



Governor's Task Force on Workforce and Artificial Intelligence



Industries, Occupations, and Skills

Governor's Task Force on Workforce and Artificial Intelligence



WISCONSIN
ECONOMIC DEVELOPMENT

Missy Hughes

Secretary and CEO,
Wisconsin Economic
Development Corporation

**Governor's Task Force on
Workforce and Artificial Intelligence**



Top 5 Ideas for Preparing the Workforce

1. Change management; Integrate the change
2. Know which population are disadvantaged
3. Educate the employers and workforce
4. Maximize GDP growth



Top 5 AI Challenges for Task Force Focus

1. Security
2. Trust / Fear / Social Responsibility
3. Equity / Digital Access
4. Cost – Investment
5. Need for critical thinking



Headline of the Future

A modernizing workforce that supports the growth and development of workers and drives a growing economy that provides life-sustaining wages and societal benefits

Wisconsin GDP growth is within top 10 due to investment on AI education and innovation



A man in a blue suit is standing and presenting a bar chart on a screen to a group of people seated around a table in a meeting room. The chart has several blue bars and one prominent pink bar. The scene is dimly lit with a blue tint.

Task Force Survey Findings

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Q1: Priorities to Prepare Wisconsin's Workforce for AI

- ✓ **Educate** employers, workers, and students to help prepare for the future of AI.
- ✓ Make sure policy makers and leaders have an **understanding** of AI.
- ✓ Improve access to **training** to speed skill attainment.
- ✓ Know which populations are marginalized or may be disadvantaged by these emerging technologies and take steps to **reduce barriers**.



Q2: Challenges in Preparing Wisconsin's Workforce for AI

- ✓ **Fear and mistrust** of the technology.
- ✓ Funding for **training** and other preparations.
- ✓ **Security** concerns.
- ✓ Increased gap in **access to economic opportunities**.



Initial Research on Industries, Skillsets, and Occupations Most Likely to be Impacted by AI

Scott Hodek

Section Chief, Office of Economic Advisors
DWD Division of Employment and Training

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Which occupations will be most affected by AI?

- Rapidly evolving disruptive technology impacts are difficult to predict.
- Will depend on collective choices made by individuals, businesses, AI vendors, and federal and state policymakers.
- That said, we can make some educated guesses...



Estimating AI Exposure

- Several studies have estimated AI exposure by occupation by:
 - Linking AI capabilities with work activities currently done by workers
 - Calculating how much each occupation relies on AI-suitable activities
- If workers in an occupation are mostly doing tasks that an AI could be trained to do, that occupation is rated as having high exposure to AI



What does AI exposure mean?

- **AI Exposure** = People are doing work which, on paper, an AI could be trained to do.
- What does this mean for **employers**?
- What does this mean for **workers**?



Most Exposed Occupations

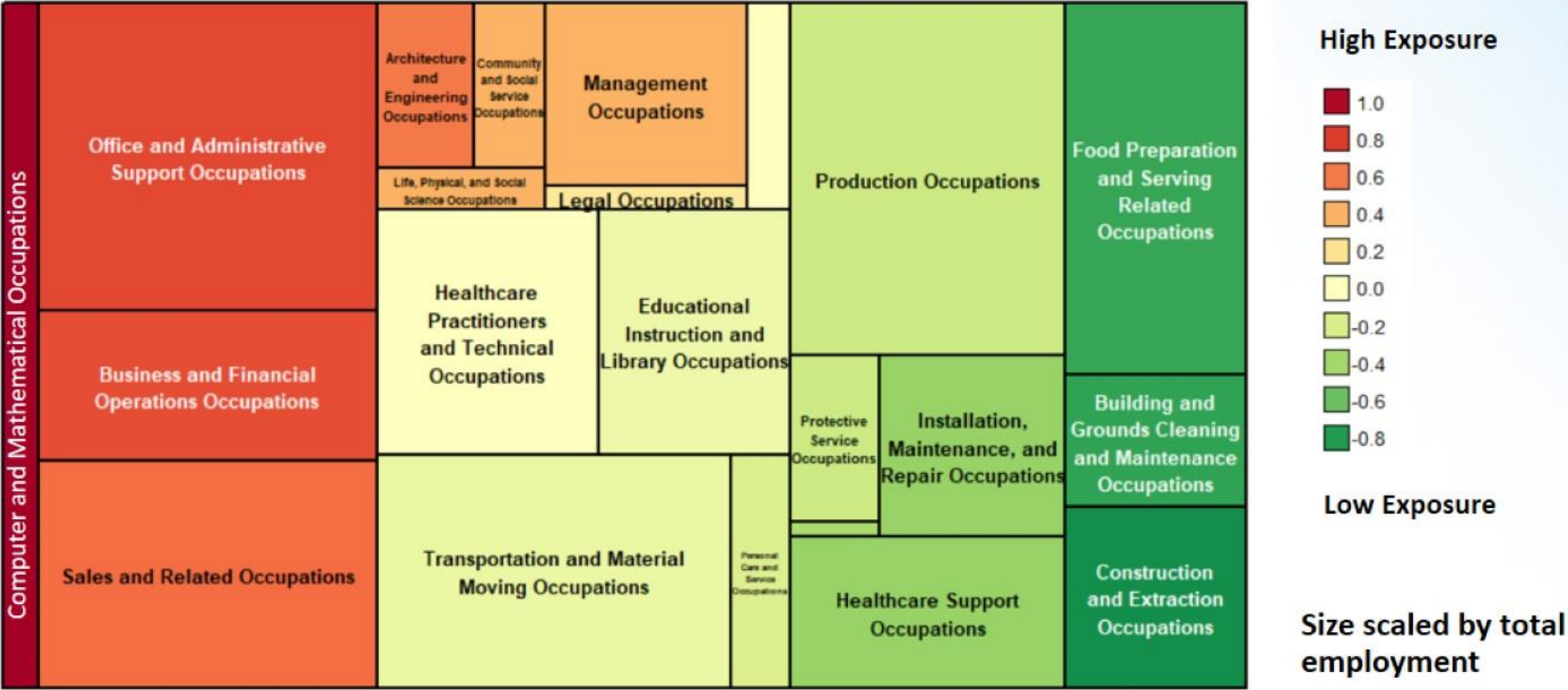
Occupation	Employment in WI	AI Exposure Rank	AI Exposure
Market Research Analysts and Marketing Specialists	12,890	5	1.46
Bookkeeping, Accounting, and Auditing Clerks	34,900	8	1.32
Tellers	10,110	24	1.09
Computer Systems Analysts	10,870	29	1.04
Computer User Support Specialists	12,010	33	1.04
Network and Computer Systems Administrators	8,220	37	1.04
Software Developers	18,450	39	1.04
Receptionists and Information Clerks	25,420	60	0.92
Industrial Engineers	11,680	76	0.84
Mechanical Engineers	9,170	77	0.84

