Presenter Background

- Project Manager and Trainer
  - 25 years IT experience on utilities, defense, & finance
  - 15 years Agile-to-Traditional PMO Integration

- Agile Project Management
  - Helped create Agile method DSDM in 1994
  - 20+ years agile project experience (XP, Scrum, FDD)
  - Board director of Agile Alliance and APLN
  - Author, trainer, and presenter Agile Conference 2001-12
  - Author “RMC’s PMI-ACP Exam Prep” book

- Traditional Project Management
  - PMP, PRINCE2 certifications
  - PMBOK v3, v4 and v5 contributor
  - Trainer for PMI SeminarsWorld 2005-2012
  - Presenter PMI Global Congress 2004-2012
  - PMI-ACP certification designer

Agenda

- Why Risk Management?
  - Despite the increased adoption of agile failure rates are still high
  - Larger projects are especially vulnerable
  - Greater complexity
  - Longer horizon of risk
  - Failure to learn from mistakes

Why Risk Management?

- Larger projects are especially vulnerable
- More stakeholders to satisfy
- Higher likelihood of change

Bowman – British Army
$6B Failed Project
Photo Credit: "Bowman Review" National Audit Office

JTRS – US Army
$4B Failed Project
Photo Credit: "How to blow $6B on a tech project", ARS
Typical Risk Management - Process Flaws
PMBoK Risk Management Process
1. Risk Management Planning (Decide how to...)
2. Risk Identification (Find them)
3. Qualitative Risk Analysis (Classify and rank)
4. Quantitative Risk Analysis (Numerical analysis)
5. Risk Response Planning (Plan counter measures)
6. Risk Monitoring and Control (Checking, controlling, reporting)

Typical Risk Management – Execution Flaws
Problems:
• Poor engagement - dry, boring, academic, done by PM, does not drive enough change
• Done once – typically near the start, when we know least about the project
• Not revisited enough – often “parked” off to one side and not reviewed again
• Not integrated into project lifecycle – poor tools for task integration
• Poor ongoing visibility – few stakeholders regularly review the project risks

Typical Risk Management – Issues
Issue Summary:
1. Flawed Process (or at least not optimally described)
2. Focused at the wrong time during the project
3. Dominated by the wrong resources
⇒ Weak Risk Management ⇒ Project Failures

Agenda

Devolution
• Devolution: Not the opposite of evolution
• It means moving decision making power downwards

“Devolution is the granting of powers from the central government to government at a local level. It is a form of decentralization. Devolved territories have the power to make legislation relevant to the area.” – Wikipedia

• Instead of the Project Manager or PMO managing risks and opportunities – now the team does

Evolution of Devolution
1. Planning
From Gantt Charts to task boards
2. Estimating
From WBS to Planning poker
3. Decision Making
From Cmd & Cntl to Empowered teams
4. Risk Management
From Risk Registers to Doomsday Clocks, etc.
Risk Terminology

Unofficial definition of terms:

- **Opportunity** – Good stuff that could happen to the project
  
  “Our current reporting engine meets the performance requirements”

- **Risk/Threat** – Bad stuff that could happen to the project
  
  “Loss of key resources delays project handover to support”

- **Risk Impact** – the result to the project should the risk occur

- **Risk Probability** – the likelihood that the risk will occur

- **Risk Severity** – Impact x Probability = the significance of a risk

- **Issue** – Stuff that has happened, like a risk occurring
  
  “Decree: Business time will now be charged to the project.”

- **Assumption** – A low probability risk reworded as if it will not happen – and monitored
  
  “PCs will be available when required to start the project.”

Collaboration Benefits

1. **Generates wiser decisions** through the understanding of complex, cross boundary problems via shared information

2. **Promotes problem solving** rather than procedural decision making

3. **Fosters action** by mobilizing shared resources to get work done

4. **Builds social capital** by building relationships and understanding

5. **Fosters ownership of collective problems** by valuing participation and shifting power downwards

Source: Study by Steven Yaffee from the University of Michigan.

Collaboration in Agile

1. **Planning Poker** – moves quickly yet engages team, builds consensus, finds outliers

2. **Group Decision Making** – Fist of Five voting

3. **Retrospectives** – group diagnosis of issues & process adaptation

Agile Tools For Change

Business and team collaborate on accepting new changes and priority adjustments

New Changes are prioritized into the backlog of remaining work

Items may be reprioritised
Agile Tools For Risk Management

Business and team collaborate on incorporating risk avoidance and reduction activities

Backlog

- Risk avoidance and reduction activities prioritized into the backlog of remaining work
- Risk items may be reprioritized

