

An aerial map of a city, likely London, with a grid overlay. Several areas are highlighted with orange boxes and labeled with numbers: 6169252, 6834711, and 8376521. The map is rendered in shades of blue and teal.

# THE NATIONAL SECURITY SCORECARD

CRITICAL TECHNOLOGIES EDITION

govini

## FOREWORD

The fighting in Ukraine is the latest chapter in the brutal and grinding, mechanized warfare that has characterized state-on-state conflict for nearly a century. While weapons have become more lethal, fighter jets still crisscross the skies; tanks and artillery still slug it out in major ground battles; and in places like Mariupol, infantry still fight in desperate close combat with rifles, machine guns, and grenades.

Ukraine, however, also makes it clear that the future of warfare has arrived. Autonomous and semi-autonomous drones prowl above the battlefield; artificial intelligence-driven intelligence fusion gives commanders unparalleled understanding of the battlespace; hackers wage largely unseen cyber battles in the shadows; and powerful mobile communications and computing devices enable individual soldiers to tap into unprecedented levels of awareness and lethality.

Much as in 1861, 1914, or 1939, the world stands on the eve of a new era in the character of war brought forth by rapid technological change. Unlike in the past, however, the technologies driving change are not primarily military in nature, but rather civilian technologies that can be adapted for military use. As a result, the United States' intensifying techno-military confrontation with the People's Republic

of China will hinge not on which side can build the best weapons, but on who can best harness critical emerging technologies.

In recent years, the U.S. Government has recognized the importance of emerging technology to both strategic competition with China and our future national prosperity, and multiple administrations and congresses have taken action accordingly. But despite these efforts, moving fast enough to beat China remains a pernicious challenge. We know well how difficult it can be to drive change in an organization as large and complex as the U.S. Government—and given the broad applicability of these technologies, it is a whole-of-government issue.

If senior leaders in the U.S. Government are to chart an effective path forward, they must first understand where we are and where we have been. That is why Govini's National Security Scorecard: Critical Technologies Edition is vital. It provides a baseline view of what the U.S. Government has spent and whom they have partnered with on key emerging technologies in recent years. Armed with this baseline, decision makers can better design strategies to rapidly drive the development of critical technologies and harness them for national security ends.



Robert O. Work, Chairman



Tara Murphy Dougherty, CEO

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# CRITICAL TECHNOLOGIES OVERVIEW

The Govini Critical Technologies Taxonomy illuminates spending on critical technologies by the U.S. Government (USG) from FY17-21, as well as the vendor ecosystems supporting federal investment in these technologies. It is derived from the Office of the Undersecretary of Defense for Research & Engineering's list of critical technology areas. The taxonomy's structure enables a granular examination of past spending priorities and trends, and provides a basis for assessing continuing efforts into the future.

The taxonomy is organized into 11 segments (orange nodes) and 41 subsegments (white nodes). Each of the 41 subsegments are further subdivided into sub-subsegments, which are depicted later in the Scorecard. This additional layer of granularity in effect creates 11 subordinate taxonomies, one for each critical technology segment, all nested under the overarching Critical Technologies Taxonomy.

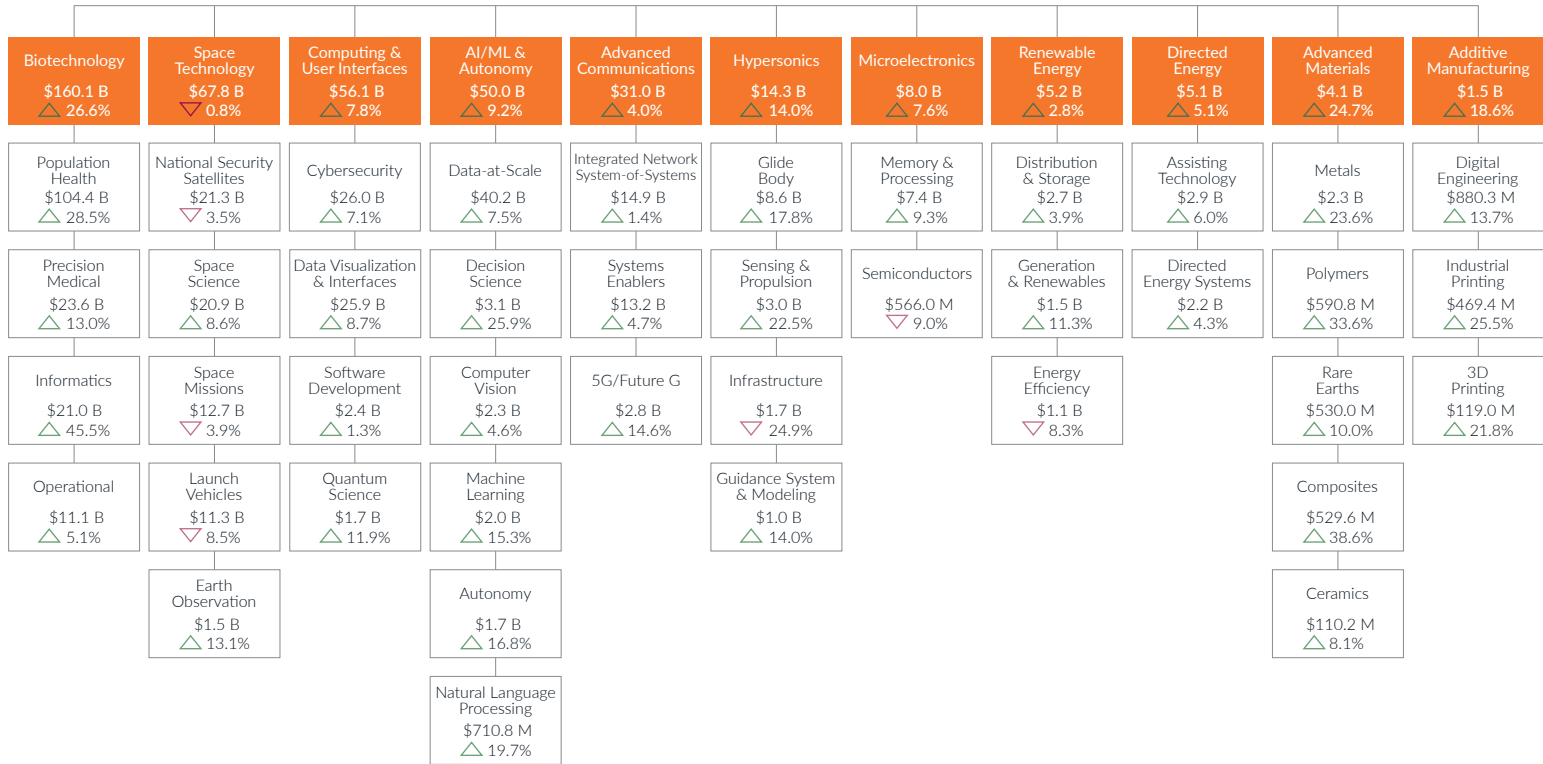
Govini created the taxonomy by applying supervised machine learning (ML) and natural language processing to parse, analyze, and categorize large volumes of federal contracts data, including prime contracts, grants, and other transaction authority (OTA) awards. The use of artificial intelligence (AI) and supervised ML models enables analysis of the large volumes of irregular data contained in federal contracts—data that often are inaccessible through regular government reporting processes or human-intensive analytical approaches. Moreover, beyond simply making usable an expansive body of data sources, Govini's Decision Science Platform and National Security Knowledge Graph establish high fidelity standards

in categorized and fused data to produce a comprehensive and accurate depiction of federal spending, and the supporting vendor ecosystem, over time.

## KEY FINDINGS

- Overall USG spending on critical technologies skyrocketed over the period, nearly doubling from \$60.7B in FY17 to \$117.2B in FY21. After steady growth from FY17-19, spending levels jumped significantly in FY20 and FY21.
- The magnitude of the increase, however, is somewhat misleading. The massive spikes in FY20 and FY21 were primarily driven by exponential increases in the Biotechnology segment due to an influx of funding for COVID-19 related research in response to the pandemic.
- Spending on Space Technology remained essentially flat in FY21 compared to FY17, the only segment that did not see an increase in yearly spending levels. This is likely to change in the future with greater DoD focus on the space domain. An 8.5% decrease in the Launch Vehicles subsegment may reflect a shift towards greater reliance on commercial space launch.
- Despite recent attention on reshoring microchip production to the United States, yearly USG spending on semiconductor fabrication declined over the period. This trend could change in the future, however, if the CHIPS Act and other pending legislation are enacted, spurring increased USG investment.

# CRITICAL TECHNOLOGIES TAXONOMY



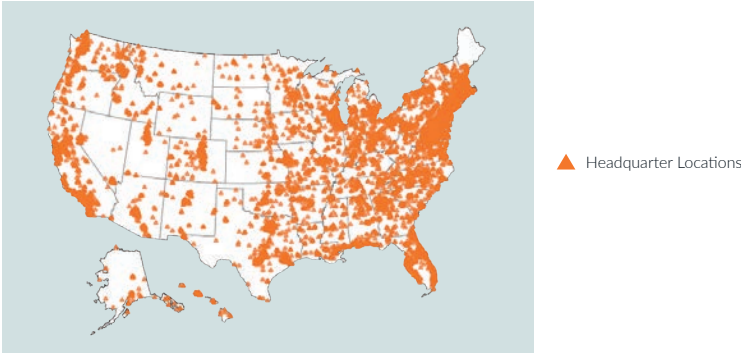
Legend:

FY17-21 Obligation Total +/- CAGR	Segment/ Subsegment \$X.X B △ X.X%
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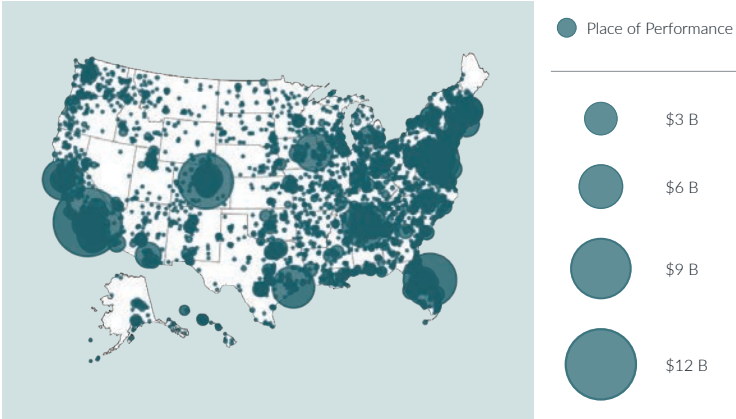
# CRITICAL TECHNOLOGIES 2022

## TAXONOMY OVERVIEW

All Critical Technologies Vendors, FY17-21

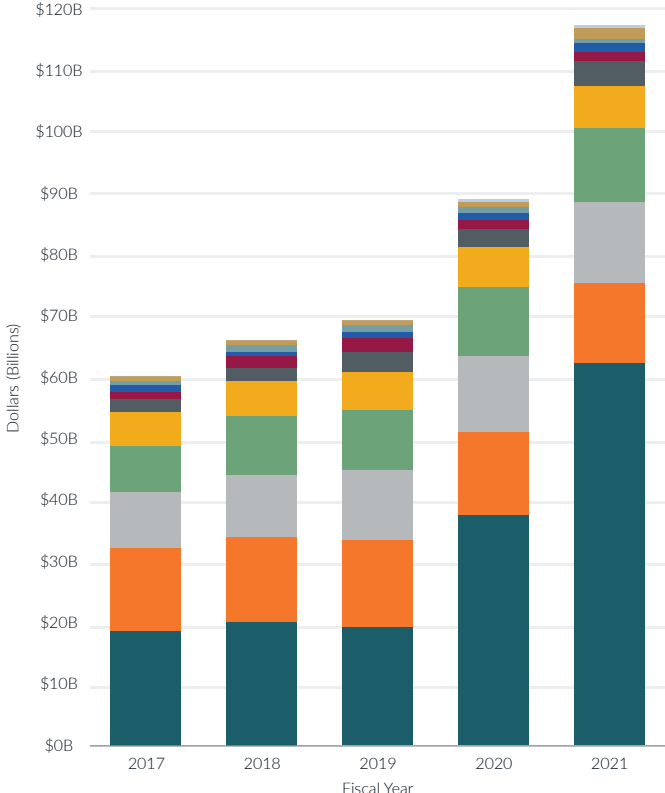


All Critical Technologies Place of Performance, FY17-21



USG Spend on Critical Technologies, FY17-21

- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing

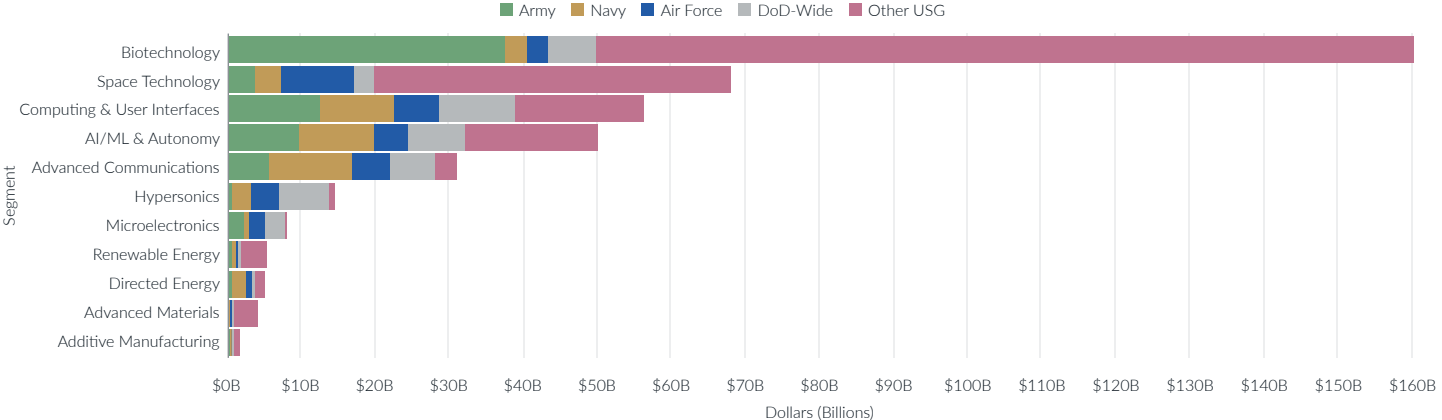


# CRITICAL TECHNOLOGIES 2022

## TAXONOMY OVERVIEW

RANK		SEGMENT	SPEND			FAR-BASED		NON FAR-BASED		
FY22	FY21		FY21 SPEND	FY17-21 SPEND	CAGR	FY21 SHARE	FY17-21 SPEND	% OF SPEND	FY17-21 SPEND	% OF SPEND
1	— 1	Biotechnology	\$62.7 B	\$160.1 B	△ 26.6%	39.7%	\$80.7 B	50.4%	\$79.4 B	49.6%
2	△ 3	Computing & User Interfaces	\$13.2 B	\$56.1 B	△ 7.8%	13.9%	\$51.5 B	91.9%	\$4.5 B	8.1%
3	▽ 2	Space Technology	\$12.8 B	\$67.8 B	▽ 0.8%	16.8%	\$63.3 B	93.4%	\$4.5 B	6.6%
4	— 4	AI/ML & Autonomy	\$12.0 B	\$50.0 B	△ 9.2%	12.4%	\$42.1 B	84.3%	\$7.8 B	15.7%
5	— 5	Advanced Communications	\$6.6 B	\$30.9 B	△ 4.0%	7.7%	\$30.6 B	98.9%	\$358.7 M	1.2%
6	— 6	Hypersonics	\$4.1 B	\$14.3 B	△ 14.0%	3.6%	\$13.5 B	94.2%	\$823.6 M	5.8%
7	— 7	Microelectronics	\$1.6 B	\$8.0 B	△ 7.6%	2.0%	\$7.5 B	93.2%	\$540.8 M	6.8%
8	△ 10	Advanced Materials	\$1.6 B	\$4.1 B	△ 24.7%	1.0%	\$741.6 M	18.3%	\$3.3 B	81.7%
9	▽ 8	Renewable Energy	\$1.1 B	\$5.2 B	△ 2.8%	1.3%	\$3.2 B	61.8%	\$2.0 B	38.2%
10	▽ 9	Directed Energy	\$1.0 B	\$5.1 B	△ 5.1%	1.3%	\$4.6 B	90.6%	\$477.0 M	9.4%
11	— 11	Additive Manufacturing	\$434.9 M	\$1.5 B	△ 18.3%	0.4%	\$715.4 M	48.7%	\$758.7 M	51.7%

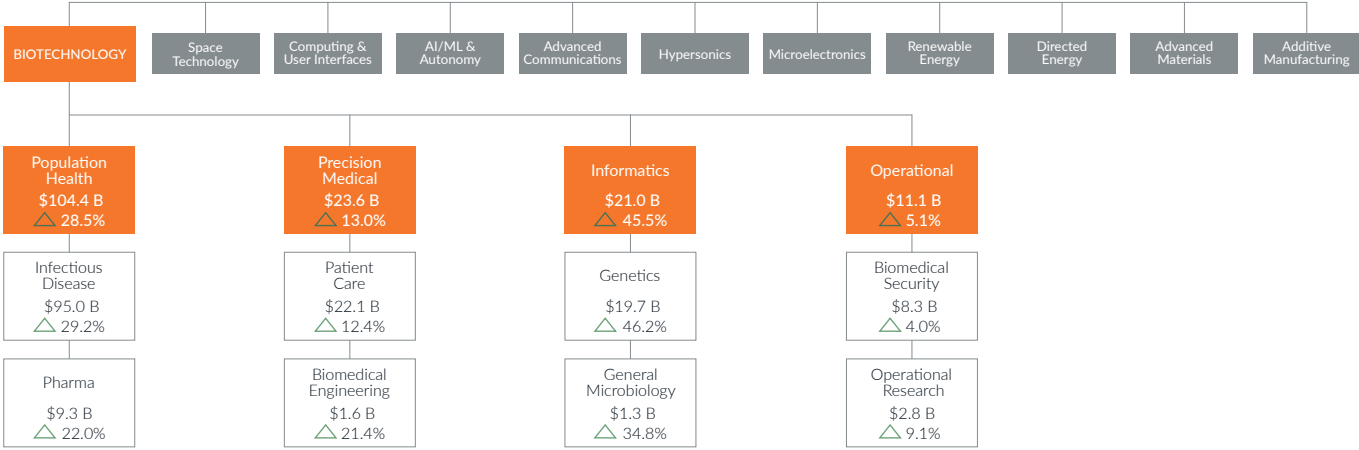
Segment Spend by Government Agencies, FY17-21



# TECHNOLOGY SEGMENT ANALYSIS

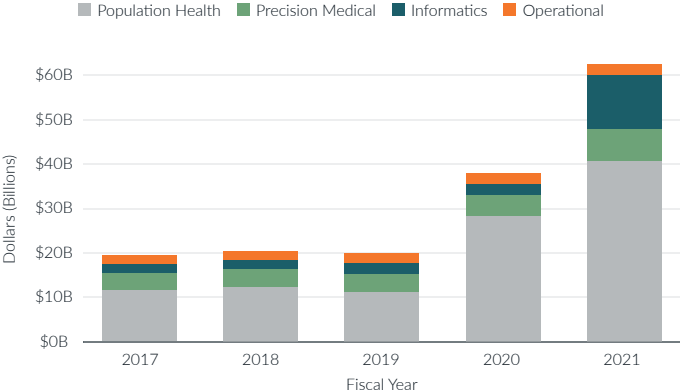
# BIOTECHNOLOGY

TAXONOMY

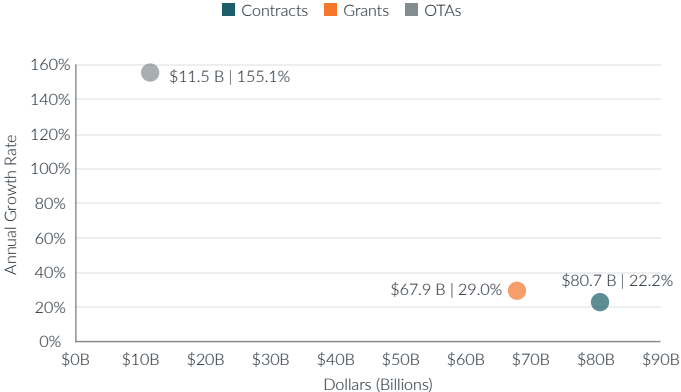


# BIOTECHNOLOGY OVERVIEW

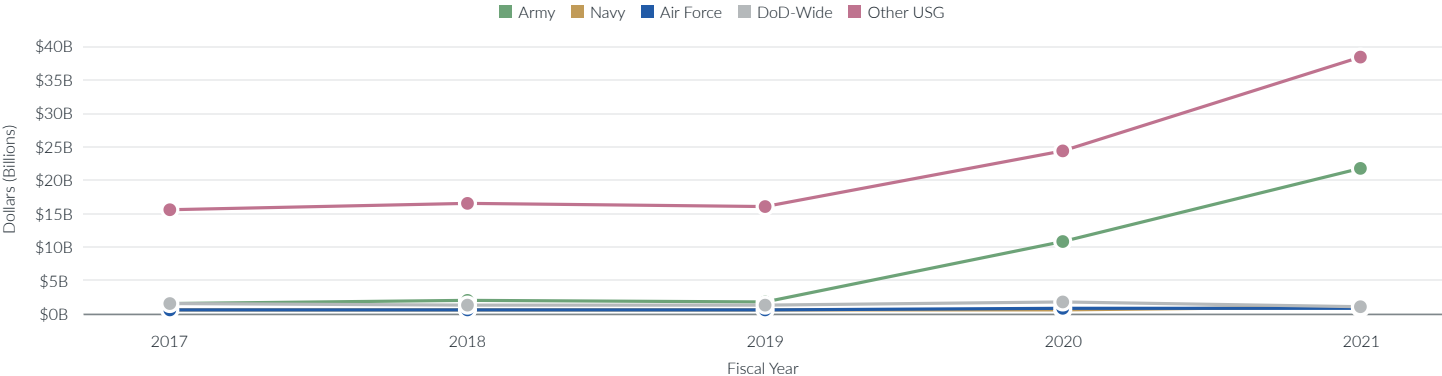
### Spend by Segment, FY17-21



### Award Type Velocity, FY17-21



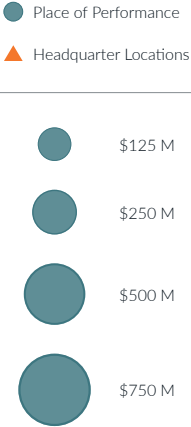
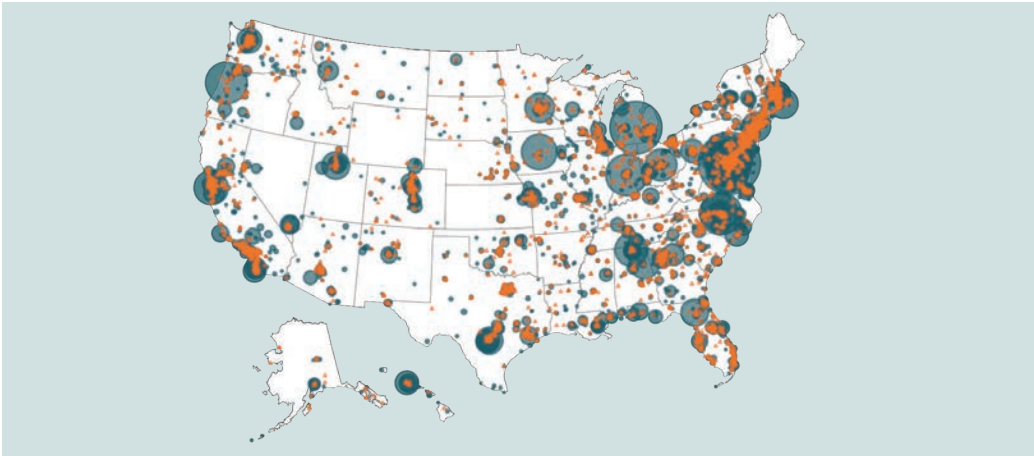
### Segment Spend by Government Agencies, FY17-21



# BIOTECHNOLOGY

## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

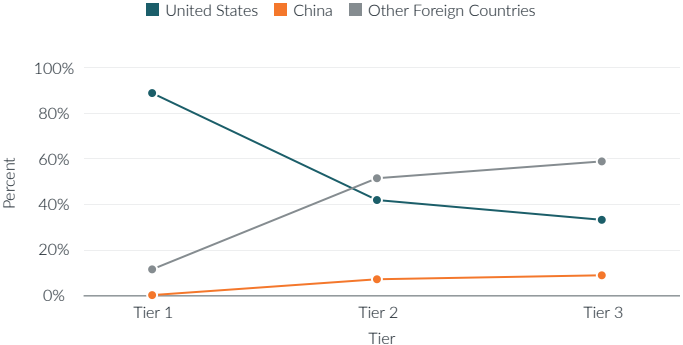
■ Population Health ■ Precision Medical ■ Informatics ■ Operational

Moderna Inc. (MRNA) \$9.6 B		Pfizer Inc. (PFE) \$8.5 B		State of California   \$1.2 B	
Advanced Technologies Int. \$7.3 B		Merck & Co. Inc. \$3.1 B	Leidos Inc. (LDOS) \$3.1 B		
Chemomics International Inc. \$5.2 B		Health Research Inc. \$2.7 B	McKesson Corp. (MCK) \$2.0 B	AstraZeneca PLC (AZN) \$2.0 B	Mayo Clinic   \$1.3 B
UChicago Argonne LLC \$4.7 B		State of California \$1.6 B			Emergent Biosolutions Inc. \$1.1 B

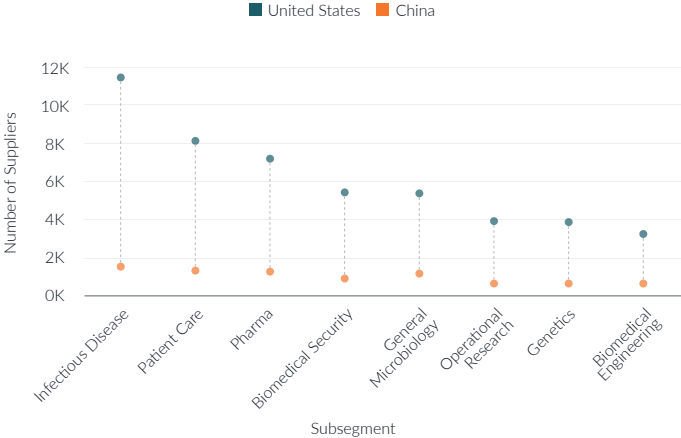
# BIOTECHNOLOGY

## SUPPLIER ANALYTICS

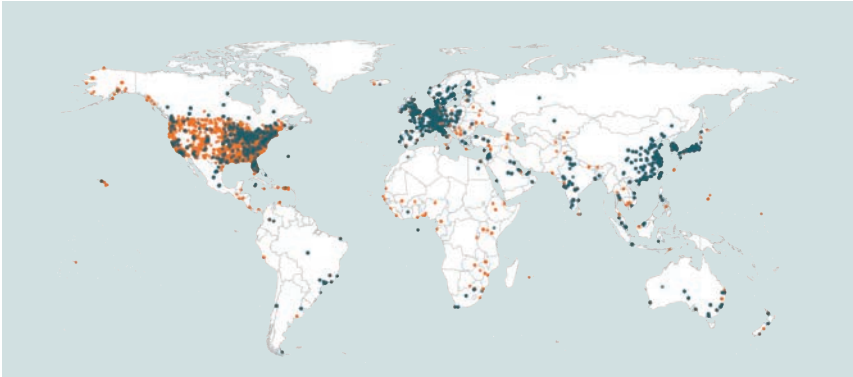
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	21,054	9,774	25,915
China	49	1,637	6,649
Great Britain	280	1,427	4,131
Japan	169	1,376	7,037
South Korea	53	1,056	4,762

# BIOTECHNOLOGY

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	△ 299	Pfizer Inc. (PFE)	\$7.5 B	\$8.5 B	△ 64.7%	\$22.4 M	A+ (98)	87.8%
2	— 2	Moderna Inc. (MRNA)	\$7.3 B	\$9.6 B	△ 155.9%	\$234.5 M	B+ (88)	84.9%
3	△ 12	AstraZeneca PLC (AZN)	\$1.6 B	\$2.0 B	— -	\$49.8 M	A+ (99)	83.6%
4	△ 22	McKesson Corp. (MCK)	\$1.6 B	\$2.0 B	△ 95.9%	\$2.3 M	A+ (98)	5.8%
5	△ 40	Merck & Co. Inc.	\$1.5 B	\$3.1 B	△ 8.8%	\$22.4 M	A+ (98)	3.6%
6	— 6	Health Research Inc.	\$1.2 B	\$2.8 B	△ 41.3%	\$3.6 M	B (84)	0.0%
7	▽ 4	UChicago Argonne LLC	\$992.8 M	\$4.7 B	△ 4.8%	\$42.8 M	B+ (89)	0.0%
8	△ 17	Mass General Brigham Inc.	\$754.8 M	\$1.9 B	△ 27.2%	\$347.5 K	A+ (98)	26.0%
9	△ 15	University of Texas System	\$736.3 M	\$1.8 B	△ 30.9%	\$264.3 K	A+ (96)	7.4%
10	▽ 3	Chemomics International Inc.	\$724.2 M	\$5.3 B	▽ 7.0%	\$40.1 M	B+ (86)	0.0%

### NOTABLE EMERGENT COMPANIES

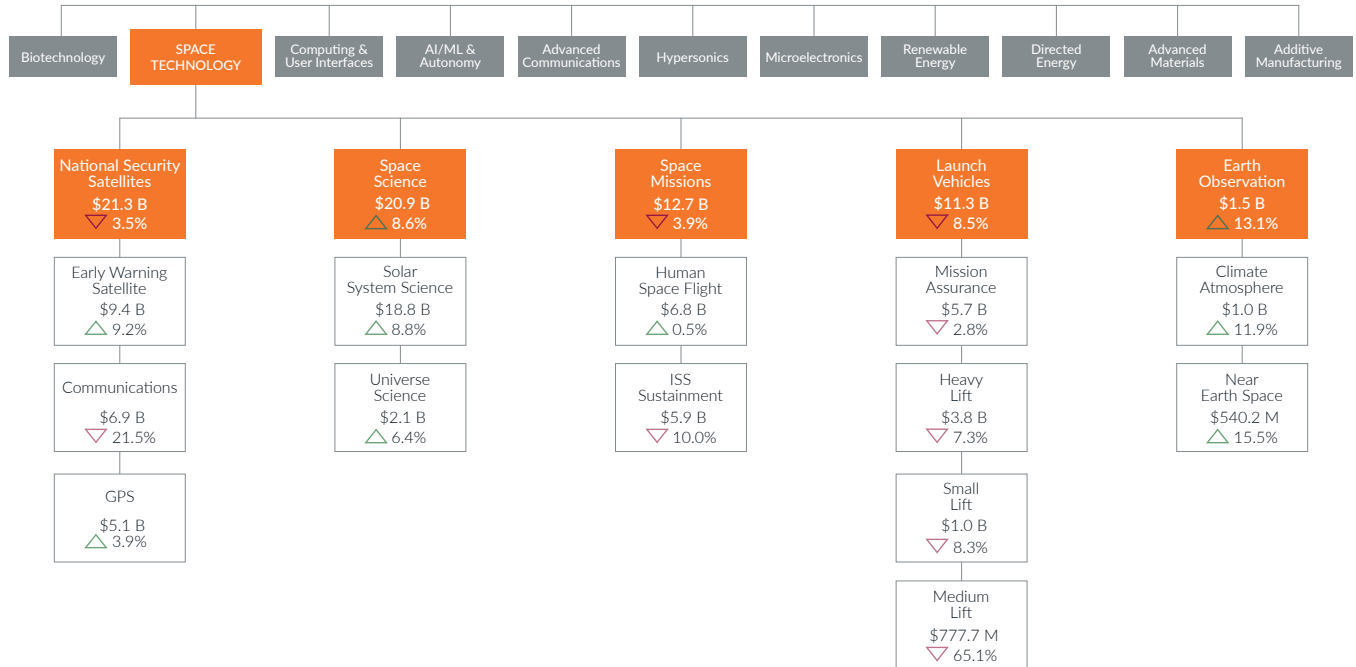
COMPANY	LOCATION
AavantiBio Inc.	Cambridge, MA
Capsida Biotherapeutics Inc.	Thousand Oaks, CA
Dyno Therapeutics Inc.	Watertown, MA
SomaLogic Inc. (SLGC)	Boulder, CO
Umoja Biopharma	Seattle, WA

### NOTABLE INVESTORS

COMPANY	LOCATION
5AM Ventures	San Francisco, CA
ARCH Venture Partners	Chicago, IL
Atlas Venture	Cambridge, MA
OrbiMed Advisors LLC	New York, NY
Third Rock Ventures	Boston, MA

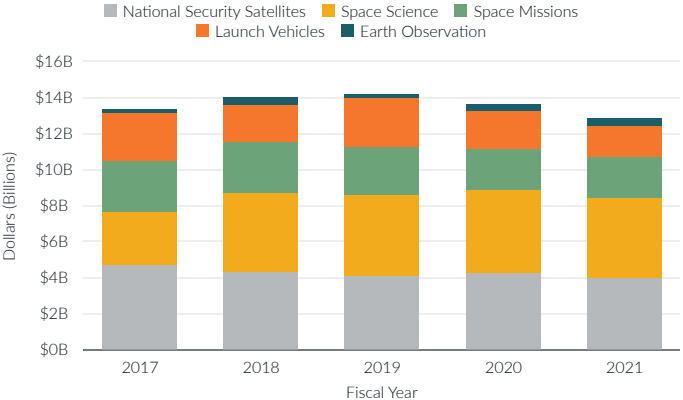
# SPACE TECHNOLOGY

## TAXONOMY

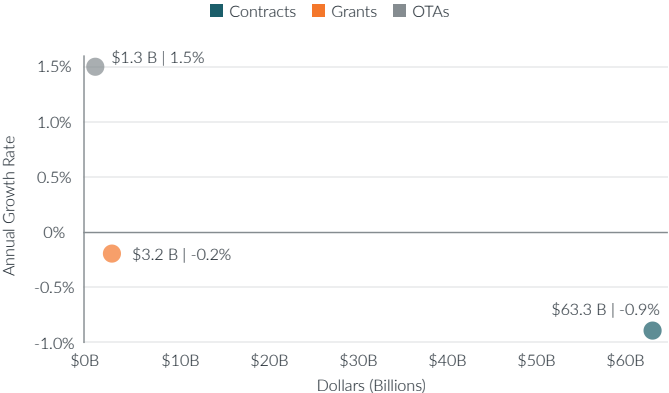


# SPACE TECHNOLOGY OVERVIEW

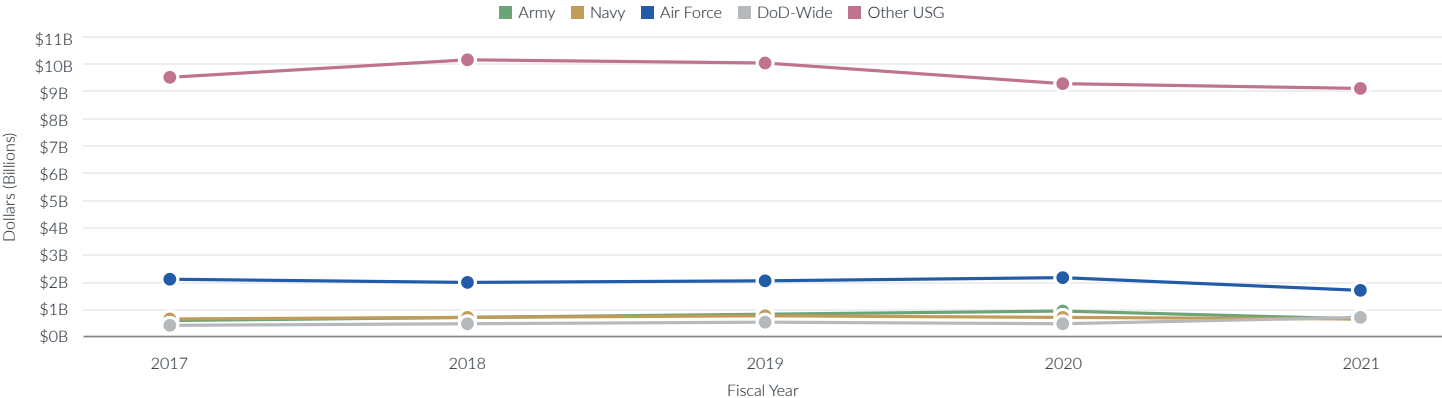
Spend by Segment, FY17-21



Award Type Velocity, FY17-21



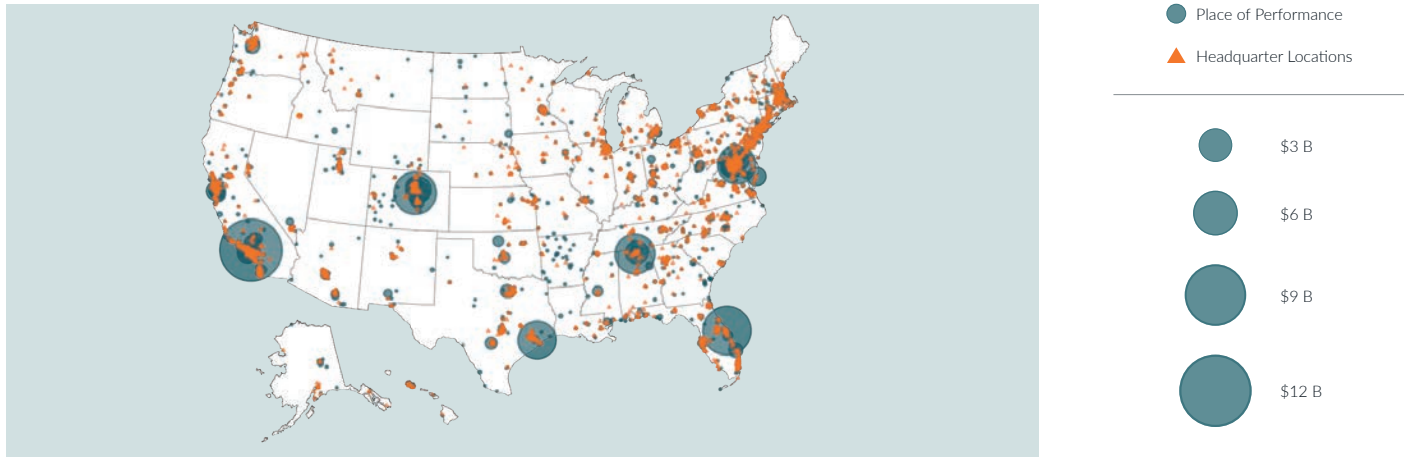
Segment Spend by Government Agencies, FY17-21



# SPACE TECHNOLOGY

## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

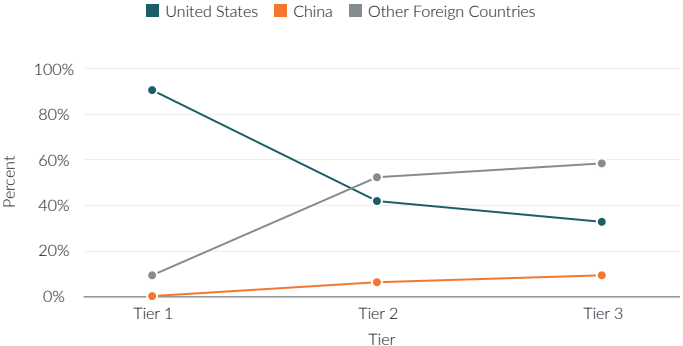
■ National Security Satellites 
 ■ Space Science 
 ■ Space Missions 
 ■ Launch Vehicles 
 ■ Earth Observation

