BIOSCIENCE
From Occupations to Skills
DATA SUMMARY

The Greater Fargo Moorhead Economic Development Corporation, in partnership with Lightcast, is proud to present this workforce report—a collaborative effort to assess and strengthen the region's economic vitality and talent readiness. As our region experiences rapid growth and investment, we face both significant opportunity and an urgent need to align workforce capabilities with business demands.

Key sectors such as manufacturing, bioscience, and ag-tech are expanding, yet employers continue to grapple with talent shortages. Our analysis of current labor market data highlights critical skills gaps—from technical and digital proficiencies to soft skills like communication and adaptability. Preparing our workforce for both today's roles and the jobs of tomorrow is essential.

To address these challenges, we are introducing the Promising Practices Toolkit—a set of actionable, evidence-based strategies that include proven training models, successful employer-education partnerships, inclusive hiring practices, and data-driven planning tools for stakeholders.
We invite you to engage with these insights and resources as we work together to build a more adaptive, inclusive, and globally competitive workforce for the Fargo-Moorhead region.

Joe Raso
President & CEO
GFMEDC

Josh Wright
Head of Growth
Lightcast

While the primary objective of this summit is to address the workforce needs of industry, it is essential to acknowledge a set of interconnected factors that significantly impact workforce participation, development, and sustainability.

ADJACENT FACTORS

- Affordable & Available Housing Supply
- Childcare Availability & Affordability
- Livable Wage & Economic Mobility

PERSISTENT WORKFORCE CHALLENGES

- Lack of Clear Career Pathways
- Foundational Skill Gaps
- Soft Skill Deficits

HUMAN AIDED WORK

- Artificial Intelligence
- Automation

Though not the primary focus, factors like housing, childcare, and wages directly affect workforce participation and stability. With this in mind, we now turn to workforce demand—over 47,000 job postings in the past year highlight the pressing need to align talent with industry needs.

Current State of Affairs: FM MSA Job Postings

Over the last year, our region has seen a wide array of open positions across different industries. From May 2024 to April 2025, there were 47,000 unique job postings in the FM MSA across all industry sectors. Over 3,500 employers competed for talent during this time.

May 2024 - Apr 2025

Sample of Top Industries

	Unique Postings
Health Care and Social Assistance	8,805
Administrative and Support and Waste Management	6,354
Retail Trade	4,704
Manufacturing	2,404
Wholesale Trade	2,390
Construction	2,149
Accommodation and Food Services	2,072
Professional, Scientific, and Technical Services	1,995
Finance and Insurance	1,581
Educational Services	1,517
Public Administration	1,048
Transportation and Warehousing	999
Other Services (except Public Administration)	894
Real Estate and Rental and Leasing	879

Less than half (48%) of the job postings in the last year listed any education requirement.

About 1 in 4 (23%) asked for an **Associates or Bachelor's Degree.**

Staffing Patterns Now and Through 2031

Sample of Top Occupations	Employed in Industry (2025)	Employed in Industry (2031)	Change (2025-2031)	% Change (2025-2031)
Healthcare Practitioners and Technical Occupations	11,758	12,789	1,031	9%
Healthcare Support Occupations	8,197	8,898	702	9%
Personal Care and Service Occupations	5,845	6,092	246	4%
Architecture and Engineering Occupations	2,297	2,500	203	9%
Life, Physical and Social Science Occupations	1,472	1,569	96	7%

Expected growth amongst all occupations is greater than 7,200 new positions.

Bioscience
Education, Experience and Qualifications

Over 350 unique job postings in Bioscience industries was posted in the last year (May 2024-Apr 2025) in the FM MSA. Over 50 employers competed for talent across the metro.

In the past year, over **20% of job postings in the Bioscience sector did not specify any formal education requirement**, while just over 25% requested a minimum of a high school diploma or GED.

Education Level	Unique Postings	% of Total
No Education Listed	75	21%
High school or GED	97	27%
Associate's degree	30	8%
Bachelor's degree	188	53%
Master's degree	50	14%
Ph.D. or professional degree	26	7%

*This includes any mention of an education level and may total more than 100%.

