ASA (AL&T)

ASA(ALT) System of Systems Engineering "Architecture" Developments
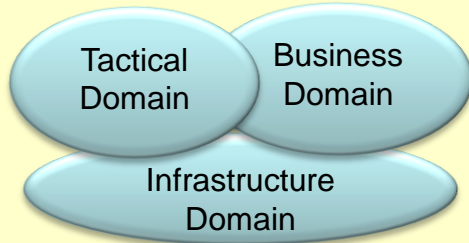
NDIA Systems Engineering Conf
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SoSE

DESIGN ✳ DEVELOP ✳ DELIVER ✳ DOMINATE

System of Systems Engineering (SoSE) – Environment

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Scope

- Tactical Domain
- Business Domain
- Infrastructure Domain

Mission

The Mission of ASA(ALT) SOSE: *Provide the Army's leadership and materiel developers with the necessary engineering/architectural products to manage and shape the Army's materiel portfolio, to ensure a System Engineering discipline across the Materiel developer community throughout the acquisition life cycle and grow the System Engineering capability within the Army – through education, engineering policy, guidelines and adoption of best industry practices,....."Build the Bench".*

Manage the Army's Portfolio

Product

- Cost
- Technology Maturity
- Capability
- Time

Analysis

Feedback

Capability Sets

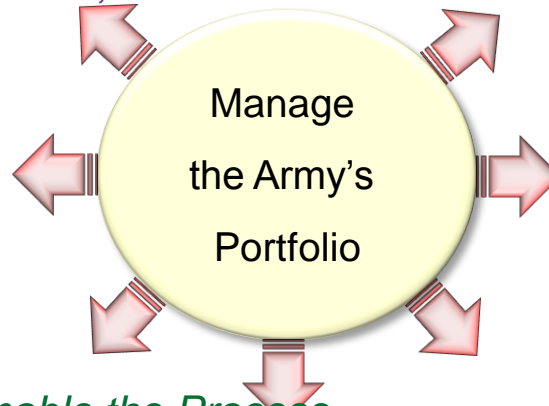2011/12   13/14   15/16

Build the Bench

- Organize the Army Engineering Community
- Establish Technical Authority and engineering expertise/capability
- Pursue accreditation and certifications of organic workforce & organizations

Create Data Transparency

- Establish CM and an authoritative repository for products
- Establish a collaboration environment
- Establish a common operating environment for engineering Products

Enable the Process

- Establish the engineering process to deliver synchronized capability
- Establish the analytical structure with models & simulations
- Establish the engineering compliance structure/process for acquisition execution excellence
- Deliver engineering support to HQ staff and acquisition community
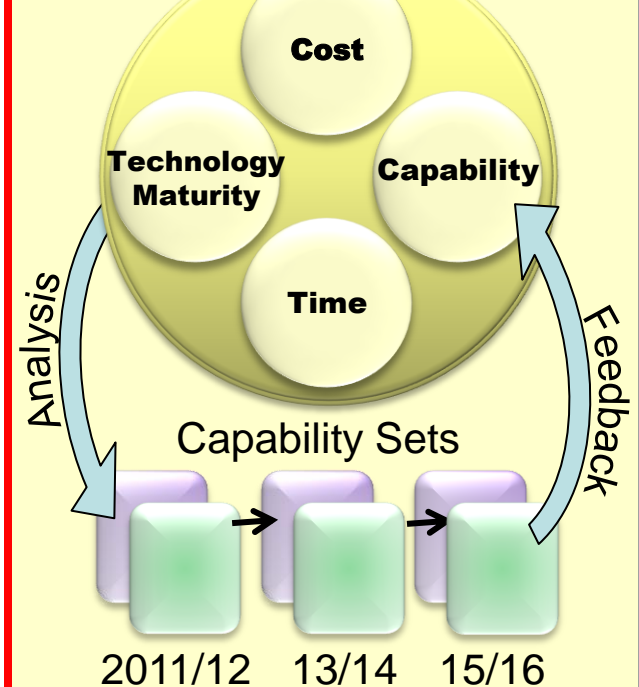
Manage the Portfolio

- Support the prioritization of capabilities within the portfolio
- Set the baseline architecture roadmap over time
- Support the resourcing process
- Synchronize and align the S&T, systems integration, test, and certification activities

Ver. 2.7

ASA(ALT) SoSE Major Workload Areas*

ASA (AL&T)

- Performing SoS-level trades, developing and communicating <u>recommendations</u> to decision makers

- <u>Integration</u> of new systems into the SoSE process (i.e. CDRT, Mod strategy, etc.)

