

Risk Management In Software Intensive Projects

Lecture 1 - Introduction

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Agenda

- Who am I and why am I teaching you this
- What is the risk
 - Definitions
- Different ways of looking at risk
- Risk and project management
- The case for and against doing risk management in projects

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What is Risk

"A problem is a risk whose time has come..."

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Risk Defined



- The possibility of suffering loss
 - Webster's dictionary, 1981
- The measure of the probability and severity of adverse effects
 - William W. Lawrence, "Of Acceptable Risk", 1976
- No universally excepted definition exists
- All definitions share the following characteristics:
 - **Uncertainty** - an event may or may not happen
 - **Loss** - an event has unwanted consequences or losses

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Is Risk Necessarily Bad?



"Risk in itself is not bad; risk is essential to progress, and failure is often a key part of learning. But we must learn to balance the possible negative consequences of risk against the potential benefits of its associated opportunity."

Roger L. Van Scoy

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Different Ways to Look at Risk



- There are various approaches to look at risk
 - Dynamic vs. Static
 - loss and gain
- The way we look at risk and its management is subjective and to an extent depends on
 - Experience
 - Attitude
 - Perception
- Nonetheless, two elements persist:
 - Chance
 - Choice

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"The essence of risk management lies in maximizing the areas **where we have some control over the outcome while minimizing the areas where we have absolutely no control over the outcome** and the linkage between cause and effect is hidden from us."

"Against the Gods p. 197"

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Risk and Project Management



Makes the Pieces fit together

Risk management is aimed at addressing the risks within the project management environment



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The Need to Manage Risk

Increases With System Complexity



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The Case For Risk Management



- Risk Management provides
 - Options, tradeoffs, effects, interactions
 - Systematic view of the problem scope
 - Contingency planning, action vs. reaction
 - Active vs. passive management
 - Feed forward, push vs. pull in design, planning and execution
 - Better, knowledgeable decision making
 - Less exposure to risk

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The Case Against Risk Management



- We rather "manage for success"
- No real data for effective risk management exists
- We don't know how to...
- Why spend money on it, if it might not happen
- Our stakeholders are not mature enough to face up to the risks

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Questions?



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