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# Modeling the Department of Navy Acquisition Workforce With System Dynamics

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# A Multidimensional Approach to Acquisition Workforce Management
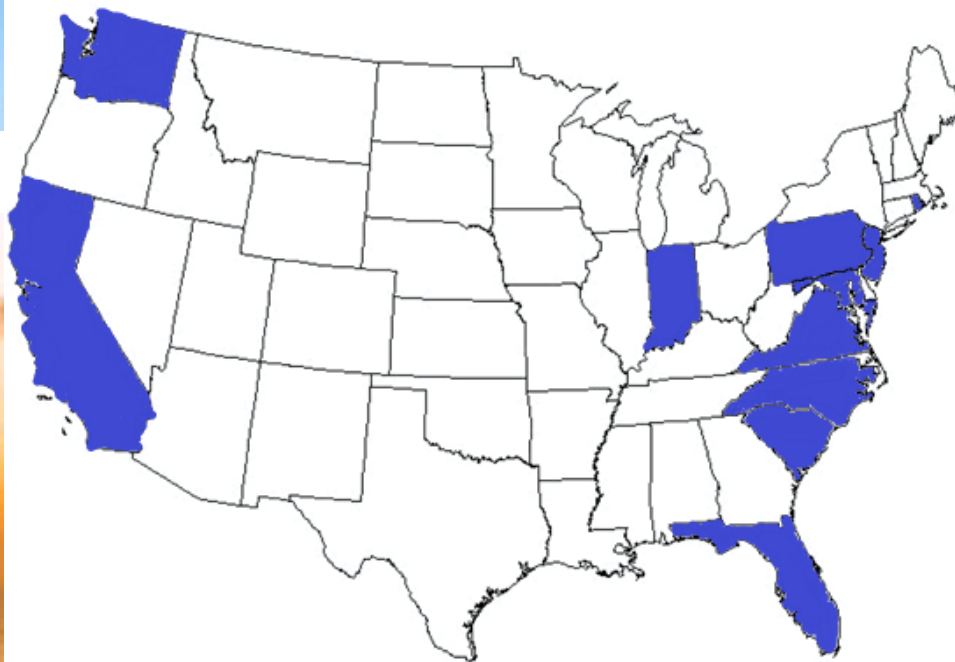
**May 9, 2018**

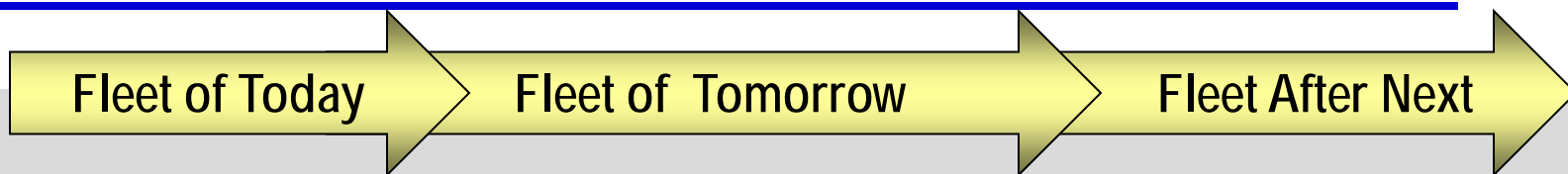*Joe Everling*

*Liz Rosa*

*Dr. Altyn Clark*

*Dr. David Ford*

# Acquisition Workforce (AWF) Management is a Wicked Problem



*Every person matters, every day matters, every dollar matters as we meet warfighter needs for affordable, agile, lethal capability*

# Guiding Questions for AWF Leaders
## Frame the Wicked Problem

**Fleet of Today** → **Fleet of Tomorrow** → **Fleet After Next**

| | Fleet of Today | Fleet of Tomorrow | Fleet After Next |
|---|---|---|---|
| **Demand** | *What drives work?* | | |
| **Supply** | *Do we have the right rotation programs?* | *What kind/size of workforce needed?* | *Do we incentivize the right performance?* |
| **Products & Services** | *What are major products?* | *How does the money flow?* | |
| **Workload Drivers** | *How do we know we're working on right things?* | *Where are skills needed?* | |
| **Technology & Process Impact** | | *What does technical excellence look like?* | *What levers can we use to improve AWF performance?* |
| **Added Value to Fleet** | How do we *evaluate* AWF health and affordability? | | |
| **"Productivity"** | *How do we keep people energized, engaged, connected?* | *How do we know we're getting better?* | |

## *How do we deliver lethal capability faster, while developing the workforce for the future?*

# Three DACM Lines of Inquiry to Address the Wicked Problem

1. DON governance structure to manage the AWF like a major program

2. Shared visibility in digital war rooms:
   AWF history, context, current health measures, future needs, and improvement levers

3. AWF system dynamics models to explore feedback loops and time delays

*Applying longitudinal systems thinking to the PEOPLE within the DON Acquisition Enterprise*

