# 2024 Manufacturing Workforce Trends Survey<sup>©</sup>

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# Introduction

The Manufacturers Alliance is pleased to present The Workforce Trends Survey – 2024.

This survey covers issues of critical importance to Minnesota manufacturing firms and summarizes comments from 192 companies with a combined total of over 106,000 employees. Participating firms have on average 565 employees (median 132 employees) and an average annual revenue of \$430.3 million (median annual revenue of \$39.5 million).

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 2024 – on average across all groups – are similar to those reported in 2023 (26.3%). 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.

Industry Group	# Firms Reporting	25 <sup>th</sup> Percentile	Average	Median	75 <sup>th</sup> Percentile
All Industry Groups	179	9.7%	16.8%	14.0%	20.2%
Food & Kindred Products	6	21.0%	27.3%	24.5%	29.0%
Lumber & Wood ex Furniture	5	*	22.4%	25.9%	*
Furniture & Fixtures	4	*	*	*	*
Printing, Publishing & Allied	7	11.5%	16.2%	18.0%	19.0%
Chemicals & Allied Products	6	8.6%	12.0%	10.4%	11.4%
Petroleum Refining & Related	1	*	*	*	*
Rubber & Plastic Products	23	11.1%	15.3%	13.0%	20.2%
Stone, Clay, Glass & Concrete Products	1	*	*	*	*
Primary Metal Industries	9	9.5%	15.8%	15.0%	23.0%
Fabricated Metal Products	52	11.0%	17.9%	14.7%	19.8%
Industrial Machinery Computer Equip	16	9.7%	15.1%	13.5%	17.8%
Electronic & Other Electrical	10	8.1%	13.2%	15.1%	17.5%
Transportation Equipment	1	*	*	*	*
Measur, Anal & Control Instruments	5	*	13.8%	16.5%	*
Misc Manufacturing Industries	33	7.3%	17.7%	10.8%	22.2%

#### Voluntary Separations

### Involuntary Separations

Industry Group	# Firms Reporting	25 <sup>th</sup> Percentile	Average	Median	75 <sup>th</sup> Percentile
All Industry Groups	179	2.7%	8.1%	7.0%	11.3%
Food & Kindred Products	6	6.9%	10.4%	8.4%	13.0%
Lumber & Wood ex Furniture	5	*	9.1%	10.7%	*
Furniture & Fixtures	4	*	*	*	*
Printing, Publishing & Allied	7	4.7%	7.9%	9.8%	11.5%
Chemicals & Allied Products	6	3.2%	6.6%	6.1%	8.7%
Petroleum Refining & Related	1	*	*	*	*
Rubber & Plastic Products	23	3.7%	7.4%	7.7%	9.8%
Stone, Clay, Glass & Concrete Products	1	*	*	*	*
Primary Metal Industries	9	6.5%	8.5%	8.0%	10.0%
Fabricated Metal Products	52	1.9%	7.2%	4.8%	12.0%
Industrial Machinery Computer Equip	16	2.1%	5.9%	4.0%	7.7%
Electronic & Other Electrical	10	3.2%	9.4%	8.0%	10.9%
Transportation Equipment	1	*	*	*	*
Measur, Anal & Control Instruments	5	*	7.5%	2.0%	*
Misc Manufacturing Industries	33	3.0%	9.8%	6.4%	11.1%

Total Separation Rates (Voluntary & Involuntary)

Industry Group	# Firms Reporting	25 <sup>th</sup> Percentile	Average	Median	75 <sup>th</sup> Percentile
All Industry Groups	181	14.1%	25.2%	22.0%	31.0%
Food & Kindred Products	6	27.1%	37.8%	32.4%	38.3%
Lumber & Wood ex Furniture	5	*	31.5%	36.6%	*
Furniture & Fixtures	4	*	*	*	*
Printing, Publishing & Allied	7	20.4%	24.2%	21.4%	27.5%
Chemicals & Allied Products	6	12.5%	18.6%	17.1%	22.2%
Petroleum Refining & Related	1	*	*	*	*
Rubber & Plastic Products	24	17.7%	23.1%	22.3%	28.8%
Stone, Clay, Glass & Concrete Products	1	*	*	*	*
Primary Metal Industries	9	23.0%	24.3%	27.0%	31.2%
Fabricated Metal Products	52	14.0%	25.2%	21.0%	31.3%
Industrial Machinery Computer Equip	16	13.6%	21.0%	19.6%	30.2%
Electronic & Other Electrical	11	13.2%	26.5%	25.0%	33.7%
Transportation Equipment	1	*	*	*	*
Measur, Anal & Control Instruments	5	*	21.3%	18.1%	*
Misc Manufacturing Industries	33	14.0%	27.5%	19.7%	36.0%

### 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 763-533-8239 kirbys@mfrall.com

# **Compensation Practices**

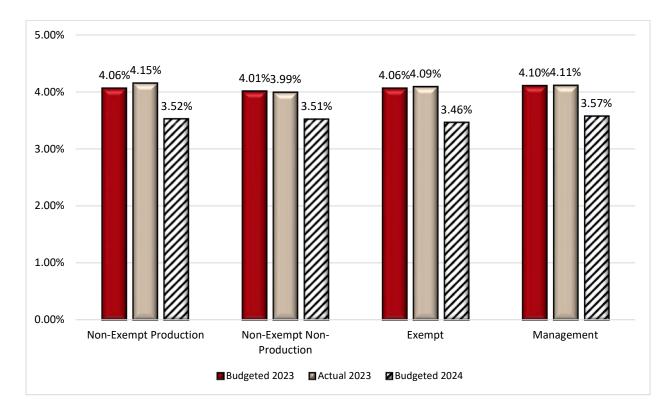
### **Compensation Adjustments**

### Average Percent Wage/Salary Adjustment

Participating companies reported actual 2023 and budgeted 2024 pay increases by employee group. The average budgeted 2023 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).