Business User Story
Risk Avoidance Story

Collaborative Risk Management

Characteristics:
- Promotes engagement – fun, whole team, drives new stories and behaviours
- Done frequently – throughout the project as new information emerges
- Updated Often – linked to iteration planning, retrospectives and backlog grooming
- Integrated into planning lifecycle – adds stories into the backlog, creates actions for retrospective process
- Engaging, high visibility – generates high visibility reminders for project risks, mitigation strategies and opportunities

PMBOK Risk Management Steps

1. Risk Management Planning
   - (1 Decide how)
2. Risk Identification
   - (2 Find them)
3. Qualitative Risk Analysis
   - (3 Sift)
4. Quantitative Risk Analysis
5. Risk Response Planning
   - (4 Measure)
6. Risk Monitoring and Control
   - (5 Decide actions)

Iterative Risk Management

1) Plan Your Trip (Plan Risk Management)

Purpose:
- Tailor RM approach to this project
- Educate the team in RM basics

Games:
1. 4C’s – Consider the Costs, Consequences, Context, Choices
2. Are we buying a Coffee, Couch, Car, or Condo?
3. Deposits and bank fees
1) Plan Your Trip (Plan Risk Management)

Consider the Costs, Consequences, Context, Choices
Q: What would you take with you for a 2 hour hike?
Q: A 2 day hike?
Q: In winter?
Q: For kids or experiences adventurers?

Project size and significance:
Q: Are we buying a Coffee, Couch, Car, or a Condo?
$2, $2,000, $20,000, $200,000
(Levels of rigor and need for professional help)

2) Find Friends and Foes (Risk and Opportunity Identification)

Purpose:
- Understand and identify Risks and Opportunities

Games:
- Doomsday Clock - identify risks (based on IEEE categories)
- Karma day - identify opportunities (based on IEEE categories)

3) Post Your Ad (Qualitative Risk Analysis)

Purpose:
- Classify and rank risks and opportunities

Games:
- Investors and Help Wanted
- Tug of War

Deposits and Bank Fees – understand value risk interaction
Cumulative Feature Value
Business Value
Features
Time
Risks occurring
3) Post Your Ad (Qualitative Risk Analysis)

Traditional Probability and Impact Matrix

<table>
<thead>
<tr>
<th>Probability</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Impact</td>
</tr>
<tr>
<td>Medium</td>
<td>Impact</td>
</tr>
<tr>
<td>Low</td>
<td>Impact</td>
</tr>
<tr>
<td>Very Low</td>
<td>Impact</td>
</tr>
<tr>
<td>Extreme</td>
<td>Impact</td>
</tr>
<tr>
<td>Very High</td>
<td>Impact</td>
</tr>
</tbody>
</table>

3) Post Your Ad (Qualitative Risk Analysis)

4) Today’s Forecast (Quantitative Risk Analysis)

Purpose:
- Measure risks and opportunities

Games:
- Dragon’s Den – “Next Best Dollar Spent”
- Battle Bots – simulations

4) Today’s Forecast (Quantitative Risk Analysis)

Expected Monetary Value (EMV) = Impact x Probability

Expected Monetary Value (EMV) = $80,000 x (50%) = $40,000

Residual Risks = remaining risks after risk response
- e.g. reduce reporting performance risk by running on a faster server, risk prob. halved

Secondary Risks = new risks as a result of risk response
- e.g. move to new corporate cloud platform for reporting - this has it's own new risks

Net EMV = Residual Risk (EMV) + Secondary Risk (EMV)

5) Backlog Injector (Plan Risk Responses)

Purpose:
- Ensure risk and opportunities responses are actioned

Games:
- Junction Function
- Dollar Balance
- Report Card
- Inoculator

5) Backlog Injector (Plan Risk Responses)

Junction Function – Decide what to do about the risks

Options:
- Avoidance – eliminate the cause of the risk
- Mitigation – reduce probability of the occurrence
- Transference – insurance, outsource, etc.
- Acceptance – accept and communicate to stakeholders
5) Backlog Injector (Plan Risk Responses)

**Dollar Balance** – understand ranking with features

<table>
<thead>
<tr>
<th>Risk Severity</th>
<th>Feature Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Probability % x Impact $)</td>
<td>Business Value</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prioritized Risk List</th>
<th>Prioritized Response Actions</th>
<th>Prioritized Feature Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% x $5000</td>
<td>Action</td>
<td>$5,000</td>
</tr>
<tr>
<td>25% x $5000</td>
<td>Action</td>
<td>$2,500</td>
</tr>
<tr>
<td>25% x $2500</td>
<td>Action</td>
<td>$1,250</td>
</tr>
<tr>
<td>15% x $5000</td>
<td>Action</td>
<td>$750</td>
</tr>
<tr>
<td>10% x $5000</td>
<td>Action</td>
<td>$500</td>
</tr>
</tbody>
</table>