California Institute of Technology \$5.3 B	Northrop Grumman Corp. (NOC)   \$1.0 B	KBR Inc. (KBR) \$897.2 M	Lockheed Martin Corp. (LMT) \$4.7 B
Boeing Co. (BA) \$3.1 B			Boeing Co. (BA) \$3.2 B
California Institute of Technology \$3.9 B	Northrop Grumman Corp. (NOC) \$1.7 B	Lockheed Martin Corp. (LMT) \$1.6 B	Boeing Co. (BA) \$1.7 B
Raytheon Technologies Corp. (RTX) \$2.5 B	L3Harris Technologies Inc. (LHX)   \$895.2 M		Jacobs Engineering Group Inc. (J) \$1.6 B
			United Launch Alliance LLC \$1.5 B

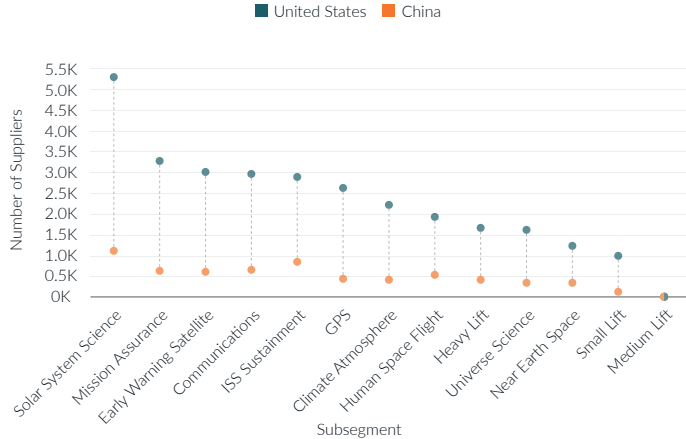
# SPACE TECHNOLOGY

## SUPPLIER ANALYTICS

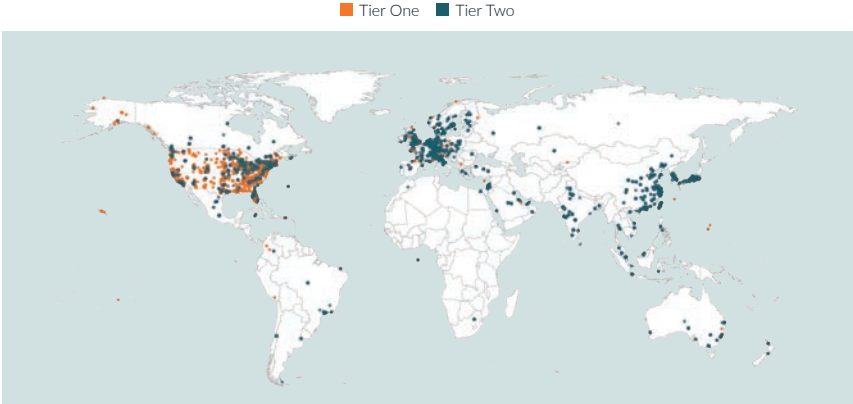
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	5,172	5,509	21,589
Great Britain	73	773	3,502
Japan	43	753	5,736
China	5	736	5,890
Canada	55	537	1,674

# SPACE TECHNOLOGY

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	— 1	Boeing Co. (BA)	\$1.6 B	\$8.7 B	▽ 1.0%	\$6.5 M	A (94)	40.0%
2	— 2	Lockheed Martin Corp. (LMT)	\$1.1 B	\$7.2 B	▽ 11.4%	\$5.2 M	A+ (95)	8.2%
3	△ 19	SpaceX	\$995.8 M	\$1.6 B	△ 52.6%	\$9.4 M	B+ (89)	0.0%
4	▽ 3	California Institute of Technology	\$937.0 M	\$9.2 B	▽ 16.8%	\$1.2 M	B+ (89)	99.6%
5	▽ 4	Northrop Grumman Corp. (NOC)	\$656.2 M	\$3.3 B	△ 2.4%	\$3.0 M	A+ (98)	25.7%
6	— 6	Jacobs Engineering Group Inc. (J)	\$549.9 M	\$2.4 B	△ 25.5%	\$4.7 M	A+ (99)	0.0%
7	▽ 5	Raytheon Technologies Corp. (RTX)	\$506.9 M	\$2.8 B	▽ 0.9%	\$2.5 M	A+ (97)	9.7%
8	— 8	KBR Inc. (KBR)	\$308.4 M	\$1.4 B	△ 4.6%	\$1.9 M	A+ (98)	0.0%
9	△ 10	Blue Origin LLC	\$251.6 M	\$482.3 M	— -	\$28.4 M	B (81)	0.0%
10	▽ 9	L3Harris Technologies Inc. (LHX)	\$247.6 M	\$996.2 M	△ 15.2%	\$1.0 M	A+ (98)	9.2%

### NOTABLE EMERGENT COMPANIES

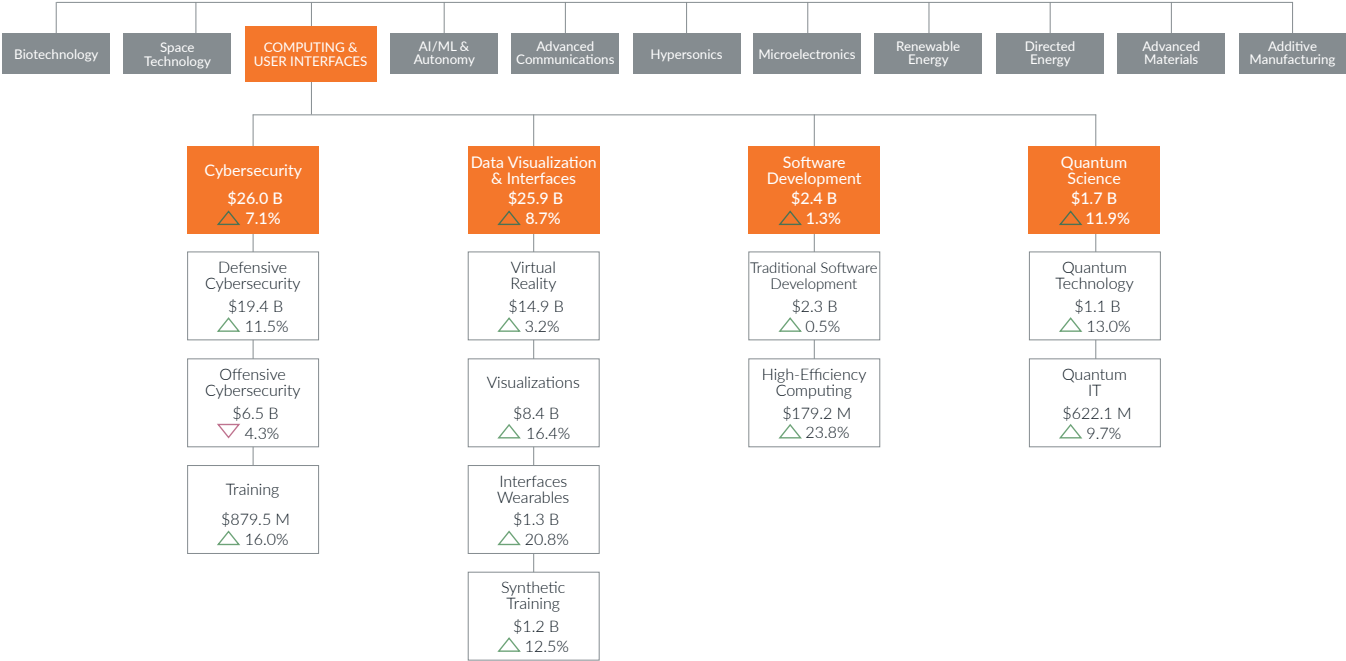
COMPANY	LOCATION
ABL Space Systems	El Segundo, CA
ICEYE	Espoo, Finland
Kymeta Corp.	Redmond, WA
Planet Labs PBC (PL)	San Francisco, CA
Relativity Space	Los Angeles, CA

### NOTABLE INVESTORS

COMPANY	LOCATION
Hemisphere Ventures	Mckinney, TX
Lux Capital	New York, NY
RRE Ventures	New York, NY
Space Capital LP	New York, NY
Techstars Starburst Space	Los Angeles, CA

# COMPUTING & USER INTERFACES

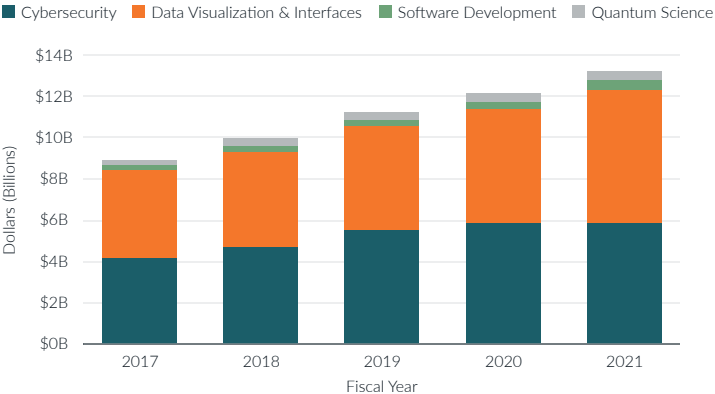
TAXONOMY



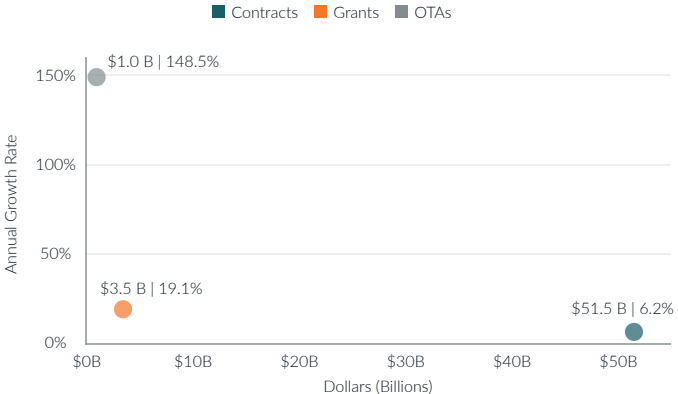
# COMPUTING & USER INTERFACES

## OVERVIEW

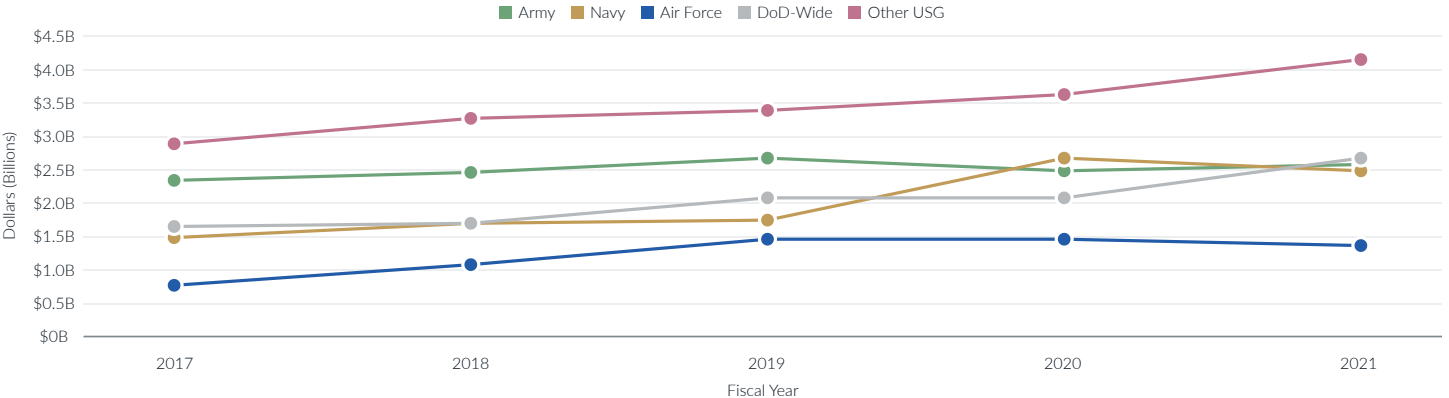
Spend by Segment, FY17-21



Award Type Velocity, FY17-21



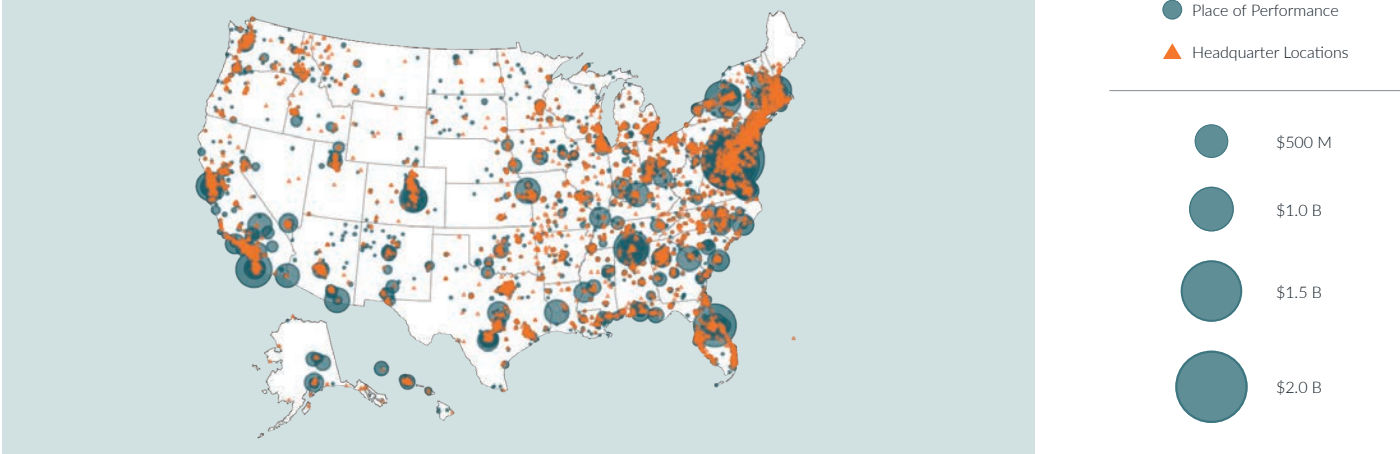
Segment Spend by Government Agencies, FY17-21



# COMPUTING & USER INTERFACES

## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

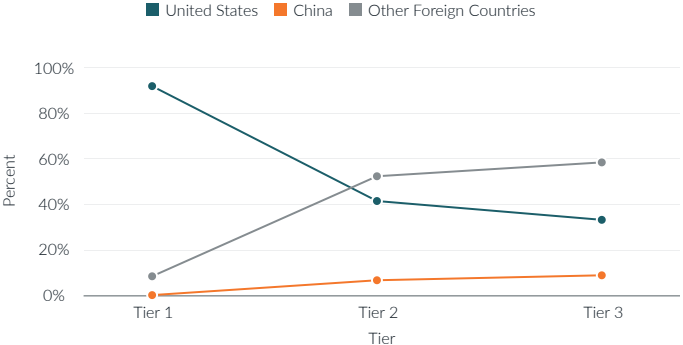
■ Cybersecurity 
 ■ Data Visualization & Interfaces 
 ■ Software Development 
 ■ Quantum Science

Leidos Inc. (LDOS) \$2.0 B	Northrop Grumman Corp. (NOC) \$956.3 M	Booz Allen Hamilton Holding Corp. (BAH)   \$664.8 M	L3Harris Technologies Inc. (LHX)   \$584.7 M	BAE Systems PLC (BAESY)   \$549.4 M		Software Development
	General Dynamics Corp. (GD) \$948.5 M	Jacobs Engineering Group Inc. (J)   \$538.1 M				
Lockheed Martin Corp. (LMT) \$1.4 B	Raytheon Technologies Corp. (RTX) \$686.2 M					Software Development
						Software Development
Palantir Technologies Inc. (PLTR) \$1.2 B	Johns Hopkins University \$680.0 M	Science Applications Int. Corp. (SAIC)   \$589.1 M	Booz Allen Hamilton Holding Corp. (BAH) \$492.1 M	MITRE Corp. \$448.6 M	Leidos Inc. (LDOS) \$387.5M	Software Development
	Raytheon Technologies Corp. (RTX) \$679.9 M	General Dynamics Corp. (GD) \$583.7 M				Software Development
Lockheed Martin Corp. (LMT) \$1.0 B	Northrop Grumman Corp. (NOC) \$594.1 M	Valiant Integrated Services LLC \$530.0 M				Software Development
						Software Development

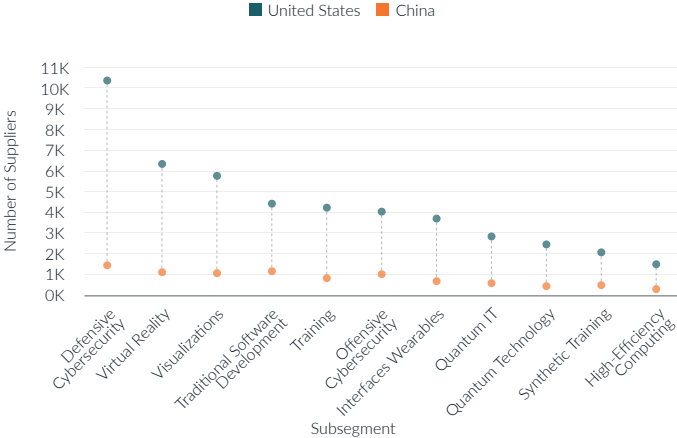
# COMPUTING & USER INTERFACES

## SUPPLIER ANALYTICS

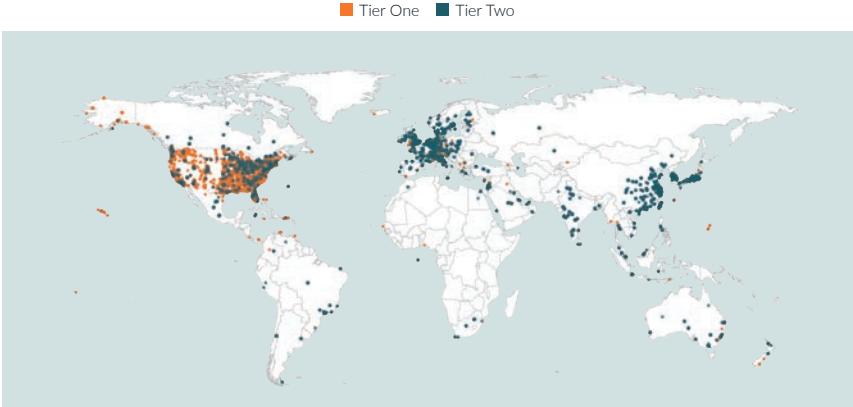
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	12,713	8,967	28,160
China	10	1,446	7,614
Japan	102	1,380	7,690
Great Britain	146	1,287	4,379
South Korea	14	902	5,035

# COMPUTING & USER INTERFACES

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	△ 2	Lockheed Martin Corp. (LMT)	\$867.3 M	\$2.4 B	△ 14.9%	\$2.4 M	A+ (95)	42.3%
2	△ 4	Palantir Technologies Inc. (PLTR)	\$397.8 M	\$1.2 B	△ 24.7%	\$3.1 M	B+ (89)	45.7%
3	△ 6	Raytheon Technologies Corp. (RTX)	\$390.1 M	\$1.4 B	△ 12.4%	\$1.5 M	A+ (97)	33.6%
4	△ 5	General Dynamics Corp. (GD)	\$347.2 M	\$1.7 B	△ 7.0%	\$814.4 K	A+ (98)	25.1%
5	▽ 1	Leidos Inc. (LDOS)	\$274.7 M	\$2.4 B	▽ 3.0%	\$1.0 M	A+ (98)	1.8%
6	△ 7	Booz Allen Hamilton Holding Corp. (BAH)	\$262.3 M	\$1.3 B	△ 3.1%	\$668.2 K	A+ (98)	0.1%
7	△ 17	Jacobs Engineering Group Inc. (J)	\$249.1 M	\$685.9 M	△ 28.1%	\$687.3 K	A+ (99)	10.5%
8	— 8	Science Applications International Corp. (SAIC)	\$230.9 M	\$940.3 M	△ 14.0%	\$912.0 K	A+ (96)	2.6%
9	▽ 3	Northrop Grumman Corp. (NOC)	\$225.5 M	\$1.6 B	▽ 2.5%	\$1.6 M	A+ (98)	8.2%
10	— 10	L3Harris Technologies Inc. (LHX)	\$215.8 M	\$722.2 M	△ 14.4%	\$942.8 K	A+ (98)	48.5%

### NOTABLE EMERGENT COMPANIES

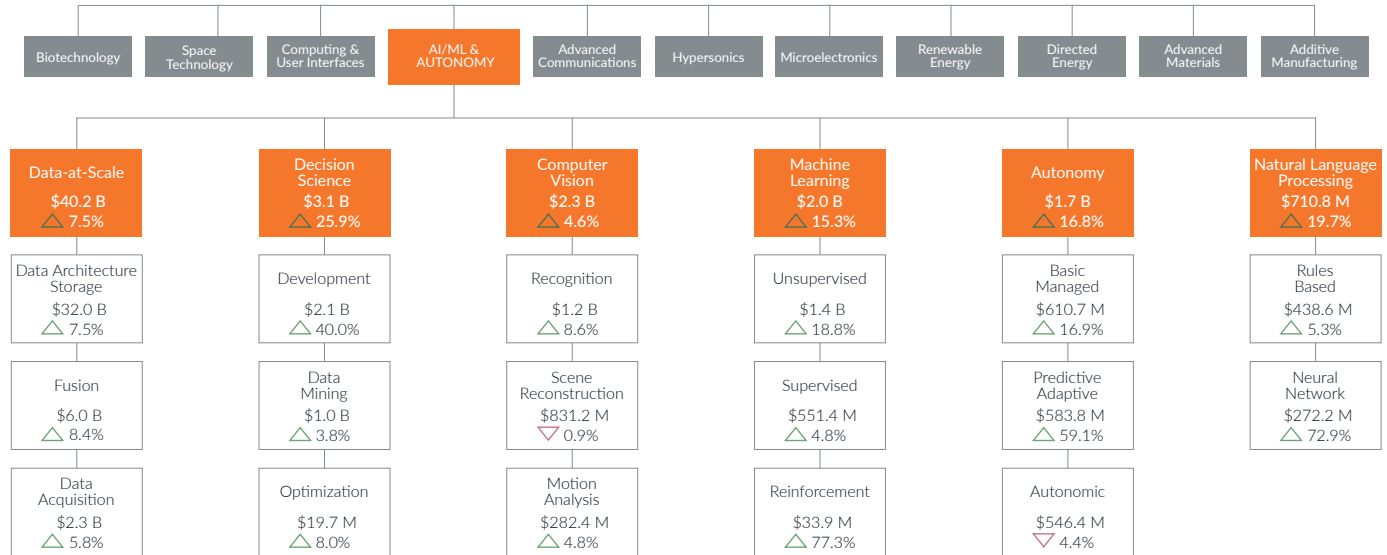
COMPANY	LOCATION
ColdQuanta	Boulder, CO
QC Ware	Palto Alto, CA
Red 6	Orlando, FL
Rigetti Computing (RGTI)	Berkeley, CA
Zapata Computing	Boston, MA

### NOTABLE INVESTORS

COMPANY	LOCATION
Bessemer Venture Partners	San Francisco, CA
Comcast Ventures	San Francisco, CA
Maverick Ventures	San Francisco, CA
Pegasus Tech Ventures	San Jose, CA
Snowpoint Ventures	San Francisco, CA

# AI/ML & AUTONOMY

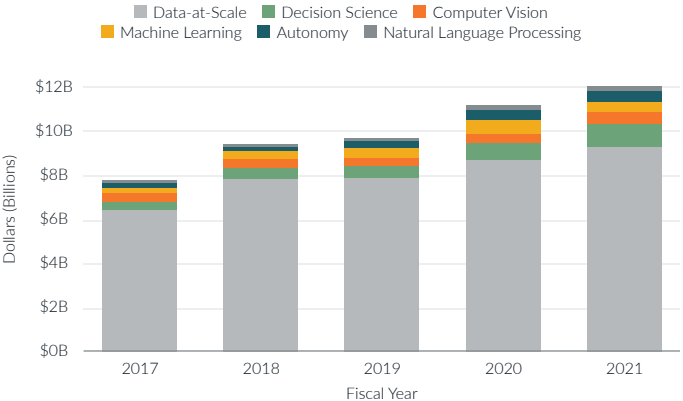
## TAXONOMY



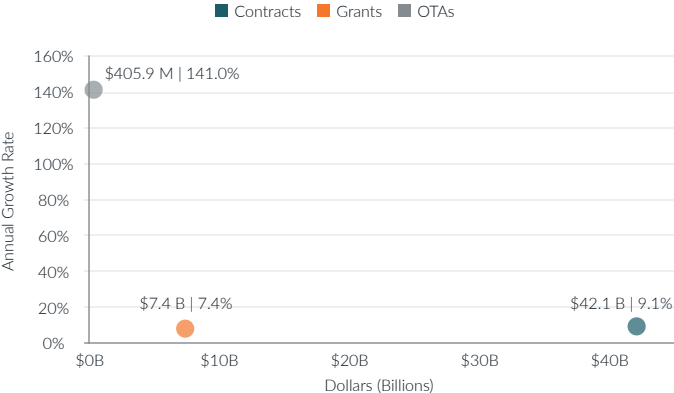
# AI/ML & AUTONOMY

## OVERVIEW

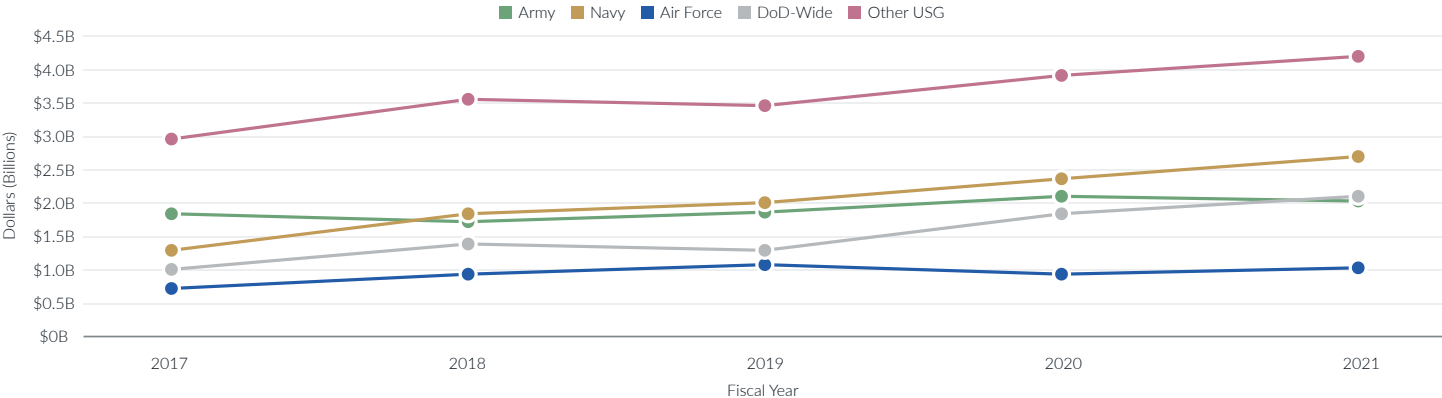
Spend by Segment, FY17-21



Award Type Velocity, FY17-21



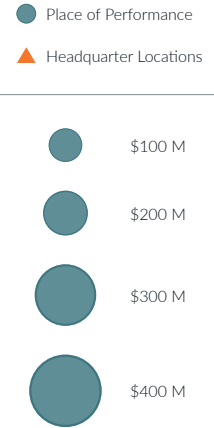
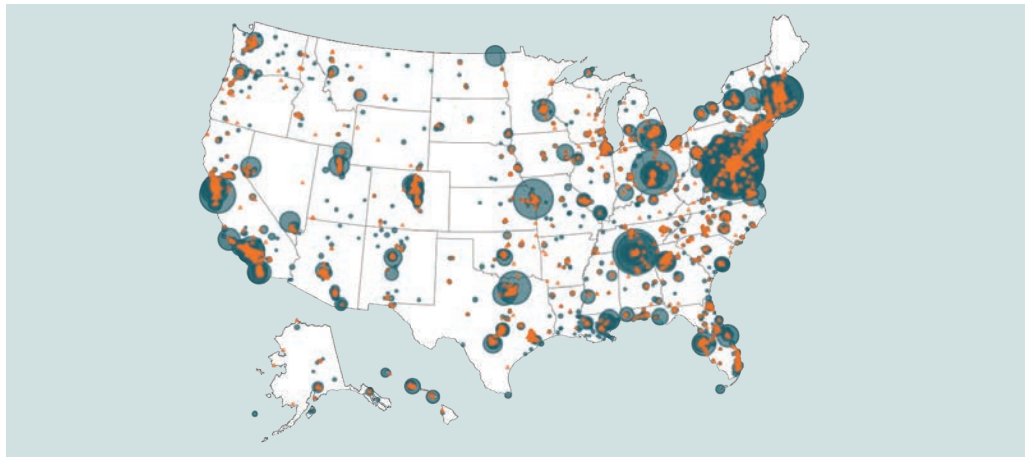
Segment Spend by Government Agencies, FY17-21



# AI/ML & AUTONOMY

## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

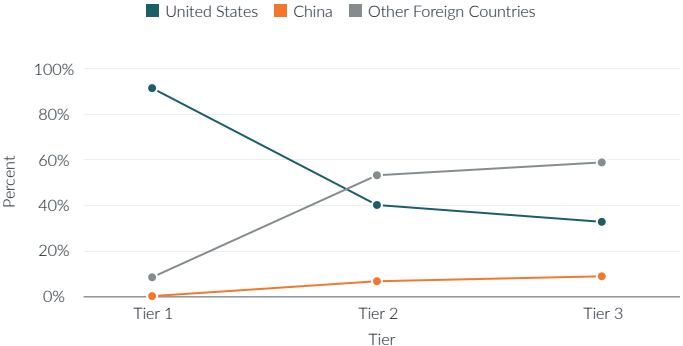
■ Data-at-Scale ■ Decision Science ■ Computer Vision ■ Machine Learning ■ Autonomy ■ Natural Language Processing

Leidos Inc. (LDOS) \$1.8 B	Science Applications International Corp. (SAIC) \$1.4 B	Raytheon Technologies Corp. (RTX) \$1.4 B	Northrop Grumman Corp. (NOC) \$431.7 M
General Dynamics Corp. (GD) \$1.3 B	Lockheed Martin Corp. (LMT) \$990.9 M	Northrop Grumman Corp. (NOC) \$746.5 M	
BAE Systems PLC (BAESY) \$1.3 B	Peraton (formerly Perspecta Inc.) \$652.3 M	Jacobs Engineering Group Inc. (J) \$597.1 M	TRAX Int. Corp. \$507.6 M
Booz Allen Hamilton Holding Corp. (BAH) \$1.0 B	Leonardo S.p.A (FINMY) \$445.1 M	State of California \$413.3 M	Four Points Technology LLC   \$371.6 M
	Johnsons Controls Int. PLC (JCI) \$415.2 M	KBR Inc. (KBR) \$388.8 M	Serco Group PLC \$347.3 M

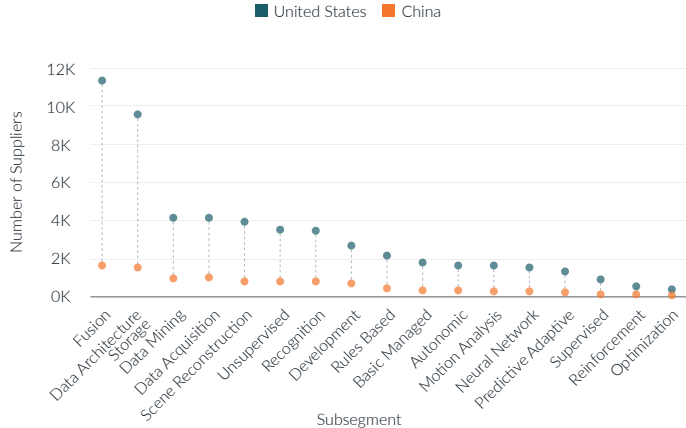
# AI/ML & AUTONOMY

## SUPPLIER ANALYTICS

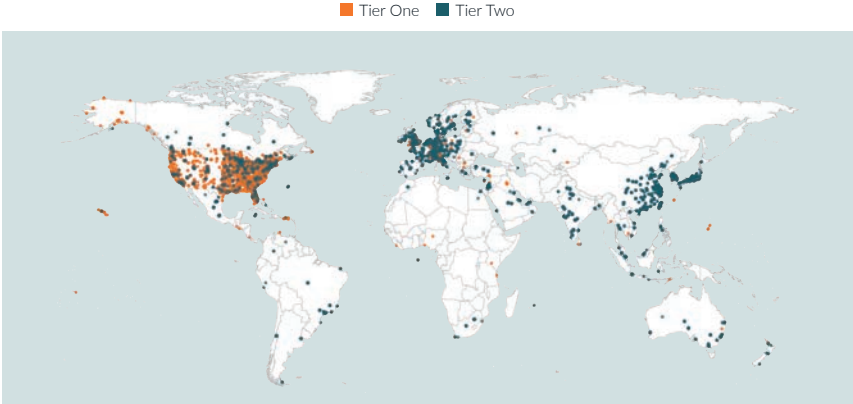
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	15,437	10,268	32,686
China	17	1,758	8,879
Japan	115	1,639	8,847
Great Britain	232	1,585	5,310
South Korea	27	1,153	5,656

# AI/ML & AUTONOMY

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	△ 3	Leidos Inc. (LDOS)	\$570.3 M	\$1.9 B	△ 17.5%	\$1.1 M	A+ (98)	4.9%
2	△ 7	Lockheed Martin Corp. (LMT)	\$496.0 M	\$1.2 B	△ 14.6%	\$1.1 M	A+ (95)	57.5%
3	▽ 2	Northrop Grumman Corp. (NOC)	\$392.4 M	\$1.3 B	△ 33.1%	\$1.0 M	A+ (98)	43.0%
4	▽ 1	Science Applications International Corp. (SAIC)	\$384.7 M	\$1.5 B	△ 10.5%	\$707.2 K	A+ (96)	0.2%
5	△ 6	General Dynamics Corp. (GD)	\$326.8 M	\$1.4 B	△ 7.4%	\$901.1 K	A+ (98)	10.6%
6	▽ 4	Raytheon Technologies Corp. (RTX)	\$323.7 M	\$1.6 B	△ 3.8%	\$1.1 M	A+ (97)	33.6%
7	▽ 5	BAE Systems PLC (BAESY)	\$281.5 M	\$1.4 B	△ 4.4%	\$646.0 K	A+ (98)	29.2%
8	— 8	Booz Allen Hamilton Holding Corp. (BAH)	\$196.3 M	\$1.1 B	△ 3.8%	\$711.7 K	A+ (98)	1.1%
9	— 9	KBR Inc. (KBR)	\$190.6 M	\$608.4 M	△ 33.1%	\$753.9 K	A+ (98)	0.0%
10	— 10	Jacobs Engineering Group Inc. (J)	\$163.0 M	\$628.4 M	△ 17.8%	\$862.1 K	A+ (99)	0.0%

### NOTABLE EMERGENT COMPANIES

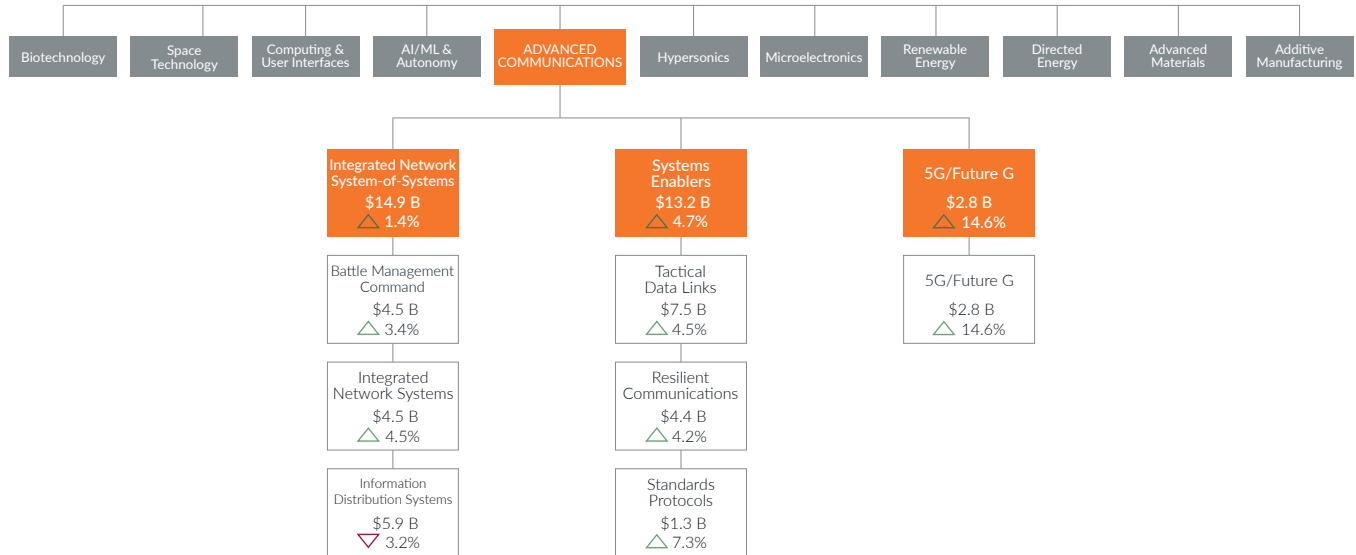
COMPANY	LOCATION
Anduril Industries Inc.	Irvine, CA
Applied Intuition	Mountain View, CA
Databricks	San Francisco, CA
ModalAI Inc.	San Diego, CA
Shield AI Inc.	San Diego, CA

### NOTABLE INVESTORS

COMPANY	LOCATION
Accel	Palo Alto, CA
Andreessen Horowitz	Menlo Park, CA
Bessemer Venture Partners	Redwood City, CA
Greylock	Menlo Park, CA
Sequoia Capital	Menlo Park, CA

