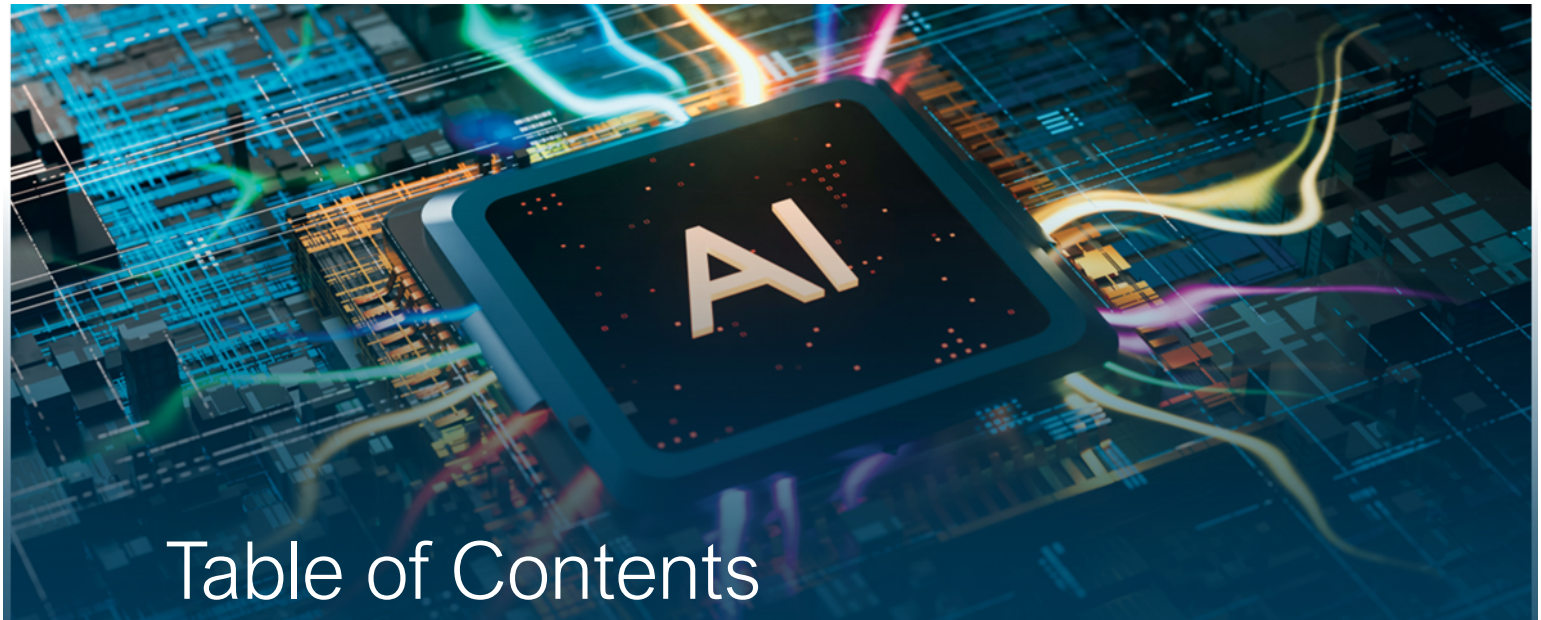
SEIZING THE ECONOMIC POWER OF ARTIFICIAL INTELLIGENCE

INDIANA CHAMBER FOUNDATION

REPORT PREPARED BY

accenture



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Dear Reader,

For over 100 years, the Indiana Chamber of Commerce has helped lead on public policy in the state, through the support of our member and business interests and our advocacy work to shape legislation at the Indiana Statehouse. We are proud of these efforts – spurred by our team, ongoing member engagement and a renewed focus on partnerships – that have helped to make Indiana one of the best states in the country to start and grow a business.

When I became CEO in January 2024, we coalesced around a series of foundational goals for the organization. One of which is how the Indiana Chamber can act as a thought leader on subject areas that are critical to Indiana's future.

The conference, "AI Leadership Summit: Seizing the Economic Power of Artificial Intelligence," was the manifestation of that aim, and this report is a continuation of it. AI will continue to impact business – and all aspects of Indiana's economy – in so many ways that we have yet to even imagine.

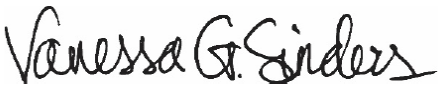
As we look collectively towards the future and determine where Indiana needs to go over the next several decades, making Indiana attractive to AI investments and talent is critical. We are proud to have partnered with Accenture to produce this report that provides valuable insights from the summit and guidance to the state's employers.

Key takeaways include a better understanding of the differences between AI and generative AI, the importance of a "people-centric" approach to introducing AI technology into business operations, and what changes we can expect to see – and prepare for – among industries that drive our economy.

The Chamber will continue collaborating with partners and subject matter experts, hosting forums and producing reports that help position Indiana as the most AI-friendly state in the country. Most importantly, we will remain a resource and ally to the business community, policymakers, lawmakers and all Hoosiers as we navigate a future in which AI promises to prove pervasive.

We hope you enjoy this report and seize the opportunity to power Indiana forward.

Sincerely,



Vanessa Green Sinders
President and CEO

Introduction

Why are we here?

On August 28, 2024, the Indiana Chamber of Commerce Foundation ("Chamber"), in partnership with the Central Indiana Corporate Partnership (CICP) and Accenture, hosted the AI Leadership Summit (Summit) in conjunction with Rally. Rally is a two-day innovation conference held in Indianapolis, Indiana, which seeks to grow and foster cross sector innovation and harness that momentum in Indiana. In alignment with this mission, the Chamber invited subject matter experts from industries deemed by Indiana Economic Development Corporation as "most critical" to Indiana's 10-year economic future: advanced manufacturing, agbioscience, life sciences, and logistics and transportation. With the growth of Artificial Intelligence (AI) and the emergence of Generative AI (GenAI), the summit served as the perfect platform to convene the business community and prognosticate about how these technologies will alter Indiana's innovation driven economy. Panelists for each session shared their perspectives on the current and future impact(s) to their industries, workforce, and education due to AI and highlighted Indiana's greatest AI-related challenges and opportunities for economic prosperity. This report intends to capture lessons learned from the Summit and provide unique, actionable insights to better position Indiana's business, political and academic communities for AI's imminent impact on the state's economy.

Indiana Economy Snapshot:

- Above National Average in Labor Force Participation
  63.0% Indiana[i], 62.7% US National Average [ii]
- 165,943 Job Postings in Indiana
  October 2023[iii]
- $404.29B Indiana GDP
  19th in the USA[iv]
- 20 Year High in Exports
  $12.06B in Exports in 2022[v]
- 3,302,000 Non-Farm Jobs
  September 2024[vi]
- 524,400 Manufacturing Jobs
  October 2024[vii]

In partnership with the Chamber, Accenture performed additional analysis on AI trends impacting the type of work within the key industries, how the requisite skills are changing, and how Indiana's workforce can be prepared for this shift. At first glance, opportunity may seem regionalized to the large urban centers within the state, however Indiana's rural regions are strong contributors to the state's economic growth and success. For example, in 2022, the logistics and transportation industry employed just over six percent of Indiana's workforce, bringing in 254,558 jobs, of which 35,223 stem from nonmetropolitan areas. Moreover, the highest employment rates were concentrated to 5 Counties: Allen, Boone, Hendricks, Lake, and Marion.[viii] In that same year, the state experienced a 20-year record high in exports with over $12 billion in goods moved.[ix]

Introduction to AI

When ChatGPT was released on November 30, 2022, the conversations of AI shifted and suddenly headlines started to focus on a new offering type, GenAI. While this shift seemed sudden, the development and implementation of AI, and now, GenAI is not new. AI's evolution can best be described as persistent advancement. Early models of AI started as descriptive, i.e. primarily describing the environment around the device for the user. From there, the models progressed to be diagnostic in nature—calling attention to a change that occurred. The turn of the millennium introduced "predictive" AI, which alerts users to act before a change occurs. More recently, AI has advanced from "prescriptive," providing recommendations on how to resolve an issue in the environment, to GenAI—which can create unique, case-specific solutions autonomously.

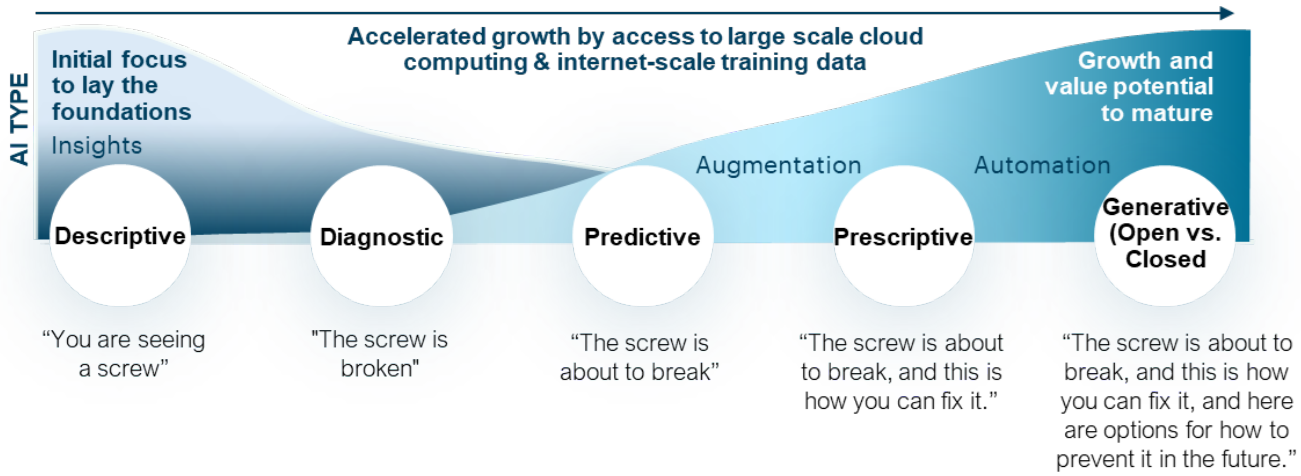


Figure 1: Advancement of GenAI

Not surprisingly, these advancements are changing not only how work is done but also who is doing it. The reality is that there will be only a few jobs and job functions that will remain unchanged by GenAI, while it will be more common to find entirely new jobs that are not offered today. Jobs of the future are summarized as follows:

1. **Core:** Jobs that include essential tasks that require human judgement, emotional intelligence and complex decision making. These jobs will see minimal impact on skills and require a human to be involved.
2. **Automation:** These jobs will see a significant portion of routine tasks that are automated and need less human intervention. For example, a portion of a manufacturing job may now be done by a machine.
3. **Augmented by AI:** These jobs will see technology enhancing human performance by providing insights or data analysis. These jobs will see partially automatable skills, freeing up more time for humans to supervise or learn core skills. For example, this might be real time data insights to assist with identifying bottlenecks or issues.
4. **Augmented by GenAI:** These jobs will see GenAI creating content and collaborating with the human. This will free up time for the worker to concentrate more on higher cognitive tasks. For instance, an office worker may use GenAI to summarize a meeting and provide tasks as a follow up.

Key Definitions:

GenAI: GenAI learns from content and uses a statistical model to predict what the answer might be.

Large Language Model: These models are trained on large amounts of text and can perform natural language processing tasks

Open GenAI: Uses publicly available and potentially copyrighted information. Example: Chat GPT

Closed GenAI: Uses information from closed sources, information is generally more accurate and secure.

Hallucinations: Occurs when an AI system generates incorrect or misleading information, this may be due to bias or processing errors. Bias can be introduced by the data or the documents that are used to train GenAI.