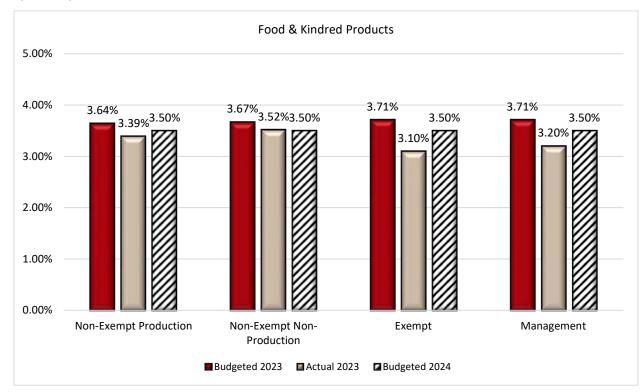
	Pay Adjustments INCLUDING Zero (0%) Adjustments				ustments EXC (0%) Adjustm	
Employee Group	# Firms Reporting	Average	Median	# Firms Reporting	Average	Median
NEx Production – Budgeted 2023	178	4.0%	4.0%	177	4.1%	4.0%
NEx Production – Actual 2023	184	4.1%	4.0%	181	4.1%	4.0%
NEx Production – Budgeted 2024	169	3.5%	3.5%	169	3.5%	3.5%
NEx Non-Production – Budgeted 2023	173	4.0%	4.0%	172	4.0%	4.0%
NEx Non-Production – Actual 2023	176	3.9%	4.0%	173	4.0%	4.0%
NEx Non-Production – Budgeted 2024	164	3.5%	3.5%	164	3.5%	3.5%
Exempt – Budgeted 2023	177	4.0%	4.0%	174	4.1%	4.0%
Exempt – Actual 2023	182	4.0%	4.0%	178	4.1%	4.0%
Exempt – Budgeted 2024	167	3.5%	3.5%	167	3.5%	3.5%
Management – Budgeted 2023	172	4.0%	4.0%	166	4.1%	4.0%
Management – Actual 2023	177	4.0%	4.0%	170	4.1%	4.0%
Management – Budgeted 2024	163	3.6%	3.5%	163	3.6%	3.5%



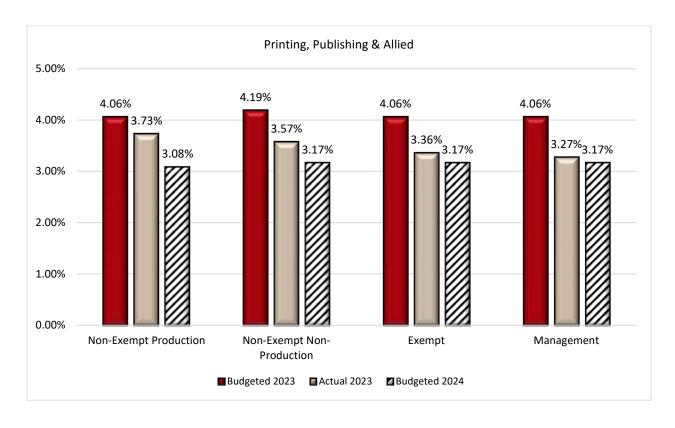
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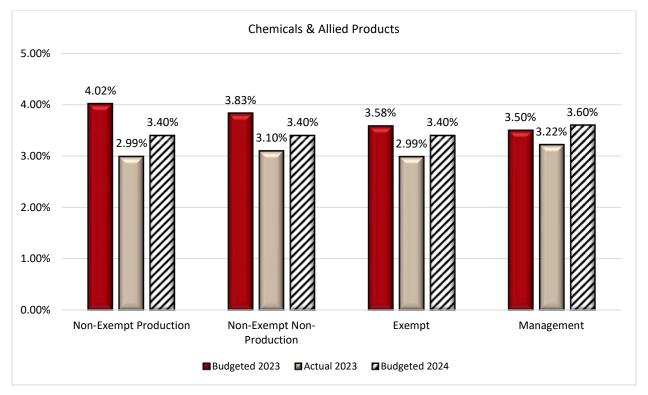
### Average Percent Wage/Salary Adjustment by Industry

The following eleven charts indicate the average percent pay adjustments, including (as reportable) budgeted 2023, actual 2023 and budgeted 2024, by industry. Average budgeted 2023 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.

