Cycles Times and Cycles of Acquisition Reform

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Acquisition Reform Today

- **Senator John McCain**: "America's technological advantage is eroding…Our adversaries are building weapon systems while we shuffle paper. If we continue with business as usual, I fear the United States could lose its military technological advantage altogether."

- **Senator Angus King**: "By the way, on procurement, not only is there an issue of cost, there is an issue of time…The time it takes Boeing to get a new aircraft from concept to flight is something like seven years. In the military, it is 23 years."

- **Assistant Secretary Will Roper**: "We live in a world where we can't wait 10 years to get a program right ultimately because outside technology, commercial technology is driving this."

Recent reforms attempt to speed up acquisition in order to pace with adversaries and the commercial sector.

Historic Reform Cycles

- Acquisition reform is cyclical; historic reform cycles can be classified according to whether reformers centralized or decentralized oversight

- Oversight can be centralized or decentralized within OSD and the military services; for example, centralized oversight:
  - OSD: More milestone reviews, more programs classified as MDAPs
  - Services: More military specifications, more training for program managers

Oversight Approach	Years	Reform Cycle
Centralized	1970-1980	Defense Systems Acquisition Reform Council
	1990-1993	Defense Acquisition Board
	2008-2016	Weapon Systems Acquisition Reform Act
Decentralized	1961-1969	McNamara Reforms
	1981-1989	Acqusition Improvement Program
	1994-2007	Mandate for Change and Transformation
	2017-present	Restructuring AT&L

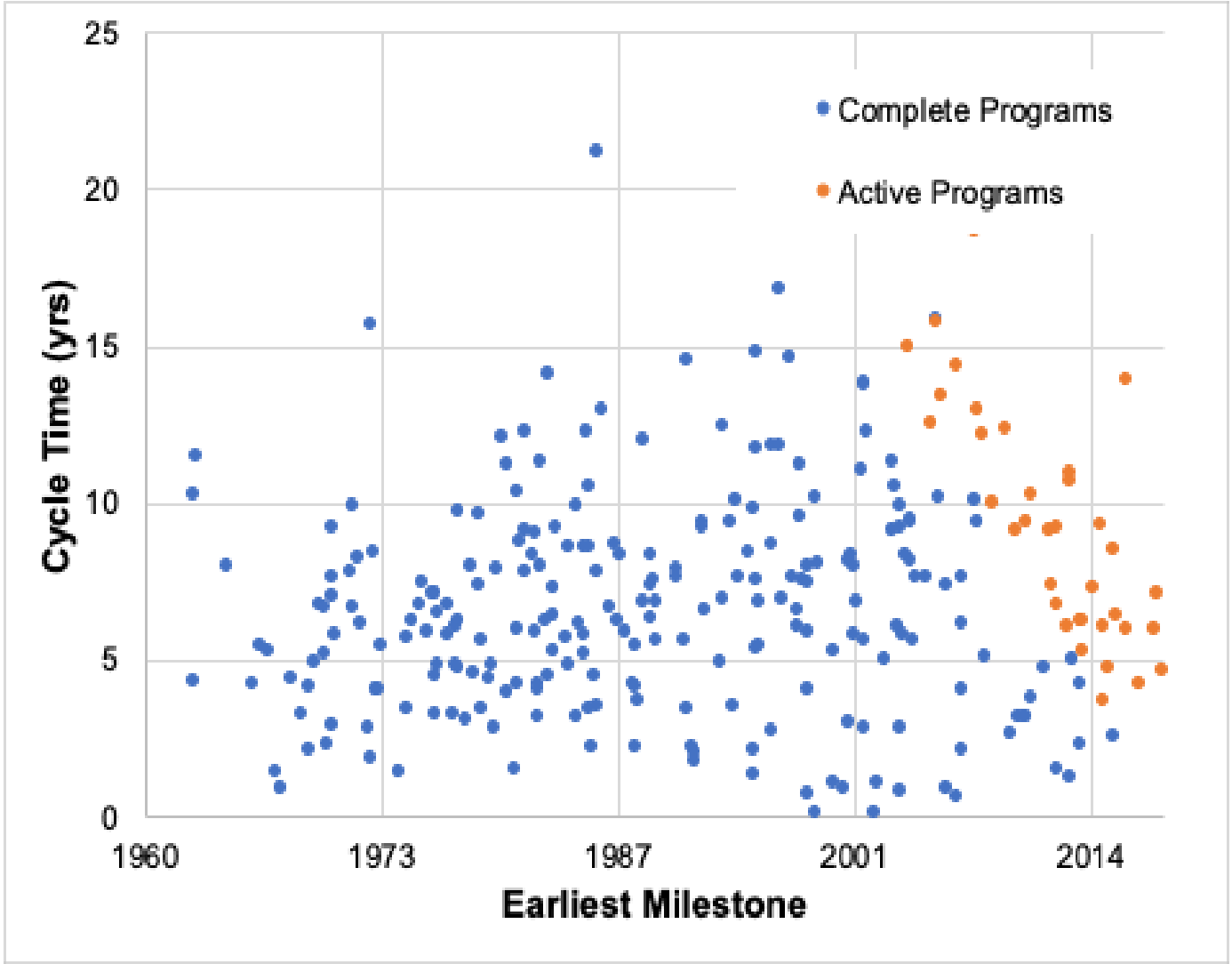
- Of course, simplifying assumptions enable analysis but have limitations; acquisition and reform are complex

