



Calhoun: The NPS Institutional Archive
DSpace Repository

Acquisition Research Program

Acquisition Research Symposium

2015-05-01

Portfolio Acquisition: How DoD Can Leverage the Commercial Product Line Model

Modigliani, Peter J.

Monterey, California. Naval Postgraduate School

<https://hdl.handle.net/10945/53650>

This publication is a work of the U.S. Government as defined in Title 17, United States Code, Section 101. Copyright protection is not available for this work in the United States.

Downloaded from NPS Archive: Calhoun



<http://www.nps.edu/library>

Calhoun is the Naval Postgraduate School's public access digital repository for research materials and institutional publications created by the NPS community. Calhoun is named for Professor of Mathematics Guy K. Calhoun, NPS's first appointed -- and published -- scholarly author.

Dudley Knox Library / Naval Postgraduate School
411 Dyer Road / 1 University Circle
Monterey, California USA 93943

Portfolio Acquisition

Peter Modigliani

pmodigliani@mitre.org

(703) 983-9131

14 May 15



NPS Acquisition Research Symposium 2015

MITRE

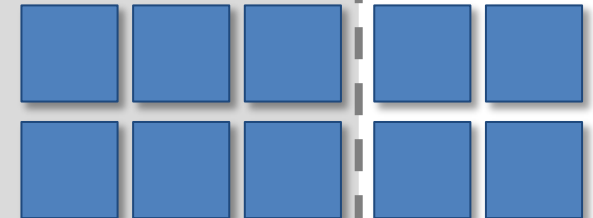
Portfolio Acquisition Concept

Elevate acquisition elements up to a portfolio structure for speed, agility, and an integrated capability suite

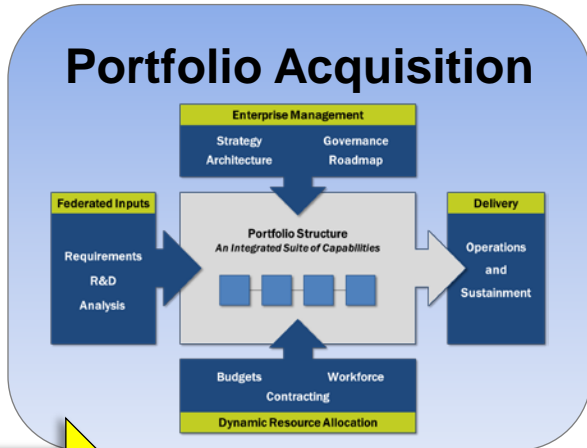
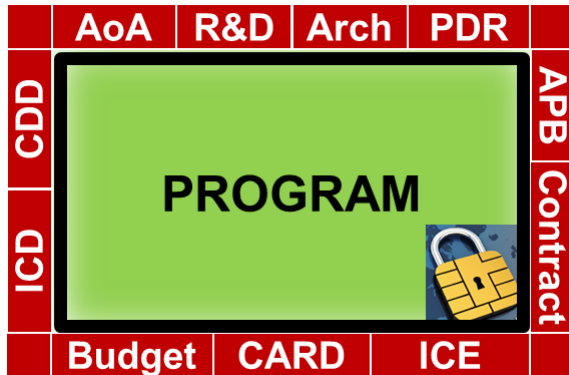


Portfolio

A collection of programs, projects, increments, and related R&D and development efforts designed to achieve a set of strategic outcomes



