

The background of the report cover features a dark industrial setting. In the upper left, a white robotic arm is partially visible. The central focus is a bright blue welding process, with a large, intense light source and a spray of sparks. The overall color palette is dominated by dark blues and blacks, with the bright blue of the welding providing a strong contrast.

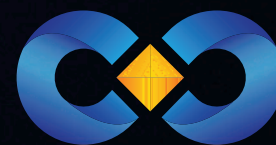
2024 Manufacturing

Readiness Grants

Impact Report

July 1, 2020, through December 31, 2023

September 2024



CONEXUS
INDIANA



Program Overview

The Manufacturing Readiness Grants (MRG) program began in 2020 as a bold and innovative approach to accelerate the Fourth Industrial Revolution (Industry 4.0) and modernize Indiana's advanced manufacturing sector. The program provides matching grants, up to \$200,000, to companies making capital investments in technology-enabled smart manufacturing equipment. Since inception, Conexus Indiana has administered the program on behalf of the Indiana Economic Development Corporation (IEDC) and partnered with Next Level Manufacturing Institute to deliver the program statewide.

MRG Program Awards

FIGURE 1: MRG PROGRAM AWARDS THROUGH DECEMBER 31, 2023

526

TOTAL AWARDS

79

TOTAL COUNTIES

733

TOTAL APPLICATIONS

\$57M

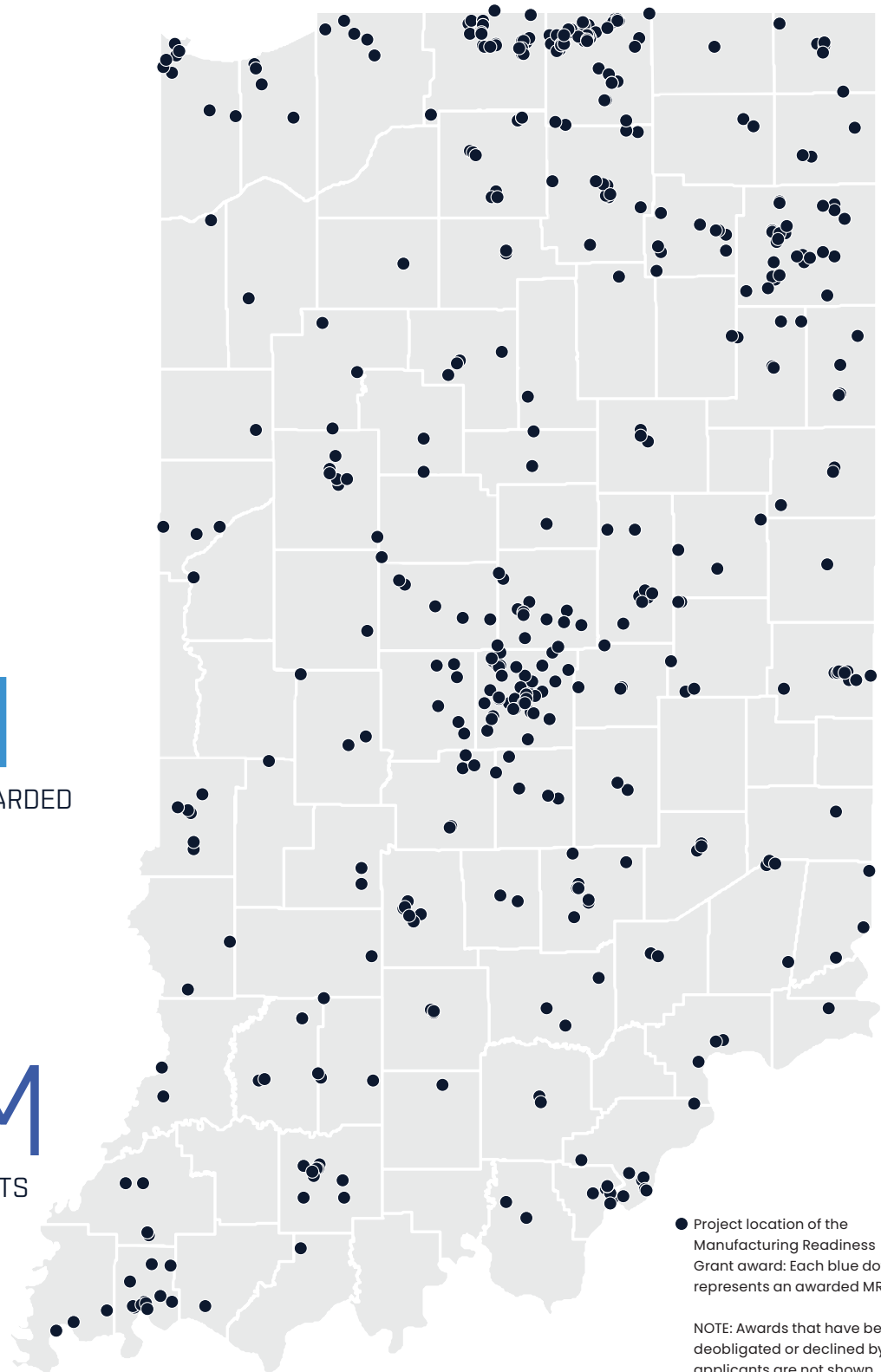
TOTAL GRANT FUNDING AWARDED

13:1

LEVERAGE RATIO

\$813M

TOTAL PROJECT BUDGETS SUPPORTED



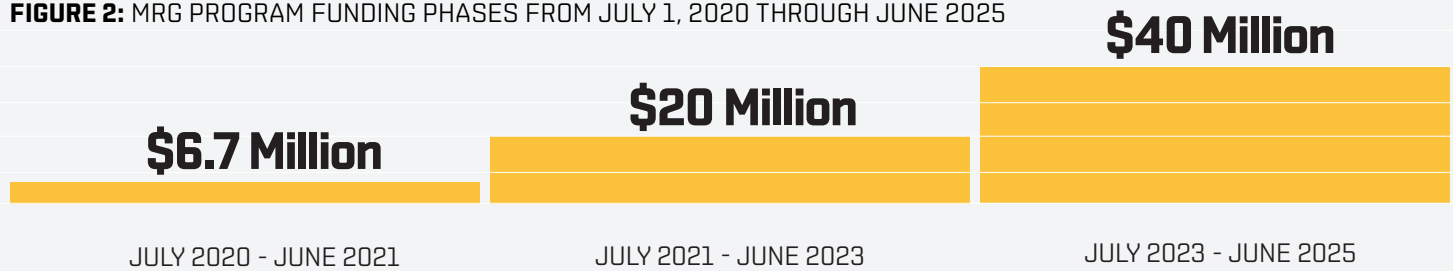
2024 MRG Impact Report

By The Numbers: In 2023 alone, 161 awards were made enabling \$329 million in technology-enabled, private capital investments to accelerate production capabilities and efficiencies across 50 Indiana counties. Since the program was launched in 2020, 526 awards totaling \$57 million have been awarded to 465 unique companies in 79 counties, accelerating proposed projects with combined budgets of \$813 million.

