



Governor's Task Force on Workforce and Artificial Intelligence



Jennifer Sereno

**Assistant Deputy Secretary,
WI Department of
Workforce Development**

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



Housekeeping & Agenda

Definition: Artificial Intelligence refers to a collection of technologies that allow computers to automate tasks that have historically required human intelligence such as speech recognition, translation, computer vision, automated decision making, anomaly detection, forecasting and content generation. Generative AI tools can learn the patterns and structure of source training data, then generate new data that has similar characteristics.



Survey Monkey Results



Q1: SurveyMonkey

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.
- ✓ Use **data** and **analytics** to help refine workforce and educational approaches and adjust over time to boost economic growth.
- ✓ 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: SurveyMonkey

Challenges in Preparing Wisconsin's Workforce for AI

- ✓ **Fear and mistrust** of the technology.
- ✓ Need to instill **critical thinking**.
- ✓ Digital **literacy**.
- ✓ **Security** concerns.
- ✓ Increased gap in **access to economic opportunities**.





Amy Pechacek

Secretary, Wisconsin
Department of Workforce
Development

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



65.8%

Labor Force
Participation

3M+

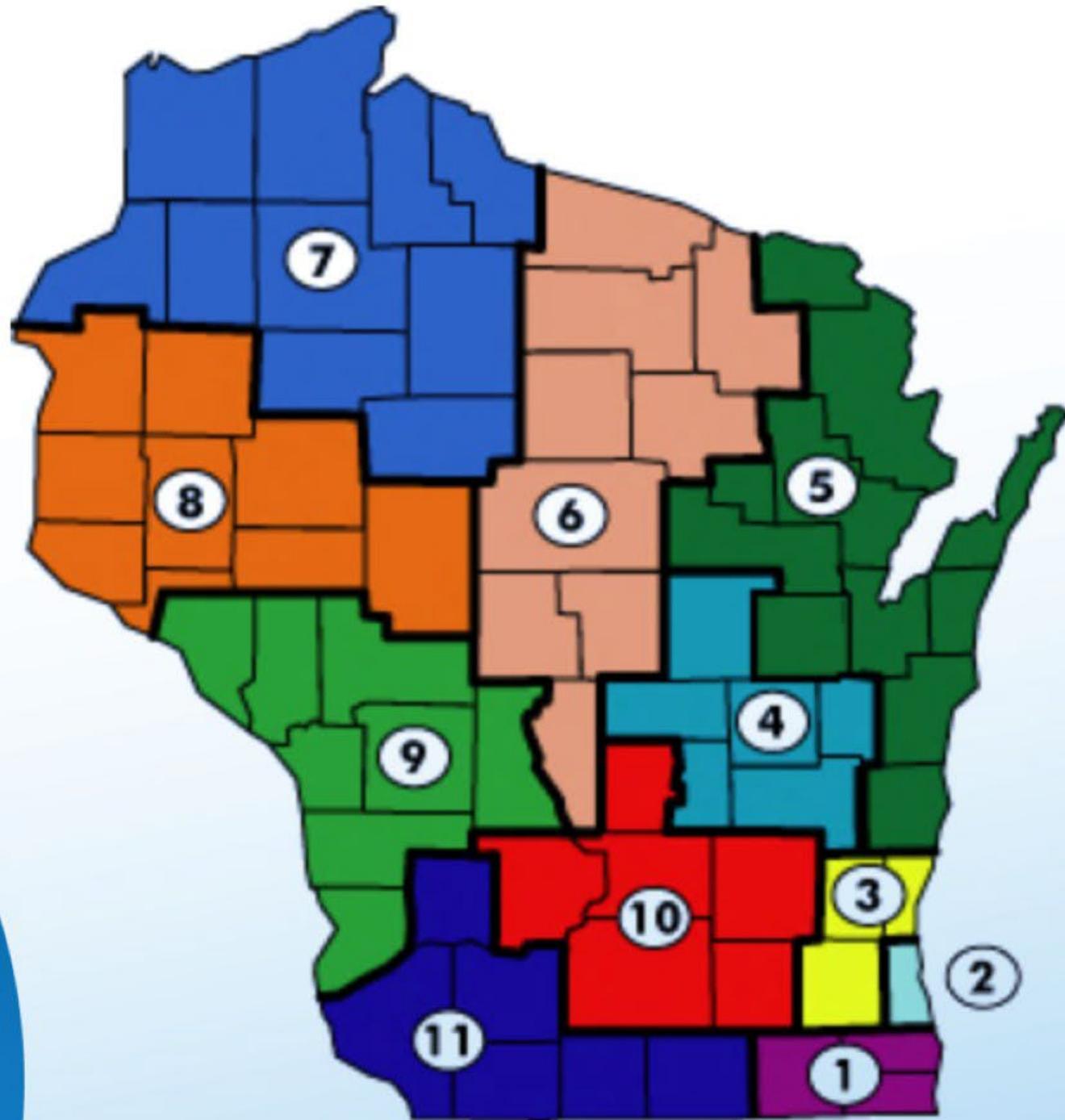
Wisconsin
Nonfarm Jobs

3.2%

Low
Unemployment

Wisconsin's Workforce Ecosystem

- Workforce Innovation and Opportunity Act
- Workforce Development Boards
- Governor's Council on Workforce Investment





Kathy Blumenfeld

Secretary, Wisconsin
Department of
Administration

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**





UNIVERSITY

Eric Baumgartner

**Executive Vice President of
Academics, Milwaukee
School of Engineering (MSOE)**

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





UNIVERSITY

Building an AI-Ready Workforce

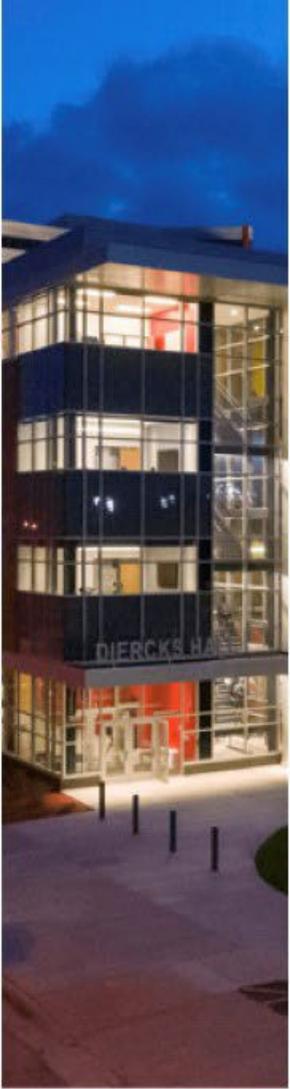
Eric T. Baumgartner, Exec. Vice President of Academics

Milwaukee School of Engineering

December 4, 2023

Dwight Diercks

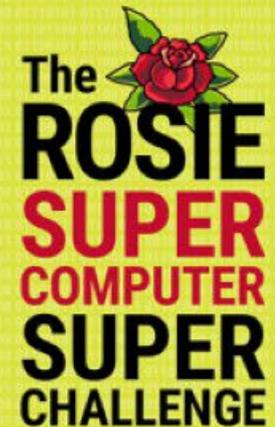
- MSOE's journey in AI education starts with MSOE alumnus, Dwight Diercks
 - 1990 graduate with bachelor's degree in computer science and engineering
 - Currently the senior vice president for software engineering at NVIDIA (employee number 22)
 - \$34M gift to MSOE in 2017 to create the Dwight and Dian Diercks Computational Science Hall which opened in Fall 2019 and is home to MSOE's computer science and software engineering programs and the high-performance computer, Rosie



Building an AI-Ready Workforce

- Rosie

- High-performance computer with 2 new NVIDIA DGX-H100 systems, 3 NVIDIA DGX-1 systems, and 20 servers each with four NVIDIA T4 GPUs and sharing 300TB of network-attached storage
- Available to all students, faculty, staff and corporate partners