Additionally, **over 40% of all postings in these fields did not list any prior work experience as a requirement**, indicating a significant number of entry-level opportunities within the sector.

Minimum Experience	Unique Postings	% of Total
No Experience Listed	145	41%
0 - 1 Years	44	12%
2 - 3 Years	75	21%
4 - 6 Years	48	13%
7 - 9 Years	27	8%
10+ Years	17	5%

Specialized skills requested in job postings:

Good Manufacturing Practices 21%

Pharmaceuticals 18%

Marketing 14%

Selling Techniques 12%

Biology 11%

Qualification	Postings with Qualification
Valid Driver's License	75
Registered Nurse	16
Master of Business Administration	7
Nurse Practitioner	6
American Society for Quality Certified	5

Bioscience: Pipeline Gap

Evaluating a potential talent surplus or shortage involves considering multiple variables. Key factors such as an occupation's share of total industry employment, the average number of annual job openings, median hourly wages, and projected employment changes provide a comprehensive framework for assessing workforce alignment. For reference, there are 1,300 people currently employed in the Bioscience Industry in the FM MSA.

Top 10 Occupations in Bioscience by % of total Jobs in Industry Group

Description	% of Total Jobs in Industry Group (2024	Entry Level Education	Average Annual Openings	Annual Post-Secondary Surplus/ (Gap)*	Median Hourly Earnings	Change in Jobs (2025-2031)
Chemical Plant and System Operators	6.30%	HS Diploma	10	*	$47.88	9
Packaging and Filling Machine Operators and Tenders	4.70%	HS Diploma	54	*	$21.40	40
Chemical Equipment Operators and Tenders	3.90%	HS Diploma	10	*	$33.02	17
Inspectors, Testers, Sorters, Samplers, and Weighers	3.70%	HS Diploma	64	*	$24.10	31
Software Developers	3.60%	Bachelor's degree	74	135	$49.49	75
General and Operations Managers	3.50%	Bachelor's degree	333	458	$45.42	124
Medical Scientists, Except Epidemiologists	3.30%	Doctoral or professional degree	15	373	$37.80	15
Miscellaneous Assemblers and Fabricators	3.20%	HS Diploma	323	*	$22.51	7
Biological Technicians	2.80%	Bachelor's degree	9	191	$25.26	4
Industrial Engineers	2.40%	Bachelor's degree	19	16	$40.43	35

Note: Change in the table above is the net difference for the occupation; inclusive of exits and growth.

*This surplus/gap is arrived at taking the number of regional completions less the number of average annual openings. Due to lack of program information or that no post-secondary program is needed, we are unable to ascertain a surplus or gap for this occupation.

Grey Shaded Occupations:
As we contemplate how to address the needs of the bioscience industry, we can't overlook the demand for key positions and the role they play in these sectors. However crucial, these positions have median hourly earnings under $25/hour and pose difficulties to fill now and in the future without intentional action.

Blue Shaded Occupations:
Targeted Occupations filtered by % of jobs in industry, quantify of openings, and median hourly wage as well as highly anticipated retirements in future years.

Career Pathways Mapping

Career Pathways Mapping, a Lightcast tool, helps address in-demand occupations by focusing on the skills that occupations need. Many adjacent occupations have similar skill sets that can be developed, or up-skilled to move workers into in-demand careers. Looking at the top occupations in each grouping of targeted industries, General and Operations Managers are a common needed occupation throughout.