Least Exposed Occupations

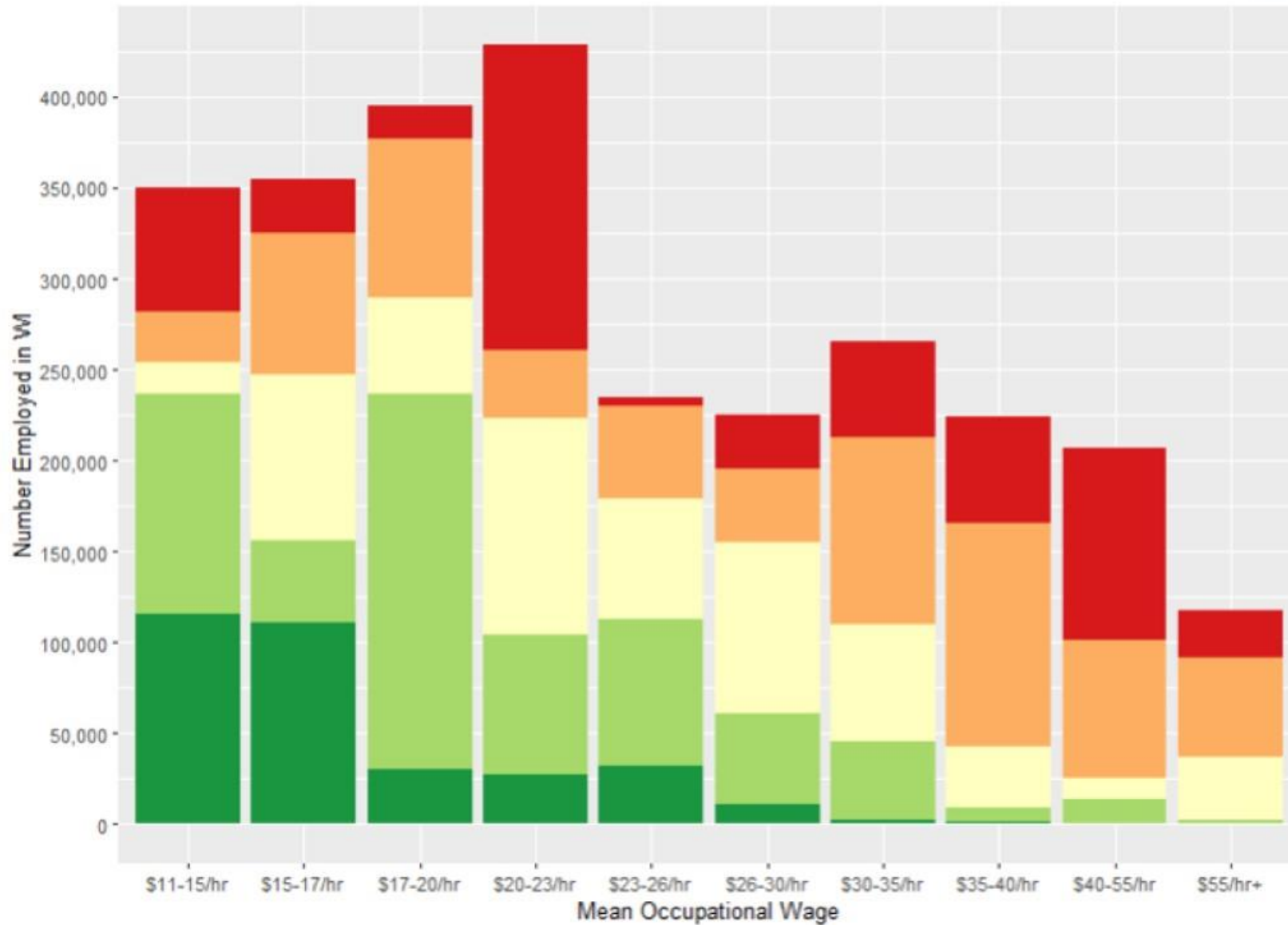
Occupation	Employment in WI	AI Exposure Rank	AI Exposure
Maids and Housekeeping Cleaners	16,060	746	-1.40
Janitors and Cleaners	38,620	739	-1.24
Landscaping and Groundskeeping Workers	16,890	738	-1.23
Food Preparation Workers	20,360	723	-1.04
Cooks, Restaurant	23,830	713	-0.95
Fast Food and Counter Workers	54,770	681	-0.74
Waiters and Waitresses	34,540	678	-0.73
Construction Laborers	17,990	677	-0.72
Welders, Cutters, Solderers, and Brazers	18,080	665	-0.68
Carpenters	14,120	662	-0.67



