

IS THERE A SKILLS MISMATCH IN MANUFACTURING?

MICHIGAN EDUCATORS APPRENTICESHIP & TRAINING ASSOCIATION (MEATA)

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The Manufacturing Skills Mismatch Debate

Yes

Formal training is declining

Job openings exceed new hires nationally

Anecdotal evidence from companies abounds

Real time LMI shows mismatches

Surveys show mismatches but magnitude varies considerably



No

Wages not rising at above average rates

High levels of the unemployed indicate workers are available

HR practices not working

There is a wage problem

Reluctance to hire the unemployed

Uncertainty about economy

It is a training gap not a skills gap

Two National Studies on the Manufacturing Skills Gap

1. Boston Consulting Group (BCG)

- The **skills gap** in the U.S. is “overblown:” It is only 80,000 to 100,000 workers in magnitude
 - About 8 percent of the nation’s high-skilled manufacturing labor force
- Serious **workforce shortages are local** and exist in 5 of top 50 manufacturing markets
 - Occupations in shortest supply are welders, machinists, and industrial-machinery mechanics
- As retirements and re-shoring grows, the highly skilled manufacturing **worker shortage could worsen** to 875,000 machinists, welders, industrial-machinery mechanics and industrial engineers by 2020
- Investment in **training and skills development** needs to be stepped up

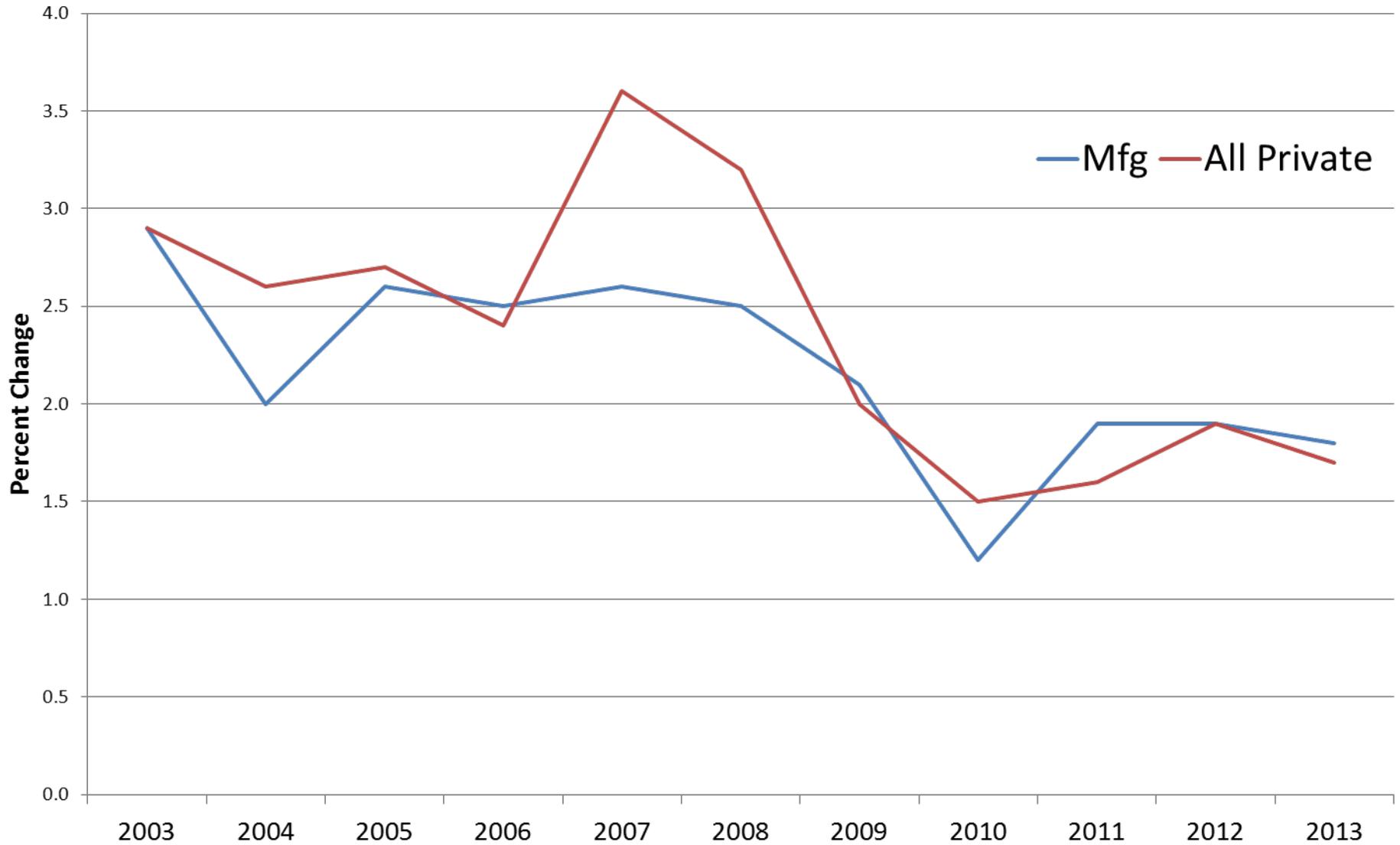
Two National Studies on the Manufacturing Skills Gap