# Embracing Structure and Discipline to Manage Challenges in the Department of Navy Acquisition Workforce

**May 2018**

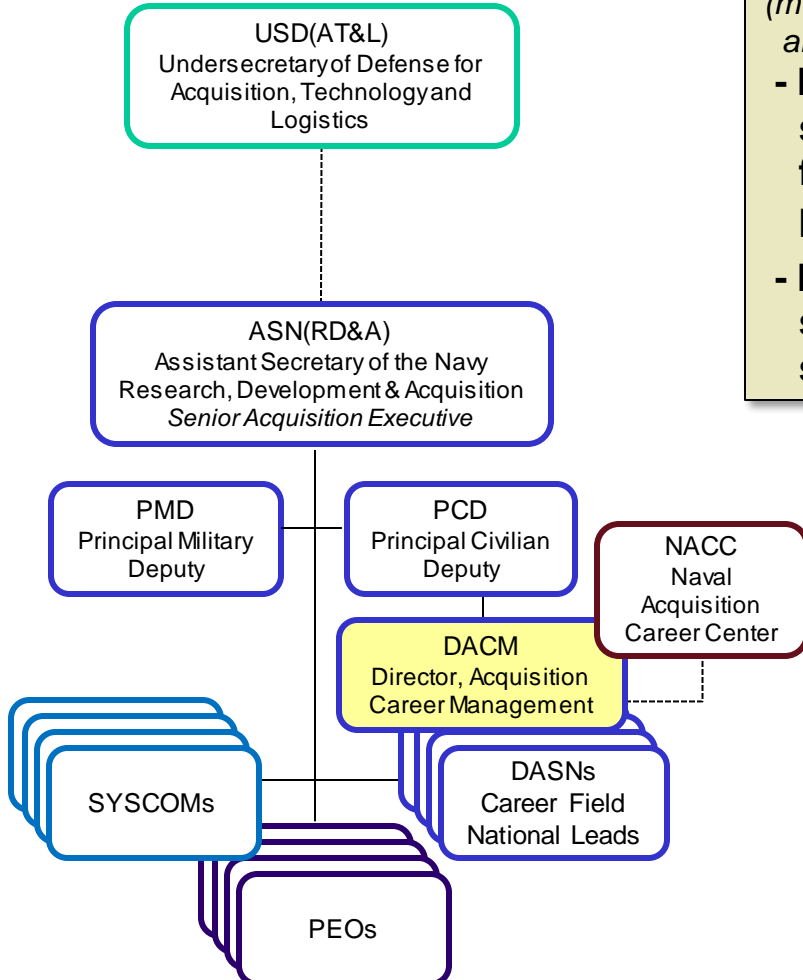*Liz Rosa*

# The Naval Acquisition Workforce is Itself a Major Acquisition Program

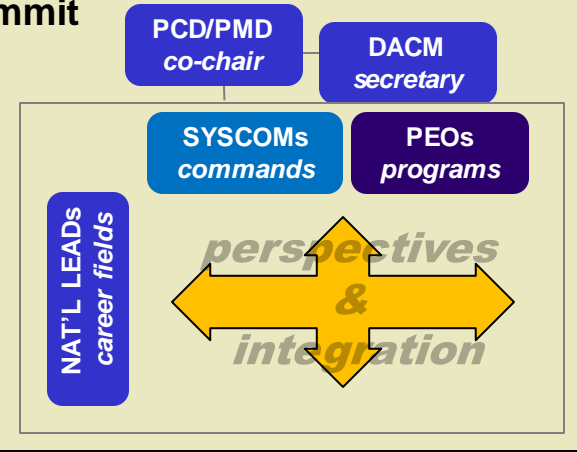## Acquisition Chain of Command

**USD(AT&L)**
Undersecretary of Defense for Acquisition, Technology and Logistics

**ASN(RD&A)**
Assistant Secretary of the Navy Research, Development & Acquisition
*Senior Acquisition Executive*

**PMD**
Principal Military Deputy

**PCD**
Principal Civilian Deputy

**NACC**
Naval Acquisition Career Center

**DACM**
Director, Acquisition Career Management

**SYSCOMs**

**DASNs**
Career Field National Leads

**PEOs**
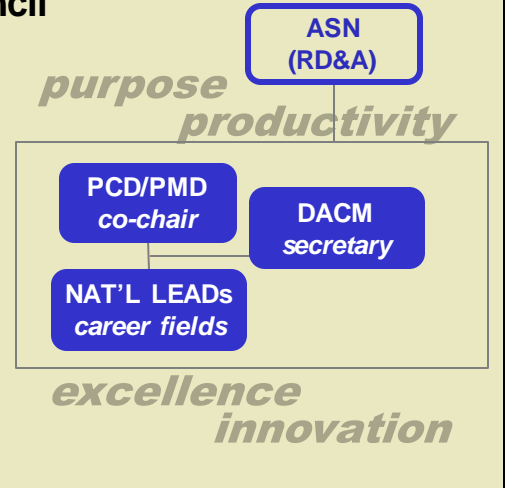
## Acquisition Workforce Summit
*(meets every other QTR, alternating w/ACC)*

- **Full spectrum of AWF stakeholders: career fields, commands, programs**

- **Forum for enterprise strategy & problem solving**

**PCD/PMD** *co-chair*

**DACM** *secretary*

**SYSCOMs** *commands*

**PEOs** *programs*

**NAT'L LEADs** *career fields*

*perspectives & integration*

## Acquisition Career Council
*(meets every other QTR, alternating w/Summit)*

- **Advisory Council to ASN(RD&A)**

- **Chartered to enhance the quality of AWF**

  - **Attract quality personnel**
  - **Improve skills & knowledge**
  - **Professional standards**

**ASN (RD&A)**

*purpose*
*productivity*

**PCD/PMD** *co-chair*

**DACM** *secretary*

**NAT'L LEADs** *career fields*

*excellence innovation*

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*Right people. Right skills. Right place. Right time.*

# AWF History and Vision

NSPS "pay for performance"

