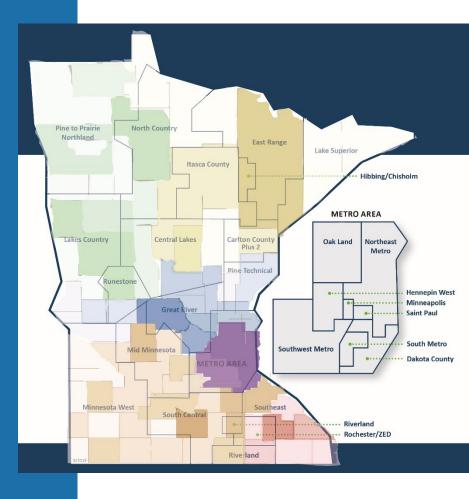
### CAREER & TECHNICAL EDUCATION

### Workforce Trends & Careers of Tomorrow



**RealTime Talent** Erin Olson, Director of Strategic Research October 2021



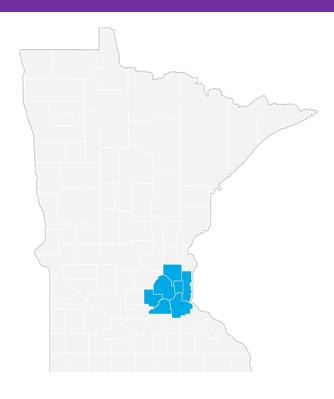
The contents of this publication were made possible through the Strengthening Career and Technical Education for the 21st Century Act (Perkins V) federal grant from the United States Department of Education administered through Minnesota State Colleges and Universities. Who's in the Virtual "Room"

### In the chat field, please share your name, your role, and the organization that you represent.

### CAREER & TECHNICAL EDUCATION

### Workforce Trends & Careers of Tomorrow

MSP Metro Minnesota



**RealTime Talent** Erin Olson, Director of Strategic Research October 2021



### Overview

#### Resident Population of the MSP Metro Elk River 350,253 255,938 544,442 1,245,837 101,949 ≤ 145,275 145,275 to 350,253 421,453 145,275 350,253 to 421,453 421,453 to 544,442 ≥ 544,442 Source: JobsEQ®, ESRI American Community Survey 2015-2019

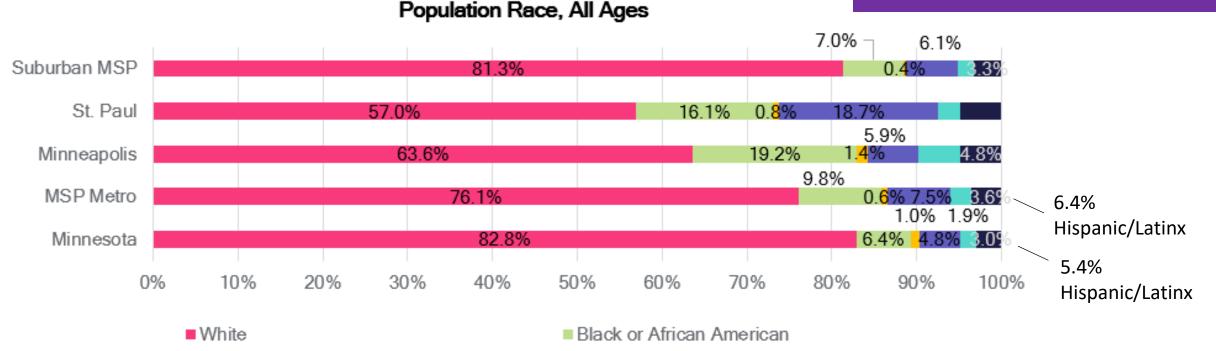
#### MSP Metro Minnesota

- Community Profile
- Workforce Forecast
- Mid-Term Occupational Impacts
- Career Field Insights

#### Access the full report here: http://www.realtimetalent.org



#### MSP Metro Minnesota



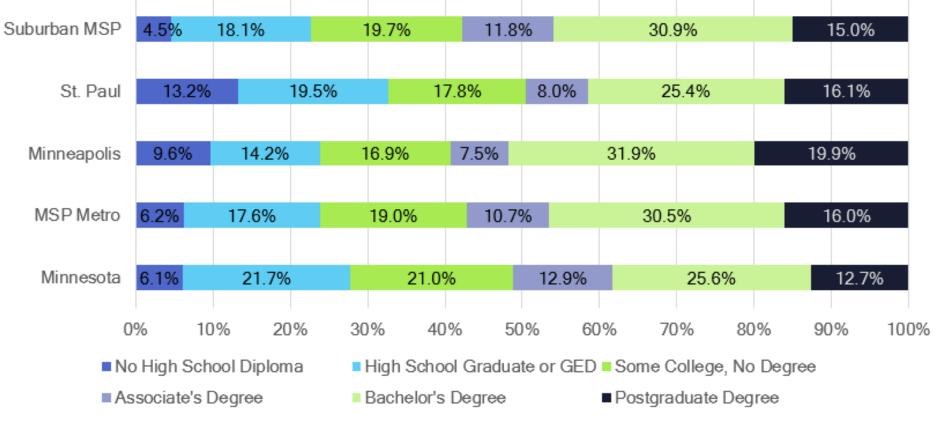
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Some Other Race

Two or More Races

American Community Survey 2015-2019.



#### MSP Metro Minnesota



#### Educational Attainment, Age 25-64

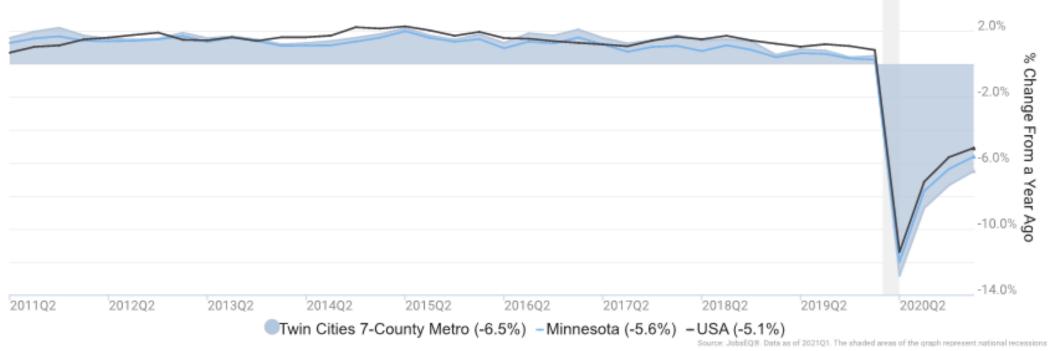
American Community Survey 2015-2019.



