

MANUFACTURING




Tampa Bay's Manufacturing sector employs nearly 66,000 workers at almost 3,000 establishments in the production of a diverse range of products. The average earnings per job is over \$71,000. Employment in the sector has declined by more than 10 percent over the past decade. However, this trend mirrors state and national patterns.

Major industry groups in the MSA (based on employment in 2017) include:

- NAICS 334: Computer & Electronic Product Manufacturing (9,569 jobs)
- NAICS 339: Miscellaneous Manufacturing (7,603 jobs, the majority in medical equipment and supplies)
- NAICS 332: Fabricated Metal Product Manufacturing (6,705 jobs)
- NAICS 333: Machinery Manufacturing (5,786 jobs)

FIGURE 1. OVERVIEW: MANUFACTURING

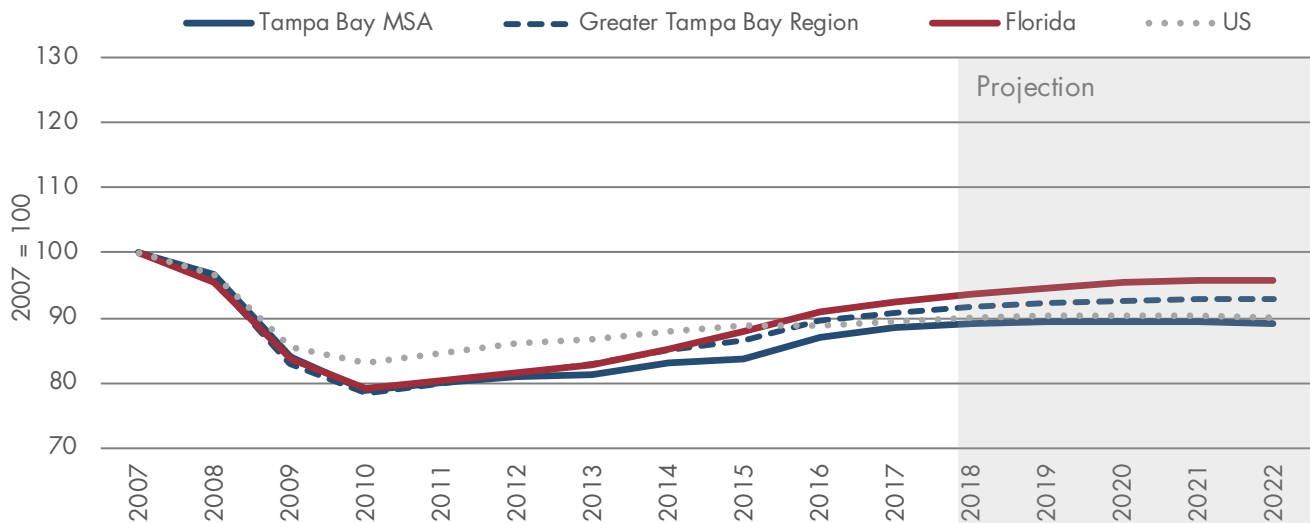
DEFINITION: The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products.

-  **65,986**
Jobs in Tampa Bay MSA, 2017
-  **-11.4%**
Employment change (%) past 10 years
-  **\$71,889**
Average earnings per job, 2017*
-  **2,909**
Payrolled business locations, 2017

CLASSIFICATION USED FOR ANALYSIS:
NAICS 31-33 Manufacturing

FIGURE 2. EMPLOYMENT TRENDS (HISTORIC & PROJECTED): MANUFACTURING

JOB CHANGE RELATIVE TO 2007, WITH COMPARISONS TO TOTAL EMPLOYMENT AND STATE, US TRENDS



Source(s): All figures, Emsi 2018.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed

Note(s): *Average earnings per job is the total industry earnings for a region divided by number of jobs. It includes wages, salaries, supplements (additional employee benefits), and proprietor income. It is not equivalent to compensation paid directly to workers.

MAJOR EMPLOYERS. Global manufacturing services company Jabil, which is headquartered in St. Petersburg, employs the largest number of workers in the sector (2,000). While other major multinational corporations, such as Lockheed Martin and Honeywell, also have a presence in Tampa Bay, much of the metro area's manufacturing base is comprised of small-to-medium enterprises. The diversity of goods produced in the region highlighted previously is illustrated in Figure 3. However, the importance of the aerospace & defense and life sciences industries to the region's job base is evident.