Building an AI-Ready Workforce

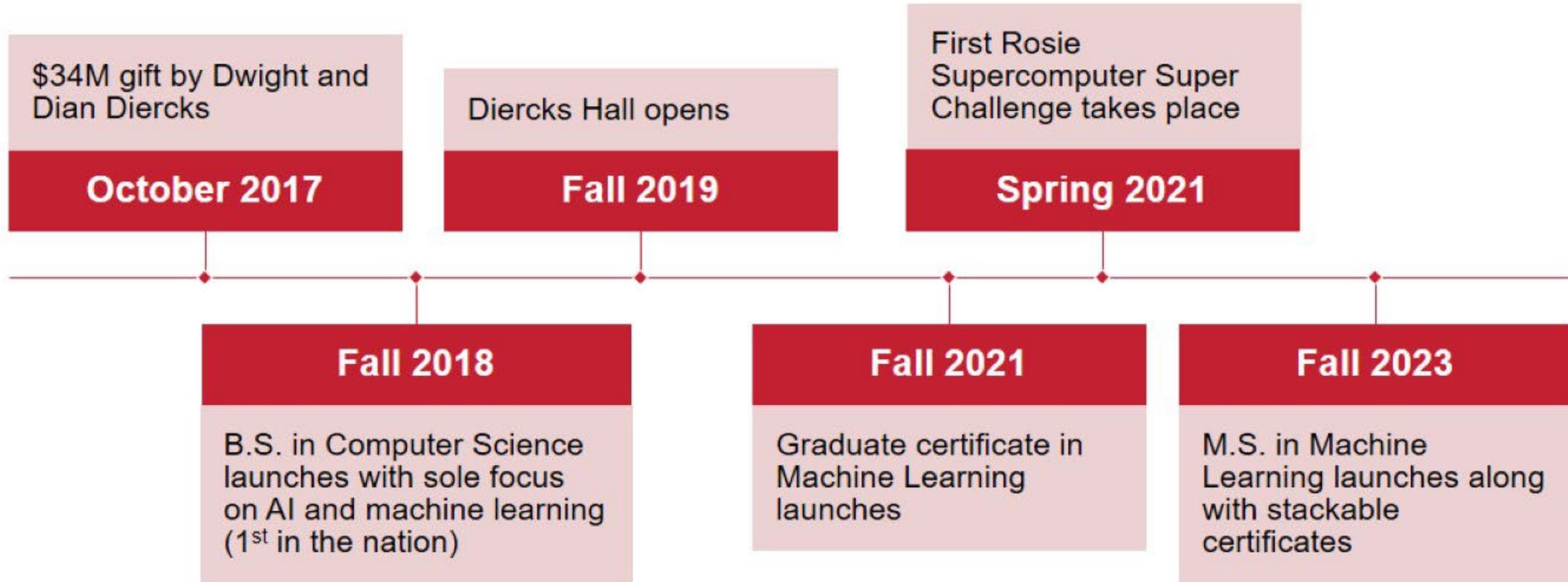
- Rosie
 - High-performance computer with 2 new NVIDIA DGX-H100 systems, 3 NVIDIA DGX-1 systems, and 20 servers each with four NVIDIA T4 GPUs and sharing 300TB of network-attached storage
 - Available to all students, faculty, staff and corporate partners

* First in Wisconsin to install DGX-H100 systems which are the accelerated computing engines behind the headline-grabbing AI advancements in the past 12 months



The 
ROSIE
SUPER
COMPUTER
SUPER
CHALLENGE

Building an AI-Ready Workforce





Building an AI-Ready Workforce

Fall Enrollments	2018	2019	2020	2021	2022	2023
BSCS	58	122	176	218	258	309
ML Certs				17	19	36
MSML						15

- MSOE's computer science programs are supported by 22 full-time faculty members with 50% having specific expertise in AI and machine learning
 - Includes Dr. Jeremy Kedziora, PieperPower Foundation Endowed Chair in AI
- MSOE Center for Professional Education



Corporate Engagement

Graduate Programs



Undergraduate Data Science Practicum



Scanalytics Inc.



AI-Focused Internships



KOHL'S





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MSOE serves as an educational resource to Wisconsin companies to assist in the development of an AI-ready workforce

Questions?



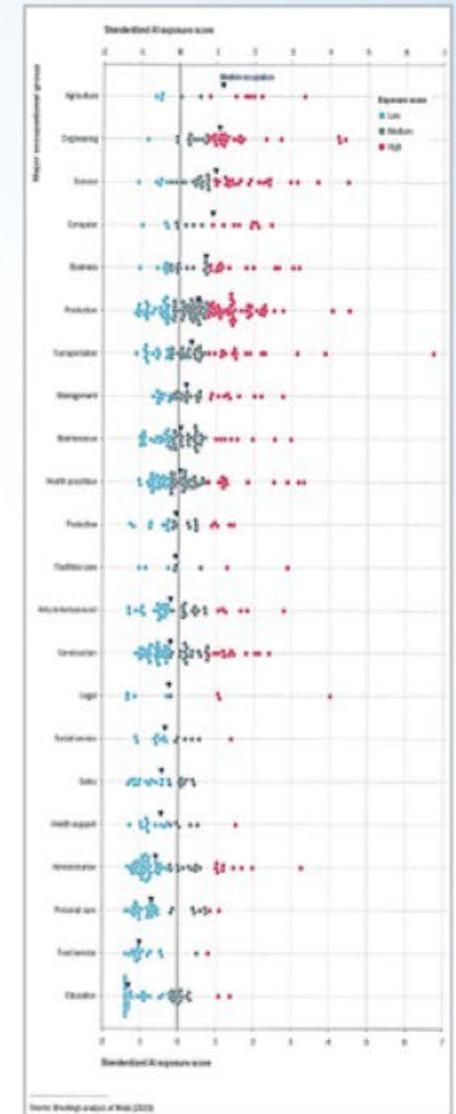
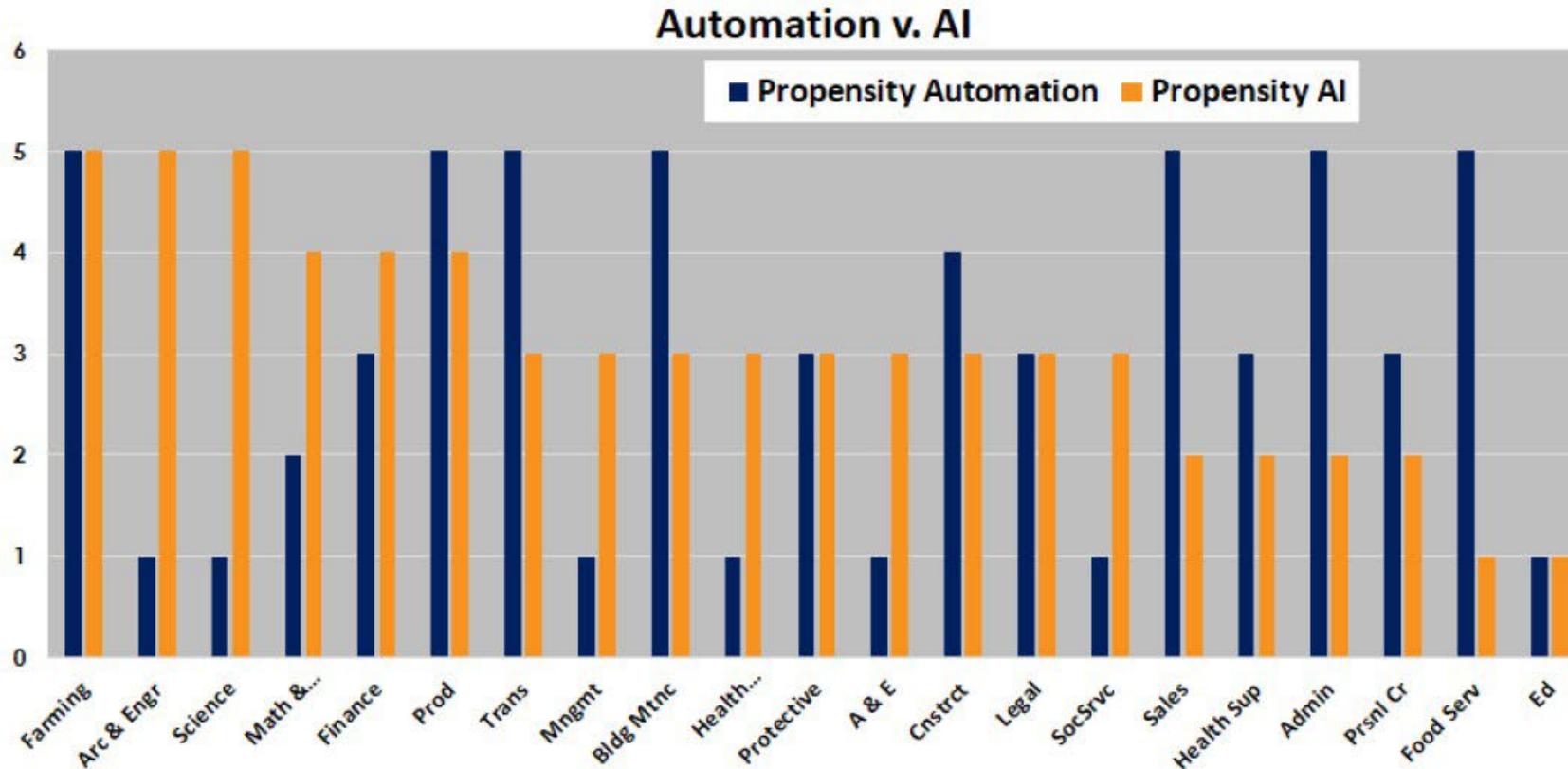
Dennis Winters

**Chief Economist & Labor
Market Information Director,
Wisconsin Department of
Workforce Development**

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



AI Skill Exposure



Source: Brookings's analysis of Webb (2019)



Which occupations will be most affected by AI?

- Rapidly evolving disruptive technology impacts are difficult to predict, and are dependent on choices by:
 - Individuals incorporating AI into their life and work
 - Businesses adopting AI into their business processes
 - AI product development and pricing
 - Policymakers regulating AI
- That said, we can make some educated guesses...



What does AI exposure mean?

