

# 2025 Manufacturing Workforce Trends Survey<sup>©</sup>



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**Manufacturers Alliance**  
Providing Training & Education Peer to Peer

Compiled by:

Altura Consulting Group LLC

763-745-9425

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Introduction

The Manufacturers Alliance is pleased to present *The Workforce Trends Survey – 2025*.

This survey covers issues of critical importance to Minnesota manufacturing firms and summarizes comments from 174 companies.

A list of participating companies is included in the last section of this report.

Employee Turnover Rates

In this section, participants reported information on turnover rates over the last 12 months for:

- Voluntary separations (employee makes the decision to leave the company).
- Involuntary separations (company asks employee to leave the company for performance or layoffs).
- Total turnover rates (separations for any reason).

Total turnover rates reported in 2025 – on average across all groups – are slightly below those reported in 2024 (25.2%). See the tables below for details reported by industry group and termination type. Industries where zero participants reported turnover data are not included in the tables.

Voluntary Separations

Industry Group	# Firms Reporting	25 <sup>th</sup> Percentile	Average	Median	75 <sup>th</sup> Percentile
All Industry Groups	158	8.0%	13.6%	12.5%	17.0%
Food & Kindred Products	5	*	20.5%	18.6%	*
Lumber & Wood ex Furniture	3	*	*	*	*
Furniture & Fixtures	2	*	*	*	*
Printing, Publishing & Allied	8	8.1%	13.0%	12.4%	17.6%
Chemicals & Allied Products	5	*	10.0%	9.0%	*
Rubber & Plastic Products	22	8.6%	14.5%	15.0%	18.8%
Primary Metal Industries	6	12.5%	15.2%	14.1%	14.8%
Fabricated Metal Products	49	7.0%	13.8%	12.0%	17.0%
Industrial Machinery Computer Equip	15	4.4%	10.9%	10.7%	16.5%
Electronic & Other Electrical	11	9.7%	16.2%	13.0%	15.5%
Transportation Equipment	3	*	*	*	*
Measur, Anal & Control Instruments	2	*	*	*	*
Misc Manufacturing Industries	27	8.4%	13.2%	13.9%	16.5%

Involuntary Separations

Industry Group	# Firms Reporting	25 <sup>th</sup> Percentile	Average	Median	75 <sup>th</sup> Percentile
All Industry Groups	158	3.8%	8.6%	7.0%	11.6%
Food & Kindred Products	5	*	15.5%	10.0%	*
Lumber & Wood ex Furniture	3	*	*	*	*
Furniture & Fixtures	2	*	*	*	*
Printing, Publishing & Allied	8	0.8%	4.1%	2.5%	6.6%
Chemicals & Allied Products	5	*	6.9%	5.0%	*
Rubber & Plastic Products	22	5.1%	10.4%	9.2%	15.0%
Primary Metal Industries	6	9.3%	10.9%	10.6%	13.3%
Fabricated Metal Products	49	3.0%	8.2%	5.0%	12.0%
Industrial Machinery Computer Equip	15	2.4%	7.1%	5.2%	9.6%
Electronic & Other Electrical	11	5.2%	11.3%	10.0%	14.5%
Transportation Equipment	3	*	*	*	*
Measur, Anal & Control Instruments	2	*	*	*	*
Misc Manufacturing Industries	27	4.3%	7.0%	6.4%	8.8%

Total Separation Rates (Voluntary & Involuntary)

Industry Group	# Firms Reporting	25 <sup>th</sup> Percentile	Average	Median	75 <sup>th</sup> Percentile
All Industry Groups	161	14.0%	22.3%	20.0%	28.0%
Food & Kindred Products	5	*	36.0%	28.7%	*
Lumber & Wood ex Furniture	3	*	*	*	*
Furniture & Fixtures	2	*	*	*	*
Printing, Publishing & Allied	8	9.8%	17.1%	15.1%	22.7%
Chemicals & Allied Products	5	*	16.9%	16.0%	*
Rubber & Plastic Products	23	17.9%	25.0%	23.0%	31.4%
Primary Metal Industries	7	22.6%	29.0%	25.2%	38.0%
Fabricated Metal Products	49	14.0%	22.1%	19.0%	28.0%
Industrial Machinery Computer Equip	15	9.0%	18.0%	14.7%	28.0%
Electronic & Other Electrical	12	17.5%	26.5%	20.0%	27.4%
Transportation Equipment	3	*	*	*	*
Measur, Anal & Control Instruments	2	*	*	*	*
Misc Manufacturing Industries	27	14.0%	20.2%	19.0%	25.0%

General Comments

If you have any questions about this report or any of the data reported, feel free to contact the survey sponsor directly:

Kirby Sneen  
**Manufacturers Alliance**  
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Compensation Practices

Compensation Adjustments

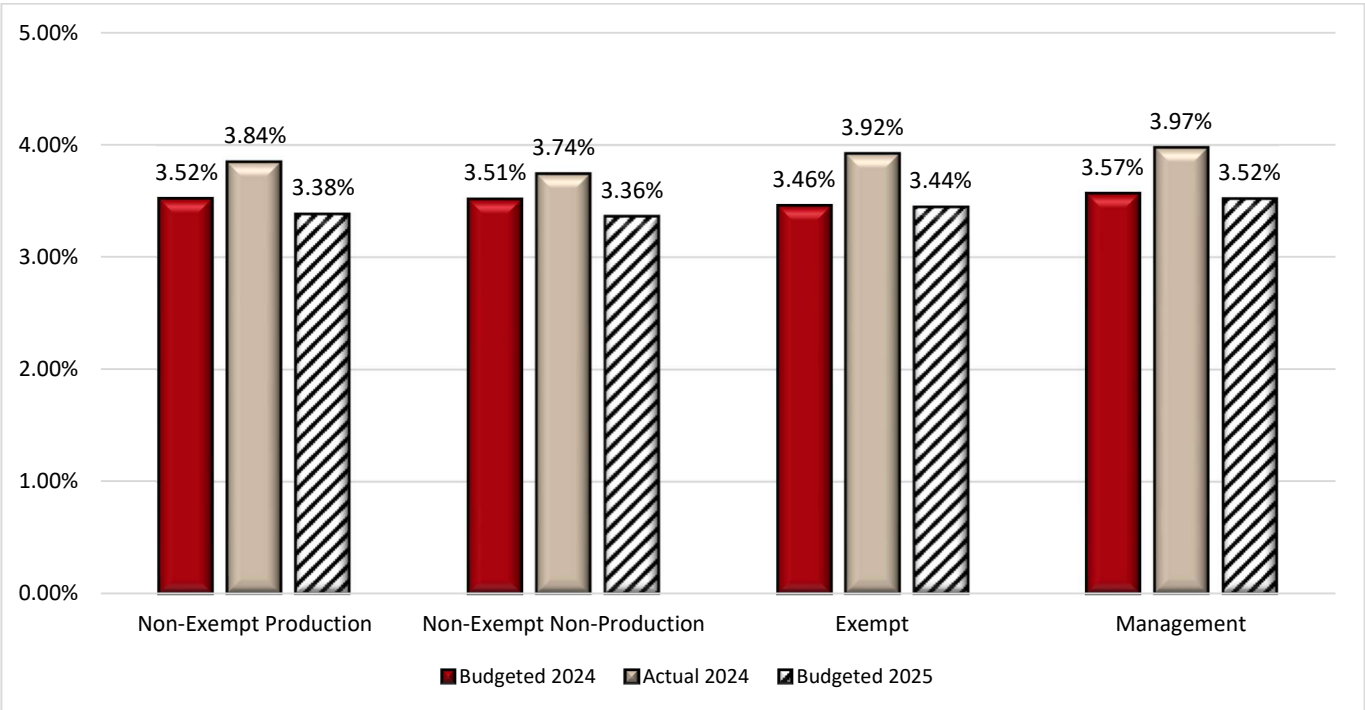
Average Percent Wage/Salary Adjustment

Participating companies reported actual 2024 and budgeted 2025 pay increases by employee group. The average budgeted 2024 pay increase data are from last year’s survey results. See details in the table and chart below.

Note the results in the chart following the table exclude firms reporting no planned pay adjustments (zero percent).

Employee Group	Pay Adjustments INCLUDING Zero (0%) Adjustments			Pay Adjustments EXCLUDING Zero (0%) Adjustments		
	# Firms Reporting	Average	Median	# Firms Reporting	Average	Median
NEx Production – Budgeted 2024	169	3.5%	3.5%	169	3.5%	3.5%
NEx Production – Actual 2024	165	3.7%	3.5%	159	3.8%	3.5%
NEx Production – Budgeted 2025	157	3.3%	3.2%	153	3.4%	3.5%
NEx Non-Production – Budgeted 2024	164	3.5%	3.5%	164	3.5%	3.5%
NEx Non-Production – Actual 2024	161	3.6%	3.5%	153	3.7%	3.5%
NEx Non-Production – Budgeted 2025	153	3.3%	3.0%	148	3.4%	3.2%
Exempt – Budgeted 2024	167	3.5%	3.5%	167	3.5%	3.5%
Exempt – Actual 2024	162	3.7%	3.5%	153	3.9%	3.5%
Exempt – Budgeted 2025	155	3.3%	3.5%	149	3.4%	3.5%
Management – Budgeted 2024	163	3.6%	3.5%	163	3.6%	3.5%
Management – Actual 2024	159	3.6%	3.5%	146	4.0%	3.5%
Management – Budgeted 2025	152	3.4%	3.2%	146	3.5%	3.5%