Funding History: The program was originally launched in July 2020 with \$4 million in funding as part of the IEDC's Economic Activity Stabilization and Enhancement (EASE) program.

Expansion: Despite quintupling in size, demand remains exceptionally high and exhausts available funds each year. Since its inception, 7.1% of Indiana's small- and mid-sized enterprises (SMEs) have taken advantage of the MRG program with qualified projects that average \$13 of private investment for each \$1 of grant support.

FIGURE 2: MRG PROGRAM FUNDING PHASES FROM JULY 1, 2020 THROUGH JUNE 2025





733

MANUFACTURING READINESS
GRANTS APPLICATIONS SINCE
PROGRAM INCEPTION

MRG Report Highlights

\$57M

IN TOTAL GRANT FUNDING
AWARDED



526

AWARDS MADE TO INDIANA
MANUFACTURING COMPANIES
SINCE 2020



Impact **Survey** Results

In March 2024, Conexus Indiana and the IEDC launched a survey to quantify expected outcomes on company revenue, wages and job growth. The survey results are based on 80 individual responses from MRG recipients within the reporting period that have completed their supported projects.

Business Impact: Advanced technologies can drive productivity and enable business growth, a widely understood relationship accepted by many academics and economic development leaders. The MRG impact survey results also support this viewpoint, with 35% of companies anticipating more than a 10% increase in revenue growth, which equates to a \$1.6 million increase on average. This exceptional growth can be attributed to manufacturers' adding new capabilities, expanding production capacity, increasing efficiency, reducing costs and digitizing production systems. On average, each \$1 of grant support results in \$13 of capital expenditure, helping companies reinvest in themselves. These outcomes contribute to competitiveness and differentiation in the market as well as profitability.