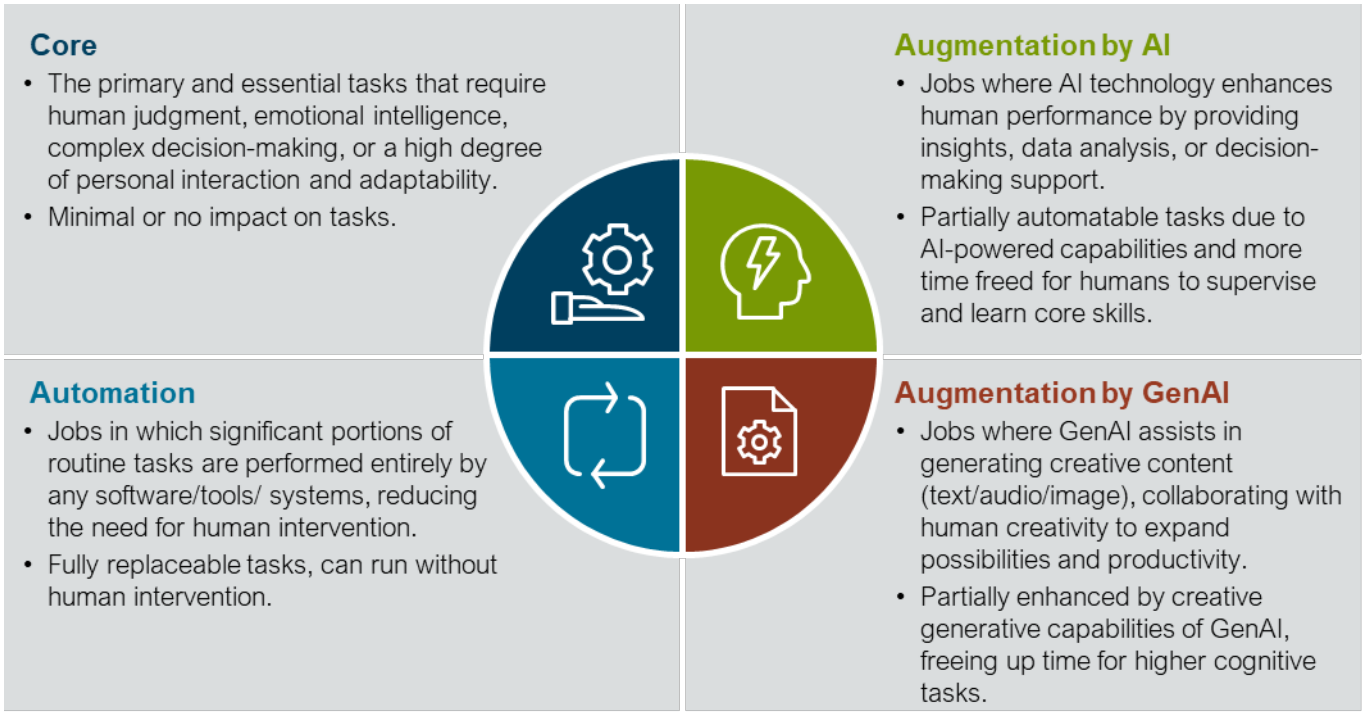


Figure 2: The role of AI and GenAI in jobs of the future

Of the industries featured at the Summit, AI is most likely to impact jobs in the life sciences industry with 23% of work time expected to experience a degree of automation and 21% showing at least some potential for augmentation. Contrasted with the broader industry of agriculture, which has a lesser potential for automation and augmentation—showing 18% expected for automation with 10% of time anticipated to be augmented. Later in the report there is a more detailed look at the top occupations in each industry, which shows even more variation. With the differing impact, business leaders will need to tailor their approach to workforce training and upskilling at both the industry level and the occupational level.

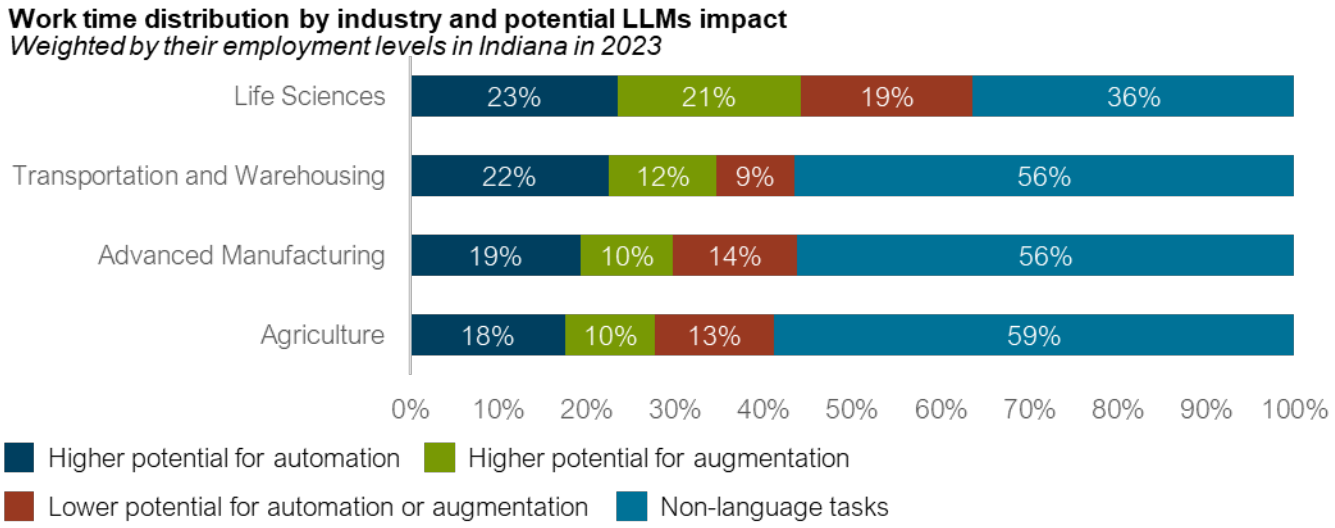


Figure 3: Impact to working time by industry

The advent of broader AI integration across industries will have downstream implications that require strategic planning. For example, data centers that power AI models will increase the strain on energy supply and demand. Energy demands to complete AI tasks are already driving an annual growth rate of 26% to 36% globally.[x] States and grid operators are contemplating solutions to meet this demand including expanding the use of nuclear energy to increase energy supply. To reduce confusion and inconsistencies, policymakers, public and private leaders, academia, and the workforce at large will need to collaborate in establishing best practices in AI use and operations.

Access to AI is another consideration, and states will need to determine if they want to provide a public sector solution. Small businesses may be unable to afford AI adoption, which would increase the digital divide with large corporations. TechPoint, a CICP member organization, is a convening voice and serves to address potential gaps by working to enhance resource connectivity for startups and elevating best practices, while amplifying stories of success. Moving forward, there is need for even greater participation among the business community and governments to solve for inequities and encourage innovation.

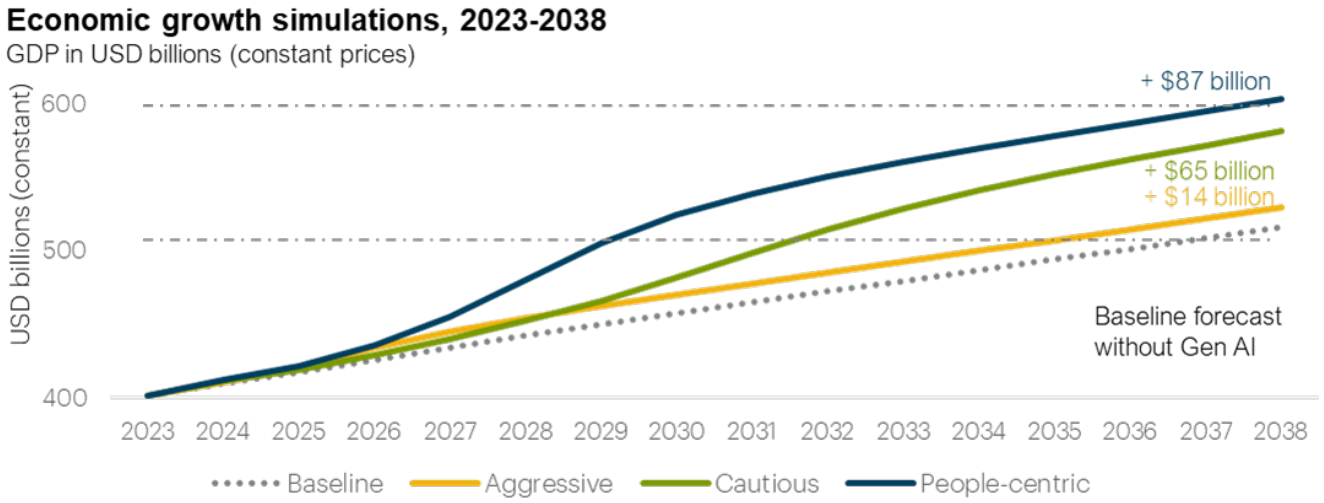
At the Summit, U.S. Senator Todd Young, in conversation with Jordan Crenshaw of the U.S. Chamber of Commerce, discussed his role in the bipartisan effort to enhance federal resources aimed at addressing emerging challenges and opportunities related to GenAI.

Senator Young is interested in developing a better prepared workforce for emerging technologies by strengthening math and science education among K-12 students, creating pathways to retain graduates, and incentivizing new entrepreneurs to launch businesses in Indiana.

The public sector is, however, beginning to better understand the potential of AI. For Indiana legislators, representatives at the federal and state level are tuned into the conversation surrounding this new technology. In September 2024, the state integrated a GenAI chatbot into the IN.gov website. Serving like a master brain of public information for the state, it can answer almost any question a user might have in seconds.[xi] This year, lawmakers were tasked with surveying the totality of the state's AI usage with the passage of Senate Bill 150, authored by Senator Liz Brown, R-Fort Wayne, which established the Artificial Intelligence Task Force to study and assess the use of AI technology by Indiana state agencies. State Senator Brown, also a member of the task force, prioritizes constituent privacy and security. In her role, she is committed to ensuring data sources for all use cases across the state are accurate and that user interactions are anonymized. At the federal level, U.S. Senator Todd Young, a Summit participant, is a key member of the Bipartisan Senate AI Working Group which released a roadmap for AI policy in the United States Senate.[xii] At the start of the year, Senator Young submitted a letter to the Senate Appropriations Committee urging it to support the National Institute for Standards and Technology (NIST) with $10M in funding to provide additional staffing, develop joint research partnerships, and accelerate AI use case testing.

What does Indiana stand to gain by businesses adopting a responsible, people-centric approach to GenAI?

GenAI will cause the most significant economic uplift to work since the agricultural and industrial revolutions. In the industrial revolution, growth was marked by mass production and standardized outputs, while the agricultural revolution saw greater efficiencies in crop harvesting. More recently, mobile phone technology changed our reality of how to conduct business and represents 10% of overall growth between the years 2000 and 2019 globally, which translates to over $2.4 trillion in economic impact.[xiii] The age of GenAI will be defined not only by productivity gains but also by enhanced human creativity and potential to shape more innovative employee and customer experiences. The GenAI revolution will create an estimated **$87B in additional economic value for Indiana by 2038,** as seen in figure 4 below.[xiv] The total economic impact, however, will be dictated by the adoption approach employers choose: people-centric, aggressive, or cautious. A people-centric approach, one that puts people first, will improve labor productivity and add 1.1 percentage points to the state's average annual GDP growth rate. In contrast, should employers take an aggressive approach to adoption, economic growth plateaus at $14B. Whereas a cautious approach that prioritizes risk aversion rather than workforce, will delay full adoption maturity and inevitably slow economic growth. A cautious approach will take 15 years for adoption and peak over that time at $65B.



Source: Accenture Research. Simulated GDP growth under three scenarios. State GDP forecast from Oxford Economics as the baseline.

Figure 4: Economic growth simulations

Interestingly, looking at the baseline, an aggressive approach to GenAI adoption has an incredibly low impact compared to what would naturally occur despite GenAI. This tracks logically as well, given the focus is on automation and speed, which leaves no time for reskilling the current workforce and preparing the ecosystem for full adoption. Ultimately, there is great value in steady progression toward adoption and equipping the workforce with the tools to build creatively—an approach that Indiana has prided itself on for decades.

Roadmap: Implementing a People-Centric Approach to GenAI

1. Start with GenAI Governance Structure

While the upside of GenAI is promising for employers and the economy, there are risks and challenges that come with adoption. Some of these can be addressed in the design and build of GenAI functions, while others will require an ecosystem approach. States and local governments across the country are exploring regulatory pathways that both allow and encourage innovation and provide consumer safety protections. The sophistication of GenAI models allows practitioners to create content that is increasingly indistinguishable to human users, which can pose major threats to trust, perception, and other social factors, especially when conducting business. Many state governments, including Indiana, have taken action to protect against deepfakes.[xv] However, the speed at which new cyber threats emerge can be a challenge for governments to keep pace.

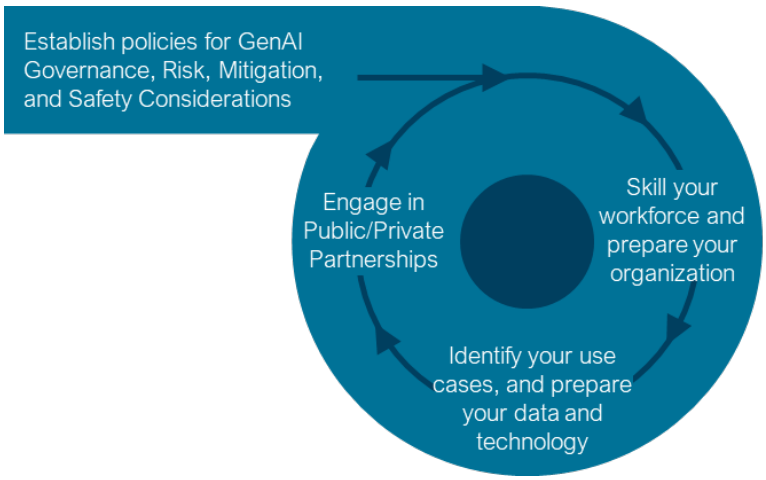


Figure 5: GenAI Governance

Organizations can mitigate risks of GenAI through a governance structure that is communicated clearly to employees. Clear communication can also alleviate negative sentiment and concerns employees may have about augmentation by GenAI. To that end, Accenture conducted a workplace survey across top employers, finding that 95% of employees surveyed saw value in working with GenAI, while 82% say they already possess some understanding of the technology. However, employees' biggest concerns surrounded their ability to trust their organization to ensure positive outcomes for the entire workforce. Further findings highlight this concern, with 60% of employees indicating worry regarding increased stress and burnout related to GenAI training and use, 58% feeling insecure about their job security, and 57% seeking clarity on what this technology means for their careers.[xvi] The chart below shows principles that the entire ecosystem should consider when introducing GenAI tools into the workflow.

