Turning Visions
into Business.

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Project Management

Risk Management

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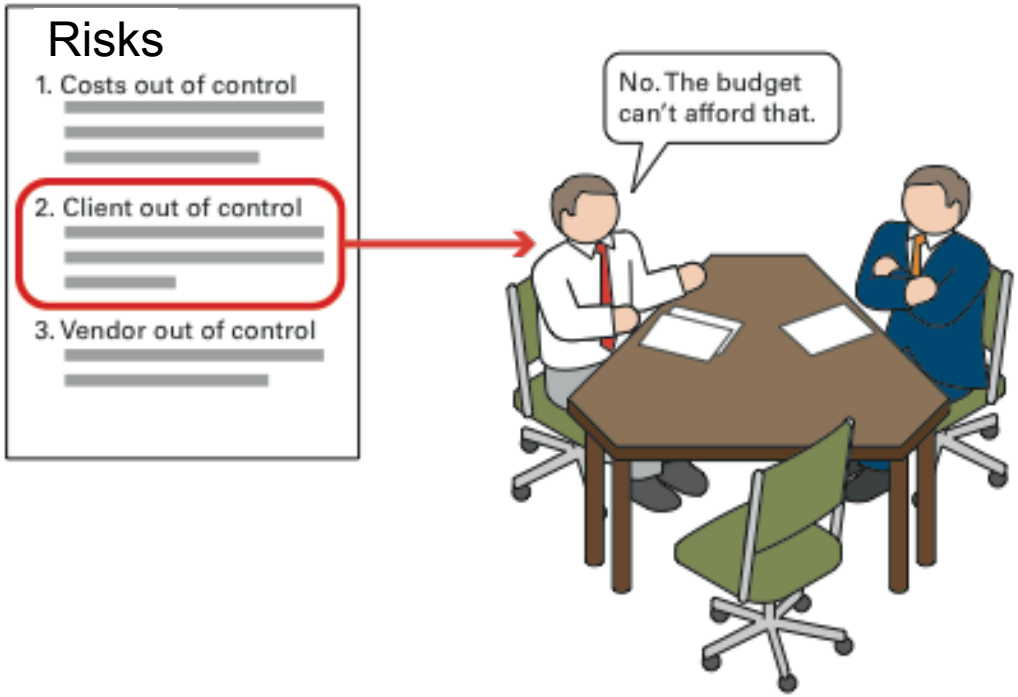
Risk Management in CMMI

Purpose

Identify potential problems before they occur so that risk handling activities can be planned and invoked as needed across the life of the product or project to mitigate adverse impacts on achieving objectives.



Risk Management Goals

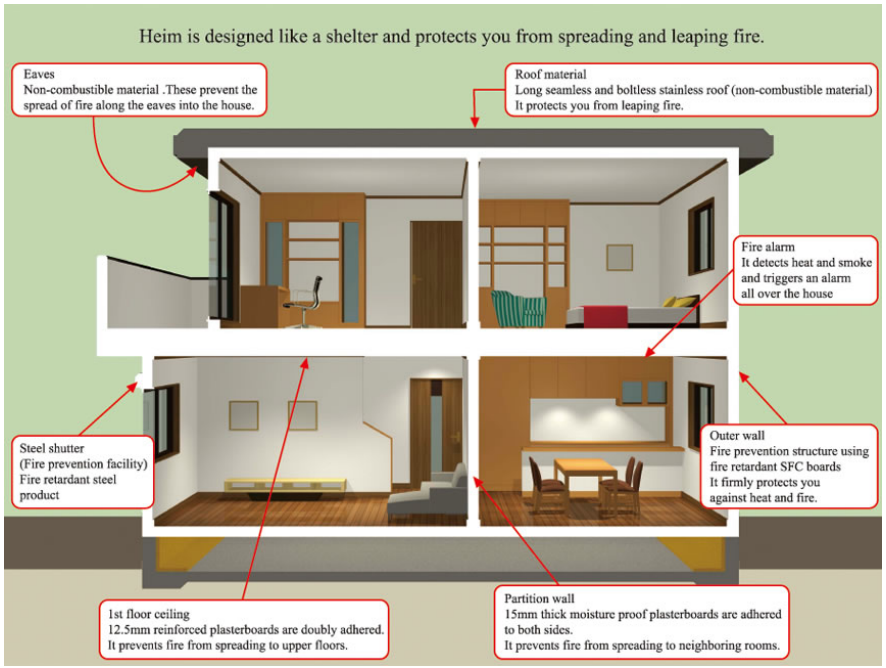
SG 1	**Prepare for Risk Management** Preparation for risk management is conducted.
SG 2	**Identify and Analyze Risks** Risks are identified and analyzed to determine their relative importance.
SG 3	**Mitigate Risks** Risks are handled and mitigated as appropriate to reduce adverse impacts on achieving objectives.