Major Defense Acquisition Program Cycle Times

- Cycle time: Time elapsed from Milestone B/C (earliest available) to initial operating capability (IOC)
  - Some assumptions were required to identify milestones and IOC
- Cycle time growth: △elapsed time (actual – predicted) / predicted elapsed time
- Data sources: Major defense acquisition program (MDAP) cycle times only
  - Defense Acquisition Management Information Retrieval (DAMIR) System
  - RAND's Defense Systems Cost Performance Database
- Available data, MDAPs 1962-present
  - Complete programs (past IOC): 237 programs, 189 with cycle time growth data
  - Active programs (not past IOC): 39 programs, 37 with cycle time growth data
  - Cancelled programs excluded (unreliable data)

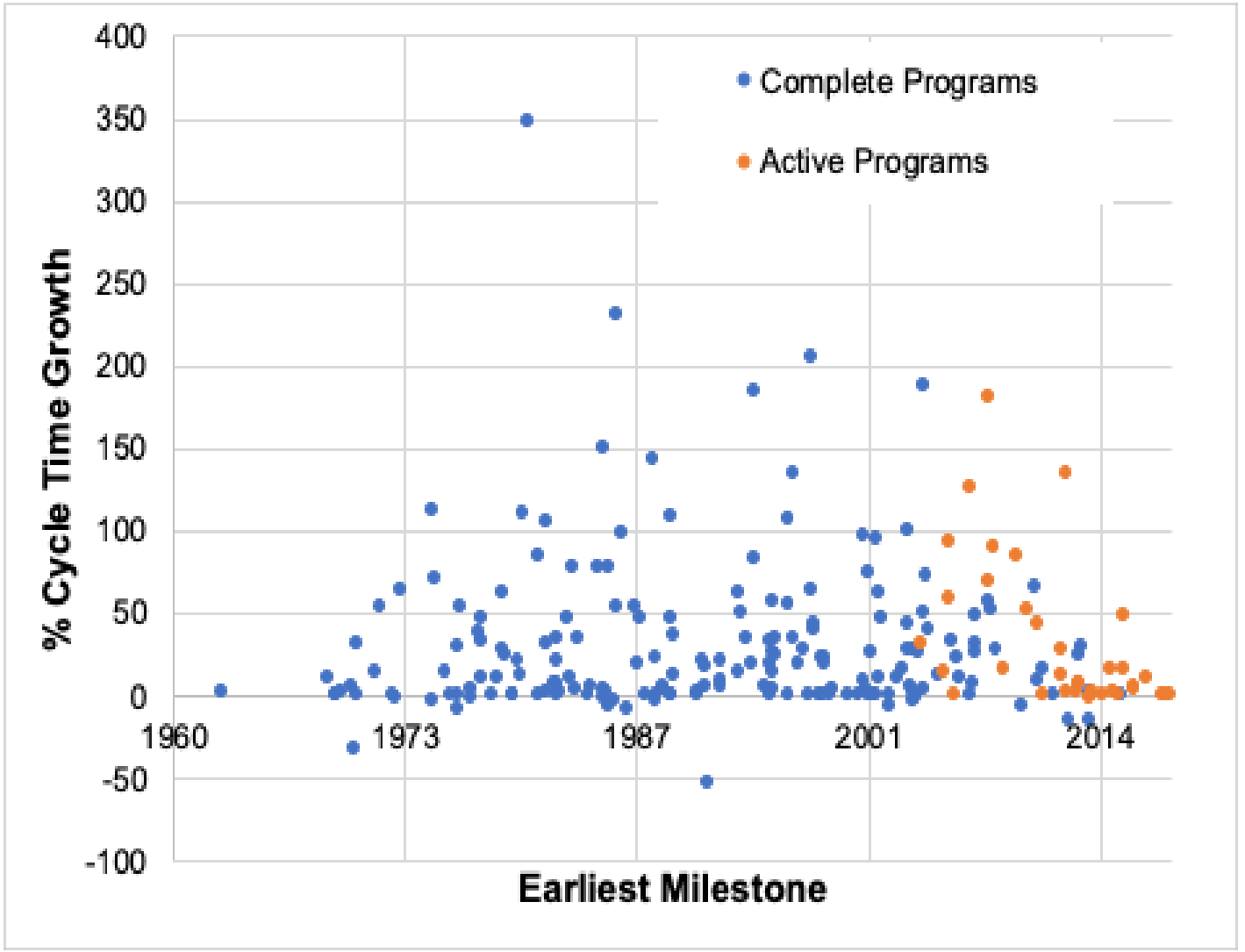
MDAP Cycle Times

- Despite cycles of acquisition reform, MDAP cycle times have not changed over time
- Cycle times for complete MDAPs:
  - Mean = 6.5 years
  - Median = 6.3 years
- MDAPs initiated during centralized reform cycles had lower cycle times, but results were not statistically significant



MDAP Cycle Time Growth

- Despite cycles of acquisition reform, MDAP cycle time growth has not changed over time
- Cycle time growth for complete MDAPs:
  - Mean = 30.5%
  - Median = 14.6%
- MDAPs initiated during centralized reform cycles had less cycle time growth, and *results were statistically significant*



Cycle Times and Cycles of Acquisition Reform

- No clear trends in cycle time or cycle time growth over time
- But, differences are apparent if MDAPs are grouped according to reform cycle

	Oversight	Mean	Median	Max.	Min	N
Cycle Time (years)	*Centralized*	6.6 yrs	6.3 yrs	18.7 yrs	1.3 yrs	111
