2023 Benchmarking Indiana's Advanced Manufacturing and Logistics Industries Report:

Identifying Opportunities for Workforce Development and Transformation

August 2023

Lightcast

CONEXUS INDIANA

Contents

Introduction

Advanced Manufacturing & Logistics: A Driving Force for Indiana's Economic Prosperity

Indiana is at an inflection point — the state is already a national advanced manufacturing and logistics (AML) leader, but to maintain its leadership position and reach global prominence Indiana must build the workforce of the future and enable Industry 4.0 occupations to increase productivity and competitiveness.

Manufacturing alone employs roughly 534,000 Hoosiers and contributed a Gross Regional Product (GRP) of approximately $104 billion in 2022 **(Figure 1)**. This industry dominance makes Indiana the most manufacturing intensive state when measured by both percent of GRP and number of jobs per capita in the nation. Logistics, another crucial industry for Indiana, employs roughly 168,000 Hoosiers, adding another $16 billion in GRP, making it Indiana's 8th largest industry sector by employment and 9th largest by GRP. Together, these industries make and move the things that are essential to the lives and livelihoods of Hoosiers and people around the globe. Advancing AML, especially when it comes to creating more high-tech, high-wage jobs, benefits every Hoosier and helps make Indiana a great place in which to live, work, and invest.

Figure 1: Indiana's AML Jobs, Average Compensation and GRP (2022)

Manufacturing	Logistics
Total Jobs: 533,877	Total Jobs: 167,633
Average Total Compensation: $89,555	Average Total Compensation: $67,988
GRP: $104 billion	GRP: $16 billion

As Indiana's AML companies steadily adopt digital technologies, such as cobots, big data and analytics, IIoT, machine learning, and 3D printing, the State of Indiana is doubling down on its strategy to lead the nation in the Economy of the Future. Anchored by microelectronics, the life sciences, advanced mobility, clean energy, and the future of food and animal health, the Economy of the Future is already well underway in Indiana with more than $22 billion invested in 2022 alone.

But continued growth in these future-focused industries is no guarantee. One major challenge is the talent gap in advanced manufacturing and logistics jobs, especially jobs that remain unfilled each year. This challenge is not unique to Indiana, but rather a national phenomenon that continues to linger. Conexus Indiana tackled this issue head on in 2022 with its "Leakproof: Strengthening Indiana's Advanced Manufacturing and Logistics Workforce Pipeline" white paper, which identified strategies to increase workforce participation and the availability of skilled talent for AML, including a commitment to growing the labor force participation rate from 62% to 65%. Now Conexus Indiana is taking this work a step further with an interactive Industry Insights Dashboard that equips Conexus, the State of Indiana, industry as well as our regional economic development and education partners with the latest data-driven insights on Indiana's AML industries. The dashboard includes data on wages, skills, educational attainment, 5-year industry and occupation growth rates, turnover and retirement rates, and more. Not only does the dashboard provide current, forward-looking, and

customizable data on workforce trends, but it benchmarks many of these elements against Indiana's neighboring states. By illuminating industry subsector and occupation growth through Q4, 2026, Conexus Indiana can develop talent programs in partnership with its statewide network to target key subsectors and augment investments made by the State.

The "2023 Benchmarking Indiana's Advanced Manufacturing and Logistics Industries Report: Identifying Opportunities for Workforce Development and Transformation" takes key learnings from the Industry Insights Dashboard and provides an outline of opportunities for Indiana to excel in the Economy of the Future. Specifically, this report shows:

1. Strategic initiatives underway by Indiana organizations, such as the Indiana Economic Development Corporation and the Applied Research Institute, to "enable growth and innovation in future-looking industries like semiconductor fabrication and design, electric vehicles and batteries, life sciences, agbiosciences and Industry 4.0" align with Lightcast's 5-year industry growth model.[1]
    - The Computer and Electronic Product Manufacturing subsector is expected to grow by 5% with Semiconductor Processing Technician occupations growing by 32%.
    - The Chemical Manufacturing subsector is expected to grow by 10% with Biochemists and Biophysicists occupations growing by 22% and Biological Technicians occupations growing by 19%.
    - The Transportation Equipment Manufacturing (predominately automotive, aerospace, and adjacent suppliers) subsector is expected to grow by 7% with Welders, Cutters, Solderers, and Brazers occupations growing by 15%.
2. Indiana is competitive with and, in many instances, outperforms its neighboring states in terms of average wages, employment concentration, and advertised benefits in AML job postings.
    - Advertised average wages for Indiana's manufacturing industry are $54,331 and average total compensation is $89,555.
    - Almost every Indiana county is above the U.S. average for employment concentration in manufacturing. The northern and southern regions of the state are the most intensive, notably around Elkhart County in the northeast and Gibson County in the south.
    - Advertised average wages for Indiana's logistics industry are $58,332 and average total compensation is $67,988.
    - For the logistics sector, elevated employment concentrations are found in the central region of the state, such as Boone, Hendricks, and Johnson counties. This cluster supports Indiana's major freight traffic corridors, including the I-80/I-90 route toward Chicago, the I-70 route connecting Indianapolis to Columbus, Ohio, and St. Louis, the I-69 route toward Detroit, and the I-65 route connecting Indianapolis to Louisville.
    - Both advanced manufacturing and logistics employers in Indiana are more likely to advertise retirement and saving benefits than neighboring states. Logistics employers advertise these benefits in nearly three-quarters of all job postings. However, this may be because employers are having difficulty finding candidates to fill these positions, indicating a tight labor market.

[1] For more info on Lightcast's projection methodology, see https://kb.lightcast.io/en/articles/6957562-industry-projections-methodology.

3. Indiana's job posting demand for Industry 4.0 skills, including robotics, data analytics, and 3D modeling, is roughly on par with its neighboring states. Skill demand can be a proxy indicator of technology adoption and continues to highlight the urgency for Indiana's AML companies to accelerate digital transformation.
    - Data analytics is mentioned in over 53,000 AML job postings while robotics is mentioned in 2,200 job postings by Indiana employers.
    - When skill demand is indexed against nationwide averages, robotics is requested by Indiana employers most intensely.
    - Digital skills and Industry 4.0-enabled occupations are often sought by Indiana's largest subsector employers, such as Transportation Equipment Manufacturing, Chemical Manufacturing, and Warehousing and Storage.

It will be crucial for industry, academia, and economic development groups to leverage tools, such as the Industry Insights Dashboard, to keep up with future talent needs and skill demand. New insights can be tapped to attract, train, upskill, and retain talent in Indiana to succeed in the Economy of the Future.

Dashboard Methodology

To prepare Indiana to succeed in AML's rapidly changing workforce landscape, Conexus Indiana (Conexus) engaged Lightcast to benchmark the current state of its AML workforce against bordering states (Illinois, Michigan, Ohio, and Kentucky). These four contiguous states have substantial advanced manufacturing and logistics industrial bases and often compete for a similar workforce pool. Adding growth projections through 2026 for Indiana's advanced manufacturing and logistics industry subsectors and occupations will help identify the skills and occupations needed to cultivate a tech-savvy workforce and accelerate innovation in AML for years to come.