FIGURE 3. LARGEST MANUFACTURERS IN TAMPA BAY MSA
RANKED BY NUMBER OF LOCAL EMPLOYEES

BUSINESS NAME	CITY	# OF EMPLOYEES LOCAL/TOTAL	LOCAL MFG. SPACE (SF)	2017 REVENUE	PRODUCTS MANUFACTURED LOCALLY
Jabil Inc.	St. Petersburg	2,000 / 180,000	425,000	\$19.06 B	Defense & aerospace
Honeywell Intl. Inc.	Clearwater	1,800 ⁽¹⁾ / 131,000	800,000	\$40.53 B	Aerospace products
BIC Graphic North Am.	Clearwater	600 ⁽¹⁾ / —	70,000	—	Writing instruments
Lockheed Martin Tactical Systems	Oldsmar	500 ⁽¹⁾ / 100,000	208,000	\$51.05 B	Electronic components
Mettler-Toledo Safeline	Lutz	500 / —	270,000	—	Food safety equipment
Chromalloy Castings Tampa Corp.	Tampa	388 / —	115,000	—	Gas turbine engine components
Accuform	Brooksville	280 / 301	110,000	—	Safety signs
Omnicell – Medication Adherence Division ⁽²⁾	St. Petersburg	280 / —	132,500	—	Pharmaceutical packaging solutions
American Tool & Mold Inc.	Clearwater	250 ⁽³⁾ / 250	150,000	—	High-precision machine parts, plastic injection molds/molding
Barrette Outdoor Living	Brooksville	247 / —	210,000	—	Wood, vinyl and aluminum fencing
Kimball Electronics Tampa Inc.	Tampa	227 / 5,400	150,000	\$930.91 M	Life science and medical equipment
TSE Industries Inc.	Clearwater	210 / 210	265,000	\$68.00 M	Adhesives, rubber/plastic parts, millable urethane rubber, plastic sheets
Thomas Sign & Awning Co. Inc.	Clearwater	200 / 200	100,000	\$25.00 M	Exterior: signs, awnings, graphics; Interior: signs, architectural features
Sypris Electronics LLC	Tampa	150 / 607	50,000	\$82.29 M	Security solutions
LidWorks	Plant City	150 / 150	110,000	—	Single use or disposable lids
Monin Inc.	Clearwater	150 / —	50,000	—	Gourmet flavorings
Beckwith Electric Co. Inc.	Largo	140 / —	57,000	—	Power system products
Roma Industries	Largo	125 / 150	35,000	—	Fine leather and exotic watch straps, belts, small leather goods
Power Designers Sibex Inc. ⁽⁴⁾	Safety Harbor	124 / 124	100,000	\$12.40 M	Electronic products
Southern Manufacturing Technologies Inc.	Tampa	102 / 102	20,000	\$13.95 M	Precision machined components and assemblies (aircraft, aerospace, defense)
Aero Simulation Inc.	Tampa	100 / 135	30,000	—	Flight training devices

Source: Excerpted from “Largest Manufacturers in Tampa Bay,” Tampa Bay Business Journal, April 28, 2018. (Only companies in Hernando, Hillsborough, Pasco, and Pinellas counties with at least 100 local jobs are shown.) Note(s): Data provided by company representatives unless otherwise noted. (1) Estimated. (2) Formerly MTS Medication Technologies Inc. (3) From 2017. (4) Formerly Sibex Inc.

STAFFING AND HIGH-DEMAND OCCUPATIONS. Figure 4 shows which occupations hold the highest share of employment in the Manufacturing sector overall and by subsector. Figure 5 (next page) shows demand factors for the 45 occupations with the highest share of industry employment.

