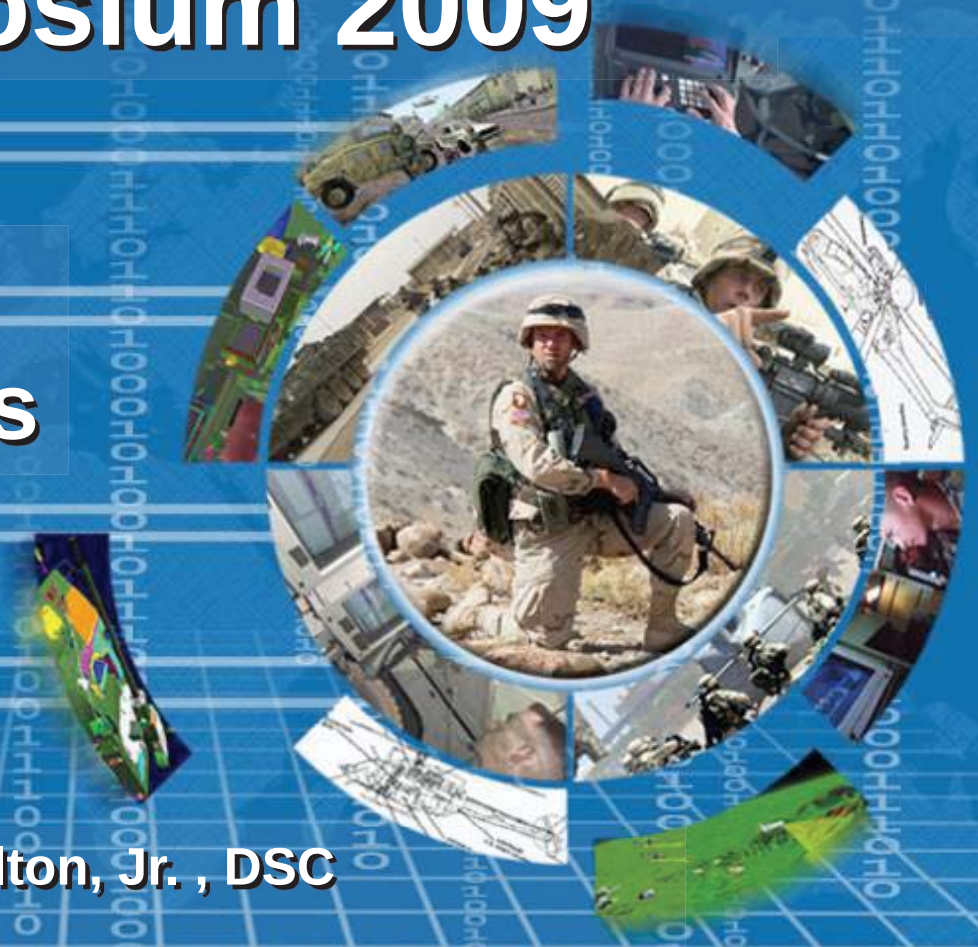
Team Software Process Symposium 2009

Keynote Address



The Honorable Claude M. Bolton, Jr. , DSC
Executive In Residence
Defense Acquisition University
September 23, 2009

Trivia Question

Name the "King" who became President of the United States

(Hint: He was born in Nebraska)

The Answer

“KING”
Gerald R. Ford

Adopted: original name - Leslie King

Trivia Question

When was the last time that Department of Defense spending was 2% of our Nation's Gross Domestic Product?

(Hint: Trick Question)

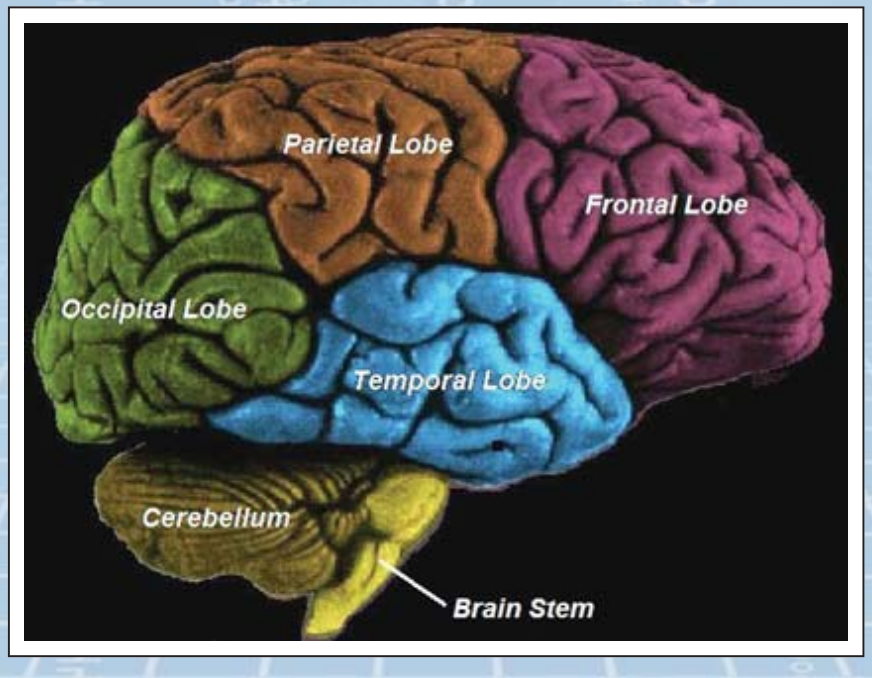
An Amazing Set of Facts

The Human Brain

Computational Power = 10^{16} cycles per second

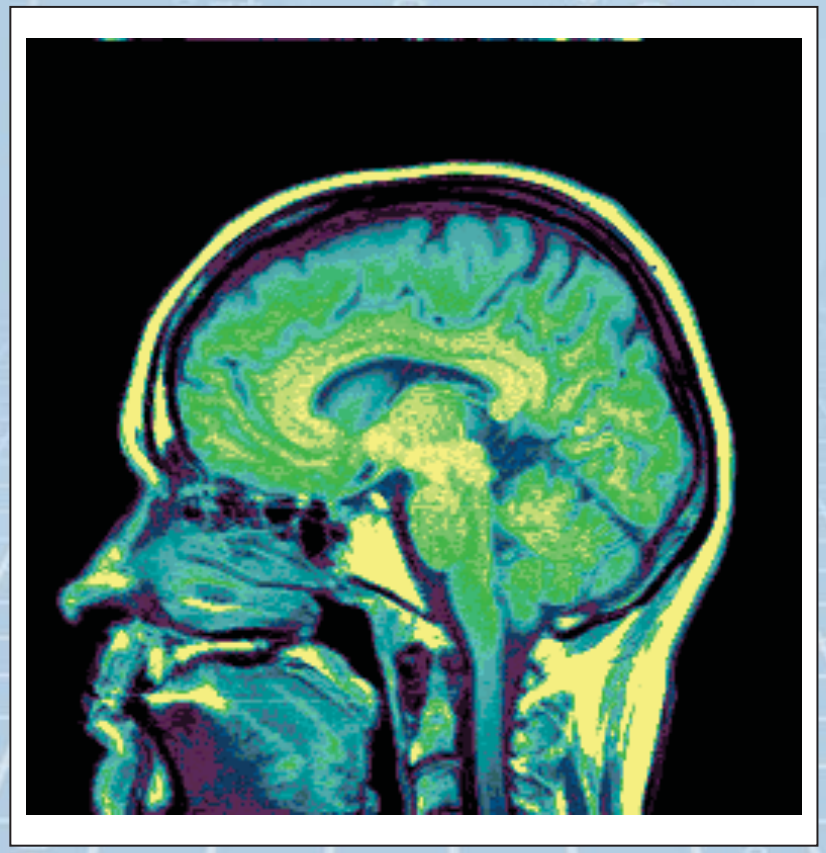
Weight = 4 lbs.

Volume = 0.06 cubic feet



Trivia Question

How Many Watts Of Power Does The Human Brain Consume?



Trivia Answer

15 Watts

Bluegene Is The Most Powerful Supercomputer.

Computational Power = 10^{15} cycles per second

Weight = 100,000 lbs.

Volume = 5000 cubic feet

Power Required = 2,000,000 Watts

(Data provided by Lawrence Livermore National Laboratory)

