



Thriving on Chaos — Delivering Quality Software

Description: **Thriving On Chaos — Delivering Quality Software** is an intensive workshop that steers development organizations toward key issues for delivering successful software products. The workshop first investigates why software development is harder and more complicated than we expect – especially in today’s climate of business and technical chaos. While many organizations try to produce "quality" software, many factors impede progress, from the simplest "how do we define quality?" to the understanding of complex, inter-locking dynamics of software development.

This workshop, developed in conjunction with Jerry Weinberg, has two major components. The first component is conceptual – What is quality? What is the nature of learning and change in a complex environment? How do we balance people issues and process issues? How do we balance rigor and flexibility? How do we think about software delivery in new and important ways? A specific six-step performance improvement model is introduced and examined in detail.

Thriving on Chaos then utilizes these concepts to address specific software development issues such as improving product quality and the implementation of development techniques such as inspections, JAD sessions, and the specification process.

The concepts are also applied to the overall development life cycle, answering questions such as: What kind of life cycle responds best to change and continuous learning? What life cycle balances flexibility and rigor? Which life cycle responds best to customer needs?

The learning experience in this workshop is experiential. The primary vehicle for learning is a series of challenging, exciting simulation exercises whose purpose is to stimulate thought and discussion. The exercises were originally developed by Jerry Weinberg, a master of experiential learning.

Though seemingly conceptual, this workshop is intensely practical. Organizations today are faced with delivering quality software in a chaotic environment. Facing the challenge requires high levels of technical skill and the ability to change and learn and thrive in the face of that chaos. Maybe that’s why this workshop has been a staple in Microsoft’s training curriculum for over five years.

Duration: 1 day

Suggested Audience: This workshop has been designed for software professionals, customer organizations, and management who are interested in or responsible for delivering quality software. The workshop is particularly effective in helping to build a high-performance team environment.

Prerequisites: There are no prerequisites for this workshop. However, participants will get more out of the workshop if they have had some experience with developing or using software. The workshop assumes that the participants have experience in systems development and basic project management practices.

Topics Covered: **Introduction**

Understanding Quality

- What is Quality? Who Defines Quality?

Improving Software Development Performance

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- Managing Chaotic Behavior
 - Flexible and Rigorous Processes
 - Performance Improvement and Learning
 - Mental Models and Change
 - Organizational Behavior Patterns
- Exercise: *Cross Words*

Systems Thinking

- What is *Systems Thinking*?
 - Learning and Feedback
 - Mapping Complex Actions
- Exercise: *Diagram of Effects*

Dynamics of Product Stability

- Error Location Dynamics
 - Error Repair Dynamics
 - Product Stability Analysis
- Exercise: *Twin Pictures*
Exercise: *The Bead Game*

Product Life Cycle Dynamics

- Life Cycle Types
 - Defect Introduction
 - Specification Dynamics
 - Other Life Cycle Dynamics
- Exercise: *House of Cards*

Measuring Performance

- Why Measure?
- How Not to Measure

Performance Improvement Action

Conclusion