# ADVANCED COMMUNICATIONS

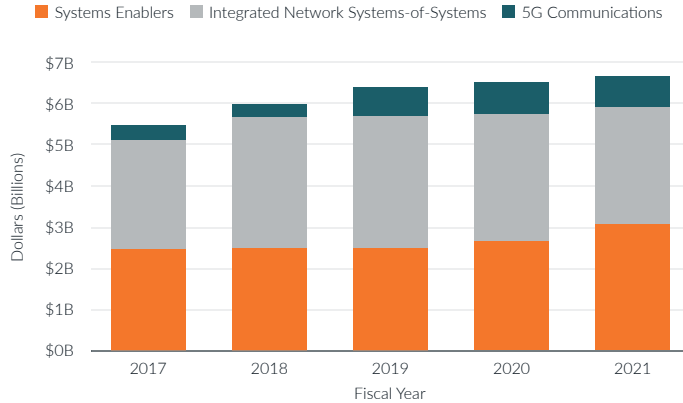
## TAXONOMY



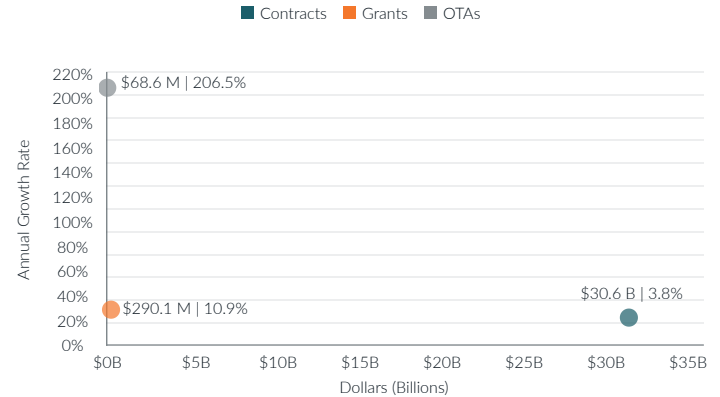
# ADVANCED COMMUNICATIONS

## OVERVIEW

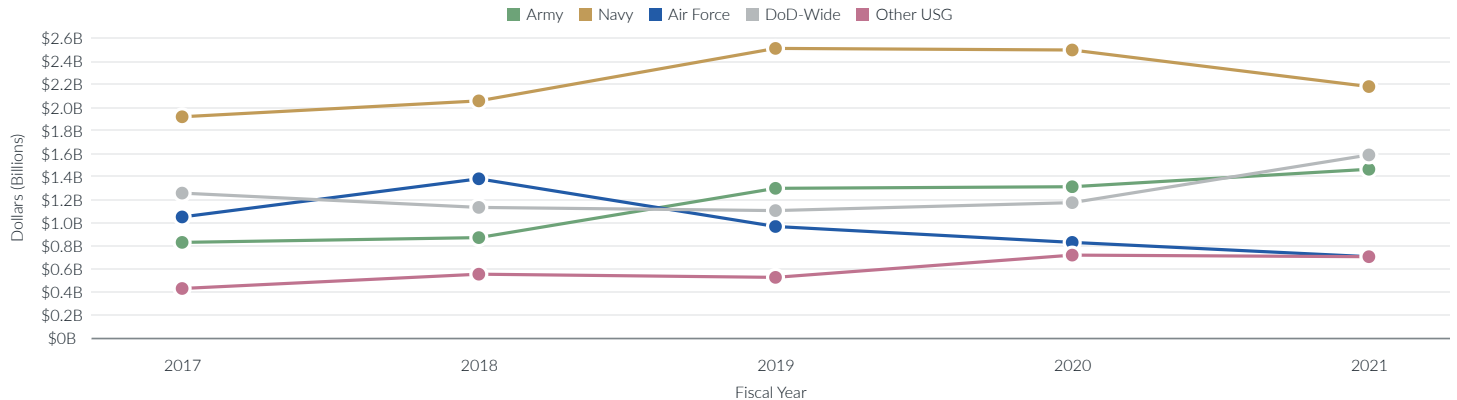
Spend by Segment, FY17-21



Award Type Velocity, FY17-21



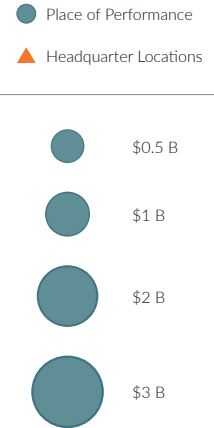
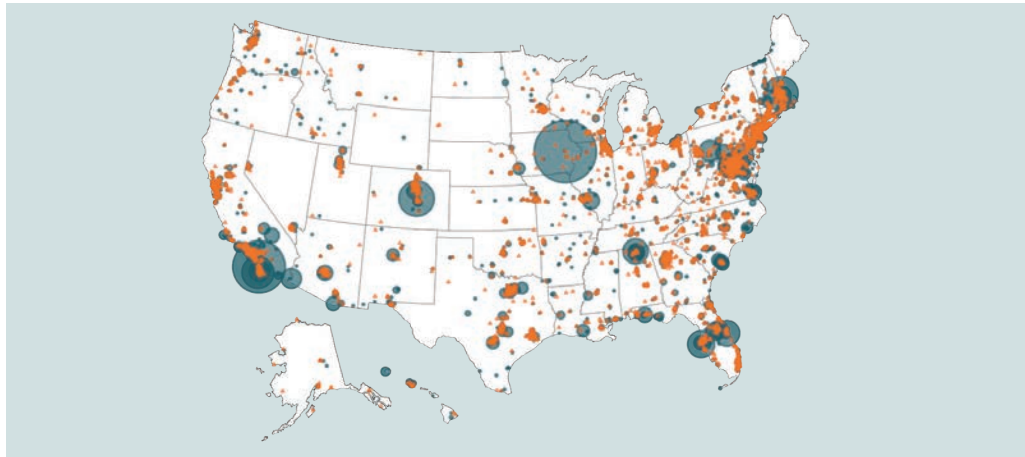
Segment Spend by Government Agencies, FY17-21



# ADVANCED COMMUNICATIONS

## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

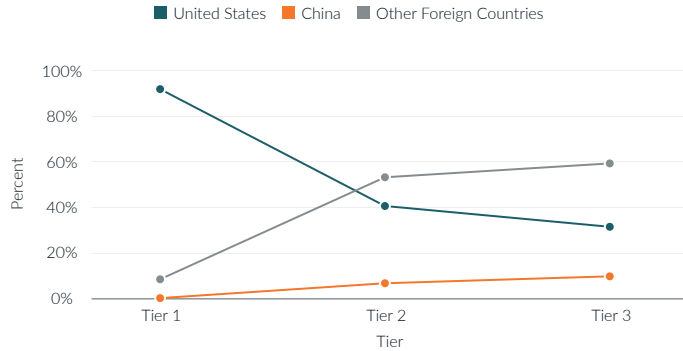
■ Integrated Network Systems-of-Systems ■ Systems Enablers ■ 5G Communications

Raytheon Technologies Corp. (RTX) \$2.8 B		Raytheon Technologies Corp. (RTX) \$987.6 M		Lockheed Martin Corp. (LMT) \$793.9 M	
Lockheed Martin Corp. (LMT) \$1.8 B		Viasat Inc. (VSAT) \$1.0 B		Northrop Grumman Corp. (NOC) \$761.0 M	
Leonardo S.p.A. (FINMY) \$859.8 M		Serco Group PLC \$465.5 M		L3Harris Technologies Inc. (LHX) \$586.4 M	
Northrop Grumman Corp. (NOC)   \$487.3 M		BAE Systems PLC (BAESY)   \$289.7 M		BAE Systems PLC (BAESY) \$417.6 M	
				G4S Ltd. \$372.0 M	
				Fleet Vehicle Source Inc. \$328.3 M	
				TRAX Int. Corp. \$306.4 M	
				Peraton (formally Perspecta Inc.)   \$369.1 M	
				The Boeing Co. (BA) \$332.5 M	
				Amentum Government Services Holdings LLC   \$547.9 M	
				Peraton (formally Perspecta Inc.) \$493.9 M	

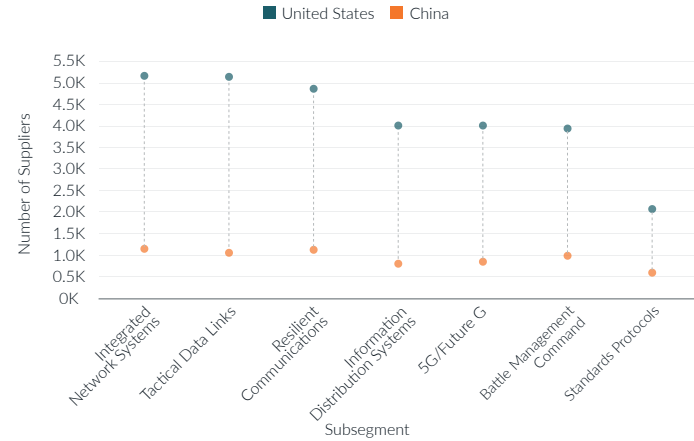
# ADVANCED COMMUNICATIONS

## SUPPLIER ANALYTICS

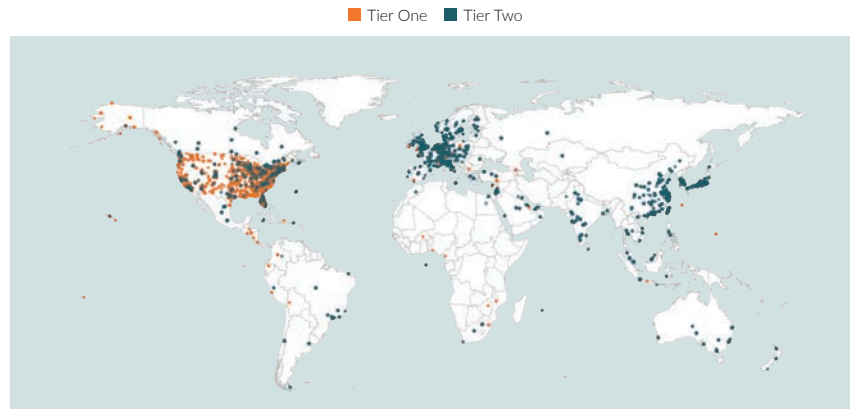
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	5,807	5,922	17,500
Japan	55	1,002	5,299
China	5	972	5,465
Great Britain	71	947	2,910
Canada	47	542	1,393

# ADVANCED COMMUNICATIONS

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	— 1	Raytheon Technologies Corp. (RTX)	\$790.7 M	\$3.8 B	△ 5.9%	\$1.6 M	A+ (97)	60.9%
2	— 2	Lockheed Martin Corp. (LMT)	\$489.1 M	\$2.6 B	▽ 2.5%	\$1.5 M	A+ (95)	96.3%
3	△ 4	Viasat Inc. (VSAT)	\$226.8 M	\$1.2 B	△ 15.3%	\$1.3 M	A+ (98)	60.4%
4	△ 6	Northrop Grumman Corp. (NOC)	\$215.6 M	\$1.3 B	▽ 5.4%	\$872.0 K	A+ (98)	49.2%
5	▽ 3	BAE Systems PLC (BAESY)	\$210.9 M	\$1.0 B	△ 15.2%	\$411.8 K	A+ (98)	13.7%
6	△ 159	Charles Stark Draper Laboratory Inc.	\$207.5 M	\$208.1 M	△ 221.9%	\$52.0 M	A+ (97)	100.0%
7	▽ 5	Leonardo SPA (FINMY)	\$190.6 M	\$1.0 B	△ 24.2%	\$1.8 M	-	7.1%
8	△ 13	Science Applications International Corp. (SAIC)	\$169.6 M	\$401.9 M	△ 58.2%	\$730.8 K	A+ (96)	0.2%
9	△ 10	L3Harris Technologies Inc. (LHX)	\$162.5 M	\$793.8 M	▽ 0.1%	\$834.7 K	A+ (98)	75.8%
10	▽ 8	Amentum Government Services LLC	\$122.0 M	\$555.4 M	△ 3.7%	\$2.5 M	A+ (96)	0.0%

### NOTABLE EMERGENT COMPANIES

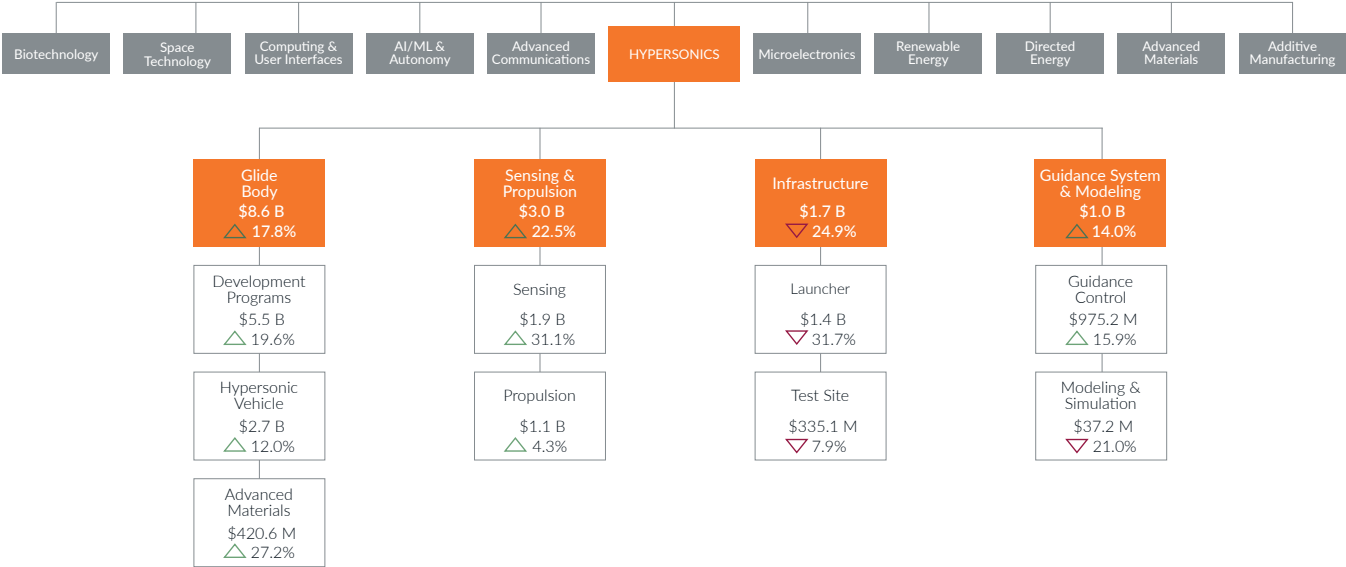
COMPANY	LOCATION
Alyria Technologies Inc.	Livermore, CA
Arista Networks Inc. (ANET)	Santa Clara, CA
Celona Inc.	Cupertino, CA
Cohere Technologies	Santa Clara, CA
OXIO	New York, NY

### NOTABLE INVESTORS

COMPANY	LOCATION
Columbia Capital	Alexandria, VA
Lightspeed Venture Partners	Menlo Park, CA
New Enterprise Associates LLC	Menlo Park, CA
SOSV	Princeton, NJ
Western Technology Investment	Portola Valley, CA

# HYPERSONICS

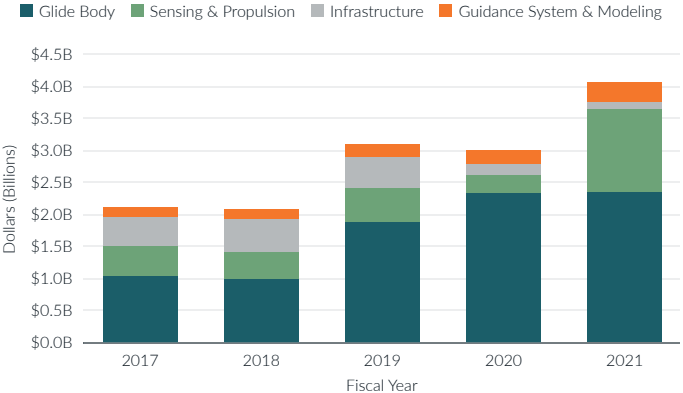
TAXONOMY



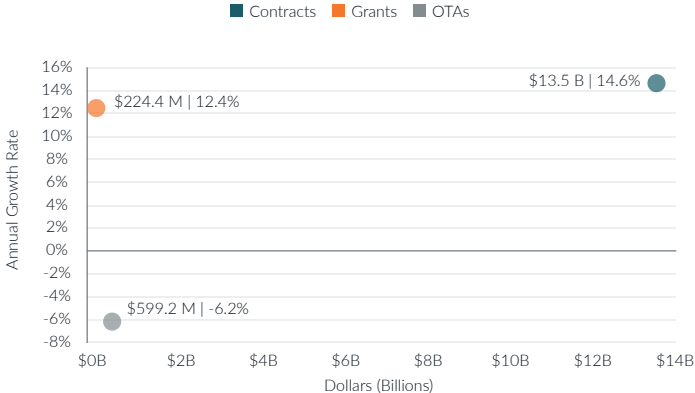
# HYPERSONICS

## OVERVIEW

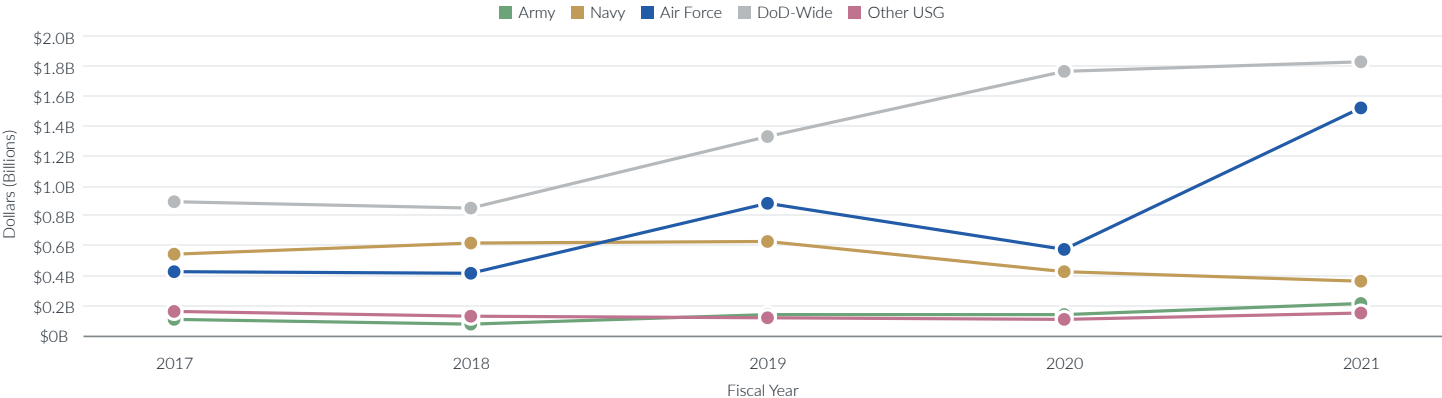
Spend by Segment, FY17-21



Award Type Velocity, FY17-21



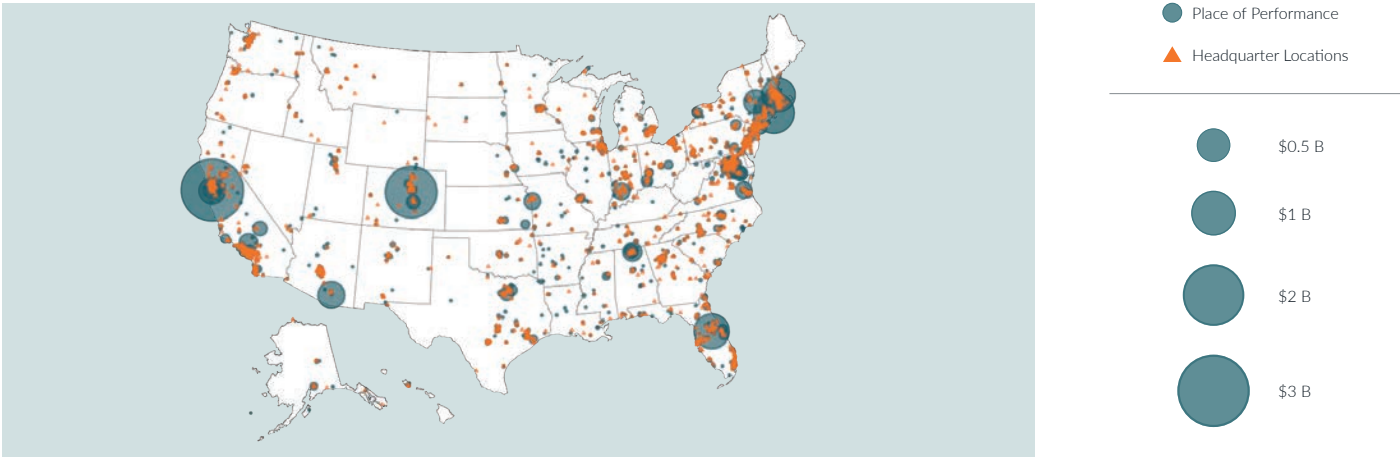
Segment Spend by Government Agencies, FY17-21



# HYPERSONICS

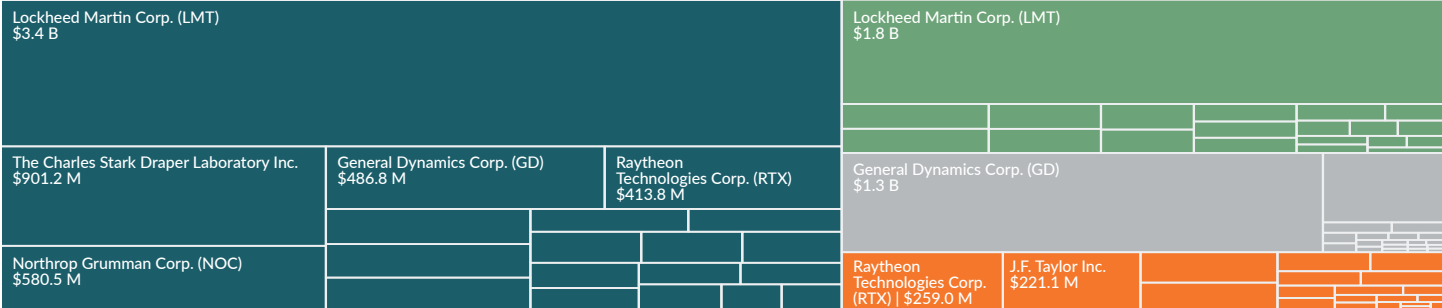
## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

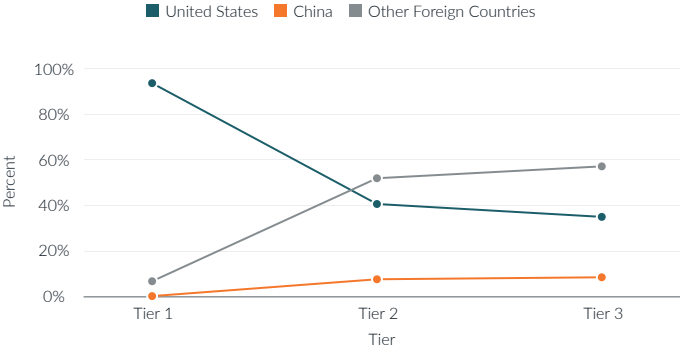
█ Glide Body █ Sensing & Propulsion █ Infrastructure █ Guidance System & Modeling



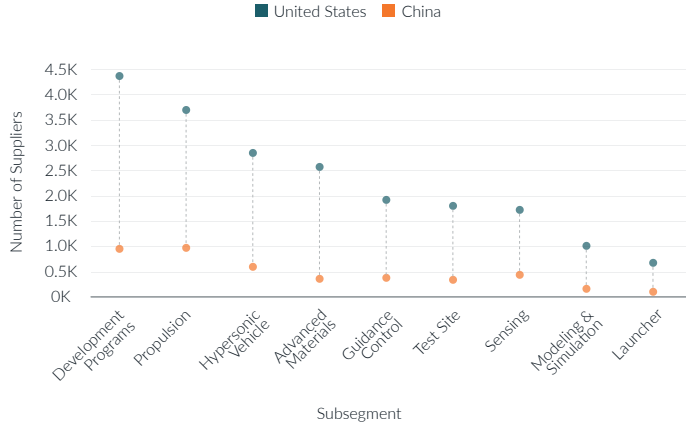
# HYPERSONICS

## SUPPLIER ANALYTICS

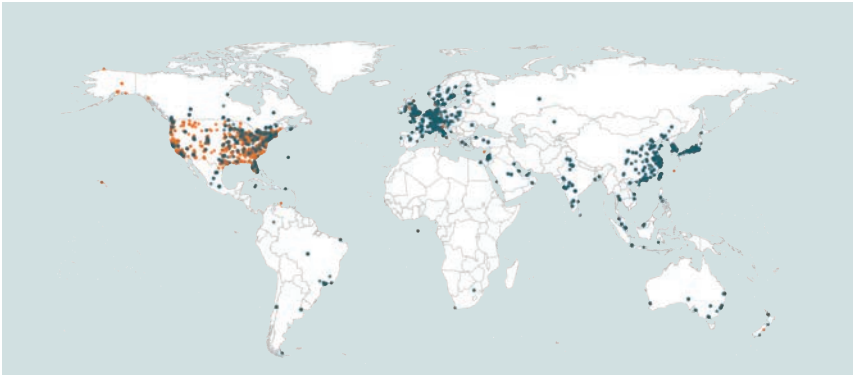
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	2,217	3,528	15,184
China	3	671	3,641
Great Britain	39	555	2,401
Japan	20	497	3,707
India	1	340	1,436

# HYPERSONICS

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	— 1	Lockheed Martin Corp. (LMT)	\$2.2 B	\$5.2 B	△ 35.1%	\$5.0 M	A+ (95)	78.9%
2	△ 5	Raytheon Technologies Corp. (RTX)	\$245.2 M	\$752.9 M	△ 22.6%	\$1.7 M	A+ (97)	53.4%
3	△ 4	Northrop Grumman Corp. (NOC)	\$225.0 M	\$713.2 M	△ 27.5%	\$1.3 M	A+ (98)	90.7%
4	▽ 3	General Dynamics Corp. (GD)	\$169.1 M	\$1.9 B	▽ 18.1%	\$2.3 M	A+ (98)	94.8%
5	▽ 2	Charles Stark Draper Laboratory Inc.	\$163.1 M	\$901.2 M	△ 86.1%	\$3.6 M	A+ (97)	99.3%
6	△ 16	Science Applications International Corp. (SAIC)	\$72.4 M	\$135.3 M	△ 43.4%	\$420.2 K	A+ (96)	0.0%
7	▽ 6	Jacobs Engineering Group Inc. (J)	\$68.2 M	\$409.4 M	△ 2.7%	\$884.2 K	A+ (99)	13.9%
8	△ 154	L3Harris Technologies Inc. (LHX)	\$43.1 M	\$96.1 M	▽ 4.3%	\$835.7 K	A+ (98)	53.5%
9	△ 159	SpaceX	\$42.8 M	\$52.9 M	△ 33.4%	\$4.4 M	B+ (89)	0.0%
10	▽ 8	Systems Planning and Analysis Inc.	\$40.7 M	\$183.9 M	△ 8.6%	\$851.6 K	B+ (85)	69.9%

### NOTABLE EMERGENT COMPANIES

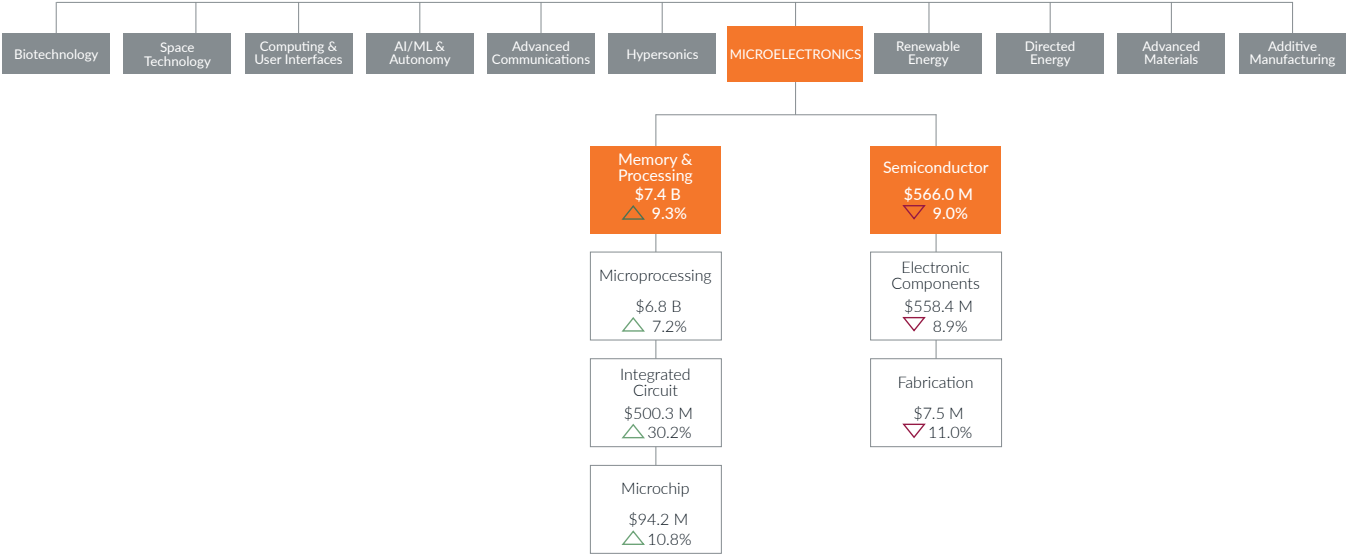
COMPANY	LOCATION
Hermeus Corp.	Atlanta, GA
HyperSciences	Spokane, WA
Karman Missile & Space Systems	Brea, CA
Reaction Engines Ltd.	Abingdon, United Kingdom
Ursa Major Technologies Inc.	Berthoud, CO

### NOTABLE INVESTORS

COMPANY	LOCATION
Caffeinated Capital	San Francisco, CA
Canaan Partners	Westport, CT
Explorer 1 Fund	San Francisco, CA
Prime Movers Lab	Jackson, WY
Revolution Ventures	Washington, DC

# MICROELECTRONICS

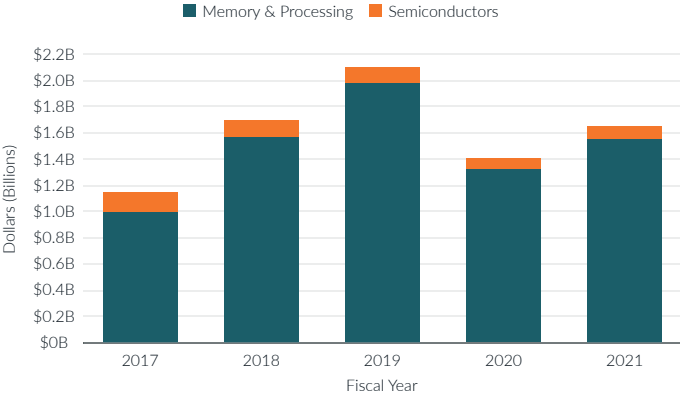
TAXONOMY



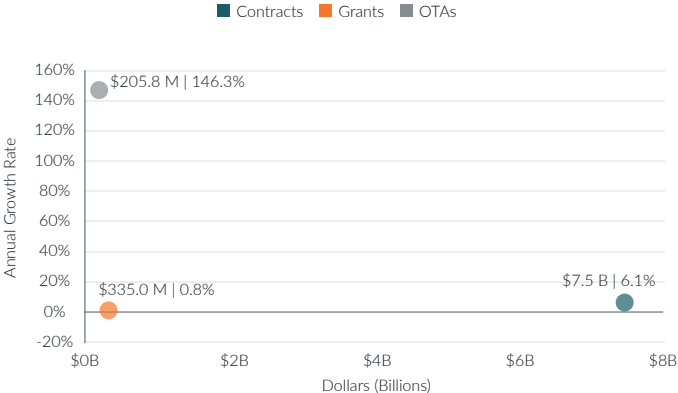
# MICROELECTRONICS

## OVERVIEW

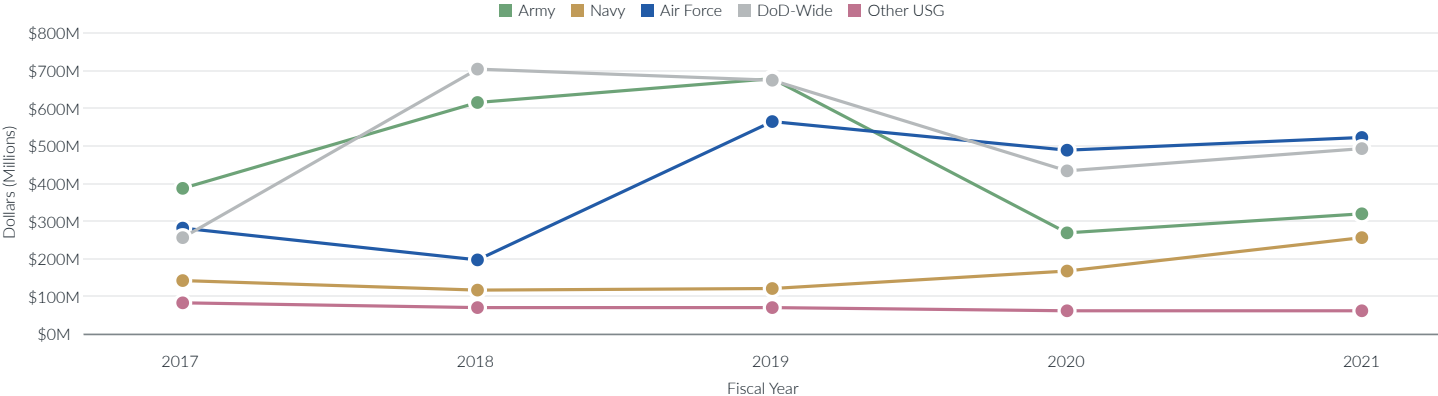
Spend by Segment, FY17-21



Award Type Velocity, FY17-21



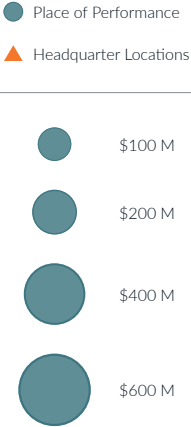
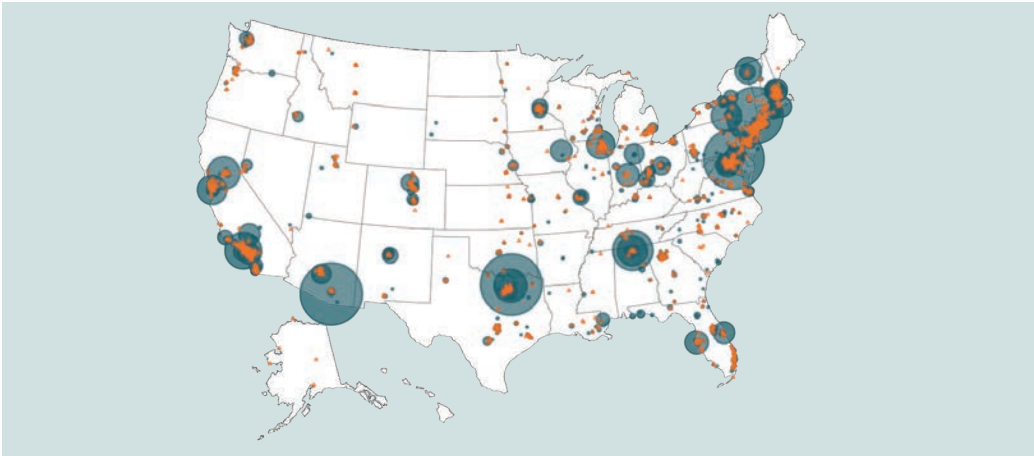
Segment Spend by Government Agencies, FY17-21



# MICROELECTRONICS

## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

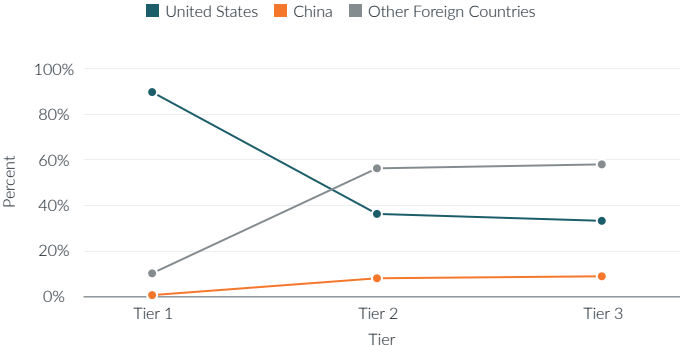
■ Memory & Processing   ■ Semiconductors

Raytheon Technologies Corp. (RTX) \$2.9 B		Northrop Grumman Corp. (NOC) \$1.9 B	
Global Foundries LLC \$622.1 M	Lockheed Martin Corp. (LMT) \$324.5 M	General Dynamics Corp. (GD) \$176.0 M	
	BAE Systems PLC (BAESY) \$254.1 M		

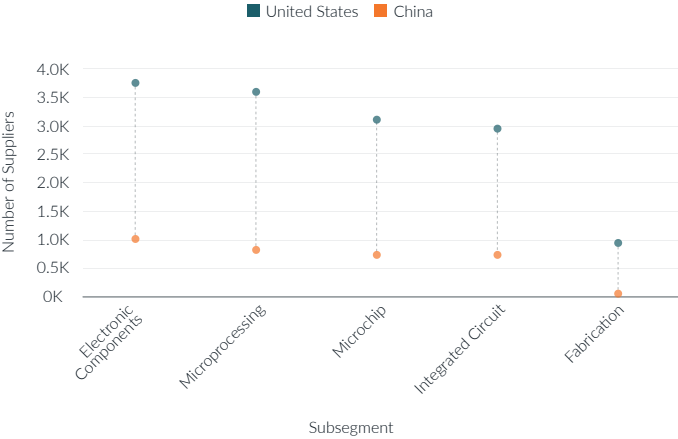
# MICROELECTRONICS

## SUPPLIER ANALYTICS

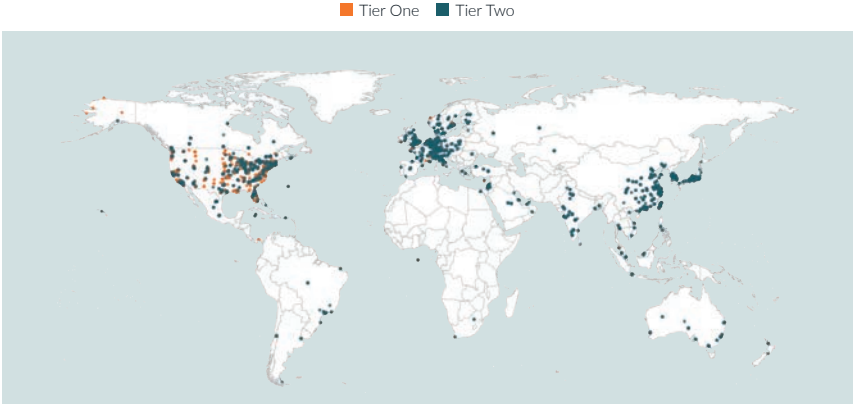
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	1,525	2,664	10,460
China	4	559	2,790
Japan	19	534	3,112
Great Britain	24	405	1,580
South Korea	4	369	1,920

# MICROELECTRONICS

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	— 1	Raytheon Technologies Corp. (RTX)	\$551.4 M	\$2.9 B	△ 6.6%	\$1.9 M	A+ (97)	7.1%
2	— 2	Northrop Grumman Corp. (NOC)	\$339.1 M	\$1.9 B	△ 5.5%	\$1.9 M	A+ (98)	0.5%
3	△ 7	National Security Technology Accelerator	\$133.4 M	\$166.1 M	— -	\$33.2 M	B (83)	0.0%
4	▽ 3	GlobalFoundries Inc. (GFS)	\$100.6 M	\$622.1 M	△ 12.1%	\$8.1 M	B+ (88)	100.0%
5	▽ 4	Lockheed Martin Corp. (LMT)	\$100.0 M	\$329.8 M	△ 16.9%	\$841.4 K	A+ (95)	2.2%
6	— 6	Marvell Technology Inc. (MRVL)	\$88.4 M	\$123.6 M	— -	\$5.1 M	A (90-94)	100.0%
7	△ 23	L3Harris Technologies Inc. (LHX)	\$47.7 M	\$65.1 M	△ 32.9%	\$442.6 K	A+ (98)	54.9%
8	▽ 5	BAE Systems PLC (BAESY)	\$29.4 M	\$254.1 M	▽ 10.2%	\$835.9 K	A+ (98)	1.1%
9	— 9	International Business Machines Corp. (IBM)	\$24.1 M	\$126.3 M	△ 7.9%	\$1.5 M	A+ (97)	99.5%
10	△ 84	Booz Allen Hamilton Holding Corp. (BAH)	\$13.8 M	\$14.6 M	— -	\$1.2 M	A+ (98)	0.0%