6

#### MSP Metro Minnesota

#### Employment for the MSP Metro

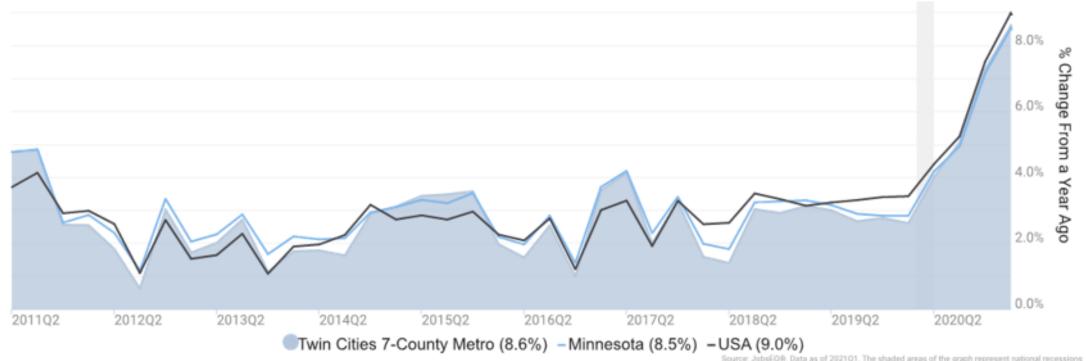


Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2020Q4 with preliminary estimates updated to 2021Q1.



#### MSP Metro Minnesota

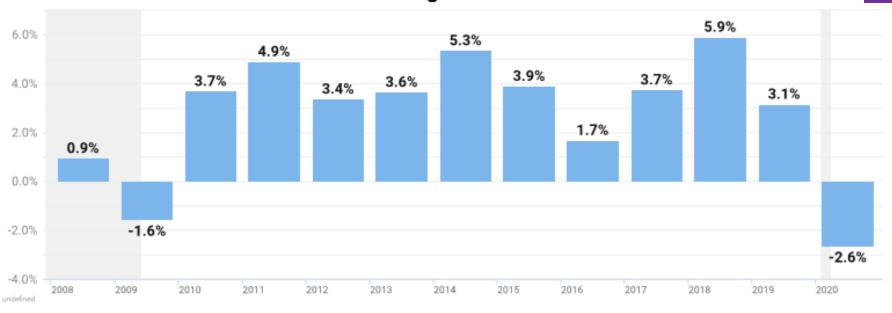




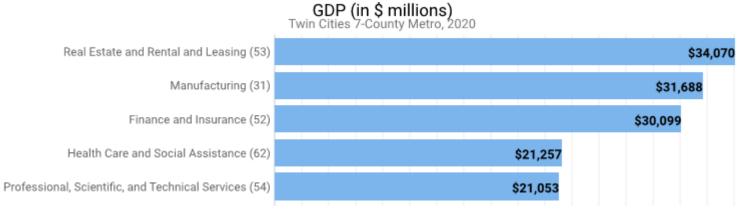
Annual average wages per worker data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2020Q4 with preliminary estimates updated to 2021Q1.



#### One-Year % Change in GDP, MSP Metro



Gross Domestic Product data are provided by the Bureau of Economic Analysis, imputed by Chmura where necessary, updated through 2020.



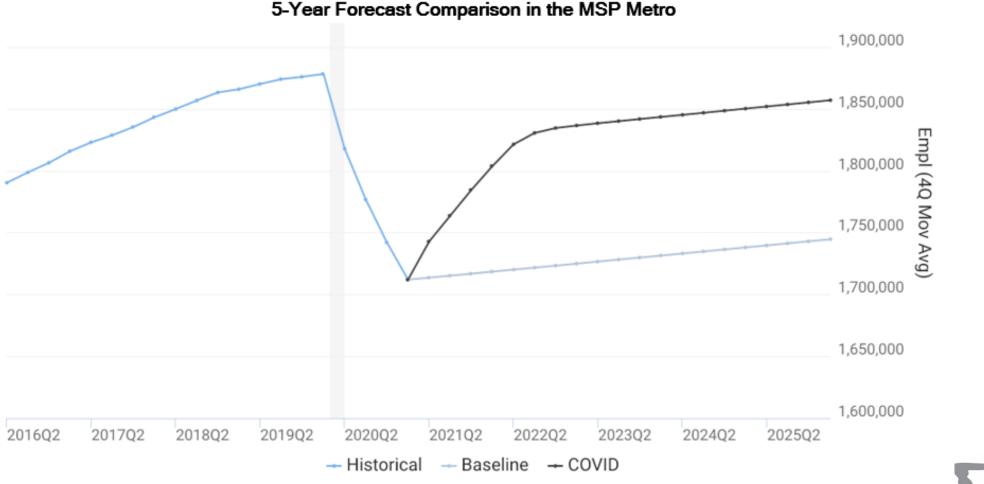
### MSP Metro Minnesota

- Gross Regional Product (GRP) contracted -2.6%
- Real Estate and Leasing contributes most to GRP



### Workforce of Today & Tomorrow *Forecast*

#### MSP Metro Minnesota





10

Source: JobsEQ®,Data as of 2021Q1

### Polling Question

When you think about the current economic situation in your community, which of the following career fields do you feel has the most challenging or pressing workforce needs to be addressed right now? (select up to two)

- 1. Agriculture, Food, and Natural Resources
- 2. Arts, Communications, and Information Systems
- 3. Business, Management, and Administration
- 4. Engineering, Manufacturing, and Technology
- 5. Health Science Technology
- 6. Human Services

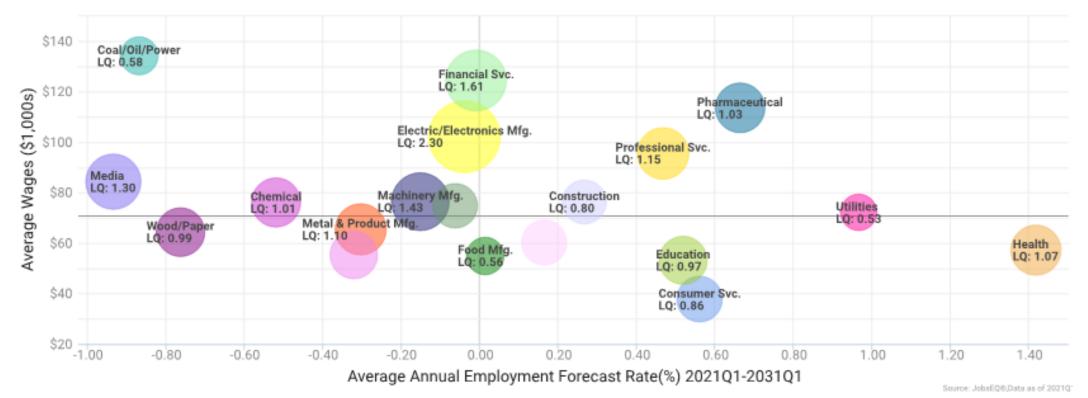
### Polling Question

When you think about your local school, district, or consortium's programming, how well do you feel current program offerings address your community's most challenging or pressing workforce needs right now?

