SAFe Principles & Practices at DHS

Creating Alignment and Cultural Change Through Leadership

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About DHS

- Formed 11 days after Sept-11-2001

- "Merger" of 14 major government entities

- Arguably one of the largest and most complex organizations in the world

#1 Take an economic view

#2 Apply systems thinking

#3 Assume variability; preserve options

#4 Build incrementally with fast, integrated learning cycles

#5 Base milestones on objective evaluation of working systems

#6 Make value flow without interruptions

#7 Apply cadence, synchronize with cross-domain planning

#8 Unlock the intrinsic motivation of knowledge workers

#9 Decentralize decision-making

#10 Organize around value

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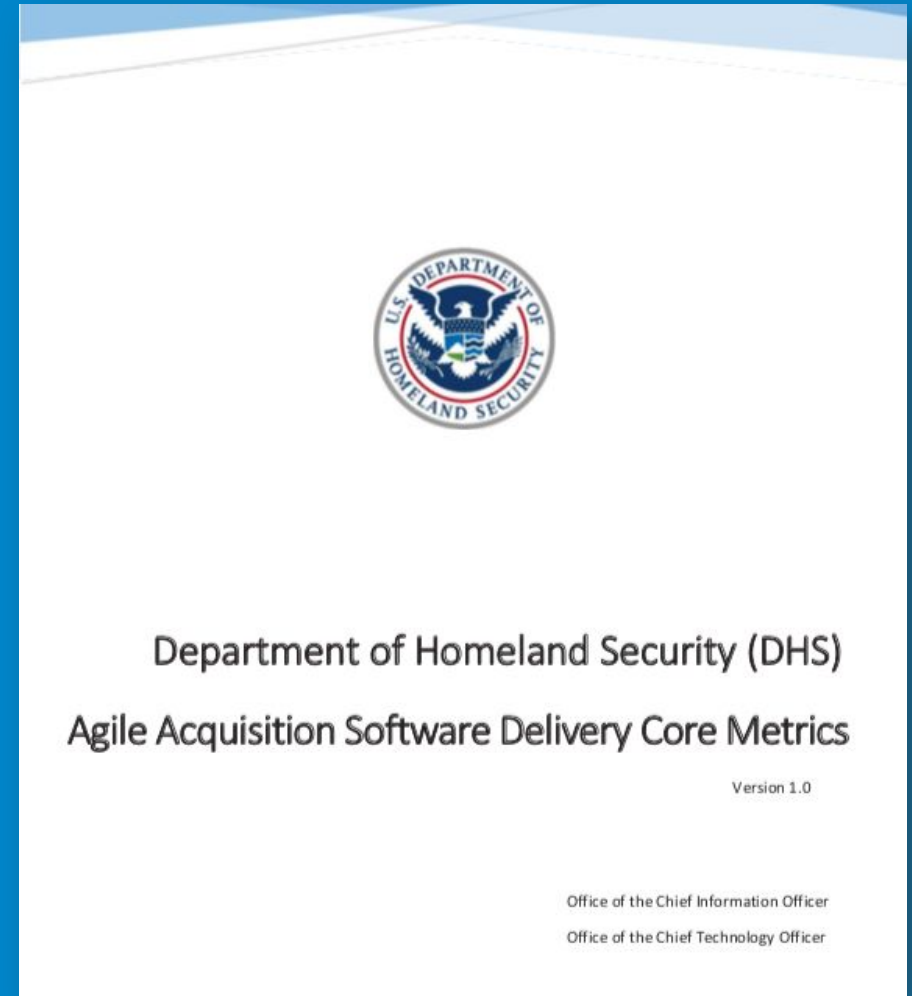
SAFe Principles – SAFe DevSecOps

Embrace the Principles

- Many folks come to SAFe looking for "a process"
- Or they equate SAFe with PI Planning
- PI Planning is GREAT but it is nowhere near sufficient
- There is no recipe for developing large complex systems

- If there is an answer, it is in the **broad** application of the principles across the organization
- SAFe is a holistic system for organizational change
- And only management can make the changes needed for SAFe to succeed

