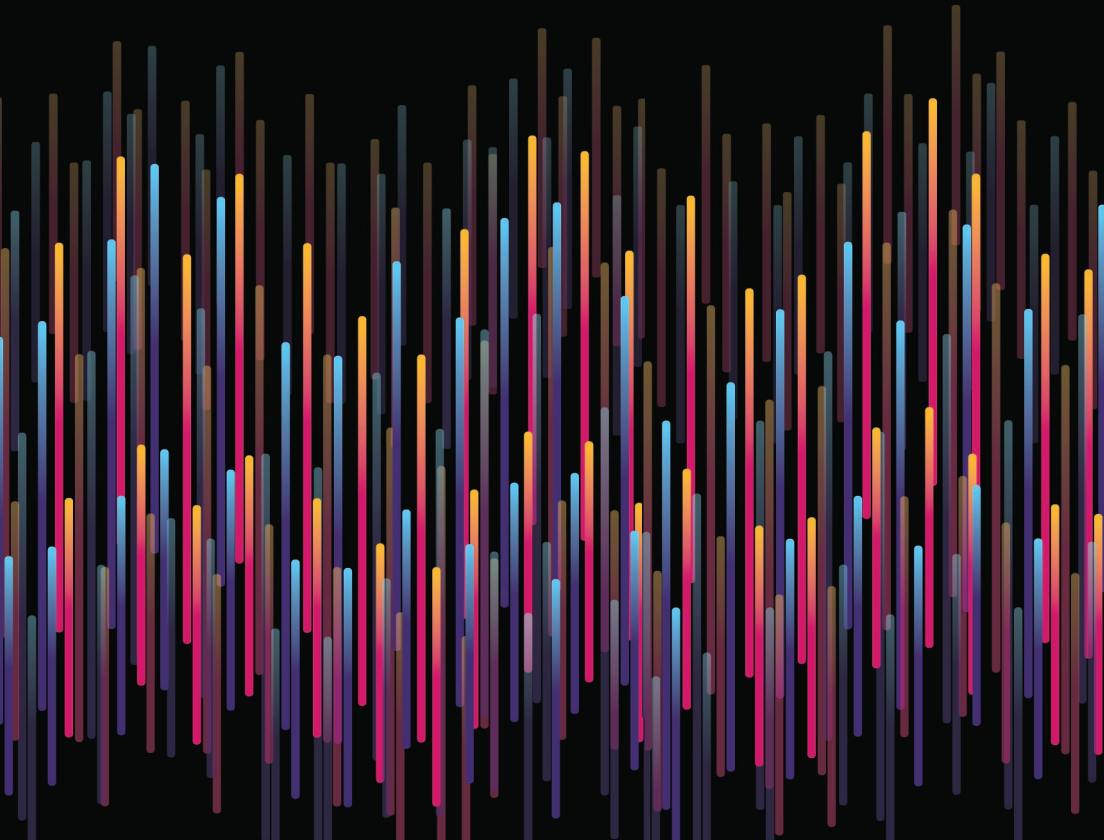


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FACTS & FIGURES

U.S. AEROSPACE & DEFENSE



AAA
AEROSPACE INDUSTRIES
ASSOCIATION



2017 was a very strong year for the aerospace and defense (A&D) industry. As you'll see in the pages that follow, the companies that make up A&D – from manufacturers and designers to suppliers and service providers – are playing a significant and transformative role in the American and global economies.

Last year alone, our industry generated \$865 billion in economic output. We saw a positive trade balance of \$86 billion – the largest of any U.S. exporting sector. Our workforce has reached 2.4 million people, representing nearly 20 percent of the nation's manufacturing workforce. And we paid out \$220 billion in wages and benefits, with our employees

earning a salary 81 percent above the national average. Those last statistics are some of the most important you'll find in this year's Facts and Figures, because recruiting and retaining a strong and diverse 21st century workforce underpins all that we do.

I am encouraged by the industry's performance in 2017. And 2018 is shaping up to be even stronger: with America's aerospace and defense companies expanding research and development, ramping up production to meet growing international and domestic demand, and the U.S. government increasing its investments in defense and space.

