



Trends in the Defense Industrial Base



**Office of the Deputy Assistant Secretary of Defense
Manufacturing and Industrial Base Policy**

March 29th, 2017



Importance of the defense industrial base

“...Our margin of technological superiority is slowly eroding, and addressing this issue is one of our most important strategic tasks, because too great an erosion of our technological superiority would ultimately undermine our conventional deterrence, raise a competitor’s incentives for preemption, contribute to crisis instability, and greatly raise the potential cost of any future U.S. military operation.”

- Deputy Secretary of Defense, Bob Work

The defense industrial base is an integral part of our force structure and underpins our technical dominance

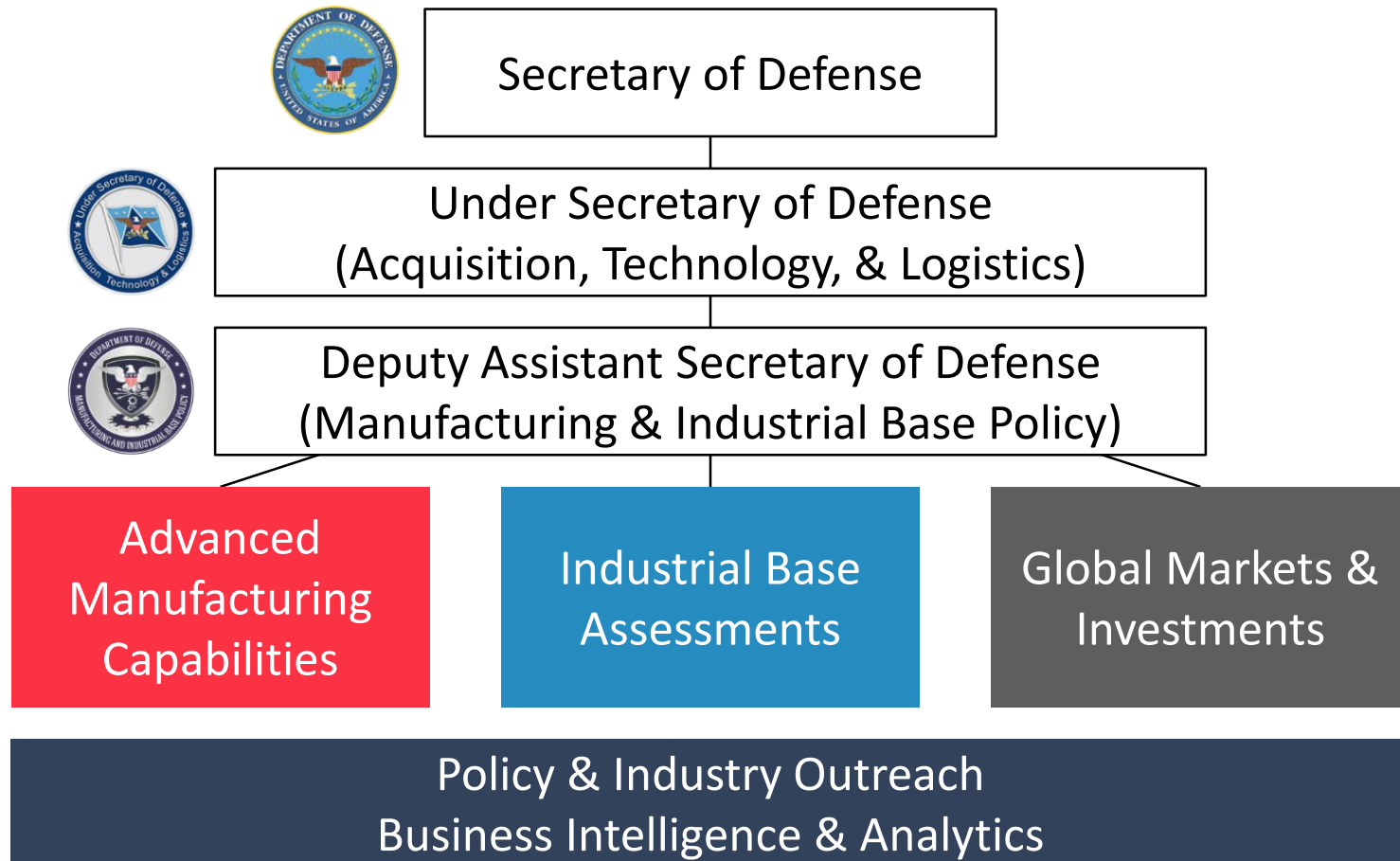




Mission and location of the Office of Manufacturing and Industrial Base Policy (MIBP)