- 1. To a Great Extent
- 2. Somewhat
- 3. Very Little
- 4. Not at all
- 5. I do not know

### Workforce of Today & Tomorrow Forecast

#### MSP Metro Minnesota



#### Industry Clusters for Twin Cities 7-County Metro as of 2021Q1

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### Mid-Term Occupational Impacts High Contact-Intensity Occupations

#### MSP Metro Minnesota

#### **Diverging Mid-Term Impacts (greatest losses and gains)**

- Fast Food and Counter Workers (-18.7%)
- Waiters and Waitresses (-42.6%)
- Passenger Vehicle Drivers (20.6%)
- Bartenders (-42.6%)
- Personal Care Aides (+4.5%)
- Pharmacy Technicians (+0.3%)
- Phlebotomists (+0.4%)

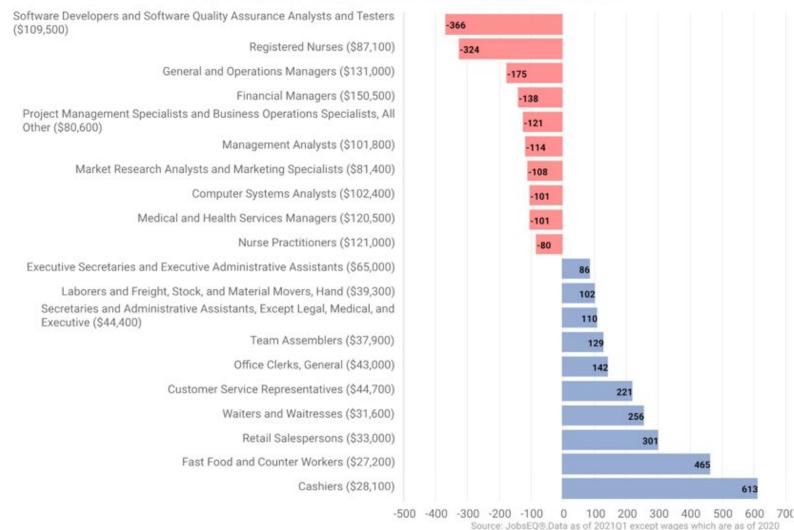
Average unemployment rate of **7.8%** across all high contact-intensity roles.



### Mid-Term Occupational Impacts **Occupation Gaps**

#### Average Annual Occupation Gaps (i.e. Talent Shortage), 2021Q1 through 2031Q1

Potential Average Annual Occupation Gaps over 10 Years in Twin Cities 7-County Metro



#### **MSP** Metro Minnesota

COVID-19 has accelerated talent surplus anticipated in lower-wage, lowereducation positions, particularly:

- 1) high contact-intensity occupations and
- 2) positions that cannot be done remotely.



465

613

### **Emerging Career Paths**

#### MSP Metro Minnesota

#### Top Emerging Occupations in the MSP Metro, March 1-August 31, 2021

- 1. Software Developers, Applications (+10%)
- 2. Heavy and Tractor-Trailer and Truck Drivers (+15%)
- 3. Laborers and Freight, Stock, and Material Movers (+251%)
- 4. Stock Clerks-Stockroom (+86%)
- 5. Personal Care Aides (+108%)

#### Top Emerging Skills in the MSP Metro in Order of Frequency in Job Postings, September 2020 - 2021

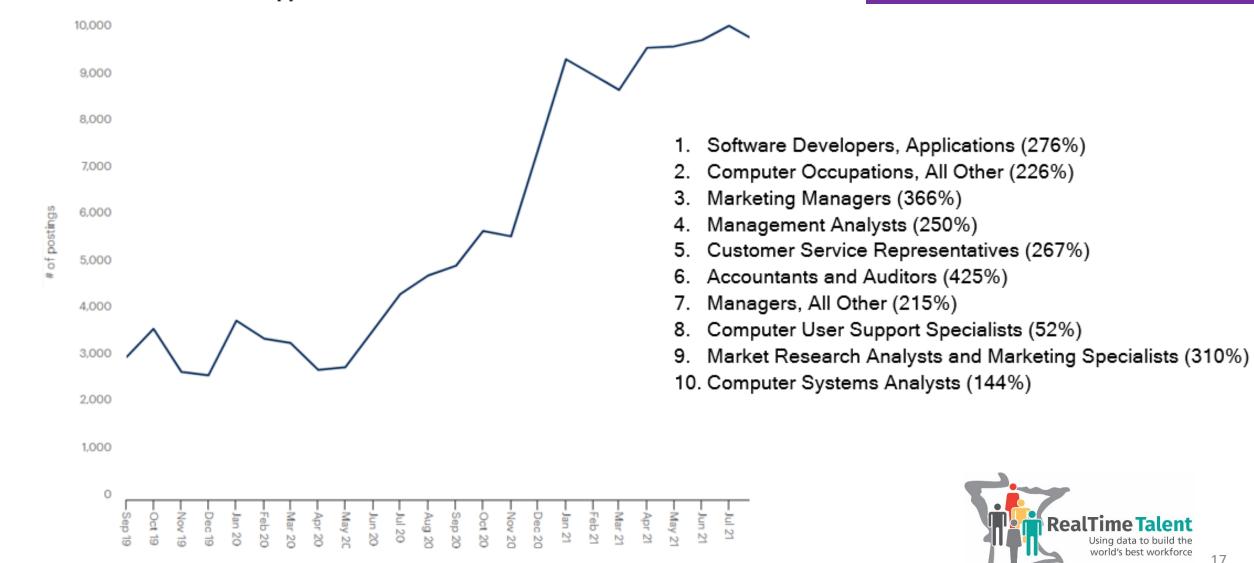
- 1. Supervision (+40%)
- 2. Software Engineering (+40%)
- 3. Product Development (+34%)
- 4. English Language Skills (+33%)
- 5. Software Development (+24%)



### **Emerging Career Paths**

Trends in Remote Work Opportunities Advertised Online, MSP Metro 2021Q1

#### MSP Metro Minnesota



### Shifting Opportunities

#### **MSP** Metro Minnesota

#### Baseline Worst-Case Scenario 10-Year Forecasts by Career Cluster, MSP Metro 2021Q1 10 Year Forecast Growth Rate

Total Employment, Latest Available Data Agriculture, Food & Natural Resources 5.0% Architecture & Construction 3.5% Arts, A/V Technology & Communications -5.2% Business, Management & Administration -1.8% 7.0% Education & Training 1.5% Finance Government & Public Administration 2.7% Health Science 11.1% 6.3% Hospitality & Tourism Human Services 19.5% Information Technology 9.9% 1.7% Law, Public Safety, Corrections & Security -2.3% Manufacturing Marketing, Sales & Service -0.4% Science, Technology, Engineering & Mathematics 5.5% Transportation, Distribution & Logistics 3.8%

Cluster forecasts estimated using Chmura, JobsEQ, based on 2020Q1 employment data. All clusters are distinct occupations except for Agriculture, Food, and Natural Resources, which overlaps with other clusters.