Wages and Jobs Impact: Contrary to typical rhetoric about automation eliminating jobs, technology adoption continues to produce a net increase in job count – on average, four new positions are created for every MRG project. While automation does reduce manual-labor-intensive tasks, Indiana manufacturers are quick to upskill, reskill, and redeploy their labor pool to new jobs with higher-value tasks. Not only are firms keen to grow digital skills for existing workers or shift them to more analytical roles, they are increasing wages for these employees as a result, with a total expected wage growth of \$177,000 per project. This expected wage and company growth enables the State of Indiana to capture additional tax revenue through both corporate income and payroll taxes.

SURVEY RESULTS FROM 80 MANUFACTURERS

\$1.6M

AVERAGE ANNUAL
REVENUE GROWTH

4

NEW POSITIONS ON
AVERAGE

35%

OF COMPANIES
ANTICIPATE MORE THAN
10% REVENUE GROWTH

\$177k

EXPECTED WAGE GROWTH-
INCLUDING NEW AND
EXISTING POSITIONS

Manufacturers Turn to Tech to Increase Productivity, Expand Production Capabilities and Alleviate Labor Market Constraints

Indiana manufacturers continue to leverage advanced technologies—such as robotics, 3D printing, cobots (collaborative robots) and next-generation machines—to increase production output, speed and product quality. Productivity was selected by 80% of survey respondents as the leading effect of technology adoption as firms strive to achieve more with constrained resources. This mindset has always been prevalent throughout the manufacturing sector, but emerging technologies associated with Industry 4.0 are taking it to another level. Capturing new customers was cited by 53% of respondents as a realized goal of successful technology adoption. Showcasing production capabilities and facility modernization to new and existing customers is often a part of the pitch for manufacturers, making them more competitive within a global landscape.

DIGITAL TRANSFORMATION

82%

AUTOMATED MANUAL PROCESSES

45%

OPTIMIZED OVERALL EQUIPMENT EFFECTIVENESS

37%

DIGITIZED AND INTEGRATED MANUFACTURING SYSTEMS

Automation of manual processes was cited by 82% of survey respondents as manufacturers look to optimize the mix of automation and labor to refocus their workforces away from functions best suited for machines. And 37% of respondents selected digitization and integration of manufacturing systems as a project achievement.

More and more manufacturers see value in connecting their physical systems with machine data, digital systems and advanced analytics. Successful integration of the two can lead to better decision-making, improved workforce safety and collaboration across functions. These outcomes help manufacturers gain a competitive advantage over their peers.

ECONOMIC IMPACT

80%

ACHIEVED PRODUCTIVITY GAINS

77%

SCALED EXISTING PRODUCTION CAPACITY

53%

CAPTURED NEW CUSTOMERS

Hiring manufacturing workers and filling open positions across the United States has been a challenge within the sector since 2020 and will likely remain as so for the foreseeable future. Leveraging technology to alleviate these constraints by reallocating labor to other in-demand positions was a priority for 65% of respondents with many (60%) specifically investing in workforce development through upskilling or reskilling, likely with an emphasis on “digital skills.”

WORKFORCE DEVELOPMENT

65%

ALLEVIATED CONSTRAINTS OF LIMITED LABOR POOL

60%

ENHANCED WORKFORCE THROUGH SKILLS DEVELOPMENT/TRAINING

57%

CREATED NEW JOBS AND/OR GREW WAGES



Regionally and Nationally

Recognized for Thought Leadership

in Smart Manufacturing

The MRG program is continuously promoted to Indiana manufacturers through Conexus' newsletter, social media, paid LinkedIn campaign and Google search ads. As the portfolio of case studies continues to grow (with examples now in 33 of Indiana's 92 counties), a wide range of industries, products, technologies, processes and shared learnings at small- and mid-sized firms are available to the public. With this wide coverage of "Indiana's Future Factory," the stories have continued to inspire interest from trade media publications and provided Indiana many thought leadership opportunities for smart manufacturing.