- Degree to which AI can be applied:
 - **Workers** – tasks AI could be trained to do
 - **Employers** – more opportunities to increase labor efficiency
- For workers, increased likelihood of:
 - Skills transitions
 - Adjusting workflows to work with AI tools
 - Focusing on work that an AI cannot do



Estimating AI Exposure

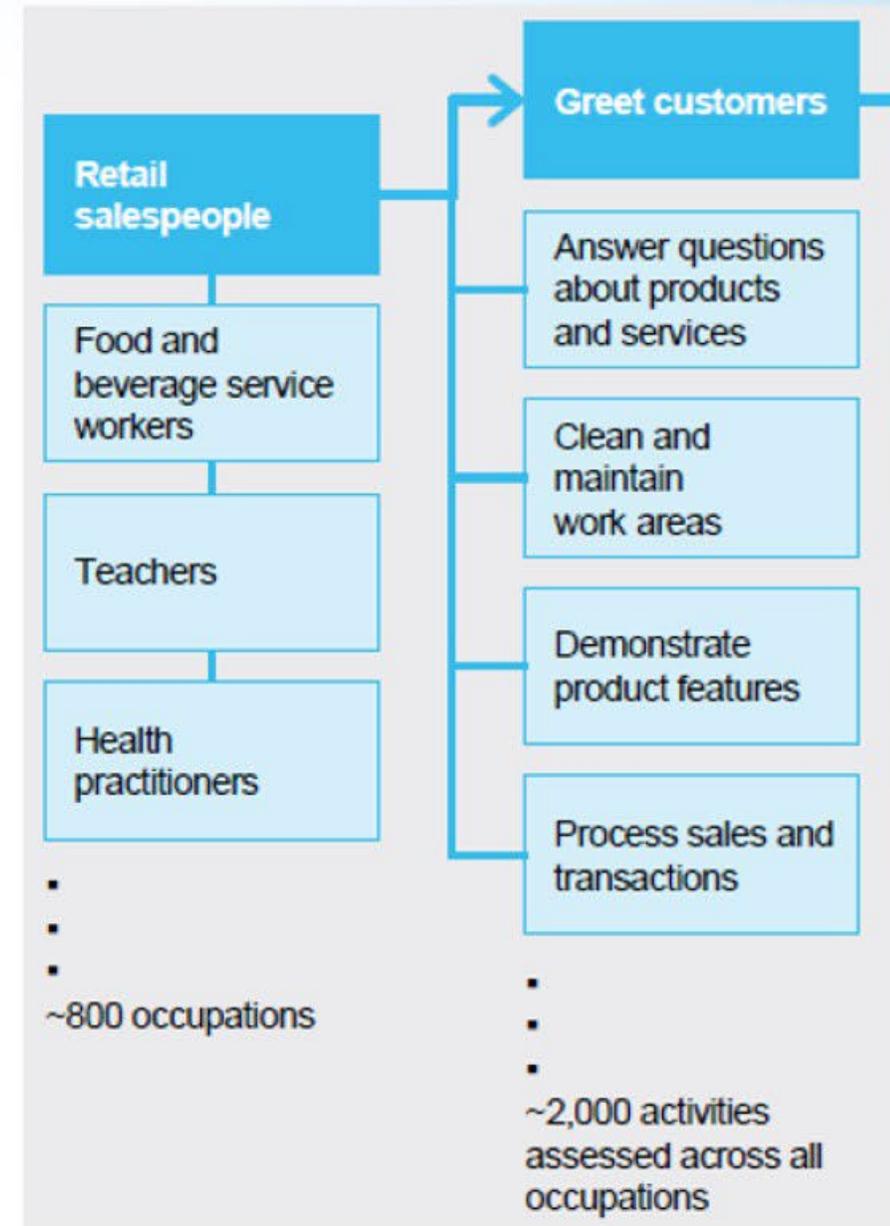
- Several studies have estimated AI exposure by occupation by:
 - Linking AI capabilities with worker activities
 - Calculating occupational usage
- The greater the overlap, the greater the AI exposure



Occupations & Activities

O*NET

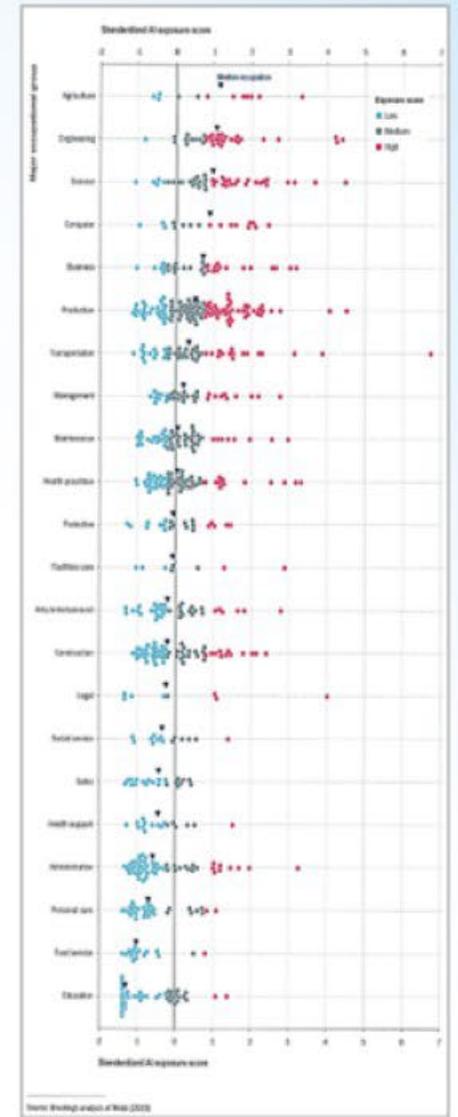
- A database of US occupations that divides the labor force into **~800 occupational categories**.
- Identifies Knowledge, Skills and Abilities (KSAs) and estimates the importance of each KSA to the job.



Linking AI Capabilities to Work

Studies differ in approach to identifying AI work activities:

- Gig workers to evaluate activity AI suitability
 - Brynjolfsson et al. (2019), Felten et al. (2019)
- Compare AI-related patent descriptions of work activities
 - Webb (2020), Meindl et al. (2021)



Source: Brookings's analysis of Webb (2019)



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

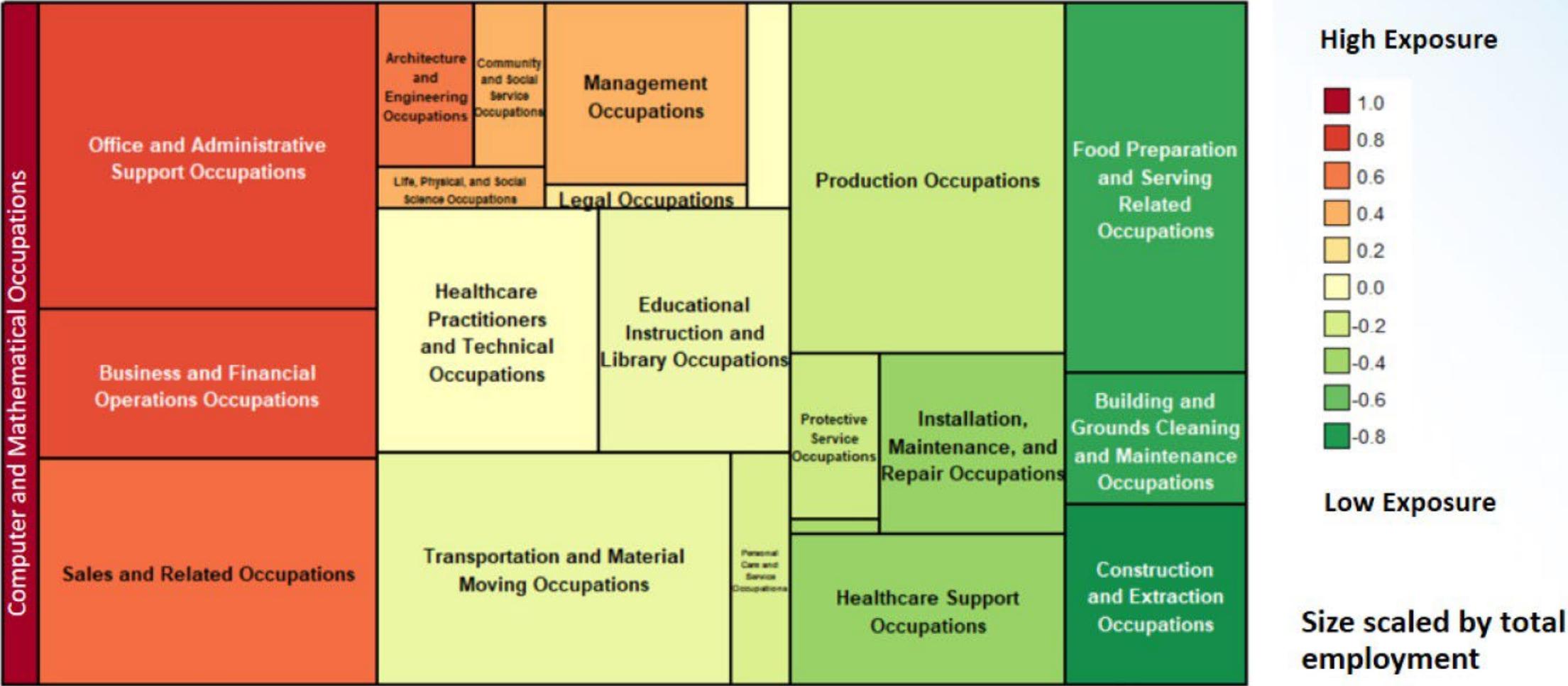
Least Exposed Occupations

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

AI exposure shown here combine estimates from Brynjolfsson et al. (2019), Felten et al. (2019), Webb (2020), Meindl et al. (2021).

