Supporting Systems Engineering Modernization

Where 15288 meets Lean Agile

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Meeting the Challenge

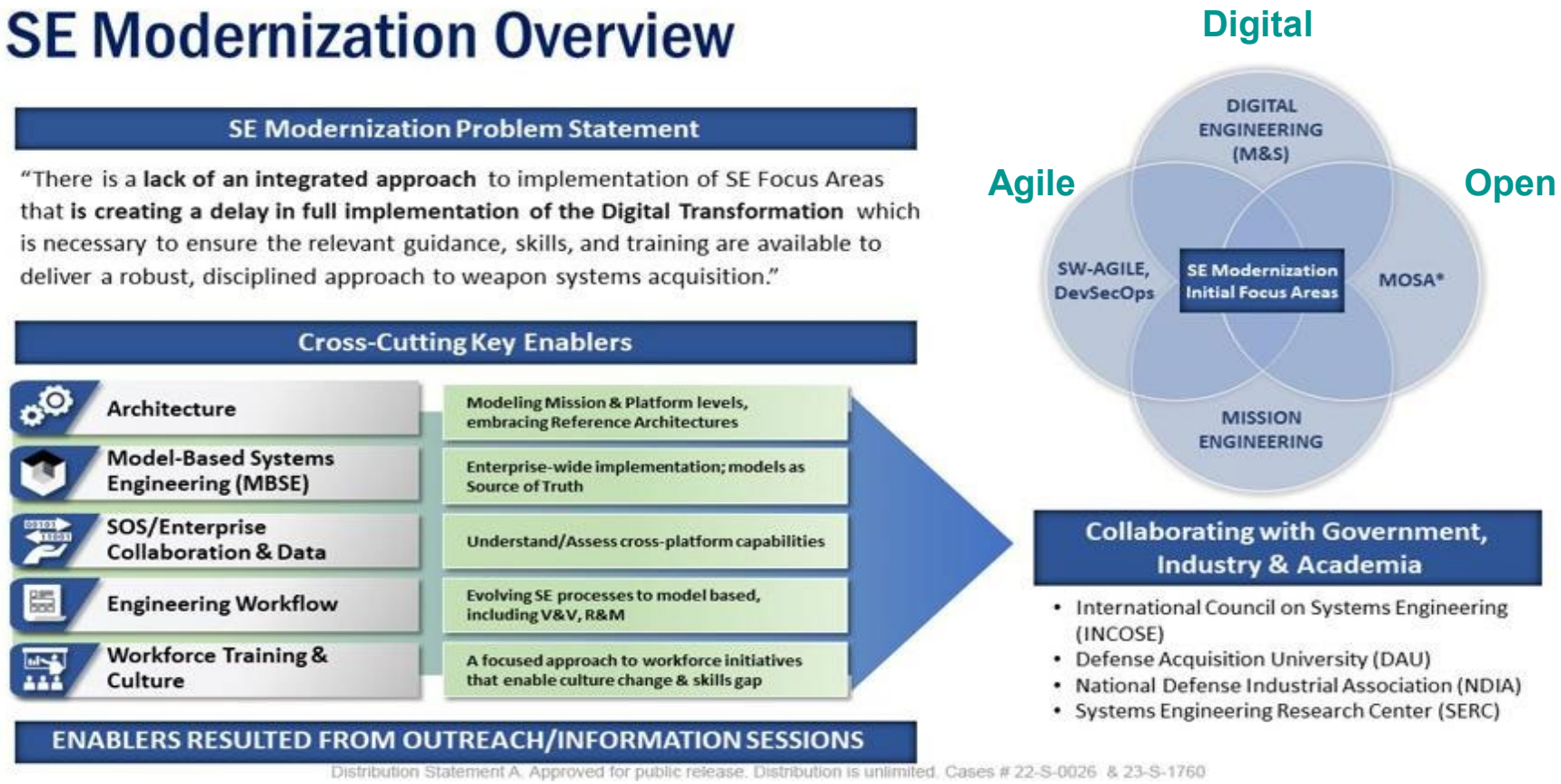
Emerging Threats

Whole of nation competition: military, economic, and political

Proliferation of advanced technologies in all domains

To succeed we need to change

Systems Engineering Modernization



https://www.cto.mil/sea/se/

DoD is driving Systems Engineering Modernization

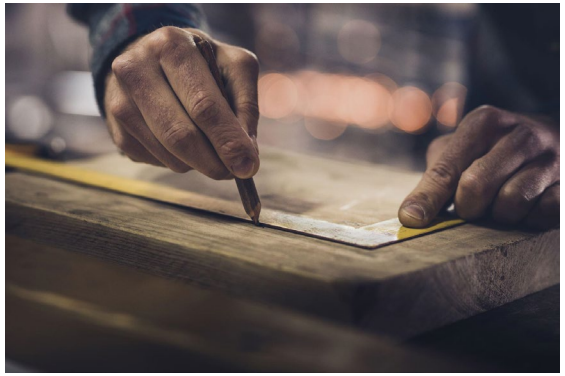
Supporting Systems Engineering Modernization

Advancing the Engineering practice

Continuous modernization

Delivery of high quality, safe, secure, reliable systems