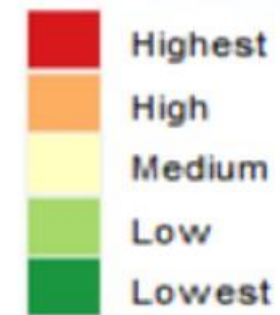
Wisconsin Occupations by AI Exposure



AI Exposure by Income in Wisconsin



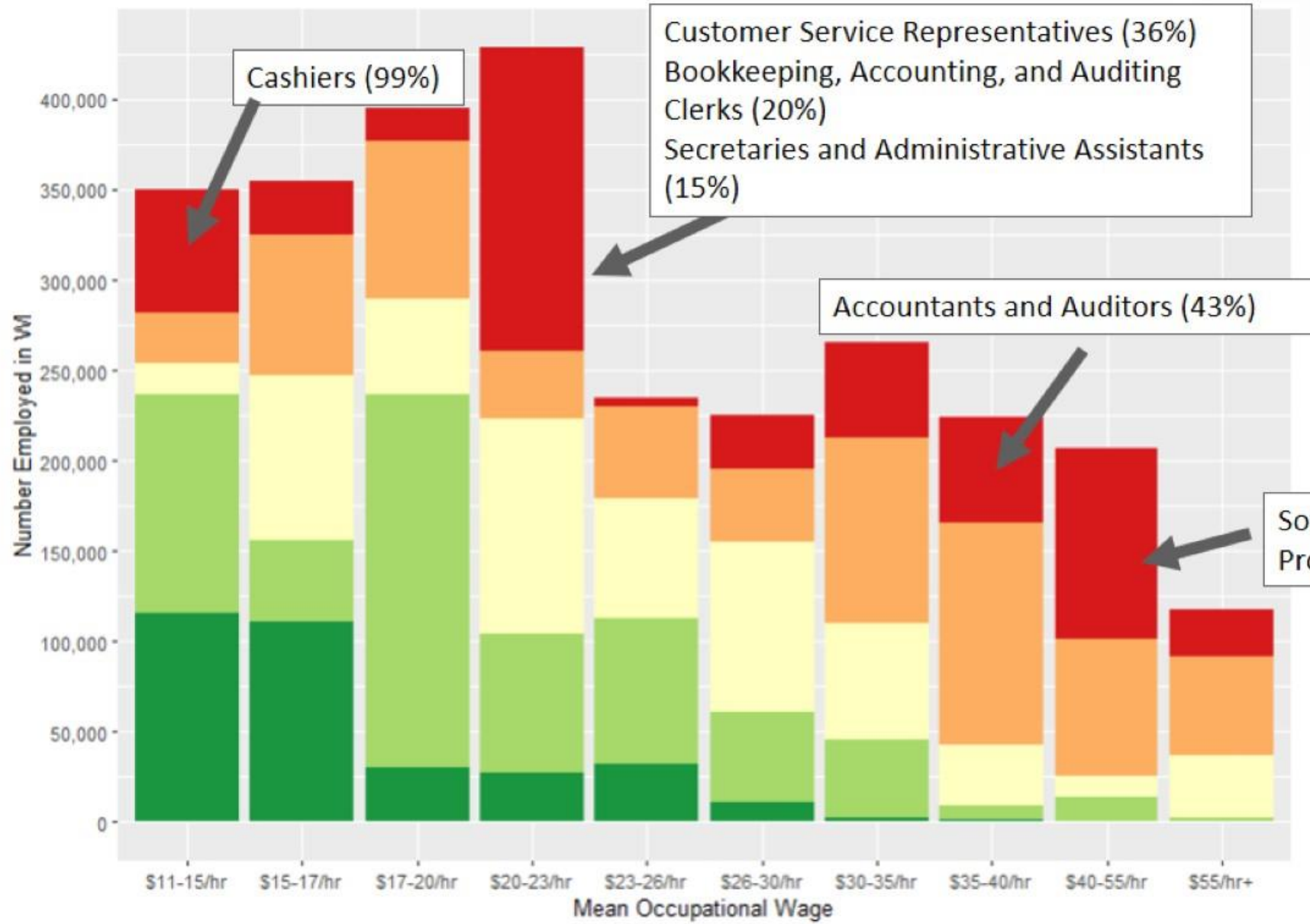
AI Exposure Level



Note: Income levels are based on the average wage by occupation and do not reflect within-occupation variation



AI Exposure by Income in Wisconsin



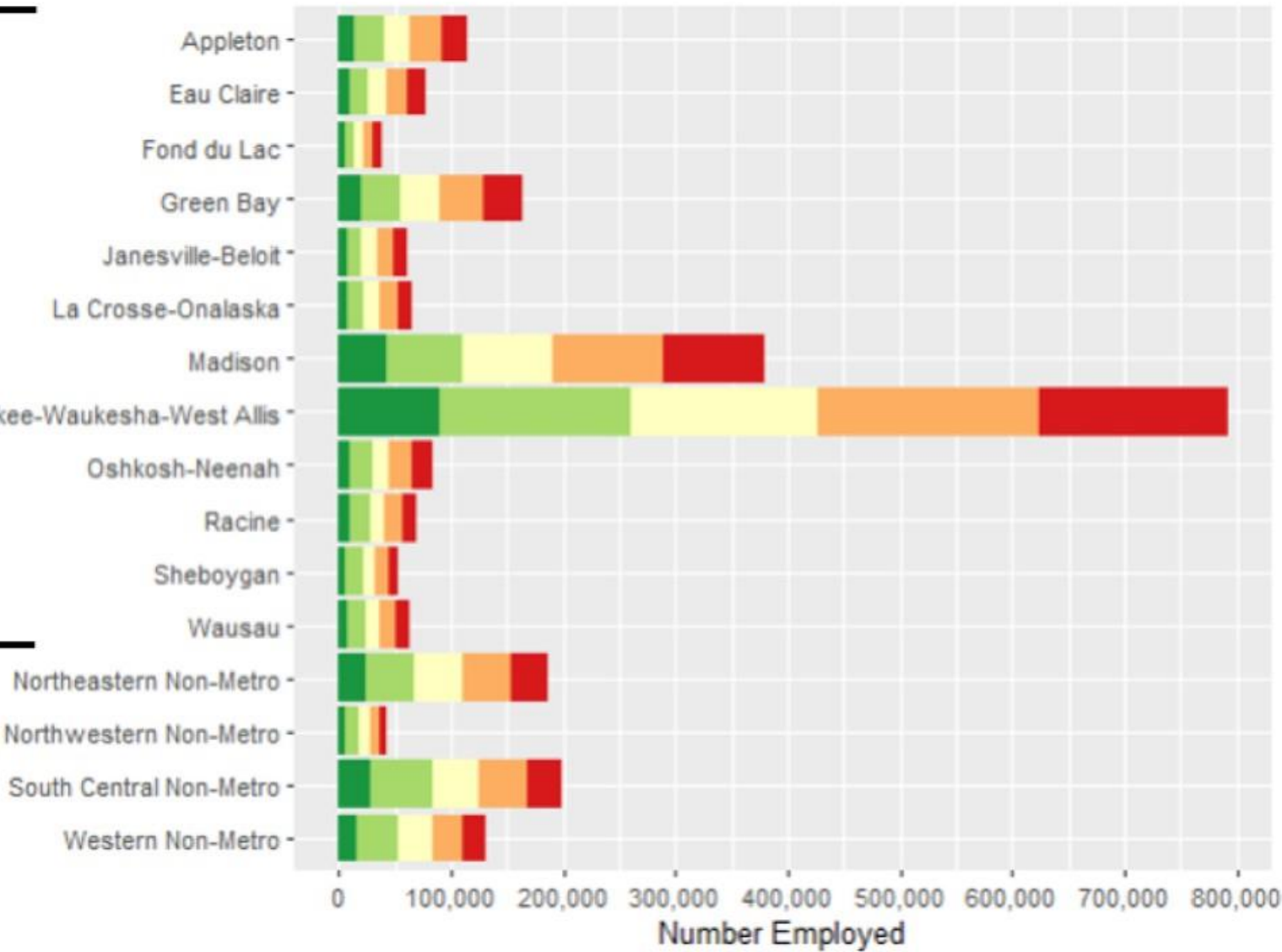
Note: Income levels are based on the average wage by occupation and do not reflect within-occupation variation



