



Agenda

- 11:00 a.m. Start of Program Networking
- 11:30 a.m. Plated Lunch Served
- 11:45 a.m. **Welcome Event Corporate Sponsor**Erik Swan, Senior Vice President, Associated Bank
- 11:50 a.m. **State and New North Region Economic Report**John Koskinen, Chief Economist, WI Department of Revenue
- 12:05 p.m. New North Regional Innovation Perspective
 Marc Schaffer, PhD, Associate Professor, Executive Director
 SNC Center for Business & Economic Analysis (CBEA)
 Sarah Scanlan, SNC CBEA Student Fellow
 Evan Glaser, SNC CBEA Student Fellow
- 12:25 p.m. **Local Innovation Perspective**Craig Dickman, Managing Director, TitletownTech
- 12:40 p.m. **Wisconsin Tech Hub Designation and Strategy Grant** Lisa Johnson, CEO, BioForward
- 12:55 p.m. Closing Remarks











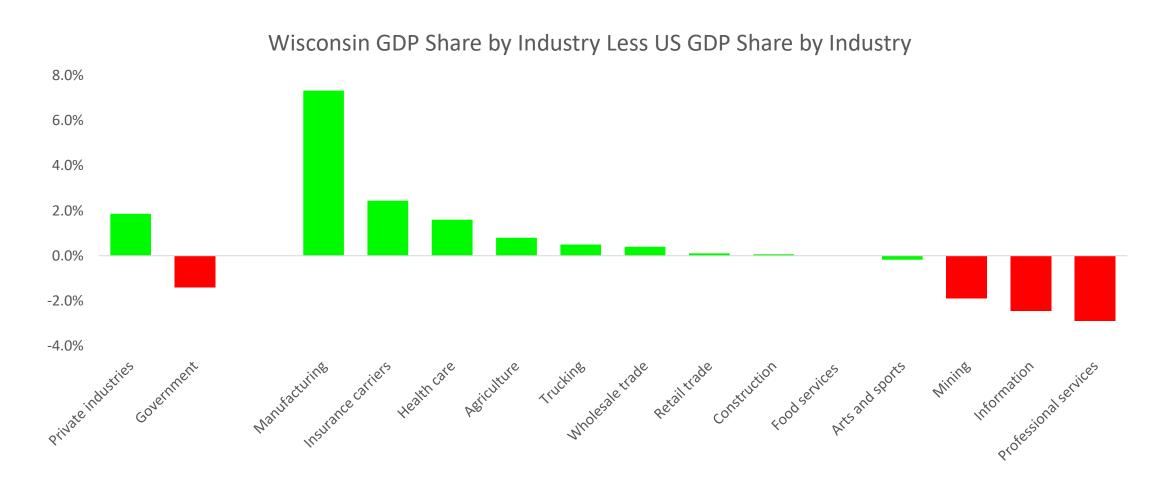


Welcome

State and New North Economic Report 2023 & 2024

John Koskinen Chief Economist – WI Department of Revenue

Wisconsin More Intensive than the US in Manufacturing, Insurance, Health Care, Agriculture, Trucking and Trade



Wisconsin: A Pretty Good State

"Pretty Good": A Wisconsin colloquialism, to show humility in self-discussion of greatness or well-being

Examples:

The Wisconsin cartographer re-named the largest freshwater lakes in North America as the Pretty Good Lakes

U.S. News names Green Bay as the top metro area in the U.S. Residents agree that's pretty good.

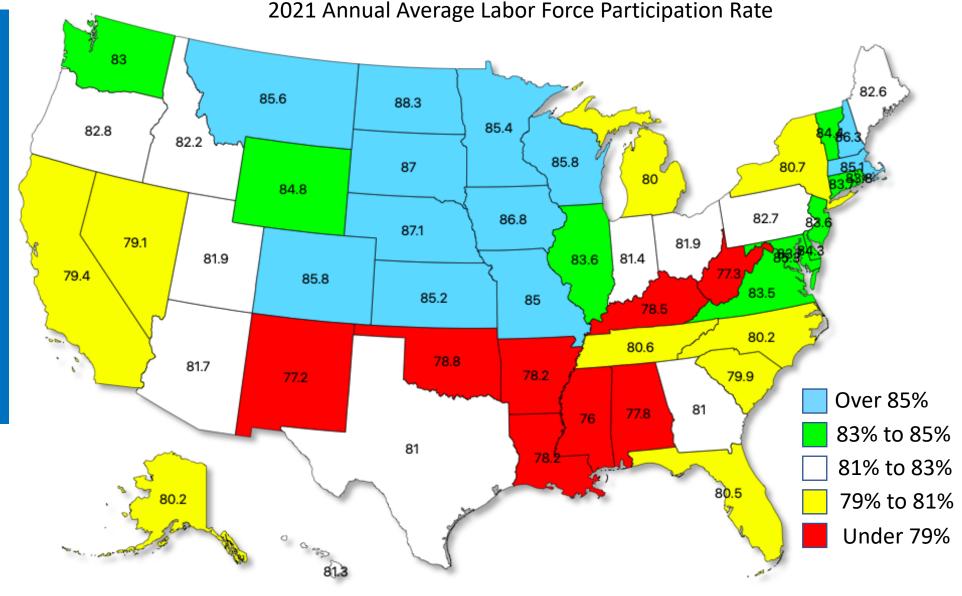
Consider WI on Multiple Metrics

- 1. Labor Force
- 2. Labor Markets
- 3. Cost of Living
- 4. Incomes
- 5. Poverty
- 6. Health Insurance
- 7. Education
- 8. Tax Burden
- 9. Net Migration
- 10. Entrepreneurship

1) Labor Force

For Prime Working Age Population, Wisconsin has the 6th Highest Labor Force Participation Rate

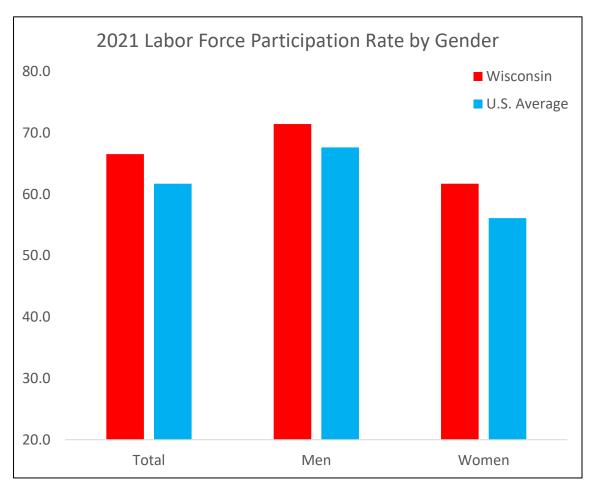
U.S. Average 81.6%

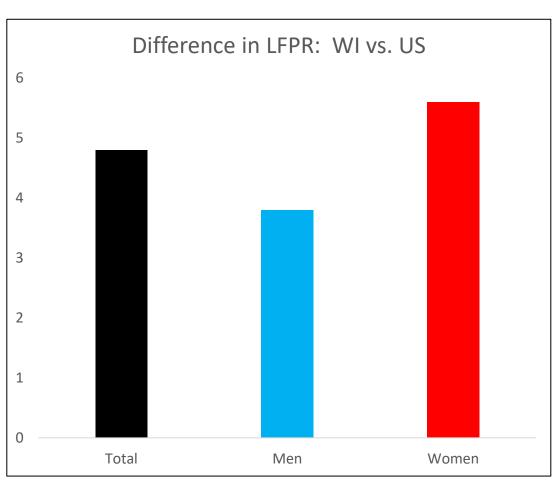


Source: U.S. Bureau of Labor Statistics

1) Labor Force: Wisconsin Women

Wisconsin Women Major Factor in Labor Force Participation Edge

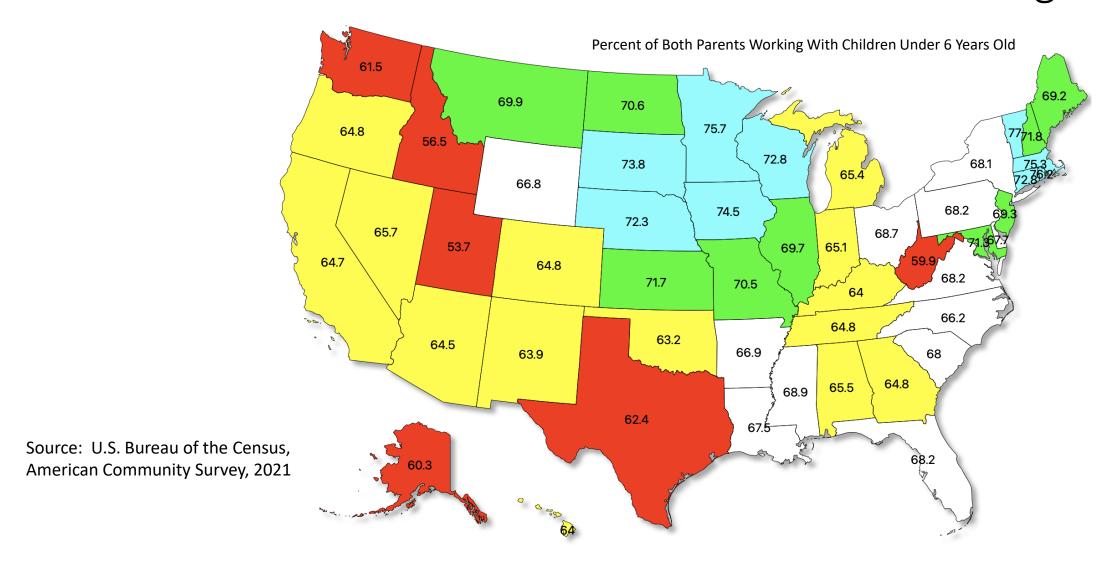




Source: U.S. Bureau of Labor Statistics

1) Labor Force

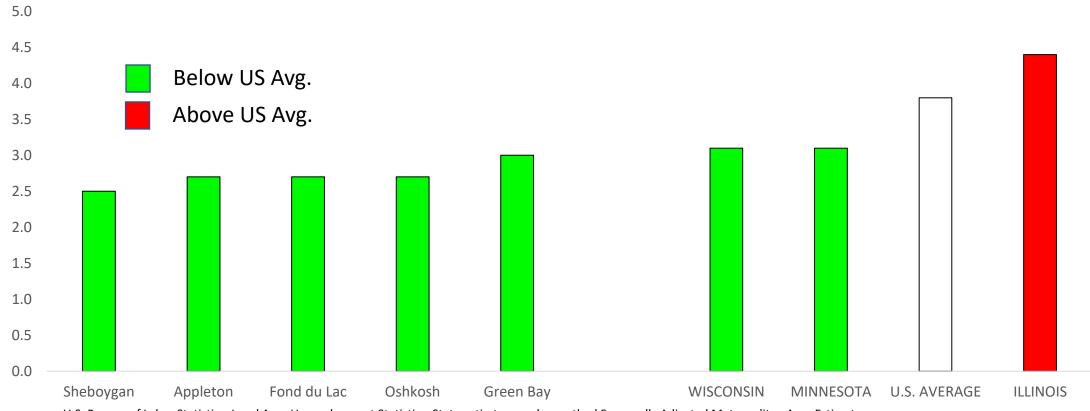
Wisconsin Ranks 7th In U.S. For Both Parents Working