Risk Management Specific Practices

SG 1	Prepare for Risk Management	
	SP 1.1	Determine Risk Sources and Categories
	SP 1.2	Define Risk Parameters
	SP 1.3	Establish a Risk Management Strategy
SG 2	Identify and Analyze Risks	
	SP 2.1	Identify Risks
	SP 2.2	Evaluate, Categorize, and Prioritize Risks
SG 3	Mitigate Risks	
	SP 3.1	Develop Risk Mitigation Plans
	SP 3.2	Implement Risk Mitigation Plans

Risks can cost you money and business.
Mitigating them means lowering the occurrence or the impact.

Lowering occurence



Lowering impact

Risk != Issue

An issue or problem (Scrum: Impediment) is something that has already occurred.

A risk is an issue/problem/impediment BEFORE it has occurred (in order to prevent it from occurring).

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Risk Management in Scrum

Risk Management in Scrum: some is included but more might be necessary.

The Scrum process mitigates key risks of projects, e.g.:

- Developing in sprints mitigates the risk that the product does not meet user expectations
- Prioritizing mitigates the risk that the product's value is created late in time (possibly outside the budget)
- Daily Scrums mitigate the risk that unnecessary work ("waste") is produced

This has led many to believe that risk management is irrelevant in Scrum.

However, especially in large projects, some risk management is also necessary in Scrum.

Scrum is designed to address key risks.

Artifact or Meeting	Role in Risk Management
Product vision	The product vision statement helps unify the project team's definition of product goals, mitigating the risk of misunderstandings about what the product needs to accomplish. While creating the product vision, the project team may consider risk on a very high level, in conjunction with the marketplace, customers, and organizational strategy.
Product roadmap	The product roadmap provides a visual overview of the project's requirements and priorities. This visual overview allows the project team to quickly identify gaps in requirements and incorrectly prioritized requirements.
Product backlog	The product backlog is a tool for accommodating change within the project. Being able to add changes to the product backlog and reprioritize requirements regularly helps turn the traditional risk associated with scope changes into a way to create a better product. Keeping the requirements and the priorities on the product backlog current helps ensure that the development team works on the most important requirements at the right time.
Release planning	The scrum team discusses risks to the release and how to mitigate those risks. Risk discussions in the release planning meeting should be high-level and relate to the release as a whole. Save risks to individual requirements for the sprint planning meetings.

Artifact or Meeting	Role in Risk Management
Sprint planning	The scrum team discusses risks to the specific requirements and tasks in the sprint and how to mitigate those risks. Risk discussions during sprint planning can be done in depth, but should only relate to the current sprint.
Sprint backlog	The burndown chart on the sprint backlog provides a quick view of the sprint status. This quick view helps the scrum team manage risks to the sprint as they arise and minimize impact by addressing problems immediately.
Daily scrum	During each daily scrum, development team members discuss roadblocks or impediments that may be or become risks to the project. Talking about roadblocks every day gives the development team and the scrum master the chance to mitigate those risks immediately.
Task board	The task board provides an unavoidable view of the sprint status, allowing the scrum team to catch risks to the sprint and manage them right away.
Sprint review	The scrum team regularly ensures that the product meets stakeholders' expectations. The sprint review also provides opportunities for stakeholders to discuss changes to the product to accommodate changing business needs. Both features of the sprint review help manage the risk of getting to the end of a project with the wrong product.
Sprint retrospective	The scrum team discusses issues with the past sprint and identifies which of those issues may be risks in future sprints. The development team needs to determine ways to prevent those risks from becoming problems again.

How would you address risk management in your project?

- Case one:
  You develop a medical device for life support in emergencies.
  What is your overall risk? What is your risk management strategy?

- Case two:
  You develop a new car sharing service that works with self driving cars (Wow!)? What is your overall risk? What is your risk management strategy?

So: there is value in contracting – also in Agile environments.

Exercise: How do you do the SAM practices in an agile environment?

- Case one:
  You source a product (a new website) from a supplier, who develops the website with their own team. How do you set up the relationship?

- Case two:
  You develop a new billing solution with a scaled agile approach. One of your four teams is an external supplier. How do you set up the relationship?

Risk Management can be added to Scrum.

Product Backlog Refinement: SG 2 (identify risks)

- Add risk mitigation user stories: As a team I want <risk mitigation> in order to mitigate the risk >xyz>
- Add risks to the user stories
- Possibly assess the occurrence and impact to the risk

Risk	Probability	Size of loss	Exposure
Failure of network connectivity with partner systems	65%	10 days	6.5

Sprint Planning Two: SG 3 (mitigate risks)

- Plan for tasks to mitigate the risks of a user story

Daily Scrum: SG 2 + SG 3 (identify and mitigate risks)

- Extend the third question to address impediments and risks
- If you identify a risk, add it to the story description and add to the Sprint Backlog a task to mitigate (to lower occurrence and/or impact)

This slide is SG1 (Prepare for Risk Management)

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Questions?

~~Exercise~~ Opportunity: Your last questions

Tasks:

- Collect the questions you still have as a team about CMMI and / or Scrum
- Pick the top 2 questions
- Bring them to the class

Exercise

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Revision History

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1.0	Finished	08.02.2015	Initial (new) version	Malte Foegen