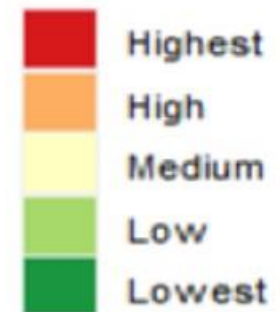
AI Exposure by Metro Area and Region in Wisconsin

Metro Areas

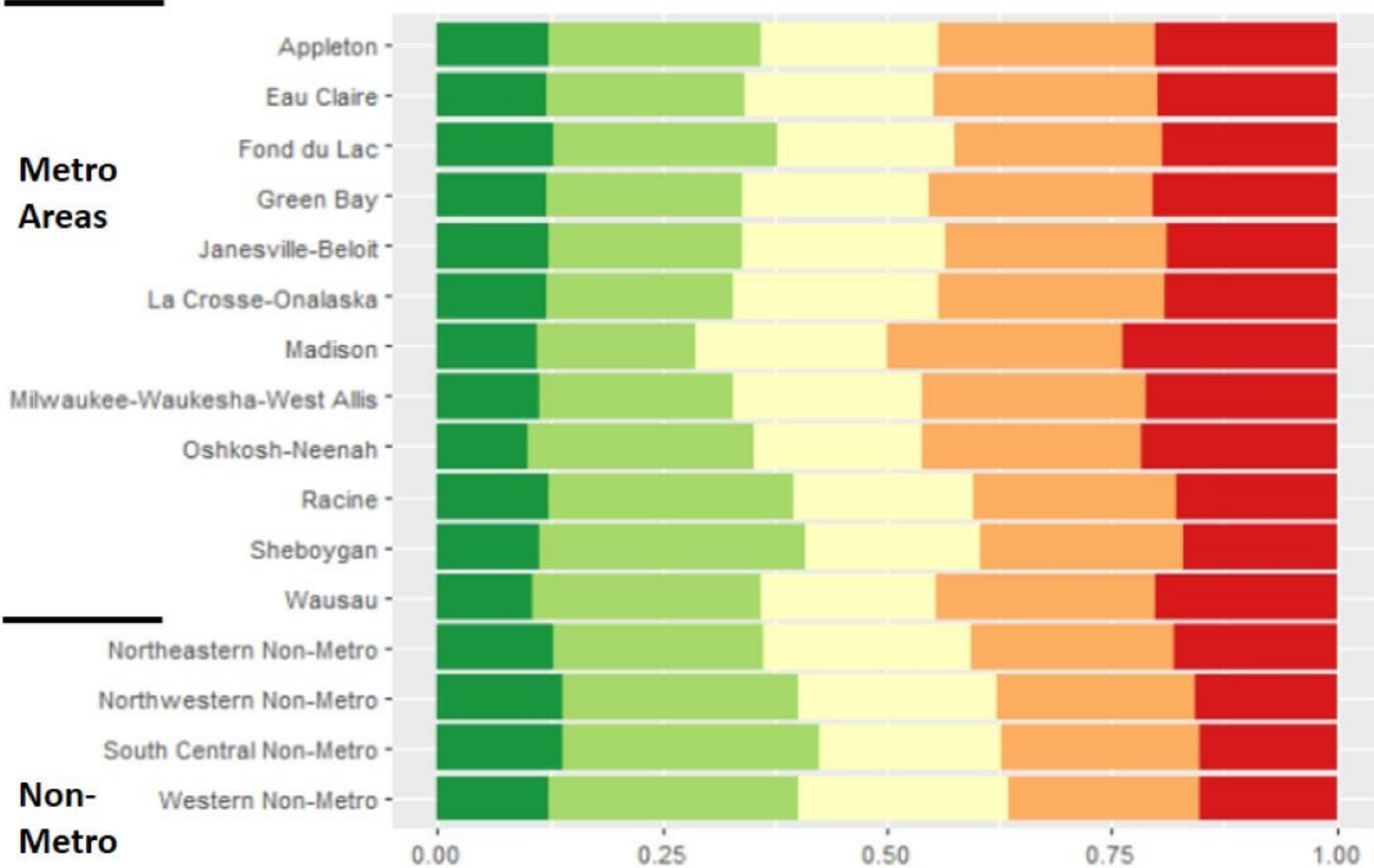
Non-Metro



AI Exposure Level



AI Exposure by Metro Area and Region in Wisconsin



Current Evidence on the Impact of AI Exposure

- **Findings:** AI exposure is associated with a decline in some skills and the emergence of new skills. (Acemoglu et al. 2022)
- *“A one standard deviation increase in our baseline measure of AI exposure based on Felten et al. - approximately the difference in the average AI exposure between finance and mining and oil extraction—is associated with 15% more AI vacancy posting.”*