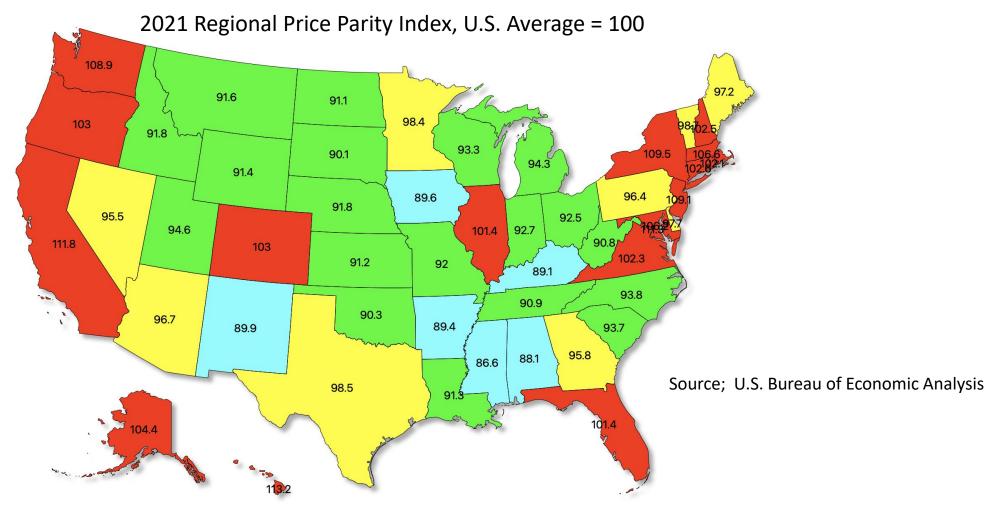
2) Labor Markets

Wisconsin and New North Metro Area Unemployment Rates Well Below the U.S. Average

September 2023 Unemployment Rate, Seasonally Adjusted

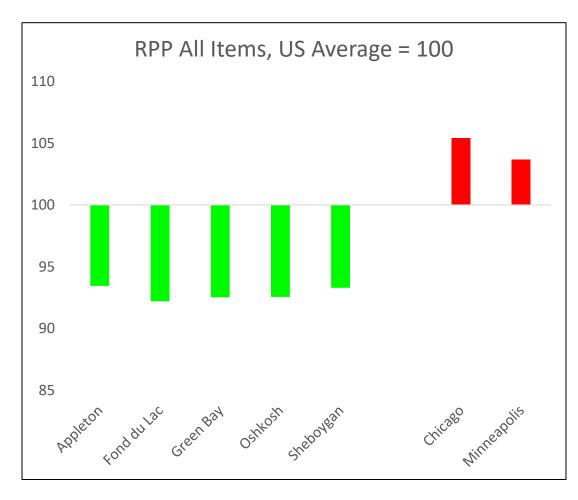


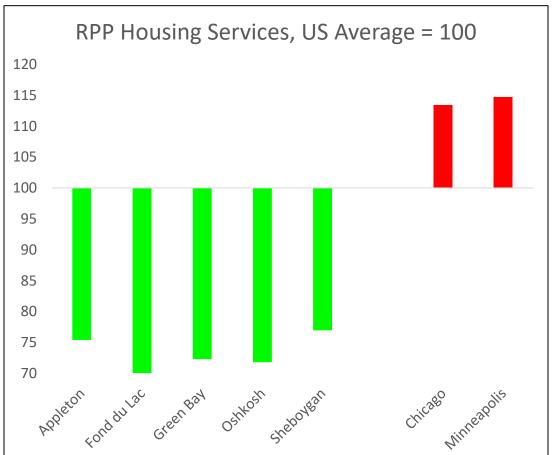
Wisconsin's Cost of Living Below U.S. Average



3) Cost of Living

New North MSAs Very Affordable





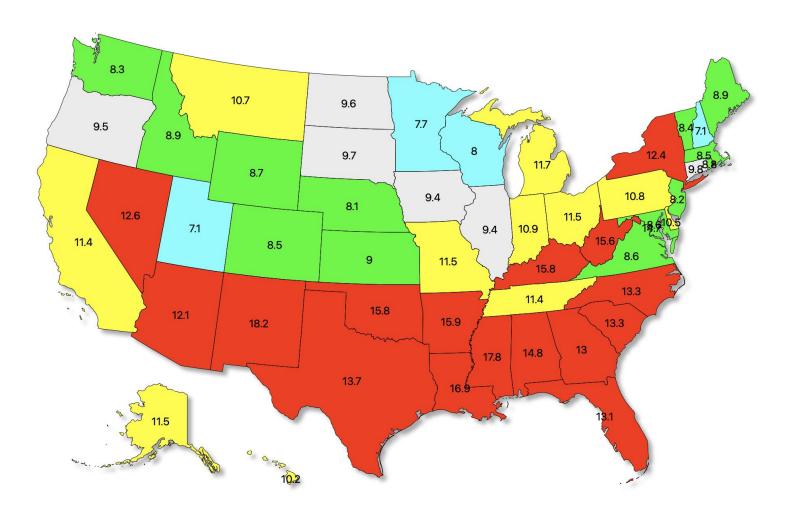
4) Incomes

Adjusted for Cost of Living, Wisconsin Incomes Above U.S. Average

	Median Household Income Nominal, Unadjusted			Median Family Income		
				Nominal, Unadjusted		
	U.S. Average	Wisconsin	Difference	U.S. Average	Wisconsin	Difference
Amount	69,717	67,125	-2,592	83,806	85,810	2,004
	Adjusted for Cost of Living			Adjusted for Cost of Living		
	U.S. Average	Wisconsin	Difference	U.S. Average	Wisconsin	Difference
RPP Index	100.0	93.3		100.0	93.3	
Amount	69,717	71,638	1,921	83,806	91,926	8,120

5) Poverty

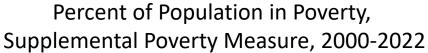
Poverty Measure,
Wisconsin Has
the 4th Lowest
Poverty Rate in
the U.S.

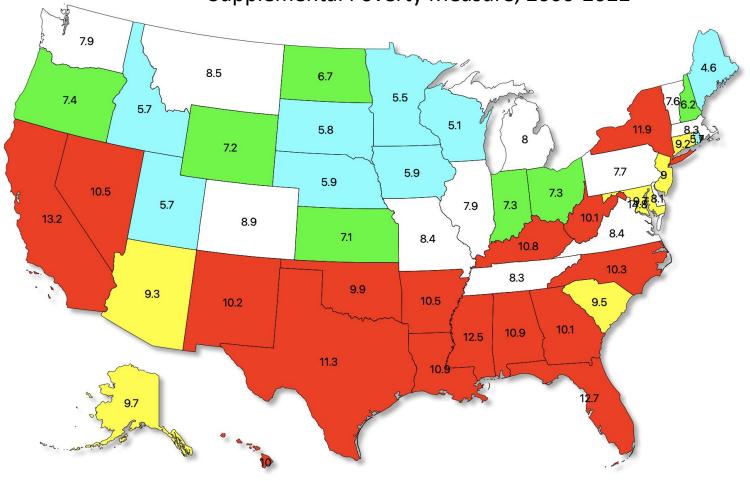


14

5) Poverty

By the Supplemental Poverty Measure Wisconsin Has the 2nd Lowest Poverty Rate in the Nation



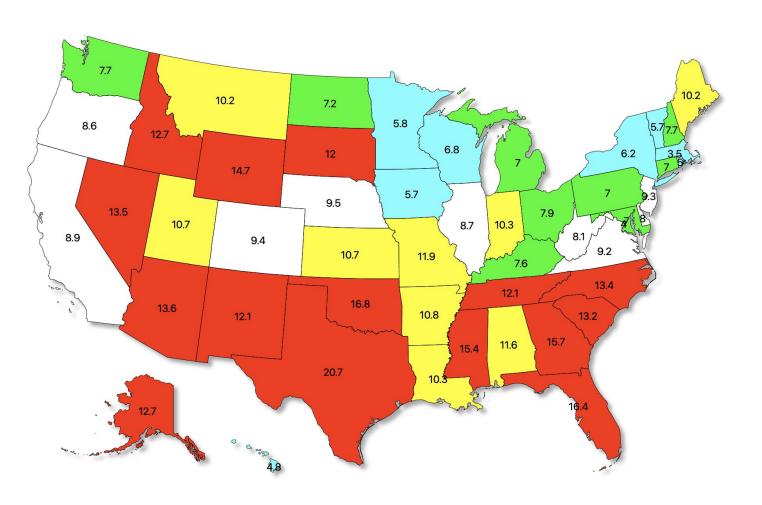


Source: U.S. Census Bureau, Current Population Survey, 2021 to 2023 Annual Social and Economic Supplements (CPS ASEC).

6) Health Insurance

Percent of Population Without Health Insurance Coverage, 2022

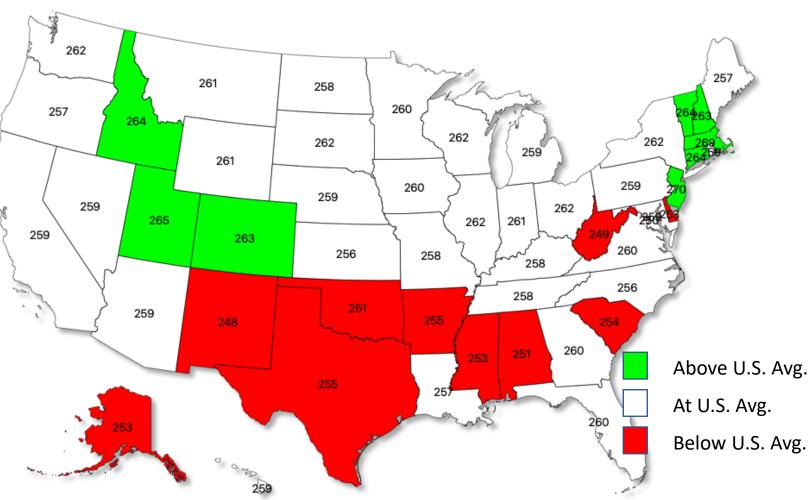
Wisconsin Ranks
6th in the Nation
for
Health
Insurance
Coverage



16

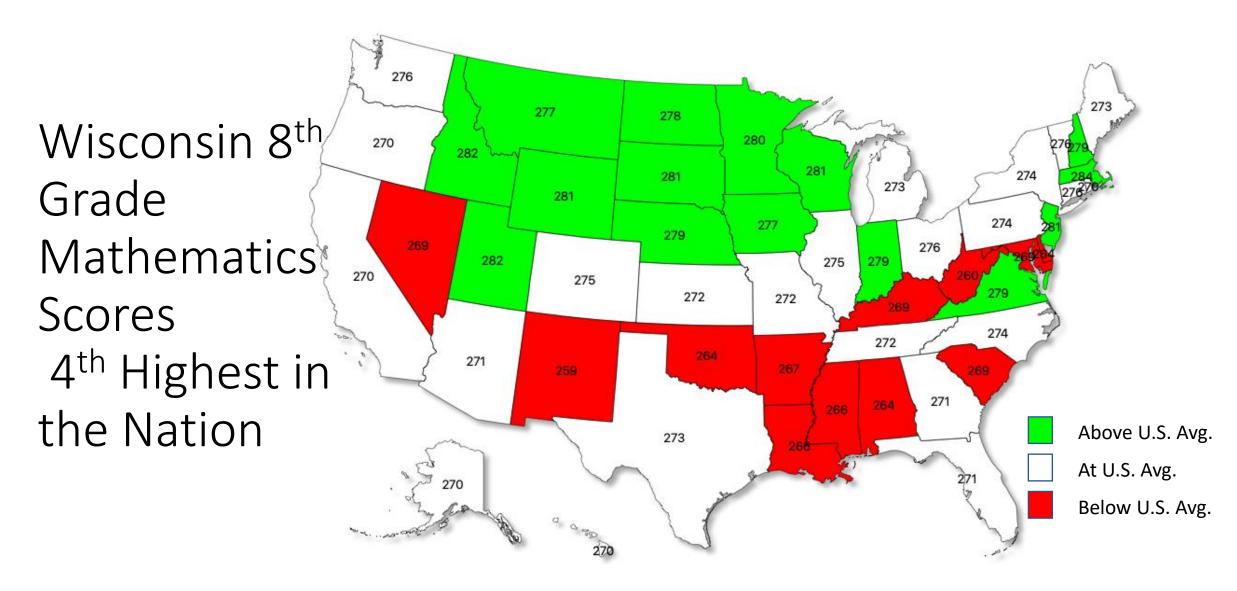
7) Education

Wisconsin 8th
Grade Reading
Scores
10th Highest in
the Nation



https://www.nationsreportcard.gov/profiles/stateprofile?chort=2&sub=RED&sj=AL&sfj=NP&st=MN&year=2022R3

