

Consequences of BBP's Affordability Initiative



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Acquisition Research
Symposium
Monterey, CA



Agenda

What is Affordability?

What has Affordability accomplished?

What are the challenges going forward?

What is Affordability?

In 2009, Defense acquisition seemed to be wasting a lot of resources



Better Buying Power: Guidance for Obtaining Greater Efficiency and Productivity in Defense Spending



14 September 2010

“DO MORE WITHOUT MORE...”

“Target Affordability and Control Cost Growth” was the leading area discussed in BBP 1.0

Mandate affordability as a requirement.

Drive productivity growth through Will Cost / Should Cost management.

Eliminate redundancy within warfighter portfolios.

Make production rates economical and hold them stable.

Set shorter program timelines and manage to them.

Definitions

Affordability Goal – not binding

Affordability Cap – binding post-MS B

Affordability Constraint – either one

Implementation Directive for BBP 2.0 – Achieving Greater Efficiency and Productivity in Defense Spending



24 April 2013

“We are continuing our efforts to achieve greater efficiency and productivity in defense spending.”

“If affordability caps are breached, costs must be reduced or else program cancelation can be expected.”

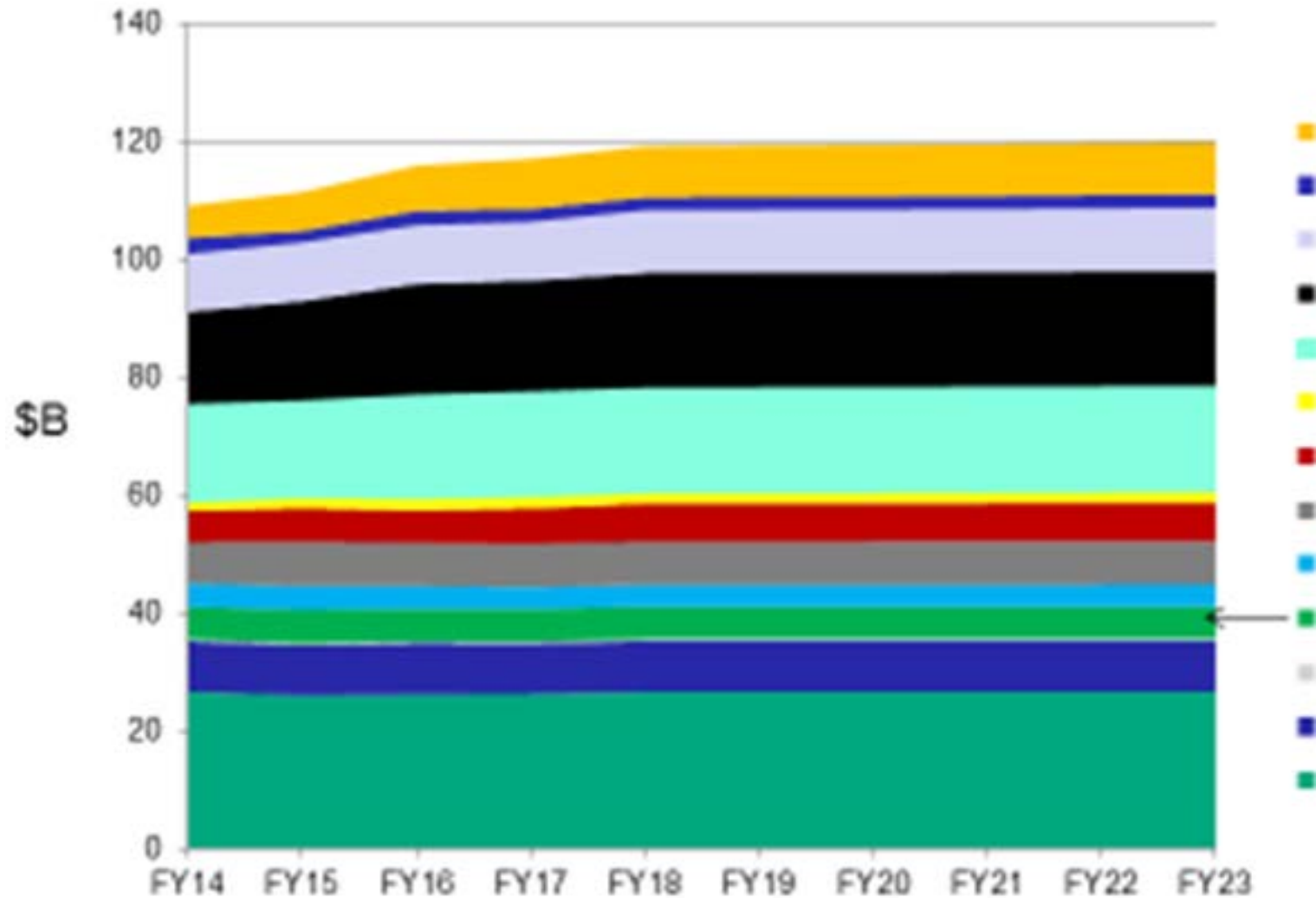
-BBP 2.0

“Constraints stem from long-term affordability planning and analysis, which is a Component leadership responsibility.”