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### Career Field Analysis

#### **Target Occupations**

High wage (above regional average)
High-skill (require some credential)
High-demand (2/4 indicators: under 3% unempl, higher
than average 5-year growth, total 5-year demand >50%
of current empl, high job posting volume)
\*Often also high occupation gap and award gap



#### **Gateway Occupations**

Mid-wage (\$42,000 – regional average) Low-middle skills (HS diploma, some OJT) Sufficient demand (3-5% unemployment and/or high volumes of current opportunities)

#### **Origin Occupations**

Low wage (<\$42,000/year) Low skill (no credential) Low demand (over 5% unemployment, low growth, low replacement demand, and/or low job postings)

### Career Field Analysis

#### **Occupation Characteristics for Consideration**

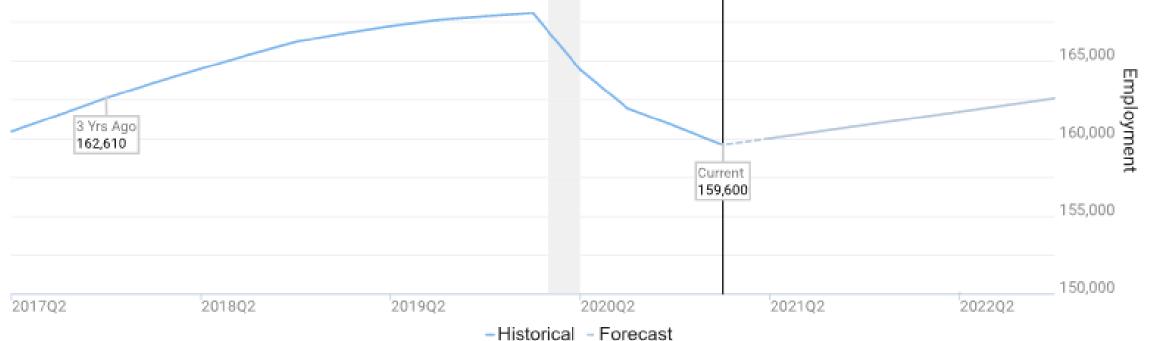
- High-Wage: Paying above the area mean wage
- High-Skill: Requiring some form of credential
- High-Demand: 2/4 of the following requirements met:
  - Low unemployment
  - High volume of job postings in the past 3 months
  - Forecasted growth outpaces average regional forecasted growth
  - Forecasted total demand equal to or greater than 50% of total current employment
- Occupation Gaps
- Award Gaps



### Health Science Technology

#### MSP Metro Minnesota

Baseline Worst-Case Scenario 3-Year Forecast for Health Science Technology Careers, MSP Metro 2021Q1



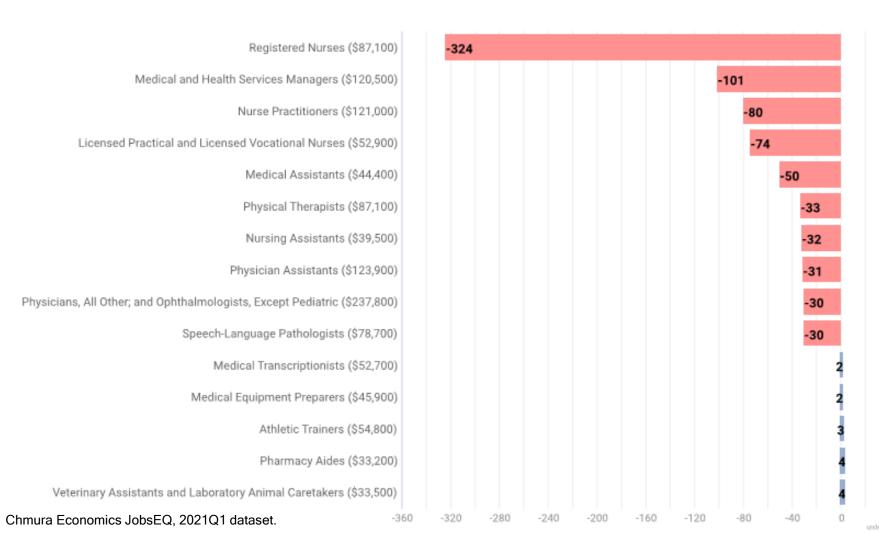
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### Health Science Technology

#### MSP Metro Minnesota

Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Health Science Technology, MSP Metro 2021Q1



#### **Certification Gaps**

Licensed Practical Nurse (LPN) Medical Technologist (Medical Technologists) Certified Nursing Assistant (CNA) Certified Home Health Aide Certified Clinical Medical Assistant (NHA) Pediatric Advanced Life Support (PALS) Trauma Nursing Core Course (TNCC) Registered Dental Assistant (RDA) National Phlebotomy Association Certified Phlebotomist Registered Respiratory Therapist (RRT)



### Health Science Technology

MSP Metro, 2021Q1



# Target Occupations (all HW, HD, HS, OG, AG) Registered Nurses Medical and Health Services Managers Nurse Practitioners Medical Scientists Speech-Language Pathologists Physician Assistants

#### **Gateway Occupations**

Licensed Practical Nurses (HS, OG, AG) Medical Dosimetrists (HS, OG, AG) Medical and Clinical Lab Technologists/Technicians (HS, OG, AG) Veterinary Technologists (HS, HD, OG, AG) Dispensing Opticians (OG, AG)

#### **Origin Occupations**

Likely

Home Health Aides (HD, AG) Personal Care Aides (HD) Nursing Assistants (HS, HD, OG) Pharmacy Technicians (OG, AG) Healthcare Support Workers

#### Aligned

Customer Service Reps Childcare Workers Secretaries Cashiers Cooks

### Health Science Technology

#### MSP Metro Minnesota

#### Top Ten Target Occupations in Health Science Technology, MSP 2021Q1

SOC	Occupation	2021Q1 Empl	Mean Ann Wages <sup>2</sup>	High- Wage	High-Skill	High- Demand	OG	AG
29-1141	Registered Nurses	36,626	\$87,100	HW	HS	HD	OG	AG
11-9111	Medical and Health Services Managers	4,831	\$120,500	HW	HS	HD	OG	AG
29-1171	Nurse Practitioners	2,282	\$121,000	HW	HS	HD	OG	AG
19-1042	Medical Scientists, Except Epidemiologists	1,732	\$99.500	HW	HS	HD	OG	AG
29-1127	Speech-Language Pathologists	1,543	\$78,700	HW	HS	HD	OG	AG
29-1071	Physician Assistants	1,353	\$123,900	HW	HS	HD	OG	AG
29-1126	Respiratory Therapists	1,236	\$72,100	HW	HS	HD	OG	AG
29-1131	Veterinarians	999	\$94,500	HW	HS	HD	OG	
29-2091	Orthotists and Prosthetists	160	\$89,300	HW	HS	HD	OG	
29-1081	Podiatrists	88	\$158,600	HW	HS	HD		AG