Base Milestones on Objective Evaluation of Working Systems

4 DHS Agile Measurement system

4 Encourages early and frequent testing through automation

4 Encourages frequent deployment

4 Programs are starting to transition to the new measurement system

Department of Homeland Security (DHS)

Agile Acquisition Software Delivery Core Metrics

Version 1.0

Office of the Chief Information Officer

Office of the Chief Technology Officer

- Number of production deployments per quarter
- Percentage of unit test coverage
- Percentage of automated tests
- Average production deployment lead time

Assume Variability, Preserve Options

4 New requirements guidance for DHS

4 Encourages higher level requirements / objective based outcomes

4 Encourages exploration of solutions

4 Discourages detailed, fixed scope requirements

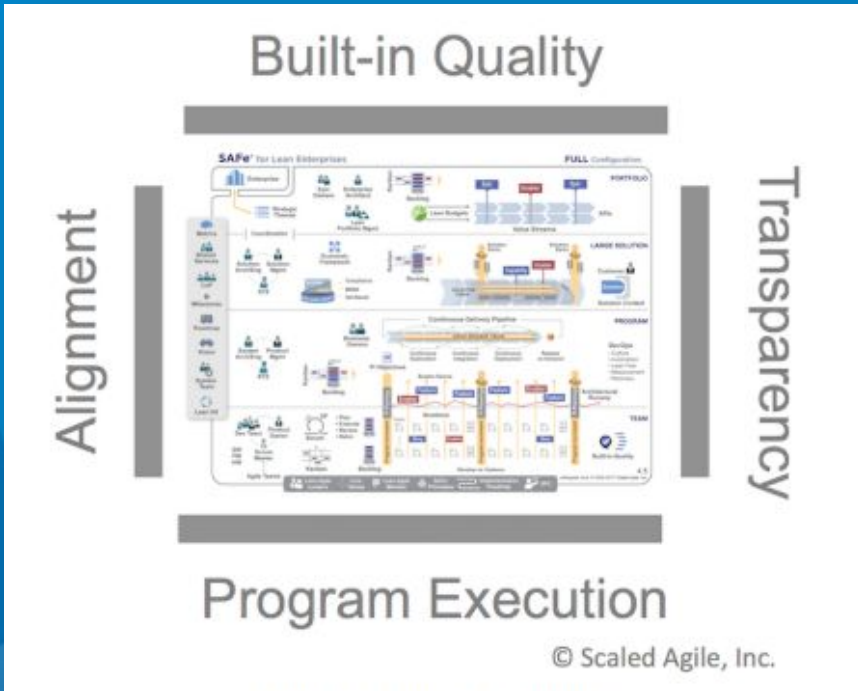4 Encourages SAFe-style roadmaps and planning

Apply Cadence, Synchronization, and Cross-Domain Planning

- PI Planning at TSA and other components
- Demos Scheduled
- I&A Workshops Scheduled
- Feature-level delivery
- RRR & CCB Scheduled
- Deployment Scheduled

