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Video OV-1





DMM: An
Accelerated Future
State Whitepaper



## Strategic Priorities – Digital Acquisition

#### AQ Digital Acquisition Priority

- 1. Implement Open Systems Standards and Reference Architectures
- 2. Ensure Programs Are "Born Digital" or Digitally Adapt over the Lifecycle
- 3. Expand Enterprise Solutions and Embrace Cloud-based Collaborative Environments
- 4. Institutionalize Processes for Agile Software Development and Software-Intensive Systems

### AFMC Digital Materiel Management Priority

- 1. Structure and Secure our Data
- 2. Train our Digital Workforce
- 3. Provide Access to DMM Tools
- 4. Develop Digital strategies
- 5. Instill a digital-first culture
- 6. Modernize IT infrastructure

Aligned for Enterprise Digital Dominance



# DAF Digital Building Code

The Digital Building Code is a living set of practices that guide USAF and USSF programs to implement Digital Transformation:

- Digital Engineering
- Open Systems Architecture
- Agile Software Practices

#### **DIGITAL ENGINEERING AND MANAGEMENT**

- 1. Develop digital models of systems
- 2. Develop a digital twin and digital thread
- 3. Implement an integrated digital environment
- 4. Employ a tailored digital strategy for contracting with industry
- 5. Ensure organizational readiness for Digital Engineering
- 6. Implement Digital Acquisition
- 7. Track Digital Maturity



DEPARTMENT OF THE AIR FORCE WASHINGTON, DC

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR THE ACQUISITION ENTERPRISE

SUBJECT: Digital Building Code for the Transformation of Acquisition and Sustainment

In line with the National Defense Strategy, the Department of Defense's Digital Engineering Strategy, and Chief of Staff of the Air Force's Accelerate Change or Lose Paper, the Department of the Air Force (DAF) is implementing a Digital Transformation across the acquisition and sustainment enterprise. This is truly a cultural, business, and technological transformation. As such, it requires the continued support and engagement of the entire community: across all functional domains; from program trenches to headquarters staffs; from freshly hired graduates to seasoned veterans; and with government and industry collaboration. A Digital Transformation is the disruptive enabler we need to overcome our adversaries' rapidly increasing parity. Through this Digital Transformation, and the relentless spirit of Airmen and Guardians across the Department, we can and will transform our acquisition enterprise into one that securely delivers capability at the speed of relevance.

In response, the DAF laid out a strategic vision to improve its acquisition and sustainment practices through a Digital Transformation that includes Digital Engineering and Management, Agile Software Development, and Open System Architectures. This strategic vision promotes digitally enabled processes and replaces the linear, document-centric approach of today with a dynamic, model-centric approach. This new approach places emphasis on evolving and refining models as opposed to updating paper documents; obtaining appropriate intellectual property (IP) rights to prevent vendor-lock during sustainment; and developing and delivering capabilities in rapid, innovative, and agile ways. Implementing the Department's Digital Transformation involves artful execution of this "Digital Building Code." The Digital Building Code is intended to be a living set of best practices that will be updated and to capture lessons learned along the DAF's Digital Transformation journey.

Digital Acquisition and Sustainment hold the key to unleashing the speed and agility we need to field capability at the tempo required to win in future conflicts with peer competitors. The attached tabs give a point of departure for executing programs aligned with the Digital Transformation concept of congrations.

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New programs are "born" digital while existing or legacy programs implement practices that can provide value



## DAF Digital Building Code

#### **OPEN SYSTEMS ARCHITECTURE**

- 1. Implement an Open Systems Architecture
- 2. Leverage Open Standards
- 3. Designate, empower, resource, and train System Architects in Program Offices
- 4. Track and report architecture performance metrics

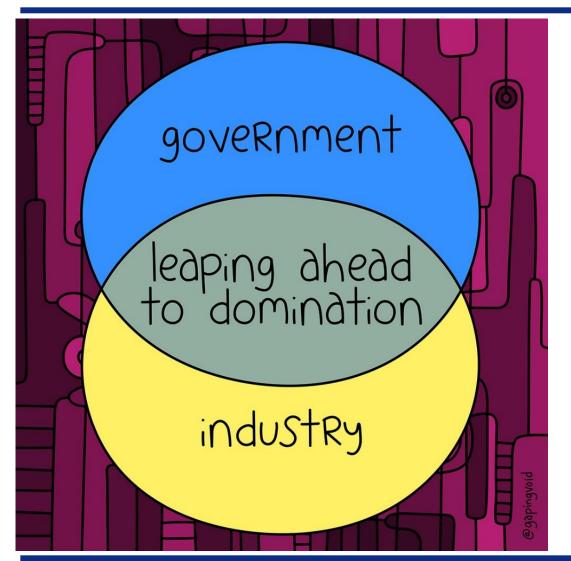
#### **AGILE SOFTWARE**

- 1. Implement DevSecOps software development methodology and reference design
- 2. Adopt the following common enterprise services and tooling standards
- 3. Implement the following organization staffing, leadership, and training guidance
- 4. Start tracking performance metrics for software factories and Agile teams

A cultural, business and technological transformation



# Recognized Challenges Areas for Continued Innovation



- Multi-level security and cross domain solutions for integrated digital environments
- Intellectual property access, rights, exchange
- Data and model curation, verification, validation (over time)
- Scaling enterprise-wide capabilities while integrating digital engineering across programs, Services, DoD, and Industry
- Transitioning legacy artifacts, business practices, culture



### **Discussion Questions**

- How do primes share data with each other, their subs, and government while protecting IP?
- What policies are in place by the Air Force that inhibit our collective digital transformation?
- What mandates and requirements are not in place today that would help if the Air Force was more prescriptive?
- What are actionable/tactical ways we can address data access vs. ownership during design and development?
- What existing standardization activities for data standards, formats, style guides, and frameworks are already underway?
  - Where is the government not involved where we should be?
- What does a collaborative digital environment look like?
  - What would make this feasible?