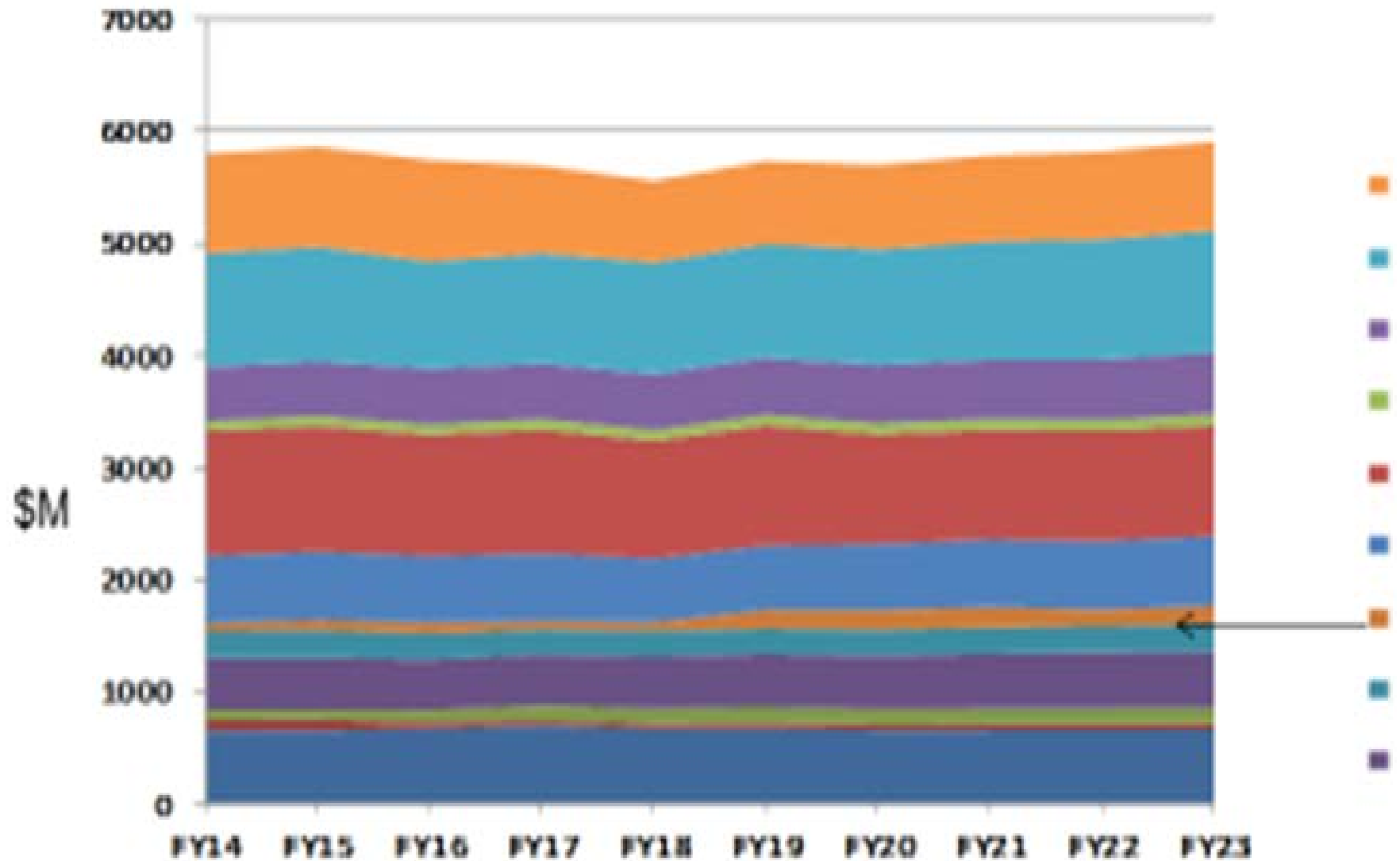
-BBP 2.0

Presentation of Affordability Analysis became standardized after BBP 2.0

A Sample Service's Total Obligational Authority (TOA)



Relevant Portfolio





ACQUISITION,
TECHNOLOGY,
AND LOGISTICS

UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

APR 09 2015

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
DEPUTY CHIEF MANAGEMENT OFFICER
DEPARTMENT OF DEFENSE CHIEF INFORMATION OFFICER
DIRECTORS OF THE DEFENSE AGENCIES
AT&L DIRECT REPORTS

Implementation Directive for Better Buying Power 3.0 – Achieving Dominant Capabilities through Technical Excellence and Innovation

what we called Better Buying Power. Today I am issuing the attached implementing instructions for Better Buying Power 3.0. This iteration of Better Buying Power is the next step in our continuing effort to increase the productivity, efficiency, and effectiveness of the Department of Defense's many acquisition, technology, and logistics efforts.