FIGURE 4. TOP 30 OCCUPATIONS: MANUFACTURING SECTOR (NAICS 31) & SELECTED SUBSECTORS
PERCENT OF TOTAL JOBS IN INDUSTRY

		Less than 1.0%	1.0% to 2.49%	2.5% to 4.9%	5.0% to 7.49%	Greater than 7.5%	
HDOs	SOC CODE	DESCRIPTION	Manufacturing	Computer & Electronic Product Mfg.	Miscellaneous Manufacturing	Fabricated Metal Product Mfg.	Machinery Manufacturing
			31	334	339	332	333
	51-2092	Team Assemblers	7.4%	5.3%	12.3%	7.8%	14.3%
▶	51-1011	First-Line Supvrs., Production & Operating Workers	4.2%	3.1%	3.6%	5.2%	4.1%
▶	41-4012	Sales Reps., Whls. & Mfg., Exc. Tech. & Scientific	2.8%	1.5%	2.7%	3.4%	3.5%
	51-9111	Packaging & Filling Machine Workers	2.7%	0.1%	1.1%	0.4%	0.2%
	51-2022	Electrical & Electronic Equip. Assemblers	2.3%	13.4%	0.9%	0.1%	1.7%
	51-4041	Machinists	2.3%	1.6%	1.9%	7.7%	6.1%
	43-4051	Customer Service Representatives	2.2%	2.4%	3.6%	1.8%	2.1%
	53-7062	Laborers/Freight, Stock, & Material Movers, Hand	2.2%	0.8%	1.3%	2.2%	1.8%
	51-4121	Welders, Cutters, Solderers, & Brazers	2.0%	0.8%	0.6%	7.7%	4.9%
▶	51-5112	Printing Press Operators	2.0%	0.1%	0.5%	0.0%	0.0%
	51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	1.9%	2.9%	2.1%	1.9%	1.8%
▶	53-3032	Heavy & Tractor-Trailer Truck Drivers	1.8%	0.0%	0.1%	0.7%	0.1%
	49-9041	Industrial Machinery Mechanics	1.7%	0.9%	0.6%	1.2%	1.6%
	17-2112	Industrial Engineers	1.6%	4.1%	2.3%	1.1%	2.1%
▶	49-9071	Maintenance & Repair Workers, General	1.6%	0.9%	1.2%	1.5%	1.4%
	43-5071	Shipping, Receiving, & Traffic Clerks	1.5%	1.3%	1.8%	2.0%	1.8%
	51-4072	Molding, Coremaking, & Casting, Metal/Plastic	1.4%	0.6%	2.6%	0.5%	1.5%
	51-9198	Helpers--Production Workers	1.4%	0.3%	1.2%	1.7%	0.9%
▶	43-9061	Office Clerks, General	1.3%	1.0%	1.9%	1.8%	1.4%
▶	11-1021	General & Operations Managers	1.3%	1.4%	1.3%	1.8%	1.4%
▶	43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	1.1%	1.1%	1.3%	1.7%	1.3%
	51-4031	Cutting, Punching, & Press Machine, Metal/Plastic	1.1%	0.4%	0.8%	4.3%	1.5%
	13-1023	Purchasing Agents, Exc. Whls., Retail, & Farm	0.8%	1.7%	0.7%	0.9%	1.3%
▶	13-2011	Accountants & Auditors	0.8%	1.4%	0.9%	0.8%	1.0%
	51-2041	Structural Metal Fabricators & Fitters	0.8%	0.1%	0.6%	4.2%	1.1%
	51-9081	Dental Laboratory Technicians	0.8%	0.0%	7.8%	0.0%	0.0%
	51-9121	Coating, Painting, & Spraying Machine Workers	0.7%	0.1%	0.6%	2.4%	1.0%
	51-4011	CNC Machine Operators, Metal/Plastic	0.7%	0.7%	0.7%	2.2%	1.8%
▶	41-4011	Sales Reps., Whls. & Mfg., Tech. & Scientific	0.7%	2.8%	1.3%	0.1%	0.8%
▶	13-1199	Business Operations Specialists, All Other	0.7%	1.6%	0.7%	0.4%	0.7%

Source: Emsi 2018.2 – QCEW Employees, Non-QCEW Employees, and Self-Employed.

High-demand occupations (HDOs) are those occupations that are expected to experience high pressure in three or more demand factors: new job growth, replacement demand, retirement exposure, or relative wages.

FIGURE 5. DEMAND FACTORS FOR THE TOP 45 OCCUPATIONS: MANUFACTURING

SOC CODE	DESCRIPTION	2017 Jobs	Projected Openings (2017-22)	Net Job Change (2017-2022)	Wage Premium (US=1.00)	% 55-64 Years	% 65+ Years
LOW-SKILL (High school or less)							
43-4051	Customer Service Representatives	48,113	35,613	4,046	0.69	14%	4%
43-9061	Office Clerks, General	26,767	16,841	1,000	0.88	20%	9%
43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	26,624	15,195	815	0.75	25%	10%
53-7062	Laborers/Freight, Stock, & Material Movers, Hand	16,178	11,263	108	1.10	14%	4%
43-5071	Shipping, Receiving, & Traffic Clerks	4,772	2,670	221	1.18	18%	4%
51-9198	Helpers--Production Workers	1,528	1,136	-62	0.75	15%	6%
MIDDLE-SKILL (More than high school, less than four years)							
53-3032	Heavy & Tractor-Trailer Truck Drivers	13,361	8,304	1,020	1.58	22%	7%
49-9071	Maintenance & Repair Workers, General	13,306	7,449	861	0.70	25%	7%
41-4012	Sales Reps., Whls. & Mfg., Exc. Tech. & Scientific	13,697	7,212	186	1.83	22%	7%
51-2092	Team Assemblers	6,156	3,571	-127	0.92	20%	5%
51-1011	First-Line Supvrs., Production & Operating Workers	4,396	2,222	61	1.11	24%	4%
51-9111	Packaging & Filling Machine Workers	3,222	1,834	-141	0.74	17%	4%
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	2,660	1,741	121	1.01	23%	7%
51-4121	Welders, Cutters, Solderers, & Brazers	2,443	1,439	120	0.97	18%	3%
51-2022	Electrical & Electronic Equip. Assemblers	2,277	1,375	2	0.79	28%	7%
51-4041	Machinists	1,982	1,153	130	0.98	27%	7%
51-5112	Printing Press Operators	2,209	1,086	-285	1.16	21%	5%
49-9041	Industrial Machinery Mechanics	1,983	1,036	161	0.89	25%	5%
47-2211	Sheet Metal Workers	966	639	108	0.68	17%	4%
51-4072	Molding, Coremaking, & Casting, Metal/Plastic	1,140	630	-80	0.93	23%	5%
51-2099	Assemblers & Fabricators, All Other	1,015	605	2	1.04	18%	5%
51-9083	Ophthalmic Laboratory Technicians	885	535	30	0.99	19%	5%
51-2041	Structural Metal Fabricators & Fitters	803	500	47	1.22	22%	4%
17-3023	Electrical & Electronics Eng. Technicians	981	454	23	0.99	26%	5%
51-4031	Cutting, Punching, & Press Machine, Metal/Plastic	706	395	-36	0.81	23%	5%
51-9081	Dental Laboratory Technicians	594	364	16	1.44	23%	7%
51-4011	CNC Machine Operators, Metal/Plastic	530	353	76	0.93	21%	3%
51-9121	Coating, Painting, & Spraying Machine Workers	548	309	20	1.07	16%	3%
51-4033	Grinding & Buffing Machine, Metal/Plastic	497	260	-28	0.62	23%	6%
17-3026	Industrial Engineering Technicians	435	205	14	0.67	25%	5%
51-9082	Medical Appliance Technicians	270	167	11	1.16	23%	6%
51-4111	Tool & Die Makers	285	140	1	1.29	35%	9%

