

# Welcome to the Jungle





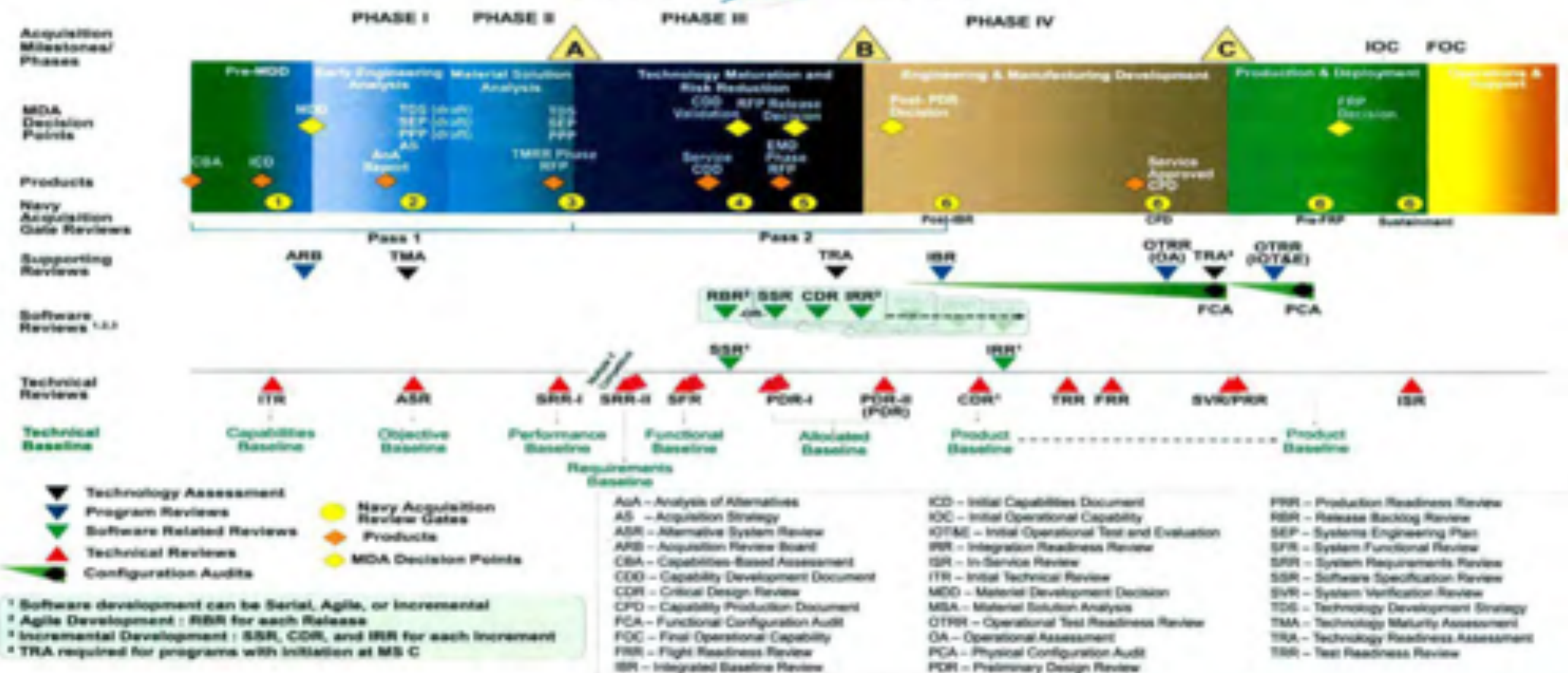


A photograph of a dense, misty forest. A dirt path leads through the undergrowth of ferns and other plants. Large, moss-covered tree trunks are visible on the left and right. The text "30 years" is overlaid in the center in a large, bold, black serif font.

