Agile-Lean Systems Engineering in Defense: Expanding the Scope of NDIA/AFEI Agile Defense Adoption Proponents Team (ADAPT)

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Agenda

- What is ADAPT?
- System Engineering’s Role in Agile Adoption
- ADAPT’s Role in Systems Engineering
- Upcoming Events
WHAT IS ADAPT?

AGILE DEFENSE ADOPTION PROONENTS TEAM
What is ADAPT?

- Community of Interest focused on adoption of agile methods in DoD
- SME's with similar interests
  - Government organizations looking to change
  - Industry practitioners (consultants, tool vendors, contractors, etc)
  - Academia investigating adoption of agile
- Minimal organization
- Active
- AGILE!
Established in February 2011

Focus: adoption of agile methods in IT and software and systems engineering, acquisition, legislation, requirements and technology.

The ADAPT Executive Committee:
- Richard Cheng, Excella Consulting
- Suzette Johnson, Northrop Grumman
- Ken Mills, Version One
- Richard Turner, Stevens Institute

AFEI Staff
- Dave Chesebrough, AFEI
- Tammy Kicker, AFEI
Recent Activities

- Input to “Handbook for Implementing Agile in Department of Defense Information Technology Acquisition” (2012)
- Conferences and Workshops (2011, 2012)
- Open (Breakfast) Meetings (~every two months)
- Collaborations/Networking/Listening
SYSTEM ENGINEERING ROLE IN AGILE ADOPTION
First there was IT…

- First years focused primarily on software in the IT environment and development practices
- Home ground for agile practices
- Support from DoD CIO office
- Leveraging Past Section 804 work
“No agile team is an island” *(Apologies to John Donne)*

Most acquisition is system driven, system focused

Systems engineering exists in many forms

Contracting is a key issue in enabling agile

Culture change is required –and not just in development
Integrating SwE and SE has always been “difficult”

SE touches SW in many places
  – Requirements
  – Architecture
  – V&V

Easier with more traditional SW development practices based on SE principles

Agile has different values

There must be education on both sides

Some progress being made
SE Role in Agile adoption

- SE needs to understand how to enable rather than dismiss agility
- SW needs to see SE as an enabler adding value
- Some agile approaches seem less challenging to SE – starting points?
- SE needs to apply more “systems thinking” to its own processes
- SE and SW need to learn from each other
ADAPT’S ROLE IN SYSTEMS ENGINEERING
ADAPT can span the three target communities to bring together beneficial attractors in agile (and lean) adoption in a systems context

- Government and Military: SEI, DoD, DISA, DARPA, NSF, other agencies
- Industry: NDIA/AFEI, PMI, Lean Systems Society, Agile Alliance, OMG, other agile and lean organizations
- Academia: SERC@Stevens (23 universities), others
- Companies and individuals
- Agile and Lean Systems Engineering: Kanban in SE
  - SERC Research Task
  - Investigating pull scheduling and SE as a service
  - Building a simulated implementation of networked kanban-based scheduling systems for a complex, multiple site hospital information system

- Collaboration among strong SMEs
  - Industry working group (volunteers)
Connections in RT-35

- David Anderson (David J. Anderson and Associates)
- Jabe Bloom (The Library Corporation)
- Mike Burrows (David J. Anderson and Associates)
- Hillel Glazer (Entinex)
- Curtis Hibbs (Boeing)
- Suzette Johnson (Northrop Grumman)
- Larry Maccherone (Rally Development)
- Don Reinertsen (Reinertsen & Associates)
- David Rico (Boeing)
- Garry Roedler (Lockheed Martin)
- Karl Scotland (Rally Software, UK)
- Alan Shalloway (NetObjectives)
- Neil Shirk (Lockheed Martin)
- Neil Siegel (Northrop Grumman)
- James Sutton (Jubata Group)
- Richard Turner (Stevens/SERC)
Other ADAPT-related activities

- Clearing house for related research, experience, practice (may use DAU Acquisition BPCH)
- Developing culture change model based on corporate experience (Boeing, LM, NGC, Raytheon)
- Developing common educational outcomes and training resource database
Fall ADAPT Workshop

- November 28, 2012 - Hyatt Regency Crystal City
- World Cafe-style workshop w/tables:
  - Contracting and Acquisition
  - Project Management
  - Testing and Integration
  - Systems Considerations
  - Changing Culture
- Speakers from DoD:
  - Ronald Pontius, Director, C2, Under Secretary of Defense, AT&L
  - Dr. Steven Hutchison, Principal Deputy, DASD Developmental Test and Evaluation
  - Dave Mihelcic, Chief Technology Officer, DISA (invited)
  - More information [www.afei.org/workinggroups/Adapt](http://www.afei.org/workinggroups/Adapt)
Questions?

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