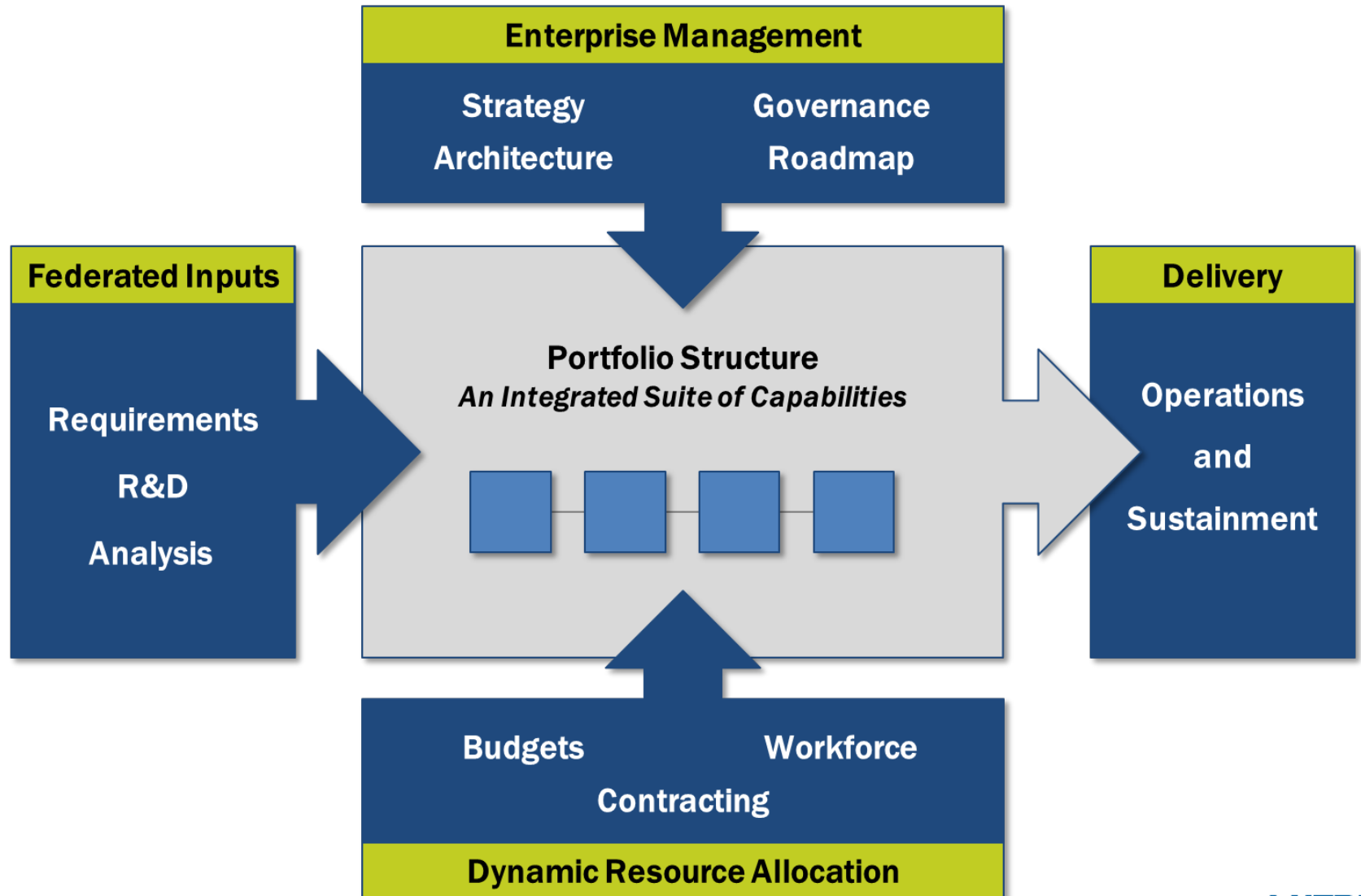
Break from a Program-Centric Model



**Stove-piped solutions,
long cycle times,
high cost, schedule,
and performance risks**

**Need a model responsive to changes in
operations, technologies, and budgets**

Portfolio Acquisition Framework



Portfolio Requirements



Portfolio ICD

Capability requirements and gaps for broad mission area

Portfolio Requirements Backlog

1. Requirement
2. Requirement
3. Requirement
4. Requirement
- . Requirement
- . Requirement
- . Requirement
- . Requirement
- . Requirement
- . Requirement
- . Requirement
- . Requirement
- . Requirement
- . Requirement
- n. Requirement