The data in this report and the accompanying Industry Insights Dashboard were curated by Lightcast, the global leader in labor market analytics. Lightcast obtains its data from two main sources:

- **Government Data**: Data is curated from multiple sources such as the Bureau of Labor Statistics (BLS), U.S. Census Bureau, Bureau of Economic Analysis (BEA), Employment & Training Administration (ETA), and U.S. Department of Education. This gleans rich industry and occupation data on demographics, employment, wages, etc.
- **Real-time Data**: Granular data on skills, certifications, experience, and education attainment come from scraping the internet daily for job postings and online career profile information from over 50,000 sources. The data is from Lightcast's Q1, 2023, data run and consists of 2022 figures.

***Note**: All figures in this report use government data sources unless otherwise specified.*

Industry Insights Dashboard Access

The dashboard can be accessed via the Conexus Indiana website and is available for use by the general public at www.conexusindiana.com/workforce-dashboard or by scanning this QR code.

Preparing Indiana's AML Workforce for the Economy of the Future: 5-Year Overview

Growth Areas in the Manufacturing Sector

The Economy of the Future is defined by the onset of electrification and clean energy technologies, Industry 4.0, and other emerging markets, as well as an accompanying workforce that is prepared to embrace new skills and job functions. Nearly all Indiana manufacturing subsectors are forecasted to grow by 2026, highlighting the need for continued workforce transformation and skills alignment.

In particular, the Transportation Equipment Manufacturing, Computer and Electronic Product Manufacturing, and Chemical Manufacturing subsectors present strategic investment opportunities for Indiana and are expected to see significant employment growth in the next few years (>5%, **Figure 3**). Furthermore, the Chemical Manufacturing and Computer and Electronic Product Manufacturing subsectors offer high wages/compensation to their STEM-intensive workforces.

Transportation Equipment Manufacturing is Indiana's largest manufacturing subsector when measured by employment (**Figure 2**) and is expected to see 7% growth in employment by 2026 (**Figure 3**). Indiana has a long history of leadership in the automotive subsector and is home to 5 OEM automobile assembly plants, positioning Indiana to capitalize on recent battery manufacturing and electric vehicle (EV) assembly investments. The EV and internal combustion engine (ICE) supplier base, which includes companies in both Transportation Equipment Manufacturing and Fabricated Metal Product Manufacturing, will also likely see employment growth in the next few years. (**Figure 2**).

Figure 2: Top 15 Manufacturing Subsectors by Employment, 2022-2026

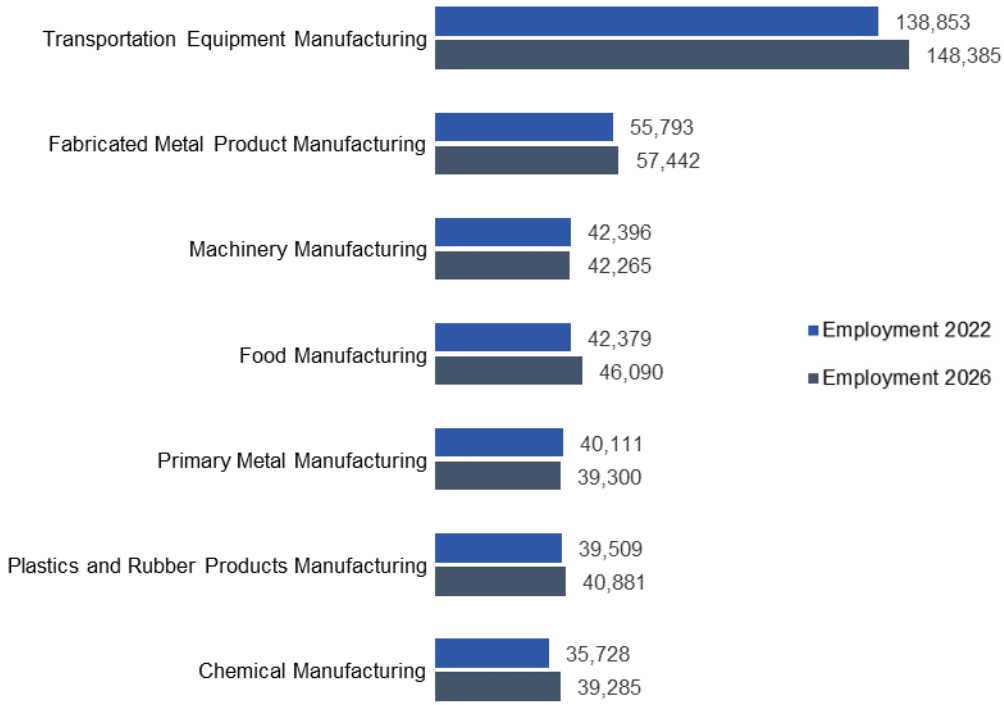
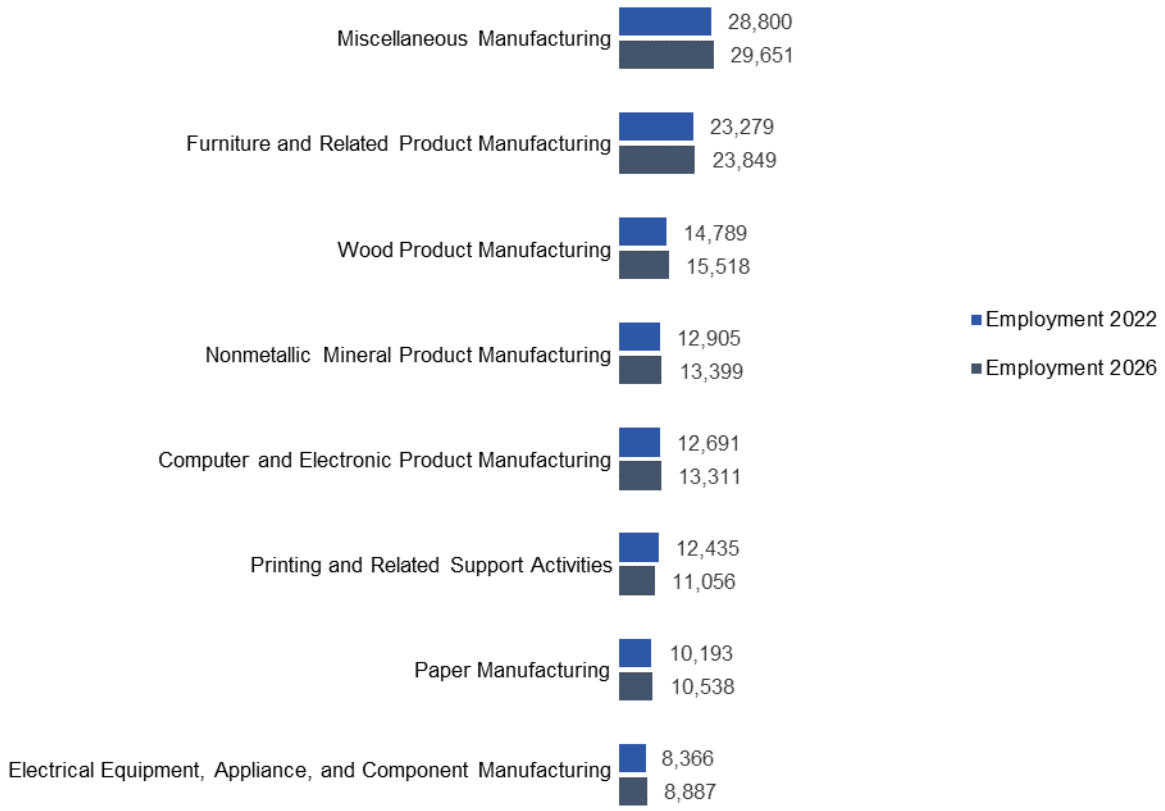
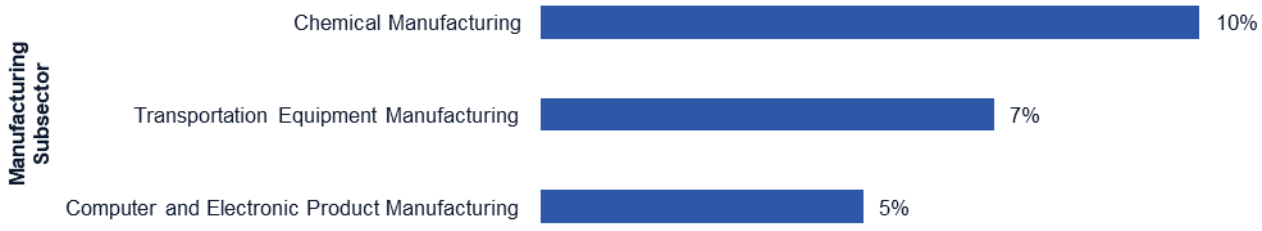