Responsible GenAI principles should focus on the following ideas:

Human First Approach	Fairness	Transparency, Explainability and Accuracy	Safety	Accountability	Compliance, Data and Privacy Security
Understand the impact on the workforce when GenAI is deployed. Ensure that use aligns to core values and potential negative impacts are identified and managed and workforce is properly trained.	Implement control access across GenAI lifecycle and mitigate bias at each step.	Assess hallucination and accuracy Key Risk Indicators when selecting foundational models. Perform accuracy testing on GenAI tools. Add technical controls to detect deep fakes.	Evaluate potential safety concerns and take action to mitigate harm.	Document enterprise-wide governance structures with clear roles, policies and responsibilities.	Add data privacy and security controls to mitigate against prompt injections and other adversarial attacks.

2. Skill your workforce and prepare your organization

As mentioned, the workforce is excited about this new era of GenAI but understandably apprehensive about how it may impact their jobs. Employers will need to build trust within their talent pools by taking the people-centric approach and instilling confidence that work will inevitably change, but the jobs will remain. This people-centric approach is known to leave workers "Net Better Off." Accenture's research shows that helping people to become Net Better Off unlocks nearly two-thirds (64%) of an individual's potential at work. When spread across the entire workforce, organizations can deliver 5% greater revenue growth. Ensuring workers are Net Better Off closes the trust gap and gets employees ready for, and comfortable with, GenAI integration. For instance, workers who are highly Net Better Off had a 19% greater incidence of "strongly agree" responses regarding their comfort with the technology—particularly in terms of how they can apply it to their work.[xvii] This means that employers will need to upskill employees to know how to safely leverage GenAI, proactively train using an intentional approach, and expose workers to practical use cases to apply knowledge learned.

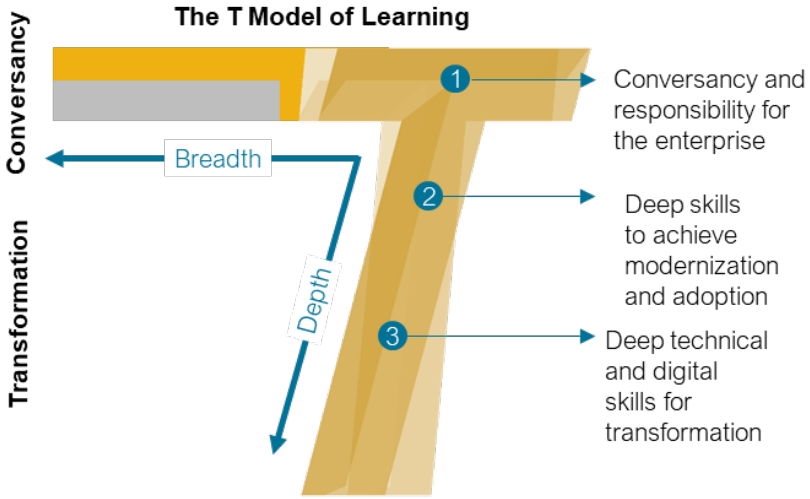


Figure 6: T Model of Learning

Organizations should also be prepared for the next generation of its workforce with an understanding that students are learning—and want to use — GenAI tools after graduation. We spoke with Blaizing Academy's executive director, John Qualls, who works to prepare job seekers across the state through a hands-on, vocational approach to learning. The academy offers certifications in artificial intelligence and other tech related skillsets, as well as supports students in the job search process. In his work, John also helps employers identify their needs to prepare for AI use in the workplace. Blaizing Academy was acquired in 2022 by Indiana Wesleyan University and recently rebranded to its new name with a nod to AI's emerging footprint.

To help visualize this concept, the T-model of learning can be used to represent workers' learning journey. The expectation will be that all workers move horizontally along the top portion of the T to gain baseline conversational knowledge, while more advanced positions concurrently move toward the trunk, widening their knowledge base and the ability to perform technical tasks at mastery. From Accenture's research, there are fundamental skills that Indiana and all employers, regardless of industry, can establish to create a workforce that is comfortable with these technologies.[xviii] It is important to understand that training is a critical component of all AI and GenAI adoptions. Employers are rightfully eager to integrate these solutions for operational efficiency, however for long-term effectiveness it is better to delay to sensibly invest in the workforce—and that investment is paramount to safety across all levels and risk scenarios.

The chart below provides a few examples of areas for focus.

GenAI Related Skills	Additional Skills
• Fundamentals of GenAI	• Process Optimization
• Prompt Engineering	• Problem Solving
• How to Select and Train an LLM	• Organizational Design
• Responsible AI	• Change Adoption
• Industry Use Case Examples	• Customer Service
• Cybersecurity and GenAI	• Ethical, privacy and intellectual property considerations
• Marketing, sales and service powered by GenAI	• Skills based talent management

3. Identify your use cases and prepare data and technology

Once organizations put in place a governance structure, they will need to align on use cases to pursue. While many organizations are already using GenAI, those that are new to it may want to start with a simpler use case and agree to selection criteria for prioritizing initiatives. Accenture suggests business leaders adopt a three-step approach to GenAI adoption:

- Explore: Define vision and assess value chain to identify and prioritize use case for GenAI. Exploration is about learning where things can improve company-wide, but it is important to eventually narrow focus through prioritizing return on investment.
- Experiment: Rapidly prototype GenAI use cases, experiment to measure impact, adoption and overall readiness. Creating opportunities for employees to simply play with AI tools can build understanding, confidence, and imagination around problem-solving.
- Execute: Set out a comprehensive activation strategy with a practical implementation roadmap and detailed reference architecture for deployment. Once deployed, be sure to evaluate and capture lessons learned through employee feedback and metrics.

There are many common use cases most businesses can explore as a starting point regardless of industry. These may range from reducing time spent on manual labor for many administrative tasks, improving documentation and storage of institutional knowledge, or enhancing customer service through intelligent chat bots and call center support.

Common Business GenAI Use Cases	
• Chatbots	• Benefit Administration
• Sentiment analysis	• Policy Development and Review
• Scheduling Coordinator	• Code Assist for Developers
• Augmented Call Centers—Post-Call Summarization, On-Demand Digital Translator	• Performance Evaluations
	• Enterprise knowledge management and FAQ creation

Data is at the heart of GenAI, and existing enterprise data can be leveraged. Unlike traditional data products, GenAI is less dependent on labeled data and supports data in various formats. While data is central to both AI and GenAI the data life cycle looks different.

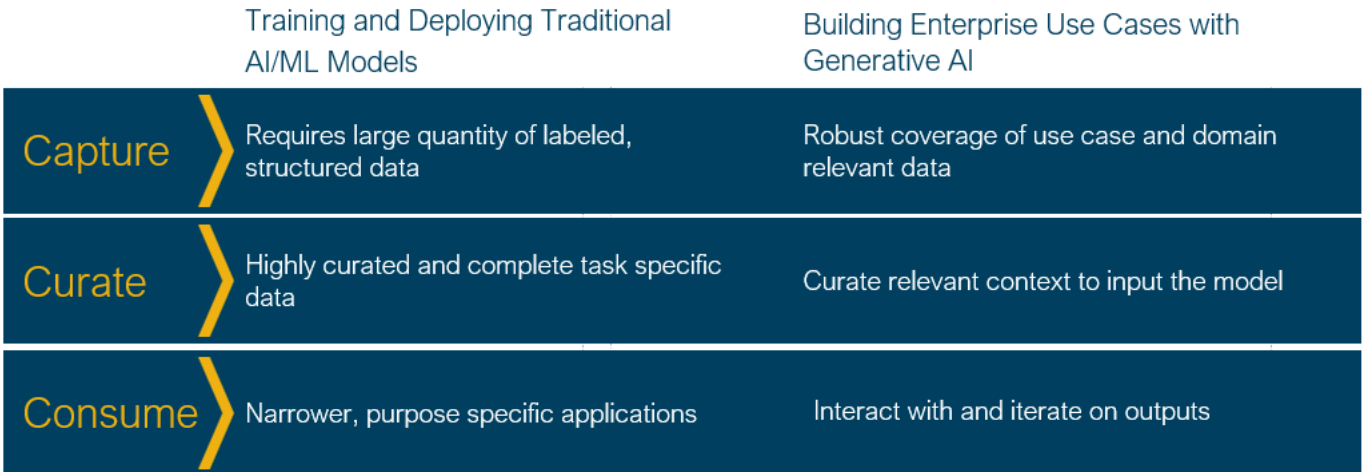


Figure 7: GenAI Data Lifecycle

4. Engage in public/private partnerships

For small and medium-sized companies, it can be difficult to envision adopting the technology as a solution without a clear understanding of the costs of integration. In each industry section of this report, there are examples of scenarios for GenAI innovations across a variety of business functions. Organizational readiness will influence when and how to adopt. While some companies may be all in for adoption of GenAI, others may want to start with a small discrete project or partner with outside organizations to collaborate or share cost burdens. In any case, the three-step approach–explore, experiment, execute—should be the guiding path.

A great example of an organization making strides in this space is the Central Indiana Corporate Partnership's (CICP) and its subsidiary, TechPoint. TechPoint is the industry-led growth initiative for Indiana's digital innovation economy and overall tech ecosystem, and it is focused on working with public, private, and industry partners to expand the tech talent pipeline, enhance resource connectivity for enterprise organizations and startups alike, and elevate the industry by activating the community and amplifying stories of success. TechPoint and other CICP subsidiaries regularly look for private sector partnership opportunities as showcased in AnalytiXIN, another special initiative of CICP, which is focused on connecting academia, industry and community leaders to foster collaboration for drive data-driven innovation and opportunities. Particularly in Life Sciences, AnalytiXIN is bringing various organizations together for innovation. By creating space and opportunity for collaboration and connection, this organization is focused on helping Indiana to become a national destination for AI and advanced analytics. Indiana businesses can benefit from these partnerships when they need technological solutions to a problem that may be outsourced to CICP either as a pilot project or long-term partnership opportunity.

During the Summit's Advanced Manufacturing panel, experts identified the industry as a trailblazer for early adoption of automation, and in turn GenAI. Manufacturing has generations of practice using data to inform decision making, leading to more nimble processes and increased production and profits. Bill Kemerer, a panelist and Vice President of Global Data and Analytics at Allegion, encouraged manufacturers to prioritize AI and GenAI leadership among all levels of the organization. That time committed toward formally cultivating use of these technologies is of mutual benefit for the company and its employees. Creating a sandbox of sorts for employees grants autonomy to develop novel use cases while the company can better anticipate risk and establish appropriate safeguards to protect from bad actors. Under his leadership, Bill is working to that end by creating an employee network across business units that promotes innovation and teaches staff how to develop AI solutions in a compliant and safe manner at Allegion.

1,800+ AI Jobs Posted
Manufacturers are demonstrating a strong appetite for AI skills

From an academic perspective, Dr. Stephan Biller, a distinguished professor at Purdue University, described his institution's own leadership across the nation in GenAI stewardship. Dr. Biller helps lead a coalition made up of the business community and fellow academic institutions to prepare manufacturers for greater resiliency, especially among small and medium-sized enterprises. In that work, the coalition is focused on tackling the biggest lessons learned from the pandemic by priming its partners with the tools necessary to achieve digital transformation. Dr. Biller plans to use GenAI as a primary vehicle to produce greater organizational excellence but cautions business leaders from focusing merely on its use rather than understanding and prioritizing the outcomes it can support. In the classroom, he takes his teaching to the real world to grant students the opportunity to apply knowledge and reinforce their education through experiential learning. Through partnerships, his students learn by helping companies within the industry solve their biggest problems.

Workforce

According to research conducted by Accenture, Indiana's advanced manufacturing landscape has already demonstrated an appetite in the workforce for skills related to GenAI. Since August 2023, findings show that over 1,800 jobs posted in advanced manufacturing sought talent with GenAI related capabilities. Specifically, key skills were listed as AI, GenAI, and machine learning. For AI, 0.4% of the current workforce possess skill knowledge in the domain. Comparatively, AI skills comprise 1% of the total job postings by employers. This signals affirmation that the industry is cultivating a need for GenAI skills. Conexus, a partner of CICP, conducted an "AI in Indiana" 2023 survey which found that 44% of manufacturing respondents have adopted AI in one or more business units.[xix] GenAI capabilities that manufacturing companies deem most important for workforce training purposes include the following: computer vision, physical robotic, robotic process automation, natural-language text understanding and deep learning.

