

THE ILLINOIS MANUFACTURER

THIRD QUARTER 2026
AI & TECHNOLOGY

HALL OF FAME &
EXCELLENCE
AWARDS

pg 6

BUSINESS
DAY

pg 34

PRSRT STD
U.S. POSTAGE PAID
BLOOMINGTON, IL
PERMIT NO. 437

FEATURE

*Argonne's Role in
America's AI Future*

pg 20

2026

LEGISLATIVE
ADVOCACY

pg 30

Who can customize an energy strategy that is right for my business?

Constellation can connect your business with a suite of products, foster strategic alliances, and leverage state-of-the-art technology to shape and execute your energy strategy. Backed by insightful intelligence and an unmatched grasp of market trends, Constellation provides comprehensive energy solutions and diverse pricing options for electric, natural gas, and renewable energy products, tailored to companies of all sizes across every competitive energy market in the U.S. Your journey to optimal energy solutions begins with Constellation.

To learn more about the IMA Energy Program with Constellation, contact Rich Cialabrini at richard.cialabrini@constellation.com or 847.738.2510.



constellation.com/IMA

©2025 Constellation. The offerings described herein are those of either Constellation NewEnergy, Inc., Constellation NewEnergy-Gas Division, LLC or Constellation Navigator, LLC, affiliates of each other. Brand names and product names are trademarks or service marks of their respective holders. All rights reserved.
Constellation is the endorsed energy supplier of this association which receives compensation for its promotional and marketing efforts from Constellation.

TABLE OF CONTENTS

MISSION STATEMENT

The Illinois Manufacturers’ Association is one of the only state-wide association dedicated to boldly moving Illinois’ makers forward. The IMA is the oldest and largest state manufacturing trade association in the United States, representing nearly 4,000 companies and facilities.

CHAIRWOMAN
Kara Demirjian Huss
PRESIDENT & CEO
Mark Denzler

EDITOR
Audriana Sherwood

The Illinois Manufacturer is published quarterly by the Illinois Manufacturers’ Association. All rights reserved. The title, The Illinois Manufacturer, is a trademark of the Illinois Manufacturers’ Association.

Copyright 2026 © Illinois Manufacturers’ Association. Reproduction of all or any part is prohibited except by written permission of the publisher. Published articles do not necessarily reflect the views of the magazine or its publisher. Information in this publication should not be substituted for advice of competent legal counsel.

For address changes and adjustments, write to The Illinois Manufacturer. Presort standard postage paid at Bloomington, IL. Postmaster: Send address changes to:

The Illinois Manufacturer,
220 East Adams Street, Springfield, IL 62701.
Telephone: 217.522.1240

If you have any questions, please contact Audriana Sherwood, Graphic Design Manager and Editor of Publications at: asherwood@ima-net.org, or 217.636.3171



F
E
A
T
U
R
E

President’s Report: Happy Birthday America!.....	04
2026 Hall of Fame and Excellence Awards	05
Demand Response: The Opportunity Is Only Increasing.....	08
We Can Process the Data — But We Still Own the Decision.....	09
Now is the time to Implement AI	10
Using AI Notetaking	12
IMEC Corner.....	14
Key Provisions for Market Access in the EU Post 20 January 2027	15
How AI and Advanced Technology is are Redefining Capital Planning	18
Argonne’s Role in America’s AI Future	20
How Illinois Manufacturers Can Begin Their AI Journey.....	22
AI, Air Quality, and Food Safety	24
OSHA’s Minor Servicing Exception.....	27
Legislative Advocacy.....	30
2026 Business Day	34
Upcoming IMA Events	36
New Members.....	38
Member News.....	39

NEWS WITH THE IMA
News information, press releases and articles may be sent to Audriana Sherwood, Graphic Design Manager and Editor of Publications at: asherwood@ima-net.org, or 217.636.3171

The Illinois Manufacturer is underwritten by Constellation

HAPPY BIRTHDAY, AMERICA!

America is worth celebrating, and our nation proudly commemorated its 250th birthday on July 4 with dedicated events that capped off a year-long celebration. America continues to be a beacon for “the tired, the poor, the huddles masses yearning to breathe free” as is inscribed on the Statue of Liberty in New York Harbor.

American (and Illinois) manufacturing deserves to be celebrated as well because our industry has been part of every major historical event in our nation’s history, from the Revolutionary War to the recent Artemis II / Orion mission that took humans further into space than ever before and set the stage for the next lunar landing. Manufacturing, along with mining and agriculture, helped build our nation into the most prosperous and generous on earth. Manufacturing innovation, ingenuity, and technology have been at the forefront of every generation in the past two and a half centuries, so let’s look at the role of manufacturing throughout American history.

Late 1700s: America began to industrialize after achieving its independence. British textile technology was brought to America, the cotton gin boosted production, and the concept of interchangeable parts revolutionized manufacturing efficiency and laid the groundwork for mass production. America began producing more products, reducing its reliance on Europe, and this led to the creation of the first factory towns. New products included bifocal glasses, lightning rods, octants, steamboats, spermaceti candles, smallpox vaccination, and the submarine. America’s first patent was awarded to William Pollard for a machine that roves and spins cotton.