- Cadence-based, schedule-driven deliveries vs scope-driven
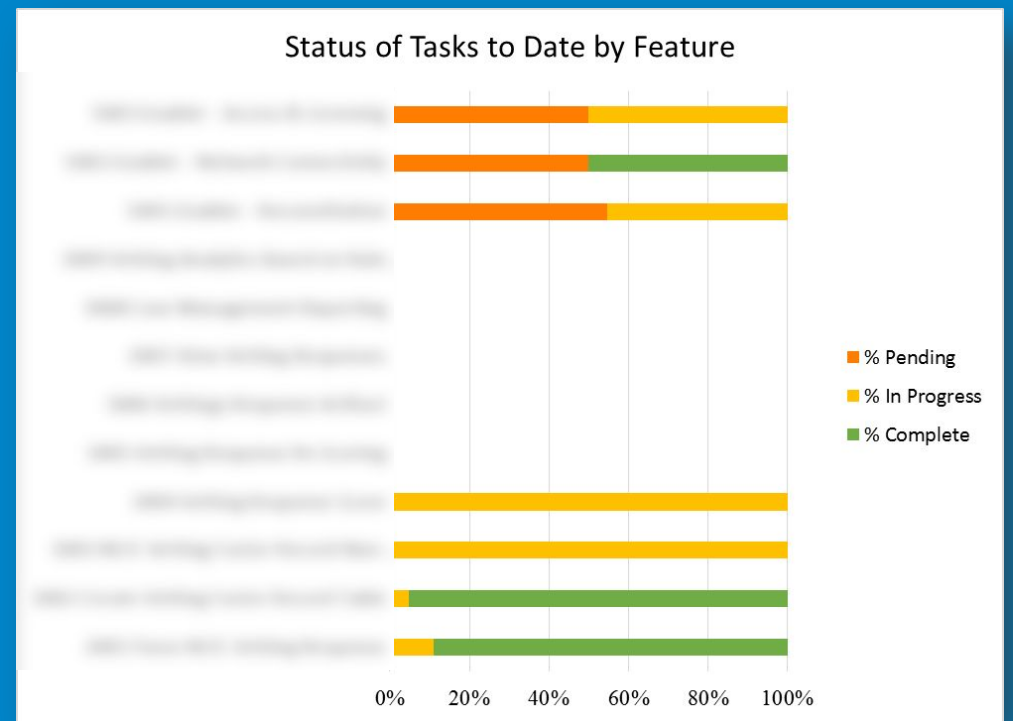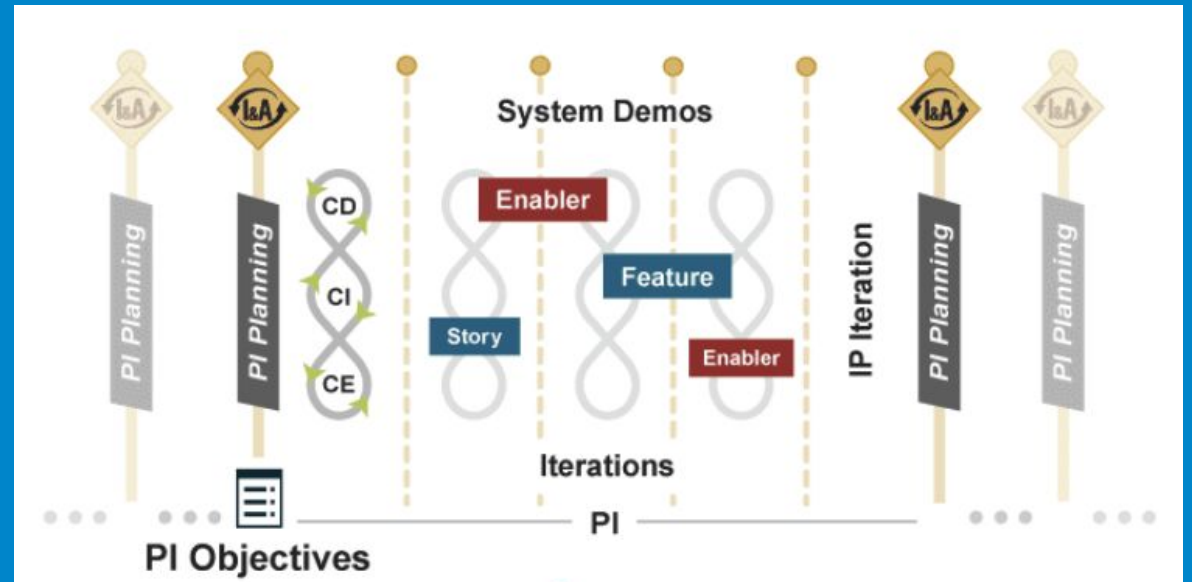
Putting SAFe Core Values into Action

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ACTION PLAN 5. INCORPORATE AGILE GOVERNANCE AND REVIEW MODELS TO INCREASE TRANSPARENCY AND FEEDBACK THROUGHOUT THE OBTAIN PHASE AND OPERATIONS AND MAINTENANCE (O&M)

PROBLEM STATEMENT

In the transition to Agile development, traditional approaches towards program oversight and governance (along with related requirements placed on programs) are often disconnected from the way in which programs plan, develop, deploy, and implement functionality. As a result, governance and oversight bodies risk creating additional work for programs and/or being disconnected from the work being performed, solutions being developed, and value being provided. This limits the effectiveness of oversight groups in performing support functions as a part of their governance role, potentially inhibiting the overall intended mission of risk mitigation, value creation, and enabling transparency.