Ensure robust, secure, resilient, and innovative industrial capabilities upon which the Department of Defense can rely to fulfill the Warfighter's current and future requirements





The defense industrial base is a key part of DoD force structure, but faces challenges



There are positive trends in the DIB...

- Profitability high
- Emerging “Reshoring”
- Spirited competition
- Innovation focus
- New DIB and workforce entrants

...But significant challenges exist

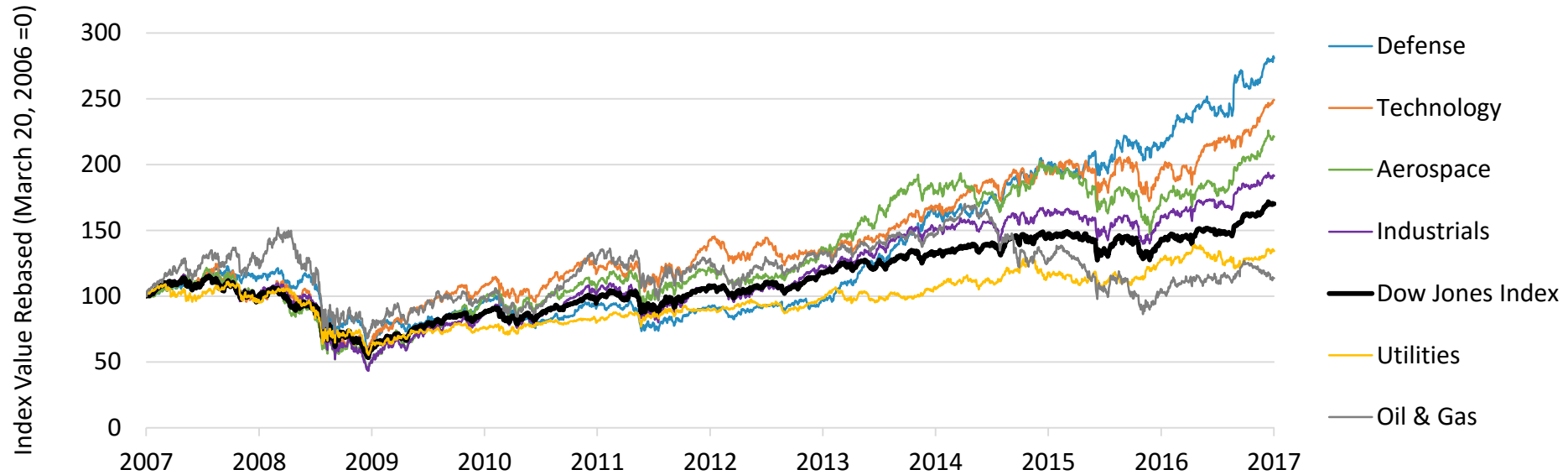
- Defense research & development (R&D) lags
- Fragile industrial base sectors
- Maintaining competition
- Concerning foreign investment trends
- Maintaining workforce



The A&D sector has outperformed other sectors



A&D Performance Relative to the Broader Dow Jones Index and Other Sector Indices



Sector/Index	Total Returns		
	1Y	5Y	10Y
Dow Jones Index	27%	63%	70%
Aerospace	44%	102%	121%
Defense	65%	189%	181%
Industrials	30%	84%	91%
Technology	51%	106%	149%
Utilities	7%	45%	34%
Oil & Gas	9%	-13%	14%