### NOTABLE EMERGENT COMPANIES

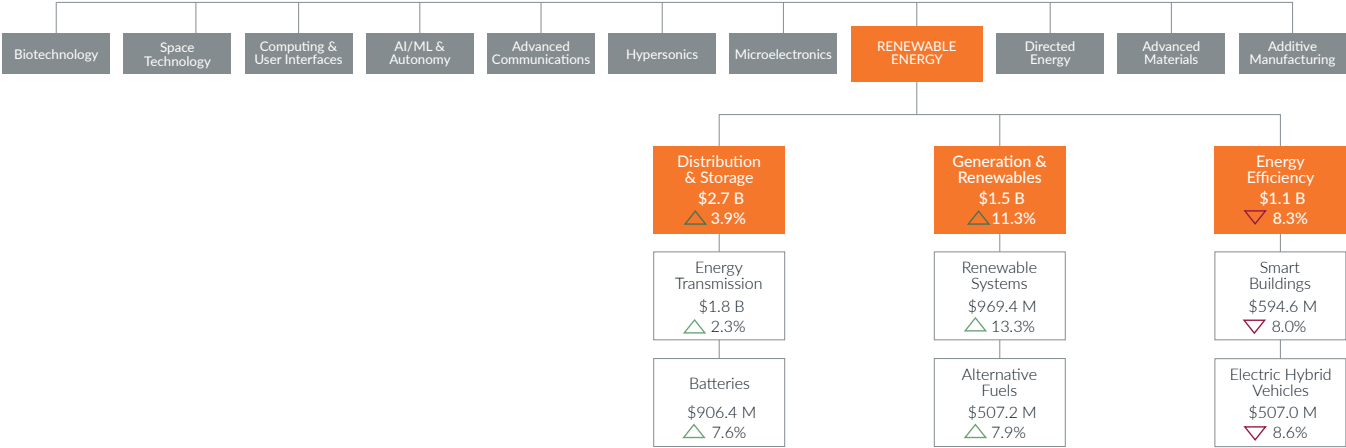
COMPANY	LOCATION
Alif Semiconductor	Pleasanton, CA
Ampere Computing LLC	Santa Clara, CA
Ayar Labs	Emeryville, CA
Fungible Inc.	Santa Clara, CA
Vayyar	Yehud-Monosson, Israel

### NOTABLE INVESTORS

COMPANY	LOCATION
Anthem Venture Partners	Santa Monica, CA
Intel Capital	Santa Clara, CA
Mayfield Fund LLC	Menlo Park, CA
Norwest Venture Partners	Palo Alto, CA
Summit Partners	Boston, MA

# RENEWABLE ENERGY

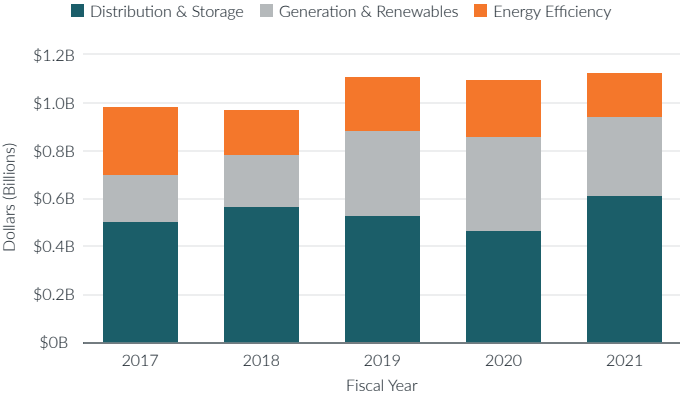
TAXONOMY



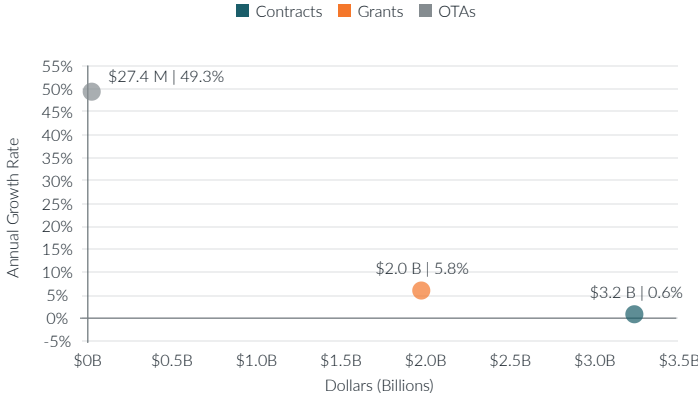
# RENEWABLE ENERGY

## OVERVIEW

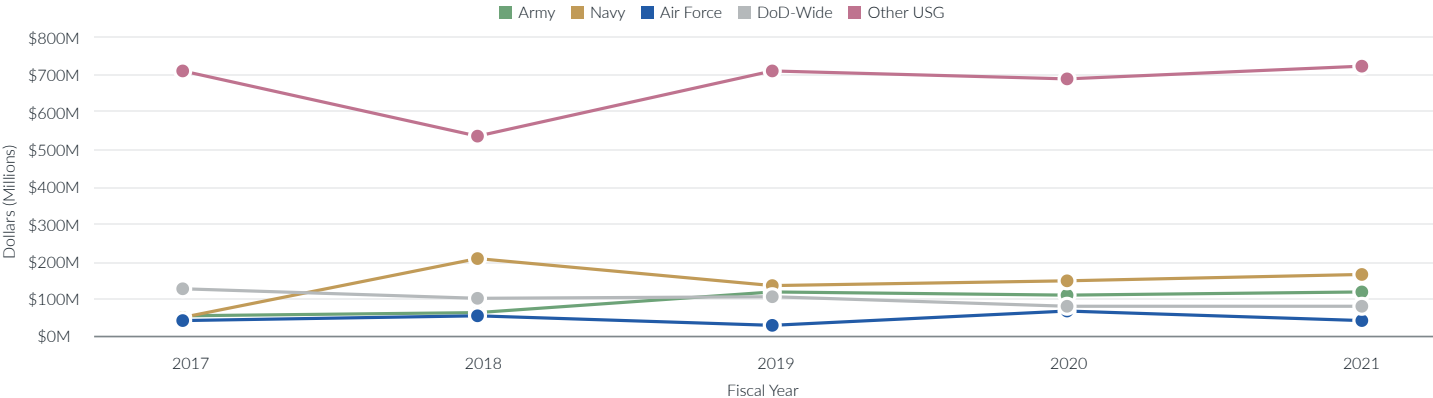
Spend by Segment, FY17-21



Award Type Velocity, FY17-21



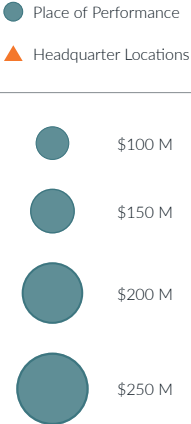
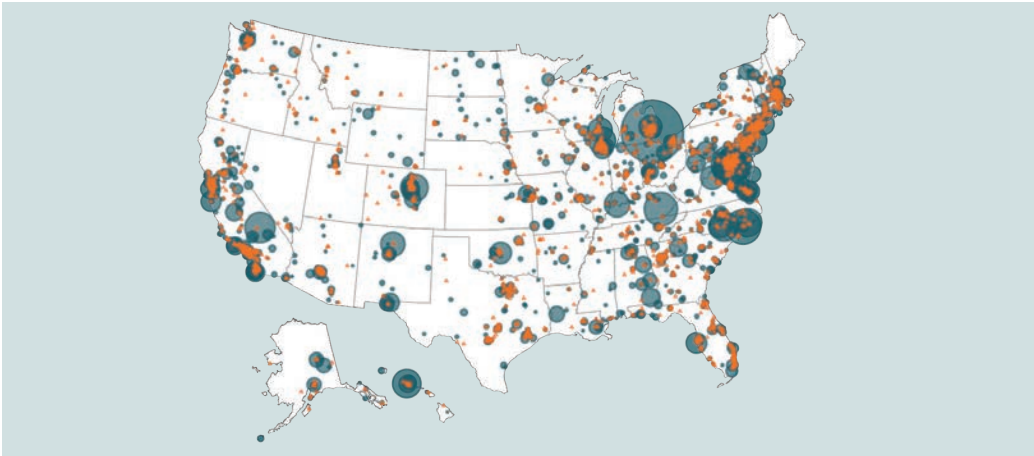
Segment Spend by Government Agencies, FY17-21



# RENEWABLE ENERGY

## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

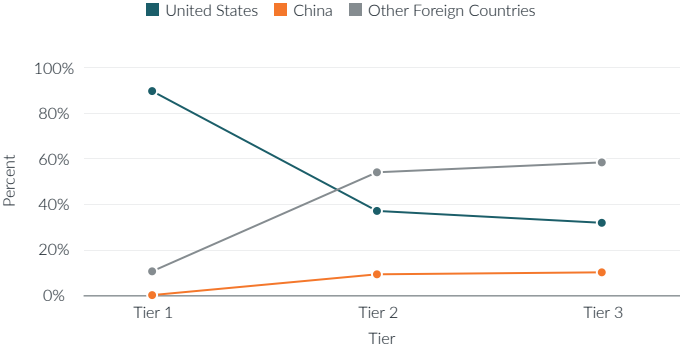
■ Distribution & Storage ■ Generation & Renewables ■ Energy Efficiency

Ford Motor Co. (F) \$255.1 M		Honeywell Int. Inc. (HON) \$75.1 M		Johnson Controls Int. PLC (JCI)   \$68.5 M		Ameresco Inc. \$63.5 M		The University of Utah \$181.4 M	
Carrier Global Corp. (CARR) \$104.7 M		Consolidated Edison Inc.   \$57.1 M		Schneider Electric SE \$36.5 M				APTIM AECOM Decommissioning LLC \$71.7 M	
		King County, WA \$39.1 M		Siemens AG   \$34.9 M					
State of Michigan \$100.0 M		State of California \$68.3 M		Cape-Burns & McDonnell JV   \$46.3 M		M.C. Dean Inc. \$45.3 M			
APTIM LLC \$85.9 M		Synergy Electric Co. Inc. \$67.3 M							
Rooney Holdings Inc. \$76.2 M		Power Pro Plus Inc. \$56.0 M							

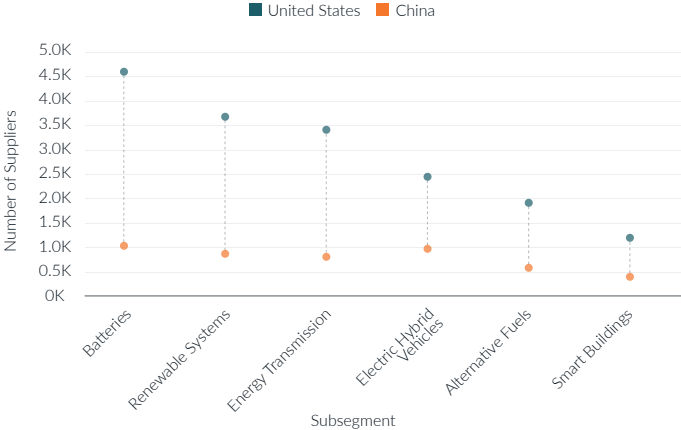
# RENEWABLE ENERGY

## SUPPLIER ANALYTICS

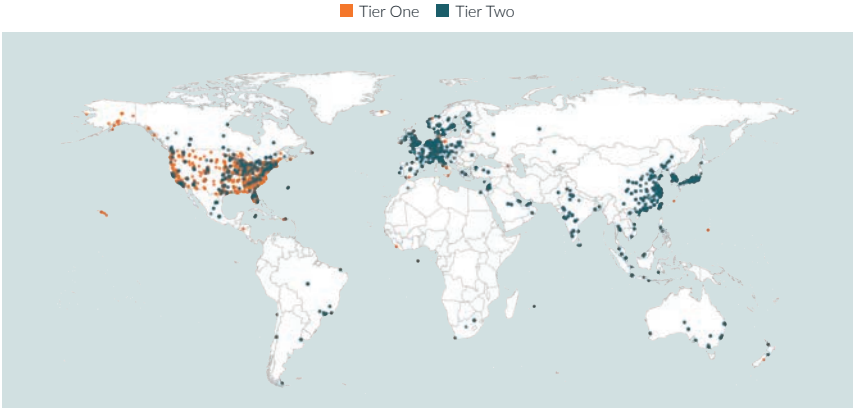
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	3,433	3,764	13,465
China	4	1,013	4,256
Japan	26	630	3,694
Great Britain	44	572	2,143
South Korea	7	459	2,720

# RENEWABLE ENERGY

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	△ 9	State of California	\$47.2 M	\$102.6 M	△ 29.4%	\$263.8 K	A (94)	0.0%
2	△ 35	Synergy Electric Company Inc.	\$45.3 M	\$67.3 M	△ 24.2%	\$1.8 M	A (93)	0.0%
3	▽ 2	Ford Motor Co. (F)	\$33.7 M	\$255.3 M	▽ 17.2%	\$37.6 K	A (93)	0.0%
4	— 4	APTIM AECOM Decommissioning LLC	\$28.8 M	\$71.7 M	▽ 7.6%	\$23.9 M	B+ (85-89)	0.0%
5	△ 15	Ameresco Inc.	\$26.3 M	\$77.8 M	△ 9.8%	\$810.6 K	A+ (96)	0.0%
6	△ 13	Power Pro Plus Inc.	\$25.6 M	\$56.1 M	△ 11.2%	\$1.5 M	B+ (89)	0.1%
7	— 7	Carrier Global Corp. (CARR)	\$22.9 M	\$104.8 M	△ 13.6%	\$1.0 M	A+ (96)	2.7%
8	△ 129	Natron Energy Inc.	\$19.9 M	\$19.9 M	— -	\$9.9 M	B (83)	0.0%
9	△ 42	University of Illinois	\$19.9 M	\$33.3 M	△ 104.0%	\$374.7 K	A (94)	0.0%
10	▽ 1	Fluor Corp. (FLR)	\$17.5 M	\$67.5 M	▽ 18.9%	\$13.5 M	A+ (99)	0.0%

### NOTABLE EMERGENT COMPANIES

COMPANY	LOCATION
Alto Ingredients (ALTO)	Sacramento, CA
Bloom Energy Corp. (BE)	Sunnyvale, CA
Clearway Energy Inc. (CWEN)	Princeton, NJ
First Solar Inc. (FSLR)	Tempe, AZ
Gevo Inc. (GEVO)	Englewood, CO

### NOTABLE INVESTORS

COMPANY	LOCATION
Clean Energy Venture Group	Boston, MA
Element 8 Angels	Seattle, WA
Energize Ventures	Chicago, IL
Energy Foundry	Chicago, IL
Manhattan Venture Partners	New York, NY

# DIRECTED ENERGY

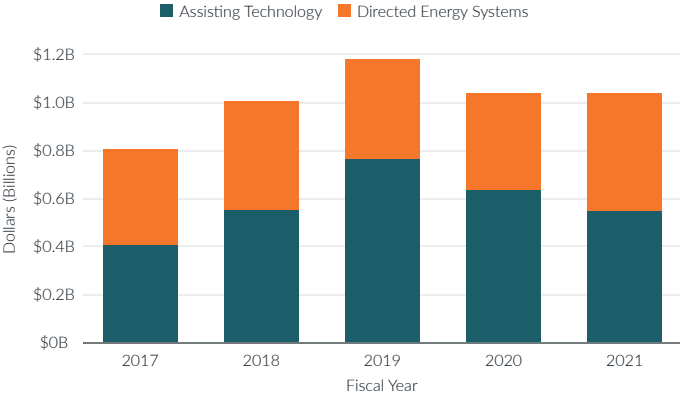
## TAXONOMY



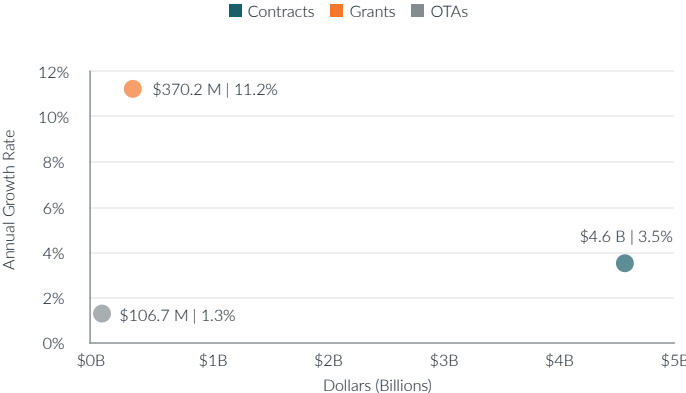
# DIRECTED ENERGY

## OVERVIEW

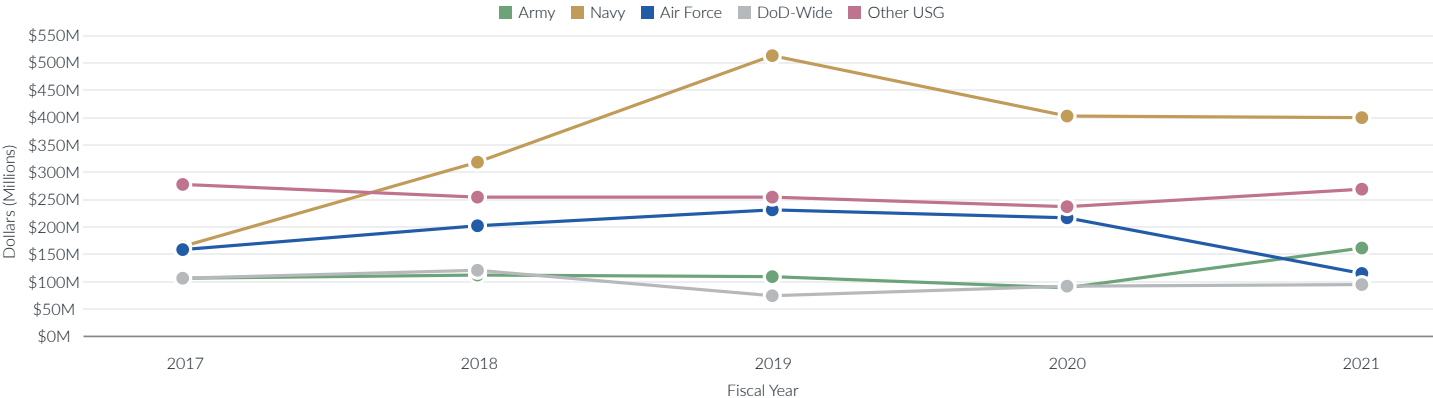
Spend by Segment, FY17-21



Award Type Velocity, FY17-21



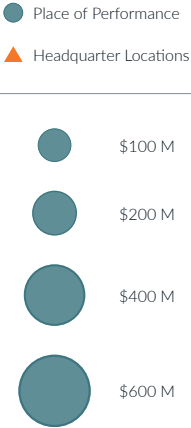
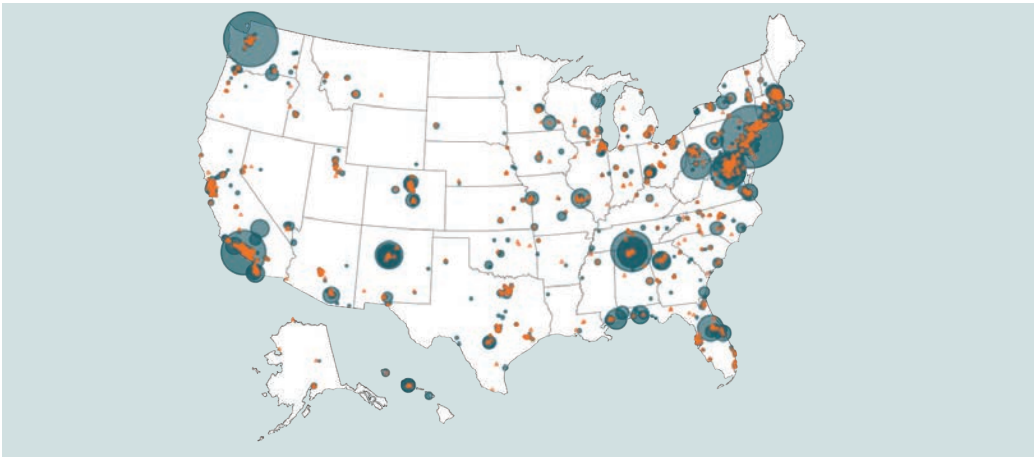
Segment Spend by Government Agencies, FY17-21



# DIRECTED ENERGY

## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

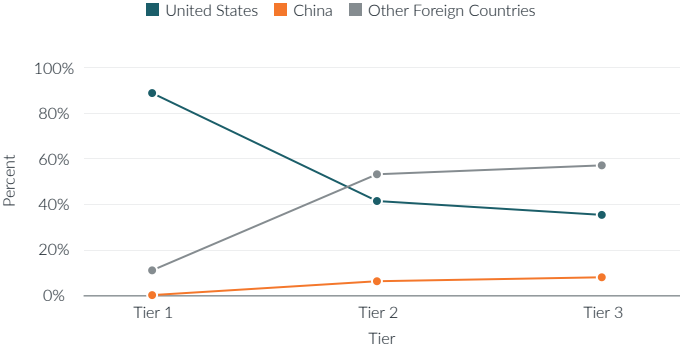
■ Assisting Technology    ■ Directed Energy Systems

Lockheed Martin Corp. (LMT) \$311.3 M		ManTech TSG-2 Joint Venture \$176.1 M		Trustees of Princeton University \$640.4 M			
Northrop Grumman Corp. (NOC) \$164.9 M			AECOM (ACM) \$142.8 M		Leidos Inc. (LDOS) \$210.5 M		
Raytheon Technologies Corp. (RTX) \$129.5 M		Boeing Co. (BA) \$108.5 M		Northrop Grumman Corp. (NOC) \$155.3 M			
General Dynamics Corp. (GD)   \$69.5 M		Modern Technology Solutions Inc. \$107.4 M		Radiance Technologies Inc. \$95.6 M			

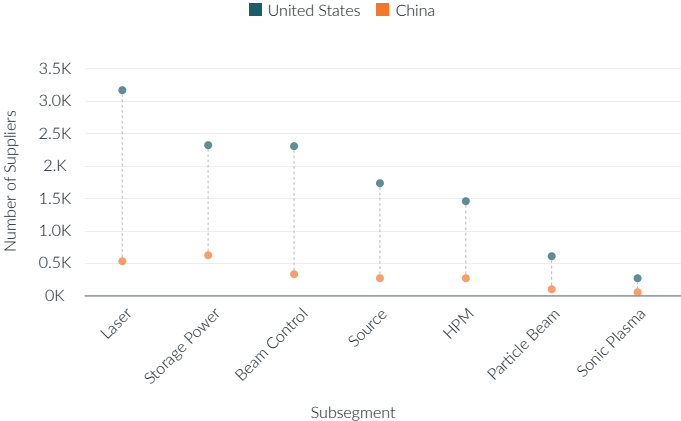
# DIRECTED ENERGY

## SUPPLIER ANALYTICS

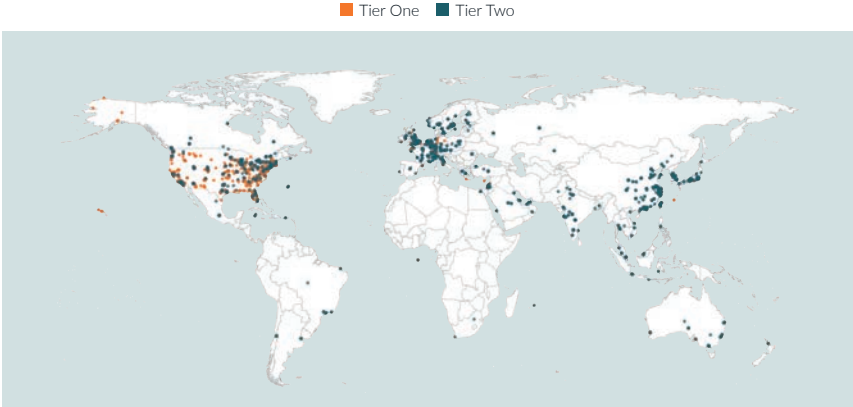
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	1,360	1,949	9,372
Great Britain	30	344	1,542
China	2	286	2,068
Japan	16	241	2,086
France	8	205	787

# DIRECTED ENERGY

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	— 1	Trustees of Princeton University	\$142.2 M	\$640.8 M	△ 7.7%	\$3.8 M	A (91)	0.0%
2	△ 3	ManTech TSG-2 JV	\$92.0 M	\$176.1 M	△ 661.2%	\$1.9 M	A+ (97)	0.0%
3	△ 4	Leidos Inc. (LDOS)	\$87.2 M	\$257.7 M	△ 35.9%	\$473.7 K	A+ (98)	0.0%
4	△ 29	Huntington Ingalls Industries Inc. (HII)	\$45.1 M	\$79.7 M	△ 109.8%	\$1.2 M	A (93)	2.6%
5	▽ 2	Lockheed Martin Corp. (LMT)	\$45.0 M	\$322.0 M	△ 39.8%	\$1.3 M	A+ (95)	6.5%
6	△ 8	Modern Technology Solutions Inc.	\$32.4 M	\$107.4 M	△ 9.4%	\$2.2 M	A+ (98)	0.0%
7	— 7	Northrop Grumman Corp. (NOC)	\$32.3 M	\$320.3 M	▽ 20.0%	\$1.4 M	A+ (98)	8.8%
8	△ 82	Advanced Technologies Int.	\$31.5 M	\$33.1 M	△ 80.6%	\$1.4 M	C+ (78)	0.0%
9	△ 17	Radiance Technologies Inc.	\$27.4 M	\$98.7 M	△ 2.2%	\$1.4 M	B+ (89)	0.0%
10	△ 24	KBR Inc. (KBR)	\$14.1 M	\$26.3 M	△ 43.5%	\$691.0 K	A+ (98)	0.0%

### NOTABLE EMERGENT COMPANIES

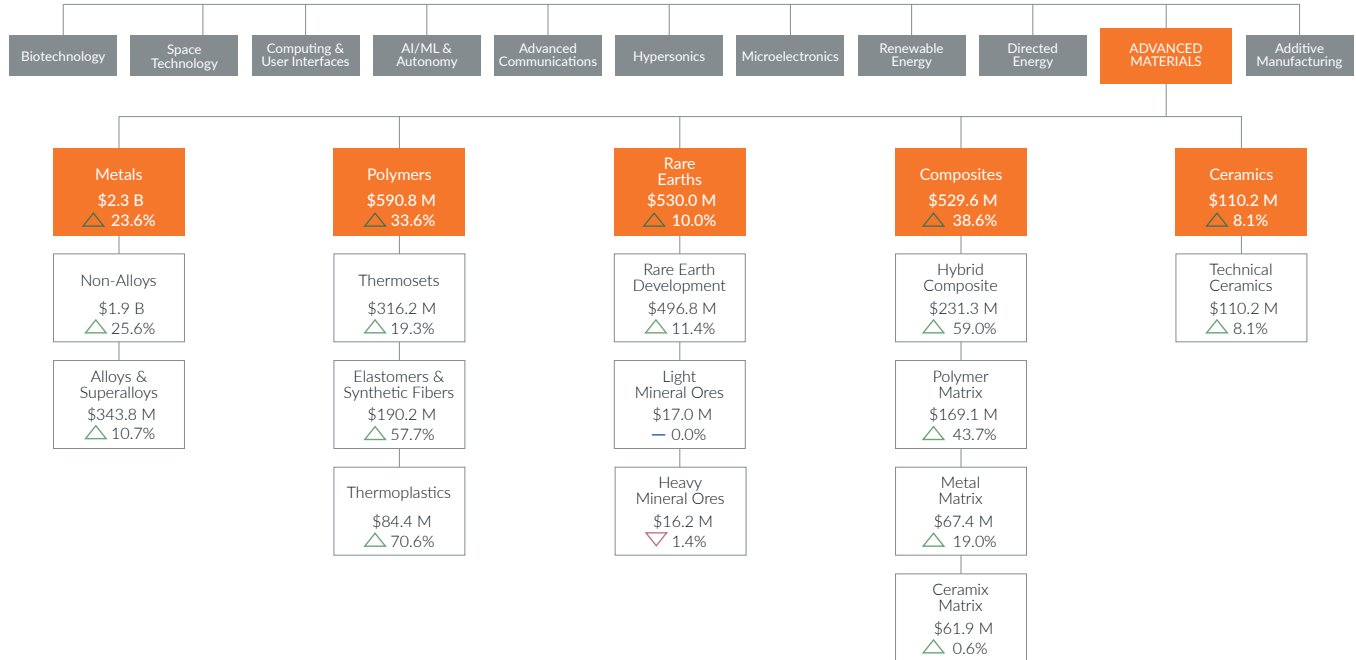
COMPANY	LOCATION
Brilliant Light Power Inc.	Cranbury, NJ
Eprius Inc.	Los Angeles, CA
FormAlloy Technologies Inc.	Spring Valley, CA
nLIGHT Inc. (LASR)	Camas, WA
TAE Technologies	Foothill Ranch, CA

### NOTABLE INVESTORS

COMPANY	LOCATION
8VC	Austin, TX
Broom Ventures LLC	Palo Alto, CA
Gaingels Management LLC	New York, NY
Red Cell Partners LLC	Beverly Hills, CA
Venrock	Palo Alto, CA

# ADVANCED MATERIALS

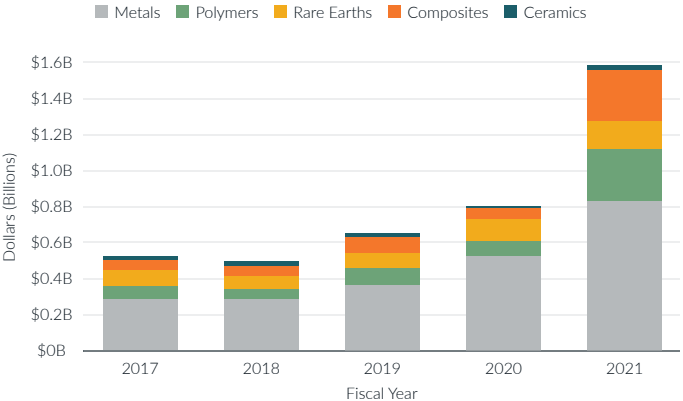
## TAXONOMY



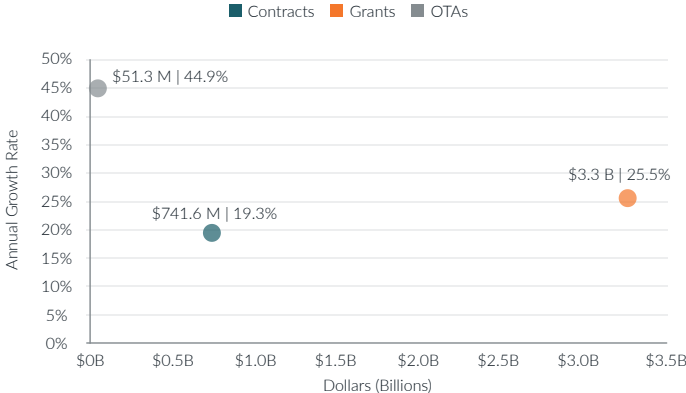
# ADVANCED MATERIALS

## OVERVIEW

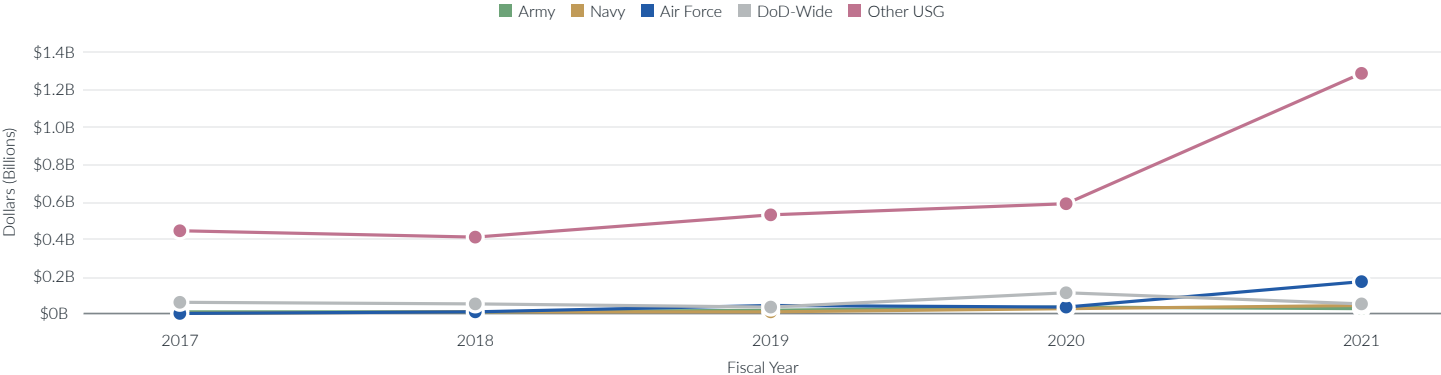
Spend by Segment, FY17-21



Award Type Velocity, FY17-21



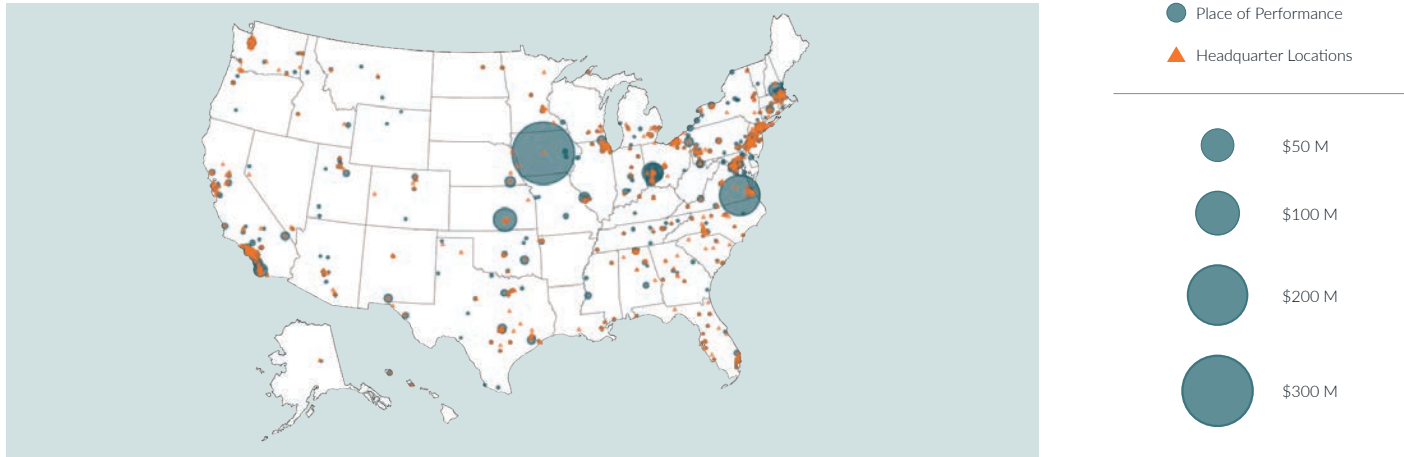
Segment Spend by Government Agencies, FY17-21



# ADVANCED MATERIALS

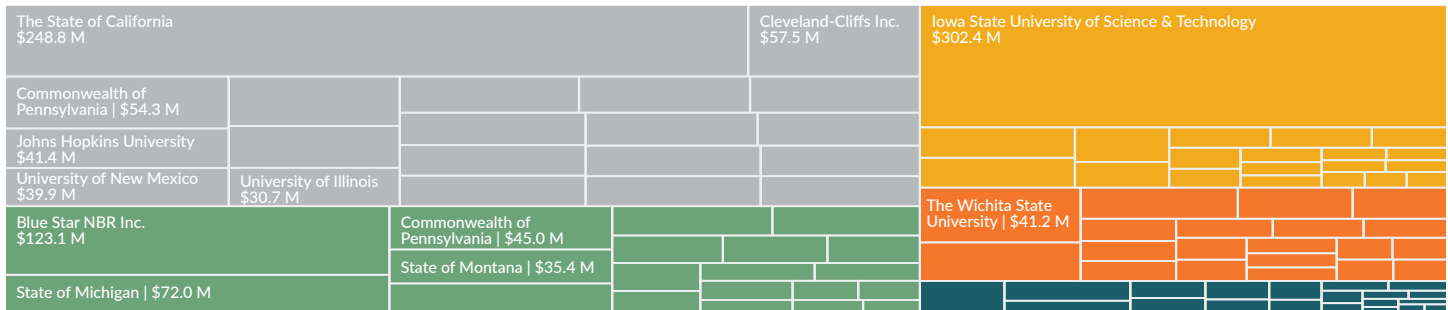
## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

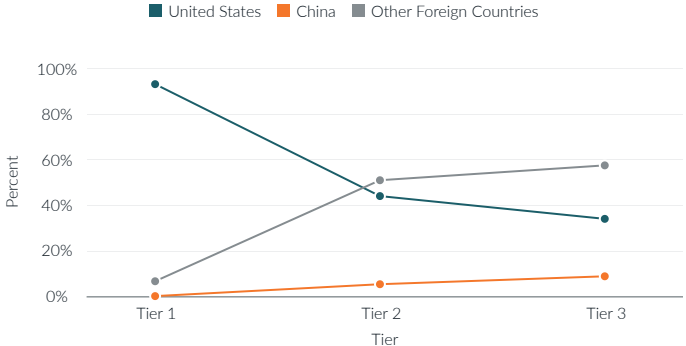
■ Metals ■ Polymers ■ Rare Earths ■ Composites ■ Ceramics



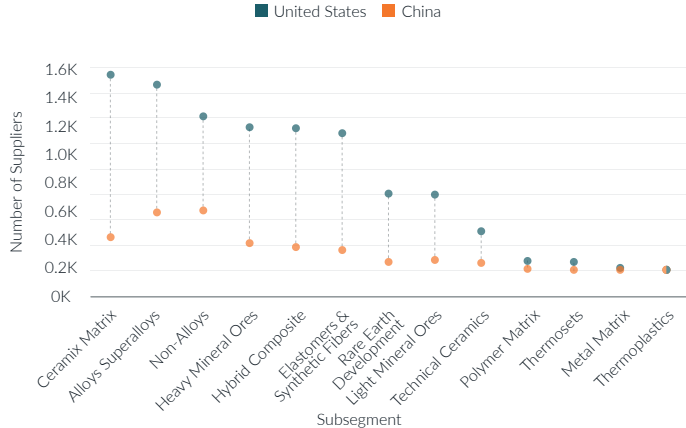
# ADVANCED MATERIALS

## SUPPLIER ANALYTICS

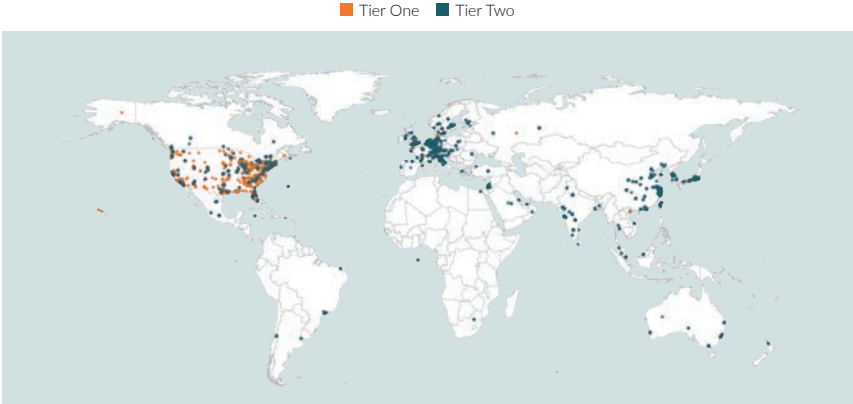
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	2,601	2,900	12,944
China	2	734	3,199
South Korea	8	328	2,011
Great Britain	30	319	2,078
Japan	10	309	2,840

# ADVANCED MATERIALS

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	△ 250	Blue Star NBR LLC	\$123.1 M	\$123.1 M	— -	\$123.1 M	B (81)	0.0%
2	▽ 1	State of California	\$116.8 M	\$299.5 M	△ 29.9%	\$292.2 K	A (94)	0.0%
3	▽ 2	Iowa State University of Science & Technology	\$62.0 M	\$309.0 M	△ 0.2%	\$2.0 M	A+ (96)	0.0%
4	△ 15	State of Michigan	\$51.2 M	\$85.1 M	△ 36.9%	\$211.6 K	B+ (88)	0.0%
5	▽ 3	Commonwealth of Pennsylvania	\$38.0 M	\$100.4 M	△ 229.5%	\$475.9 K	A (91)	0.0%
6	△ 35	University of Texas System	\$27.7 M	\$58.0 M	△ 35.4%	\$197.9 K	A+ (96)	0.0%
7	△ 251	General Atomics Inc.	\$26.2 M	\$26.2 M	— -	\$8.7 M	A+ (98)	0.0%
8	△ 53	Wichita State University	\$18.5 M	\$50.4 M	△ 40.2%	\$1.4 M	A+ (96)	0.0%
9	△ 25	Northwestern University	\$18.0 M	\$34.8 M	△ 36.4%	\$211.1 K	A (94)	0.0%
10	△ 36	Trustees of Columbia University In The City of New York	\$17.9 M	\$32.2 M	△ 47.2%	\$203.7 K	A (91)	0.0%