- Changes in:
- Operations
 - Technologies
 - Threats
 - Analysis

CDD → Program 1

CDD → Inc 2

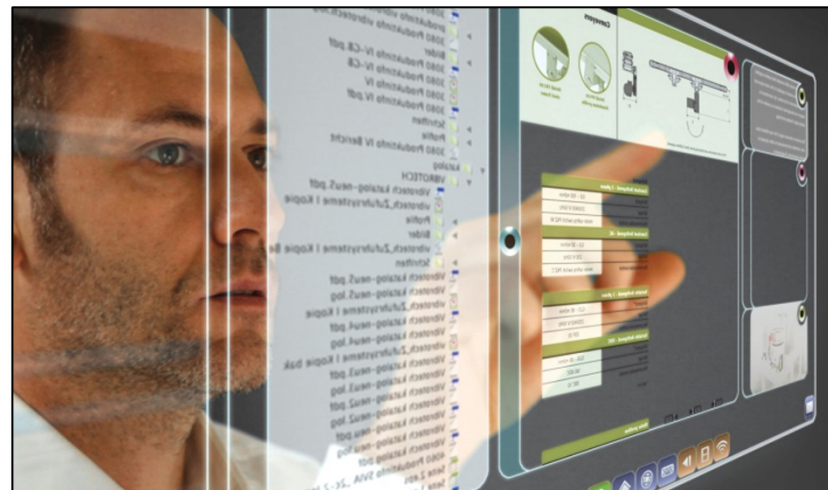
CDD → Program 2

CDD → Program 3

Integrated, Dynamic, Prioritized Set of Portfolio Requirements

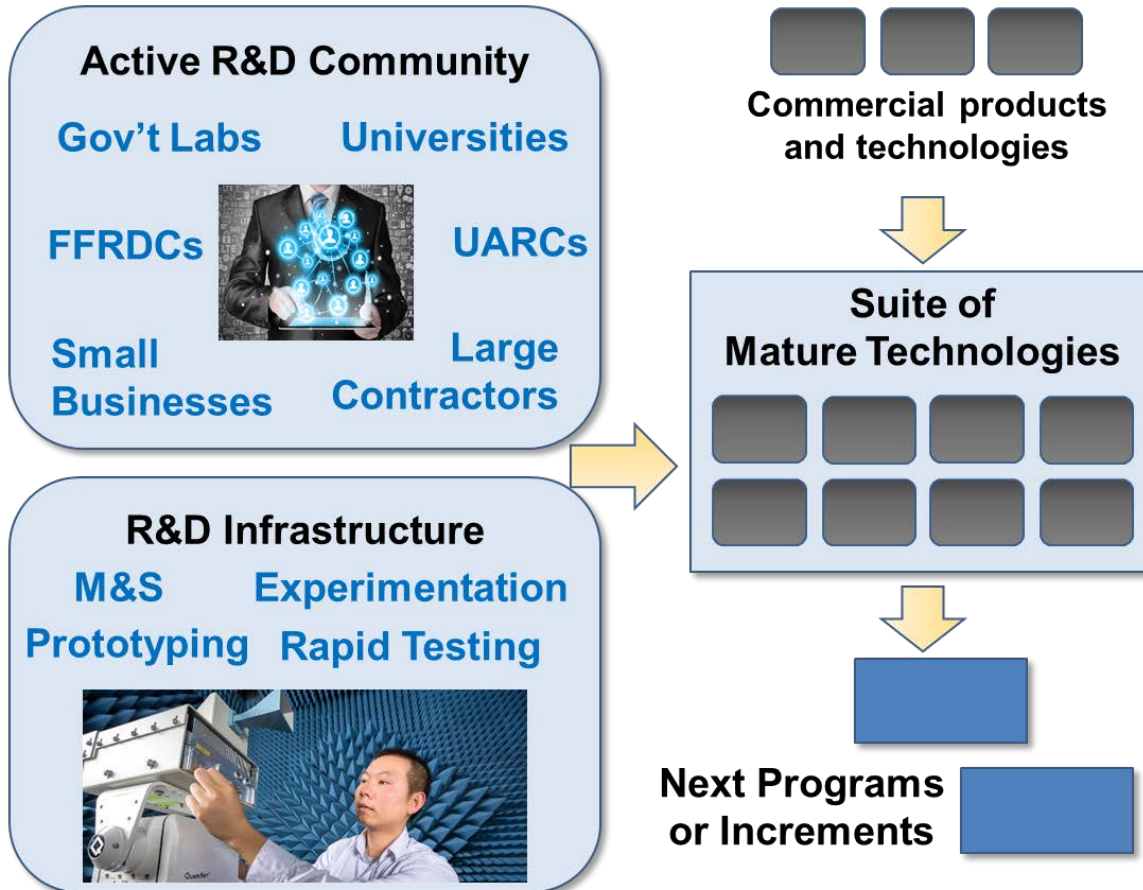
Analysis

- **Analysis of Alternatives**
- **Integrated cost, schedule and technical models**
- **Integrated risk management**
- **Threat assessments – operational, system, technology, services**
- **Optimizing investments and capability mix for mission impact**



Continual, Integrated Analytical Environment to Optimize Cost, Risk, Performance, and Mission Impact