There is more continuity than change in Better Buying Power 3.0. Core initiatives focus on: ensuring that the programs we pursue are affordable, mandating that our managers identify and pursue "should cost" savings opportunities, providing effective incentives to industry,

What has affordability accomplished?

Constraints are not changed often

42 of 105 active programs have constraints

13 have had 2 constraints

4 have had 3 constraints

4 caps (as opposed to goals) have changed

The Ground Combat Vehicle



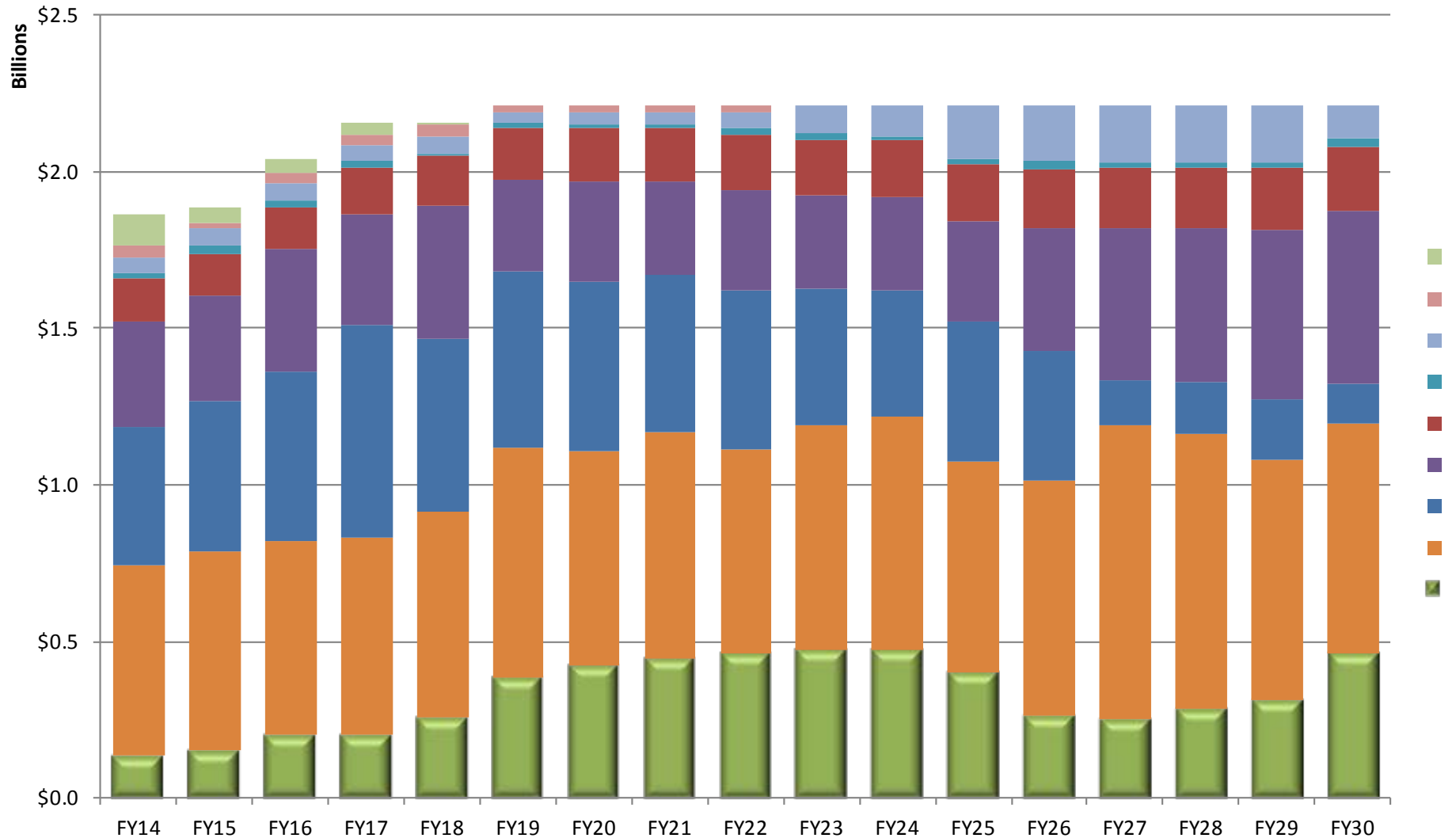
The Navy N2/ N6 told IDA that Affordability Analysis saved them a lot of money