	Decentralized	7.2 yrs	6.8 yrs	21.2 yrs	0.1 yrs	159
Cycle Time Growth (percent)	*Centralized*	23.7%	12.4%	180.0%	-53.6%	87
	Decentralized	36.2%	19.0%	346.7%	-8.0%	134

- Shorter cycle times for MDAPs starting in centralized reform cycles, but results were not statistically significant
- Less cycle time growth for MDAPs starting in centralized reform cycles, and *results were statistically significant*

Decentralizing oversight may not shorten MDAP cycle times, and may instead increase cycle time growth

Potential for Today's Cycle

- Hard to make comparisons between DoD, private sector, China
  - Limited data on private sector, China, and non-MDAP programs
- But, available data shows that DoD fielded MDAPs at speeds comparable to China + U.S. private sector

Platform Type	Mean	Median	Max	Min	N
Aircraft	6.3 yrs	5.7 yrs	14.5 yrs	0.9 yrs	52
C4I/Electronic	5.6 yrs	6.2 yrs	14.8 yrs	0.1 yrs	44
Helicopter	7.7 yrs	6.8 yrs	21.2 yrs	0.9 yrs	17
Missile / Munitions	6.7 yrs	6.5 yrs	14.6 yrs	1.5 yrs	70
Satellite	8.8 yrs	7.9 yrs	16.8 yrs	4.2 yrs	16
Ship / Sub	6.8 yrs	4.9 yrs	15.7 yrs	1.3 yrs	28
Vehicle	4.3 yrs	4.4 yrs	8.7 yrs	0.7 yrs	10

Today's reforms decentralized for speed, but may have been unnecessary (at least for MDAPs)

Conclusions

- Too soon to tell whether recent acquisition reforms-–which decentralized oversight—will reduce acquisition cycle time
- But, analysis of historic reform cycles suggests that MDAPs initiated during periods of centralized oversight have lower rates of cycle time growth
- Luckily, compared to example programs from China and U.S. private sector, DoD has historically fielded MDAPs at the “speed of relevance”
- Lots of future work to explore MDAP cycle times, and CSIS research on this topic continues