GS/Demo

ACQDEMO "pay for contribution"

**1991… 2005 • • • • 2010 • • • • 2015 • • ★ • • 2020 • • • •**

**DAWIA established**

**2008 Strategy to Balance AWF & CTR Support**

**2009 In-sourcing RMD 802 to increase CIV AWF by ~3500**

**2009 DAWDF established**

**2010 1st DON AWF Strat Plan**

**2013-2014 Sequestration Shutdn & Hiring Freeze**

**2014 Growth Achieved**

**2015-2019 MHA Cuts**

**2015 DAWDF made permanent**

**2016 DON AWF FY16-22 Strat Plan**

**2017 Strategic Re-baseline**

## Strategic Plan
- Link to Warfighter (current and future)
- Professional and Technical Excellence
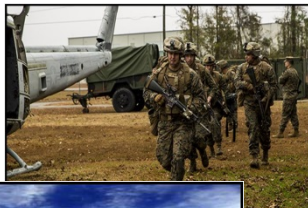- Responsible and Accountable

**End Game:**
- 100% DAWIA Certification
- 100% Currency (CLPs)
- Recertification for current assignment CF only
- No Waivers
- Good Process Order & Discipline
- Aligned with Strategy
- Manage by Priority

DEPARTMENT OF THE NAVY
ACQUISITION WORKFORCE FY 16-22
STRATEGIC PLAN

*Rapidly changing threats demand an AWF that can change rapidly And that is technically excellent and accountable.*

# DON Acquisition Workforce Strategic Plan



## GOAL 1:
## Energize the Workforce

Connect people to the Product and Mission. There is not a more noble mission than to support the men and women who are protecting and serving our nation. The Acquisition Workforce is grounded in the values of integrity, trust, diversity, teamwork, dedicated service, and excellence and is dedicated to that mission.

## GOAL 2:
## Focus on Professional and Technical Excellence

Deliberately manage and match capability needs with professional and technical excellence.

## GOAL 3:
## Reinforce Responsibility and Accountability

All work is performed through people. The values of integrity, trust, diversity, teamwork, dedicated service, and excellence are the foundation of our culture that must be sustained to ensure responsibility and accountability.

### AWF VALUES

### Integrity, Trust, Diversity, Teamwork, Dedicated service, Excellence

# AWF Career Navigators, Roadmaps, Paths

## DRAFT - Career Navigator Framework – DRAFT – Updated 11/16/17

**Life Event** *(e.g. Married, Move to new area, Buy house, civic responsibilities, Children, School events, Recreation, Travel, Death of Loved One)*

| Entry | Journeyman | Expert | Senior Leader |
|---|---|---|---|
| 1 2 3 4 | 5 6 7 8 9 10 11 12 13 14 15 16 | 17 18 19 20 21 22 23 24 | 25 26 27 28 29 30 |

*Level of Responsibility and Influence Increases*

**Results & Awards**

| *(e.g. Valued Team Member, Successful Project Leader, LOAs, Performance Awards)* | *(e.g. Cross Functional Team implemented new pay system, Team Leader for $20M Cost Reduction IPT, Successful Source Selection LOAs, AEA and Performance Awards, Meritorious Award)* | *(e.g. Mentoring and Leading High Performance teams that earn recognition from Fleet and DON)* |
|---|---|---|

**Experience**

*Demonstrate Executive Leadership, Program Execution, Technical Management, Business Management*

**Industry**

*(e.g. Industry job, assignment in SECDEF Fellows Program)*

**RDA Level**

*(e.g. Rotation in DASN, 3 year assignment in DASN)*

**Broadening**

*(e.g. SYSCOM Development Program, Assignment or rotation in SYSCOM/PEO outside of normal job duties)*

**Within Domain/ SYSCOM**

*(e.g. Work in a Warfare Center, rotation or assignment in SYSCOM, assignment in a Domain such as Ships, Subs, C4I,....) )*

**Certification**

| DAWIA Level | DAWIA Level II | DAWIA Level III | KLP Requirements |
|---|---|---|---|

**Mentoring**

| 1st Line Supervisor + 1 | 2 Mentors | SES Mentor and Become Mentor for others | Mentoring Others |
|---|---|---|---|

**Training**

**Technical**

*( e.g. Introductory and Broadening Courses –IWS courses, Weapon System Safety, EVM, Finance, Contracting, Engineering)*

**Professional**

*(e.g. SYSCOM Boot Camp, Capitol Hill Workshop, Public Speaking, Technical Writing )*

**Personal Development**

| **Personal Mastery – Lead Self** | **Interpersonal Mastery – Lead Teams/Projects/People** | **Organizational Mastery – Lead Organizations/Programs** | **Motivational Mastery – Lead the Institution** |
|---|---|---|---|
| Communication Professionalism Stress Management Critical Thinking Decision Making Customer Service Flexibility | Technology Management Creativity & Innovation Conflict Management Problem Solving Team Building Accountability | Technical Credibility Resource Management Human Capital Mgt. Developing Others/Mentoring Entrepreneurship Resilience | Vision Partnering Political Savvy Strategic Thinking External Awareness Influencing/Negotiating |

**Education**

| Associate's/Bachelor's | Master's | Master's/Doctorate/Executive Education |
|---|---|---|

**Character**

| Take Federal Employee Oath; Exemplify Standards of Conduct, Moral Character, Honor, Courage, Commitment, Integrity, … |
|---|