Delivering value to the warfighter



"A world-class engineering culture requires an engineering capability that adapts and mitigates evolving threats faster than the opposition can produce them."

- Paul Mann, Chief Engineer,
Assistant Secretary of the Navy for Research, Development, and Acquisition.

Enhance cross-organizational capability to ensure mission readiness and sustainability

The Power of Agile and Systems Engineering

Systems Engineering

Ensures alignment, coordination and integration across the enterprise

+

Agile

Focus on adaptability, fast feedback, and rapid decision-making

=

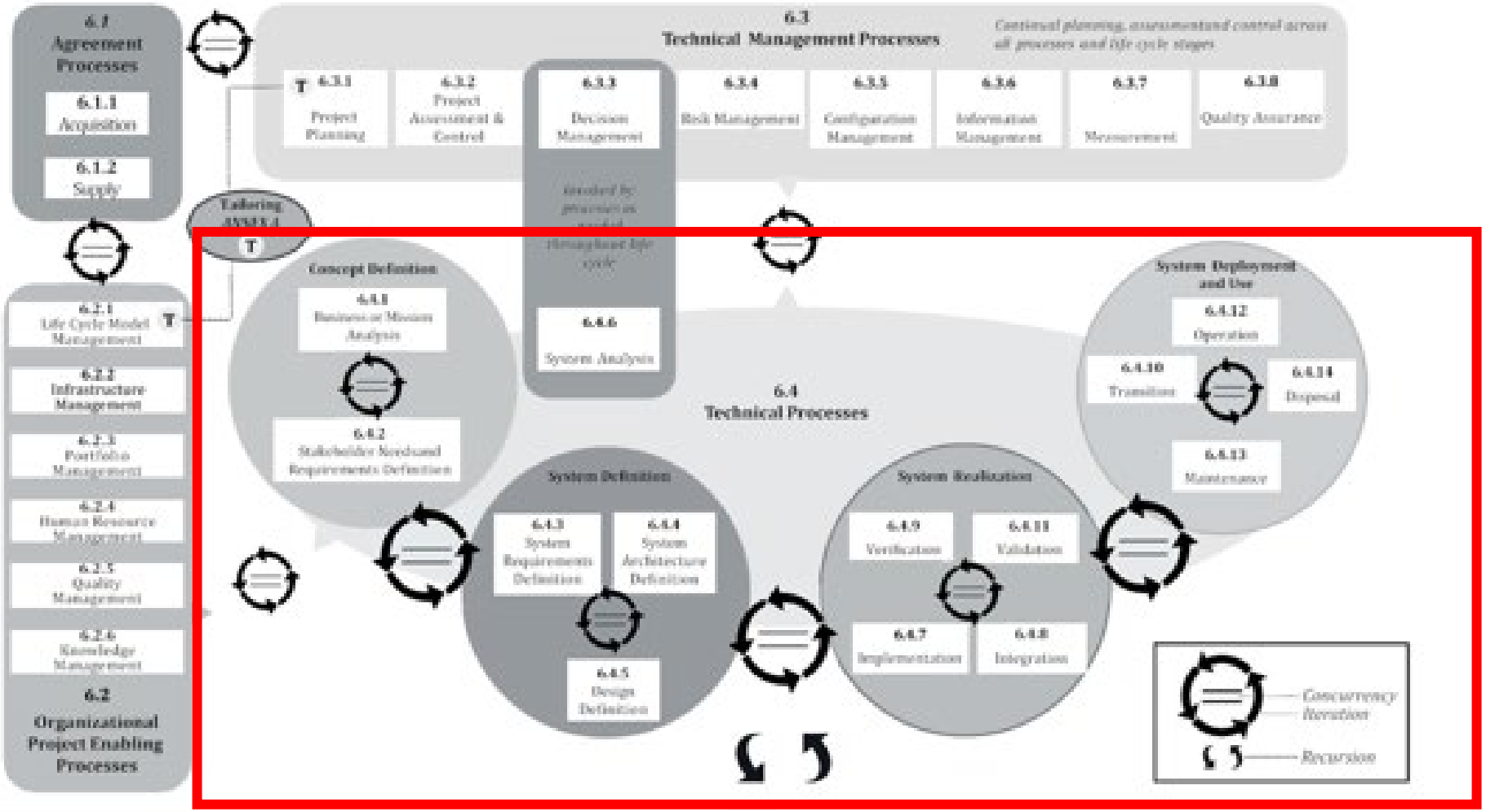
Responsive, scalable, and innovative solutions