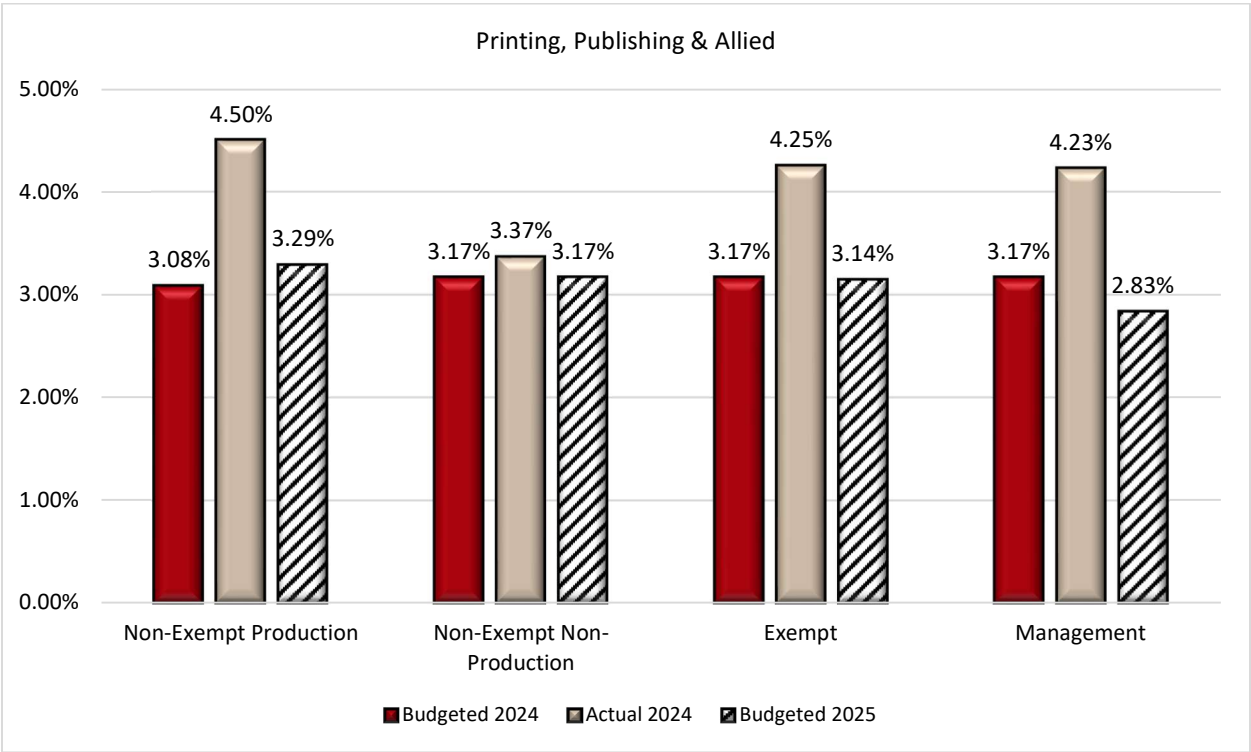
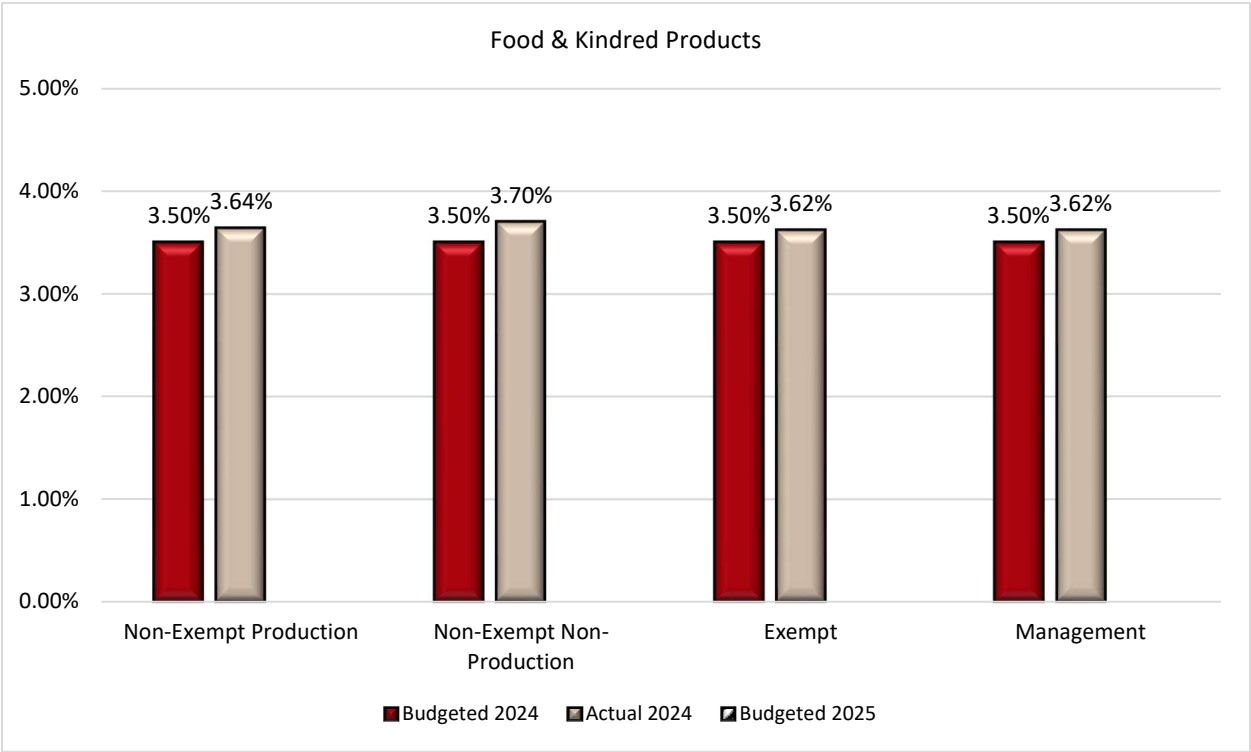
Exempt – Employees exempt from the overtime provisions of the Fair Labor Standards Act (FLSA).  
Non-Exempt Non-Production – Non-production employees subject to the overtime provisions of the FLSA.  
Non-Exempt Production – Employees in production-oriented positions and subject to the overtime provisions of the FLSA.  
Temporary (“Temps”) – Workers hired (either contracted through an employment agency or hired directly) to work for a specific period of time.

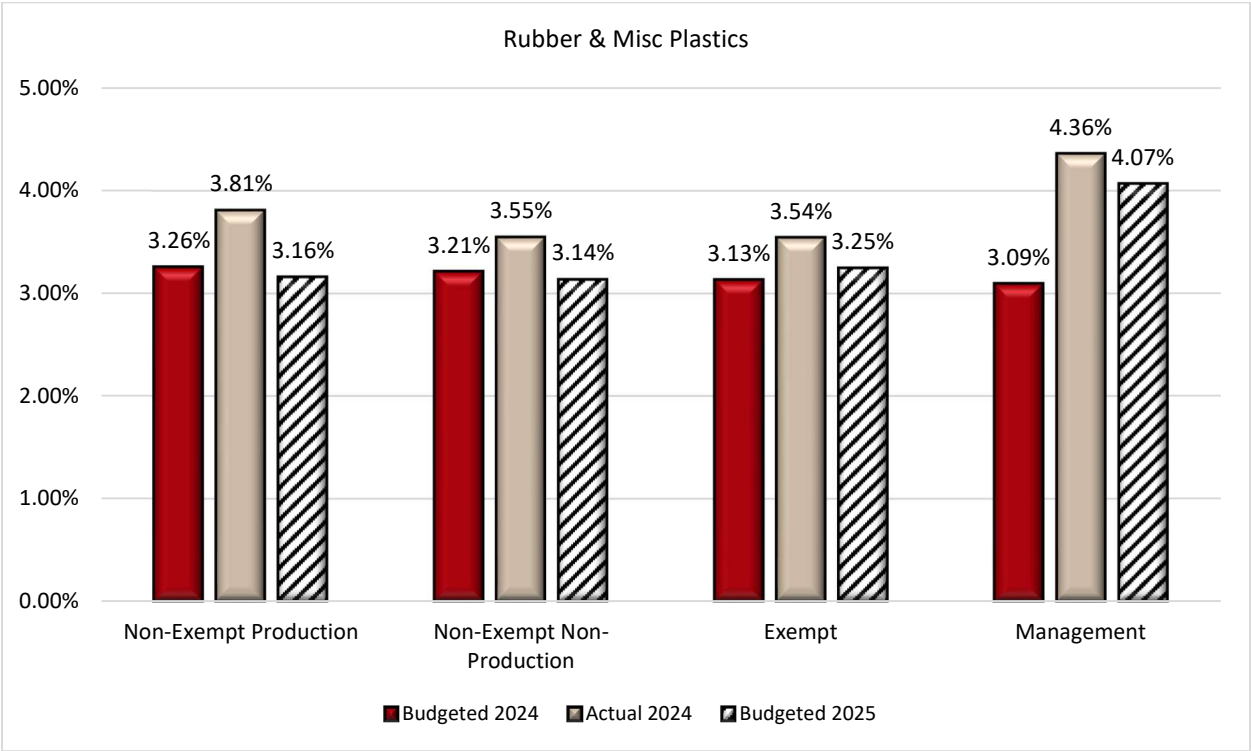
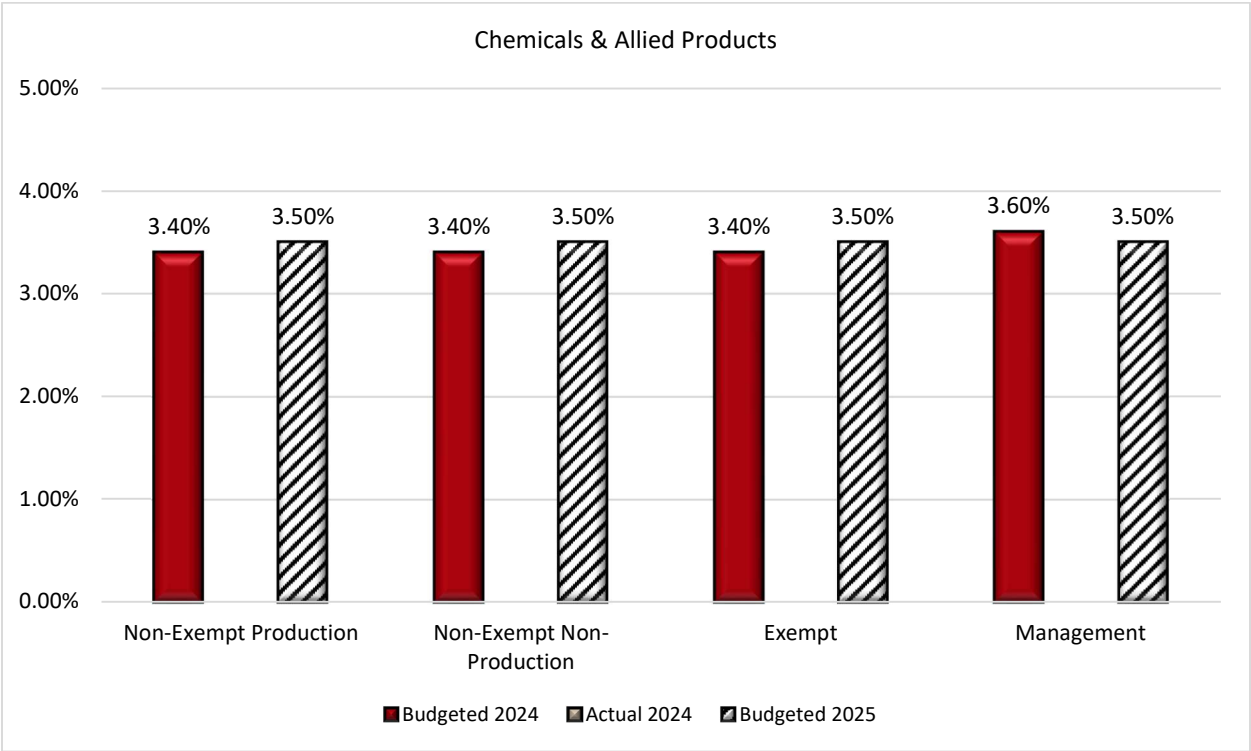