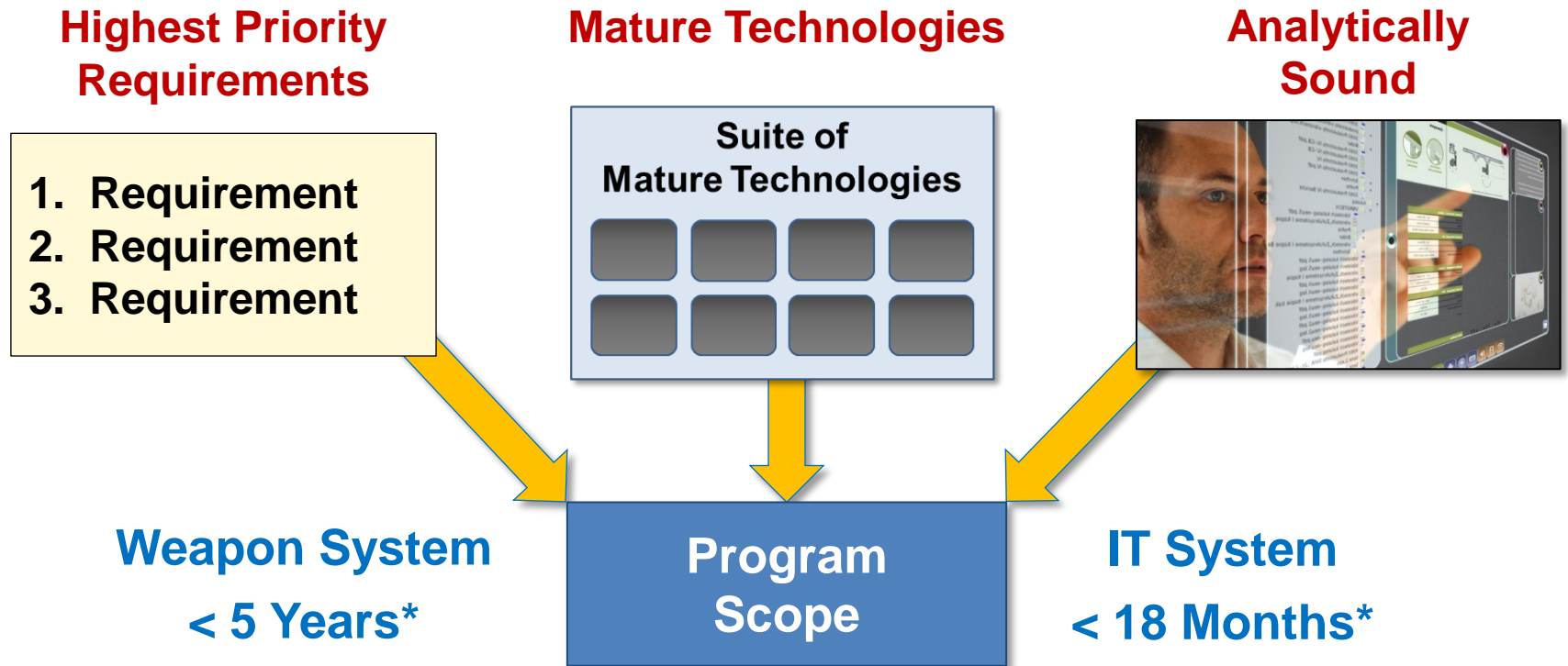
Research and Development



- **Separate technology R&D from systems development**
- **Robust R&D will shape CONOPS and requirements**
- **Faster technology maturity, transition, and use of comm technology**

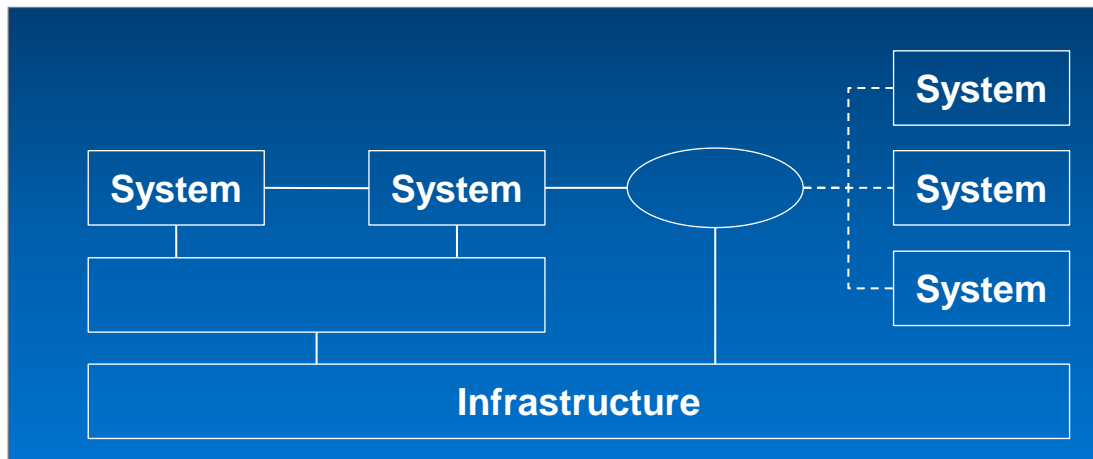
Invest in a collaborative, competitive environment to continually mature technologies and foster innovations

Structure



Scope programs to deliver capabilities in reasonable timeframe

Enterprise Architectures



**Technical and
business
integration**

- Integrated designs to optimize enterprise performance
- Design common standards and interfaces
- Drive use of common platforms/infrastructure and subsystems
- Maximize use of Modular Open System Architectures (MOSA)
- Establish technical governance

Strategies



- **Portfolios capstone documents**
 - Short program docs capture unique content
 - Reduce cycle times – streamline docs and reviews
- **Common, repeatable processes**
 - Ensure programs leverage best practices
 - New programs start with established framework
- **Enable broader competition and strengthen industrial base**
 - Portfolio-wide strategies beyond competing for EMD contracts
 - Leverage AT&L's Sector-by-Sector, Tier-by-Tier ([S2T2](#)) analysis
 - Examine more dual awards, split buys, and parallel developments

