Agile Acquisition of Agile C2

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June 20, 2012
Introduction

• Commanders are increasingly more engaged in day-to-day activities

• There is a rapid pace of software creation, adoption, and demand

• The U.S. Government is in support of agile adoption
  – DoD CIO 10 Point Plan to reform DoD IT
## Agile DoD Compared to Traditional DoD

<table>
<thead>
<tr>
<th>Element</th>
<th>Agile DoD</th>
<th>Traditional DoD</th>
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<tr>
<td><strong>Organizational Structure</strong></td>
<td>• Flexible and adaptive structures; • Self organizing teams, • Co located teams or strong communication mechanisms when teams are distributed</td>
<td>• Command and control structures that are difficult to change • Hierarchical, command and control-based teams</td>
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<td><strong>Rewards System</strong></td>
<td>• Team is focus of rewards • Sometimes team itself recognizes individuals</td>
<td>• Individual is focus of the reward system</td>
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<td><strong>Communications &amp; Decision Making</strong></td>
<td>• Daily stand up meetings, • Frequent retrospectives, • Information radiators to communicate critical project information; • Evocative documents to feed conversation; • “Just enough” documentation. • Control and discipline comes from the Agile team itself.</td>
<td>• Top down communication; External regulations, policies and procedures tend to drive the work. Activities and processes documented; • Traditional, representational documents used by the PMO throughout the development life cycle to oversee the progress and discipline of the developer through formal and informal reviews.</td>
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<td><strong>Staffing Model</strong></td>
<td>• Cross functional teams including all roles across the life cycle throughout the lifespan of the project; • Agile advocate or coach • End-user representative</td>
<td>• Uses traditional waterfall model with separate teams, particularly for development and testing • Different roles (e.g. developer, tester) are active at different defined points in the life cycle and are not substantively involved except at those times</td>
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Guiding Scenario

- Validated Agile Practices for DoD
- Field Validation of Agile Practices for DoD
- Actionable DoD-centric Agile Methods
- Other Potential Topics
- Influence
- New Models and Guidelines
- Full Understanding of Agile Lean Principles
- Potential Agile Practices for DoD

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Features of Agility in Acquisition

• Adopting an agile culture
• Incremental delivery
• Self organizing teams
• Flexibility
• End-user participation
• Risk management
Benefits of Agile Software Development

Better software can improve operational command and control by

• Ability to adjust quickly
• Ability to be responsive to changing customer needs
• “Uncertainty is inherent in the process of software development,” (Atkinson)
• Earlier insight into development problems
• More personal commitment to project
Innovation and Agility in Acquisition

Systems and Software Engineering Expertise and Framework

Balance evolution of user needs and developed capabilities.

New Mission Need

Traditional Approach

Time spent clarifying requirements

DoD/IC for intelligence community, requirements, stakeholders, needs, business practices, user test and evaluation

New Mission Capability

2010 2012 2014

Traditional Approach

Incremental Approach

Time
Obstacles to Agility in Acquisition

- Long DoD timelines
- Traditional contract constraints
- Culture shifts
- Rigid DoD requirements and oversight
- The element of the unknown
- Information overload
- Communication gaps
- Scaling and Architecture
How to Implement Agility in Acquisition

• DoD Oversight
  – Examine the formal and informal acquisition process
  – Examine the requirement process
  – Require cultural shift
  – Retool contracts for agile acquisition
  – Research how to scale agility

• PEOs and PMs
  – Push back when needed
  – Understand requirements and intent of requirements
  – Stay connected with users
How to Implement Agility in Acquisition

• Engineers and Developers
  – Demand more authority in setting schedule, resources
  – Commit to plan
  – Produce to schedule
  – Learn from each iteration, improve ability to plan and produce
  – Where possible live in the users shoes
Conclusion