

SAN DIEGO COUNTY LABOR MARKET ANALYSIS

# BLUE ECONOMY

NOVEMBER 2016



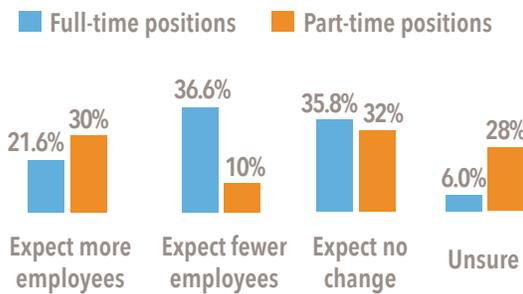
San Diego's Blue Economy is a sector that encompasses a variety of industries, including Advanced Manufacturing, Information and Communication Technologies (ICT), innovation, military or defense and tourism. Within the Blue Economy are Blue Technology or "BlueTech" jobs, referring to technologically-advanced activities and methods to solve water-related issues, and traditional maritime occupations that increasingly incorporate BlueTech into their work. This study serves to inform the workforce development system on how to better prepare the future workforce by analyzing job growth, hiring challenges and skills in demand from Blue Economy employers.

## OVERVIEW OF THE BLUE ECONOMY IN SAN DIEGO COUNTY

San Diego's Blue Economy includes more than 1,400 local companies, supports over 45,000 jobs and generates over \$14 billion in direct sales. Businesses are primarily small- to medium-sized with approximately 72% of the employers surveyed employing 25 workers or fewer.

Overall, employers expect to have more part-time workers in the next two years than full-time workers: 30% of employers expect more part-time workers and 36.6% expect fewer full-time workers.

Employer Expectations of Full- and Part-Time Employees in Two Years

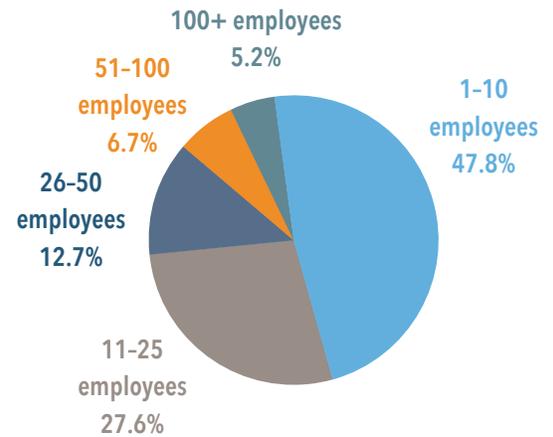


Blue Economy employers reported that their greatest challenge in the next two years is *employee recruitment and retention*.