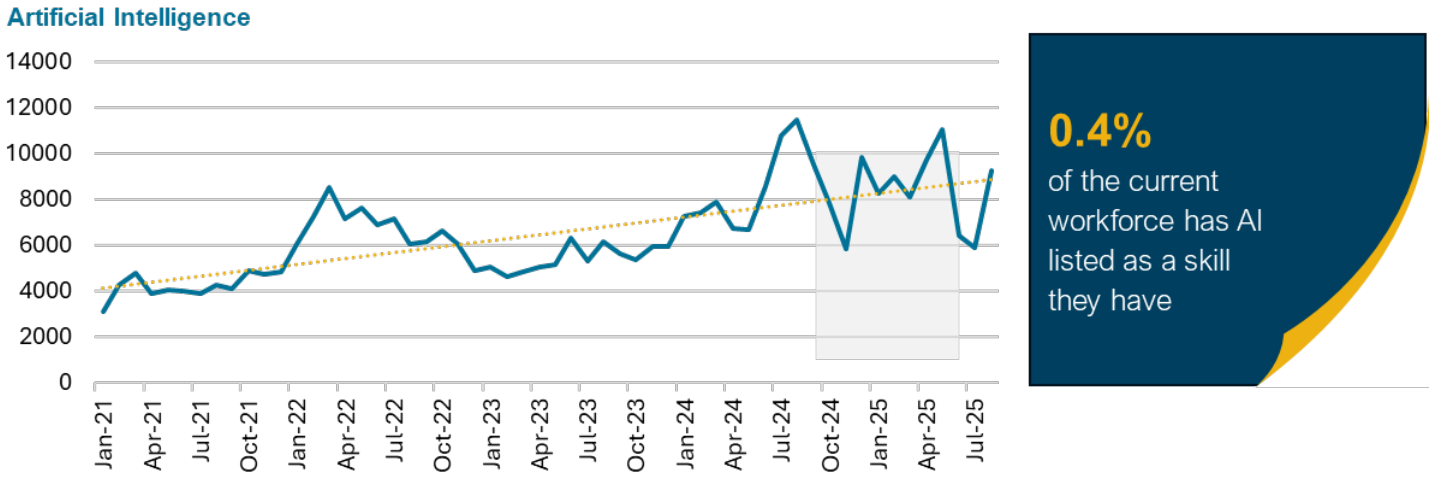


Figure *8*: Advanced Manufacturing Workforce: Artificial Intelligence

In a similar upward trend, for GenAI, only 0.05% of the current workforce possess the skill, however GenAI's demand by employers shows a growing 0.1% of total job postings. According to TechPoint research, roughly 57% of companies are not planning to hire new GenAI talent in Indiana, however 84% expressed intentions to help existing employees develop GenAI-related skills.[xx]

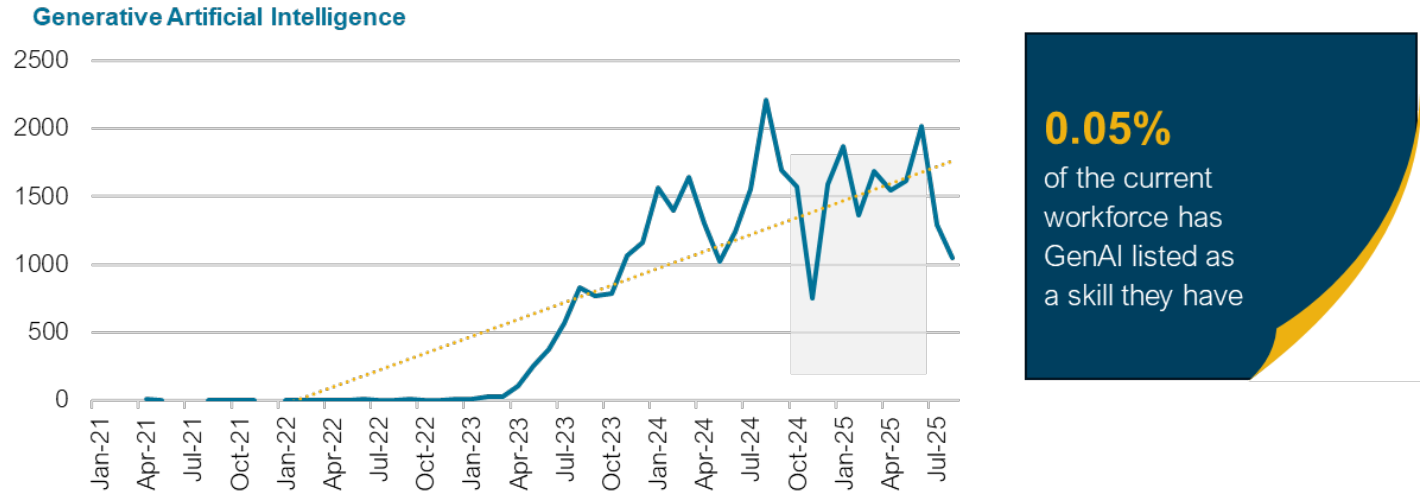
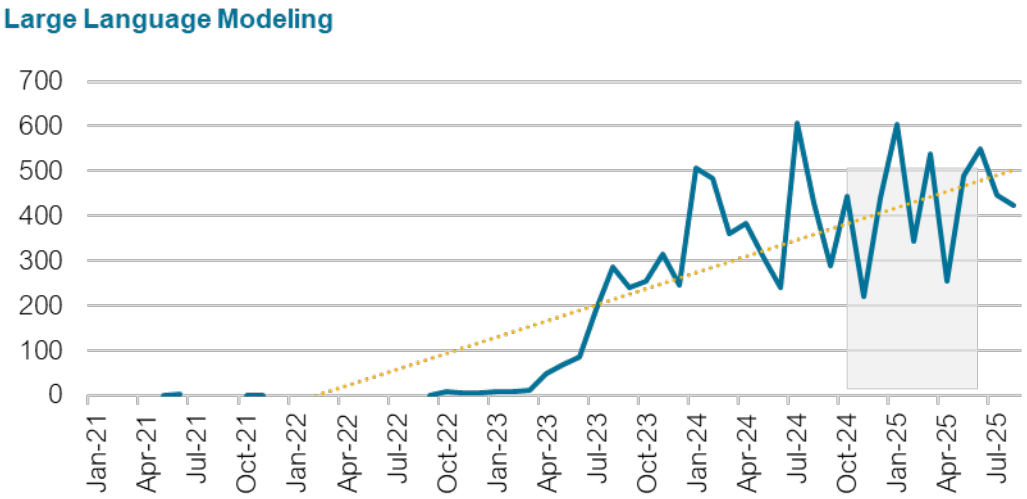


Figure 9: Advanced Manufacturing Workforce: Generative Artificial Intelligence[xxi]

Interestingly, the data related to explicit skills for large language models (LLMs) over the past year show only 39 positions. Yet, projections shown in the table below suggest the skill as an emerging need with a sharp increase over the next few months. This signals that employers are widening their descriptive inventory of GenAI skills needed and may be a window into the types of projects manufacturers are gearing up for and the skills they plan to leverage.



Availability of this skill in the current Advanced Manufacturing workforce is very low, **less than 0.005%**

Figure 10: Advanced Manufacturing Workforce: Large Language Modeling

These demanded skills align with Indiana's other top industries' needs, however advanced manufacturing is leading the workforce with the most talent skilled in AI with nearly 5,000 workers harnessing the skillset. At this early stage of adoption, advanced manufacturing is proving that is adaptable, agile, and invested in the growth of AI integration.

The chart on the next page takes a closer look at the percentage of work hours anticipated to be exposed to AI and GenAI for the top 20 occupations in manufacturing. As shown, roles with more language-based functions will see greater change as adoption progresses with over a quarter of all hours worked estimated to be impacted by large language models. Of this impacted time, many of the tasks are expected to become automated. In contrast, tasks that are expected to be augmented attribute to less than 10% of hours worked. This means employers can help workers familiarize with this innovative technology, while also preparing for workers to focus on other areas within the manufacturing environment. Overall, GenAI can help companies become more efficient, more productive, and hopefully translate to better working conditions. Even though work is shifting with the integration of these technologies, employees still need core competencies in the tasks that are changing so they can help intervene and respond when errors occur.

On average, GenAI can affect 28% of all hours worked by top 20 occupations.

- 19% of the time is susceptible to higher automation and 9% is susceptible to higher augmentation
- It means that workers on average spend this amount of time on tasks that could be significantly impacted by Generative AI

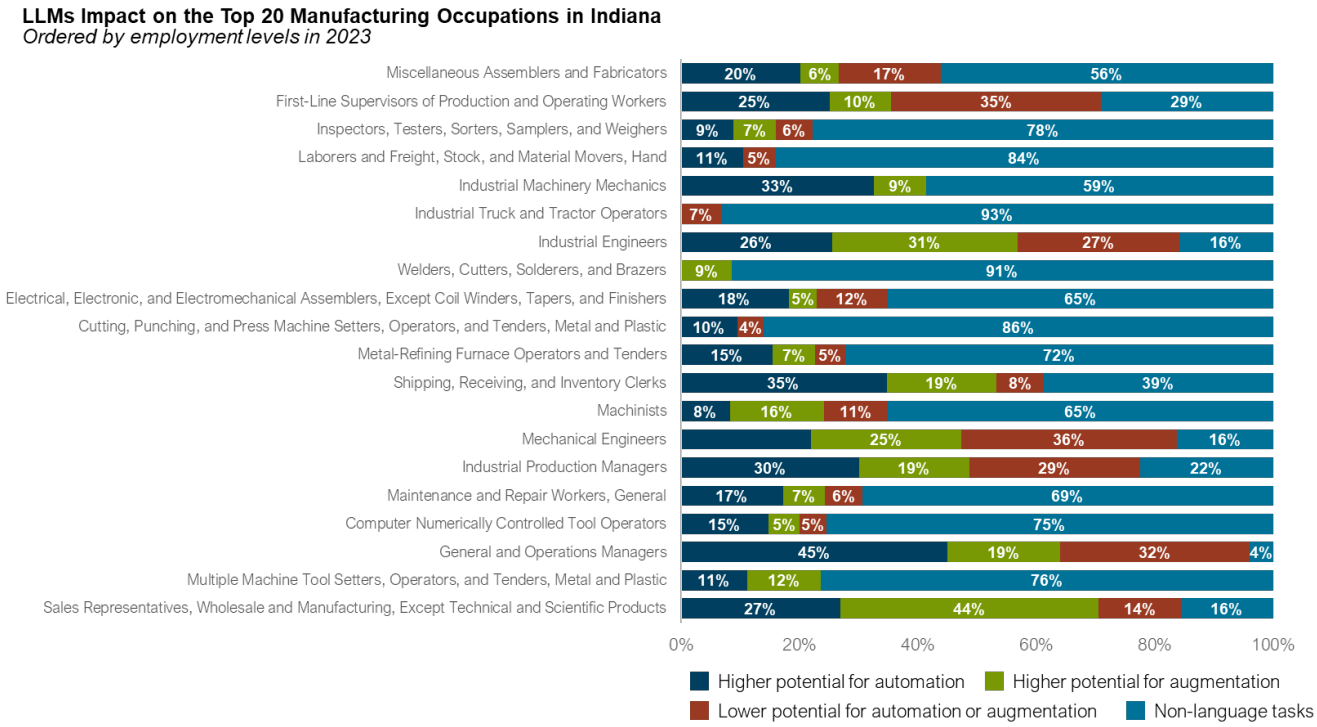


Figure 11: Percentage of work hours anticipated to be impacted by AI and GenAI for the top 20 occupations in manufacturing

Advanced Manufacturing Use Cases

Business Problem	AI Driven Solution	Outcome	Way to Build and Expand
Product defects can cause legal issues, impact brand reputation, and decrease customer satisfaction.	**Computer Vision** is a useful AI tool that can be embedded into assembly workflows to catch defects. The technology uses a combination of cameras and AI-enabled software to recognize inconsistencies and alert assembly workers of the issue.	• Decision makers have better data to investigate root causes for defects. • Decrease in defective products making their way to customers • Less reliance on human eye for primary role of quality assurance	Connect hardware like sensors and additional GenAI tools like predictive maintenance, prescriptive analytics, and supply chain optimization systems for more global oversight of the assembly line.
Customer needs can be challenging to meet as business leaders work to balance overproduction and underproduction with internal fiscal prudence including staffing considerations.	**Demand Sensing** is enabled by **Predictive Analytics** to forecast optimal production. The technology uses Generative AI by integrating with Enterprise Resource Planning systems to pull organizational data and external insights like weather and consumer trends to make recommendations and provide insights into demand vs supply.	• Manufacturers can better plan for customer needs and align with product volume. • Reduce unnecessary operational costs. • Realize greater potential for increased customer satisfaction due to optimized availability and more accurate delivery times.	Add sensors, computer vision, machine learning, and other GenAI tools to trigger start/stop automation of robotics or other hardware in assembly line to more efficiently control production.

Succession planning is a major priority across industries, as the workforce ages. Employers can find it challenging to retain institutional knowledge as workers transition away from their current role.	**Interactive Chatbot** to capture knowledge of senior staff and provide a tool for new employees to ask questions and receive immediate answers.	Manufacturers can capture institutional knowledge and build on it as processes change.	Add interactive training modules to train new workers on processes.
Assembly line workers can feel the brunt of the demanding operation to build products; job functions are often strenuous, tedious, and mentally challenging in the manufacturing environment.	**Robotics** coupled with GenAI tools can automate repetitive and sophisticated tasks, like move large heavy objects and tighten hard-to-reach screws autonomously.	Manufacturers can reduce physical human workload and ensure precision in the production line.	Add machine learning, LLMs, computer vision and other GenAI tools to enable robotics to detect, reject, and return defected items for reprocessing; as well as use predicted analysis tools to monitor demand needs and optimize production.

Bringing it to Life

Mursix, headquartered in Yorktown Indiana, is a family owned and operated manufacturer, supporting customers nationwide in the automotive, medical, energy, and industrial sectors.

Summit panelist, Susan Murray Carlock, of Mursix, shared her plans with the audience to reshape the conventional approach to training and development using Generative AI. Under Susan's leadership, where she serves as Executive Vice President, Mursix developed and launched a pilot program centered around a closed source chatbot branded as Murray Mentor to help junior staff in real time with workplace challenges. With a nod to her family's namesake, Murray works as a self-help guide for Mursix's tradespeople to learn and apply best practices in a more agile manner within the context of their working environment. Murray is a hub for internal resources and fueled by learnings from senior staff, meaning that it is a repository to retain institutional knowledge and a cornerstone for succession planning.