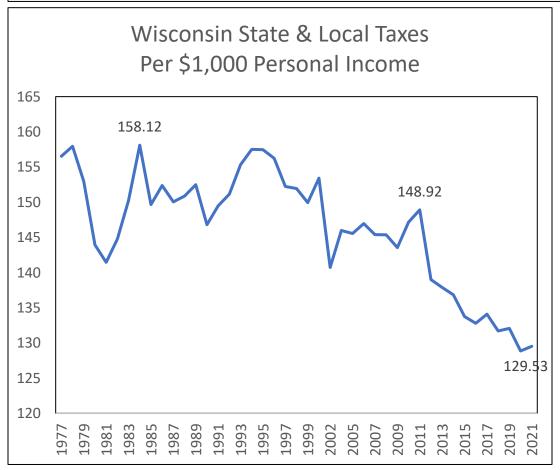
7) Education

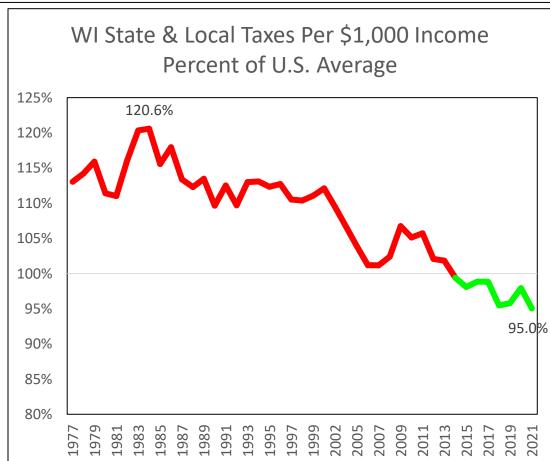


November 15, 2023 Wisconsin Department of Revenue 18

8) Tax Burden

Wisconsin Has Significantly Reduced Its State and Local Tax Burden



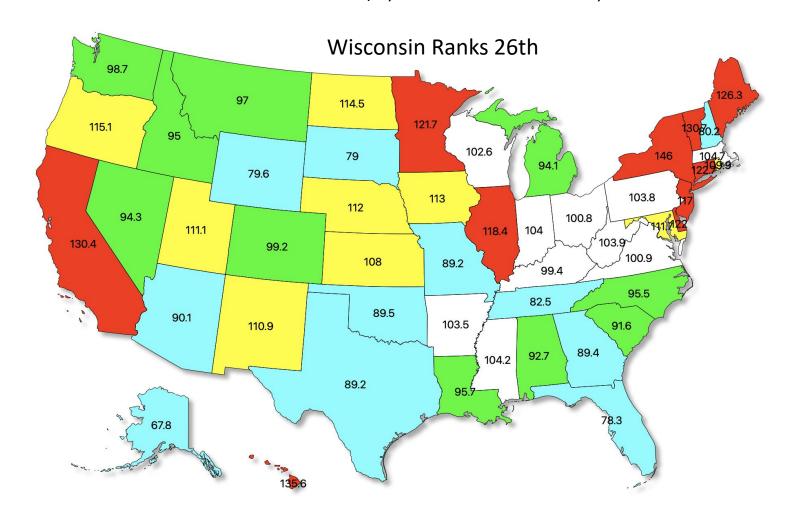


DOR Data Visualization: State & Local Tax Burden

State & Local Taxes Per \$1,000 Personal Income, FY2021

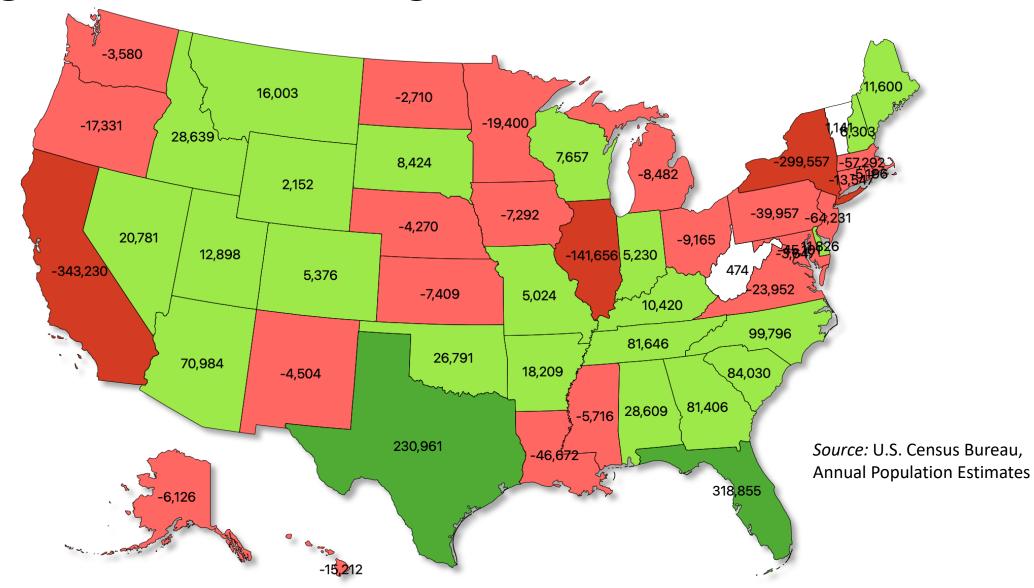
Wisconsin Tax Burden Below U.S. Average

U.S. Average \$107.3



20

Stronger Domestic In-Migration for Wisconsin in 2022

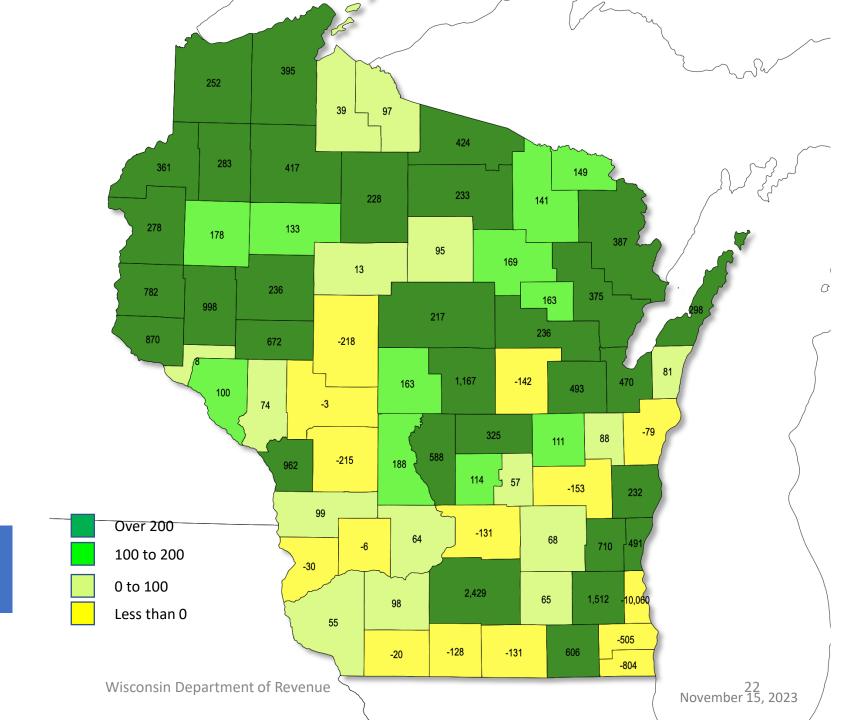


Wisconsin Net Domestic Migration by County, 2021 to 2022

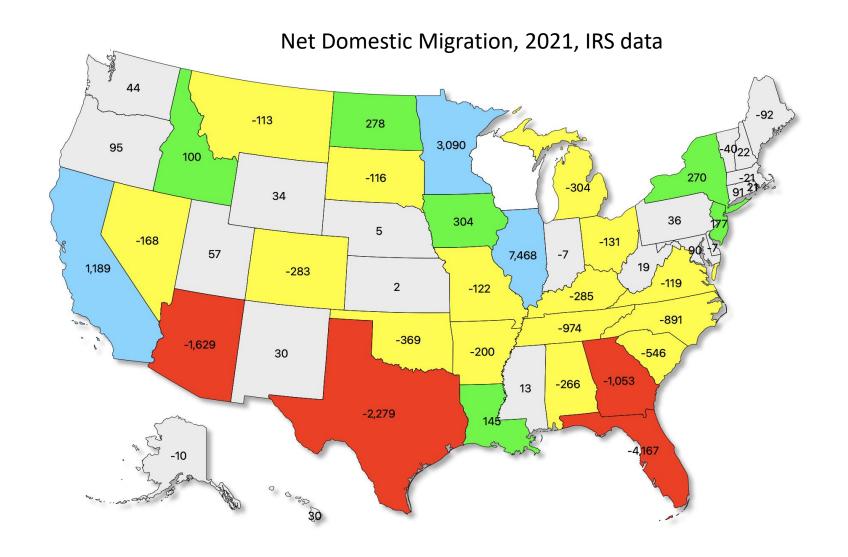
Source: U.S. Census Bureau, Population Division

Release Date: March 2023

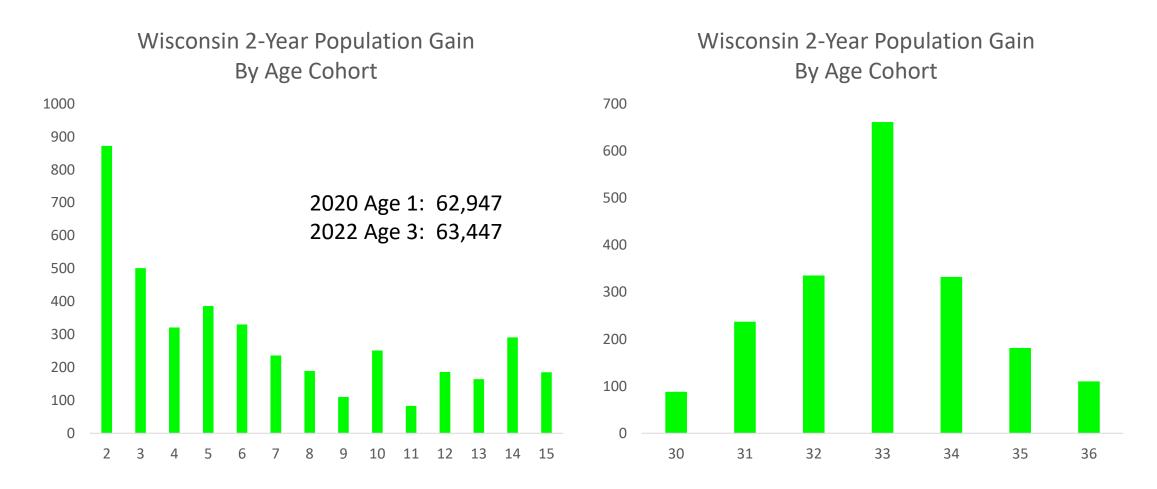
Annual and Cumulative Estimates of the Components of Resident Population Change for Counties in Wisconsin: April 1, 2020 to July 1, 2022 (CO-EST2022-COMP-55)



Principal Sources of Wisconsin NET In-Migration: Illinois, Minnesota, and California