Software…
A Key Element in Transforming the Force

Software Programs at Defense

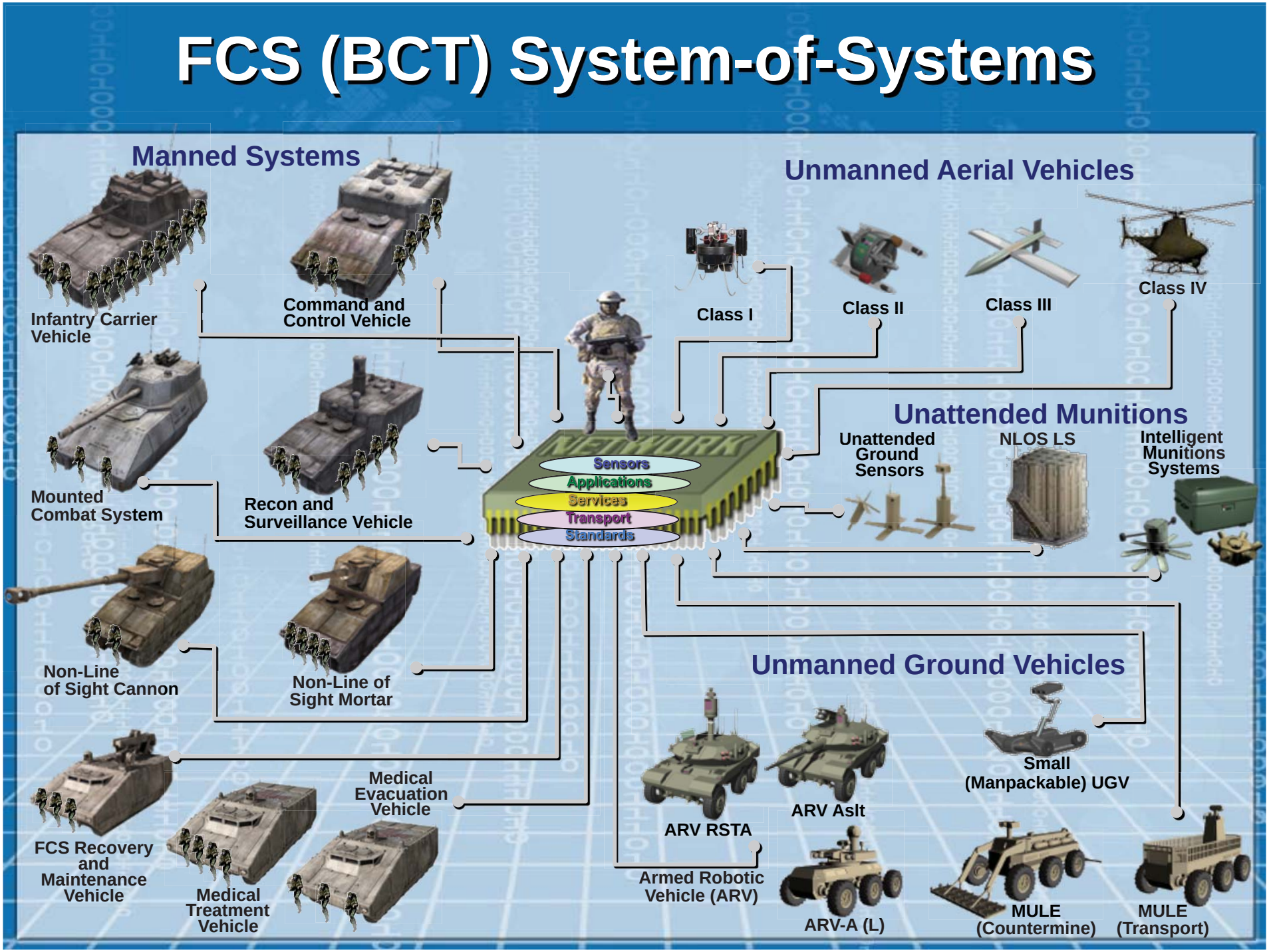
Where Are We?

- **Progress**
  - Great Tools for the Soldier
  - Good Lines of Code
- **Challenges**
  - Tools Becoming Antiquated
  - Difficult to Keep Pace with Technology

Where Do We Go From Here?

How Do We Make Software Development Light-Years Better, Faster and Cheaper With 10% of the People, Time and Money?

FCS (BCT) System-of-Systems



FCS Initial Software Breakdown

Manned Ground Vehicles

2.9

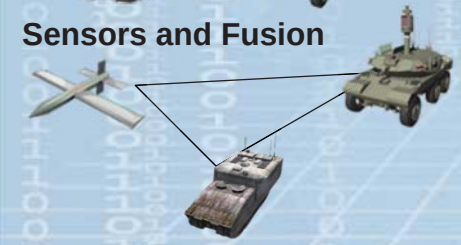
Unmanned Air Platforms

0.6

Unmanned Ground

1.0

Sensors and Fusion



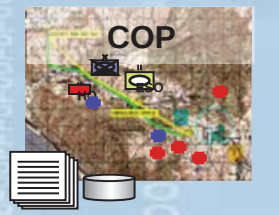
2.9

Autonomous Navigation

0.8

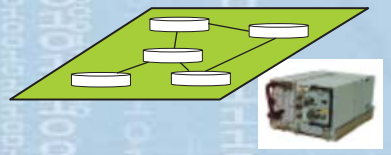
Real Time/Embedded 8.2

Command and Control (includes (WMI)



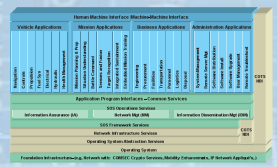
4.5

Communications and Network Management



1.3

SoS COE (DB/OS etc.)



3.4

C2/Infrastructure 9.2

Logistics 1.7

Lab/Test Software 0.4

Simulation/Training 3.0

Test/Simulation/ Logistics 5.1

High Complexity/Low Productivity

Less Complexity/High Productivity

22.5M New and Pre-Existing SLOC

What Does The Future Hold?

How Do We Acquire and Manage a Billion Lines of Code?

Ultra-Large-Scale (ULS) Systems

- **DoD systems of the future will be ULS Systems - "Billion Lines of Code Systems" and more …**
- **Socio-Technical EcoSystems that are a mixture of people and technology in balance**
- **New ways of thinking about such systems are needed**
- **The Army sponsored an SEI led multi-disciplinary team to search for answers beyond traditional engineering disciplines**
  - **The ULS Systems Research Agenda, completed 31 May 06, identified a roadmap for research necessary for meeting the Army's future**

Products May Differ, But . . .

Management 101

is still

Management 101!

What Makes a Successful Program? The "3 Rs"

1. Requirements
2. Resources
3. Right People

Trivia Question

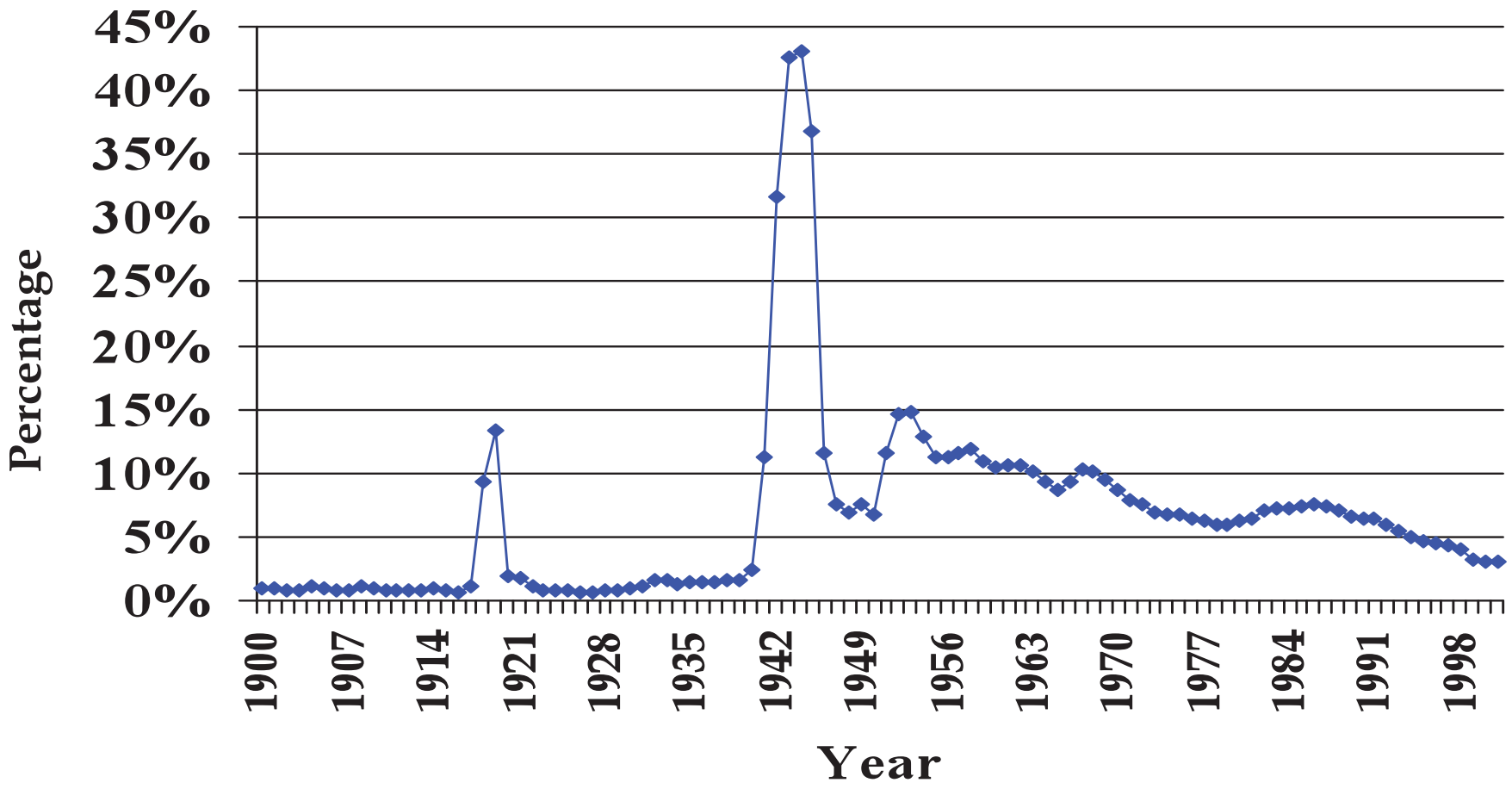
When was the last time that Department of Defense spending was 2% of our Nation's Gross Domestic Product?

The Answer

Never; Previously known as Department of War and Gross National Product.