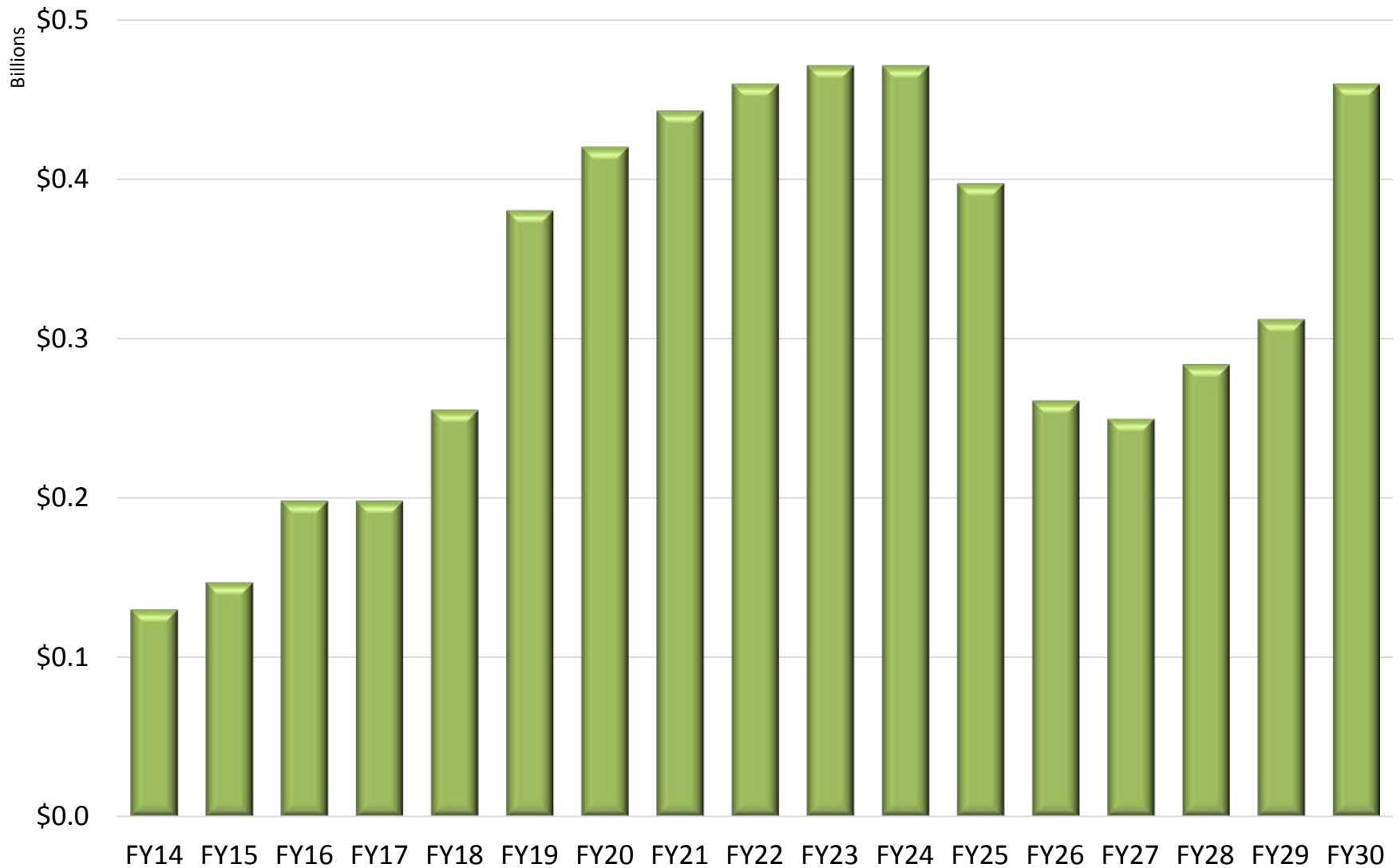


What are the challenges going forward?