Continued next page

Note(s): Highlights: Wage premium = 10 percent or higher than US wages; 55-64 = 20 percent or higher; 65+ = 10 percent or higher.

FIGURE 5. DEMAND FACTORS FOR THE TOP 45 OCCUPATIONS: MANUFACTURING (CONTINUED)

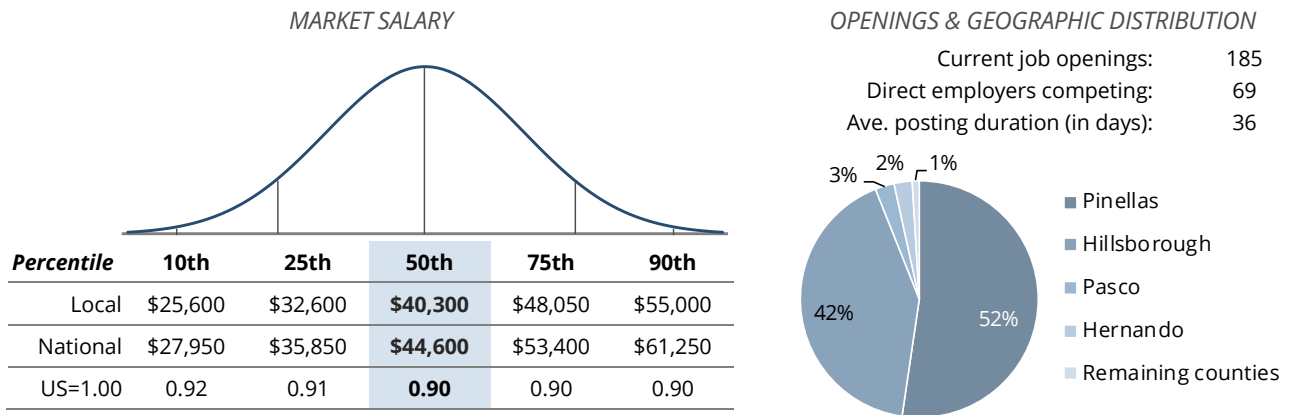
SOC CODE	DESCRIPTION	2017 Jobs	Projected Openings (2017-22)	Net Job Change (2017-2022)	Wage Premium (US=1.00)	% 55-64 Years	% 65+ Years
HIGH SKILL <i>(Four-year degree or above)</i>							
13-2011	Accountants & Auditors	14,115	7,887	1,441	1.30	19%	6%
13-1199	Business Operations Specialists, All Other	13,245	6,738	687	0.95	21% ◀	5%
11-1021	General & Operations Managers	12,980	6,635	1,208	4.73	20% ◀	4%
15-1132	Software Developers, Applications	7,037	3,222	873	1.51	12%	2%
41-4011	Sales Reps., Whls. & Mfg., Tech. & Scientific	4,520	2,405	91	1.81	20% ◀	5%
15-1133	Software Developers, Systems Software	3,141	1,366	327	1.06	12%	2%
27-1024	Graphic Designers	2,510	1,333	144	1.54	15%	7%
13-1023	Purchasing Agents, Exc, Whls., Retail, & Farm	2,608	1,249	113	0.87	26% ◀	6%
17-2112	Industrial Engineers	1,965	744	97	0.72	24% ◀	5%
17-2141	Mechanical Engineers	1,062	440	96	0.71	21% ◀	6%
11-9041	Architectural & Engineering Mgrs.	1,033	429	66	2.93	26% ◀	6%
17-2071	Electrical Engineers	1,120	420	57	0.99	24% ◀	6%
17-2072	Electronics Engineers, Except Computer	743	258	13	0.90	23% ◀	5%

Source: Emsi 2018.2—QCEW Employees, Non-QCEW Employees, and Self-Employed.

