



Focus on Manufacturing

Real-Time Insights by Real-Time Talent

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Real-Time Talent: A Catalyst for Change

Ensuring the talent to meet the needs of Minnesota employers

Real-Time Talent is a unique public-private collaborative, whose leaders represent Minnesota’s higher education, workforce system, and key industries. Our aim is to support higher education and workforce systems to become more market-oriented and data-driven in order to meet pending workforce shortages head on. We do this by introducing new tools and reinforcing the use of existing tools to align decisions to labor market needs, establishing a culture of cross-sector collaboration.

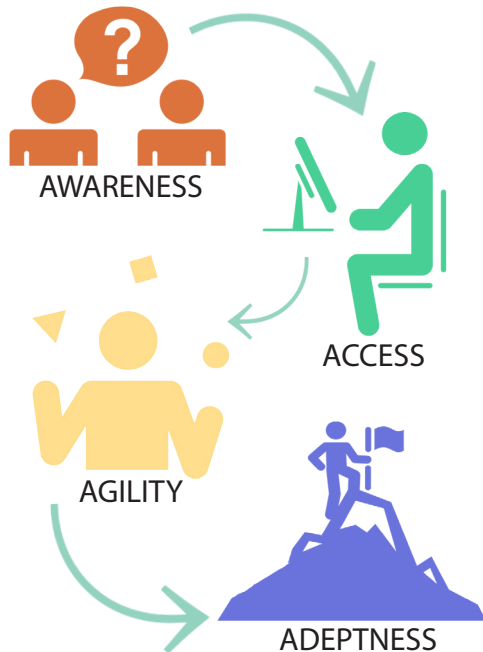
We owe a huge debt of gratitude to more than 600 stakeholders who helped us determine the best way to effect positive change in Minnesota’s workforce and over 300 users who are testing out Wanted Analytics, a real-time data tool. Without the support of these leaders in the private sector, government, higher education, non-profit organizations, and foundations who have devoted their time and resources to Real-Time Talent, we would not be where we are today.

We support Minnesota’s growing economy in the following ways:

- Help employer associations and chambers of commerce to meet the talent needs of local businesses;
- Help academic leaders choose which programs to start, stop, scale up, or scale down to meet the needs of their students and the economy;
- Help academic, nonprofit, and workforce center counselors support students and job seekers in choosing educational investments and securing employment;
- Help government agencies, foundations, and policy makers understand and support the current job market.

We invite you to subscribe to our quarterly newsletters by visiting our website at www.realtimetalentmn.org, where you will find additional reports and resources on Minnesota’s workforce. If you have any questions about the findings presented in this report or have a particular research request, please contact us at:

651-325-4277 or erin.olson@realtimetalentmn.org

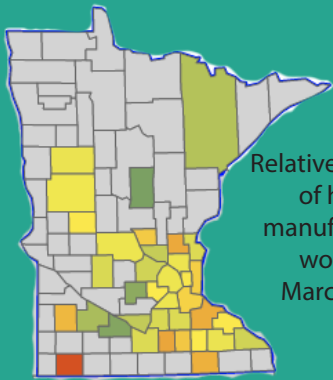


Anticipated 2016 Hiring Needs

Multiple data sources help to estimate the hiring needs of manufacturing companies this year. Based on historic and current real-time data on employer online job postings, we estimate the following number of total openings in 2016:

Manufacturing: 31,517*

CNC Operator:	+13%	1,759*
CNC Programmer:	-25.5%	107*
Machinists:	-0.9%	2,133
Welder/Cutter/ Solderer/Brazer:	+5.5%	1,578



Relative difficulty of hiring manufacturing workers, March 2016

Industrial Maintenance: 1,598*

Industrial Mechanic:	+17%	1,500*
Machine Maintenance Worker:	+18%	62
Millwright:	+2%	35

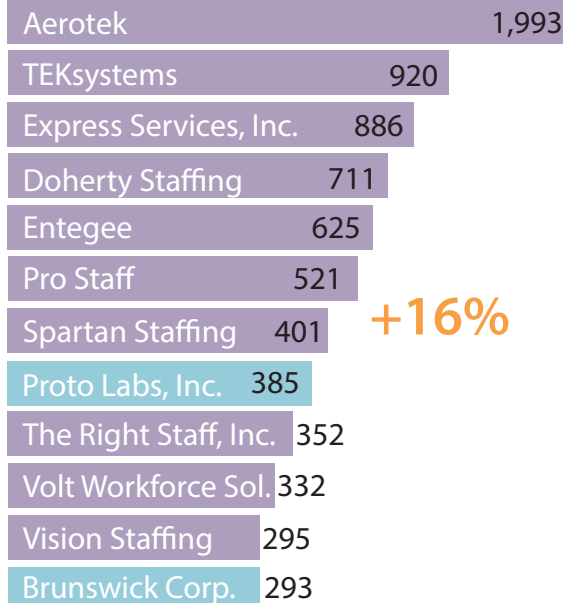
* indicates a strong fit to the regression line.

