
CAREER ADVANCEMENT FOR MANUFACTURING ANNUAL REPORT

2022





Key Insights

Thomas, in collaboration with Women in Manufacturing, conducted this annual benchmark survey about **career advancement and women in the manufacturing sector**, revealing the following key trends:

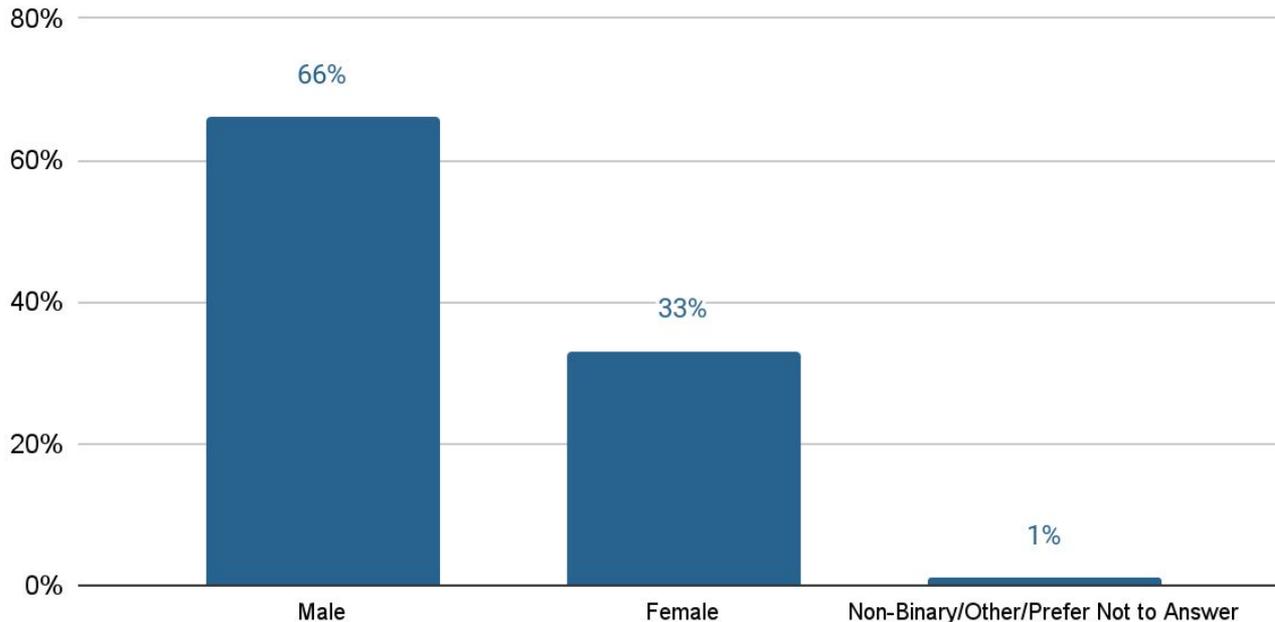
1. **1 in 3** manufacturing professionals and **1 in 4** manufacturing leaders are women.
2. The Telecommunications industry has the highest female employee presence (**39%**), whereas Energy/Utilities has the lowest representation (**30%**).
3. Men (**46%**) are significantly more likely to seek out a career in manufacturing compared to their female counterparts (**30%**).
4. Leadership/management training is the most widely offered and most impactful resource offered to employees.
5. Women are significantly less likely to report that their contributions are valued in manufacturing businesses and less likely to receive career advancement opportunities (**30%** of women vs. **47%** of men completely agree their contributions are valued).
6. **75%** of women and **80%** of men are likely or very likely to recommend a career in manufacturing.
7. Professionals in the Agricultural (**85%**) and Logistics/Shipping (**82%**) industries are the most optimistic about the advancement of women in manufacturing.



Profile of the Manufacturing Sector

1 in 3 Manufacturing Employees Are Women

Estimated percentage of employees in your entire company by gender:

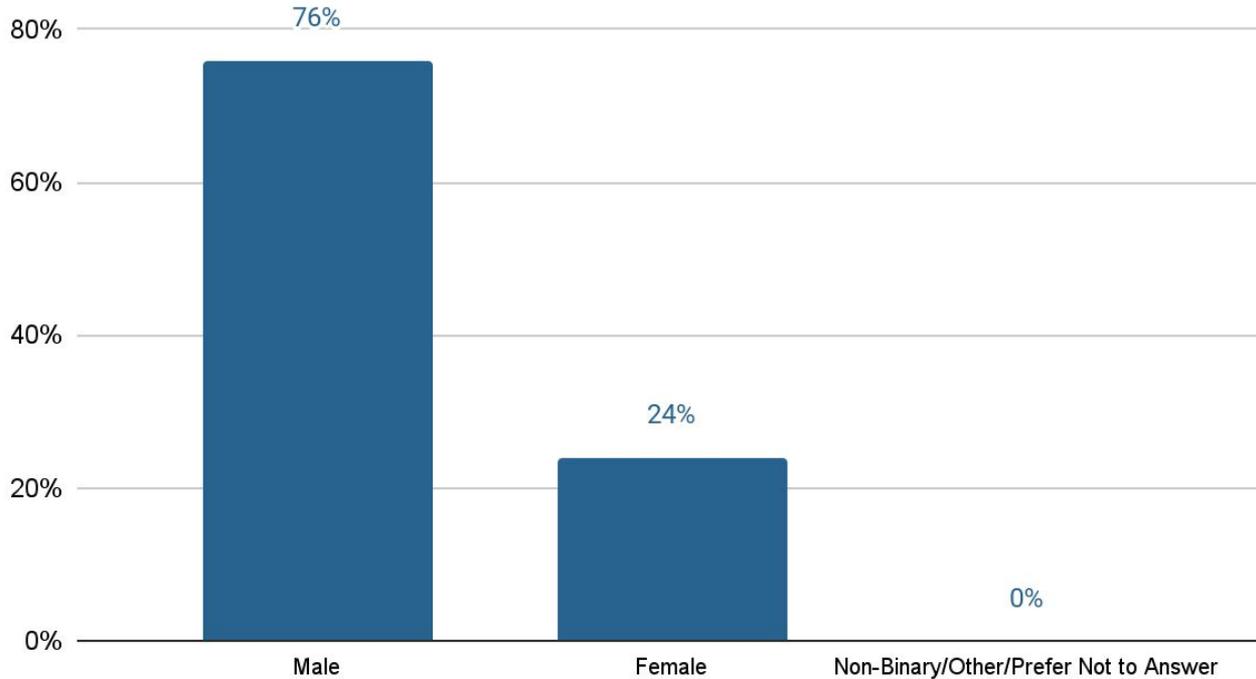


¹ n=595; in Female n=459; in Male n=131; in Non-binary, Other, or Prefer Not to Answer n=5.

² In 2020, Female=33%; Male=66%, and; in Non-binary, Other, or Prefer Not to Answer=1%.

