

INDUSTRY PROFILE

# EAST BAY MANUFACTURING

MANUFACTURING DAY

OCTOBER 4, 2019



[www.eastbayeda.org](http://www.eastbayeda.org)

# Manufacturing Still Matters

The East Bay (Alameda and Contra Costa counties) has a long legacy of manufacturing and continues to this day –ranging from manufacturing machinery to medical equipment to food. The manufacturing sector remains a vital source of innovation and economic competitiveness in the East Bay with significant contributions to research and development, exports and productivity growth.

The East Bay has seen its concentration in manufacturing jobs increase relative to the U.S., California and the rest of the Bay Area since the mid-1990s. This is particularly true for specialized and advanced manufacturing activities that support the region's high-tech sectors.

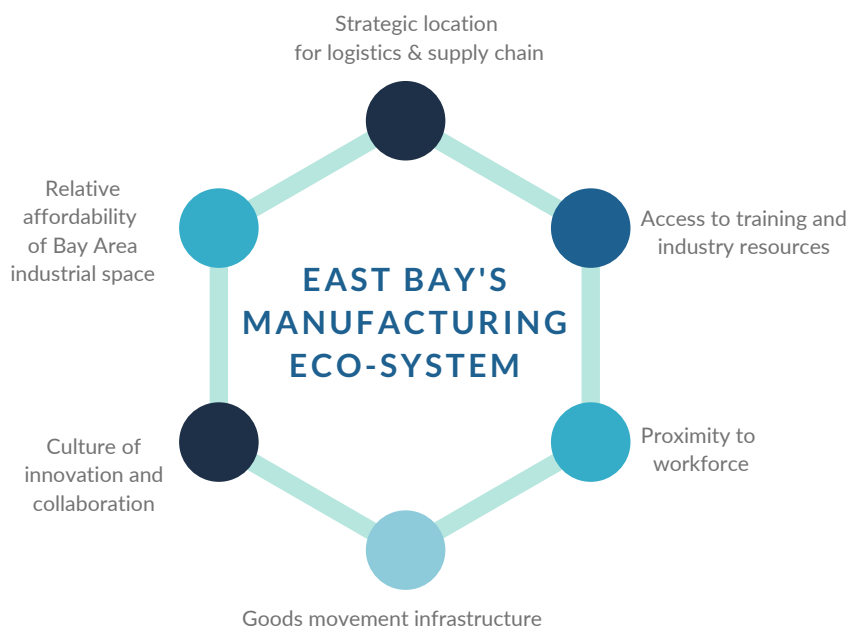
As R&D functions increasingly converge with goods production, the East Bay remains well-positioned to continue to be one of the nation's leading manufacturing regions. At the same time, it is important to not take these advantages for granted: business, education, government, nonprofit organizations, and other partners must work together even more closely to ensure that our region's infrastructure, training programs, and other assets that have helped create our success continue to receive the investments and support they need to sustain our competitive advantages.

## Top Manufacturing Subsectors

	Jobs (2018)	% of Industry	5-Year Change	Location Quotient*
Computer and Electronic Product Manufacturing	19,089	19%	1,104	2.2
Transportation Equipment Manufacturing	16,440	16%	13,318	1.2
Food Manufacturing	11,366	11%	1,003	0.9
Machinery Manufacturing	8,335	8%	2,370	0.9
Fabricated Metal Product Manufacturing	8,035	8%	1,810	0.7
Chemical Manufacturing	7,126	7%	1,841	1.1

\* Location Quotient - how concentrated this industry is in the East Bay compared to the nation.

Sources: Bureau of Labor Statistics; EMSI, 2019.