*Career Trajectory Change*

## Career Planning that Spans Career Fields and SYSCOMs.

# Adding Agility to DON Acquisition Workforce Management in Digital Collaboration Centers

## May 2018

### *Dr. Altyn Clark*

# AWF Digital Collaboration Center

# Naval acquisition is a complicated system of socio-technical systems

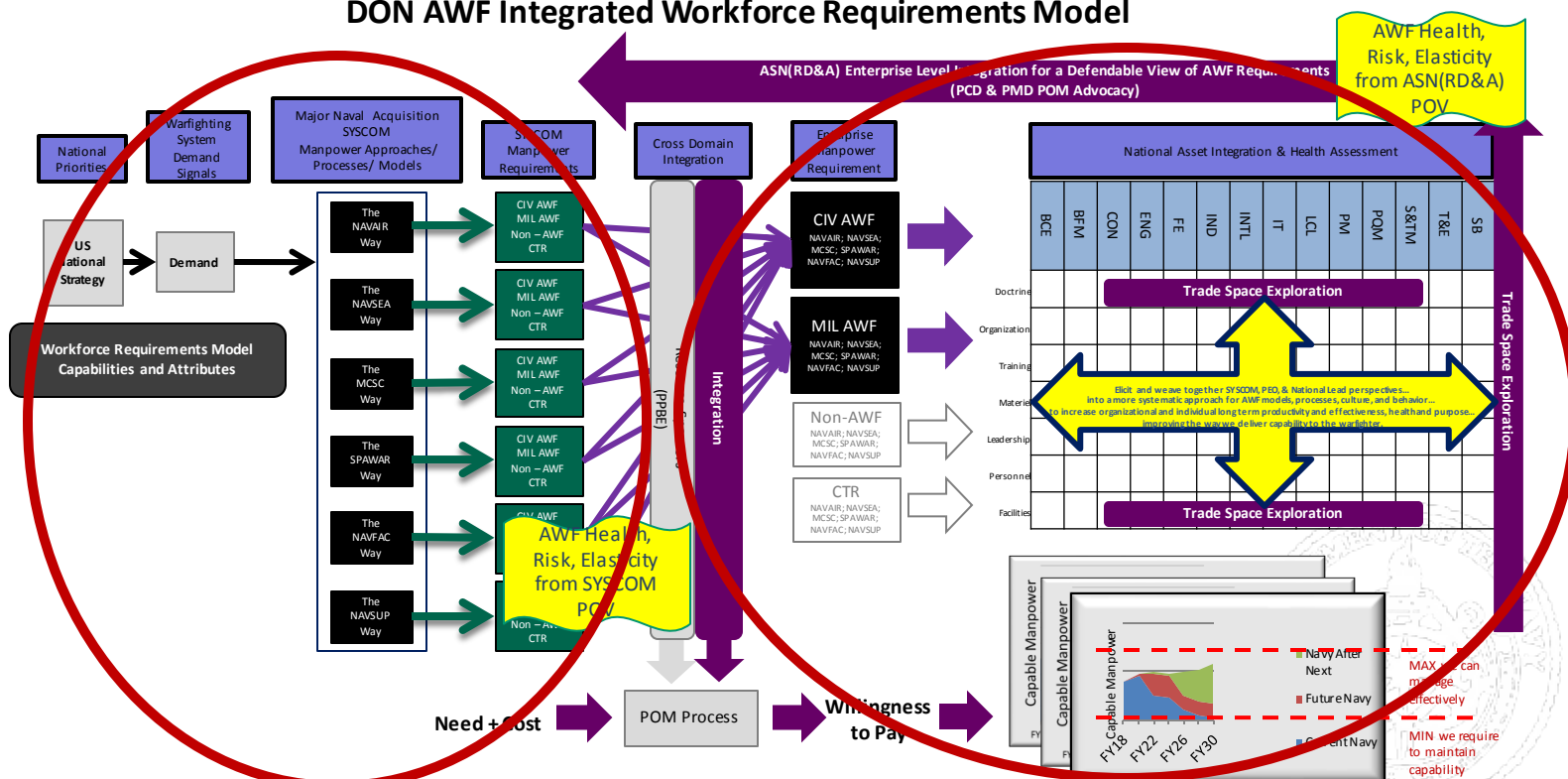**National Defense Strategy**

**Lethal Capacity**

# AWF Integration Challenges

SYSCOM Manpower Planning Is Adequate—Could Improve

Integration Across SYSCOMs and Across Career Fields for a Defendable Enterprise View is Harder



DON AWF Integrated Workforce Requirements Model

*What AWF composition is needed to maintain Current Navy?*
*Acquire Next Navy to address 10 year threats?*
*Prepare future technologies for Navy after Next?*