Returns as of the end of trading on March 20, 2017

Market data accessed via Thomson Reuters Eikon

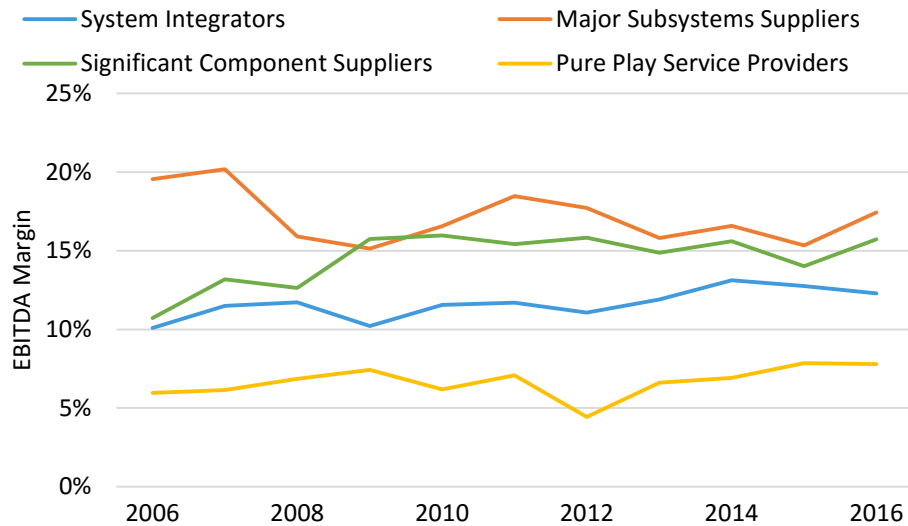


A&D margins are healthy but R&D spending has lagged



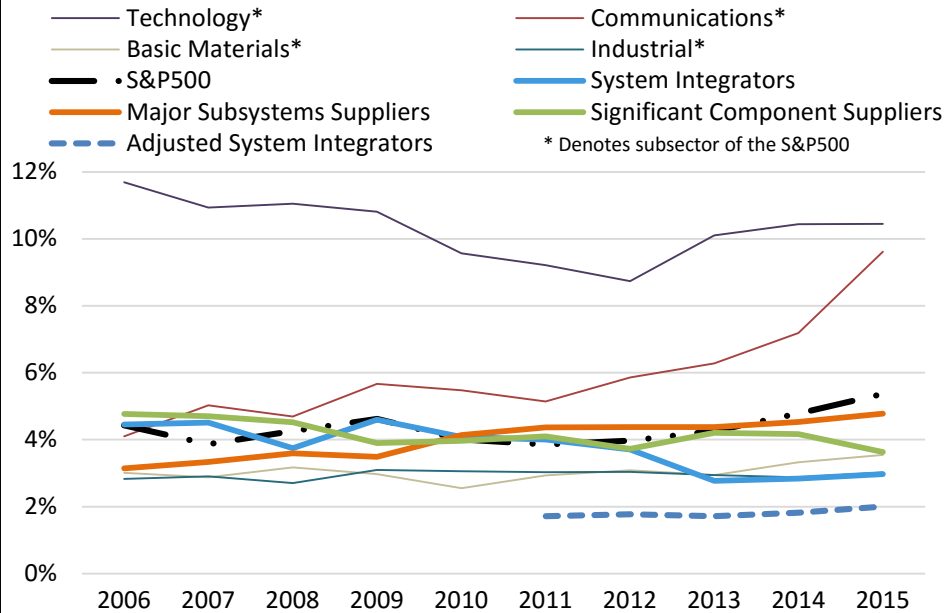
EBITDA Margins by Index

(EBITDA: earnings before interest, tax, depreciation, and amortization)



Source: Financial Data retrieved via Thomson Reuters

R&D Expense as % of Sales



Source: Financial Data retrieved via Thomson Reuters

Big 6 System Integrators

e.g. Lockheed Martin and Northrop Grumman

Returns as of 03/08/2017

1Y:	5Y:	10Y:
35%	196%	169%

Major Subsystems Suppliers

e.g. Aerojet Rocketdyne and General Electric

Returns as of 03/08/2017

1Y:	5Y:	10Y:
28%	87%	84%

Significant Component Suppliers

e.g. AeroVironment and Digital Globe

Returns as of 03/08/2017

1Y:	5Y:	10Y:
40%	72%	140%

Pure Play Services Providers

e.g. AECOM and Booz Allen Hamilton

Returns as of 03/08/2017

1Y:	5Y:	10Y:
30%	38%	36%

The A&D sector is financially strong, but incentivizing R&D will be key for the future