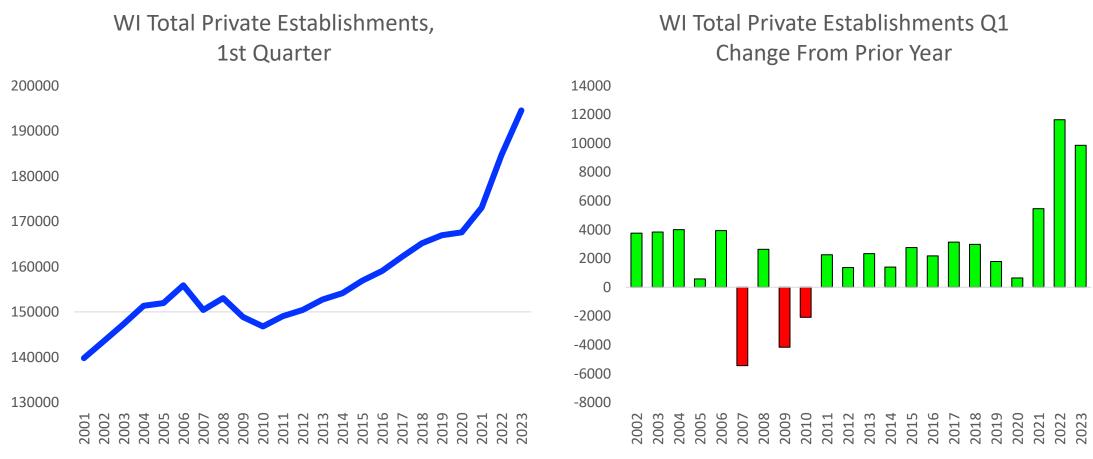


Major Source of In-Migration, Families with Children



10) Entrepreneurship

Wisconsin Total Number of Businesses Rose Sharply in 2021, 2022, and 2023

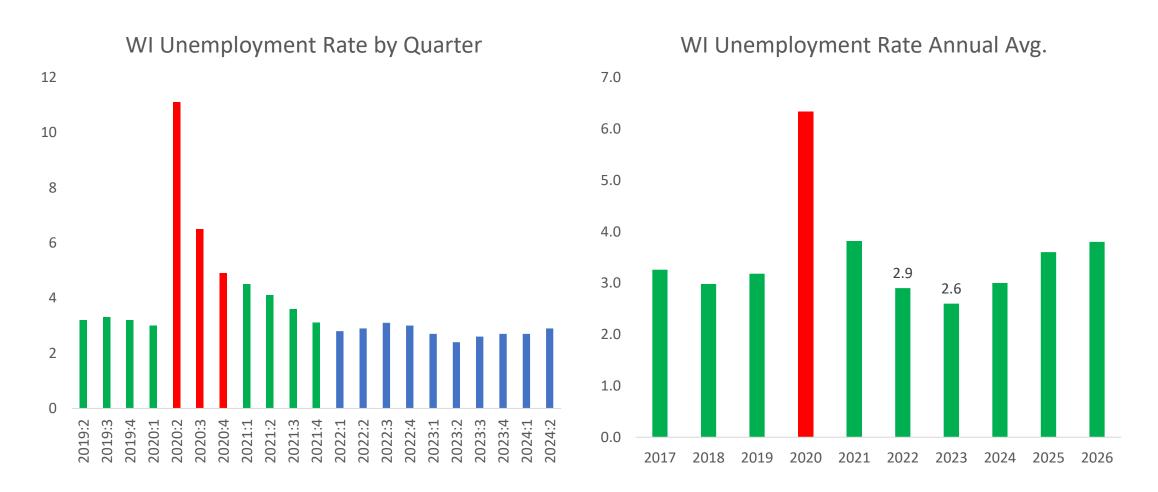


Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Data Retrieved October 16, 2023

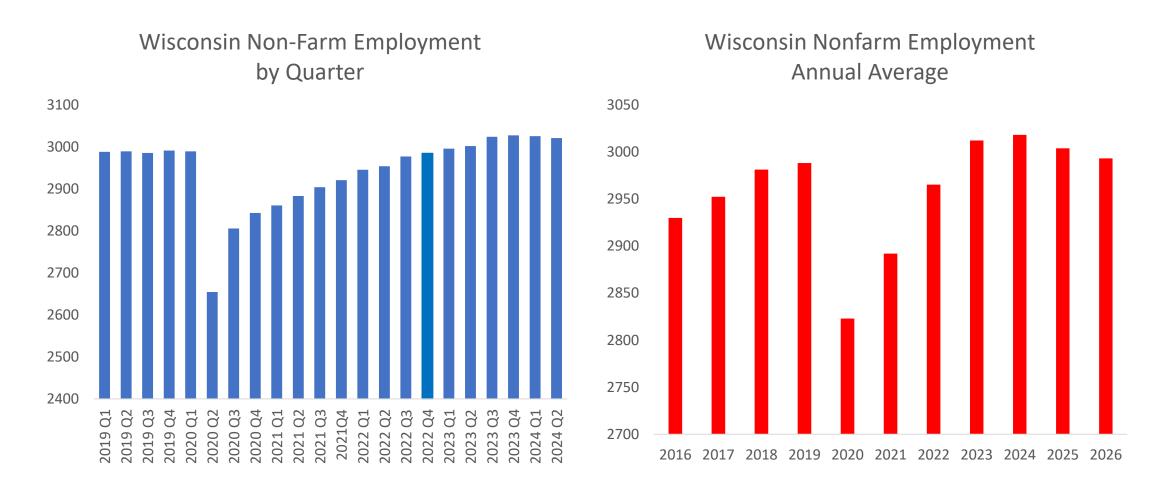
Wisconsin Outlook

Wisconsin's Economic Outlook: Unemployment Rate

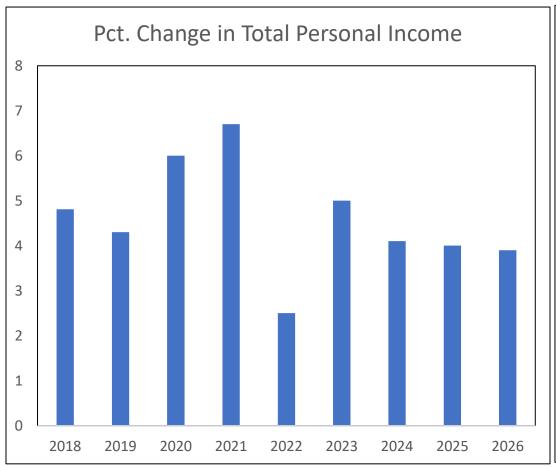
Will Stay at Near Record Lows Through Mid-2024

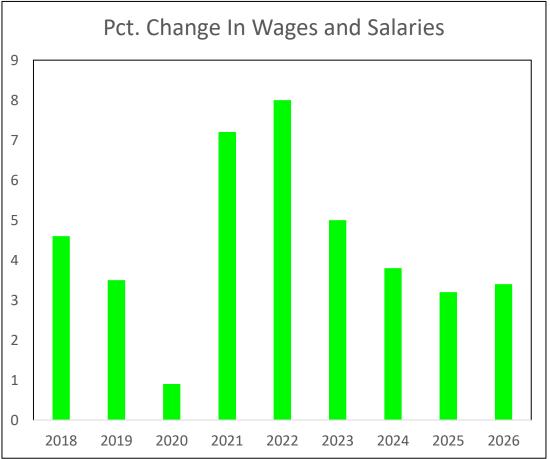


Wisconsin Non-Farm Employment, Establishment Survey Expanding Through 2024 Q2



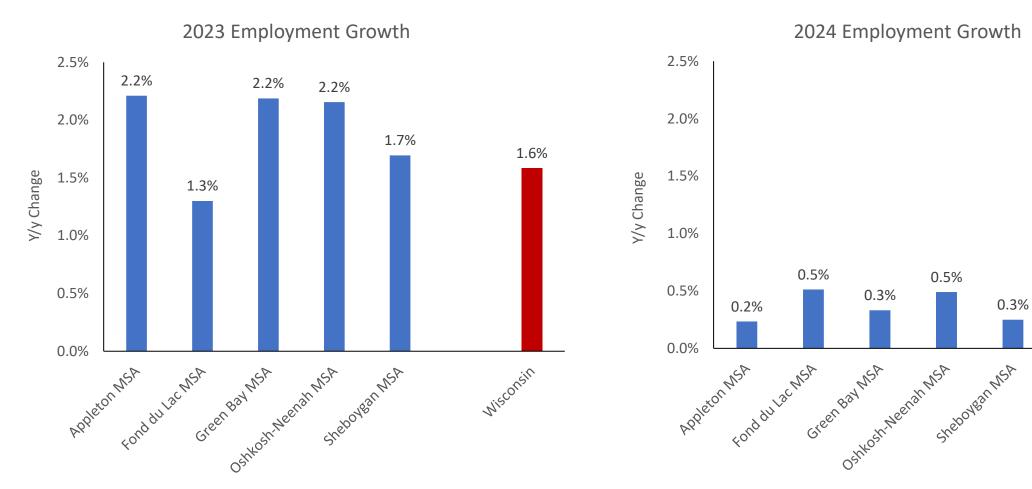
Wisconsin Economic Outlook: Personal Income Supported by Strong Wage Growth 2021, 2022 and 2023 Wage Growth Eases in 2024





Economic Outlook New North MSAs

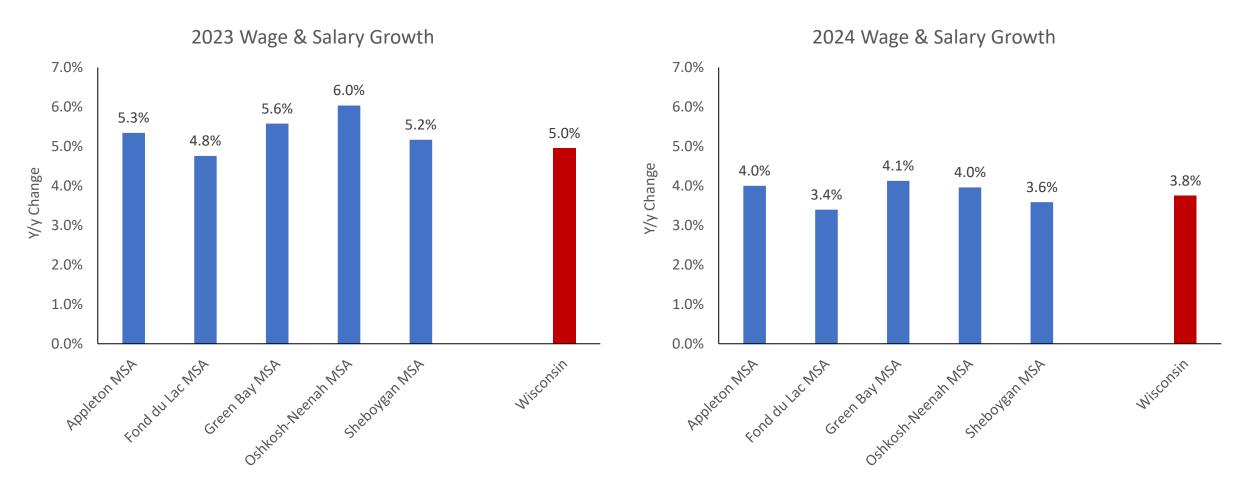
Employment Outlook—New North Outpaces Wisconsin



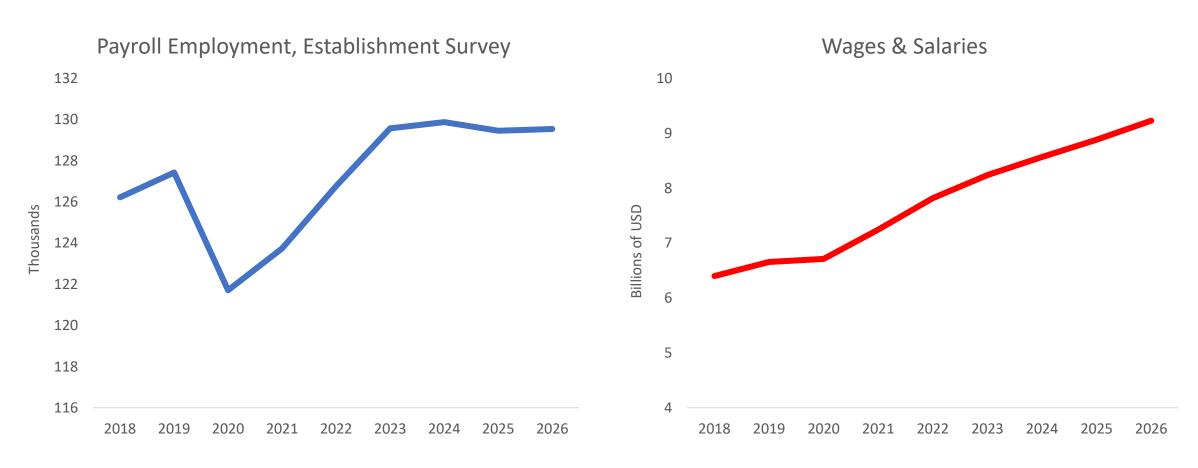
Source: Wisconsin MSA Outlook, Wisconsin Department of Revenue