The A&D industry plays a critical role in securing America's national security, in driving our economy, in leading global innovation, and in inspiring people around the world to dream big dreams. We're proud of the work we do. And the Aerospace Industries Association is pleased to publish the "2018 Facts & Figures: The U.S. Aerospace & Defense Industry," with the support of IHS Markit, to offer a snapshot into the health of our dynamic industry

A handwritten signature in black ink that reads "Eric K. Fanning". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Eric Fanning
President & CEO
Aerospace Industries Association

KEY TRENDS IN THE U.S. AEROSPACE & DEFENSE INDUSTRY

The U.S. aerospace and defense industry showed up with a strong year in 2017, generating \$865 billion in economic output and supporting approximately 2.4 million U.S. jobs. Indeed, after two years of relatively flat growth, many of the industry's key indicators saw an upswing, with commercial production, sales and orders all picking up toward the end of 2017, offsetting flatter growth in the industry's defense sector. Other industry indicators, like employment levels, remained stable, while industry exports fell marginally from an all-time high in the previous year.

Measured in manufacturing activity, the industry's commercial aerospace sector saw its output increase in 2017, driven by higher shipments of commercial aircraft, general aviation aircraft and civil space systems. And while the industry's defense side saw higher deliveries of military aircraft including fighters, transports and patrol aircraft, shipments fell slightly overall from the previous year, driven by lower deliveries of military rotorcraft, trainers, unmanned aerial systems and naval systems.

The industry's performance in the international marketplace this year underscores the importance of high-value, high-technology exports to the American economy. While the U.S. experienced the third largest trade deficit on record, our industry generated \$143 billion in exports and a positive trade balance of \$86 billion, effectively reducing the U.S. trade deficit by 10 percent. U.S. imports of aerospace and defense goods also grew over the previous year, but not enough to surpass a record high in 2015.

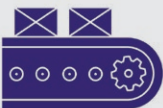
Looking to the future, all signs point to 2018 being an even stronger year than 2017. The industry's commercial aerospace segment is set to increase manufacturing output in 2018 in response to higher domestic and international demand for commercial aircraft and related platforms. And the increased investment levels for NASA and the Department of Defense under the 2017 Congressional Omnibus will only further improve the outlook for manufacturers in the industry's defense and space sectors.