National Defense As Percentage of GNP/GDP

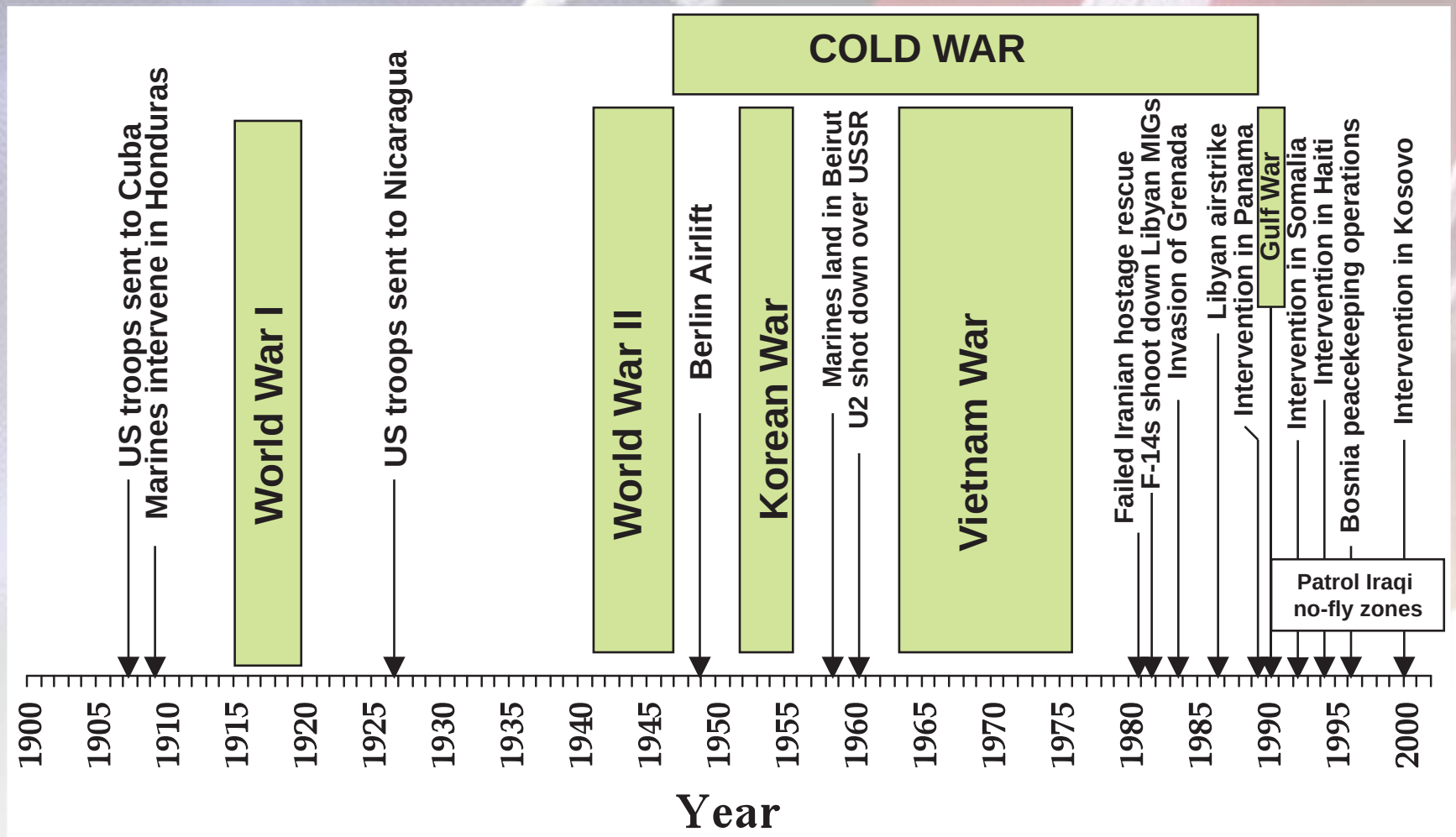
Since 1900



Sources: DOC's BEA *Survey of Current Business*, August 1998
OUSD(C) National Defense Budget Estimates for FY2000 (projections)

Conflicts with U.S. Involvement

Since 1900



Question

How Do We Maintain A World Class Military On 2% GDP With A Hundred Years Of History Against Us?

Solution

We must change the way DoD does business

a.k.a - Acquisition & Logistics Excellence . . . Transformation

DAU Overview Briefing

Learn.

Perform.

Succeed.

'02 '06

'05 '06 '07

#1

Rev. Apr 09

Improving the Acquisition Process

ACQUISITION REFORM

EVOLUTIONARY ACQUISITION

OTA

TOC

"Try Before You Buy"

FASA

TQM

DAWIA

Reengineering

FARA

CAIV

2-Levels of Maintenance

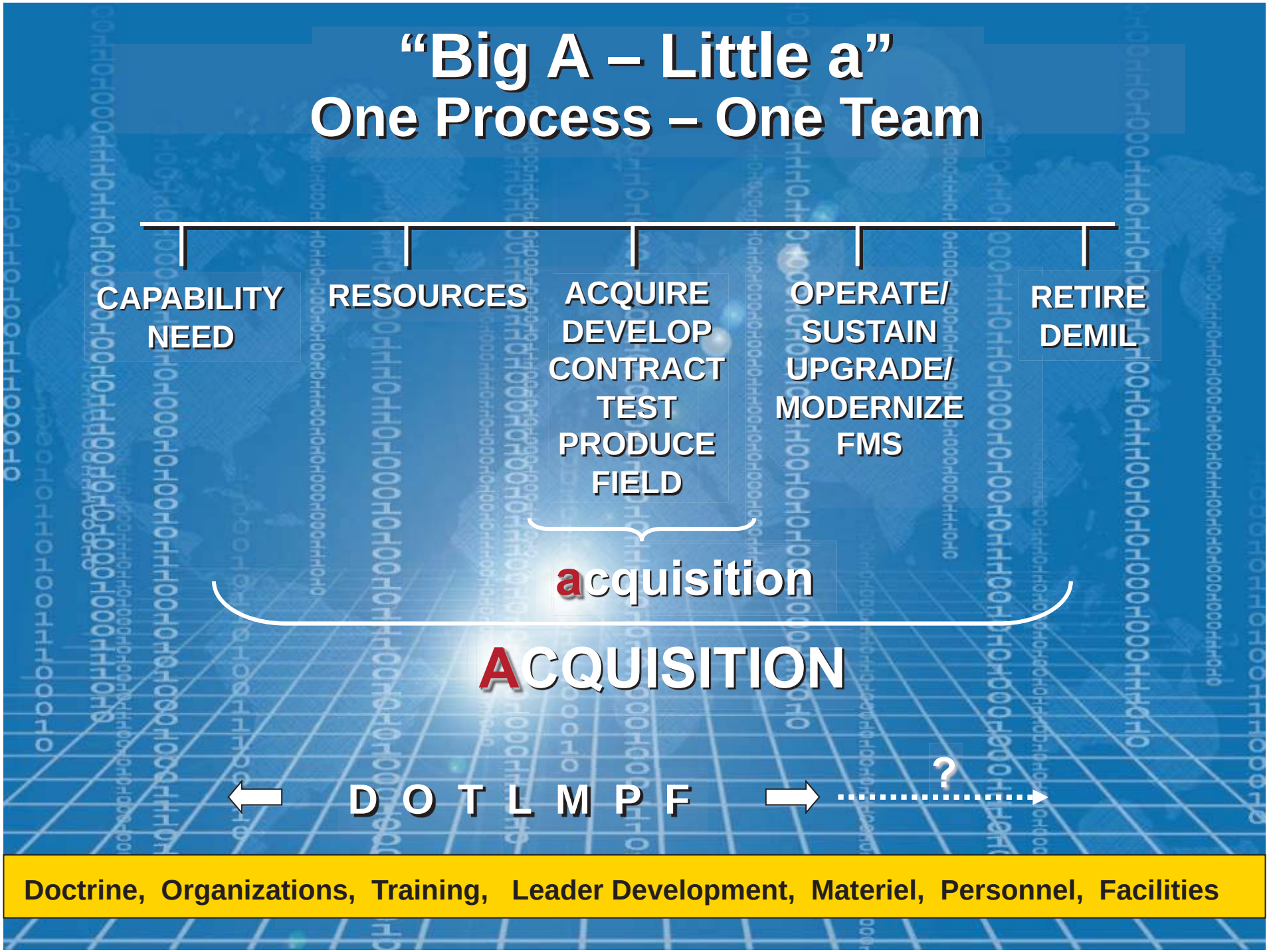
Performance Based Contracting and Logistics

TOCR

ACQUISITION EXCELLENCE

LEAN SIX SIGMA

"Big A – Little a"
One Process – One Team



What Makes a Successful Program? The "3 Rs"

1. Requirements
2. Resources
3. Right People

What Makes a Successful Software Program?

The "3 Questions"

When shown software program metrics, ask:

1. **What does it mean?**
2. **How do you know?**
3. **Show me.**

What Makes a Successful Software Program?

The "3 Questions"

When shown software program metrics, ask:

1. What does it mean?
2. How do you know?
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What Makes a Successful Software Program?

The "3 Questions"

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What Makes a Successful Software Program?