Recommendation Focus	
Reduce Risk	
Primary Organization(s)	
PARM	**S&T (OSE)**
OCIO	**OCFO**
Level of Difficulty	
8	
Impact	
6	
Executive Priority	
Critical	

RECOMMENDATION

Develop a revised governance approach that aligns with the iterative nature of Agile and enables programs to establish Continuous Integration Continuous Delivery (CI/CD) pipelines and emphasize communication of program planning, processes, issues, and risks through naturally occurring artifacts. Implement Agile governance and review models to increase transparency and feedback throughout the Obtain phase and O&M. The updated DHS governance and review models should account for portfolio, program, and project level considerations. This will improve the value of headquarters support as well as provide transparency in program management and delivery.

TASKS TO COMPLETE

- Define program touchpoints and steering committee review cycle frequency and format, including expectations on the content or information that programs are to present, as well as the necessary oversight organizations to be included
- gile programs to seek Acquisition decisions in incremental updates and provide detailed delivery aps at Acquisition Review Boards (ARBs) to reflect program features and sprint planning in alone incremental capabilities (incremental timeframe can be customized per program, but ining in accordance with FITARA).
- blish reporting and feedback mechanisms that minimize manual input, are consistent in timing and ctive and insight into program ires additional awareness and

RECOMMENDATION
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CALMR: Culture, Automation, Lean + Decentralized Decision Making

Team Managed Deployments policy allow teams to deploy to production without a gate review ….
under strict conditions:

- Very frequent deployment
- Automated testing of all kinds
- Automated and frequent security scans
- Automated deployment
- Use of an approved pipeline

This guidance is intended to further encourage widespread use of very frequent, very small software deployments.
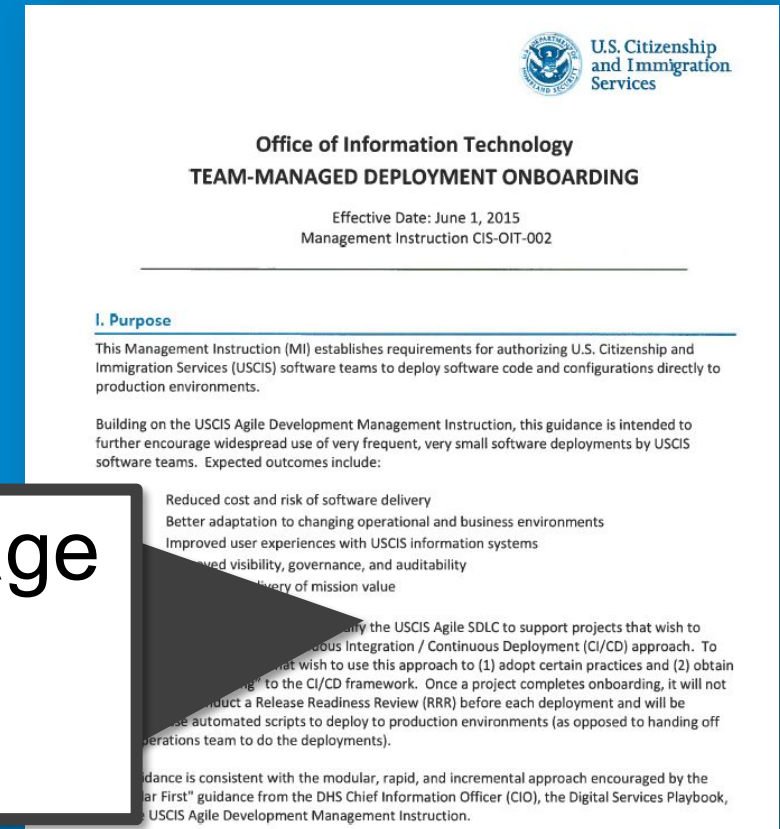
Culture of Shared Responsibility + Respect for People