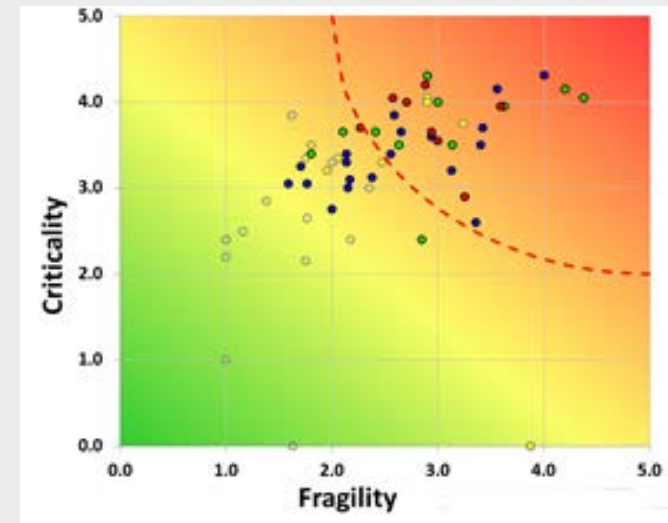
The Department assesses the defense industrial base by sector



Defense Industrial Base Sectors	Defense Industrial Base Sub-sectors	
Missiles & Munitions	Tactical Missiles	Red
	Missile Defense	Yellow
	Strategic Missiles	Red
	Conventional Ammunition	Green
Ground Vehicles	Combat	Yellow
	Combat Support	Green
	Combat Service Support	Green
Space	Space Launch	Yellow
	Satellites	Yellow
Aircraft	Fixed Wing	Yellow
	Rotary Wing	Yellow
	Unmanned Aerial Vehicles	Yellow
Shipbuilding	Submarines	Yellow
	Aircraft Carriers	Yellow
	Surface Vessels	Yellow
C4I	Communications	Green
	Sensors / Radars	Yellow
	Microelectronics	Yellow

Fragility and Criticality (FaC) Assessments

- Select the **assessment subject and scope**
- Develop the **FaC matrix**
- Identify **Risk**
- Develop **Mitigation**



Low Medium High

Fact-based, repeatable, iterative, and collaborative process



Data analytics and an innovative workforce are critical to the future defense industrial base



Current State



New Analytic Platforms

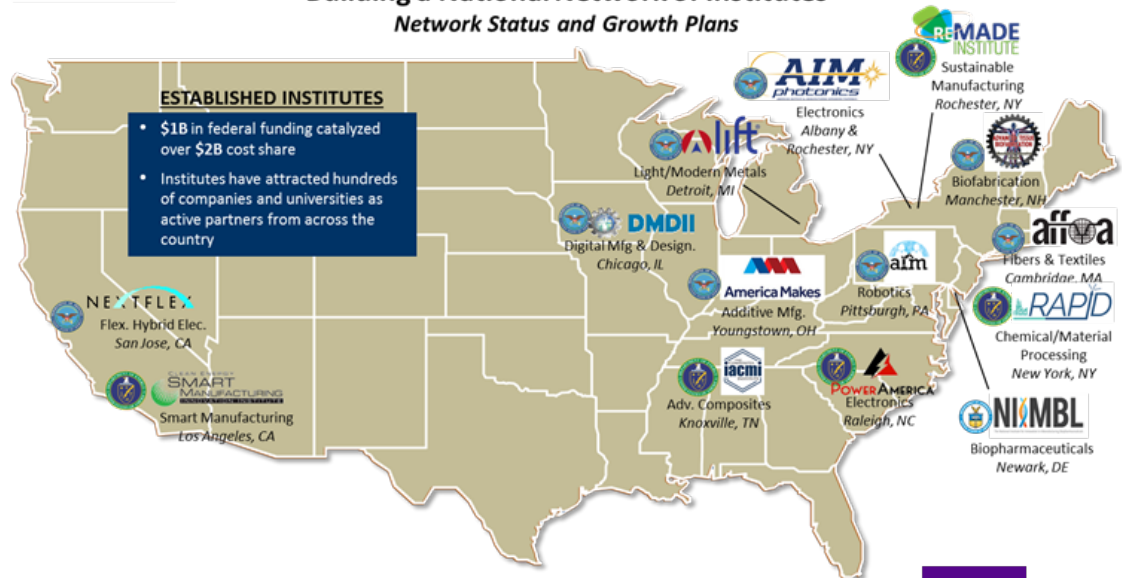


Future State

DoD recognizes criticality of A&D talent for a resilient and innovative defense industrial base