The "3 Questions"

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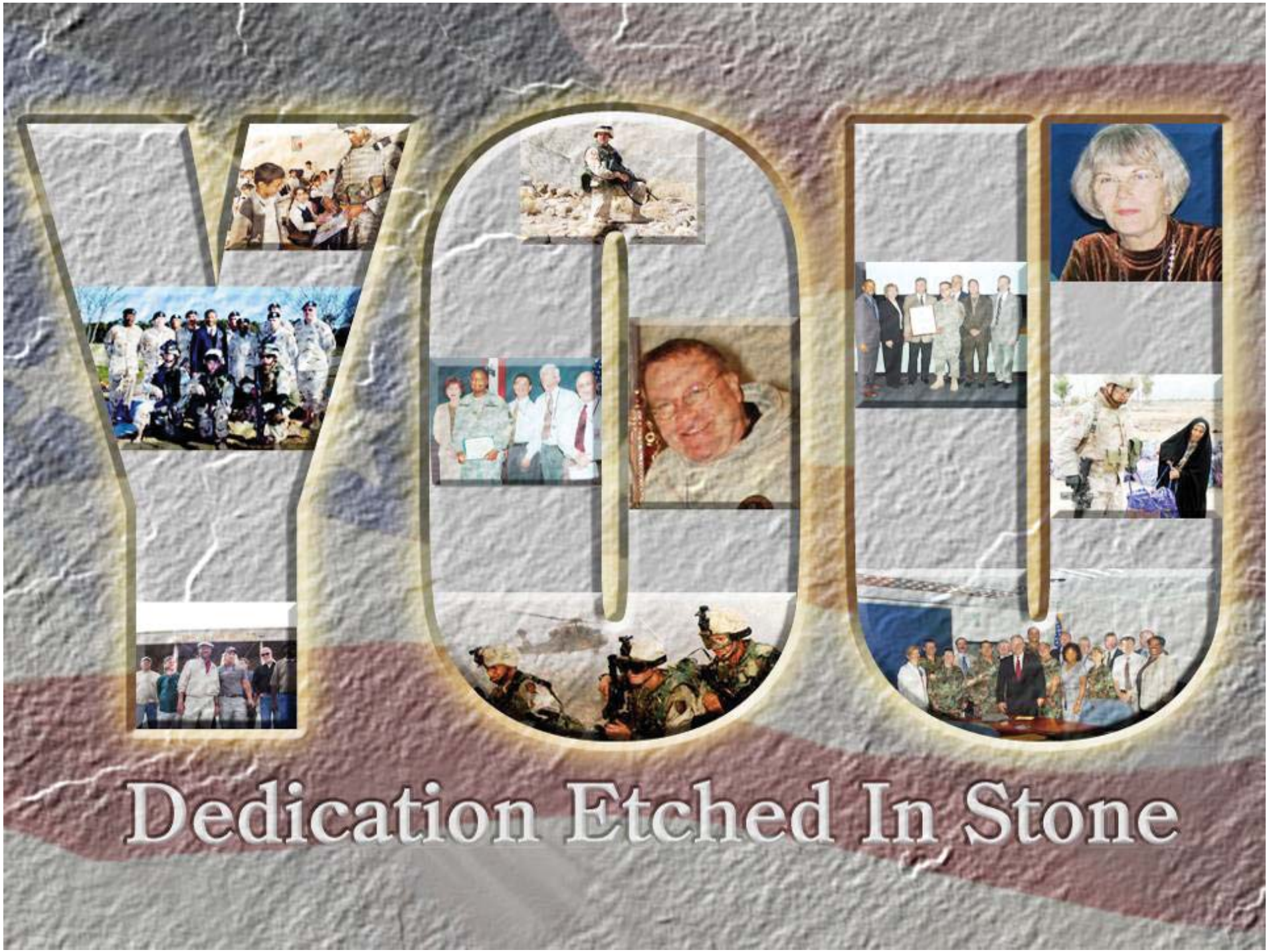

Dedication Etched In Stone

????

www.dau.mil

claude.bolton@dau.mil

Backup

DAU Overview Briefing

Learn.

Perform.

Succeed.

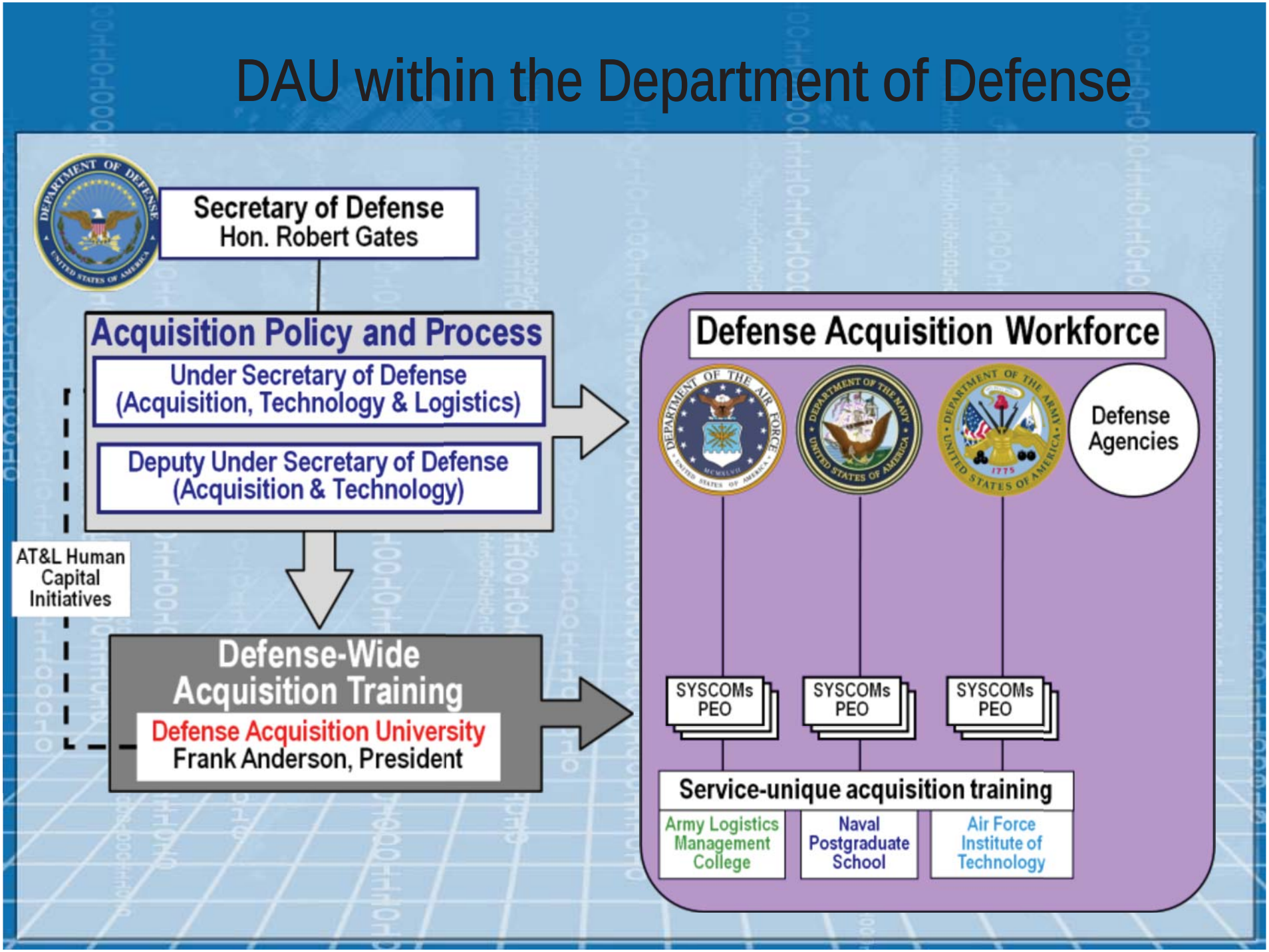
'02 '06

'05 '06 '07

#1

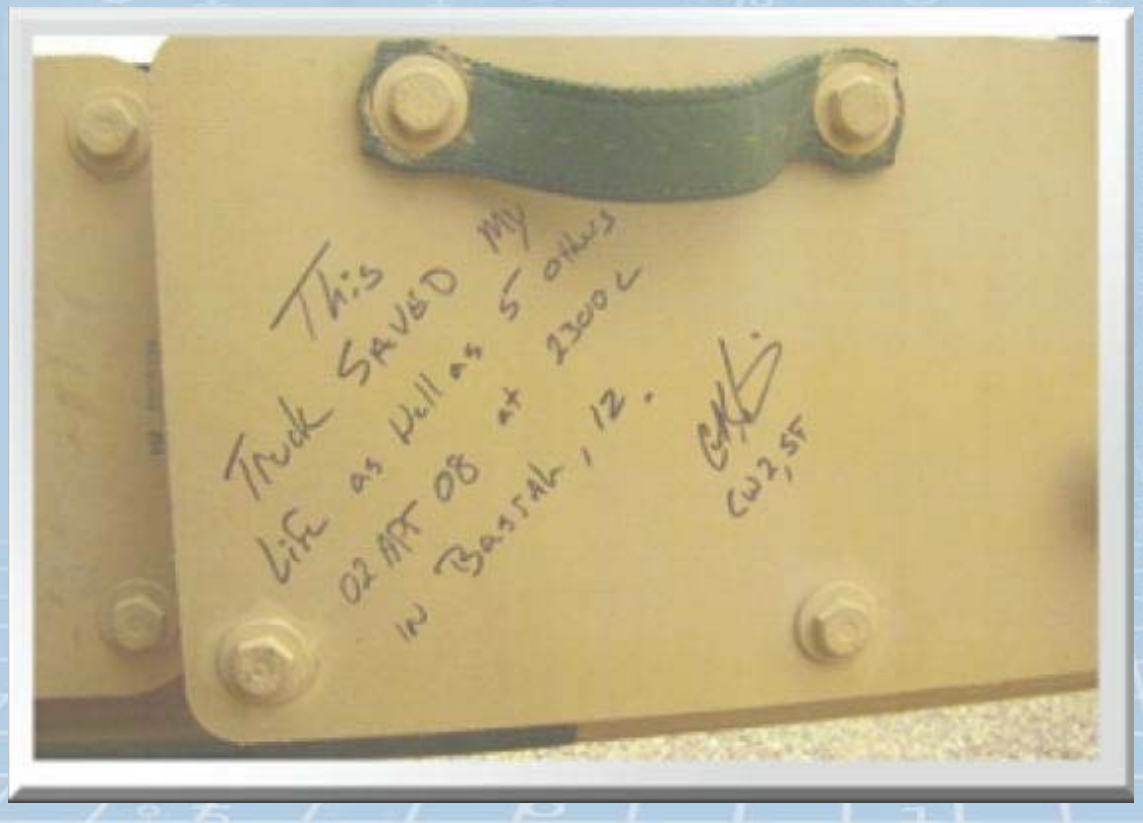
Rev. Apr 09

DAU within the Department of Defense



DAU Mission

Provide practitioner training, career management, & services to enable the AT&L community to make smart business decisions and deliver timely and affordable capabilities to the warfighter.