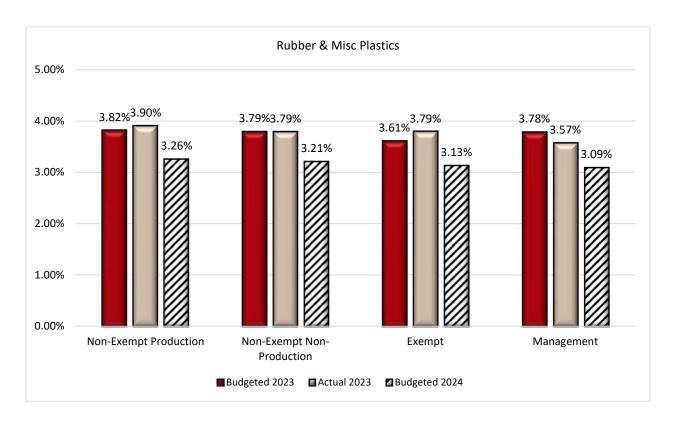


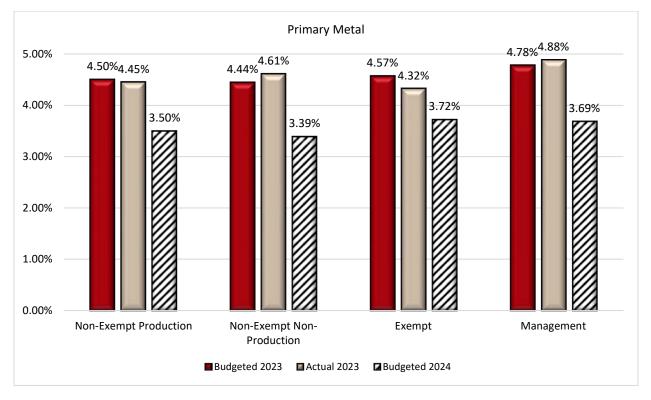




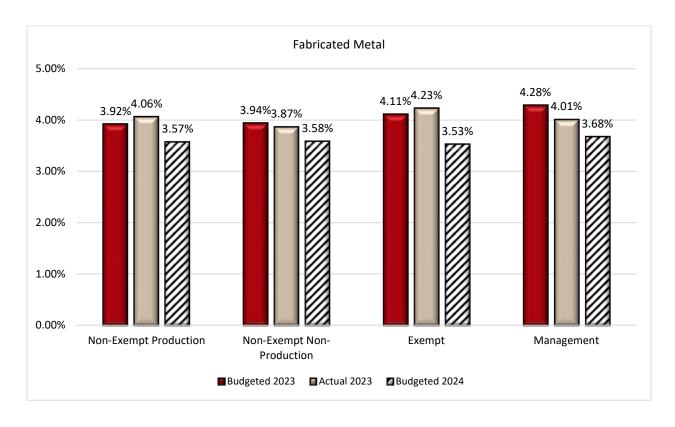


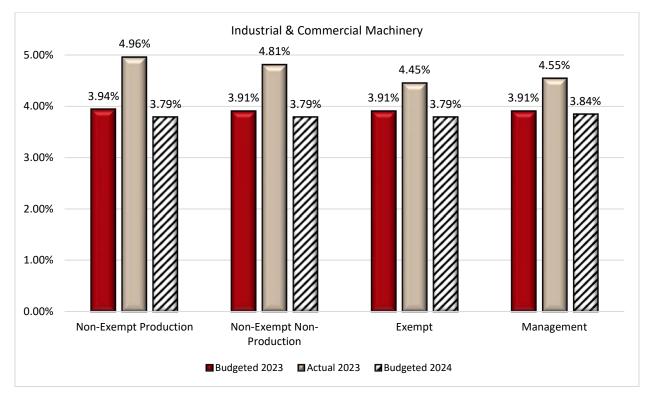
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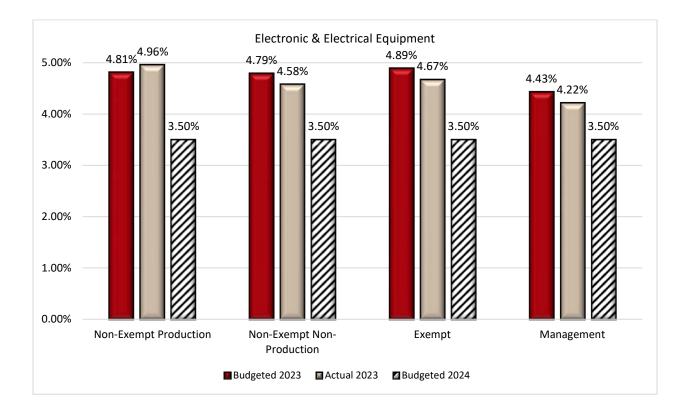


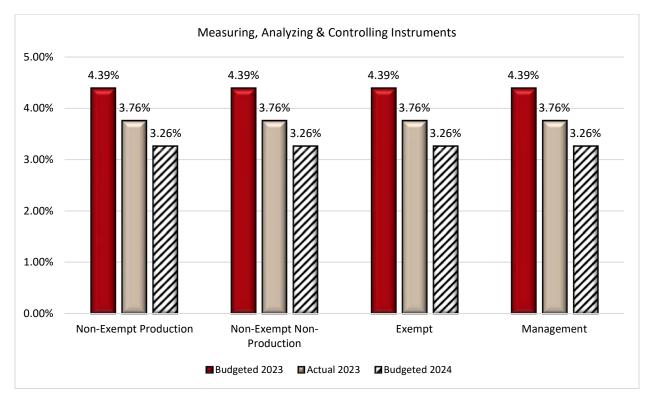


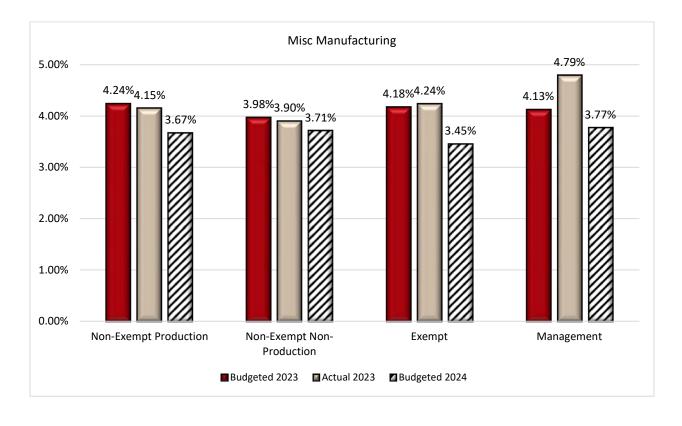
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# Workforce Trends

### 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	Added Comments
Communicates clearly	3.09	Have vigorous discussions
Drives for results	3.88	Make courageous decisions
Solves problems	3.90	Fast and flat decision making
Builds relationships	4.88	Harmonious relationships
Champions change	4.95	Have humanity
Takes initiative	5.05	Take continuous action
Sets goals	5.13	Present a vision
Trains others effectively	5.45	Develop people

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

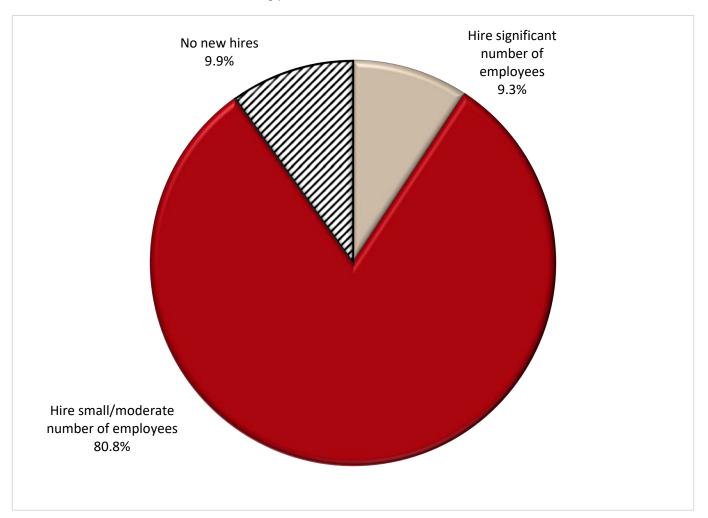
Other Leadership Skill	Ranking
Builds trust	1.00
Continuous improvement	1.00
Manages empathy	1.00
Quality mindset	1.00
Servant leadership	1.00
Emotional intelligence in the workplace	2.00
Leadership team mindset	7.00
Enjoyment - foster a fun working environment	9.00

### Workforce Practices

### Hiring Plans in 2024

Hiring remains a priority, but hiring plans have shifted notably. While the percent of participants reporting plans to hire a small/moderate number of employees in the coming year has stayed relatively steady (increasing to 80.8% for 2024 from 77.7% in 2023) the percent of those planning to hire a significant number of employees in the coming year has dropped from 20.3% in 2023 to 9.3% in 2024 and the number stating plans for no new hires increased from 2.0% in 2023 to 9.9% in 2024.