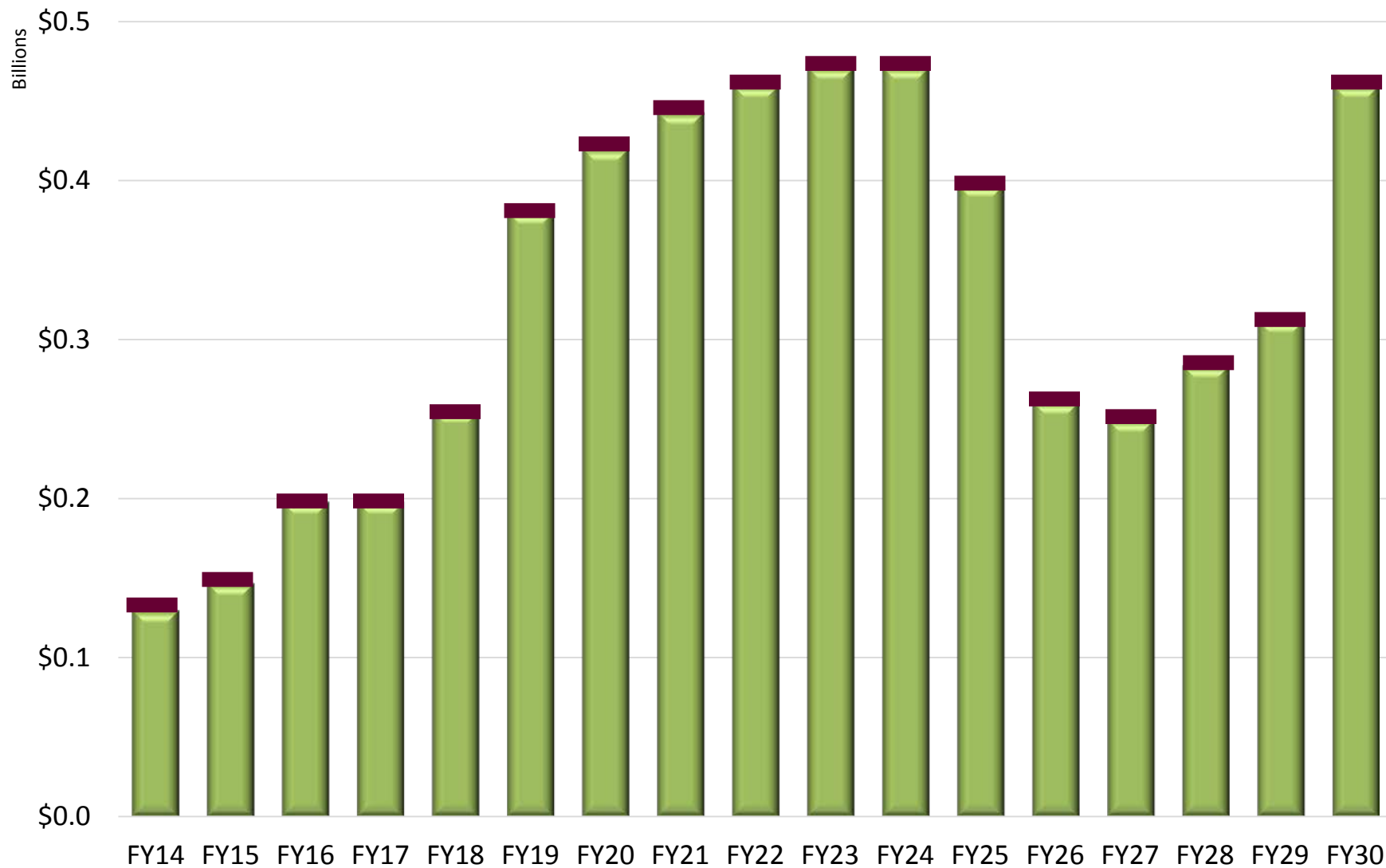
A Nominal Program's Affordability Analysis