1 in 4 Manufacturing Business Leaders Are Women

Estimated percentage of company leadership teams by gender:

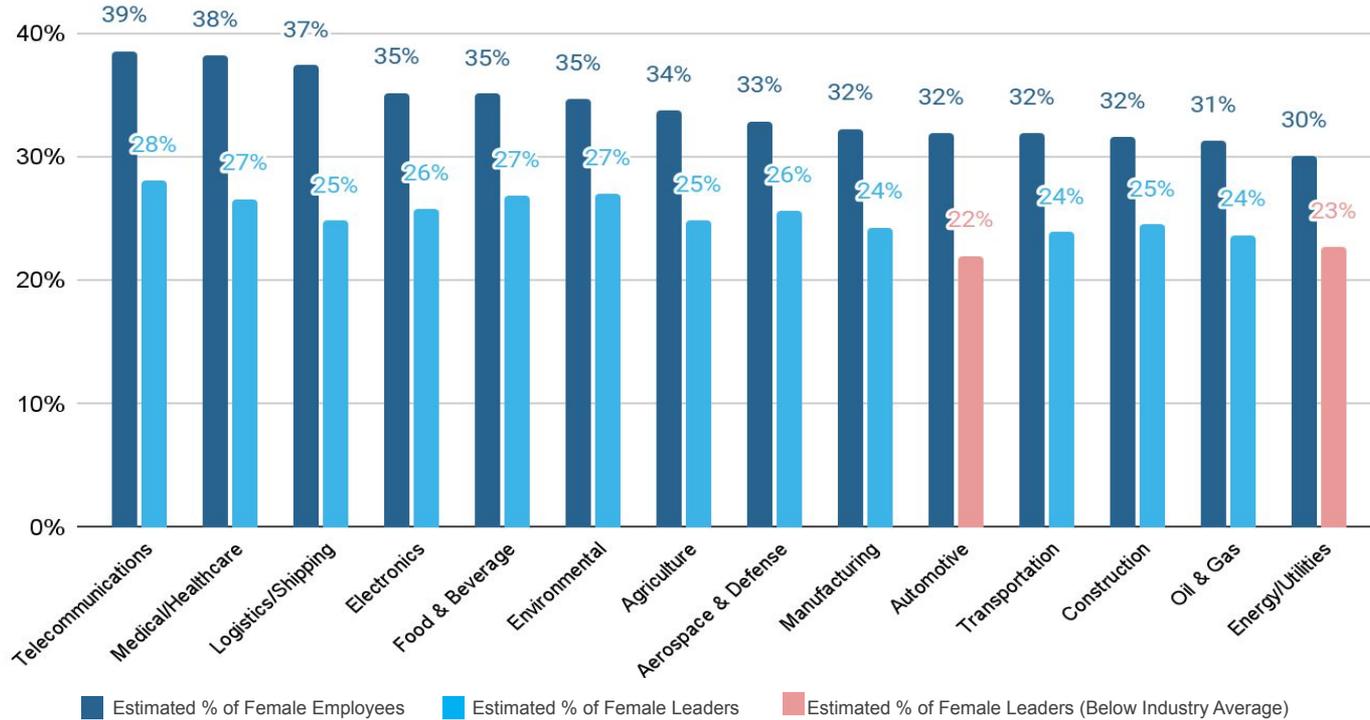


¹ n=595; in Female n=459; in Male n=131; in Non-binary, Other, or Prefer Not to Answer n=5.

² In 2020, Female=26%; Male=73%, and; in Non-binary, Other, or Prefer Not to Answer=0%.

Women Are Climbing the Ranks in Telecommunications, But Not in Automotive

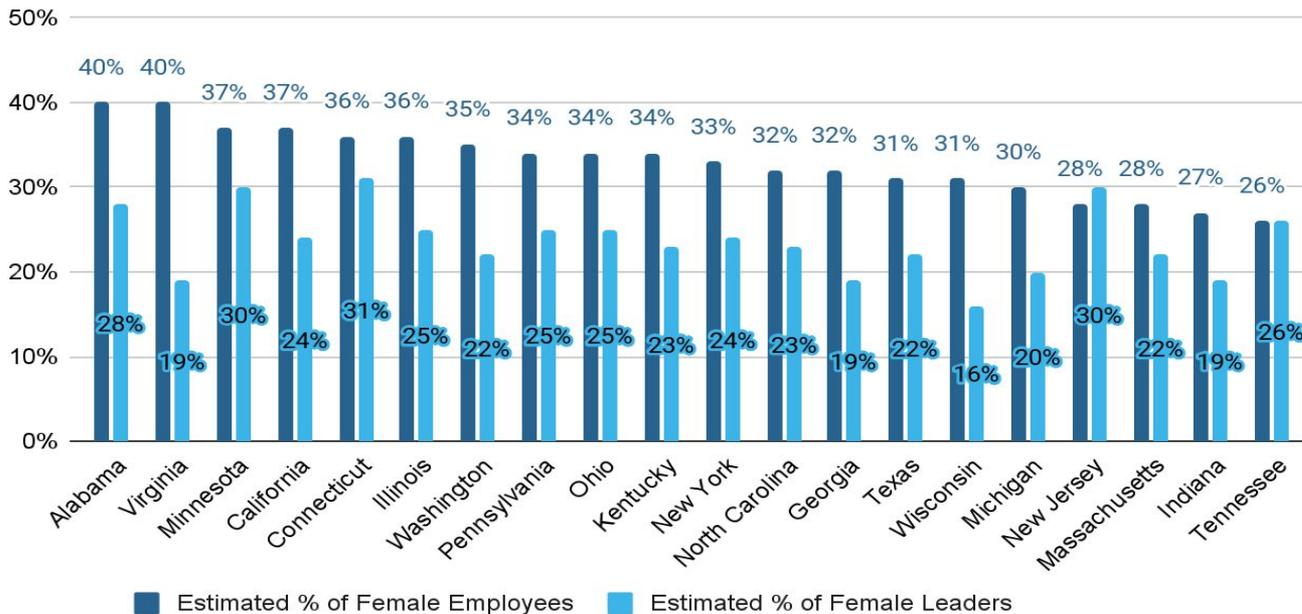
General female employment and leadership representation:



¹ Total/industry average, n=1,763; in Telecommunications n=46; in Medical/Healthcare n=102; in Logistics/Shipping n=55; in Electronics n=95; in Food & Beverage n=112; in Environmental n=54; in Agriculture n=111; in Aerospace & Defense n=161; in Manufacturing n=401; in Automotive n=180; in Transportation n=94; in Construction n=133; in Oil & Gas n=98; in Energy/Utilities n=121.

Alabama and Virginia Have the Highest Representation of Women in Manufacturing, While Connecticut Has the Highest Percentage in Leadership Positions

General female representation:



¹ Sample size n=501; in Alabama n=10; in Virginia n=17; in Minnesota n=16; in California n=28; in Connecticut n=15; in Illinois n=37; in Washington n=17; in Pennsylvania n=47; in Ohio n=50; in Kentucky n=25; in New York n=17; in North Carolina n=33; in Georgia n=25; in Texas n=33; in Wisconsin n=35; in Michigan n=38; in New Jersey n=18; in Massachusetts n=11; in Indiana n=12; in Tennessee n=17.