2. Deloitte/Manufacturing Institute – 2011 Skills Gap Study

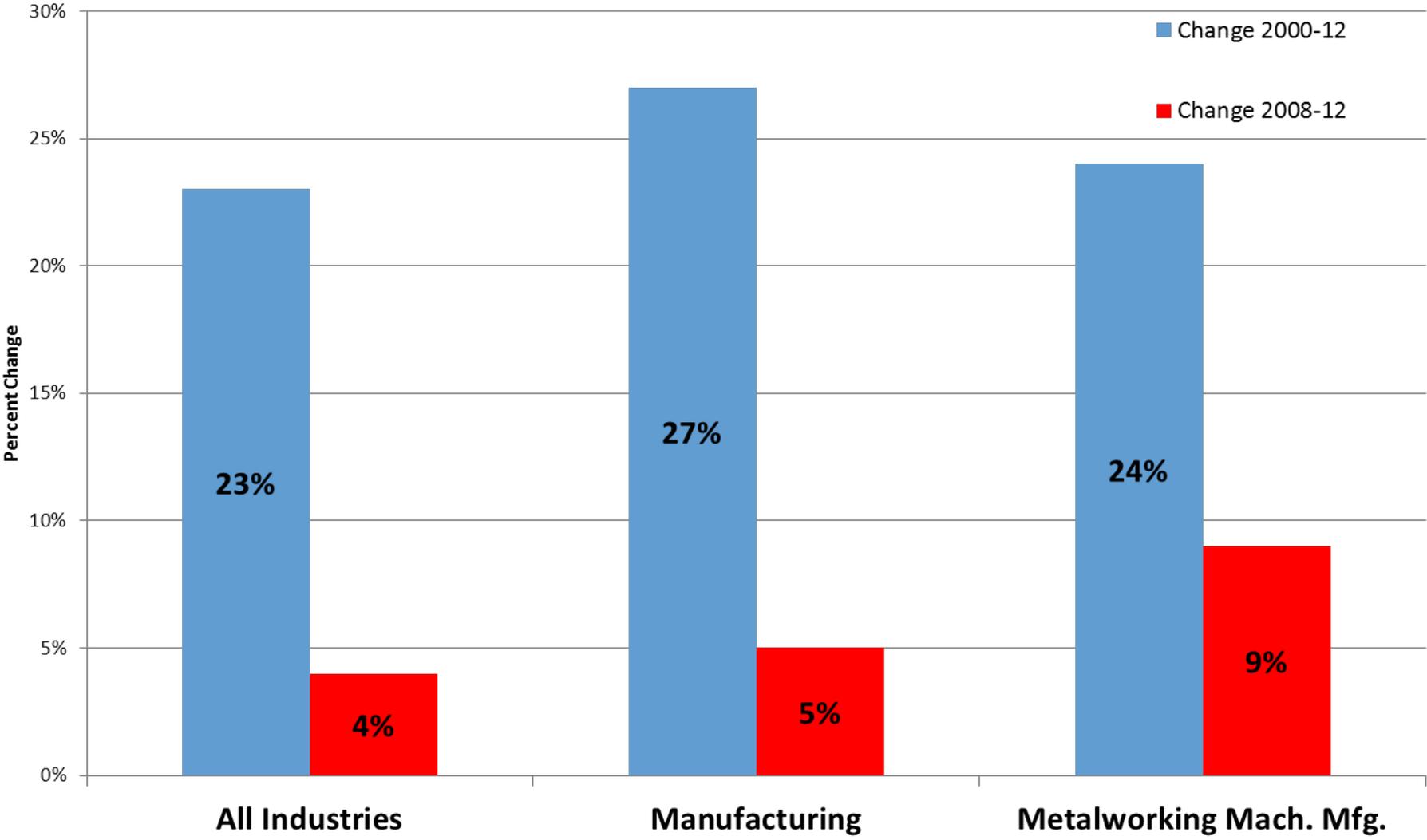
- **600,000 jobs unfilled** due to a lack of qualified applicants
- 74% of employers say the **skilled production shortages** had a significant negative impact on their ability to expand or improve productivity
- 42% of employers say **engineering staff shortages** had a significant negative impact on their ability to expand or improve productivity
- All others worker categories were under 25% - unskilled production, sales and marketing, scientists and design engineers, administration and customer service

Wage Change in Manufacturing Varies Relative to Average

U.S. Employment Cost Index - BLS



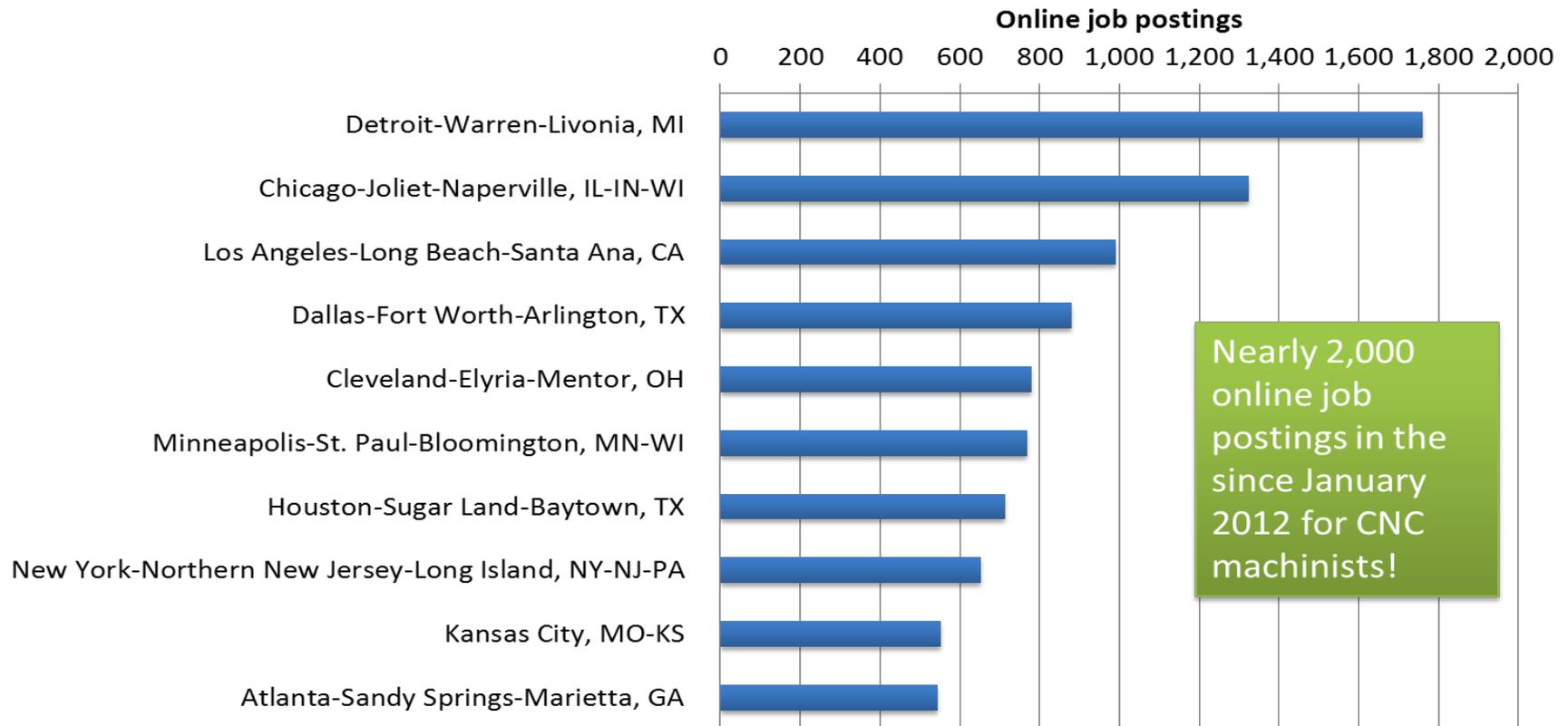
Manufacturing Wages Increase Above the Average In Michigan



Source: Quarterly Census of Employment and Wages, MI Bureau of Labor Market Information & Strategic Initiatives

Competition for Machinists Intense in Detroit

CNC machinists



Top 10 MSAs with CNC operator and programmer demand
January-September 2012 from Burning Glass Technologies.

