## Dwight D. Eisenhower School for National Security and Resource Strategy

## **Acquisition and Innovation Core Couse**

## Lesson 1 Introduction to A&I



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### The Bottom Line Up Front



**Bernard Baruch** 

"It is not enough to mobilize a Nation's military strength. There must be a mobilization of her full economic resources – industrial, agricultural, and financial. These must be organized, coordinated and directed with the same strategy that governs the operations of the purely military arms of service."

# THE FRENHOWER SCHOOL

### **Topics**

- Course Motivation
- My Approach
- Course Overview
- Assessments
- Your Questions
- Acquisition and Innovation Defined
- Next Lesson



#### **Course Motivation**

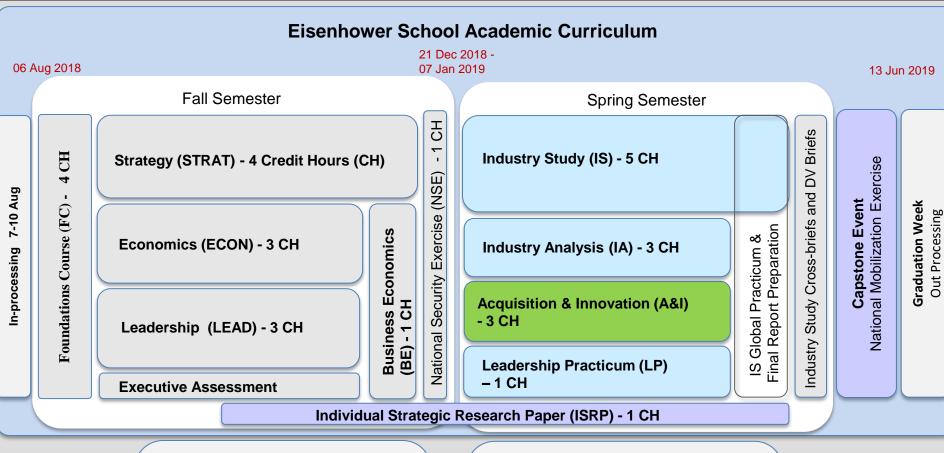
• Why study acquisition and innovation?

• Why is it important?

• Why inflict acquisition on non-acquisition people?

### ES Academic Calendar AY 2018-19





- NDU-wide Elective Program Concentration Programs 2/4 CH
- Senior Acquisition Course (SAC)
- Supply Chain Management (SCM)
- Long-Term Strategy (LTS)
- NDU Research Scholar

NDU Electives – 2 CH

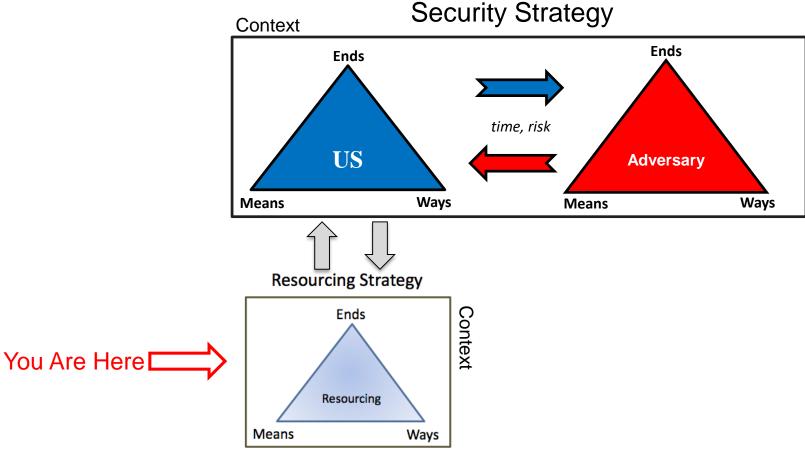
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NDU Electives – 2 CH

Total Credit Hours (CH)
33 CH minimum

## Integrated Strategy & Resourcing Model





Models Help Us to Predict a Strategy's Strengths and Weaknesses Without Testing Them in Real Life



### Name that Program!

- An innovative but unconventional design was criticized as "extravagant."
- A multi-mission requirement for irregular warfare and high-intensity warfare put conflicting demands on the design.
- Use of exotic materials delayed construction and raised costs.
- A divided political establishment argued over the need and cost.
- Contracts were spread around all the northeast states to ensure political support.
- Cost growth caused schedule slippage and program instability.
- Congress, alarmed at the costs and delays, conducted inquiries and railed against waste.