The chart below summarizes the 2024 hiring plans.

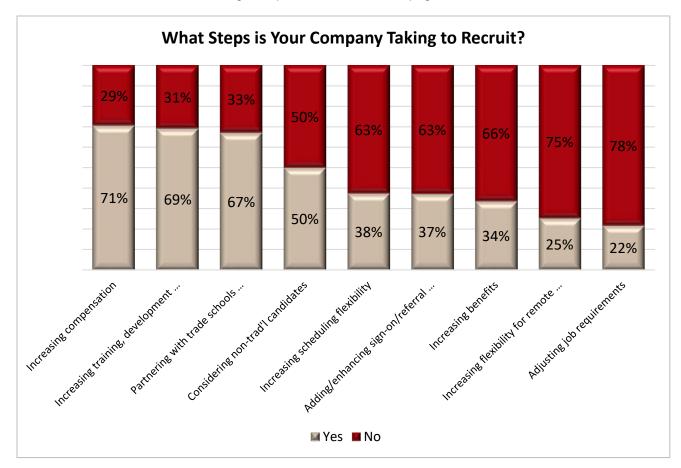


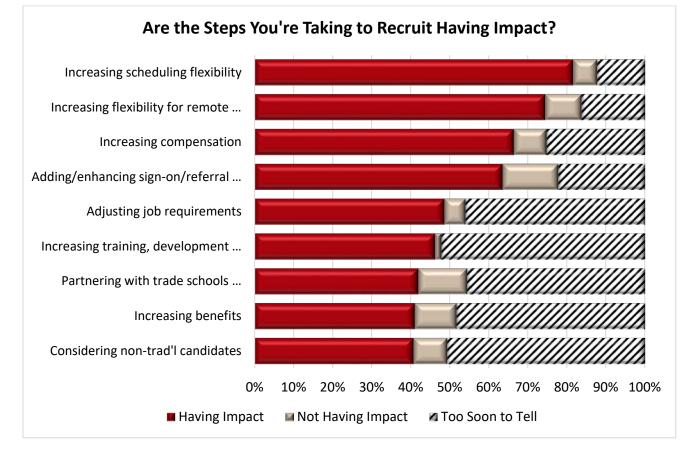
### Steps Being Taken to RECRUIT Employees

Participants this year responded to a list of potential steps (noted below) being taken to <u>recruit</u> 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:

- Participate in local high school CAPS (center for advanced professional studies) program 1 participant (having impact).
- Temp to hire with interns 1 participant (impact not reported).
- Training leaders on how to interview and onboard new hires 1 participant (having impact).
- Working with recruiting companies 1 participant (having impact).

The top four steps taken to recruit employees in 2024 are the same ones, in the same order, that we saw in 2023. The four steps at the top of the 2024 recruiting impact list are also the same as in 2023, but the order has shifted: increasing compensation and adding/enhancing sign-on/referral bonuses have dropped to 3<sup>rd</sup> and 4<sup>th</sup> place while flexibility (both for scheduling and for remote work) now top the impact chart in 1<sup>st</sup> and 2<sup>nd</sup> place. The industry continues to work at identifying and embracing opportunities for flexible scheduling and remote work where they are feasible, but also recognizes the reality that in the manufacture of products this may be an area (like compensation) where demand can exceed supply.

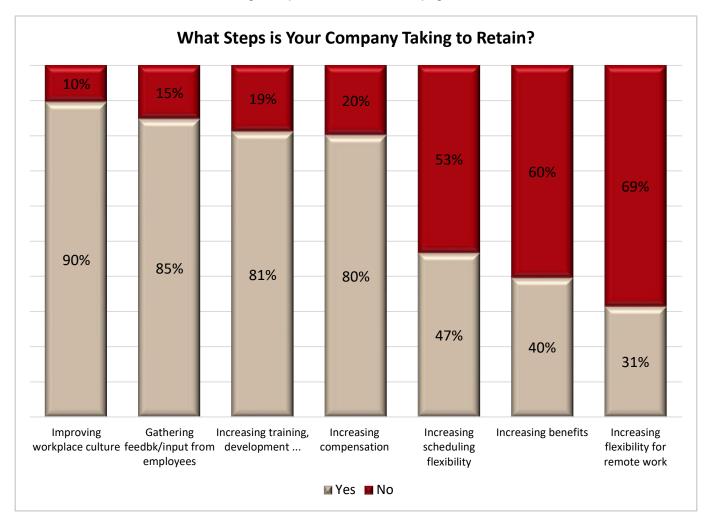
Most Popular Steps	% Cos	Steps with Greatest Impact	% Cos
Increasing compensation	71%	Increasing scheduling flexibility	82%
Increasing training, development	69%	Increasing flexibility for remote	74%
Partnering with trade schools	67%	Increasing compensation	66%
Considering non-trad'l candidates	50%	Adding/enhancing sign-on/referral	63%
Increasing scheduling flexibility	38%	Adjusting job requirements	49%

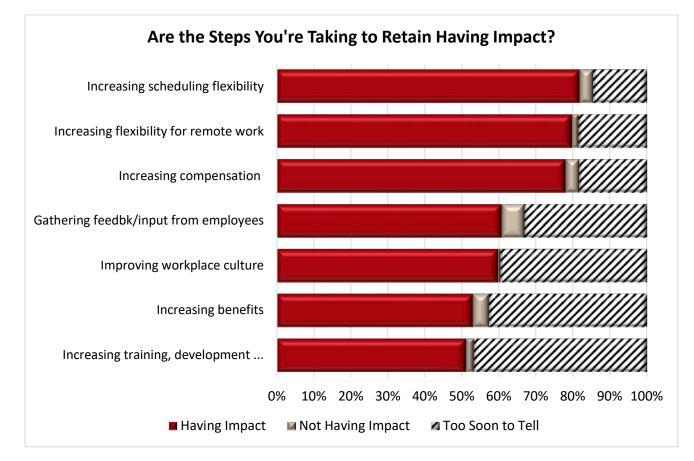
### Steps Being Taken to RETAIN Employees