Manufacturing Jobs in Minnesota, 2015

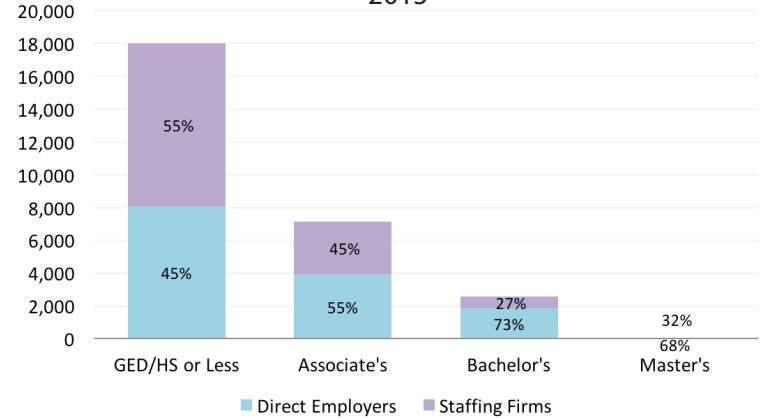
There were a total of **27,772** manufacturing jobs advertised online in Minnesota in 2015, up 16% since 2014. Staffing agencies play a critical role in hiring manufacturing talent, representing all but four of the top 20 largest employers of production technicians in Minnesota in 2015 (see below). Just under 50% of all online manufacturing job postings were offered by staffing agencies.

Overall, jobs posted by staffing firms had lower educational and experience requirements, having a higher number of entry-level electrical and electronic equipment assembler positions than direct employers. Staffing firms also typically keep job postings online for longer periods of time, with the typical manufacturing posting by a staffing firm staying active for 180-365 days.

Top 12 Employers



Manufacturing Job Postings in Minnesota by Education Level, 2015

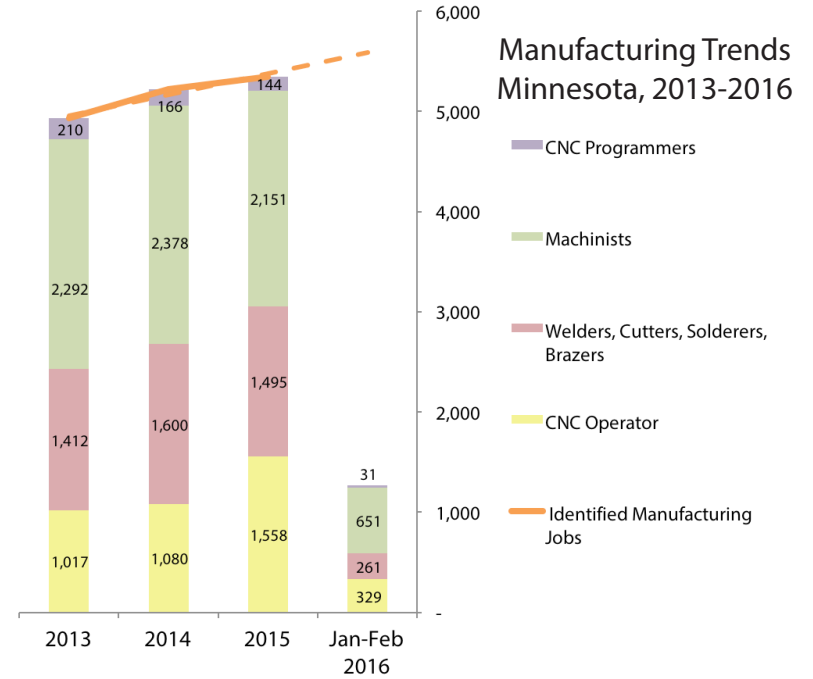
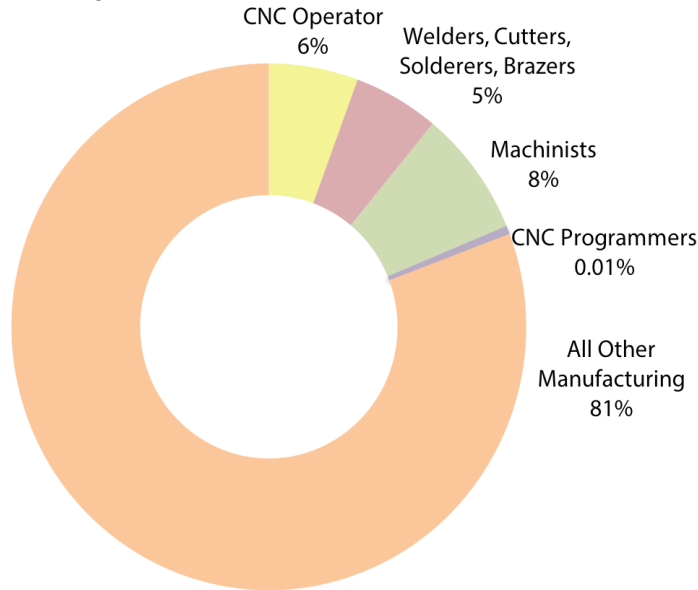