Figure 2: Top 15 Manufacturing Subsectors by Employment, 2022-2026 (*Continued*)



Semiconductor manufacturing growth (within Computer and Electronic Product Manufacturing) is likely to achieve at least 5% growth by 2026 (**Figure 3**), which will be further bolstered by continued investments made by the State of Indiana, including the Accelerating Microelectronics Production & Development (AMPD) task force, and new incentives to attract semiconductor companies. The biopharmaceutical manufacturing subsector (within Chemical Manufacturing) is expected to see 10% growth (**Figure 3**) and will be accompanied by investments such as Eli Lilly and Company's $3.7 billion facility expansion in the LEAP-Lebanon Innovation District. The district boasts more than 50 leading biotech, pharmaceutical, and life sciences companies within 30 miles, including the Purdue Research Park.

Figure 3: Projected Employment Growth for Select Manufacturing Subsectors, 2022-2026



The projected growth of these major manufacturing subsectors, including semiconductor and biopharmaceutical manufacturing, also contains corresponding increases in the enabling job occupations. For example, within Computer and Electronic Product Manufacturing, Semiconductor Processing Technicians are forecasted to grow by 32% by 2026 (**Figure 4**). The same is true for specific occupations within Chemical

Manufacturing. Biochemists/Biophysicists (22%), Biological Technicians (19%), and Chemical Engineers (19%) are forecasted to grow by double-digits (**Figure 4**). With the Indiana Economic Development Corporation's continued investments and company attraction efforts, these subsectors are likely to see even more of an uptick in occupation growth in the coming years.

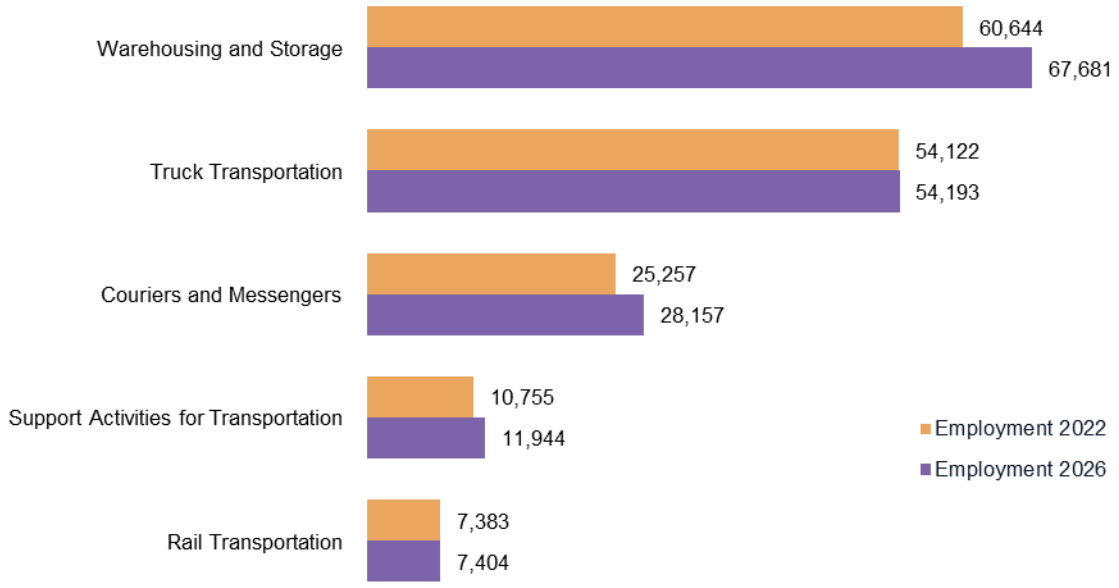
Figure 4: Projected Occupation Growth within Select Manufacturing Subsectors, 2022-2026

Occupation	Manufacturing Subsector	Projected Growth, 2022-2026	Employment 2022	Projected Employment 2026	Estimated Employment Change
Semiconductor Processing Technicians	Computer and Electronic Product Manufacturing	32%	535	706	171
Biochemists and Biophysicists	Chemical Manufacturing	22%	119	145	26
Biological Technicians	Chemical Manufacturing	19%	194	230	37
Chemical Engineers	Chemical Manufacturing	19%	216	256	40
Welders, Cutters, Solderers, and Brazers	Transportation Equipment Manufacturing	15%	7,423	8,550	1,127

Growth Areas in the Logistics Sector

Warehousing and Storage is the largest logistics subsector in Indiana, providing critical support infrastructure to the manufacturing economy and employing over 60,000 Hoosiers (**Figure 5**). These firms move products, store raw materials, and provide 3rd party logistics solutions to enable efficient supply chains for a diverse set of industries. E-commerce has forced a sizable increase in the volume of goods being bought and sold online and coincides with increased innovation in warehousing and storage facilities to streamline fulfillment. Indiana companies are adopting an array of smart solutions, including autonomous mobile robots, vision-guided vehicles, and warehouse management systems with advanced analytics, to augment the labor force and meet customer demand.