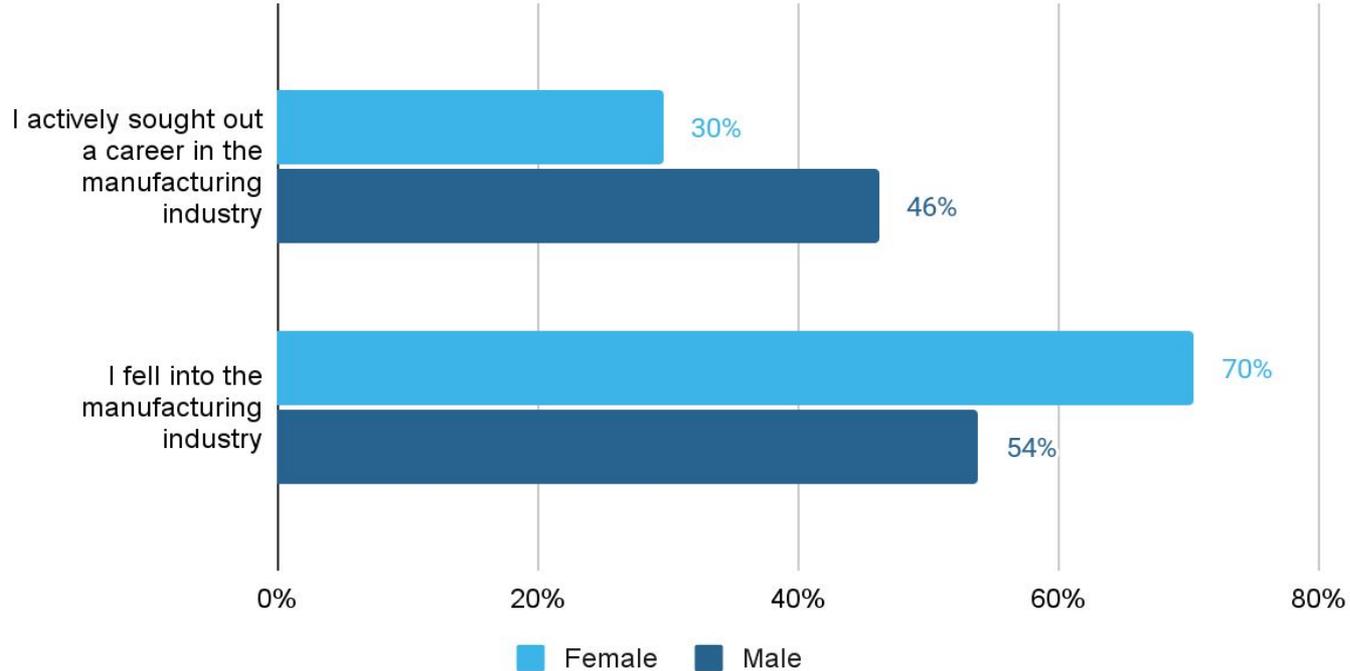
² Any state with fewer than 10 respondents was not included due to the limited sample size.

Career Entry & Recruitment Opportunities



Careers in Manufacturing Are Not Being Sought Out

How did you enter the manufacturing/industrial industry?

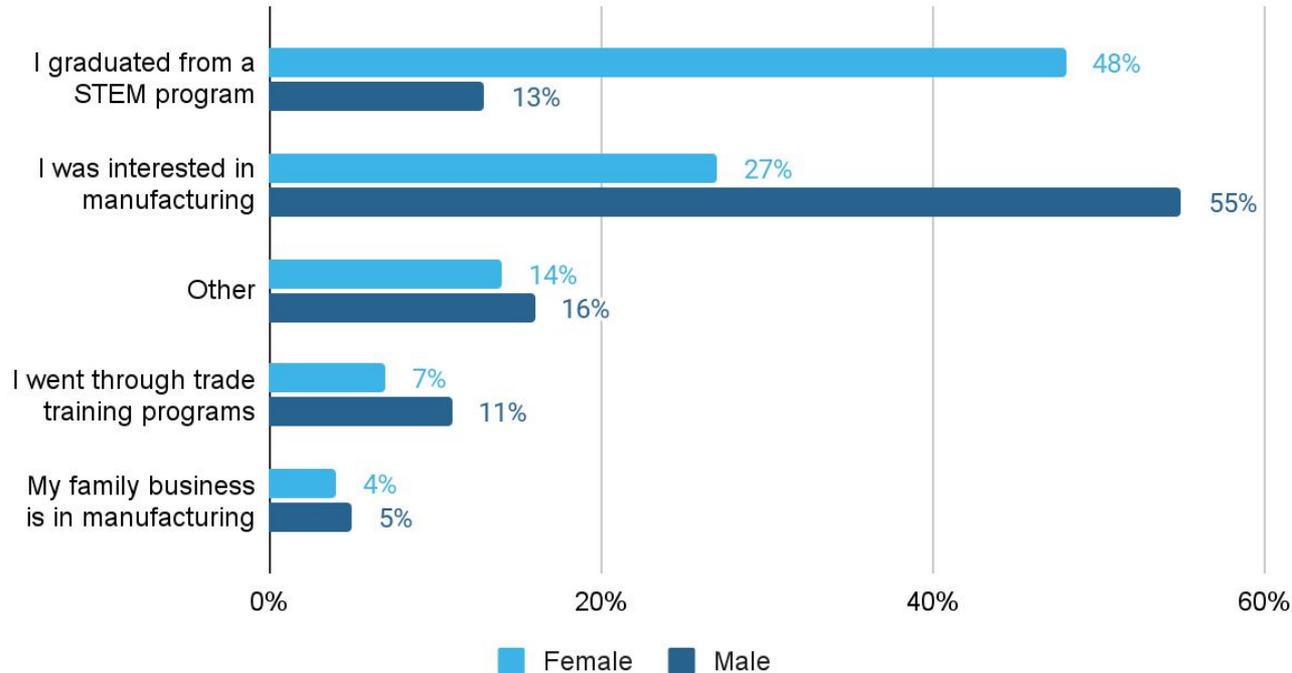


¹ Sample size n=570; in Female n=446; in Male n=119; in Non-binary, Other, or Prefer Not to Answer n=5.

² Survey respondents identifying as Non-binary, Other, or Prefer Not to Answer constituted fewer than 10 responses and were not included due to sample size.

STEM Programs Are the Most Effective Vehicles to Encourage Women to Enter the Industry

Why did you seek out this industry?