**Drive Speed
and Simplicity**

Contracting

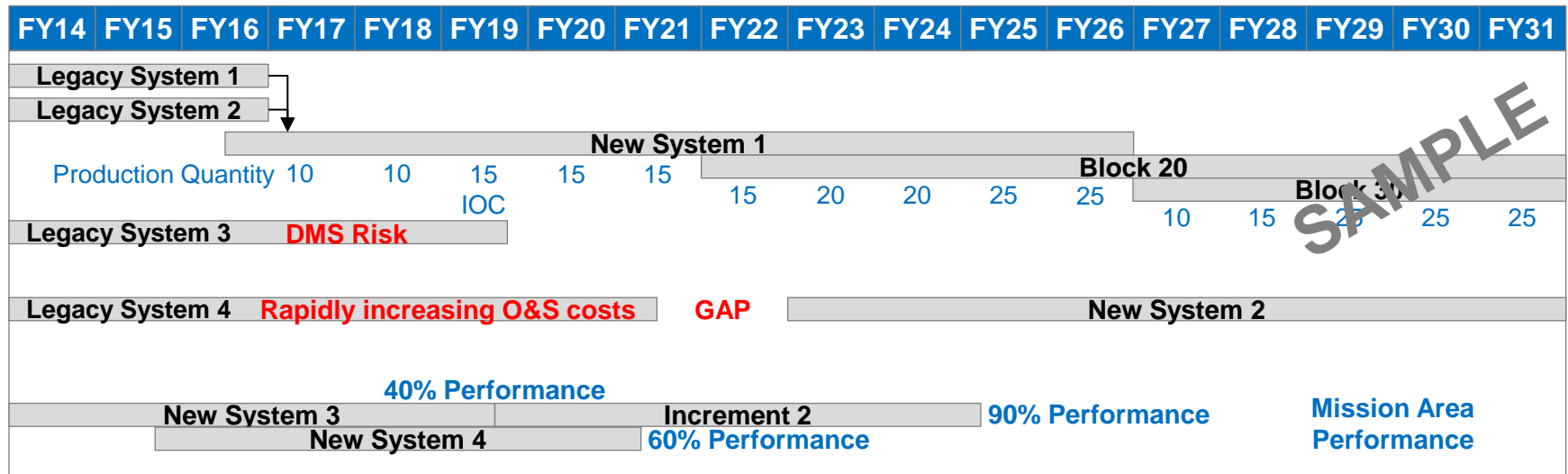


Develop active, long-term partnerships with many companies

- **Portfolio level contracts reduce contracting timelines and overhead costs while increasing competition and performance**
- **Multiple Award IDIQ contract(s)**
 - Rapid task order processes
 - Pre-negotiated terms, labor rates, metrics, and templates
 - Weigh performance on portfolio delivery orders for future awards
- **Align portfolio funded R&D with IR&D to foster innovations**
- **Increase small business participation via SBIR, STTR, and BAAs**

Roadmaps

- Long range planning and management tools
- Manage legacy system transition to an integrated capability suite
- Understand operational impacts to budget cuts, program delays
- Integrated cost, schedule, performance, and risk analysis/awareness



Governance



- **Shared responsibilities** Ops, acquisition, budget, sustainment
- **Align portfolios** Ensure same mix of programs
- **Delegate decision authorities** Enable timely decisions
- **Central knowledge repository** Provide transparency and insight
- **Align incentives** Ensure all seek common outcomes

Budgets

- **Transition to new budget model**

- PE: Portfolios
- BPAC: Programs



- **Dynamic allocation of portfolio funding to programs**
- **Allocate funding for portfolio R&D, analysis, and resources**
- **Reallocate funds based on priority, performance, budget changes**
- **Requires shared leadership and coordination across operations, acquisition, and budget executives**

Workforce

Dynamic Staffing Model



~50% assigned to PMO for long-term to become program experts



~50% Process or Technical SMEs assigned at key points across the lifecycle to provide targeted support

- **SMEs responsible for replicating best practices across programs**
 - Develop/maintain guides, templates, references, processes
 - Conduct research, collaborate with SMEs across DoD, Industry

Sustainment

- **Portfolio arch, designs enable strategic sustainment strategies**
 - Common platforms, subsystems, and services
 - Strategic capital investments across programs
- **Performance Based Logistics for mission-area capability rates**
- **Enterprise analysis/optimization**
 - Leasing vs buying
 - Public/private partnerships
 - Resources and Facilities
 - O&S Costs
 - Competition

