

SEPTEMBER 2019

WORKFORCE NEEDS IN DEFENSE:

Professional,
Scientific &
Technical
Services

Unmanned
Systems

Executive Summary



The San Diego Workforce Partnership and the South County Economic Development Council have engaged in survey research that **highlights short- and long-term workforce needs in two specific defense subsectors: The Professional, Scientific & Technical Services (PST) sector and unmanned systems (aerial, underwater, land, and surface).**

Key Findings: Professional, Scientific & Technical Services

- There is an extensive and varied collection of certifications for workers to obtain that can help improve their qualifications and skills. Unfortunately, identifying those that are most important, sought after or useful is hard for both employers and applicants. The industry could benefit from a centralized tool to help defense employers locate these training programs.
- There seems to be a disconnect between what employers want and what certifying bodies and educational are teaching (figure 2). When asked what new certification employers wanted, many requested certifications similar to those already in existence.
- While there is a perceived shortage in specific applicant pools, greater supply is possible by expanding the industry's reach (figure 1). Firms can only capture the attention of those who are able to find them. However, 90% of defense contractors are small businesses, with presumably few resources to spare on recruitment. The workforce and economic development community can support these employers by facilitating connections between businesses and diverse applicant pools.

Key Findings: Unmanned Systems

- To help meet industry demands, educational institutions should incorporate unmanned systems training into relevant degrees. Because unmanned vehicles are becoming relevant to many professional fields, courses related to their operation or programming can enhance an individual's skill sets in programs like geology, engineering or data analysis. This will expand the labor supply and promote further development of the industry.
- Veterans in a variety of specializations are good candidates for jobs using unmanned systems (table 2). With experience operating and maintaining unmanned systems, they have many of the technical skills employers' desire in this field. When paired with a greater likelihood of already having security clearance, they are often considered ideal job applicants.
- Required education seems to be related to firms experiencing hiring difficulty (table 1). Firms that have experienced difficulty during the hiring process generally require a bachelor's degree for the primary occupations at the firm. In some cases, firms would benefit from carefully considering job postings to eliminate unnecessarily strict educational requirements.

Figure 1: Difficulty in Hiring Qualified Applicants
Professional, Scientific & Technical Services