Note(s): Highlights: Wage premium = 10 percent or higher than US wages; 55-64 = 20 percent or higher; 65+ = 10 percent or higher.

HIRING. The following figures use real-time labor market information (LMI) to illustrate the hiring environment in the Tampa Bay MSA for selected occupational groups relevant to the Manufacturing sector.

FIGURE 6. REAL-TIME LMI OVERVIEW: PRODUCTION OCCUPATIONS (SOC 51-0000)
 JOB POSTINGS IN MANUFACTURING INDUSTRIES, TAMPA BAY MSA (JAN 1, 2018–JUN 30, 2018)



TOP 10 COUNTS (number of postings out of ~730 total from Jan 1, 2018–Jun 30, 2018)

OCCUPATIONS

First-Line Supvrs., Production & Oper. Workers	253
Inspect., Testers, Sorters, Samplers, Weighers	73
Electrical & Electronic Equip. Assemblers	58
Helpers--Production Workers	45
Machinists	43
Production Workers, All Other	40
Packaging & Filling Machine Workers	29
Assemblers & Fabricators, All Other	20
Welders, Cutters, Solderers, & Brazers	19
Plating & Coating Machine, Metal/Plastic	17

EMPLOYERS

Lockheed Martin	69
Cintas	49
Honeywell	43
Molex	43
Mettler Toledo	34
Gaf Materials Corporation	20
Masonite	17
Jabil	15
Int'l. Ship Repair and Marine Services, Inc.	13
Conmed Corporation	12

HARD SKILLS

Blueprints	120
Microsoft Office	77
Quality control	75
Preventive maintenance	71
Micrometers	51
Quality Assurance	47
Fire extinguishers	45
Center TRACON automation systems	45
Lean Manufacturing	45
Mathematics	44

CERTIFICATIONS

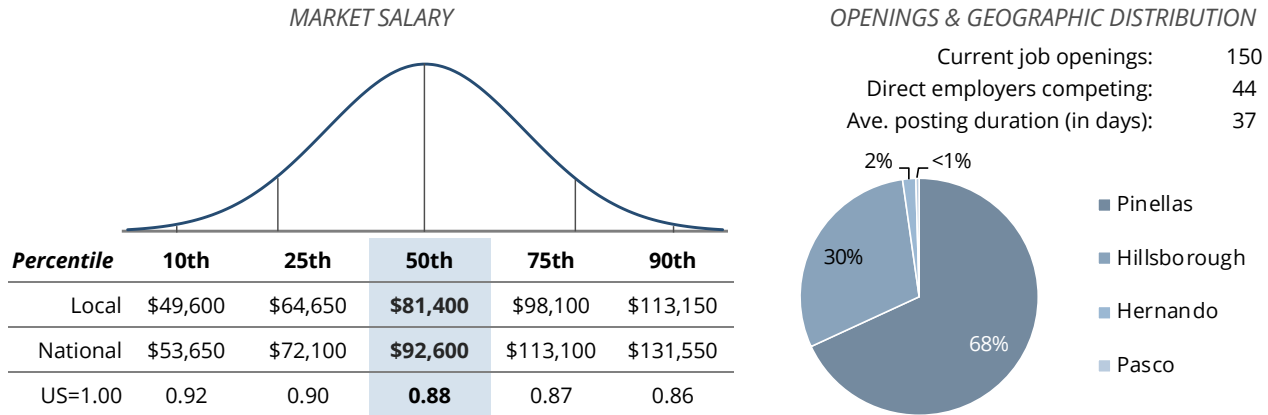
Security clearance	65
OSHA Certification	48
First Aid certification	47
Six Sigma Green Belt	28
Petroleum Oriented Safety Training	17
Driver's License	16
HAZMAT	14
Food safety programs	12
IPC-620 inspector	9
Scaled agile framework	8

Source: Gartner Talent Neuron (formerly Wanted Analytics)