Companies Hunting for Skilled Trades in Michigan



Job Postings Feb. 9 – May 9, 2012
Source: WIN & Burning Glass Technologies

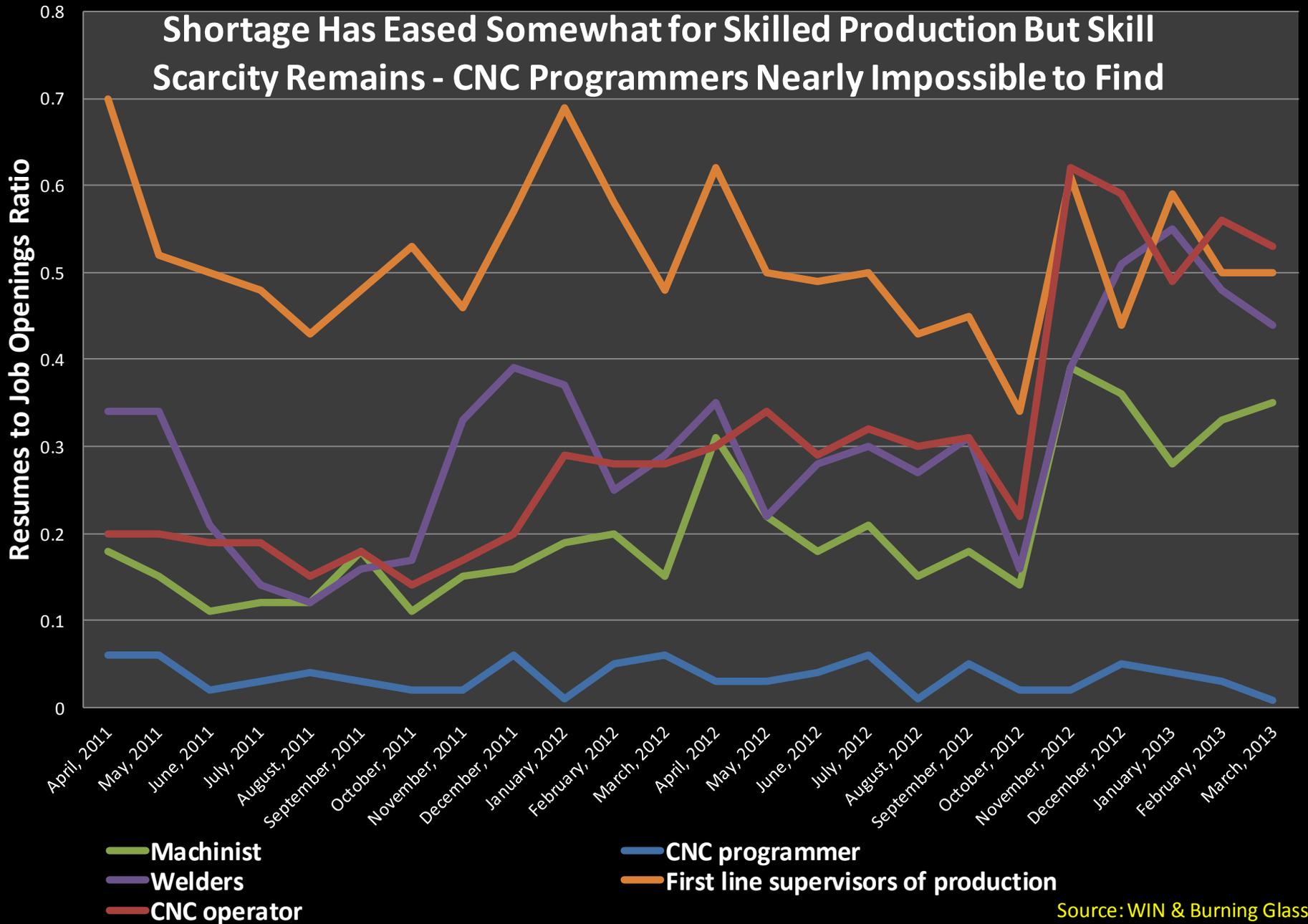
Thousands of Openings for Manufacturing-Related Engineers in Detroit and Michigan

Job Postings, October 2010 – September 2012, Source: CareerBuilder

State	Count
California	139,111
Texas	92,505
Michigan	76,355
Ohio	66,198
New York	51,005
Pennsylvania	50,809
Illinois	49,876
Massachusetts	39,428
Minnesota	38,037
Wisconsin	37,473

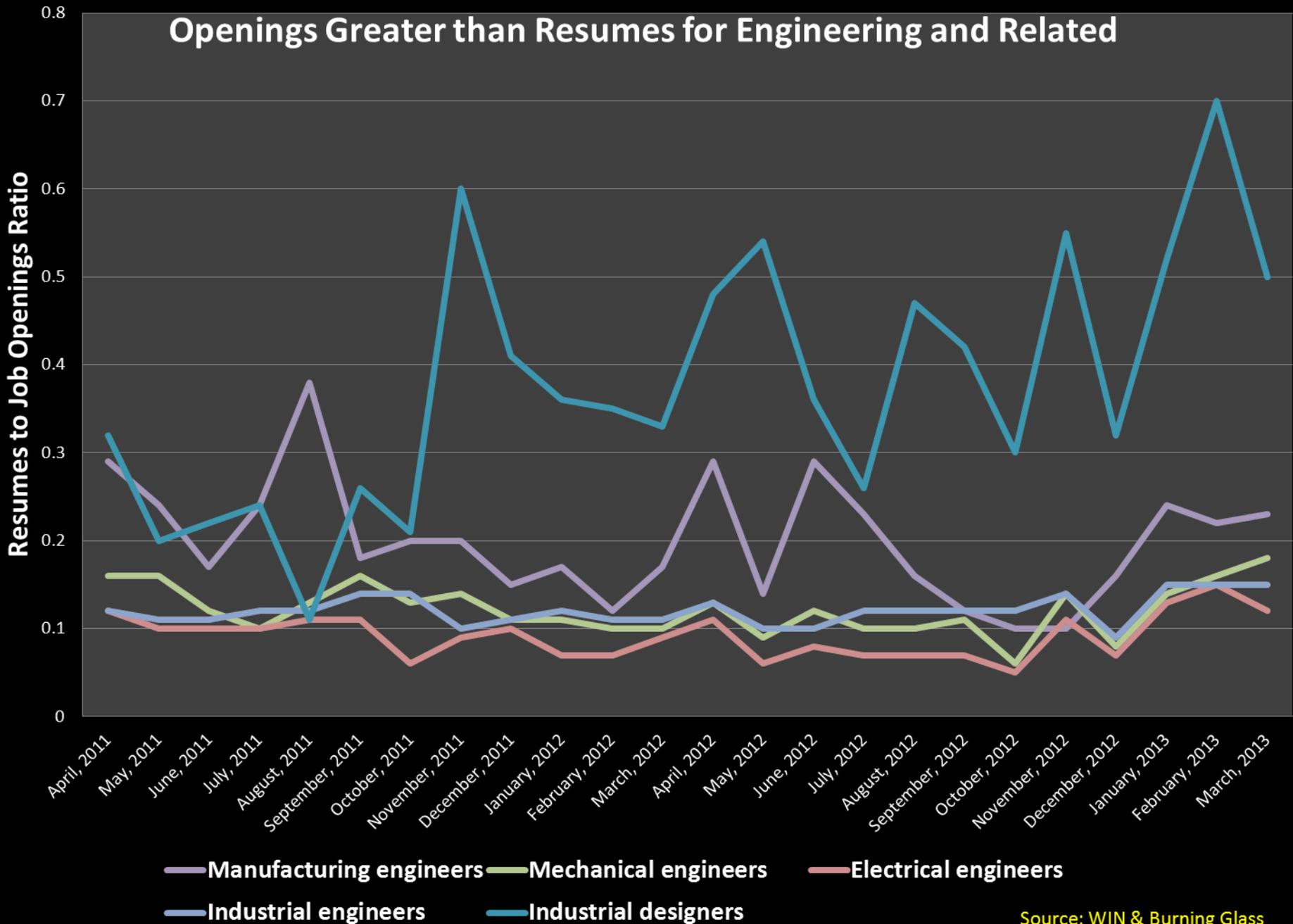
Metro Area (MSA)	Count
Houston, Texas Area	45,635
Greater Detroit Area	44,386
Greater Los Angeles Area	43,758
Greater New York City Area	35,483
Greater Chicago Area	33,971
Greater Boston Area	30,878
San Francisco Bay Area	24,482
San Jose, California Area	21,900
Washington D.C. Metro Area	20,440
Greater Minneapolis-St. Paul Area	20,180