- Annual <u>architecture development</u> and integration efforts

- High priority <u>ad hoc targeted trades</u>
  - Same processes/tool/relationships
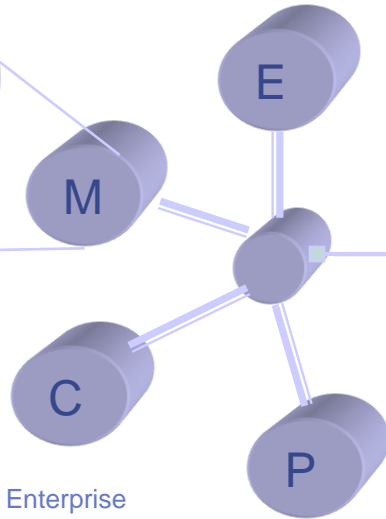
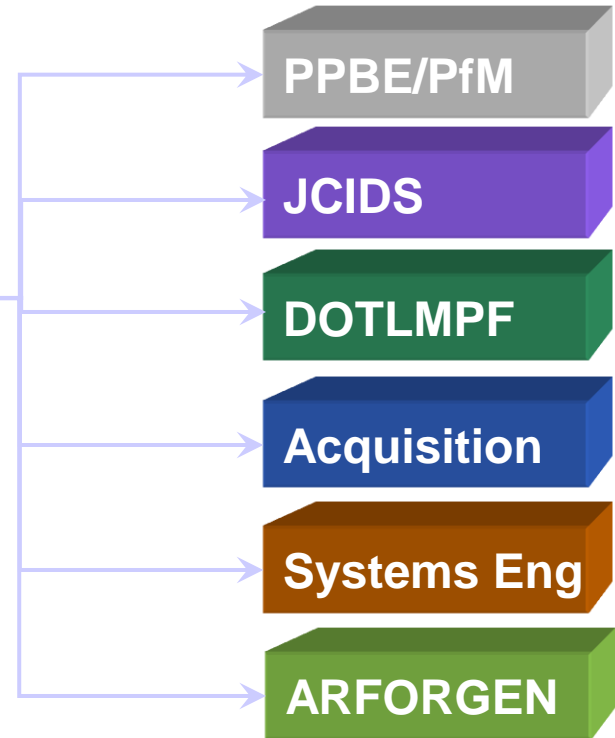# Making 'Architecture' Relevant

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Architecture Views

Cost View
Capability View
SE View
Acquisition
etc.

"Fit for Purpose"

✓ Conceptual
✓ Enterprise
✓ Capability
✓ ...

Federated Architectures

E

M

C

P

E – Enterprise
M – Mission Area
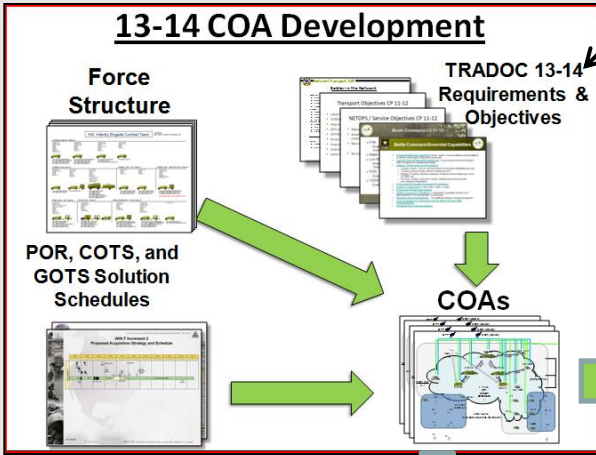C – DoD Component
P - Program

DoD/Army Core Processes

PPBE/PfM

JCIDS

DOTLMPF

Acquisition

Systems Eng

ARFORGEN

Annual Programmed Plan Refinement
(Supported by Integrated Architectures)