Required Education Levels for Manufacturing Jobs	Direct Employers	Staffing Firms	Total
GED/HS or Less	8,077	9,942	18,019
Associate's	3,925	3,221	7,146
Bachelor's	1,874	684	2,558
Master's	15	7	22
Total	13,908	13,864	27,772

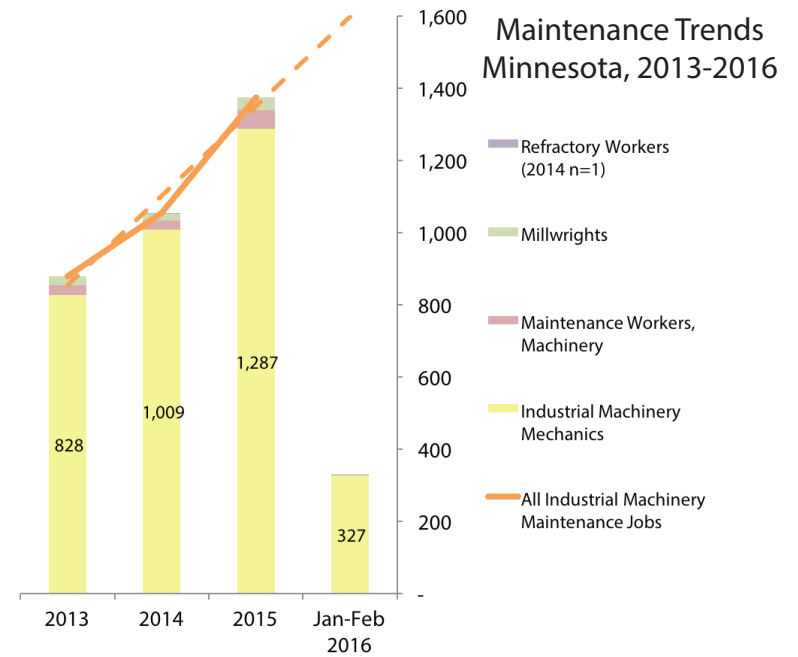
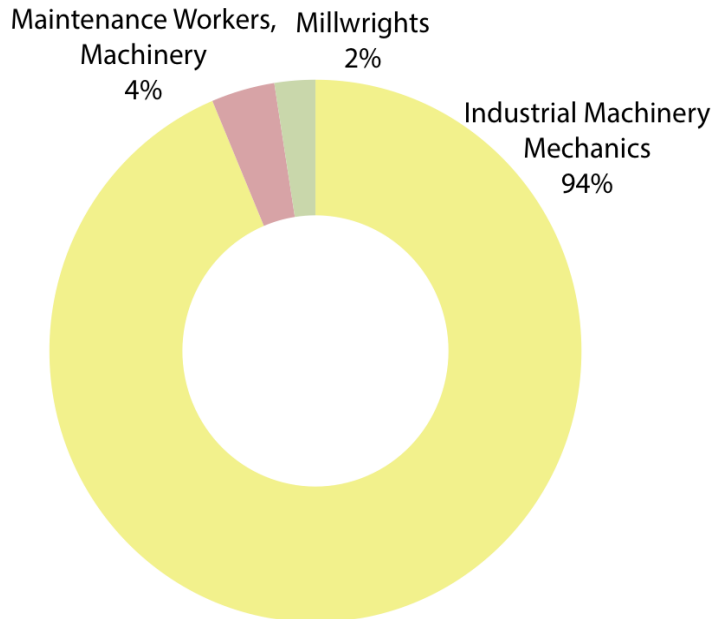
The charts to the right reveal online job posting volume by occupation. Online job postings for manufacturing and industrial maintenance positions in Minnesota have increased steadily since 2013. Early data from 2016 show that employers are continuing this hiring trend. Although DEED projects employer demand for specific manufacturing workers to increase by 1 to 3% over the next year, data extracted from job postings reveal that there may be decreased demand for some specific manufacturing positions. The number of employer postings was down for CNC programmers by 13.3%, for machinists by 9.5%, and for welders, cutters, solderers, and brazers by 6.6% since 2014. There were more job postings for CNC operators and other manufacturing positions. Crow Wing County, McLeod County, and Brown County are relatively easier places to hire manufacturing workers than many other counties in the state. Nobles County in the southeast corner of Minnesota is one of the most difficult counties to fill vacant manufacturing positions.