- A very robust, long-term education system
- Not "one and done" training
- Many roles and many levels
- Several classes a week, over a period of years!
- Forums for peer interaction
- Frequent communications
- Highly effective, and necessary, in driving organizational change
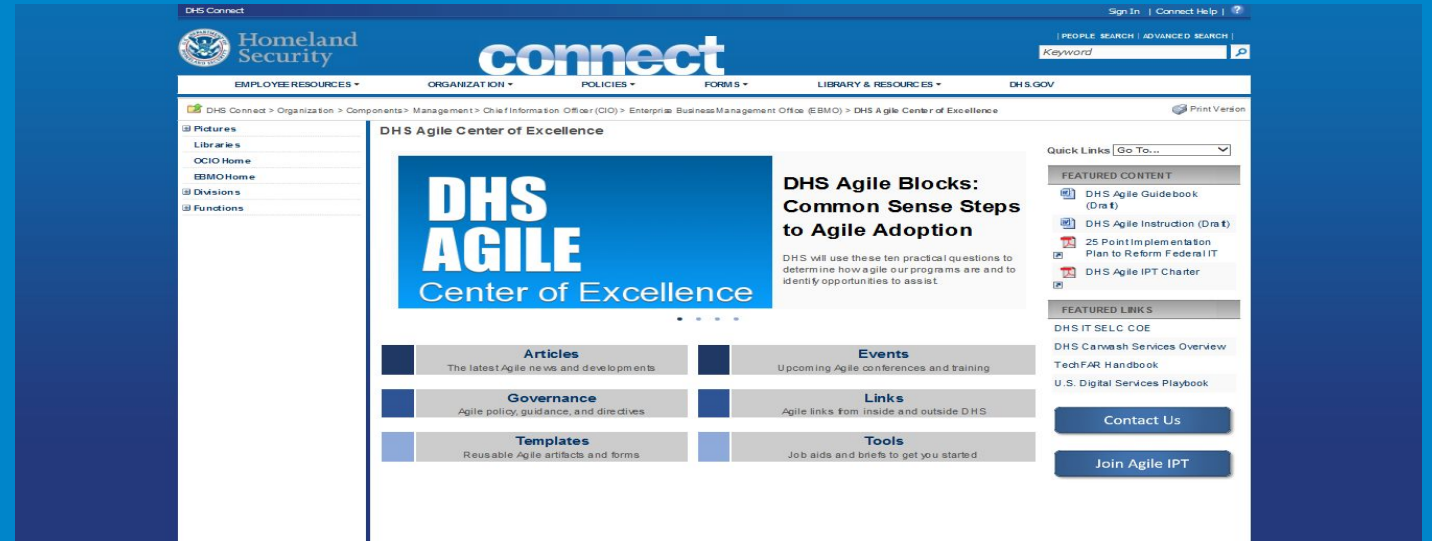
agilecoe@hq.dhs.gov

