Introduction to Agile Methods

Chennai Agile User Group Kickoff

Sanjiv Augustine

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Agenda

- **Agile at a Glance**  
  - Landscape  
  - Basics  
  - Typical Benefits  
  - How is Agile Different?  
  - Misconceptions and Myths

- **Exercise: Airplane Production Line**  
  (15 Minutes)

- **Agile Project Management Overview**  
  - APM Defined  
  - Transitioning to APM

- **Discussion/Q&A**  
  (15 Minutes)
Agile at a Glance
Corporate IT is Leading the Second Wave of IT Adoption

Agile software development processes are in use at 14% of North American and European enterprises, and another 19% of enterprises are either interested in adopting Agile or already planning to do so.

Early adopters of Agile processes were primarily small high-tech product companies. But a second wave of adoption is now underway, with enterprise IT shops taking the lead.

These shops are turning to Agile processes to cut time-to-market, improve quality, and strengthen their relationships with business stakeholders.


The Agile Landscape

Agile Methodologies

- **eXtreme Programming** *(Kent Beck, Ward Cunningham, Ron Jeffries)*
- **Scrum** *(Jeff Sutherland and Ken Schwaber)*
- **Crystal Methods** *(Alistair Cockburn)*
- **Feature Driven Development** *(Jeff DeLuca)*
- **Dynamic Systems Development Method** *(DSDM Consortium)*

Agile Management

- **Agile Project Management**  
  *Jim Highsmith, Ken Schwaber, Sanjiv Augustine*
- **Agile Management**  
  *David Anderson*
- **eXtreme Project Management**  
  *Rob Thomsett, Doug DeCarlo*
Key Agile principles are:

**Focus on customer value** - Employ business-driven prioritization of features.

**Iterative & Incremental Delivery** - Create a flow of value to customers by “chunking” feature delivery into small increments.

**Intense Collaboration** - Face-to-face communication via collocation, etc; diversified roles on integrated teams.

**Self Organization** - Team members self-organize to fulfill a shared project vision.

**Continuous Improvement** - Teams reflect, learn and adapt to change; work informs the plan.

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**What is Customer Value?**

*The right product for the right price at the right time:*

- The right product is the product with exactly the features that the customer wants.
- The right price is the price that customer believes is a fair deal.
- The right time is when the customer wants it.
Key Agile practices include:

- **Release Planning**
  (creates *Product backlog*)

- **Sprint Planning**
  (creates *Sprint backlog*)

- **Daily Scrum Meeting**

- **Fixed-length sprints**

- **Feature Review**

  *Identify the top-priority items and deliver them early and often.*
**Typical Benefits of Agile**

**Speed**
- Eliminate process waste and handoffs between multiple silos
- Reduce project and product time-to-market by 30-50%

**Flexibility**
- Respond easily to changing project requirements
- Adapt rapidly to organizational and market changes
- Facilitate Business Customer working in lock step with IT

**Innovation**
- Create and sustain teams of enthusiastic, committed and engaged individuals
- Incorporate discipline of value delivery and continuous improvement

*Source: Mary and Tom Poppendieck*
## How is Agile Different?

<table>
<thead>
<tr>
<th>Waterfall/Traditional</th>
<th>Agile Methodologies</th>
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<tbody>
<tr>
<td>Batch Manufacturing</td>
<td>Flow of Value</td>
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<tr>
<td>Large, Specialized Silos</td>
<td>Small, Integrated Teams</td>
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<td>Contract Negotiation</td>
<td>Customer Collaboration</td>
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<td>Hierarchical Control</td>
<td>Self-Organization</td>
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<tr>
<td>Upfront Perfection</td>
<td>Continuous Improvement</td>
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Misconceptions and Myths: What Agile is Not

Misconceptions about Agile:
- Is a silver bullet
- Will solve my resource issues
- Has no planning/ documentation/ architecture/ <insert pet peeve>
- Is a license to hack
- Creates quality issues
- Is undisciplined
- Doesn’t build on my previous experience/expertise
- Is not proven
- Is not being used by industry leaders
Exercise: Airplane Production Line
**Exercise – Airplane Production Line**

**Four volunteers, please!**

**Round 1 - Push System**
- Performer 1: Fold paper in half.
- Performer 2: Fold nose cone.
- Performer 3: Fold wings, tail and ailerons.
- Performer 4: Test plane (throw it into the trash).

**Round 2 - Pull System**
- Performer 1: Fold paper in half.
- Performer 2: Fold nose cone.
- Performer 3: Fold wings, tail and ailerons.
- Performer 4: Test plane (throw it into the trash).

**Round 3 - Pull System with Versatilist Performers**
- Performer 1: Create airplane.
- Performer 2: Create airplane.
- Performer 3: Create airplane.
- Performer 4: Test plane (throw it into the trash).

Start work as soon as your “inbox” is occupied.

Start work only when your “outbox” is empty.

Pass plane to Performer 4 when you’re done.
Agile Project Management Overview
Agile Project Management (APM):
- Is the work of energizing, empowering and enabling project teams to rapidly and reliably deliver customer value
  - By engaging customers, and
  - Continuously learning and adapting to their changing needs and environments
- Focuses on project throughput, teamwork and leadership

From *Managing Agile Projects*, Sanjiv Augustine, Prentice Hall 2005
## Transitioning to APM

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<thead>
<tr>
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<th>Agile</th>
<th>APM Transition</th>
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<tbody>
<tr>
<td><strong>Throughput</strong></td>
<td>Flow of Value</td>
<td>Manage The Flow of Value, Not Activities</td>
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<td><strong>Teamwork</strong></td>
<td>Small, Integrated Teams</td>
<td>Create an Integrated Team</td>
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<td></td>
<td>Customer Collaboration</td>
<td>Focus on the Project Context, Not Content</td>
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<td></td>
<td>Continuous Improvement</td>
<td>Move from Lessons Learned to Project Reflections</td>
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<td><strong>Leadership</strong></td>
<td>Self-Organization</td>
<td>Coordinate Execution through Commitments, Not Commands</td>
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<td>Lead through Presence, Not Power</td>
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Traditional Project Organization:

- Stakeholder
- Stakeholder
- Stakeholder
- Stakeholder

- Project Manager

- Customer

- Team

- Analysts
- Architects
- Developers
- Testers
Agile Project Organization:

Integrated Team
- Analyst
- Developer
- Developer
- Developer
- Tester

Project Manager

Product Owner

Stakeholder

Scrum Team Size: 7 plus or minus 2 people
Discussion/Q&A
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