As emphasized at the summit, Susan understands that the talent pipeline is vital to her company's success and longevity. Because of this, Mursix has worked in partnership with Indiana's academic institutions as a source of talent and collaboration. Susan attributed Murray Mentor's positive reception by staff to the cooperative support of academia, specifically Purdue University. She recognized the pilot program as "pivotal" to her company's work. Developing and launching Murray Mentor is the perfect demonstration of the power of experiential learning. In closing, Susan shared Purdue's willingness to work with manufacturers of Mursix's size helped her company become more digitally accelerated and forward thinking, which has been transformative for her staff.

Life Sciences

Moderated by Darshan Shah, Executive Vice President of Data and AnalytiXIN at CICP, the life sciences panel spoke to how GenAI is reshaping research and development and supply chain operations in the industry. Experts, Tim Kachur of Accenture and Ramesh Durvasula of Eli Lilly, gave the audience a peek into the sophisticated processes involved in bringing life science products to market. Jumping into workforce changes, Tim and Ramesh agree that business leaders will need to continue to hire from a variety of talent pools. They emphasize that growth-minded companies should not overly focus hiring priorities to only data science professionals, instead business leaders should commit to training the broader workforce in data analysis skills to support their GenAI endeavors. For hiring managers, having a workforce from a variety of disciplines that is curious about the results GenAI produces, and that can learn to understand the logic behind the results often helps teams develop greater innovations. To this point, Tim shared that leaders at Accenture have invested over three billion dollars in workforce development to train their over 700,000 employees worldwide to become proficient in these technologies.

This investment has led their large ecosystem of clients to engage the firm to assist in GenAI training and to understand best practices. Like in the advanced manufacturing panel, Ramesh discussed Eli Lilly's cross-industry collaborations with Indiana's strong academic institutions. In their comments, panelists addressed talent loss after students graduate and seek opportunities. According to TechPoint, 38.7% of Indiana's graduates in tech-related fields leave the state to larger metros such as Chicago or coastal cities.[xxii] As an alum from two different Indiana academic institutions, Darshan joined panelists to emphasize the unique opportunities for development and prosperity Indiana offers graduating students through the large footprint of world-class brands in Indiana, such as Salesforce, Corteva, Cummins, and Rolls Royce. In the workplace, workers are encouraged to seek opportunities to leverage GenAI tools and fluidly embed the technology into daily job activities. In other words, its use is not a start and stop process. Business leaders can ratchet up adoption by emphasizing change management, supporting workers to identify when to trust/challenge GenAI recommendations.

Life Sciences brings home
$7.4B in wages
for the Hoosier Workforce

Workforce

The life sciences have been a constant and growing industry in Indiana. According to research conducted by BioCrossroads, a CICP organization, life sciences employed well over 67,000 workers in 2023.[xxiii] Additionally, the organization found that the life sciences industry contributes $95B to Indiana's economy and is a top exporter of pharmaceutical and life sciences exports in the nation.[xxiv]

Like our findings for advanced manufacturing, the life sciences industry has promising numbers within its current workforce with core AI fundamental skills. Most recent data shows that 1% of life sciences workers have AI skills. However, the demand for this skill in the industry reflects 3% of job postings calling for workers to be trained in it.[xxv]

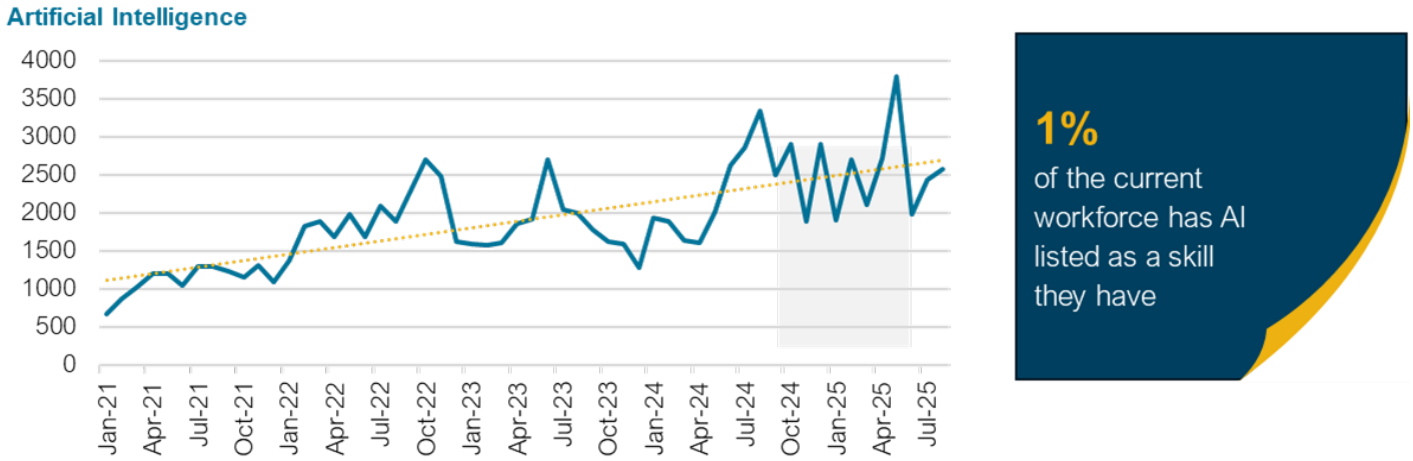


Figure 12: Life Sciences Workforce: Artificial Intelligence[xxvi]

In contrast, only 0.1% of the current workforce report explicitly having GenAI skills, with 0.5% of all postings calling for workers to have the skill.

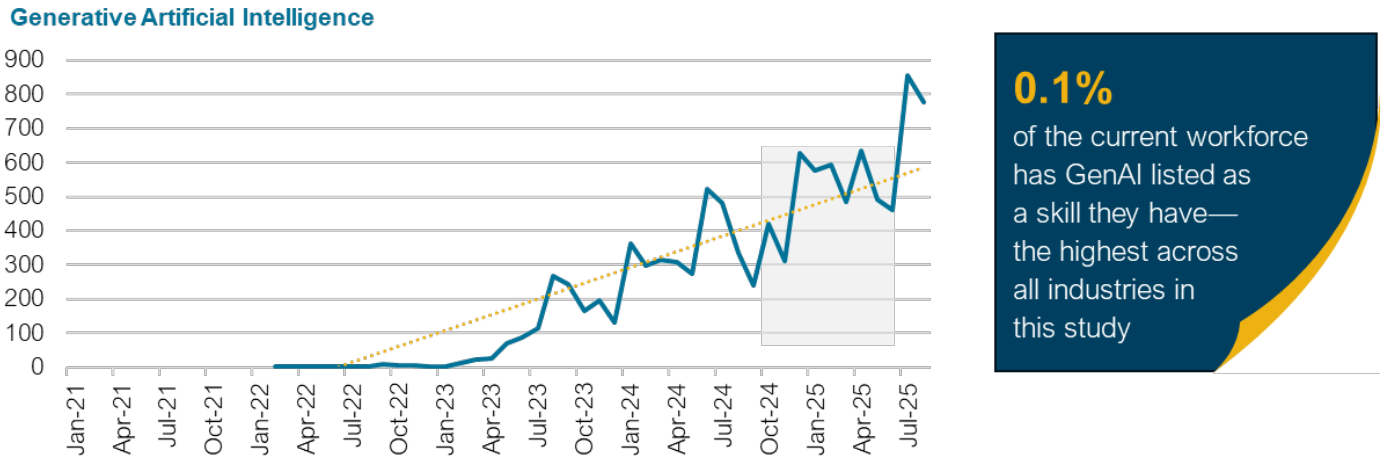


Figure 13: Life Sciences Workforce: Generative Artificial Intelligence[xxvii]

As we saw in advanced manufacturing, skills specifically calling for LLMs appear to trend upward. Currently, 0.2% of all job postings in life sciences explicitly call for LLMs as a desired knowledge base. Over the next several months, it is anticipated that the demand will volley (see table below). Notably, the greatest fluctuations are in the fourth and second quarter, which may align with typical hiring as year-end closes out and springtime hiring wanes ahead of summer.

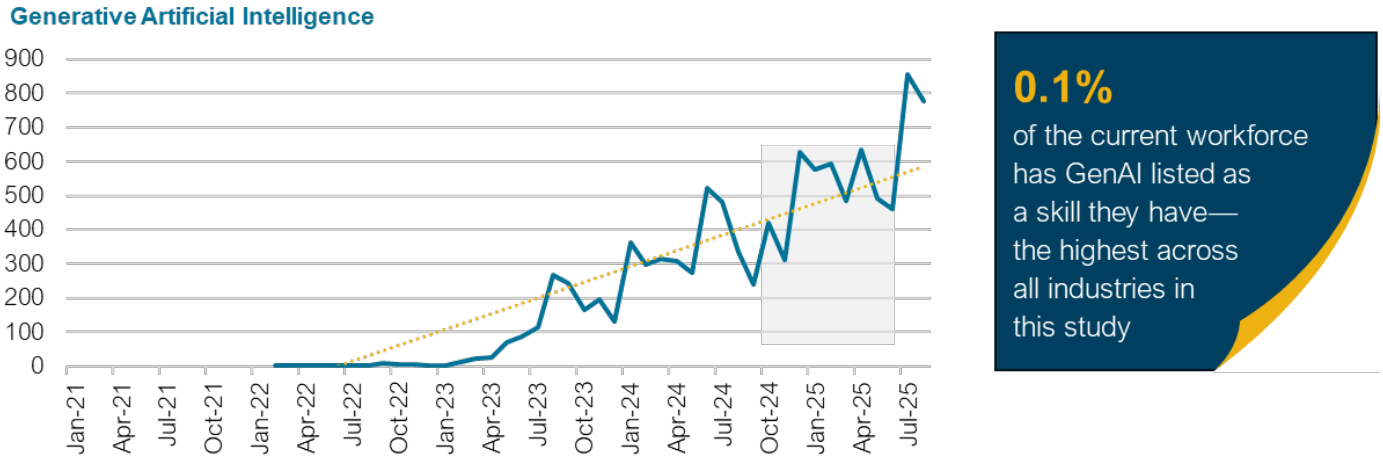


Figure 14: Life Sciences Workforce: Large Language Modeling

For life sciences, over 38% of time spent within the top 20 occupations will be impacted by GenAI. Per the graph below, the levels of automation and augmentation related to Generative AI adoption in life sciences only show a 2% difference between their impact. Positions like customer service representatives, computer analysts, and general managers have a high degree of automation and augmentation potential. Conversely, positions with a high degree of non-language tasks, like chemical equipment operators, maintenance workers, and laborers are expected to have a low impact affect due to GenAI in the workplace. This means that the life sciences industry should place a greater emphasis on preparing its workforce to integrate GenAI into their job functions.

On average, GenAI can affect 38% of all hours worked by top 20 occupations

- 20% of the time is susceptible to higher automation and 18% is susceptible to higher augmentation
- It means that workers on average spend this amount of time on tasks that could be significantly impacted by Generative AI

LLMs Impact on the Top 20 Life Sciences Occupations in Indiana
Ordered By Employment Levels in 2023

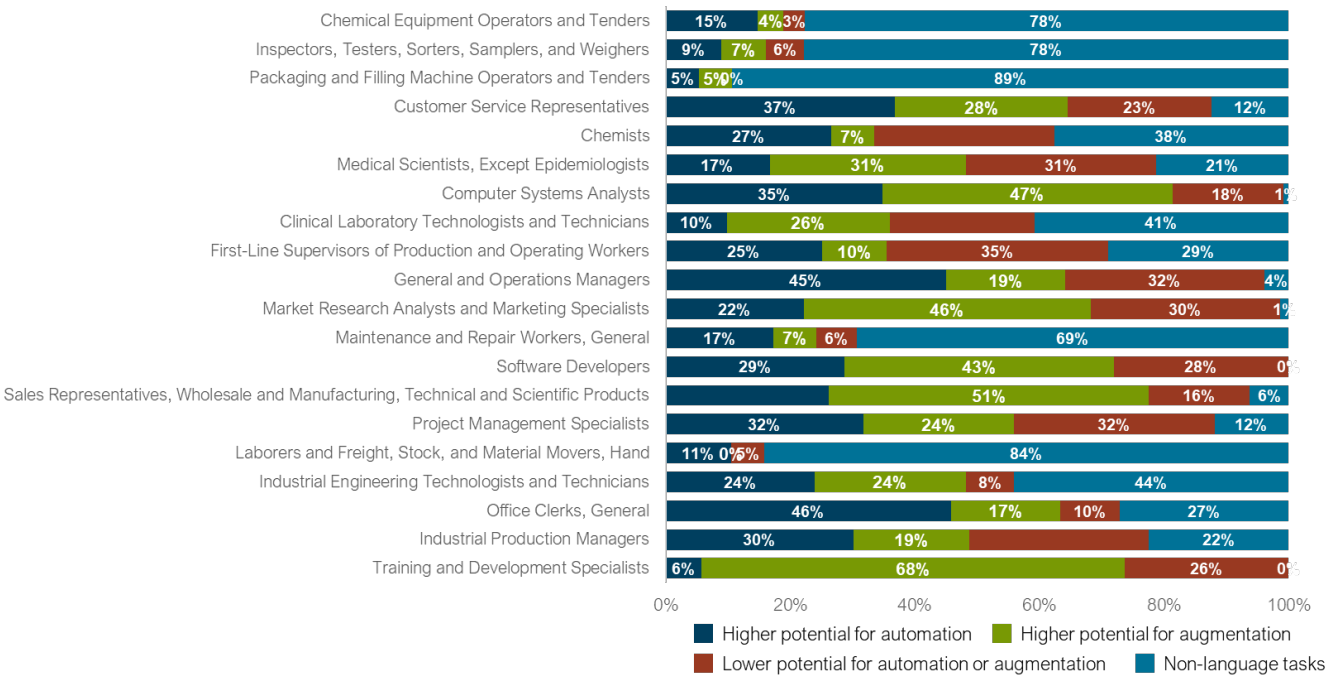


Figure 14: Percentage of work hours anticipated to be impacted by AI and GenAI for the top 20 occupations in life sciences