Shortage Has Eased Somewhat for Skilled Production But Skill Scarcity Remains - CNC Programmers Nearly Impossible to Find



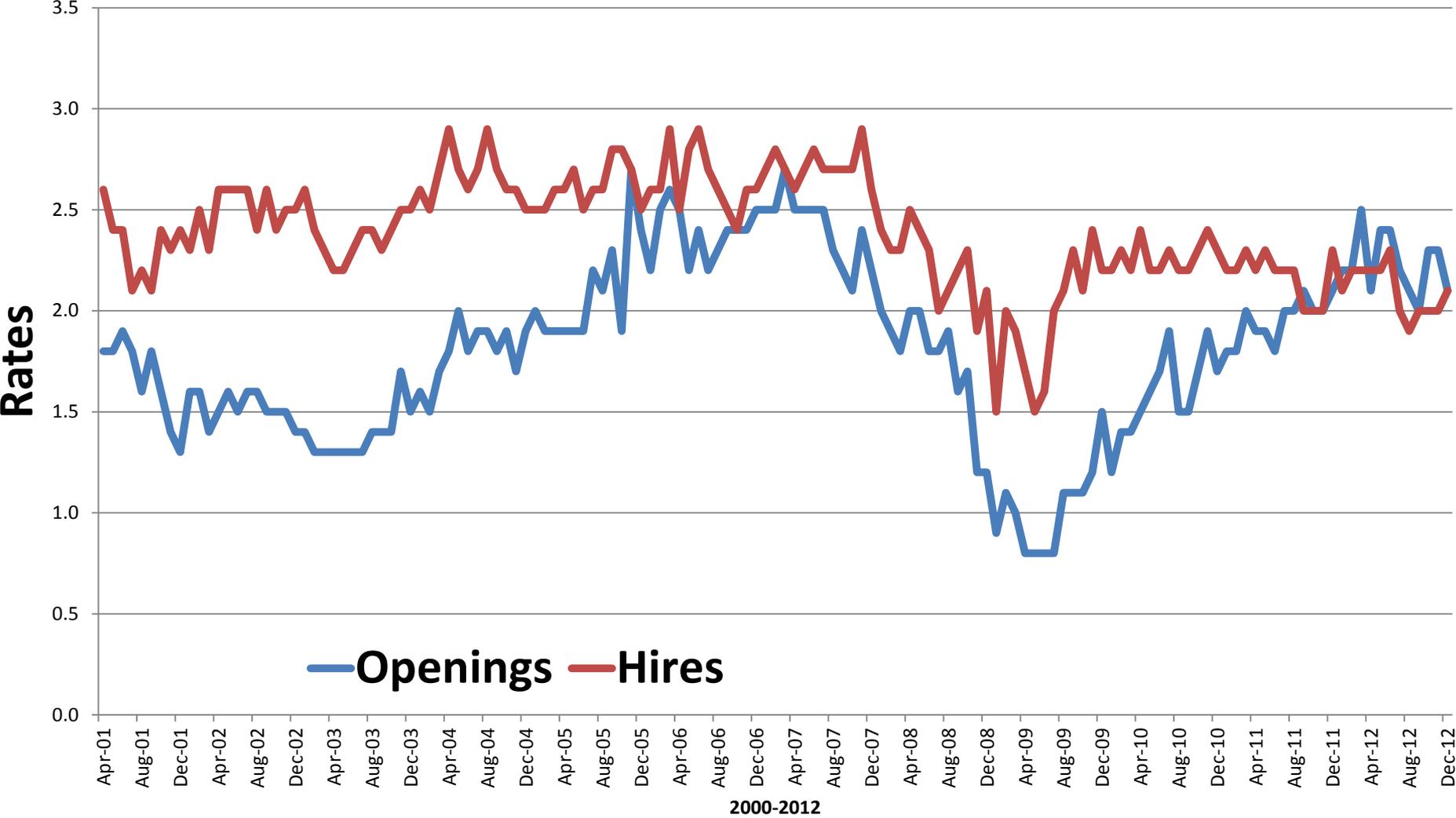
Source: WIN & Burning Glass

Openings Greater than Resumes for Engineering and Related



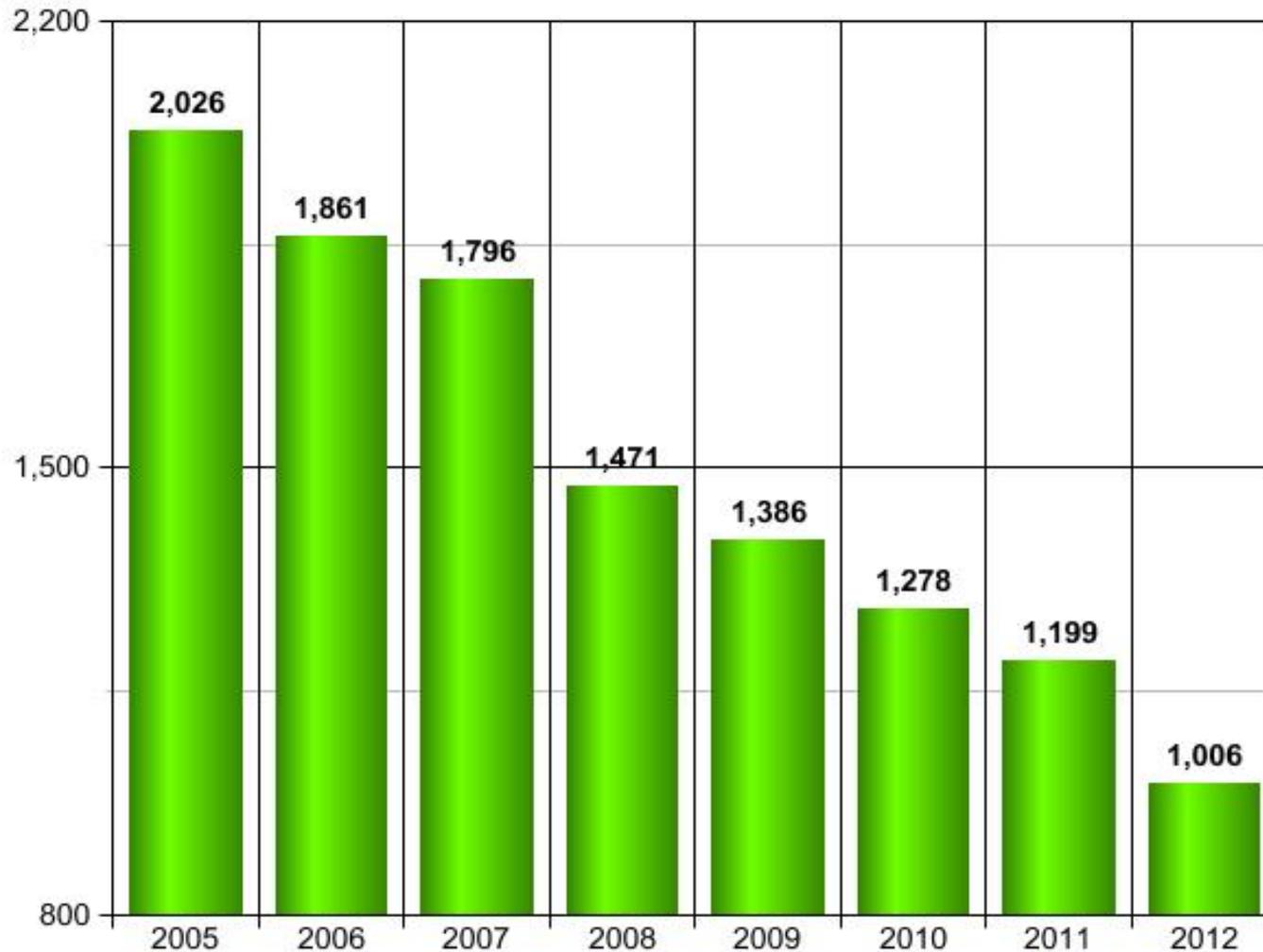