## "Six Frigates"

- "In 1794, the young United States authorized the construction of six frigates (*United States, President, Congress, Constitution, Constellation, and Chesapeake*). Intended to be the major units of the new Navy, the ships represented the aspirations of an ambitious but inexperienced institution. In execution, all the pathologies of today's weapon systems acquisition were evident."
- "But the story did not end there. In service, the ships were spectacular successes. Over the course of their careers, they fought 11 combat actions, winning 8 and losing 3. The exploits of the Constitution particularly encouraged the young nation. These successes were achieved while badly outnumbered and fighting against the two best navies in the world—the British and French. How was this possible? The advanced design that caused so many problems during construction also gave the ships a decided advantage over other ships in their class. They could defeat any ship with comparable speed and outrun any ship that was more powerful. The unexpectedly high cost bought capabilities that proved important in war."

Source: Mark Cancian (2010), "Cost Growth: Perception and Reality", AR Journal, DAU

## What do these systems have in common?









## What do these systems have in common?











### Strategic Implications

What you develop & buy – what you are capable of developing & buying – determines:

- ✓ How you will fight
- ✓ What strategies you can use
- ✓ What kind of a military you will have
- ✓ What range of capabilities you will have
- ✓ What kind of industrial base you will possess

This is why we study acquisition at the strategic level



## My Approach

#### You are current or future senior leaders

- Responsible for your own preparation
- Responsible for your own contribution
- Responsible for your own learning

#### My job is to facilitate and provide feedback

- My assumption is that you have done the readings
- I will tailor readings so you don't "waste your time"...

#### • My emphasis is on thinking about future applicability

- We all need to ask "so what" during each lesson
- We all need to understand "what's in it for me"
- Expect conceptual questions moving from specific to general
- Some theory and some practical application.



## **Typical Seminar**

- **Individual Preparation** (You and Me)
- Small Group and/or Conceptual Presentation (Tutorial)
- Large Group Discussion
- Lecture is option of last resort.



#### **Course Overview**

- Acquisition and Innovation (A&I) Core Course is NOT:
  - A course on program management
  - A course on contracting
  - A course on specific policies or regulations
  - A substitute for DAU training
- Acquisition and Innovation (A&I) Core Course **IS**:
  - A study in applied politics, economics, and leadership
  - An example of <u>strategic</u> governmental processes
  - An examination of decision-making under uncertainty
  - An example of conflicting decision-making systems
  - A discussion of the processes to decide what and how to buy
  - A supplement to your Industry Studies program
  - A complement to your Industry Analysis course

## Acquisition and Innovation (A&I) Curriculum



Lsn #	Lesson Title
1	Introduction to A&I (S)
Block 1	Mobilization
2	Economics of Mobilization: WW1 (S)
3	Mobilization as Public Policy: WW2 (CS)
4	Law & Politics of Mobilization: Korean War (CS)
5	National Framework for the Mobilization of Industrial Resources (L)
6	Assessment of Industrial Base Risks and Mitigation Strategies (L)
Block 2	Requirements & Resource Allocation
7	Political Realities of Acquisition & Innovation (S)
8	Ethics and Politics in Acquisition: Tanker Case (CS)
9	Choosing Strategic Capabilities: JCIDS (S)
10	Analyzing Strategic Capabilities: Trident Case (CS)
11	Planning, Programming, Budgeting, & Execution (PPBE) (L)
12	Strategic Resource Allocation (S)
13	Risk within the President's Budget (L) - Mark Cancian
14	The Purse & the Sword: Congressional Budget Process (S)

## Acquisition and Innovation (A&I) Curriculum



Lsn #	Lesson Title
Block 3	Innovation and Acquisition
15	Understanding Sources of Military Innovation (I) (S)
16	Understanding Sources of Military Innovation (II) (CS)
17	Defense Acquisition System (S)
18	Current Trends in Acquisition (L)
19	Acquisition and Contracting Strategy (S)
20	Analyzing Acquisition Strategies: MLRS/CUC-V Case (CS)
21	Acquisition in Support of Urgent Wartime Requirements: MRAP (CS)
22	Acquiring Services & Operational Contract Support (S)
	Program Evaluation Paper (PEP)(Assess 1)
23	Life Cycle Logistics & Supply Chain Management (S)
24	International Acquisition and Cooperative Programs (S)
25	Defense Trade and Technology Security (S)
26	Program Evaluation Paper (PEP) Team Outbriefs (Assess 2)