"This truck saved my life as well as 5 others 2 Apr 08 at 2300L in Basrah (Iraq)"

We Help the Defense Acquisition Workforce: *Learn…Perform…Succeed*

Defense Acquisition Workforce

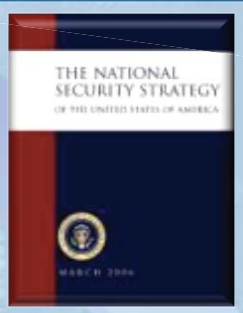
Career Fields	ARMY	NAVY/USMC	AIR FORCE	4th Estate	TOTAL
Auditing	0	0	0	3,638	3,638
Business, Cost Est., & Fin. Mgt	3,350	1,935	1,530	270	7,085
Contracting	7,714	5,245	6,834	5,887	25,680
Facilities Engineering	988	3,902	6	24	4,920
Industrial/Contract Property Mgt	99	62	26	264	451
Information Technology	1,764	903	950	317	3,934
Life Cycle Logistics	7,134	4,355	1,727	145	13,361
Production, Quality & Manufacturing	1,952	2,005	383	4,798	9,138
Program Management	3,690	4,085	4,105	901	12,781
Purchasing	319	545	142	190	1,196
SPRDE - S&T Manager	143	191	43	103	480
SPRDE - Systems Engineering	10,740	16,576	6,429	756	34,501
SPRDE - Program System Engineer	29	0	0	7	36
Test and Evaluation	2,135	2,476	2,622	187	7,420
Other / Unknown	212	768	30	230	1,258
Total	40,269	43,066	24,827	17,717	125,879

As of 30 Sep 08

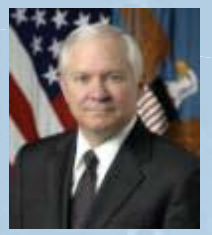
Align with Senior Leadership

Barack Obama
President

Improve the capacity & ability of the Federal acquisition workforce



Transform National Security Institutions



Robert Gates
SECDEF

William Lynn
DEPSECDEF

"Training is an essential to workforce development."

- Improve Total Force
- Right Technology
- Agile & timely procurement

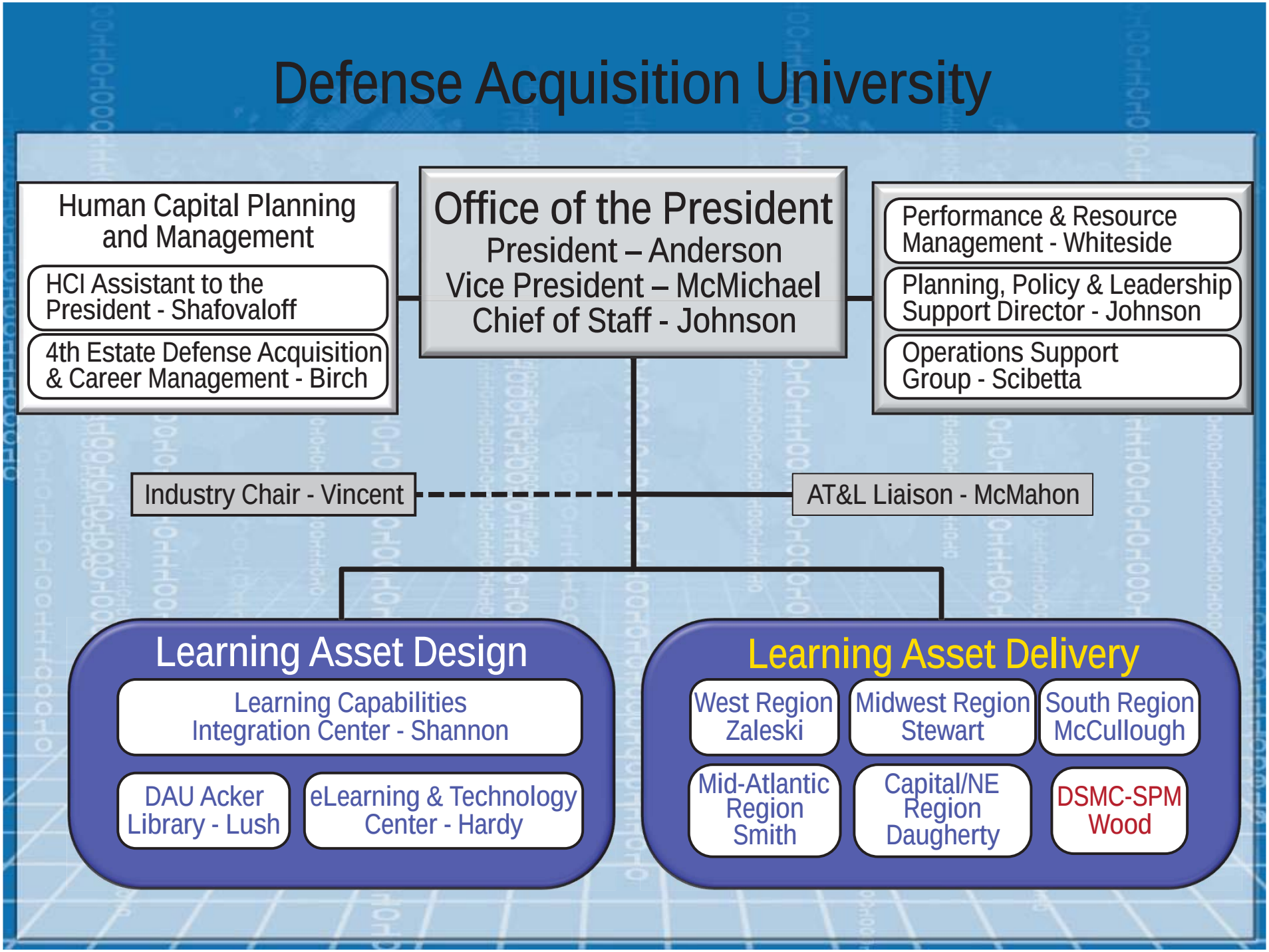
- "Big A" Acquisition
- Governance
- Risk-based Source Selection
- Time Certain Acquisition
- Human Capital Strategy

Hon. John J. Young, Jr.
USD(AT&L)

- Strategic Thrust 3: Take care of our people
- Organization Goal 1: High Performing, Agile and Ethical Workforce

Frank Anderson
President, DAU

Defense Acquisition University



Located with our Customers

Region	Location	Workforce
Capital/Northeast	Fort Belvoir, VA	31,043
Mid-Atlantic	California, MD	22,332
Midwest	Kettering, OH	18,008
South	Huntsville, AL	27,252
West	San Diego, CA	24,415

We are part of the community, not just a place to take classes.

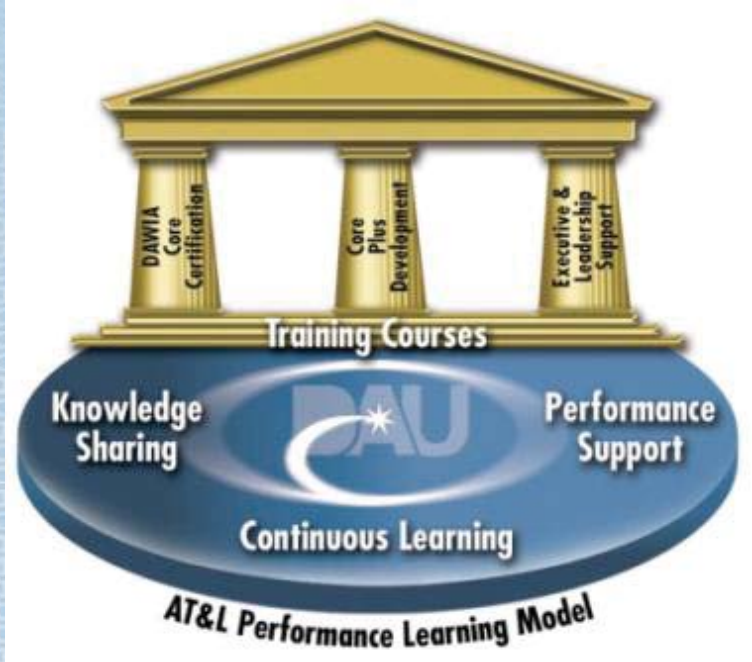
AT&L Performance Learning Model

Knowledge Sharing

AKSS - Online access to acquisition regulations & tools

ACC - Online collaborative communities

Virtual Library - Online Connection to DAU research collection



Training Courses

Classroom & online DAWIA Core, Core Plus, & Executive

Continuous Learning

CL Modules - Online, self-paced modules learning modules

Conferences - PEO / SYSCOM, Business Managers, DAU Acquisition Community Symposium

Performance Support

Consulting - Helping organizations solve complex acquisition problems

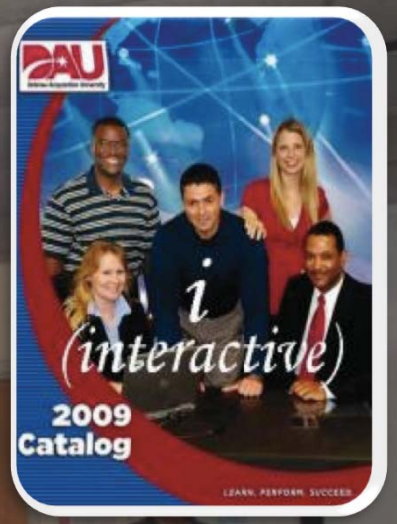
Targeted Training - Tailored organizational training