### Human Services

Baseline Worst-Case Scenario 3-Year Forecast for Human Services Careers, MSP Metro 2021Q1

285,957 285,957 2017Q2 2018Q2 2019Q2 202Q2 202Q2 202Q2 202Q2

-Historical - Forecast

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275,000

265.000

#### MSP Metro Minnesota

### Human Services

#### Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Human Services, MSP Metro 2021Q1

		-66	Substance Abuse, Behavioral Disorder, and Mental Health Counselors (\$55,600)
		-59	Secondary School Teachers, Except Special and Career/Technical Education (\$67,800)
	-44		Child, Family, and School Social Workers (\$60,400)
	-44		Lawyers (\$137,000)
	-38		Social and Community Service Managers (\$82,700)
	-32		Police and Sheriff's Patrol Officers (\$82,700)
	-30		Health Specialties Teachers, Postsecondary (\$130,000)
	-27		Compliance Officers (\$87,600)
	-26		Self-Enrichment Teachers (\$43,600)
6	-25		rst-Line Supervisors of Personal Service and Entertainment and Recreation Workers, Except Gambling Services
			48,200) Laundry and Dry-Cleaning Workers (\$30,300)
			Residential Advisors (\$42,900)
			Paralegals and Legal Assistants (\$61,500)
			Exercise Trainers and Group Fitness Instructors (\$49,100)
			Hairdressers, Hairstylists, and Cosmetologists (\$34,600)
			Security Guards (\$39,400)
			Legal Secretaries and Administrative Assistants (\$59,500)
			Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers (\$26,500)
			School Bus Monitors and Protective Service Workers, All Other (\$40,200)
			Childcare Workers (\$30,200)
	-40 -20	-60	-80

#### Certification Gaps AED Essentials Basic Life Support (BLS) Secret Clearance AFAA Personal Fitness Trainer Licensed Professional Counselor (LPC) Certified Protection Professional (CPP) Certified Diabetes Educator (CDE)

Certified Alcohol and Drug Counselor (ADC) Regulatory Affairs Certification - US (RAC)

Registered Professional Reporter (RPR)

19

20

53

-60

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40



### Human Services

MSP Metro, 2021Q1

Target Occupations (all HW, HD, HS) Middle School Teachers (OG, AG) Guidance Counselors and Career Advisors (OG, AG) Social and Community Service Managers (OG, AG) Instructional Coordinators (OG) School Psychologists (OG, AG) Education Administrators (OG, AG)

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#### **Gateway Occupations**

Social and Human Service Assistants(HS, HD) Preschool Teachers (HD, OG, AG) Self-Enrichment Teachers (HD, OG, AG) Child, Family, and School Social Workers (HS, HD, OG, AG) Substance Abuse, Behavioral Disorder, and Mental Health Counselors (HS, HD, OG, AG)

#### **Origin Occupations**

#### Likely

Home Health Aides (HD, AG) Personal Care Aides (HD) Teaching Assistants (HS, HD, AG) Childcare Workers(HD, AG) Security Guards (HD, AG) Aligned Tellers Retail Sales Workers Secretaries Cashiers Cooks

### Human Services

#### MSP Metro Minnesota

Top Ten Target Occupations in Human Services, MSP 2021Q1									
SOC	Occupation	2021Q1 Empl	Mean Ann Wages <sup>2</sup>	High- Wage	High-Skill	High- Demand	OG	AG	
25-2022	Middle School Teachers, Except Special and Career/Technical Education	5,000	\$65,500	HW	HS	HD	OG	AG	
21-1012	Educational, Guidance, and Career Counselors and Advisors	2,843	\$63,700	HW	HS	HD	OG	AG	
11-9151	Social and Community Service Managers	2,730	\$82,700	HW	HS	HD	OG	AG	
25-9031	Instructional Coordinators	2,279	\$78,800	HW	HS	HD	OG		
19-3031	Clinical, Counseling, and School Psychologists	2,164	\$86,400	HW	HS	HD	OG	AG	
25-1071	Health Specialties Teachers, Postsecondary	2,116	\$130,000	HW	HS	HD	OG		
11-9032	Education Administrators, Kindergarten through Secondary	2,057	\$119,300	HW	HS	HD	OG	AG	
21-2021	Directors, Religious Activities and Education	1,681	\$76,300	HW	HS	HD			
21-1023	Mental Health and Substance Abuse Social Workers	1,486	\$66,000	HW	HS	HD	OG	AG	
13-2061	Financial Examiners	1,315	\$95,500	HW	HS	HD	OG		

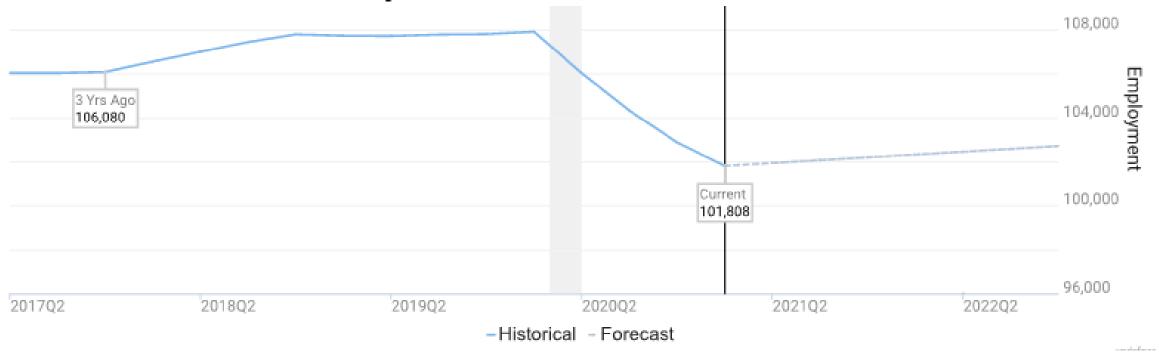


### Arts, Communications, & Information Systems

#### MSP Metro Minnesota

Baseline Worst-Case Scenario 3-Year Forecast for Arts, Communications, and Information