**Report Card** – Preparing the info for having the backlog insertion discussion

<table>
<thead>
<tr>
<th>Risk</th>
<th>Initial EMV</th>
<th>Residual EMV</th>
<th>Secondary EMV</th>
<th>Final EMV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting Engine Performance</td>
<td>500,000</td>
<td>450,000</td>
<td>500,000</td>
<td>450,000</td>
</tr>
<tr>
<td>XO's integration</td>
<td>520,000</td>
<td>520,000</td>
<td>520,000</td>
<td>520,000</td>
</tr>
<tr>
<td>Product compatibility</td>
<td>512,000</td>
<td>512,000</td>
<td>512,000</td>
<td>512,000</td>
</tr>
<tr>
<td>3rd Party Components</td>
<td>485,000</td>
<td>485,000</td>
<td>485,000</td>
<td>485,000</td>
</tr>
<tr>
<td>QA/Reliability</td>
<td>375,000</td>
<td>375,000</td>
<td>375,000</td>
<td>375,000</td>
</tr>
</tbody>
</table>

**Backlog Injector**

**Inoculator** - Getting risk response actions into the backlog

<table>
<thead>
<tr>
<th>Prioritized Risk List</th>
<th>Prioritized Mitigation Actions</th>
<th>Prioritized Feature Risk List</th>
</tr>
</thead>
<tbody>
<tr>
<td>High x High</td>
<td>Action</td>
<td>MUST</td>
</tr>
<tr>
<td>High x Med</td>
<td>Action</td>
<td>MUST</td>
</tr>
<tr>
<td>Med x High</td>
<td>Action</td>
<td>SHOULD</td>
</tr>
<tr>
<td>Med x Med</td>
<td>Action</td>
<td>SHOULD</td>
</tr>
<tr>
<td>Med x Low</td>
<td>Action</td>
<td>SHOULD</td>
</tr>
<tr>
<td>Low x Low</td>
<td>Action</td>
<td>SHOULD</td>
</tr>
</tbody>
</table>

6) Risk Radar (Monitor and Control Risks)

**Purpose:**
- Monitor and control risks, opportunities, and process

**Approaches:**
- Risk Burn Down Graphs
- Risk Retrospectives
- Rinse and Repeat
6) Risk Radar (Monitor and Control Risks)

Risk Retrospective:
1. Are we eliminating or reducing our risks?
2. How is our remaining Risk EMV burning down?
3. What is our Risk EMV Reduction Velocity per iteration?
4. When will our remaining Risk EMV be zero?
5. Do we have any new or escalating risks?
6. What are the root causes of our risks, and can we eliminate any of them?
7. Which risk avoidance or elimination strategies are working and which are not?
8. For risks that we chose to transfer, how are the third parties managing them? What can we learn from them, or would we be better bringing them back internally?
9. How are our team risk management capabilities developing?
10. Where do we still need mentoring and support?

Full details on LeadingAnswers.com/Articles

Agenda

Why So Negative?

• Visualize Opportunities
• Scrum Master as Opportunity Facilitator
• Answering a 4th question at Standup: "Are there any Opportunities we could exploit?"

• Personality Types:
  • Grinder - "Just let me do work and add value"
  • Hustler - "I need to show the VIP’s our new map interface!"

Why So Negative?

Focus on Opportunities

Opportunity Retrospective:
1. Are we exploiting and maximizing our opportunities?
2. Do we have any new or escalating opportunities?
3. What are the root causes of our opportunities and can we farm more?
4. Which opportunity exploit strategies are working and which are not?
5. How are our team opportunity management capabilities developing?
6. Where do we still need mentoring and support?

Leadership Quote:
"A good vision reveals a beckoning summit to which others can chart their own course!"

Once people are aware of risks and opportunities their day to day behaviors change
Agenda

What's Next

• Get Opportunity Enablers in the Backlog
• Expected Monetary Value for Opportunities?
• ROI and Real Options for Opportunities?
• Get more feedback from teams using these approaches

Summary / Additional Resources

• Collaboration brings huge benefits for risk and opp. management
• Awareness changes behaviour and changes outcomes
• Fun activities are more memorable

Great book on Risk Management for Software Projects
“Waltzing with Bears”, Tom DeMarco and Tim Lister

Resources:
• Email: Mike@LeadingAnswers.com
• Blog: www.LeadingAnswers.com

Scope: Origins and Usage

Origins:
1. The collaborative games were first developed on the Husky Energy IPS project in 2010 and used at 3 clients on large projects in 2010 - 2011
2. They were presented at the Risk Management track of the PMI Global Congress 2012 Vancouver – with 8 follow on uses
3. An updated set and results were presented at the PMI Global Congress 2013 New Orleans – with 15 follow on applications

Usage:
1. You have permission to use these techniques in your organization
2. You have permission to modify and augment these techniques
3. Please share your experiences, good and bad, so the techniques can be improved and the role of risk management advanced