# Flexible Product Development

## Acquiring the product development tools to delight customers ahead of the competition

**December 1st-2nd, 2005**
**Regal International East Asia Hotel, Shanghai**

**Facilitated by product development guru, speaker, consultant and author**

## Dr. Preston Smith

Principal

## New Product Dynamics

### What You Will Learn?

**This workshop will provide all that you need to develop flexibility in your organization:**

- An understanding of various flexibility tools and approaches, including the strengths and weaknesses of each one so that you know when to use it and how to adapt it to your needs
- Hands-on practice in using the tools and approaches on a case study product development project
- Seeing how others apply the tools to broaden and enrich your experience with these tools
- An appreciation of the underlying flexible environment, why it is essential, and how to develop it
- Exposure to the dark side of flexibility so that you will not become caught in it

### Why You Should Attend?

Product development can have various objectives: low cost or high-quality products, time to market, squeezing the most out of available resources, or delighting the customer. Aggressive managers want all of these, but the reality is that there are tradeoffs, so they must make choices.

Another important objective that few people are recognizing yet is flexibility: the ability to make changes in the product design, the technology employed, or the market objectives relatively late in development without serious financial, resource, or schedule consequences.Flexibility is important increasingly because markets, customer desires, incorporated technologies, and management often change before a development project can be completed - if indeed we even understand them well at the outset. This is your opportunity to become a leader in flexibility, making changes that allow you to please your customers and leave your competitors behind. This is especially important in the fast-changing economy of today's China. Attend this workshop and learn a collection of tools that will allow you to be agile.

The literature explains many of these tools - but not all in one place. More importantly, there is more to flexibility than you can learn by just reading about it. You will need some new skills, and you will need to establish a new organizational environment that is both flexible and stable. This workshop will provide all of the needed pieces. We suggest that you bring along your key colleagues so that they can support you in implementing flexibility.

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梅花信息 MeiHua Information

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## Workshop Outline

**DECEMBER 1 2005, THURSDAY, DAY ONE**

- **Introduction**
  - Definition of flexibility
  - Benefits of flexibility
  - Applicable product areas
  - Possible tradeoffs involved
  - Potential downsides
    - Amplified volatility
    - Indecisiveness

- **Keeping up with changing customer requirements**
  - The falacy of knowing all requirements at a project's outset
  - Frozen requirements versus customer feedback
  - Linking with specific customers
    - Customer surrogates
  - Limitations of customer feedback
  - Obtaining customer feedback quickly and efficiently
  - The power of a product vision

- **Front-loaded prototyping**
  - Traditional versus front-loaded strategies
  - Enabling technologies
  - Economic drivers
  - Where not to prototype
  - Front-loaded strategies
    - How many prototypes?
    - Why and when?
    - How many in parallel?
  - Examples and case studies
  - Fit with customer feedback

- **Iterative and incremental development**
  - The power of incrementalism
  - The problem with do-it-right-the-first-time

  - Planning and fixing the number of iterations
  - Examples from hardware development
  - Examples from software development
  - Fit with customer feedback and front-loaded prototyping

- **Exploiting modular product architectures**
  - Modular versus integral architectures
    - Advantages and limitations
  - Decisions to be made and how to make them
    - Functionality
    - Interfaces
    - Reserve performance and robustness
    - Isolating change
    - Partitioning risk
    - Component and design reuse
  - Hardware development examples
  - Software development examples
  - The price of modularity
    - Transitioning from modular to integral architecture

- **Employing flexibility-enhancing technologies**
  - Understanding your current weaknesses
  - Using the cost of delay to drive economics
  - Try before you buy
  - Examples

- **Using parallel development strategies**
  - Paying twice: the cost of flexibility
  - Strategies
    - How many parallel paths?
    - When to terminate?
    - Learning factors

- **Leaving choices open**
  - Identifying opportunities
  - Economics
  - Guarding against indecision and procrastination
  - Examples

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### DECEMBER 2 2005, FRIDAY, DAY TWO

- **Structuring development teams to enhance communication**
  - Communication and decision-making: the core capability
  - Communicating over distance and time zones
  - Information sharing and responsiveness
  - E-mail protocols

- **Testing strategies**
  - Running your " chicken test " early
  - Basing tests on hypotheses
  - Testing and parallel-path approaches
  - Examples

- **Decreasing queue time and improving reaction time**
  - Understanding your capacity and bottlenecks
  - Finding and measuring bottlenecks
  - The economics of delay

- **Enabling progressive commitments**
  - Planning decision sequences
  - Identifying the big decisions for early attention
  - Establishing what the product will not do
    - Not immediately
    - Not " ever "

- **Supportive management and process techniques**
  - Rolling-wave planning
  - A new view of project " completion "
  - Ongoing customer involvement
  - Separating essential from nice-to-have
  - Management by walking around (MBWA)
  - Bounding-box management

- **Metrics**
  - Strategic versus tactical metrics
  - Measures of flexibility
  - Linking metrics with desired behavior
  - Making metrics visible

- **Managing project risk**
  - Incremental and rolling-wave risk management
  - Basing risks on facts; the risk model
  - Attacking the major risks first
  - Planning to fail

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**Timetable Day 1& 2**

| | |
|---|---|
| 0830 | Registration |
| 0900 | Course Begins |
| 1030 | Morning Tea |
| 1100 | Course re-commences |
| 1230 | Luncheon |
| 1400 | Course re-commences |
| 1530 | Afternoon Tea |
| 1600 | Course re-commences |
| 1730 | End of Day |

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## About the Facilitator

**Preston Smith**

Dr. Preston Smith Began specializing in rapid product development in 1984 as an internal consultant, became an independent management consultant concentrating on time to market issues in 1986, and earned Certified Management Consultant (CMC) standing in 1990.

Preston has led more than 100 seminars in 23 countries worldwide on compressing product development cycle time and has taught product development courses at several universities. Companies who have attended his workshop include: General Electric, Sony, General Foods, Philips, Samsung, DaimlerChrysler, Honeywell, etc.

Preston has gained vast engineering and technology management experience over a period of twenty years through employment with North American Aviation ( now part of Boeing), Pratt & Whitney Aircraft, IBM, Bell Laboratories (now Lucent Technologies), General Motors Research Laboratories, etc.

He is the co-author of the popular book, **Developing Products in Half the Time**: New Rules, New Tools. This book has over 100,000 copies in use by managers in many industries. It ranks among the most popular product development titles at www.amazon.com. In addition to nearly fifty published articles on rapid development, he regularly writes columns on product development and is book review editor for the Journal of Product Innovation Management.

Preston holds a Ph.D. in engineering from Stanford University, and is a member of the Product Development and Management Association (PDMA) and the Society of Concurrent Product Development (SCPD). He is listed in Who's Who in Finance and Industry and Who's Who in the West.

His client companies span the motor vehicle, power tool, medical electronics, food packaging, chemical, computer, telecommunications, semiconductor, industrial equipment industries etc. Some of the companies who apply the tools from this workshop are: **Boeing, Bosch, Nestle, Black & Decker, Dell Computer, Intel, Siemens, Motorola, Hewlett-Packard.**

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