

Software Risk Management

Training Course Offered by The Westfall Team

Software Risk Management is a 2-day course designed to provide a knowledge base and practical skills for anyone interested in implementing or improving Software Risk Management techniques and practices in their organization. This course starts with an overview of software risk management basics, including definitions of risk management terminology, a discussion of the importance of software risk management and different types of software risks and the introduction of the software risk management process.

Course attendees will learn how to utilize various techniques for identifying and communicating software risk. These skills will be practiced using team exercises that relate the learned techniques to the attendees own software development projects. Attendees will learn to analyze their identified risks through exploring the risk's context, estimating risk probabilities and losses, calculating risk exposure, and considering the risk timeframe. Attendees will practice utilizing this analysis information to prioritize their lists of identified risks.

Course attendees will explore various risk handling techniques and learn how to define risk containment and contingency plans. The implementation of risk handling actions will be discussed. This course will explore the use of various types of reviews and metrics to track software risks. The course ends with an overview of critical success factors and barriers to implementing a software risk management program and a discussion of risk management principles.

Method of Instruction: This course is taught through lecture and interactive discussion. Actual examples from the software industry are utilized to make the information relevant. Throughout this course, learned skills are practiced using team exercises. The emphasis of this course is on techniques that allow the attendees to transition the skills learned in this course to their own work environments.

Target Audience: Software project and program managers, functional managers, developers, testers, quality engineers and other software project stakeholders who will be involved in identifying and analyzing risks, creating and implementing risk management plans and tracking risks.

Course Objectives: Upon successful completion of this course attendees will be able to:

- Understand the basic terminology and techniques of Software Risk Management
- Identify software risks for your projects
- Analyze and prioritize your software risks
- Create a software risk management plan
- Take actions to mitigate software risks

- Track the status of your software risks
- Implement a software risk management program for your organization

Detailed Outline:

I: Risk Management – The Basics

1. **What is Risk Management?**
 - a. Future Awareness
 - b. Risk Defined
 - c. Risk Exists
 - d. Risk / Reward Balance
 - e. Risk Probability & Loss
 - f. Risk Tolerance
2. **Why is Risk Management Important?**
 - a. The Software Challenge
 - b. Software Project Success Defined
 - c. The Plan Will Never Work
 - d. Why is Risk Management Important?
 - e. Risk Management Objectives
3. **Types of Software Risks**
4. **Risk Management vs. Project Management**
5. **The Risk Management Process**
 - a. Risk Management Process
 - b. Baseline Activity & Continuous Process

II: Software Risk Identification

1. **Risk Identification Goals**
 - a. Distribution of Outcomes
 - b. Risk Identification Goals – Identify Risks
 - c. Risk Identification Goals – Prevent Surprises
 - d. Risk Identification Goals – Involve People at All Levels
 - e. Risk Identification Goals – Still Time to Act
 - f. Risk Identification Goals – Communicate
2. **Risk Identification Techniques**
 - a. Inputs & Outputs
 - b. Cultural Barriers to Risk Identification
 - c. Risk Identification Techniques
 - d. Brainstorming
 - e. Brainstorming – Team Exercise
 - f. Interviewing
 - g. Interviewing – Team Exercise
 - h. Voluntary / Required Reporting
 - i. Project Decomposition
 - j. Product Decomposition
 - k. Assumption Analysis
 - l. Risk Taxonomies
 - m. Risk Taxonomy – Team Exercise
3. **Communicating Risks**
 - a. Communicating Risks

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- b. Writing Risk Statements
- c. Risk Statement – Team Exercise
- d. Risk Form – Identification Section

III: Software Risk Analysis

1. Risk Analysis Goals

- a. Risk Analysis Goals
- b. Inputs & Outputs
- c. Level of Formal Risk Assessment

2. Risk Context

- a. Analyzing Risk Context
- b. Risk Context – Team Exercise
- c. Process Decision Program Charts
- d. Root Cause Analysis – 5 “Why?” Method
- e. Root Cause Analysis – Cause & Effect (Fishbone) Diagram
- f. Cause & Effect – Team Exercise
- g. Process Cause & Effect Diagram

3. Risk Probability & Loss

- a. Risk Probability
- b. Probability Lesson
- c. Loss Analysis
- d. Compound Risks
- e. Risk Classification

4. Risk Exposure & Timeframe

- a. Another Probability Lesson
- b. Risk Exposure
- c. Risk Exposure – Team Exercise
- d. Risk Timeframes
- e. Multiple Timeframes

5. Prioritize Risk List

- a. The Cost/Schedule/Product Trilogy
- b. Prioritizing Risks
- c. Ranking by Exposure & Timeframe
- d. Prioritization – Team Exercise
- e. Comparison Risk Ranking
- f. CCR – Team Exercise
- g. Prioritization Matrix
- h. Other Prioritization Techniques
- i. Risk Form – Analysis Section

IV: Software Risk Management Planning

1. Risk Management Planning Goals

- a. Planning Goals
- b. Inputs & Outputs

2. Risk Handling Techniques

- a. Techniques for Handling Risks
- b. Obtain Additional Information
- c. Obtain Additional Information - Examples
- d. Avoid the Risk
- e. Avoid the Risk - Examples
- f. Transfer the Risk

- g. Transfer the Risk - Examples
- h. Control the Risk: Containment Plans
- i. Containment Plan - Examples
- j. Assume the Risk: Contingency Plans
- k. Contingency Plan - Examples

3. Develop Risk Plans

- a. Two Kinds of Actions
- b. Cost of Risk
- c. Risk Reduction Leverage
- d. Risk Form – Plan Section
- e. Adjust Project Plans
- f. Risk Planning Exercise

V: Taking Action & Tracking Risks

1. Taking Action

- a. Taking Action Goals
- b. Taking Action – Inputs & Outputs
- c. Just Do It

2. Risk Tracking

- a. Risk Tracking Goals
- b. Risk Tracking – Inputs & Outputs
- c. Tracking Mechanisms
- d. Reviews – Project Team
- e. Reviews – Senior Management
- f. Reviews – Major Milestone & Phase Gate
- g. Reviews – Entry & Exit Criteria
- h. Metrics – Ratio Variance
- i. Metrics – Absolute Delta Variance
- j. Metrics – Thresholds
- k. Risk Tracking – Team Exercise

VI: Implementing a Risk Management Program

1. Five Stages of Risk Management

2. Critical Success Factors & Barriers

- a. Critical Success Factors
- b. People
- c. Process
- d. Infrastructure
- e. Risk Management Policy Example
- f. Barrier – “Don’t Even Talk About Risks”
- g. Barrier – Fear
- h. Barrier – “I’m Already Too Busy”

3. Principles of Team Risk Management

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Other Software Project & Risk Management Courses:

Software Project & Risk Management: This 5-day course combines our 3-day Software Project Management and 2-day Software Risk Management course into a comprehensive course that covers the topics relevant to managing today's software projects and programs.

Software Project Management: This 3-day course is designed to provide a knowledge base and practical skills for anyone interested in implementing or

improving Software Risk Management techniques and practices in their organization.

Customized Software Project & Risk Management Courses: Our software project and risk management courses are modularized so that they can be easily customized for in-house course offerings that focus on the specific content and topics needed to meet your organization's exact training requirements. For in-house courses, class exercises can also be tailored to include actual examples from your organization in order to make the training even more relevant to your environment.

For more information about these and other course offered by The Westfall Team:

Visit our website at: www.westfallteam.com

Send an email to: lwestfall@westfallteam.com

Or call: 972-867-1172