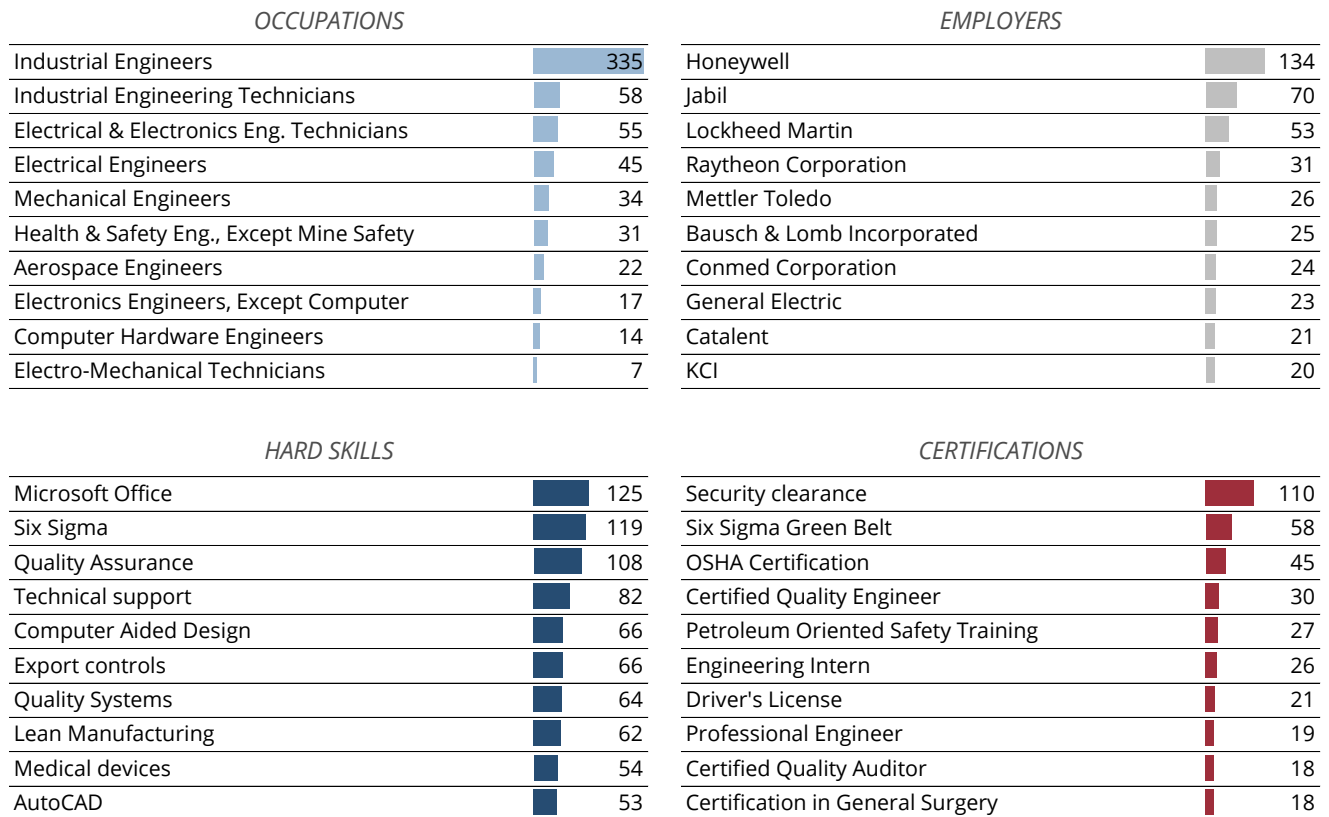
Note(s): Demand for some occupations (e.g., production or skilled trades workers) and industries (e.g., manufacturing and construction), may be under-stated in job postings data as these positions are somewhat less likely to be filled using on-line job postings.

FIGURE 7. REAL-TIME LMI OVERVIEW: ENGINEERING OCCUPATIONS (SOC 17-0000)

JOB POSTINGS IN MANUFACTURING INDUSTRIES, TAMPA BAY MSA (JAN 1, 2018–JUN 30, 2018)



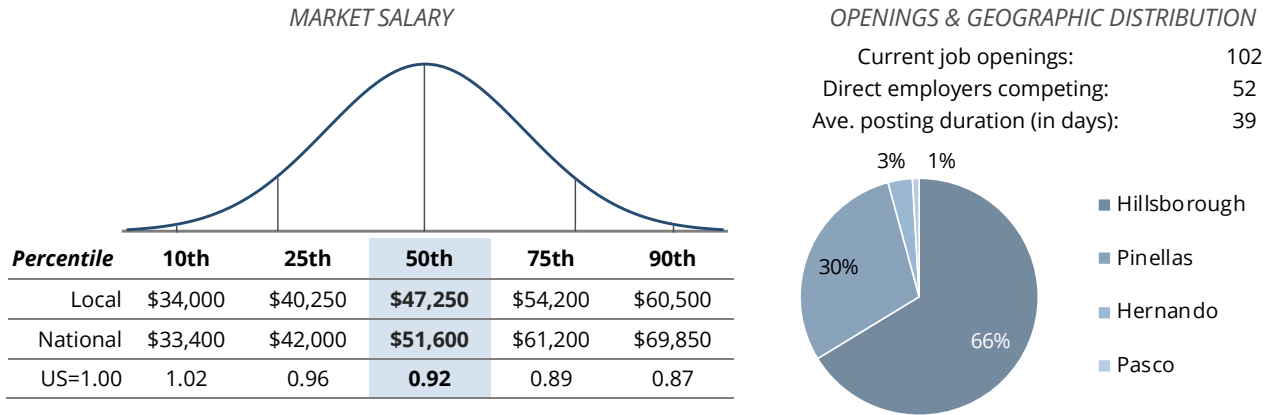
TOP 10 COUNTS (number of postings out of ~675 total from Jan 1, 2018–Jun 30, 2018)