## Acquisition and Innovation (A&I) Curriculum



Lsn #	Lesson Title
DIOCK 4	3,
27	Resourcing Trade-Offs (S)
28	Strategy & Resource Analysis - Practicum (Day 1)(Assess 3)
29	Strategy & Resource Analysis - Practicum (Day 2)(Assess 3)
30	Course Wrap Up

#### **Assessments**



- Class Contribution: 30%
  - See contribution rubric
- Program Evaluation Paper: 35%
  - Due: 13 March 2019 (Prior to Class)
  - Given 4 Programs, pick 1 to answer.
    - JLTV, LCS, V-22, F-35
  - 10-12 pages.
  - Detailed instructions will follow later
  - See PEP rubric
- PEP Team Outbrief: 10%
  - Due: 25 March 2019 (In Class)
  - While paper is individual effort, Teams will present findings.
  - Detailed instructions will follow later
  - See PEP Outbrief rubric

- Strategy and Budget Analysis: 25%
  - See Schedule
  - See Practicum rubric

- Your assessment of me:
  - End of course critique (which is too late for all of us!)
  - Mid-course comments to seminar leader / me...
  - Verbal feedback always welcome!



## **Your Questions?**

#### **Considerations**



Acquisition policy reflects the context of the government system in which it operates, and is subject to forces influencing resource allocation decisions in the public domain.



Understanding the relationships among the stakeholders within DoD, the Congress, and industry is essential to understanding how these processes interoperate to support national defense objectives

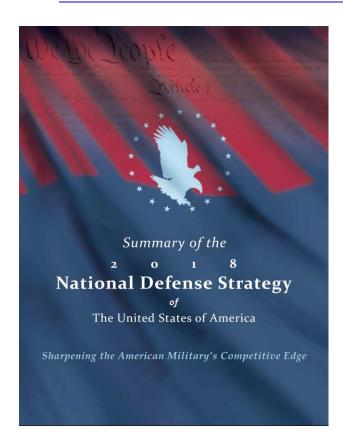






## National Defense Strategy 2018





To succeed in the emerging security environment, our Department and Joint Force will have to out-think, out-maneuver, out-partner, and out-innovate revisionist powers, rogue regimes, terrorists, and other threat actors.

We will expand the competitive space while pursuing three distinct lines of effort:

- Rebuilding military readiness as we build a more lethal force;
- Strengthening alliances as we attract new partners; and
- Reforming the Department's business practices for greater performance and affordability.



## Defense Acquisition

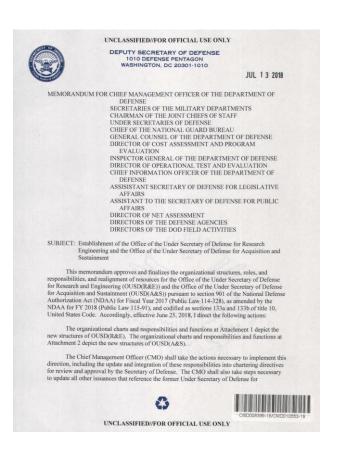
A political, administrative, and technical process by which the Department of Defense converts material resources into military capability.

May be a Product or Service

How a nation acquires defense capabilities is a reflection of its form of government—politically, economically, and militarily.

## Reorganization of Acquisition in Office of Secretary of Defense





### Memorandum from Deputy Secretary of Defense July 13, 2018

**Subject**: Establishment of the Office of the Under Secretary of Defense for Research Engineering and the Office of the Under Secretary of Defense for Acquisition and Sustainment

"...approves and finalizes the organizational structures, roles, and responsibilities, and realignment of resources...pursuant to Section 901 of the National Defense Authorization Act (NDAA) for Fiscal Year 2017."

## Acquisition and Sustainment (A&S)





Chief acquisition and sustainment officer for the Department with the mission of delivering and sustaining timely, cost-effective capabilities for the armed forces (and the department).

Honorable Ellen M. Lord USD (A&S)

- Policies relating to acquisition for the Department...
- ...access to and maintenance of defense industrial base
- MDA [milestone decision authority] for ACAT 1D programs
- Assess/report performance of the acquisition system to inform policy changes and strategic decisionmaking

USD (A&S)

DAU, DCMA, DLA, DTRA

DUSD (A&S)

- ASD (Acquisition)
- ASD (Sustainment)
- ASD (Nuclear, Chem/BIO Defense Programs)
- DASD, Industrial Policy
- Director, Joint Rapid Acquisition Cell
- Director, Special Programs
- Director, Strategy, Data & Design
- Director, International Cooperation

## Research and Engineering (R&E)





Chief technical officer for the Department with the mission of advancing technology and innovation.