October 2024 Date TBD
https://www.agiledc.org/

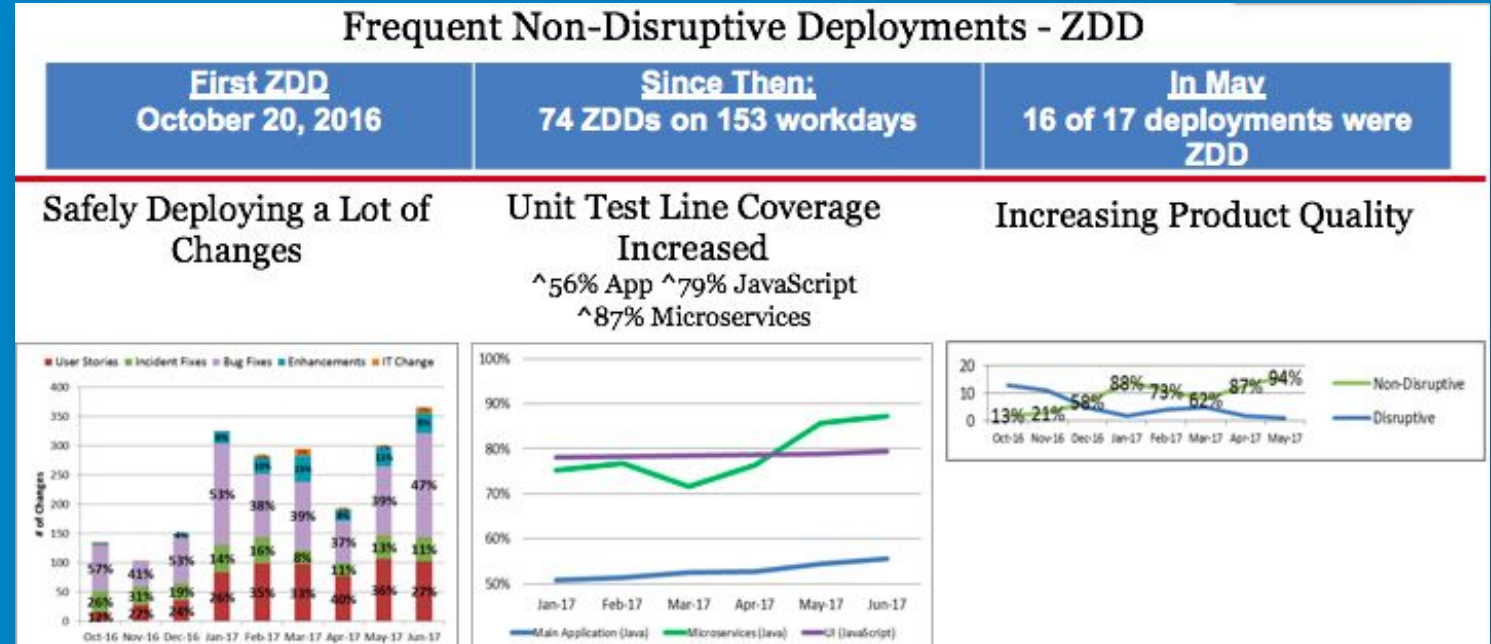May 8th 2024
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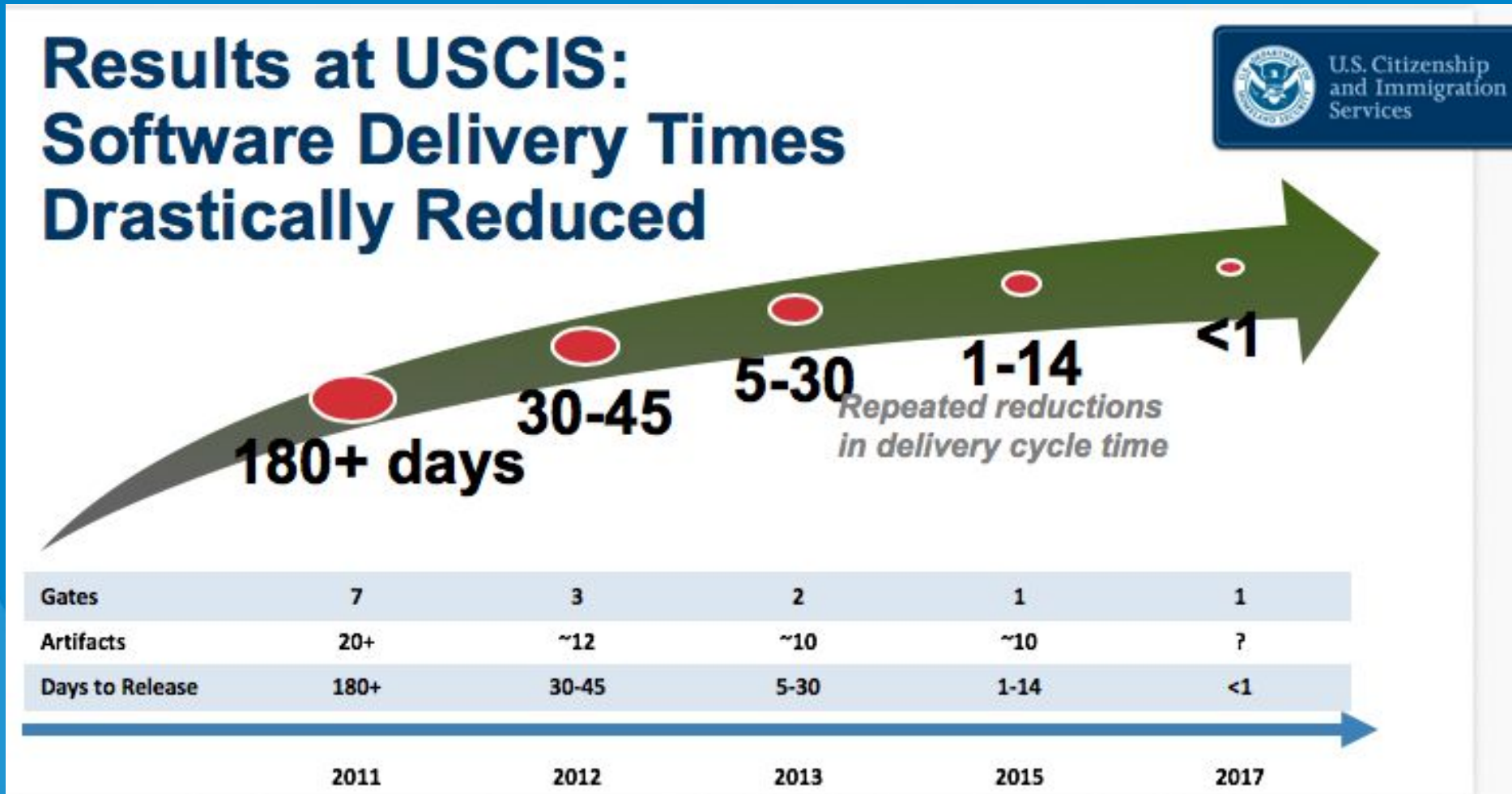
Measure Everything