2.4 M
U.S. JOBS



\$865b
IN SALES



843 K
DIRECT JOBS
1.6 M
SUPPLY CHAIN JOBS



\$143b
IN EXPORTS

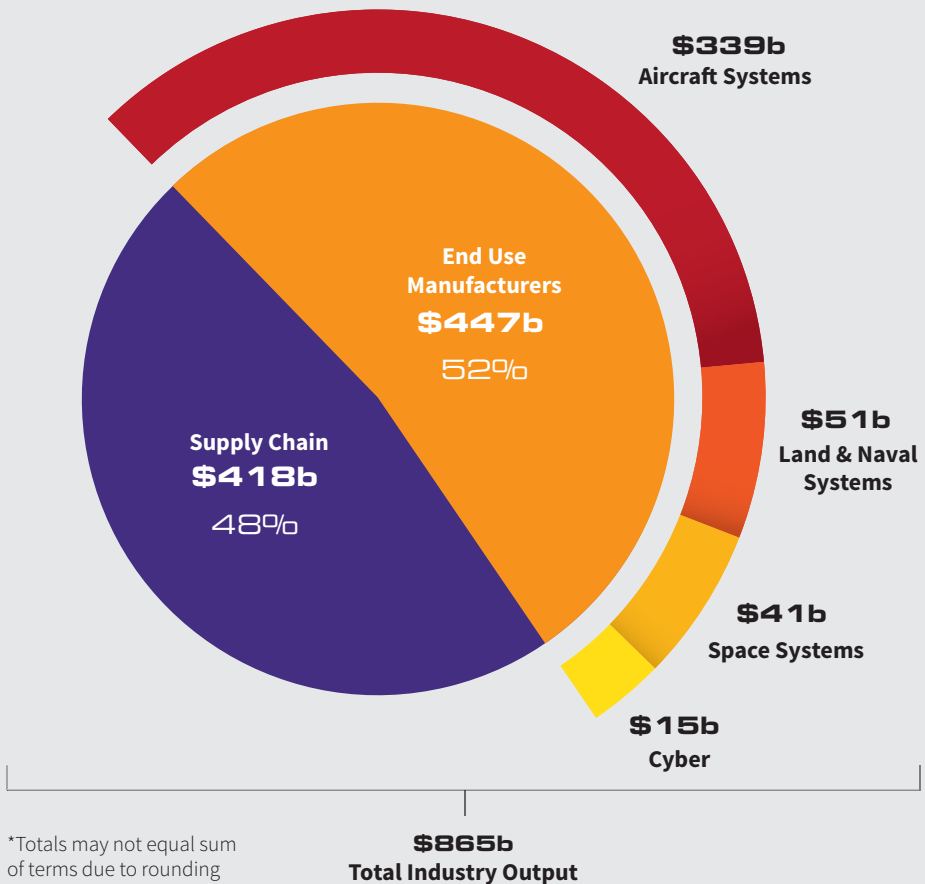
INDUSTRY OUTPUT

In 2017, the U.S. aerospace and defense industry generated an estimated \$865 billion in economic output from companies that manufacture goods and provide services up and down the industry's supply chain. Compared to 2016, output declined marginally by one percent, or \$8.5 billion, and was down 2.1 percent from a decade-high of \$883 billion in 2012. In terms of economic value, aerospace and defense generated \$348.3 billion in value-added goods and services, which amounted to 1.8 percent of total nominal U.S. Gross Domestic Product.

Firms producing end-use goods and services including aircraft, space systems, land vehicles, ships, armaments and cyber, were responsible for 52 percent of the industry's total output, or \$447 billion. The remaining \$418 billion, or 48 percent, was attributable to the industry's supply chain, which includes \$305 billion from goods-producing firms and \$113 billion from firms that provide services such as engineering, testing, logistics, and information technology.

Total Industry Output in 2017

(Dollars in Billions)



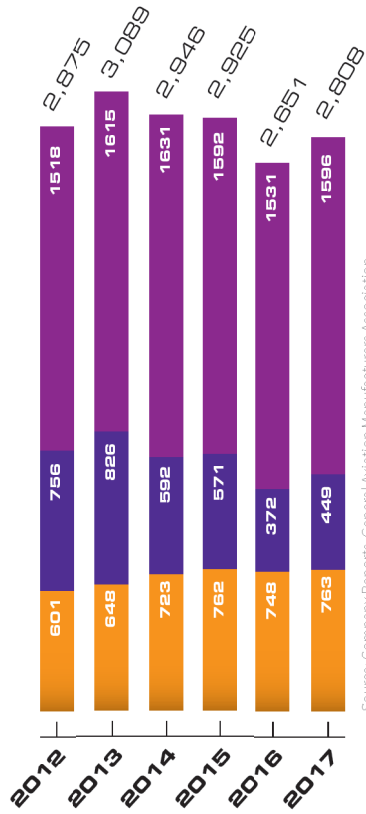


INDUSTRY PRODUCTION HIGHLIGHTS



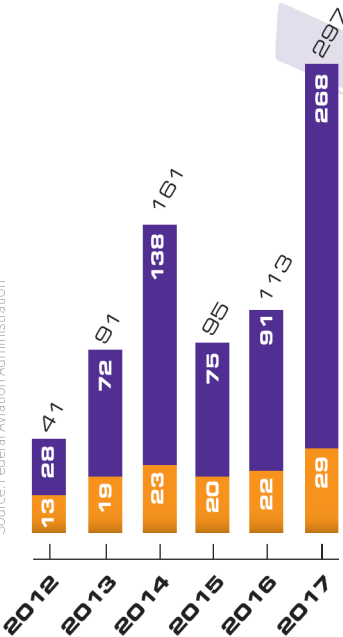
Civil Aircraft

U.S. civil aircraft production grew by six percent in 2017, led by higher shipments of helicopters, transport aircraft and general aviation systems. In total, 2,808 units were delivered to commercial and government customers in 2017, including 763 transport aircraft, 449 helicopters and 1,596 general aviation aircraft.



Source: Company Reports; General Aviation Manufacturers Association

Source: Federal Aviation Administration



Space Systems

Deliveries of U.S. space systems grew in 2017, driven by a surge in commercial space launches and payloads. In total, 29 U.S. launch vehicles were flown in 2017, up seven units from the previous year, while 268 U.S. manufactured spacecraft, which include satellites, probes, on-orbit vehicles and related platforms, were delivered to U.S. government and commercial customers, up 184 units from 2016.





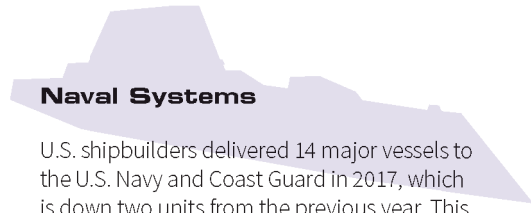
Military Aircraft

Overall, U.S. military aircraft deliveries fell in 2017 because of lower volumes of military helicopters and trainer aircraft, while higher volumes of fighter, attack, transport and patrol aircraft continued. In total, 538 units were delivered to U.S. and foreign military customers, which included 112 fighter/attack aircraft, 42 patrol/C2 aircraft, 321 helicopters, 23 trainers and 40 transport/tanker aircraft.