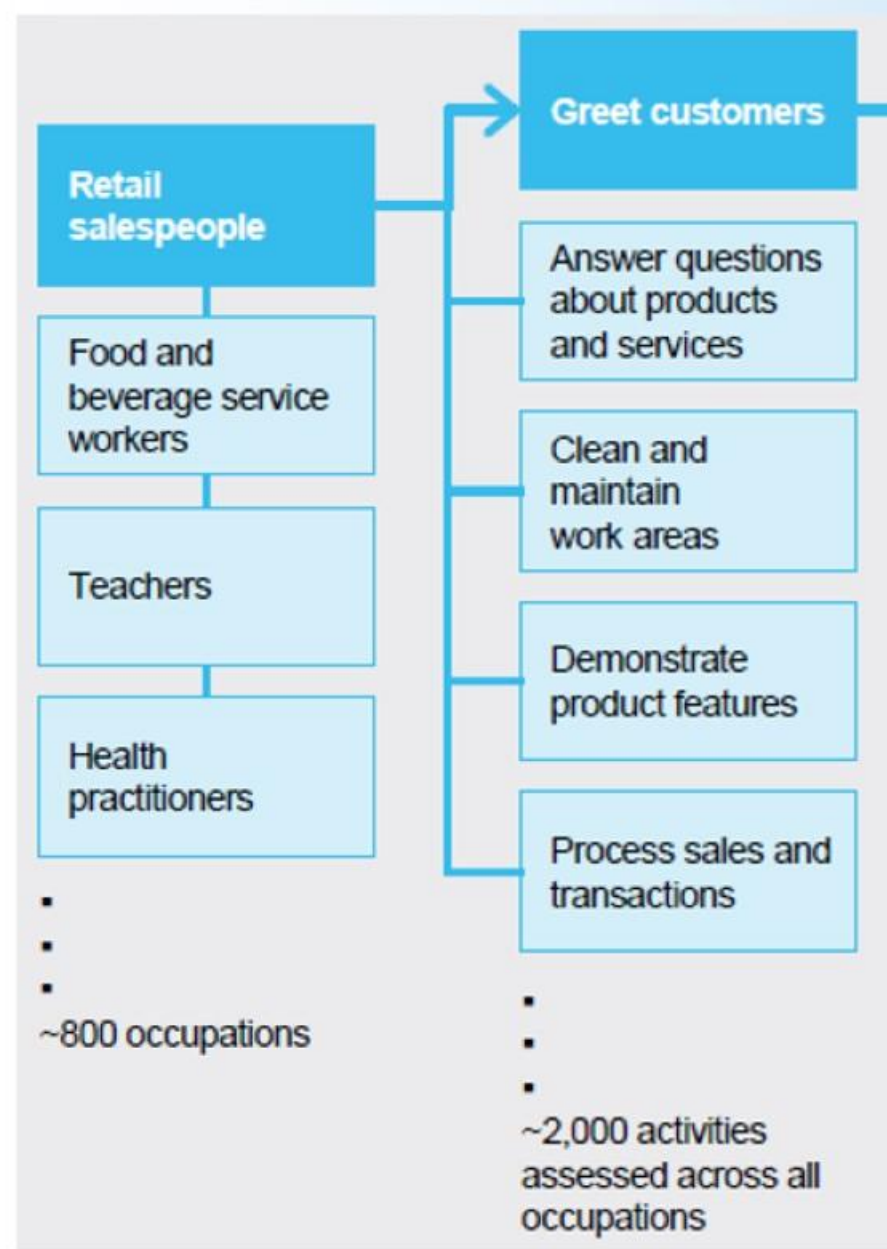


How are these estimates calculated?



Occupations & Tasks

The US Department of Labor (US DOL) maintains a database of US occupations (O*NET), which divides the labor force into approximately 800 occupational categories.



Advancing Industry and the Workforce Amidst the Impact of AI

Danielle Williams

Assistant Administrator

DWD Division of Employment and Training

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Our Changing Economy

The Issue:

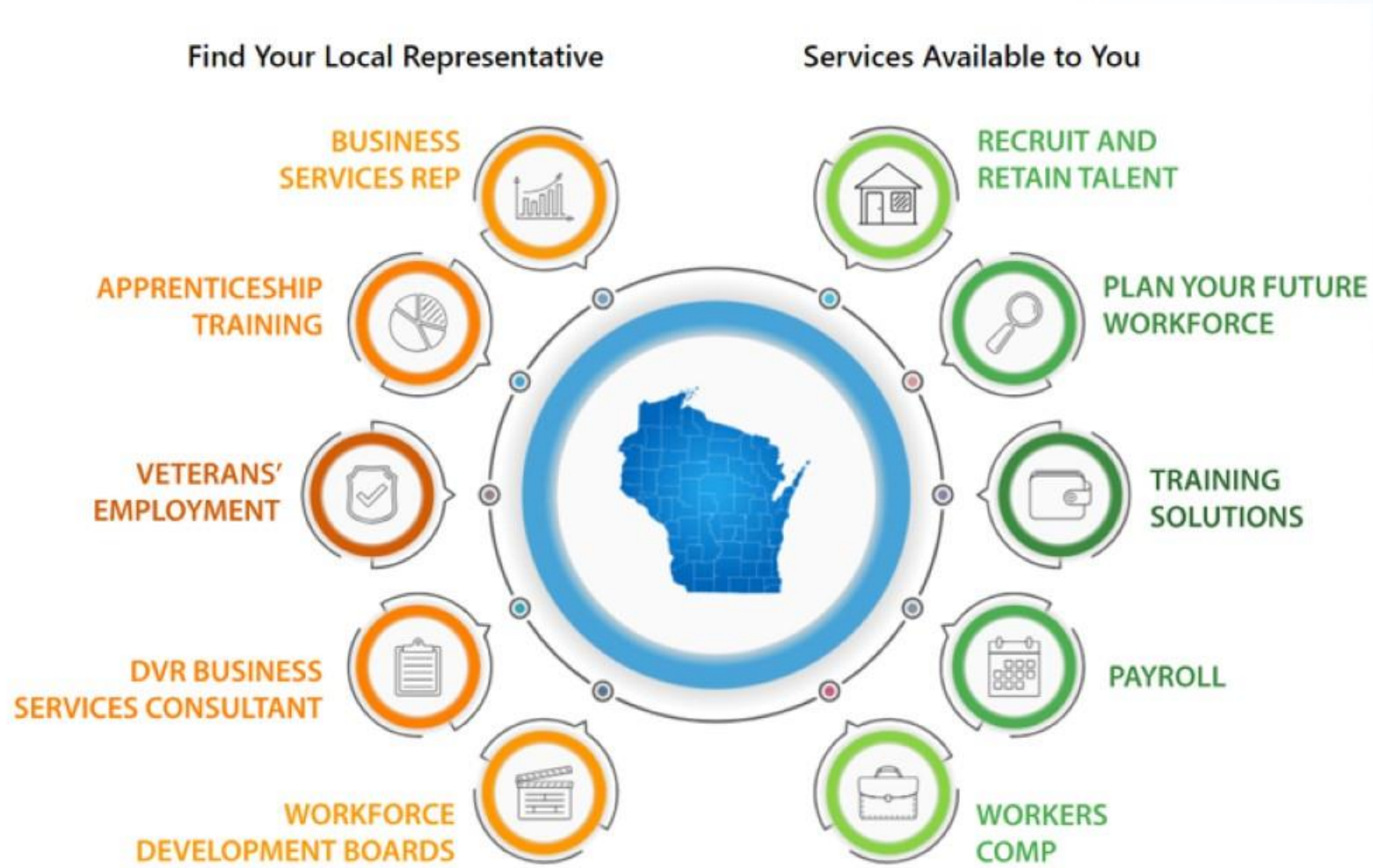
- Wisconsin's economy is changing, and jobs are being automated.
- Employers need to adapt.
- Employees and jobseekers need access to training and resources.