### NOTABLE EMERGENT COMPANIES

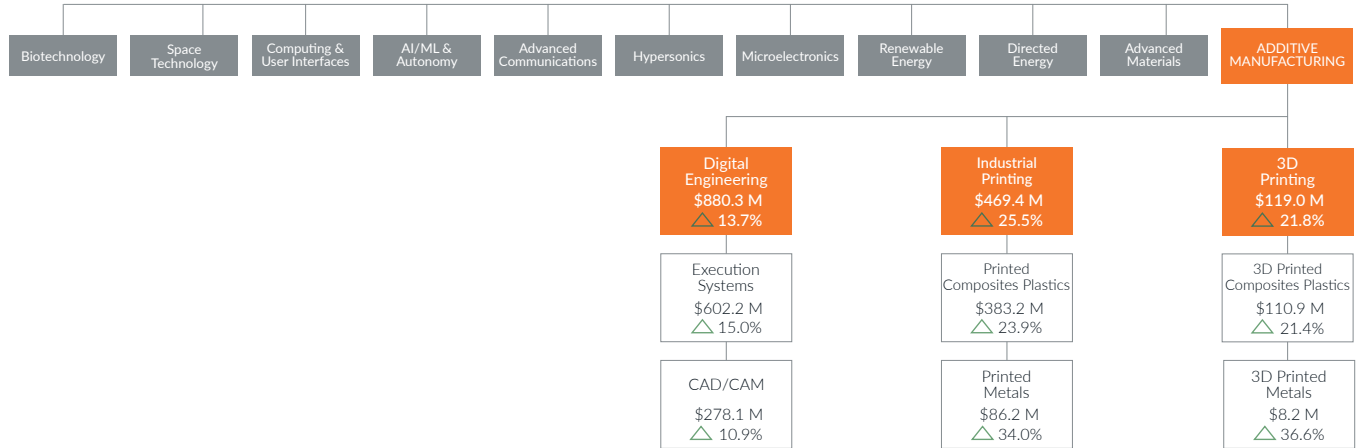
COMPANY	LOCATION
Commonwealth Fusion Systems	Cambridge, MA
Infinium Metals	Natick, MA
MP Materials Corp. (MP)	Las Vegas, NV
NatureWorks LLC	Minnnetonka, MN
Novomer Inc.	Rochester, NY

### NOTABLE INVESTORS

COMPANY	LOCATION
Khosla Ventures LLC	Menlo Park, CA
Kleiner Perkins	Menlo Park, CA
Main Street Capital Corp. (MAIN)	Houston, TX
Massachusetts Clean Energy Center	Boston, MA
Norwest Equity Partners	Minneapolis, MN

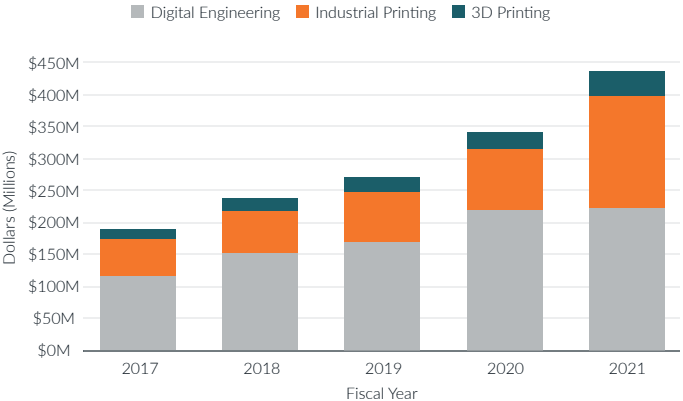
# ADDITIVE MANUFACTURING

## TAXONOMY



# ADDITIVE MANUFACTURING OVERVIEW

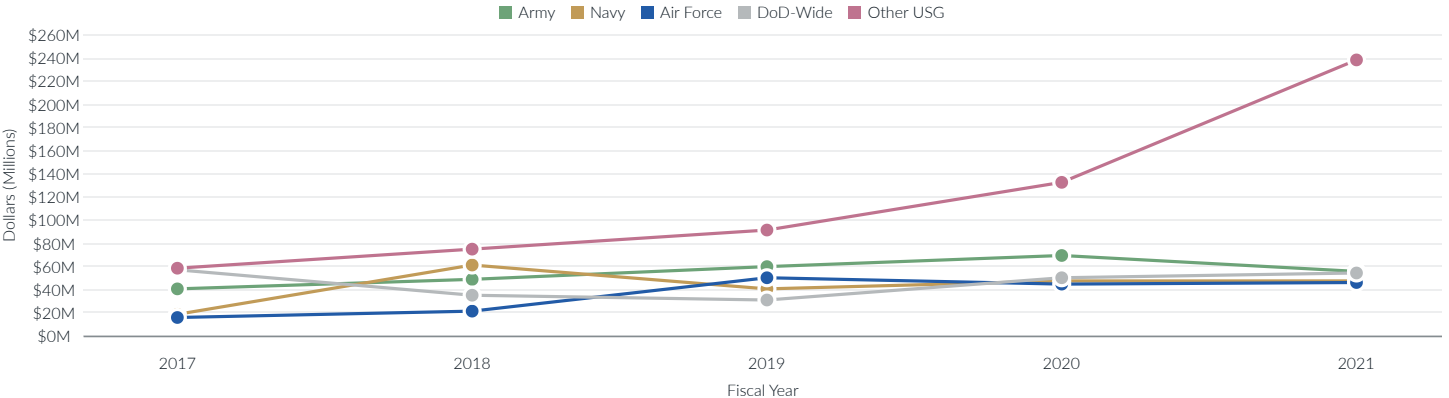
Spend by Segment, FY17-21



Award Type Velocity, FY17-21



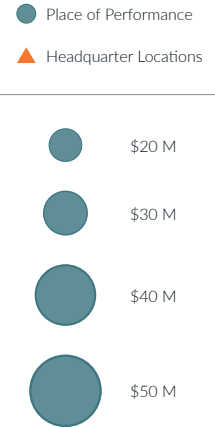
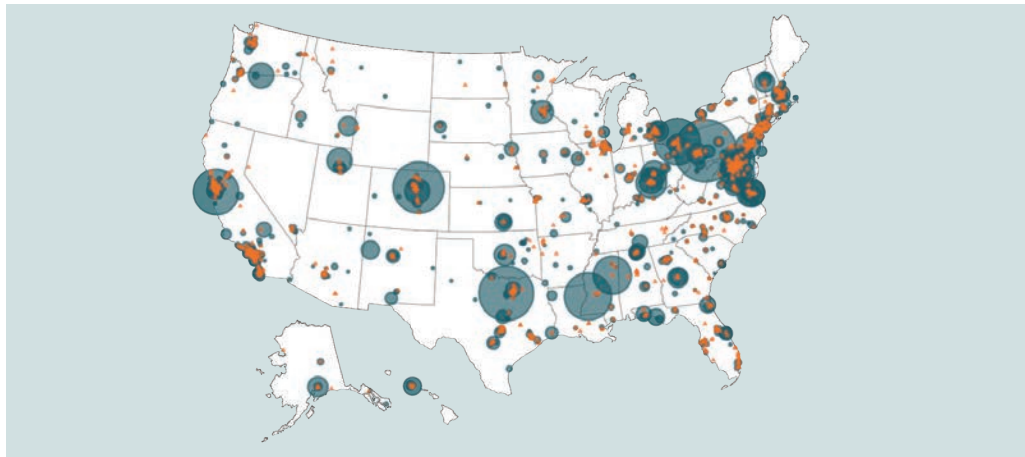
Segment Spend by Government Agencies, FY17-21



# ADDITIVE MANUFACTURING

## MARKET FOOTPRINT

Place of Performance & Vendor Headquarter Location, FY17-21



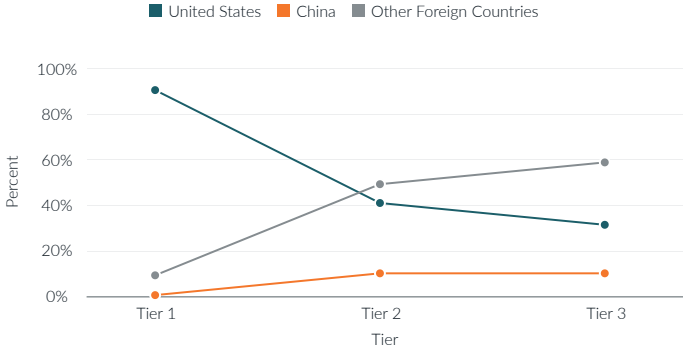
Top 20 Vendors by Subsegment, FY17-21

■ Digital Engineering ■ Industrial Printing ■ 3D Printing

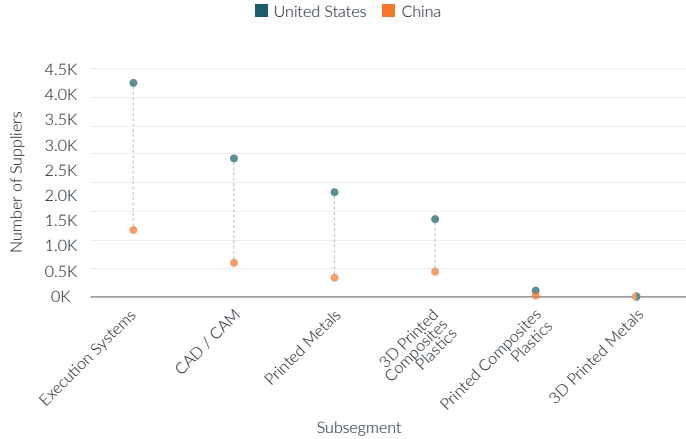
Raytheon Technologies Corp. \$67.2 M		National Center for Defense Manufacturing & Machining \$56.6 M		State of California \$27.0 M		H.F. Webster Engineering Services Inc. \$19.7 M	
Lockheed Martin Corp. \$43.0 M		Navarro Research & Engineering Inc. \$37.7 M		Siemens AG \$30.9 M			
Hx5 LLC \$30.8 M		Tech Wizards Inc. \$15.8 M					
Mississippi State University \$20.3 M		Insight Enterprises Inc. \$13.2 M					
		Etergent Technologies Ltd. \$13.2 M				Xerox Holdings Corp.   \$9.5 M	

# ADDITIVE MANUFACTURING SUPPLIER ANALYTICS

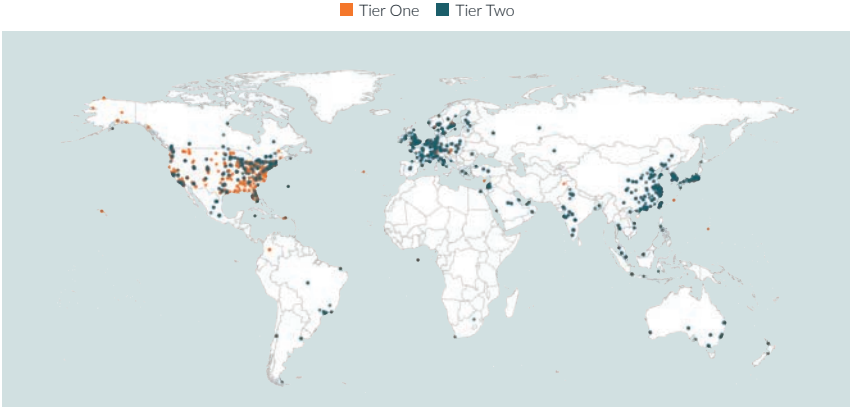
Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Subsegment, FY17-21



Supplier Geolocation by Tiers 1-2, FY17-21



Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	1,487	2,076	11,073
China	4	478	3,324
Japan	11	278	3,213
Great Britain	10	266	1,734
India	4	201	1,139

# ADDITIVE MANUFACTURING

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	— 1	National Center for Defense Manufacturing & Machining	\$53.1 M	\$184.5 M	△ 10.3%	\$732.1 K	B+ (88)	86.1%
2	△ 89	Wichita State University	\$15.0 M	\$17.2 M	△ 59.4%	\$2.5 M	A+ (96)	0.0%
3	▽ 2	Raytheon Technologies Corp. (RTX)	\$14.4 M	\$75.2 M	△ 22.0%	\$217.2 K	A+ (97)	54.9%
4	△ 9	State of California	\$11.5 M	\$32.6 M	△ 23.1%	\$269.5 K	A (94)	0.0%
5	△ 581	University of Maine System	\$11.1 M	\$11.1 M	— -	\$1.6 M	A (94)	0.0%
6	△ 88	Texas A&M University System	\$7.9 M	\$10.6 M	△ 92.6%	\$252.8 K	A+ (96)	0.0%
7	△ 24	University of Texas System	\$7.8 M	\$14.6 M	△ 35.7%	\$239.6 K	A+ (96)	0.0%
8	△ 10	Insight Enterprises Inc.	\$7.2 M	\$13.2 M	△ 224.6%	\$879.9 K	A+ (98)	0.0%
9	△ 120	University System of Maryland	\$6.4 M	\$14.6 M	△ 24.1%	\$292.4 K	A (94)	0.0%
10	▽ 7	Navarro Research & Engineering Inc.	\$6.0 M	\$37.7 M	▽ 4.7%	\$89.8 K	A (92)	0.0%

### NOTABLE EMERGENT COMPANIES

COMPANY	LOCATION
Fast Radius Inc. (FSRD)	Chicago, IL
Inkbit Corp.	Medford, MA
nTopology Inc.	New York, NY
Velo3D (VLD)	Campbell, CA
Xometry (XMTR)	Gaithersburg, MD

### NOTABLE INVESTORS

COMPANY	LOCATION
Alumni Ventures	Manchester, NH
BMW i Ventures	Mountain View, CA
Foundry Group	Boulder, CO
Stanley Ventures	Atlanta, GA
Vertex Ventures	Palo Alto, CA

# MILITARY DEPARTMENT ANALYSIS

# DEPARTMENT OF THE ARMY

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$73.2 B**

Army's Percentage of  
USG Critical Technology Spend

**18.2%**

Critical Technology Award Count

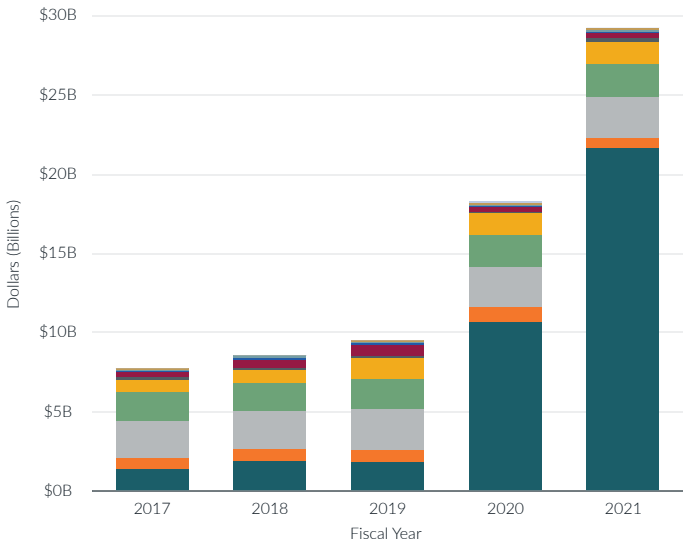
**27,663 Awards**

Critical Technology Vendor Count

**7,193 Vendors**

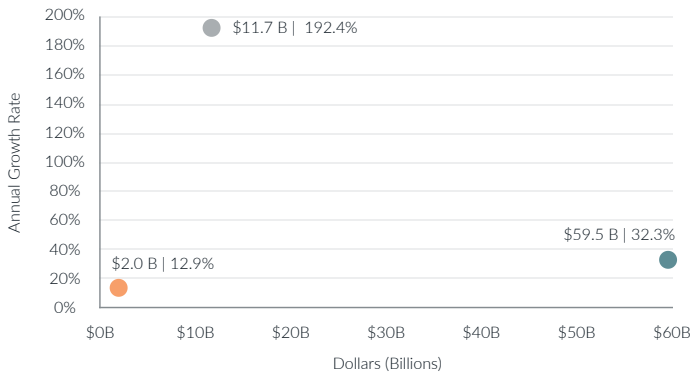
### Spend by Segment, FY17-21

- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



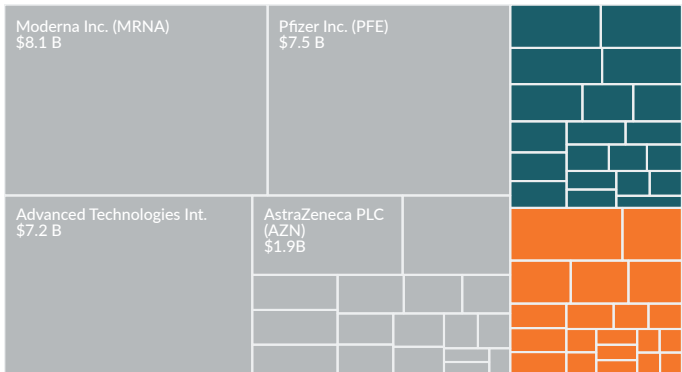
### Technology Procurement Velocity, FY17-21

■ Contracts ■ Grants ■ OTAs



### Vendor Awards by Top 3 Segments, FY17-21

■ Biotechnology ■ Computing & User Interfaces ■ AI/ML & Autonomy



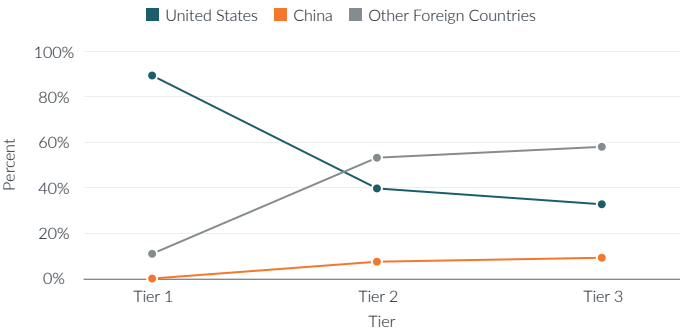
# DEPARTMENT OF THE ARMY

## TECHNOLOGY RANKINGS & SUPPLIER ANALYTICS

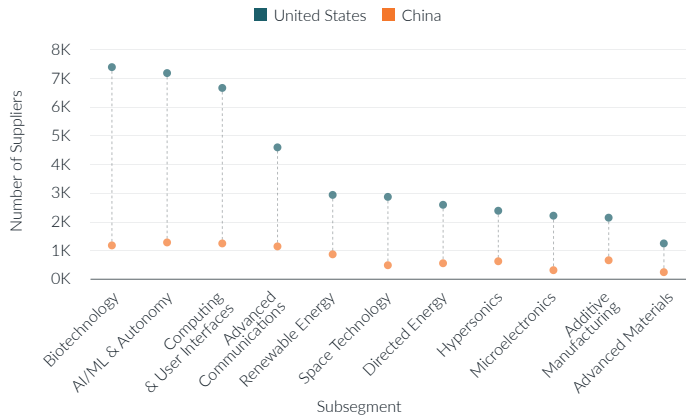
### SEGMENT RANK TABLE

SEGMENT	RANK	SUBSEGMENT	SPEND			AWARD TYPE			
SEGMENT	FY22 FY21	SUBSEGMENT	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	FAR-BASED	% OF SPEND	NON FAR-BASED	% OF SPEND
Biotechnology	1 — 1	Population Health	\$20.4 B	\$32.3 B	△ 99.9%	\$20.6 B	28.1%	\$11.7 B	16.0%
	2 — 2	Precision Medical	\$771.6 M	\$2.2 B	△ 24.0%	\$1.3 B	1.8%	\$906.2 M	1.2%
	3 — 3	Operational	\$391.0 M	\$2.6 B	▽ 5.7%	\$2.6 B	3.5%	\$84.8 M	0.1%
Computing & User Interfaces	1 — 1	Data Visualization & Interfaces	\$1.2 B	\$6.0 B	△ 4.3%	\$5.7 B	7.8%	\$317.1 M	0.4%
	2 — 2	Cybersecurity	\$1.2 B	\$5.2 B	△ 1.1%	\$5.0 B	6.9%	\$126.2 M	0.2%
	3 — 3	Software Development	\$205.5 M	\$1.3 B	▽ 4.0%	\$1.2 B	1.6%	\$91.4 M	0.1%
AI/ML & Autonomy	1 — 1	Data-at-Scale	\$1.7 B	\$8.2 B	△ 3.0%	\$8.2 B	11.1%	\$14.5 M	>0.1%
	2 — 2	Computer Vision	\$118.9 M	\$491.6 M	△ 2.1%	\$484.1 M	0.7%	\$7.5 M	>0.1%
	3 — 3	Autonomy	\$75.1 M	\$400.5 M	▽ 12.5%	\$385.6 M	0.5%	\$14.9 M	>0.1%

Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Segment, FY17-21



# DEPARTMENT OF THE ARMY

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	— -	Pfizer Inc. (PFE)	\$7.5 B	\$7.5 B	△ 581.0%	\$682.3 M	A+ (98)	100%
2	— 2	Moderna Inc. (MRNA)	\$6.9 B	\$8.1 B	△ 137.7%	\$509.1 M	B+ (88)	100%
3	— -	AstraZeneca PLC (AZN)	\$1.9 B	\$1.9 B	△ 345.9%	\$138.3 M	A+ (99)	100%
4	— -	Merck & Co. Inc.	\$1.4 B	\$1.4 B	△ 552.6%	\$92.4 M	A+ (98)	0%
5	▽ 3	Science Applications International Corp. (SAIC)	\$501.3 M	\$1.6 B	△ 19.1%	\$2.1 M	A+ (96)	0%
6	— -	CUE Inc.	\$480.9 M	\$480.9 M	— -	\$60.1 M	B+ (89)	0%
7	— -	Eli Lilly & Co.	\$413.7 M	\$413.7 M	— -	\$59.1 M	A+ (98)	0%
8	▽ 7	TRAX Int. Corp.	\$329.1 M	\$1.1 B	△ 26.2%	\$3.3 M	B+ (86)	0%
9	▽ 6	Raytheon Technologies Corp. (RTX)	\$327.3 M	\$2.7 B	▽ 8.1%	\$2.6 M	A+ (97)	12%
10	▽ 5	Leonardo S.p.A (FINMY)	\$281.4 M	\$1.2 B	△ 22.9%	\$3.0 M	-	7%

### NOTABLE DEFENSE ACCELERATORS

ACCELERATOR	LOCATION
Army Applications Lab	Austin, TX
Army SBIR/STTR Program	Washington, DC
Army Research Lab	Adelphi, MD
xTechSearch	Arlington, VA
U.S. Army Combat Capabilities Development Command Army Soldier Center	Natick, MA

### TOP 5 CONTRACTING OFFICES

CONTRACTING OFFICE	AWARD SUM	AWARD COUNT
US Department of the Army	\$60.5 B	16,601
USACE Engineering and Support Center, Huntsville	\$4.1 B	916
USACE St. Paul District	\$984.2 M	1,928
ACC-APG Orlando, FL	\$841.0 M	251
ERDC-Cold Regions Research and Engineering Laboratory (CRREL)	\$674.8 M	651

# DEPARTMENT OF THE NAVY

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$44.0 B**

Navy's Percentage of USG Critical Technology Spend

**10.9%**

Critical Technology Award Count

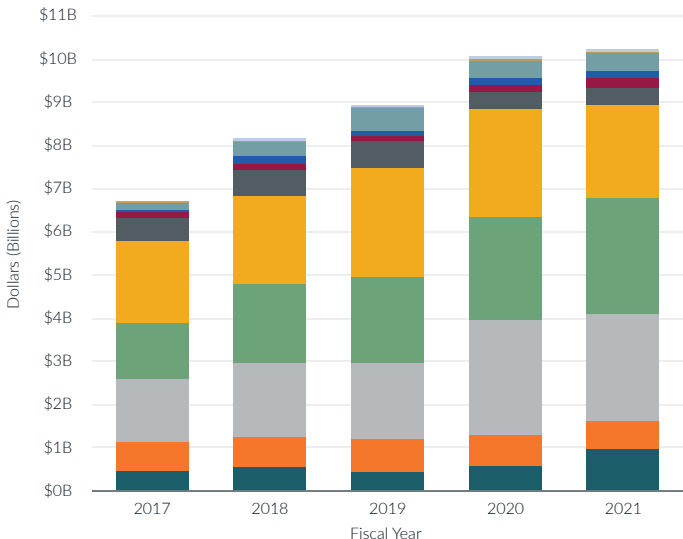
**38,986 Awards**

Critical Technology Vendor Count

**7,367 Vendors**

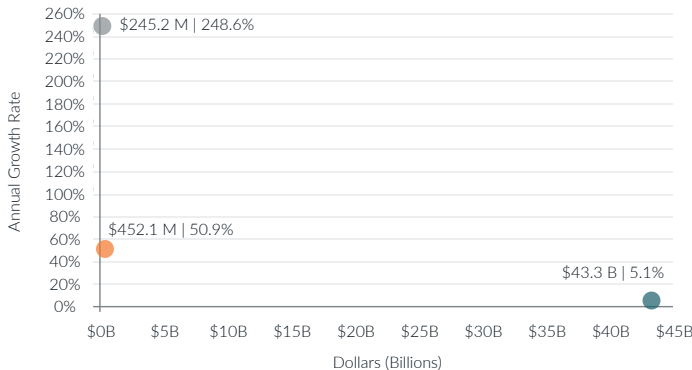
### Spend by Segment, FY17-21

- Biotechnology
- Advanced Communications
- Directed Energy
- Space Technology
- Hypersonics
- Advanced Materials
- Computing & User Interfaces
- Microelectronics
- Additive Manufacturing
- AI/ML & Autonomy
- Renewable Energy



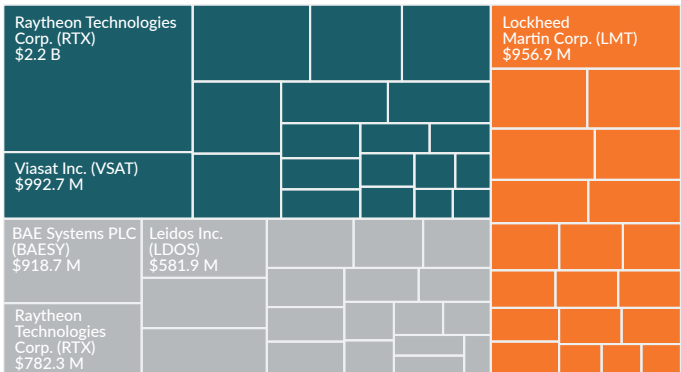
### Technology Procurement Velocity, FY17-21

- Contracts
- Grants
- OTAs



### Vendor Awards by Top 3 Segments, FY17-21

- Advanced Communications
- Computing & User Interfaces
- AI/ML & Autonomy



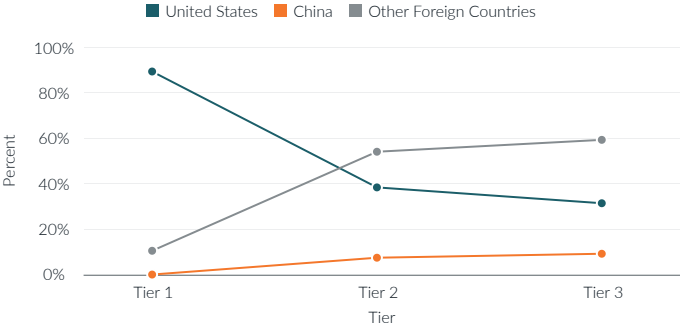
# DEPARTMENT OF THE NAVY

## TECHNOLOGY RANKINGS & SUPPLIER ANALYTICS

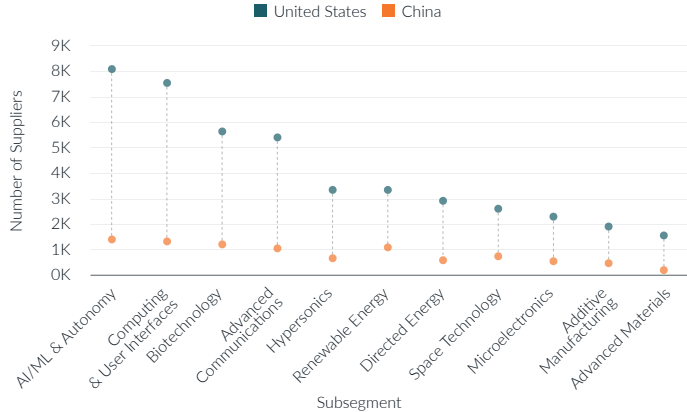
### SEGMENT RANK TABLE

SEGMENT	RANK	SUBSEGMENT	SPEND			AWARD TYPE			
SEGMENT	FY22 FY21	SUBSEGMENT	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	FAR-BASED	% OF SPEND	NON FAR-BASED	% OF SPEND
AI/ML & Autonomy	1 — 1	Data-at-Scale	\$2.4 B	\$8.9 B	△ 17.0%	\$8.9 B	20.2%	\$40.4 M	0.1%
	2 — 2	Autonomy	\$90.2 M	\$481.7 M	▽ 0.7%	\$470.8 M	1.1%	\$10.9 M	>0.1%
	3 — 3	Computer Vision	\$62.3 M	\$237.2 M	△ 8.0%	\$228.3 M	0.5%	\$8.9 M	>0.1%
Computing & User Interfaces	1 — 1	Cybersecurity	\$1.4 B	\$5.5 B	△ 14.8%	\$5.5 B	12.5%	\$10.2 M	>0.1%
	2 — 2	Data Visualization & Interfaces	\$990.4 M	\$4.2 B	△ 6.5%	\$4.2 B	9.6%	\$22.1 M	0.1%
	3 — 3	Software Development	\$62.2 M	\$258.3 M	△ 15.0%	\$252.0 M	0.6%	\$6.2 M	>0.1%
Advanced Communications	1 — 1	Integrated Network Systems-of-Systems	\$1.1 B	\$6.1 B	△ 1.3%	\$6.1 B	13.9%	\$5.5 M	>0.1%
	2 — 2	System Enablers	\$774.0 M	\$3.5 B	△ 6.3%	\$3.5 B	7.9%	\$2.3 M	>0.1%
	3 — 3	5G Communications	\$313.3 M	\$1.6 B	▽ 0.1%	\$1.6 B	3.5%	\$1.2 M	>0.1%

Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Segment, FY17-21



# DEPARTMENT OF THE NAVY

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	1	Raytheon Technologies Corp. (RTX)	\$933.5 M	\$4.2 B	△ 10.4%	\$1.2 M	A+ (97)	48.0%
2	2	Lockheed Martin Corp. (LMT)	\$498.1 M	\$1.8 B	△ 37.1%	\$1.2 M	A+ (95)	15.0%
3	12	Leidos Inc. (LDOS)	\$488.5 M	\$1.1 B	△ 29.9%	\$632.3 K	A+ (98)	3.0%
4	3	BAE Systems PLC (BAESY)	\$420.7 M	\$1.8 B	△ 17.2%	\$529.7 K	A+ (98)	5.0%
5	7	L3Harris Technologies Inc. (LHX)	\$358.0 M	\$961.8 M	△ 38.8%	\$555.7 K	A+ (98)	36.0%
6	4	General Dynamics Corp. (GD)	\$278.8 M	\$2.6 B	▽ 13.7%	\$798.6 K	A+ (98)	58.0%
7	14	Huntington Ingalls Industries Inc. (HII)	\$261.3 M	\$643.6 M	△ 38.2%	\$547.7 K	A (93)	29.0%
8	9	ManTech TSG-2 JV	\$259.2 M	\$498.7 M	△ 187.0%	\$1.8 M	A+ (97)	0.0%
9	10	Northrop Grumman Corp. (NOC)	\$223.0 M	\$1.3 B	▽ 8.3%	\$648.2 K	A+ (98)	20.0%
10	5	Viasat Inc. (VSAT)	\$207.9 M	\$1.0 B	△ 19.8%	\$1.4 M	A+ (98)	54.0%

### NOTABLE DEFENSE ACCELERATORS

ACCELERATOR	LOCATION
NavalX (Tech Bridges)	Multiple
Naval Research Lab	Washington, DC
Navy 8(a) Incubator	Arlington, VA
Department of the Navy (DoN) Rapid Innovation Fund (RIF)	Arlington, VA
NEPTUNE	Arlington, VA

### TOP 5 CONTRACTING OFFICES

CONTRACTING OFFICE	AWARD SUM	AWARD COUNT
US Department of the Navy	\$15.2 B	14,351
Naval Sea Systems Command (NAVSEA)	\$6.9 B	1,208
NAWC Aircraft Division-Patuxent River	\$4.6 B	1,438
Naval Information Warfare Systems Command (NAVWARSYSCOM)	\$2.8 B	1,163
Naval Air Systems Command (NAVAIR)	\$2.2 B	1,103

# DEPARTMENT OF THE AIR FORCE

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$35.9 B**

Air Force's Percentage of USG Critical Technology Spend

**8.9%**

Critical Technology Award Count

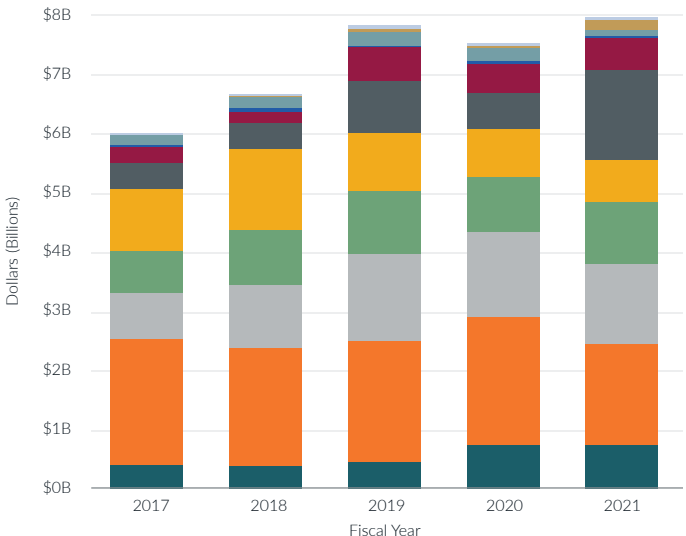
**19,567 Awards**

Critical Technology Vendor Count

**5,521 Vendors**

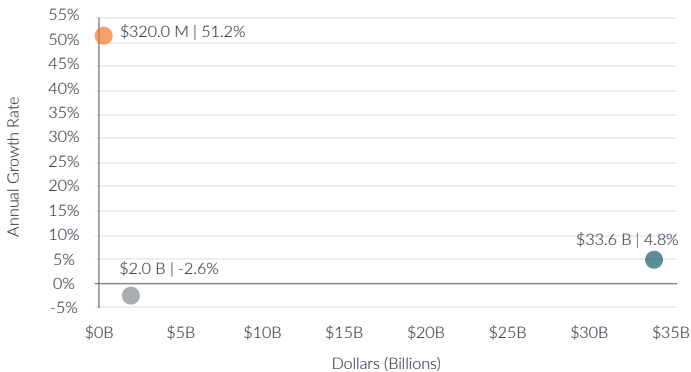
### Spend by Segment, FY17-21

- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



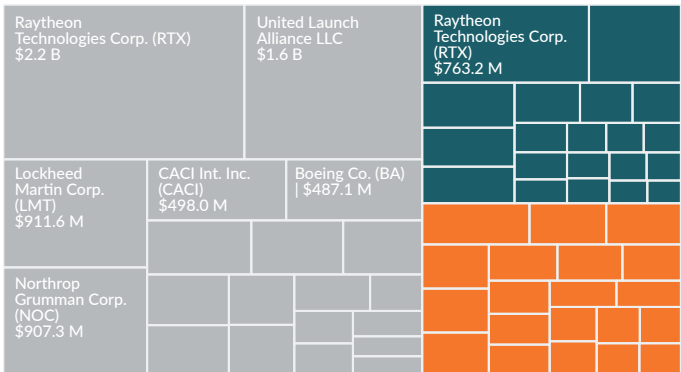
### Technology Procurement Velocity, FY17-21

- Contracts
- Grants
- OTAs



### Vendor Awards by Top 3 Segments, FY17-21

- Space Technology
- Advanced Communications
- Computing & User Interfaces



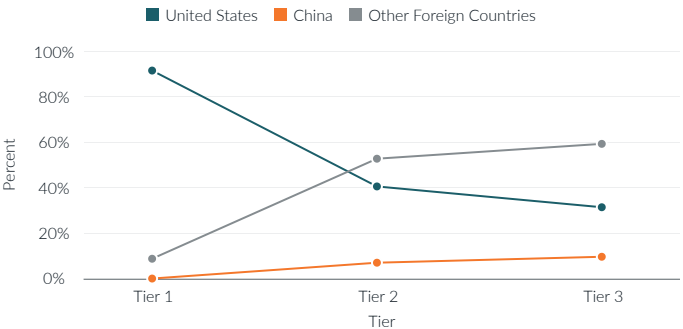
# DEPARTMENT OF THE AIR FORCE

## TECHNOLOGY RANKINGS & SUPPLIER ANALYTICS

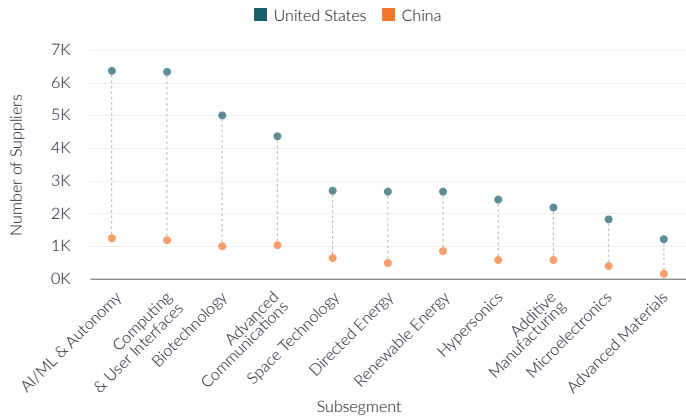
### SEGMENT RANK TABLE

SEGMENT	RANK	SUBSEGMENT	SPEND			AWARD TYPE			
SEGMENT	FY22 FY21	SUBSEGMENT	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	FAR-BASED	% OF SPEND	NON FAR-BASED	% OF SPEND
Space Technology	1 — 1	National Security Satellites	\$1.3 B	\$7.1 B	▽ 2.9%	\$6.8 B	18.9%	\$327.5 M	0.9%
	2 — 2	Launch Vehicles	\$221.8 M	\$2.5 B	▽ 18.2%	\$1.7 B	4.7%	\$852.6 M	2.4%
	3 △ 4	Earth Observation	\$124.0 M	\$222.9 M	△ 295.0%	\$166.5 M	0.5%	\$56.5 M	0.2%
Hypersonics	1 △ 2	Sensing & Propulsion	\$1.1 B	\$2.1 B	△ 30.0%	\$2.1 B	6.0%	\$9.2 M	>0.1%
	2 ▽ 1	Glide Body	\$380.8 M	\$1.6 B	△ 28.6%	\$1.6 B	4.4%	\$5.2 M	>0.1%
	3 — 3	Guidance System & Modeling	\$9.3 M	\$54.3 M	△ 9.8%	\$53.0 M	0.1%	\$1.3 M	>0.1%
Computing & User Interfaces	1 — 1	Cybersecurity	\$643.3 M	\$3.5 B	△ 6.5%	\$3.1 B	8.7%	\$347.6 M	1.0%
	2 — 2	Data Visualization & Interfaces	\$625.0 M	\$2.4 B	△ 16.5%	\$2.3 B	6.5%	\$26.5 M	0.1%
	3 — 3	Quantum Science	\$57.8 M	\$149.4 M	△ 50.8%	\$74.8 M	0.2%	\$74.6 M	0.2%