0.2%

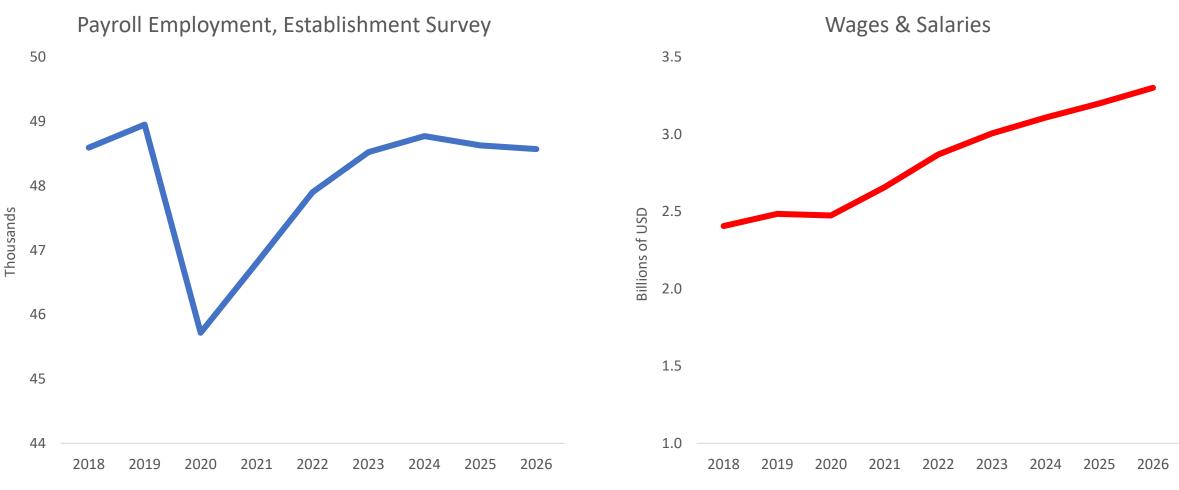
Wage & Salary Outlook: New North Outpaces Wisconsin



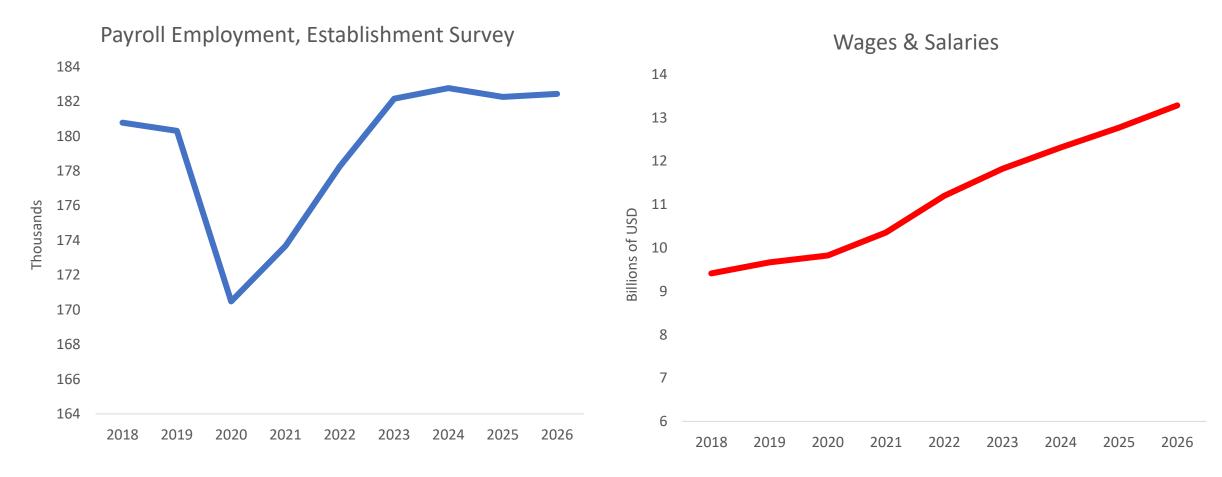
Appleton MSA Forecast



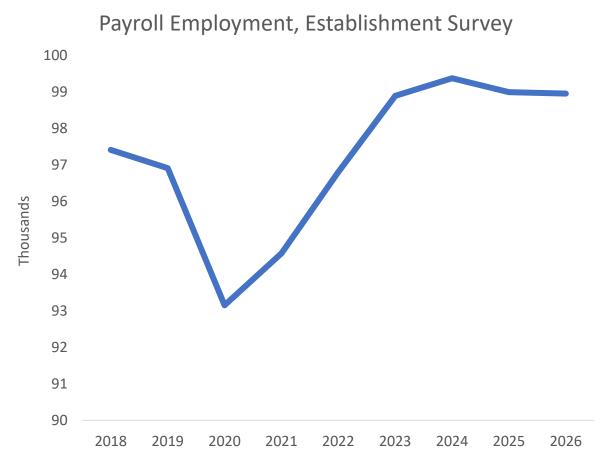
Fond du Lac MSA Forecast



Green Bay MSA Forecast

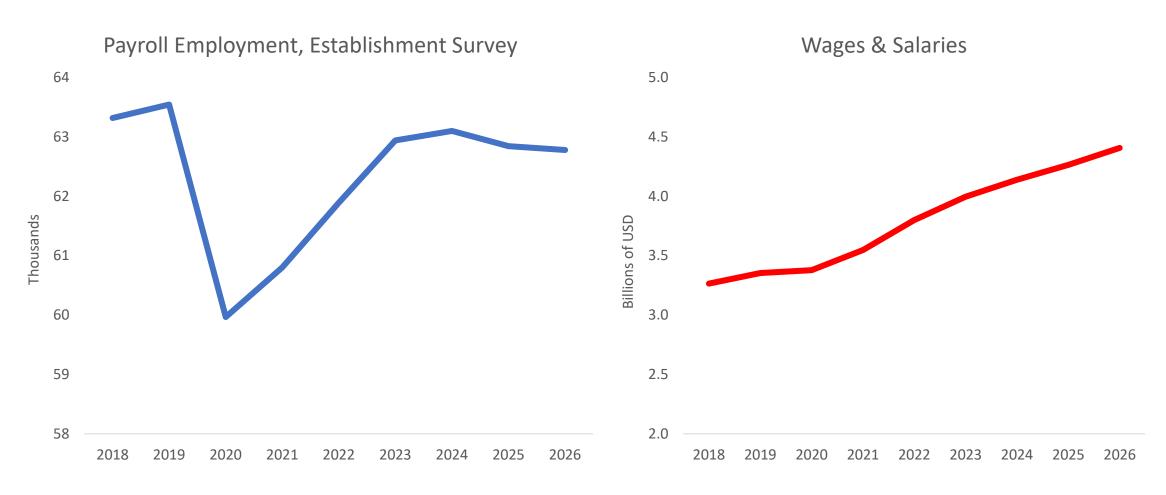


Oshkosh-Neenah MSA Forecast





Sheboygan MSA Forecast



Source: Wisconsin MSA Outlook, Wisconsin Department of Revenue

Wisconsin: A Pretty Good State

Hard Working

Middle Class

Solid Standard of Living



Region on the Rise

Innovation in the New North



Evan Glaser + Sarah Scanlan CBEA Research Analyst Fellows

Marc Schaffer, Ph.D. Executive Director, CBEA



Overview

Innovation

- A. Entrepreneurship
- B. Patents
- C. Innovative Areas

The Innovation Index

- A. National Rankings
- B. New North Innovation
- C. Strengths & Opportunities
- D. Innovation Trends over Time



Overview

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To make changes in something established, especially by introducing new methods, ideas, or products

-Webster Dictionary







PATENT ISSUANCE



VENTURE CAPITAL

Entrepreneurship

Wisconsin Trails Neighboring States in New Entrepreneurs

Midwest New Entrepreneur Rate 2021

United States	0.32%
Michigan	0.29%
Illinois	0.28%
Wisconsin	0.22%
Minnesota	0.20%

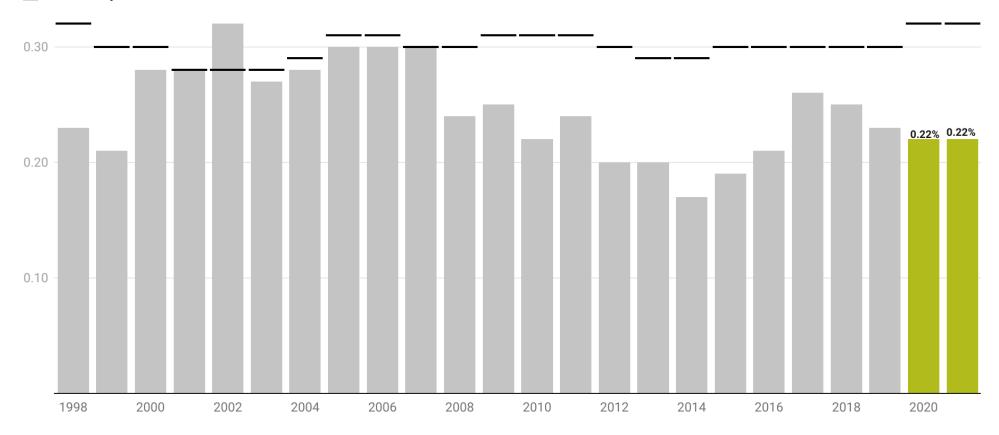
Source: Kauffman Indicators Of Entrepreneurship • Created with Datawrapper

Entrepreneurship

Wisconsin's New Entrepreneur Rate Holding Steady

Wisconsin New Entrepreneur Rates

Wisconsin United States

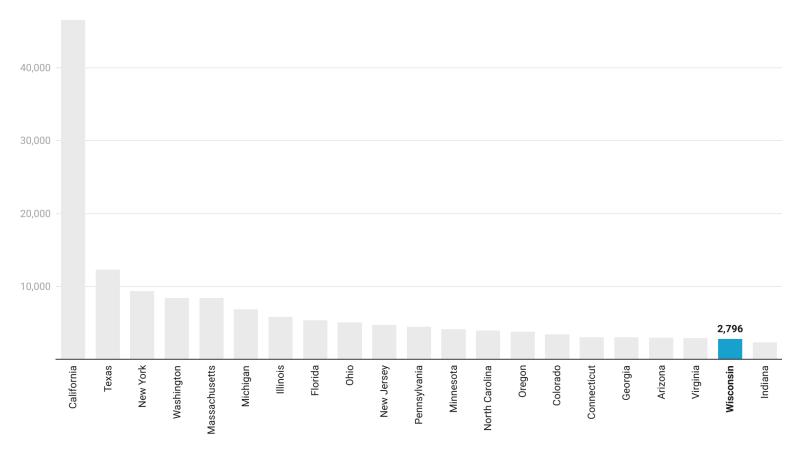


Source: Kauffman Indicators of Entrepreneurship • Created with Datawrapper

Patent Growth

Wisconsin Ranks 20th in Patent Creation in America in 2021

Number of Patents issued in 2021



Source: USPTO



What is Innovative Area?

A district developed to help entire regions compete

-Gensle



Economic Well Being



Employment/
Productivity



Business Profile



Business Dynamics



Knowledge Creation



Overview

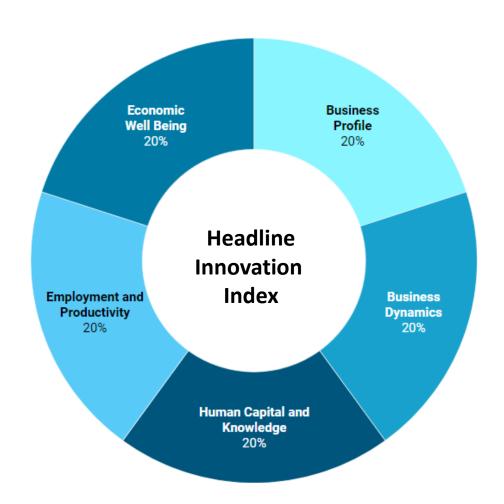
Innovation

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Measuring Regional Innovation



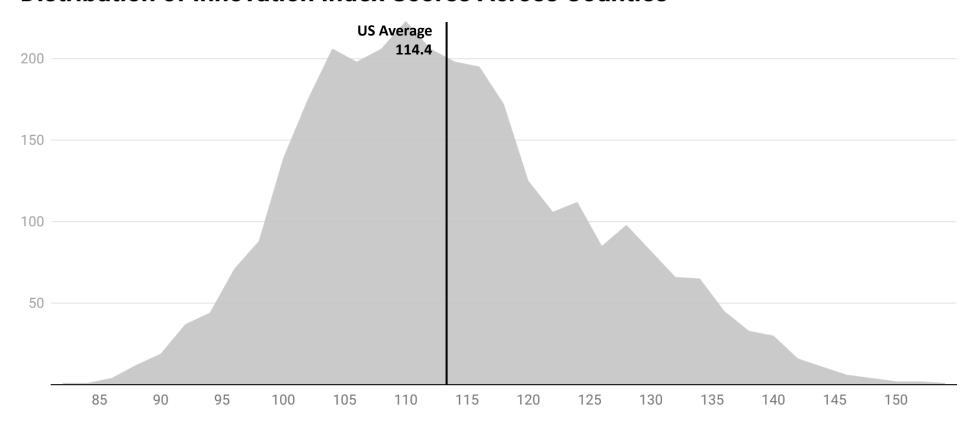
Headline Innovation Index

assigns a value of innovation within a given county as compared to the rest of the U.S. and is comprised of five subcategories

^{*} The regional innovation index 3.0 was designed by researchers at Indiana University in partnership with the Economic Development Administration and is available at StatsAmerica.