Separately, 469 military unmanned aerial systems (UAS) were delivered to domestic and foreign military customers, which is down 34 percent from the previous year.

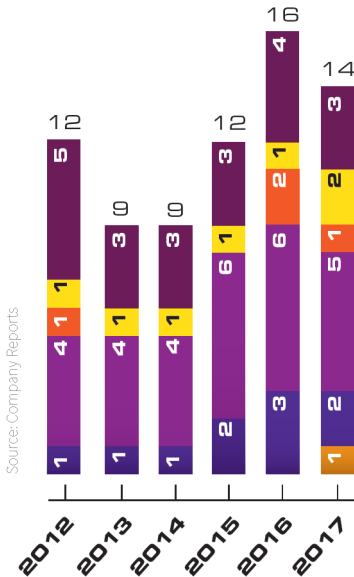
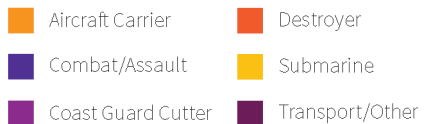


Source: Jane's by IHS Markit



Naval Systems

U.S. shipbuilders delivered 14 major vessels to the U.S. Navy and Coast Guard in 2017, which is down two units from the previous year. This total includes one aircraft carrier, two combat ships, five Coast Guard cutters, one destroyer, two submarines and three transport ships. By customer, eight vessels were delivered to the U.S. Navy and five vessels were delivered to the U.S. Coast Guard.



Source: Company Reports

EMPLOYMENT

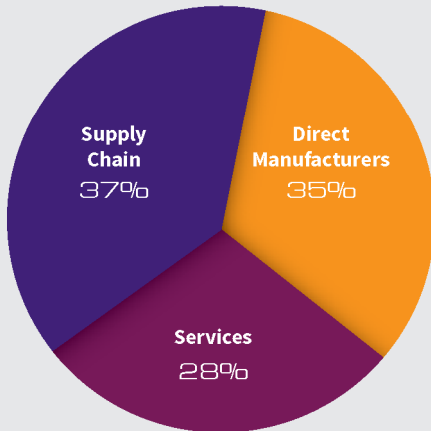
In 2017, the aerospace and defense industry supported 2.4 million U.S. jobs up and down the industry's supply chain. Of that total, 842,900, or 35 percent, were attributable to firms producing end-use goods and services such as aircraft, space systems, land vehicles, ships, armaments and cyber. The remaining 1,578,200 jobs, or 65 percent, were attributable to the industry's supply chain. Combined, aerospace and defense accounted for approximately two percent of the nation's total employment base and 20 percent of the nation's manufacturing workforce in 2017.

By industry sector, commercial aerospace accounted for 487,500 jobs, or 58 percent of the industry's direct workforce, while the defense and national security sector accounted for 355,400 jobs, or 42 percent. By industry group, direct employment accounted for the following: 543,800 for aircraft systems, 80,800 for space systems, 138,400 for land and naval systems, and 80,000 for cyber.

Overall, approximately two-thirds of the industry's employment base was concentrated in eight states in 2017: California, Washington, Texas, Arizona, Connecticut, Florida, Georgia and Ohio. For the third year in a row, California retained the largest share of industry workers and accounted for 354,010 workers, or 15 percent of industry's workforce, followed by Washington with 313,090 workers (13%), and Texas with 230,410 workers (10%).

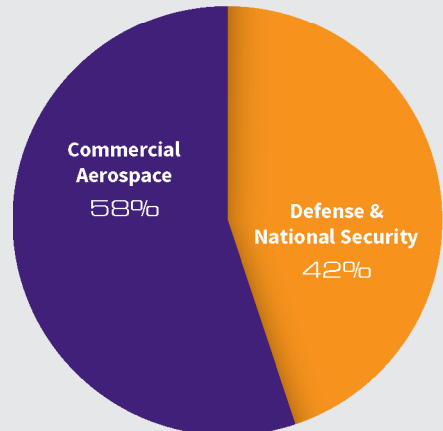
The average wage for a worker in the U.S. aerospace and defense industry was 81 percent above the national average, or \$91,500, which includes all wages and benefits paid out by employers. In total, the industry paid out \$220 billion in wages and benefits, which accounted for 2.3 percent of the nation's total labor income in 2017.

