

# **Understanding the Worker Needs of Manufacturers**

Minnesota Skills Gap Findings  
2007

# Survey Intent

- DEED, with several Minnesota partners launched the survey research project to better understand manufacturers' workforce needs in three key areas of opportunities for impact:
  - workforce capacity—shortages, training, recruiting/retention
  - collaboration with education
  - the role of state government
- Benchmark 2005 national survey by National Association of Manufacturing (NAM) and Deloitte

# Survey Distribution

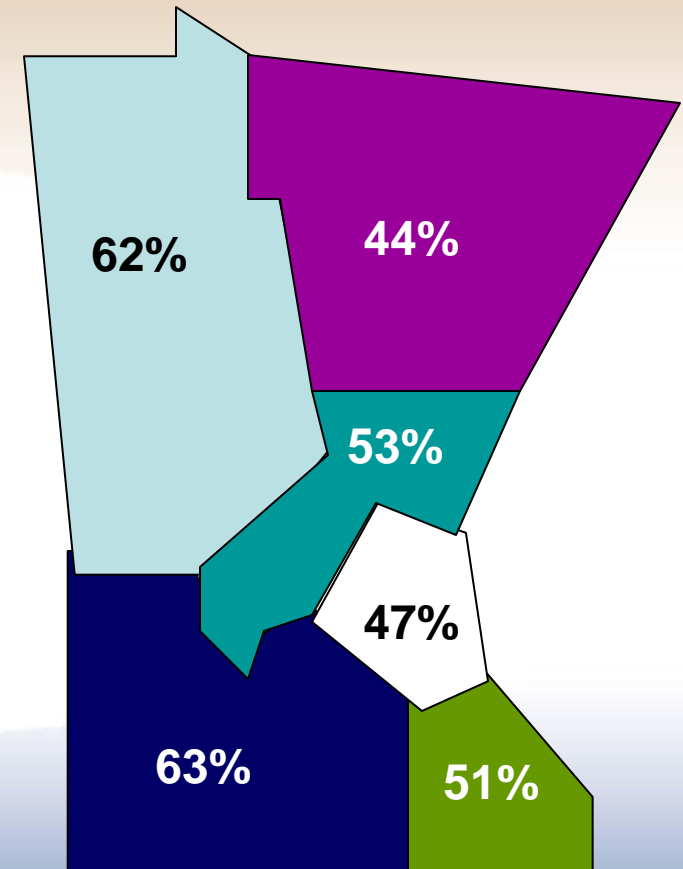
- Surveys were sent to stratified random samples of businesses in three size groups
  - fewer than 20 employees (small)
  - 20 to 74 employees (medium)
  - 75 to 250 employees (large)

# #1 Factor to Future Success

- A **high-performance workforce** was noted by all sizes of companies in every region as most important overall.
- **Low-cost production** was #2 overall, for small and large companies, and in the NE and SW regions.
- **New product innovation** was #3 overall, but #2 for medium companies, and in the NW and SE regions.
  - **Ranking order aligns with national survey data**

# Workforce Shortages

- The Southwest & Northwest were most impacted
  - Overall, 8.5% of respondents from SW indicated a **serious shortage**. No other region was higher than 4.2%
  - NW had more respondents indicate a **moderate shortage**

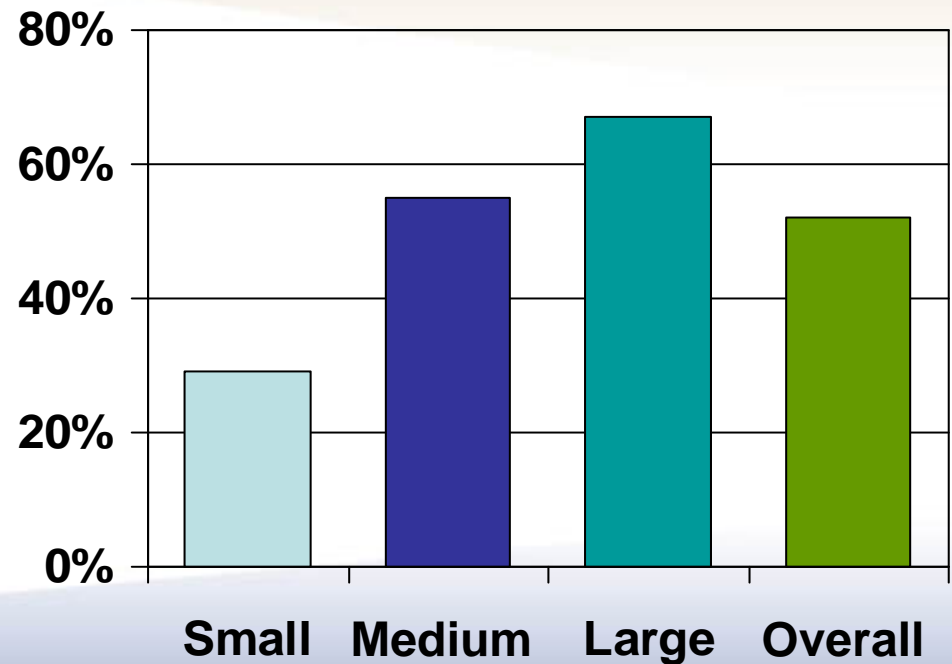


Percent Indicating Moderate or Serious Workforce Shortage

# Workforce Shortages

- Just over half of respondents had positions unfilled due to lack of qualified applicants.
  - Job vacancies most acute for large companies (75-250 employees).