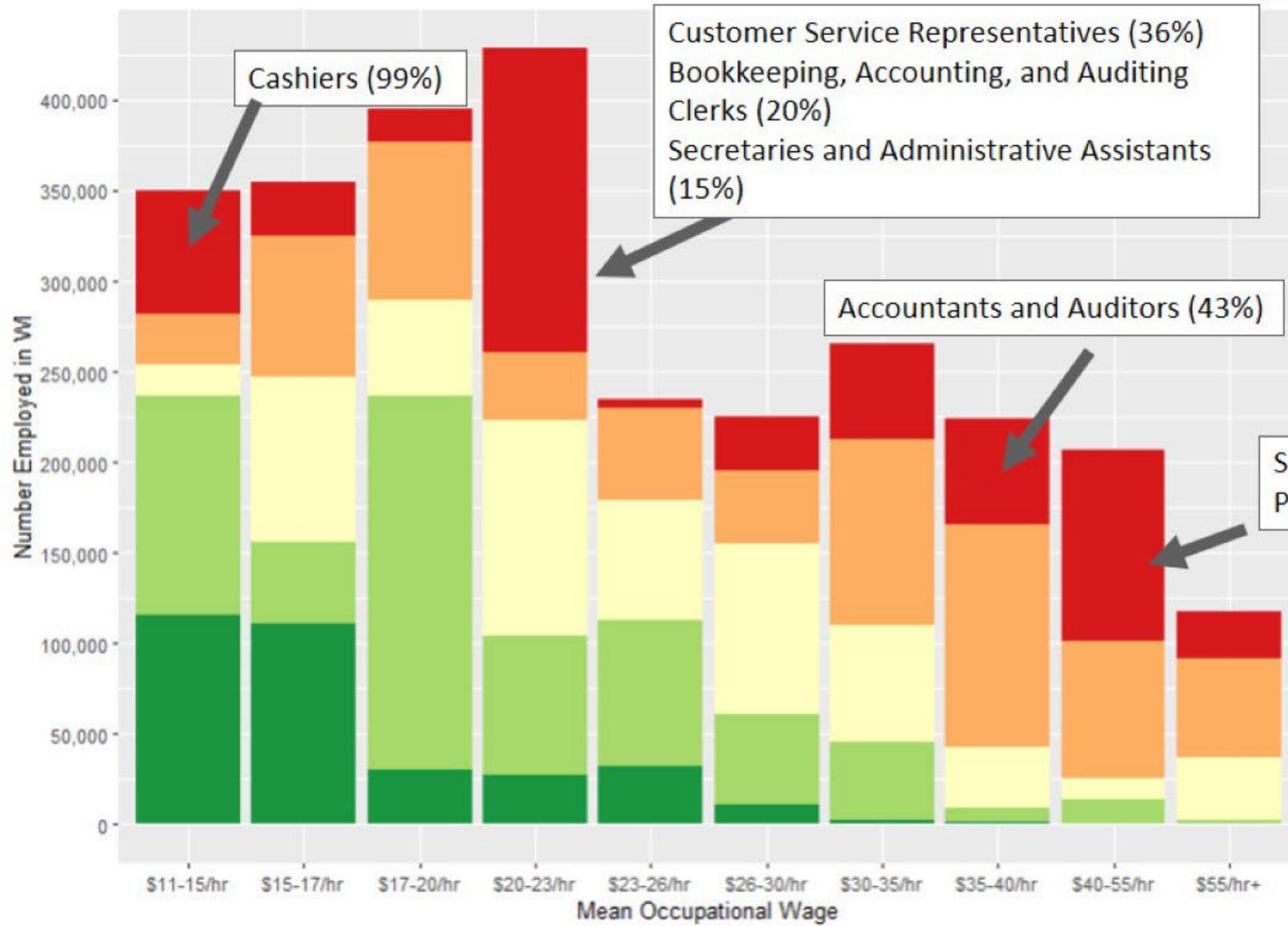


Wisconsin Occupations by AI Exposure

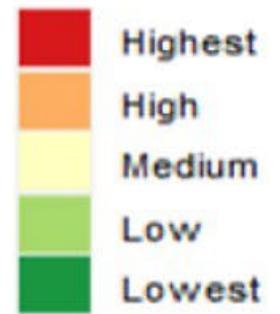


AI Exposure by Income in Wisconsin

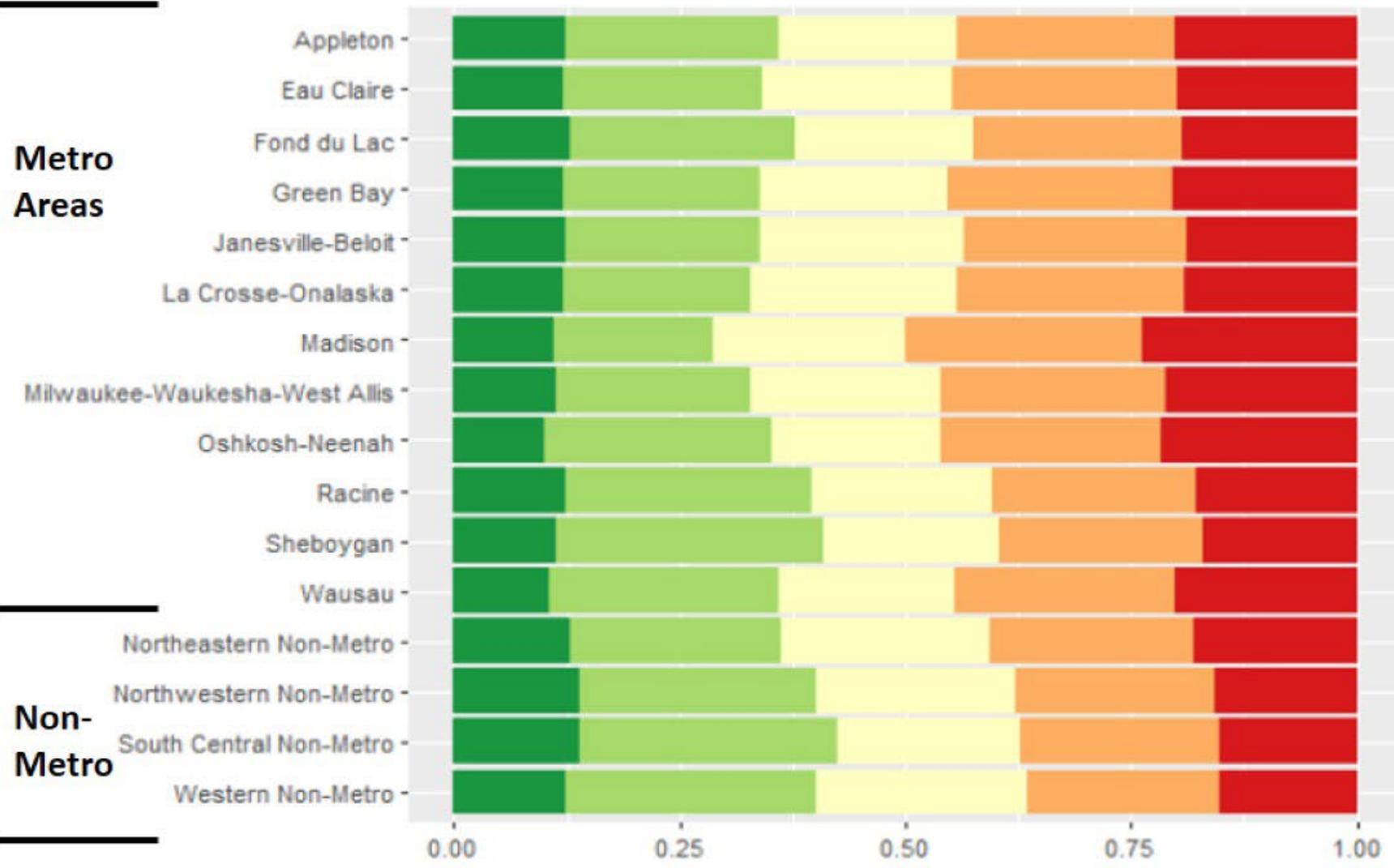
Percentages of “highest exposure” workers in the given income group