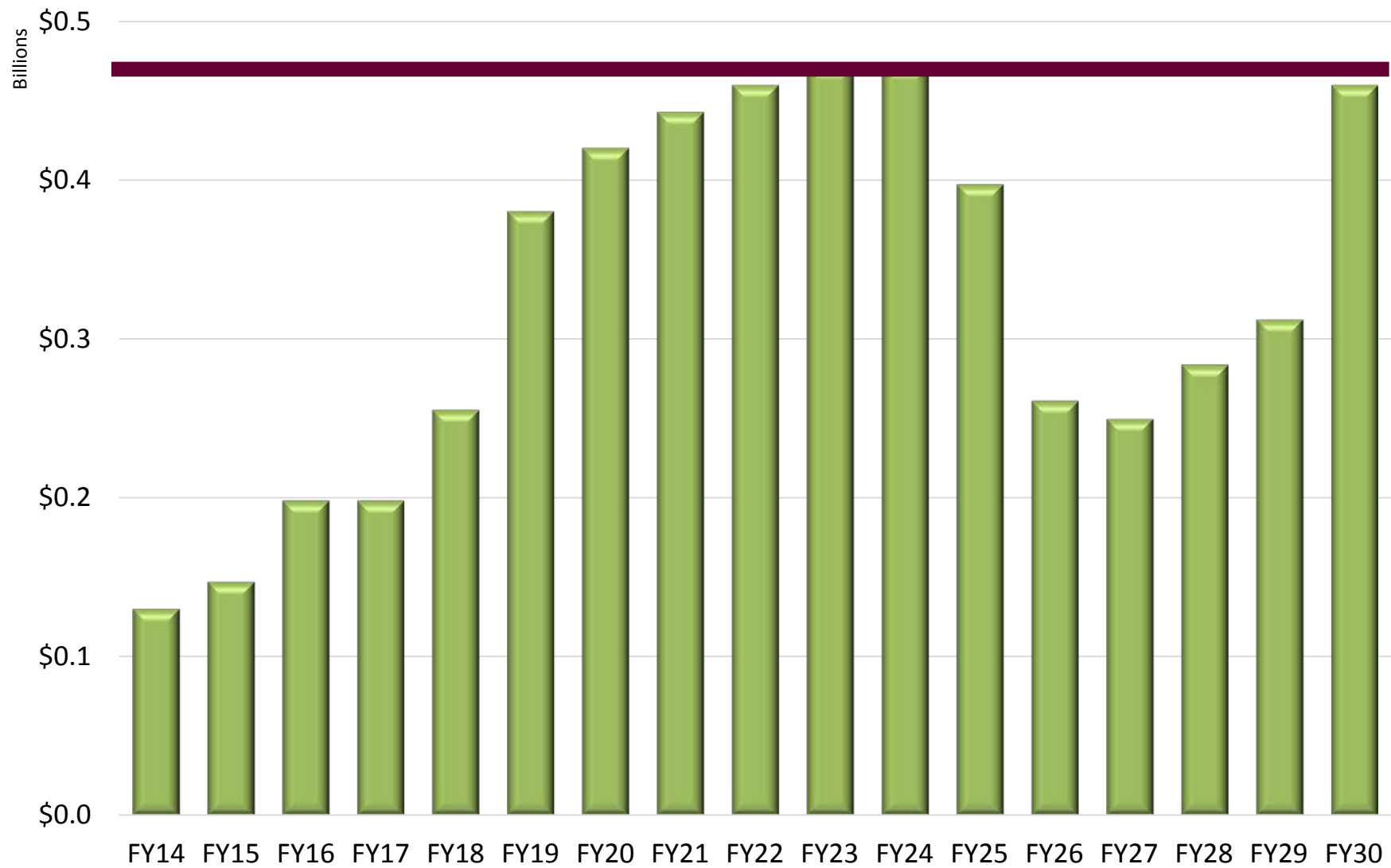
This is the data a constraint is built from



Specify each year?



Annual Maximum?



These forms of the constraint have become standard

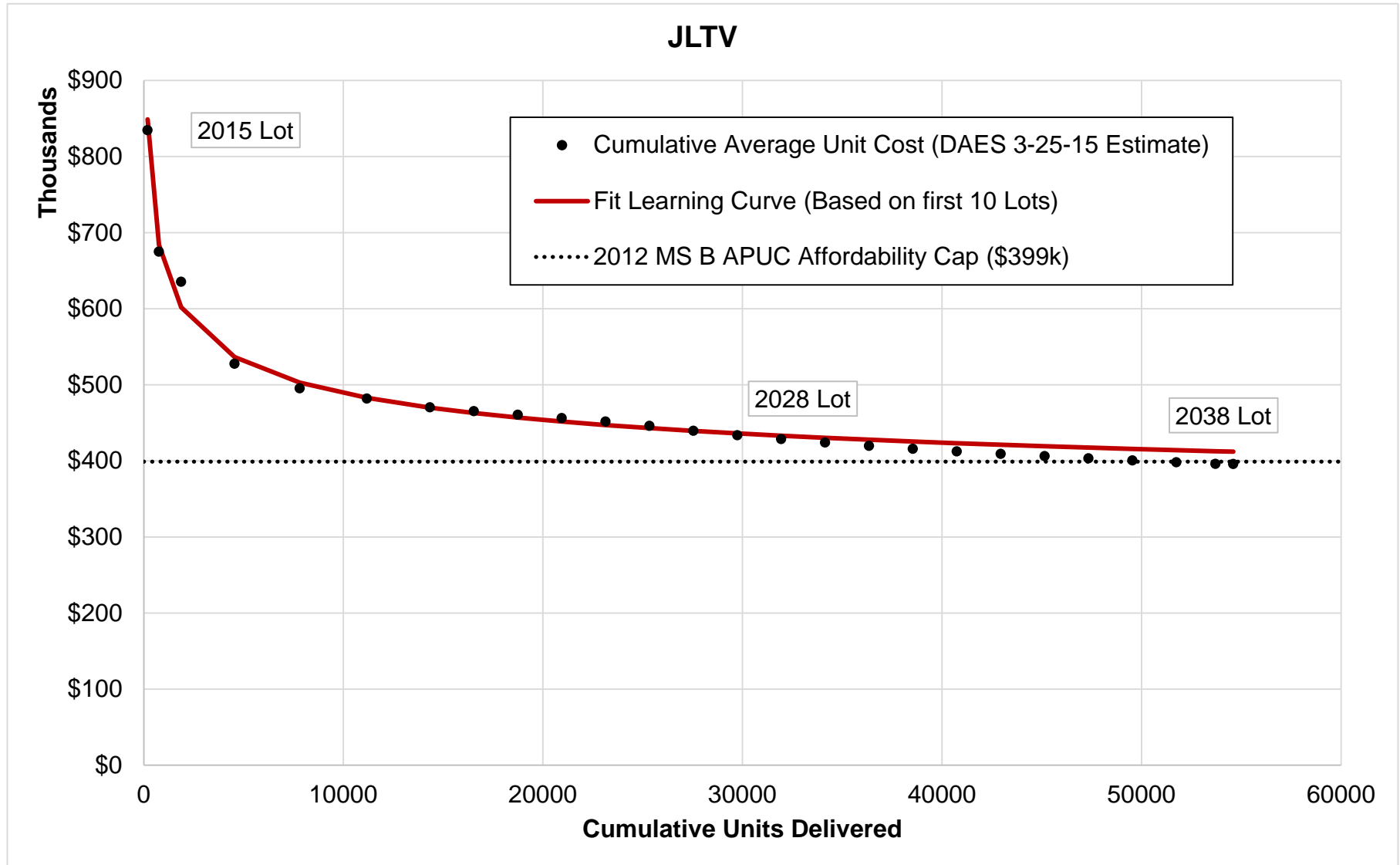
$$APUC = \frac{\$_{procurement}}{total\ procurement\ quantity}$$