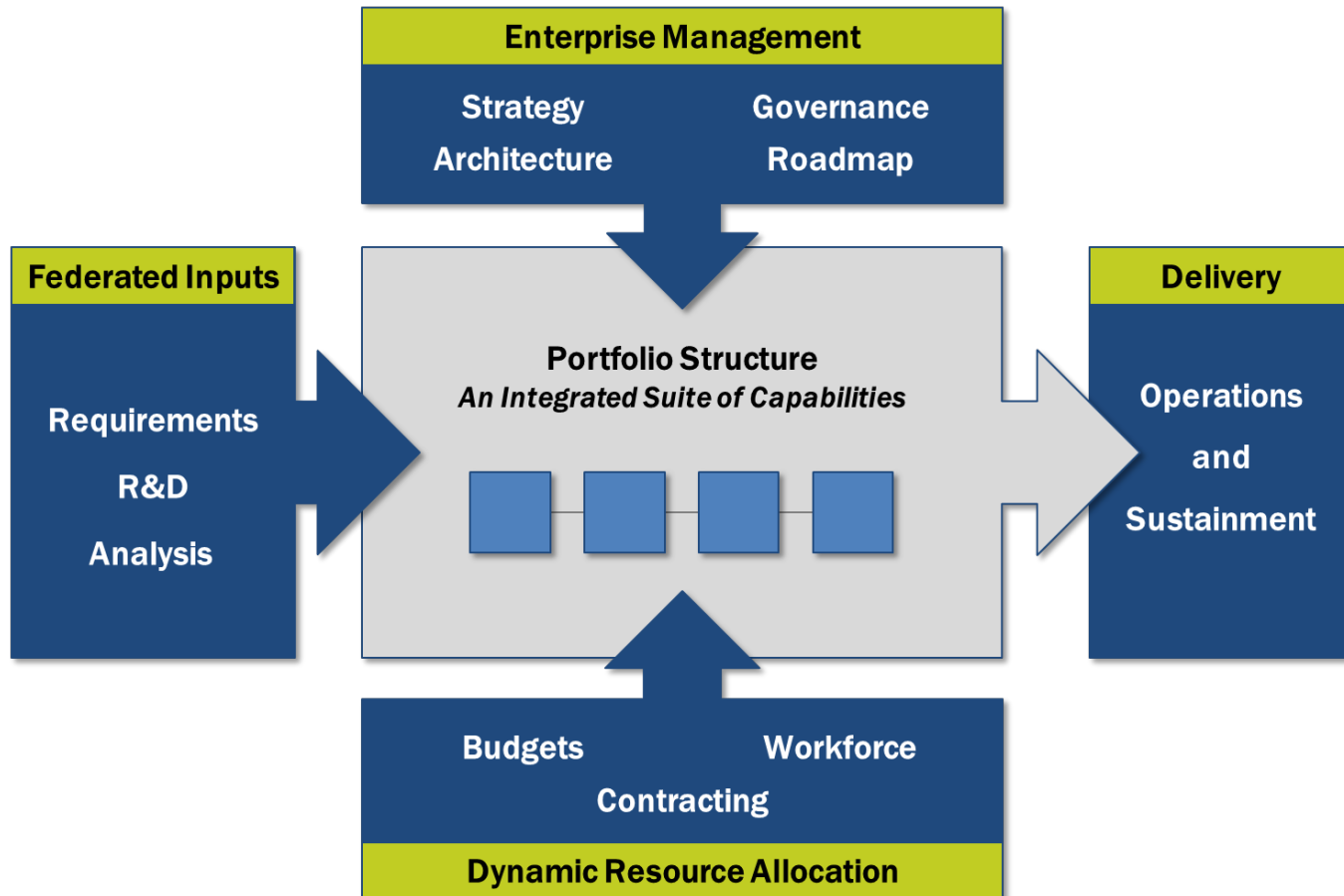


Portfolio Acquisition Could Address Many Better Buying Power Initiatives



- **Affordability and should cost management**
- **Stronger acquisition, requirements, and intel partnerships**
- **Improve productivity of Gov't and Industry R&D**
- **Increase use of prototyping, experimentation, and MOSA**
- **Decrease cycle times**
- **Create competitive environments including small business**
- **Strengthen organic engineering capabilities**

Portfolio Acquisition



Enable Faster Delivery of an Integrated Suite of Capabilities