Integrated Architecture Development Concept
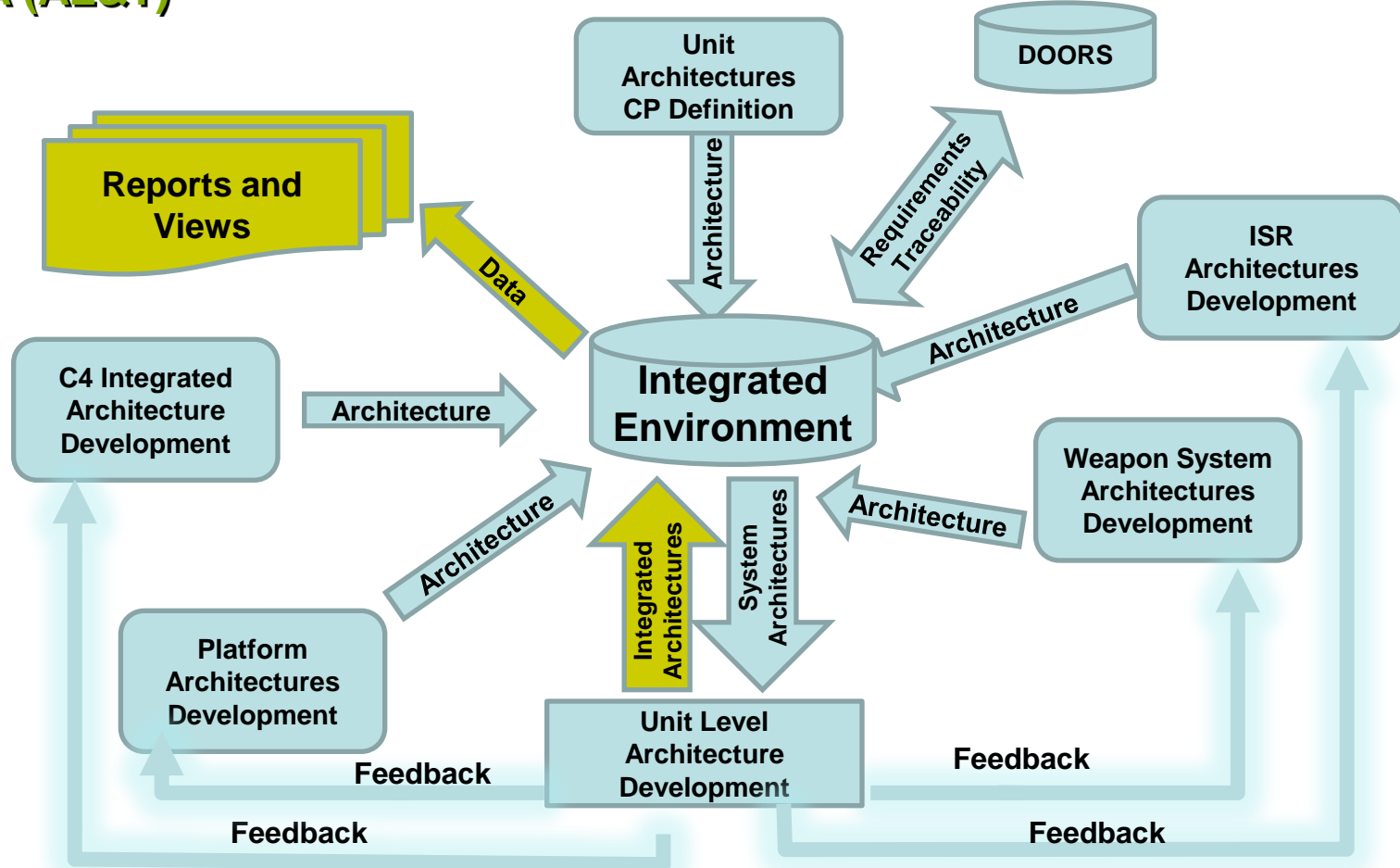
Working with and across all PEOs

Using integrated systems architectures and analytical tools to perform holistic review of all acquisition portfolios that support the POM process

SoSE

DESIGN ✳ DEVELOP ✳ DELIVER ✳ DOMINATE

Architecture Application Schedule

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Annual processes:

- Sept-May: define portfolios and architectures (C4ISR as start point)
  - Portfolio priorities and maturities are different—prioritize initial focus
  - Define interconnects across portfolios
  - Linkage of systems architectures with unit fielding timelines
  - Develop SOS SE Implementation Plan
  - Develop interaction processes between SOSE trades and TRADOC requirements process
  - Incorporates PIPs and obsolescence planning
- June: Cross-portfolio integration
- May-July: SOS trade activities
- Aug: Cross-PEO trade adjudication
- Sept: SoS decision point, SOS WSR preparation
- Oct: SoSE Weapon Systems Review portfolio position & issues
- Jan: SoSE Weapon Systems Review PoR recommended adjustments

In-parallel support to on-going activities:

- Continuous coordination with TRADOC associated with requirements
- CDRT impacts and integration

SoSE