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AI Rapid Capabilities Cell Expert Accelerator Support

SERC Annual Research Review

Sponsor: CDAO

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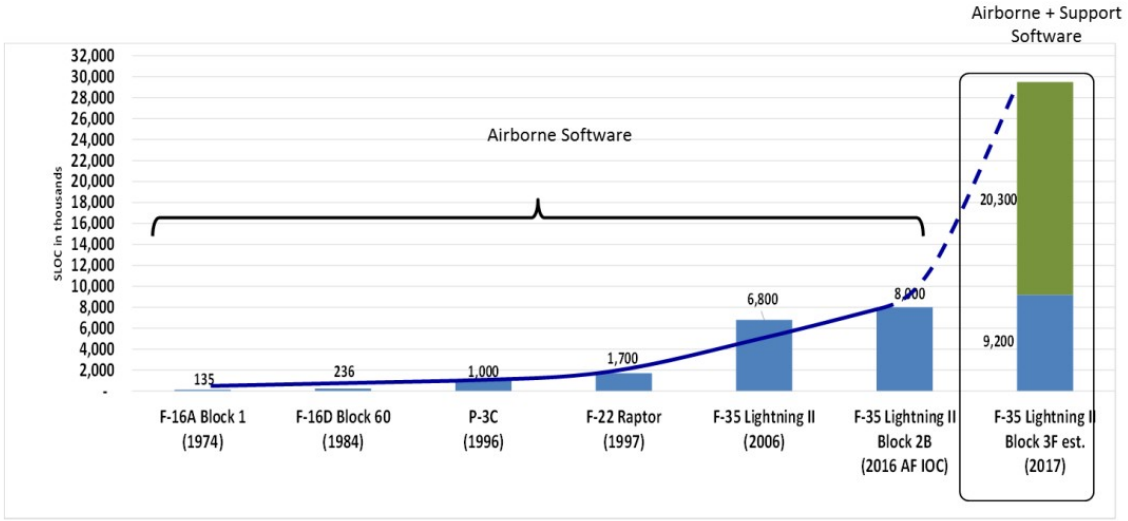
NATIONAL SECURITY INSTITUTE VIRGINIA TECH

The Moment We Are In

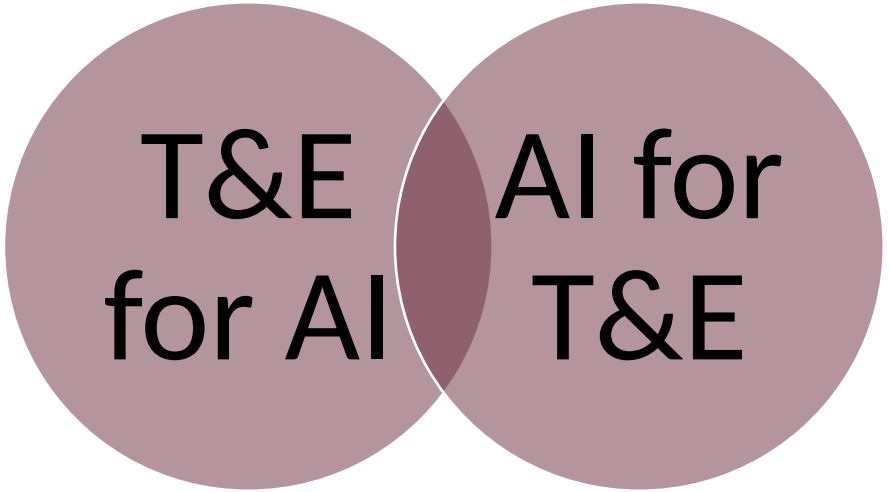
- Modern systems = multi-domain, Joint, software and AI-enabled
- Need: rigorous + rapid + mission-relevant T&E