Enhanced efficiency through streamlined processes and increased collaboration

Reduced risks

Enhanced scalability and flexibility

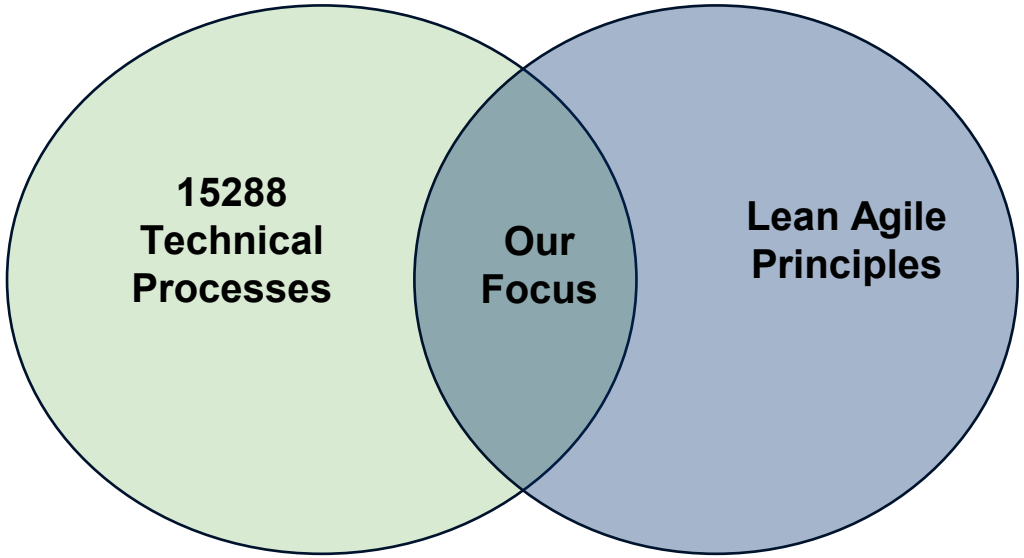
Systems Engineering: Leading the Shift from Waterfall to Agile Across All Disciplines



