

Flexible Product Development

Building Agility for Changing Markets

AN INTENSIVE TWO-DAY WORKSHOP FOCUSING ON ACCOMMODATING AND EVEN EMBRACING THE MID-PROJECT CHANGES THAT INEVITABLY ACCOMPANY TRUE PRODUCT INNOVATION

May 12–13, 2009 • Atlanta, Georgia

When you develop new products...

Do customers change their minds in the middle of the project?

Do competitors launch disruptive products after your design “freeze”?

Does the technology change before you can bring it to market?

Does your system facilitate making these changes smoothly?

Through lectures, a full-length case study, and interactive Q&A, you will learn:

- How to time decision-making to keep options open but keep schedules and budgets in line
- How to build teams that can cope well with the demands of ongoing change
- How to specify customer requirements at levels that are less likely to change
- How to design your process to accommodate change while maintaining process quality
- How to implement flexible project management techniques that overcome the rigidity of traditional project management
- How to balance the need for structure against the need for flexibility
- How to “fence in” change through modular architecture
- How to lower the cost of change throughout the process

Course Instructor:



Preston G. Smith

co-author of *Developing Products in Half the Time*



Register Today!

800 338 2223

www.ManagementRoundtable.com

Flexible Product Development

Building Agility for
Changing Markets

May 12–13, 2009 • Atlanta, Georgia

Why This Seminar Is Important to You

Change is an inescapable part of new-product innovation. When you are innovating, change will happen in the middle of a development project. However, the processes and techniques that management commonly uses to develop products (Six Sigma, Stage-Gate®, and project office, for instance) are not designed to facilitate change. Instead, they encourage heavy upfront planning and reward managers who stick to plan. Rather than resisting or denying change, why not build systems that embrace it?

This workshop shows you how to build such flexible product development systems. It was inspired by the acclaimed recent model of agile software development, although most of the agile software tools depend on some unique characteristics of software. Consequently, in this workshop we rebuild flexibility for non-software products by understanding what the agilists have done.

This topic is most timely. Although changes—from customers, in the marketplace, and in the technologies going into new products—are spiraling, pressure from the financial markets is pushing managers toward certainty: do it right the first time, follow the plan, eliminate waste, and avoid surprises. Unfortunately, this trend toward conformity is taking its toll: studies show that new-product innovation has decreased dramatically over the past decade. This workshop aims directly at restoring innovation by reintroducing flexibility so that developers can excite customers and bewilder competitors.

That is, these tools can be used defensively to cope with imposed change, and they can also be applied offensively to create an environment of change that overwhelms the competition.

We will explore several categories of tools to enhance flexibility. We explain each tool and consider its strengths and limitations. Then we turn to a product development case study that runs for the length of the workshop, where we apply the tool to the case study project to gain essential hands-on practice in applying it. You will see not only how you apply the tool, but how others, working independently, apply it too.

About the Instructor



PRESTON SMITH, through his consulting and training activities over the past twenty years, has helped many companies to become more dynamic in how

they develop new products. He is the author of the just-published book, *Flexible Product Development: Building Agility for Changing Markets*. Flexibility is just a twenty-first century expression of time-to-market, he says. “We used to measure time from when you began a project, but in an environment of change, the starting time that really matters is time from when you can make the last change in the design, and flexibility shortens this cycle time.”

Preston has led more than 100 workshops in 25 countries worldwide on advanced product development topics and has taught product development courses at several universities. Companies that have attended his workshops include: Siemens, Sony, Motorola, Medtronic, Kraft, Philips, Samsung, Daimler AG, and Honeywell. Over a twenty-year period prior to his consulting career, he held engineering and management positions with North American Aviation (now part of Boeing), Pratt & Whitney Aircraft, IBM, Bell Laboratories (now Alcatel-Lucent), and General Motors Research Laboratories.

He is book review editor for the *Journal of Product Innovation Management*, holds a Ph.D. in engineering from Stanford University, and is a member of the Product Development and Management Association (PDMA), the Agile Alliance, and the Agile Project Leadership Network.