Figure 5: Top 5 Logistics Subsectors by Employment, 2022-2026



Manufacturing companies have also undertaken supply chain optimization initiatives to enhance operational efficiency and reduce lead times. Many firms are storing additional raw materials onsite or nearby, particularly as just-in-time manufacturing processes recover from COVID-19 pandemic disruptions. Employment in the Warehousing and Storage subsector will grow by 12% by 2026 (**Figure 5**) and ensure there is enough Indiana-based capacity to meet market demand.

Figure 6: Projected Employment Growth for Select Logistics Subsectors, 2022-2026

Some of the Warehousing and Storage employment growth is due to companies, such as FedEx, Amazon, and Walmart, continuing to expand their operations in the state. The Logistics 4.0 Innovation Hub in the MADE @ Plainfield facility, a partnership between GEODIS and Indiana State University, has also recently been launched to support logistics companies with technology adoption, workforce training, and research. Delivery services (Couriers and Messengers) are also driving significant economic growth nationally and Indiana is especially poised to benefit in the next few years with projected employment growth of more than 11% (**Figure 6**).

Benchmarking Indiana's AML Workforce Against Bordering States: Industry Intensity & Advertised Wages

Manufacturing Snapshot

Indiana either competes with or outperforms its bordering states in many of its manufacturing subsectors in terms of employment concentration (**Figure 7**). This metric quantifies how intense a particular group or industry subsector is within a geographic region compared to the national average. Indiana's manufacturing intensity compared to the U.S. average is higher by a factor of two. And its largest subsector, Transportation Equipment Manufacturing (i.e., automotive, aerospace, and adjacent suppliers), has an employment concentration of 4.1. Indiana's advertised manufacturing wages are also competitive against its peers for attracting and retaining talent in the region ($54,331) (**Figure 8**).

Figure 7: Manufacturing Employment Concentration – Indiana vs. Bordering States

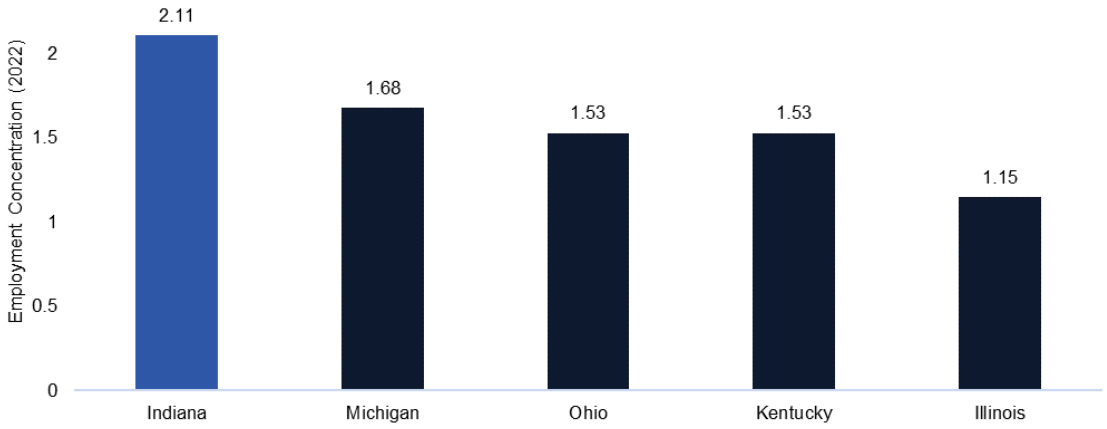
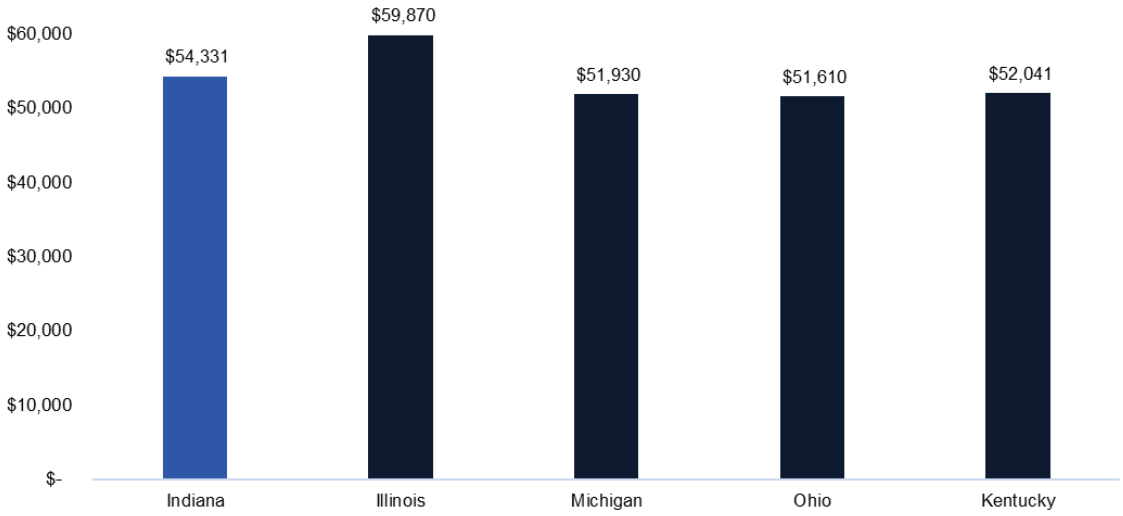


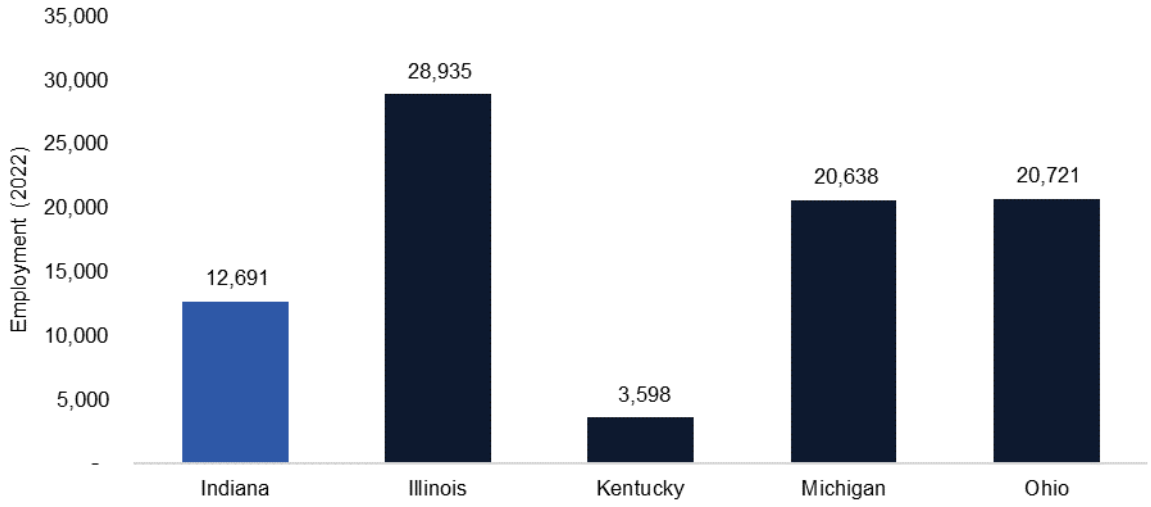
Figure 8: Manufacturing Sector Average Advertised Wages – Indiana vs. Bordering States