Indiana's Industry 4.0 Leadership is Emulated

Indiana leads in economic development for Industry 4.0 through its significant investments in MRG. Several other states have taken note and either have launched, or are soon to launch, similar programs. There are examples in Michigan, Illinois, Massachusetts, Iowa, Maryland, Kentucky (launching soon) and likely others. Indiana was first to architect, launch and scale a robust program, and Indiana continues to maintain a competitive advantage through many key differentiators. Indiana must continue to lead with innovation resources for manufacturing—its largest sector—as competitor states are not standing still.

Key Differentiators for the MRG Program

Scale and Scalability: MRG offers up to \$200,000 in matching grants as compared to programs in other states, some of which limit support to \$25,000. Core program attributes, such as the application review process and program operations, were designed with statewide growth and reach in mind. The program has been able to scale from \$4 million initially to \$20 million annually while maintaining high standards of excellence, and has the capacity to scale further.

Peer Review by Subject Matter

Experts: Conexus Smart Manufacturing Fellows are distinguished individuals within Indiana's manufacturing ecosystem. They volunteer to perform a civic service as members of the advisory committee responsible for program execution, including due diligence via review of grant applications. The committee has conducted more than 2,200 individual reviews since program inception.

Harvard Business Review

Harvard Business Review, Brighton, MA

Read more: How Smaller Manufacturers Can Upgrade Their Tech



Northwest Indiana Business Magazine, Dyer, IN

Read more: Factory of the future | Northwest Indiana Business Magazine

Manufacturing Business Technology

Manufacturing Business Technology Magazine, Madison, WI

Read more: Lessons Learned From 400 Smart Manufacturing Projects in Indiana | Manufacturing Business Technology



The Society of Manufacturing Engineers (SME) / Smart Manufacturing Magazine, Southfield, MI

Read more: Arcamed Leverages Indiana Manufacturing Readiness Grant

Key Differentiators for the MRG Program Continued

Individualized and Non-Prescriptive:

MRG is designed to be inclusive of a spectrum of Industry 4.0 technologies, inviting each company to pitch for consideration the most appropriate next step on their own digital transformation journey. A wide range of technologies has been supported, with each applicant accountable for the detailed planning and execution of their project. MRG has no limitations on specific technologies that can be considered, but only technologies in the form of capital investment, sufficiently state-of-the-art in nature, and supported with business justification are likely to be funded.

Fueling Cultural Transformation: Applications are required to be forward-looking projects and often involve an "Industry 4.0 project champion" who is likely to continue leading future innovations for the applicant. Further MRG support for subsequent technology adoption is even possible provided that a prior supported project is completed successfully, any new application is directionally different in scope, and the total of all awards does not exceed \$200,000 in grant funding.

Availability of Local Expertise and

Application Support: Organizations such as Purdue MEP, Notre Dame iNdustry Labs, enFocus and the Indiana Small Business Development Center (ISBDC) are available to support local manufacturers with technology assessments, low-cost consulting and identification of technology partners. Indiana's robust ecosystem of manufacturing expertise is ensuring companies submit quality applications, optimize available benefits and contribute to a significant portion (71%) of applications receiving partial or full funding.

Tech Ecosystem Activation: Applicants are encouraged to leverage external subject matter expertise to augment their own perspective, especially local expertise based in Indiana. As Industry 4.0 projects grow in frequency, scope and complexity, Indiana's manufacturers increasingly rely on outside expertise from tech integrators, automation experts and educational providers for engineering, project implementation, software integration and workforce training. Automation can be a significant undertaking for SMEs, often coming with a price tag well into the hundreds of thousands, if not millions of dollars. Therefore, these collaborations are foundational for SME digital transformation and critical for achieving productivity gains.

Statewide Impact and Outreach: MRG awardees are located in 79 of Indiana's 92 counties (86%), with a program goal of supporting at least one project within all 92 counties. Conexus Indiana partners with local and regional organizations to mentor and educate individual companies, as well as host regional information sessions with emphasis on reaching rural and underrepresented geographic locations.

Case Studies: A diverse portfolio of documented success that is broadly and consistently promoted through multiple channels is inspiring technology adoption widely among small- and mid-sized enterprises. Visibility to case studies is bringing opportunities for national media attention that assert Indiana's bold approach for an Industry 4.0 manufacturing renaissance.

