

Agile Methods and Process Discipline

One or Two Day Seminar^{*}

Seminar Description

Agile methods have been touted as the programming methodologies of choice for the high-speed, volatile world of Internet-speed applications and Web software development. They have also been criticized as just another disguise for undisciplined hacking. The reality depends on the fidelity to the agile philosophy with which these methodologies are implemented and the appropriateness of the implementation for the application environment. Extreme Programming, Scrum, and similar agile methods are disciplined processes that incorporate good engineering and management practices, albeit with extreme implementations tailored to a specific kind of business environment. Agile methods are targeted towards a small-project environment with high requirements volatility. This seminar discusses how agile methods can be incorporated into organizational improvement programs that are using CMMI, ISO 9001, and similar frameworks.

Who Should Attend

- Project managers who will be piloting agile methods
- Agile method experts who wish to leverage the insights of the process community
- Process experts who are studying the contributions of the agile community
- Software professionals who desire to use the best software engineering practices available

Course Prerequisites

There are no pre-requisites for this seminar.

Course Objectives

After completing this seminar, participants should be able to:

- Understand the basics of agile methods and where they are most appropriate
- Understand the objectives of software process improvement
- Evaluate the tradeoffs in practices of a specific agile method such as XP
- Discuss the technology transition barriers to adoption of agile methods
- Address transition barriers to agile methods in an organizational software process improvement context

^{*} This seminar can be delivered over either one or two days. Longer seminars involve more case studies, exercises, and role plays, as well as a more in-depth study of the material. Shorter forms of this material can be presented also.

Module Descriptions

Module 1 – The Agile Alliance

- The Agile Manifesto
- Principles of agile software development
- Success factors for agile projects

Module 2 – An Overview of Agile Methods

- The diversity of agile methods
- Scrum in brief
- Extreme Programming (XP)
- Variants of XP
- XP practice relationships and tradeoffs

Module 3 – An Overview of Best Practice Frameworks

- The quagmire of improvement frameworks
- ISO 9001 and the ISO 9004 principles
- ISO/IEC 15504 objectives and principles
- CMMI for Development
- CMMI generic practices
- CMMI process areas
- Success factors for software process improvement

Module 4 – Relating Agile Principles to CMMI Requirements

- Aligning agility and discipline
- Scrum and project management
- Fitting XP practices into organizational improvement programs
- Problematic XP practices
- Challenging CMMI, ISO 9001, and ISO/IEC 15504 requirements
- Interpreting models and standards with good judgment
- Cultural misfits with agility

Activities and Exercises

Activities and exercises include case studies, situational analyses, role playing, and interactive lecturing.