Source: Advertised wages from real-time job postings data

However, while Indiana leads in several manufacturing subsectors, there is an opportunity to grow employment concentration in semiconductors/microelectronics vs. bordering states. The Computer and Electronic Product Manufacturing subsector includes circuit boards, chips, and industrial electronics, which are crucial for the production and enhancement of any tech-enabled product. These markets are rapidly growing worldwide and could enable Indiana to be more competitive globally. Federal grants and incentives present an ideal opening and are afforded by the recently passed CHIPS Act (**Figure 9**). Indiana economic development stakeholders have already identified semiconductors and chips as a future growth sector and have launched new initiatives to seize the potential. These include the IEDC Closing Fund (incentives), the Applied Research Institute (ARI, formerly known as IN3), LEAP Lebanon Innovation District (shovel-ready infrastructure), Purdue University HardTech Corridor (research, infrastructure, and talent development) and the 16 Tech Innovation District (innovation, entrepreneurship, and placemaking in downtown Indianapolis).

Figure 9: Computer and Electronic Product Manufacturing Employment – Indiana vs. Bordering States



Logistics Snapshot

Indiana's logistics industry exceeds the U.S. average and competes with its peers in employment concentration due to its Midwest location – 80% of the contiguous United States can be reached within a 24-hour drive – providing vast access across all modes of transportation (**Figure 10**). The state's robust highway networks, airports, rail lines, and waterways enable efficient distribution and supply chains for Indiana's makers and producers. With the second largest FedEx hub in the world, Indiana is globally connected, and businesses have access to fast and reliable shipping services.

There are numerous opportunities for Hoosier upward mobility within this industry, and average advertised wages ($58,332) and average total compensation ($67,988) are representative of the opportunity. However, Indiana slightly lags Illinois and Ohio in advertised wages and also lags in cost-of-living adjusted wages overall (**Figure 11**).

Figure 10: Logistics Employment Concentration – Indiana vs. Bordering States

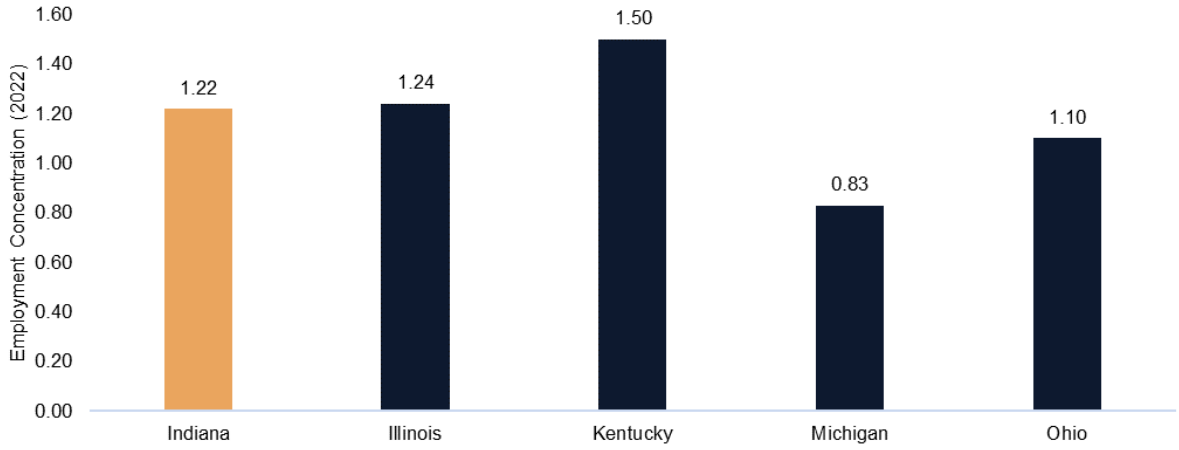
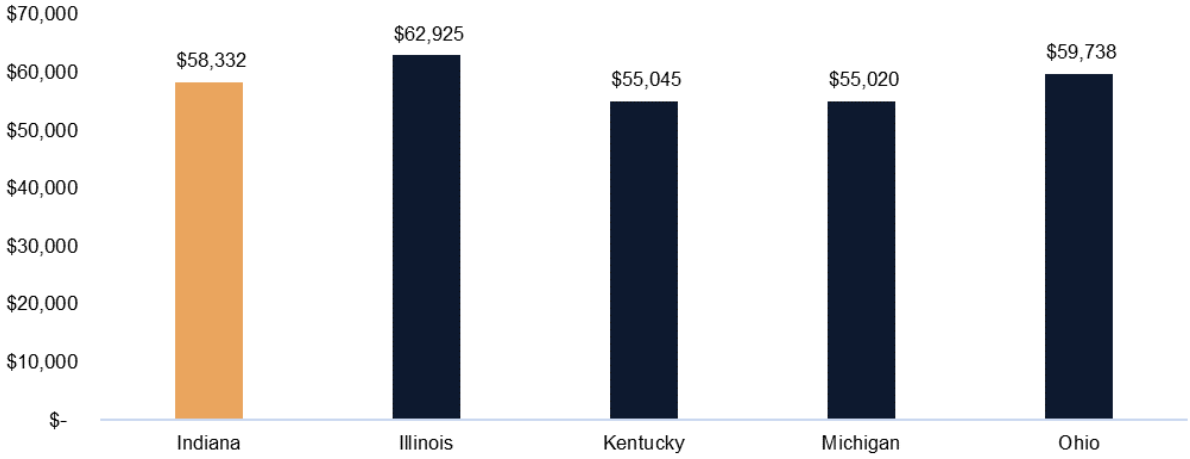


Figure 11: Logistics Sector Average Advertised Wages – Indiana vs. Bordering States