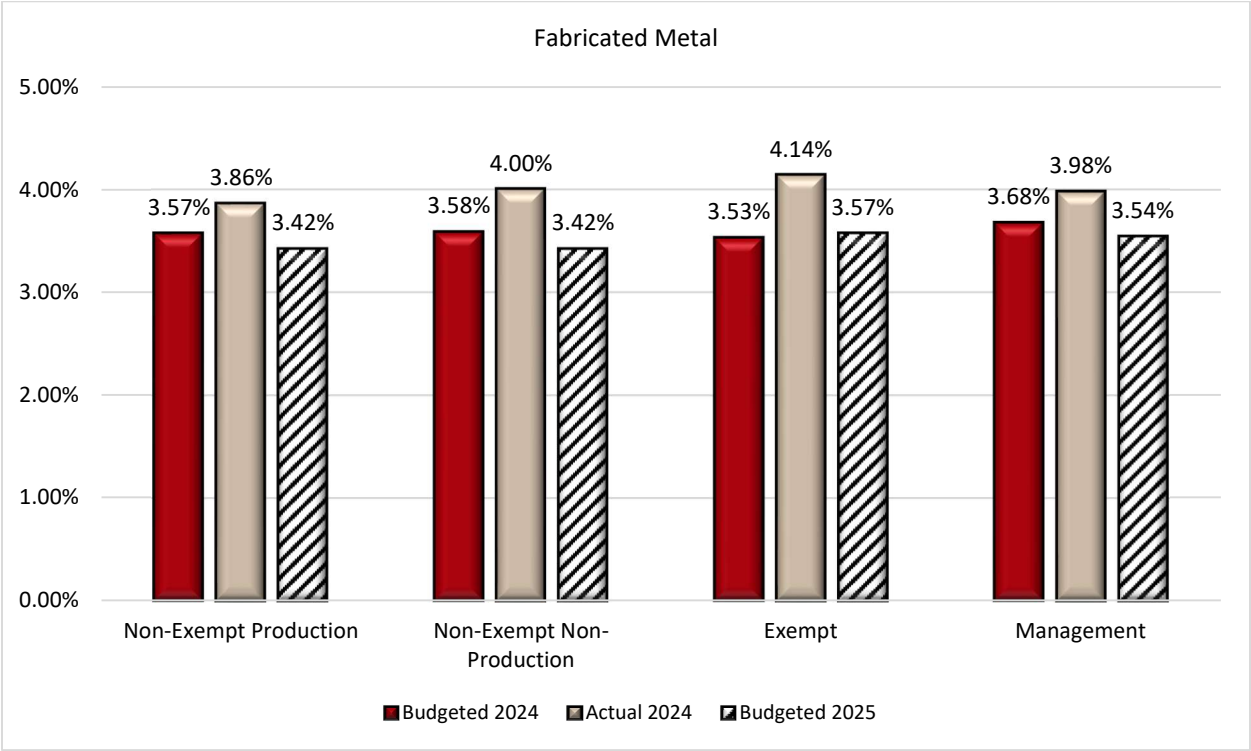
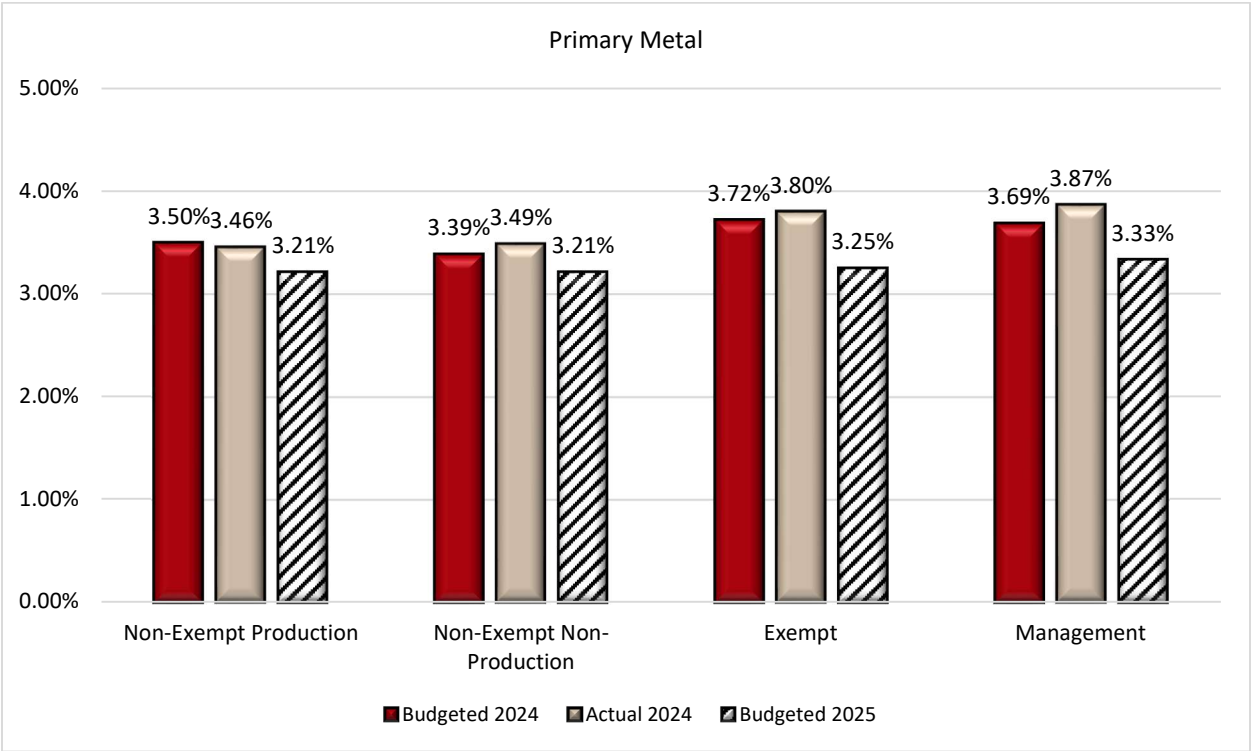


Average Percent Wage/Salary Adjustment by Industry

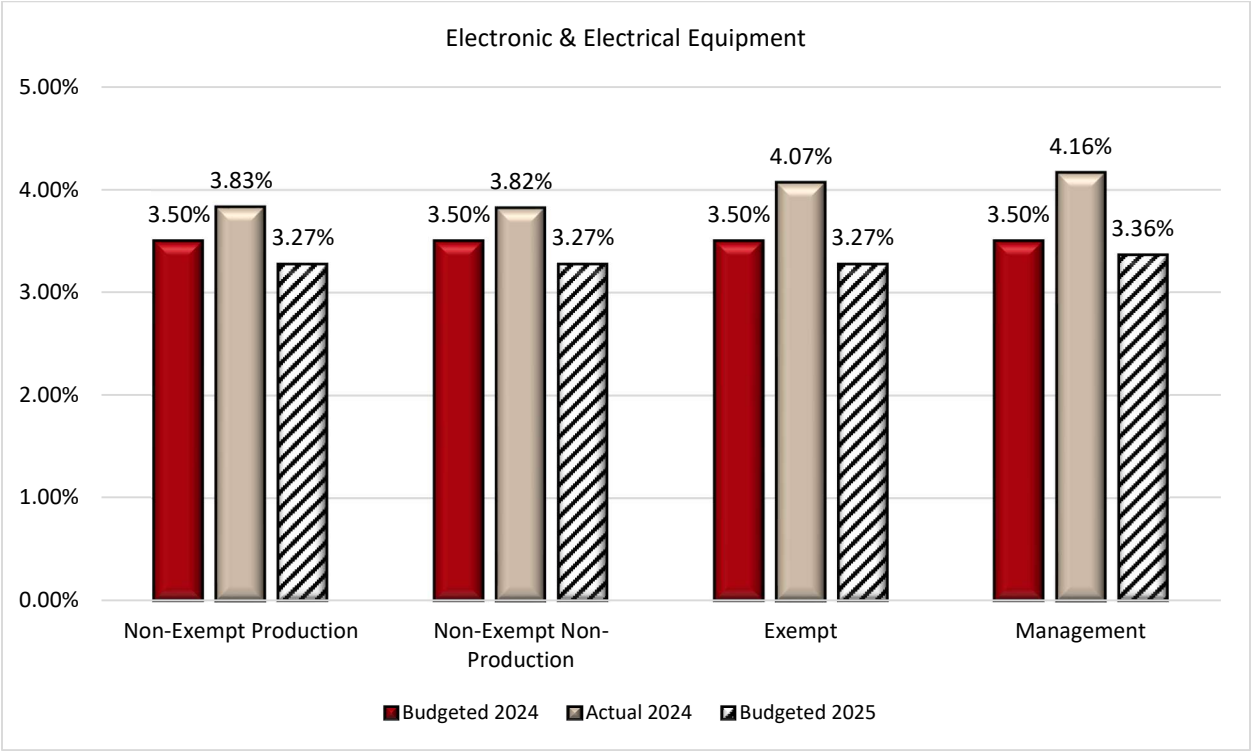
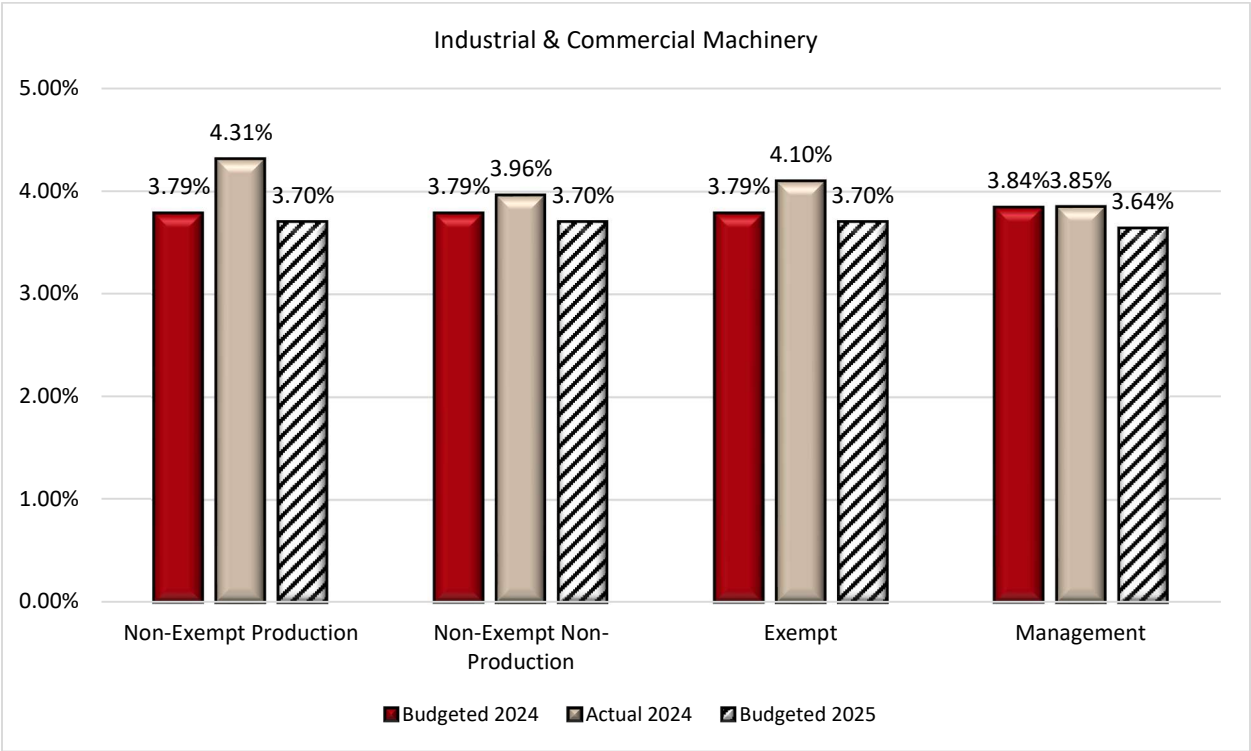
The following nine charts indicate the average percent pay adjustments, including (as reportable) budgeted 2024, actual 2024 and budgeted 2025, by industry. Average budgeted 2024 pay increase data are from last year's results. Adjustments exclude zero percent reported adjustments. Results are not shown for industries where fewer than five participants reported information.

