INNOVATION | MILITARY | TOURISM | LOCAL | INTELLECT

SAN DIEGO'S UNMANNED SYSTEMS INDUSTRY

The unmanned systems industry presents a unique opportunity for growth for San Diego's aerospace companies. San Diego is home to two of the largest military unmanned aerial vehicle (UAV) manufacturers, Northrop Grumman and General Atomics, and is a hub for UAV technologies for both military and civilian users. Covering air, land, and water, the unmanned systems platforms manufactured in the region serve a variety of sophisticated military and commercial missions.

With the rise in commercial and consumer uses, this industry is well positioned to carry aerospace innovation forward and to continue to attract top aerospace and software engineering talent to San Diego. While the Department of Defense (DoD) has been driving these technologies, significant moves by companies like Qualcomm, Amazon, and Google reflect the emerging opportunities for unmanned systems in commercial markets. San Diego's talent base has the right blend of technical skills from communications, software, cybersecurity, aviation, robotics, and data analytics to capitalize on the maturation of these commercial markets.

HIGHLIGHTS

- **Funding:** San Diego County receives the highest concentration of DoD funding for unmanned systems technology of any location in the country.[1]
- **VC:** Shield AI, a local drone startup whose mission is to save lives with artificially intelligent (AI) systems, has raised $10.5 million in a Series A round led by Andreesen Horowitz.[2]
- **And more VC:** Brain Corp, an AI company specializing in the development of self-driving technology for robots, announced a $114 million Series C funding round led by the SoftBank Vision Fund.[3]
- **RoboSub 2017:** In its 20th edition, the unmanned, underwater robotics competition at SPAWAR's large maritime test facility in Point Loma welcomed more than 300 college and high school students from eight countries to compete to design and build a vehicle from the ground up.[4]

KEY COMPANIES

- 5D Robotics
- Action Drone
- Aquaai
- Brain Corp
- Citadel
- General Atomics ASI
- Inova Drone
- Kratos Defense
- L3 Technologies
- Northrop Grumman
- Planck Aerosystems
- Ocean Aero
- Qualcomm
- Shield AI
- Teledyne Technologies

SPOTLIGHT

Qualcomm's drone and robotics technologies reduce the on-board computing footprint while offering robust connectivity, advanced processing power, and longer battery life. Qualcomm showcased some of the capabilities of drones powered by Snapdragon in providing emergency medical care. Click here to see the video.

RESOURCES

Association for Unmanned Vehicle Systems International

UAVSI is the world's largest nonprofit organization devoted exclusively to advancing the unmanned systems and robotics community. It serves more than 7,500 members from government organizations, industry, and academia.
auvsisandiego.com

Aerospace & Defense Forum

The Aerospace & Defense Forum is a community of more than 1,000 industry senior executives and professionals who collaborate and share news, information, and analysis relevant to the business of the aerospace, commercial space, and defense industries.
aerospacedefenseforum.org/san-diego-chapter

Propel San Diego

Propel San Diego is a grant initiative awarded to the City of San Diego by the U.S. Department of Defense's Office of Economic Adjustment (OEA). Through the collaboration of six key partner organizations, custom programs have been designed to assist businesses who sell products and services to DoD in order to develop a resilient defense supply chain that can stabilize despite changing budget, regional economic, and DoD readiness priorities.
sdmac.org/propel

BY THE NUMBERS

EMPLOYMENT NUMBERS

Employment data for the unmanned systems industry is not readily available. Unmanned systems-related jobs are not exclusively located in San Diego's aerospace, navigation, and maritime technologies cluster; however, a significant portion of unmanned systems-related jobs can be attributed to this cluster. In 2016, the industry accounted for nearly 32,900 jobs across more than 4,200 firms.[5] These companies are actively seeking talented and skilled individuals. In fact, 2017 alone saw more than 18,200 unique job postings within the industry.[5]

32.9K
JOBS
2016

4.2K
FIRMS
2016

$104K
AVG WAGES
2016

Employment by Key Aerospace & Navigation Technologies Industries[5]

Industry	Employment	Avg Annual Pay
Engineering Services	10,100	$95,400
Search, Detection, & Navigation Instrument Manufacturing	5,800	$108,800
Other Aircraft Parts & Auxiliary Equipment Manufacturing	5,400	$86,900
Aircraft Manufacturing	5,300	$92,700
R&D in the Physical, Engineering, & Life Sciences (except Biotech)	4,000	$167,300
Testing Laboratories	800	$88,000
Aircraft Engine & Engine Parts Manufacturing	750	$85,400
Capacitor, Resistor, Coil, Transformer, & Other Inductor Manufacturing	500	$84,700
Guided Missile & Space Vehicle Manufacturing	200	$114,400
Guided Missile & Space Vehicle Propulsion Unit Manufacturing	<10	-
TOTAL AEROSPACE & NAVIGATION TECHNOLOGIES	**32,850**	**$104,220**

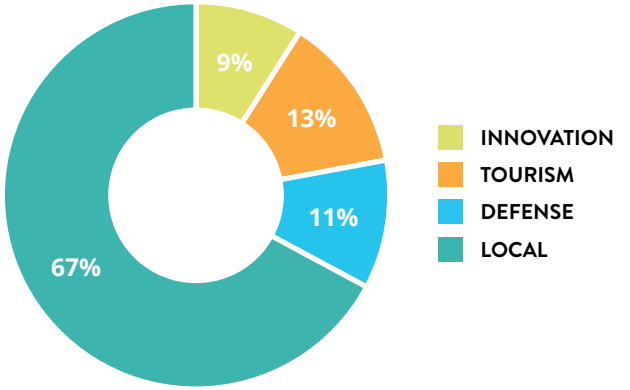
OUR ECONOMIES

The vitality of San Diego's economy is reliant upon the strength of the region's four economic drivers - innovation, military, tourism, and local.

Recognized as one of the leading high-tech hubs in the U.S., San Diego's innovation economy is anchored by established life sciences, aerospace, communications, cleantech, and software industries fueled by a collaborative culture and sophisticated support systems focused on commercializing research and growing entrepreneurial, knowledge-based companies.

As of 2016, the innovation economy was responsible for nine percent of the region's total jobs. A key driver, aerospace accounted for nearly one-fifth of these jobs.[6]

Employment Comparisons Across the San Diego Region's Economic Drivers



For more information on San Diego's aerospace industry, please contact:

Kate Gallagher,
Coordinator, Economic Development
ksg@sandiegobusiness.org | 619.615.2979

Last updated: March 2018

Sources: 1. Office of the Under Secretary of Defense, "Program Acquisition Cost by Weapon System: United States Department of Defense Fiscal Year 2016 Budget Request, 2016 2. San Diego Business Journal, "Shield AI Raises $10.5 Million in Series A Round," 2017 3. Business Wire, "Brain Corp Announces $114 Million in Series C Funding Round Led by Softbank Vision Fund," 2017 4. Defense Visual Information Distribution Center, "RoboSub 2017 kicks off 20th year of unmanned, underwater robotics competition," 2017 5. EMSI, 2017 6. San Diego Regional EDC, Traded Economies Analysis with BLS data, 2016