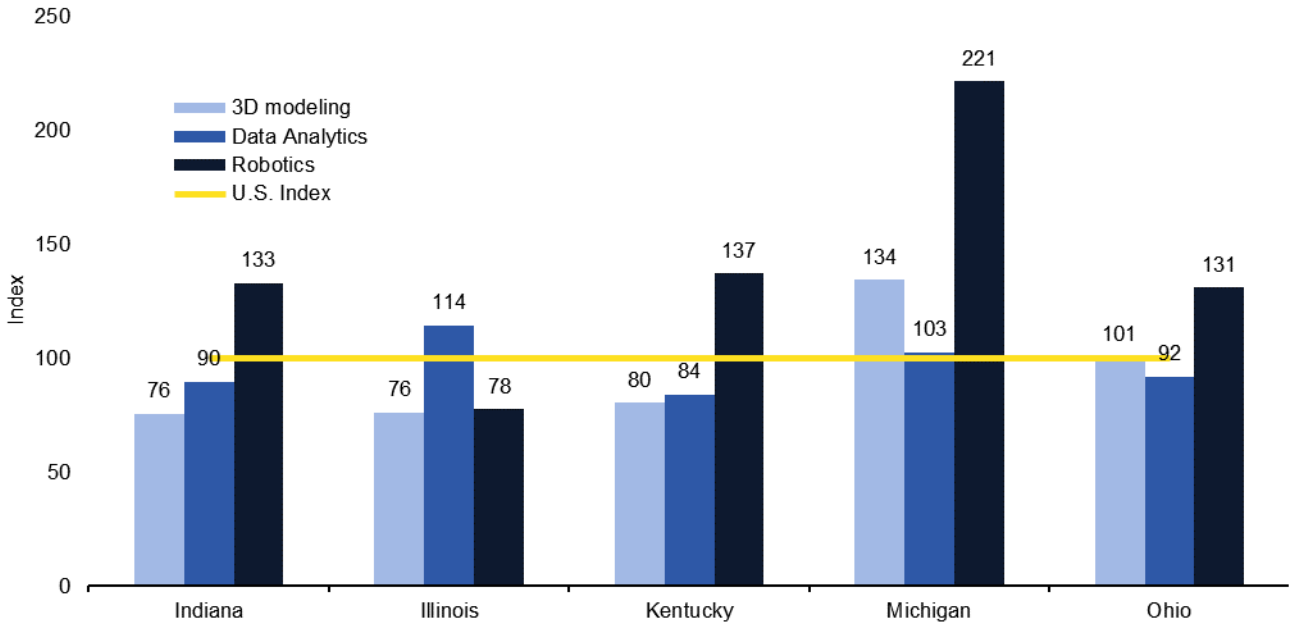
Source: Advertised wages from real-time job postings data

Benchmarking Indiana's Industry 4.0 Skill Demand

Growing Indiana's tech workforce is fundamental to maintaining a competitive edge in its manufacturing and logistics base, for example, within Indiana's largest subsectors like Transportation Equipment Manufacturing, Chemical Manufacturing, and Warehousing and Storage. According to TechPoint's recent report "Putting Tech to Work in Critical Industries: Indiana's Potential as a Global Leader for Technology Application and Adoption," the presence of Indiana's advanced industry clusters is generating a significant demand for core-tech and tech-reliant talent, including health and life sciences, agbiosciences, and advanced manufacturing.

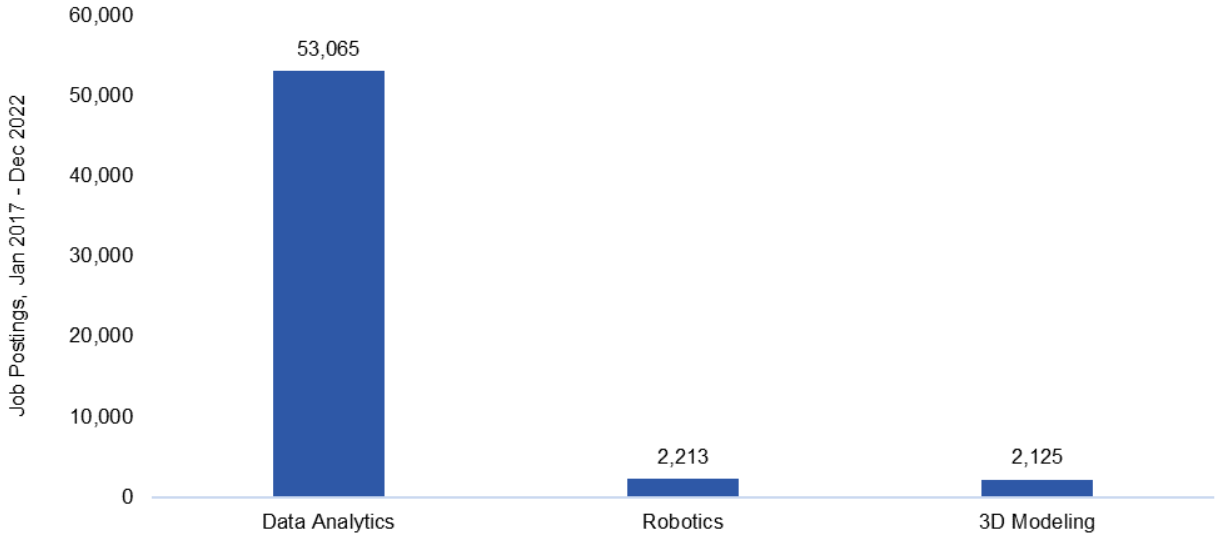
Currently, job posting skill demand in Indiana for data analytics, robotics, and 3D modeling is generally on par with regional peers, as seen in **Figure 12,** highlighting an opportunity for leadership in the coming years. The major outlier is Michigan, which more than doubles the U.S. average for robotics skill demand. In total, data analytics skills are posted more frequently than 3D modeling and robotics, but when indexed against nationwide averages, robotics is requested by Indiana employers most intensely. Data analytics is a broader skill category that cuts across different occupations, including finance, accounting, and information technology, whereas robotics and 3D modeling skills are more specialized to the manufacturing and logistics industries (**Figure 13**).

Figure 12: Industry 4.0 Skill Demand from January 2017 to December 2022, Indexed to U.S.



Source: Skill demand from real-time job postings data

Figure 13: Industry 4.0 Skill Demand in Indiana, January 2017 to December 2022



Source: Skill demand from real-time job postings data

To accelerate technology adoption within its manufacturing base, Conexus Indiana, in partnership with the Indiana Economic Development Corporation, administers the Manufacturing Readiness Grants program. Through April 2023, 425 Manufacturing Readiness Grants totaling $45 million have been awarded, supporting $628 million in technology-enabled capital investment among manufacturers. Furthermore, to align talent with Industry 4.0 tech adoption, Conexus Indiana and the Governor's Workforce Cabinet launched the Education Readiness Grants program to ensure more high school students have access to the cutting-edge advanced technologies being deployed by local manufacturers. In 2022 and 2023, the program awarded nearly $1 million to schools and school corporations across the state, supporting the purchase of equipment and the development of curricula.

Employer Benefits Analysis: Indiana Employers Favor Retirement and Savings Accounts for Talent Attraction

Employer Benefit Costs Analysis

When AML companies consider talent attraction and retention strategies, wages and salaries are almost always the focal point. But there are also non-wage benefits for employers to leverage in talent attraction and to compete regionally. These include paid leave, insurance with pay-based premiums, defined contribution plans, supplemental pay, and more. For manufacturing establishments in the Midwest, Management, Business, and Financial occupations see the highest total non-wage compensation ($17.90/hour worked), followed by Professional and Related occupations ($16.52/hour worked). Transportation and Material Moving occupations see the lowest total non-wage compensation costs ($8.48/hour worked) (**Figure 14**). While higher salaried occupations typically result in more benefits, employers should be intentional about the components offered to employees.