**30 years**

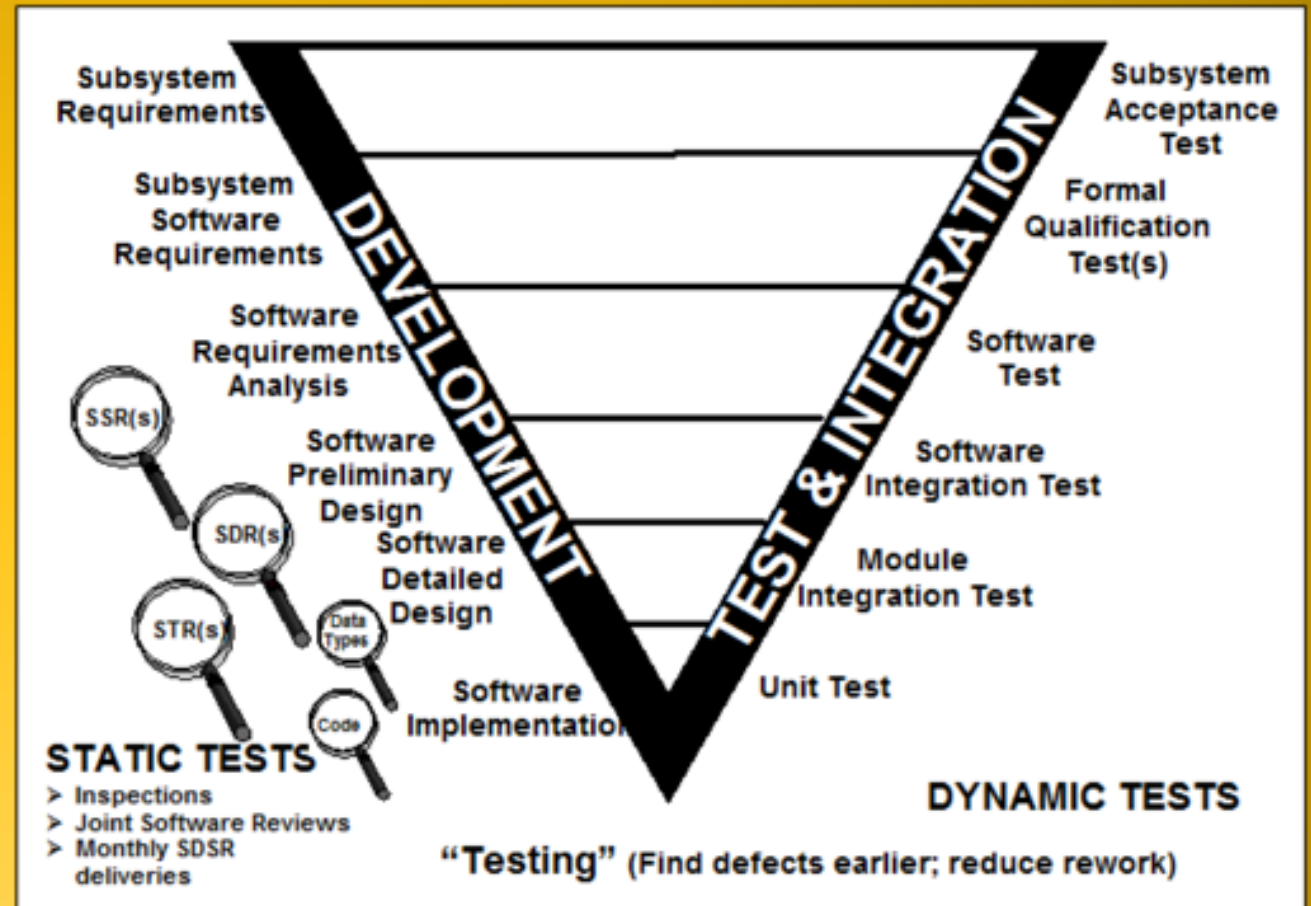


# Systems Engineering Technical Review