Strategic Growth Opportunities | Possible Avenues for Accelerated Impact and Investment

Entrepreneurial Ecosystem Engagement:

Indiana's hardtech innovation and startup ecosystem is rapidly growing. These firms develop and produce physical products, which are often proprietary. MRG typically supports manufacturing startups if they are beyond the prototype or product development stage and are ready to make capital investments in production processes.

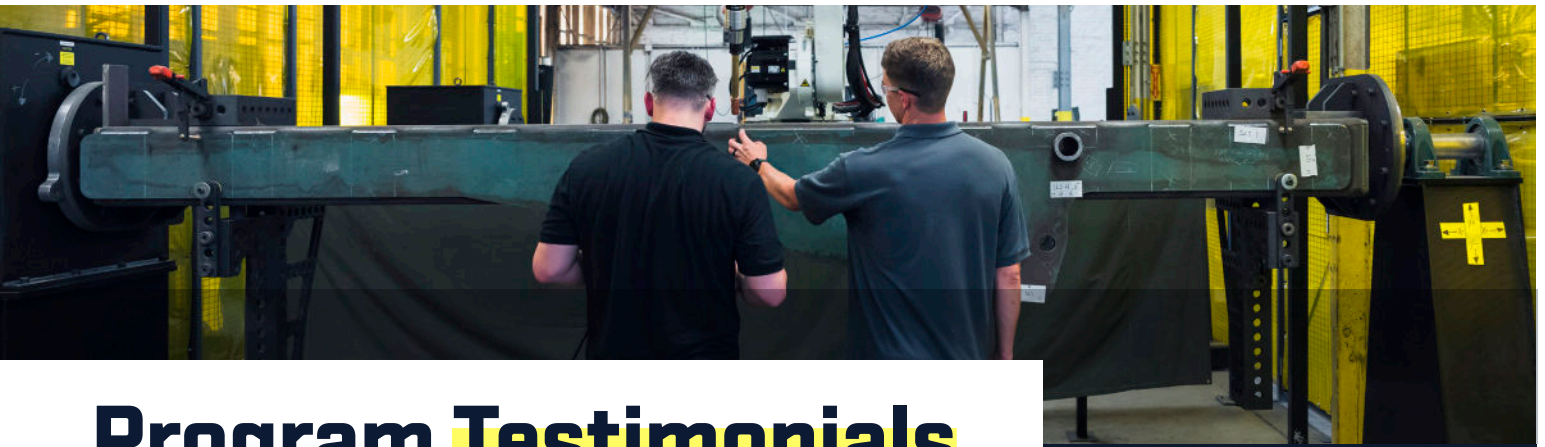
Manufacturing-Adjacent and Other Traded

Sectors: Manufacturing is known by economists as a 'traded sector' – goods and services are sold to customers outside of the region where firms are located, which brings new money into the local economy.

Supporting Industry 4.0 capital investment in both manufacturing-adjacent firms and firms from other traded sectors is worth considering. For example, Indiana is home to more than 6,300 logistics firms that enable sustainable and efficient supply chains. Like manufacturers, Indiana's logistics sector has a similar high-percentage of SMEs who are investing in next-generation equipment and technologies (Logistics 4.0) to monitor, manage and optimize their operations.

Tech Ecosystem Involvement: Manufacturing firms increasingly rely on outside sources of expertise such as systems integrators, automation experts and technology startups for technology adoption and innovation projects. The MRG program is one mechanism that can help cultivate new interactions and relationships between manufacturers and Indiana-based expertise to grow Indiana's innovation economy.





Program Testimonials

Innovation

“This grant was a game changer to our organization, especially in a time where the halt of [specific industry production] almost destroyed us. Now we are in an excellent position and **our culture has become significantly innovative. Rather than catching up with our competitors, we are starting to separate from them.**”

“Without the financial relief, we would still be struggling with what was - not what could be - and now, what is. **This grant has changed our company forever.**”

“In 30 years of being in business in Indiana and growing from start-up to 80-plus employees, **this was the biggest “game changer” for our business.**”

Workforce Safety

“These savings will then allow us to provide on-site training and teaching to our existing and new employees. **The automated process will also reduce physical strain on our employees,** thus improving employee longevity and enabling the employees to learn other facets of the manufacturing process.”

“This program has been instrumental in enabling us to redirect funds towards enhancing employee compensation. **It played a crucial role in our decision to include temporary disability insurance as part of our benefits package.**”

New Business

"It has allowed us to scale in ways I didn't believe possible before the grant. **We have started winning new business that was outside our abilities before** and our process times have dropped substantially."