Systems Careers, MSP Metro 2021Q1

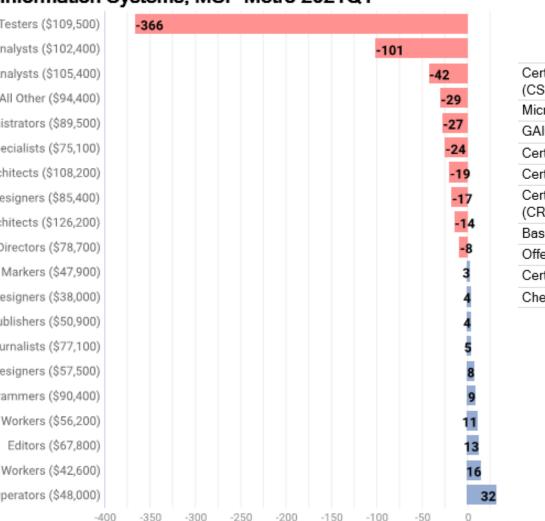




### Arts, Communications, & Information Systems

Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Arts, Communications. And Information Systems, MSP Metro 2021Q1

Software Developers and Software Quality Assurance Analysts and Testers (\$109,500) Computer Systems Analysts (\$102,400) Information Security Analysts (\$105,400) Computer Occupations, All Other (\$94,400) Network and Computer Systems Administrators (\$89,500) Computer Network Support Specialists (\$75,100) Database Administrators and Architects (\$108,200) Web Developers and Digital Interface Designers (\$85,400) Computer Network Architects (\$126,200) Producers and Directors (\$78,700) Proofreaders and Copy Markers (\$47,900) Floral Designers (\$38,000) Desktop Publishers (\$50,900) News Analysts, Reporters, and Journalists (\$77,100) Graphic Designers (\$57,500) Computer Programmers (\$90,400) Prepress Technicians and Workers (\$56,200) Editors (\$67,800) Print Binding and Finishing Workers (\$42,600) Printing Press Operators (\$48,000)



#### MSP Metro Minnesota

#### **Certification Gaps**

М	icrosoft Office Specialist (MOS)
G	AIC Reverse Engineering Malware (GREM)
С	ertified Information Systems Auditor (CISA)
С	ertified Scrum Product Owner (CSPO)
	ertification in Risk and Information Systems Contro CRISC)
B	asic Life Support (BLS)
0	ffensive Security Certified Professional (OSCP)
С	ertified Internal Auditor (CIA)
0	heck Point Certified Security Administrator (CCSA



Chmura Economics JobsEQ, 2021Q1 dataset.

Arts, Comm Information MSP Metro, 2021Q1	nunications, 8 n Systems	<b>Target Occupations</b> (all HW, HD, HS, OG, AG) Software Developers Network and Computer Systems Administrators Information Security Analysts Producers and Directors Special Effects Artists and Animators		
Real Time Talent Using data to build the world's best workforce	Photographer Computer Use	Operators cations Equipment Installers and Repairers		
Origin Occupations	Likely Actors (HS, HD, AG) Models Floral Designers Print Binding and Finishing Entertainers and Performe			

### Arts, Communications, & Information Systems

#### MSP Metro Minnesota

#### Top Ten Target Occupations in Arts, Communications, and Information Systems, MSP 2021Q1

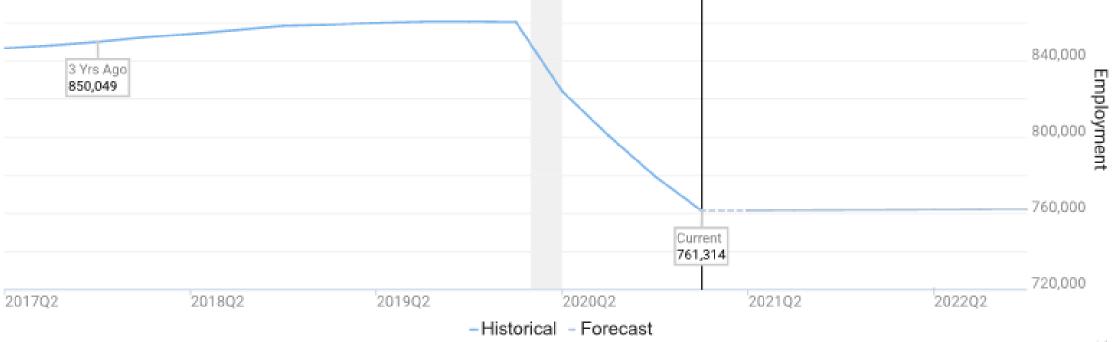
soc	Occupation	2021Q1 Empl	Mean Ann Wages <sup>2</sup>	High- Wage	High-Skill	High- Demand	OG	AG
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	24,552	\$109,500	HW	HS	HD	OG	AG
15-1244	Network and Computer Systems Administrators	4.777	\$89,500	HW	HS	HD	OG	AG
15-1212	Information Security Analysts	2,070	\$105,400	HW	HS	HD	OG	AG
27-2012	Producers and Directors	1,234	\$78,700	HW	HS	HD	OG	AG
27-1014	Special Effects Artists and Animators	744	\$68,000	HW	HS	HD	OG	AG
27-1021	Commercial and Industrial Designers	526	\$80,000	HW	HS	HD		AG
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	288	\$71,600	HW	HS	HD	OG	AG
27-1022	Fashion Designers	256	\$75,200	HW	HS	HD		
27-4032	Film and Video Editors	253	\$75,900	HW	HS	HD	OG	AG
13-1011	Agents and Business Managers of Artists, Performers, and Athletes	115	\$64,800	HW	HS	HD		AG



# Business, Management, & Administration

#### MSP Metro Minnesota

#### Baseline Worst-Case Scenario 3-Year Forecast for Business, Management, and Administration Careers, MSP Metro 2021Q1



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### Business, Management, & Administration

Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Business, Management, and Administration, MSP Metro 2021Q1

	—
-175	General and Operations Managers (\$131,000)
-13	Financial Managers (\$150,500)
-13	Project Management Specialists and Business Operations Specialists, All Other (\$80,600)
-1	Management Analysts (\$101,800)
-1	Market Research Analysts and Marketing Specialists (\$81,400)
	Accountants and Auditors (\$78,500)
	Computer and Information Systems Managers (\$156,700)
	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All
0,500)       -13         0,600)       -11         ,800)       -1         ,400)       -1         ,500)       -1         ,500)       -1         ,500)       -1         ,500)       -1         ,500)       -1         ,700)       -1         ,500)       -1         ,700)       -1         ,500)       -1         ,700)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,000)       -1         ,200)       -1	Other (\$134,900) Human Resources Specialists (\$73,300)
	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other (\$95,400)
	Bookkeeping, Accounting, and Auditing Clerks (\$48,000)
	Stockers and Order Fillers (\$34,500)
	Executive Secretaries and Executive Administrative Assistants (\$65,000)
	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive (\$44,400)
	Office Clerks, General (\$43,000)
	Customer Service Representatives (\$44,700)
	Waiters and Waitresses (\$31,600)
	Retail Salespersons (\$33,000)
	Fast Food and Counter Workers (\$27,200)
	Oct-History (A00,100)

Cashiers (\$28,100)

-138 -121 -114 -108 -75 -66

-48

-44 40

> 79 80

> > 110

-100

142

100

221

256

301

300

465

613

500

#### **MSP** Metro Minnesota

#### **Certification Gaps**

AED Essentials
Certified Internal Auditor (CIA)
Certified Information Systems Auditor (CISA)
Chartered Property Casualty Underwriter (CPCU)
Adult CPR
Certified Public Accountant (CPA)
First Aid Certification
Certified Personal Trainer (CPT)
Certified Facility Manager (CFM)
Six Sigma Green Belt Certification (SSGB)



Chmura Economics JobsEQ, 2021Q1 dataset.