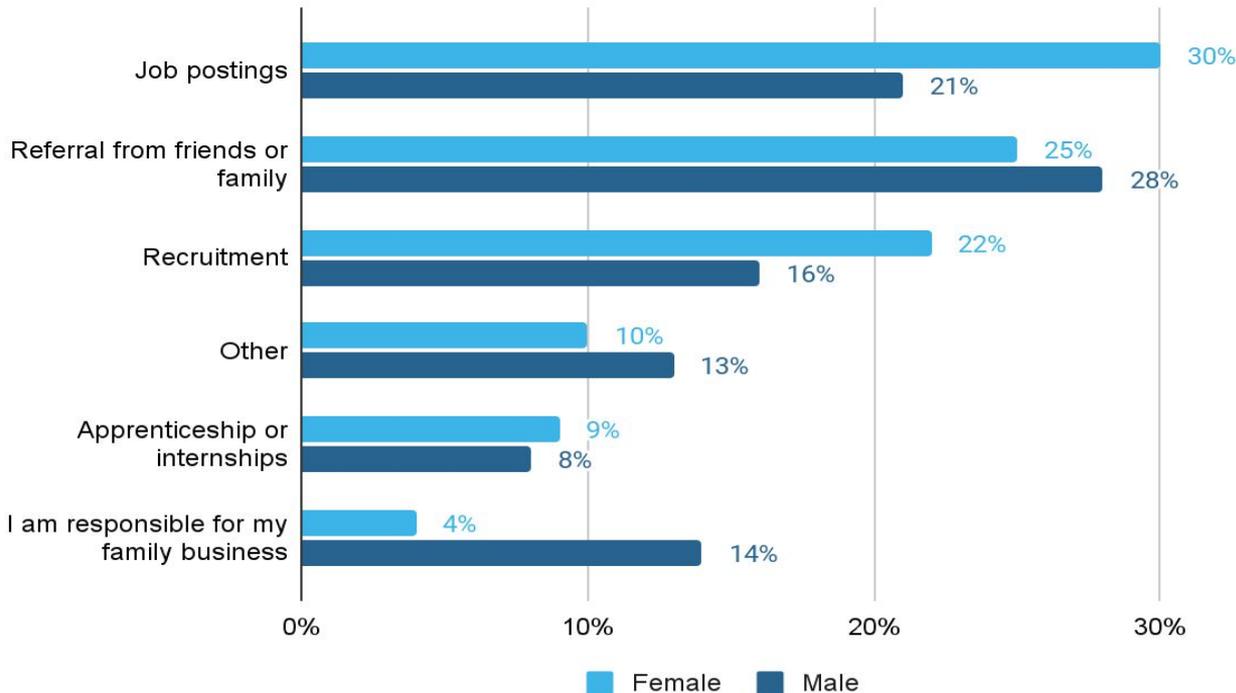
¹ Sample size n=190; in Female n=132; in Male n=55; in Non-binary, Other, or Prefer Not to Answer n=3.

² Survey respondents identifying as Non-binary, Other, or Prefer Not to Answer constituted fewer than 10 responses and were not included due to sample size.

³ Other includes salary, family influence, and looking for new opportunities.

Most Women Begin Industrial Careers Applying to Job Postings, While Most Men Get Direct Referrals

How did you end up in this industry?



¹ Sample size n=377; in Female n=312; in Male n=63; in Non-binary, Other, or Prefer Not to Answer n=2.

² Survey respondents identifying as Non-binary, Other, or Prefer Not to Answer constituted fewer than 10 responses and were not included due to sample size.

³ Other includes temporary placement, moved between departments, and networking.

How Could the Industry Recruit and Retain More Women?



- “Foster the interest in math, science, and hands-on skills from an early age (elementary) on through middle and high school. It’s too late to think we’ll catch people in high school.” — Multi-Sector Manufacturing, Georgia
- “Make female leadership visible to all levels of the industry so that lower levels and younger generations know it is possible.” — Multi-Sector Manufacturing, Illinois
- “Include more women in the interview and hiring process. Create more hiring media that is targeted to women.” — Multi-Sector Manufacturing, Texas
- “Equal pay for equal work; reasonable accommodations for working parents; affordable comprehensive healthcare options.” — Aerospace & Defense Industry, Virginia
- “Provide a way to create a more family centric culture with flexible hours especially around drop off/pick up times from school, less mandatory travel, provide child care on site, and more paid leave after birth of child or adoption.” — General Manufacturing, Kentucky
- “The industry could improve retention by designing policies and workspaces with all people in mind (for example, ensuring that equipment is designed ergonomically for women as well as for men).” — Multi-Sector Manufacturing, Ohio

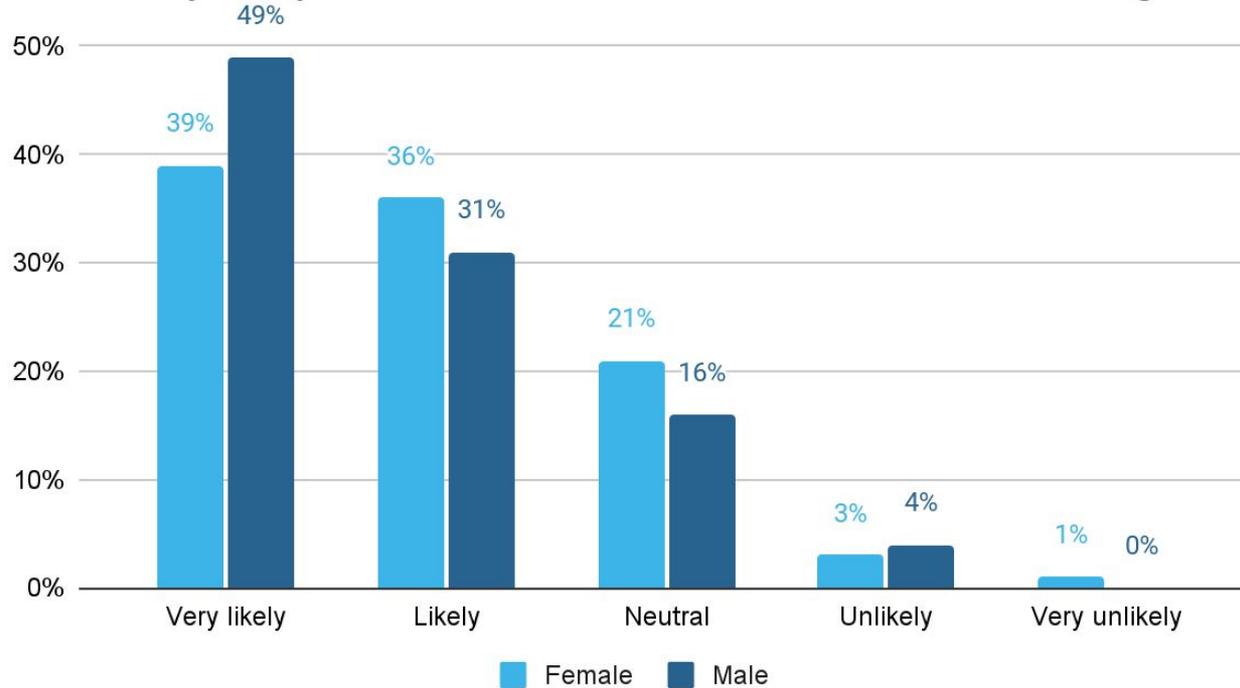


Attitudes & Perceptions



Women Are Less Likely Than Men to Recommend a Career in Manufacturing

How likely are you to recommend a career in manufacturing?