Life Sciences Use Cases[xxviii]

Business Problem	AI Driven Solution	Outcome	Way to Build and Expand
Data Entry is a critical component of Research & Development. However, it is often a tedious and time- consuming process to complete.	**Natural Language Processing (NLP)** combined with Optical Character Recognition can scan various formats of documents and convert to one centralized database.	R&D teams can more quickly begin analysis of data rather than on manually entering data.	Add a Recommendation Engine into the workflow to enable review database for interesting data points for more targeted research.
Drug Marketing is a complex process that involves marketing at multiple stakeholder levels to effectively persuade patients to use a specific available treatment.	**Predictive Marketing Analytics** can help marketing teams create campaigns using themes that are culturally relevant to target patient populations.	Marketing teams can reduce time spent on brainstorming, accelerating the pace toward Go Live.	Add other GenAI tools and integrate with CRM platform, to support sales teams in developing tailored email communications to providers for increased sales potential.
Drafting legal agreements that comply with regulatory and internal requirements calls for professional review and can be tedious and time burdensome.	**Machine Learning and Large Language Models (LLM)** can create documents using internal and regulatory guidance to ensure compliance and reduce risk.	Legal Department staff can reduce time spent on review and benefit from greater confidence that documents are standardized across the enterprise.	Add other GenAI tools and integrate with ERP systems to scan existing documentation and propose updates based on newly released guidance from regulatory bodies or internal governance policies.
Chemist's ability to manually produce and test small molecules is constrained to the time in the day.	Model-driven drug discovery uses AI to create simulated small molecules that can be tested for viability.	Chemists can drastically reduce the time committed to manually produce small molecules for testing.	Add automation to enable robotics to autonomously conduct testing.

Bringing it to Life

Eli Lilly is an American multinational pharmaceutical company headquartered in Indianapolis, Indiana, with offices in 18 countries.

As of October 2024, Lilly is the most valuable drug company in the world with a $842 billion market capitalization.

At the summit, Eli Lilly's Senior Vice President, Ramesh Durvasula, shared how their work with Generative AI has revolutionized research and development capabilities through advancements such as model-driven drug discovery. Before this groundbreaking technique, scientists were limited to the manual production of a few thousand small molecules annually with moonshot odds of moving through the development stages to yield a successful drug treatment. Now, with Generative AI powered model-driven drug discovery, scientists can computationally evaluate billions of small molecules for testing and reduce the average development phase by one to three years.

In the model-driven drug discovery use case that Ramesh shared with the audience; his scientists did not initially favor the recommended chemical transformation the algorithm produced; however, they decided to test the prediction anyway. To their surprise, the model correctly identified an improved possible drug candidate. From there, chemists built off the initial prediction from the model and combined the results with their own theorized modifications resulting in a successful recipe for a pre-clinical candidate that the company hopes to bring to market. This example demonstrates the value GenAI can provide in the drug-making process but also emphasizes the importance and need for human participation and understanding about the role of these technologies in the work they do.

Agbioscience

On the Summit stage, representatives from Corteva, BiomEdit, Elanco Animal Health and The Engineered Innovation Group spoke to how GenAI is transforming the workplace. Maia Donahue represented Indiana-based Corteva, and described how her company is tackling challenges to productivity as the industry is facing unpredictable weather patterns, population growth, and far-reaching disease outbreaks. A leader in innovative farming practices, Corteva recognizes open-source platforms as a core part of its mission. As it relates to adoption, the company naturally champions the use of these technologies from the fields to the manufacturing floor. Using GenAI, Corteva scientists reduce inaccuracies in the chemical identification process to help farmers optimize crop yields and manage field health. Across business units, Corteva has integrated the use of chatbots and transcription tools to aid workers with their daily activities.

Indiana ranks eighth in the nation as one of the top agriculture-producing states.[xxix] In 2022, the industry generated $22.7 billion in gross domestic product and employed 147,075 people, which makes Indiana's agbioscience industry a natural choice to investigate the prospects of GenAI in the workforce and workplace.[xxx]

$22.7B GDP
Generated by the Agbioscience Industry for Indiana

The industry's foundation is the rich, vast farmland and geographical position within the United States.[xxxi] Business leaders focused on research and development are attracted to Indiana's fertile ground. However, at the Summit, experts expressed the need to innovate and adapt, given more frequent occurrences of external factors that threaten production, such as severe weather fluctuations, livestock and crop disease outbreaks, and invasive species. With GenAI, farmers and scientists alike have an opportunity to gain greater control on outcomes, while still maintaining their industry knowledge and human intuition. To ready the workforce for GenAI, panelists advised industry leaders to forecast organizational needs to ensure data is collected, collated, and prepared in a manner that can be useful inputs to the algorithms needed for GenAI.

AgriNovus Indiana, a nonprofit member of CICP, sees potential to grow the industry by an additional $4B by the close of 2024. In a recently published report, AgriNovus shared their vision for Indiana's agbioscience future, prioritizing three main growth areas which include: farmer-focused innovation, food is health approach, and biological science innovations. The organization champions the link between a well-prepared workforce and overall industry success. With greater market growth in reach, experts shared that employers are ramping up the workforce with specialized skills related to GenAI.

Workforce
Counties in urban areas have had the most growth in job postings compared to rural areas. However, industry-wide, workers are supported with an appealing compensation. Average wages of agbioscience jobs (excluding farm proprietors) topped $69,000 in 2021.[xxxii] In agbioscience, 0.3% of the current workforce explicitly demonstrates knowledge in AI skills. Of note, agbioscience is anticipated to see fluctuations in demanded roles requiring GenAI skills, as the following charts show.[xxxiii]

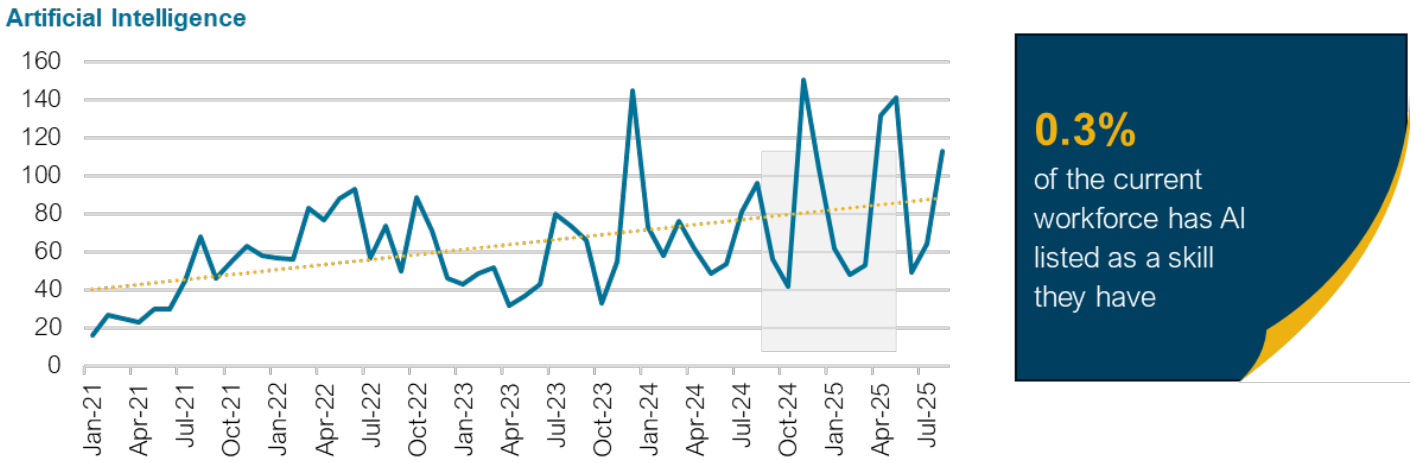


Figure 15: Agbioscience Workforce: Artificial Intelligence[xxxiv]

In contrast, only 0.03% claim to have a specific knowledge base in GenAI. However, the industry shows an uptick in employers seeking the skillset, with GenAI making up 0.1% of all posting requiring the skill.

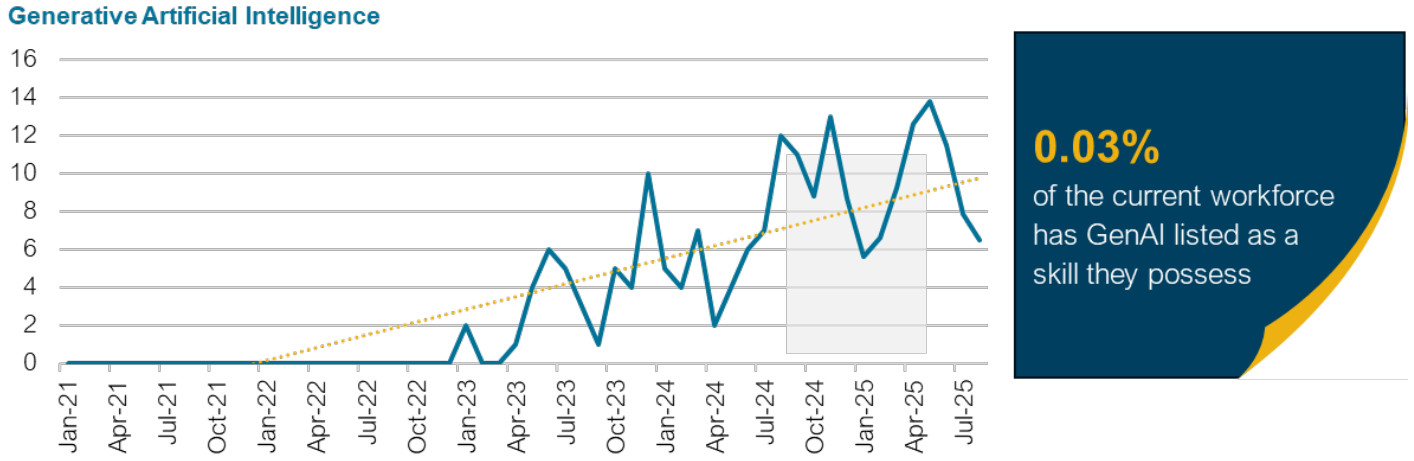


Figure 16: Agbioscience Workforce: Generative Artificial Intelligence[xxxv]

For emerging skills, unlike the other industries, agbioscience does not have large language models as an explicit demanded skillset. However, this may be due to the various position types of the industry involving predominantly non-language tasks for roles like farm workers, tractor operators, and maintenance workers, which may skew the industry in favor of other AI-related skills.