$$PAUC = \frac{\$_{RDT\&E} + \$_{procurement}}{total\ quantity}$$

$$\$_{procurement}$$

$$\$_{RDT\&E} + \$_{procurement}$$

Average unit cost encourages adding extra units



Totals should be considered in more cases, as incentives are reversed against PAUC or APUC

Quantity up \rightarrow APUC down

Quantity up \rightarrow total up

Incentives when using totals
oppose Nunn-McCurdy rules

**Average unit cost depends on
identifying equivalent units**

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**Average unit cost depends on
identifying equivalent units**



Average unit cost depends on identifying equivalent units

Global Hawk Block Approach

BLOCK 0 (ACTD)



- 7 Aircraft with ISS (EO/IR/SAR)
- First flight FY98, GWOT in FY02
- 2 Transferred to NASA for Environmental Research in FY07
- 1 USAF Test Bird at Edwards AFB



BLOCK 10



- 7 AF; 2 Navy aircraft
- Raytheon ISS (EO/IR/SAR Sensor)
- Operational in CENTCOM Jan 06
- Training & MCE at Beale AFB

BLOCK 20



- 6 USAF aircraft
- Raytheon Enhanced ISS (longer range)
- NG-ES LR-100 ELINT
- IOT&E and Fielding in 2009

BLOCK 30 (MULTI-SIGINT)



- 26 Vehicles – SIGINT Fielding in FY11
- Raytheon Enhanced ISS (longer range)
- NG-MS Adv Signals Intel Payload (ASIP)
- Operational 25+ Years; 40,000 Flight Hours

BLOCK 40



- 15 Planned, Air National Guard
- MP-RTIP AESA Radar (NG-IS with Raytheon and NG-ES as Subs)
- Ground/Maritime Radar Surveillance
- IOT&E and Fielding in FY10

NOTIONAL BLOCK X



- BAMS (Broad Area Maritime Surveillance) USN Program
- Ballistic Missile Tracking, Abn IR System
- SPIRITT, LIDAR & FOPEN for USAF
- International – New Payloads
- NOAA – Environmental Surveillance

provided for Public Release; Distribution Unlimited: 88ABW-2008-0428 Dated 6 October 2008

**Average unit cost depends on
identifying equivalent units**



Average unit cost depends on
identifying equivalent units



Operation & Support constraints are hard to monitor



Operation & Support constraints could yield bad incentives



Portfolios are not stable

	A Dec 2011	B Feb 2012	C Oct 2012	D Aug 2013	E Oct 2013	F Oct 2013	G Sep 2014
Portfolio 1	119	119	97		99		87 99
Portfolio 2		89	95		103		91
Portfolio 3		83	83		77		65
Portfolio 4		67 65	79	63	63 60		62
Portfolio 5		56	56		52		46
Portfolio 6		42	44		44	44	46
Portfolio 7		30	28		32 28		28
Portfolio 8		24	34 34		30		22
Portfolio 9		22	20		26		22
Portfolio 10		18	18		20		16
Investment Total		550	554		546		482

Constant Currency Units

Long-Range Planning with Innovation, Uncertainty, Risk



Takeaways

The spirit of Affordability Analysis has taken hold and yielded fruit

PAUC is a good affordability constraint
.but totals are better in many circumstances