Our Solution:

- Provide employers what they need to hire, train, and retain workforce.
- Flexible programs focused on employment, training, and resources.



Wisconsin Workforce Business Services





Talent Pools

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Underutilized Candidate Pools

Veterans

**People
with
disabilities**

**Justice-
involved**

**Under-
employed**

Youth





Discover Training Solutions

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Wisconsin Apprenticeship

Registered Apprenticeship

- Builds a customized skills training system instilling a company's values.
- Apprentices earn wages as they gain high-demand occupational skills.

Youth Apprenticeship

- High school juniors and seniors work and earn high school credit.
- Retains youth after graduation through full-time employment and a seamless transition to Registered Apprenticeship.



Wisconsin Fast Forward

Industry Sectors Worker Training Grants address Wisconsin's skill gap through grants to employers for customized skills training.

Advanced Manufacturing Technical Education Equipment Grants reimburse school districts for costs to buy and install technical education equipment. The equipment is used for vocational training and technical education in advanced manufacturing.



Training Resources

Eligible Training Provider List

WIOA-paid tuition assistance; 2,000+ trainings, including technical college and apprenticeship credentials.

State Agency Collaboration

DOC job labs; Windows to Work; WTCS tailored curriculum development; data sharing/evidence building across agencies.

Supports & Incentives



Labor Market Information

Helps employers adapt to new technologies and other market changes.

- Access the most current and robust labor market and economic data in Wisconsin to make informed business and employment decisions.
- USE LMI to learn about the local labor pool.
- Examine wages and long-term employment projections by industry and occupation.
- Help determine business location and expansion plans.
- Regional Labor Market Economists available to help employers understand the data.





Plan Your Future Workforce

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Innovative Solutions



Workforce Solutions Initiative

- \$128M **Workforce Innovation Grant** program funding communities to develop long-term solutions to workforce challenges
- \$20M toward the **Worker Advancement Initiative**, to offer subsidized employment and skills training opportunities with local employers to unemployed individuals
- \$10M for the **Worker Connection Program** to provide career navigators who connect and reengage individuals in the workforce using an evidence-based, human centered model



Worker Connection Program

- Embracing AI training now with partners Gener8tor and the Bay Area Workforce Development Board.
- Cohort of 13 learners now enrolled in a six-week Generative AI and Project Management skills course.
- Connects with local employers who have skills gaps in these areas.
- Will work to place participants in related employment when the training is complete.



Worker Advancement Initiative

Bay Area Workforce Board

Digital Literacy program that provided introductory, technical, and workforce curriculums to individuals identified as chronically unemployed or marginally employed and historically disconnected.

Workforce Development Board of South Central Wisconsin

Compensated digital literacy work-and-learn interfaces integrated into traditional on-the-job and technical skills training.



Manufacturing Modernization

Buckley Brinkman

Executive Director and CEO

Wisconsin Center for Manufacturing & Productivity

**Governor's Task Force on
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Manufacturing Modernization

Industry, Occupations and Skills Subcommittee,
Governor's Task Force on Workforce and Artificial Intelligence

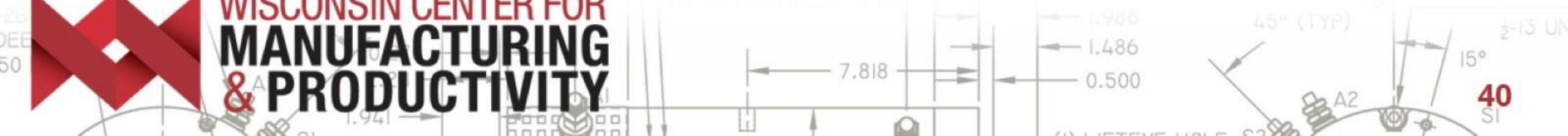


HELPING WISCONSIN MANUFACTURERS GROW.

Buckley Brinkman
Executive Director and CEO



- Automation Pilot Grant
- 2023 Wisconsin Manufacturing Report – Automation and Artificial Intelligence findings



Automation Pilot Grant



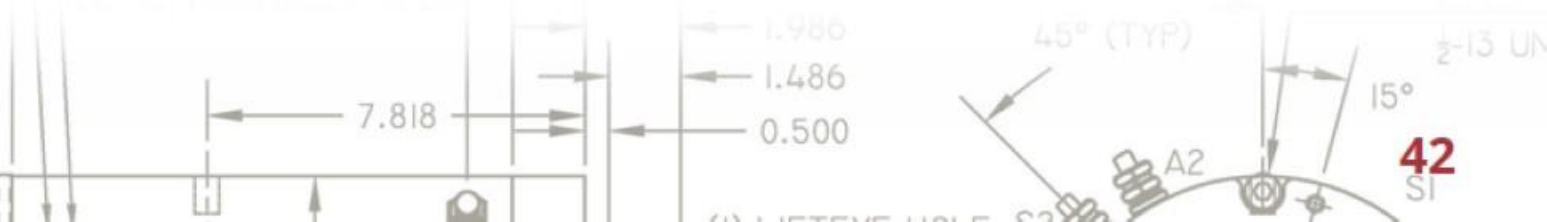
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& PRODUCTIVITY**

WEDC Targeted Industry Projects Grant

\$750,000 to support manufacturer implementation of new technology in their operations

Subsidizes equipment purchases or leases:

- 20% of purchased equipment, up to \$35,000
- 10% of leased equipment, up to \$15,000



To date, 15 companies completed projects; 9 additional companies are in line to fully obligate the grant

Early Results (15 companies):

- Average project cost – \$318K
- Private to state investment leverage ratio – 8.6:1
- 5 purchased equipment from Wisconsin automation companies (total of \$1,020,865)