Manufacturing & Trades

Carpenters

First-Line Supervisors of Construction Trades and Extraction Workers

General and Operations Managers

Operating Engineers and Other Construction Equipment Operators
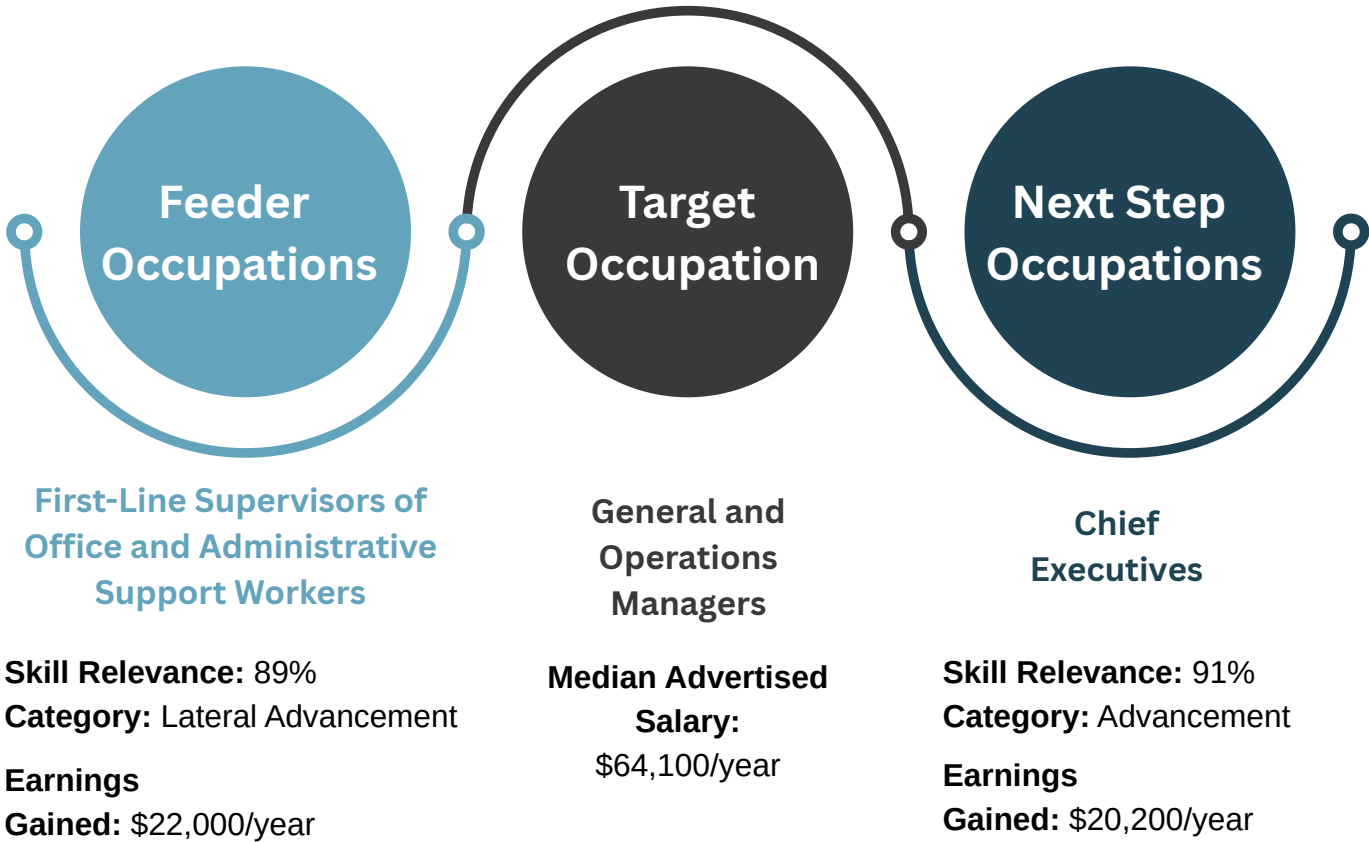
Welders, Cutters, Solderers, and Brazers