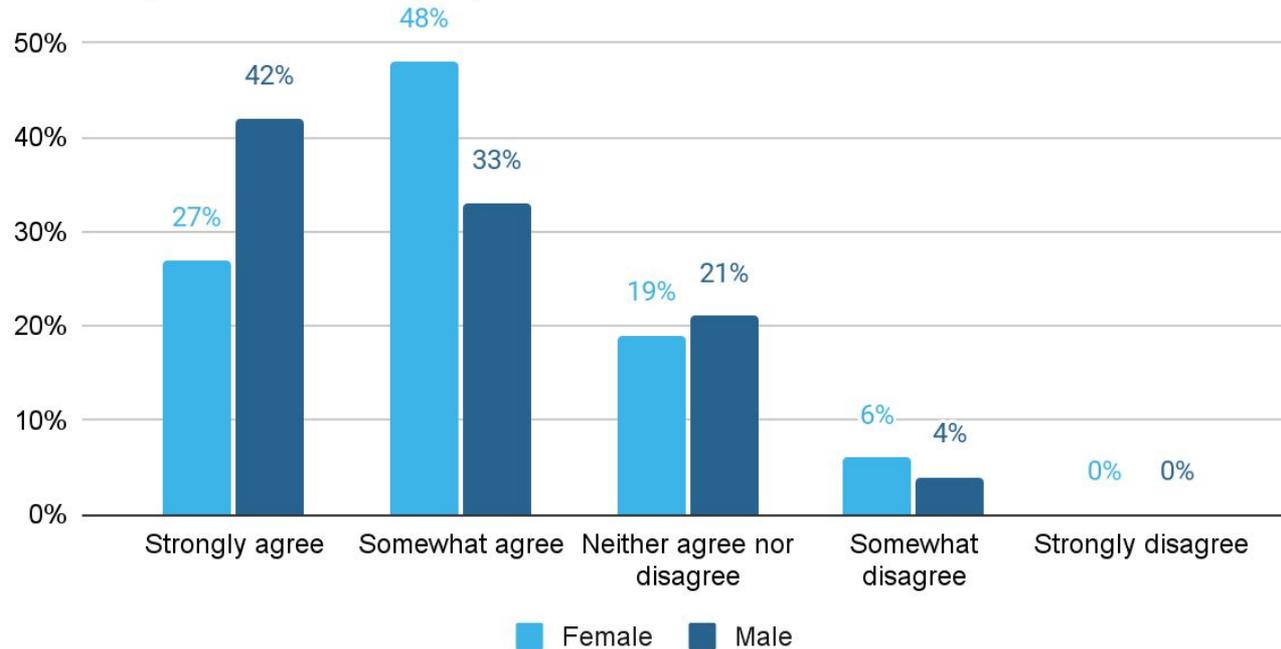


¹ Sample size n=571; in Female n=446; in Male n=120; in Non-binary, Other, or Prefer Not to Answer n=9.

² Survey respondents identifying as Non-binary, Other, or Prefer Not to Answer constituted fewer than 10 responses and were not included due to sample size.

Respondents Agree Women Have Made Significant Progress in the Manufacturing Industry Over Last 5 Years

Women have made significant progress in the manufacturing industry over the last 5 years.

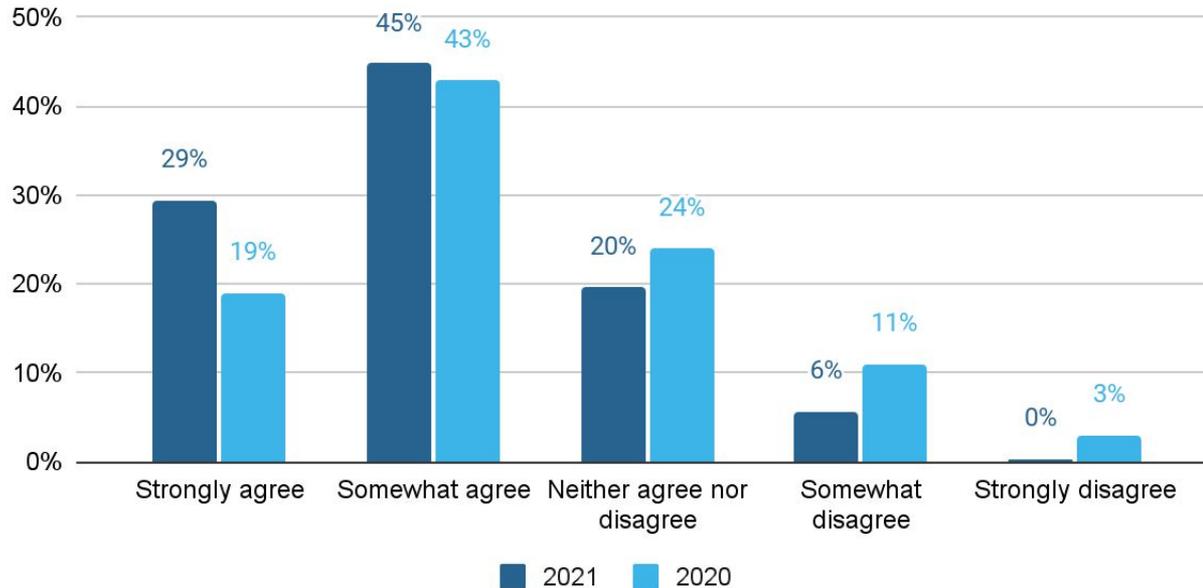


¹ Sample size n=560; in Female, n=442; in Male, n=113; in Non-binary, Other, or Prefer Not to Answer n=5.

*Survey respondents identifying as Non-binary, Other, or Prefer Not to Answer constituted fewer than 10 responses and were not included due to sample size.

2021 Respondents Are More Likely to Agree Women Have Made Significant Progress in the Manufacturing Industry Over Last 5 Years

Women have made significant progress in the manufacturing industry over the last 5 years.



¹ 2021 Sample size n=560; in Female, n=442; in Male, n=113; in Non-binary, Other, or Prefer Not to Answer n=5.

² 2020 Sample size n=465; in Female, n=322; in Male, n=134; in Non-binary, Other, or Prefer Not to Answer n=9.

³ Survey respondents identifying as Non-binary, Other, or Prefer Not to Answer constituted fewer than 10 responses and were not included due to sample size.

Why Would You Recommend a Career in Manufacturing?