Agbioscience stands out across the four industries, as automation and augmentation have the most potential impact on worker's time. Across all industry hours worked, 53% is expected to be affected in the top 20 occupations. Projections show that 33% of the hours will be impacted by automation, with 20% impacted by higher augmentation. As noted, the industry has significant variability between roles with non-language-based tasks and roles with high degrees of language-based tasks. Surprisingly, even animal caretakers are expected to have a higher degree of impact by GenAI. [xxxvi]

On average, GenAI can affect 53% of all hours worked by top 20 occupations

- 33% of the time is susceptible to higher automation and 20% is susceptible to higher augmentation
- It means that workers on average spend this amount of time on tasks that could be significantly impacted by Generative AI

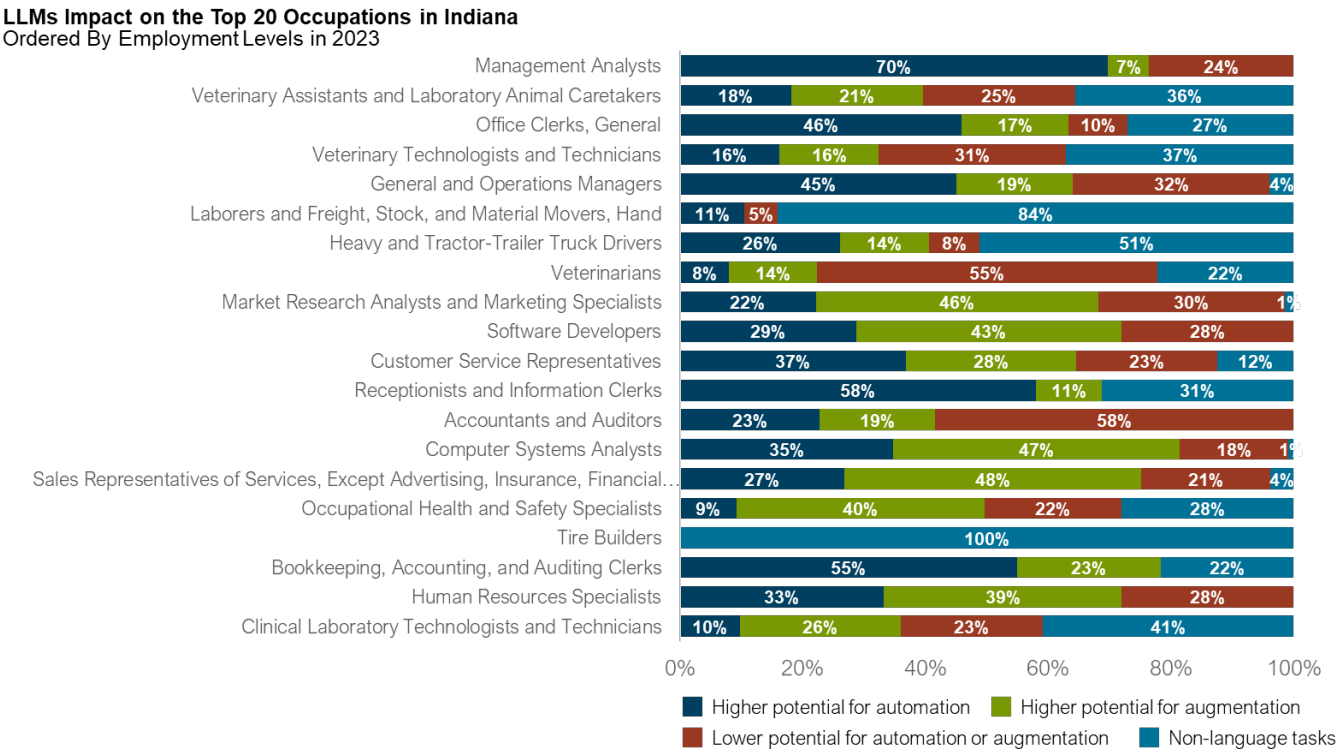


Figure 17: Percentage of work hours anticipated to be impacted by AI and GenAI for the top 20 occupations in Agbioscience

Agbioscience Use Cases[xxxvii]

Business Problem	AI Driven Solution	Outcome	Way to Build and Expand
Veterinarians can be challenged by the task of writing notes during an examination. Interferences like weather, a distressed animal, or competing responsibilities can sidetrack key clinical notation.	Transcription tools powered by **Speech-to-Text algorithms** can capture notes with a push of a button; more advanced systems can summarize notes and are optimized for specific industry jargon.	Reliable notetaking and uniformity reduce time spent on drafting process.	Integration to other GenAI systems can enable diagnostic and treatment recommendations, as well as help track disease progression and compare to other clinical factors.
Farmers can feel helpless when crop yields are impacted by external factors like weather fluctuations.	**Machine Learning, Large Language Models** can be used to alert farmers to external threats.	Scientists gain greater vigilance in mitigating issues like soil health based on GenAI recommendations, optimizing growing potential.	Add pattern recognition and computer vision to monitor growth and enable detection of plant health and abnormalities.
Farm workers take on the labor-intensive job of harvesting crops. The picking process can take a major toll on human health.	**Machinery Automation and Computer Vision** can augment the harvesting process and optimize picking to when the crop has fully matured.	Farmers can alleviate strain on the human body and redirect workers' time to more specialized tasks.	Pattern Recognition and Computer Vision can be used to prevent disease outbreaks and help farmers better respond to invasive species.

Bringing it to Life

Corteva Agriscience, headquartered in Indianapolis, is a global agriculture company that supports farmers with a full suite of services, from seed and crop protection to digital solutions.

Corteva's Digital Farming Platform Lead, Maia Donahue shared with the Summit audience how the company is reimagining farming with Artificial Intelligence. The company prioritizes open-source models as a path to greater innovation and community stewardship. Corteva uses various types of these technologies including LLMs, GenAI and machine learning to help build new tools and contribute to the larger agbioscience community. Maia and her team are working to gather specific agriculture data so that they can later partner with technology companies that have more robust capabilities to train open-source models for Corteva's solutions.

Without technology partnerships, smaller companies are ill-equipped to implement specialized data sets on their own. Currently, Corteva's granular insights software tool allows farmers to project how profitable their crop fields will be over time. However, through an open-source approach, Corteva hopes to automate data and use GenAI in the collection process from the field, which will give farmers the ability to monitor insights in real time. This will equip farmers to make better decisions, which ultimately results in time and cost saving. For Corteva, their goal is to harness analytics to manage resources sustainably, focusing on water use, carbon emissions, and waste reduction.

Logistics and Transportation

As this report details, Indiana is a clear example of a maker's state. Which naturally makes it also a mover state. Like its robust manufacturing landscape and trailblazing advancements in agriculture and the sciences, logistics and transportation are core to Indiana's gross domestic profit (GDP). Paired with the emergence of GenAI, the state has a lot of potential to grow the industry with even greater gains. Currently, the state transports $650 billion in goods and services each year.[xxxviii] It is home to the sixth largest cargo airport in the nation, as well as the second largest FedEx air hub worldwide.[xxxix]

In 2020, e-commerce sales increased by **$240B**

With the infrastructure in place, Indiana-based employers can use GenAI to optimize processes to become more agile and capture more market share. In retail alone, there is evidence that logistics and transportation will continue to boom as consumer habits have remained changed since the onset of the pandemic. Due to lockdown restrictions and threats to public health, the pandemic opened the door to higher demand for shipments while consumers opted to stay indoors. According to the U.S. Census Bureau, in 2020, e-commerce sales grew over $240B to reach $815.4B, up 43% from 2019's $571.2B.[xl]

Drivers can carry **12% more freight** by using GenAI recommendations to load trucks

With the growing demand throughout the industry, business leaders are deploying GenAI to support various job functions like modeling more efficient transportation routes, improving packaging selection, and increasing safety. For instance, tools like AI-powered load optimizers help planners get the most out of every haul by generating recommendations to efficiently and safely pack, while minimizing environmental impact. Inside the warehouse, GenAI paired with 3D palletizers creates a safe workplace as automated machines stack products to ensure the best fit for stability and space considerations reducing the physical demands of workers. Findings show that when using these technologies, teams can increase capacity usage by 12%, which means more goods transported. Moreover, mapping predictions in route selection reduces fuel costs by 17%.[xli] Overall, GenAI impacts translate to reduced travel costs, saved time, and an increased amount of goods transported.

Need for **1.1M New Truck Drivers** in the next 10 years

In the transportation segment, the concept of "human at the helm" is ever truer since job functions will have low to no exposure to the impacts of GenAI. The industry includes many roles that are physically demanding, which are less attractive to today's workforce. However, nearly 70% of United States' freight is dependent on trucking to transport, which means that the demand for workers will remain constant. Data shows that the industry estimates that there is a need for 1.1M new truck drivers in the U.S. in the next 10 years.[xlii] However, with an aging driver population forecasts show only a nominal increase may take place. Despite demand, the current workforce is aging and nearing retirement age, requiring the industry to turn its attention to succession planning. According to the Bureau of Labor Statistics, the average age of commercial truck drivers is 55 years old.[xliii] Currently, employers across Indiana seek truck drivers, freight workers, tractor operators and other roles that rely on manual labor to meet the needs of their industry and business models.

NTT Brings AI and Data Innovation to the Indianapolis 500[xliv]

A surprising place Indiana is trailblazing in AI is the Indianapolis 500. According to Technology Magazine, the iconic racing event partners with NTT Data to improve the fan experience through driver insights, venue enhancements, and simulations.

NTT uses computer vision, sensors and digital ticketing among other advanced AI tools to help operations teams manage security screening, traffic, and crowd flow. On the track, race cars are equipped with 100+ sensors to collect data and keep fans informed on driver performance. Fans can also dive into an immersive virtual experience that is made possible by performance data drawn from the inputs of the actual race event.

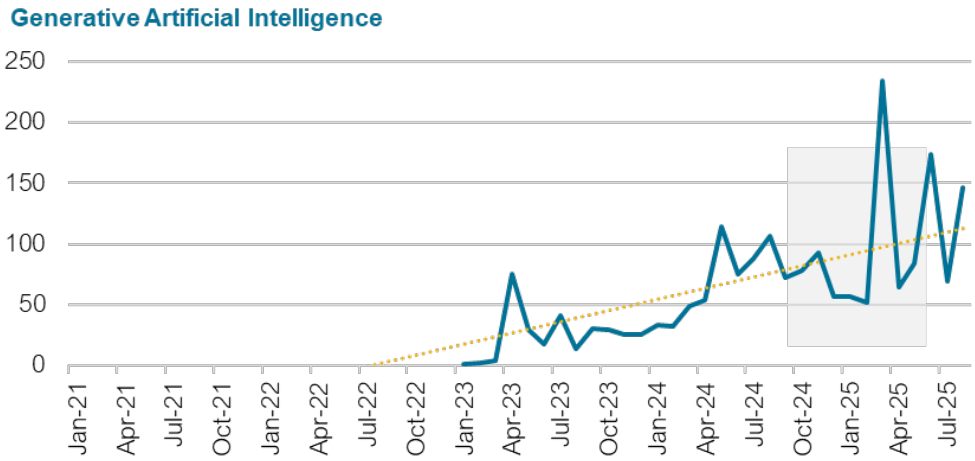
GenAI may be a solution to reduce the burden on drivers, allowing technology to automate typical human controlled tasks. Several states have experimented with the human-human platoon approach to support drivers in following the lead truck by managing speed, travel gaps, and braking. In this method, each truck in the platoon has a human driver that enables assistive technology tools to reduce errors and stress as they traverse difficult terrain, traffic, and physically intensive equipment.[xlv] More broadly, the industry can attract and retain workers with the right emphasis on training, safety, and work-life balance. As the use cases for GenAI increase across logistics and transportation, the manufacturing, life sciences, and agbioscience industries will also benefit.

Workforce

In logistics and transportation, 0.1% of the current workforce demonstrates knowledge in the broader AI skill. However, just 0.02% claim to have the explicit knowledge base for GenAI. Across the other industries, GenAI is ranked the 4th most demanded skillset. In contrast, in logistics and transportation it is ranked 13th with .003% of workers reporting to have GenAI as a skillset. However, it is expected to soon trend upwards into highly demanded emerging skill for the latter portion of 2024. And, unlike the other industries, GenAI is expected to have continued growth beginning in the first half of 2025.

On average, GenAI can affect 33% of all hours worked by top 20 occupations

- 22% of the time is susceptible to higher automation and 11% is susceptible to higher augmentation
- It means that workers on average spend this amount of time on tasks that could be significantly impacted by Generative AI



0.02%
of the current workforce has GenAI listed as a skill they have

Figure 18: Logistics and Transportation Workforce: Generative Artificial Intelligence[xlvi]

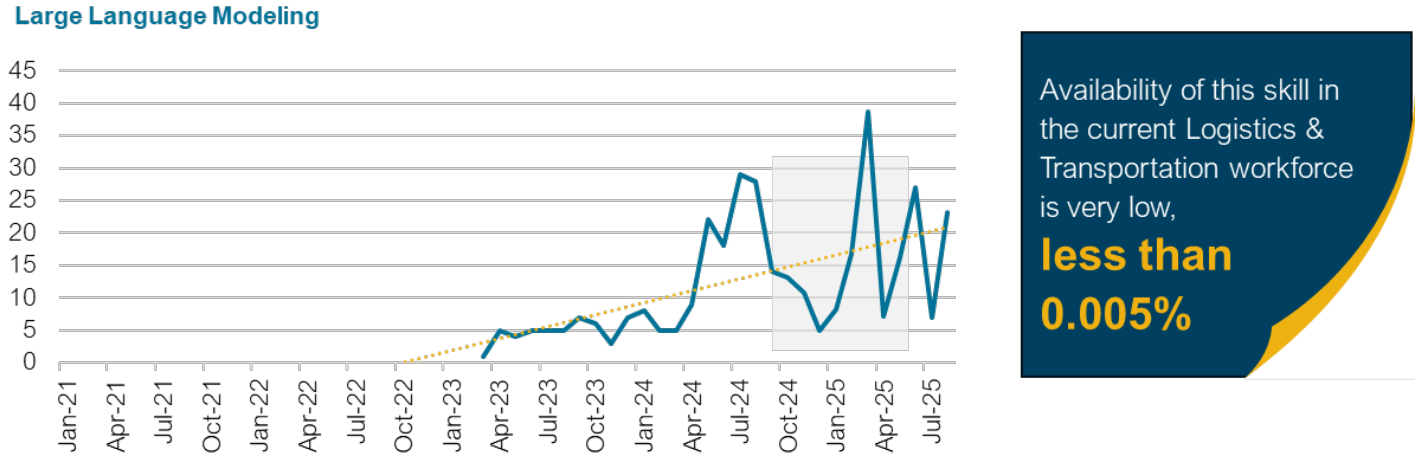


Figure 19: Logistics and Transportation: Large Language Modeling[xlvii]