Rapid Deployment Training - On-site and online training on the latest AT&L policies

24/7 Learning Assets for the Classroom and the Workplace

DAU Formal Training Courses

99 Courses	
89 DAWIA & Core Plus Courses	
	23 Level I
	54 Level II
	12 Level III
10 Executive & Leadership Support	



Functional Area	BCEFM	CON	FE	IT	LOG	PM	PQM	Property	SPRDE	T&E
# of Courses	16	23	1	6	10	13	8	3	6	3

Validation of DAU Learning Assets

Council on Occupational Education

Six year re-affirmation of Accreditation Unprecedented three commendations

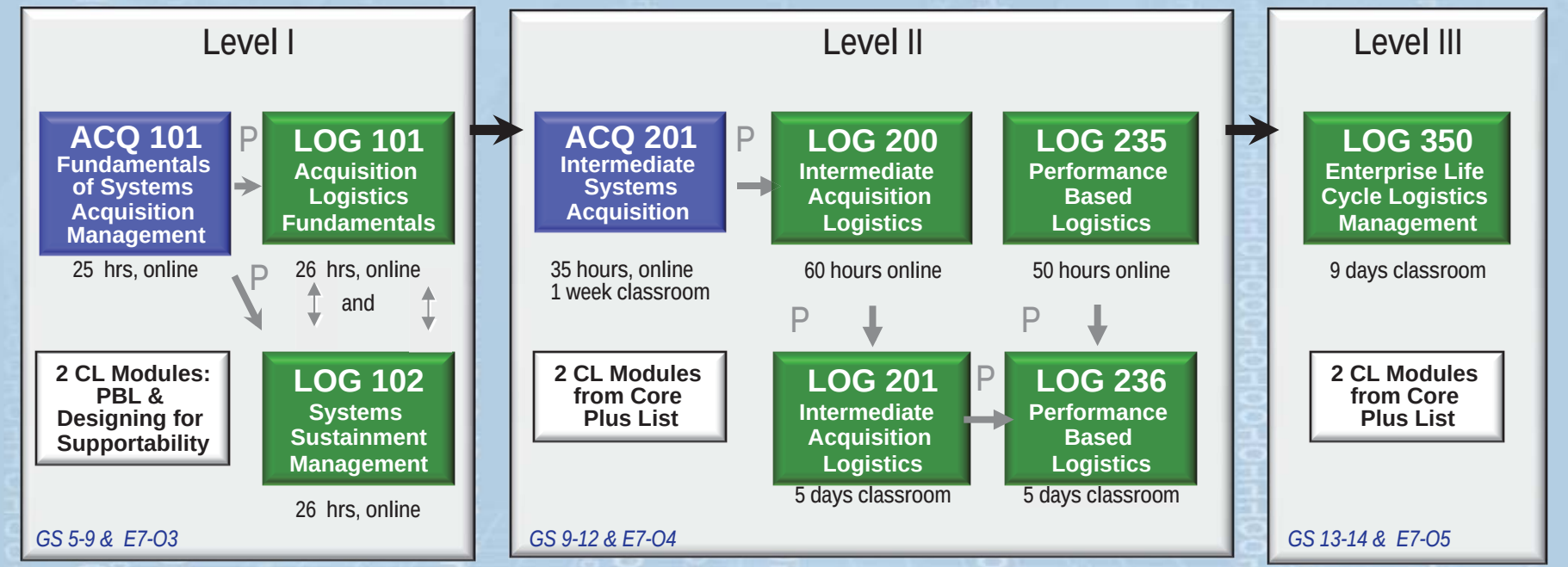
American Council on Education

College Credit Recommendations for Training Courses

International Association for Continuing Education and Training

Continuing Education Units (CEU) awarded for Training Courses

FY09 Life Cycle Logistics Certification Training



Level I "Core Plus" Courses & CL Modules
(See DAU catalog for details)

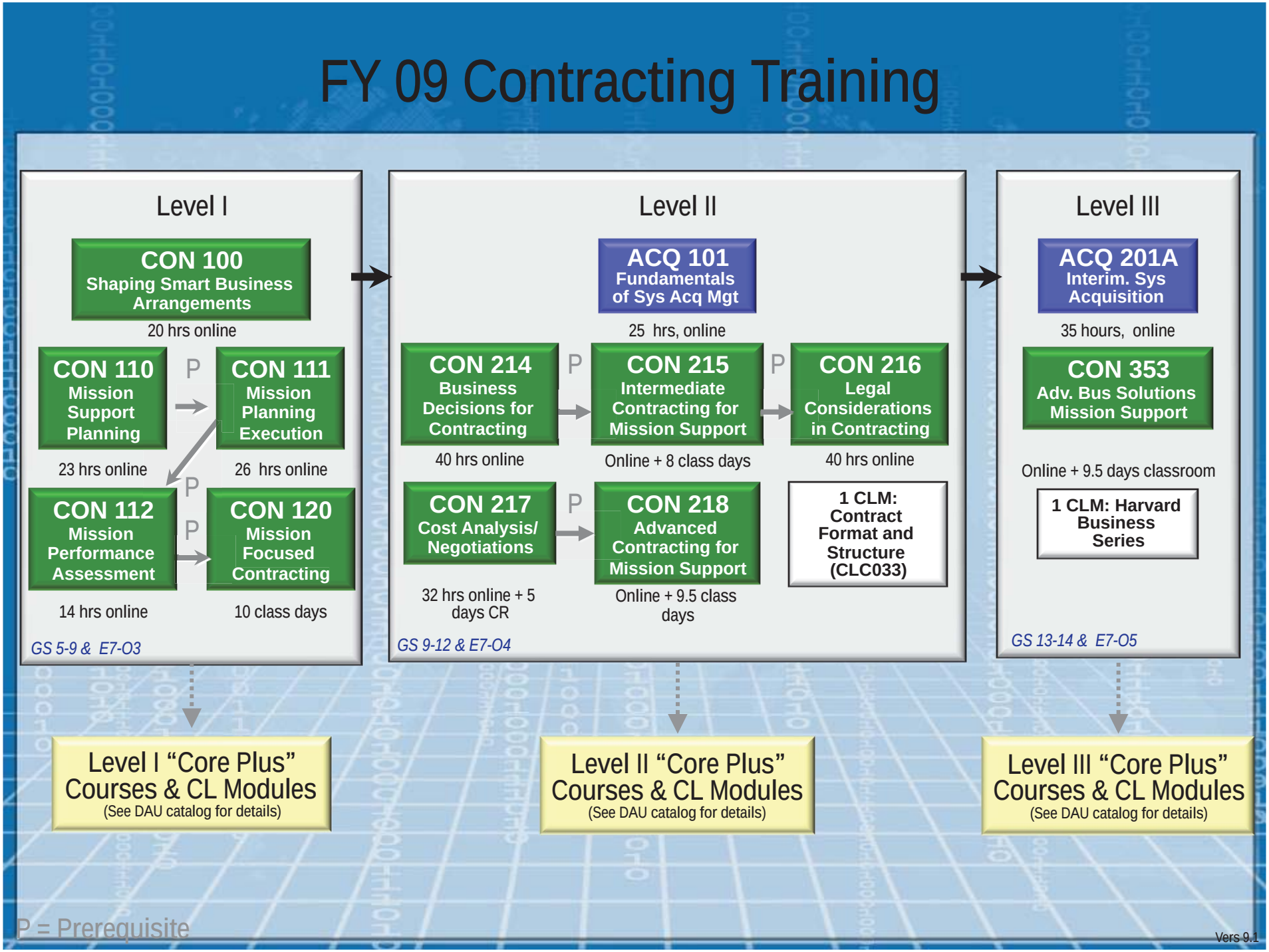
Level II "Core Plus" Courses & CL Modules
(See DAU catalog for details)

Level III "Core Plus" Courses & CL Modules
(See DAU catalog for details)

P = Prerequisite

Vers 9.1

FY 09 Contracting Training



FY 09 Program Management Training

Level I

ACQ 101
Fundamentals of Systems Acquisition Management

25 hrs, online

SYS 101
Fundamentals of Systems Planning, Research, Development, & Engineering

35 hrs, online

CLB 007
CLB 016

GS 5 – 9 & O1 - O3

Level II

ACQ 201
Intermediate Systems Acquisition Course

36 hours online +
1 week classroom

PMT 250
Program Management Tools Course

56 hours online +
4-day online collaborative phase

CON 110
Mission Support Planning

23 hrs online

SAM 101
Basic Software Acquisition Management

GS 9 – 13 & O3 - O4

Level III

PMT 352
Program Management Office Course

50 hours online +
5 weeks classroom

SYS 202
Intermediate Systems Planning, Research, Development, & Engineering

GS 13 – 14 & O4 - O5

PMT-401 and PMT-402 meet statutory requirement for PEO/ACAT I/II PM & Deputy PM (10 USC 1735)

PMT 401
Program Manager's Course

10 weeks classroom

- Potential ACAT I, IA, II, & III PMs, Dpty PMs & other senior acq mgrs

PMT 402
Executive PM Course

4 weeks classroom

- PEOs & ACAT I, IA, II PMs & Deputy PMs

Level I "Core Plus" Courses & CL Modules
(See DAU catalog)

Level II "Core Plus" Courses & CL Modules
(See DAU catalog)

Level III "Core Plus" Courses & CL Modules
(See DAU catalog)