Manufacturing Job Openings Exceed Hires

United States



Training Trends Negative

Apprenticeship – Michigan Active Programs

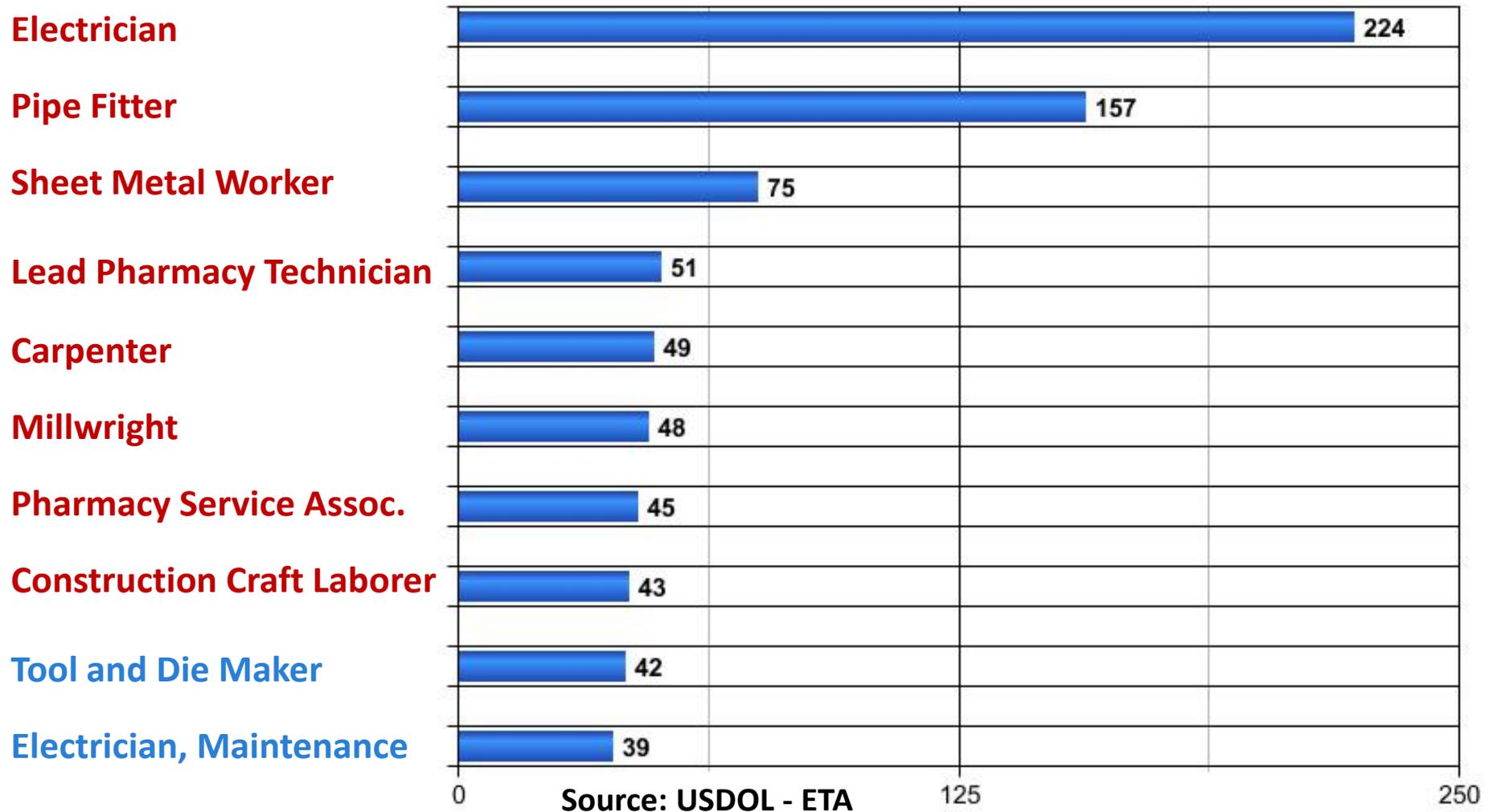


Source: USDOL - ETA

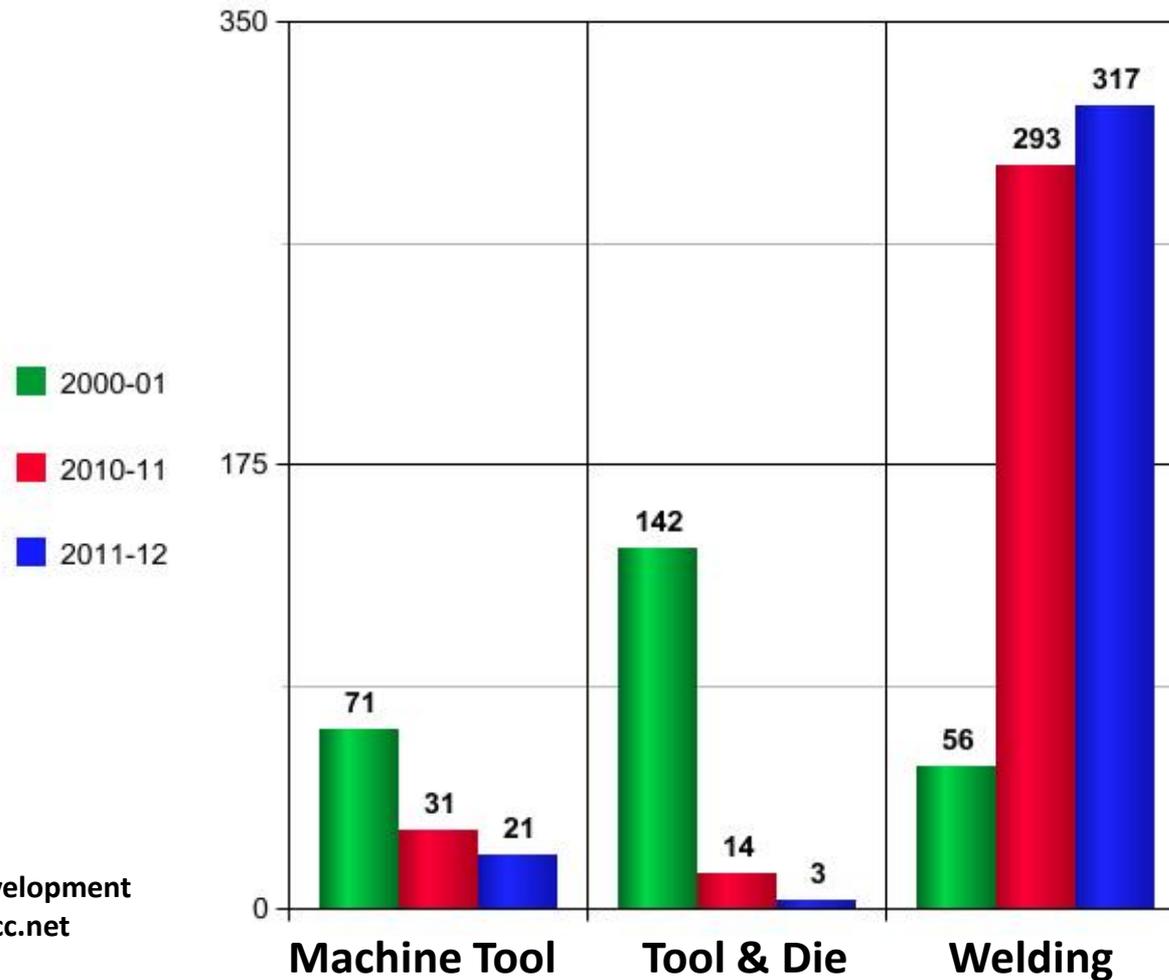
Apprenticeship Dominated by Construction

Where is Manufacturing?