WORKSHOP OUTLINE

1. Understanding Flexibility

- Dealing with Change
- How Much Flexibility
 - Benefits of Flexibility
 - The Cost of Change
 - Managing the Convergence of Flexibility
 - The Downsides of Flexibility
- The Roots: Agile Software Development
 - Extreme Programming (XP)
 - XP Practices
 - How Did XP Arise?
 - XP Values
 - Does XP Work?
- Moving from Software to Other Products
- A Note of Caution
- The Project Analyzer
- Summary

2. Customers and Product Requirements

- The Fallacy of Frozen Requirements
 - Requirements Evolution versus Scope Creep
- The Value of Customer Feedback
 - The MacCormack and Boehm Studies
 - The Overspecification Trap
 - The Principles of Iteration and Customer Feedback
 - Lowering the Cost of Iteration
- Specify at a Higher Level
 - Product Vision
 - Personas
 - Use Cases
 - User Stories
- Anticipate Customer Needs
 - Get into the Customer Experience
 - Lead Users
- The Pitfalls of Customer Feedback
 - Expert Customers
 - Customer Desires and Customer Needs
 - Internal Customers
- Summary

3. Modular Product Architectures

- Modular Versus Integral Architectures
 - Advantages and Disadvantages of Modularity
 - Modularity Objectives
- Examples of Architectural Choices
 - Automobile Design
 - Cordless Screwdriver
 - CD-ROM Drive
- Architectural Approaches
 - Reduce Coupling
 - Isolate Volatility
 - Provide for Growth
 - Align with Organizational Boundaries
- Four Steps in Designing an Architecture
- Architectural Decisions
 - Placement of Functions
 - Interfaces
 - Providing for Growth
- Architecture at the Design Level
- Shifting the Hardware-Software Boundary
- Summary

4. Experimentation

- Kinds of Experiments
- The Value of Failure
- Exploration as Experimentation
 - Planning Step
 - Construction Step
 - The Run Step
 - Assessment Step
- Front-Loaded Prototyping
 - Traditional Versus Front-Loaded Strategies
 - Enabling Technologies
 - The Front-Loaded Style
 - Front-Loading Considerations
- Testing
- Summary

5. Set-Based Design

- What Is Set-Based Design?
 - A Focus on Constraints
 - Supporting Technical Reports
- Benefits of Set-Based Design
- Managing Set-Based Design
- Delaying Decisions
 - Progressive Decisions
- The Difficulties
- Summary

6. Development Teams and People Factors

- Teams and Flexibility
- Having the “Right” People
 - Useful Experience
 - Mastery Levels
 - Great Teams from Average Individuals
- Desirable People Qualities
 - Skills
 - Dedication
 - Commitment
 - Generalists
- Team Qualities
 - Self-Organizing
 - Cross-Functional
 - Adequate Authority
 - Co-Located
 - Partially Co-Located
 - Electronic Communication Tools
- Summary

7. Decision Making

- Improving Decision-Making Flexibility
 - The Last Responsible Moment
 - Applying the Last Responsible Moment Responsibly
- People and Decisions
 - Reaching Consensus
- Uncertainty and Decisions
 - Reducing Uncertainty
- Decision Trees
 - The Value of Perfect Information
 - Decision Trees in Practice
- Real Options Thinking
- Summary

8. Project Management

- Flexible Versus Mainstream Project Management
 - The Project Plan Is Not the Guide
 - Redefining Project Completion
 - Reorienting Quality
 - Individuals Over Processes
 - The Role of Tacit Knowledge
- The Role of a Flexible Project Manager
 - Out in the Team Space
 - Supporting and Protecting the Troops
 - Clarifying and Enforcing the Product Vision
- Project Planning
 - Planning versus Anticipation
 - Rolling-Wave Planning
 - Loose-Tight Planning
- Timeboxing
 - Expectations Management
- Project Risk Management
 - Integrated versus Intrinsic Risk Management
 - Risk Management and Iterative Development
 - Managing Unknown Risks
- Project Metrics
 - Strategic versus Tactical Metrics
 - A Flexibility Index
 - Burndown Chart
 - Team Mood
 - Sharing and Acting on Metrics
- Project Retrospectives
- Summary

9. Product Development Processes

- Emergent Processes
 - Standardize in the Lower Layers
 - Build, Do Not Scale Down, Processes
- The Essentials of Flexible Processes
 - Iterative and Incremental Innovation
 - Balancing Anticipation and Adaptation
 - Tacit Knowledge
- Balancing Structure with Flexibility
 - Balancing Opposing Risks
 - Shifting the Balance
- Bottlenecks and Queues
 - The Myth of Capacity
- Useful Concepts from Agile Software Development
 - Refactoring and Technical Debt
 - You Aren't Going to Need It
- Summary

10. Implementing Flexibility

- Five Paradoxes
 - Top-Down or Bottom-Up?
 - Start Small or Start Big?
 - Start with a Piece or with the Whole Package?
 - Gradual or Ambitious?
 - Exposed or Sheltered Project?
- Transitions Are the Crux
- Top-Down Change
- Bottom-Up Change
- Summary

Who Should Attend

Managers leading and planning new product development and members of development teams. Executives who wish to rethink whether their current strategies are producing the new-product results they desire in the turbulent environment they face.