# AWF Affordability



**AWF Affordability is a Function of Need, Cost, Willingness to Pay**

# AWF Health Measurement

**Future Workforce Planning**

**Staffing (Market, Recruit, Hire, Onboard)**

**Career and Leadership Development**

**Acquisition Workforce Health**

**Education, Training, Certification, and Experience**

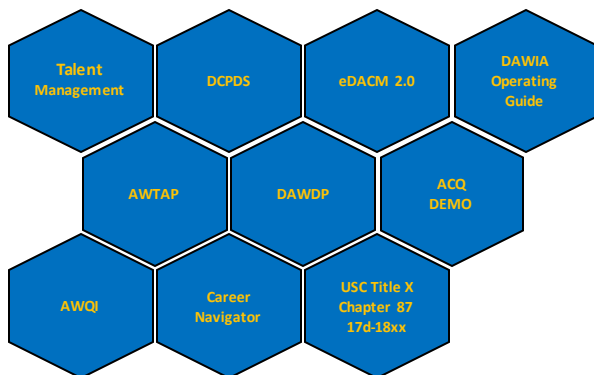**Individual and Team Performance**

**Motivation, Energy, and Engagement**

*Measuring all phases of the human capital management cycle, in the context of contribution to warfighting capability*
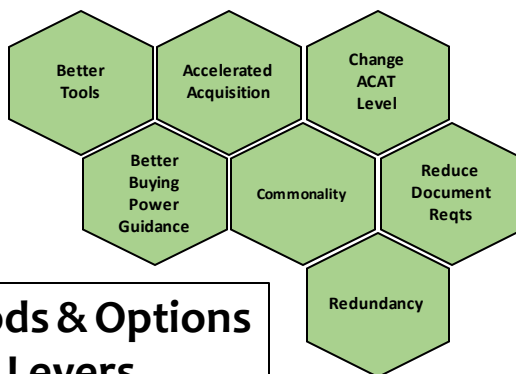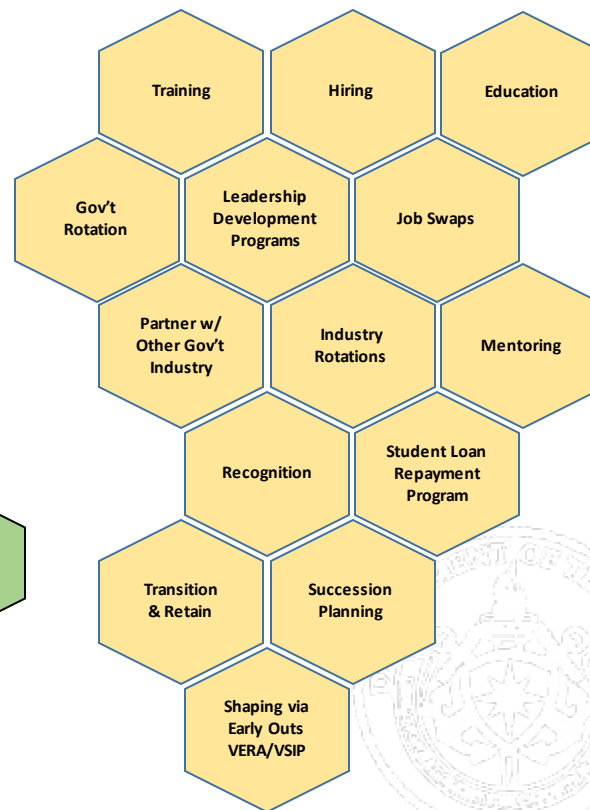
# AWF Investment Decisions

## Strategic Methods & Options Tool Levers

- Talent Management
- DCPDS
- eDACM 2.0
- DAWIA Operating Guide
- AWTAP
- DAWDP
- ACQ DEMO
- AWQI
- Career Navigator
- USC Title X Chapter 87 17d-18xx

## Strategic Methods & Options Workload Levers

- Better Tools
- Accelerated Acquisition
- Change ACAT Level
- Better Buying Power Guidance
- Commonality
- Reduce Document Reqts
- Redundancy

## Strategic Methods & Options People Levers

- Training
- Hiring
- Education
- Gov't Rotation
- Leadership Development Programs
- Job Swaps
- Partner w/ Other Gov't Industry
- Industry Rotations
- Mentoring
- Recognition
- Student Loan Repayment Program
- Transition & Retain
- Succession Planning
- Shaping via Early Outs VERA/VSIP

# Modeling the Department of Navy Acquisition Workforce with System Dynamics

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# Challenges in Policy Analysis

**Forecasting impacts of AWF policies is difficult:**

- The system consists of diverse parts
- The diverse parts interact in ways that create causal feedback…A $\rightarrow$ B $\rightarrow$ C $\rightarrow$ D $\rightarrow$ A
- Processes take time, creating delays
- The system evolves in uncertain ways
- A model that can capture these features is needed to explore and simulate the impacts of policies on the workforce