Total Industry Jobs



2,406,300
Total Jobs

Direct Industry Jobs

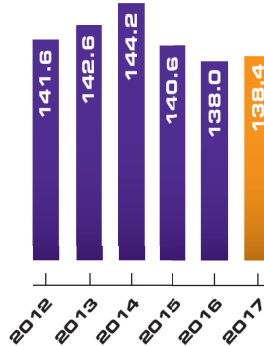
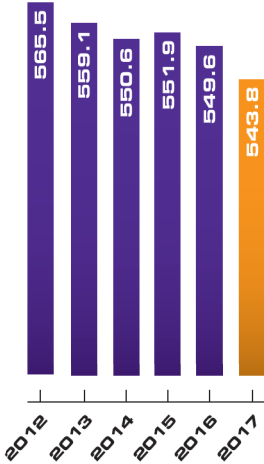


842,900
Direct Jobs

EMPLOYMENT TRENDS

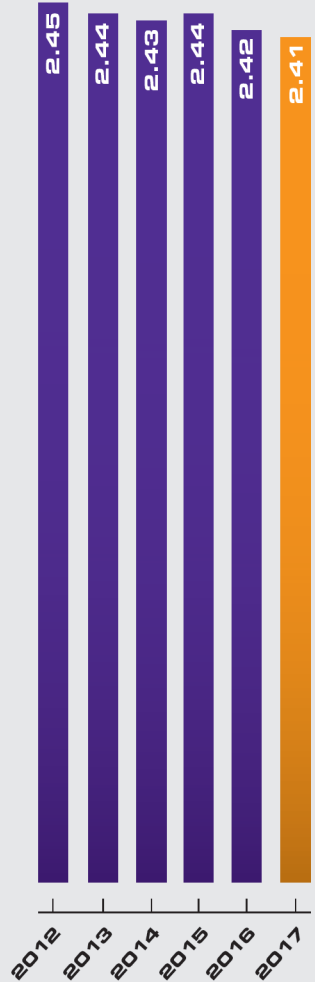
Direct/End-Use Industry Jobs

(Employment in Thousands)

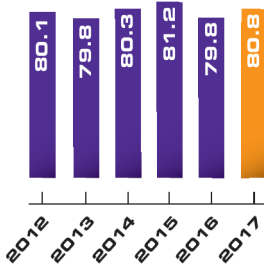


Total Employment in U.S. A&D

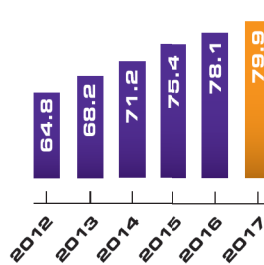
(In Millions)



AIRCRAFT SYSTEMS



LAND & NAVAL SYSTEMS



SPACE SYSTEMS

CYBER

*Scales are exaggerated to show trends.

*Total employment includes end-use manufacturing (direct jobs), and jobs associated with the industry's supply chain and services sectors. Scale is exaggerated to show trends.



Top States for A&D Employment in 2017



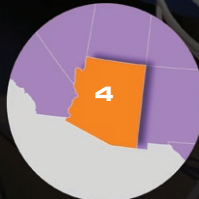
California
354,000 Jobs



Washington
313,100 Jobs



Texas
230,400 Jobs



Arizona
141,600 Jobs



Connecticut
129,700 Jobs

FOREIGN TRADE

U.S. industry retained its position as the world's largest exporter of aerospace and defense systems in 2017, down from an all-time record in the previous year. Exports fell by 2.2 percent to \$143 billion due to lower export volumes of military and commercial systems, while imports of aerospace and defense products grew by 2.3 percent to \$56.9 billion. In total, our industry generated a positive trade surplus of \$85.9 billion – the second largest on record and the largest of any U.S. industry.

On a comparative basis, aerospace and defense was the third largest gross exporter among major U.S. industries, and accounted for nine percent of total U.S. exports in goods, down from 10 percent in 2016. As measured in gross exports, the aerospace and defense industry ranked third, behind electronic products and the coal and petroleum sectors and ahead of exports from the motor vehicles, chemicals, machinery and agricultural sectors.