### Business, Management, & Administration

MSP Metro, 2021Q1

**Target Occupations** (all HW, HD, HS, OG, AG) Project Management Specialists Accountants and Auditors Management Analysts Market Research Analysts and Marketing Specialists Financial Managers



#### **Gateway Occupations**

Customer Service Representatives (HD, AG) Office Clerks, General (HD) Secretaries and Administrative Assistants (HD, AG) Bookkeeping, Accounting, and Auditing Clerks (HS, HD, AG) Supervisors of Retail Workers (HD) Shipping, Receiving, and Inventory Clerks (AG)

#### **Origin Occupations**

Likely

Retail Salespersons (HD) Fast Food and Counter Workers (HD) Cashiers (HD) Janitors and Cleaners (HD) Stockers and Order Fillers (HD)

#### Aligned

Library Technicians Eligibility Interviewers Childcare Workers

# Business, Management, & Administration

#### MSP Metro Minnesota

#### Top Ten Target Occupations in Business, Management, and Administration, MSP 2021Q1

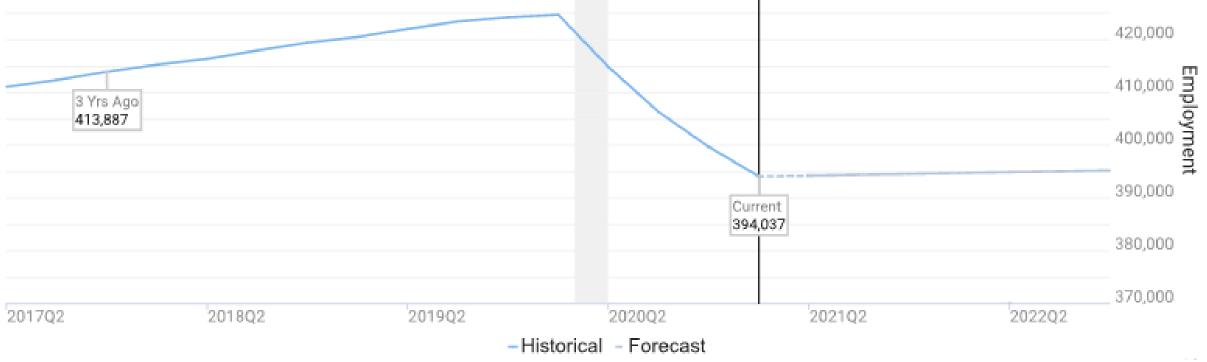
SOC	Occupation	2021Q1 Empl	Mean Ann Wages <sup>2</sup>	High- Wage	High-Skill	High- Demand	OG	AG
13-1198	Project Management Specialists and Business Operations Specialists, All Other	21,004	\$80,600	HW	HS	HD	OG	
13-2011	Accountants and Auditors	17,873	\$78,500	HW	HS	HD	OG	AG
13-1111	Management Analysts	13,861	\$101.800	HW	HS	HD	OG	AG
13-1161	Market Research Analysts and Marketing Specialists	12,042	\$81,400	HW	HS	HD	OG	AG
11-3031	Financial Managers	11,042	\$150,500	HW	HS	HD	OG	AG
13-1071	Human Resources Specialists	8,950	\$73,300	HW	HS	HD	OG	
13-2098	Financial and Investment Analysts, Financial Risk Specialists, and Financial Specialists, All Other	7,815	\$95.400	HW	HS	HD	OG	AG
11-2022	Sales Managers	6,727	\$142,900	HW	HS	HD	OG	AG
11-2021	Marketing Managers	5,728	\$154,900	HW	HS	HD	OG	AG
27-3031	Public Relations Specialists	3,909	\$70,600	HW	HS	HD	OG	AG



# Engineering, Manufacturing, & Technology

#### MSP Metro Minnesota

Baseline Worst-Case Scenario 3-Year Forecast for Engineering, Manufacturing, and Technology Careers, MSP Metro 2021Q1





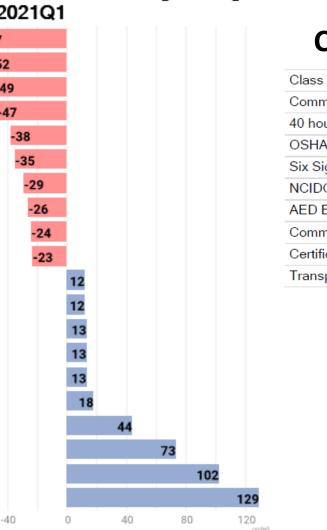
# Engineering, Manufacturing, & Technology

#### MSP Metro Minnesota

#### **Certification Gaps**

Class A Commercial Driver's License (CDL-A)
Commercial Driver's License (CDL)
40 hour HAZWOPER
OSHA 10
Six Sigma Green Belt Certification (SSGB)
NCIDQ Certification
AED Essentials
Commercial Mechanical Inspector (CMI)
Certified Welder
Transportation Worker Identification Credential (TWIC)





#### Manufacturing, and Technology, MSP Metro 2021Q1 Industrial Engineers (\$98,300) -57 Maintenance and Repair Workers, General (\$52,400) -52 Construction Managers (\$101,300) -49 Industrial Machinery Mechanics (\$64,500) -47 Carpenters (\$59,300) Heavy and Tractor-Trailer Truck Drivers (\$54,100) Electricians (\$75,400) Mechanical Engineers (\$92,800) First-Line Supervisors of Construction Trades and Extraction Workers (\$82,900) First-Line Supervisors of Mechanics, Installers, and Repairers (\$77,500) Helpers-Production Workers (\$35,700) Automotive and Watercraft Service Attendants (\$30,100) Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic (\$44,200) Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic (\$38,900) Cleaners of Vehicles and Equipment (\$30,600) Assemblers and Fabricators, All Other (\$37,700) Packers and Packagers, Hand (\$30,600) Inspectors, Testers, Sorters, Samplers, and Weighers (\$48,500) Laborers and Freight, Stock, and Material Movers, Hand (\$39,300) Team Assemblers (\$37,900)

-80

Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Engineering,

Chmura Economics JobsEQ, 2021Q1 dataset.