Honorable Dr. Michael Griffin USD (R&E)

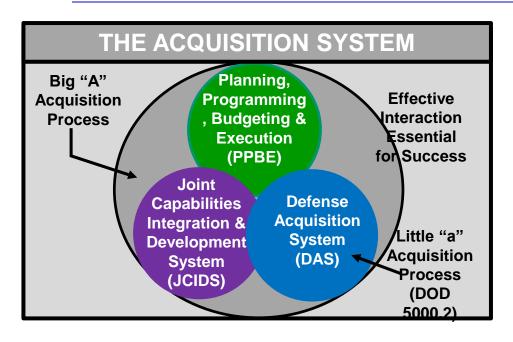
- Policies relating to technology development, tech transition, prototyping, experimentation, and development testing
- Pre-milestone risk/tech maturation assessments
- Directing DOD strategic investment in technology and emerging capability to respond to emerging threats and technology opportunities

## USD (R&E) Defense Science Board DUSD (R&E)

- Strategic Intelligence Analysis Cell
- SCO
- **DIU**
- Missile Defense Agency
- DARPA
- Director for Research & Technology
  - Microelectronics, Cyber, Quantum Science, Directed Energy, Machine Learning/AI
- Director for Advanced Capabilities
  - Networked C3, Space, Autonomy, Hypersonics

### The 'Big A' – An Interactive Process





As set forth by statute and regulation, from concept to deployment, a **system must go through a three-step process** of identifying a required capability, establishing a budget, and acquiring the system.

- The Joint Capabilities Integration and Development System (**JCIDS**) for identifying requirements.
- The Planning, Programming, Budgeting, and Execution System (**PPBE**) for allocating resources and budgeting.
- The Defense Acquisition System (**DAS**)—for developing and/or buying the item.

"Together, the three processes provide a means to determine, validate, and prioritize capability requirements and associated capability gaps and risks, and then fund, develop, field, and sustain non-material and material capability solutions for the Warfighter in a timely manner."

--CJCSI 3170.011

## Framework for Decision Making



#### **Resource Allocation**

- How much or how many we will buy?
- Federal budget calendar

**Annual Budget Cycle** (Calendar Driven)

#### **Requirements Determination**

- What will we buy and why?
- Threat and/or technical opportunity

Define gap in warfighting

capabilities

Propose solutions (DOTmLPF)

Capabilities-Based **Continuous** (Warfighter Needs Driven)

Programming, Budgeting & Execution (PPBE)

**DEPSECDEF** Oversight **DMAG** 

Planning,

SLRG

Joint Capabilities Integration and **Development System** (JCIDS)

VCJCS/JROC **Oversight** 

Defense Acquisition System (DAS)

Milestone Decision Authority (MDA) **Oversight** DAB

#### **Acquisition Management**

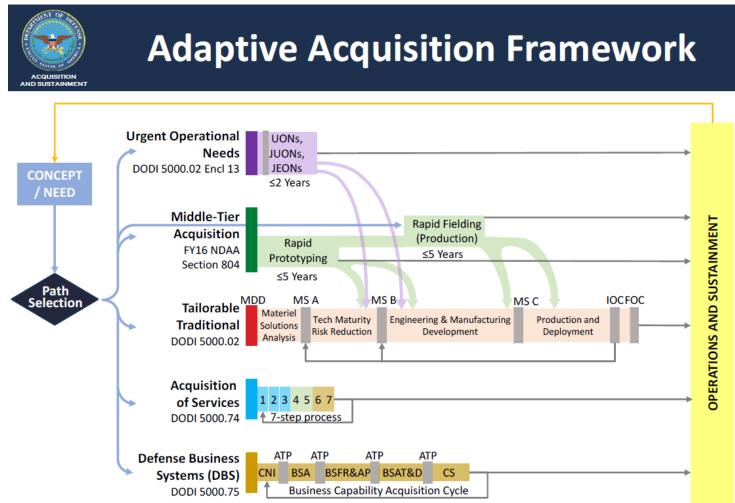
- How will we buy or develop the capability?
- Milestones/Approvals

"Little a" Acquisition **Milestones** 

(Event Driven)