The industry's largest export destination in 2017 was China, which accounted for \$16.3 billion, or 11.5 percent of total industry exports, followed by France, the United Kingdom, Canada and Germany. By industry subsector, U.S. commercial aerospace exports were led by China, France and the United Kingdom, while exports of military systems were led by Saudi Arabia, Australia and Japan.

OUR INDUSTRY GENERATED A POSITIVE TRADE SURPLUS OF
\$85.9 BILLION

— THE SECOND LARGEST ON RECORD AND
THE LARGEST OF ANY U.S. INDUSTRY.



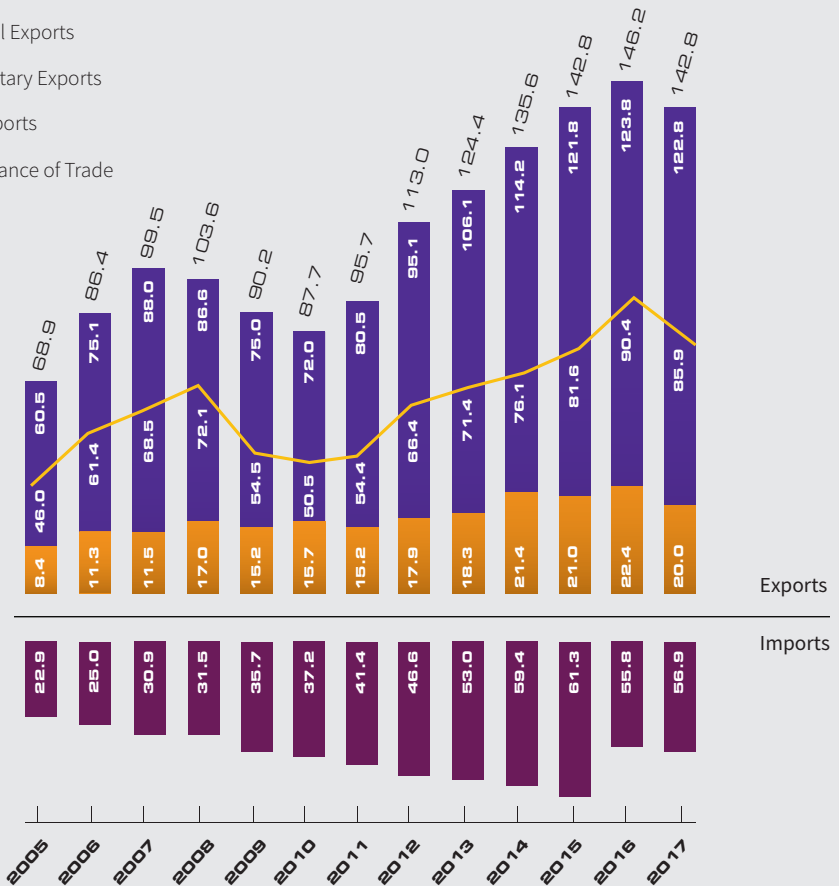
On a regional basis, Europe was the largest destination for U.S. aerospace and defense exports accounting for 36 percent, or \$50.8 billion, followed by the Asia-Pacific (\$47.3), the Americas (\$23.1b), the Middle East (\$18.5b), and Africa (\$2.5b). Overall, U.S. aerospace and defense export volumes to Europe and the Americas grew marginally (2% and 5%, respectively), while the Middle East and Asia Pacific saw U.S. export volumes fall over the previous year's levels (-9% and -5%, respectively).

Domestically, industry's exports continue to be led by Washington state, which accounted for 30 percent of total exports, followed by exports from Kentucky (8%), California (7%), Texas (6%) and Florida (5%). As a share of a state's total exports, aerospace and defense comprised the largest export-share from Washington (55%), followed by Connecticut (46%), Kentucky (38%), Arkansas (27%) and Kansas (24%).

U.S. Aerospace & Defense: Exports, Imports, and Balance of Trade

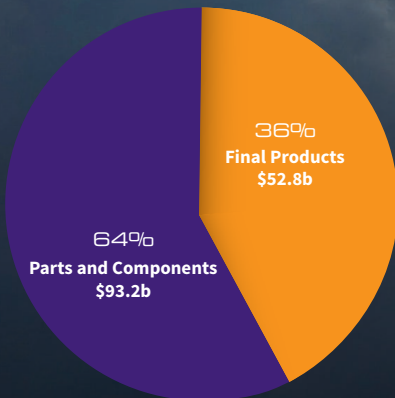
(Dollars in Billions)