The distribution of total non-wage compensation costs also varies by benefit category. For example, paid leave, which is usually based on salary/hourly wages, accounts for the largest or second largest share of employer benefit costs. For Production, Transportation and Material Moving, and Installation, Maintenance and Repair occupations, paid leave accounts for about 23% to 25% of non-wage compensation per employee hour worked. Whereas Management, Business and Financial occupations see paid leave account for about 37% of non-wage compensation per employee hour worked (**Figure 14**). Insurance-related benefits costs are also a significant portion of non-wage compensation across all occupations and are often the largest employer cost.

Figure 14: Total Non-wage Compensation Cost Estimates – Manufacturing Establishments in the Midwest, March 2022

Occupations	Paid leave	Supplemental pay	Insurance	Retirement and savings		Total non-wage compensation
				Defined benefits	Defined contributions	
Production occupations	$2.29	$2.12	$4.63	$0.26	$0.77	$10.07
Professional & Related occupations	$5.50	$2.31	$5.38	$1.06	$2.27	$16.52
Transportation & Material Moving occupations	$2.01	$1.89	$3.56	$0.20	$0.82	$8.48
Installation, Maintenance & Repair occupations	$3.36	$2.68	$5.39	$0.62	$1.29	$13.34
Management, Business, & Financial occupations	$6.71	$3.02	$5.13	$0.84	$2.20	$17.90

Note: Unpublished Data, includes Indiana, Illinois, Michigan, Ohio, Wisconsin, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

Source: BLS National Compensation Survey

Advertised Benefits in Job Postings Analysis

Across the 5 states included in the analysis, the most advertised benefits category from 2018 to 2022 was 'Retirement and Savings' accounts. The share of job postings with 'Retirement and Savings' listed as a benefit ranged from 65% to 71% for the manufacturing sector and from 70% to 74% for the logistics sector (**Figures 15 and 16**). Compared to surrounding states, Indiana had the greatest share of job postings advertising 'Retirement and Savings' benefits but its manufacturers don't advertise 'Work-Life Balance' as frequently. This is certainly an opportunity for Indiana-based employers to be more intentional about the inclusion of all benefits package details as they look to attract talent (**Figure 15**). In particular, Millennials and Gen-Z talent highly value benefits like Health and Wellness and Work-life Balance, and are top considerations when they choose an employer, according to a recent Deloitte "2023 Gen Z and Millennial Survey Report."

Figure 15: Benefit Advertisement Rates by Benefit Category and State Between 2018-2022 (Manufacturing)

Benefit Category	Indiana	Illinois	Kentucky	Michigan	Ohio
Retirement and Savings	71%	65%	69%	66%	68%
Insurance	57%	49%	57%	58%	55%
Paid Leave	49%	45%	53%	50%	51%
Education & Career Development	28%	27%	27%	36%	28%
Work-Life Balance	20%	26%	24%	22%	22%
Supplemental Pay	15%	13%	15%	14%	16%
Health & Wellness Benefits	6%	5%	4%	5%	5%

Source: Advertised benefits from real-time job postings data

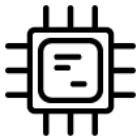
Figure 16: Benefit Advertisement Rates by Benefit Category and State Between 2018-2022 (Logistics)

Benefit Category	Indiana	Illinois	Kentucky	Michigan	Ohio
Retirement and Savings	74%	71%	73%	70%	74%
Insurance	56%	55%	58%	57%	55%
Paid Leave	39%	41%	42%	41%	39%
Education and Career Development	19%	19%	20%	19%	19%
Work-Life Balance	12%	15%	14%	17%	15%
Supplemental Pay	14%	14%	18%	14%	16%
Health and Wellness Benefits	4%	3%	6%	2%	3%

Source: Advertised benefits from real-time job postings data

However, when employers advertise benefits more frequently, it can signal problems in finding candidates to fill those open positions. While this may seem counterintuitive, jobs with higher average wages are automatically assumed to contain compelling non-wage benefits by potential candidates. An example of this case is Illinois. Employers in Illinois advertise benefits less frequently than their neighbors but offer higher wages on average (**Figures 8 and 11**).

Recommendations



Grow the semiconductor subsector and talent pipeline.

Tens of thousands of semiconductor engineers/technicians will be needed in the United States to meet the rapidly growing subsector in the next decade. The recently announced CHIPS Act will provide up to $52.7 billion in subsidies to expand domestic chip manufacturing, creating an abundance of opportunities for Indiana. If leveraged appropriately, subsectors that rely on electronic products and related components as inputs (i.e., industrial equipment, next-generation hardware, vehicles, and medical devices) will also benefit.

How We're Doing: In May 2022, Purdue University launched a comprehensive set of interdisciplinary degrees and credentials in semiconductors and microelectronics, which will aim to educate both graduate and undergraduate students and help create the next generation of skilled semiconductor workforce. Another example of recent success is SkyWater Technology's recent $1.8B semiconductor fabrication facility investment at Purdue University's Discovery Park District. The physical connection to the university provides companies access to Purdue faculty experts in the semiconductor field, its pipeline of graduates prepared to work in the industry, as well as Purdue research programs.

Cultivate Industry 4.0 and digital skills in Indiana's AML workforce.

When benchmarking skill demand for robotics, 3D modeling, and data analytics within job postings across 5 states, Indiana employers do not yet exceed any of their peers. As a proxy measure for Industry 4.0 technology adoption, these skills are crucial to maintaining a competitive edge in the advanced manufacturing and logistics industries.

How We're Doing: Programs like Indiana's Manufacturing Readiness Grants continue to accelerate technology adoption and facility modernization within its manufacturing base. Through May 2023, 425 grants totaling $45 million have been awarded, stimulating private-sector project investments of $628 million. State legislators have further allocated an additional $40 million in the next 2-year budget from July 2023 to June 2025 to future-proof Indiana's manufacturing sector. These funds will support cobots, Industrial Internet of Things, machine vision, robotics, and more on a 1:1 matching basis. Many employers have upskilled employees with digital skills, detailed among nearly 50 published case studies.

Maintain Indiana's competitive edge in the Transportation Equipment Manufacturing subsector.

Indiana's largest manufacturing subsector is projected to add over 9,500 jobs by 2026 (6.9% growth) and maintaining a robust talent pipeline is critical to see this growth come to fruition. With the onset of electrification, next-generation batteries, advanced mobility, and autonomous driving technologies, Indiana needs to be agile in adapting its workforce to

support these emerging markets. Workforce transformation can and will happen with intentional investments made by its 5 major OEMs and established ICE supplier base. With its robust automotive foundation, Indiana's economic development stakeholders must mobilize to take advantage of federal incentives (i.e., the Inflation Reduction Act) for the development of workforce training and upskilling programs.

How We're Doing: A battery belt in the Midwest is being created as nearby states offer incentives and local tax credits to spur investments. As of 2023, Indiana has secured $7.6 billion in commitments from major OEMs, which is projected to bring 5,800 new jobs (batteries, ePowertrain, electric vehicle assembly). Ohio, Michigan, and Kentucky have also secured significant investments, ($7.5B, $16.6B, 10.8B, respectively). To ensure these are successful growth projects, investment in workforce development (i.e., EV/battery courses, certificates, and degree programs) should be equally prioritized.