New North Counties Feature Higher Headline Innovation Score when Compared to Other U.S. Counties

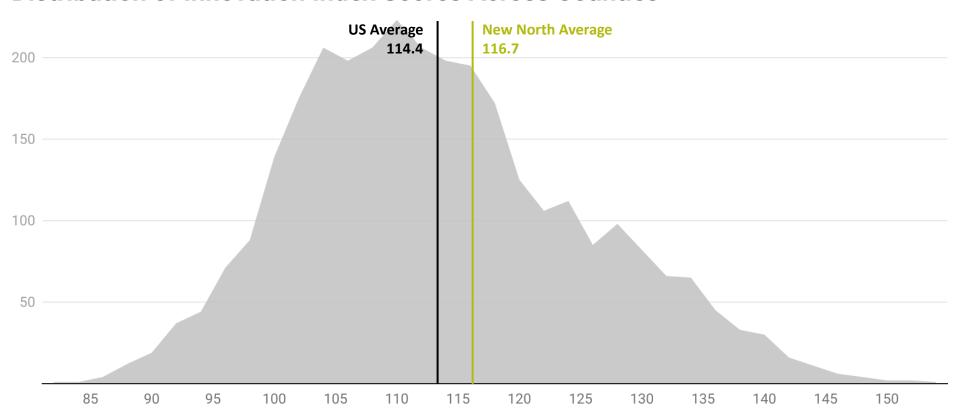
Distribution of Innovation Index Scores Across Counties



Source: statsamerica.org/innovation • Created with Datawrapper

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Distribution of Innovation Index Scores Across Counties



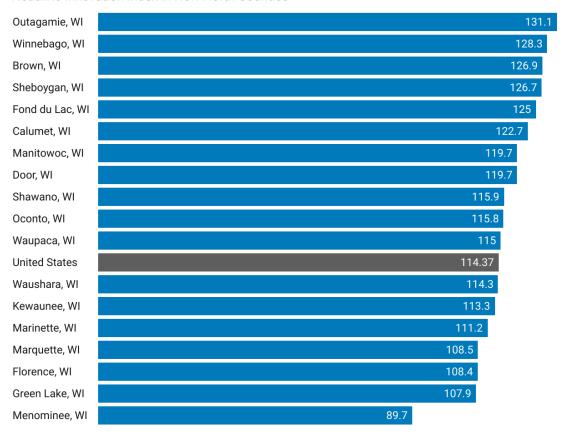
Source: statsamerica.org/innovation • Created with Datawrapper

89.7 131.1

Created with Datawrapper

Outgamie Receives Highest Innovation Index in the New North

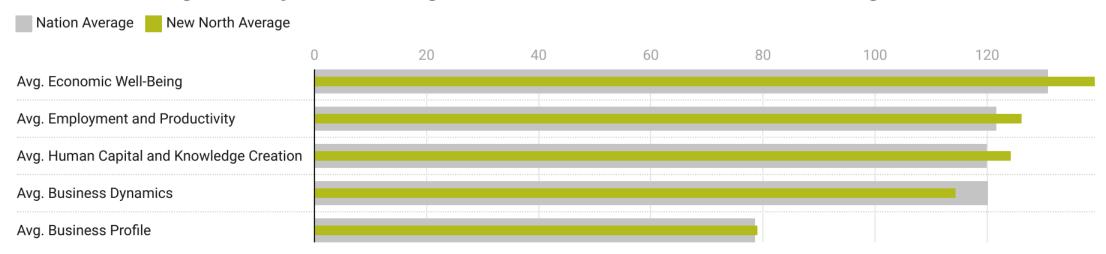
Headline Innovation Index in New North Counties



Source: Statsamerica/innovation

New North Region Outpaces Average Scores Across 4 out of 5 Subcategories

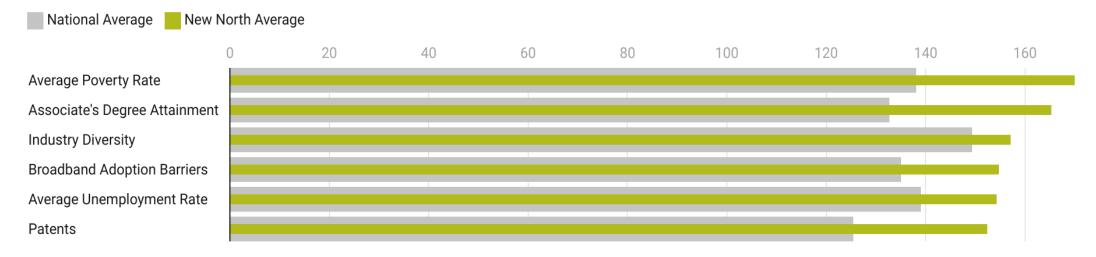
New North Region Outpaces Average Scores Across 4 out of 5 Sub Categories



Source: Statsamerica.org/innovation

Areas of Strength in the New North

Highest Scoring Index categories on average in the New North Compared to National Averages



Source: Statsamerica/Innovation

Opportunities for Growth in the New North Region

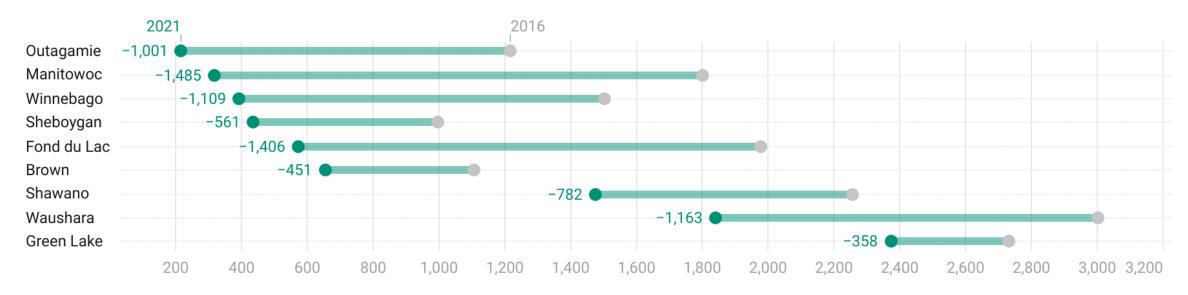
Lowest scoring Index categories on average in the New North



Source: statsamerica.org/innovation

Many New North Counties Moving Up in Business Profile Rank from 2016 - 2021

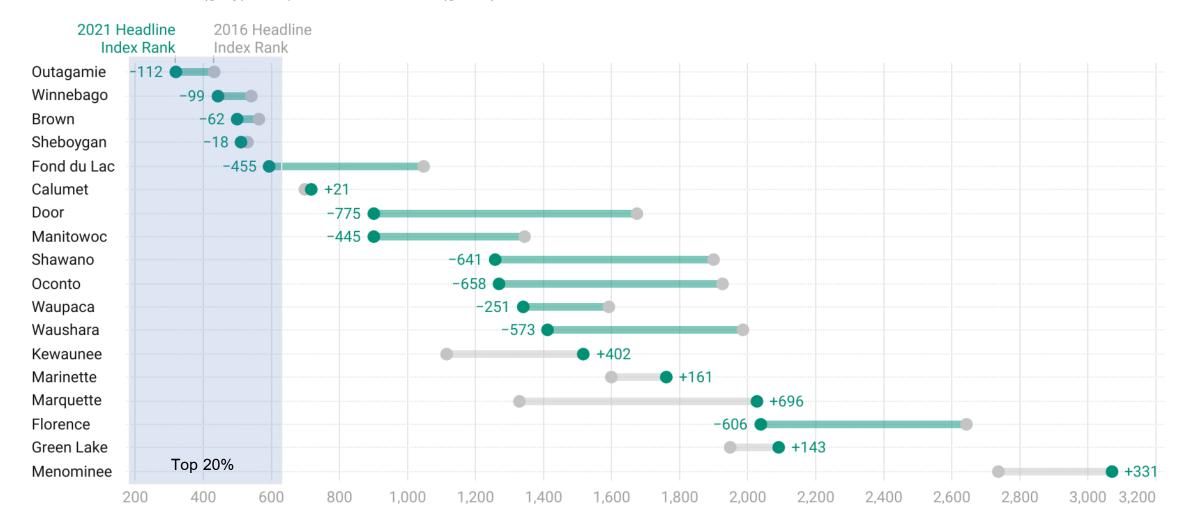
2016 Business Profile Rank (grey) compared to 2021 Business Profile Rank (green) out of 3143 U.S. Counties



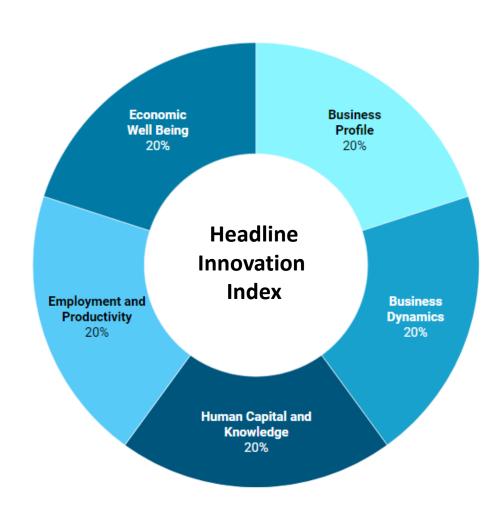
Source: Source: statsamerica.org/innovation • Created with Datawrapper

Majority of New North Counties Moving Up National Headline Innovation Index Rankings

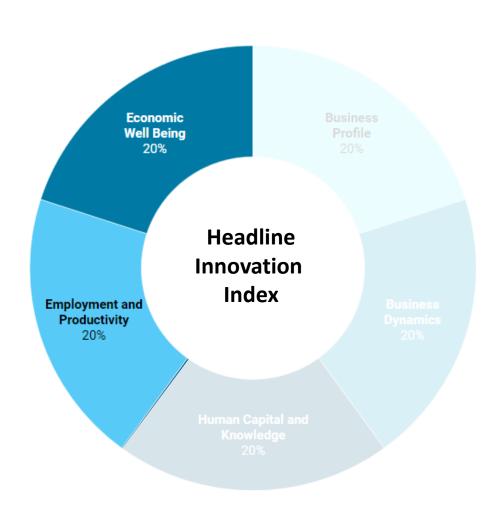
2016 Innovation rank (gray) compared to 2021 rank (green) out of 3143 U.S. Counties