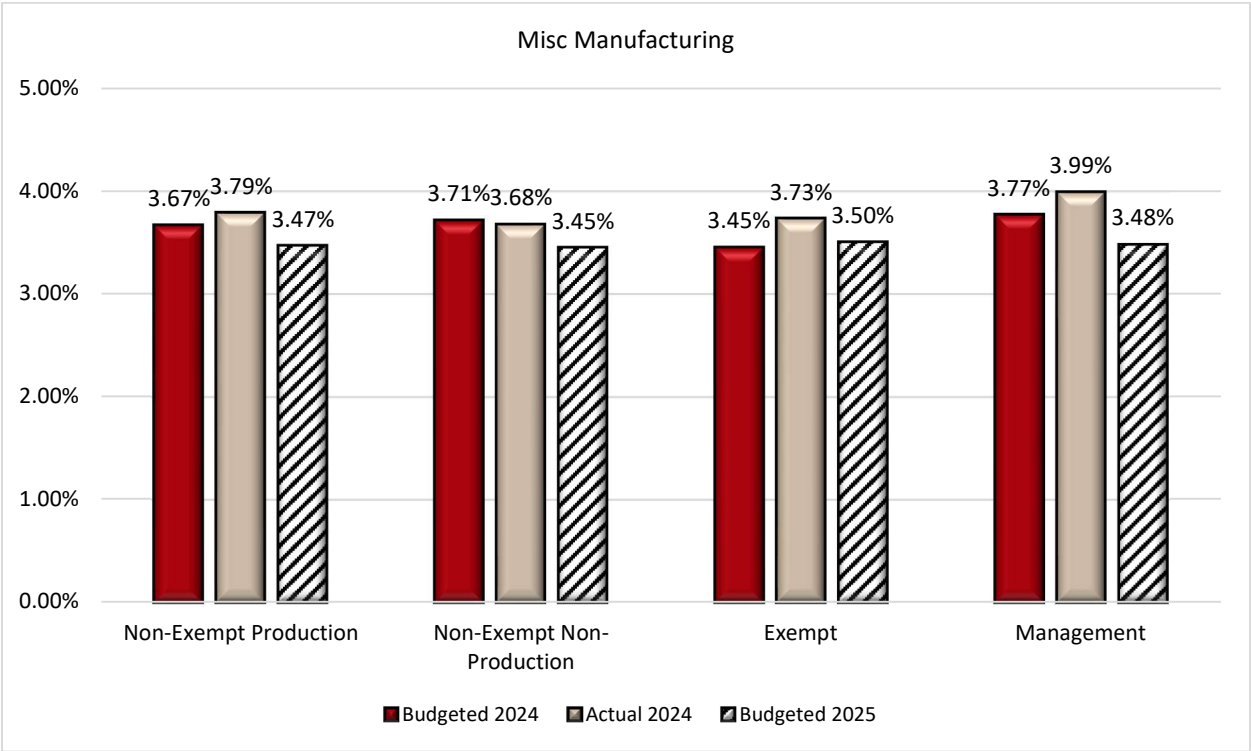












## Workforce Trends

### Leadership Skills

Participants rank ordered a set of eight leadership skills, plus an Other category, in a manner that reflects their company's leadership development objectives and priorities. The ranking was completed by assigning "1" to the most needed (and "8" or "9" to the least needed) in the set. Additionally, seven of the responding firms used the Other category to add another skill to their ranking set.

The table below displays the results of the ranking, where the lowest "average score" indicates the highest number of "1's" (most needed skill), "2's" and "3's" were awarded.

Leadership Skill	Average Score
Communicates clearly	3.05
Solves problems	3.47
Drives for results	3.66
Takes initiative	4.82
Builds relationships	5.17
Champions change	5.30
Trains others effectively	5.33
Sets goals	5.42

The Other skills noted and ranked by participants are listed in the table that follows. Note that every table row represents the Other description and ranking of one participant.

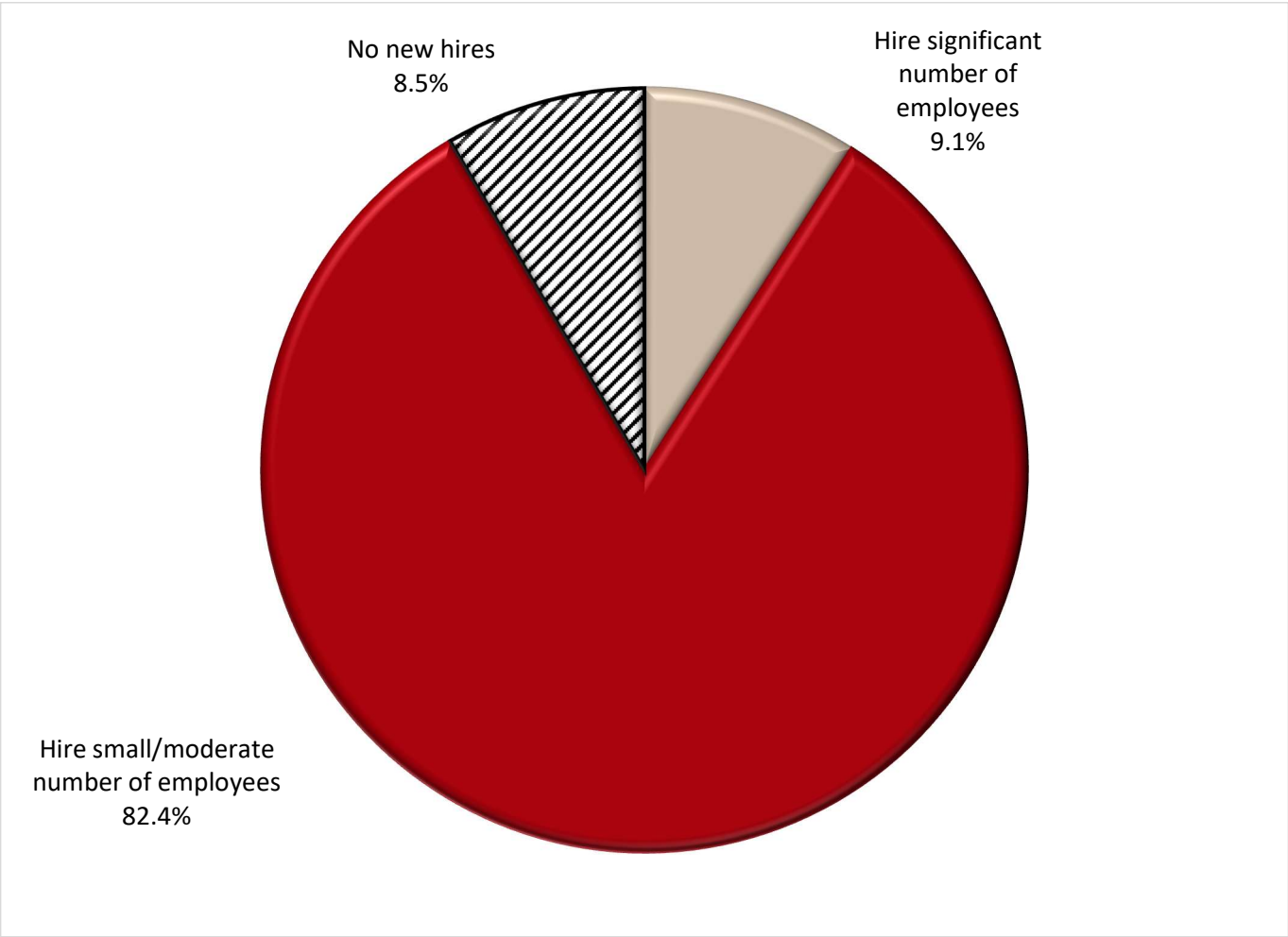
Other Leadership Skill	Ranking
Builds trust up, down, and across	1.00
Collaboration	1.00
Manages with empathy	1.00
Emotional intelligence in the workplace	2.00
Accountability	9.00
Strategic planning	9.00
Treats employees respectfully	9.00

Workforce Practices

*Hiring Plans in 2025*

Hiring plans in 2025 have shifted just slightly from 2024. The percent of those who are planning no new hires for this year has decreased from 9.9% to 8.5%. Plans to hire a significant number of employees are reported by 9.1% for 2025, down slightly from 9.3% in 2024, while plans to hire a small/moderate number are up from 80.8% in 2024 to 82.4% in 2025.

The chart below summarizes the 2025 hiring plans.