Timing

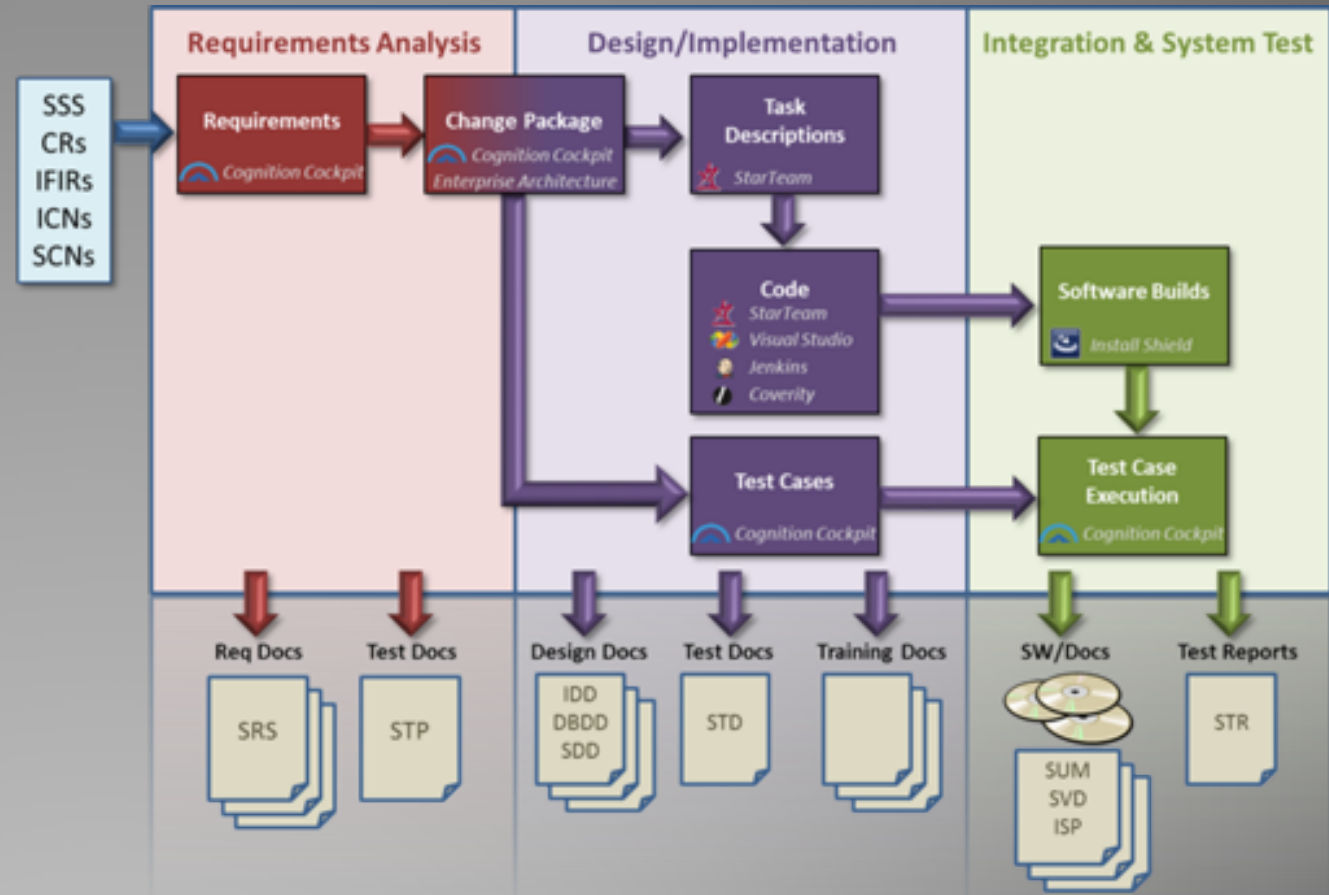
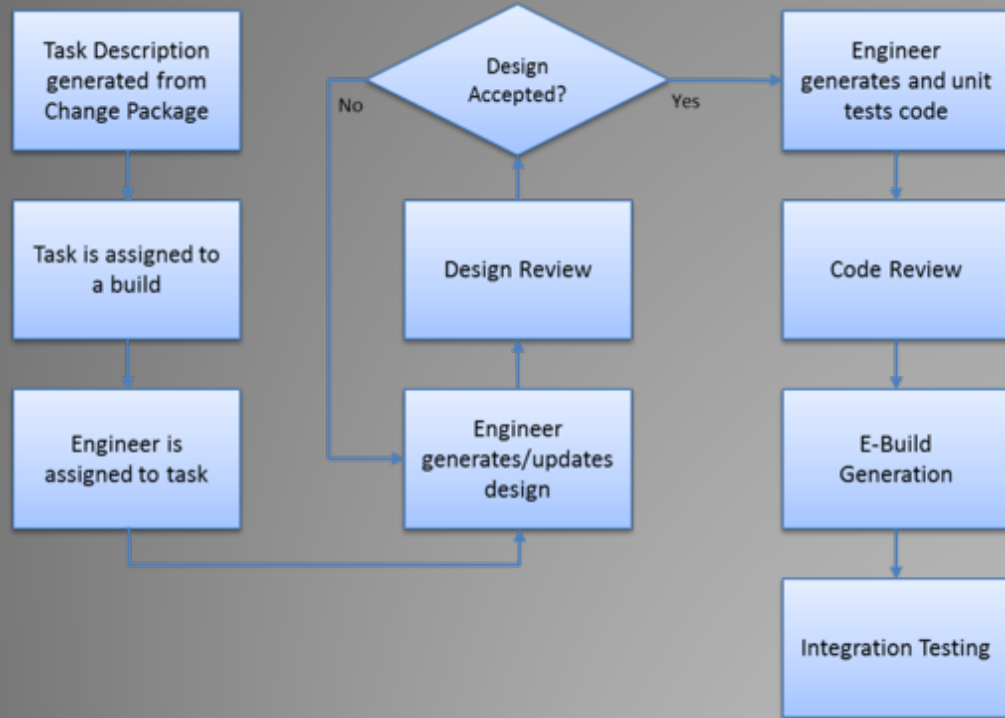