"Without the state's help on the purchase of this program, it would have been hard for us to burden the cost of this machine. But since we were able to bring this work in-house, **we can utilize this machine to win new business we would never have been able to!**"

"This grant has had an amazing impact on our business. **It has allowed us to scale a specific product line we run for medical companies throughout the country, bringing more business to Indiana.**"

State Appreciation

"It's great to know that the State is behind us manufacturers. In northern Indiana, it's a real tough competitive marketplace with the supplier wheel to the RV Industry. The MRG program has played a major role in gaining a competitive edge."

"In our situation, it brought technology and capabilities to Indiana and our company that do not exist many other places in North America - **which puts Indiana and our company in a strong strategic position.**"

"The funding we received was crucial to our setup and long-term success. **We are thankful to operate our business in a state that cares about its people and businesses.**"



Case Studies

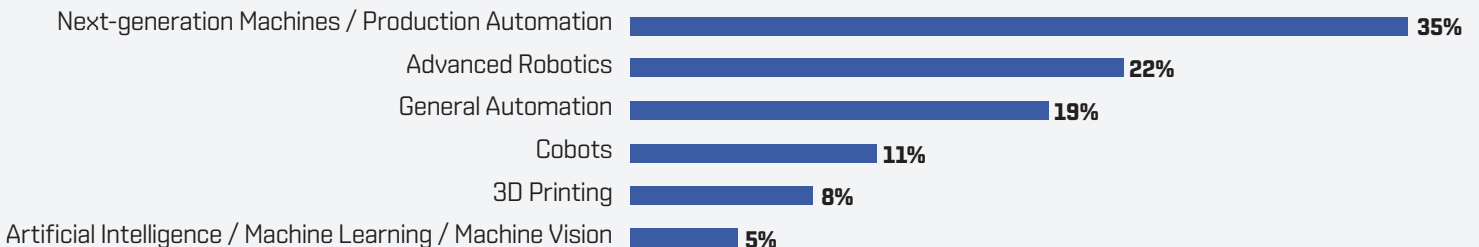
Showcasing Indiana as the Place for Smart Manufacturing and Digital Transformation

Over the last three years, Conexus Indiana has interviewed MRG recipients upon completion of their supported projects and published case studies documenting best practices for Industry 4.0. These case studies are continuously promoted across the state via multiple channels and collectively constitute a significant portfolio of success. The database is robust, with 63 examples documented in 33 of Indiana's 92 counties (36% coverage). Together, they represent a wide range of sectors, products, technologies, processes and shared learnings at SMEs. Many of the stories focus on companies that are in rural communities, have a rich history of operations, or are entrepreneurial in nature. These case studies have continued to spark interest from national media outlets, helping showcase

Indiana as the place for smart manufacturing and digital transformation. This is due, in part, to the MRG program's being one of the few programs anywhere that has documented technology adoption and digital manufacturing broadly across an entire state.

A deeper dive into the specific technology investments manufacturers are making point toward next-generation production systems with smart technology features (35%)—including IoT, advanced sensors, digital twin/digital thread software—and advanced robotics (22%). These two technology categories should come as no surprise as they offer manufacturers both significant productivity gains and increased capacity.

FIGURE 7: TECHNOLOGY INVESTMENT BREAKDOWN BY CASE STUDY (N=63)