Participants this year responded to a list of potential steps (noted below) being taken to <u>retain</u> 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:

- Enhancing onboarding of employees 1 participant (having impact).
- Received an MJSP (Minnesota Job Skills Partnership) grant for training; improving the review process in 2024 – 1 participant (having impact)

In comparing the steps being taken to retain employees in 2024 to those from 2023, we see the top 5 steps remaining the same, with some shuffling in their order. We see improving workplace culture moving from 3<sup>rd</sup> place to 1<sup>st</sup> and increasing compensation from 1<sup>st</sup> place to 4<sup>th</sup>. In examining the steps having the highest impact on retention, we see (as we did in recruiting) increasing scheduling flexibility and flexibility for remote work move into 1<sup>st</sup> and 2<sup>nd</sup> place, with increasing compensation dropping from 1<sup>st</sup> to 3<sup>rd</sup>. Efforts to improve workplace culture (the number 1 retention step being taken in 2024) appear to be paying off, with about 60% of those taking this step reporting that it is having an impact.

Most Popular Steps	% Firms Rptg	Steps with Greatest Impact	% Firms Rptg
Improving workplace culture	90%	Increasing scheduling flexibility	82%
Gathering feedbk/input from employees	85%	Increasing flexibility for remote work	80%
Increasing training, development	81%	Increasing compensation	78%
Increasing compensation	80%	Gathering feedbk/input from employees	61%
Increasing scheduling flexibility	47%	Improving workplace culture	60%

### 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.

Hourly production positions were the most frequently reported by a substantial margin.

Top Reported Positions and Skills	# Firms Reporting
Hourly Production	9
Engineering	4
Machinists/Machine Operators	4
Accounting	2
Assemblers	2
Operations Positions	2

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

- Chemists
- Fabricators
- General Labor
- IT Positions
- Management, Upper Management
- Mechanics
- Mixers
- Office Nonexempt
- Press Help
- Product Managers

- QA Inspectors
- Route Delivery
- Sales
- Skilled Program/Setup Positions
- Skilled Shop Positions
- Supervisors
- Technical
- Toolmakers
- Warehouse
- Welders

### 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	78%
Compliance/quality	68%
Soft skills	62%
Problem solving	48%
Other	4%

Other Training Being Offered:

- Safety training 2 participants.
- Equipment cross training 1 participant.
- Cohort training for leaders 1 participant.
- Project work training 1 participant.
- Creating a defined training matrix for all positions 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.)	132	5	12	8	10
Supervisor (e.g. Production Supervisor, Shift Supervisor, etc.)	131	8	15	12	20
Lead (e.g., Assembly Lead, Welding Lead, Machine Operations Lead, etc.)	112	5	8	7	10

# Survey Participants

Alphabetical Participant List

7-SIGMA Incorporated Aagard Accu-Prompt EDM, Inc. Advanced Molding Technologies, LLC Aggressive Hydraulics, Inc. Air Quality Engineering Ajax Metal Forming Solutions, LLC Alexandria Industries American Flexible Products American Time and Signal Company Amerilab Technologies, Inc. Analog Technologies Corporation Andersen Corporation Anderson Dahlen Andrew Tool & Machining Company apg Arc Precision ARKRAY Artistic Finishes, Inc. Astro Metal Craft Atrix International. Inc. Aurora Pharmaceutical AVAOP. LLC Aveda Corporation AVEKA Group, Inc. AWT Labels & Packaging **Banner Engineering** Beacon Embeddedworks Bermo **Birchwood Laboratories LLC** Bondhus Corporation **Branches LLC** BTD C4 Welding, Inc. **Caerus** Corporation Cannon Equipment Carley Foundry Inc. Chandler Exhibits Inc. Chandler Industries Inc. Cirtec Medical Clow Stamping Company Conagra Brands Conagra Brands - Mankato Conductive Containers Inc. Cretex Companies, Inc. Crystal Distribution Inc. Custom Products of Litchfield, Inc. **CWMF** Corporation Daikin Applied Americas, Inc. Danfoss Power Solutions II LLC

Dedicated Networks, Inc. Distinctive Floral Company dba Len Busch Roses Diversified Plastics, Inc. Door Engineering **DriSteem Corporation** Dynamic Group Dynamic Sealing Technologies, Inc. EA Sween ECO Finishing Company Electronic Systems Inc. Elemet Group Ellicott Dredge Technologies **EMERGE** Enterprises Emerson Engage Technologies Corporation Engineered Products Company FasTest, Inc. Featherlite Trailer Manufacturing LLC Federal Package Network, Inc. Garfield Truss Company Garlock Equipment Gemini, Inc. **Global Finishing Solutions** GLS Companies, Inc. dba ENPOINTE **GN ReSound** Good Sense Foods **Gopher Resource** Graco Inc. **Greenheck Group** H.B. Fuller Company Health Systems Cooperative Laundries Horton, Inc. **ICA** Corporation IDC Group, Inc. Industrial Fabrication Services, Inc. Industrial Netting Inc. InTech Industries Inc. Integreon Global, Inc. Intek Plastics LLC J&B Group, Inc. **J&E** Companies JEM Technical Jet Edge Waterjet Systems John Henry Foster Minnesota Inc. Johnson Screens Inc. Jonaco Machine Jones Metal, Inc. Kasco Marine, Inc. Kendall Howard **Keytronic** 