# Development Methodology

Much of it was customer directed  
Program schedules and contracts written around a waterfall driven acquisition and development process



# No Going Back!



**Where are the gorillas?  
You promised gorillas!**



**4 years**  
**10 years**



**4 years: SRR -> IOC**

**10 years: IOC -> FOC**

**2-6 years**

# Why Change?

- Other people in the company are doing it
- Promises better outcomes
- Executive is pushing for it

900 Defects



Timeline

# “Learning” Pls

- The leadership team did not want to start the ART launch with the whole team until October (+7 months)
- Leadership wanted to feel better equipped to lead the transformation
- Many Enablers needed to be done in preparation – tooling and process

Scaled back, “Learning” Program Increments were enacted by 6-8 key leaders using 2 hours per day per person for capacity planning





# Benefits Realized After 1 Program Increment

**“Far exceeded our goal, high value items demonstrated to the customer”**

## Increased Customer Interaction

**PI-1 Solution Demo had both military customer and requirements partner in attendance**

**Witnessed first hand a 10 week development cycle-time**

**Customer expectations and requirements already changing**

## Software Quality

**DO see benefit from multi-disciplined development teams**

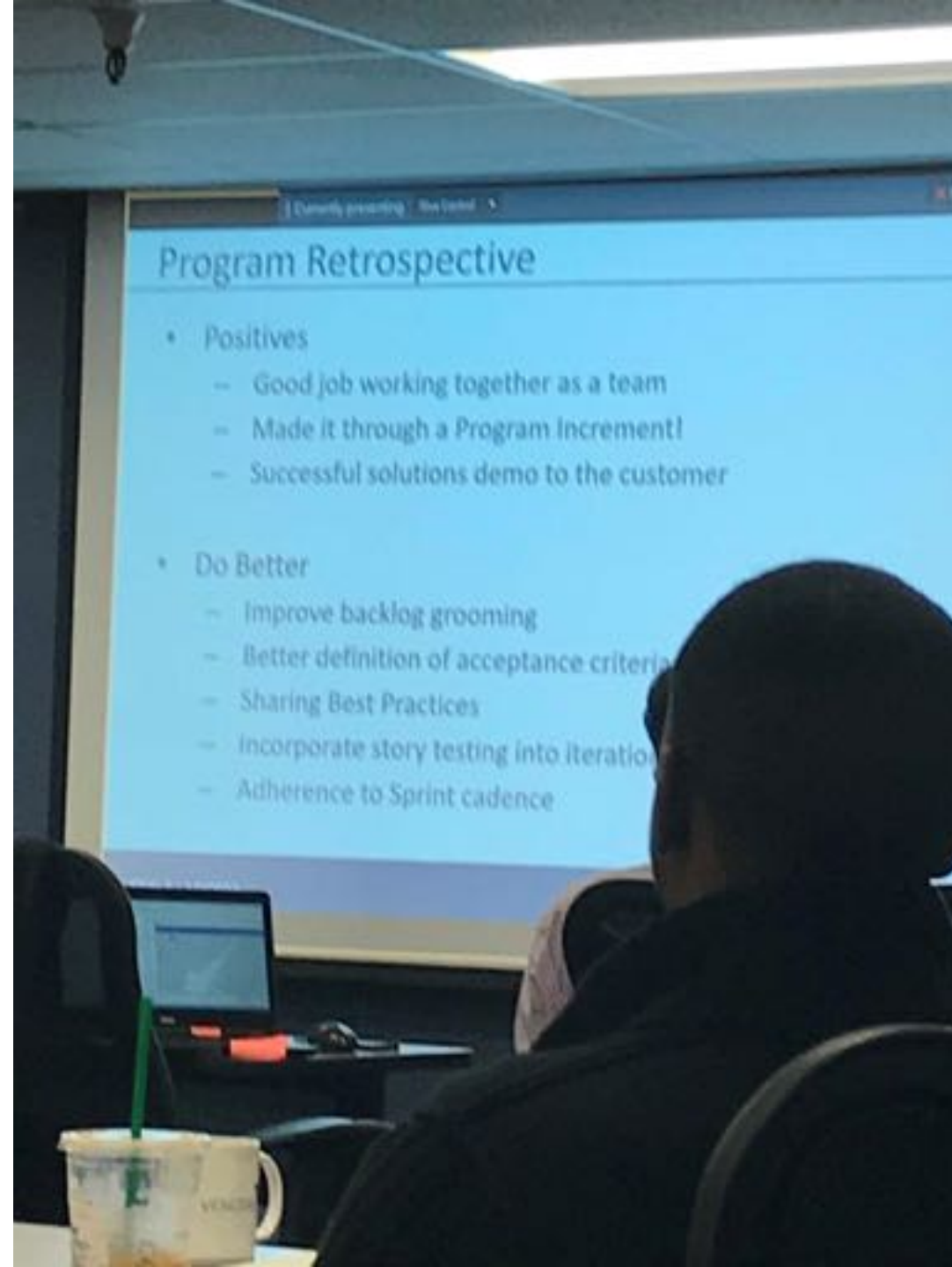