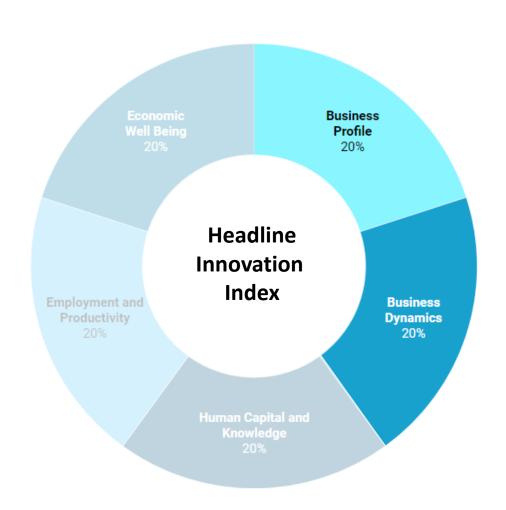
Source: Statsamerica.org/innovation



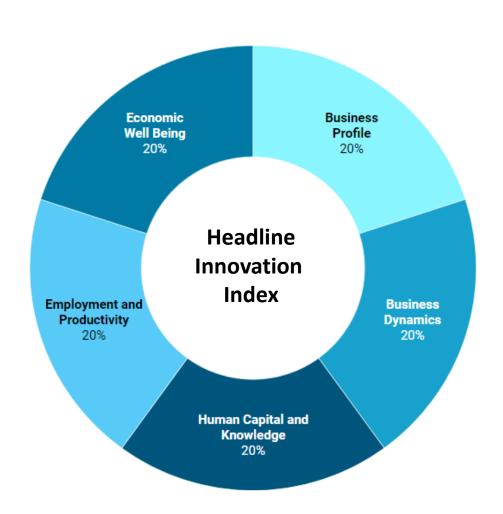
1 Innovation rankings are on the rise in the New North trending above the national average



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- 2 Economic Well Being, and Employment/Productivity are foundational to our success in the region



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- Opportunities for growth in innovation in business dynamics and profile have experienced strides in recent years



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Region on the Rise

Innovation in the New North



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State and Regional Economic Intel Forum Local Innovation Perspective

Craig Dickman

Managing Director, TitletownTech







TITLETOWNTECH FOUNDERS





TITLETOWNTECH COMPANIES





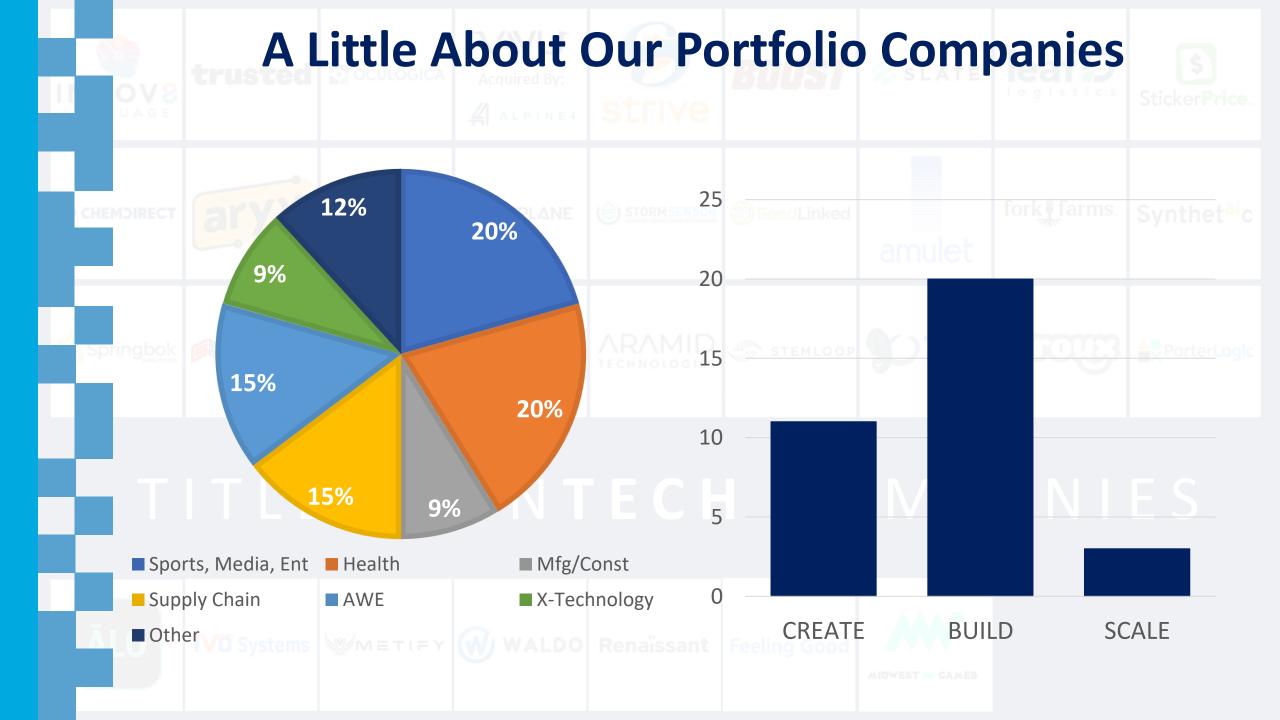








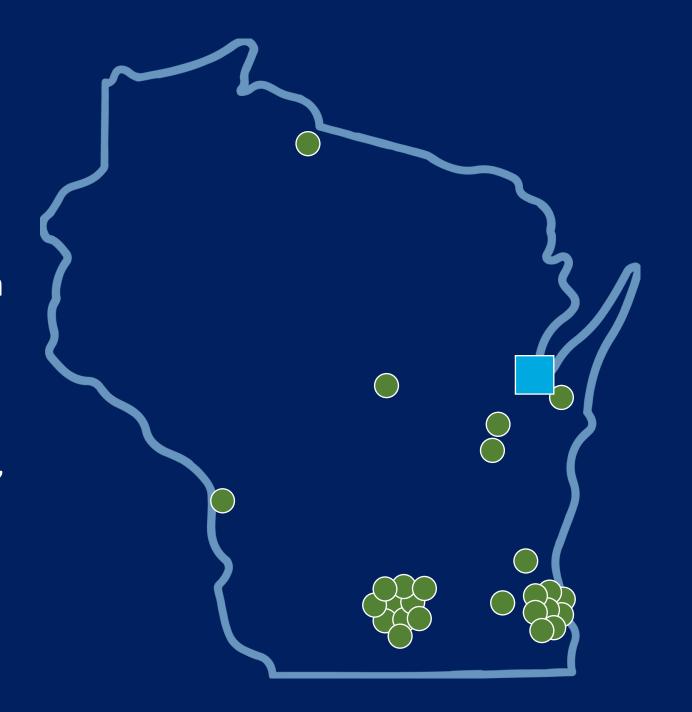




For Perspective...

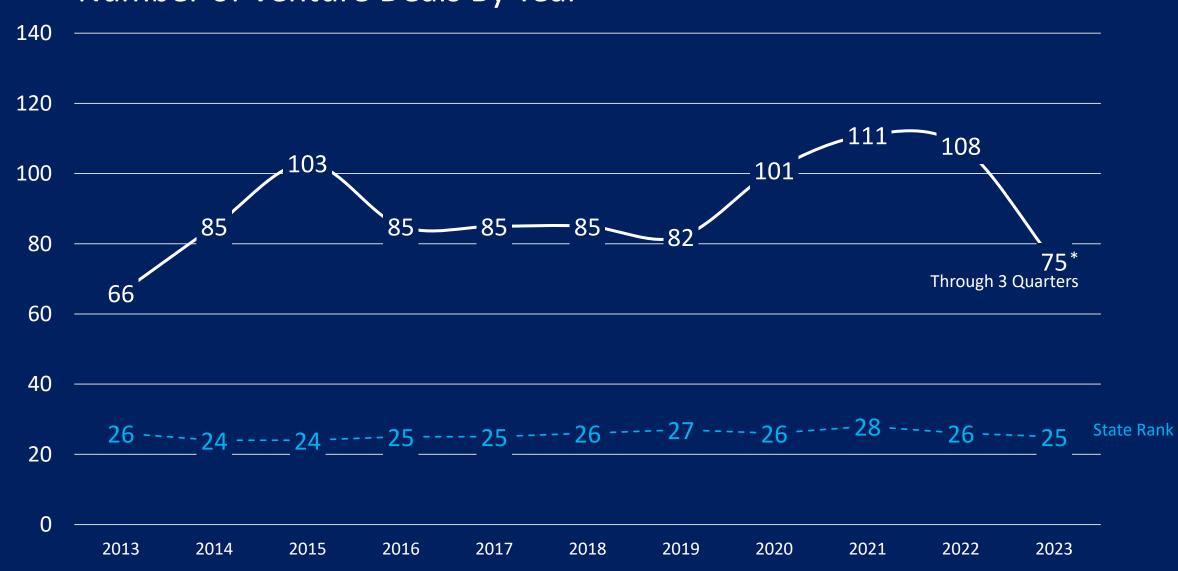
We are one – of more than 25 – venture capital organizations in the State.

So, when you see our data, know that it is biased.