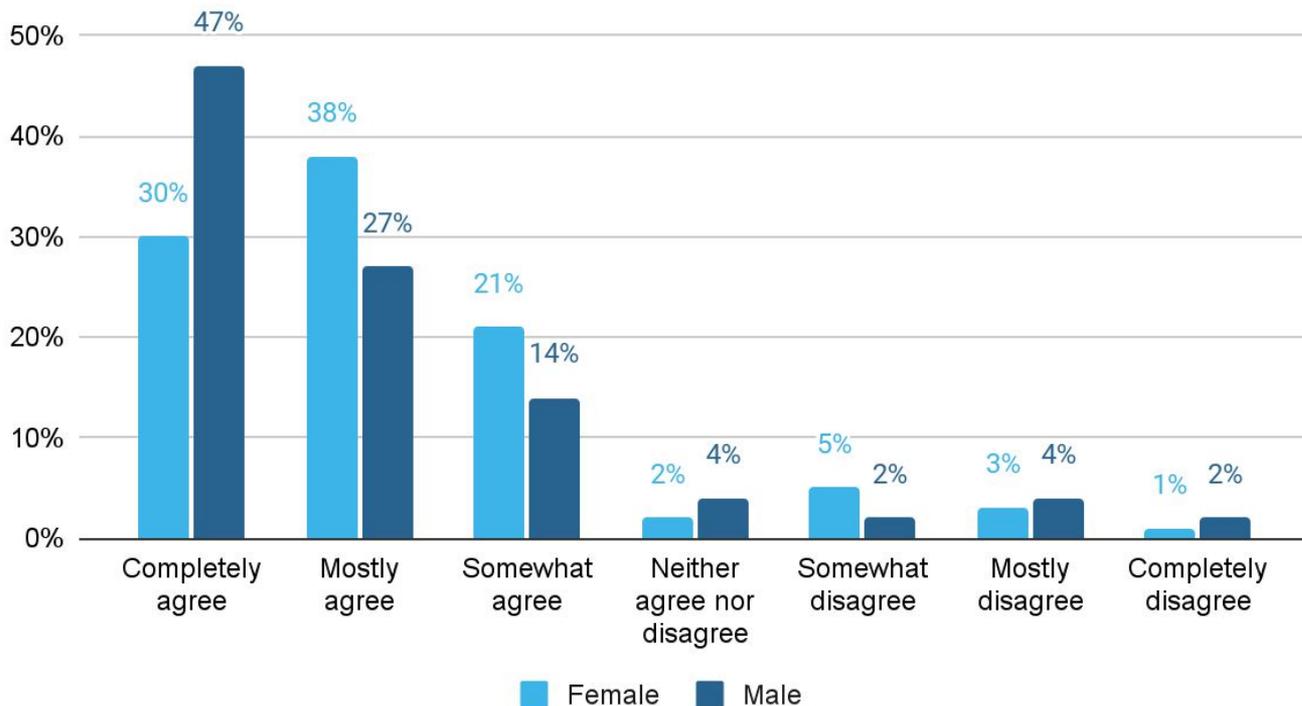


- “Manufacturing is the life blood of the economy.” - Multi-Sector Manufacturing, Illinois
- “Job stability and being classified as an essential business for the supply chain... Incredible opportunities for women and POC to go into leadership since there's an effort to have representation of diversity at all levels.” — General Manufacturing, New Jersey
- “Not all positions / jobs in manufacturing require a college education or degree. Someone with a high school education can be quite successful in a manufacturing job.” — Transportation Industry, Texas
- “Manufacturing is part of the backbone of this nation! It is who we were, who we are, and who we will be if we remain focused. We do not need to become a service sector nation and rely on others to manufacture what we need. Skills pay the bills and provide a standard of living that is not to be laughed at. It provides primary and secondary jobs & careers that in turn create additional opportunities.” — Multi-Sector Manufacturing, Alabama
- “It is well paid. There is a lot of learning. It is interesting. Good people. The career can take you many interesting places.” — Multi-Sector Manufacturing, Maine
- “Amongst careers, it is the most versatile and prolific. Manufacturing will never go away, is the cornerstone of a strong economy and creates a stable country.” — Automotive Industry, Michigan



Women Are Significantly Less Likely to Report That Their Contributions Are Valued in Manufacturing Businesses

I believe my company values my contributions.

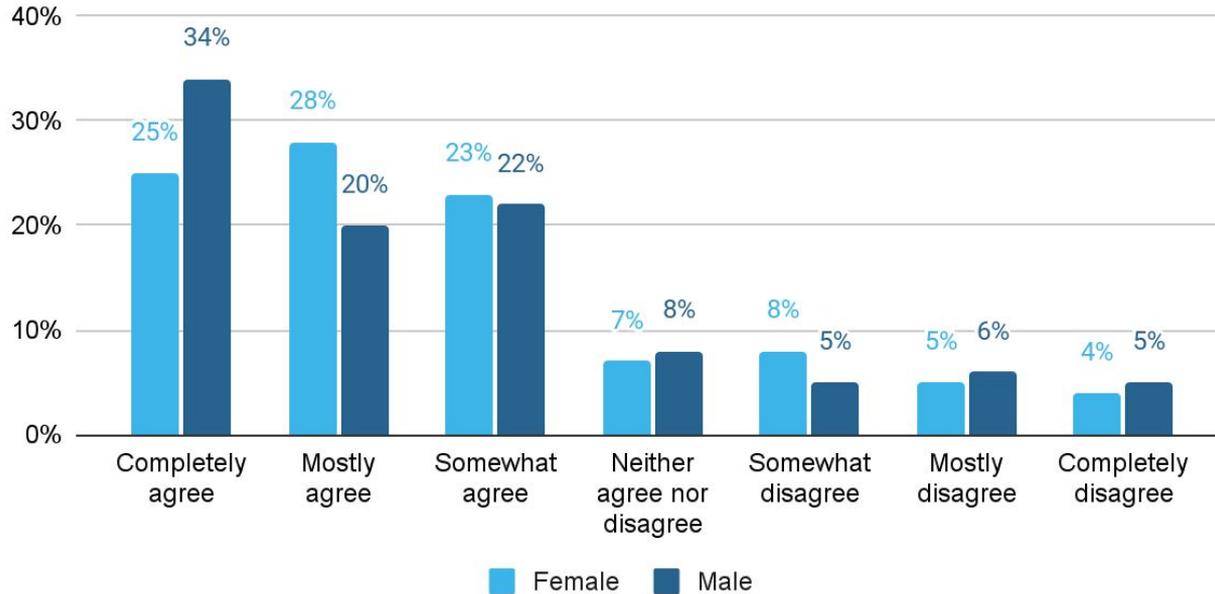


¹ Sample size n=588; in Female n=455; in Male n=128; in Non-binary, Other, or Prefer Not to Answer n=5.

² Survey respondents identifying as Non-binary, Other, or Prefer Not to Answer constituted fewer than 10 responses and were not included due to sample size.

Only 25% of Women Feel Strongly About Their Career Advancement Opportunities Compared to 34% of Male Respondents

The company I currently work for provides opportunities for my career advancement.



¹ Sample size n=587; in Female n=455; in Male n=127; in Non-binary, Other, or Prefer Not to Answer n=5.

² Survey respondents identifying as Non-binary, Other, or Prefer Not to Answer constituted fewer than 10 responses and were not included due to sample size.

Why Would You Not Recommend a Career in Manufacturing?