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Data Metalcraft, Inc. DCI. Inc. Decimet Sales. Inc. LasX Industries, Inc. Lexington Manufacturing Life Fitness LimPro Metal Fabrication Lincoln Industries of Minnesota LISI MEDICAL Remmele Lowell Inc. Lubrication Technologies Services, LLC M & N Structures, Inc. Mactech, Inc. Marshall Manufacturing Company Mate Precision Technologies Mathias Die Company Midwest Rubber Service and Supply Company Mikros Engineering, Inc. Miller Manufacturing Minnesota Grinding Mitek Modern Molding, Inc. Myplas Recycling Navy Island, Inc. Nortech Systems North Star Imaging Northern Metal Fab Inc. nVent Nystrom Olsen Tool & Plastics, Inc. Olympus Corporation of the Americas **Opportunity Partners Owens Corning** Pallet Service Corporation Park Industries Phillips & Temro Industries, Inc. PHS West LLC Plato Woodwork, Inc. PNE Inc. dba IRD Glass dba IRD Ceramics Polaris Inc. Precision Associates. Inc. Precision Coatings. Inc. Precision Gasket Company dba PGC Premier Marine, LLC Premium Waters. Inc. Pride Solutions, LLC

Kurt Manufacturing Company La Machine Shop, Inc. Lake Air Products **Priority Envelope** Process Displays LLC Processed Metals Innovators Inc. Product Development Solutions, Inc. Production Engineering Corporation Qualitech Rapid Packaging, Inc. **RC Smith Company Rice Lake Weighing Systems** Rotation Engineering & Manufacturing Satellite Industries Inc. Schreiber Foods Showdown Displays Sportech, LLC SPS Works Steinwall, Inc. T.O. Plastics TCLAD, Inc. Tenere, Inc. dba Cadrex Manufacturing **Tennant Company Tescom Corporation** The Imagine Group The Sierra Company LLC dba Fenix Group Thermo-Tech Windows LLC **TT Electronics** Twin City EDM & Manufacturing Twin City Plating Unity Precision Manufacuring Uponor, Inc. Velosity Viking Engineering Wagner Spray Tech Wanner Engineering, Inc. Wenger Corporation West Central Steel Whirltronics, Inc. Wilbert Plastic Services Wilson Tool International, Inc. Wilson Wolf Manufacturing, LLC Windings, Inc. Wipaire Zero Zone Refrigeration, LLC Zero-Max

### Total Participant Count: 192

### Participants by Industry Type

Food & Kindred Products (7 participants)	
Conagra Brands - Mankato	Premium Waters, Inc.
EA Sween	Qualitech
Good Sense Foods	Schreiber Foods
J&B Group, Inc.	
Lumber & Wood except Furniture (5 participants)	
Artistic Finishes, Inc.	Navy Island, Inc.
Garfield Truss Company	Pallet Service Corporation
Lexington Manufacturing	
Furniture & Fixtures (4 participants)	
Chandler Exhibits Inc.	RC Smith Company
Plato Woodwork, Inc.	Wenger Corporation
Printing, Publishing & Allied (7 participants)	
AWT Labels & Packaging	Process Displays LLC
6 5	
Conagra Brands	SPS Works
Conagra Brands GLS Companies, Inc. dba ENPOINTE	SPS Works The Imagine Group
5	

### **Chemicals & Allied Products (6 participants)**

Amerilab Technologies, Inc. Aurora Pharmaceutical Aveda Corporation

#### Petroleum Refining & Related (1 participant)

Lubrication Technologies Services, LLC

### **Rubber & Plastic Products (24 participants)**

7-SIGMA Incorporated Advanced Molding Technologies, LLC American Flexible Products Conductive Containers Inc. Diversified Plastics, Inc. Dynamic Group Industrial Netting Inc. InTech Industries Inc. Intek Plastics LLC Midwest Rubber Service and Supply Company Mikros Engineering, Inc. Modern Molding, Inc.

### Stone, Clay, Glass & Concrete (1 participant)

**Owens Corning** 

#### **Primary Metal Industries (10 participants)**

Alexandria Industries Carley Foundry Inc. Clow Stamping Company Cretex Companies, Inc. Gopher Resource IDC Group, Inc. Johnson Screens Inc. Product Development Solutions, Inc. Tenere, Inc. dba Cadrex Manufacturing Twin City Plating

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AVEKA Group, Inc. H.B. Fuller Company

The Sierra Company LLC dba Fenix Group

Myplas Recycling Olsen Tool & Plastics, Inc. Precision Associates, Inc. Precision Gasket Company dba PGC Pride Solutions, LLC Satellite Industries Inc. Sportech, LLC Steinwall, Inc. T.O. Plastics Uponor, Inc. Velosity Wilbert Plastic Services

22

### Fabricated Metal Products (56 participants)

Accu-Prompt EDM, Inc. Air Quality Engineering Ajax Metal Forming Solutions, LLC Anderson Dahlen Arc Precision Astro Metal Craft Bermo **Bondhus Corporation** BTD C4 Welding, Inc. Cannon Equipment Chandler Industries Inc. Crystal Distribution Inc. Custom Products of Litchfield, Inc. Data Metalcraft, Inc. DCI, Inc. Decimet Sales, Inc. Door Engineering Dynamic Sealing Technologies, Inc. Elemet Group EMERGE Enterprises FasTest, Inc. Featherlite Trailer Manufacturing LLC Gemini. Inc. **Global Finishing Solutions** ICA Corporation Industrial Fabrication Services, Inc. **J&E** Companies

JEM Technical Jonaco Machine Jones Metal, Inc. Kendall Howard La Machine Shop, Inc. Lake Air Products Life Fitness LimPro Metal Fabrication Lincoln Industries of Minnesota M & N Structures, Inc. Mate Precision Technologies Mathias Die Company Minnesota Grinding Mitek Northern Metal Fab Inc. nVent Nystrom Precision Coatings, Inc. Processed Metals Innovators Inc. Production Engineering Corporation Rotation Engineering & Manufacturing **Tescom Corporation** Twin City EDM & Manufacturing Unity Precision Manufacuring Wanner Engineering, Inc. West Central Steel Whirltronics, Inc. Wipaire

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

Aagard Atrix International, Inc. CWMF Corporation Daikin Applied Americas, Inc. DriSteem Corporation Ellicott Dredge Technologies Engage Technologies Corporation Greenheck Group

#### **Electronic & Other Electrical (11 participants)**

American Time and Signal Company Analog Technologies Corporation Banner Engineering Beacon Embeddedworks Dedicated Networks, Inc. Electronic Systems Inc.