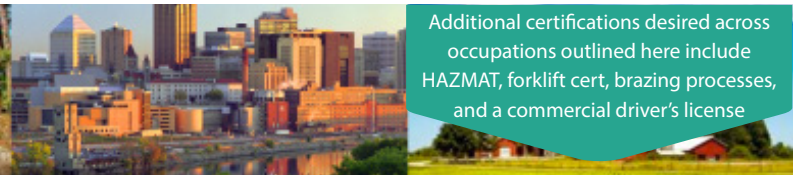
Industry Trends

Manufacturing Occupations Minnesota, 2015



Industrial Maintenance Occupations Minnesota, 2015





Additional certifications desired across occupations outlined here include HAZMAT, forklift cert, brazing processes, and a commercial driver's license

Manufacturing Occupation Profiles

	Job Postings 2015 and Growth from 2014 (WA)	Job Vacancies Q2 2015 and 1-Year Growth (DEED)	Top Employers in 2015 (WA)	Relevant Certifications/Licenses	Top Hard Skills (% postings requiring each skill, WA)	Hiring Demand	Median Salary
Manufacturing Occupations	27,772 +18.4%	-	-	-	-	WA: 35 Candidates / Job Opening	WA: \$40,400
CNC Operators	1,558 +44.3%	1,820 +2.1	1) Aerotek 151 jobs +96.1% 2) Otter Tail Power Company 97 jobs +185.3% 3) TEKsystems 82 jobs +70.8% 4) Proto Labs, Inc. 66 jobs +230% 5) Express Services Inc. 59 jobs +25.5%	ISA Certified Control Systems Tech Machining Level 1 - CNC Milling Machining Level 1 - CNC Turning Material Handling Equipment Cert (WA)	1) CNC Machine Experience, 28% 2) Geometric Dimensioning & Tolerancing 3) Preventative Machine Inspections 4) Work Order 5) Quality Systems	DEED: Above Average WA: 22 Candidates / Job Opening	DEED: \$17.78/hr (2015 Q2) DEED: \$36,980 (FT) WA: \$28,650
CNC Programmers	144 -13.3%	54 +3%	1) Entege 12 jobs +140% 2) Manpower 11 jobs +450% 3) Aerotek 10 jobs -33.3% 4) Avenue Staffing Inc 9 jobs +350% 5) Pro Staff 7 jobs +40%	Certified Welding Engineer Slide forming Level II & III American Society of Mechanical Engineers (WA) Autodesk Certified User (WA)	1) SolidWorks CAD, 21.5% 2) CNC Programming, 21.5% 3) CNC Machine Experience, 20.1% 4) AutoCAD 16% 5) Instrumentation, 11.8%	DEED: Above Average WA: 54 Candidates / Job Opening	DEED: \$15.93/hr (2015 Q2) DEED: \$33,130 (FT) WA: \$49,800
Machinists	2,151 -9.5%	483 +1.9%	1) Aerotek 228 jobs +30.3% 2) Entege 137 jobs -0.7% 3) TEKsystems 118 jobs +55.3% 4) Twin City Staffing 94 jobs +6.8% 5) RTI International 82 jobs -3.5%	Certified Metalworking Fluids Specialist Certified Oil Monitoring Analyst II Fluid Power Engineer / Master Mechanic Level I Machine Lubricant Analyst Material Handling Equipment Cert (WA)	1) CNC Machine Experience, 17.7% 2) Geometric Dimensioning & Tolerancing, 7.4% 3) Precision Machining, 6.2% 4) Shop Math, 6.2% 5) Read Blue Prints	DEED: High WA: 28 Candidates / Job Opening	DEED: \$16.43/hr (2015 Q2) DEED: \$34,170 (FT) WA: \$41,400
Welders, Cutters, Solderers, and Brazers	1,495 -6.6%	311 +1%	1) Aerotek 294 jobs +26.7% 2) TEKsystems 146 jobs +15.9% 3) Express Services Inc 104 jobs +3% 4) Pro Staff 102 jobs -2.9% 5) Kelly Services 88 jobs +1000%	Certified Welder (WA and DEED) Structural Welding Specialist Certified Associate Welding Inspector Material Handling Equipment Cert (WA) Safety Trained Supervisor (WA)	1) Read Blue Prints, 7% 2) Material Handling 3) Quality Control 4) Work Order 5) Spartan	DEED: High WA: 54 Candidates / Job Opening	DEED: \$16.43/hr (2015 Q2) DEED: \$34,170 (FT) WA: \$32,750
Industrial Machinery Maintenance	1,374 +30.5%	-	-	-	-	WA: 45 Candidates / Job Opening	WA: \$41,800
Industrial Machinery Mechanics	1,287 +27.55%	234 +1.1%	1) Aerotek 121 jobs +108.6% 2) TEKsystems 63 jobs +425% 3) CyberCoders 30 jobs +42.9% 4) Diedre Moire Corporation 24 jobs +50% 5) Entege 22 jobs +120%	Certified Lubrication Specialist Certified Maintenance and Reliability Tech Certified Metalworking Fluids Specialist Fluid Power Connector and Conductor Fluid Power Engineer	1) Preventative Maintenance Inspections, 21.8% 2) CNC Machine Experience, 11.3% 3) Machine Maintenance, 7% 4) Electrical Systems, 7% 5) Material Handling	DEED: High WA: 38 Candidates / Job Opening	DEED: \$16.66/hr (2015 Q2) DEED: \$34,650 (FT) WA: \$42,150
Maintenance Workers, Machinery	34 +88.9%	20 +1%	1) Schwan Food Company 16 jobs +145% 2) Doherty Staffing Solutions 2 jobs +100% 3) Alliant Techsystems 2 jobs -50% 4) Duininck Bros Inc 2 jobs +100% 5) Blattner Energy 2 jobs +100%	Building Operators Level II Certified Maintenance and Reliability Tech Fluid Power Connector and Conductor Fluid Power Industrial Hydraulic Mechanic Fluid Power master Mechanic / Technician	1) Preventative Maintenance Inspections, 61.8% 2) Maintenance Repairs, 47% 3) Work Order 4) Hazard Analysis and Critical Control Points 5) Plant Maintenance	DEED: Above Average WA: N/A	DEED: \$19.37/hr (2015 Q2) DEED: \$40,290 (FT) WA: \$36,000
Millwrights	53 +112%	22 +1.3%	1) Tradesmen International 23 jobs +666% 2) TKO Construction Services 11 jobs +1,000% 3) GRUS Construction 4 jobs N/A 4) Volden Construction 3 jobs N/A 5) Honeywell 2 jobs N/A	Fluid Power Connector and Conductor	1) Plant Maintenance 2) Carlson 3) Precision Machining 4) Preventative Maintenance Inspections	DEED: Above Average WA: 360 Candidates / Job Opening	DEED: N/A WA: \$38,000