ISO/IEC/IEEE 15288:2023 process

Intersection of 15288 and Lean Agile

Mission Analysis
Stakeholder Analysis
Requirements
Development
Architecture
Design Analysis
Implementation
Integration
Verification
Transition
Validation
Operation
Maintenance
Disposal



Customer Centricity
Economic View
Apply systems thinking
Assume variability and preserve options
Build incrementally
Objective evaluation of working systems
Make value flow
Apply cadence and synchronization
Intrinsic motivation
Decentralize decision making
Organize around value

Enabling responsiveness to change

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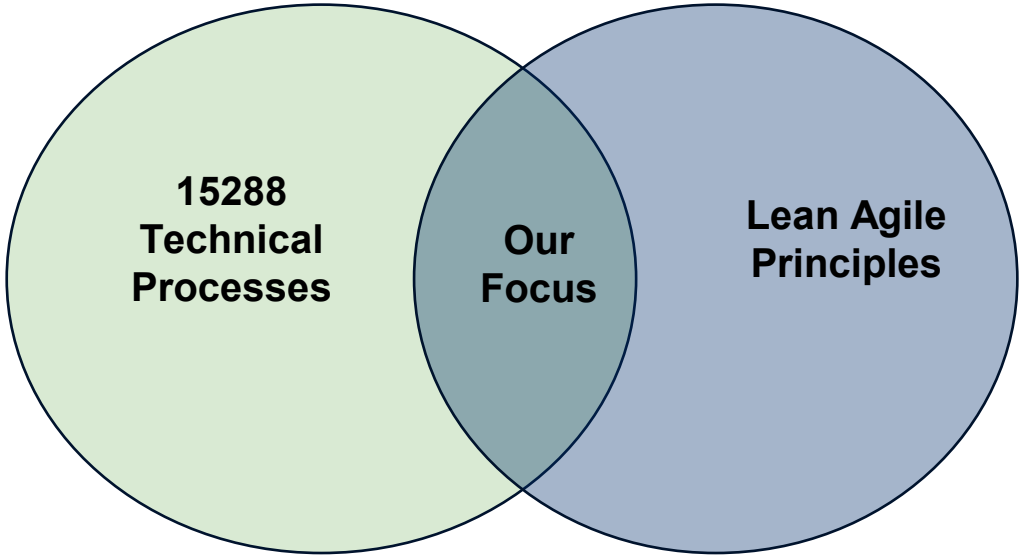
Case study 1



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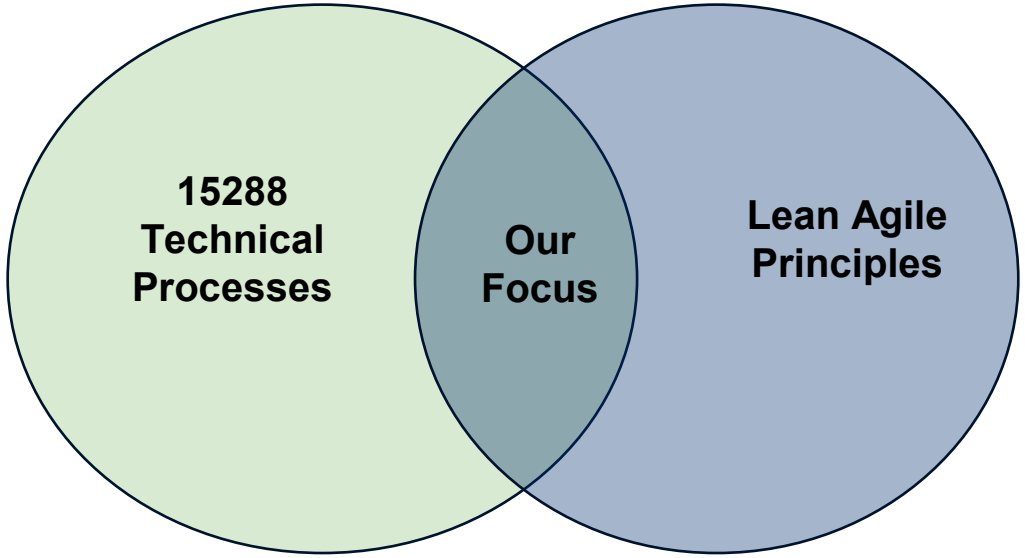
Case study 2