Healthcare & Bioscience

Registered Nurses

General and Operations Managers

Managers, All Other

Software Developers

Substance Abuse, Behavioral Disorder and Mental Health Counselors

AgTech & Autonomous

Software Developers

Civil Engineers

General and Operations Managers

Computer User Support Specialists
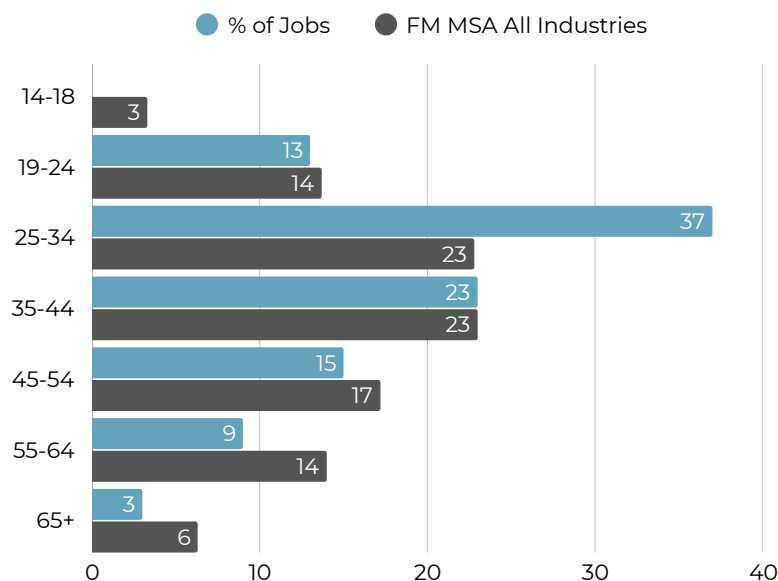
Software Quality Assurance Analysts and Testers

Example of Career Mapping for:
General and Operations Managers

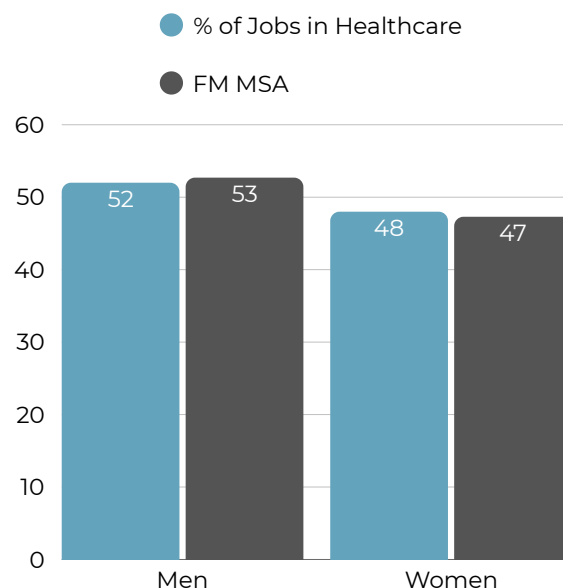| Feeder Occupations	Target Occupation	Next Step Occupations
First-Line Supervisors of Office and Administrative Support Workers	**General and Operations Managers**	**Chief Executives**
Skill Relevance: 89% **Category:** Lateral Advancement	**Median Advertised Salary:** $64,100/year	**Skill Relevance:** 91% **Category:** Advancement
Earnings Gained: $22,000/year		**Earnings Gained:** $20,200/year

Bioscience
Industry Demographics

Examining the age, gender, and race or ethnicity of an industry's workforce helps identify key challenges in recruitment, retention, and equity. These demographics reveal trends like aging workers, underrepresentation, or lack of diversity, all of which affect workforce stability and long-term growth.

Industry Age Breakdown

Legend: ● % of Jobs   ● FM MSA All Industries

Age	% of Jobs	FM MSA All Industries
14-18		3
19-24	13	14
25-34	37	23
35-44	23	23
45-54	15	17
55-64	9	14
65+	3	6

Gender Breakdown

Legend: ● % of Jobs in Healthcare   ● FM MSA

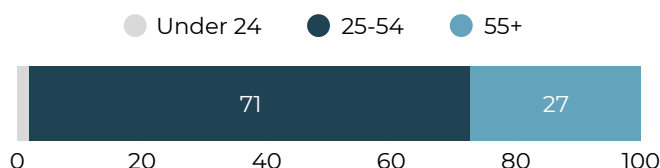|	Men	Women
% of Jobs in Healthcare	52	48
FM MSA	53	47

Nearly 12**%** of the workforce in the bioscience industry are **over the age of 55.** Compared to other targeted industries, the bioscience industry does not have as many mature workers.