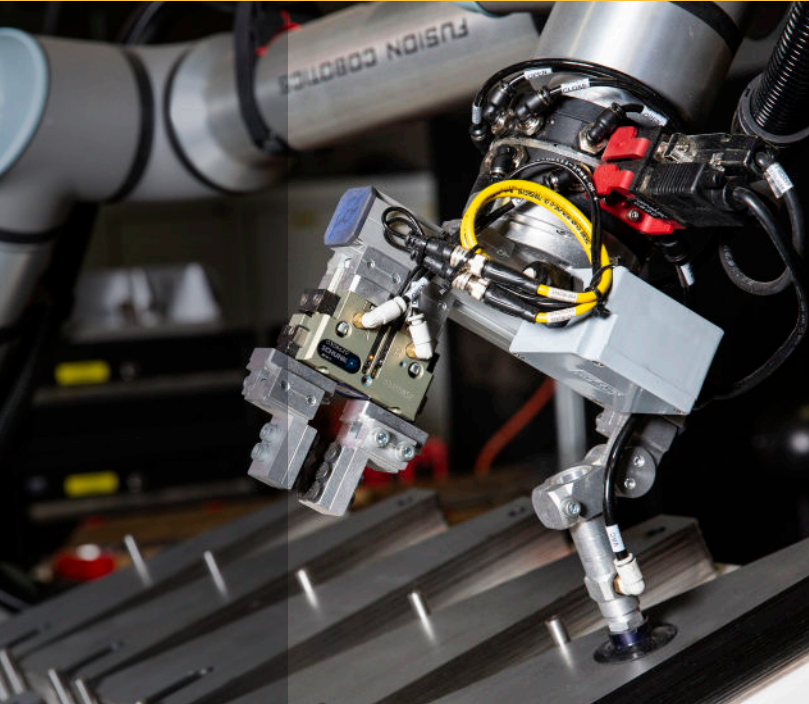


22%

INVESTED IN ADVANCED
ROBOTICS

35%

INVESTED IN NEXT-
GENERATION MACHINES/
PRODUCTION AUTOMATION



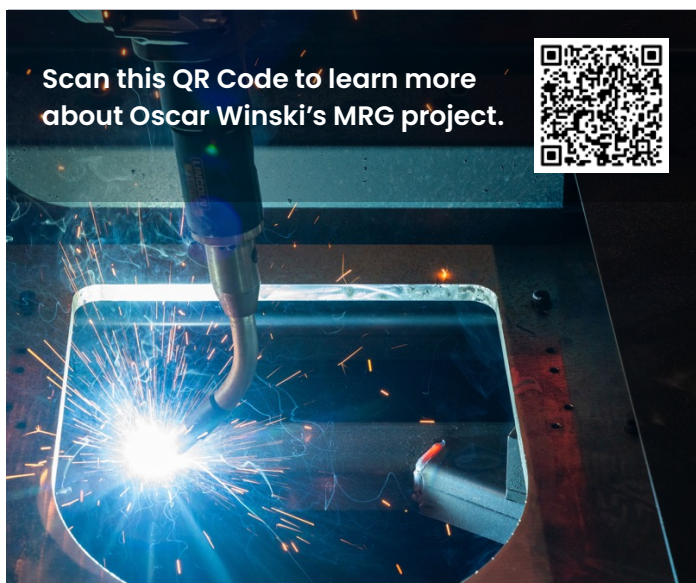
11%

INVESTED IN COBOTS

Case Studies

Statewide Industrial Innovation

While the stories focus on technology adoption, Indiana's manufacturers are doing more than just leveraging advanced technologies in their production processes—they are entering new markets, launching new products, onshoring production and innovating their processes. Within these 63 case studies, there are dozens of examples of how advanced technology was used as the foundation to create transformational business change.



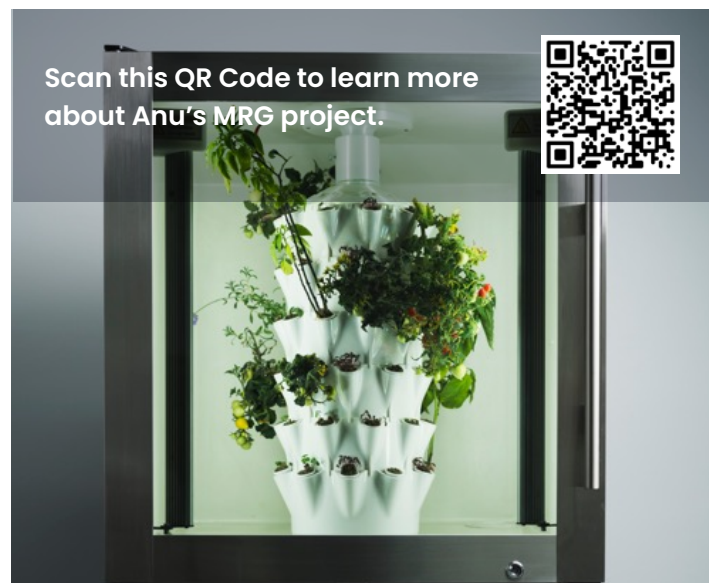
Scan this QR Code to learn more about Oscar Winski's MRG project.