- “It depends on the person and their personal factors that can determine if a career in manufacturing is good for them. The manufacturing industry is very demanding of time, some holiday/weekend work or late nights, and being on call on weekends is very possible. It is hard to have a flexible schedule or remote options or consistent work/life balance in manufacturing.” — Chemical Industry, New Jersey
- “Not a great deal of flexibility in the workplace for working mothers. The industry makes you feel like a bad employee to put your family first.” — Agriculture Industry, Illinois
- “Pay scale not equal. Advancement opportunities hard to achieve.” — Food & Beverage Industry, Maryland
- “Working with predominantly men is alienating.” — Multi-Sector Manufacturing, Kansas
- “Need to work in a progressive environment with leadership that is willing to step outside the ‘this is the way we’ve always done things’ mindset. Otherwise, new ideas and technology aren’t fully utilized...the ability to work from home is limited — even for those in sales and service.” — Food & Beverage Industry, Colorado



Company Benefits & Training



Industrial Workers Seek More Flexible Schedules

Top 5 Benefits **Offered** at Manufacturing Companies:

1. Health insurance
2. Performance reviews
3. Educational opportunities
4. Employee assistance programs
5. Remote work

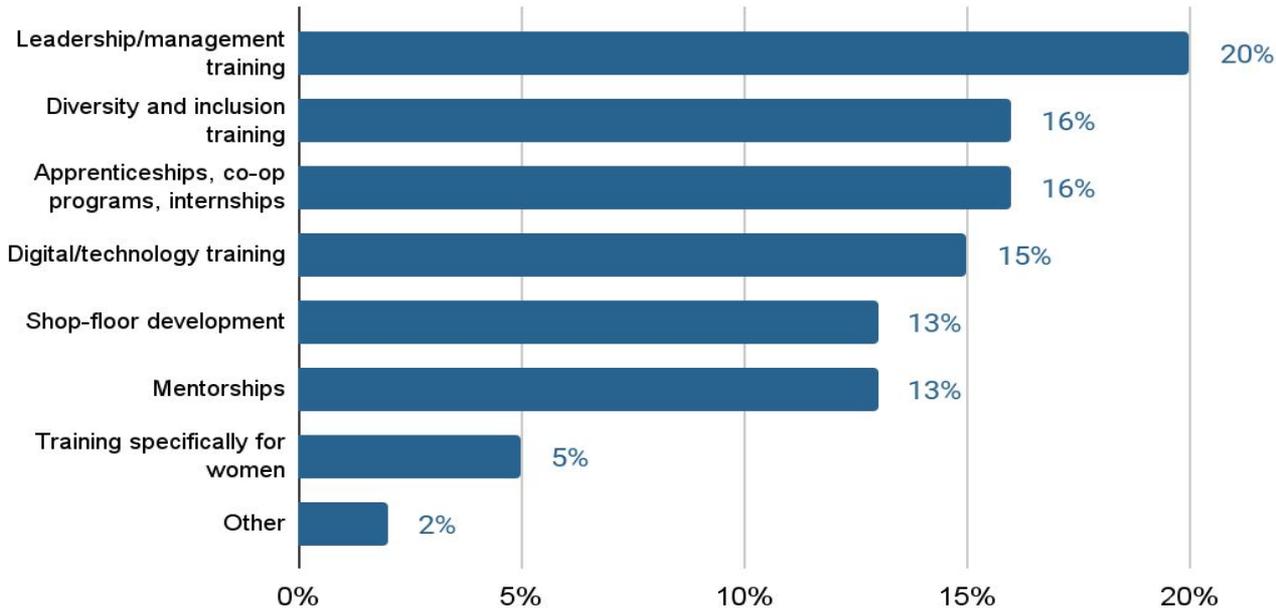
Top 5 Benefits **Desired** at Manufacturing Companies:

1. Health insurance
2. Flexible schedules
3. Educational opportunities
4. Remote work
5. Performance reviews

¹ Sample size n=652; in Female n=491; in Male n=156; in Non-binary, Other, or Prefer Not to Answer n=5..

Leadership/Management Training Is the Most Popular Training Option Offered

What kinds of training and educational opportunities does your company offer?

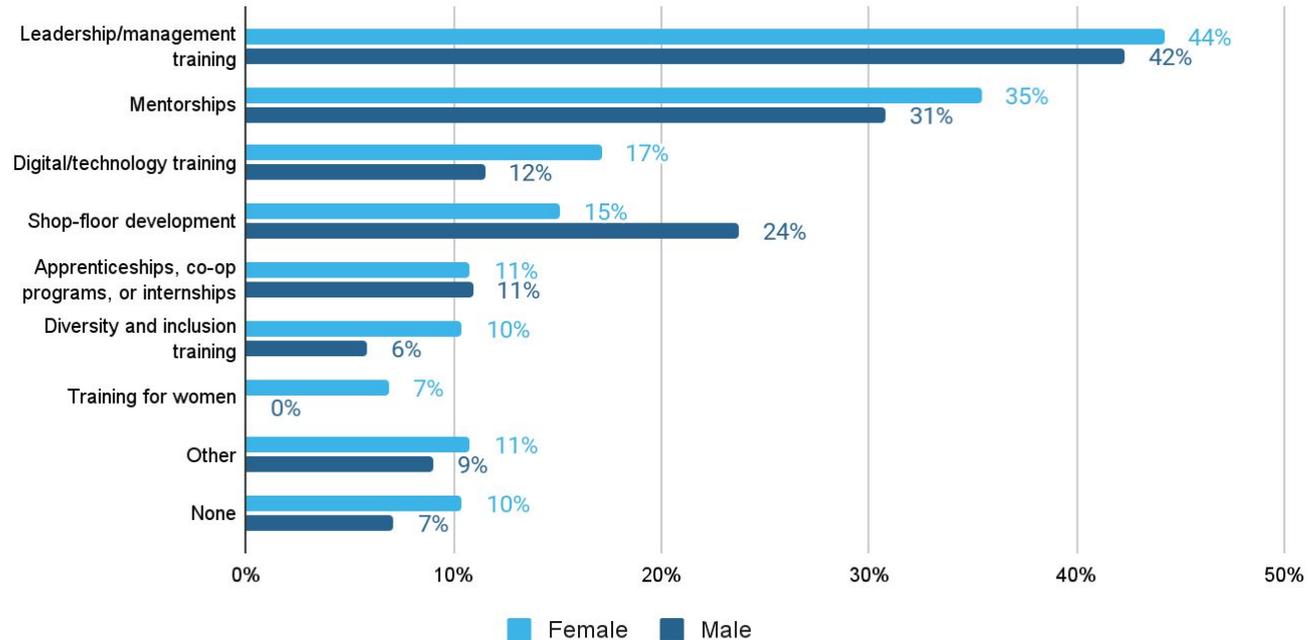


¹ Sample size n=1,416.

² Other includes product knowledge training, college/tuition reimbursement, and outside conferences.

Leadership/Management Training Is the Most Impactful for Career Advancement

Which of the following do you feel has most positively impacted your career advancement?



¹ Sample size n=652; in Female n=491; in Male n=156; in Non-binary, Other, or Prefer Not to Answer n=5.

² Survey respondents identifying as Non-binary, Other, or Prefer Not to Answer constituted less than 10 responses and were not included due to sample size.

³ Other includes networking, higher education, and on-the-job opportunities.