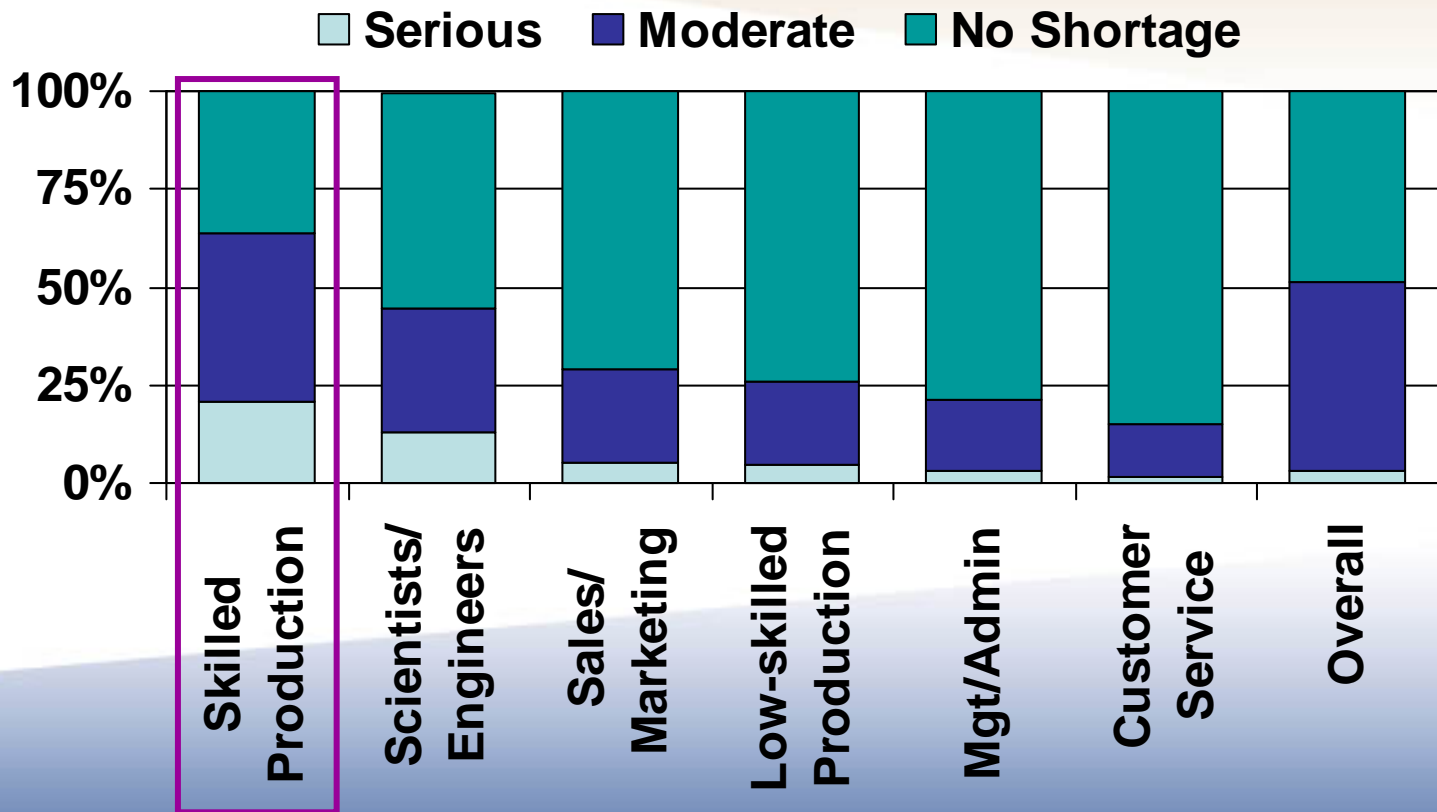
## Job Unfilled



Percent Indicating at Least One Unfilled Position

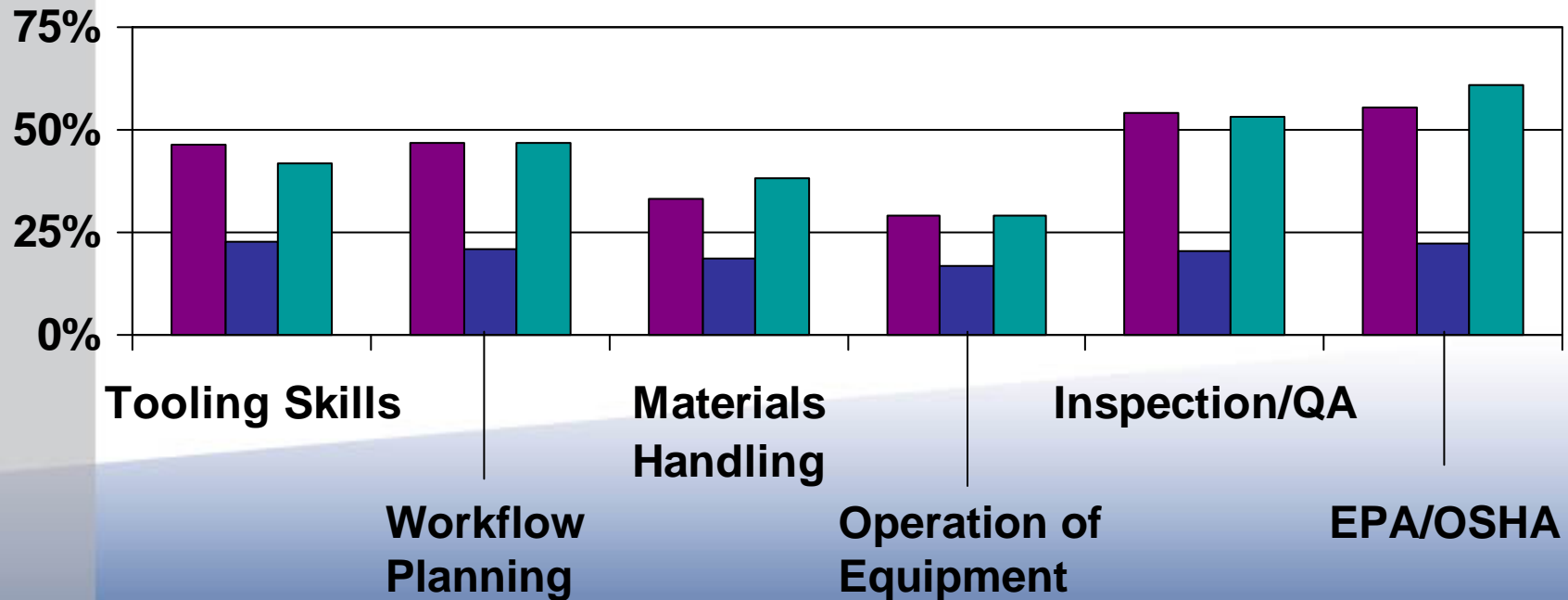
# Workforce Shortages

## Severity by Occupation



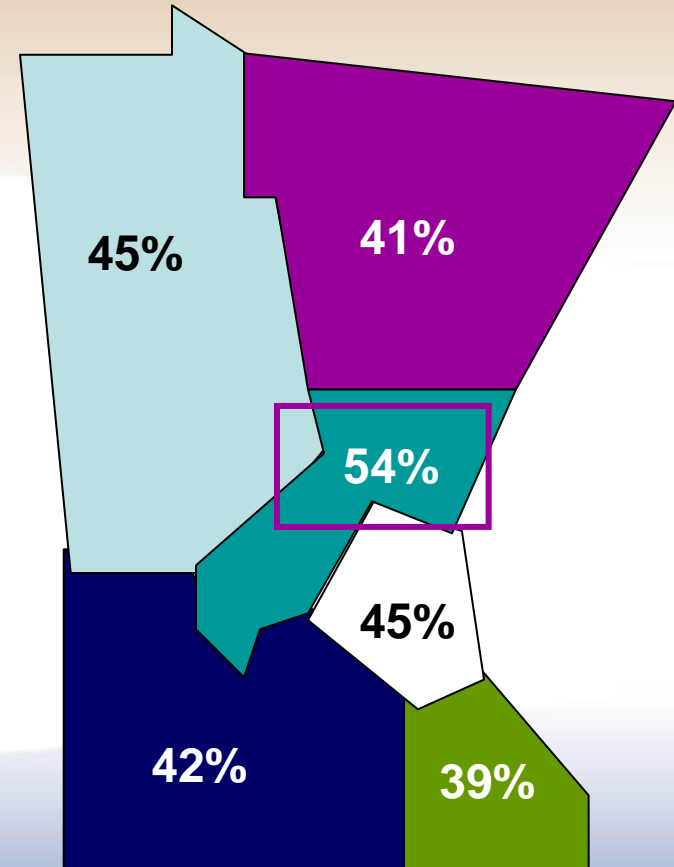
# Production Workforce Competencies

- In 6 production competency areas, we asked **Are skills essential?** **Are workers usually qualified?** and **Is paid training (in-house or external) provided?**



# Production Workforce Competencies

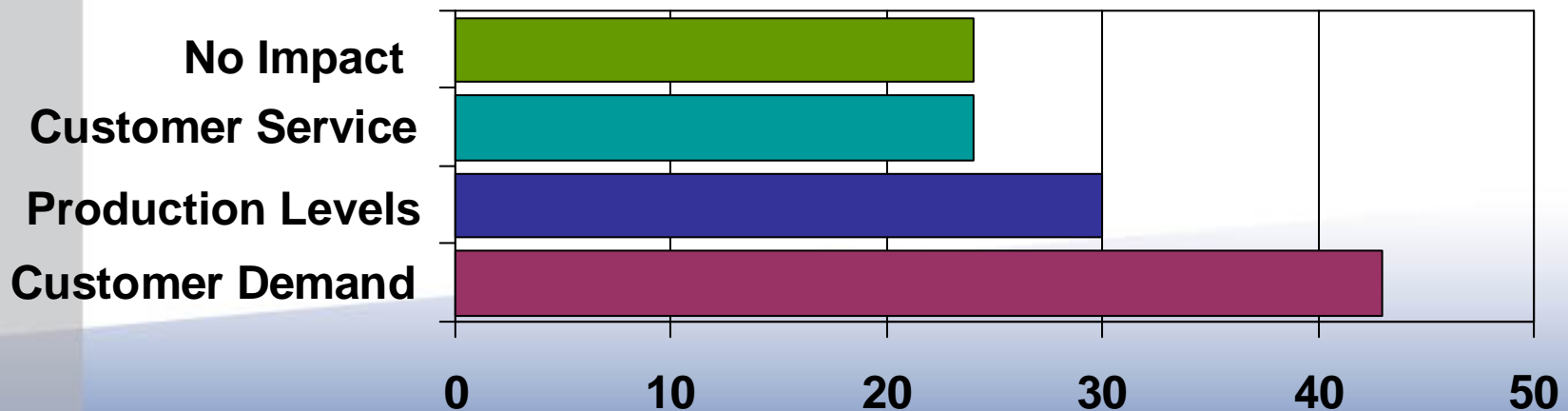
- Central Minnesota respondents broke with peers in all other regions with over half (54%) valuing standardized or uniform certification in metalforming skills standards for production workforce.



Percent Rating Certification "Useful" to "Essential"

# Impact of Workforce Shortages

- The workforce shortages most impact a company's ability to maintain production levels to meet **customer demand**, achieve productivity targets, and provide **customer service & satisfaction**.

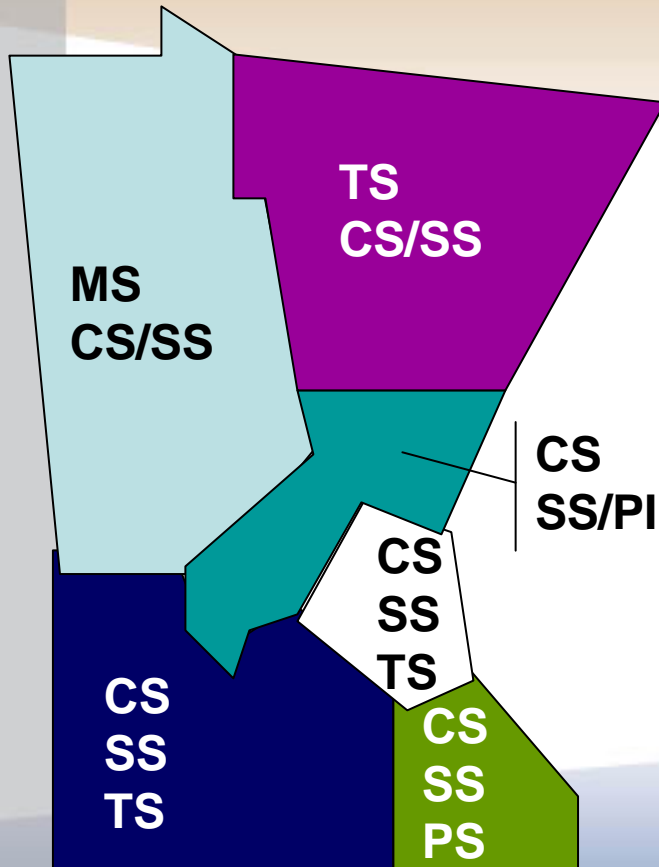


# Building Capacity—Skills Needed

## Three-Year Outlook

1. Computer skills
2. Basic employability skills
3. Technical skills
4. Problem-solving skills
5. Process improvement
6. Supervisory/managerial
7. Working on a team
8. Print reading
9. Customer service
10. Reading/writing/  
communication
11. Math
12. English fluency
13. Innovative creative

# Building Capacity—Future Needs



Top Three Training Needs in Three Years

- Over the next three years, employees will need more training in computer skills according to nearly half of respondents (49.7%).

CS	Computer Skills
MS	Management Skills
TS	Technical Skills
SS	Soft Skills
PI	Process Improvement
PS	Problem Solving

# Building Capacity—Anomalies

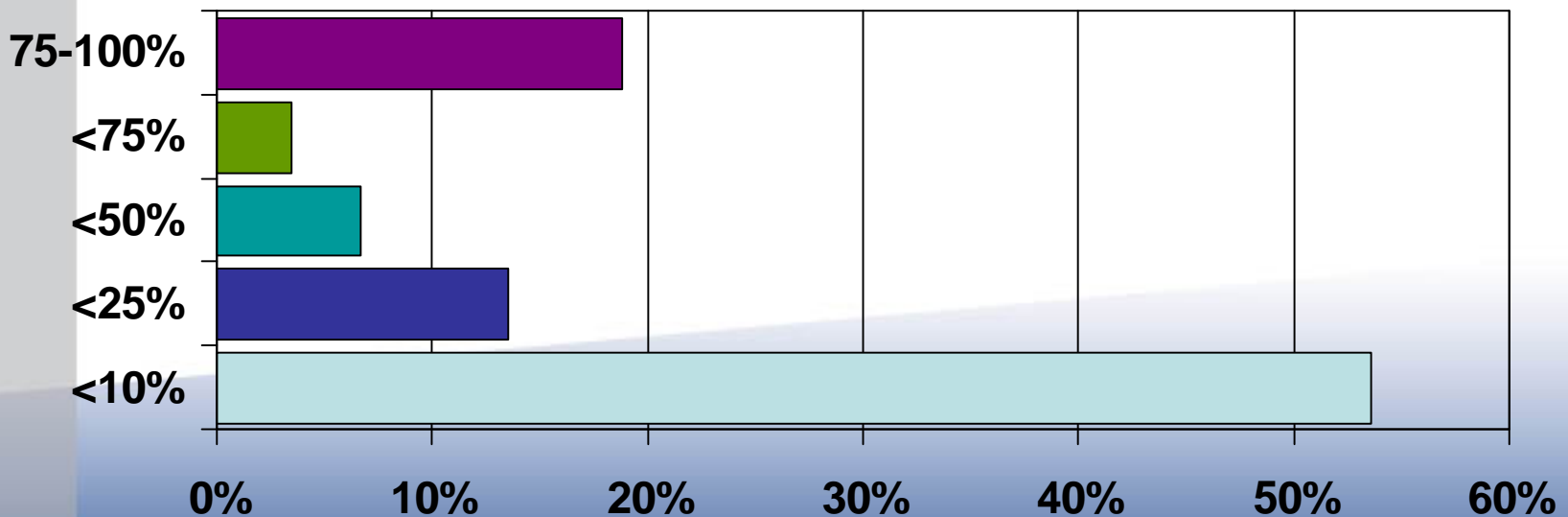
- In which general skill areas will your employees need more training or qualifications over the next three years?