On-shored Production

Oscar Winski Company
Tippecanoe County, Lafayette, IN

Oscar Winski, founded in 1907, recently advanced its manufacturing capabilities by adopting a robotic welding system. This modernization has enabled the company to on-shore production, enhance its competitive edge and reduce supply chain risks. The new technology supported by the MRG program not only boosts efficiency and quality but also aligns with the state's commitment to revitalizing domestic manufacturing.



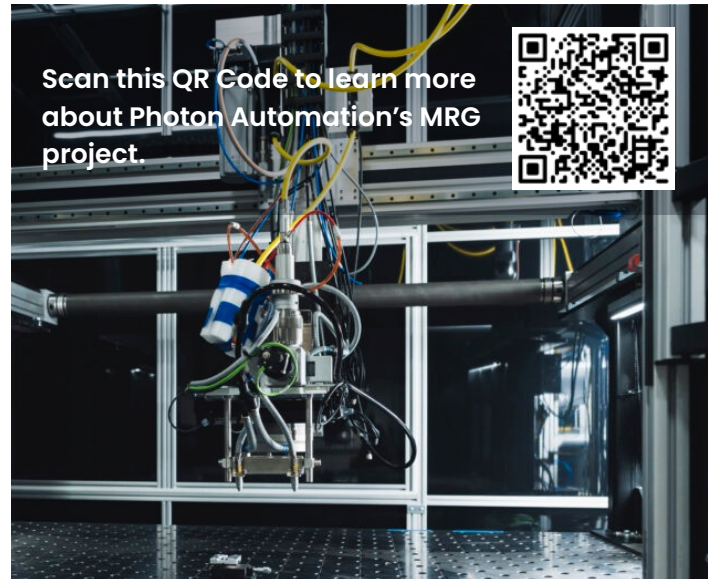
Scan this QR Code to learn more about Anu's MRG project.



Launched a New Product

Anu
Vanderburgh County, Evansville, IN

The Anu™ home garden, which resembles a small refrigerator, allows users to grow fresh vegetables and herbs year-round. With a \$200,000 Manufacturing Readiness Grant, Anu scaled its manufacturing capabilities to produce this rotary aeroponics system and consumable seed pods. The grant supports Anu's mission of "Farming Without Borders," leveraging Indiana's manufacturing and agricultural strengths to democratize food production and reduce food deserts.



Process Innovation

Smoker Craft Inc.
Whitley County, New Paris, IN

Smoker Craft Inc., leveraging a \$200,000 Manufacturing Readiness Grant, has revolutionized its pontoon production with a custom robotic tube welding system, a first-of-its-kind innovation. The robotic system, designed specifically for Smoker Craft, reduces labor costs and increased production capacity 10-fold. The successful implementation underscores Indiana's leadership in advanced manufacturing innovations.

Entered a New Market

Photon Automation
Hancock County, Greenfield, IN

Photon Automation funded the deployment of a cutting-edge fiber laser welding system designed to accommodate the manufacture of diverse battery sizes and materials, positioning the company as a leader in this emerging field. This advanced technology that integrates robotics, machine vision and proprietary algorithms supported Photon Automation's entry into low-volume contract manufacturing for various industries, including transportation and telecommunications. The company's successful entry into this new market highlights Indiana's role in fostering technological innovation and market expansion.

About Conexus Indiana

For more than a decade, Conexus Indiana, one of the Central Indiana Corporate Partnership (CICP)'s branded initiatives, has been positioning the Hoosier State as the best place for advanced manufacturing and logistics industries to innovate, invest, employ and succeed. By collaborating with industry, academic and public-sector partners on a shared vision for an innovative, skilled workforce and stronger business climate, Conexus Indiana has helped to create opportunities for advanced manufacturing and logistics companies, prepare Hoosiers to succeed in the state's largest industry sectors and maintain Indiana's competitive advantage. For more information, visit conexusindiana.com.

Acknowledgments

Thanks to the Indiana Economic Development Corporation and Next Level Manufacturing Institute for their support and execution of the Manufacturing Readiness Grants program and for partnering with Conexus Indiana to deliver the program.

Thanks to the Conexus Indiana Smart Manufacturing Fellows, a group of manufacturing professionals from diverse company demographics, industry sectors and regional locations around Indiana. Much of the credibility that propels the success of the program is due to their volunteer contributions in the form of anonymous peer review of MRG applications.



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