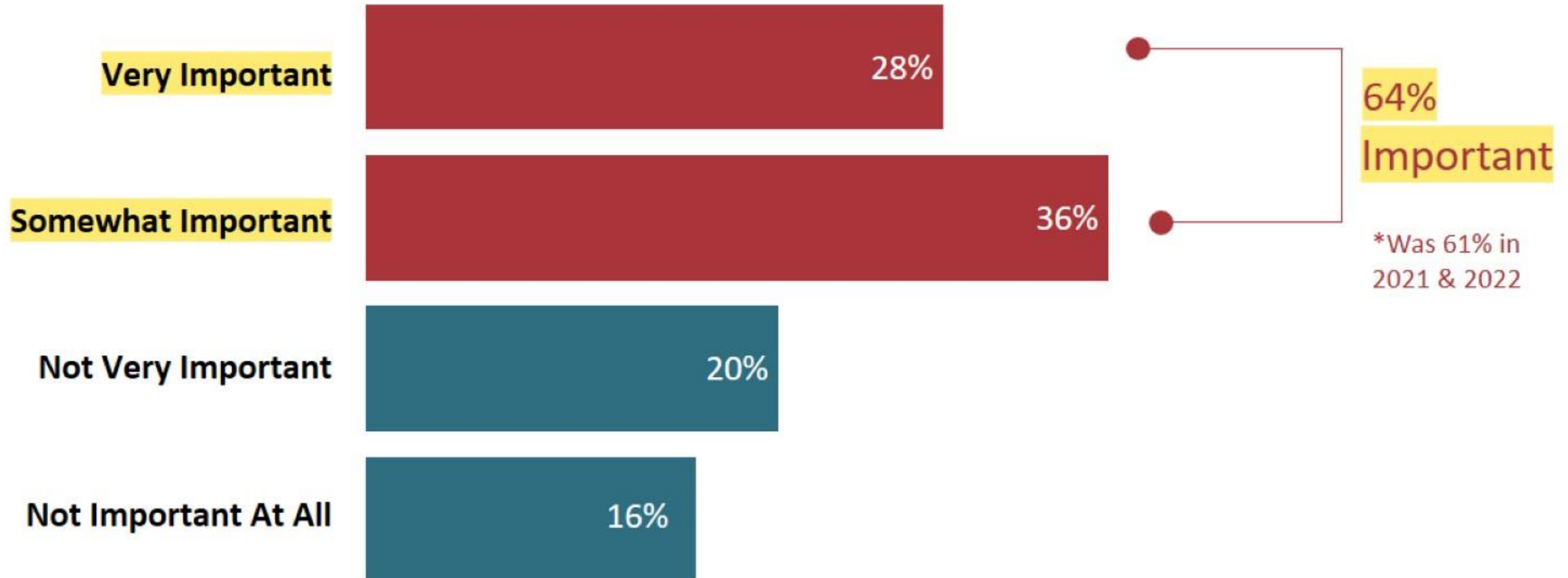
Wisconsin Manufacturing Report



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A majority of manufacturing executives see automation as important to their company's future, with nearly three-in-ten saying it's *very important*.

"Generally speaking, how important do you think automation will be to your company's future?"



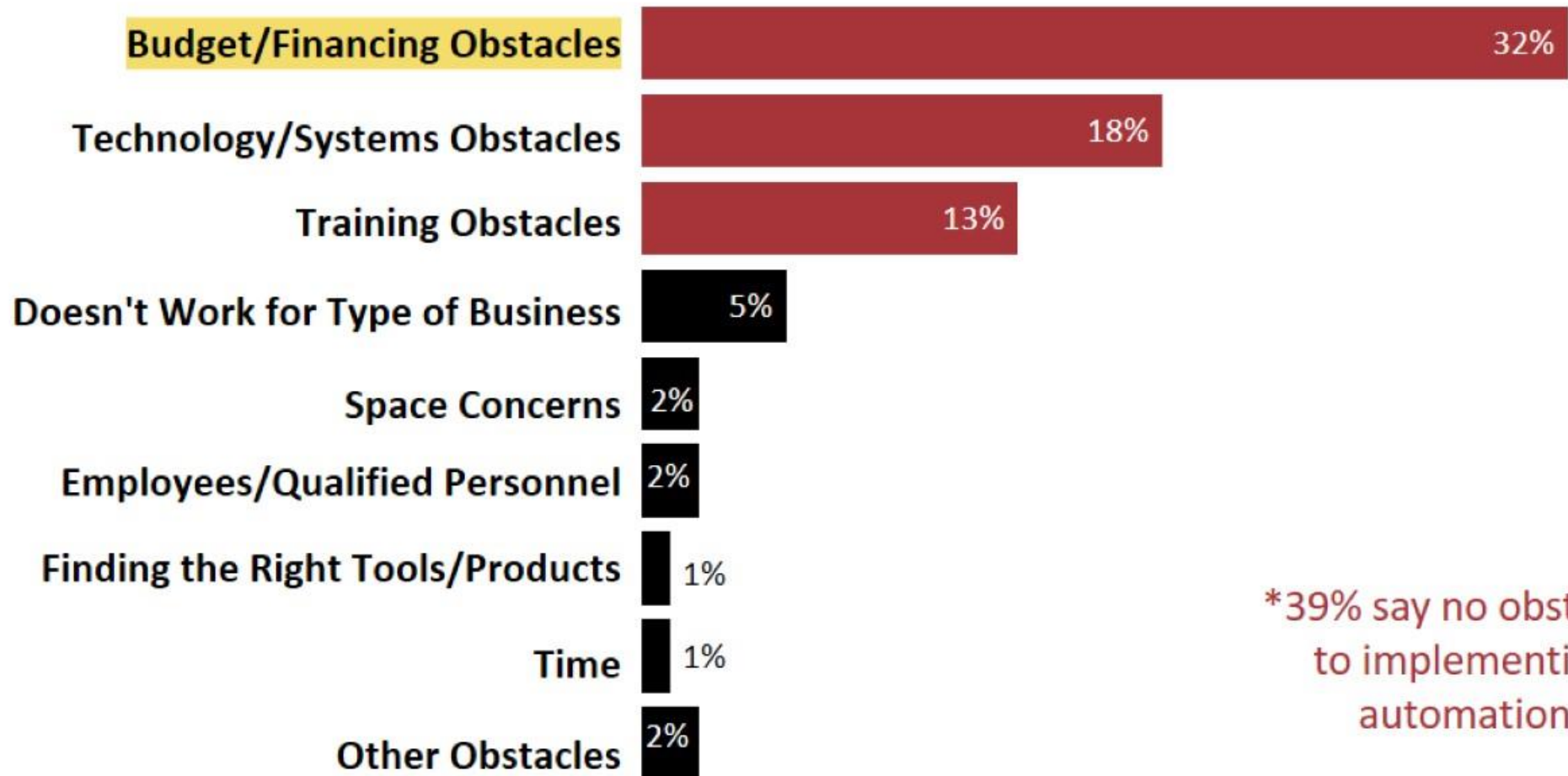
Automation is clearly more important for larger companies, but we have seen an increase among smaller manufacturers since 2021.

