk Category, Risk Status, Risk Owner, Risk Trigger and Risk Trigger Date
2. Indicate your RISK’s Mitigation Response and Contingency Response, if applicable.