Technology Suppliers by Tiers 1-3, FY17-21



Tiers 1-2 Supplier Count by Segment, FY17-21



# DEPARTMENT OF THE AIR FORCE

## VENDOR RANKINGS

### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	△ 2	Lockheed Martin Corp. (LMT)	\$1.6 B	\$4.8 B	△ 11.6%	\$3.5 M	A+ (95)	65%
2	▽ 1	Raytheon Technologies Corp. (RTX)	\$654.9 M	\$4.2 B	▽ 2.5%	\$2.0 M	A+ (97)	22.0%
3	— 3	Northrop Grumman Corp. (NOC)	\$529.3 M	\$2.4 B	△ 13.2%	\$1.8 M	A+ (98)	26.0%
4	△ 32	Advanced Technologies Int.	\$232.1 M	\$308.4 M	△ 60.0%	\$4.3 M	C+ (78)	0.0%
5	▽ 4	United Launch Alliance LLC	\$202.5 M	\$1.6 B	▽ 11.1%	\$24.3 M	-	94.0%
6	△ 14	L3Harris Technologies Inc. (LHX)	\$146.7 M	\$740.8 M	▽ 4.4%	\$1.3 M	A+ (98)	68.0%
7	▽ 6	CACI International Inc. (CACI)	\$143.6 M	\$611.9 M	△ 7.3%	\$905.1 K	A+ (98)	1.0%
8	△ 15	Science Applications International Corp. (SAIC)	\$133.1 M	\$279.9 M	△ 21.7%	\$1.2 M	A+ (96)	11.0%
9	△ 125	Palantir Technologies Inc. (PLTR)	\$129.7 M	\$137.0 M	△ 204.0%	\$4.7 M	B+ (89)	89.0%
10	— -	Blue Star NBR LLC	\$123.1 M	\$123.1 M	— -	\$123.1 M	-	0.0%

### NOTABLE DEFENSE ACCELERATORS

ACCELERATOR	LOCATION
AF Techstars Accelerator	Boulder, CO
Air Force Research Laboratory (AFRL)	Dayton, OH
AFWERX	Washington, D.C.
Allied Space Accelerator	Boulder, CO
Catalyst Accelerator	Colorado Springs, CO

### TOP 5 CONTRACTING OFFICES

CONTRACTING OFFICE	AWARD SUM	AWARD COUNT
US Department of the Air Force	\$34.3 B	18,299
Air Force Research Laboratory (AFRL)	\$423.1 M	256
Defense Information Systems Agency (DISA)	\$345.7 M	144
Wright-Patterson AFB	\$248.7 M	98
DCMA-Los Angeles, CA	\$117.4 M	99



# DOD AGENCY ANALYSIS

# DEFENSE ADVANCED RESEARCH PROJECT AGENCY

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$3.5 B**

DARPA's Percentage of USG Critical Technology Spend

**0.9%**

Critical Technology Award Count

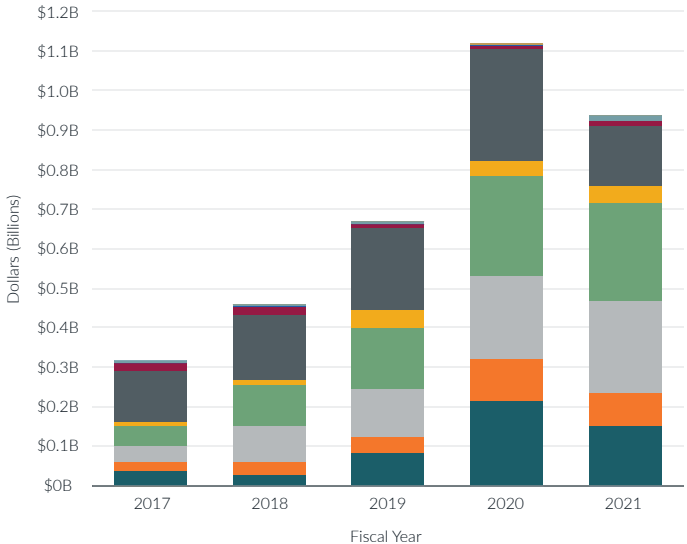
**1,269 Awards**

Critical Technology Vendor Count

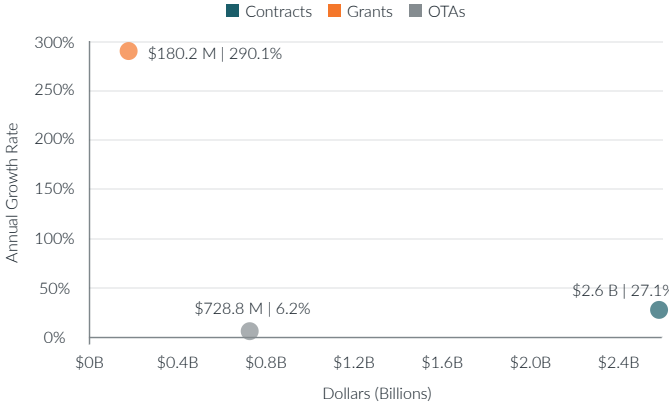
**438 Vendors**

### Spend by Segment, FY17-21

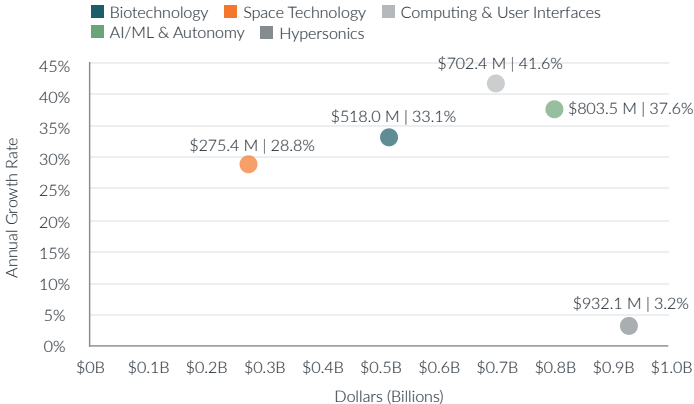
- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



### Technology Procurement Velocity, FY17-21



### Top 5 Technology Velocity by Segment, FY17-21



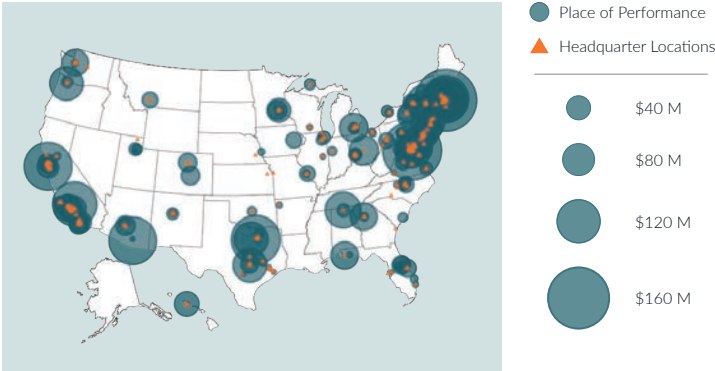
# DEFENSE ADVANCED RESEARCH PROJECT AGENCY

## VENDOR BENCHMARKS

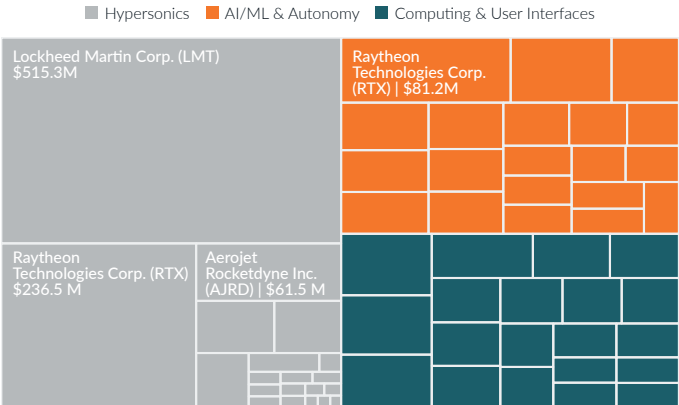
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	△ 2	Raytheon Technologies Corp. (RTX)	\$155.4 M	\$491.0 M	△ 31.9%	\$1.5 M	A+ (97)	0.4%
2	▽ 1	Lockheed Martin Corp. (LMT)	\$114.5 M	\$626.0 M	△ 8.9%	\$2.8 M	A+ (95)	0.0%
3	△ 18	Systems & Technology Research LLC	\$43.6 M	\$70.3 M	△ 76.6%	\$878.7 K	B+ (85)	0.0%
4	△ 19	Cerebras Systems Inc.	\$33.4 M	\$46.0 M	△ 62.4%	\$4.2 M	B (84)	0.0%
5	▽ 3	Northrop Grumman Corp. (NOC)	\$29.4 M	\$128.7 M	△ 18.1%	\$863.6 K	A+ (98)	0.0%
6	△ 413	AbCellera Biologics Inc.	\$28.9 M	\$28.9 M	— -	\$4.1 M	-	0.0%
7	△ 50	L3Harris Technologies Inc. (LHX)	\$24.4 M	\$47.7 M	△ 36.9%	\$1.3 M	A+ (98)	0.0%
8	△ 62	Martin Defense Group LLC	\$23.2 M	\$26.4 M	△ 166.6%	\$1.8 M	B (81)	0.0%
9	▽ 4	SRI International	\$21.9 M	\$84.3 M	△ 38.9%	\$487.6 K	A+ (98)	0.0%
10	△ 328	ManTech TSG-2 JV	\$18.6 M	\$18.6 M	— -	\$6.2 M	A+ (97)	0.0%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21



# DEFENSE INFORMATION SYSTEMS AGENCY

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$8.7 B**

DISA's Percentage of  
USG Critical Technology Spend

**2.2%**

Critical Technology Award Count

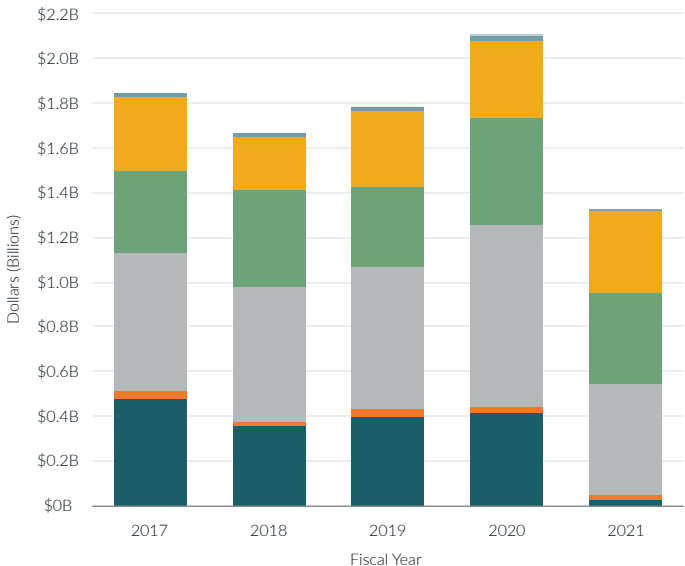
**1,798 Awards**

Critical Technology Vendor Count

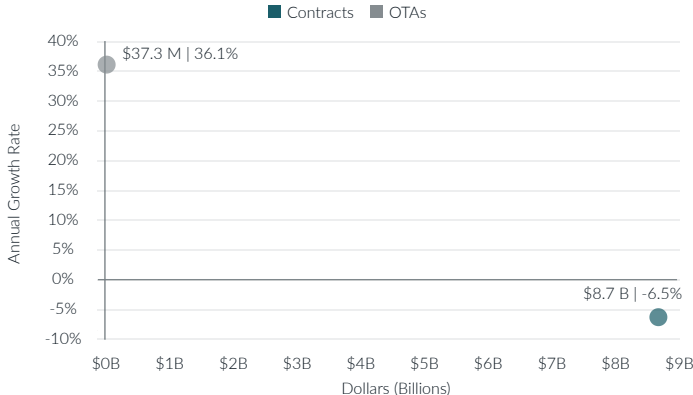
**360 Vendors**

### Spend by Segment, FY17-21

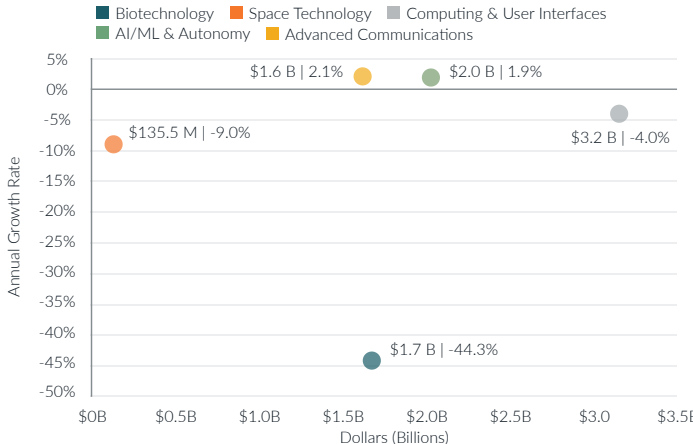
- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Renewable Energy
- Directed Energy
- Additive Manufacturing



### Technology Procurement Velocity, FY17-21



### Top 5 Technology Velocity by Segment, FY17-21



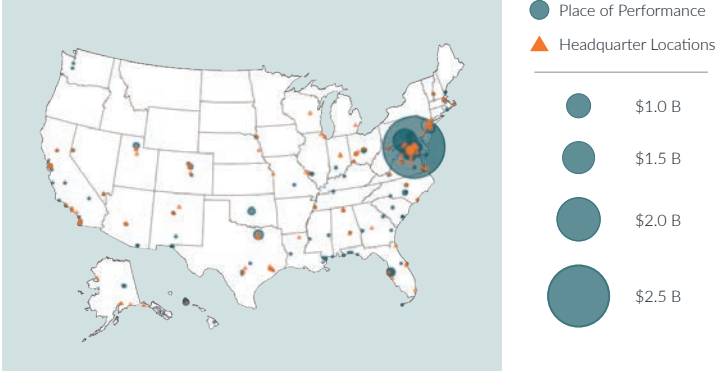
# DEFENSE INFORMATION SYSTEMS AGENCY

## VENDOR BENCHMARKS

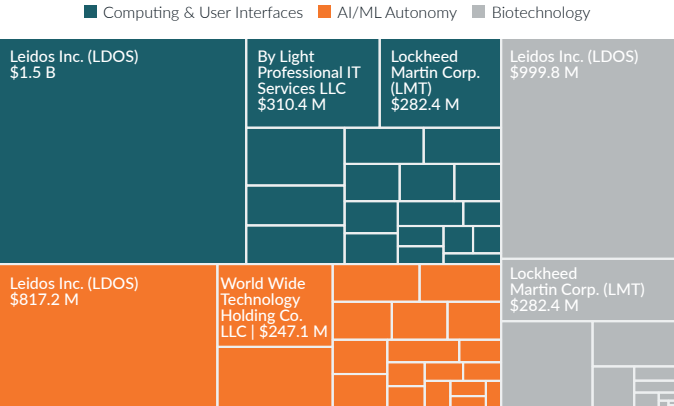
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	1	Leidos Inc. (LDOS)	\$244.6 M	\$3.3 B	▽ 27.5%	\$1.8 M	A+ (98)	0.0%
2	2	By Light Professional IT Services LLC	\$167.3 M	\$840.6 M	△ 1.0%	\$748.6 K	A (93)	0.0%
3	3	Booz Allen Hamilton Holding Corp. (BAH)	\$155.0 M	\$341.5 M	△ 331.0%	\$645.6 K	A+ (98)	0.0%
4	9	Deloitte LLC	\$74.6 M	\$107.8 M	△ 132.7%	\$2.9 M	A+ (97)	0.0%
5	4	General Dynamics Corp. (GD)	\$69.0 M	\$185.2 M	△ 158.3%	\$1.2 M	A+ (98)	1.2%
6	5	Peraton (formally Perspecta Inc.)	\$54.4 M	\$364.9 M	▽ 2.2%	\$4.6 M	A+ (97)	0.0%
7	13	SOS International LLC	\$54.3 M	\$79.6 M	△ 46.5%	\$1.2 M	A+ (96)	0.0%
8	14	ASGN Inc. (ASGN)	\$48.9 M	\$71.0 M	△ 49.0%	\$1.8 M	A+ (97)	0.0%
9	31	VAE Inc.	\$43.9 M	\$54.8 M	△ 98.4%	\$1.8 M	A (90)	0.0%
10	20	Tyto Athene LLC	\$39.4 M	\$48.7 M	△ 106.0%	\$2.4 M	A+ (98)	0.0%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21



## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$30.8 M**

DSCA's Percentage of  
USG Critical Technology Spend

**0.01%**

Critical Technology Award Count

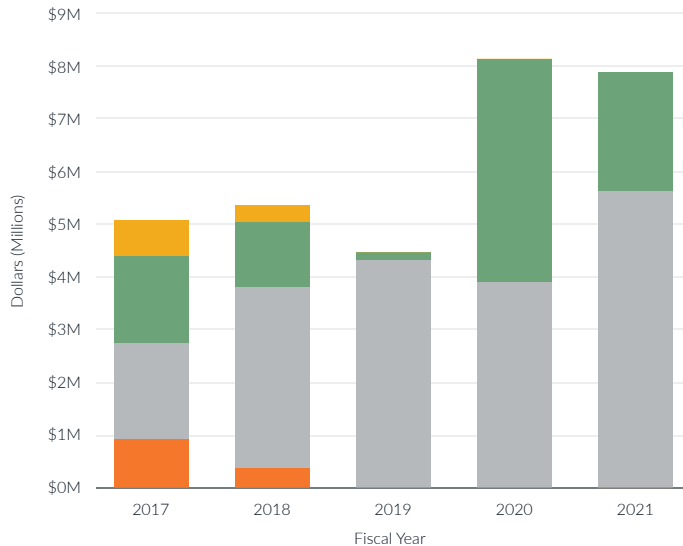
**112 Awards**

Critical Technology Vendor Count

**66 Vendors**

#### Spend by Segment, FY17-21

- Space Technology
- Advanced Communications
- Computing & User Interfaces
- AI/ML & Autonomy

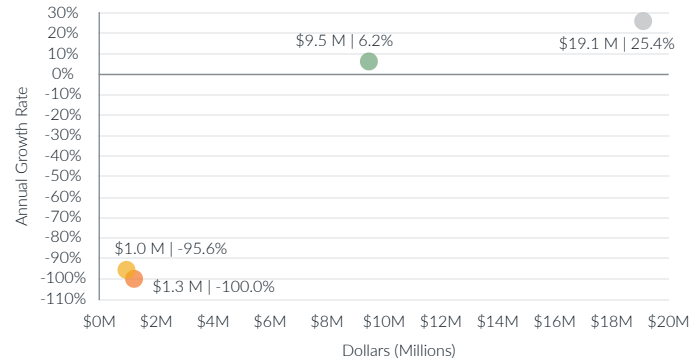


### Technology Procurement Velocity, FY17-21



### Top 4 Technology Velocity by Segment, FY17-21

- Space Technology
- Advanced Communications
- Computing & User Interfaces
- AI/ML & Autonomy



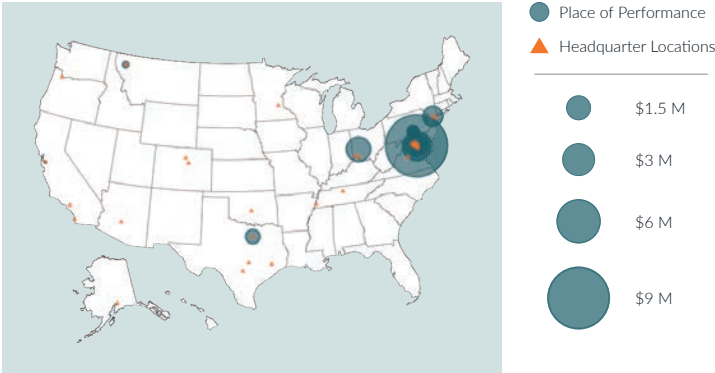
# DEFENSE SECURITY COOPERATION AGENCY

## VENDOR BENCHMARKS

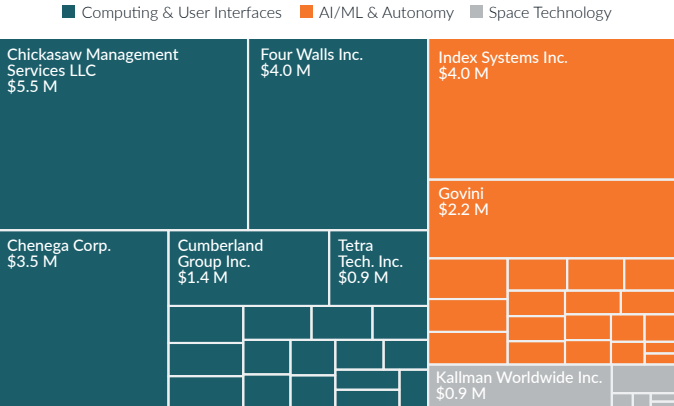
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	△ 3	Chickasaw Management Services LLC	\$2.7 M	\$5.5 M	△ 24.1%	\$1.4 M	A+ (96)	100.0%
2	— 2	Index Systems Inc.	\$2.1 M	\$4.0 M	△ 6.4%	\$1.0 M	C+ (76)	100.0%
3	△ 16	Chenega Corp.	\$1.7 M	\$3.5 M	△ 22.6%	\$349.0 K	A+ (99)	17.4%
4	— 4	Four Walls Inc.	\$1.1 M	\$4.0 M	△ 36.7%	\$798.2 K	C+ (78)	0.0%
5	△ 6	SYNNEX Corp. (SNX)	\$99.6 K	\$298.9 K	— 0.0%	\$74.7 K	A+ (98)	0.0%
6	△ 33	Carahsoft Technology Corp.	\$49.5 K	\$49.5 K	— -	\$49.5 K	A (92)	0.0%
7	△ 9	A. P. Inspections LLC	\$26.5 K	\$217.6 K	▽ 17.7%	\$19.8 K	B (84)	0.0%
8	△ 31	BahFed Corp.	\$17.9 K	\$17.9 K	— -	\$17.9 K	B (83)	0.0%
9	△ 14	SmartDog Services LLC	\$12.3 K	\$24.6 K	— 0.0%	\$6.2 K	-	0.0%
10	△ 19	Cumberland Group Inc.	\$10.0 K	\$1.4 M	▽ 65.4%	\$350.9 K	C+ (78)	0.0%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21



# DEFENSE THREAT REDUCTION AGENCY

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$1.3 B**

DTRA's Percentage of USG Critical Technology Spend

**0.3%**

Critical Technology Award Count

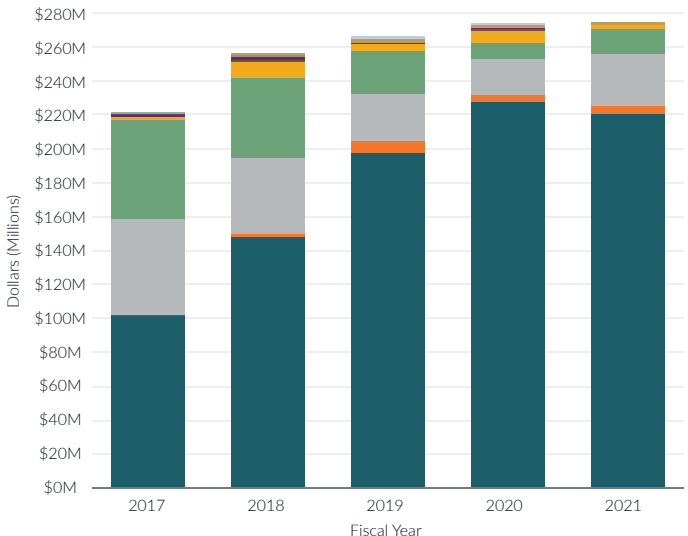
**476 Awards**

Critical Technology Vendor Count

**259 Vendors**

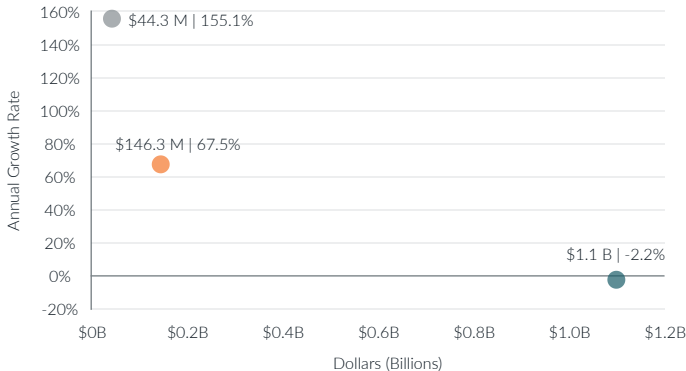
### Spend by Segment, FY17-21

- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



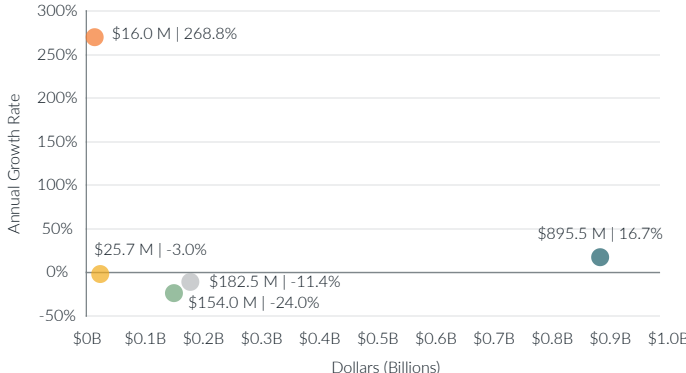
### Technology Procurement Velocity, FY17-21

- Contracts
- Grants
- OTAs



### Top 5 Technology Velocity by Segment, FY17-21

- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications



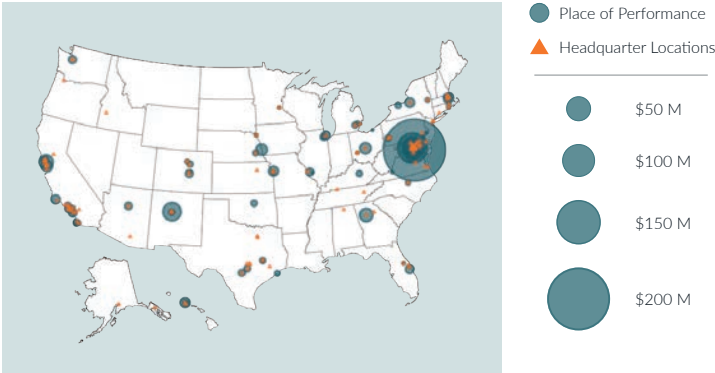
# DEFENSE THREAT REDUCTION AGENCY

## VENDOR BENCHMARKS

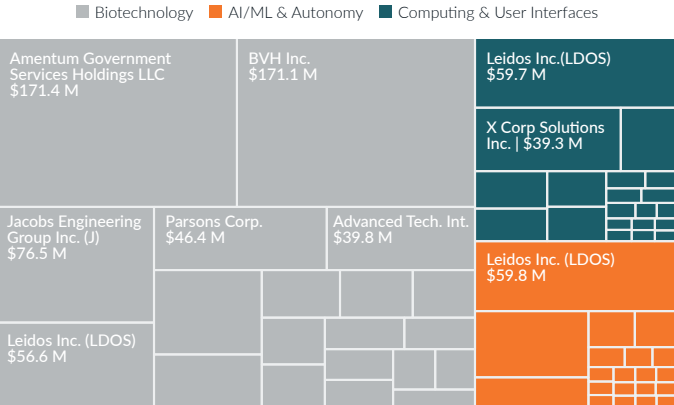
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21		AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	1	Amentum Government Services LLC	\$46.8 M	\$171.4 M	△ 58.1%	\$46.8 M	A+ (96)	0.0%
2	20	Advanced Technologies International	\$37.0 M	\$39.8 M	△ 265.2%	\$37.0 M	C+ (78)	0.0%
3	2	BVH Inc.	\$36.4 M	\$171.1 M	△ 6.6%	\$36.4 M	A+ (98)	0.0%
4	191	International AIDS Vaccine Initiative	\$14.7 M	\$14.7 M	— -	\$14.7 M	A+ (98)	0.0%
5	3	The Parsons Corp.	\$11.9 M	\$50.2 M	△ 150.0%	\$11.9 M	A+ (98)	0.0%
6	4	Jacobs Engineering Group Inc. (J)	\$11.3 M	\$76.5 M	▽ 19.7%	\$11.3 M	A+ (99)	0.0%
7	15	Booz Allen Hamilton Holding Corp. (BAH)	\$8.3 M	\$15.8 M	△ 42.2%	\$8.3 M	A+ (98)	0.0%
8	7	X Corp Solutions Inc.	\$8.3 M	\$39.3 M	▽ 0.8%	\$8.3 M	C (74)	0.0%
9	126	Pennsylvania State University	\$8.2 M	\$8.2 M	— -	\$8.2 M	A (92)	0.0%
10	168	National University of Singapore	\$5.7 M	\$6.1 M	△ 146.4%	\$5.7 M	-	0.0%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21



# MISSILE DEFENSE AGENCY

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$5.9 B**

MDA's Percentage of  
USG Critical Technology Spend

**1.5%**

Critical Technology Award Count

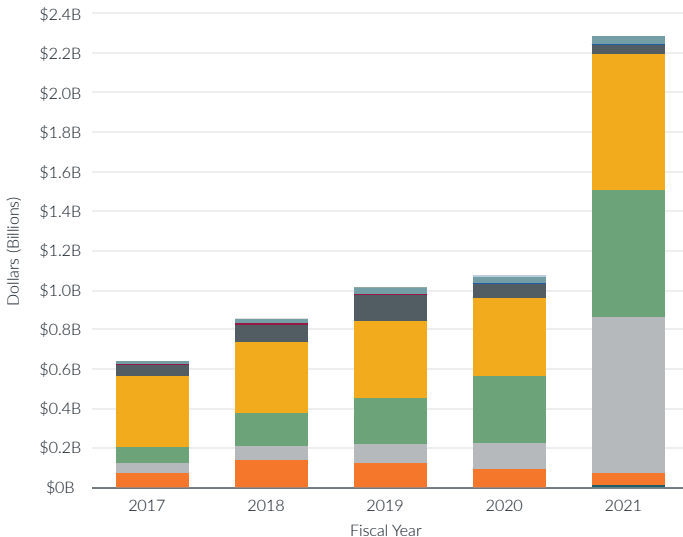
**563 Awards**

Critical Technology Vendor Count

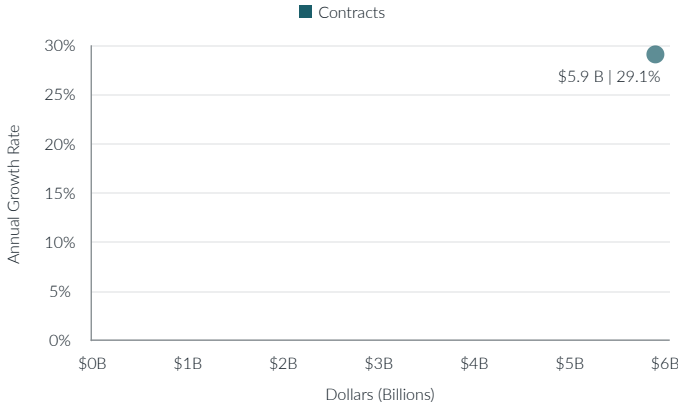
**246 Vendors**

### Spend by Segment, FY17-21

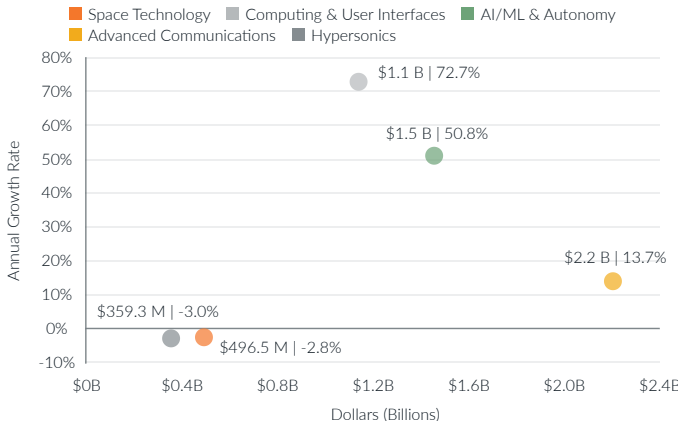
- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



### Technology Procurement Velocity, FY17-21



### Top 5 Technology Velocity by Segment, FY17-21



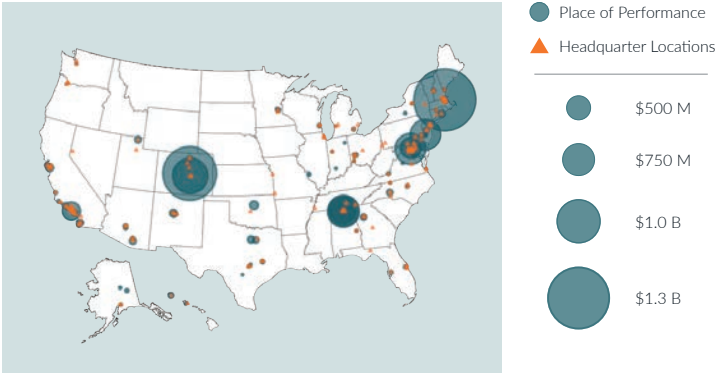
# MISSILE DEFENSE AGENCY

## VENDOR BENCHMARKS

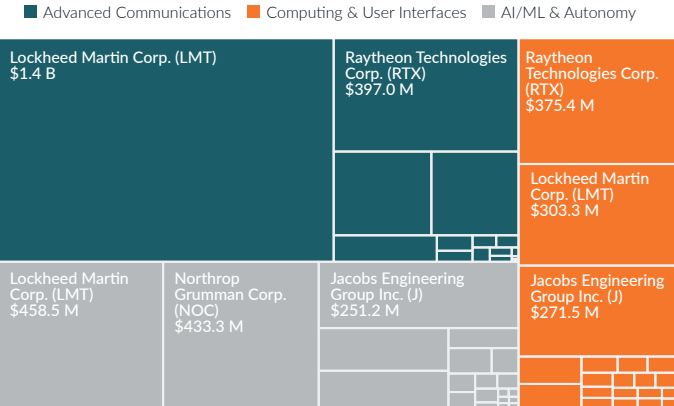
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	1	Lockheed Martin Corp. (LMT)	\$978.6 M	\$2.3 B	△ 27.6%	\$2.6 M	A+ (95)	98.8%
2	5	Raytheon Technologies Corp. (RTX)	\$546.4 M	\$794.2 M	△ 41.4%	\$2.6 M	A+ (97)	69.5%
3	2	Jacobs Engineering Group Inc. (J)	\$250.6 M	\$639.0 M	△ 36.7%	\$1.6 M	A+ (99)	0.0%
4	3	Northrop Grumman Corp. (NOC)	\$147.1 M	\$684.0 M	△ 87.9%	\$1.3 M	A+ (98)	99.5%
5	9	The Parsons Corp.	\$81.1 M	\$131.9 M	△ 67.8%	\$804.0 K	A+ (98)	0.0%
6	7	decibel Research Inc.	\$73.3 M	\$137.3 M	△ 20.7%	\$730.4 K	A (91)	0.0%
7	4	L3Harris Technologies Inc. (LHX)	\$35.4 M	\$310.5 M	△ 5.5%	\$1.1 M	A+ (98)	0.0%
8	6	Modern Technology Solutions Inc.	\$31.6 M	\$112.2 M	△ 11.2%	\$1.9 M	A+ (98)	0.0%
9	17	a.i. Sollutions Inc.	\$20.9 M	\$24.0 M	△ 144.4%	\$647.4 K	A (93)	0.0%
10	12	Aerojet Rocketdyne Holdings Inc. (AJRD)	\$13.4 M	\$30.4 M	△ 18.7%	\$1.8 M	A+ (98)	0.0%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21



# U.S. SPECIAL OPERATIONS COMMAND

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$936.5 M**

USSOCOM's Percentage of USG Critical Technology Spend

**0.2%**

Critical Technology Award Count

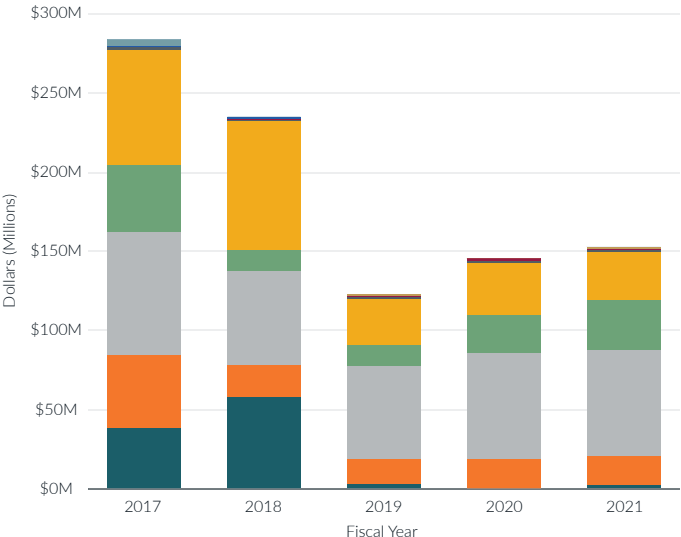
**1,583 Awards**

Critical Technology Vendor Count

**357 Vendors**

### Spend by Segment, FY17-21

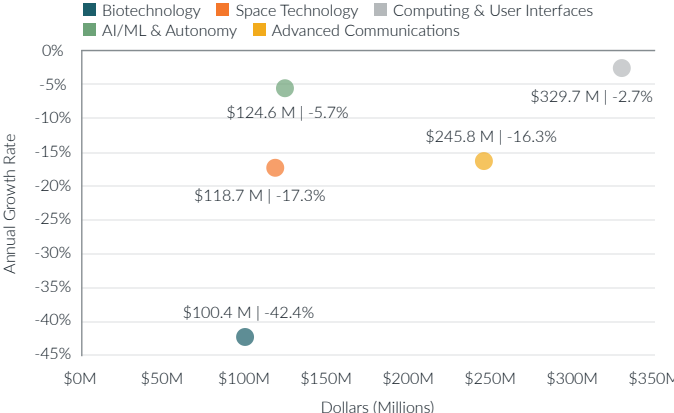
- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



### Technology Procurement Velocity, FY17-21



### Top 5 Technology Velocity by Segment, FY17-21



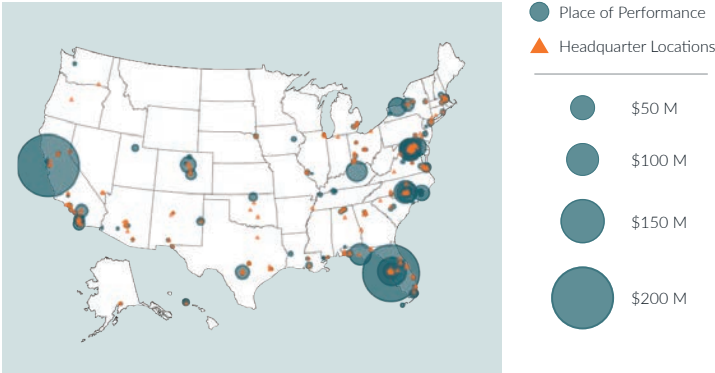
# U.S. SPECIAL OPERATIONS COMMAND

## VENDOR BENCHMARKS

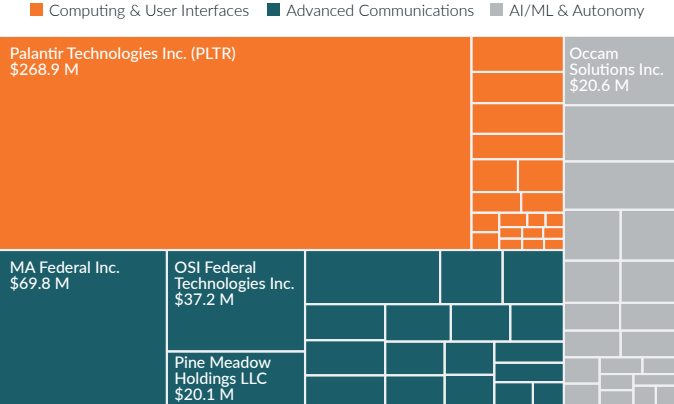
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21		AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	— 1	Palantir Technologies Inc. (PLTR)	\$52.5 M	\$268.9 M	▽ 0.8%	\$10.3 M	B+ (89)	100.0%
2	△ 10	OSI Federal Technologies Inc.	\$17.0 M	\$37.2 M	△ 247.8%	\$1.8 M	B (81)	0.0%
3	△ 4	Occam Solutions Inc.	\$11.7 M	\$20.6 M	△ 14.9%	\$1.9 M	A (93)	0.0%
4	△ 5	NANA Regional Corp. Inc.	\$7.8 M	\$16.7 M	△ 296.9%	\$929.0 K	A+ (98)	100.0%
5	△ 114	Arrowmaker Group Inc.	\$7.6 M	\$8.2 M	△ 127.4%	\$2.1 M	B+ (88)	0.0%
6	— 6	Lockheed Martin Corp. (LMT)	\$7.5 M	\$28.0 M	▽ 4.3%	\$393.8 K	A+ (95)	0.0%
7	△ 214	Leidos Inc. (LDOS)	\$6.0 M	\$6.0 M	— -	\$859.1 K	A+ (98)	100.0%
8	▽ 7	Creative IT Solutions LLC	\$5.2 M	\$8.8 M	△ 18.9%	\$1.3 M	C+ (79)	100.0%
9	△ 108	Applied Training Solutions LLC	\$4.1 M	\$4.1 M	— -	\$4.1 M	C+ (79)	0.0%
10	△ 11	Four Walls Inc.	\$3.4 M	\$7.5 M	△ 69.0%	\$377.1 K	C+ (78)	0.0%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21



