



SAN DIEGO COUNTY LABOR MARKET ANALYSIS

# ADVANCED MANUFACTURING

An Update on Labor Force and Training Needs

SAN DIEGO  
**WORKFORCE**  
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Advanced Manufacturing uses technology and advanced processes to create goods for consumers and businesses. With high-tech jobs in computers and robotics, Advanced Manufacturing includes diverse industries such as electronics, aerospace, fabrication metals, biotechnology and maritime. This report is an update to the 2014 research that initially identified Advanced Manufacturing as a Priority Sector in San Diego County. The full report examines recent employment trends in the sector, specifically highlighting how the sector has evolved.

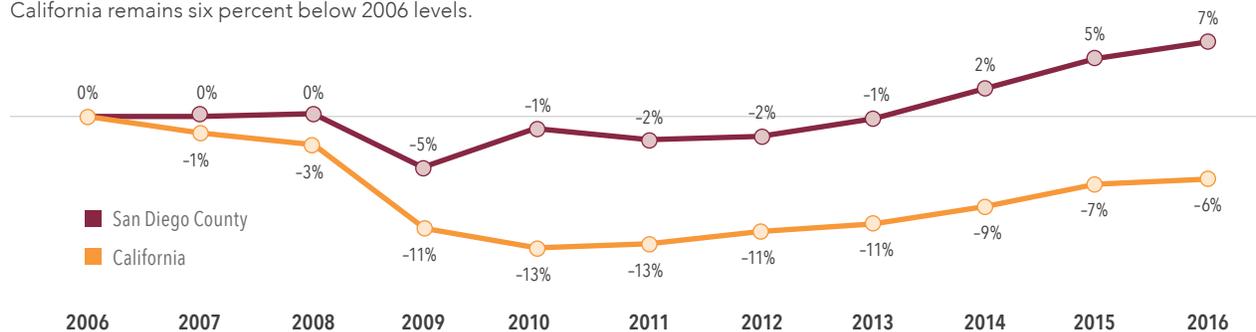
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more jobs in 2016 than in 2006

## HISTORICAL EMPLOYMENT TRENDS

While Advanced Manufacturing took a hit during the 2007–2009 recession, San Diego County employment has since surpassed pre-recession levels. In contrast, employment across the state of California remains six percent below 2006 levels.



## ADVANCED MANUFACTURING FAST FACTS



6,190 establishments in 2016



168,347 overall jobs in 2016



Biotechnology and medical device manufacturing had the greatest employment increase between 2006 and 2016, gaining 66 percent



The median hourly wage for these workers is \$20.83 as of 2016



### DID YOU KNOW?

38 percent of Advanced Manufacturing employers usually promote from within. Entry-level workers in Advanced Manufacturing typically progress into associate professionals (32 percent), management roles (28 percent) and clerical positions (18 percent).



## GENERAL RECOMMENDATIONS

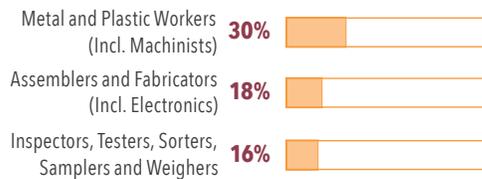
- Encourage employers to start hiring individuals who do not have work experience. If the cost of hiring individuals could be subsidized, employers would be able to train job seekers on-the-job which may help increase employment opportunities for people who have interest in the field but do not have the hands-on experience opportunities. Apprenticeships are another positive option for attracting this population.
- There are limited facilities in the region that have machines available for training. One potential opportunity is to further leverage those facilities that already exist by having evening or night training programs.

## KEY ADVANCED MANUFACTURING OCCUPATIONS IN SAN DIEGO COUNTY, 2016

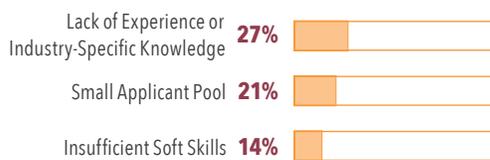
OCCUPATIONS	TYPICAL ENTRY-LEVEL EDUCATION	2016 JOBS IN INDUSTRY	2013-2016 IN-INDUSTRY CHANGE	MEDIAN HOURLY EARNINGS
Assemblers and Fabricators	High school diploma or equivalent	10,168	8%	\$12.54
Software Developers	Bachelor's degree	8,628	15%	\$52.22
Electrical or Civil Engineers	Bachelor's degree	6,292	11%	\$49.03
Metal and Plastic Workers (incl. Machines)	High school diploma or equivalent	5,996	10%	\$26.48
General and Operations Managers	Bachelor's degree	3,732	5%	\$50.27
Inspectors, Testers, Sorters, Samplers and Weighers	High school diploma or equivalent	3,399	-8%	\$19.56
Food Processing Workers	No formal educational credentials	1,946	4%	\$10.72
Laborers and Freight, Stock and Materials Movers	No formal educational credentials	1,657	8%	\$11.65

### HIRING CHALLENGES

The positions most frequently identified by employers as hardest to fill are:

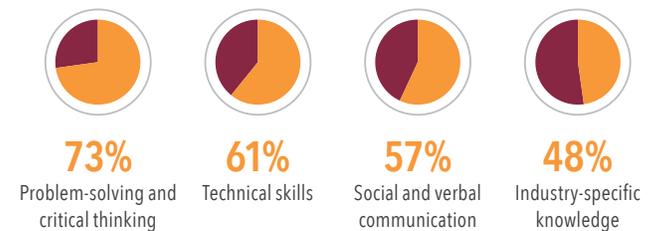


The most frequently cited reasons for hiring difficulties are:



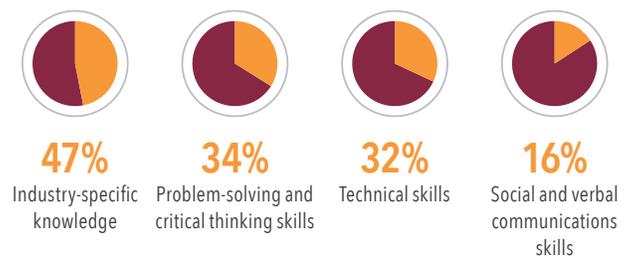
### SKILLS ASSESSMENT

Skills that employers say are **very important**:



- Many skill sets are developed through experience. For example, "A skilled machinist knows just by touching materials how to work with the product."
- Employers mentioned that the more experience someone has working on different types of projects, the more valuable they are to the industry.

Skills that employers say are **very difficult** to find:



### RECOMMENDATIONS FOR JOB SEEKERS

- There are specialized training programs for this industry at places like MiraCosta College and San Diego City College, and some programs are tailored to specific populations like veterans. These programs can sometimes have a long wait list, so if you have an interest sign up for the wait list sooner rather than later.
- You do not have to start at a manufacturing firm as a machinist, you can start in an entry-level position such as warehouse, flooring or shipping while you gain experience and pursue further training.
- The nature of this sector can be cyclical, and in some cases employment is only guaranteed through the end of a large project. Flexibility and comfort with a non-traditional work schedule will set you up for a successful career.



## ACKNOWLEDGMENTS

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