**Deeper discussion of behavior, architecture, test**

**“Shocked at how quickly teams are adapting”**





# PI 1 Retrospective





# Additional Progress

## PI-2 (currently mid PI-2)

**Started Pre-PI Planning a full week prior to PI Planning**

**Huge difference, mature features**

**Velocity increasing, some teams finishing early and asking for more work**

**Cadence improving each sprint, sprint demos happening regularly**

## PI-3

**Midway into PI-2 have started PI-3 planning**

**This will be the real test, 3 concurrent baselines in development, contractual dependencies**

# Nasty Realities



- Tension between agile team and scaled agile
- “Watermelons” in key positions
- Social change







# The Gorillas are Becoming Agile

The Pentagon should "immediately" adopt private-sector practices for agile software development and jettison its traditional methods in favor of a more iterative approach, according to an influential advisory board.

Inside Defense

3/28/2018





# The Military is on the Move



<https://www.youtube.com/watch?v=Rw6lcaqA5MM>






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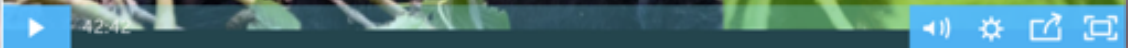



## Patterns for Agile Hardware-Inclusive Systems




**LOOK!  
GORILLAS  
ARE DOING  
BALLET!**

**AN AGILE  
TRANSFORMATION STORY**



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What are the quantified benefits of improved value delivery when paired with Agile + Lean Practices?

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