The current portfolios are not sufficient

Current practice doesn't account for uncertainty





Backup

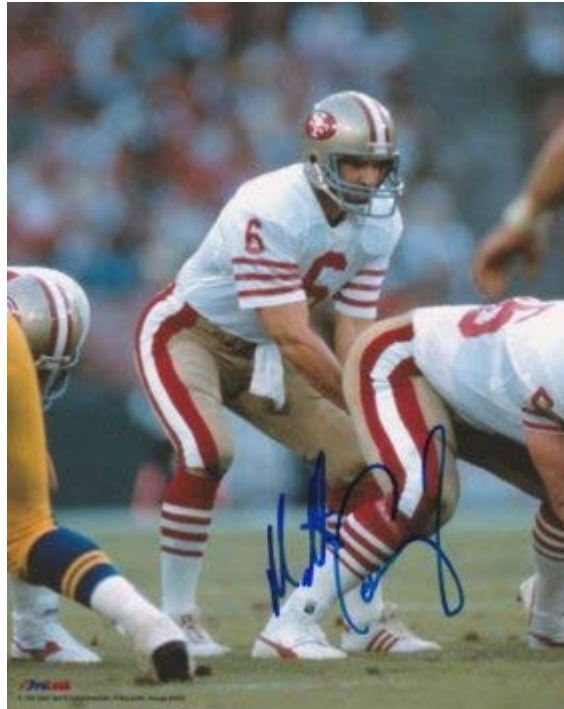


Photo Credits

Slide 1:

<http://www.maxwell.af.mil/news/story.asp?id=123281138>

Slide 4:

DAMIR F-22 2010
DAMIR VH-71 2007
DAMIR FCS 2007

Slide 5:

Ashton Carter (left)

<https://www.whitehouse.gov/blog/author/secretary-ashton-carter>

Frank Kendall

<http://www.defense.gov/About-DoD/Biographies/Biography-View/Article/602725/frank-kendall>

Slide 8:

Frank Kendall

<http://www.defense.gov/About-DoD/Biographies/Biography-View/Article/602725/frank-kendall>

Slide 17:

GCV: <http://www.army.mil/article/63891/>

Slides 18 & 19:

DAMIR E-2D AHE 2016

Slide 29:

A-10s

<http://www.usafe.af.mil/news/story.asp?id=123465987>

Slide 30:

Six ships of Battle Force Zulu steam in formation after the cease-fire that ended Operation Desert Storm. At left, from top, are the guided missile cruiser USS LEYTE GULF (CG-55), the aircraft carriers USS MIDWAY (CV-41) and USS RANGER (CV-61) and the guided missile cruiser USS NORMANDY (CG-60). At right are the nuclear-powered aircraft carrier USS THEODORE ROOSEVELT (CVN-71), top, and the aircraft carrier USS AMERICA (CV-66)

<http://usnhistory.navylive.dodlive.mil/gulf-war-curator-of-the-navy-recalls-experience-25-years-later-part-ii/>

Slide 31:

DAMIR Family of Medium Tactical Vehicles (FMTV) 2016

Slide 33:

DAMIR ATIRCM/ CMWS 2007

Slide 34:

<http://www.eglin.af.mil/news/story.asp?id=123406493>

Slide 35:

<http://www.nationalguard.mil/News/ArticleView/tabid/5563/Article/577116/hoax-phone-calls-no-laughing-matter-to-vermont-guard.aspx>

Slide 36 & 40

U.S.S. Constitution

www.history.navy.mil/browse-by-topic/ships/uss-constitution-americas-ship-of-state/ship-history-highlights/uss-constitution-1992-1996-restoration/july-21-1997-200th-anniversary-sail-of-uss-constitution.html

Slide 42:

Matt Cavanaugh, one of Joe Montana's many backups.

<http://www.amazon.com/Cavanaugh-Autographed-Signed-Francisco-49ers/dp/B00BY6NQSC>

Pictures from DAMIR are from the “Mission and Description” tab in the SAR from the year posted.

Meetings

19 August 2015 – Army G8, LTC David Richkowski

20 October 2015 – RAND Irv Blickstein, Mr. John Yurchak
and Mr. Bradley Martin

3 November 2015 – OSD-PARCA-APAP, Dr. Philip Antón

16 November 2015 – Navy N2/ N6, Mr. Stephen Sadler

29 December 2015 – Army G8, COL Christopher Farrell,
Mr. Billie Watts, and Mr. Alfred Wilson

14 January 2016 – AT&L-ARA, Mr. Joseph Beauregard
and Mr. David Bawel

The Players

Research Team

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Kevin Wu

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Tzee-Nan Lo

Christopher Martin

Zachary McGregor-Dorsey

Special Thanks

David Tate

The focus of BBP 1.0 was on reducing spending

Target Affordability and Control Cost Growth

Incentivize Productivity and Innovation in Industry

Promote Real Competition

Improve Tradecraft in Services Acquisition

Reduce Non-Productive Processes and Bureaucracy

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