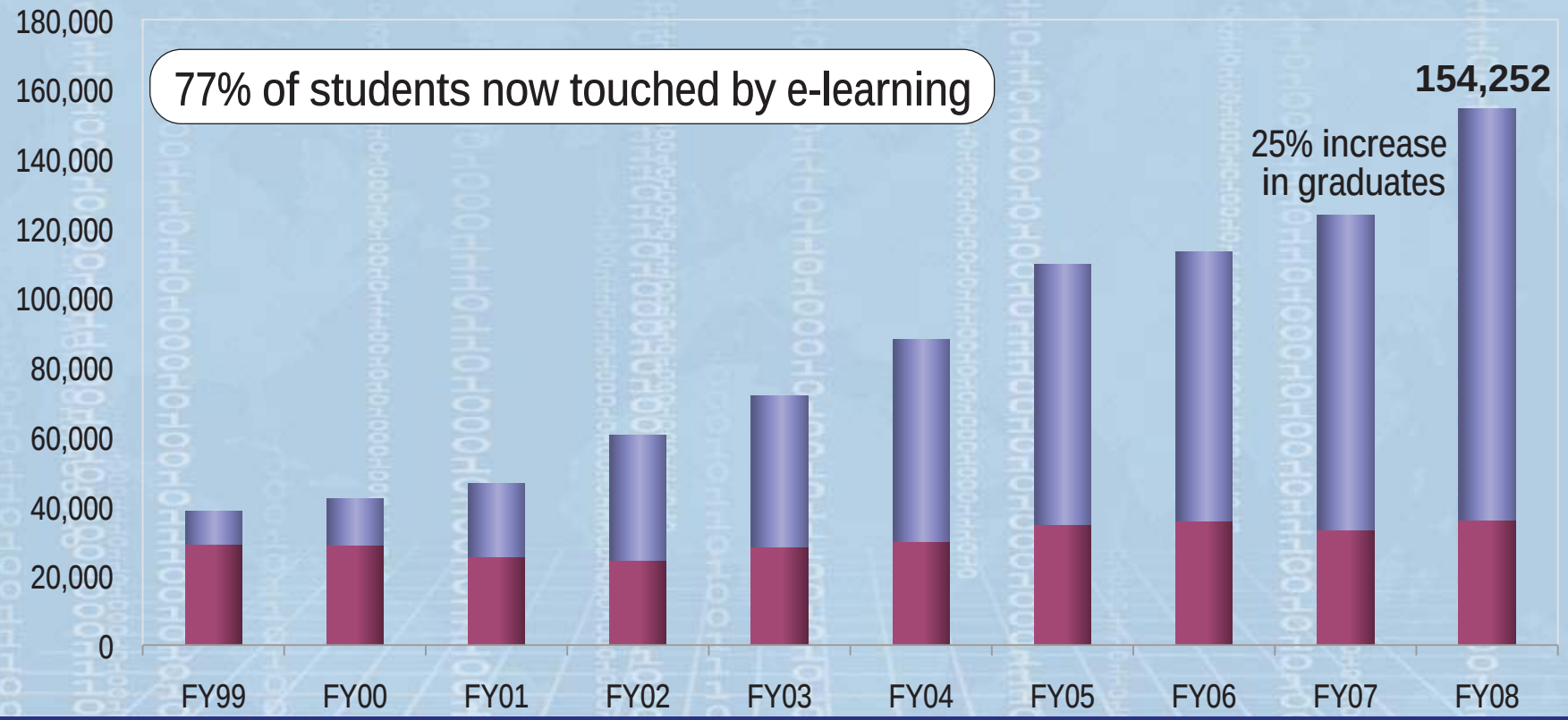
"Core Plus"

PMT 403
Program Manager's Skills Course

Highly Recommended for ACAT III PM & Deputy PM

Vers 9.1

Training Courses: Reaching the Workforce



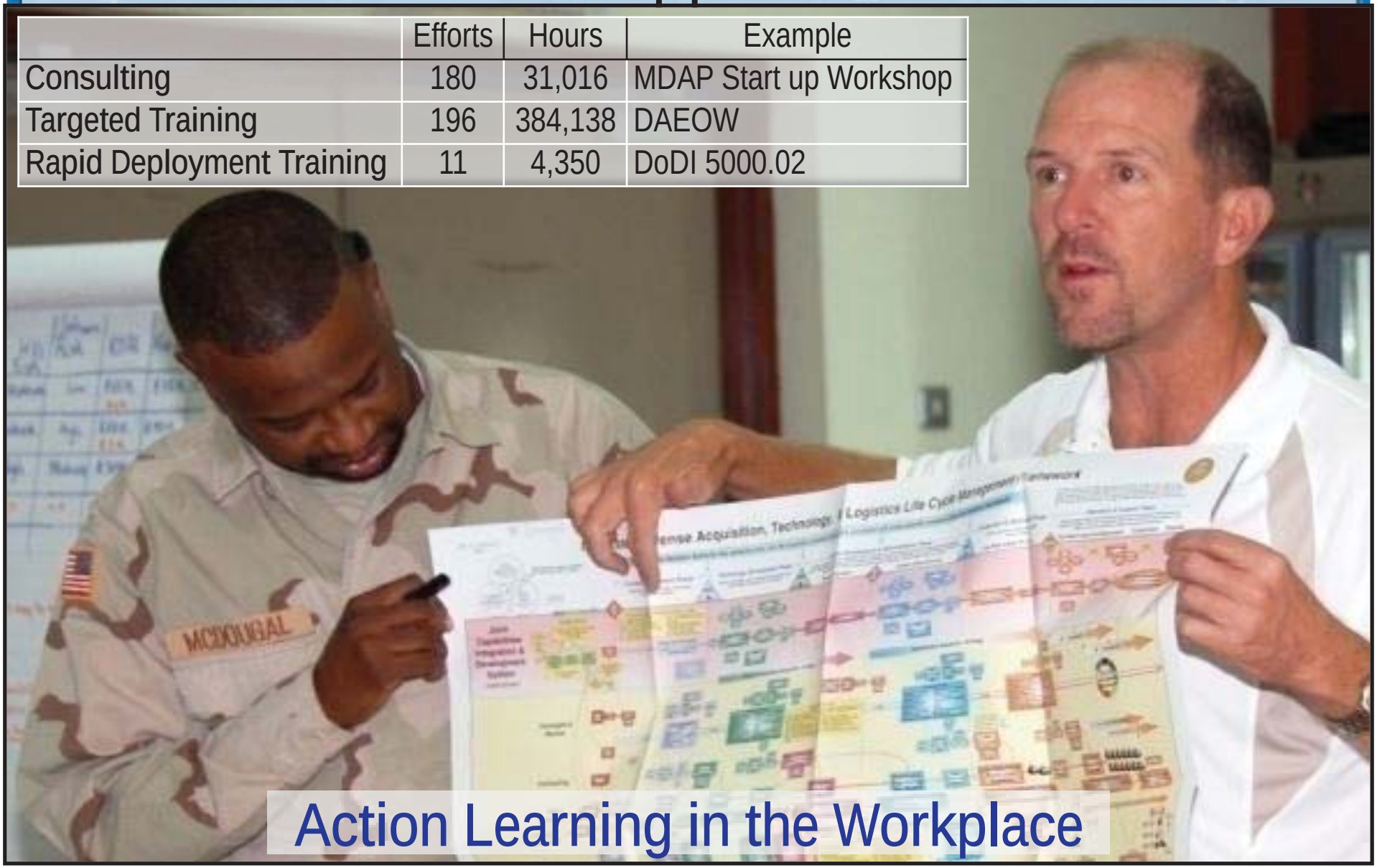
Over 850,000 grads since FY99

	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Classroom	29,031	28,859	25,489	24,368	28,192	29,684	34,587	35,697	33,191	35,861
Web	9,589	13,380	21,031	36,117	43,649	58,290	75,079	77,582	90,600	118,391
Total	38,620	42,239	46,520	60,485	71,841	87,974	109,666	113,279	123,791	154,252

As of 30 Sep 08

FY08 Performance Support

	Efforts	Hours	Example
Consulting	180	31,016	MDAP Start up Workshop
Targeted Training	196	384,138	DAEOW
Rapid Deployment Training	11	4,350	DoDI 5000.02