	C	M	NE	NW	SE	SW
English fluency	14%	28%	2%	4%	18%	17%
Creativity	14%	17%	7%	12%	22%	17%
Supervisory	35%	31%	26%	43%	39%	32%
Technical	39%	38%	52%	38%	39%	40%

# Training Incumbent Workforce

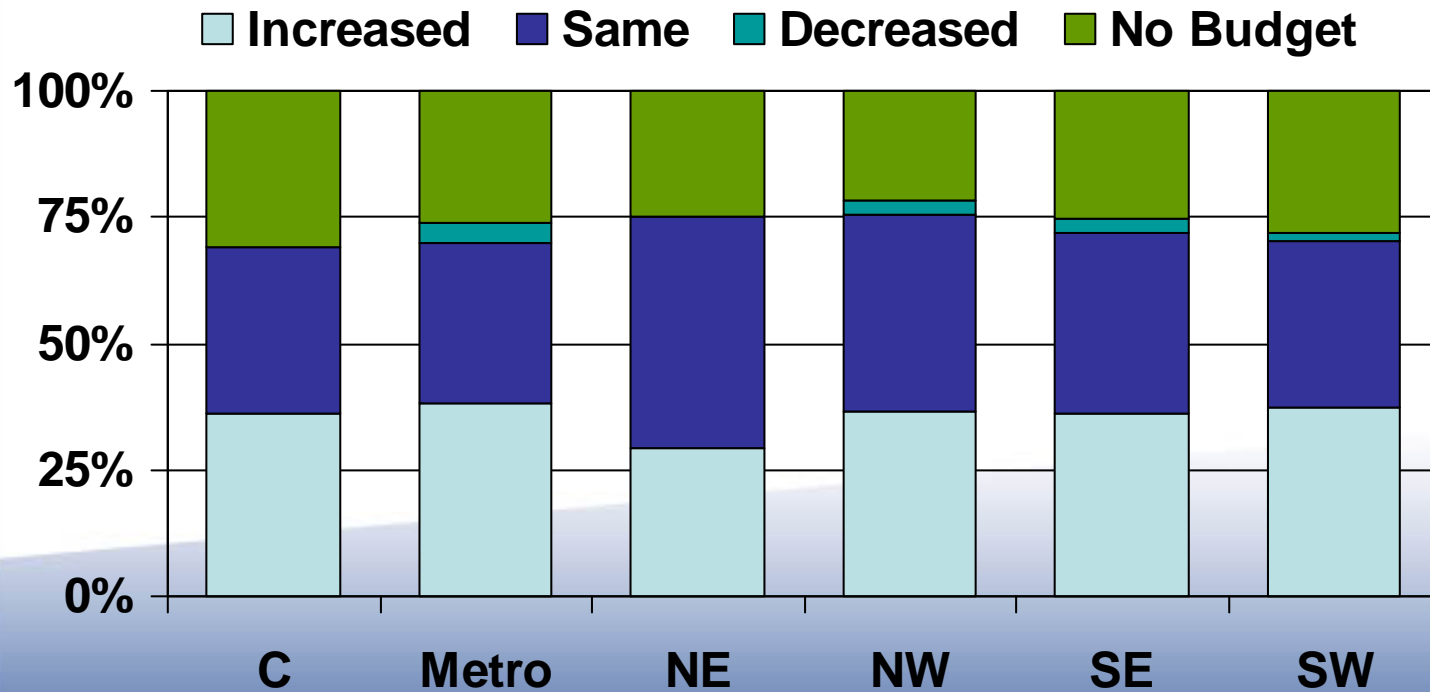
- Overall, nearly 20% of respondents indicated that 75-100% of employees received training each year, but more than half indicated that just 10% or less did.

## Incumbents Receiving Training



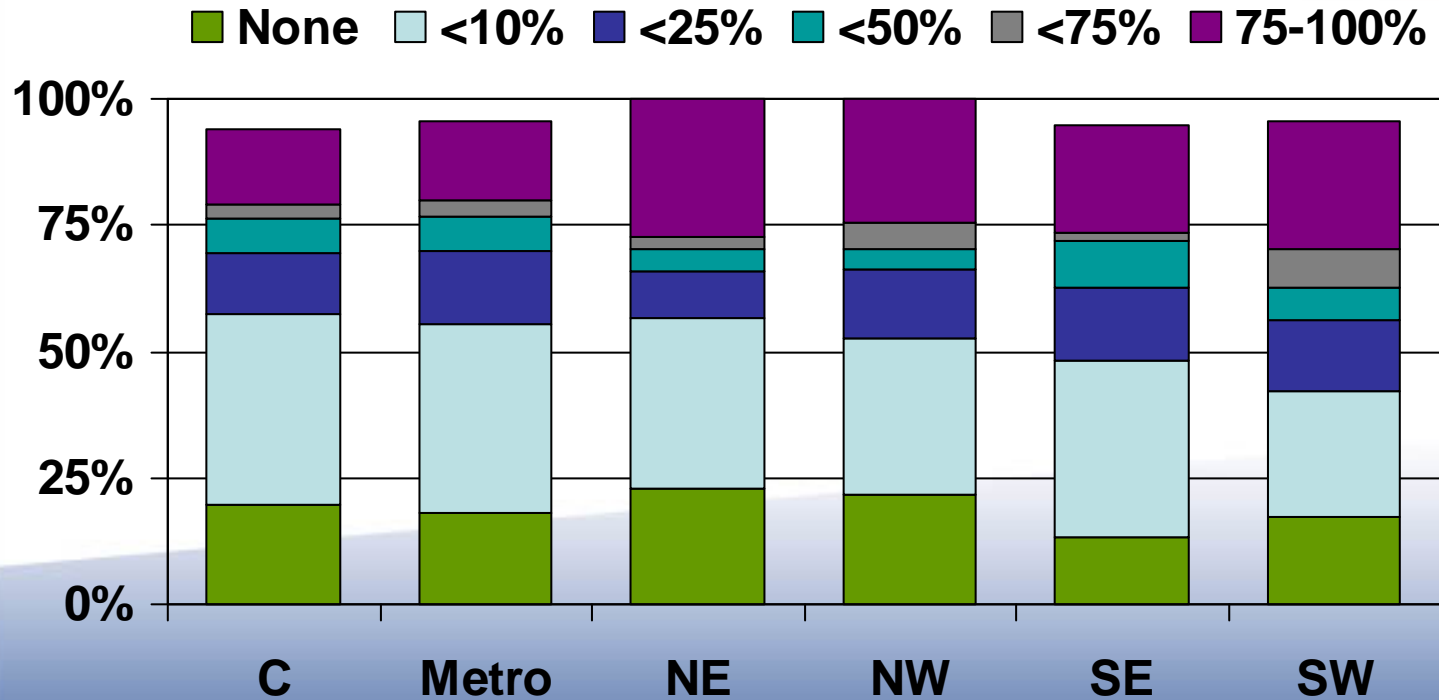
# Building Capacity—Training \$

Compared to three years ago,  
how has the training budget changed?



# Building Capacity—Training #

What percentage of all employees receive company-paid formal training?

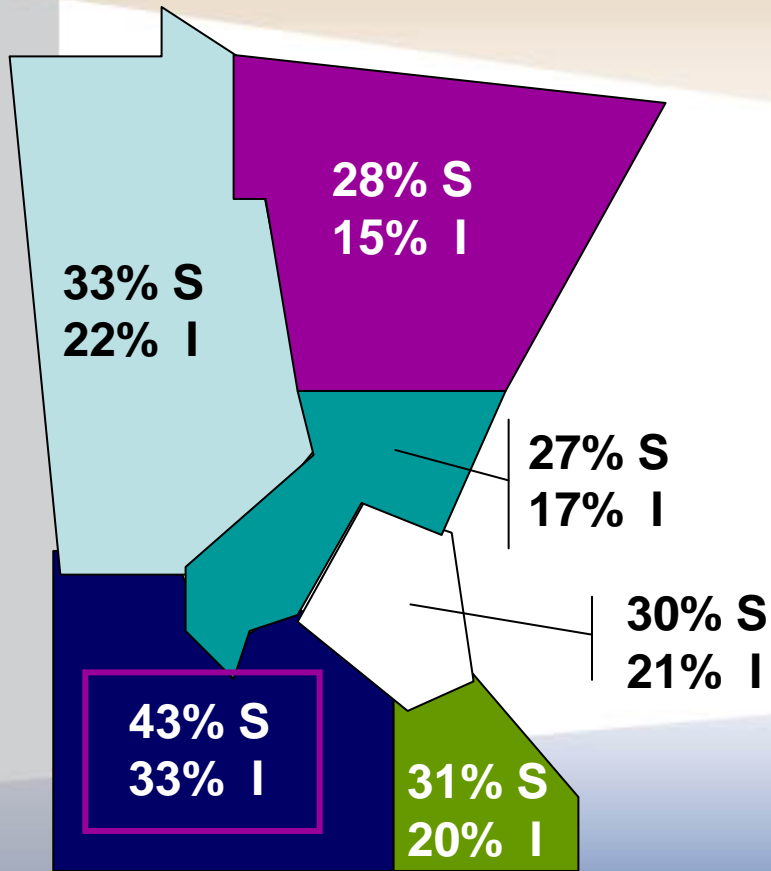


# Community /Technical Colleges Help

## Overall Ratings of Community & Technical Colleges

	Very Useful 1	2	3	Not Useful 4
Student Training	31%	32%	22%	4%
Incumbent Training	21%	32%	26%	8%

# Regional View of Colleges



Percent Rating Very Useful

- SW respondents gave higher marks to community and technical colleges for training both students (S) and incumbent workforce (I) than respondents in other regions.

# Training Partners—Effectiveness

- #1. Technical/Vocational colleges (67%)
2. Business/Industry associations (27%)
3. Universities (23%)
4. Community colleges (22%)
5. Consultants (19%)
6. Manufacturing Extension Partnerships (12%)
7. Online training providers (7%)
8. State of local government agencies (3%)
10. Community/faith-based organizations (2%)
11. Unions (1.4%)
12. Federal-funded programs (.09%)

# Training Partners—Anomalies

- From your experience, which of the following provide the most effective education and training?

