Root Causes and Process Improvement

Identifying Problems and Causes and Managing and Improving Business Processes

Course Length: 3 Days

Course Abstract:

In an environment of rapid change, the organization's processes must meet business objectives and make effective and efficient use of scarce resources. Those processes also have to satisfy the needs for which they were initiated by the organization, which requires that processes respond to the business requirements of those who have to interact with them. In addition, the organization's business improvement projects often create new processes or improve existing processes, which creates a close interplay between projects and processes, and it requires a project in order to improve processes.

The interplay creates three important dimensions of quality in organizations:

- Process quality to ensure that processes are effective and efficient
- Product quality to ensure that the product of process improvement projects meet the needs of stakeholders
- Project quality to ensure that the project itself meets the quality standards established for it

Failing to meet any one of these quality dimensions can create problems, waste critical resources and result in dissatisfied stakeholders. Meeting these three dimensions of quality requires the application of a broad array of skills that include:

- Identifying customer requirements
- Improving processes used in the project and those that are the product of the project
- Identifying quality standards
- Identifying the root causes of problems and making good decisions
- Employing process control tools like run charts, statistical sampling and control charts
- Making good project tradeoffs and decisions about quality standards for processes
- Measuring outcomes
- Instilling a sense of quality control in project team members
- Employing methods and tools related to the modern quality movement
- Understanding and managing the cost of quality

This three-day workshop focuses on identifying the root causes of business problems, building processes that meet those needs, and ensuring that those processes meet quality standards. (Other workshops focus on the elements of project quality management.) It has been designed to build those skills and to allow participants to understand the purposes of process quality management. It is highly interactive and designed to allow participants to both acquire and apply skills that can serve them well in the workplace. It utilizes a case study throughout the

workshop. This workshop also allows extensive application of concepts to a real project of concern to the participants.

 This workshop is compliant with the *Project Management Body of Knowledge (the PMBOK®️ Guide, Fourth Edition* and draws insights on quality management and requirements from the *Business Analysis Body of Knowledge (the BABOK®️)*.

Target Student:

The target student for this workshop is a project manager, a business analyst working on improving organizational processes, team members engaged in process controls or quality improvement, or a process stakeholder whose job performance involves effective interaction with organizational processes. General managers with the intention of improving their understanding of process improvement and project management would also benefit from this workshop.

Prerequisites:

A general understanding of process management tools confirmed through other coursework or experience would help participants draw the most from this workshop.

The Goals of this Workshop

The goals of this workshop are to:

- Create an understanding of the role and challenges of process quality management
- Build a comprehensive set of skills required for the multi-dimensional management of process improvement projects
- Explore the use of quality management tools and the lessons to be learned from the modern quality movement
- Provide an understanding of basic and more advanced quality management tools
- Allow participants to apply the skills they have learned in an extensive capstone exercise
- Help participants increase their ability to satisfy stakeholders by creating projects, products, and processes that meet the needs of those stakeholders

Course Outline:

Day 1:

- Module 1: Introduction to the workshop

  - In this module, we will detail the workshop objectives and schedule and identify participant interests and concerns. We'll also describe the dimensions of quality for complex processes.

- Module 4: Process quality fundamentals

  - In this module, we'll examine the tenets of the modern quality movement and its pioneers and the definitions of quality. We'll also examine the challenges of process improvement.

- Module 3: Root cause analysis

  - In this module, we will examine techniques for identifying the root causes of business problems. We'll describe methods for gathering information, applying root-cause diagrams and analysis, and identifying causes that are susceptible to corrective action. We'll engage in an exercise to apply the concepts we've learned.

- Module 4: Identifying and managing process quality

  - In this module, we'll examine the fundamentals of indentifying the requirements for business process and describe the challenges of identifying user definitions of quality and the tools for eliciting accurate requirements for business processes. We'll describe the attributes of requirements and techniques for analyzing and documenting requirements. Last, we'll examine the methods for ensuring that processes meet quality requirements.

Day 2:

- Module 5: Managing and improving process quality

  - In this module, we'll examine the basic tools for managing and improving process quality. We'll identify the role of random errors and the eight principal tools of project quality management identified in the *PMBOK*® *Guide, Fourth Edition*. We'll engage in an exercise to identify process errors and a plan for process improvement.

- Module 6: Advanced tools for quality management

  - In this module, we'll investigate some more advanced tools for process quality management. The tools that we will explore include process and failure mode effect analysis (PFMEA), fault tree analysis, gap analysis, affinity diagrams, statistical process control (including Lean and Six Sigma), and process capability analysis. We'll engage in an exercise to identify quality improvement methods that we'll employ on our projects and organizations.

Day 3:

- Module 6: Advanced tools for quality management (conclusion)

- Module 7: Capstone exercise

- Using a real project of concern to participants, they will have the opportunity to apply they have learned. At the close of the exercise, class participants will present the results of their problem-solving exercise and present recommendations to the class.

- Module 8: Workshop wrap-up

  - In this module, we'll conclude the workshop and respond to remaining questions. We'll identify additional resources and evaluate the workshop