Top Ten Occupations FY 2012

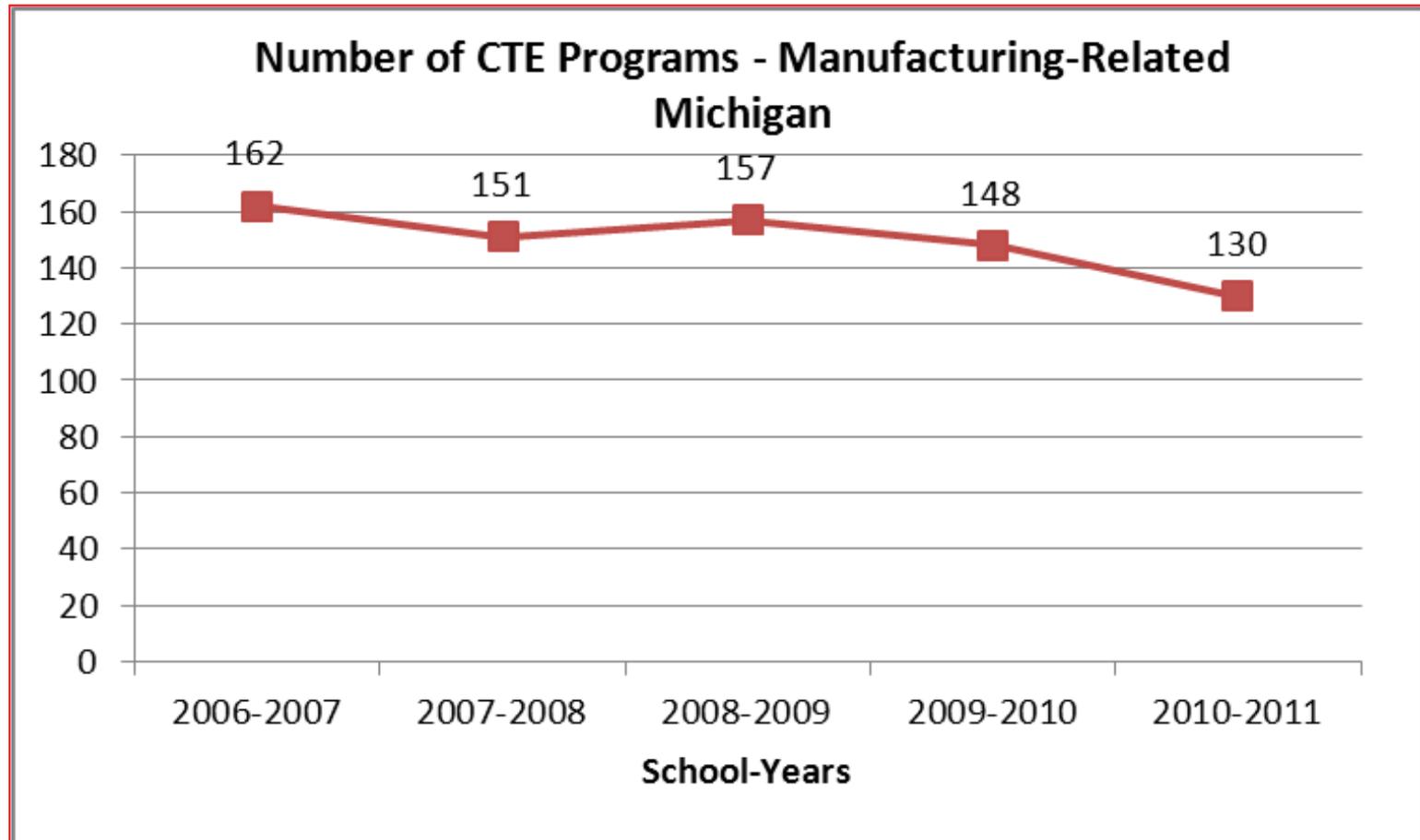


Community College Awards in Key Manufacturing Programs



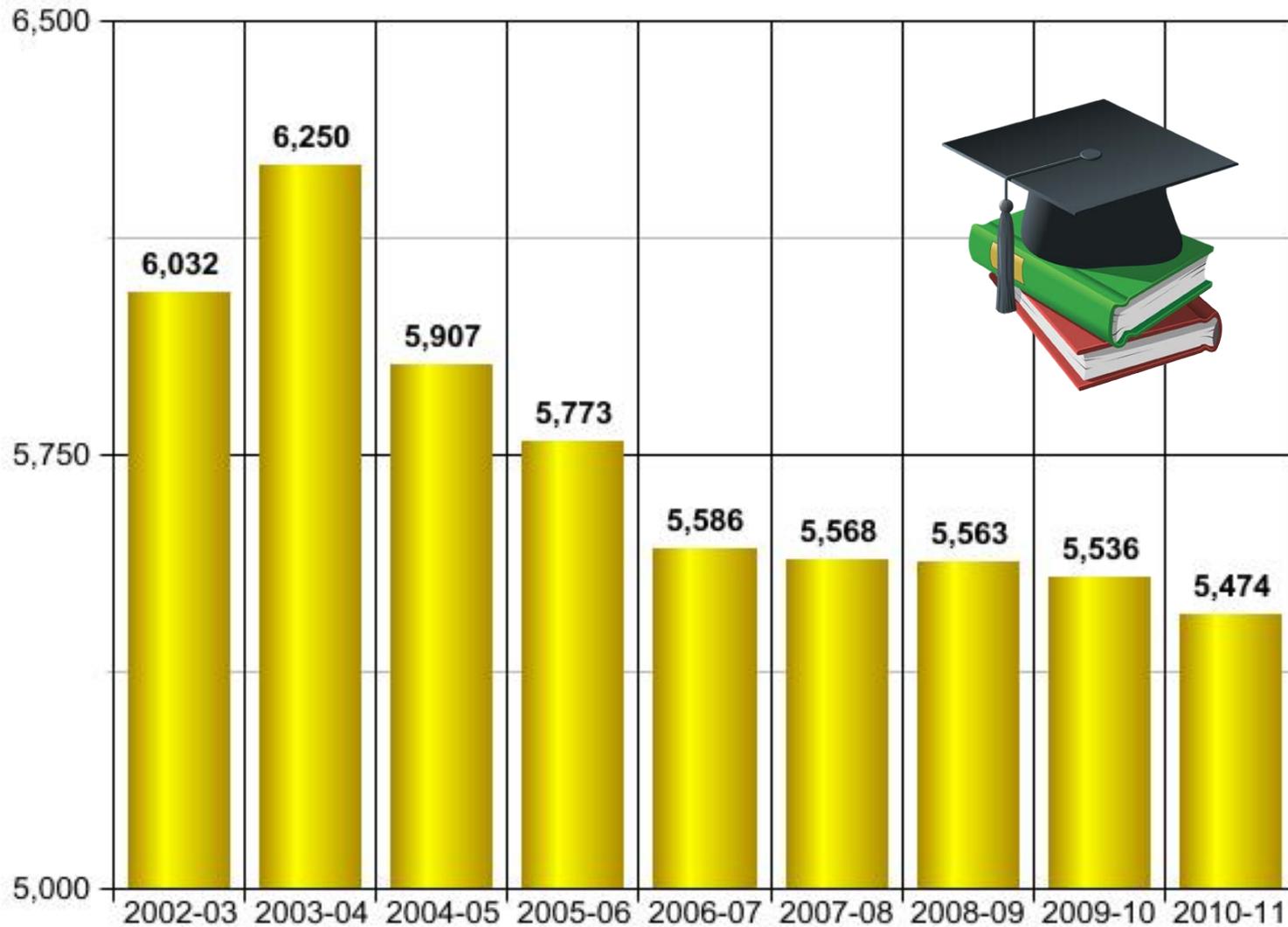
Source: Workforce Development Agency, michigancc.net

Manufacturing-Related CTE Programs Trending Downward



Source – Michigan Department of Education

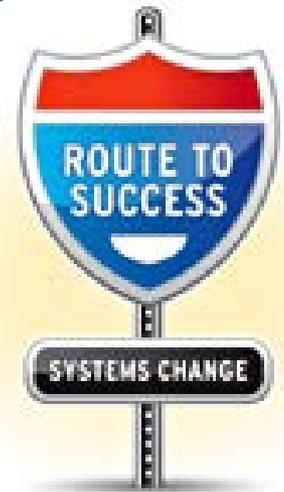
Michigan Engineering Graduates Declining



Institute of Education Sciences: IPEDS

Conclusion

- Michigan labor market dramatically different
- Widespread skill or training mismatches
- We need **systems change**
 - ✓ *Need a “demand-driven” system*
 - ✓ *More comprehensive industry involvement and leadership*
 - ✓ *Form or join manufacturing communities (Clusters)*



Workforce Development Agency



Implementing **demand-driven** model locally for a more targeted, rapid response to company worker needs

Agency assigned staff in **five talent-short industry sectors** to boost training and recruitment