	C	M	NE	NW	SE	SW
<b>Community Colleges</b>	19%	16%	33%	28%	34%	31%
<b>Industry Associations</b>	18%	33%	11%	32%	27%	19%
<b>State or Local Gov't</b>	3%	2%	9%	8%	1%	3%
<b>Community/Faith-Based</b>	2%	2%	0%	5%	1%	2%

# Recruitment-Retention Strategies

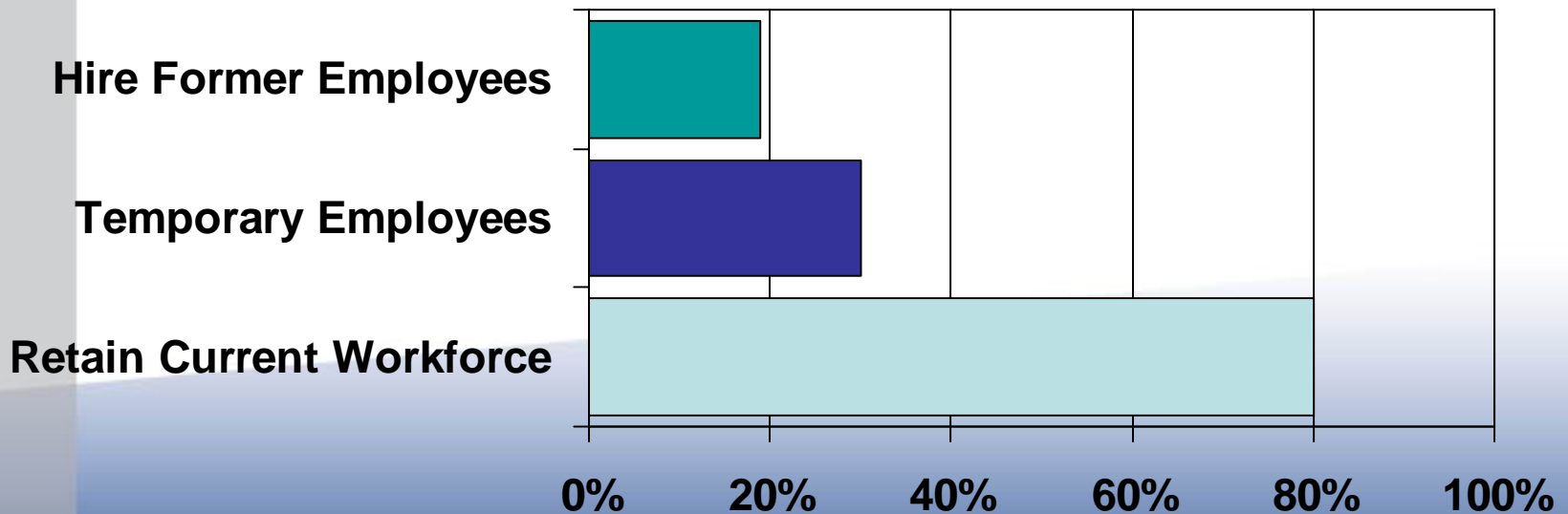
- Four of the five most-used practices were the same, but in different order.

	Retain Current Employees		Recruit New Employees	
1	Increased wages	54.0%	Healthcare benefits	40.6%
2	Healthcare benefits	43.2%	Increased wages	39.1%
3	401(k)/retirement plans	33.9%	401(k)/retirement plans	28.6%
4	Flexible work arrangements	32.7%	Flexible work arrangements	17.8%
5	Improving organizational culture	19.5%	Incentives for employee referrals	10.8%

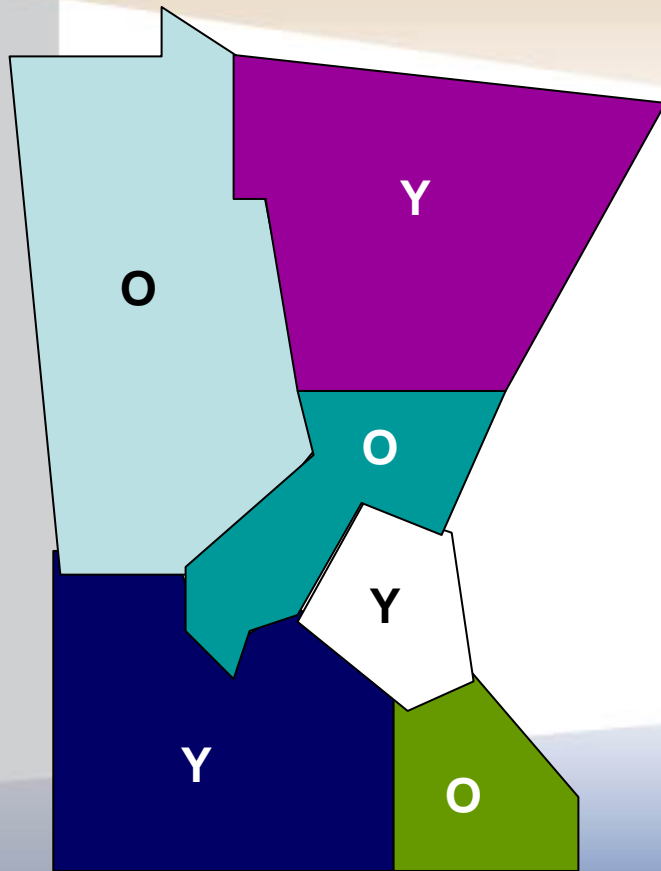
# Recruitment-Retention Strategies

- All sizes of manufacturing firms chose the same responses to the challenges of attracting and retaining qualified employees over the next 3 years.

## Top Tactics for the Next Three Years

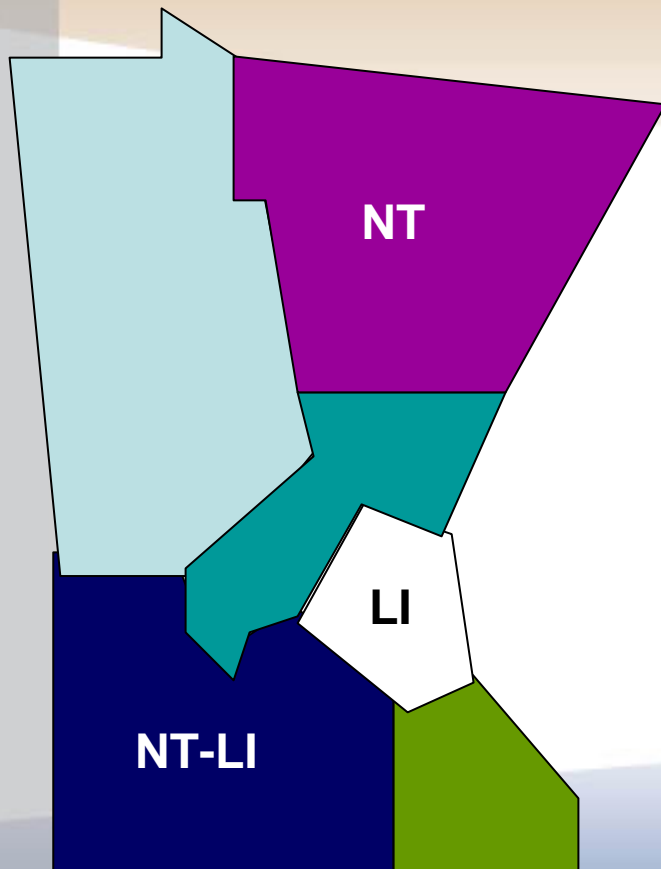


# Recruitment-Retention Strategies



- Some respondents will put greater emphasis on hiring younger workers (Y), some will put greater emphasis on older/experienced workers (O) over the next three years.

# Recruitment-Retention Strategies

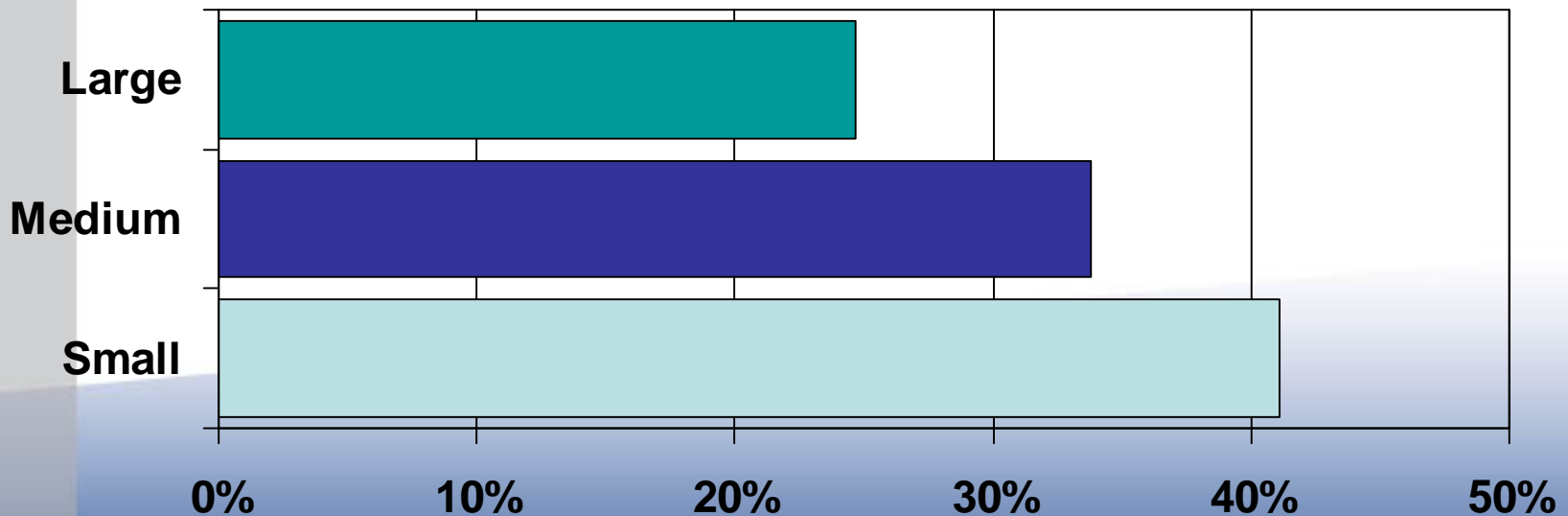


- SW and NE more likely to focus on non-traditional (NT) workers than those in other regions.
- Metro and SW more likely to focus on foreign nationals/legal immigrants (LI).