Unique Ways Manufacturing Companies Promote Female Advancement



- “We have an initiative to increase our female population to 30% by the year 2030 and we also have sponsorship programs and mentor programs for females.” — General Manufacturing, Indiana
- “We just started a women's ERG.” — Construction Industry, Texas
- “Specific development training with cohorts of women at similar career stages.” — Multi-Sector Manufacturing, New Jersey
- “We have a specific women in engineering group that gets to travel to our different locations and get tours, trainings, and networking opportunities.” — Multi-Sector Manufacturing, Wisconsin
- “My company provides membership to Women in Manufacturing for all employees who wish to use it.” — Multi-Sector Manufacturing, Ohio
- “Our CHRO is very focused on increasing diversity within our teams. It is discussed at the C-Suite level and is very much a part of day to day conversations, particularly as we recruit outside talent.” — Multi-Sector Manufacturing, Ohio
- “Encouraging diverse panel interviews when recruiting.” — Multi-Sector Manufacturing, Connecticut
- “Inclusive workplace initiatives (mothers rooms, female cut uniforms, etc).” — Food & Beverage Industry, Minnesota

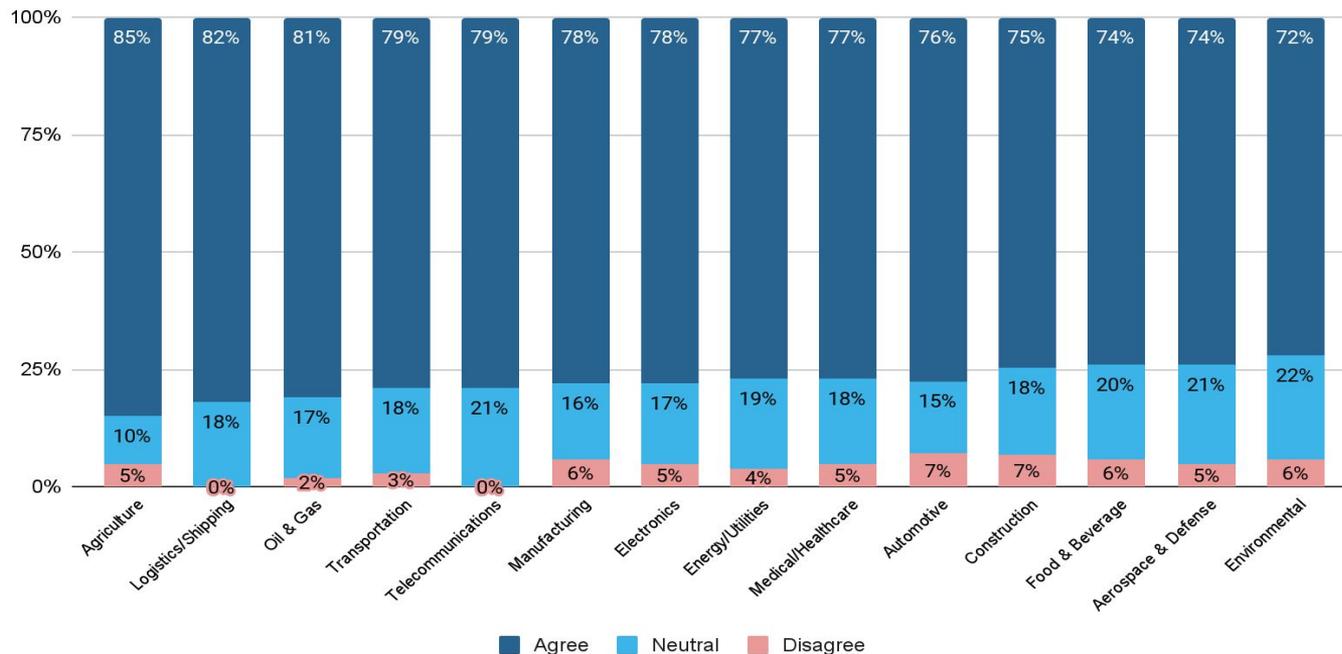


Looking Forward



The Agriculture, Logistics/Shipping, And Oil & Gas Sectors Are the Most Optimistic About the Advancement of Women in Manufacturing

I am optimistic about the ongoing advancement of women in manufacturing.



¹ Total/industry average, n=1,641; in Telecommunications n=42; in Medical/Healthcare n=94; in Logistics/Shipping n=51; in Electronics n=83; in Food/Beverage n=106; in Environmental n=50; in Agriculture n=104; in Aerospace & Defense n=149; in Manufacturing n=378; in Automotive n=170; in Transportation n=90; in Construction n=125; in Oil & Gas n=89; in Energy/Utilities n=110.

The Best Career Advice Respondents Would Share with Women in the Manufacturing Sector



- “The more you pursue educational opportunities within your industry and workplace, the faster you're going to leave all the naysayers in the dust.” — Multi-Sector Manufacturing, Ohio
- “Know your worth. Ask for what you need to be successful, don't wait for someone to hand it to you.” — Food & Beverage Industry, Minnesota
- “Do what you do with the strength and talents you have. You don't have to do things the way a man would do them to be successful, but neither do we need to exclude men. We need the opinions and insight of every group to get a full picture of a problem and create a solution.” — General Manufacturing, Alabama
- “Be strong. Be your own advocate. Work hard. Ask for guidance. Throw a rock at that ceiling every day until it shatters.” — Construction Industry, Texas
- “Learn as much as you can from as many people as you can about the business. Take the time to learn the process from start to finish. Read, listen and learn about the industry as a whole and how you can make an impact.” — General Manufacturing, Connecticut
- “Bring yourself to the table. Don't wait to be invited especially if you have the knowledge and see the opportunity to make a contribution. Find a sponsor and a mentor throughout your career to help you find your best opportunities for advancement.” — Multi-Sector Manufacturing, Pennsylvania





Recommendations

1. There are jobs to be done: women make up only **33%** of manufacturing jobs and **24%** of industry leadership positions.
2. To encourage more women in manufacturing, the industry should focus on fostering interest in manufacturing (**27%** of women entered manufacturing because of a general interest) and supporting educational programs and opportunities (**48%** of women in manufacturing graduated from a STEM program).
3. Automotive (**22%**) and Energy/Utilities (**23%**) industries rank the lowest in female leadership progression. Companies in these sectors should invest in resources, training, mentorship, or association partnerships to close the gap.
4. To support career advancement and employee appreciation companies should consider adding leadership and management training (**20%** of respondents consider this the most impactful for career advancement) and flexible scheduling (the only desired benefit not met at most companies).
5. Future Insight: Due to the significant difference reported for the value of contributions (**30%** of women vs. **47%** of men completely agree their contributions are valued), further research is needed to identify how employees feel valued.



Methodology

This survey was conducted over a 33-day period from August 5 to September 7, 2021.

A total of 800 respondents participated and 663 responses qualified for the survey. Due to the conditional and multiple choice nature of the survey, some datasets may contain a different respondent number which is annotated in the footnotes for clarity.

INVITED PARTICIPANTS:

● Qualifiers:

- Complete, non-duplicate entry
- Required to work in the manufacturing or industrial sector in North America

● Recruitment:

- Respondents were invited to participate via Thomas and Women in Manufacturing emails. The invitation pool was incentivized with an executive summary report of the survey findings.

RESPONDENTS' FIRMOGRAPHICS:

- **Revenue:** Business revenues span from less than \$1 million to over \$1 billion.
- **Employees:** Company size spans from 1 to more than 15,000 employees.
- **Company Location:** Identified by country and state/province.
- **More Information:** Please [click here](#).

SURVEY INFORMATION:

- **Survey Administration:** Qualtrics, online survey
- **Survey Language:** English
- **Questions:** 40 questions were included

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Women in Manufacturing (WiM) is the only national trade association dedicated to providing year-round support to women who have chosen a career in the manufacturing industry.

WiM members benefit from exclusive access to educational programming, networking opportunities, bimonthly webinars, a customized job board, a robust searchable directory, and much more.

womeninmanufacturing.org



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