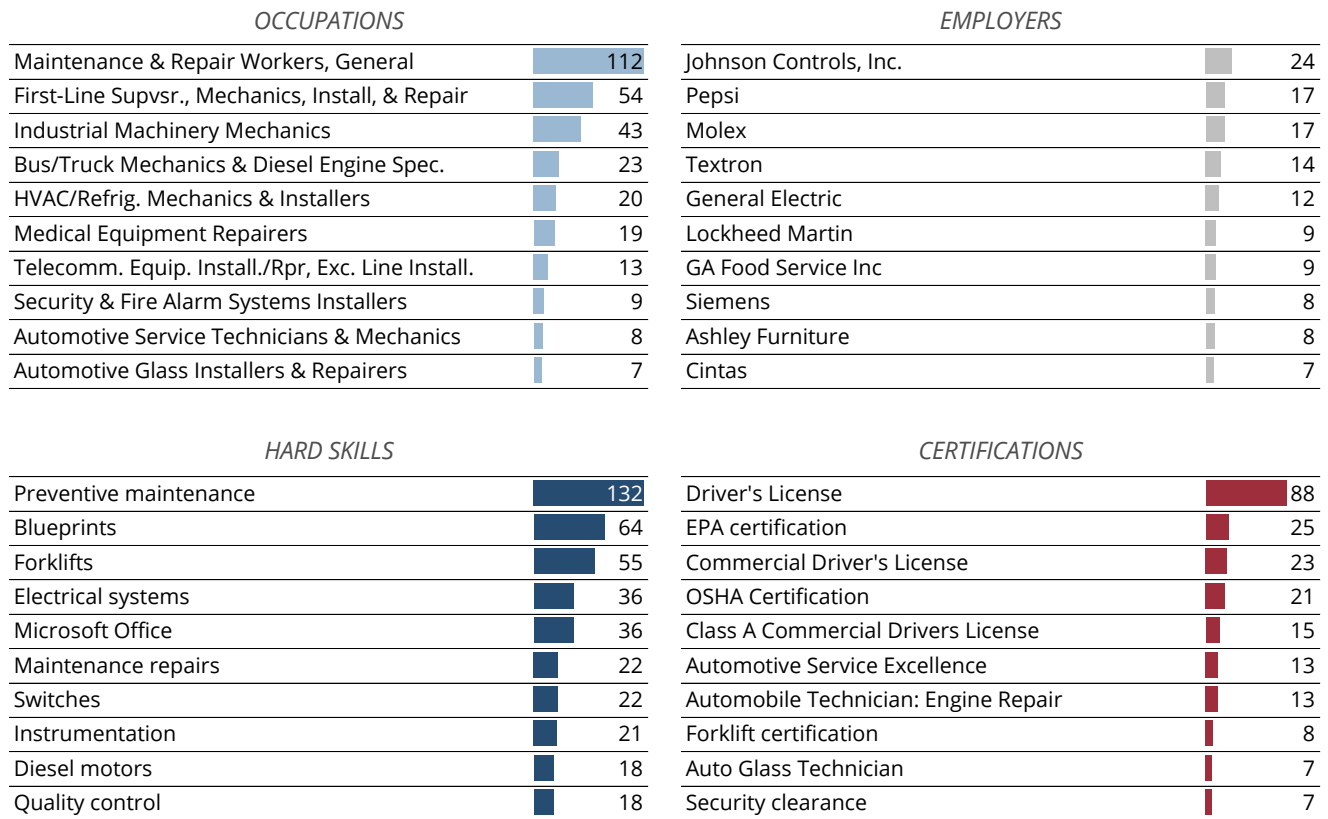
Source: Gartner Talent Neuron (formerly Wanted Analytics)

Note(s): Demand for some occupations (e.g., production or skilled trades workers) and industries (e.g., manufacturing and construction), may be under-stated in job postings data as these positions are somewhat less likely to be filled using on-line job postings.