# INTERAGENCY ANALYSIS

# DEPARTMENT OF ENERGY

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$10.5 B**

DoE's Percentage of  
USG Critical Technology Spend

**2.6%**

Critical Technology Award Count

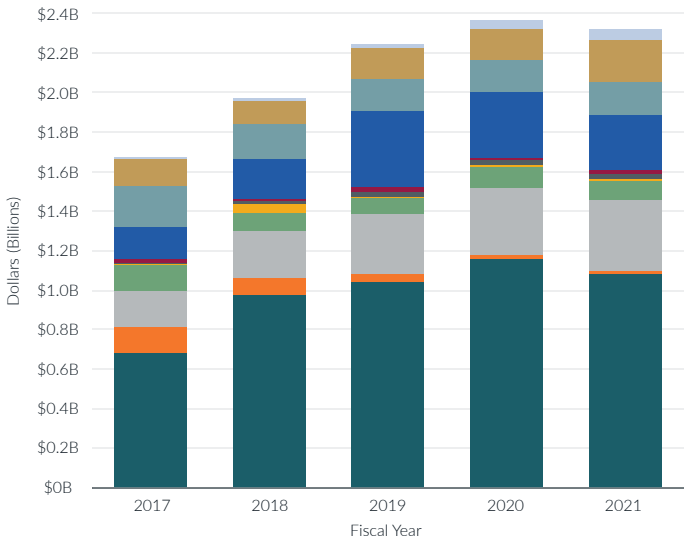
**4,453 Awards**

Critical Technology Vendor Count

**1,445 Vendors**

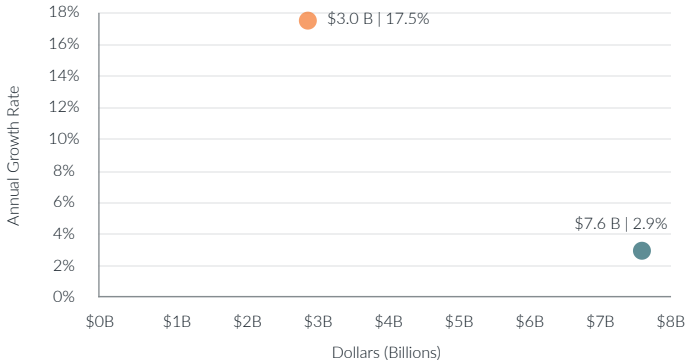
### Spend by Segment, FY17-21

- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



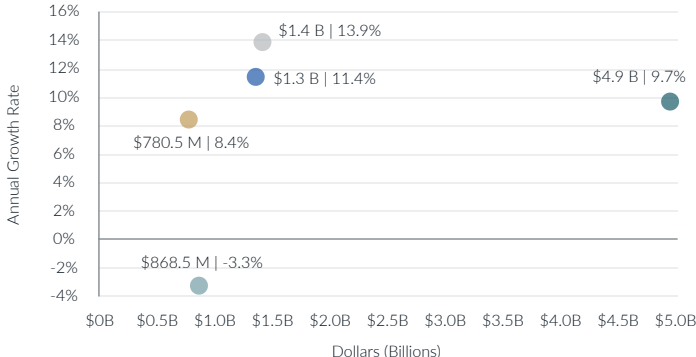
### Award Type Velocity, FY17-21

- Contracts
- Grants



### Top 5 Technology Velocity by Segment, FY17-21

- Biotechnology
- Computing & User Interfaces
- Renewable Energy
- Directed Energy
- Advanced Materials



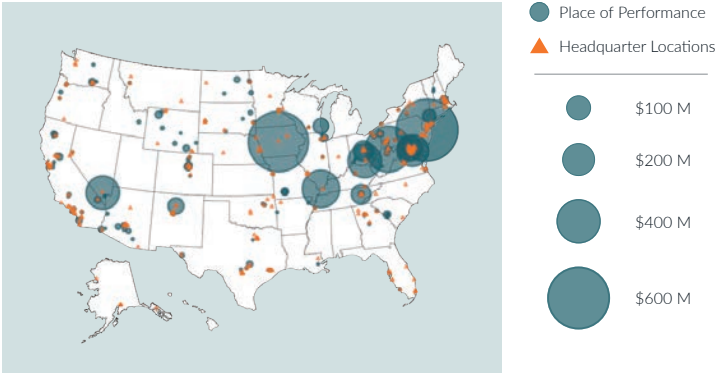
# DEPARTMENT OF ENERGY

## VENDOR BENCHMARKS

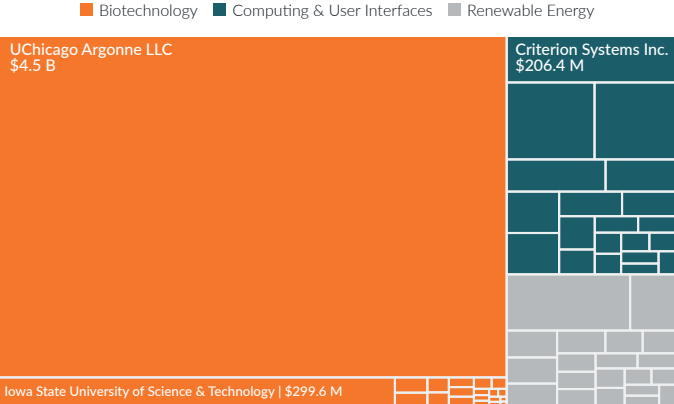
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	— 1	UChicago Argonne LLC	\$992.8 M	\$4.5 B	△ 10.5%	\$42.5 M	B+ (89)	0.0%
2	— 2	Trustees of Princeton University	\$145.5 M	\$652.9 M	△ 8.4%	\$3.2 M	A (91)	0.0%
3	— 3	Iowa State University of Science & Technology	\$122.5 M	\$608.5 M	— 0.0%	\$3.0 M	A+ (96)	0.0%
4	△ 5	Criterion Systems Inc.	\$53.6 M	\$206.4 M	△ 16.3%	\$2.9 M	A (91)	0.0%
5	△ 9	Cook Inlet Region Inc.	\$37.7 M	\$177.7 M	△ 5.0%	\$1.1 M	A+ (98)	0.0%
6	△ 13	University of Illinois	\$35.8 M	\$67.4 M	△ 54.1%	\$387.6 K	A (94)	0.0%
7	△ 10	Unwin Co.	\$33.7 M	\$56.9 M	△ 20.5%	\$5.7 M	A (90)	0.0%
8	▽ 4	Swift & Staley Inc.	\$32.8 M	\$221.0 M	△ 1.9%	\$1.7 M	C+ (79)	0.0%
9	△ 224	General Atomics Inc.	\$26.9 M	\$29.4 M	△ 214.8%	\$1.2 M	A+ (98)	0.0%
10	▽ 8	State of California	\$26.7 M	\$127.3 M	△ 13.1%	\$273.9 K	A (94)	0.0%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21



## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$795.1 M**

DHS's Percentage of  
USG Critical Technology Spend

**0.2%**

Critical Technology Award Count

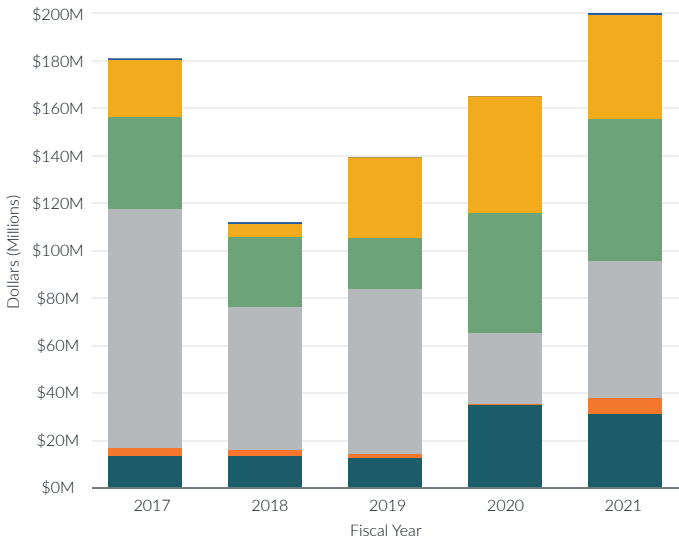
**925 Awards**

Critical Technology Vendor Count

**386 Vendors**

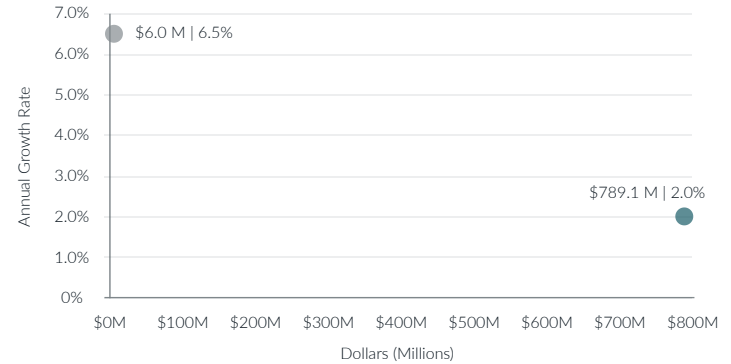
### Spend by Segment, FY17-21

■ Biotechnology 
 ■ Space Technology 
 ■ Computing & User Interfaces 
 ■ AI/ML & Autonomy  
■ Advanced Communications 
 ■ Renewable Energy 
 ■ Directed Energy 
 ■ Additive Manufacturing



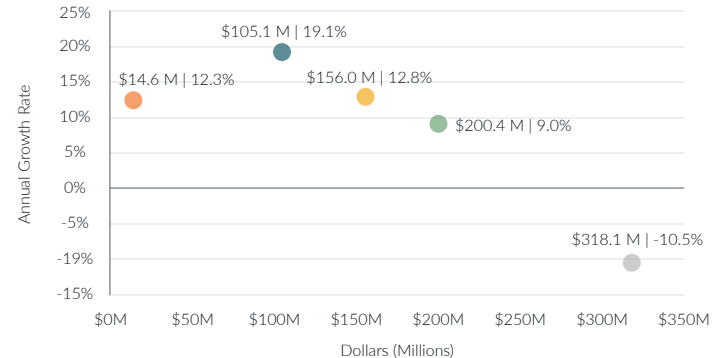
### Award Type Velocity, FY17-21

■ Contracts 
 ■ OTAs



### Top 5 Technology Velocity by Segment, FY17-21

■ Biotechnology 
 ■ Space Technology 
 ■ Computing & User Interfaces  
■ AI/ML & Autonomy 
 ■ Advanced Communications



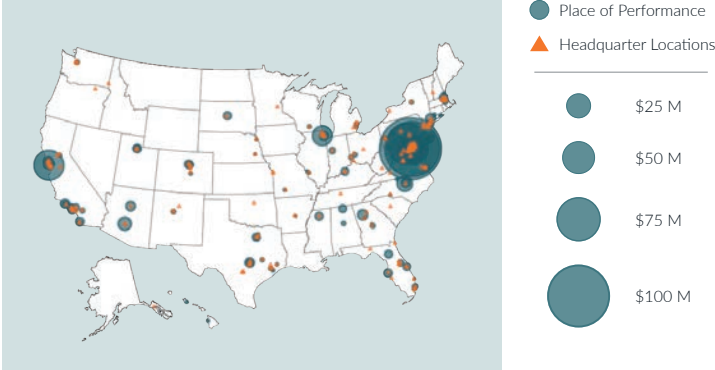
# DEPARTMENT OF HOMELAND SECURITY

## VENDOR BENCHMARKS

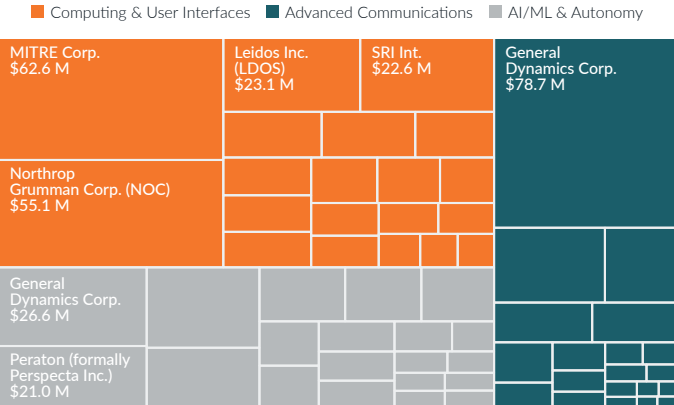
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21		AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	— 1	General Dynamics Corp. (GD)	\$28.4 M	\$108.1 M	△ 23.0%	\$1.3 M	A+ (98)	100.0%
2	△ 13	MITRE Corp.	\$14.0 M	\$69.7 M	△ 21.0%	\$2.9 M	A+ (98)	100.0%
3	△ 10	Four Points Technology LLC	\$11.7 M	\$20.9 M	△ 47.20%	\$1.4 M	B+ (89)	0.0%
4	▽ 2	Battelle Memorial Institute Inc.	\$11.0 M	\$47.8 M	△ 16.6%	\$401.7 K	B (81)	0.0%
5	△ 15	Leidos Inc. (LDOS)	\$11.0 M	\$23.7 M	△ 4.2%	\$2.2 M	A+ (98)	0.0%
6	△ 40	Mythics Inc.	\$10.6 M	\$11.2 M	△ 232.6%	\$1.6 M	A (93)	0.0%
7	△ 337	Chartis Consulting Corp.	\$8.9 M	\$8.9 M	— -	\$8.9 M	A+ (98)	0.0%
8	△ 283	Global Medical Response Inc.	\$8.7 M	\$8.7 M	— -	\$788.3 K	A+ (97)	100.0%
9	△ 244	Maximus Inc. (MMS)	\$8.2 M	\$8.2 M	— -	\$8.2 M	-	0.0%
10	▽ 9	CACI International Inc. (CACI)	\$7.0 M	\$19.5 M	△ 161.90%	\$1.5 M	A+ (98)	22.5%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21



# DEPARTMENT OF JUSTICE

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$1.1 B**

DoJ's Percentage of  
USG Critical Technology Spend

**0.3%**

Critical Technology Award Count

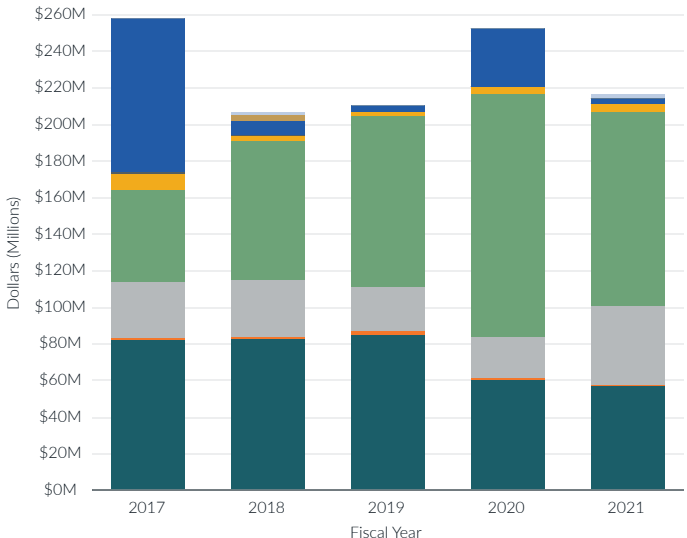
**4,322 Awards**

Critical Technology Vendor Count

**777 Vendors**

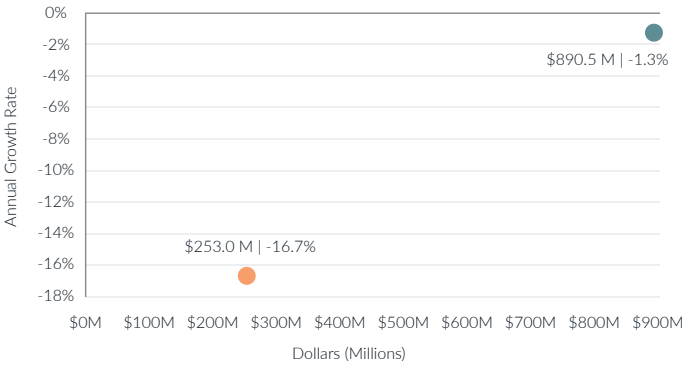
### Spend by Segment, FY17-21

- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



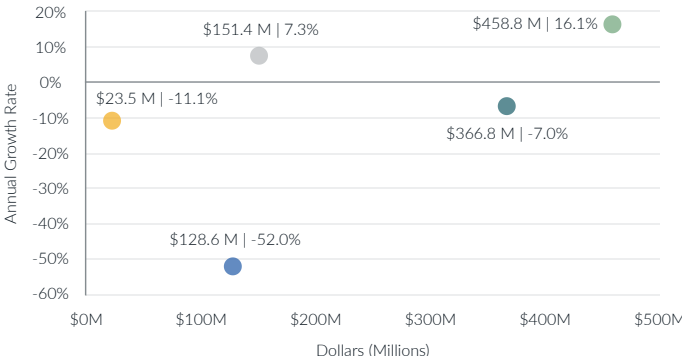
### Award Type Velocity, FY17-21

- Contracts
- Grants



### Top 5 Technology Velocity by Segment, FY17-21

- Biotechnology
- AI/ML & Autonomy
- Computing & User Interfaces
- Advanced Communications
- Renewable Energy



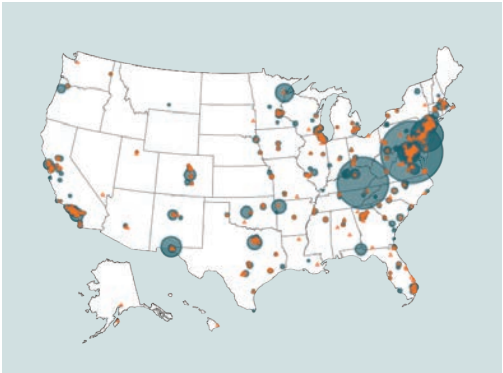
# DEPARTMENT OF JUSTICE

## VENDOR BENCHMARKS

### TOP 10 VENDORS

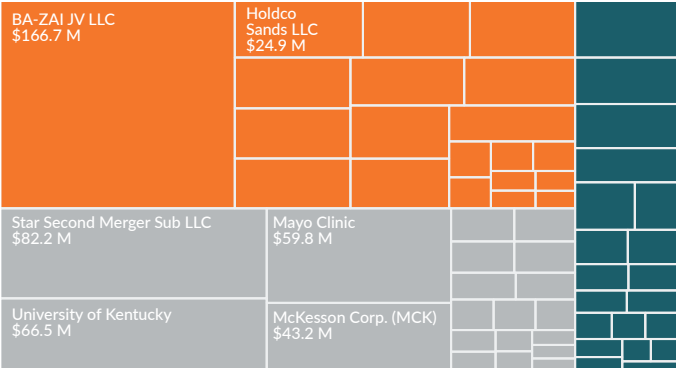
RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	1	BA-ZAI JV LLC	\$67.0 M	\$0.2 B	△ 121.6%	\$2.0 M	-	0.0%
2	26	McKesson Corp. (MCK)	\$12.5 M	\$47.4 M	▽ 0.3%	\$64.7 K	A+ (98)	0.4%
3	4	Mayo Clinic	\$12.1 M	\$59.8 M	▽ 4.3%	\$55.2 K	A+ (99)	100.0%
4	5	Minburn Technology Group LLC	\$11.6 M	\$19.9 M	△ 18.2%	\$795.2 K	C+ (75-79)	100.0%
5	3	University of Kentucky	\$6.9 M	\$66.5 M	△ 56.5%	\$549.6 K	A (94)	0.3%
6	71	Mercy Hospital Springfield	\$6.5 M	\$6.8 M	△ 396.8%	\$95.5 K	A (90-94)	0.0%
7	355	Sysorex Inc. (SYSX)	\$6.2 M	\$6.2 M	— -	\$2.1 M	B (84)	0.0%
8	8	The National Center For Missing and Exploited Children	\$6.0 M	\$18.0 M	— 0.0%	\$6.0 M	B+ (88)	0.0%
9	624	Credence Management Solutions LLC	\$5.9 M	\$5.9 M	— -	\$3.0 M	C+ (78)	0.0%
10	118	Mindpoint Group LLC	\$5.4 M	\$15.6 M	△ 1.2%	\$501.8 K	B (82)	0.0%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21

■ AI/ML & Autonomy ■ Biotechnology ■ Computing & User Interfaces



# DEPARTMENT OF STATE

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$1.3 B**

DoS's Percentage of  
USG Critical Technology Spend

**0.3%**

Critical Technology Award Count

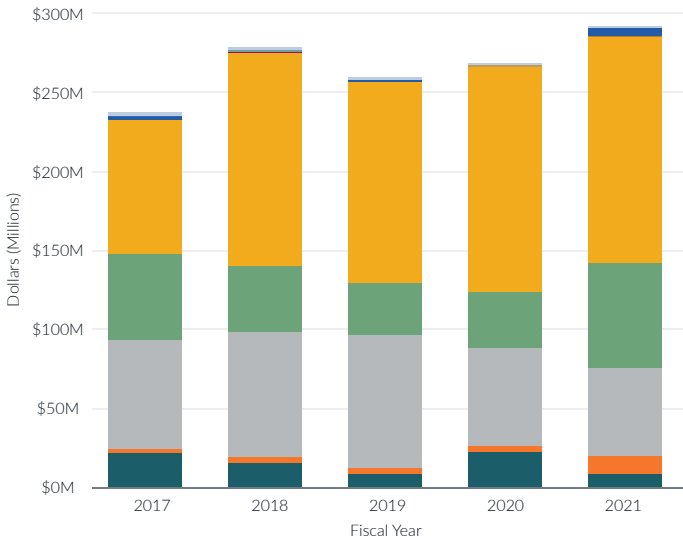
**2,229 Awards**

Critical Technology Vendor Count

**691 Vendors**

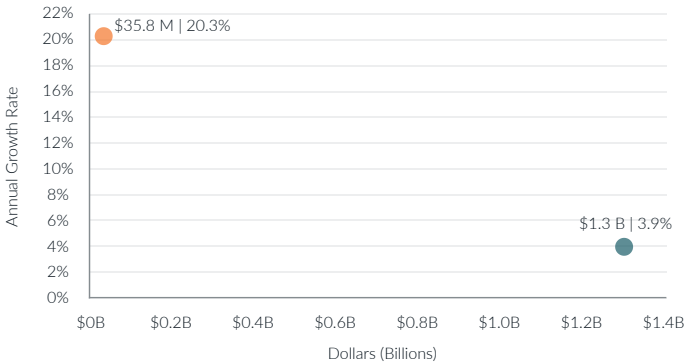
### Spend by Segment, FY17-21

- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



### Award Type Velocity, FY17-21

- Contracts
- Grants



### Top 5 Technology Velocity by Segment, FY17-21

- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications



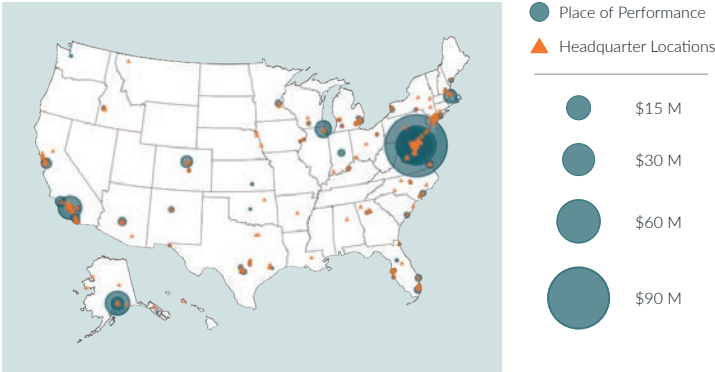
# DEPARTMENT OF STATE

## VENDOR BENCHMARKS

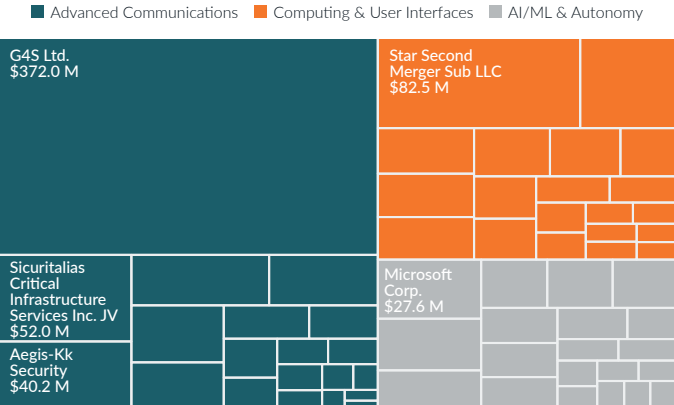
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	1	G4S Ltd.	\$96.7 M	\$389.7 M	△ 14.4%	\$422.2 K	A+ (98)	0.3%
2	16	Iron Vine Security LLC	\$13.6 M	\$18.5 M	△ 67.0%	\$2.1 M	B+ (87)	0.0%
3	3	Carahsoft Technology Corp.	\$13.3 M	\$39.6 M	△ 139.9%	\$465.9 K	A (92)	0.3%
4	409	Koniag Management Solutions LLC	\$12.1 M	\$12.1 M	— -	\$4.0 M	A+ (95)	100.0%
5	27	NANA Regional Corporation Inc.	\$9.2 M	\$12.0 M	△ 89.3%	\$429.4 K	A+ (98)	5.2%
6	4	Aegis-Kk Security	\$8.6 M	\$40.2 M	△ 13.6%	\$375.2 K	A (94)	0.0%
7	6	Sicuritalia Securitas Critical Infrastructure Services Inc. JV	\$8.4 M	\$52.0 M	▽ 5.0%	\$1.1 M	-	0.0%
8	9	Institute Management LLC	\$6.4 M	\$17.7 M	△ 211.2%	\$1.0 M	B (84)	0.0%
9	12	Torres-Avarn Security LLC	\$5.8 M	\$12.9 M	△ 61.1%	\$402.0 K	B+ (89)	0.0%
10	11	Inter-Con Security Systems Inc.	\$5.5 M	\$24.8 M	△ 22.7%	\$243.0 K	A (92)	0.0%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21



# NATIONAL AERONAUTICS & SPACE ADMINISTRATION

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$51.9 B**

NASA's Percentage of  
USG Critical Technology Spend

**12.9%**

Critical Technology Award Count

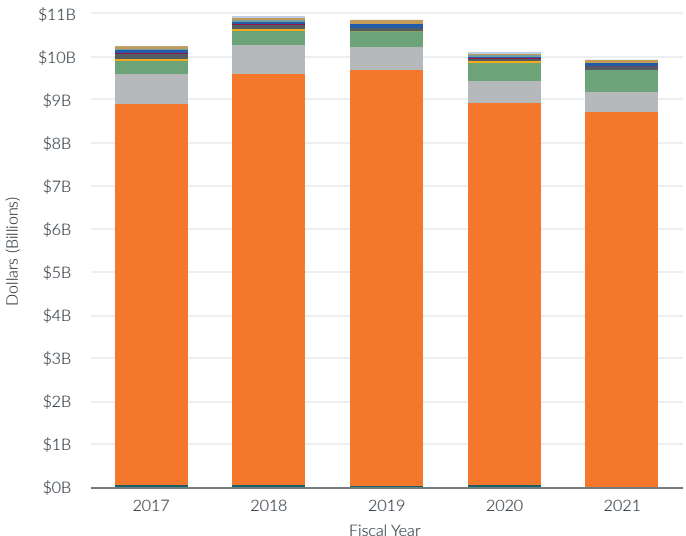
**19,822 Awards**

Critical Technology Vendor Count

**3,198 Vendors**

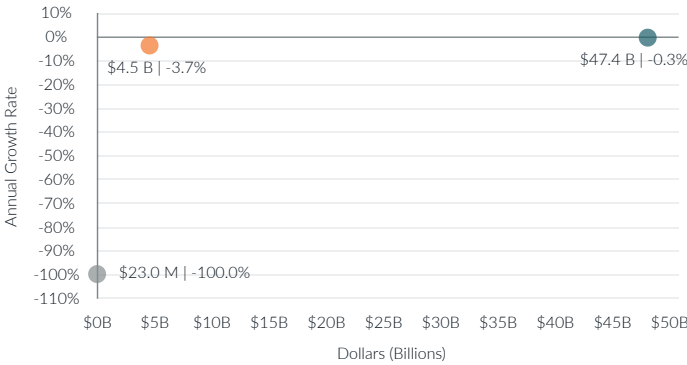
### Spend by Segment, FY17-21

- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



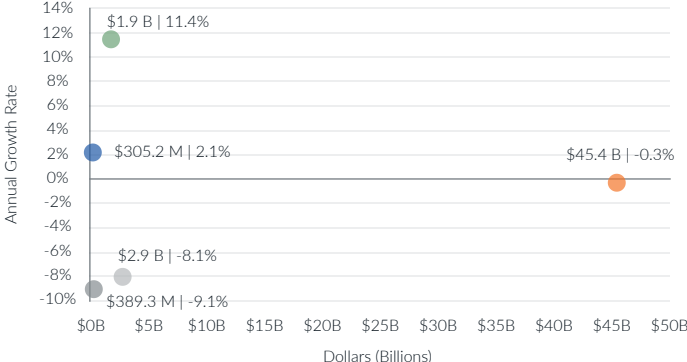
### Award Type Velocity, FY17-21

- Contracts
- Grants
- OTAs



### Top 5 Technology Velocity by Segment, FY17-21

- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Hypersonics
- Renewable Energy



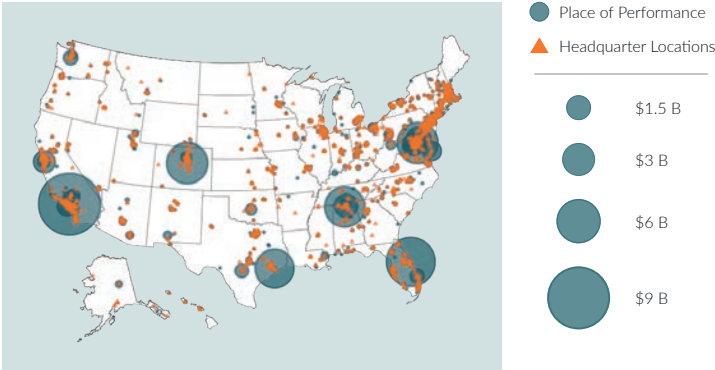
# NATIONAL AERONAUTICS & SPACE ADMINISTRATION

## VENDOR BENCHMARKS

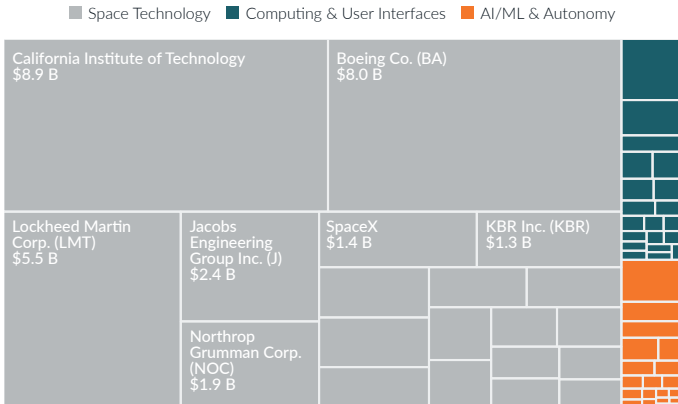
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	1	Boeing Co. (BA)	\$1.5 B	\$8.0 B	▽ 0.9%	\$7.0 M	A (94)	40.9%
2	2	California Institute of Technology	\$959.1 M	\$8.9 B	▽ 16.1%	\$1.1 M	B+ (89)	99.6%
3	14	SpaceX	\$886.8 M	\$1.4 B	△ 53.7%	\$10.8 M	B+ (89)	0.0%
4	3	Lockheed Martin Corp. (LMT)	\$831.5 M	\$5.6 B	▽ 6.5%	\$6.8 M	A+ (95)	0.2%
5	5	Northrop Grumman Corp. (NOC)	\$686.2 M	\$2.3 B	△ 13.5%	\$3.5 M	A+ (98)	11.0%
6	4	Jacobs Engineering Group Inc. (J)	\$584.7 M	\$2.6 B	△ 20.7%	\$4.0 M	A+ (99)	0.0%
7	6	KBR Inc. (KBR)	\$330.1 M	\$1.5 B	△ 0.3%	\$2.5 M	A+ (98)	0.0%
8	10	Blue Origin LLC	\$251.6 M	\$482.3 M	△ 357.8%	\$28.4 M	B (81)	0.0%
9	9	Science Systems and Applications Inc.	\$212.9 M	\$909.6 M	△ 9.9%	\$1.9 M	A (91)	0.0%
10	16	Southwest Research Institute Inc.	\$206.1 M	\$474.6 M	△ 24.8%	\$508.7 K	A+ (99)	0.5%

Critical Technologies Place of Performance, FY17-21



Vendor Awards by Top 3 Segments, FY17-21



# NATIONAL SCIENCE FOUNDATION

## OVERVIEW

### Critical Technology Overview, FY17-21

Critical Technology Spend

**\$8.5 B**

NSF's Percentage of USG Critical Technology Spend

**2.1%**

Critical Technology Award Count

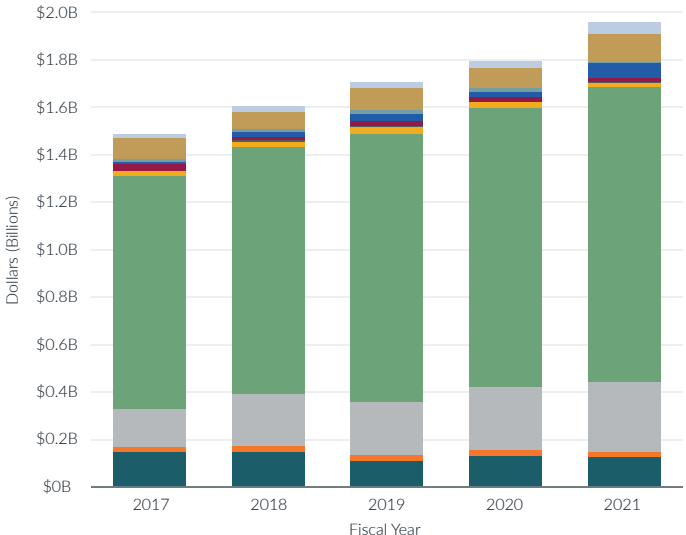
**20,273 Awards**

Critical Technology Vendor Count

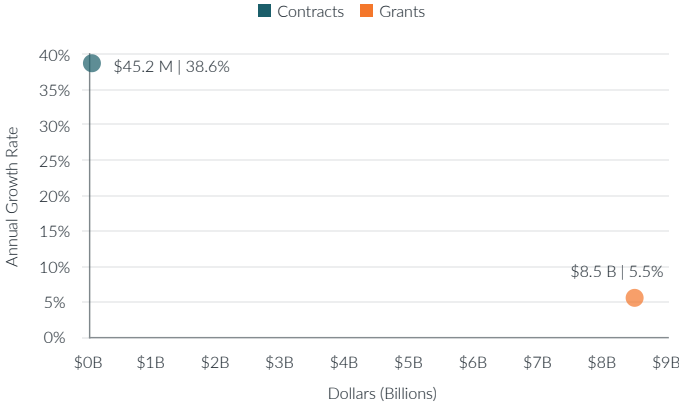
**1,254 Vendors**

### Spend by Segment, FY17-21

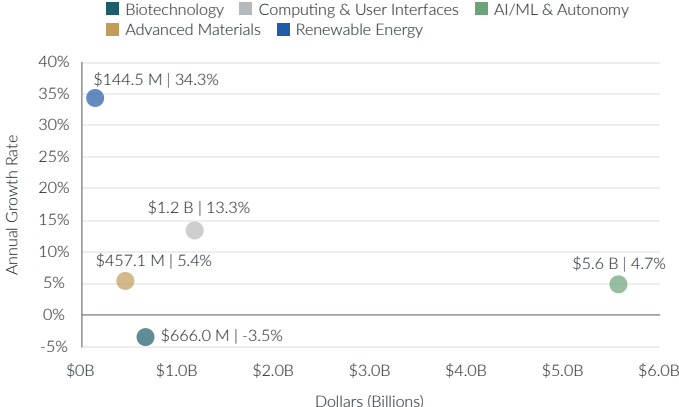
- Biotechnology
- Space Technology
- Computing & User Interfaces
- AI/ML & Autonomy
- Advanced Communications
- Hypersonics
- Microelectronics
- Renewable Energy
- Directed Energy
- Advanced Materials
- Additive Manufacturing



### Award Type Velocity, FY17-21



### Top 5 Technology Velocity by Segment, FY17-21



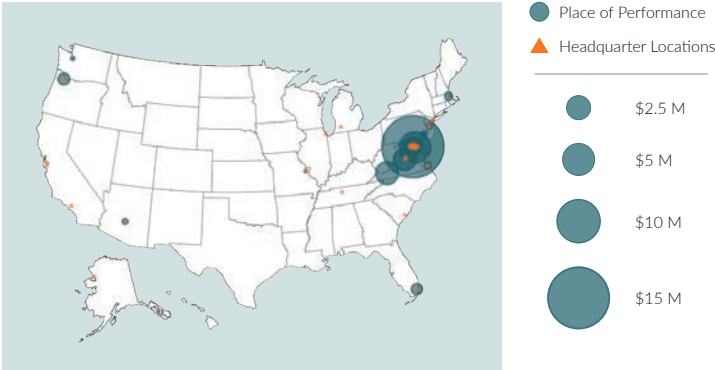
# NATIONAL SCIENCE FOUNDATION

## VENDOR BENCHMARKS

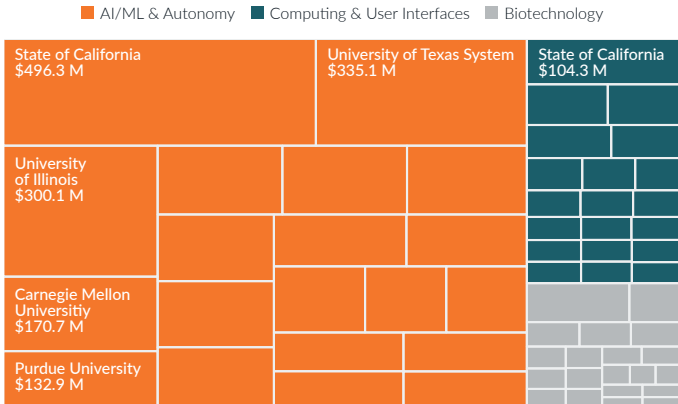
### TOP 10 VENDORS

RANK		VENDOR	SPEND				FINANCIALS	SOLE SOURCE
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	1	State of California	\$208.7 M	\$761.7 M	△ 9.2%	\$259.5 K	A (94)	0.0%
2	3	University of Texas System	\$74.8 M	\$399.5 M	△ 0.2%	\$330.4 K	A+ (96)	0.0%
3	2	University of Illinois	\$72.9 M	\$362.5 M	▽ 4.1%	\$370.6 K	A (94)	0.0%
4	39	Ohio State University	\$43.2 M	\$99.5 M	△ 34.0%	\$228.7 K	A (92)	0.0%
5	5	Carnegie Mellon University	\$42.3 M	\$192.7 M	△ 7.1%	\$217.3 K	A (92)	0.0%
6	13	University of Washington	\$40.9 M	\$146.1 M	△ 6.1%	\$207.5 K	A (94)	0.0%
7	21	University System of Maryland	\$36.3 M	\$134.7 M	△ 8.8%	\$202.6 K	A (94)	0.0%
8	8	Purdue University	\$35.4 M	\$171.9 M	▽ 0.1%	\$294.9 K	A (94)	0.0%
9	14	Regents Of The University Of Colorado	\$33.1 M	\$132.6 M	△ 7.4%	\$266.9 K	A (94)	0.0%
10	30	Trustees of Columbia University In The City of New York	\$31.6 M	\$107.1 M	△ 10.2%	\$274.0 K	A (91)	0.0%