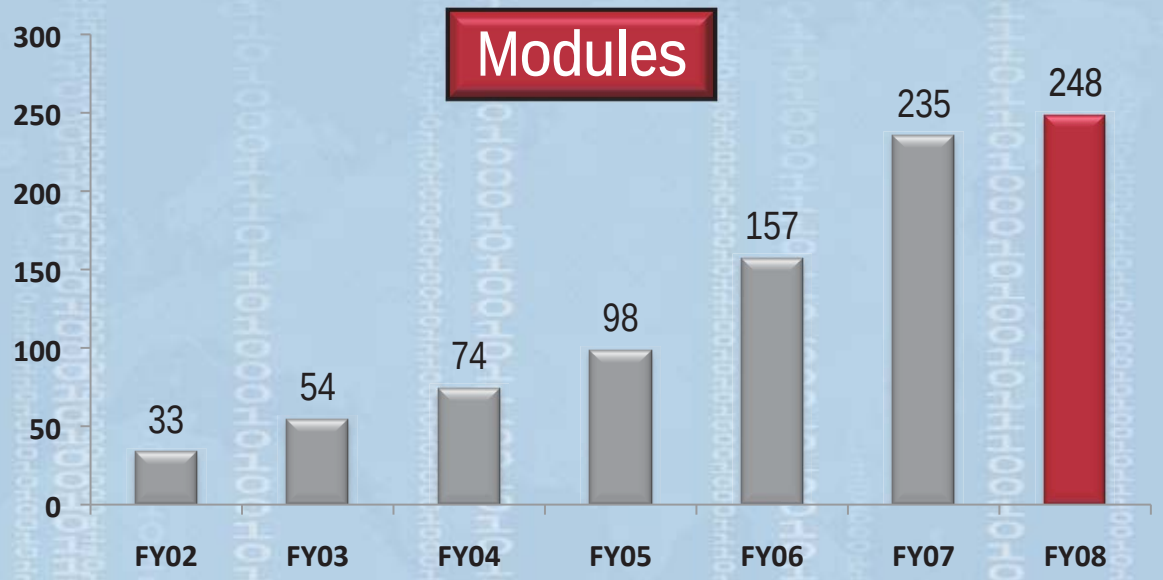


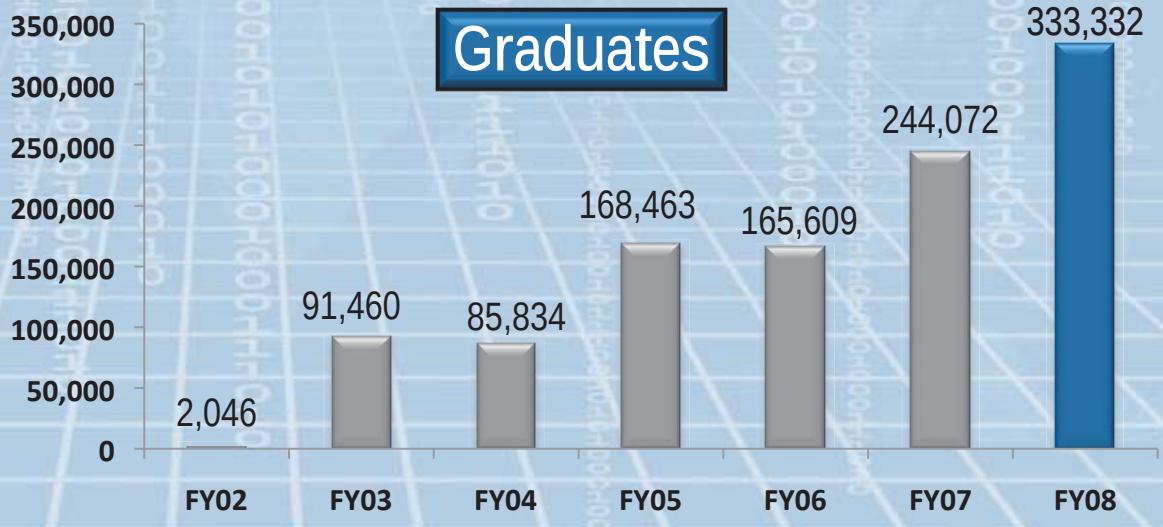
Action Learning in the Workplace

Continuous Learning Center Growth

Module Type	Count
Business	14
Contracting	57
Engineering & Technology	28
Government Purchase Card	3
International	6
Logistics	25
Acquisition Management & Program Management	30
Standard Procurement System	2
Harvard Business Modules	83

Browse for content or enroll to earn CLPs





As of 30 Sep 08

Acquisition Skills & Knowledge Sustainment

Acquisition Knowledge Management System

AT&L Knowledge Sharing System

Your one stop source for AT&L information

- Searchable regulations & policies
- Ask-a-Professor
- Online workplace support tools
  - –Integrated Framework Chart
  - –Defense Acquisition Guidebook (DAG)

AKSS Statistics	FY08
Weekly AKSS Avg Visits	23,915
Contact Hours	429,351
Page Views	74M
DAG Visits	708,862

Acquisition Community Connection

Where the DoD AT&L Workforce Meets to Share Knowledge

- Functional Communities of Practice
- Special Interest Areas
- Collaborative environment connecting field practitioners and policy experts

ACC Statistics	FY08
Registered Users	53,942
Contact Hours	248,645
Knowledge Contributions	57,095
Page Views	36.7M

Applied Research Program

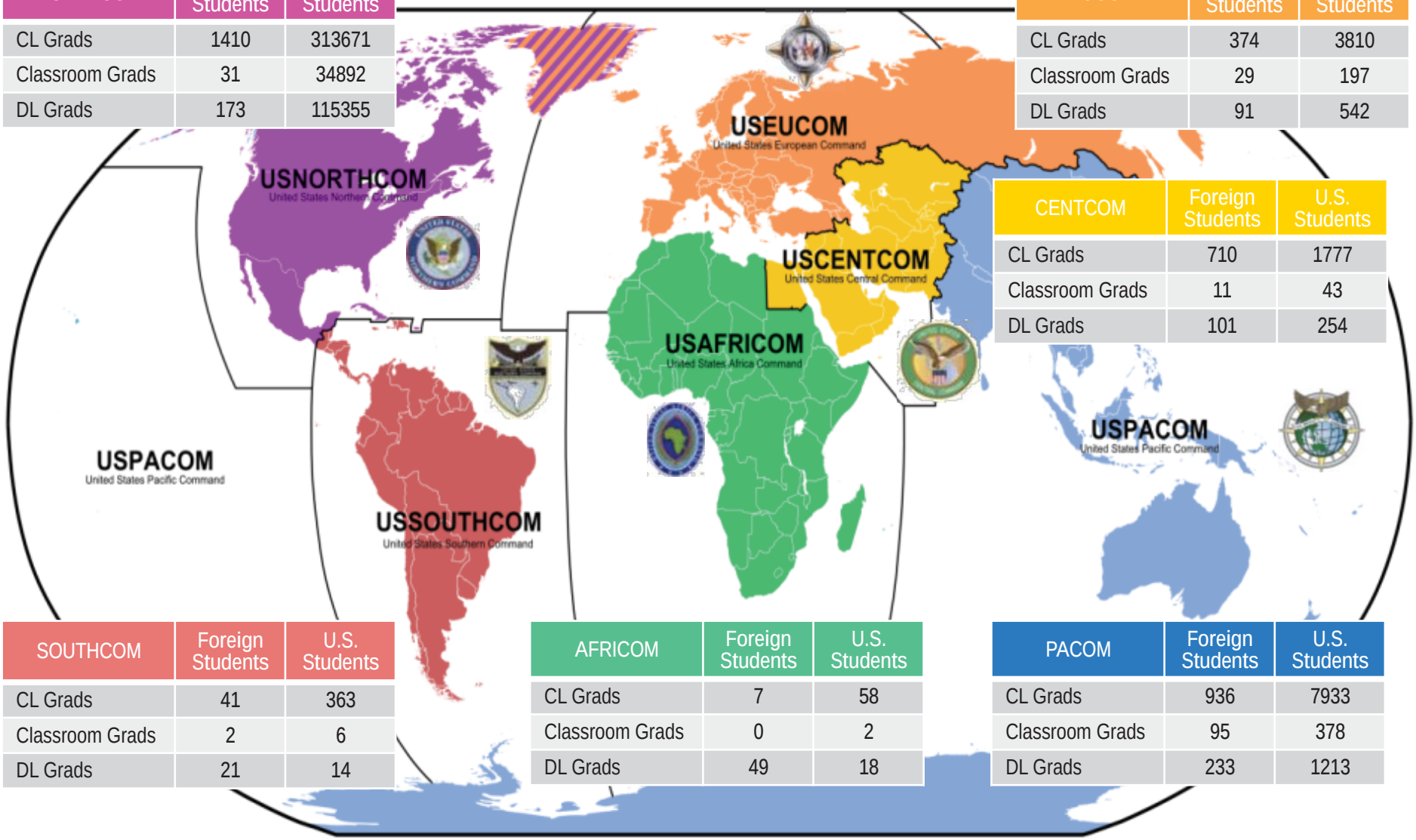
http://www.dau.mil/pubs/arqtoc.asp

- Research is an underpinning of the Performance Learning Model -- used to develop knowledge assets
  - –Curricula
  - –Guidebooks
  - –Performance Support
  - –Communities of Practice
- Policy research to support AT&L priorities & initiatives
- *Defense Acquisition Review Journal*
  - –Captures acquisition research, lessons learned/best practices, tutorials, expert opinion
  - –Each issue is theme based. Examples:
    - "LEAN"
    - Performance Based Acquisition
    - Communities of Practice
    - System of Systems Acquisition

Global Reach to Support Combatant Commands

NORTHCOM	Foreign Students	U.S. Students
CL Grads	1410	313671
Classroom Grads	31	34892
DL Grads	173	115355

EUCOM	Foreign Students	U.S. Students
CL Grads	374	3810
Classroom Grads	29	197
DL Grads	91	542



CENTCOM	Foreign Students	U.S. Students
CL Grads	710	1777
Classroom Grads	11	43
DL Grads	101	254

SOUTHCOM	Foreign Students	U.S. Students
CL Grads	41	363
Classroom Grads	2	6
DL Grads	21	14

AFRICOM	Foreign Students	U.S. Students
CL Grads	7	58
Classroom Grads	0	2
DL Grads	49	18

PACOM	Foreign Students	U.S. Students
CL Grads	936	7933
Classroom Grads	95	378
DL Grads	233	1213

DAU Strategic Partnerships

Over 130 colleges & Universities offer credit for DAU courses toward degrees / certificates

"Excelerate" Your Master's Degree…

Through this program, partner universities are offering the AT&L workforce credit toward masters degrees for DAWIA Level II and III certification.

Grantham University

UMT

Webster University

Bellevue University

Villanova University

http://www.dau.mil/about-dau/partnerships.aspx

Impact: Saves time, tuition assistance dollars and out of pocket expenses

Learning assets at www.dau.mil

DAU Training & CL Courses

http://icatalog.dau.mil/onlinecatalog/courses.aspx

Performance Support

http://www.dau.mil/performance_support/default.asp

Acquisition Best Practices Clearinghouse

https://bpch.dau.mil/Pages/default.aspx

AT&L Knowledge Sharing System (AKSS)

https://akss.dau.mil/default.aspx

Acquisition Community Connection

https://acc.dau.mil/CommunityBrowser.aspx

DAU Acker Library

http://www.dau.mil/Library/

A nationally recognized training leader…

CUBIC '02 '06

#1 THE TOP 10 '05 '06 '07

CHIEF LEARNING OFFICER Learning In Practice Awards

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