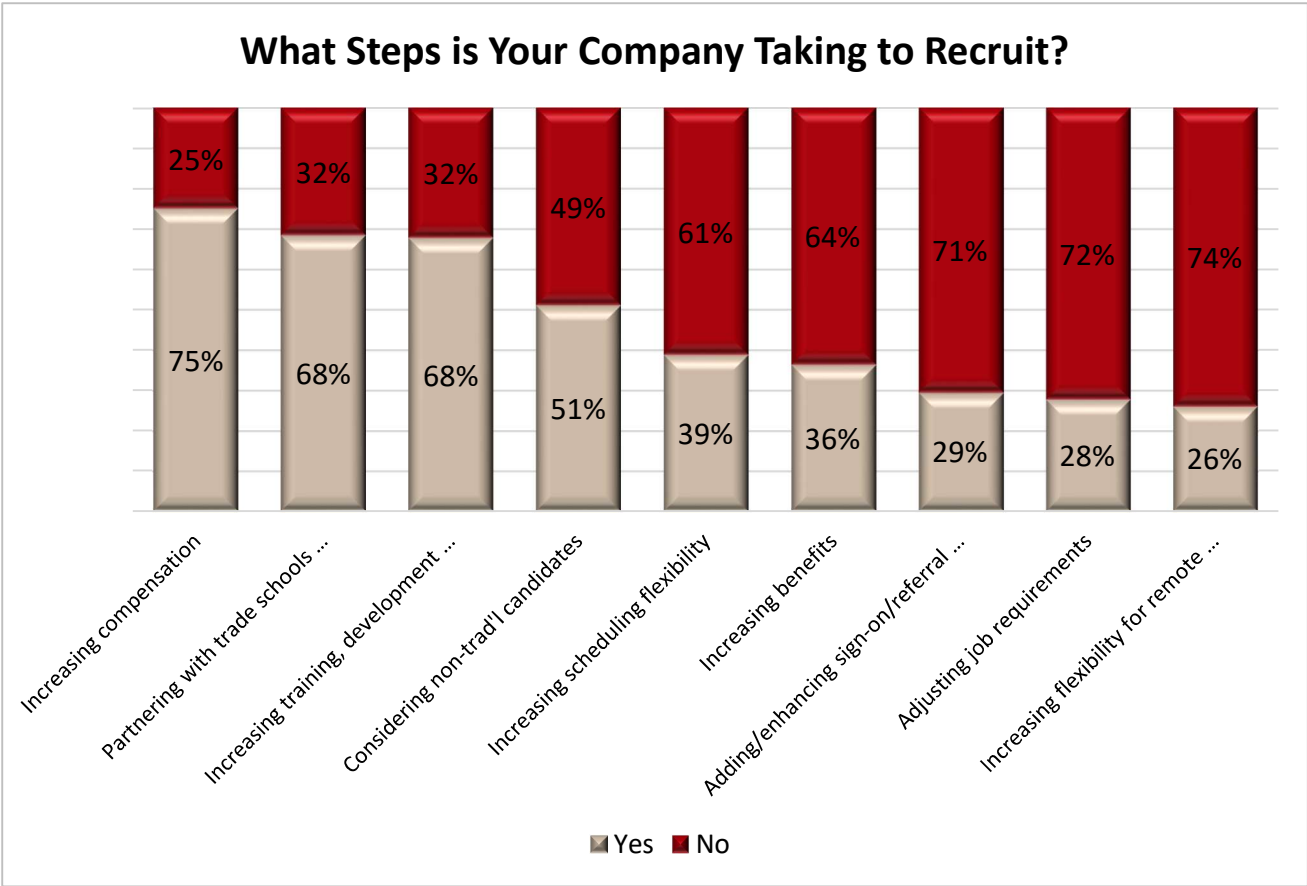


Steps Being Taken to RECRUIT Employees

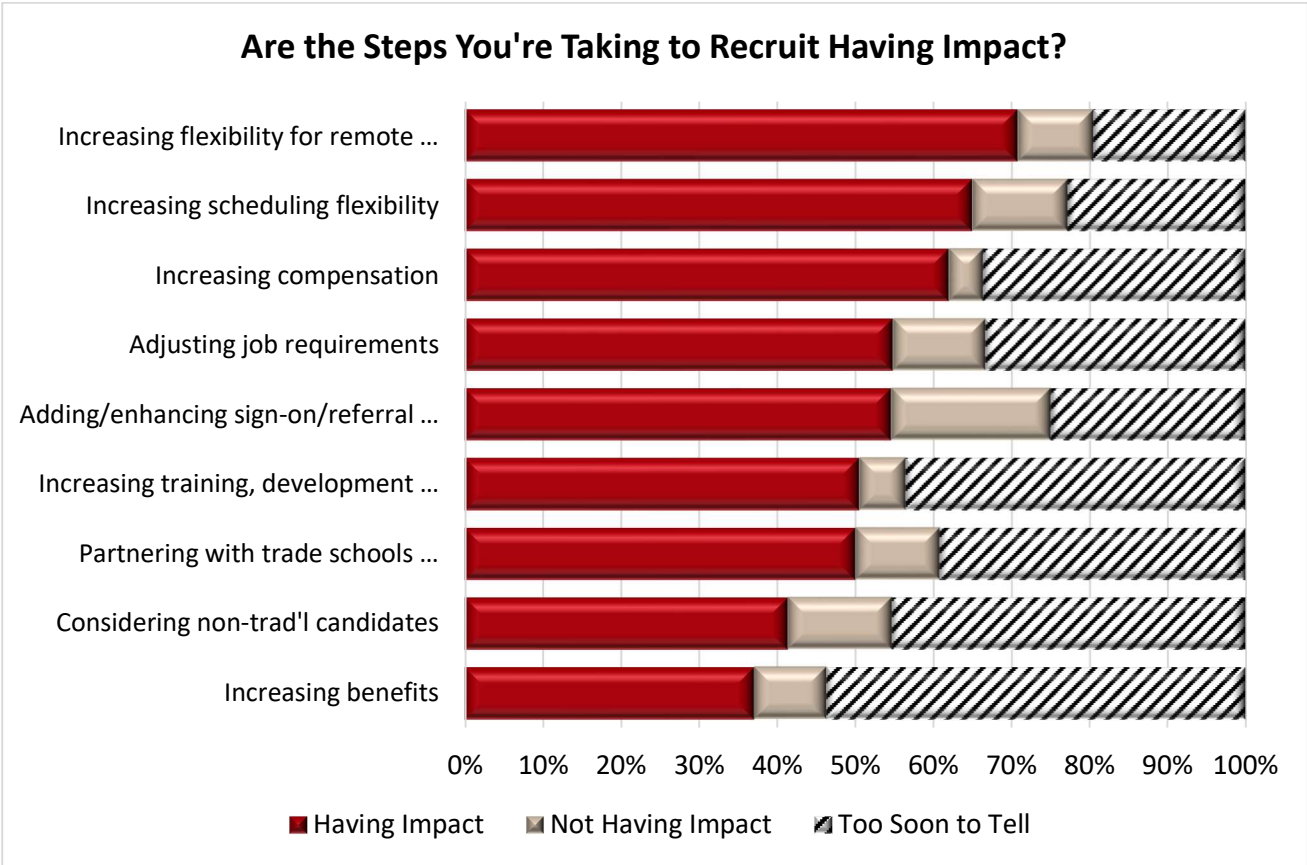
Participants this year responded to a list of potential steps (noted below) being taken to recruit employees in the current labor market, indicating which ones they are taking, sharing any “other” steps they are pursuing and reporting whether their steps are having an impact on recruitment.

- Increasing compensation
- Increasing benefits
- Increasing scheduling flexibility
- Increasing flexibility for remote work
- Increasing training, development and/or mentoring opportunities
- Adding or enhancing sign-on or referral bonuses
- Adjusting job requirements
- Considering non-traditional candidates
- Partnering with trade schools, colleges or other entities

The chart immediately below summarizes the prevalence of the different steps among participating companies and the chart that follows it highlights their responses about whether each step taken is having an impact on recruiting success. Observations about the findings are presented on the next page.







Other Recruiting Steps Reported:

- Condensed work schedules: 4/10 & 9/81 - 1 participant (having impact).
- More passive sourcing of candidates - 1 participant (impact not reported).
- Relocation programs - 1 participant (having impact).
- Using high caliber temp agency for machinists - 1 participant (having impact).
- Utilizing temp to hire – 1 participant (impact not reported).

The top five steps taken to recruit employees in 2025 are the same ones that we saw in 2024, but we see some shifts. *Increasing compensation* increased the most in frequency of reporting, from 71% to 75%. The steps with greatest impact are also the same as those reported in 2024 with a few switches in their order. We do observe that the percent of companies reporting these steps as having an impact on recruiting has dropped for the majority of them (with *scheduling flexibility* dropping the most from 82% to 65%). Only *adjusting job requirements* showed an increase in reported impact, from 49% to 55%.

We see the industry continuing to work at identifying and embracing opportunities for flexibility, but perhaps as flexible and remote work arrangements become more common their impact on recruiting success is less than what it was a year or two ago. Compensation continues to be the most popular step, albeit with its reported impact slightly reduced.

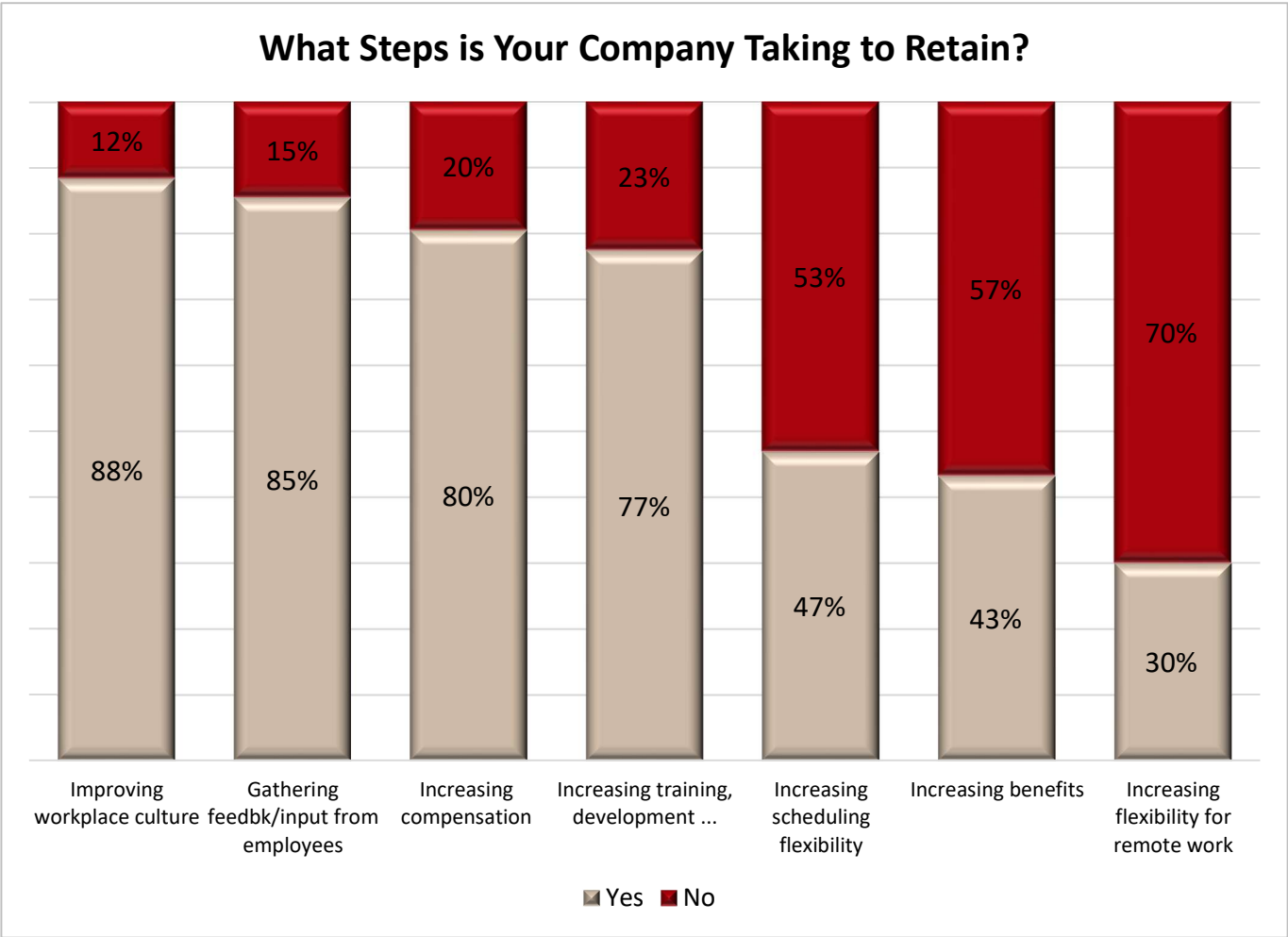
Most Popular Steps	% Firms Reporting	Steps with Greatest Impact	% Firms Reporting
Increasing compensation	75%	Increasing flexibility for remote ...	71%
Partnering with trade schools ...	68%	Increasing scheduling flexibility	65%
Increasing training, development ...	68%	Increasing compensation	62%
Considering non-trad'l candidates	51%	Adjusting job requirements	55%
Increasing scheduling flexibility	39%	Adding/enhancing sign-on/referral ...	55%