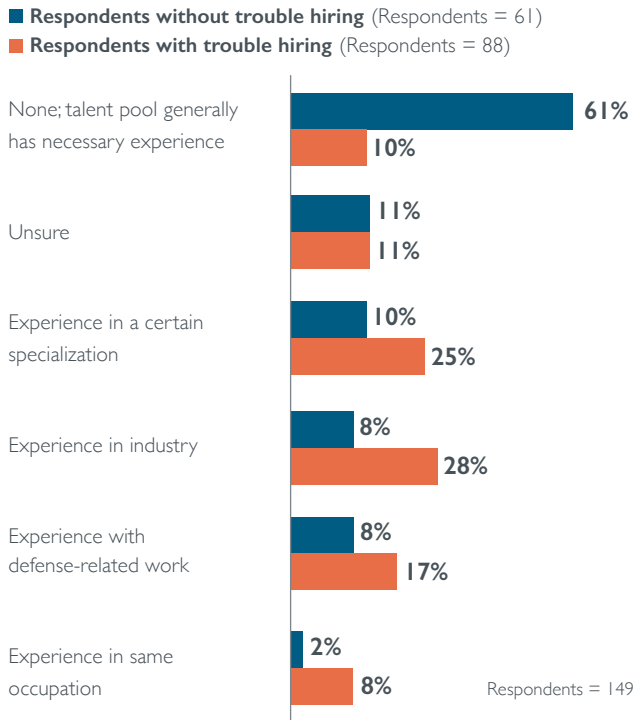


Table 1: Understanding Respondents' Primary Job Needs
Unmanned Systems

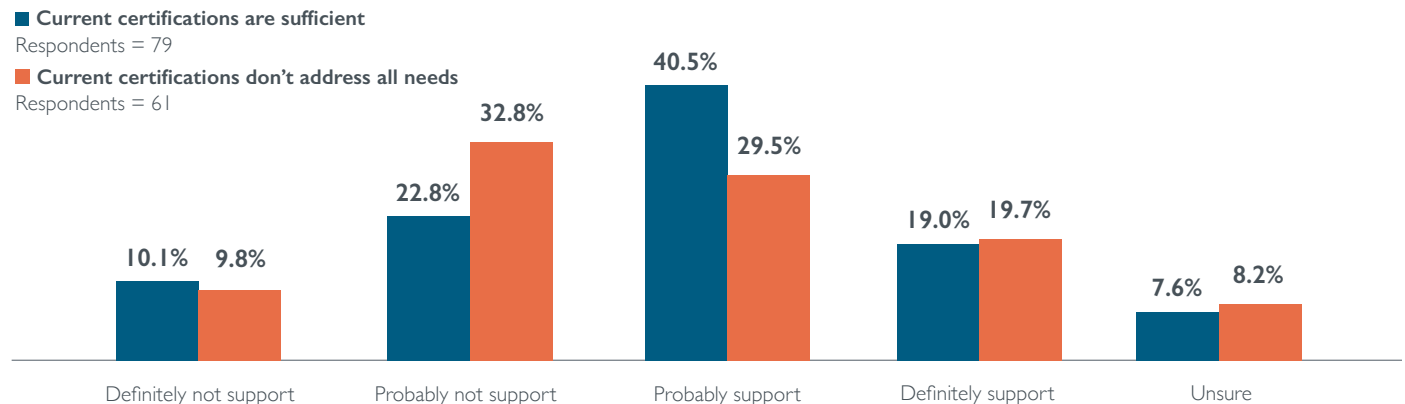
Employers' Job Requirements	Count
What is the most in-demand job at your firm?	21
Computer Occupations	8
Drone Piloting and Training	7
Other Jobs*	6
What certification is needed?	18
FAA Part 107	9
CNAA or CNNP	1
None; N/A	8
What skills are needed?	21
Software and Programming Related	7
Drone and Flying Related	7
Other Skills**	7
Is a type of degree required?	17
Associate	1
Bachelor's	7
Master's	1
None	8
Do you need applicants with security clearance?	20
Yes	10
No	10

Table 2: Crosswalk Between Employer-Identified, In-Demand Occupations and Corresponding Military Job Titles
Unmanned Systems

In-demand Occupations: Identified by Employers	Example Crosswalk of Military Occupation
Electro-Mechanical Technicians: 17-3024	Advanced Fighter Aircraft Integrated Avionics
	Unmanned Aircraft System (UAS) Operator
	Aviation Precision Measurement Equipment (PME) Calibration/Repair Technician
	Unmanned Aerial Vehicle (UAV) External Pilot
Aerospace Engineers: 17-2011	Developmental Engineer, Flight Test
	Aerodynamics Engineering Officer
	Aeronautical Engineer
	Aviation Engineering Administration
Software Developers, Systems Software: 15-1133	Systems Development
	Computer Systems Programming Journeyman
	Cyber Systems
	Communications and Information, Software Engineer
Computer Programmer: 15-1131	Information Systems Technician
	Cyber Transport Systems Apprentice, Data Links
	Communication Intelligence Collection Signals Analyst

Figure 2: Firms' Willingness to Support Development of New Training Programs
Professional, Scientific & Technical Services

Total Respondents = 150



Propel San Diego partners



Propel San Diego is a Department of Defense (DoD) funded grant initiative led by the San Diego Workforce Partnership, the South County Economic Development Council, the City of San Diego, the East County Economic Development Council, the San Diego Military Advisory Council and San Diego Regional Economic Development Corporation. The goal of this effort is to better understand the needs and opportunities for regional businesses that conduct defense-related work. Additionally, Propel San Diego aims to develop a resilient defense supply chain in the San Diego region that remains stable despite changing budget priorities and addresses both regional economic and DoD readiness priorities. The San Diego Industrial Drone Consortium recruited respondents for this report.

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