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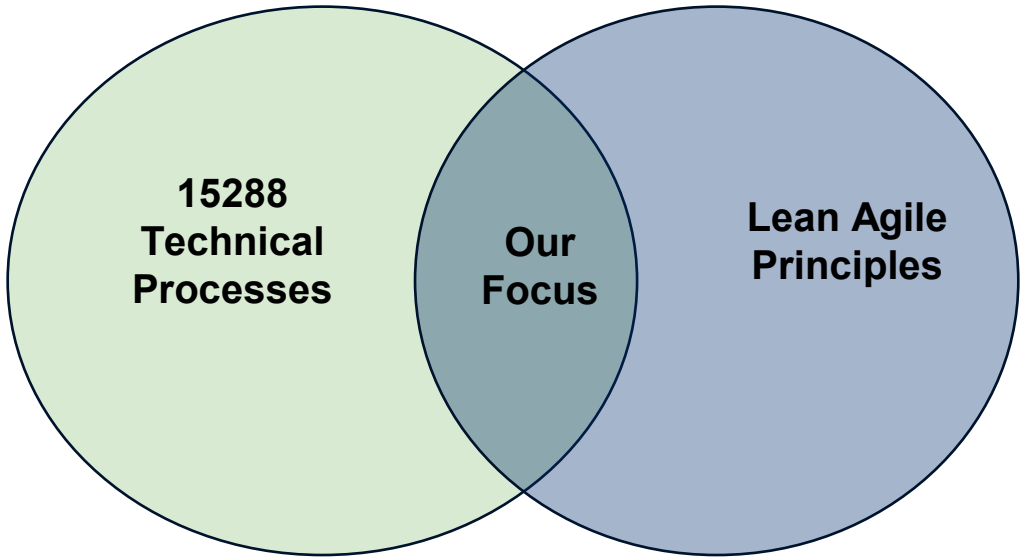
Case study 3