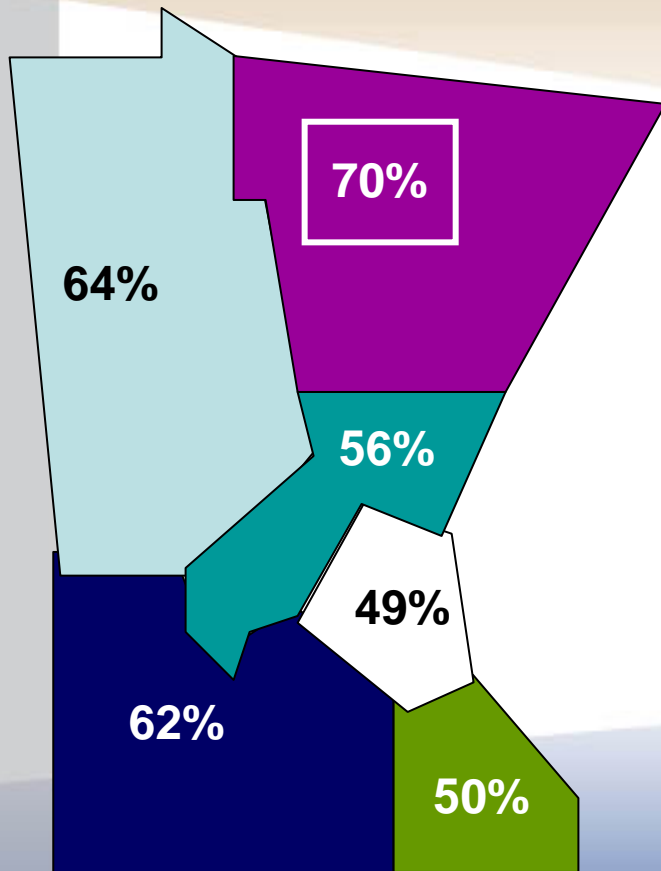
# Retention Strategies

- While all sizes of companies increased wages & healthcare benefits to retain employees, **small companies were more likely to also use flexible scheduling.**

## Flexible Work Arrangements



# Regional Retention Practices

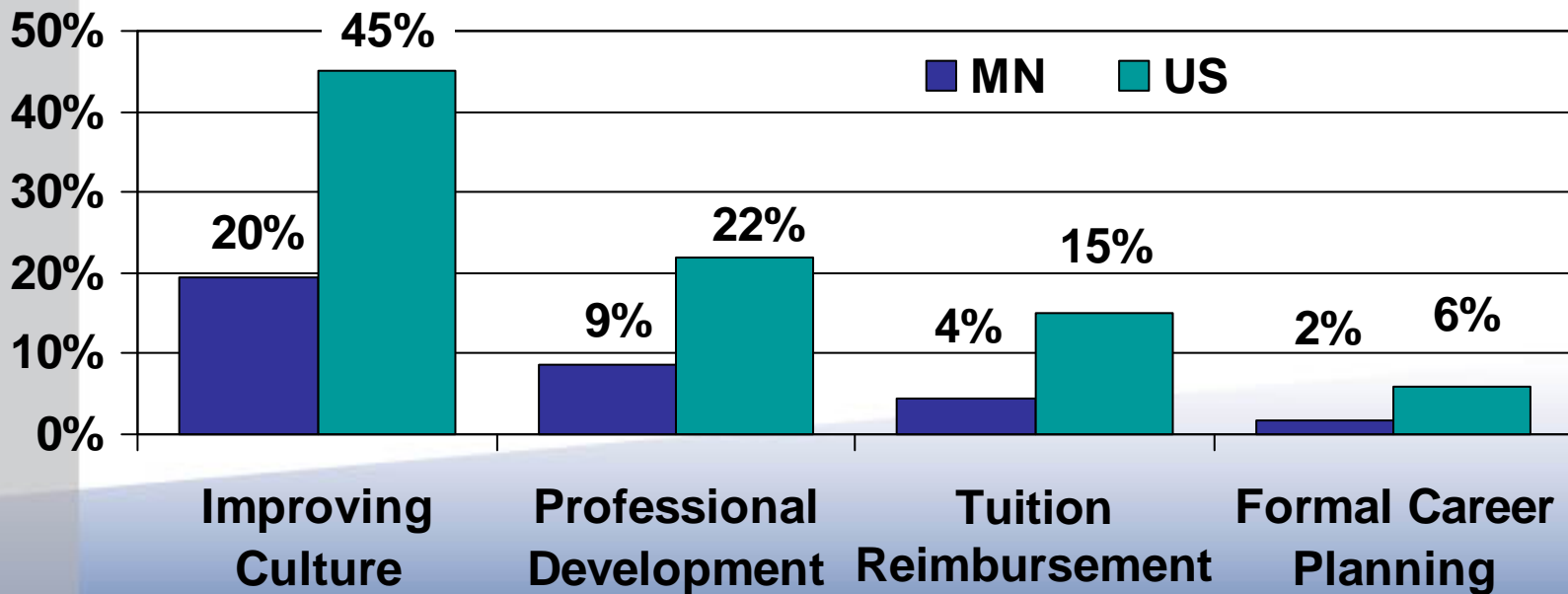


Percent Increasing Wages

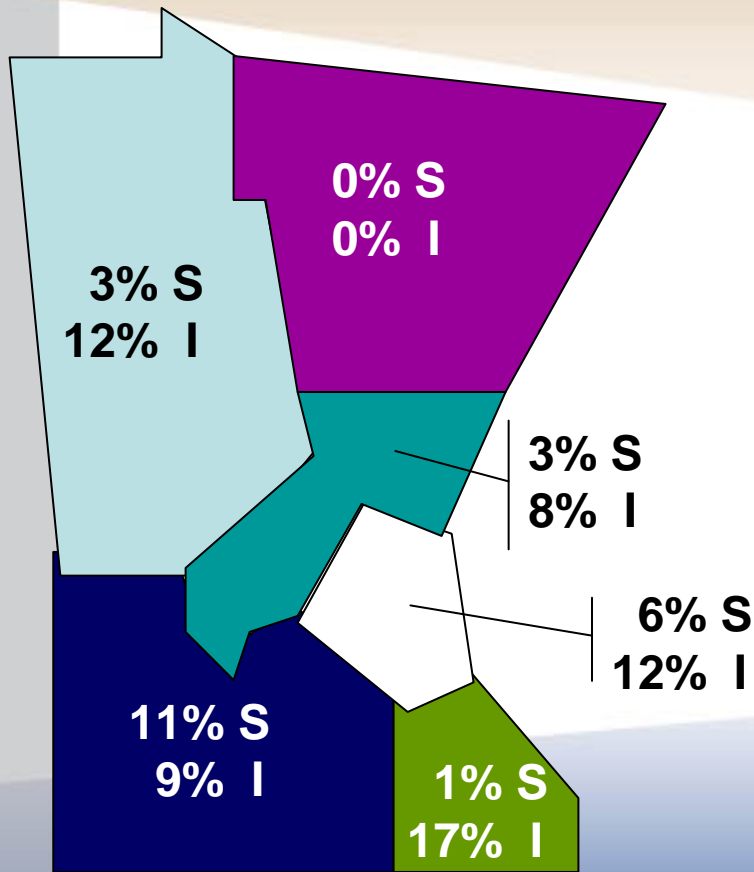
- The NE respondents indicate more pressure to increase wages (relative to local competitors) in order to retain their current workforce.

# Retention Anomalies

- Nationally, manufacturers were more than twice as likely to use certain retention strategies than their Minnesotan counterparts.



# Regional Recruitment Practices

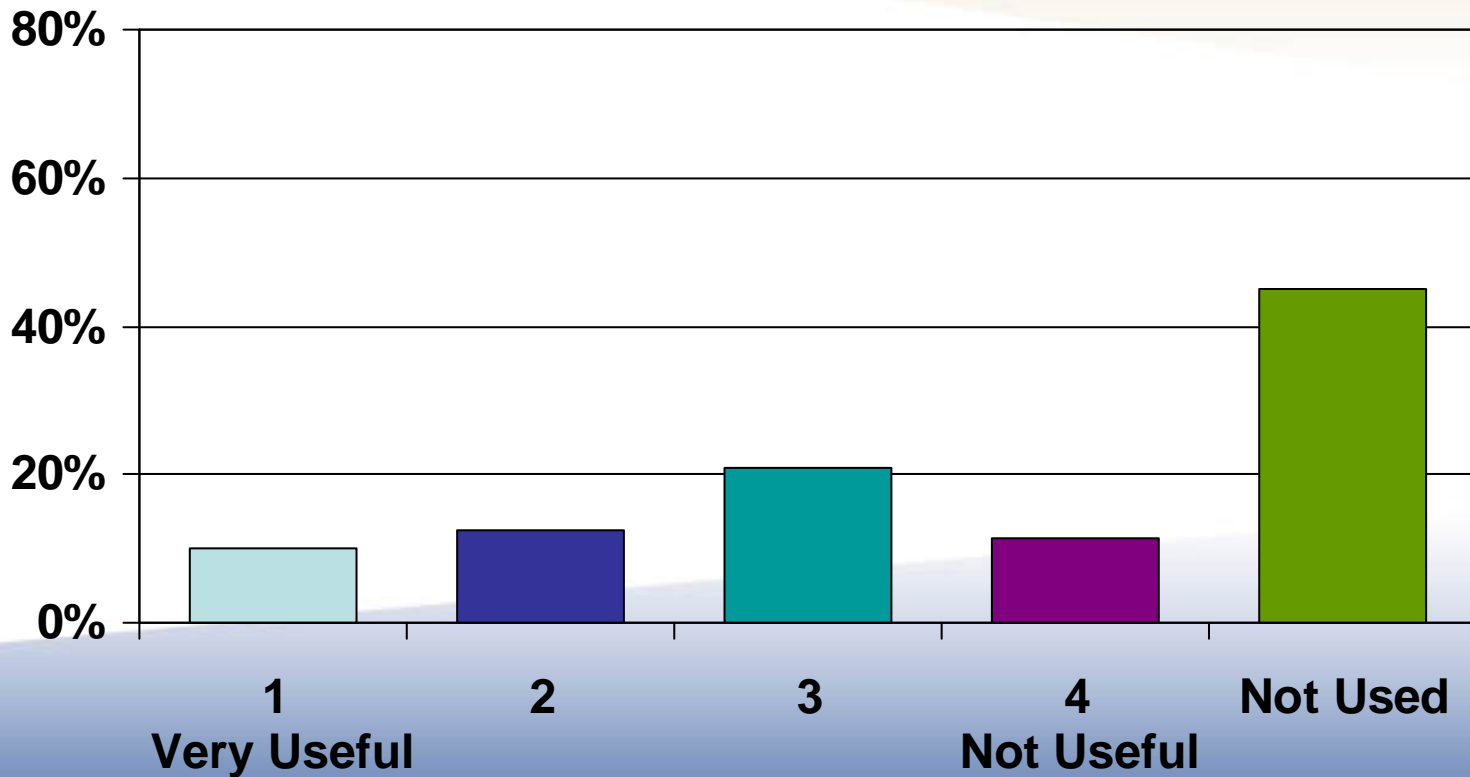


Percent Using Bonuses or Incentives

- No NE respondents reported offering signing bonuses (S) or incentives (I) for employee referrals as a recruitment strategy.
- SW was most likely to offer signing bonuses.
- SE was most likely to offer incentives for employee referrals.

