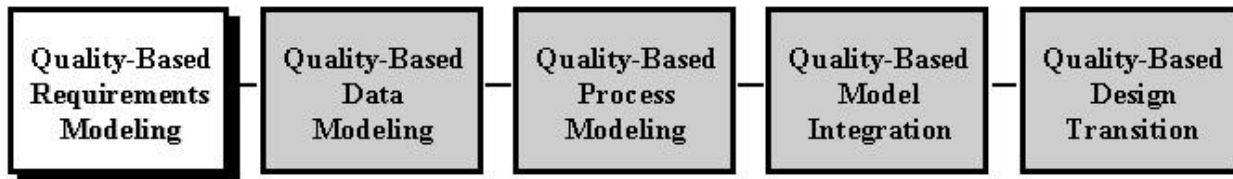


## Software Engineering Series



An entire analysis curriculum built on the synthesis of quality management and software engineering principles.

# Quality-Based Requirements Modeling

*Quality-Based Requirements Modeling* improves the definition of requirements for information systems by better understanding the three types of requirements, how they conflict and interact, and how best to capture and record requirements results to minimize omissions and errors.

Poor requirements definition is the number one cause of project and system failures in Information Technology. An improved requirements process results in better project communications, highly satisfied customers, and higher quality systems placed into production in less time and at less cost.

This seminar explains how to define and validate requirements for information systems:

- ◇ Addresses the requirements *fallacy* that requirements analysis is primarily for the purpose of transferring knowledge from the customer to the producer, recognizing that customers are often unaware of their own requirements at the start of a project.
- ◇ Provides a workable model for enhancing *organizational memory* and learning so identified requirements that are not addressed immediately, either due to time and budget constraints, or else technical unfeasibility, are not lost or forgotten in the expanse of time.
- ◇ Integrates an entire *exception-based* mini-requirements process into project definition activities so early scope ambiguity is eliminated prior to final budget and date commitments by the customer and project team.
- ◇ Recognizes the *validation pitfall* of project requirements and benefits that often can't be realized until long after project completion, providing shorter-term critical success factor analysis as a risk mitigating technique.
- ◇ Highlights the *most common defects* in requirements and offers specific strategies for avoiding or circumventing such classic pitfalls. Includes specific requirements modeling techniques for the classic omissions typically encountered in requirements analysis, including business releases, version control, system interfaces, and data history.

This seminar fully integrates requirements modeling activities with industry accepted process benchmarks (such as SEI's CMM, ISO 9000-3, or Zachman's Model Framework) that can be integrated into any existing methodology, or set of techniques and tools.

**Seminar Rationale...**

Failure to properly identify and manage requirements is the single most consistent cause of project failure, regardless of project size and organization.

The requirements analysis process is defect prone for a variety of reasons. Post-implementation reviews of most information systems projects typically show that 60-75% of all defects encountered during a project, and embedded in the finished systems products, are defects in requirements.

A significant root cause of this trend is a general lack of training among information systems professionals in requirements definition. It is only with the advent of quality principles and TQM over the last decade that requirements have become a discussion of paramount importance to the systems community.

In order to do better requirements definition, we need to better understand what a requirement is, and how to recognize a good one when we see it.

**Seminar Uniqueness...**

By focusing early on the exceptions in the business process, this seminar helps avoid most of the classic project scoping pitfalls associated with traditional methods that leave projects subject to delays, rework, overruns, and customer dissatisfaction:

**QUALITY-BASED REQUIREMENTS MODELING**

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- What Are Requirements?
- Desired Requirements Attributes
- Management Responsibilities

**A FRAMEWORK FOR REQUIREMENTS**

- SEI Capability Maturity Models
- IEEE 12207, 830, & 1233 Standards

**IDENTIFYING BUSINESS NEEDS**

- Business Cycle Event-Response Patterns
- Prioritization of Defect Areas & Opportunities
- Identification of Expected Causes & Fixes
- Weighting High-Level Requirements

**ELICITING & MODELING BUSINESS REQUIREMENTS**

- Information Collecting Techniques
- Modeling & Specification Techniques

**DETERMINING IMPLEMENTATION REQUIREMENTS**

- Business System Interfaces
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**REQUIREMENTS EVOLUTION**

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