Ready for Scrum?

Steve Hutchison
DISA T&E
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Scrum Overview

- Software development framework focused on delivering value according to customer priorities
- Delivers **working software** with **fewer defects** at a sustainable pace
- Removes impediments; teams **self-organize** and become “hyper-productive”
“This new emphasis on speed and flexibility calls for a different approach for managing new product development. The traditional sequential or ‘relay race’ approach to product development…may conflict with the goals of maximum speed and flexibility. Instead, a holistic or ‘rugby’ approach—where a team tries to go the distance as a unit, passing the ball back and forth—may better serve today’s competitive requirements.”

“While there is value in the items on the right, we value the items on the left more.”
Key Features of Scrum

• Highly collaborative
• Documentation light
• Change resilient
• Fundamentally different requirements process
• Short duration development cycle: “Sprint”
• Continuous integration and testing
• Focused on priority needs of the customer: the Warfighter

Agile is about delivery of capability at “speed of need.”
3 Key Roles in Scrum

• Product Owner
  – define product features
  – prioritize features; adjust at each sprint
  – accept/reject sprint product

• Team
  – cross-functional, self-organizing
    • programmers, users, testers
  – membership does not change during sprints

• Scrum Master
  – enable collaboration across all roles and functions
  – ensure team productivity - remove impediments!

Inspect and Adapt
The Product Backlog

• Requirements document
  – not a CDD

• Prioritized list of desired features
  – product Owner prioritizes
  – stated as “user story”
    • as a ___, I want to ___, so that I can _____
    • A Mission Thread likely consists of multiple user stories

• Continuously updated and re-prioritized
  – features added and removed to reflect customer needs

A high-priority user requirement may be just one sprint away from delivery
The Sprint

• Time-boxed development period
  – design, code, test
  – sustainable pace
  – “Sprint backlog”
  – highest priority features from product backlog
  – no changes (new features) during Sprint

• Test Driven Development
  – user stories translated into Test Cases
    • testing the capability as it is intended to be used
  – early involvement!

Outcome: potentially deployable capability
Continuous Integration and Test

- Testing is a shared resource
  - DT, OT, interoperability, security
  - continuous user involvement
  - one team!
- Reciprocity
- Risk-based, mission focused
- Maximizes use of test automation
  - virtualization
- Lightweight documentation: shift emphasis from TEMP to Test Cases

Do not sacrifice rigor in Agile testing
Sprint Review

• Deployment decision
  – not an FDDR
• Demo to stakeholders
• Working capability is eligible to be deployed
  – product owner, stakeholders decide
  – can be improved in subsequent sprint
  – defects returned to the product backlog
• Testers take on “continuous monitoring” role for deployed capability

Capability deployment: start small, scale rapidly
# Task Board

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Role of Testing in Scrum

If you think you’re going to show up at the end and run a test, think again.
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What is Agile Testing?

• Is not testing on an Agile project
• “Early Tester Involvement”
  – drive development
• One team – no tester silos
  – customer focused
• Collaborative
  – with developer, customer
  – not “quality police”

“Unfortunately, customers aren’t generally good at articulating their requirements. Driving development with the wrong tests won’t deliver the desired outcome.

Crispin and Gregory, *Agile Testing*
What Makes Agile Testing Different?

• Not a “phase” at the end
  – Can’t test quality into the product
• Much earlier in the process
  – Coding and testing are integrated
    • A user story is not “done” until it has been tested
  – Drives a culture of feedback and improvement
    • Not a gatekeeper
• Lightweight process
  – Less documentation reliant
• Employs more automation

We define an agile tester this way: a professional tester who embraces change, collaborates well with both technical and business people, and understands the concept of using tests to document requirements and drive development.

Crispin and Gregory, *Agile Testing*
Agile Testing Quadrants

Copyright 2009 Lisa Crispin, Janet Gregory – DragonFire, Inc.
The Agile Testing Quadrants
Original idea by Brian Marick, www.exampler.com
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Challenges

• Test as a Service
  – On demand
• Persistent environment
  – Federate capabilities
  – Virtualize
• Education and training
  – PMs and Testers
• Agile DIACAP, Interoperability, oversight
• Community of Interest User base

Shift the paradigm: testing as an enabler of improved acquisition outcomes
Summary

- New IT Acquisition model is coming
- TE&C processes must adapt
  - Responsive to iterative, incremental development
  - Responsive to **User** priorities
  - High optempo
- Dramatically reduced TE&C timelines

Objective: rapid fielding of enhanced IT capabilities to the Warfighter
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