## 102,500

Manufacturing jobs in 2018  
(27% growth since 2013)

## \$224 BILLION

Gross regional product (GRP) in 2018  
Manufacturing represents 15% of the East Bay's overall GRP

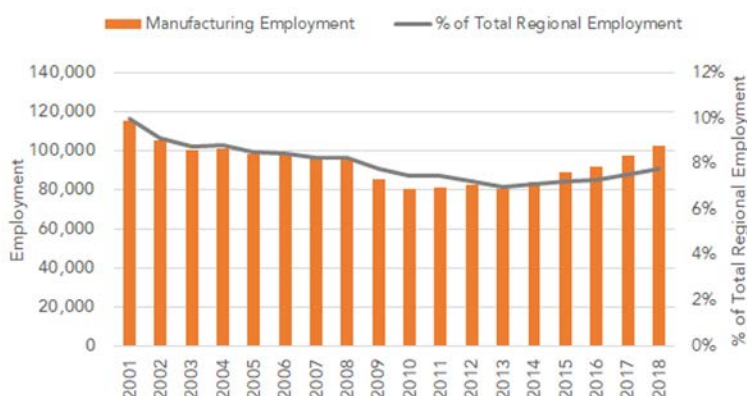
# Manufacturing Trends

In the 1960s, the East Bay's manufacturing sector accounted for nearly 28 percent of all jobs. Today, the industry comprises only 8 percent of jobs. Remarkable gains in productivity and automation, as well as increased international competition, are major reasons for the decreases. Despite declines in the sector employment overall, the East Bay's manufacturing output remains strong – comprising about 15 percent of overall GRP. In addition, manufacturing activities directly and indirectly support other economic activities, which keeps the East Bay thriving and growing.

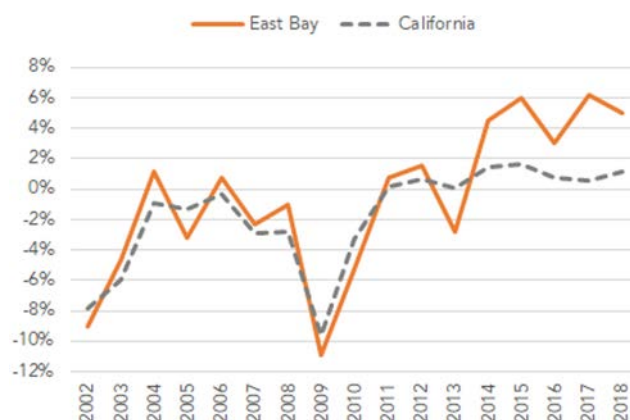


Source: Manex.

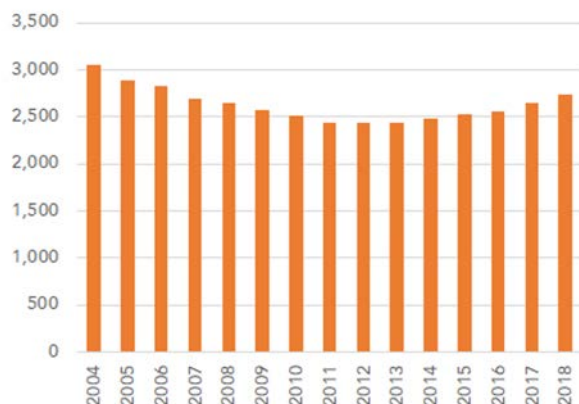
## Manufacturing Employment



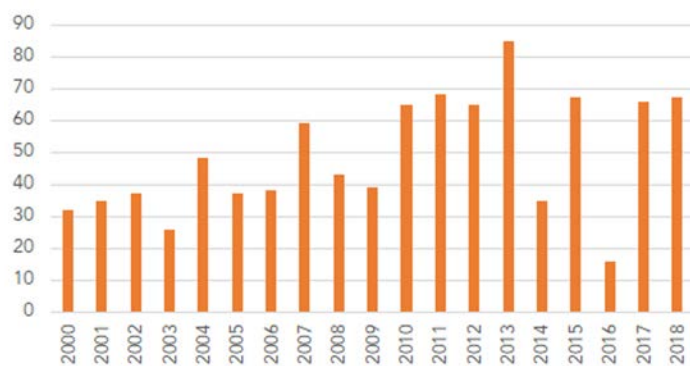
## Annual Percent Growth of Manufacturing Jobs



## Manufacturing Businesses



## Annual Manufacturing Business Starts



Sources: Bureau of Labor Statistics; DatabaseUSA; EMSI, 2019.