Importance of Automation By Type of Company

	Very Important	Total Important	Total Important In 2021
1-49 Employees	23%	59%	53%
50+ Employees	48%	82%	89%
Revenue Under \$1 Million	17%	47%	
Revenue \$1 - \$5 Million	26%	66%	
Revenue \$5 Million +	45%	84%	

Of those who say there are obstacles to implementing automation, financing is clearly the top concern they have.

“Are there any obstacles to implementing automation at your company?”

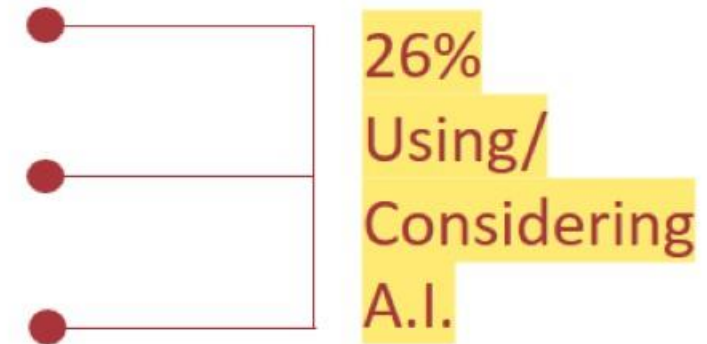


*39% say no obstacles to implementing automation

About a quarter of manufacturers say they are using or considering using A.I. within the next five years.

“Have you previously used, are you currently using, or are you considering using artificial intelligence, or A.I., in your business operations?”

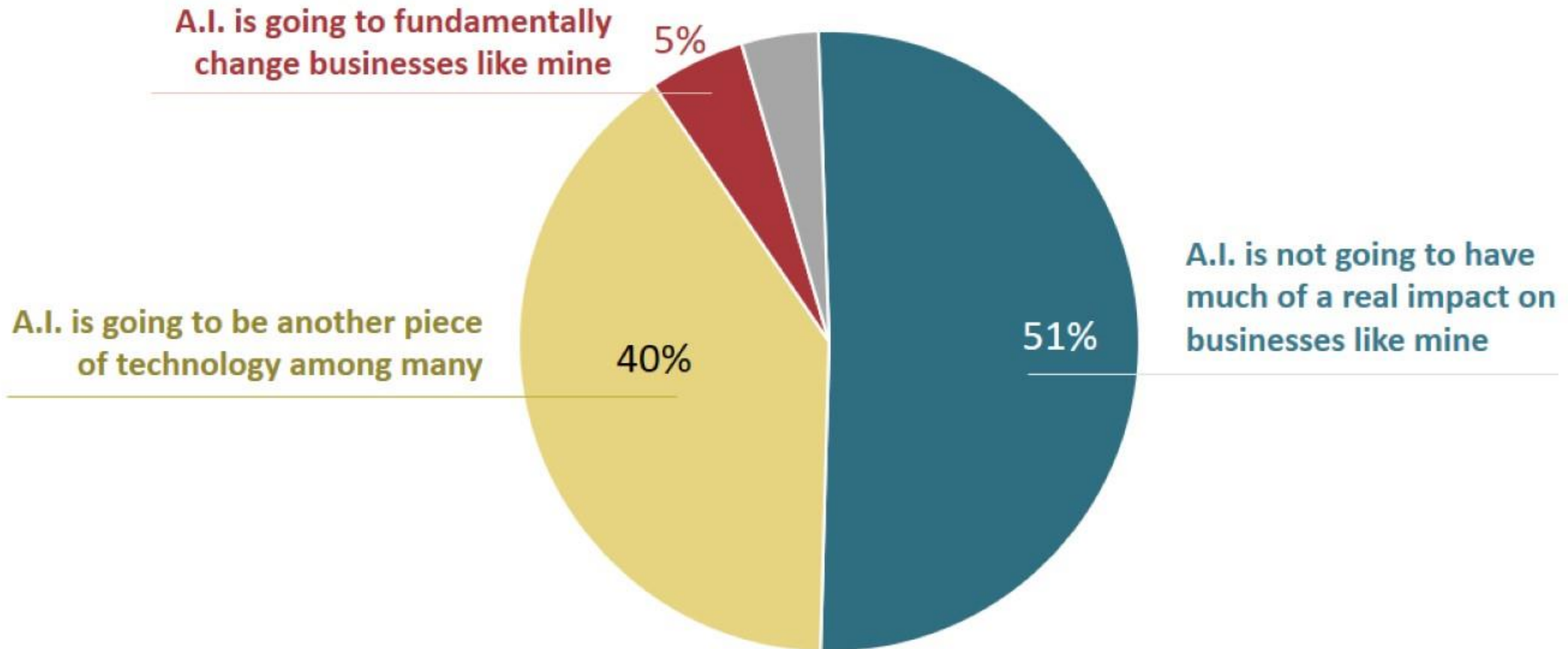
	%
Currently Using A.I.	10%
Considering Using A.I. Within Next Year	7%
Considering Using A.I. Within Next 2-5 Years	9%
No, Have Never Used and Have No Plans to Use A.I.	72%



3% Don't Know/Not Sure

Most manufacturers in Wisconsin say they don't expect A.I. to impact businesses like theirs.

“Thinking about the next few years, which ONE of the following viewpoints on the impacts of artificial intelligence, or A.I., on businesses like yours do you agree with more?”





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26
DEE
50





Industries, Occupations, and Skills

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Industries, Occupations & Skills

This subcommittee will delve into the industries, occupations, and functional skillsets most likely to benefit or experience disruption from AI. Both employee and employer needs will be addressed.



Question 1:

Given the data presented earlier, which Wisconsin industries, occupations, and skillsets may see the greatest opportunities with AI?



Question 2:

Given this data, which industries, occupations and skillsets appear to be at potential risk as AI technologies expand?



Question 3:

Considering the perspectives of workers, employers, and job seekers, how would you prioritize investments and training to sustain Wisconsin's thriving economy? Please consider the roles and responsibilities of government, education, and the private sector.



Thank You

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