For the top 20 occupations in logistics and transportation, 33% of all hours worked are expected to be impacted by GenAI. With 22% of hours worked in those tasks slated to be automated and just 11% to be augmented. Like agbioscience, this industry has a great deal of job functions associated with non-language-based tasks. Drivers across the industry can expect some impacts to their jobs with GenAI's current course of adoption; however, the greatest impacts will be with office clerks, general managers, and customer service representatives. The industry can prioritize exposing GenAI-related use cases to this workforce to unlock greater innovation across the field. [xlviii]

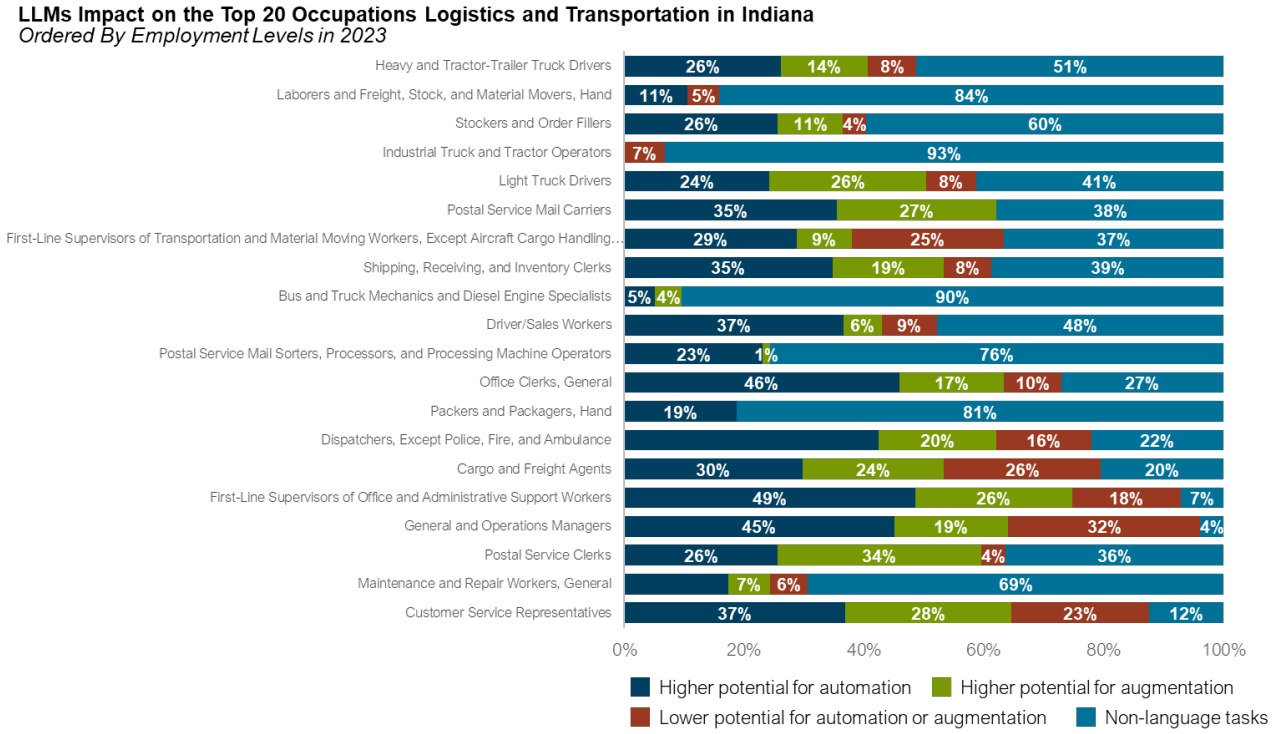
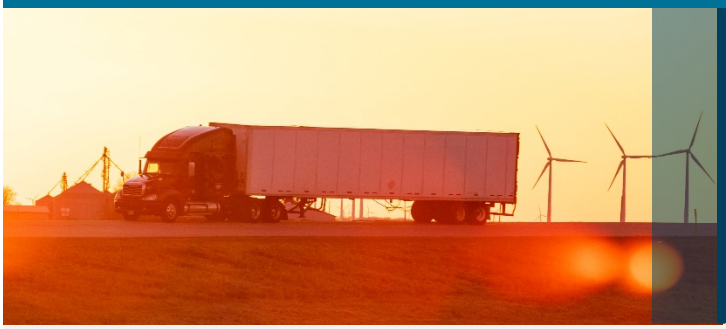


Figure 20: Percentage of work hours anticipated to be impacted by AI and GenAI for the top 20 occupations in logistics and transportation

Logistics & Transportation Use Cases[xlix]

Business Problem	AI Driven Solution	Outcome	Way to Build and Expand
Transportation companies are working to balance rising fuel costs and inflation with customer satisfaction, requiring business leaders to find ways to reduce delivery times and costs.	**Intelligent Route Optimization** is a GenAI tool that can help predict the best route in real time. The technology uses machine learning to make recommendations based on current road conditions, traffic, and infrastructure constraints.	Trucking companies will benefit from reduced fuel costs and emissions. While truck drivers will experience improved driving conditions with less traffic and delays.	Add predictive analytics to forecast fuel economy based on the weights of trucks during the planning process.
Trucking is a demanding job and unexpected breakdowns in vehicles can cause stress on drivers. When trucks breakdown it poses a dangerous threat to safety and impacts customer satisfaction.	**Predictive Maintenance** can be used to detect truck issues before breaking down and monitors performance to provide service alerts ahead of time.	Drivers will benefit from greater insight into vehicle health and provides more confidence on the road.	Add additional AI tools to predict profits and costs of vehicle maintenance for future years using archival data and real time market conditions.
Docks can be a crowded and dangerous setting for truckers as they work to load/unload freight.	**Automated Dock Scheduling** optimizes the process of loading and unloading freight by automatically scheduling dock times based on traffic conditions, warehouse capacity, and congestion.	Drivers can benefit from a reduction in delays and costs associated with late arrival penalties.	Pair other AI tools like predictive analytics to help truck drivers determine potential disruptions prior to arrival; load optimization tools can more efficiently pack trucks for optimally safe transport.

Bringing it to Life



Langham Logistics is a woman-owned, third-party logistics and freight management company headquartered in Indianapolis.

From the Summit stage, panelist Lee Ann Lobue Merriman, Director of Customer Experience at Langham Logistics, shared her GenAI-enabled rapid response to increased service demand from customers as they emerged from the pandemic. Langham Logistics is a third-party logistics (3PL) company specializing in temperature-controlled warehousing and transportation, largely serving the life sciences industry. As seen across industries, since the pandemic, the growth within life sciences has materially shifted customer needs and expectations—that is true for business-to-business transactions, too. For Lee Ann, that meant creating new types of contracts to account for customer requests for more frequent access to products and associated data. As she worked to accommodate, Lee Ann also had to assume greater responsibility and inherent risk in safely, securely, and compliantly handling those goods, especially given the fragile nature of many life science products.

Lee Ann's team addressed the changing landscape with human intuition and explored where GenAI tools could successfully support operational improvement. This approach equipped the workforce with the requisite confidence to provide value to the customer and position the company as a standout choice among the competition. Now, AI is integrated into inventory tracking, labor management systems, security systems, and business development areas. For example, AI-powered drones scan pallets across Langham Logistics' five facilities to ensure accuracy and availability of products, fetching case data and metrics like temperature readings. In labor management, Lee Ann can share with business leaders and customers real-time data on all employees with security access, records of training, and compliance with other onboarding requirements. GenAI is also in Langham Logistics' security apparatus helping oversight teams determine whether there is an intruder by using predictive analytics to track abnormalities in driving patterns. On the business development side, Lee Ann is working to develop a library using legacy data that can assist in more quickly developing RFP responses for prospective customers. At each use case, Langham Logistics is building resiliency as the data is collected and collated in an organized manner.

Although GenAI improved many facets of the customer experience, other business units require further preparation to be a valued pursuit for the company. Lee Ann emphasized the need for exploration and collaboration. She prioritizes cultivating a strong culture that embraces a new generation of thinkers but also celebrates the institutional knowledge of her dedicated veteran workforce. As generations prior, successful transitions into a new era beckons an appreciation of the skills all age groups offer. To evangelize the power of GenAI, Lee Ann is focused on stewardship across sectors and in partnership with academic institutions through external lunch-and-learns hosted by Langham Logistics.

Closing

Data shows that the real value of GenAI can be realized when employers embrace employee innovation and value their collective institutional knowledge, while ensuring the ecosystem has tangible exposure to the technology. Whether it be in the classroom or the plant floor, successful leaders will take a dual approach of teaching responsible principles and allowing for experiential learning. Throughout the use cases highlighted in this report, the common thread is that humans remain at the helm of each phase of the implementation life cycle (planning, work, decision making, etc.). With that said, this new era of work will be characterized by continuous change. The way we do work and interact with work will take patience, commitment, and tenacity to realize the benefits of GenAI.

In this report, we focused on Indiana's four most prominent industries; however, GenAI will inevitably shift how we all interact and fit into the work and workplace around us. Over the past two years, business leaders have demonstrated incredible agility in accepting AI, in its many forms, to support the current workforce and rising student talent. The Indiana Chamber will continue to find opportunities to convene the business community, strengthen partnerships to grow its resource base, and otherwise help prepare Indiana businesses to compete nationally and globally as GenAI continues to change the business landscape.

At the Summit, each panel shared resounding pride in our workforce and the products that are made in Indiana and with Hoosier businesses' global reach will continue to lead and transform. With any new technology there will be shifts in tasks associated with roles and the time allocated to those tasks. However, given the nature of our work, the impact to these roles will not be immediate. The roles that show significant impact will find GenAI to be a welcomed addition as an assistive tool to complement the path to the finish line.

Collectively, the ecosystem needs to continue to educate, prepare workers, processes, and systems to adopt and adapt to GenAI. Broad training and upskilling will need to happen across the workforce, with subset developing deep AI and GenAI expertise. Earlier in this report, we discussed a methodology of "explore, experiment, and execute." At each stage, the Chamber is an active voice in helping businesses reach their goals and creating space for this to happen across the state.

Methodology

Research and Analysis:
As the AI Leadership Summit featured the 4 industries discussed in this report, we used NAICS codes associated with those industries to identify the associated relevant roles and skills. To understand the impact AI will have on the hours worked across the industries, our analysis was conducted in 4 steps, which include: identifying language tasks, assessing knowledge use on task, labeling task transformation potential, and rolling up tasks to job and industry level. We combined tasks' labels with employment statistics in order to understand the portion of worked time that could be transformed by the technology. We roll up jobs' estimates to industry level and other relevant workforce aggregates, like functions and industry specific job groups.

Data Scope

Task coverage	19,265 tasks
Jobs coverage	~900 jobs
Indiana	2023 Employment
Tasks	19,265
Language Tasks	9,934
High Transformation Potential Tasks	4,646
Augmentable Tasks	3,211
Automatable Tasks	1.435

We estimated the economic value impact of GenAI as the additional GDP growth driven by labor productivity improvement from adopting GenAI across the state economy. We considered several factors in determining economic impact: efficiency gains, likely job transitions, stimulation of labor force reshuffling, labor productivity growth, and GDP growth. In researching and analyzing job growth and requisite skills needed for the current and future workforce, we utilized Lightcast. Lightcast (a merger of Emsi and Burning Glass Technologies) has over two decades of experience of data analysis capabilities. Lightcast delivers reliable and trusted labor market data. Their tools collect real-time data from over 40,000 sources every day, contributing to a database with over one billion job postings and billions of other data points. That is combined with curated input from dozens of other statistical sources, like government agencies, to provide the most complete view possible* of the fast-changing labor market. To simulate the economic impact of GenAI, we calculated how changes in the composition of the labor force brought about by GenAI adoption would impact the state's Gross Domestic Product (GDP) growth under different assumptions.

The growth simulation comprised several steps:

- Job occupations were broken down into tasks, which had been tagged by Accenture researchers according to their transformation potential for automation and augmentation using a human + machine methodology.
- Estimation of productivity gains using all available experimental evidence from the economic literature to estimate the hours saved based on current state of GenAI.
- Prediction of likely job transitions between all possible pairs of occupations based on historical trends, labor market dynamics, and similarity in demanded skills.
- Envision three scenarios of how organizations could adopt GenAI across three parameters: innovation focus, pace of adoption, and degree of talent displacement.
- Simulation of labor force reshuffling to optimize automation or augmentation under each scenario.
- Modeling of additional economic output growth under each scenario, compared against consensus baseline growth projections.

The external/outside-in analysis exposes how Indiana's industries view themselves through the lens of what the State and its people share externally (e.g., LinkedIn, Glassdoor). Since it's based on external data, results will not exactly match actual state data. It is also a representation of how others perceive Indiana's talent. Other states are considered for benchmarks comparison. The comparisons are not necessarily considered as "good" or "bad" as every State has varying strategies and stages of evolution. These insights are meant to spark discussion internally within Indiana (specifically in four Industries—Agriculture, Life Science, Logistics & Transportation and Manufacturing).

AI Leadership Summit Panelists & Subsequent Qualitative Interviews:
The basis of our recap of the AI Leadership Summit derived from notes taken during each panel discussion, as well as review of the recordings of those sessions following the event. To gain greater insight and ensure we captured a range of voices, our team conducted qualitative interviews with several key stakeholders, including State Senator Liz Brown (Indiana District 15), Melina Kennedy (CICP), John Qualls (Blaizing Academy) and Ting Gootee (TechPoint).

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+ Designates a member of the AI Summit Steering Committee
^ Designates a Summit panel participant
* Designates an interview participant

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