# Top Occupations & Employers

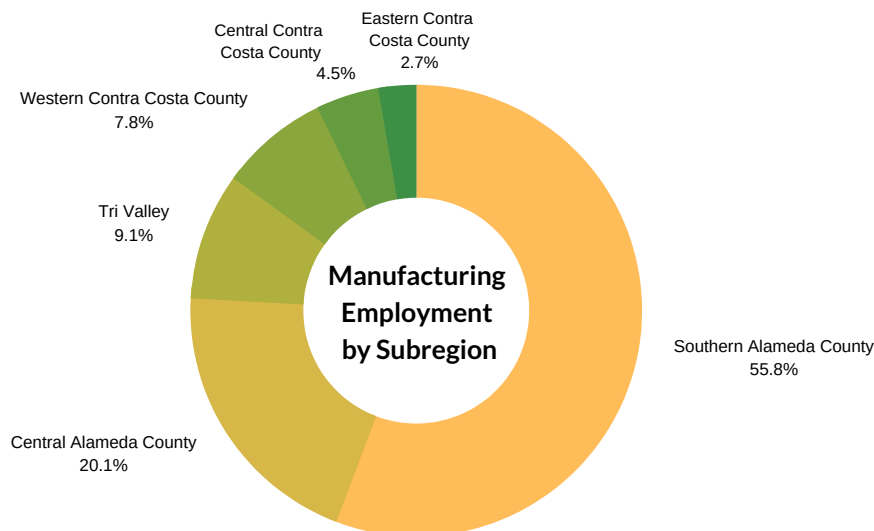
Manufacturing remains an important source of middle-wage jobs and can provide a ladder into higher-wage positions. Manufacturing jobs often do not require formal education, as many skills are taught on the job. However, STEM skills are increasingly needed to align with the changing manufacturing landscape that exists today and in the near future.

Description	Employed in Industry (2018)	5-Year Change	% of Total Jobs in Industry (2018)	Median Hourly Earnings	"Typical On-the-Job Training"
Assemblers and Fabricators	13,645	8,007	13%	\$17.02	Moderate-term
Electrical, Electronic, and Electromechanical Assemblers	3,104	539	3%	\$15.67	Moderate-term
First-Line Supervisors of Production and Operating Workers	2,719	685	3%	\$33.06	None
Machinists	2,288	436	2%	\$25.77	Long-term
Laborers and Freight, Stock, and Material Movers, Hand	2,220	784	2%	\$15.19	Short-term
Inspectors, Testers, Sorters, Samplers, and Weighers	2,193	537	2%	\$20.34	Moderate-term
General and Operations Managers	1,819	243	2%	\$59.18	None
Packaging and Filling Machine Operators and Tenders	1,770	294	2%	\$13.89	Moderate-term
Sales Representatives	1,730	315	2%	\$32.07	Moderate-term
Shipping, Receiving, and Traffic Clerks	1,579	236	2%	\$16.78	Short-term

Sources: Bureau of Labor Statistics; EMSI, 2019.

## 13,600 JOBS

Assemblers and fabricators represent the largest share of manufacturing occupations in the East Bay



## Major Employers

Company	Type	Location
Abbott Diabetes Care	Surgical and Medical Instrument	Alameda
Tyson Foods	Food	San Lorenzo
Asteelflash	Semiconductor & Related Device	Fremont
Bayer	Pharmaceutical	Berkeley
Dean Foods	Food	Hayward
Bio-RAD Laboratories	Biomedical	Hercules
Chevron Corporation	Petroleum	Richmond
Clear-Com Communications	Communications Equipment	Alameda
Dow Chemical	Petroleum	Pittsburg
Grifols Diagnostic Solutions	Pharmaceutical	Emeryville
Posco Steel	Steel	Pittsburg
Shell Martinez Refinery	Petroleum	Martinez
Tesla	Automobile	Fremont

\*Selected businesses that engage in manufacturing and production activities (NAICS 31-33).