AI Exposure Level



AI Exposure by Metro Area and Region in Wisconsin



Underutilized Talent Pools

Individuals with Disabilities

690,000+ Wisconsinites self-identify as having a significant disability

Veterans

141,600+ veterans of working age (18-64) in Wisconsin

Justice Involved Individuals

Wisconsin DOC has nearly 21,500 Persons in Care

Low Income Individuals

In 2021, about 363,000 working age people in Wisconsin lived in poverty



Building Partnerships

No High School Degree

Alternative Programs
GED Programs
Literacy Councils

Housing Insecurity

Shelters & Food Banks
Street Outreach Teams
Transitional Living Programs

Justice Involved

Probation & Parole Offices
Community Release Programs
Connect to JCW Programs

Outreach Events

Festivals & National Night Out Events
Community Gatherings
Resource Fairs



Connecting the Dots for Opportunity Youth

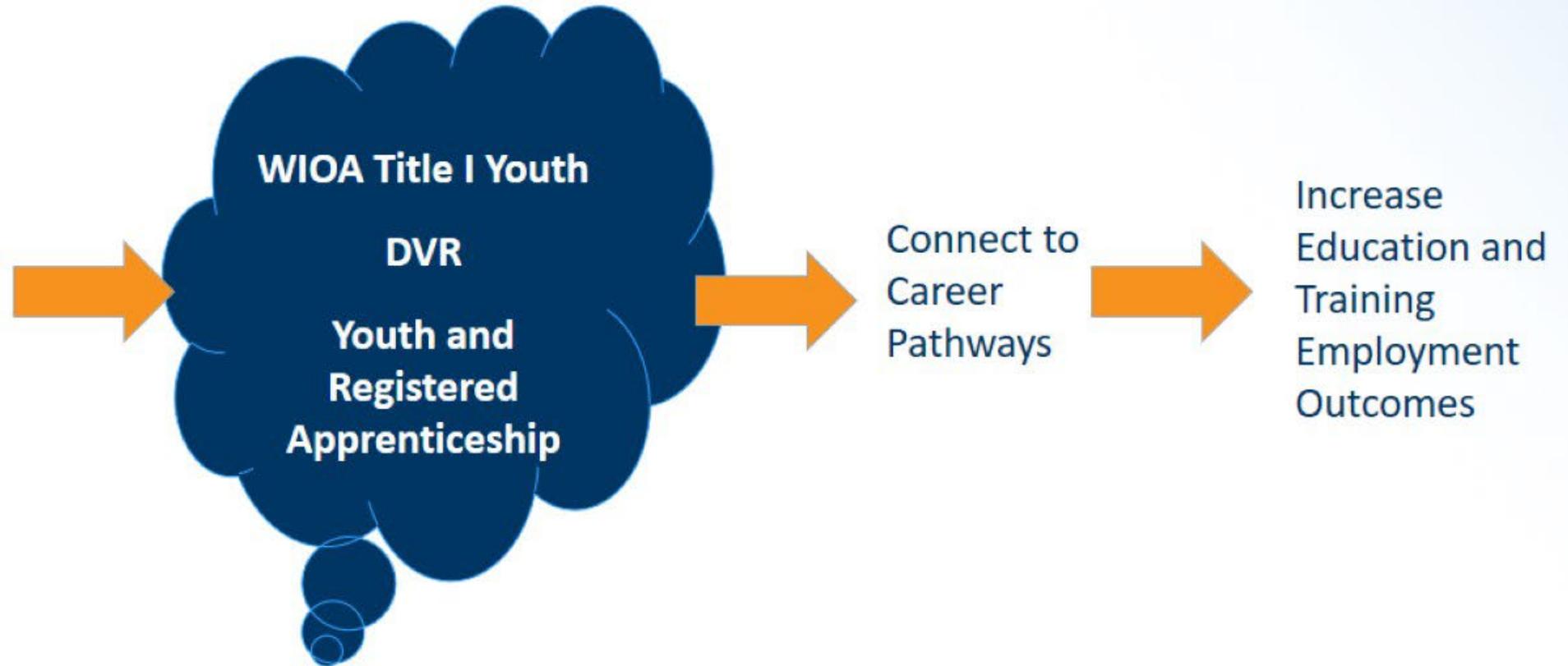
Find & Visualize the Opportunity Youth

Connect to Education Training Careers

Increase Success

Potential Targets:

1. Graduation risk
2. Justice involved
3. Child welfare
4. Medicaid
5. Foodshare



Guidelines for Unserved and Underserved

Broadband Expansion Grant, FY 2023
Wisconsin Public Service Commission

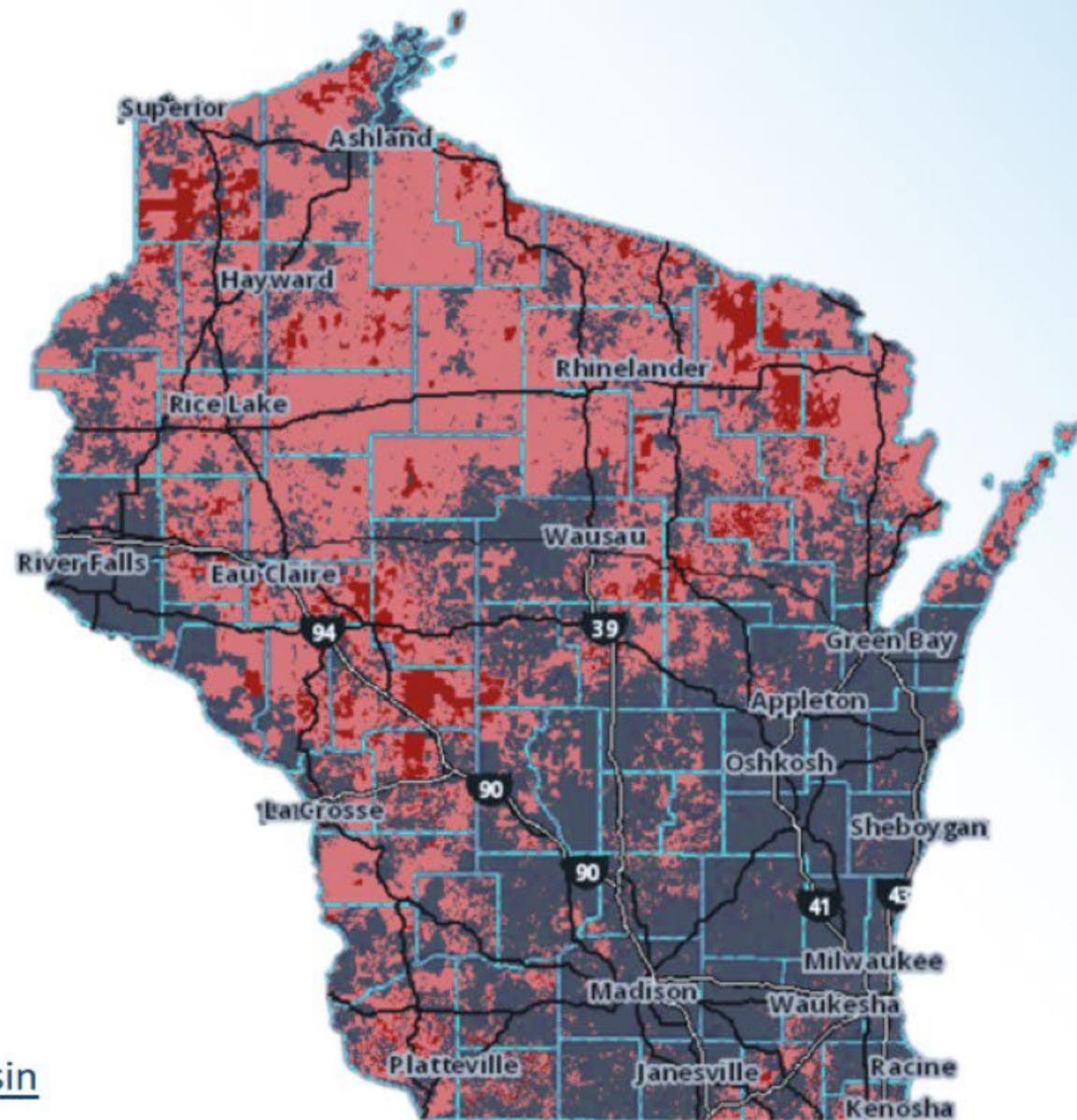
NEW! - Broadband Expansion Grant
"Unserved" Guideline, FY 2023

0 Fixed Internet Options for 5+
Mbps Down / 0.6+ Mbps Up



NEW! - Broadband Expansion Grant
"Underserved" Guideline, FY 2023

0 or 1 Fixed Internet Options for
25+ Mbps Down / 3+ Mbps Up



[Wisconsin Broadband Map - Public Service Commission of Wisconsin](#)



Governor's Task Force on Workforce and Artificial Intelligence

Key Takeaways

- AI will be pervasive
- AI will impact employers and employees
- AI will affect occupations across the skills spectrum
- AI socioeconomic effects will be significant, as yet untold





Deloitte.