# **Model Structure** People

- Acquisition workforce (AWF) workforce
- Critical Acquisition Positions (CAP) workforce
- Key Leadership Positions (KLP) workforce
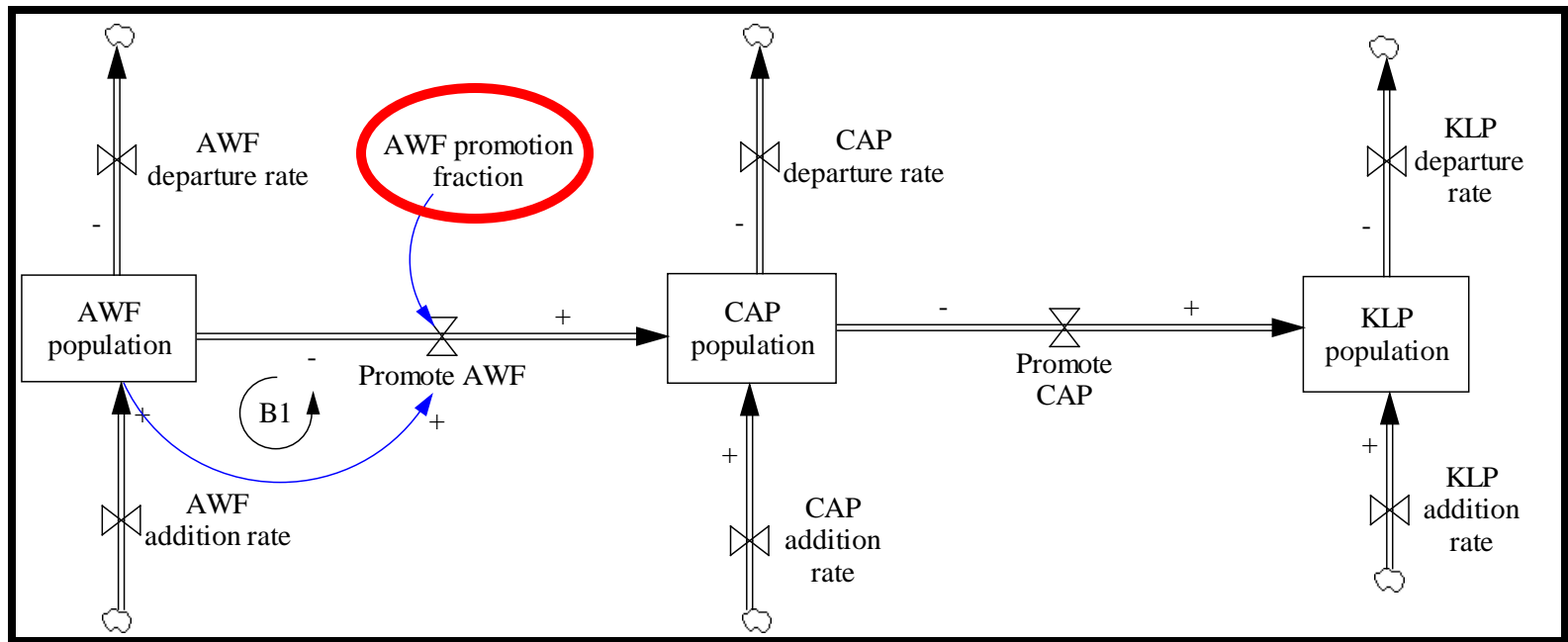


**Model of People in an Acquisition Workforce Model**

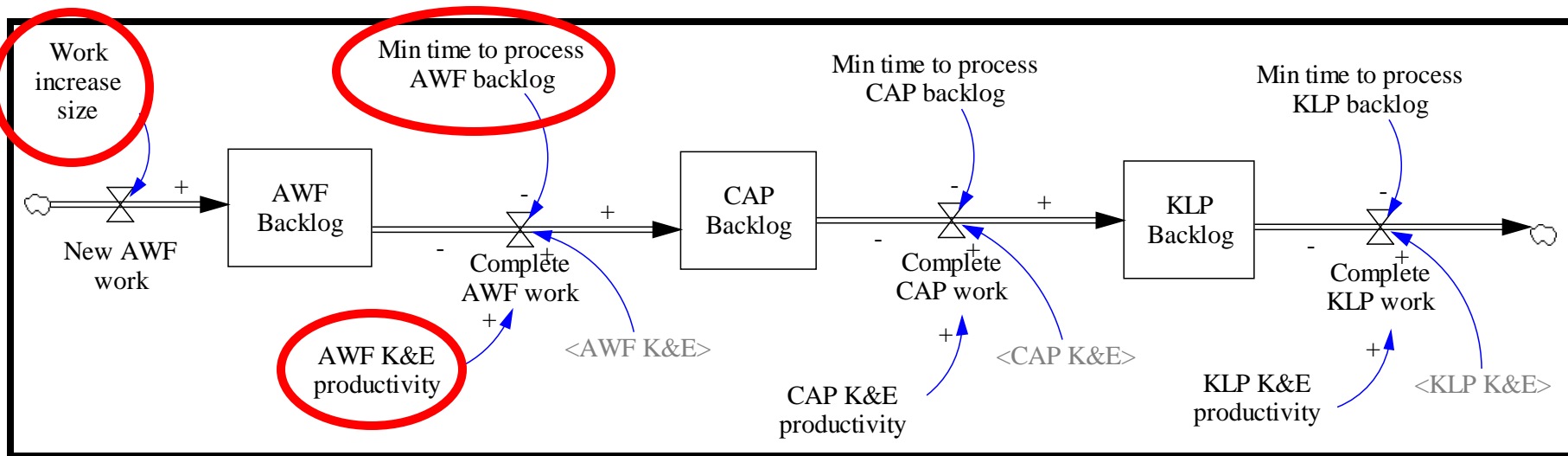# Model Structure
## Acquisition Knowledge and Experience
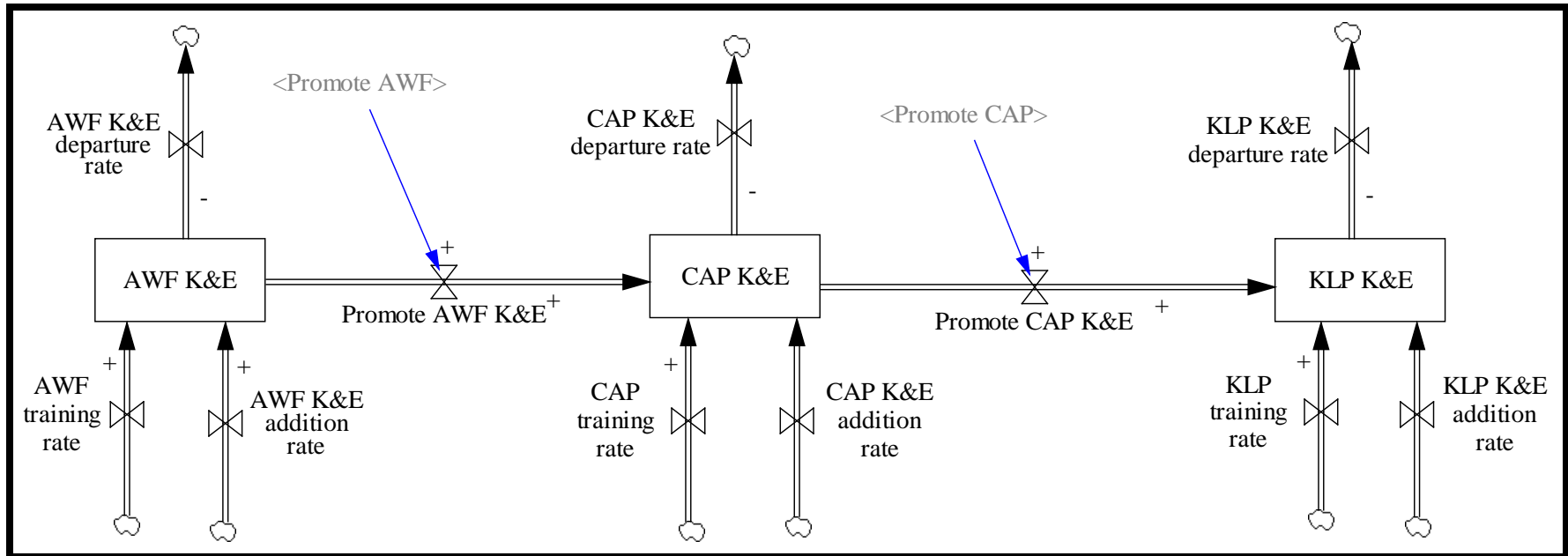