Greatest Challenges in Two Years Cited by Number of Employers



Breakdown of Surveyed Employers By Employment Size

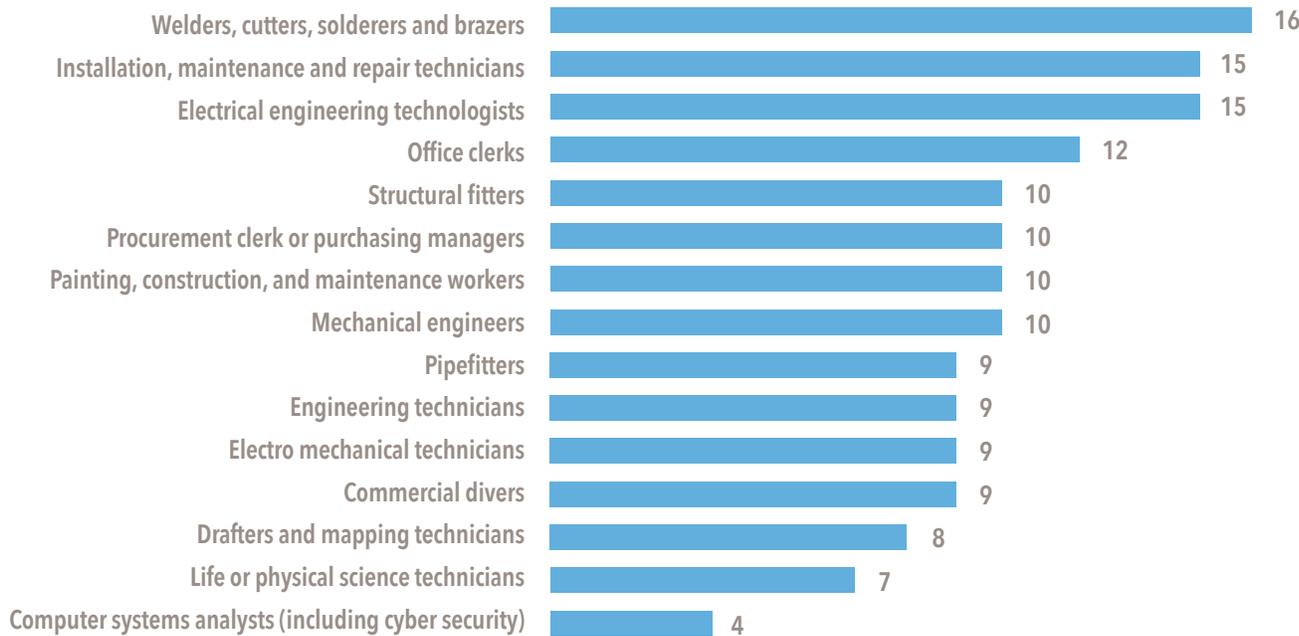


This study highlights 15 BlueTech and traditional maritime occupations that compose a majority of San Diego's Blue Economy:

1. Commercial divers
2. Computer systems analysts (including cyber security specialists)
3. Drafters and mapping technicians
4. Electrical engineering technologists
5. Electro mechanical technicians (including robotics)
6. Engineering technicians
7. Installation, maintenance and repair technicians
8. Life or physical science technicians
9. Mechanical engineers
10. Office clerks
11. Painting, coating and decorating workers
12. Pipefitters
13. Procurement clerks or purchasing managers
14. Structural fitters (including aircraft, structures, surfaces, rigging and systems assemblers)
15. Welders, cutters, solderers and brazers

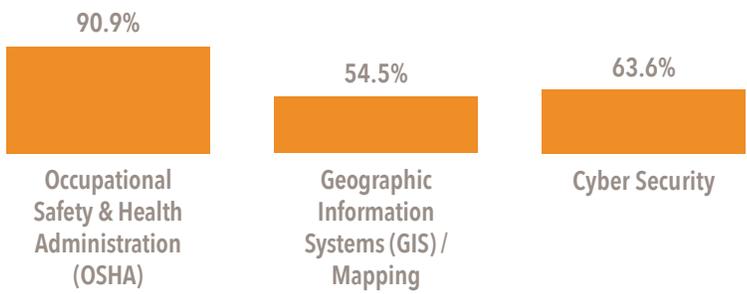
Welders, cutters, solderers and brazers was the top occupation that the majority of employers surveyed currently employ or plan to employ, followed by installation, maintenance and repair technicians, and electrical engineering technologists. Employers also indicated a number of important occupations in interviews and surveys that were not in this list, including surveyors, marine engineers, plumbers, sales positions, merchant mariners and more.

### Currently Employed or Planned to Employ Occupations by Number of Employers



Knowledge of OSHA was an important skill set that approximately 90.9% of employers identified, followed by cyber security skills (63.6%), and GIS and mapping capabilities (54.5%).

### Importance of Skill Sets by Percentage of Employers Interviewed



### Other specialized skills and credentials employers valued include:

- Electro-mechanical assembly training
- LEED certification
- PPE for engineering occupations
- Project management certification
- Merchant mariner documentation
- SCUBA diving certification
- America Congress Survey & Mapping (ACSM) certified hydrographers



## RECOMMENDATIONS

- Career counselors and educators who have job seekers or students interested in the Blue Economy should develop techniques on how to focus and conduct job search towards small companies
- Invest more funding in programs that provide youth with first-time exposure and training in the maritime industry
- In the follow up study to this report, identify specifically whether companies want to engage in international trade; some businesses may want to engage in international trade but lack the resources/guidance to start
- Focus on understanding why employers plan to have more part-time workers in the next two years instead of full-time workers to see if there are opportunities for full-time employment and develop workforce programs accordingly
- Since employers are looking to fill more part-time positions, connect Blue Economy employers with more internship opportunities as a type of “try before you buy” model in hiring

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