The gender distribution in this industry is fairly even.

About 15% of the workforce in the bioscience industry is **diverse**.

Managers, All Other

Legend: ○ Under 24   ● 25-54   ● 55+

Under 24	25-54	55+
	71	27

First-Line Supervisors of Production and Operating Workers

Legend: ○ Under 24   ● 25-54   ● 55+

Under 24	25-54	55+
	75	22

Looking deeper at demographic trends such as age can help us spot occupation gaps before they become critical.
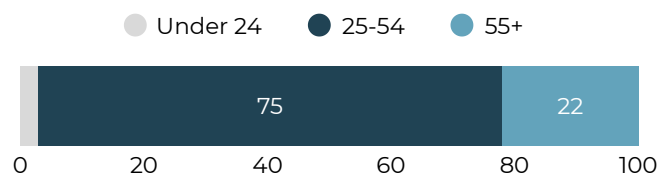
For the occupations to the left, more than 20% of their workforce is age 55+ and likely considering retirement in future years.

Promising Practices

Promising practices refer to strategies that effectively increase occupational completions and market entries. While this list is not exhaustive, they serve as key building blocks for addressing workforce challenges.

How do we make a collective impact with promising practices?

- Align resources, expertise, and training to scale programs targeting in-demand skills.
- Streamline pathways from skill development to microcredentials to employment.
- Build a statewide data network to connect employers with programs that expand talent pools (e.g., ND's Childcare and ROOTS Talent Attraction Programs).

Skills-Based Hiring   PartnerHighlight   Lightcast

A skills-based approach is primarily used in the hiring process. It's put into practice when a hiring manager places a greater emphasis on the skills a candidate has over their degree or previous job titles. In evaluating a candidate by the skills needed for the job, as opposed to using degree title and job title filters, companies can expand their talent pool for skilled candidates.
Read about Lightcast's Skills-Based Hiring Toolkit here ⟶

Talent Recruitment   FARGO MOORHEAD ECONOMIC DEVELOPMENT   PartnerHighlight   THE CHAMBER Fargo Moorhead West Fargo

The GFMEDC has been engaged in talent recuitment strategies that have both built awareness of the FM Region and helped companies engage in talent outreach. The www.liveinfargo.com and www.workinfargo.com websites are tools that companies can use when showcasing the region to out-of-market candidates. The GFMEDC's Lightning Recruitment Program can help pin-point outside talent to recruit. Additonally, the FMWF Chamber's Community Concierge Program can help new comers cultivate connections.

Accelerated Credentialing

Accelerated credentialing refers to streamlining the process that workers learn skills and are tested on those skills for entry into a profession. Benefits of accelerated credentialing include:

- Faster entry into the workforce
- Recognition of prior learning and experience
- Microcredentialing and credential stacking

Career Exposure   FARGO MOORHEAD ECONOMIC DEVELOPMENT   PartnerHighlight   CareerViewXR Career Exploration Experiences by Be More Colorful   GOLDEN PATH SOLUTIONS   THE CHAMBER Fargo Moorhead West Fargo

How can learning about a career be accessible, fun and rewarding? Providing career information in an engaging way can help. To do this, numerous efforts have been made by the GFMEDC and our partners in the following:

- Virtual Reality
- Work-Based Learning
- The Good Jobs Challenge

Company Culture   FARGO MOORHEAD ECONOMIC DEVELOPMENT

Workplaces with great company culture attract and retain employees. The GFMEDC is gathering these best practices in a collaborative network that companies can tap into and assess their own culture.

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FULL DATA PROFILE

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FARGO MOORHEAD
ECONOMIC DEVELOPMENT

Thank You