Speed with Discipline
*Empowering IT Acquisitions

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The Point – Value Deployed Rapidly to the Warfighter
Challenges to Speed

- Net-Centric warfare is here today
  - Our forces hindered by large weapon system approaches
- Tightly coupled interdependencies and custom development increase development time/cost
  - Late development cycle changes and sustainment >$s
- Legacy base of capabilities requires modernization to meet modern cyber threats
- Reality: Decreasing budgets

Delivering rapid secure capabilities requires NEW approaches

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Examples of Disruptive Change

Software Defined Everything

High Tech Manufacturing

Pre- & Industrial Age

What’s Next?

Internet of Things

3D Printing

Integrated Circuit

Rust Belt Industry

Mass Production

Military Advances

Non-kinetic warfare

Air Cavalry/Helicopters

Tank

Cavalry

Ref: The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail, Clayton Christensen, 1997

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DoD Acquisition Drivers

2010: Better Buying Power 1.0
- Deliver the warfighting capability we need for the dollars we have
- Restore affordability to defense goods and services

2012: Better Buying Power 2.0
- Incentivize Productivity & Innovation in Industry and Government
- Eliminate Unproductive Processes and Bureaucracy
- Promote Effective Competition

2015: Better Buying Power 3.0
- Provided specific initiatives for focus areas
  - Remove barriers to commercial technology utilization
  - Use Modular Open System Architecture
  - Cybersecurity
Growing Software Dependency


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Late to Need

• Information Assurance adding 18 month+
• Limited Value
  • Controls vs risk based

In last 5 years, poor success with ~50% termination/critical change rate

Standalone Systems can take 6+ years to deliver, provided they are not terminated first.
• BTCC complements Better Buying Power
• PlugFest Plus is a series of events
  – Adapt new acquisition approaches to rapid, agile capabilities
  – Allow greater (non-traditional industry) competition
  – Deliver a final product for immediate warfighter use
  – Institutionalize process model
• Combine Modern Open Systems Architecture + Modern Acquisition

Focus is on Assembly versus Production
Modular Open System Architecture

- Distributed Common Ground System
  Already a key enabler for information sharing and collaboration among previously isolated intelligence centers

- Licensed as open source software

- Published standards allow for increased competition and plug-in integration

- Allows for acquisition of modular capabilities
  - Toolbox will evolve to become part of the bigger OSD “Digital Thread” transformation
Software Quality is a ‘Transformation Driver’

- Software Quality processes can capture the full value of open system architectures
  - Achieve technology refresh cycles aligned with global innovation
  - Enable iterative system development and fielding
  - Broaden pool of technologies available to meet mission requirements
  - Reduce costs to develop and sustain Air Force systems
- Open Design, granular component development, and measurement
- Software Quality “Early and Always”

*Software quality is fundamentally effective systems/software engineering*
Assembled Capabilities

Promise of Composability Realized

EXAMPLE: Widget
EXAMPLE: DISA Core Server, JC2CUI, Ozone
EXAMPLE: JIE Infrastructure, Data Center, Cloud

Assembled IT Capability

End User

Provider

Delivery

Assembler

Assembly

L Legacy System

D Data Component

M Mission Component

C Core Server

I Infrastructure

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Mission Assurance Approach

1. Acquire a mission component
2. Authorize the mission component to be included in a previously accredited baseline
3. Assemble the mission component with domain infrastructure
4. Use the assembled IT capability, Iterate

Tailored security requirements can be leveraged to rapidly field secure capabilities

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The Assembled IT Capabilities Approach enables fine-grained acquisition of mission components which are assembled with shared infrastructure and common technologies.
The Future

• Compelling need
  – Rapid secure capabilities to the Warfighter

• Value proposition
  – Mission capabilities delivered thru software speed

• Well-defined and implemented composable software required for
  – Assembled Capabilities
  – Reciprocity of security

• **Quality is the key enabler!**

Software focused mission capability can succeed if supported by rapid, innovative acquisition approaches
AFLCMC... Providing the Warfighter’s Edge

**Product**
- Deliver Cost Effective Acquisition Solutions
- Deliver Affordable and Effective Product Support

**Process**
- Launch High Confidence Sustainable Programs
- Standardize and Continuously Improve Center Processes

**People**
- Develop and Place Right Person at Right Time
- Assure a Safe, Secure, and Quality Work Environment
• Evolving a 30-year plan with key concepts:
  • Better Buying Power (BBP)
  • Strengthening Organic Engineering
  • Owning the Technical Baseline

• DCGS moving to and checklists using Acquisition Workbench
  • Pathfinders to transition to Agile or Blended Agile
  • Toolbox will evolve to become part of the bigger OSD “Digital Thread” transformation