### **Transportation Equipment (1 participant)**

Polaris Inc.

Jet Edge Waterjet Systems Park Industries PHS West LLC Rice Lake Weighing Systems Tennant Company Viking Engineering Wilson Tool International, Inc. Zero Zone Refrigeration, LLC

Engineered Products Company Keytronic Nortech Systems TCLAD, Inc. Windings, Inc.

### Measuring, Analyzing & Controlling Instruments (7 participants)

ARKRAY Cirtec Medical Emerson GN ReSound North Star Imaging Olympus Corporation of the Americas TT Electronics

### **Misc Manufacturing Industries (36 participants)**

Aggressive Hydraulics, Inc. Andersen Corporation Andrew Tool & Machining Company apg AVAOP, LLC **Birchwood Laboratories LLC** Branches LLC **Caerus** Corporation **Danfoss Power Solutions II LLC** Distinctive Floral Company dba Len Busch Roses ECO Finishing Company Federal Package Network, Inc. Garlock Equipment Graco Inc. Health Systems Cooperative Laundries Horton, Inc. Integreon Global, Inc. John Henry Foster Minnesota Inc.

Kasco Marine, Inc. Kurt Manufacturing Company LasX Industries, Inc. LISI MEDICAL Remmele Lowell Inc. Mactech, Inc. Marshall Manufacturing Company Miller Manufacturing **Opportunity Partners** Phillips & Temro Industries, Inc. PNE Inc. dba IRD Glass dba IRD Ceramics Premier Marine, LLC Rapid Packaging, Inc. Showdown Displays Thermo-Tech Windows LLC Wagner Spray Tech Wilson Wolf Manufacturing, LLC 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.

#### Group 1: Less than 50 Total Employees (27 participants)

7-SIGMA Incorporated Accu-Prompt EDM, Inc. Air Quality Engineering American Flexible Products Andrew Tool & Machining Company Arc Precision Atrix International, Inc. Branches LLC Ellicott Dredge Technologies Garfield Truss Company Industrial Netting Inc. La Machine Shop, Inc. LimPro Metal Fabrication M & N Structures, Inc.

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

Ajax Metal Forming Solutions, LLC American Time and Signal Company Analog Technologies Corporation apg Artistic Finishes, Inc. Astro Metal Craft AVEKA Group, Inc. Beacon Embeddedworks **Birchwood Laboratories LLC** C4 Welding, Inc. **Caerus** Corporation Conductive Containers Inc. **CWMF** Corporation Data Metalcraft, Inc. Decimet Sales, Inc. Diversified Plastics, Inc. Dynamic Sealing Technologies, Inc. FasTest. Inc. Garlock Equipment Good Sense Foods IDC Group, Inc. Jet Edge Waterjet Systems

Marshall Manufacturing Company Minnesota Grinding Myplas Recycling Olsen Tool & Plastics, Inc. PHS West LLC Precision Coatings, Inc. Pride Solutions, LLC Rapid Packaging, Inc. RC Smith Company Rotation Engineering & Manufacturing SPS Works Twin City Plating Wilson Wolf Manufacturing, LLC

Jones Metal, Inc. Kasco Marine, Inc. Kendall Howard LasX Industries, Inc. Lincoln Industries of Minnesota Lowell Inc. Mactech. Inc. Mathias Die Company Midwest Rubber Service and Supply Company Northern Metal Fab Inc. PNE Inc. dba IRD Glass dba IRD Ceramics Precision Gasket Company dba PGC **Priority Envelope** Product Development Solutions, Inc. Production Engineering Corporation Satellite Industries Inc. The Sierra Company LLC dba Fenix Group Twin City EDM & Manufacturing Unity Precision Manufacuring Viking Engineering Zero-Max

### Group 3: 100 to 199 Total Employees (48 participants)

Advanced Molding Technologies, LLC Aggressive Hydraulics, Inc. Amerilab Technologies, Inc. Aurora Pharmaceutical AVAOP, LLC Bermo **Bondhus Corporation** Cannon Equipment Chandler Exhibits Inc. **Conagra Brands** Custom Products of Litchfield, Inc. **Danfoss Power Solutions II LLC** DCI. Inc. Dedicated Networks, Inc. Door Engineering DriSteem Corporation Dynamic Group **ECO Finishing Company** Elemet Group Engage Technologies Corporation Engineered Products Company Federal Package Network, Inc. GLS Companies, Inc. dba ENPOINTE ICA Corporation

#### Group 4: 200 to 499 Total Employees (40 participants)

Aagard Alexandria Industries Anderson Dahlen ARKRAY AWT Labels & Packaging Carley Foundry Inc. Chandler Industries Inc. Conagra Brands - Mankato Crystal Distribution Inc. Distinctive Floral Company dba Len Busch Roses Electronic Systems Inc. Featherlite Trailer Manufacturing LLC **Global Finishing Solutions** Health Systems Cooperative Laundries Horton, Inc. Intek Plastics LLC **J&E** Companies John Henry Foster Minnesota Inc. Johnson Screens Inc. **Keytronic** 

Industrial Fabrication Services, Inc. InTech Industries Inc. **JEM** Technical Jonaco Machine Mikros Engineering, Inc. Modern Molding, Inc. Navy Island, Inc. North Star Imaging Pallet Service Corporation Plato Woodwork, Inc. Premier Marine, LLC Processed Metals Innovators Inc. Qualitech Steinwall, Inc. T.O. Plastics TCLAD, Inc. **Tescom Corporation** Thermo-Tech Windows LLC TT Electronics Wanner Engineering, Inc. West Central Steel Whirltronics. Inc. Wilbert Plastic Services Windings, Inc.

Kurt Manufacturing Company Lake Air Products Lexington Manufacturing LISI MEDICAL Remmele Mate Precision Technologies Miller Manufacturing Nortech Systems Nystrom **Opportunity Partners** Park Industries Phillips & Temro Industries, Inc. Precision Associates, Inc. Process Displays LLC Showdown Displays Tenere, Inc. dba Cadrex Manufacturing Velosity Wagner Spray Tech Wilson Tool International, Inc. Wipaire Zero Zone Refrigeration, LLC

### Group 5: Over 500 Total Employees (33 participants)

Andersen Corporation Aveda Corporation **Banner Engineering** BTD Cirtec Medical **Clow Stamping Company** Cretex Companies, Inc. Daikin Applied Americas, Inc. EA Sween Emerson Gemini, Inc. **GN ReSound** Gopher Resource Graco Inc. **Greenheck Group** H.B. Fuller Company Integreon Global, Inc.