**Acquisition Knowledge and Experience in an Acquisition Workforce Model**

K&E lost due to forgetting and obsolescence based on the half-life of the K&E.

**Model of Acquisition Work in the Acquisition Workforce Model**
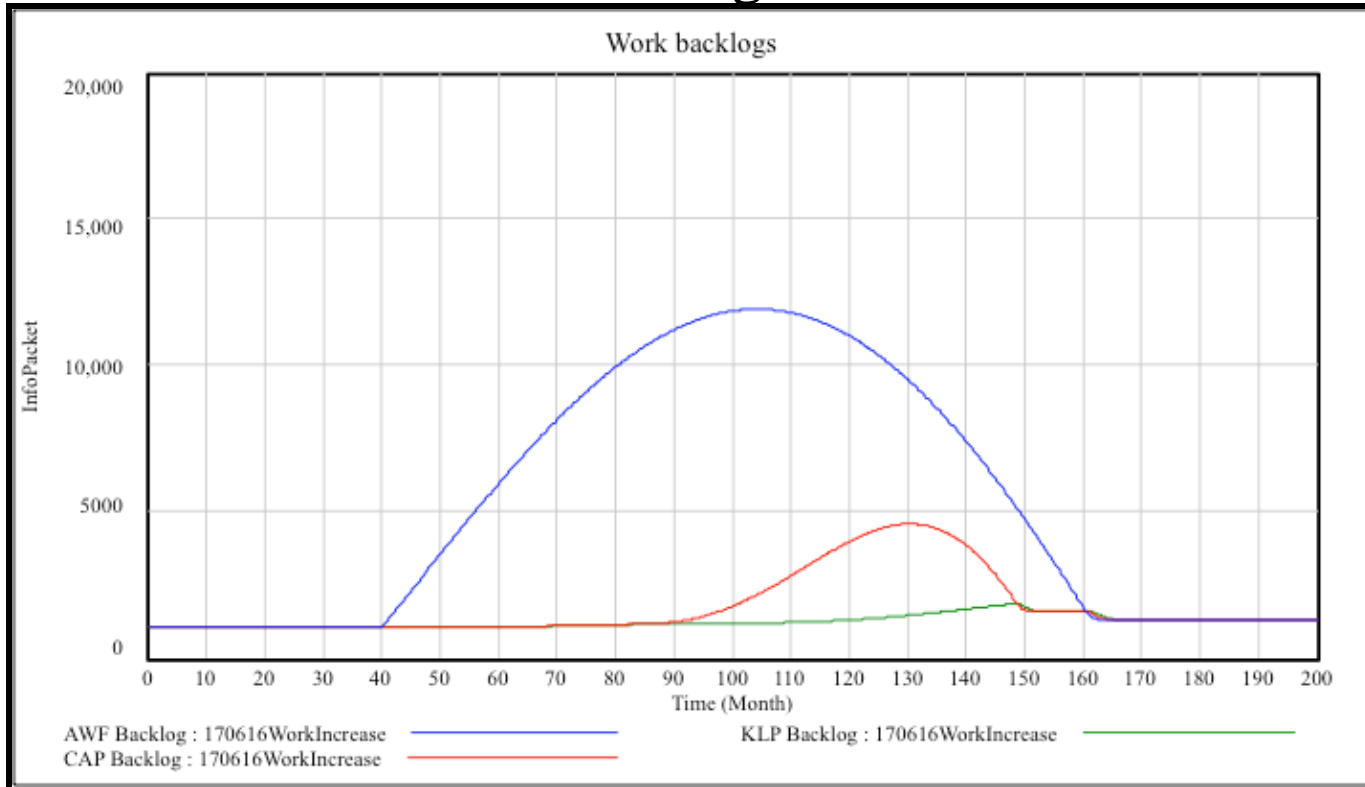
# AWF Performance Measures