All job posting data used in this report were pulled on 3/2/2016 from Wanted Analytics (www.wantedanalytics.com) to show specific findings in production technician and industrial maintenance jobs in the state of Minnesota. All online postings spidered from thousands of websites are included in this report, including staffing firms. Percents show change from 2014. Changes in real-time data counts for this time period may occur due to improved access to or cleaning of data, and counts are accurate as of the date pulled. Manufacturing positions span 63 BLS 8-digit codes. The following search definitions were used:

- CNC Operators:** SOC 51-4011
 - CNC Programmers:** SOC 51-4012
 - Machinists:** SOC 51-4040
 - Welders, Cutters, Solderers, and Brazers:** SOC 51-4121
 - Industrial Machinery Mechanics:** SOC 49-9041
 - Maintenance Workers, Machinery:** SOC 49-9043
 - Millwrights:** SOC 49-9044
 - Industrial Machinery Installation, Repair, and Maintenance Workers:** SOC 49-9040
 - Manufacturing:** SOC 51-1000, 51-2000, 51-4000, 51-5100, 51-6060, 51-6090, 51-9010, 51-9020, 51-9030, 51-9040, 51-9110, 51-9121, 51-9140, 51-9191, 51-9192, 51-9193, 51-9195, 51-9196
- DEED median salary and job vacancy data for each occupation is from the Job Vacancy Survey for Quarter 2 of 2015. The Full Time salary is an estimate from the DEED hourly rate, assuming full-time year-round work. Relevant certifications are a combined list from Wanted Analytics (WA) job posting data and DEED Career Profiles.