- Civil Exports
- Military Exports
- Imports
- Balance of Trade

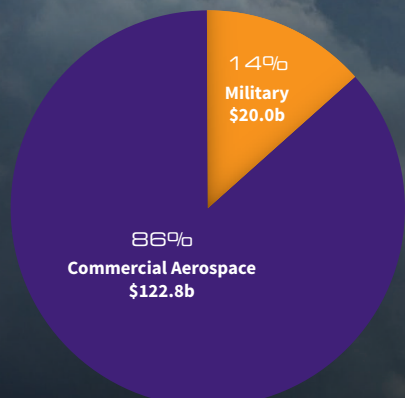




Breakdown of U.S. A&D Exports:



Product Type



Industry Sector

Top 10 States for A&D Exports in 2017

(Dollars in Billions)



\$42.4b
Washington



\$6.9b
Georgia



\$11.7b
Kentucky



\$6.7b
Connecticut



\$10.4b
California



\$6.3b
South Carolina



\$8.9b
Texas



\$5.1b
Ohio



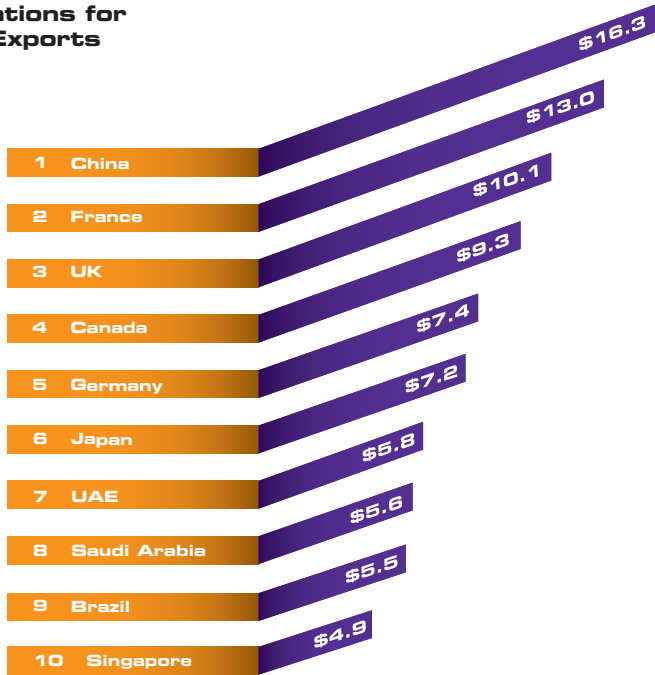
\$7.2b
Florida



\$3.2b
Arizona

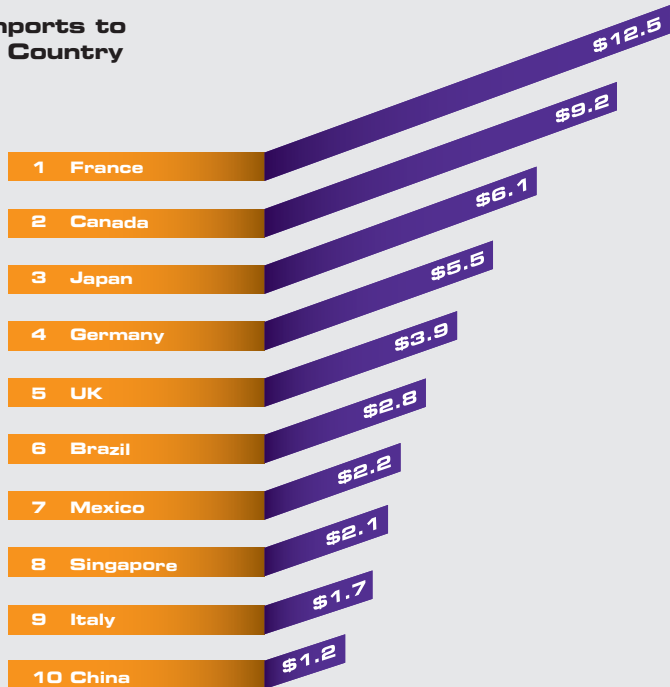
Top Destinations for U.S. A&D Exports

(Dollars in Billions)



Top A&D Imports to the U.S. by Country

(Dollars in Billions)