**Edward
Van Buren**

**GPS Artificial Intelligence
Strategic Growth Leader,
Deloitte Consulting**

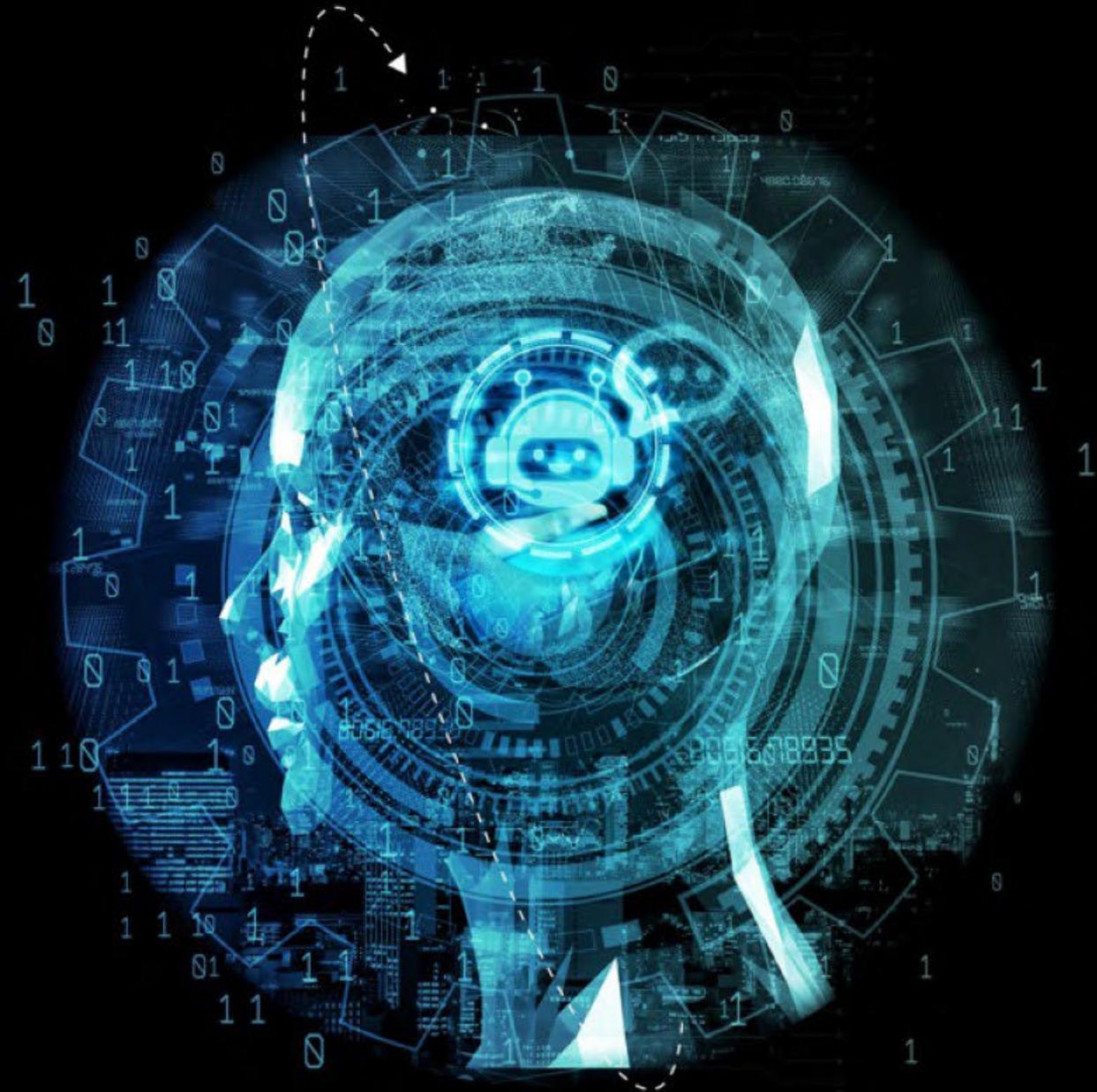
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WI Governor's Task Force on Workforce and Artificial Intelligence

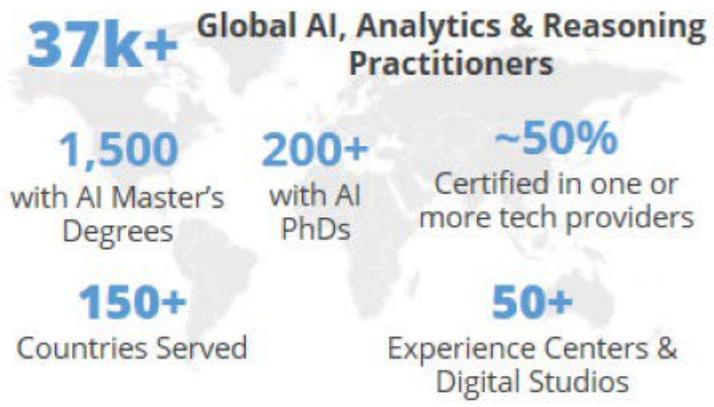
December 4, 2023

Milwaukee, Wisconsin



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We are differentiated by our trustworthy and sector-specific solutions...



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We work with a wide range of partners across the ecosystem...



...who can deliver value via our extensive capabilities with 450+ proprietary assets

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 - AI Misuse Detection & Remediation
 - Autonomous Business Transformation
 - Data Ops / LLM Ops
 - Opportunity Identification & Value realization
 - Process Automation
 - Proof of Concept Development
 - Tailored AI Industry Solution Development
- ...and more

...which are underpinned by a decade of thoughtful investments in AI

The AI Institute™
Market shaping thought leadership and conferences

The AI Academy™
Closing the AI skills gap through education

\$2B+ committed to AI learning

21K+ Deloitte practitioners trained

...and are recognized as a Global Leader by multiple analysts

Worldwide Leader in 2023 for **AI Services & Cloud Professional Services**

Global Leader in Data and Analytics Service Providers Worldwide for 8 consecutive years

Global Leader & Star Performer in Data & Analytics Services in 2023

*Since 2021, Deloitte has received **89+** innovation awards across the Industry*

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AI State Policy Landscape

BACKGROUND



EDUCATION

Policymakers at state executive and legislative levels want to **understand how AI is being used in their own states** and educate themselves before legislating on the topic.



LEGISLATION

During the 2023 session, **artificial intelligence legislation** was introduced in **over 22 states and territories**.



GENERAL TRENDS

Legislation enacted and executive orders issued in 2023 have pertained to creating **working groups and committees tasked with studying AI and producing policy recommendations**.

Example State Actions



California: Executive order issued to ensure deployment of ethical and responsible GenAI within state agencies.



Connecticut: Legislation established a working group to develop best practices for ethical and equitable use of AI in state government; required an inventory of state systems that employ AI.



Maine: MaineIT established a moratorium for at least 6 months on GenAI to conduct a risk assessment.



New Jersey: Executive order issued that establishes AI Task Force to study emerging AI technologies, to issue findings on their impacts, and offer recommendations on ethical use of them.



Oklahoma: Executive order issued to create the Governor's Task Force on Emerging Technologies to develop policy recommendations on responsible deployment of AI and GenAI.



Pennsylvania: Executive order issued to establish responsive and responsible standards for governance of GenAI when used by state agencies.



Wisconsin: Executive order issued to create Governor's Task Force on Workforce and Artificial Intelligence to identify GenAI impact and opportunities on labor market, explore initiatives to advance equity and economic opportunity, and recommend policy direction to capitalize on AI transformation.



Virginia: Executive directive issued to ensure the responsible, ethical and transparent use of AI technology by state government.

AI Federal Policy Landscape

While there is broad agreement on the importance of AI issues across the Biden Administration and Congress, policymakers do not yet agree whether, when, and how AI should be regulated.

BIDEN ADMINISTRATION

- On October 30th, the Biden Administration issued an **executive order on artificial intelligence**¹
- This EO identifies eight principles through which the administration intends to require — or incentivize — certain changes related to AI's development and use, including:
 - **AI safety and security**
 - **Innovation and competition**
 - **Equity and civil rights**
- A lengthy section on **federal government use of AI** lays out new directives to guide how agencies manage AI in their operations and missions, as well as how to increase AI talent in government
- Office of Management and Budget issued draft guidance to federal agencies to implement the EO directives.

CONGRESS

- Most AI laws focus on **governmental uses of AI**²
- Now, both the House and Senate are holding hearings and educational briefings³ on **AI policy issues**, including:
 - **AI governance**
 - **Bias and discrimination concerns**
 - **National security impacts**
 - **Workforce effects**
 - **AI misuse**⁴
- Senate Majority Leader Schumer (D-NY) announced a **regulatory framework and expert forums** to gather additional perspectives⁵
- The House introduced bipartisan legislation that would create a **commission to study AI and make recommendations**⁶



Key themes of the Executive Order on Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence

- 1 Safety and Security**

A major focus of the EO is the safe and secure development and use of AI – especially for the most powerful systems which could impact national security, economic security, or public health.
- 2 Federal Government Use of AI**

The EO embraces the responsible use of AI by encouraging agencies to use and integrate AI into their missions and discouraging outright bans.
- 3 Equity and Civil Rights**

The EO seeks to address potential bias and discrimination in algorithms and automated tools, with a particular focus on housing, real estate, and consumer financial markets.
- 4 Consumer and Worker Protections**

Independent agencies, such as the SEC and FTC, are encouraged to take steps to protect consumers from fraud, discrimination, privacy threats, and other potential AI-related risks.
- 5 Innovation and Competition**

The EO includes several initiatives aimed at promoting federal innovation, small business adoption of AI, and competition in the AI marketplace.
- 6 Privacy**

The EO seeks to protect data collected by the federal government.
- 7 US Global Leadership**

Relevant agencies are instructed to engage with international allies and partners to encourage collaboration and cooperation in the development of global AI standards setting and research.