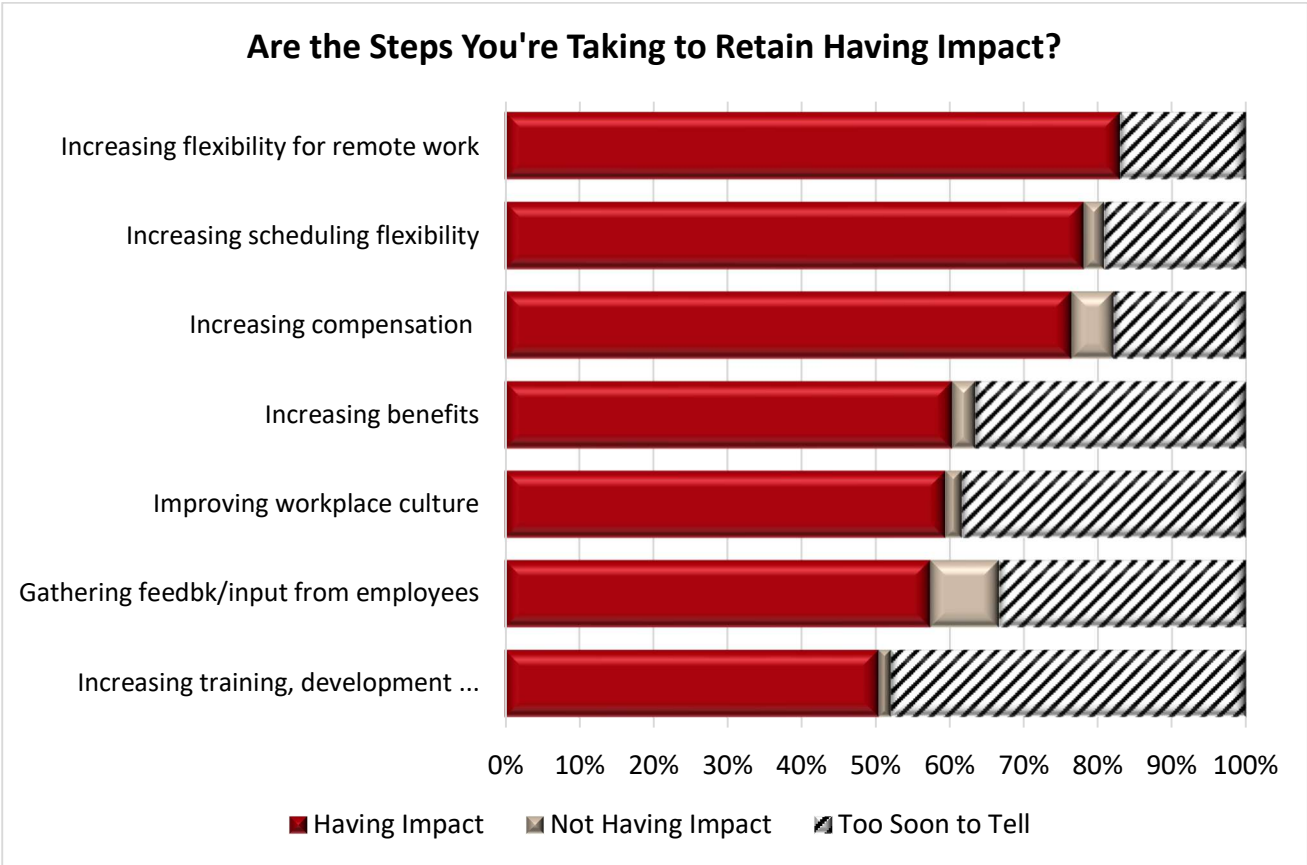
Steps Being Taken to RETAIN Employees

Participants this year responded to a list of potential steps (noted below) being taken to retain employees in the current labor market, indicating which ones they are taking, sharing any “other” steps they are pursuing and reporting whether their steps are having an impact on retention.

- Increasing compensation
- Increasing benefits
- Increasing scheduling flexibility
- Increasing flexibility for remote work
- Increasing training, development and/or mentoring opportunities
- Gathering feedback and input from employees
- Improving workplace culture

The chart immediately below summarizes the prevalence of the different steps among participating companies and the chart that follows it highlights their responses about whether each step taken is having an impact on retention success. Observations about the findings are presented on the next page.





Other Retention Steps Reported:

- Improved leadership training - 1 participant (having impact).
- Increasing communication - 1 participant (too soon to tell).

In comparing the steps being taken to retain employees in 2025 to those from 2024, we see the top 5 choices remaining the same, with some shuffling in their order. We find *increasing compensation* moving from 4<sup>th</sup> place to 3<sup>rd</sup> and *increasing training, development and/or mentoring opportunities* from 3<sup>rd</sup> place to 4<sup>th</sup>. In examining the steps having the highest impact on retention, we see *increasing flexibility for remote work* gains 3% and moves from 2<sup>nd</sup> into 1<sup>st</sup> place. *Gathering feedback/input from employees*, while holding its place as the 2<sup>nd</sup> most popular step being taken, drops out of the top five steps with greatest impact and has been replaced there by *increasing benefits*.

It is interesting to see, as we did in 2024, that the most popular steps being taken to retain employees – improving workplace culture and gathering employee input – are not the steps reported as delivering the greatest impact on retention. We find it hard to argue against efforts to gather employee input and improve the culture; it may be that these initiatives present their own challenges or that their impact is simply more difficult to measure. Rewards – in this case compensation and benefits – seem to continually hold a key place in the retention equation, though they’re rarely at the top of either list (popularity or impact).

Most Popular Steps		Steps with Greatest Impact	
	% Firms Reporting		% Firms Reporting
Improving workplace culture	88%	Increasing flexibility for remote work	83%
Gathering feedback/input from employees	85%	Increasing scheduling flexibility	78%
Increasing compensation	80%	Increasing compensation	76%
Increasing training, development ...	77%	Increasing benefits	60%
Increasing scheduling flexibility	47%	Improving workplace culture	59%

*Positions Affected by Compensation Increases*

Those participants who reported increasing compensation as a step being taken to recruit or retain employees in today's labor market were also asked which positions are being affected by the increase. 64.4% of responding organizations reported that the increase of compensation affects all positions company-wide. 35.6% reported that the increase affects certain positions and skills. The second group was asked to note which positions and skills are impacted by the increases; these are reported below either in the table (which features the positions and skills reported by 2 or more participants) or the list of other mentions that follows.

Production positions were the most frequently reported by a substantial margin.

Top Reported Positions and Skills	# Firms Reporting
Hourly/Direct Labor Production	15
Machinists/Machine Operators	5
Maintenance	3
Technical	3
Engineers	2
Forklift Operators	2
Warehouse	2
Welders	2

Other Positions and Skills (mentioned by 1 participant each):

- Aircraft Mechanic
- Assemblers
- Customer Service
- IT Positions
- Operations Positions
- Painters
- Press Assistant/Operator
- Product Managers
- Route Delivery
- Shipping/Receiving
- Skilled Shop Positions

Types of Training Being Offered

Those participants who reported increasing training and development opportunities as a step being taken to improve recruitment and/or retention in today's labor market were also asked about the type(s) of training being offered by their companies. A summary of the training offerings reported is presented in the table below.

Type of Training Being Offered	% Firms Reporting
Management/leadership	83%
Technical skills	82%
Compliance/quality	63%
Soft skills	61%
Problem solving	52%
Other	7%

Other Training Being Offered:

- Mentorship and coaching - 1 participant.
- Safety training - 1 participant.

Ideal Number of Direct Reports for Manufacturing Leadership Roles

Participants were asked to report what their company considers to be an ideal number of direct reports for three manufacturing leadership positions. Their responses are presented in the table below. Note that responses of “0” direct reports are not included in the table.