Market Data

Number of Venture Deals By Year



Data Source: Pitchbook

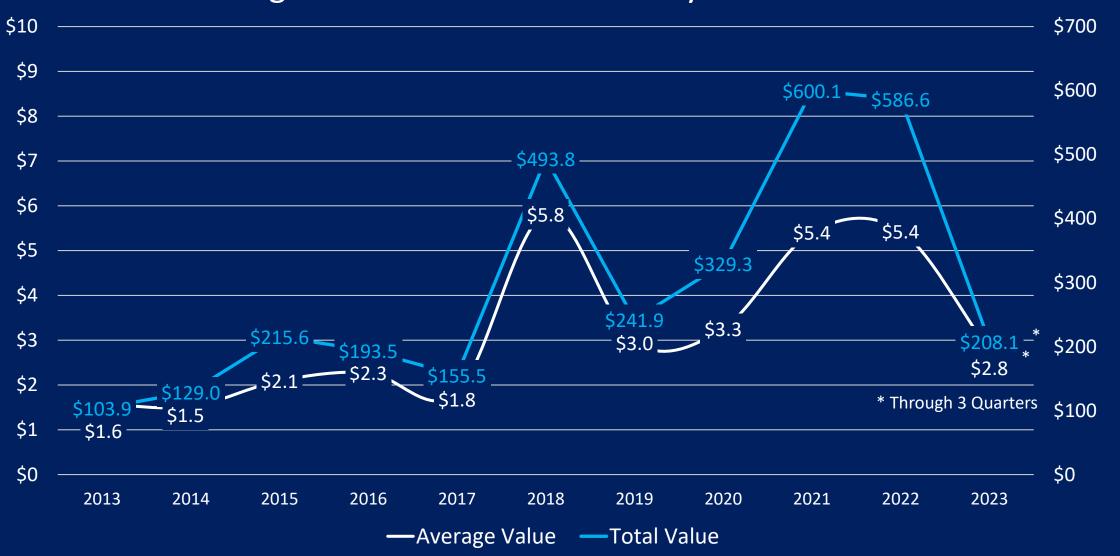
Market Data

Number and Value of Venture Deals By Year



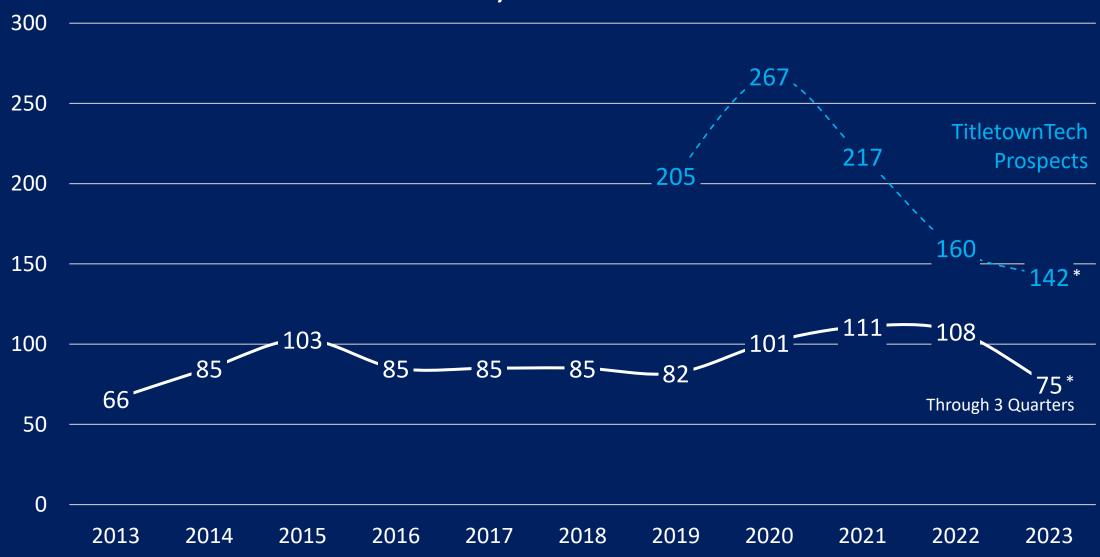
Market Data

Total & Average Value of Venture Deals By Year





Number of Venture Deals By Year



TITLETOWNTECH



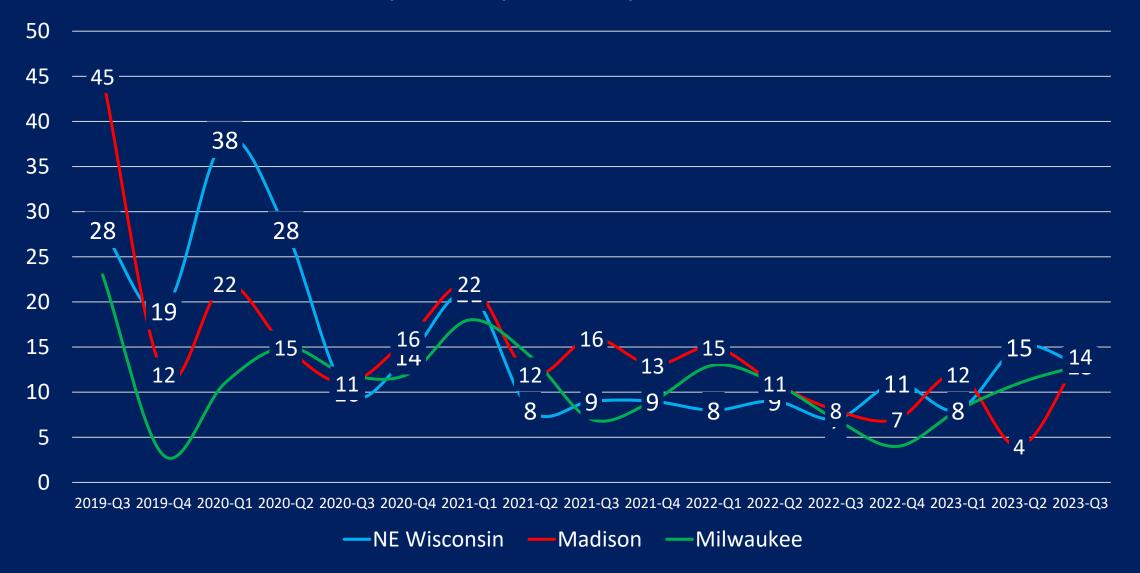
Wisconsin Deal Prospects By Quarter



TITLETOWNTECH



Wisconsin Deal Prospects By Primary Markets



TITLETOWNTECH



Wisconsin Deal Prospects By Primary Markets

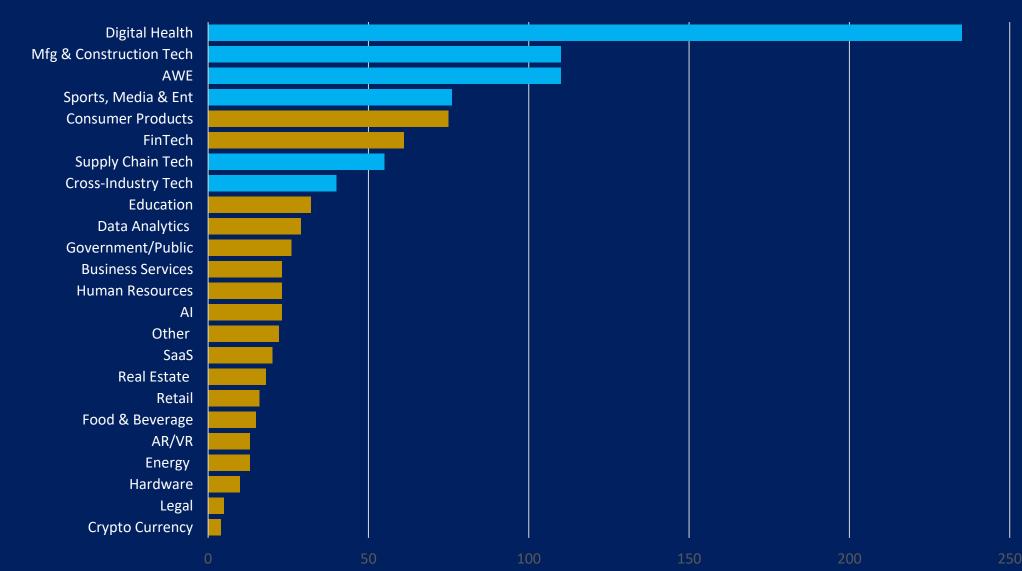


2019-Q3 2019-Q4 2020-Q1 2020-Q2 2020-Q3 2020-Q4 2021-Q1 2021-Q2 2021-Q3 2021-Q4 2022-Q1 2022-Q2 2022-Q3 2022-Q4 2023-Q1 2023-Q2 2023-Q3



TITLETOWNTECH Wisconsin Deal Prospects By Industry





A FEW CLOSING THOUGHTS

- We in Wisconsin are great problem solvers
- Higher education is critical... and we need to figure it out
- Public policy needs to align better with the emerging ecosystem
- Our ecosystem will ultimately be the point of differentiation
- We have a unique opportunity to lead in health/biohealth



THANK YOU



Bio Health I Tech Hub

Pathway to Personalized Medicine

Overview of OUR WI Tech Hub

Lisa Johnson, CEO BioForward



CHIPS & SCIENCE ACT OF 2022

Invests in U.S. regions that are focused on key technology focus areas

The program supports regional plans to expand a critical technology ecosystem and become a global leader over the next decade

- Phase I grants Tech Hub Designation to selected regions
- Phase II is a competition for \$40-\$70 million in funding among designated regions

WI Category of Designation- Advancing Biotechnology: Precision and Prediction



PHASE I APPLICATION THEME: WI IS ORGANIZED, MOBILIZED, AND READY TO COMPETE

- Strong leading organizations with history of collaboration
- Committed university system and technical colleges
- Promising technical college and corporate workforce development programs
- Decades of successful tech transfer
- A long history of biohealth entrepreneurship translating to growth companies
- Strong quality, precision, and custom manufacturing ecosystem
- Unbeatable affordability and livability; WI attracts talent from the coasts

WI Biohealth Tech Hub Initial Consortium Members

Aaron Olver (UW Research Park) to Chair Consortium

Accuray

BigStep

BioForward

Employ Milwaukee

Exact Sciences

GE HealthCare

Madison College

MadRep

Milwaukee Area Technical College

M7

Plexus

Rockwell Automation

UW- Madison SMPH

UW System

WEDC



WI BIOHEALTH INDUSTRY



Drugs & Pharmaceuticals

WI Employment: 6,007 WI Establishments: 92

Companies:

Aldevron, Arrowhead Pharma,
Biosearch Technologies, Catalent Biologics,
Illumina, Mallinckrodt Pharmaceuticals
(Stratatech), Nexus Pharmaceuticals,
Promega, Scientific Protein Labs,
SHINE Technologies,
Sterling Pharma Solutions

Medical Devices & Equipment

WI Employment: 11,729 WI Establishments: 253

Companies:

Accuray, GE Healthcare, Gilson, Medtronic, Thermo Fisher Scientific

Digital Health

WI Employment: 12,401 WI Establishments: 123

Companies:

DotCom Therapy, EnsoData, Epic Systems, HealthMyne, Moxe Health, Redox

Biomedical Research & Testing

WI Employment: 11,526 WI Establishments: 381

Companies:

Eurofins, Exact Sciences, LabCorp, PPD, Quest Diagnostics



The Biohealth Industry

Biohealth-Related Distribution

WI Employment: 9,870 WI Establishments: 1,195

Companies:
Cardinal Health, McKesson

PROOF IN THE NUMBERS

Data provided by BioForward's 2022 Wisconsin Biohealth Industry Landscape & Economic Impact Report

2,666 **TOTAL PATENTS**

45%

OF ISSUED PATENTS WERE MEDICAL **DEVICE RELATED**

10% **INDUSTRY GROWTH RATE**

> >129K **TOTAL JOBS**

>51K **DIRECTLY EMPLOYED**

>15K **NEW JOBS SINCE 2015**

MULTIPLIER

AVERAGE BIOHEALTH WAGE

EFFECT

34%

>\$10B

IN PRODUCTS SOLD **UNDER WARF**

LICENSE IN LAST 10

YEARS

MORE CONCENRATED IN MED DEVICE MFG THAN U.S. AVERAGE

\$189.4M **VENTURE INVESTMENT**

CAPTIAL IN 2021

EXPENDITURES IN 2020

R&D

WISCONSIN Bio!!ealth TechHub

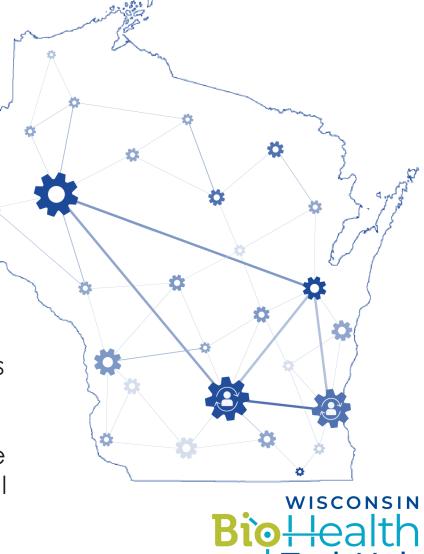
SUMMARY OF WISCONSIN'S STRENGTH

 There is emerging alignment on a geographic focus of the Madison and Milwaukee-Racine-Waukesha MSAs as an interconnected Regional Tech Hub

 Hub and Spoke model – interconnecting all statewide biohealth companies, including precision manufacturers and automation partners, workforce development and academia

 There is emerging alignment on a core technology area, data-driven personalized medicine, building on our existing strength in medical imaging and genomics

 Our decisions on consortium membership and structure will need to reflect current obstacles and the specific types of commitments and leadership that will be needed to address them



PHASE II TIMELINE





PHASE II COMPONENTS & CRITERION



CRITERION	POINTS
Project quality, ability to execute, private sector integration	16
Impact on economic and national security	16
Investment and policy commitments	16
Developing, recruiting, retaining talent and workforce	8
Capital formation, deployment, and access	8
Equity and diversity	8
Governance, leadership, and evaluation	8



ADDITIONAL CONSIDERATIONS

- Consortia may evolve from Phase I; but must be justified
- Phase II application must retain core technology area(s) and elaborate on focus areas
- Application geography must remain the same
- Phase II Implementation Grants will be awarded with a maximum 90% federal grant rate; if led by a
 Tribal government, the federal share may be awarded at a maximum 100% rate
- EDA expects most projects will range from 24 to 60 months and that all projects will proceed efficiently and expeditiously
- Applicants should minimize potential adverse impacts and account for current and future climate risks
- Applicants must use a digital platform to track metrics and participate in program evaluation
- o Commitments from non-applying entities outside the consortium or non-applying consortium members must include a letter of commitment paired with a completed Commitment Form
- Foreign direct investment in a project is permitted from foreign entities that are not Foreign Entities of Concern (FEOC), either as matching funds or through a commitment



MODEL FOR PROPOSAL DEVELOPMENT

- Personalized/Precision Medicine right patient right treatment right time
- Meaningful Solving significant unmet healthcare needs
 Measurable Data driven and data moving results
- Cost Effective practical, inclusive: diverse populations, rural to urban delivery settings

Patient Impact

- World leaders in Medical Physics, Imaging and Genomics spanning diagnostics to therapy united with Big Data
- Geographic Center for Precision Medicine Innovation, Manufacturing, and Supply Chain
- The Wisconsin Idea in action... Theory to application improving lives

WI Biohealth
Tech Hub

Technology Leadership

- Advance existing world-leading center for personalized medicine
- Leveraging diverse workforce, skills, education level, creating trajectory for continuous career growth in Wisconsin
 - Build bridges between strengths in Innovation, Manufacturing, and Supply Chain
 - Inclusive living-wage jobs: broad participation with upward mobility
 - Demand-driven job creation
 - Wisconsin created & Wisconsin made (sticky innovation)





Key Contacts

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Thank you!