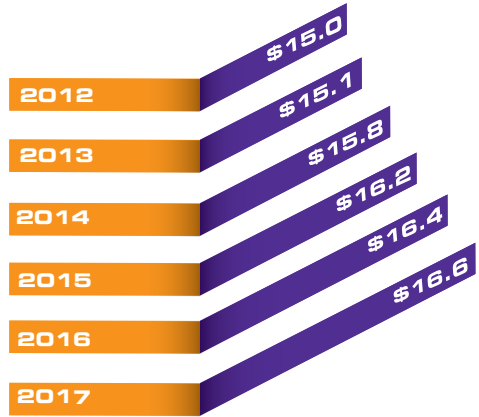


RESEARCH & DEVELOPMENT

Aerospace and defense-related research and development spending from both industry and government experienced relatively flat growth in 2017 compared to the previous year. On the industry side, the top 25 U.S. aerospace and defense companies allocated a disclosed total of \$16.6 billion on research and development, which represents 4.2 percent of those companies' total revenues for 2017. Over the past five years, research and development spending from the top 25 has grown by 11 percent in current dollars, or 2.5 percent as measured in constant dollars.

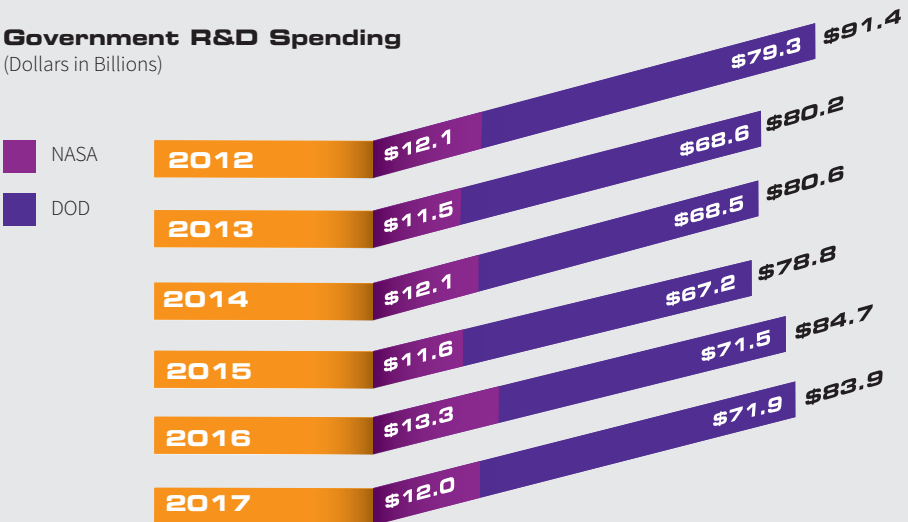
U.S. government spending on research and development attributable to aerospace and defense totaled \$83.9 billion in 2017. Over the past five years, this spending has dropped by eight percent in current dollars, or 16 percent as measured in constant dollars. By agency, the U.S. Department of Defense accounted for 86 percent, or \$71.9 billion, of total spending, while the National Aeronautics and Space Administration accounted for the remaining 14 percent, or \$12 billion.

Industry R&D Spending (Dollars in Billions)



Government R&D Spending

(Dollars in Billions)



METHODOLOGY

This report is based on data developed in partnership with IHS Markit and independently by the Aerospace Industries Association. Data pertaining to the industry's employment, output, wage and value-added figures are based on data from the U.S. Census Bureau, the Department of Labor, IMPLAN and proprietary data from IHS Markit. Data on the industry's foreign trade activity are based on an analysis of trade data from the U.S. International Trade Commission and the United Nation's International Trade Statistics Database. Lastly, data on government and industry research and development activity are based on company financial reports, agency budget documents, and data from the American Association for the Advancement of Science.

AIA defines the U.S. aerospace and defense industry as consisting of establishments that manufacture end-use platforms including civil and military aircraft, rotorcraft, space systems, military vehicles and land systems, naval ships, missiles and armaments, as well those establishments that constitute the industry's manufacturing and services supply chain. In 2017, AIA added companies that provide end-use cyber services to the definition of direct industry companies.

ABOUT AIA

The Aerospace Industries Association of America (AIA) is the premier trade association representing the nation's leading aerospace and defense manufacturers and suppliers with more than 340 members. For nearly 100 years, since the Association's founding in 1919, AIA has been the industry voice shaping the policies that matter most to our members. AIA's expertise represents the interests of manufacturers and suppliers of civil, military, and business aircraft, helicopters, unmanned aerial systems, space systems, aircraft engines, missiles, materiel, and related components, equipment, services, and information technology.



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