Engineering, Manufacturi Technology MSP Metro, 2021Q1		<ul> <li>Target Occupations (all HW, HD, HS)</li> <li>Industrial Engineers (OG, AG)</li> <li>Architectural and Engineering Managers (OG)</li> <li>Logisticians (OG)</li> <li>Cost Estimators (OG, AG)</li> <li>Aircraft Mechanics and Service Technicians (OG, AG)</li> <li>Environmental Scientists and Specialists (OG, AG)</li> </ul>			
Vising data to build the world's best workforce	Gateway Occupations Heavy and Tractor Trailer Drivers (HS, HD, OG, AG) Maintenance and Repair Workers, General (HD, OG) Carpenters (OG, AG) Construction Laborers Automotive Service Technicians and Mechanics (HS, AG) Supervisors of Production and Operating Workers (HW, HD, OG)				
Origin Occupations	Likely Laborers and Freight, Stock Team Assemblers Landscaping and Groundsk Light Truck Drivers (HD, AG Passenger Vehicle Drivers (	eeping Workers (HD) )	<ul> <li>Aligned</li> <li>Parking Lot Attendants</li> <li>Retail Sales Workers</li> <li>Stockers and Order Fillers</li> <li>Janitors and Cleaners</li> <li>Personal Services Managers</li> </ul>		

# Engineering, Manufacturing, & Technology

#### MSP Metro Minnesota

Top Ten Target Occupations in Engineering, Manufacturing, and Technology, MSP 2021Q1

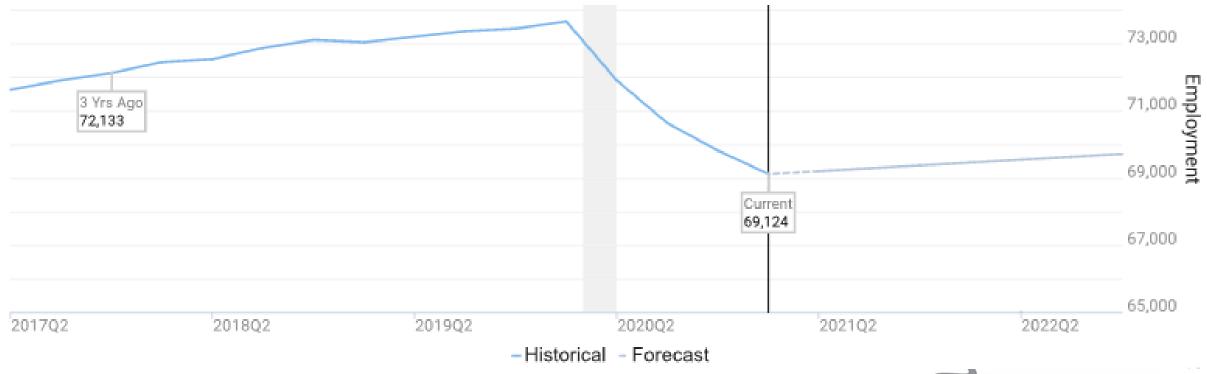
SOC	Occupation	2021Q1 Empl	Mean Ann Wages <sup>2</sup>	High- Wage	High-Skill	High- Demand	OG	AG
17-2112	Industrial Engineers	6,190	\$98,300	нw	HS	HD	OG	AG
11-9041	Architectural and Engineering Managers	2,847	\$158,900	нw	HS	HD	OG	
13-1081	Logisticians	2,355	\$80,400	HW	HS	HD	OG	
13-1051	Cost Estimators	2,265	\$73,900	HW	HS	HD	OG	AG
49-3011	Aircraft Mechanics and Service Technicians	1,455	\$82,900	нw	HS	HD	OG	AG
19-2041	Environmental Scientists and Specialists, Including Health	1,199	\$82,000	нw	HS	HD	OG	AG
15-2098	Data Scientists and Mathematical Science Occupations, All Other	865	\$98,800	нw	HS	HD	OG	
15-2041	Statisticians	598	\$90,200	HW	HS	HD	OG	
51-9162	Computer Numerically Controlled Tool Programmers	566	\$69,200	HW	HS	HD	OG	



#### Agriculture, Food, & Natural Resources

#### MSP Metro Minnesota

#### Baseline Worst-Case Scenario 3-Year Forecast for Agriculture, Food, and Natural Resources Careers, MSP Metro 2021Q1





#### MSP Metro Minnesota

### Agriculture, Food, & Natural Resources

#### Annual Average Occupation Gaps (i.e. Talent Shortages) for the next 10 Years in Agriculture, Food, and Natural Resources, MSP Metro 2021Q1

-8

-6

-6

-5

2 2

2

3

3

10

5

15 updeficed







(\$62,400)

A						
Agriculture, Food, & Natural Resources		<b>Target Occupations</b> (all HW, HD, HS) Aircraft Mechanics and Service Technicians (OG, AG)				
						Environmental Scientis
				Veterinarians (OG)		
MSP Metro, 2021Q1		<b>Environmental Engine</b>	Environmental Engineers (OG, AG)			
		Surveyors (OG, AG)				
		Urban and Regional Planners (OG)				
	<b>Gateway Occupations</b>					
RealTime Talent	Telecommuni	Telecommunications Equipment Installers and Repairers (HS, AG)				
Using data to build the world's best workforce	Farmers, Rand	Farmers, Ranchers, and Other Agricultural Managers (HW, HD, OG)				
		f Groundskeeping Worke	- · · · · · ·			
		Butchers and Meat Cutters				
		Refuse and Recyclable Material Collectors- (AG)				
		Treatment Plant and System Operators (HW, HD, AG)				
Origin Occupations		fileatifient Flant and Sys				
Origin Occupations	Likely		Aligned			
	Landscaping and Grounds		Compliance Officers			
	Animal Caretakers (HD, AG	)	Laborers and Freight Movers			
	Bakers (HD, AG)		Stockers and Order Fillers			
	Veterinary Techs HS, HD, O	G, AG)	Cooks			
	Farmworkers and Laborers	(AG)	Customer Service Reps			

#### Agriculture, Food, & Natural Resources

#### MSP Metro Minnesota

#### Top Ten Target Occupations in Engineering, Manufacturing, and Technology, MSP 2021Q1

SOC	Occupation	2021Q1 Empl	Mean Ann Wages <sup>2</sup>	High- Wage	High-Skill	High- Demand	OG	AG
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51-9162	Computer Numerically Controlled Tool Programmers	566	\$69,200	HW	HS	HD	OG	



## Summary and Discussion

## What piece of the data surprised, inspired, validated, or challenged you?

From your perspective, what are the most important considerations in these data for Career and Technical Education programs?

## What is one barrier that you can help remove for BIPOC students?

# What additional information will you seek out next?

## What changes or evaluations to your program will you prioritize next as a result of this data?

#### Thank you!

If you have questions about this report, please contact: Erin Olson, Director of Strategic Research, <u>erin@realtimetalentmn.org</u>



#### Appendix