Accelerate biopharmaceutical manufacturing and related R&D.

Though Chemical Manufacturing is Indiana's 7th largest manufacturing subsector, it has an outsized impact in terms of GRP. The 5-year growth trajectory for Chemical Manufacturing could be over 10% by 2026, adding over 3,500 jobs. Universities, community colleges, and other talent hubs must support these biomanufacturing sites with the enabling talent pipeline, including degrees, certificates, and courses in biochemistry, biotech, and chemical engineering.

How We're Doing: Indiana experienced capital investment of more than $6.8 billion in 2022 that will directly result in the creation of 3,000 new life sciences sector jobs in the state, according to a recent research report published by BioCrossroads. This includes more than $600 million in venture capital to support innovation and start-ups along with $2.8 billion in other capital investments for establishing, expanding, or upgrading Indiana life sciences facilities.

Attract Gen-Z talent to Indiana's AML industries.

The lack of young individuals, particularly Gen-Z, replacing the existing AML workforce will be a limiting factor for future growth. For instance, two of the state's forecasted high-growth sectors, Computer and Electronic Product Manufacturing and Textile Products Manufacturing, have high retirement rates. These subsectors are projected to grow at a rate that will likely outpace the incoming talent, so Indiana must be prepared to deploy creative programs to attract Gen Z into AML.

How We're Doing: MakeINMove is an awareness program targeted specifically to Generation Z talent. "Gen Z" represents the most educated generation in America, and few can remember a time before information wasn't always readily available at their fingertips. These digital natives are perfectly positioned for long and successful careers in the tech industries of tomorrow: advanced manufacturing and logistics.

Glossary of Labor Market Terms

Benefits Terminology

- **Employer Benefit Costs by Type:** Unpublished estimates from the Bureau of Labor Statistics National Compensation Survey (NCS) were used to examine non-wage compensation costs by occupation for manufacturing and logistics employers in the Midwest. The NCS produces data on employer costs per employee hour worked for several major benefit categories, including paid leave, supplemental pay, insurance, and retirement and savings. Disaggregated subnational estimates are not publicly available and were obtained through a special request to the BLS. Per BLS policy, data were only provided for occupation groups within the industries of interest for which the relative standard of error was less than 30%.[2] It is important to note that the unpublished NCS estimates are subject to sampling error and other sources of bias, but still provide valuable insights into the distribution of employer benefit costs within and across occupations in manufacturing and logistics in the Midwest.
- **Benefits Advertised in Job Postings:** A content analysis of job postings from January 2017 to December 2022 was carried out to assess trends in benefits advertised for positions in the manufacturing and logistics sectors. Lightcast curated a list of keywords to identify job postings mentioning common employer-provided benefits. Each keyword was assigned a corresponding benefit type and categorized according to the following mutually exclusive benefit categories: **Retirement and Savings, Supplemental Pay, Insurance, Health and Wellness, Paid Leave, Education & Career Development, and Work-Life Balance.** As an example of the coding process, job postings flagged using variants of '401k' (e.g., '401(k)', '401 (k)', '401k', '401 k') were assigned to the '401k' benefit type and the 'Retirement & Savings' benefit category. The share of total job postings mentioning a given benefit type or category – referred to as the benefit advertisement rate – was calculated and compared for the manufacturing and logistics sectors in Indiana and four comparison states: Illinois, Kentucky, Michigan, and Ohio. We also examined benefit advertisement rates by subsector and occupation for more in-depth information about the benefits advertised for manufacturing and logistics jobs in Indiana.

Labor Market Terms

- **Average Total Compensation:** The total industry wages, salaries, supplements, and proprietor income in the region, divided by the number of jobs in the region.
- **Establishment Size:** The number of employees at an establishment. An establishment is a single physical location involving some type of economic activity (i.e., business). A single company may have multiple establishments.
- **Gross Regional Product (GRP):** A measure for the final market value of all goods and services produced in the region of study. GRP is the sum of total industry earnings, taxes on production and imports, and profits, less subsidies.
- **Industry:** A group of businesses that produce similar goods and services and share similar production processes for creating the goods and services they sell. In the U.S. and Canada, industries are classified

[2] Lightcast received estimates for construction, extraction, farming, fishing, and forestry occupations in the manufacturing industry from the BLS but ultimately chose to exclude this data from our analysis due to reliability concerns.

using NAICS codes. Under the NAICS system, the goods and services a business produces are given less importance than the processes used to create or provide them.

- **Industry Subsector:** A portion or group within an industry sector; a subsector is at the 3-digit level of classification in the NAICS system.
- **Employment Concentration:** Quantifies how concentrated a particular group is (i.e., industry, occupation, demographic, job postings, online profiles) in a region compared to the rest of the nation. It can reveal what makes a particular region "unique." For example, if Leather Product Manufacturing accounts for 10% of jobs in your area but only 1% of jobs nationally, then the area's leather-producing industry has an Employment Concentration rating of 10. In this area, Leather Product Manufacturing accounts for a larger than average "share" of total jobs (i.e., the share is ten times larger than average).
- **Occupation:** Refers to a group of professions or careers in the workforce. The occupation describes the role (i.e., what the worker does at an establishment). This is distinct from a job title. The number of occupations is also different from the number of jobs because total jobs represent the number of positions held within a certain occupation.
- **Turnover Rate:** Quantifies how often employees are moving to and from different employers. Turnover rate is calculated by comparing total separations to total jobs (separations divided by jobs). A separation is recorded when an individual's Social Security Number that appeared on a company's payroll is no longer present. By comparing separations to the total number of jobs in an occupation or industry, we can benchmark the level of movement (i.e., turnover) taking place within that occupation or industry.

About

Conexus Indiana is a nonprofit focused on making Indiana a global leader in advanced manufacturing and logistics. Most of what we do is partner with state leaders — everyone from business owners to educational leaders to people working in the public sector — to connect, innovate, and generate the big ideas that drive the future of AML. We bring together the leadership of businesses in AML, administer grants to upgrade their tech, help train the skilled talent they need — and a lot more.

1210 Waterway Blvd., STE 5000

Indianapolis, IN 46202

conexusindiana.com

Lightcast is the world's leading authority on job skills, workforce talent, and labor market dynamics, providing expertise that empowers businesses, education providers, and governments to find the skills and talent they need and enabling workers to unlock new career opportunities. Headquartered in Boston, Massachusetts, and Moscow, Idaho, Lightcast is active in more than 30 countries and has offices in the United Kingdom, Italy, New Zealand, and India. The company is backed by global private equity leader KKR.

232 N Almon Street

Moscow, ID 83843

lightcast.io

Acknowledgements

Conexus Indiana collaborated with Lightcast to produce this report.
Proper acknowledgement of Lightcast should be included in publications, presentations, or other materials.