Sources: DatabaseUSA; Dun & Bradstreet; 2019.

# The Future of Manufacturing

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The future of manufacturing is not driven by a single force, but a combination of technologies, including sensors, algorithms, and robotics. In use for decades, but now at a lower cost, with broad access, high speed, fine precision and now interconnectivity, the “internet of things” (IoT) have opened the door to a new reality. Their synthesis is connecting all parts of manufacturing – people, processes, materials and creating far more than the sum of their constituent parts. Industry experts believe that this process – in the small and medium sized manufacturing space – will be an evolution not a revolution.

The East Bay has a strong legacy of manufacturing, many components of which are still active and visible across the region today. As manufacturers continue to adapt to technology changes, there will be increased demand for employees with high levels of technical skills, such as coders, app developers, data scientists, 3D printing specialists and others. Heavy emphasis on STEM education, apprenticeships, technical training and other resources (e.g., maker spaces, incubators) are needed to assist manufacturers with evolving in a continuously changing digital business landscape.

## What will the factory of the future look like?

**Automated** – Collaborative Robots (Cobots) performing tasks of lower added value and changing from one task to the other easily

**Digitally Connected** – Incorporating electronics to capture data in a massive way and manage production processes in real time

**Intelligent** – Interpreting the data of the processes and facilitating decision-making in advance, promoting continuous improvement and innovation

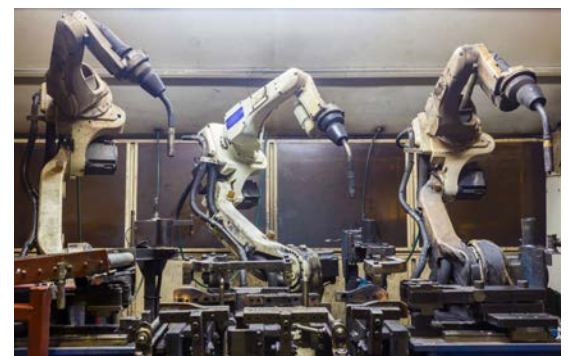
**Flexible** - The design, manufacturing and logistics must be flexible in order to adapt quickly to changes in demand

**Sustainable** – With a rational and responsible use of resources and energy

**Human** – All of the foregoing will only be possible if we properly train employees and activate their talent. People will continue to be the center of activity and will make a difference in this scenario



Source: Manex.



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# Industry Resources

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## **Nationwide Manufacturing Network**

Manufacturing Extension Partnership (MEP)

## **Public Agency Alliances**

Alameda County Workforce Development Board  
(ACWDB)

CalRecycle

California Manufacturing & Technology Association  
(CMTA)

CalCharge

GO-Biz Office of Business & Economic Development

National Institute of Standards and Technology (NIST)

Silicon Valley Manufacturing Roundtable

SEMI America Silicon Valley

Silicon Valley Robotics

United States Department of Agriculture (USDA)

Western Trade Adjustment Assistance Center  
(WTAAC)

Work2Future

## **Training & Development Alliances**

Affiliate Member Institute of Coaching, McLean  
Hospital, a Harvard Medical School

Association of Manufacturers Bay Area (AMBayArea)

Bay Area California Community Colleges Consortium

California Employers Association

Biomedical Manufacturing Network

i-GATE

Lawrence Livermore National Laboratory (LLNL)

NextFlex

Society of Manufacturing Engineers (SME)

Solano Small Business Development Center

University of California, Berkeley, Laboratory for  
Manufacturing and Sustainability (LMAS)

## **SPECIAL ACKNOWLEDGEMENTS**



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