Critical Technologies Place of Performance, FY17-21



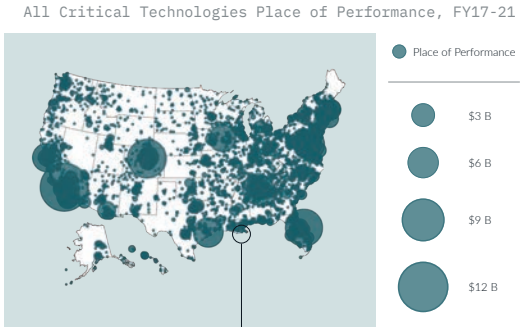
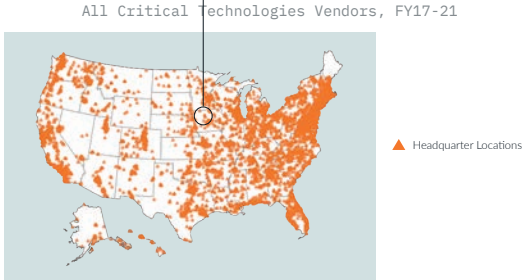
Vendor Awards by Top 3 Segments, FY17-21



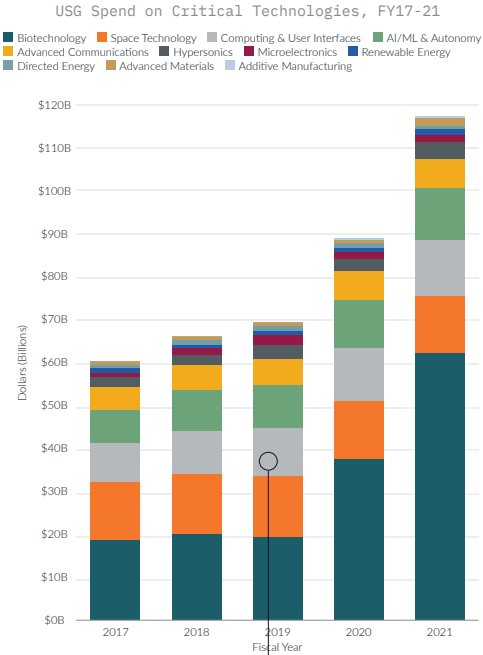
# SCORECARD GUIDES & VENDOR INDEX

# CRITICAL TECHNOLOGIES GUIDE

**ALL CRITICAL TECHNOLOGIES VENDORS, FY17-21**  
 Headquarter locations of awarded vendors for all 11 critical technologies combined, from FY17-21



**ALL CRITICAL TECHNOLOGIES PLACE OF PERFORMANCE, FY17-21**  
 Place of contract performance locations for all 11 critical technologies combined by zip code and total award amount, FY17-21



**USG SPEND ON CRITICAL TECHNOLOGIES, FY17-21**  
 Year-over-year awarded amount by technology segment across all USG, FY17-21

# CRITICAL TECHNOLOGIES GUIDE

**RANK**  
Segments are ranked by greatest to least by FY21 awarded amount, in comparison to FY20 awarded amount

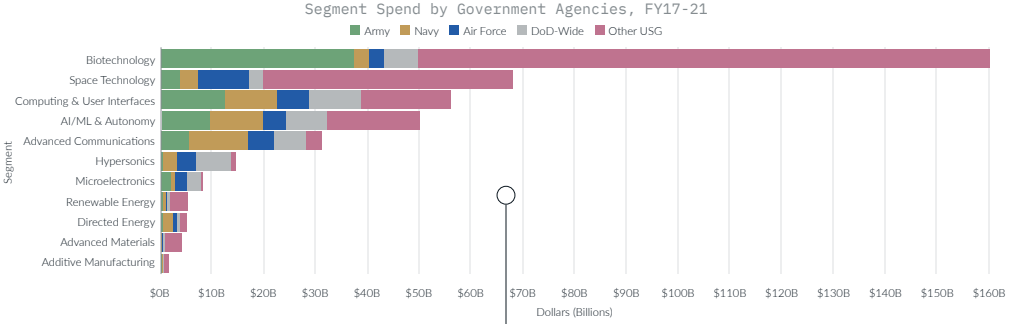
**SPEND**  
Combined contract, grant, and OTA combined awards for each segment; the compound annual growth rate from FY17-FY21, and the FY21 percentage of FY17-21 spend

**NON FAR-BASED**  
Non Federal Acquisition Regulation (FAR) based is combined grant and OTA awards from FY17-21, and the percentage of the total segment's awarded dollars from FY17-21

RANK		SEGMENT	SPEND			FAR-BASED		NON FAR-BASED		
FY22	FY21		FY21 SPEND	FY17-21 SPEND	CAGR	FY21 SHARE	FY17-21 SPEND	% OF SPEND	FY17-21 SPEND	% OF SPEND
1	1	Biotechnology	\$42 B	\$160.1 B	△ 26.6%	39.7%	\$80.7 B	50.4%	\$79.4 B	49.6%

**FY21 SPEND**  
Combined contract, grant, and OTA awards for each segment

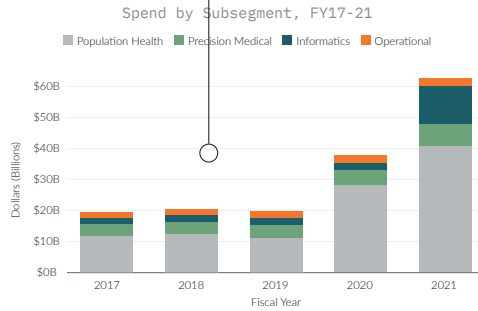
**FAR-BASED**  
Federal Acquisition Regulation (FAR) based is the formal contract spend from FY17-21, and the percentage of the total segment's awarded dollars from FY17-21



**SEGMENT SPEND BY GOVERNMENT AGENCIES, FY17-21**  
Total spend for each individual segment from FY17-21, split by each Military Department, DoD-Wide, and all other government agencies

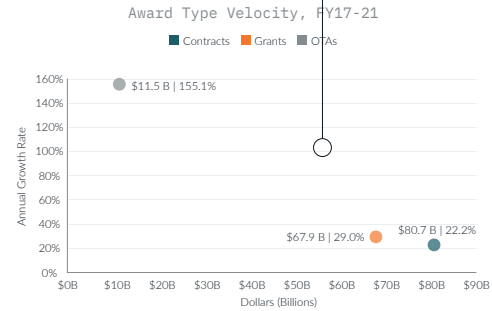
## SPEND BY SUBSEGMENT, FY17-21

Year-over-year awarded amount by technology subsegment, FY17-21

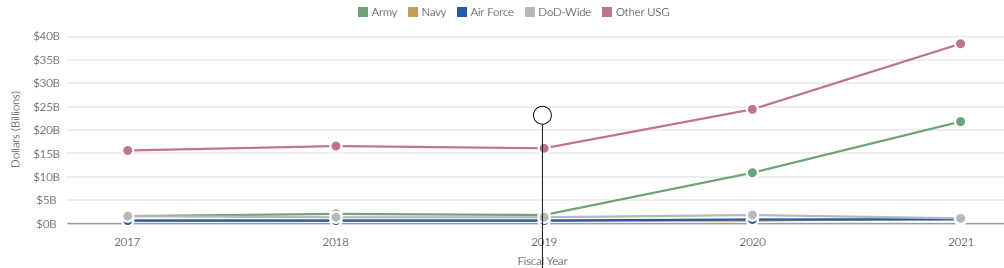


## AWARD TYPE VELOCITY, FY17-21

Compound annual growth rate compared to total spend from FY17-21 combined, by contracts, grants, and OTAs for each segment



## Segment Spend by Government Agencies, FY17-21



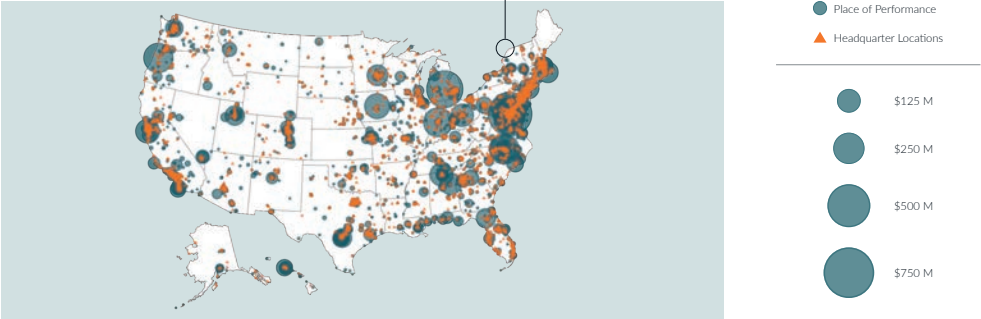
## SEGMENT SPEND BY GOVERNMENT AGENCIES, FY17-21

Year-over-year spend on respective critical technology, split by each Military Department, DoD-Wide, and all other government agencies

# TECHNOLOGY SEGMENT ANALYSIS GUIDE

**PLACE OF PERFORMANCE & VENDOR HEADQUARTER LOCATION**  
 Place of contract performance locations overlaid with vendor headquarter locations for each respective technology by zip code and total award amount, FY17-21

Place of Performance & Vendor Headquarter Location, FY17-21



Top 20 Vendors by Subsegment, FY17-21

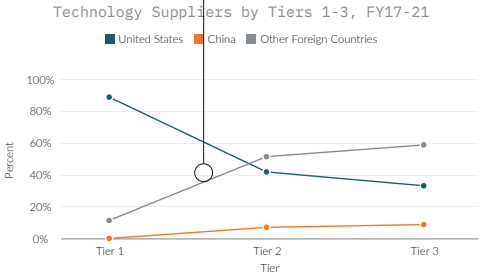
■ Population Health ■ Precision Medical ■ Informatics ■ Operational

Moderna Inc. (MRNA) \$9.6 B		Pfizer Inc. (PFE) \$8.5 B		State of California   \$1.2 B	
Advanced Technologies Int. \$7.3 B		Merck & Co. Inc. \$3.1 B		Lidos Holdings Inc. (LDOS) \$3.1 B	
Chemonics International Inc. \$5.2 B		Health Research Inc. \$2.7 B		McKesson Corp. (MCK) \$2.0 B	
UChicago Argonne LLC \$4.7 B		State of California \$1.6 B		AstraZeneca PLC (AZN) \$2.0 B	
				Mayo Clinic   \$1.3 B	
				Emergent Biosolutions Inc. \$1.1 B	

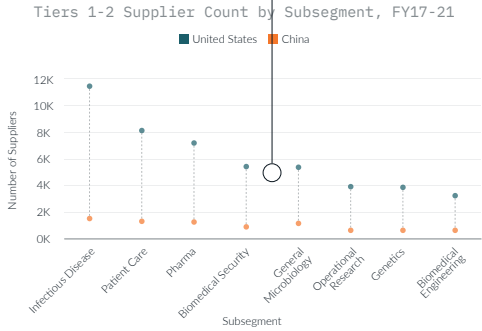
**TOP 20 VENDORS BY SUBSEGMENT, FY17-21**  
 Market size & award distribution of each technology subsegment's top 20 vendors, FY17-21

# TECHNOLOGY SEGMENT ANALYSIS GUIDE

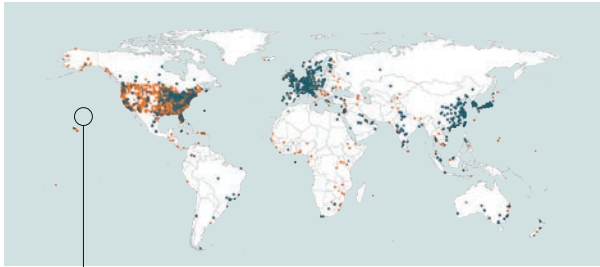
**TECHNOLOGY SUPPLIERS BY TIERS 1-3, FY17-21**  
 Percentage of total technology suppliers by Tiers 1-3, split by U.S., Chinese, and other foreign countries' total supplier level



**TIERS 1-2 SUPPLIER COUNT BY SUBSEGMENT, FY17-21**  
 Comparison of U.S. to Chinese Tiers 1 and 2 supplier count combined at the sub-subsegment level



Supplier Geolocation by Tiers 1-2, FY17-21



**SUPPLIER GEOLOCATION BY TIERS 1-2, FY17-21**  
 Global supplier address locations by Tiers 1 & 2, FY17-21

Top 5 Supplier Countries by Tier Two, FY17-21

COUNTRY	SUPPLIER COUNTS		
	TIER ONE	TIER TWO	TIER THREE
United States	21,054	9,774	25,915
China	49	1,637	6,649
Great Britain	280	1,427	4,131
Japan	169	1,376	7,037
South Korea	53	1,056	4,762

**TOP 5 SUPPLIER COUNTRIES BY TIER TWO, FY17-21**  
 Top 5 countries and their respective total supplier counts in Tiers 1-3, sorted from greatest to least by Tier 2 supplier count

**TIERS**  
 Tier 1: Prime Contract Vendors  
 Tier 2: Sub-contract Vendors, Prime Contract Vendors' Suppliers  
 Tier 3: Suppliers (for the Sub-contract Vendors and Prime Contract Vendors' Suppliers)

## RANK

Vendors are ranked by greatest to least by FY21 awarded amount, in comparison to FY20 awarded amount

## FINANCIALS

An estimation of an organization's creditworthiness in letter grade format. Calculations are made from company demographics such as employee counts, industry classification, number of years in business, number of locations, form of entity (public or private), and any documented bankruptcies or other legal filings.

### TOP 10 VENDORS

RANK	VENDOR	SPEND				FINANCIALS	SOLE SOURCE
		AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	Pfizer Inc. (PFE)	\$7.5 B	\$8.5 B	△ 64.7%	\$22.4 M	A+ (98)	87.8%

## SPEND

FY21 contract, grant, and OTA combined awards for each vendor; FY17-21 contract, grant, and OTA combined awards; the compound annual growth rate from FY17-FY21; and the average amount per contract action for each vendor

## SOLE SOURCE

Percentage of awarded contracts for respective vendor that were sole-sourced, or not competed

### NOTABLE EMERGENT COMPANIES

COMPANY	LOCATION
AavantBio Inc.	Cambridge, MA

## NOTABLE EMERGENT COMPANIES

Emergent companies that focus all or part of their business on the respective technologies

### NOTABLE INVESTORS

COMPANY	LOCATION
5AM Ventures	San Francisco, CA

## NOTABLE INVESTORS

Investment companies that have one or more portfolio companies engaged in developing the respective technology

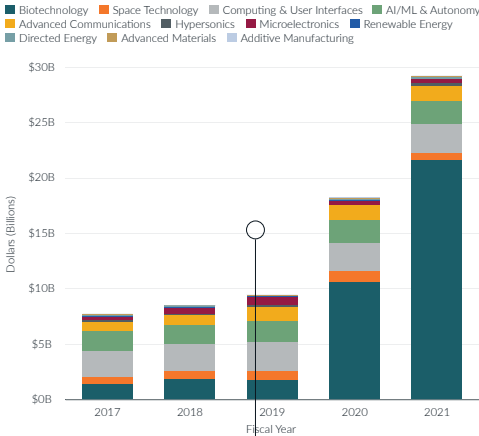
# MILITARY DEPARTMENTS GUIDE

## Critical Technology Overview, FY17-21

Critical Technology Spend  
**\$73.2 B**  
 Army's Percentage of USG Critical Technology Spend  
**18.2%**

Critical Technology Award Count  
**27,663 Awards**  
 Critical Technology Unique Vendor Count  
**7,193 Vendors**

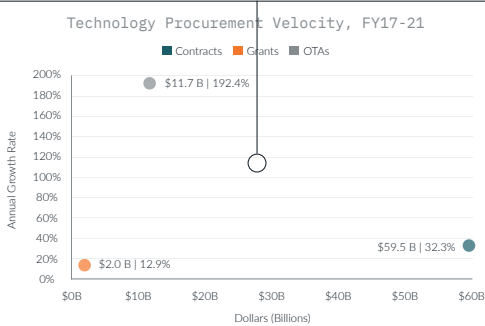
### Spend by Segment, FY17-21



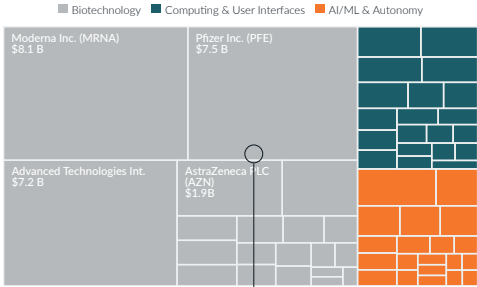
**SPEND BY SEGMENT, FY17-21**  
 Year-over-year awarded amount by technology segment for the respective Military Department, FY17-21

## TECHNOLOGY PROCUREMENT VELOCITY, FY17-21

Compound annual growth rate compared to total Military Department spend from FY17-21 combined, by contracts, grants, and OTAs



### Vendor Awards by Top 3 Segments, FY17-21



**VENDOR AWARDS BY TOP 3 SEGMENTS, FY17-21**  
 Market size & award distribution of each Military Department's top 3 technology segments by top 20 vendors, FY17-21

# MILITARY DEPARTMENTS GUIDE

**RANK**  
Subsegments are ranked by greatest to least by FY21 awarded amount, in comparison to FY20 awarded amount

**SPEND**  
FY21 combined contract, grant, and OTA combined awards for each vendor; FY17-21 contract, grant, and OTA combined awards; the compound annual growth rate from FY17-FY21; and the average amount per contract action for each vendor

**NON FAR-BASED**  
Combined grant and OTA awards from FY17-21, and the percentage of the total subsegment's awarded dollars from FY17-21

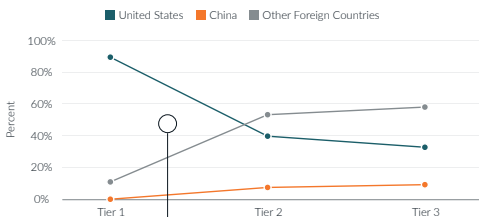
SEGMENT RANK TABLE

SEGMENT	RANK		SUBSEGMENT	SPEND			PROCUREMENT TYPE			
	FY22	FY21		AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	FAR-BASED	% OF SPEND	NON FAR-BASED	% OF SPEND
Biotechnology	1	1	Population Health	\$60.9 B	\$32.3 B	△ 99.9%	\$60.9 B	28.1%	\$12.7 B	16.0%
	2	2	Precision Medical	\$771.6 M	\$2.2 B	△ 24.0%	\$1.3 B	1.8%	\$906.2 M	1.2%
	3	3	Operational	\$391.0 M	\$2.6 B	▽ 5.7%	\$2.6 B	3.5%	\$84.8 M	0.1%

**AWARDED AMOUNT FY21**  
FY21 contract, grant, and OTA awards for each subsegment

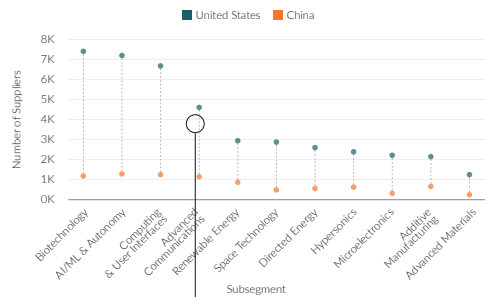
**FAR-BASED**  
Formal contract spend from FY17-21, and the percentage of the total subsegment's awarded dollars from FY17-21

Technology Suppliers by Tiers 1-3, FY17-21



**TECHNOLOGY SUPPLIERS BY TIERS 1-3, FY17-21**  
Percentage of total technology suppliers by tiers 1-3, split by U.S., Chinese, and other foreign countries' total supplier count

Tiers 1-2 Supplier Count by Segment, FY17-21



**TIERS 1-2 SUPPLIER COUNT BY SEGMENT, FY17-21**  
Comparison of U.S. to Chinese tiers 1 and 2 supplier count combined by technology segment

# MILITARY DEPARTMENTS GUIDE

**RANK**

Vendors are ranked by greatest to least by FY21 awarded amount, in comparison to FY20 awarded amount

**FINANCIALS**

An estimation of an organization's creditworthiness in letter grade format. Calculations are made from company demographics such as employee counts, industry classification, number of years in business, number of locations, form of entity (public or private), and any documented bankruptcies or other legal filings.

TOP 10 VENDORS

RANK		VENDOR	SPEND			FINANCIALS	SOLE SOURCE	
FY22	FY21	VENDOR NAME	AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21	AVG. AMOUNT PER CONTRACT ACTION	CREDIT GRADE	% SHARE OF AWARDED
1	-	Pfizer Inc. (PFE)	\$7.5 B	\$7.5 B	△ 581.0%	\$682.3 M	A+ (98)	100%

**SPEND**

FY17 contract, grant, and OTA combined awards for each vendor; FY17-21 contract, grant, and OTA combined awards; the compound annual growth rate from FY17-FY21; and the average amount per contract action for each vendor

**SOLE SOURCE**

Percentage of awarded contracts for respective vendor that were sole-sourced, or not competed

NOTABLE DEFENSE ACCELERATORS

ACCELERATOR	LOCATION
Army Applications Lab	Austin, TX

**NOTABLE DEFENSE ACCELERATORS**

List of 5 notable DoD entities that identify emerging technologies from the academic and the venture communities that can address DoD problems in innovative ways

TOP 5 CONTRACTING OFFICES

CONTRACTING OFFICE	AWARD SUM	AWARD COUNT
US Department of the Army	\$60.5 B	16,601

**TOP 5 CONTRACTING OFFICES**

Top 5 contracting offices for the respective Military Department, the total awarded value, and the number of awards from that office

# DOD AGENCIES & INTERAGENCIES GUIDE

**TECHNOLOGY PROCUREMENT VELOCITY, FY17-21**  
 Compound annual growth rate compared to total DoD/USG agency spend from FY17-21 combined, by contracts, grants, and OTAs (where applicable)

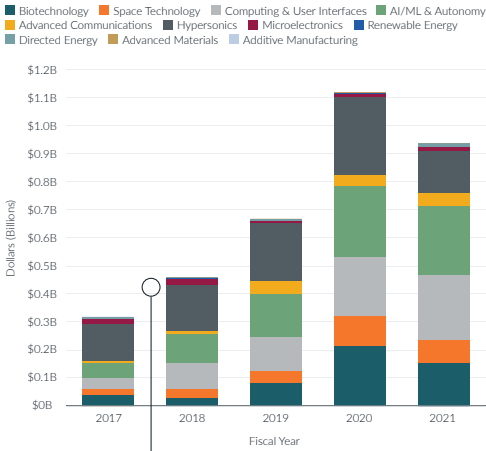
Critical Technology Overview, FY17-21

Critical Technology Spend  
**\$3.5 B**  
DARPA's Percentage of USG Critical Technology Spend  
**0.9%**

Critical Technology Award Count  
**1,269 Awards**

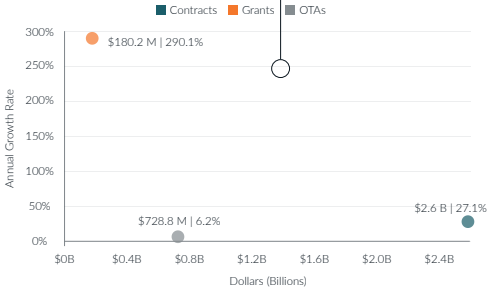
Critical Technology Unique Vendor Count  
**438 Vendors**

Spend by Segment, FY17-21

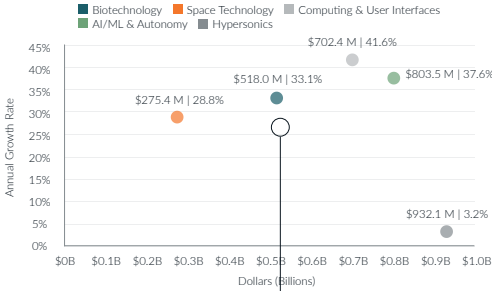


**SPEND BY SEGMENT, FY17-21**  
 Year-over-year awarded amount by technology segment for each respective DoD/USG agency, FY17-21

Technology Procurement Velocity, FY17-21



Top 5 Technology Velocity by Segment, FY17-21



**TOP 5 TECHNOLOGY VELOCITY BY SEGMENT, FY17-21**  
 Compound annual growth rate compared to total DoD/USG agency spend from FY17-21 combined, by top 5 segments

# DOD AGENCIES/INTERAGENCIES GUIDE

**RANK**

Vendors are ranked by greatest to least by FY21 awarded amount, in comparison to FY20 awarded amount

**FINANCIALS**

An estimation of an organization's creditworthiness in letter grade format. Calculations are made from company demographics such as employee counts, industry classification, number of years in business, number of locations, form of entity (public or private), and any documented bankruptcies or other legal filings.

TOP 10 VENDORS

RANK	VENDOR	SPEND			FINANCIALS	SOLE SOURCE
		AWARDED AMOUNT FY21	AWARDED AMOUNT FY17-21	ANNUAL GROWTH RATE FY17-21		
1	Raytheon Technologies Corp. (RTX)	\$155.4 M	\$491.0 M	31.9%	A+ (97)	0.4%

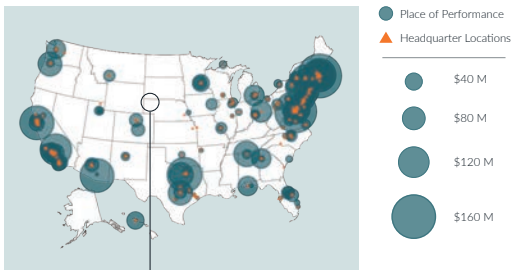
**SPEND**

FY17 contract, grant, and OTA combined awards for each vendor; FY17-21 contract, grant, and OTA combined awards; the compound annual growth rate from FY17-FY21; and the average amount per contract action for each vendor

**SOLE SOURCE**

Percentage of awarded contracts for respective vendor that were sole-sourced, or not competed

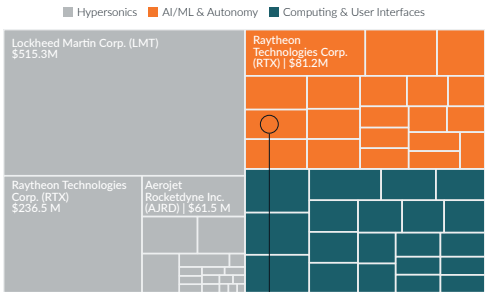
Critical Technologies Place of Performance, FY17-21



**CRITICAL TECHNOLOGIES PLACE OF PERFORMANCE, FY17-21**

Place of contract performance locations overlaid with vendor headquarter locations for each respective agency by zip code and total award amount, FY17-21

Vendor Awards by Top 3 Segments, FY17-21



**VENDOR AWARDS BY TOP 3 SEGMENTS, FY17-21**

Market size & award distribution of each agency's top 3 technology segments by top 20 vendors, FY17-21

# VENDOR INDEX

VENDOR	PAGE	VENDOR	PAGE	VENDOR	PAGE
5AM Ventures	10	Anthem Venture Partners	40	Brilliant Light Power Inc.	50
8VC	50	Applied Intuition	25	Broom Ventures LLC	50
A. P. Inspections LLC	77	Applied Training Solutions LLC	83	BVH Inc.	79
a.i. Sollutions Inc.	81	APTIM AECOM Decommissioning LLC	43,45	By Light, Professional IT Services LLC	75
Aalyria Technologies Inc.	30	APTIM LLC	43	CACI Int. Inc. (CACI)	68,70,88
AavantiBio Inc.	10	ARCH Venture Partners	10	Caffeinated Capital	35
AbCellera Biologics Inc.	73	Arista Networks Inc. (ANET)	30	California Institute of Technology	13,15,94
ABL Space Systems	15	Army Applications Lab	64	Canaan Partners	35
ACC-APG Orlando, FL	64	Army Research Lab	64	Cape-Burns & McDonnell JV	43
Accel	25	Army SBIR/STTR Program	64	Capsida Biotherapeutics Inc.	10
Advanced Technologies Int.	8,50,62,70,79	Arrowmaker Group Inc.	83	Carahsoft Technology Corp.	77,92
AECOM (ACM)	48	ASGN Inc. (ASGN)	75	Carnegie Mellon University	96
Aegis-Kk Security	92	AstraZeneca PLC (AZN)	8,10,62,64	Carrier Global Corp. (CARR)	43,45
Aerobet Rocketdyne Inc. (AJRD)	73,81	Atlas Venture	10	Catalyst Accelerator	70
AF Techstars Accelerator	70	Ayar Labs	40	Celona Inc.	30
AFWERX	70	BA-ZAI JV, LLC	90	Cerebras Systems Inc.	73
Air Force Research Laboratory (AFRL)	70	BAE Systems PLC (BAESY)	18,23,25,28, 30,38,40,65,67	Charles Stark Draper Laboratory Inc.	30,33,35
Alif Semiconductor	40	BahFed Corp.	77	Chartis Consulting Corp.	88
Allied Space Accelerator	70	Battelle Memorial Institute Inc.	88	Chemonics International Inc.	8,10
Alto Ingredients (ALTO)	45	Bessemer Venture Partners	20,25	Chenega Corp.	77
Alumni Ventures	60	Bloom Energy Corp. (BE)	45	Chickasaw Management Services LLC	77
Amentum Government Services LLC	28,30,79	Blue Origin LLC	15,94	Clean Energy Venture Group	45
Ameresco Inc.	43,45	Blue Star NBR Inc.	53	Clearway Energy Inc. (CWEN)	45
Ampere Computing LLC	40	Blue Star NBR LLC	55,70	Cleveland-Cliffs Inc.	53
Ampla Health	58	BMW i Ventures	60	Cohere Technologies	30
Andreessen Horowitz	25	Boeing Co. (BA)	13,15,28,48,68,94	ColdQuanta	20
Anduril Industries Inc.	25	Booz Allen Hamilton Holding Corp. (BAH)	18,20,23, 25,40,75,79	Columbia Capital	30

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Commonwealth of Pennsylvania	53,55	Ford Motor Co. (F)	43,45	Infinium Metals	55
Consolidated Edison Inc.	43	FormAlloy Technologies Inc.	50	Inkbit Corp.	60
Cook Inlet Region Inc.	86	Foundry Group	60	Insight Enterprises Inc.	60
King County, WA	43	Four Points Technology LLC	23,88	Institute Management LLC	92
Creative IT Solutions LLC	83	Four Walls Inc.	77,83	Intel Capital	40
Credence Management Solutions LLC	90	Fungible Inc.	40	Inter-Con Security Systems Inc.	92
Criterion Systems Inc.	86	G4S Ltd.	28,92	International AIDS Vaccine Initiative	79
CUE Inc.	64	Gaingels Management LLC	50	International Business Machines Corp. (IBM)	40
Databricks	25	General Atomics Inc.	55,86	Iowa State University of Science & Technology	53,55,86
DCMA-Los Angeles, CA	70	General Dynamics Corp. (GD)	18,20,23,25,33,35,38,48,67,75,88	Iron Vine Security LLC	92
decibel Research Inc.	81	Gevo Inc. (GEVO)	45	J.F. Taylor Inc.	33
Defense Information Systems Agency (DISA)	70	Global Foundries LLC	38	Jacobs Engineering Group Inc. (J)	13,15,18,20,23,25,35,79,81,94
Deloitte LLC	75	Global Medical Response Inc.	88	Johns Hopkins University	18,53
Department of the Navy (DoN) Rapid Innovation Fund (RIF)	67	GlobalFoundries Inc. (GFS)	40	Johnson Controls Int. PLC (JCI)	23,43
Dyno Therapeutics Inc.	10	Govini	77	Kallman Worldwide Inc.	77
Element 8 Angels	45	Greylock	25	Karman Missile & Space Systems	35
Eli Lilly & Co.	64	H.F. Webster Engineering Services Inc.	58	KBR Inc. (KBR)	13,15,23,25,50,94
Emergent Biosolutions Inc.	8	Health Research Inc.	8,10	Khosla Ventures LLC	55
Energize Ventures	45	Hemisphere Ventures	15	Kleiner Perkins	55
Energy Foundry	45	Hermeus Corp.	35	Koniag Management Solutions LLC	92
Eprius Inc.	50	Holdco Sands LLC	90	Kymeta Corp.	15
ERDC-Cold Regions Research and Engineering Laboratory (CRREL)	64	Honeywell Int. Inc. (HON)	43	L3Harris Technologies Inc. (LHX)	13,15,18,20,28,30,35,40,67,70,73,81
Explorer 1 Fund	35	Huntington Ingalls Industries Inc. (HII)	50,67	Leidos Inc. (LDOS)	8,18,20,23,25,48,50,65,67,75,79,83,88
Fast Radius Inc. (FSRD)	60	Hx5 LLC	58	Leonardo S.p.A (FINMY)	23,28,30,64
First Solar Inc. (FSLR)	45	HyperSciences	35	Lightspeed Venture Partners	30

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Lockheed Martin Corp. (LMT)	13,15,18,20,23,25,28,30,33,35,38,40,48,50,58,65,67,68,70,73,81,83,94	Mythics Inc.	88	OSI Federal Technologies Inc.	83
Lux Capital	15	NANA Regional Corp. Inc.	83,92	OXIO	30
M.C. Dean Inc.	43	National Center for Defense Manufacturing & Machining	58,60	Palantir Technologies Inc. (PLTR)	18,20,70,83
MA Federal Inc.	83	National Security Technology Accelerator	40	Parsons Corp.	79,81
Main Street Capital Corp. (MAIN)	55	National University of Singapore	79	Pegasus Tech Ventures	20
Manhattan Venenture Partners	45	Natron Energy Inc.	45	Pennsylvania State University	79
ManTech TSG-2 JV	48,50,67,73	NatureWorks LLC	55	Peraton (formally Perspecta Inc.)	23,28,75,88
Martin Defense Group LLC	73	Naval Air Systems Command (NAVAIR)	67	Pfizer Inc. (PFE)	8,10,62,64
Marvell Technology Inc. (MRVL)	40	Naval Information Warfare Systems Command (NAWWARSSCOM)	67	Pine Meadow Holdings LLC	83
Mass General Brigham Inc.	10	Naval Research Lab	67	Planet Labs PBC (PL)	15
Massachusetts Clean Energy Center	55	Naval Sea Systems Command (NAVSEA)	67	Power Pro Plus Inc.	43,45
Maverick Ventures	20	NavalX (Tech Bridges)	67	Prime Movers Lab	35
Maximus Inc. (MMS)	88	Navarro Research & Engineering Inc.	58,60	Purdue University	96
Mayfield Fund LLC	40	Navy 8(a) Incubator	67	QC Ware	20
Mayo Clinic	8,90	NAWC Aircraft Division-Patuxent River	67	Radiance Technologies Inc.	48,50
McKesson Corp. (MCK)	8,10,90	NEPTUNE	67	Raytheon Technologies Corp. (RTX)	13,15,18,20,23,25,28,30,33,35,38,40,48,58,60,64,65,67,68,70,73,81
Merck & Co. Inc.	8,10,64	New Enterprise Associates LLC	30	Reaction Engines Ltd.	35
Mercy Hospital Springfield	90	nLIGHT Inc. (LASR)	50	Red 6	20
Microsoft Corp. (MSFT)	92	Northrop Grumman Corp. (NOC)	13,15,18,20,23,25,28,30,33,35,38,40,48,50,67,68,70,73,81,94	Red Cell Partners LLC	50
Minburn Technology Group LLC	90	Northwestern University	55	Regents Of The University Of Colorado	96
Mindpoint Group LLC	90	Norwest Equity Partners	55	Relativity Space	15
Mississippi State University	58	Norwest Venture Partners	40	Revolution Ventures	35
MITRE Corp.	18,88	Novomer Inc.	55	Rigetti Computing (RGTI)	20
ModalAI Inc.	25	nTopology Inc.	60	Rooney Holdings Inc.	43
Modern Technology Solutions Inc.	48,50,81	Occam Solutions Inc.	83	RRE Ventures	15
Moderna Inc. (MRNA)	8,10,62,64	Ohio State University	96	Schneider Electric SE	43
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Snowpoint Ventures	20	The National Center For Missing and Exploited Children	90	Valiant Integrated Services LLC	18
SomaLogic Inc. (SLGC)	10	Third Rock Ventures	10	Vayyar	40
SOS International LLC	75	Torres-Avarn Security LLC	92	Velo3D (VLD)	60
SOSV	30	TRAX Int. Corp.	23,28,64	Venrock	50
Southwest Research Institute Inc.	94	Trustees of Columbia University In The City of New York	55,96	Vertex Ventures	60
Space Capital LP	15	Trustees of Princeton University	48,50,86	Viasat Inc. (VSAT)	28,30,65,67
SpaceX	15,35,94	Tyto Athene LLC	75	Western Technology Investment	30
SRI International	73	U.S. Army Combat Capabilities Development Command Army Soldier Center	64	Wichita State University	53,55
Stanley Ventures	60	UChicago Argonne LLC	8,10,86	World Wide Technolgy Holding Co. LLC	75
Star Second Merger Sub LLC	92	Umoja Biopharma	10	Wright-Patterson AFB	70
State of California	8,23,43,45,53,55,58,60,86,96	United Launch Alliance LLC	13,68,70	X Corp Solutions Inc.	79
State of Michigan	43,53,55	University of Illinois	45,53,86,96	Xerox Holdings Corp. (XRX)	58
State of Montana	53	University of Kentucky	90	Xometry (XMTR)	60
Stellantis N.V.	43	University of Maine System	60	xTechSearch	64
Summit Partners	40	University of New Mexico	53	Zapata Computing	20
Swift & Staley Inc.	86	University of Texas System	10,55,60,96		
Synergy Electric Company Inc.	43,45	University of Utah	43		
SYNNEX Corp. (SNX)	77	University of Washington	96		
Sysorex Inc. (SYSX)	90	University System of Maryland	60,96		
Systems & Technology Research LLC	73	Unwin Co.	86		

# THE NATIONAL SECURITY SCORECARD

## CRITICAL TECHNOLOGIES EDITION

Govini is a Decision Science company whose mission is to advance U.S. competitiveness through dynamic data and machine learning.

Govini's National Security Knowledge Graph and Decision Science Platform are used at scale across the national security sector of the U.S. federal government. These capabilities enable leaders to better direct investments to innovation and modernization, balance mission portfolios to reflect agency priorities, and achieve superior financial and mission outcomes.

With Govini, government analysts, program managers, and decision makers gain unprecedented visibility into the companies, capabilities, and capital in national security to solve challenges pertaining to Supply Chain & Logistics, Resourcing & Reform, Technology & Innovation, and the Defense Industrial Base.