	# Firms Reporting	25 <sup>th</sup> Percentile	Average	Median	75 <sup>th</sup> Percentile
Manager (e.g. Manufacturing Manager, Operations Manager, Production Manager, etc.)	127	5	10	7	10
Supervisor (e.g. Production Supervisor, Shift Supervisor, etc.)	126	8	14	10	20
Lead (e.g., Assembly Lead, Welding Lead, Machine Operations Lead, etc.)	101	5	8	8	10



## Survey Participants

### Alphabetical Participant List

7-SIGMA Incorporated	EMERGE Enterprises
Aagard	Emerson
Action Plastics, Inc.	Engage Technologies Corporation
Advanced Molding Technologies, LLC	Engineered Products Company
Aggressive Hydraulics, Inc.	EPG Companies
Air Quality Engineering	FasTest Inc.
Ajax Metal Forming Solutions, LLC	Featherlite Trailer Manufacturing
American Flexible Products	Federal Package Network, Inc.
American Time and Signal Company	Garfield Truss Company
Analog Technologies Corporation	Gemini, Inc.
Andersen Corporation	GF Building Flow Solutions dba Uponor, Inc.
Anderson Dahlen	Global Finishing Solutions
Andrew Tool & Machining Company	GLS Companies Inc. dba ENPOINTE
apg Cash Drawer	Gopher Resource
Arc Precision	Graco Inc.
Astro Metal Craft	H.B. Fuller Company
Atlas Manufacturing	HBI Amerilab Technologies
Atrix International, Inc.	Health Systems Cooperative Laundries
Aurora Pharmaceutical	Horton Inc.
Aveda Corporation	ICA Corporation
AVEKA Group, Inc.	IDC Group, Inc.
Banner Engineering	ILLUME
Bauer Welding & Metal Fabricators, Inc.	Industrial Netting Inc.
Beacon EmbeddedWorks	In'Tech Industries Inc.
Bermo, Inc.	Integreon Global, Inc.
Birchwood Laboratories	Intek Plastics LLC
Bondhus Corporation	International Precision Machining, Inc.
Branches LLC	IPS Cranes, Inc.
BTD Manufacturing Inc.	J&B Group, Inc.
C4 Welding, Inc.	Japs-Olson Company, LLC
Cannon Equipment	Jet Edge Waterjet Systems
Carley Foundry Inc.	John Henry Foster MN Inc.
Chandler Exhibits, Inc.	Johnson Screens, Inc.
Chandler Industries LLC	Jonaco Machine
Clarus Medical	Kasco Marine, Inc.
Clow Stamping Company	Kendall Howard
Conagra Brands	Kurt Manufacturing Company
Conagra Brands - Mankato	La Machine Shop, Inc.
Conductive Containers Inc.	Lake Air Products
Continental Machines dba DoALL Sawing Products	LasX Industries, Inc.
Cretex Companies Inc.	Lexington Manufacturing
Croix Gear	LimPro Metal Fabrication
CWMF Corporation	Lincoln Industries of MN
Daikin Applied Americas, Inc.	LISI MEDICAL Remmele
Data Metalcraft, Inc.	Loram Maintenance of Way
DCI, Inc.	Lowell Inc.
Diamond Graphics	Mactech, Inc.
Distinctive Floral Company dba Len Busch Roses	Marshall Manufacturing Company
Dynamic Group	Mate Precision Technologies
EDCO Products	Mathias Die Company
Electronics Systems Inc.	Mercury
Elemet Group	Micro-Matics Inc.

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Ellicott Dredge Technologies  
Mikros Engineering, Inc.  
Miller Manufacturing  
Minnesota Grinding  
Modern Molding Inc.  
Modernistic, Inc.  
MRG Tool and Die  
National Checking Company  
Nortech Systems Inc.  
nVent  
Nystrom  
Olsen Tool & Plastics, Inc.  
Olympus Corporation of the Americas  
Opportunity Partners  
Pallet Service Corporation  
Park Industries  
Phillips & Temro Industries, Inc.  
PHS West LLC  
Pinnacle Climate Technologies  
Placon  
Plymouth Industries, Inc.  
PNE Inc. dba IRD Glass dba IRD Ceramics  
Polaris Inc.  
Precision Associates, Inc.  
Precision Coatings, Inc.  
Precision Gasket Company dba PGC  
Premium Waters, Inc.  
Pride Solutions LLC  
Process Displays LLC  
Product Development Solutions, Inc.  
Production Engineering Corporation  
Rapid Packaging, Inc.  
RC Smith Company  
Rice Lake Weighing Systems  
Rotation Engineering & Manufacturing

Midwest Rubber Service and Supply Company  
Satellite Industries Inc.  
Schreiber Foods  
Senneca Holdings  
Showdown Displays  
Sightline Commercial Solutions  
SkyWater Technology  
Sportech, LLC  
SPS Works  
St Croix Forge Inc. - Mustad USA  
Stylmark, Inc.  
T.O. Plastics  
TCLAD, Inc.  
Tennant Company  
Tescom Corporation  
The Imagine Group  
The Pinske Edge  
The Specialty Manufacturing Company  
Tjernlund Products, Inc.  
TT Electronics  
Twin City Die Castings Company  
Twin City Plating  
United States Distilled Products Company  
Unity Precision Manufacturing  
Velocity  
Viking Engineering  
Wagner SprayTech  
Whirltrons, Inc.  
Wilson Tool International, Inc.  
Wilson Wolf Manufacturing, LLC  
Windings, Inc.  
Wipaire  
Zero Zone Refrigeration LLC  
Zero-Max  
Zirc Dental Products

**Total Participant Count: 174**

Participants by Industry Type

**Food & Kindred Products (5 participants)**

Conagra Brands - Mankato	Schreiber Foods
J&B Group, Inc.	United States Distilled Products Company
Premium Waters, Inc.	

**Lumber & Wood except Furniture (3 participants)**

Garfield Truss Company	Pallet Service Corporation
Lexington Manufacturing	

**Furniture & Fixtures (2 participants)**

Chandler Exhibits, Inc.	RC Smith Company
-------------------------	------------------

**Printing, Publishing & Allied (9 participants)**

Conagra Brands	National Checking Company
Diamond Graphics	Process Displays LLC
GLS Companies Inc. dba ENPOINTE	SPS Works
Japs-Olson Company, LLC	The Imagine Group
Modernistic, Inc.	

**Chemicals & Allied Products (5 participants)**

Aurora Pharmaceutical	H.B. Fuller Company
Aveda Corporation	HBI Amerilab Technologies
AVEKA Group, Inc.	

**Rubber & Plastic Products (23 participants)**

7-SIGMA Incorporated	Modern Molding Inc.
Action Plastics, Inc.	Olsen Tool & Plastics, Inc.
Advanced Molding Technologies, LLC	Placon
American Flexible Products	Precision Associates, Inc.
Conductive Containers Inc.	Precision Gasket Company dba PGC
Dynamic Group	Pride Solutions LLC
GF Building Flow Solutions dba Uponor, Inc.	Satellite Industries Inc.
Industrial Netting Inc.	Sportech, LLC
In'Tech Industries Inc.	T.O. Plastics
Intek Plastics LLC	Velocity
Midwest Rubber Service and Supply Company	Zirc Dental Products
Mikros Engineering, Inc.	

**Primary Metal Industries (7 participants)**

Carley Foundry Inc.	IDC Group, Inc.
Clow Stamping Company	Johnson Screens, Inc.
Cretex Companies Inc.	Twin City Plating
Gopher Resource	

**Fabricated Metal Products (53 participants)**

- |   |                                      |
|---|--------------------------------------|
| Air Quality Engineering                 | Lake Air Products                    |
| Ajax Metal Forming Solutions, LLC       | LimPro Metal Fabrication             |
| Anderson Dahlen                         | Lincoln Industries of MN             |
| Arc Precision                           | Mate Precision Technologies          |
| Astro Metal Craft                       | Mathias Die Company                  |
| Atlas Manufacturing                     | Mercury                              |
| Bauer Welding & Metal Fabricators, Inc. | Micro-Matics Inc.                    |
| Bermo, Inc.                             | Minnesota Grinding                   |
| Bondhus Corporation                     | MRG Tool and Die                     |
| BTD Manufacturing Inc.                  | nVent                                |
| C4 Welding, Inc.                        | Nystrom                              |
| Cannon Equipment                        | Precision Coatings, Inc.             |
| Chandler Industries LLC                 | Product Development Solutions, Inc.  |
| Croix Gear                              | Production Engineering Corporation   |
| Data Metalcraft, Inc.                   | Rotation Engineering & Manufacturing |
| DCI, Inc.                               | Senneca Holdings                     |
| EDCO Products                           | Sightline Commercial Solutions       |
| Elemet Group                            | St Croix Forge Inc. - Mustad USA     |
| EMERGE Enterprises                      | Stylmark, Inc.                       |
| FasTest Inc.                            | Tescom Corporation                   |
| Gemini, Inc.                            | The Specialty Manufacturing Company  |
| Global Finishing Solutions              | Tjernlund Products, Inc.             |
| ICA Corporation                         | Twin City Die Castings Company       |
| International Precision Machining, Inc. | Unity Precision Manufacturing        |
| Jonaco Machine                          | Whirltrons, Inc.                     |
| Kendall Howard                          | Wipaire                              |
| La Machine Shop, Inc.                   |                                      |

**Industrial Machinery & Computer Equipment (16 participants)**

- |  |                                 |
|--|---------------------------------|
| Aagard   | Jet Edge Waterjet Systems       |
| Atrix International, Inc.                      | Park Industries                 |
| Continental Machines dba DoALL Sawing Products | PHS West LLC                    |
| CWMF Corporation                               | Rice Lake Weighing Systems      |
| Daikin Applied Americas, Inc.                  | Tennant Company                 |
| Ellicott Dredge Technologies                   | Viking Engineering              |
| Engage Technologies Corporation                | Wilson Tool International, Inc. |
| IPS Cranes, Inc.                               | Zero Zone Refrigeration LLC     |

**Electronic & Other Electrical (12 participants)**

- |                                  |                       |
|----------------------------------|-----------------------|
| American Time and Signal Company | EPG Companies         |
| Analog Technologies Corporation  | LasX Industries, Inc. |
| Banner Engineering               | Nortech Systems Inc.  |
| Beacon EmbeddedWorks             | SkyWater Technology   |
| Electronics Systems Inc.         | TCLAD, Inc.           |
| Engineered Products Company      | Windings, Inc.        |

**Transportation Equipment (3 participants)**

- |                                   |              |
|-----------------------------------|--------------|
| Featherlite Trailer Manufacturing | Polaris Inc. |
| Loram Maintenance of Way          |              |

**Measuring, Analyzing & Controlling Instruments (4 participants)**

Clarus Medical	Olympus Corporation of the Americas
Emerson	TT Electronics

**Misc Manufacturing Industries (32 participants)**

Aggressive Hydraulics, Inc.	LISI MEDICAL Remmele
Andersen Corporation	Lowell Inc.
Andrew Tool & Machining Company	Mactech, Inc.
apg Cash Drawer	Marshall Manufacturing Company
Birchwood Laboratories	Miller Manufacturing
Branches LLC	Opportunity Partners
Distinctive Floral Company dba Len Busch Roses	Phillips & Temro Industries, Inc.
Federal Package Network, Inc.	Pinnacle Climate Technologies
Graco Inc.	Plymouth Industries, Inc.
Health Systems Cooperative Laundries	PNE Inc. dba IRD Glass dba IRD Ceramics
Horton Inc.	Rapid Packaging, Inc.
ILLUME	Showdown Displays
Integreon Global, Inc.	The Pinske Edge
John Henry Foster MN Inc.	Wagner SprayTech
Kasco Marine, Inc.	Wilson Wolf Manufacturing, LLC
Kurt Manufacturing Company	Zero-Max



Participants by Number of Company Employees

Note: Participants were classified into an employee size group according to the total number of employees reported. Size groups were structured to establish five groups of approximately equal numbers of participants and by significant breaks in size. Each group represents roughly twenty percent of all survey participants.