4 Number of Production Deployments

4 Zero-Downtime-Deployments

4 Unit Test Coverage

4 Production Issues

Build Incrementally With Fast, Integrated Learning Cycles

Results at USCIS: Software Delivery Times Drastically Reduced

U.S. Citizenship and Immigration Services

180+ days → 30-45 → 5-30 → 1-14 → <1

Repeated reductions in delivery cycle time

Gates	7	3	2	1	1
Artifacts	20+	~12	~10	~10	?
Days to Release	180+	30-45	5-30	1-14	<1
	2011	2012	2013	2015	2017

USCIS – Transformation Case Study (Mark Schwartz)

"We can take these multibillion dollar programs that take four years to write the requirements for and instead start delivering value in six weeks, and use that value delivery as a way to control the program," – Mark Schwartz.

- Integrated Agile Program across 20 Teams delivering multiple releases weekly on Mission Critical System
- Compliance built into Agile methods and DevSecOps pipeline
  - Security
  - 508 Certification
  - Multilevel Test Automation
  - Real time Penetration Testing
- Integrated Risk Management with daily synchronization
- Utilizing customer focused design thinking and user experience testing
- Outcome based funding

https://www.youtube.com/watch?v=m2tw5T9puzo
https://www.youtube.com/watch?v=ZR3JMNp_J-4

It is not enough that management commit themselves to quality and productivity, they must know what it is they must do.

Such a responsibility cannot be delegated.