J&B Group, Inc. Life Fitness Lubrication Technologies Services, LLC Mitek nVent Olympus Corporation of the Americas **Owens Corning** Polaris Inc. Premium Waters, Inc. Rice Lake Weighing Systems Schreiber Foods Sportech, LLC **Tennant Company** The Imagine Group Uponor, Inc. Wenger Corporation

Participants by Distance From Minneapolis

### Group 1: Within 20 Miles of Minneapolis (106 Participants)

7-SIGMA Incorporated Accu-Prompt EDM, Inc. Advanced Molding Technologies, LLC Air Quality Engineering Ajax Metal Forming Solutions, LLC Amerilab Technologies, Inc. Analog Technologies Corporation Andrew Tool & Machining Company apg ARKRAY Artistic Finishes, Inc. Atrix International, Inc. Aveda Corporation AVEKA Group, Inc. AWT Labels & Packaging **Banner Engineering** Beacon Embeddedworks Bermo **Birchwood Laboratories LLC Caerus** Corporation Carley Foundry Inc. Chandler Industries Inc. Cirtec Medical **Conagra Brands** Conductive Containers Inc. Daikin Applied Americas, Inc. **Danfoss Power Solutions II LLC** Dedicated Networks, Inc. Distinctive Floral Company dba Len Busch Roses **Diversified Plastics, Inc.** DriSteem Corporation Dynamic Sealing Technologies, Inc. EA Sween **ECO Finishing Company EMERGE** Enterprises Engage Technologies Corporation **Engineered Products Company** FasTest, Inc. Federal Package Network, Inc. Garlock Equipment GLS Companies, Inc. dba ENPOINTE GN ReSound Good Sense Foods **Gopher Resource** Graco Inc. H.B. Fuller Company Health Systems Cooperative Laundries Horton, Inc. IDC Group, Inc. Industrial Netting Inc. Integreon Global, Inc.

John Henry Foster Minnesota Inc. Johnson Screens Inc. Kevtronic Kurt Manufacturing Company Lake Air Products LasX Industries, Inc. Lexington Manufacturing LimPro Metal Fabrication LISI MEDICAL Remmele Lowell Inc. Lubrication Technologies Services, LLC Marshall Manufacturing Company Mathias Die Company Midwest Rubber Service and Supply Company Mikros Engineering, Inc. Minnesota Grinding Navy Island, Inc. Nortech Systems nVent Nystrom Olympus Corporation of the Americas **Opportunity Partners Owens Corning** Pallet Service Corporation Phillips & Temro Industries, Inc. Precision Associates, Inc. Precision Coatings, Inc. Precision Gasket Company dba PGC Premium Waters, Inc. **Priority Envelope** Process Displays LLC Product Development Solutions, Inc. Production Engineering Corporation Rapid Packaging, Inc. **RC Smith Company** Rotation Engineering & Manufacturing Satellite Industries Inc. Showdown Displays SPS Works Steinwall, Inc. Tennant Company The Sierra Company LLC dba Fenix Group TT Electronics Twin City EDM & Manufacturing Twin City Plating Uponor, Inc. Viking Engineering Wagner Spray Tech Wanner Engineering, Inc. Wilbert Plastic Services Wilson Wolf Manufacturing, LLC

J&E Companies JEM Technical Wipaire Zero-Max

#### Group 2: 20 to 45 Miles from Minneapolis (47 Participants)

Aggressive Hydraulics, Inc. American Flexible Products Andersen Corporation Anderson Dahlen Arc Precision Astro Metal Craft Aurora Pharmaceutical AVAOP, LLC **Bondhus Corporation** Cannon Equipment Chandler Exhibits Inc. Cretex Companies, Inc. Crystal Distribution Inc. Decimet Sales, Inc. Dynamic Group Ellicott Dredge Technologies Emerson Gemini. Inc. ICA Corporation InTech Industries Inc. Intek Plastics LLC J&B Group, Inc. Jet Edge Waterjet Systems Jonaco Machine

Kasco Marine, Inc. Kendall Howard La Machine Shop, Inc. Life Fitness M & N Structures, Inc. Mate Precision Technologies Modern Molding, Inc. Myplas Recycling North Star Imaging Olsen Tool & Plastics, Inc. PHS West LLC Polaris Inc. - Monticello Premier Marine, LLC Qualitech Sportech, LLC TCLAD, Inc. **Tescom Corporation** The Imagine Group Unity Precision Manufacuring Velosity Whirltronics, Inc. Wilson Tool International. Inc. Zero Zone Refrigeration, LLC

### Group 3: 45 to 70 Miles from Minneapolis (22 Participants)

American Time and Signal Company Branches LLC C4 Welding, Inc. Custom Products of Litchfield, Inc. CWMF Corporation Data Metalcraft, Inc. DCI, Inc. Elemet Group Life Fitness - Owatonna Lincoln Industries of Minnesota Mactech, Inc. Miller Manufacturing Mitek Northern Metal Fab Inc. Plato Woodwork, Inc. PNE Inc. dba IRD Glass dba IRD Ceramics Polaris Inc. - Osceola Pride Solutions, LLC T.O. Plastics Tenere, Inc. dba Cadrex Manufacturing Thermo-Tech Windows LLC Wenger Corporation

#### Group 4: More than 70 Miles from Minneapolis (20 Participants)

Aagard Alexandria Industries BTD Clow Stamping Company Conagra Brands - Mankato Door Engineering Electronic Systems Inc. Featherlite Trailer Manufacturing LLC Garfield Truss Company Global Finishing Solutions Greenheck Group Industrial Fabrication Services, Inc. Jones Metal, Inc. Park Industries Polaris Inc. - Roseau Processed Metals Innovators Inc. Rice Lake Weighing Systems Schreiber Foods West Central Steel Windings, Inc.