FIGURE 8. REAL-TIME LMI OVERVIEW: INSTALLATION, MAINT. & REPAIR OCCUPATIONS (SOC 49-0000)
 JOB POSTINGS IN MANUFACTURING INDUSTRIES, TAMPA BAY MSA (JAN 1, 2018–JUN 30, 2018)



TOP 10 COUNTS (number of postings out of ~330 total from Jan 1, 2018–Jun 30, 2018)



Source: Gartner Talent Neuron (formerly Wanted Analytics)

Note(s): Demand for some occupations (e.g., production or skilled trades workers) and industries (e.g., manufacturing and construction), may be under-stated in job postings data as these positions are somewhat less likely to be filled using on-line job postings.

TRAINING. Figure 9 through Figure 11 provide an overview of training relevant to the Manufacturing sector. Noncredit offerings are programs that do not lead to a degree. They include certificate programs, continuing education credits, and other types of workforce training programs.

Many manufacturing occupations do not require formal training or degree programs and traditionally have relied on on-the-job training. However, the Tampa Bay region’s public higher education institutions offer a range of programs that support the various pathways of the Manufacturing sector.

In addition, the school districts offer a number of different pre-engineering programs, including robotics, Project Lead the Way, engineering core certification. They also offer certifications in Autodesk, Solidworks, NCCER Carpentry, OSHA 10, and certified production technician.

FIGURE 9. NONCREDIT OFFERINGS BY CAREER PATHWAY FOR SELECTED SCHOOLS

PATHWAY	HCC	SPC	PHSC	PTC
Maintenance, installation & repair		●	—	●
Manufacturing production process development	●	●	—	●
Production	●	●	—	●
Quality assurance		●	—	

FIGURE 10. APPRENTICESHIP PROGRAMS BY CAREER PATHWAY

PATHWAY	NUMBER
TOTAL	27
Maintenance, installation & repair	7
Manufacturing production process development	6
Production	14
Quality assurance	

Sources: TIP Research (Figure 9), US DOL – ETA (Figure 10). Pasco-Hernando State College non-credit courses were not available.

FIGURE 11. DEGREE PROGRAM OFFERINGS: MANUFACTURING CAREER CLUSTER SELECT REGIONAL INSTITUTIONS DURING THE 2016 ACADEMIC YEAR

PATHWAY	USF-Main	USF-SP	HCC	PHSC	PTC-CW	PTC-SP	SPC
Engineering and Technology	●						
Maintenance, Installation & Repair					●		●
Manufacturing Production Process Development	●		●		●		
Production			●	●	●	●	
Quality Assurance							●

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

Note(s): IPEDS data include only schools eligible to participate in federal financial aid programs. Programs were categorized by career cluster and career pathway by TIP using O-Net.

USF = University of South Florida; HCC = Hillsborough Community College; PHSC = Pasco-Hernando State College; PTC = Pinellas Technical College; SPC = St. Petersburg College.

ASSOCIATIONS & RESOURCES. Tampa Bay has a number of assets and initiatives that support the Manufacturing sector. These include:

- *Bay Area Manufacturing Association.* The Bay Area Manufacturers Association (BAMA) supports manufacturers and promotes economic development in the Tampa Bay Region. BAMA provides a forum to exchange ideas and share best practice information; network with colleagues; and learn about manufacturing related topics through educational programs and tours. BAMA supports STEM programs and offers scholarships to students pursuing manufacturing and STEM education. Manufacturing provides jobs for approximately 60,000 people in approximately 2,500 facilities throughout Pinellas, Hillsborough and Pasco counties.
- *Manufacturing Alliance of Hillsborough County.* The Manufacturing Alliance of Hillsborough County fuels the growth and longevity of the county's manufacturing sector. The Alliance cultivates the next generation of workers and leaders and helps businesses access talent and resources.
- *Florida Medical Manufacturers Consortium.* The Florida Medical Manufacturers Consortium (FMMC) is a statewide association of medical technology firms. The FMMC exists to unite, promote and grow the Florida medical device industry, and to enhance the business success of its member companies. The FMMC accomplishes its mission via three (3) strategic priorities: Networking; Industry Knowledge & Expertise; and Advocacy.
- *Upper Tampa Bay Manufacturers Association.* The UTBMA is dedicated to serving the unique business and networking needs of the approximately 400 manufacturers located in the region. The association leadership is exclusively formed by manufacturing principles. The UTBMA board of directors includes manufacturers from Hernando, Hillsborough, Pasco and Pinellas counties.
- *AmSkills.* AmSkills is a multi-discipline, advanced technical training program for manufacturing. The initiative brings together government, education, and industry to work together on building solutions for workforce development through European-style apprenticeship training.
- *Workforce Institute.* St Petersburg College's Workforce Institute Offers training, continuing education, industry certifications, licensures and career pathways. Recently, the Workforce Institute partnered with Ford, General Motors, and Toyota to develop a mechatronics and electromechanical technicians program, which is the first in Florida.
- *Florida Apprenticeship Consortium.* St Petersburg College in partnership with Florida State College Jacksonville and Broward College to expand high-quality apprenticeships in manufacturing.