New Methods for Acceleration – Expert Accelerator Support

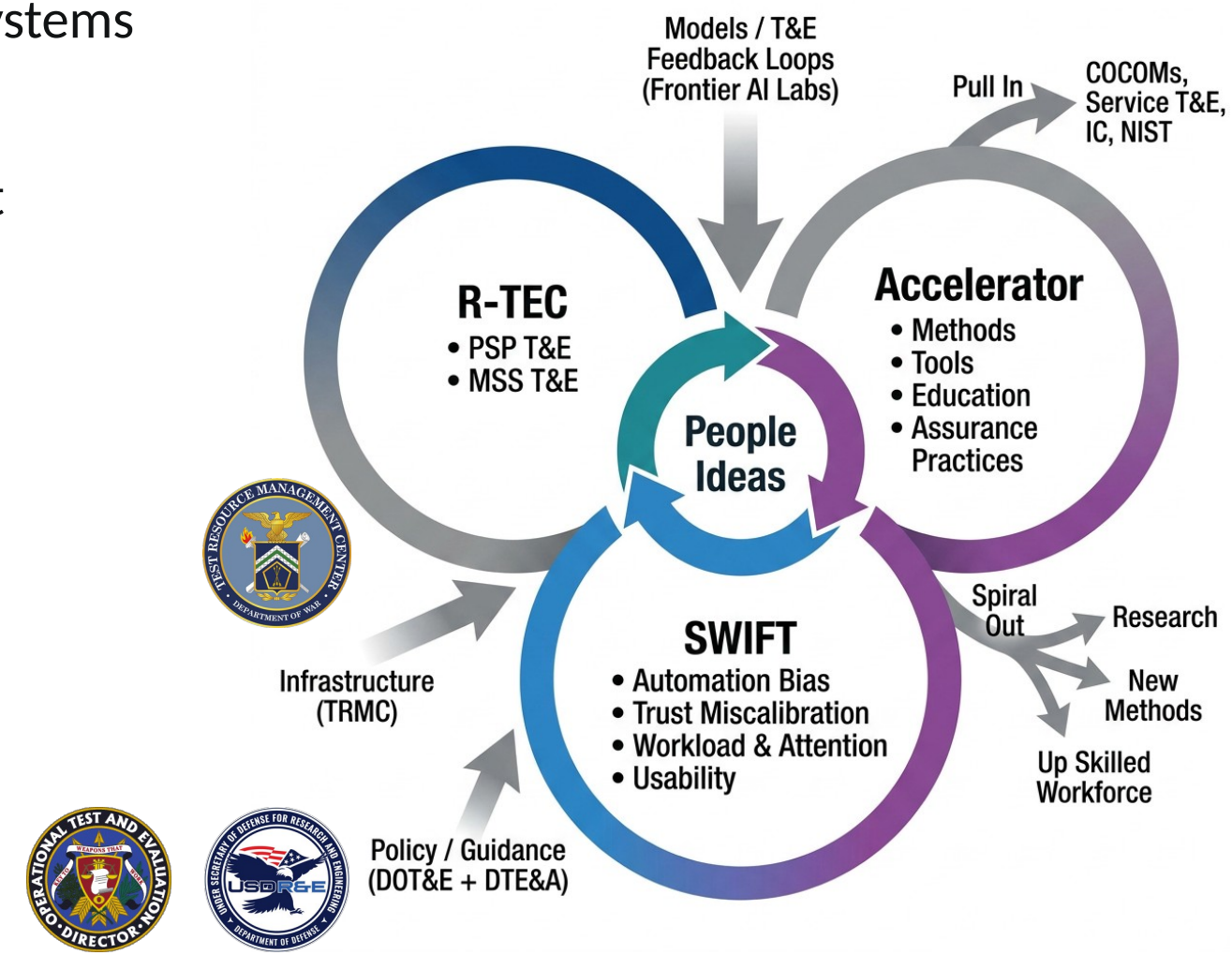
- AI-enabled systems (AIES) require **new measures**
- T&E programs for AIES must **learn the critical factors**
- Experimental design methods for **efficiently testing**
- **Human-machine testing / operational testing** can quantitatively capture the impact of AI
- T&E activities must **span** the entire **acquisition lifecycle**



- AI for **automating and accelerating** test design
- AI for **test case generation**
- AI for **operationally realistic** testing shifted left
- AI for **continuous testing and monitoring**

Turning Acceleration into Practice

- Method development based in real systems with operational workflows
- Engaging operational and T&E subject matter experts
- Rapidly transition:
  - Methods → Tools → Training
- Establish and publish best practices



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Thank you!

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