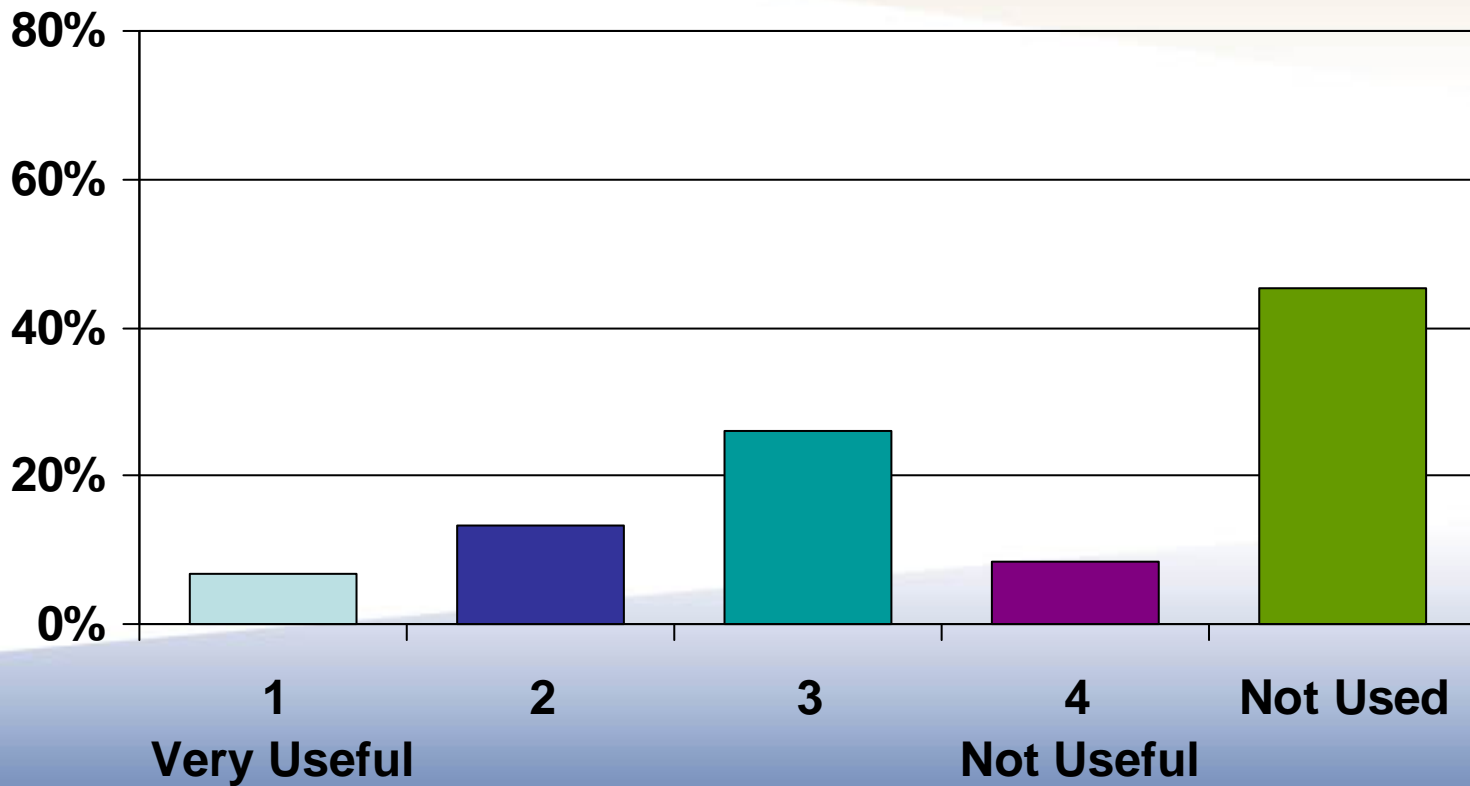
# Talent Sourcing

Public/Government Agencies  
(e.g. DEED WorkForce Centers, MN Job Bank)