As of 13 January 2017

Building a National Network of Institutes Network Status and Growth Plans





Strengthening DoD manufacturing capabilities across the acquisition life cycle



Program Maturity

Pre-Concept		Concept Refinement		Technology Development		Engineering & Manufacturing Development	Production & Deployment		Operations & Support
TRL 1	TRL 2	TRL 3	TRL 4	TRL 5	TRL 6	TRL 7	TRL 8	TRL 9	

MD5 National Security Technology Accelerator

Defense Production Act (DPA) Title III

Manufacturing Technology (ManTech)

DPA Title I

Manufacturing USA Institutes

Industrial Base Analysis and Sustainment (IBAS)

MIBP manufacturing programs span all technology readiness levels



Ensuring competition and protecting our most sensitive technologies

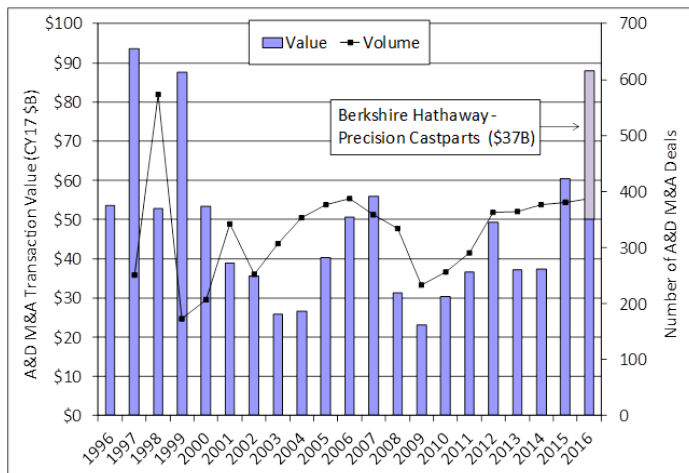


Mergers and Acquisitions, Joint Ventures, and Strategic Alliance Transactions

U.S.-Based Transactions

Conduct DoD's M&A analyses and facilitate regulator reviews to protect the Department's interests in:

- national security, competition, and innovation
- global technological leadership
- supply chain effects
- financial stability and stewardship of industry



Global Markets & Investments and CFIUS

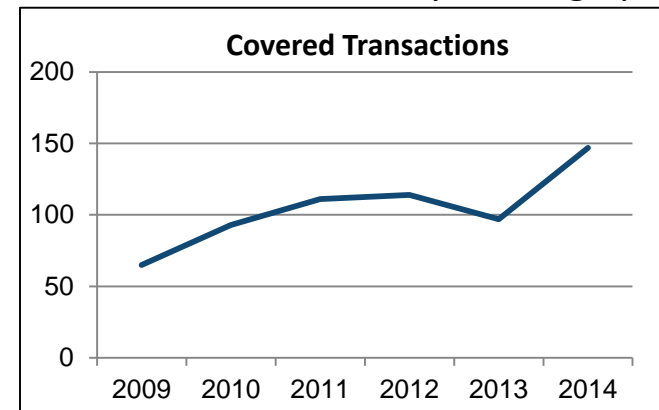
Foreign Direct Investment

Global Markets & Investments

- Analyze national security implications of foreign investments in the United States
- Proactively assess global market trends related to the defense industrial base

Committee on Foreign Investment in the U.S.

- Review transactions that could result in control of a U.S. business by a foreign person



2014 CFIUS Annual Report to Congress

MIBP is DoD lead for evaluating the national security impacts of proposed transactions



MIBP capabilities & programs support the defense industrial base across the DoD acquisition life cycle



Strengthen the industrial base that supports the Warfighter



Questions?