

# Course Title: Managing Requirements for SW and Information Technology Projects

3 Day Workshop – Course # 303

**Course Length: 3 Days**

**Course Abstract:**

Software development and other information technology projects fail far more often than we might hope, and when projects fail, it's often not related to bad management of the schedule or the costs. Software development and information technology projects fail most often because of poor requirements definition and management. We simply fail to deliver the goods or services that our stakeholders need and, as a result, disappoint our customers and build animosity and conflict.

Without good requirements management we can fail to identify the business needs we need to address, what users want or need, all of the stakeholders who may be able to interject requirements, system interfaces, requirements changes, and, ultimately, requirements that are clear, necessary, attainable, and verifiable. The result is dissatisfied users and project sponsors.

Identifying and managing software and information technology project requirements requires the application of a broad array of skills. It requires delicate discussions and negotiations with users to identify requirements, the ability to develop consensus on requirements, the ability to evaluate and apply the requirements elicitation methods that are appropriate for the project, and the ability to deploy a set of requirements analysis and documentation techniques that give developers a solid understanding of the project. It requires both "hard skills" and "soft skills." It requires a balance between meeting the explicit needs of users and allowing the project team to provide a creative solution and a balance between the need to "lock-down" requirements early with the need to remain open and flexible to emerging needs and business conditions.

In order to effectively manage requirements, organizations and project teams also have to create requirements management processes that are tailored for the needs of the organization. Those processes have to be made clear to all stakeholders.

This workshop is intended to provide information technology project managers and team members with the techniques and skills necessary for identifying and delivering good project requirements and for building a reusable requirements process. It employs the requirements techniques and standards developed by the International Institute of Business Analysts (the IIBA™) and documented in its *Business Analysis Body of Knowledge* (the BABOK™) in both its Versions 1.6 and 2.0. It also employs other sources of requirements management best practices. This workshop is compliant with the project management methods established by the Project Management Institute (PMI®), the world's largest and most respected association of project managers. It complies with the Project Management Body of Knowledge (the PMBOK® Guide, Fourth Edition).

**Target Student:**

This workshop is targeted to project managers or those who may become project managers and information technology team members. It is also addressed to those with the responsibility for managing information technology project requirements, whom, in some organizations, are described as business analysts.

**Prerequisites:**

None.

**The Goals of this Workshop**

The goals of this workshop are to:

- Identify the need for solid requirements management
- Describe the challenges of requirements management
- Identify the link between information technology project lifecycles and the management of requirements
- Improve participant ability to employ the soft skills required for requirements management, including conflict management, developing consensus, working with diverse stakeholders, communicating effectively, and managing stakeholder expectations
- Identify requirements risks and techniques for managing those risks
- Describe the necessary attributes of a requirements cycle
- Identify and apply methods for requirements elicitation, including shadowing, interviews, and requirements development workshops
- Explore the documentation of business and user requirements
- Identify and apply methods for requirements analysis, including object-oriented tools, use cases, and process models
- Explore the application of requirements software and the characteristics and functions of that software
- Engage the participant in exercises designed to improve their ability to apply these concepts and enhance their ability to manage projects
- Improve the capacity of managers and team members to create good outcomes and results for information technology projects

**Course Outline:**

Day 1:

- Module 1: Introduction to the workshop

- In this module, we will detail the course objectives and schedule and identify participant interests and concerns, roles and responsibilities
- Module 2: The attributes of good requirements and requirements challenges
  - In this module, we will identify the definition of requirements, the types of requirements, and the differences between “what” and “how,” which can have a significant impact on the role of the project team and its ability to contribute value to the project effort. We’ll identify the challenges of requirements identification and management and the characteristics of good requirements.
- Module 3: Requirements risks
  - In this module, we’ll examine the risks that attend the requirements management process, risks that, far more than other risk factors, impact information technology projects. We’ll describe risk management strategies and build a risk management plan that reduces the potential for negative requirements risks to impact our projects.
- Module 4: Managing requirements conflict
  - In this module, we will identify the types of conflict that are embedded in requirements management for information technology projects. We’ll identify the normal, and unsuccessful, ways that information technology project teams use to deal with conflict and provide a better way to manage requirements conflict. Participants will be engaged in an exercise to improve their ability to employ those effective techniques.
- Module 5: Improving requirements communications
  - In this module, we will examine ways to improve the communications within the requirements management process. We will describe techniques for working with stakeholders to establish consensus, report on requirements status, and manage key decisions. We’ll examine ways to manage diverse teams and communications and create communications that gain attention and manage expectations.
- Module 6: Requirements elicitation overview
  - In this module, we’ll quickly review the techniques identified by the *BABOK™* and other sources to elicit requirements for software and information technology projects and apply those techniques. We’ll examine the use of shadowing, interviewing, creating user stories, and surveying, and we’ll create a requirements list including supplementary requirements and requirements attributes.

Day 2:

- Module 7: Business and user requirements documentation
  - In this extended module, we'll examine and apply the requirements documentation techniques identified by the *BABOK™* and other sources for documenting user and business requirements.

Day 3:

- Module 8: Requirements analysis: UML and object-oriented methods
  - In this module, we'll describe the origins of UML and its combination of tools for analyzing and documenting requirements. We'll describe static and dynamic models.
- Module 9: Requirements analysis: other requirements analysis and documentation methods
  - In this module, we examine a variety of other requirements analysis and documentation tools not included in UML.
- Module 10: Requirements verification
  - In this module, we'll examine the tools for making sure our project results have met the requirements we have identified.
- Module 11: Requirements software
  - In this module, we'll take a quick look at requirements documentation tools, examine the two major types of tools and identify sources of free software, listings of software, and critiques of software.
- Module 12: Workshop wrap-up
  - In this module, we'll wrap-up the workshop, make concluding comments, address remaining questions, and evaluate the workshop