Executive Order: Workforce Impact



DEPARTMENT OF LABOR

- Publish principles and best practices to aid employers in **leveraging AI for workforce purposes** in a way that maximizes benefits and mitigates harm. The guidelines must include provisions related to job displacement, career opportunities, labor standards and job quality, and implications for the collection of employee data; encourage the adoption of these guidelines.
- Issue guidance to clarify **that employers that deploy AI to monitor or augment employees' work** must continue to compensate workers for hours worked under the Fair Labor Standards Act of 1938.
- Submit a report to the president analyzing how federal agencies can support **workers displaced by AI**. The report must assess how current and former federal programs, including unemployment insurance, can be leveraged to respond to AI, as well as additional legislative measures to strengthen AI-related training, skilling, and educational initiatives.

COUNCIL OF ECONOMIC ADVISERS



- Submit a report to the president on AI's **impacts on the labor market** within 180 days.

NATIONAL SCIENCE FOUNDATION



- Require the prioritization of available resources to support **AI-related education and workforce development** through existing fellowship programs and other awards.

Executive Order: State, Local, Higher Education Impact

While the EO mainly focuses on federal government agencies, there are several areas that directly impact state and local government including health and human services, transportation, civil rights, law enforcement workforce, and public programs. Below is an overview of specific state, local, Tribal, and territorial (SLTT) impacts by agency.



Health and Human Services

- Develop a plan (*within 180 days*) on the use of automated/algorithmic systems in how states and localities implement HHS public benefits/services.
- Establish HHS AI Task Force (*within 90 days*) and develop guidance (*within 365*) days of Task Force creation) on responsible use of AI in HHS services.



Department of Transportation

- Assess needs (*within 180 days*) for information, technical assistance, and guidance on use of AI in transportation.
- Support pilot programs related to AI and evaluate outcomes to make recommendations on AI's use in transportation to state agencies.



Department of Justice

- Provide advice and assistance to SLTT on best practices for investigating and prosecuting AI-related civil rights violations.
- Develop guidance (*within 270 days*) for hiring individuals qualified in AI technology in law enforcement and criminal justice SLTT agencies.



Department of Agriculture

- Issue guidance (*within 180 days*) on the use of automated/algorithmic systems in implementing or providing support for agency administered benefits programs. Ensure programs maximize access, identify instances that require notification or human reviewer, enable auditing, outcomes are equitable.



Department of Energy

- Issue report (*within 180 days*) describing potential for AI to improve planning, permitting, investment, and operations for electric and grid infrastructure.
- Develop tools (*within 180 days*) that build foundation models for basic applied science like streamlining permitting and environmental reviews.



Department of Homeland Security

- Incorporate (*within 180 days*) the AI Risk Management Framework, NIST AI 100-1, and other appropriate security guidance, into relevant safety and security guidelines for use by critical infra. owners and operators.
- Create guidance and benchmarks (*within 270 days*) for evaluating and auditing AI capabilities with a focus on how AI could cause harm in cybersecurity and biosecurity.



Department of Education

- Develop resources, policies, and guidance on AI (*within 365 days*) that address safe, responsible, and nondiscriminatory uses of AI in education, to be developed in consultation with stakeholders.



Small Business Administration

- Prioritize Regional Innovation Cluster program funding for clusters that support planning activities related to (one or more) of the Small Business AI Innovation and Commercialization Institutes.
- Assess and revise eligibility criteria for existing programs like the State Trade Expansion Program, Technical and Business Assistance funding.

Stay Ahead in the Age of AI

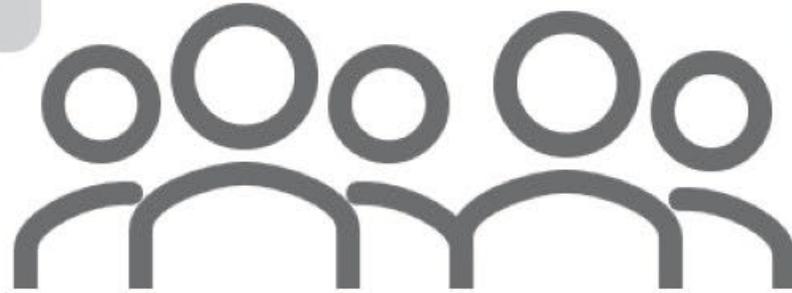
While not exhaustive, below are 3 key considerations for the future of work in response to the recent Executive Order

300M
global jobs could be
impacted by AI

62% of workers say they
don't have the skills to effectively
and safely use GenAI skills

400% projected increase
in productivity of knowledge
workers from AI adoption by 2030

50% AI deployments
fail to achieve desired
outcomes



1 Invest in AI & Digital Literacy

Host informative sessions that focus on educating business and tech leaders, as well as data users, about the responsible utilization of AI. These sessions aim to enhance their understanding and knowledge of practices in AI usage.

2 Determine AI Value Drivers

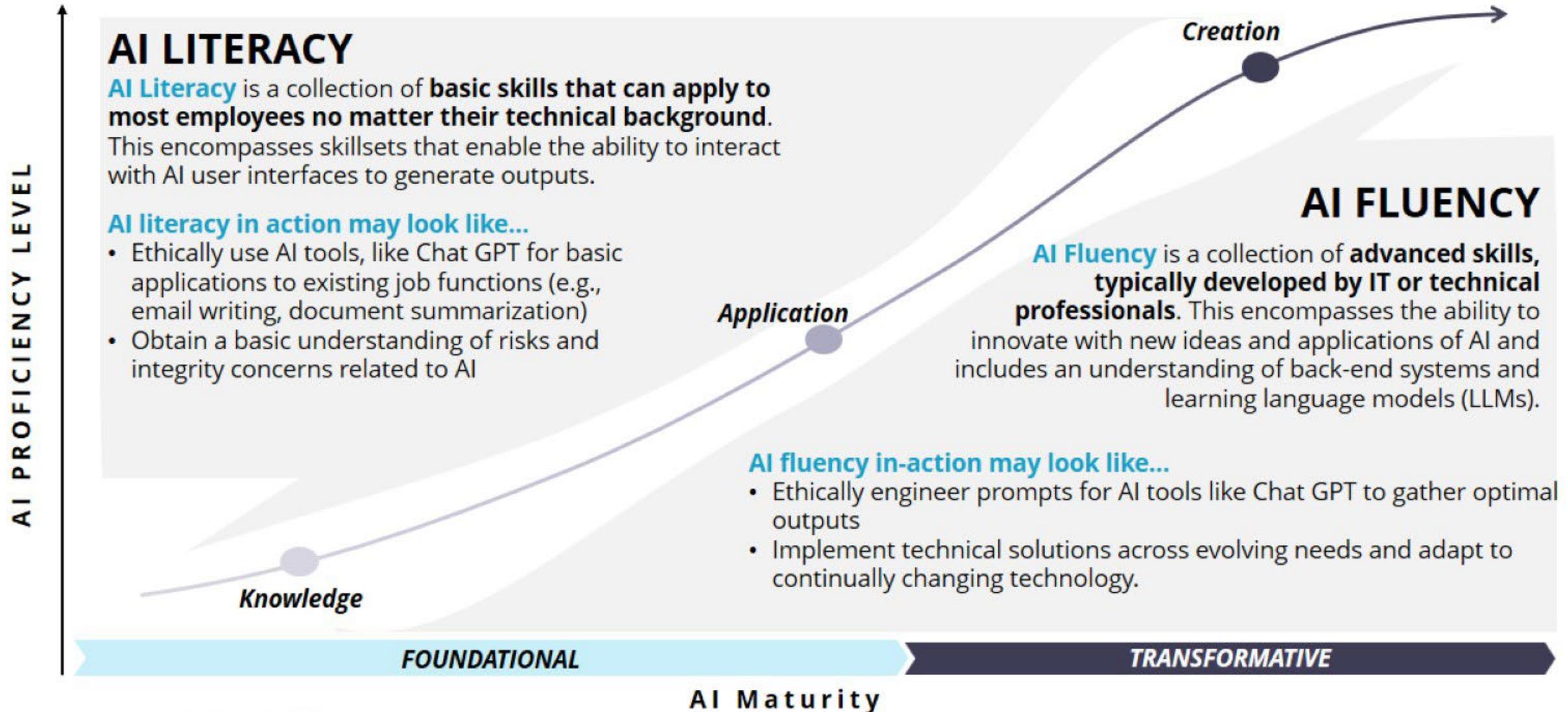
AI is fueling transformation across all industries. Understand what is likely to be affected from AI (beyond automation) regarding industry and job types.