The more you face change and uncertainty in developing new products, the more valuable this workshop will be. If you are not facing change, ask yourself: Are your new products truly innovative?

Although this workshop is aimed at non-software products, which have not had the benefit of agile methodologies heretofore, agile software developers will find it valuable to strengthen their understanding of agile approaches.

"I was very excited about some of the concepts introduced during the workshop. Within one week I was presenting key ideas to our Executive Staff and leading a very productive discussion about how we can begin putting them to work in our organization."

Henry T. Ferguson, VP, Internet Strategies, Coaxis, Inc.

"The workshop was very stimulating and I have already met with some of the other Xerox folks that attended to plan our implementation of concepts and ideas that were introduced."

M. Scott Walsh, Program Manager, Xerox Office Group

Free Book Offer

All attendees will receive a free copy of Preston Smith's new book, *Flexible Product Development: Building Agility for Changing Markets*.



ABOUT MANAGEMENT ROUNDTABLE



The Management Roundtable (MRT) is the foremost knowledge and networking resource for industry practitioners involved in product, service, technology, and business development. Practitioner-oriented and unbiased, MRT's focus is on strategies and processes that enable speed, innovation, profitability, and overall competitive advantage. Through its highly regarded conferences and publications, MRT has helped companies achieve their objectives since 1980.

Its newest membership offering, the Management Roundtable FastTrack, (<http://fasttrack.roundtable.com>) offers direct, year-round access to leading-practice insights via teleconference and online reports.

Flexible Product Development

May 12-13, 2009 • Atlanta, Georgia

4 WAYS TO REGISTER:

CALL: 1-800-338-2223 or 781-891-8080
(weekdays, 9:00am-5:30pm EST)

FAX TO: 781-398-1889

INTERNET: www.ManagementRoundtable.com

MAIL TO: Flexible Product Development
c/o Management Roundtable
92 Crescent Street, Waltham, MA 02453

Please accept the following registration for the "Flexible Product Development" workshop at \$1995/person:

(Please use photocopies for additional registrants. Please type or print clearly.)

NAME Mr. / Ms. _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY/STATE/ZIP _____

PHONE _____ FAX _____

EMAIL _____

- I would also like to join the Management Roundtable FastTrack for continuous access to leading-practice insights and peer dialogues on product development and other key innovation practices. **40% discount** with workshop registration—just add \$297 to your registration total (regular price \$495/year). Membership will be activated upon receipt of payment.

Payment Information

- Check enclosed, payable in US funds to *Management Roundtable, Inc.*
- Please bill my VISA Mastercard AMEX Diner's Club

CARD NO. _____ EXP. DATE: _____

NAME AS IT APPEARS ON CARD: _____

SIGNATURE _____

- Please bill my company. PO# _____

Code: Web Download

WORKSHOP FEE: \$1995/person. Fee includes all program materials, luncheons, continental breakfasts, and refreshment breaks.

DATES: The workshop will be held May 12-13, 2009. Registration and continental breakfast begins at 7:30 am on Day 1; session begins at 8:00 am and concludes at 4:00 pm on Day 2. See our website for agenda details.

LOCATION & HOTEL ACCOMMODATIONS: This workshop will be held at the **The Westin Atlanta Airport**, 4736 Best Road, College Park, GA 30337. For reservations call please call 888-627-7211 and mention that you will be attending Management Roundtable's **Flexible Product Development** workshop. Room rate: \$139. Deadline: April 24, 2009

NO-RISK GUARANTEE: Your satisfaction is 100% guaranteed—money-back or credit. If you're not satisfied with the quality of this program, let us know in writing and we'll refund your entire registration fee.

CANCELLATIONS/SUBSTITUTIONS: You may send a substitute attendee in your place at any time with no penalty (please inform us in advance if possible). Cancellations made within 5 business days of the event are subject to a \$200 administration fee OR the full fee can be credited towards a future purchase. No-shows are liable for the full fee.

WORKSHOP ATTIRE: Business casual.