**Group 1: Less than 50 Total Employees (32 participants)**

7-SIGMA Incorporated	LimPro Metal Fabrication
Action Plastics, Inc.	Marshall Manufacturing Company
Air Quality Engineering	Mercury
American Flexible Products	Micro-Matics Inc.
Andrew Tool & Machining Company	Minnesota Grinding
Arc Precision	Olsen Tool & Plastics, Inc.
Atrix International, Inc.	PHS West LLC
Branches LLC	Precision Coatings, Inc.
EMERGE Enterprises	Pride Solutions LLC
EPG Companies	RC Smith Company
Garfield Truss Company	Rotation Engineering & Manufacturing
Industrial Netting Inc.	SPS Works
International Precision Machining, Inc.	The Pinske Edge
IPS Cranes, Inc.	Twin City Plating
Jet Edge Waterjet Systems	Unity Precision Manufacturing
La Machine Shop, Inc.	Wilson Wolf Manufacturing, LLC

**Group 2: 50 to 99 Total Employees (43 participants)**

Ajax Metal Forming Solutions, LLC	Kendall Howard
American Time and Signal Company	LasX Industries, Inc.
Analog Technologies Corporation	Lincoln Industries of MN
apg Cash Drawer	Lowell Inc.
Astro Metal Craft	Mactech, Inc.
AVEKA Group, Inc.	Mathias Die Company
Bauer Welding & Metal Fabricators, Inc.	Midwest Rubber Service and Supply Company
Beacon EmbeddedWorks	Modernistic, Inc.
Birchwood Laboratories	MRG Tool and Die
C4 Welding, Inc.	Pinnacle Climate Technologies
Cannon Equipment	Plymouth Industries, Inc.
Clarus Medical	PNE Inc. dba IRD Glass dba IRD Ceramics
Conductive Containers Inc.	Precision Gasket Company dba PGC
Continental Machines dba DoALL Sawing Products	Product Development Solutions, Inc.
Croix Gear	Production Engineering Corporation
CWMF Corporation	Rapid Packaging, Inc.
Data Metalcraft, Inc.	St Croix Forge Inc. - Mustad USA
Ellicott Dredge Technologies	Tjernlund Products, Inc.
FasTest Inc.	Viking Engineering
Federal Package Network, Inc.	Zero-Max
In'Tech Industries Inc.	Zirc Dental Products
Kasco Marine, Inc.	

**Group 3: 100 to 199 Total Employees (37 participants)**

- |                                    |                                |
|------------------------------------|--------------------------------|
| Advanced Molding Technologies, LLC | IDC Group, Inc.                |
| Aggressive Hydraulics, Inc.        | ILLUME                         |
| Atlas Manufacturing                | Integreon Global, Inc.         |
| Aurora Pharmaceutical              | John Henry Foster MN Inc.      |
| Bermo, Inc.                        | Jonaco Machine                 |
| Bondhus Corporation                | Mikros Engineering, Inc.       |
| Chandler Exhibits, Inc.            | Modern Molding Inc.            |
| Conagra Brands                     | National Checking Company      |
| DCI, Inc.                          | Pallet Service Corporation     |
| Dynamic Group                      | Senneca Holdings               |
| EDCO Products                      | Sightline Commercial Solutions |
| Electronics Systems Inc.           | Stylmark, Inc.                 |
| Elemet Group                       | T.O. Plastics                  |
| Engage Technologies Corporation    | TCLAD, Inc.                    |
| Engineered Products Company        | Tescom Corporation             |
| GLS Companies Inc. dba ENPOINTE    | Twin City Die Castings Company |
| HBI Amerilab Technologies          | Whirltronics, Inc.             |
| Horton Inc.                        | Windings, Inc.                 |
| ICA Corporation                    |                                |

**Group 4: 200 to 499 Total Employees (34 participants)**

- |  |  |
|--|--|
| Aagard   | LISI MEDICAL Remmele                     |
| Anderson Dahlen                                | Mate Precision Technologies              |
| Aveda Corporation                              | Miller Manufacturing                     |
| Carley Foundry Inc.                            | Nortech Systems Inc.                     |
| Chandler Industries LLC                        | Nystrom                                  |
| Clow Stamping Company                          | Opportunity Partners                     |
| Conagra Brands - Mankato                       | Park Industries                          |
| Diamond Graphics                               | Phillips & Temro Industries, Inc.        |
| Distinctive Floral Company dba Len Busch Roses | Precision Associates, Inc.               |
| Featherlite Trailer Manufacturing              | Process Displays LLC                     |
| Global Finishing Solutions                     | Sportech, LLC                            |
| Health Systems Cooperative Laundries           | The Specialty Manufacturing Company      |
| Intek Plastics LLC                             | United States Distilled Products Company |
| Johnson Screens, Inc.                          | Wagner SprayTech                         |
| Kurt Manufacturing Company                     | Wilson Tool International, Inc.          |
| Lake Air Products                              | Wipaire                                  |
| Lexington Manufacturing                        | Zero Zone Refrigeration LLC              |

**Group 5: Over 500 Total Employees (28 participants)**

Andersen Corporation	nVent
Banner Engineering	Olympus Corporation of the Americas
BTD Manufacturing Inc.	Placon
Cretex Companies Inc.	Polaris Inc.
Daikin Applied Americas, Inc.	Premium Waters, Inc.
Emerson	Rice Lake Weighing Systems
Gemini, Inc.	Satellite Industries Inc.
GF Building Flow Solutions dba Uponor, Inc.	Schreiber Foods
Gopher Resource	Showdown Displays
Graco Inc.	SkyWater Technology
H.B. Fuller Company	Tennant Company
J&B Group, Inc.	The Imagine Group
Japs-Olson Company, LLC	TT Electronics
Loram Maintenance of Way	Velocity

Participants by Distance From Minneapolis

**Group 1: Within 20 Miles of Minneapolis (92 Participants)**

7-SIGMA Incorporated	LimPro Metal Fabrication
Advanced Molding Technologies, LLC	Lowell Inc.
Air Quality Engineering	Marshall Manufacturing Company
apg Cash Drawer	Mathias Die Company
Atlas Manufacturing	Midwest Rubber Service and Supply Company
Atrix International, Inc.	Mikros Engineering, Inc.
AVEKA Group, Inc.	Minnesota Grinding
Banner Engineering	Modern Molding Inc.
Bauer Welding & Metal Fabricators, Inc.	National Checking Company
Beacon EmbeddedWorks	Nystrom
Bermo, Inc.	Olsen Tool & Plastics, Inc.
Birchwood Laboratories	Olympus Corporation of the Americas
Chandler Industries LLC	Pallet Service Corporation
Clarus Medical	Phillips & Temro Industries, Inc.
Conagra Brands	Placon
Conductive Containers Inc.	Plymouth Industries, Inc.
Continental Machines dba DoALL Sawing Products	Precision Associates, Inc.
Distinctive Floral Company dba Len Busch Roses	Precision Coatings, Inc.
Dynamic Group	Precision Gasket Company dba PGC
EMERGE Enterprises	Premium Waters, Inc.
Emerson	Process Displays LLC
Engage Technologies Corporation	Product Development Solutions, Inc.
Engineered Products Company	Production Engineering Corporation
EPG Companies	Rapid Packaging, Inc.
FasTest Inc.	RC Smith Company
Federal Package Network, Inc.	Rotation Engineering & Manufacturing
GLS Companies Inc. dba ENPOINTE	Satellite Industries Inc.
Gopher Resource	Sightline Commercial Solutions
Graco Inc.	SkyWater Technology
H.B. Fuller Company	SPS Works
HBI Amerilab Technologies	Stylmark, Inc.
Horton Inc.	Tennant Company
ICA Corporation	The Imagine Group
IDC Group, Inc.	The Specialty Manufacturing Company
ILLUME	Tjernlund Products, Inc.
Industrial Netting Inc.	TT Electronics
In'Tech Industries Inc.	Twin City Die Castings Company
Integreon Global, Inc.	Twin City Plating
Jet Edge Waterjet Systems	Velocity
Johnson Screens, Inc.	Viking Engineering
Jonaco Machine	Wagner SprayTech
Kasco Marine, Inc.	Whirltronics, Inc.
Kurt Manufacturing Company	Wilson Tool International, Inc.
Lake Air Products	Wilson Wolf Manufacturing, LLC
LasX Industries, Inc.	Zero Zone Refrigeration LLC
Lexington Manufacturing	Zero-Max

**Group 2: 20 to 45 Miles from Minneapolis (43 Participants)**

Action Plastics, Inc.	Intek Plastics LLC
Aggressive Hydraulics, Inc.	J&B Group, Inc.
Ajax Metal Forming Solutions, LLC	Japs-Olson Company, LLC
American Flexible Products	John Henry Foster MN Inc.
Analog Technologies Corporation	LISI MEDICAL Remmele
Andersen Corporation	Loram Maintenance of Way
Anderson Dahlen	Mate Precision Technologies
Andrew Tool & Machining Company	Micro-Matics Inc.
Arc Precision	Modernistic, Inc.
Astro Metal Craft	MRG Tool and Die
Aurora Pharmaceutical	nVent
Aveda Corporation	Opportunity Partners
Bondhus Corporation	PHS West LLC
Cannon Equipment	Polaris Inc.
Carley Foundry Inc.	Spotech, LLC
Chandler Exhibits, Inc.	St Croix Forge Inc. - Mustad USA
Cretex Companies Inc.	TCLAD, Inc.
Croix Gear	Tescom Corporation
Diamond Graphics	Unity Precision Manufacturing
EDCO Products	Wipaire
Ellicott Dredge Technologies	Zirc Dental Products
Health Systems Cooperative Laundries	

**Group 3: 45 to 70 Miles from Minneapolis (26 Participants)**

American Time and Signal Company	Lincoln Industries of MN
Branches LLC	Mactech, Inc.
C4 Welding, Inc.	Mercury
Conagra Brands - Mankato	Miller Manufacturing
CWMF Corporation	Pinnacle Climate Technologies
Daikin Applied Americas, Inc.	PNE Inc. dba IRD Glass dba IRD Ceramics
Data Metalcraft, Inc.	Polaris Inc. - Osceola
DCI, Inc.	Pride Solutions LLC
Elemet Group	Showdown Displays
Gemini, Inc.	T.O. Plastics
GF Building Flow Solutions dba Uponor, Inc.	The Pinske Edge
Kendall Howard	United States Distilled Products Company
La Machine Shop, Inc.	Windings, Inc.

**Group 4: More than 70 Miles from Minneapolis (15 Participants)**

Aagard	IPS Cranes, Inc.
BTD Manufacturing Inc.	Nortech Systems Inc.
Clow Stamping Company	Park Industries
Electronics Systems Inc.	Polaris Inc. - Roseau
Featherlite Trailer Manufacturing	Rice Lake Weighing Systems
Garfield Truss Company	Schreiber Foods
Global Finishing Solutions	Senneca Holdings
International Precision Machining, Inc.	