3 Adapt the Workforce

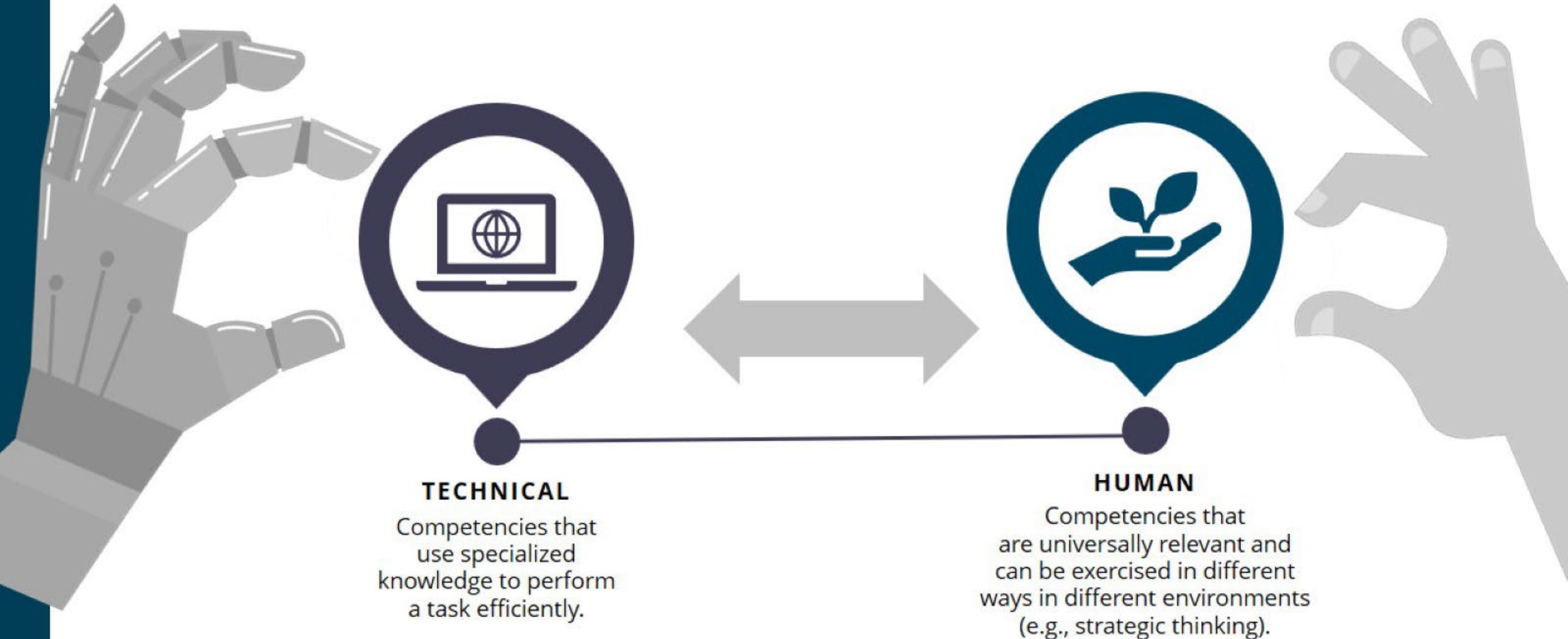
Build a workforce that blends human and machine capabilities. Workflows and roles should be reevaluated to achieve new value, manage risk, minimize disruption.

AI Literacy and Fluency

It is critical to incorporate AI-readiness activities as part of the overarching talent strategy to effectively upskill workforces and mitigate enterprise AI risk, creating an iterative process to achieve AI literacy regardless of role, and AI fluency where required by function.



With skills at the center of work, we need to understand the different types of skills at the forefront...





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Subcommittee Assignments

Governor's Task Force on Workforce and Artificial Intelligence





Industries, Occupations, and Skills

Governor's Task Force on Workforce and Artificial Intelligence

Question 1:

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



Q1: Greatest Opportunities

1. Healthcare
2. Government
3. Software engineering



Q1: Greatest Opportunities

4. Predictive analysis
5. Market research
6. Manufacturing

Note: Identify processes that can be automated and anticipate changes in systems (how and when). These changes can lead to increased productivity, enhancing effectiveness and efficiency, and create opportunities.



Question 2:

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



Q2: Potential Risk

- 1. Risks in fundamental business building blocks: finance, communications, marketing (where we see repetition in business).**
- 2. How to replicate early successes and avoid lagging behind, strive for leadership.**



Q2: Potential Risk

3. How can we use AI to enhance productivity while retaining our employees.
4. Occupations impacted by the redesign of systems/processes with AI integration.
5. Value of education diminishes/decreases.



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.



Q3: Priority Investments and Training

1. Introduce tax credits.
2. Emphasize growth opportunities and leverage current competitive strengths.
3. Invests in the common interests of industry, workers and society.



Q3: Priority Investments and Training

4. Educate the workforce with critical thinking skills to navigate the transition to AI integration.
5. Invest in innovation and creation of new jobs. As systems change and evolve, clear directions for education and training needs will emerge.





Equity & Economic Opportunity

Governor's Task Force on Workforce and Artificial Intelligence

Question 1:

To advance an economy that works for everyone, where do you see the greatest opportunities to connect underutilized talent pools with AI skills and jobs?



Q1: Key Opportunities

- 1. Connect to existing programs**
- 2. Identify skills that are needed for AI jobs**
 - Identify skills/areas that will be impacted by AI
 - Identify opportunities to apply these skills to various industries



Q1: Key Opportunities

3. **Provide resources to industries to help identify skill sets that would bolster advancement within their industry**
4. **Clearly identify expectations related to AI jobs**
 - Pay, benefits, roles, classifications, etc.



Question 2:

Thinking about the worker quantity challenge and employers' need for talent, what do you envision in terms of roles and responsibilities for government, education, and the private sector in terms of connecting underutilized talent with AI skills and jobs?



Q2: Connecting Underutilized Talent

1. **Government is responsible for removing barriers and ensuring funding towards equitable access.**
2. **Private sector should identify AI related skills needed based on industry.**
3. **Educational systems need to develop curriculum to respond to skills needed.**



Q2: Connecting Underutilized Talent

4. Government, education, and private sector have a shared responsibility and need to work together.
5. Technology developers should work with industries to identify skills needed.
6. Technology developers should work with educational systems to develop curriculum.



Question 3:

Where do the greatest challenges lie in terms of connecting underutilized talent with AI skills and jobs? Please consider the perspectives of workers, employers, and job seekers. Also consider factors such as accessibility and existing employment barriers.

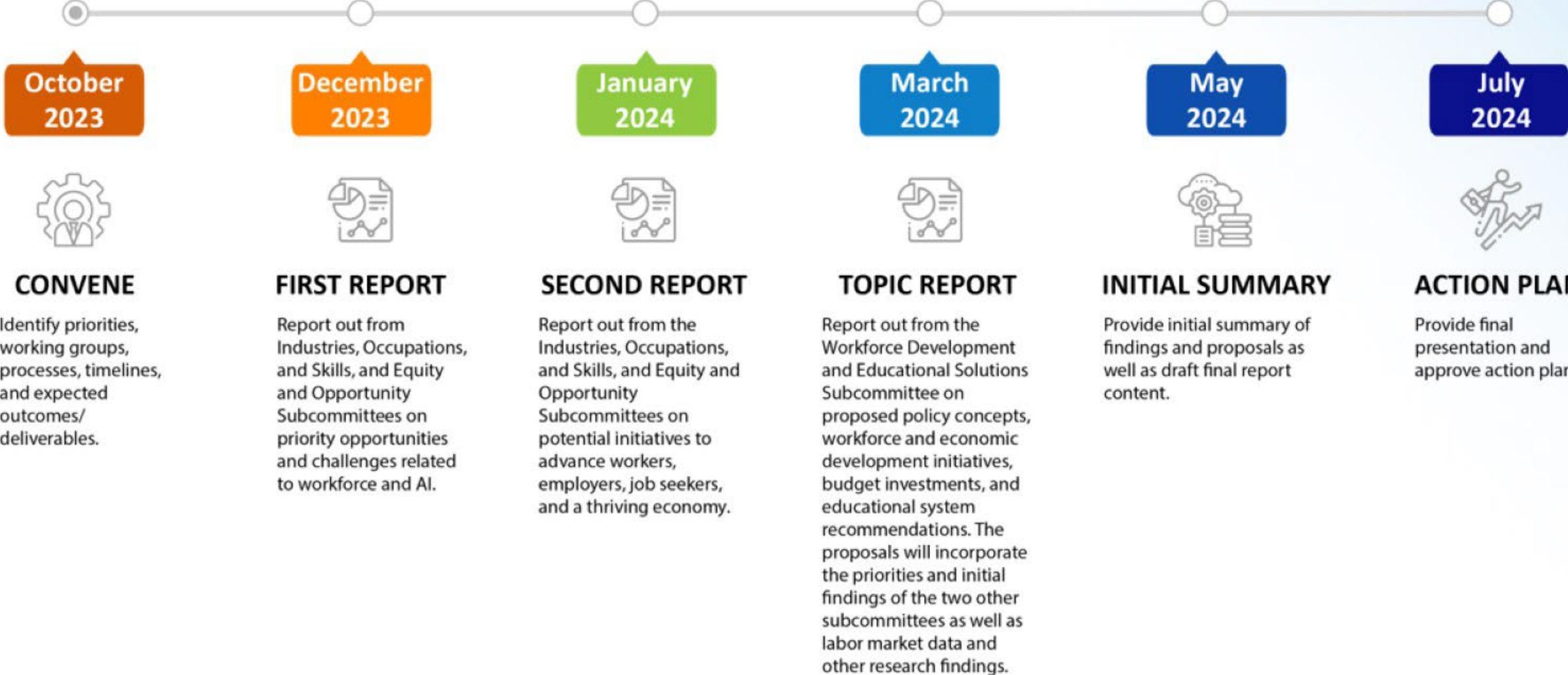


Q3: Priority Challenges

1. Lack of access to broadband
2. Lack of digital literacy
3. Clarity of educational pathways



Timeline





Looking Ahead

Governor's Task Force on Workforce and Artificial Intelligence



Thank You

Governor's Task Force on Workforce and Artificial Intelligence