—W. Edwards Deming

DHS Management Is Enabling Scaled Agile to Succeed

1. Updated Agile Instruction Guidelines
2. Published Agile Core Metrics and Playbook
3. Core Metrics added to INVEST CPIC system
4. Developed Agile Requirements Guidance
5. Monthly Agile COI meetings, biweekly Coaches Corners reach 2000+ users
6. Hosted annual Agile Expos
7. Achieved 100 percent Agile adoption for major programs in 2017
8. Drove implementation of 18 Agile Acquisition Action Plans
9. Developed the Streamlined Software Acquisition Process (SSAP)
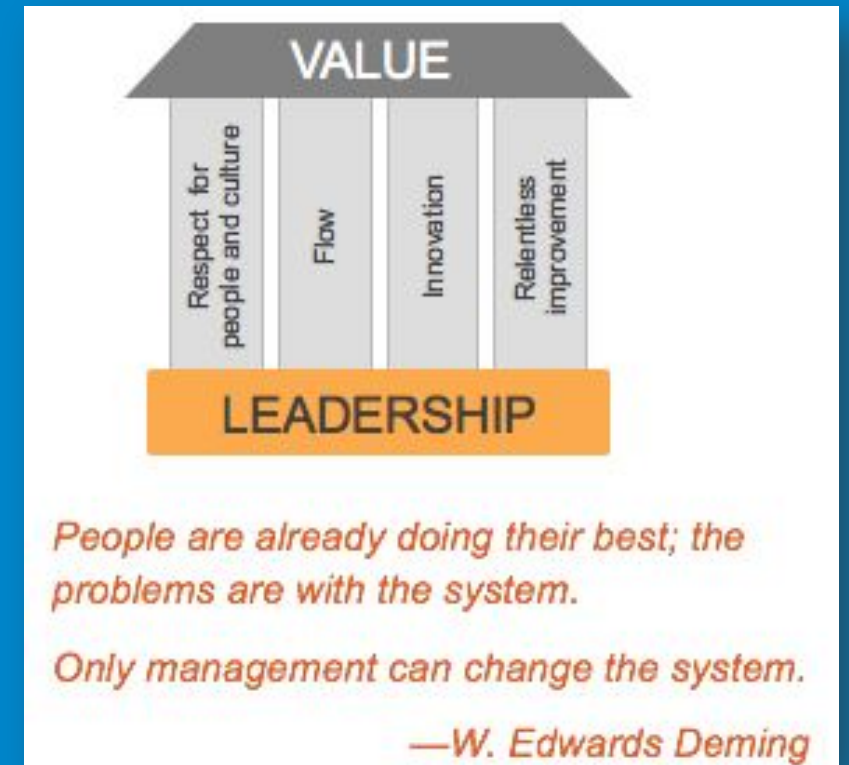
Additional Agile Leadership at DHS

1. Agile Center of Excellence website was created to share information and is continually updated with new material

2. Agile Building Blocks concept to assess level of Agile adoption and identify gaps in programs, components, and DHS overall

3. Providing tools (Jira, CI/CD Pipeline) to DHS Programs/Projects

4. CPO Procurement Innovation Lab (PIL) provides cutting edge guidance and support for Agile contracting techniques

5. DHS DevOps COP established to work together on a common flexible DevOps framework for enterprise use

Next Steps for Agile at DHS

1. Reimagine Agile software delivery through continual improvement
2. Continue to measure Agile and DevOps adoption across DHS
3. Develop Agile coaching strategy/curriculum
4. Identify Major and non-Major program candidates for Agile assistance
5. Continue filling knowledge gaps and executing Agile community outreach
6. Coordinate with CPO for concurrent Agile contracting coaching
7. Improve the Agile Core Metrics to include software business value
8. Further streamline federal IT acquisition to better accommodate Agile
9. Reassess and adjust often (Hey, we are Agile!)

DHS Management is Changing the System

- SAFe is not a "software development" thing
- Nor is it "PI Planning"
- It is a holistic application of lean principles across all functions
- To create a system of inter-related and synergistic enablement processes
  - Business Requirements
  - Procurement / Contracting
  - Governance
  - Program Management
  - Technology
  - HR
  - Operations

VALUE

Respect for people and culture | Flow | Innovation | Relentless improvement

LEADERSHIP

People are already doing their best; the problems are with the system.

Only management can change the system.

—W. Edwards Deming

Questions

Thank you!