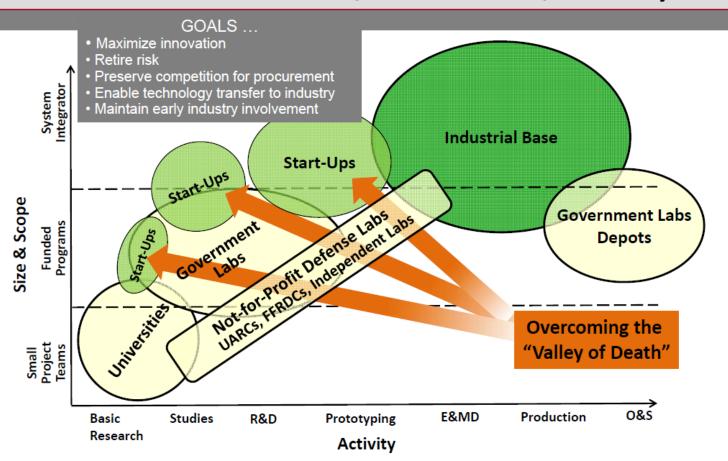




### "Triple Helix"

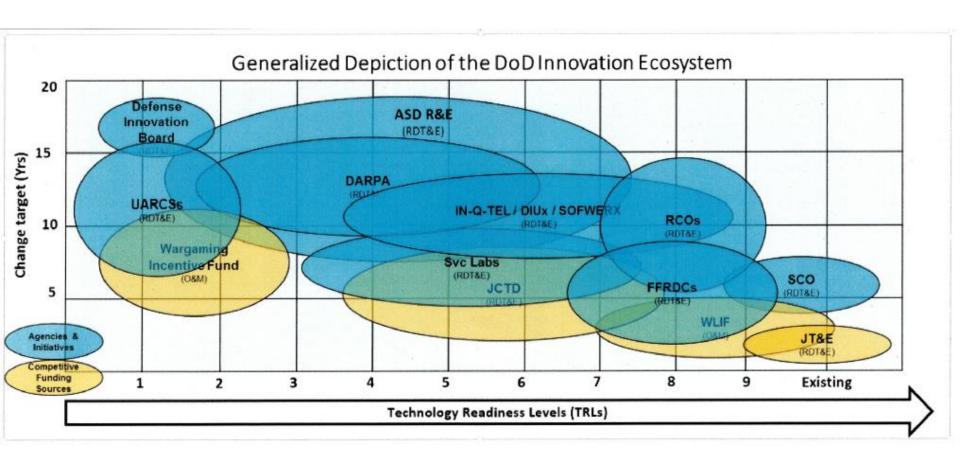


#### **BRIDGING** -- Academia, Government, Industry



## **Defense Innovation Ecosystem**







## Environment: The "Simple Reality"

"Starting with the simple truth that soldiers, policymakers, and politicians all have a right to some say over weapons acquisition, the nation has arrived at a process in which these groups fight for control continuously over the course of a development. And because everyone has partial control over part of the process, no one has control over all of it. Weapons and forces are political outcomes, just like the other policy choices in other areas of government activity."

--Thomas McNaugher, New Weapons, Old Politics

(*NDU Library: UC263.M36*)

## Government Buying Characteristics of the Existing System Include:

- Single buyer who is also regulator and cost setter
- Specialized defense accounting and auditing systems
- Procedures dominate over production
- Equity rules over efficiency
- Constraint rich environment
  - Decisions pushed up the chain
  - Risk adverse management
  - Hard to say "yes", easy to say "no"
- Top executives (political appointees) are short timers
- Personnel motivation is different from agency to agency
- Oversight, oversight (NO ONE can be trusted)
- Never enough resources

# THE FISENHOWER SCHOOL

## Readings

- **Brandt and A'hearn:** "The Sisyphus Paradox Framing the Acquisition Reform Debate"
  - Thesis?
  - The six paradox?
- **Hunter**: "Is the Acquisition Reform Racket About to be Disrupted?"
  - Thesis?
- **Atkinson**: "Understanding the U.S. National Innovation System"
  - Thesis?
  - Three elements? How do they differ from the Triple Helix?
- Griffin: "Promoting DoD's Culture of Innovation"
  - Thesis?



#### **Next Lesson**

- A&I-02: Economics of Mobilization: WWI (S)
  - Read Required Readings A, B, C, & D.
  - Recommended Reading order: Reading A, D, C, B
  - Cyber Domain (Thursday at 08:15)
  - Land Domain (Thursday at 10:00)

