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2015 Defense Health Information Technology Symposium

Implementation of Agile

SCRUM Software Development Methodology



“Medically Ready Force...Ready Medical Force”

DHA Vision



“A joint, integrated, premier system of health, supporting those who serve in the defense of our country.”



Solution Delivery Division



- **Mission:**

Deliver information technology solutions to the Military Health System through expert acquisition program management, process reengineering, training and integration activities in order to support and advance the delivery of health care to our patients.

- **Vision:**

To become the world class leader in health information technology solutions and integration.



Learning Objectives



- Differentiate between the Agile SCRUM methodology and the traditional waterfall model
- Identify the benefits of Agile SCRUM software development methodology
- Describe how Solution Delivery Division transitioned from waterfall to Agile SCRUM methodology
- Apply Solution Delivery Division best practices for transitioning to Agile

Agenda



- Solution Delivery Division Overview
- Agile SCRUM vs. Waterfall
- Benefits of SCRUM
- Proven Success and User Best Practices
- Solution Delivery Division – Clinical Support Agile Velocity
- Creating an Agile Organization and Best Practices
- Future of Agile

- SCRUM is an iterative and incremental Agile software development methodology for managing product development
 - ❑ Product Backlog is prioritized
 - ❑ Sprint Backlog a team effort
 - ❑ Time boxed; 2-4 weeks (20 working days)
 - ❑ Daily, short (15 minute) meeting
 - ❑ Deliver a working increment of software

Waterfall vs. Agile



	Waterfall	Agile
User Engagement	Early stages with sharp decline	Part of the team
Requirements	Defined up front, signed off	Detailed in collaboration
Tasks	Separated	Shared, team delivery
Status Reports	Intermittently	Visibility
Development Activities	“Over the Wall” Unseen	Transparent
Plans	Defined up from	Evolutionary
Changes	Not welcome	Allowed until last reasonable moment
Rework	Inevitable	Part of the planning

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Benefits of SCRUM



- Collaboration, shared responsibilities and commitments
- Time to market is reduced
- Most important features to the user at a faster rate
- Product quality improves
- Rework approach is managed as a priority
- Cost is predictable
- Risk is reduced

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Greatest Benefit - User Engagement



- Directly involved in creating user stories and acceptance criteria
- Priority is revisited before each sprint
- Provide visibility into routine Agile activities
 - Product Backlog Grooming, Sprint Planning, Daily SCRUM, Demos
- Provide feedback opportunities to assure quality
- Real-time acceptance of the sprint results

■ Waterfall

- ❑ Provided requirements and hoped for the best
- ❑ Created limited flexibility; Limited opportunity to review/adjust until deployed to the production
- ❑ Produced mismatched expectations; Team had good intentions but the processes didn't align with goals

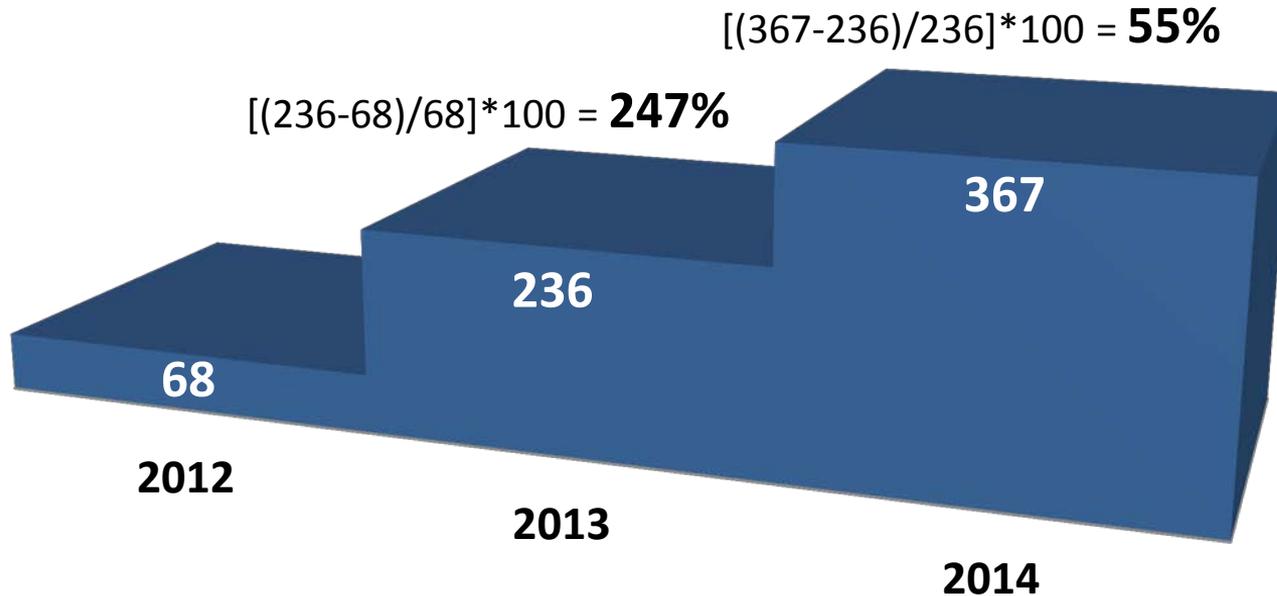
■ Agile

- ❑ Represents a cultural change
- ❑ Enables team to be more responsive to changes
- ❑ Creates a continuous user contribution/feedback loop

Solution Delivery Division Clinical Support Agile Velocity



Number of Change Requests/User Stories Delivered by Year



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Creating an Agile Organization



- Gain leadership commitment
- Start small; Target impact areas
- Determine what is necessary to meet only the core needs
- Define Agile roles
- Engage users
- Train teams
- Inspect and adapt!

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Best Practices from IT Perspective



- Commitment to turn the ship
- Provide guidance
 - Utilize existing resources; hire only what you need
 - Work toward closing the gap in understanding and knowledge
- Start small and grow
- Priorities are evaluated before every sprint and top priorities are addressed in real-time

- Goals for systems transitioning into the Solution Delivery Division from the Services
 - ❑ Align management approach, processes, and infrastructure into one structure
 - ❑ Evolve threats to data
 - ❑ Adapt to change in DoD
 - ❑ Adjust to changing technology
 - ❑ Address user's business needs
 - ❑ Integrate dependencies
 - ❑ Respond to specialized resource demands

Additional Resources



- Considerations for Using Agile in DoD Acquisition, Software Engineering Institute, Carnegie Mellon University, April 2010:
<http://www.sei.cmu.edu/reports/10tn002.pdf>
- A New Approach for Delivering Information Technology Capabilities in the Department of Defense, Report to Congress, November 2010:
<http://dcmo.defense.gov/documents/OSD%2013744-10%20-%20804%20Report%20to%20Congress%20.pdf>

Please complete your evaluations

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Questions?



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