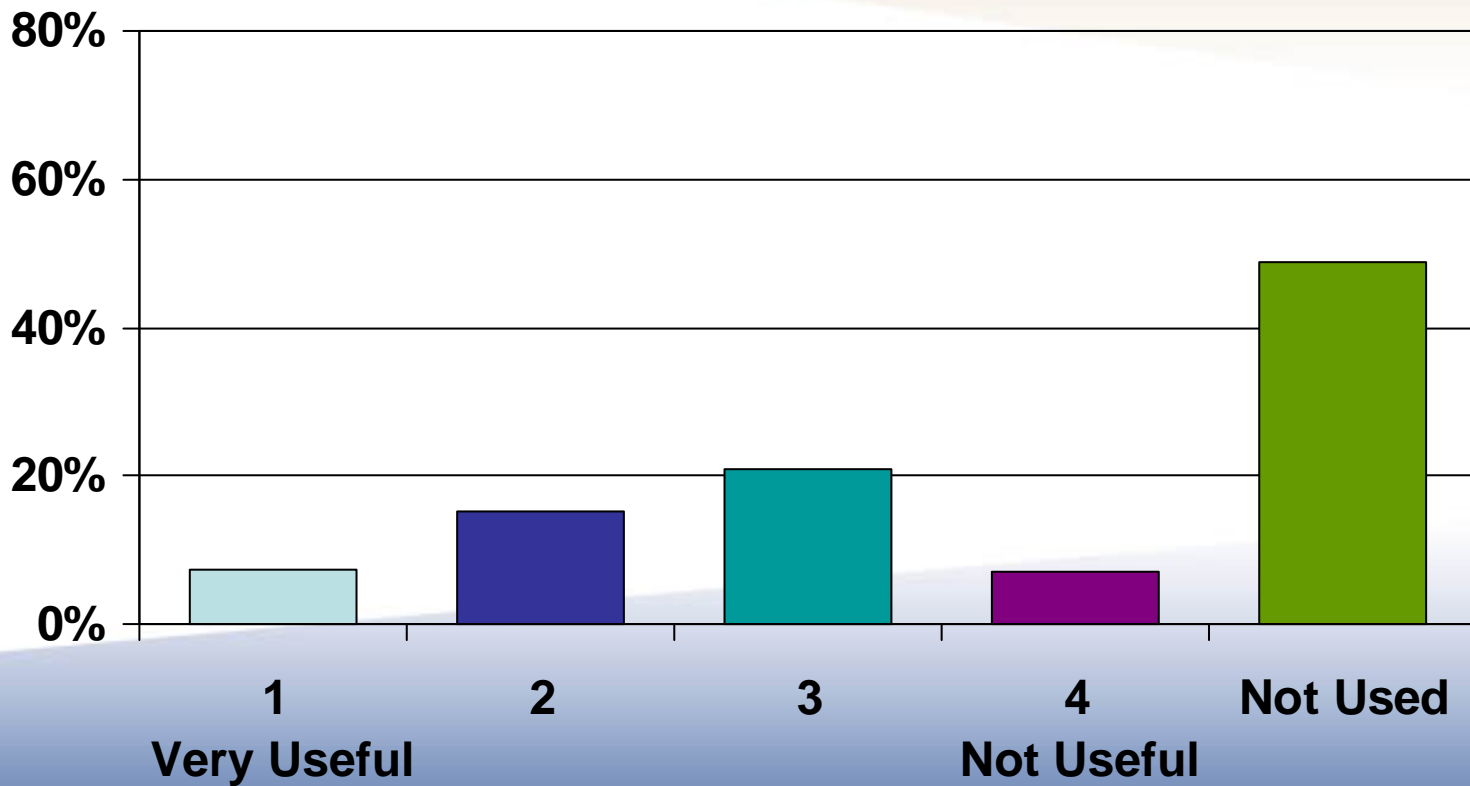
# Talent Sourcing

## Community or Technical Colleges



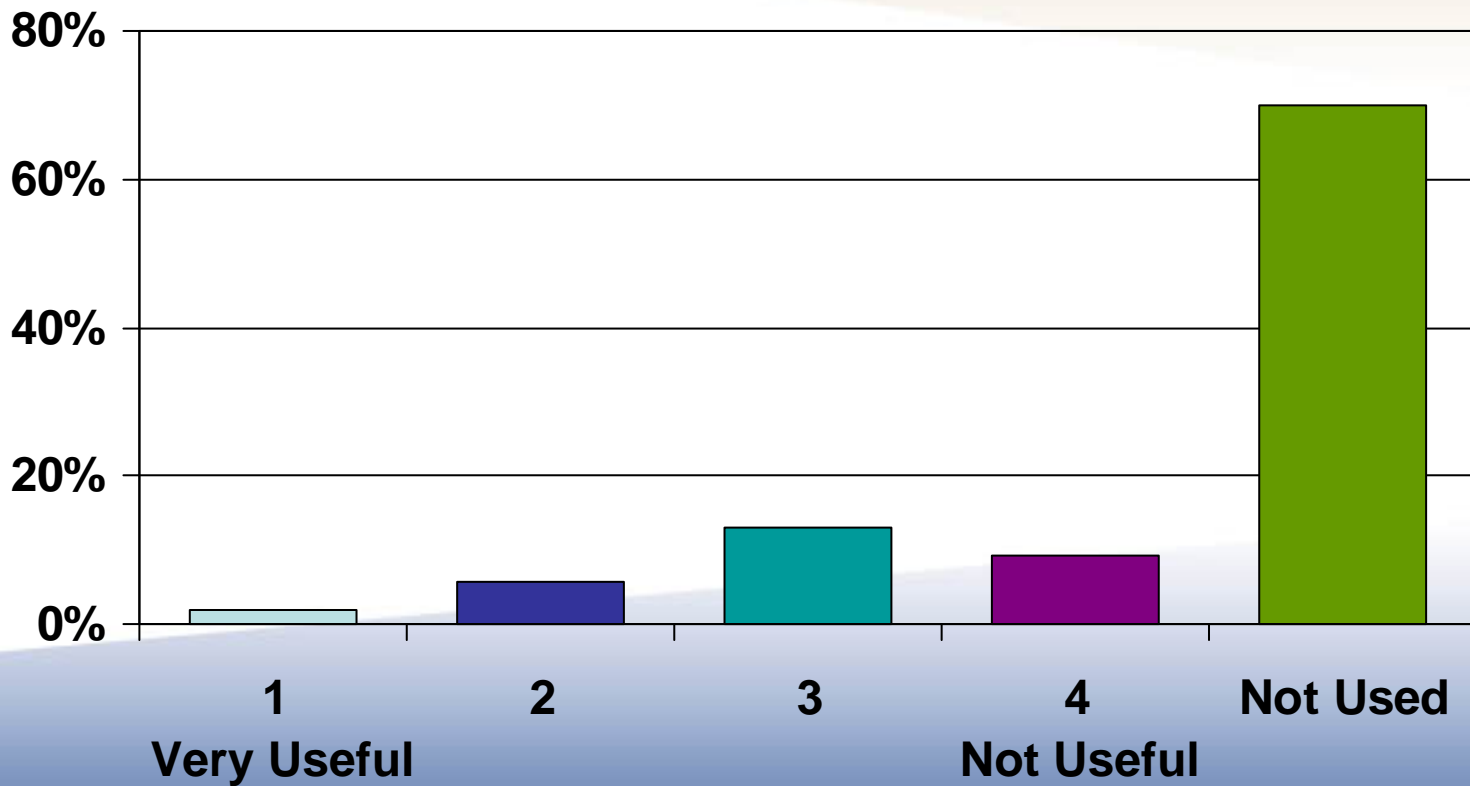
# Talent Sourcing

## Internet-Based Agencies or Job Boards



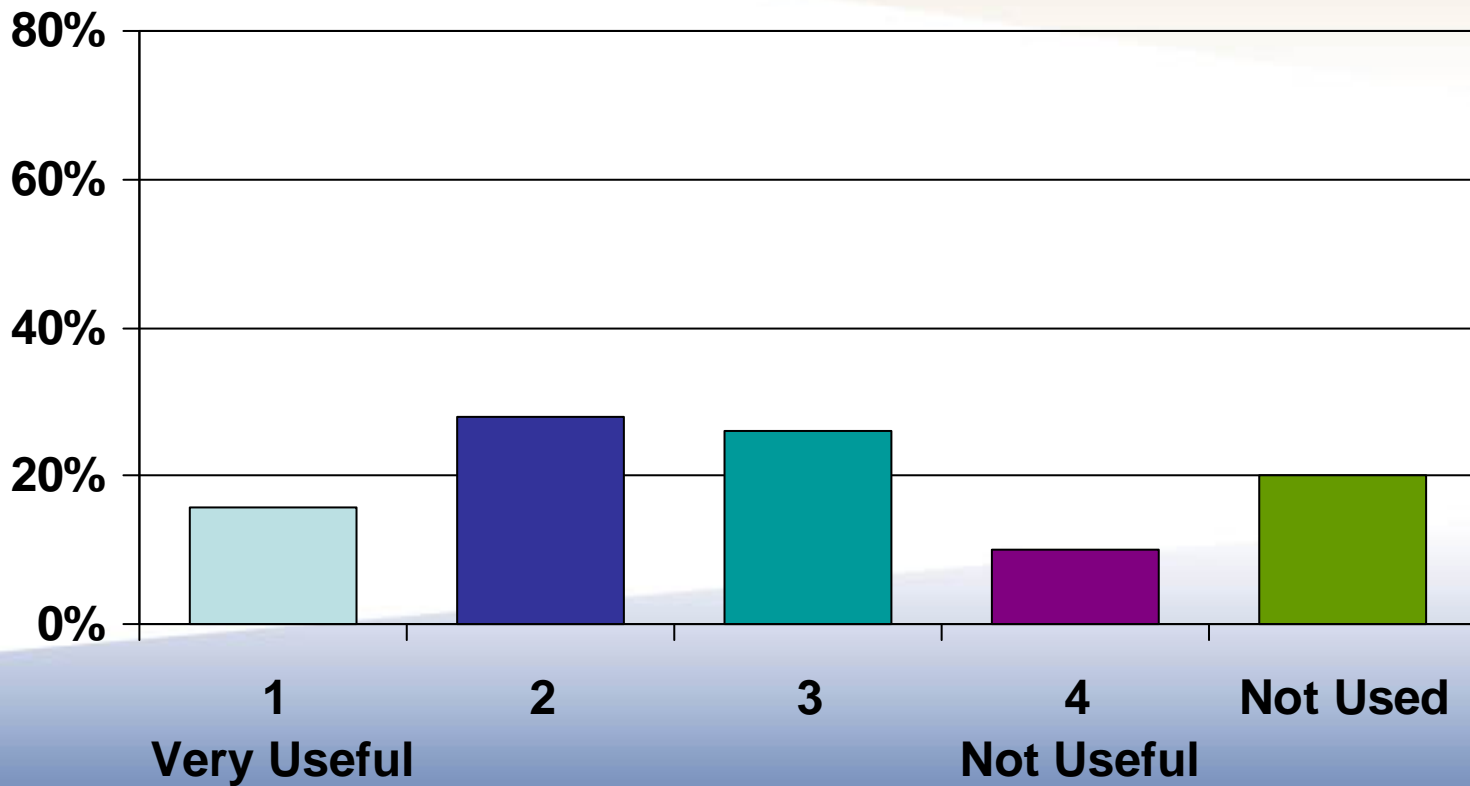
# Talent Sourcing

## Job Fairs



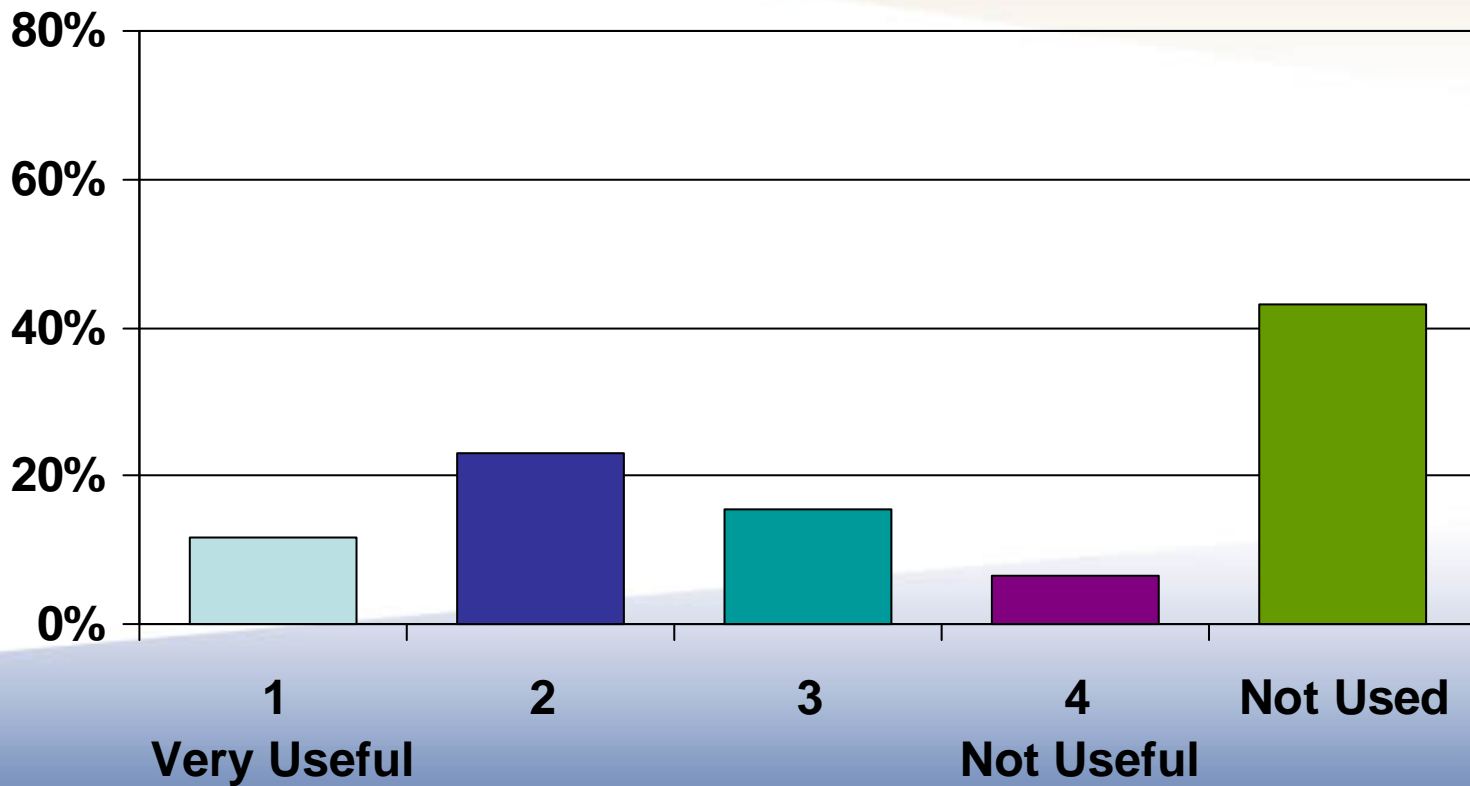
# Talent Sourcing

## Newspapers or Other Periodicals



# Talent Sourcing

## Private Employment/Recruitment Agencies



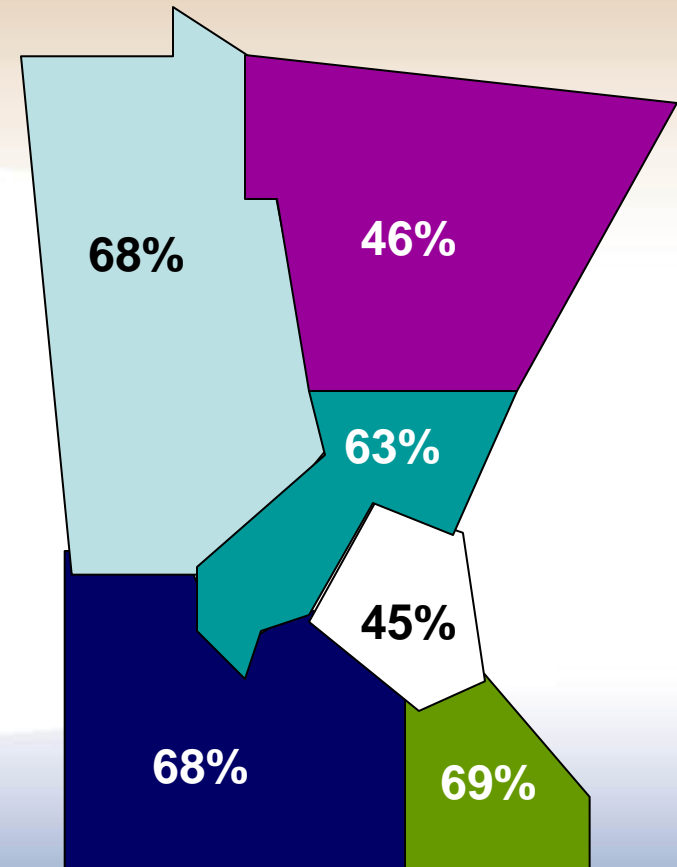
# Collaboration with Educators

- Minnesota lags behind their peers nationwide.

