2023 is the Year of Digital Transformation for the Army!!

Young J. Bang
Principal Deputy Assistant Secretary of the Army
(Acquisition, Logistics and Technology)

November 8, 2022
# 6 Modernization Priorities

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Next Generation Squad Weapon: Began MTA Sep 2018/ Contract May 22 - Anticipated End FY23

Infantry Squad Vehicle: Began June 2019 / Fielded May 2022

Synthetic Training Environment - 2 - FY23
To enable faster delivery of capabilities to our warfighter, we must drive towards *Open Systems*, that are Interoperable/Interchangeable and plug and play!!

We can’t afford to wait multiple years to deliver large systems to our soldiers!!
- Our *Software Development* process and approaches must be modernized to enable smaller, faster, incremental delivery of capabilities and drive towards CI/CD

We MUST simplify and accelerate getting the necessary data to commanders to enable their decision making
- Data is foundational to software and AI.

Artificial Intelligence has the potential to revolutionize modern warfare. We often constrain technology because we don’t understand it or are unimaginative on how to employ it.
Moving forward with Modular Open Systems Approach (MOSA)

- Avoiding Vendor-lock Through Open Architecture and Open Systems
- Develop Reference Architectures to Guide Implementations
- Move Towards Interchangeable/Plug and Play Capabilities

Decoupling of hardware and software enables us more flexibility and trade space

- Get Capabilities Out Rapidly
- Allows Us to Use Multiple Pathways
- Reduces Dependency and Critical Path

Data abstraction from software further enables us to reduce complexity and technical debt

- Enables Army Data Strategy and Data Governance
- Moves Us Towards Interoperability
- Better Consumption of Data Between Systems

Flatten and Simplify the architecture

- Reduce Point to Point
- Leverage Existing Capabilities and Libraries
- Use Secure Development Environments (Cloud)
what army does: multiple sustained versions

accelerating the digital transformation ...

... moving towards modern software development

industry process: continuous/flexible

agile/iterative process:
- fast, integrated cycles with incremental capabilities & cyber updates in weeks to months
- shorter cycles allow for continuous release of new &/or improved capabilities
- reduced risk and cost while improving quality by finding/fixing defects and cyber issues earlier

build software using product mentality
**Requirements:**
- SWP enables speed and broad description of needs for software
- HCD approach to drive Epics and User Stories

**Contracting:**
- Training in DevSecOps and Agile
- Knowledge Center with Templates and artifacts

**Testing:**
- ATEC is already working several initiatives to enable DevSecOps:
  - Cyber T&E Pilot, Distributed and virtual T&E env
  - Established ASA(ALT)/ATEC weekly WG on software centric T&E changes
  - In conjunction with PMs, identify and implement automated software test tools to track software changes

**Field/Deploy:**
- Moving towards a CI and CD approach

**Sustainment:**
- Not “sustaining” s/w, part of DevSecOps

**Cyber:**
- Cyber “baked in” development process vice bolt on at the end
- RMF 2.0
- Pushing cATO & Army wide DevSecOps Platform
We MUST simplify and accelerate getting the necessary data to commander to enable their decision making!

Simplifying and flattening Army’s data architecture for more effective and efficient data driven decisions
✓ Move to a more Federated and Decentralized model
✓ Reducing Replication and Persistence of Data
✓ Shift to Data as a Product and Data Product Owner Mindset
✓ Avoiding Vendor Lock
✓ Hybrid Data Mesh and Fabric for Enterprise and Tactical Environments
✓ Defining a Reference Architecture to Govern Acquisition of Data Centric Capabilities
✓ Transport Agnostic Data Exchanges Supporting The Full Range of Network at All Echelons
✓ Alignment to the Army’s Data Plan for Governance
❑ Moving Towards Self Service Data Scripting/Visualization and Analysis
❑ Securing Data in Motion
❑ DataBOM
Because the Army has the most difficult operational environments for AI to be successfully deployed, we are launching an effort to increase and accelerate the future concepts, acquisition, development, testing and adoption of AI into the enterprise:

- **Current Efforts – Sensors, Components**
  - AI2C – Experimentation and Concept Development
  - PEO – IEW&S – AI Development with Sensors, Targeting
  - PEO GCS/GVSC – RCV, OMFV, Robotic Technology Kernel (RTK)
  - JPEO CBRND, PEO Soldier, PEO CS&CSS

- **Near – Expand to Platforms and Systems, MLOps**
  - Expand S&T Efforts in Building an Ecosystem in Cutting Edge AI
  - PEOs will Establish and have Responsibility for AI within their PEO either at the PEO level or as a PM
  - DASA DES – Focus on AI Reuse and Integration Across the Acquisition Community
  - PEO STRI/TSMO – Build the AI Threat Testing Capability

- **Long (Enterprise Efforts)**
  - Work with ATEC/DOT&E for Large Scale AI Testing Capabilities. Verification & Validation
  - Responsible AI and tie-in to Army and DoD Enterprise Efforts
  - Re-imagining Warfare with AI
Contact Information

... how to reach us

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