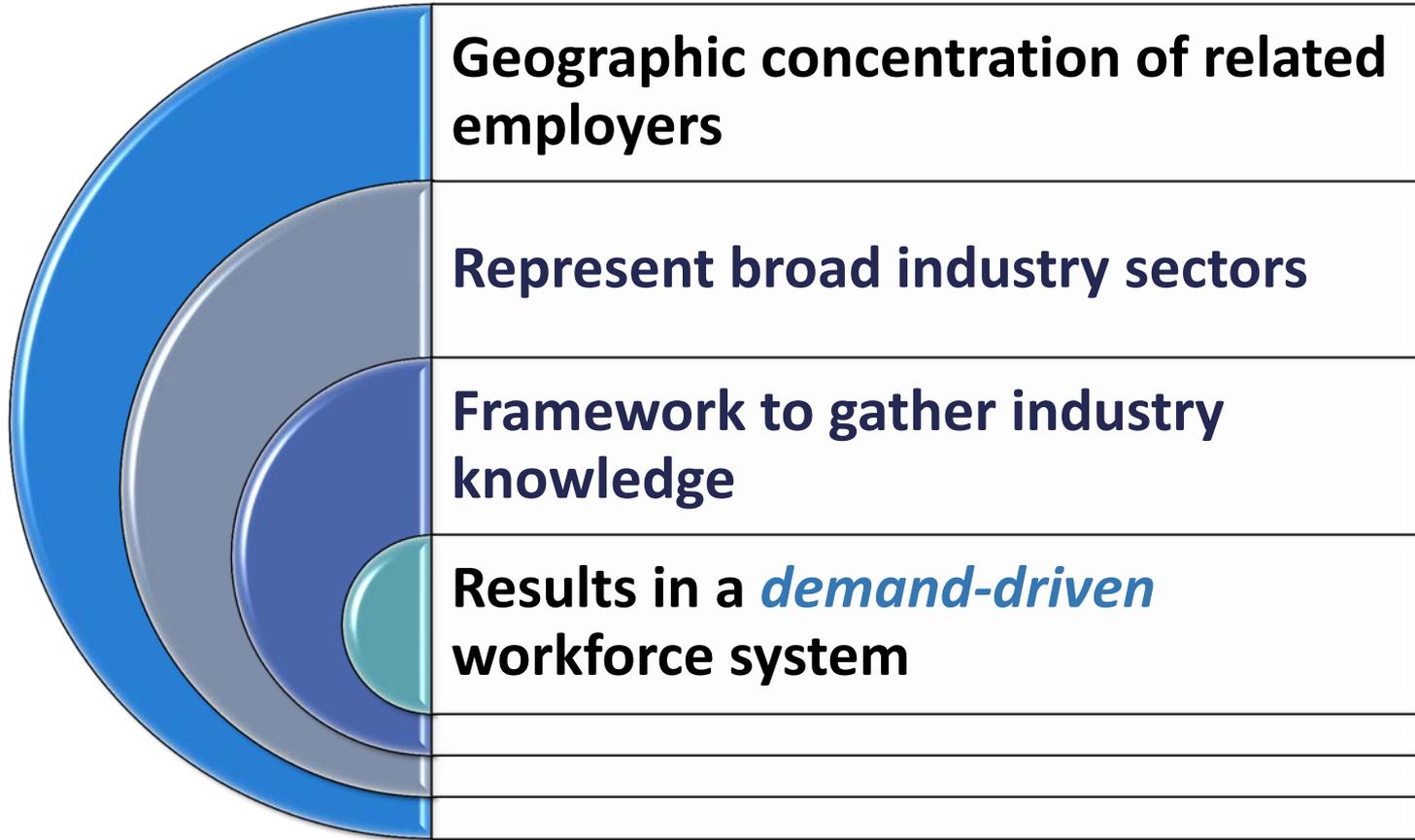
Working with local partners and state associations kicked off the Michigan Industry Cluster Approach (MICA)

What is Demand-Driven?

- **Opposite of supply-driven**
- **Establishes employers as primary customers of workforce system**
- **Employers directly provide labor market information to service providers**



What is a Cluster?



WDA Clusters

Manufacturing



Information Technology



Health Care



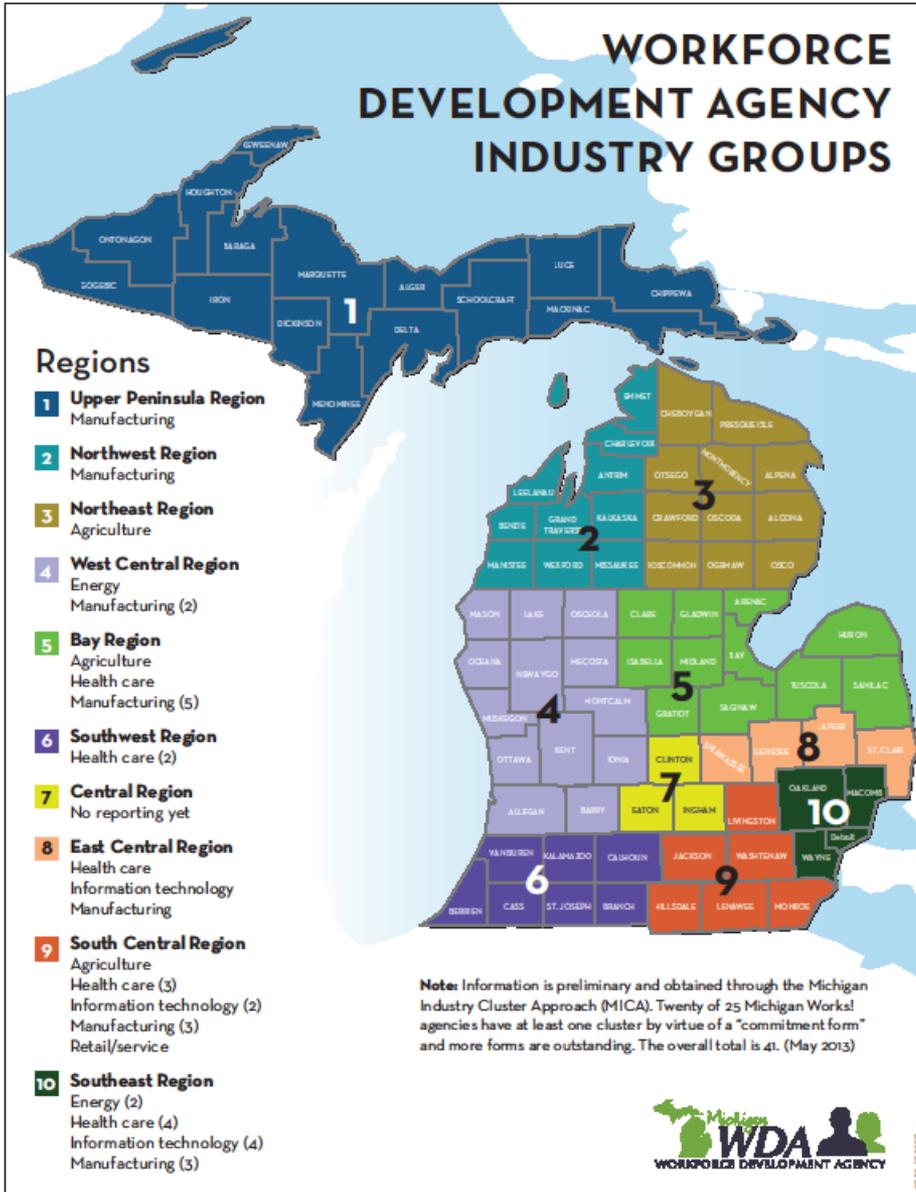
Energy



Agriculture



WORKFORCE DEVELOPMENT AGENCY INDUSTRY GROUPS



20 of 25 MWAs
have clusters

41 clusters in MWA
network

Manufacturing	16	Energy	3
Health Care	11	Agriculture	3
IT	7	Other	1

Manufacturing is Back!

Talent Challenges Emerge

- **Added thousands of jobs** statewide in recent months and more to come
- **Talent shortage** now and for foreseeable future
 - Training mismatch
 - Insufficient pipeline of young workers
 - Aging workforce
 - Too little training for occupations in demand



Local Industry Action Plans

Teamwork

Recruitment

**Talent
Issues**

Training

Pipeline

WDA Key Strategies



- Form **local clusters**
- Direct resources to **industry-based efforts**
- Link industry to **returning veterans**
- Seek **strategic training funds**
- Encourage **youth and adult apprenticeship**

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