Type of Collaboration	MN	US
Participate in Career Days/Job Fairs	26%	45%
Organize Special Programs/Events	11%	25%
Develop Curriculum	5%	20%
Incorporate Industry Standards in Curriculum	3%	15%
Youth Apprenticeships, Internships, Hires	26%	54%
Teacher Summer Internships	5%	9%
Assist in Instruction	7%	18%
Mentor Students	11%	14%
Contribute Space/Equipment	10%	22%
Other	5%	5%

# Regional Differences in Collaboration

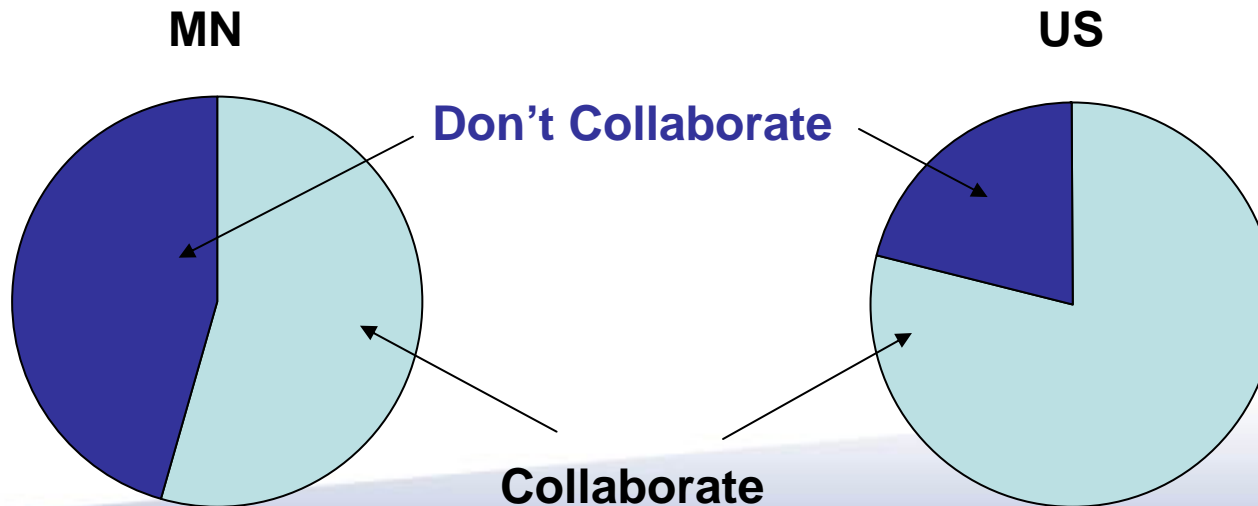
- Every region had substantial differences from statewide results of 54.5% of respondents that collaborate.



Percent Indicating Some Collaboration

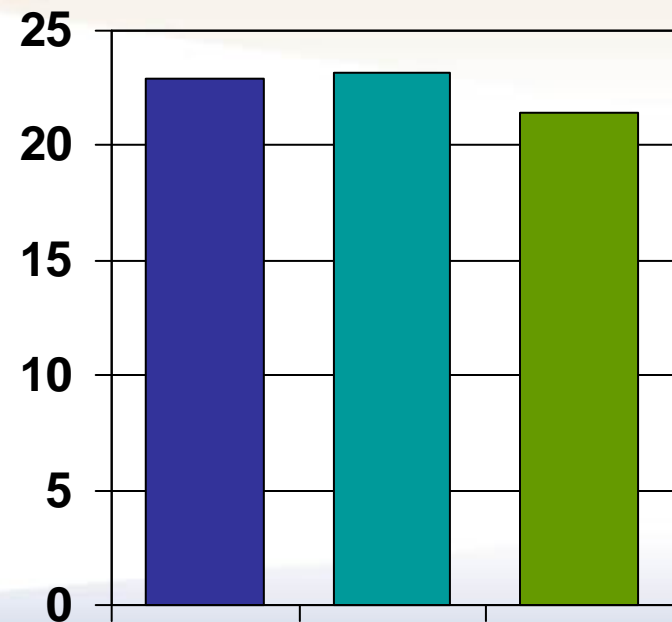
# Collaboration—Benchmark

- Nationally, 21% report no collaboration compared to 46% in our survey.



# Rationale for Collaboration

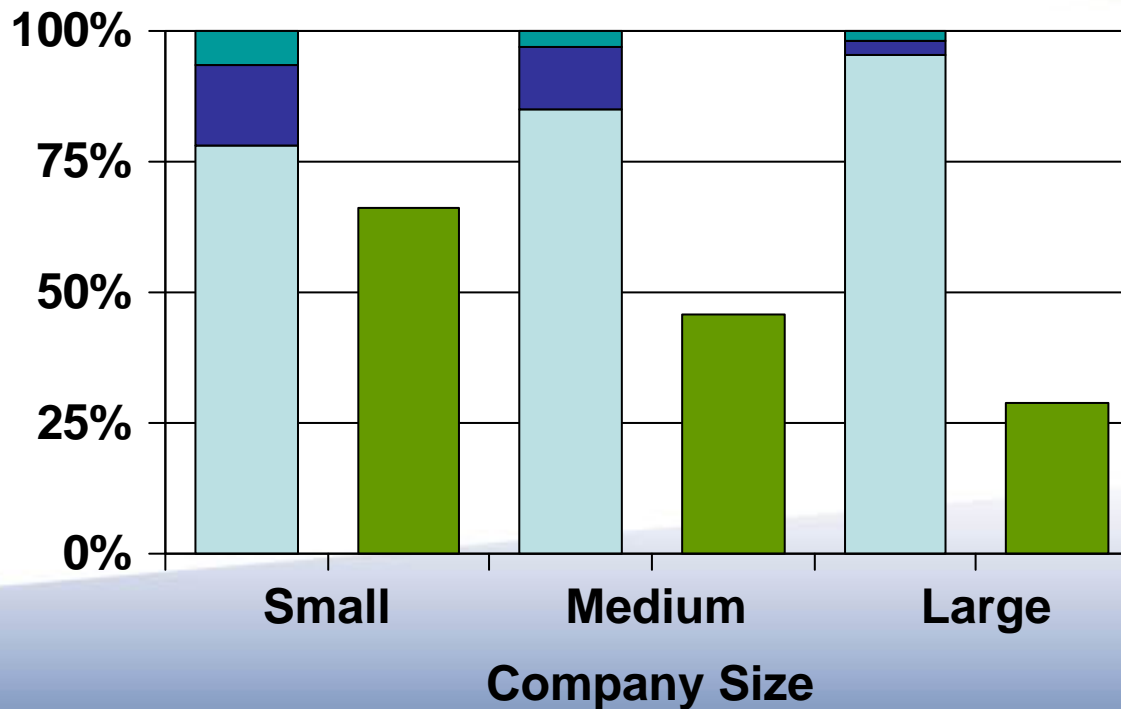
- For those Minnesota companies that collaborate, the **top three reasons** were
  - promote the industry to students, teachers and parents;
  - recruit new employees among students;
  - part of the company's community outreach.



# State Involvement—Services

## Awareness of MN Workforce Systems

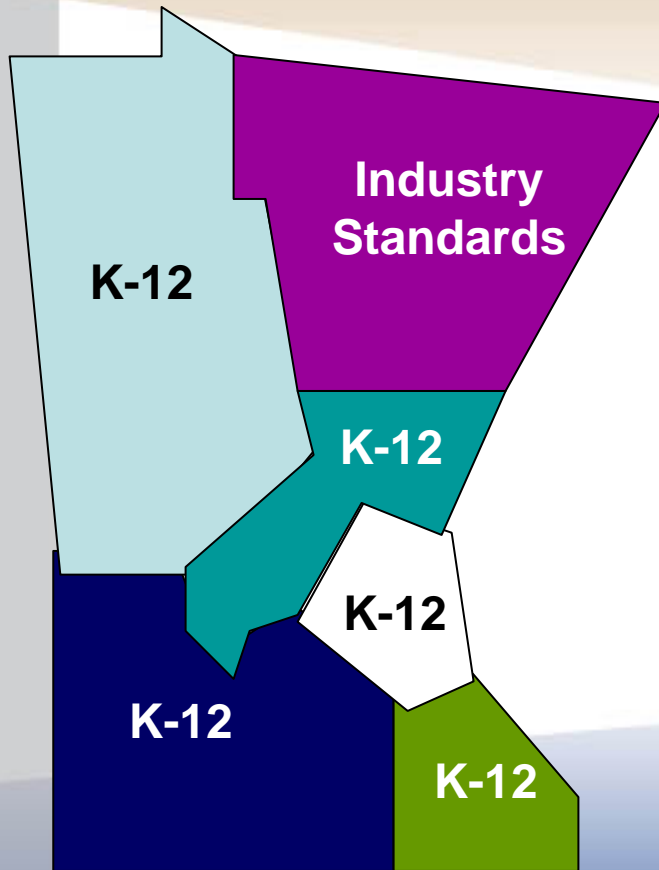
■ Aware ■ Not Aware ■ Don't Know ■ Don't Use



# State Involvement—Weighing In

- Over 70% believed that the State of Minnesota should have moderate or significant involvement in assisting manufacturers to attract and retain a highly effective workforce.
- The preferred forms of support were **tax relief for companies** that offer training and **funding for employee training** at companies.

# Third Choices for State Support



- Behind tax relief and funding for training, the NE region was singular in wanting support from the State for industry standards or certifications.
- Third choice for all other regions was for the State to focus on K-12 education.

# National Recommendations

- Employers must
  - understand the importance of human capital as a business investment
  - implement new and non-traditional approaches to skills retention challenges
  - help the public sector to understand what companies need
- Educators must
  - produce graduates with the skills needed
- Education and workforce policies must
  - reflect the need for lifelong learning
- Individuals must
  - take responsibility for their employability

# My Recommendations

- **Placement service providers:**
  - improve perceived and actual value to serve more effectively
- **Employers:**
  - consider whether current levels of investment in training are adequate
  - evaluate time priorities to include collaboration with local schools
- **Education/training providers in C & NE:**
  - study demand for skill certification to better meet expressed needs
- **Manufacturing advocates:**
  - consider proposing policy changes to give tax incentives or direct funding for investments made in training workers

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# Survey Fine Print

- 704 responses (2,370 surveys sent),
  - response rate of 29.4% (31.7% adjusted)
- Margin of error of +/- 3.6 percent
- Results more representative of the workforce needs of medium and large businesses