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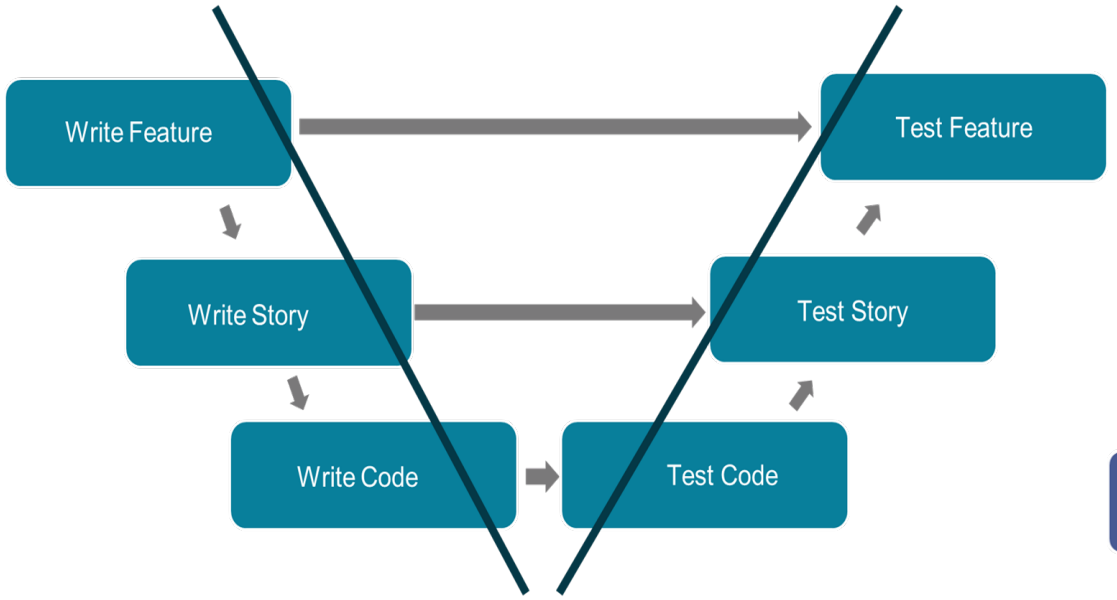
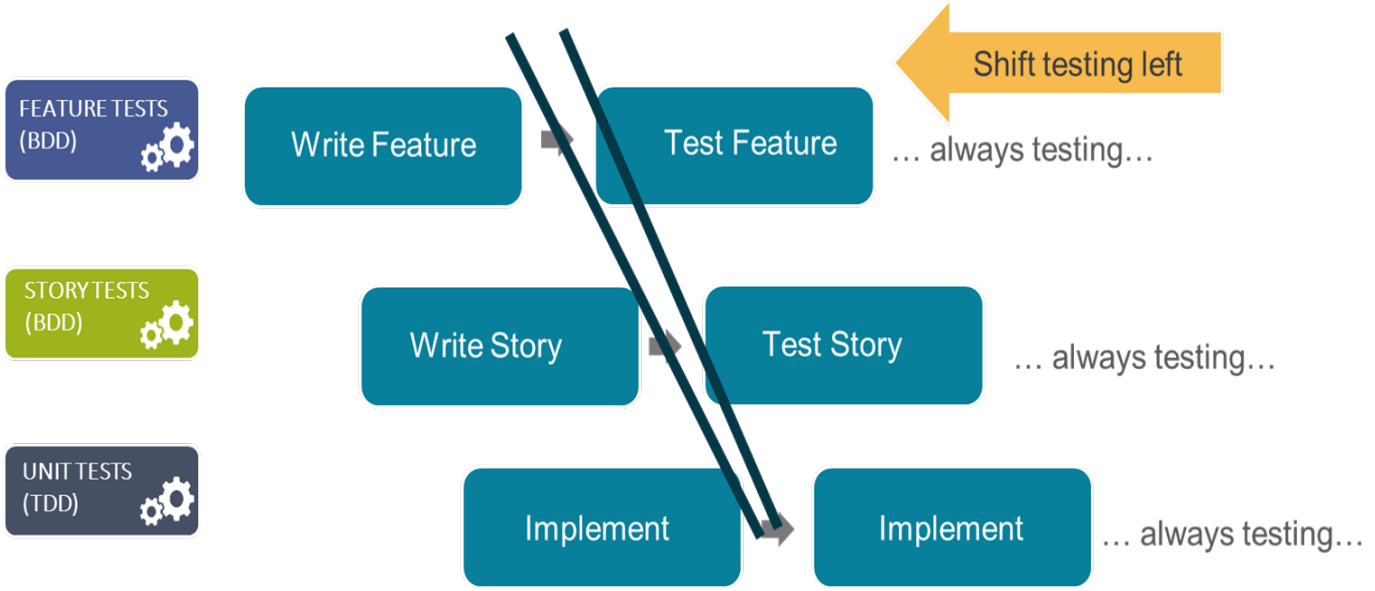
Shift left





Collapse the “V”

Key Takeaways

1. If you are already doing systems engineering, you are probably further along than you think.

2. Start with “what problem you are trying to solve”

3. Systems Engineers are well positioned to drive change across the enterprise

NDIA SED ADAPT working group

Call to Action

1. Learn more. Read the “Supporting Systems Engineering Modernization - Where 15288 meets Lean Agile” white paper (coming Q1 2025)

2. Apply what you’ve learned

3. Engage with the NDIA SED ADAPT working group

Be a catalyst for the change ahead

Questions?


LOCKHEED MARTIN