- AWF size (AWF, CAP, KLP, total)
- Work backlogs (AWF, CAP, KLP, total)
- Average time in backlog (AWF, CAP, KLP, total)
- Annual workforce cost

# Illustration of Model Use

- Work inflow of work to AWF backlog increase by 25% at month 40 and remain at the higher level.
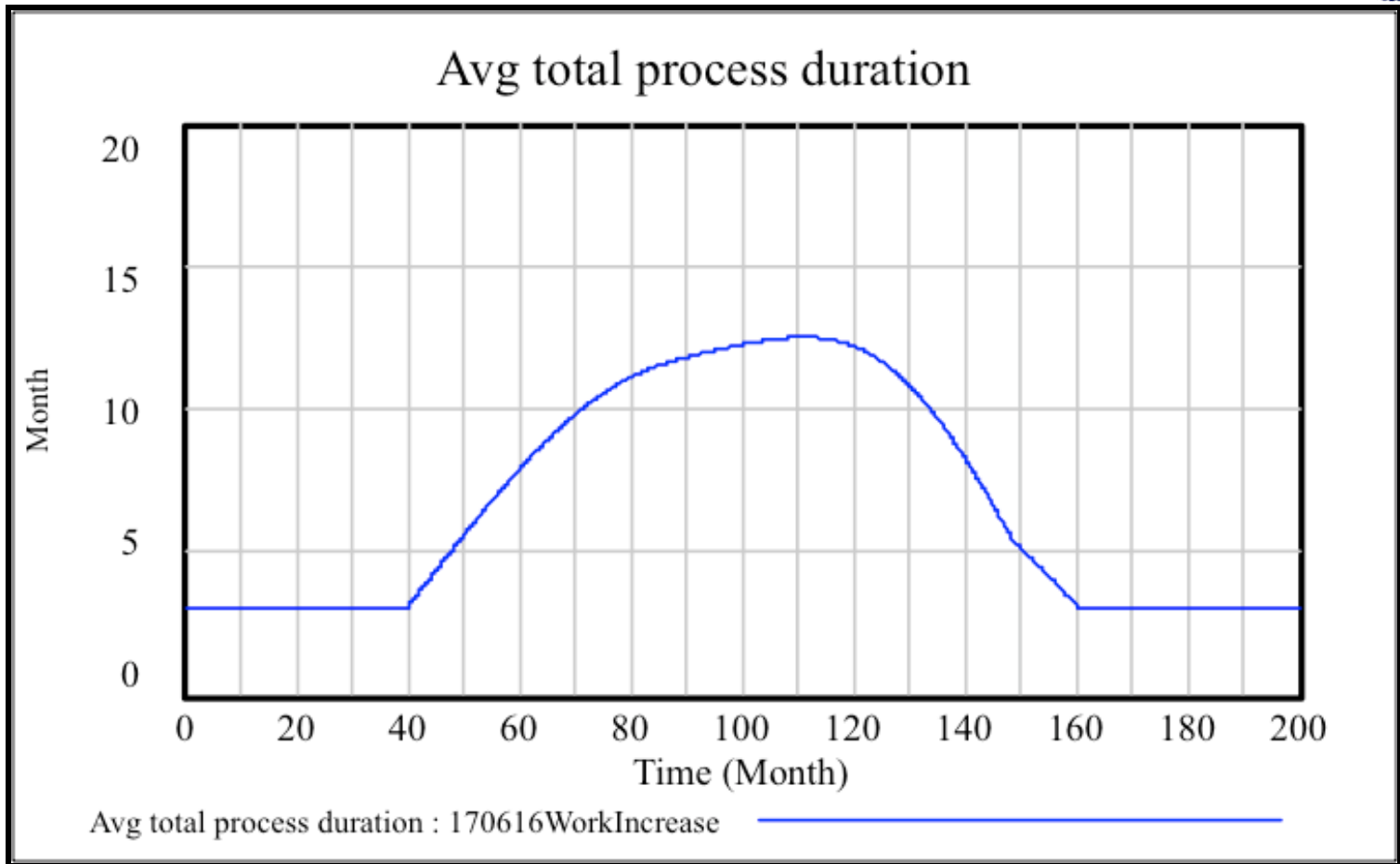


**Work Backlogs in Response to increase in Acquisition Work**
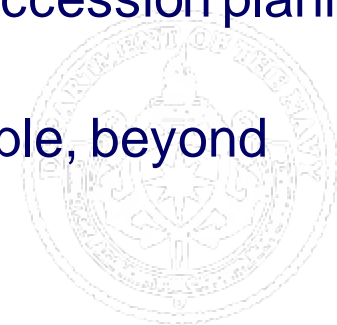
# Illustration of Model Use



Acquisition Delays in Response to increase in Acquisition Work

# For Further Study

- Measuring Program and AWF outputs & outcomes
- Judicious application of system dynamics models
- Workload forecasting models tied to the 30-year shipbuilding plan
- Talent management systems and toolsets
- Digital war rooms with shared data display across multiple geographies
- Half-life of knowledge and the refresh rate required to maintain currency
- Defining the characteristics of a fully developed professional in all career fields
- Better defining the pool of candidates available for succession planning purposes
- Better understanding the qualities needed in key people, beyond technical training

# Questions?