Early 1800s: Manufacturing surged in the 19th Century with the Industrial Revolution, while railroads connected raw materials to factories and helped transport goods to market. Steam power, iron production, and mechanization dramatically increased productivity, shifting from hand production to machine manufacturing. Revolver, vulcanized rubber, sewing machine, and cash register.

Late 1800s: America became a global industrial leader, and industrialists like Andrew Carnegie and John D. Rockefeller built massive empires in steel and oil, respectively. Henry Ford invented the assembly line, allowing affordable products to be produced for the mass market. It led to the creation of the middle class, as mass production lowered costs and expanded consumer access. New products included the telephone, phonograph, light bulb, Coca-Cola, refrigerated railcar, zipper, mousetrap, candy corn, and Kodak camera.

Early 1900s: American manufacturing was critical during both World Wars, and it was dubbed the “Arsenal of Democracy” during WWII, with factories shifting to produce tanks, planes, and weapons. Women entered the workforce in larger numbers and played a huge role in the war effort (Rosie the Riveter). America defeated Nazi Germany and its allies and became a global superpower. Technological innovation flourished, and workforce diversity expanded. The powered vacuum cleaner, radio, Air conditioner, Airplane, radar, talking motion picture, x-ray machine, Teddy Bear, hearing aids, windshield wipers, and Model T were created.

Late 1900s: The United States helped rebuild Europe and dominated global manufacturing, resulting in the rise of globalization. New products included credit cards, diet soft drinks, audio cassette, compact disc, ATM machines, vaccines for mumps, measles, and polio, MRI, cell phones, personal computer, Doppler radar, and the International Space Station.

2000s: Manufacturing evolved at the speed of light with the increased use of automation, robotics, and AI, with growth in semiconductors, aerospace, and biotech. Manufacturing matters more than ever because of national security, innovation, and economic development, with jobs becoming more highly skilled. Inventions and innovations include the iPod and iPhone, Garmin GPS systems, artificial heart, USB flash drive, jetpack, 3-D printers, camera phones, drones, Bluetooth, Orion spacecraft, and NERDS Gummy Clusters!

Illinois led the way for many inventions throughout history, including the cell phone, zipper, Twinkie, steel plow, spray paint, barbed wire, vacuum cleaner, mechanical dishwasher, skyscraper, Ferris Wheel, diesel engine, brownies, television remote control, pinball machine, penicillin, farm silos, and more. *Manufacturing is resilient. Manufacturing is diverse. Manufacturing is sustainable. Manufacturing is innovative.*

American and Illinois manufacturing is strong and leading our nation forward. Our nation, our economy, and our way of life will continue to face unknown challenges. While I don’t know what is coming next, and I certainly don’t have all the answers, I do know one thing for sure. I do know that American manufacturers have solutions to the world’s greatest challenges and will continue rising to the occasion for the next 250 years. *God bless America!* ♦

Mark Denzler

Mark Denzler is President and Chief Executive Officer of the Illinois Manufacturers’ Association.
He may be reached at mdenzler@ima-net.org, or 217.718.3726.

Honoring the Makers who built Illinois.

2026 ILLINOIS MANUFACTURING HALL OF FAME

Celebrating the People, Products, and Companies That Changed History

For more than 200 years, Illinois manufacturers have been solving problems, creating opportunity and producing innovations that have shaped industries around the world. From the invention that helped settle the American West to technologies powering today’s electrical grid, manufacturing has long been woven into the fabric of Illinois.

That legacy was once again celebrated as the Illinois Manufacturers’ Association (IMA) honored the 2026 class of inductees into the Illinois Manufacturing Hall of Fame during a ceremony on June 25 at the Westin Chicago Lombard.

Established in 2024, the Illinois Manufacturing Hall of Fame recognizes the remarkable people, products and companies whose contributions have transformed manufacturing and strengthened Illinois’ economy. Today, manufacturing remains the state’s largest contributor to Gross Domestic Product, supporting nearly one-third of all Illinois jobs and generating more than \$580 billion in annual economic activity.

This year’s inductees embody the innovation, resilience and entrepreneurial spirit that have made Illinois a global manufacturing leader. Their achievements have improved lives, strengthened communities and helped shape the future of manufacturing while preserving the state’s rich industrial heritage. The Hall of Fame ceremony was held alongside the Illinois Manufacturing Excellence Awards, presented in partnership with the Illinois Manufacturing Excellence Center (IMEC), recognizing outstanding manufacturers, organizations and individuals across eight categories.

CELEBRATING VISIONARY LEADERS

The 2026 class recognizes five individuals whose careers have left an enduring mark on manufacturing, workforce development and innovation.

Joseph F. Glidden forever changed American agriculture with his invention of modern barbed wire, earning the title "Father of Barbed Wire." His innovation helped transform farming across the country while putting DeKalb, Illinois, on the map. Beyond his business success, Glidden donated part of his homestead, which became the site of Northern Illinois University.

Rick Delawder, President of SWD Inc., has spent decades advancing the metal finishing industry while serving in leadership roles across numerous manufacturing organizations. A second-generation family business leader, Delawder’s influence extends well beyond his own company through his commitment to strengthening the entire manufacturing community.

Don Welge transformed Gilster Milling Company from a small family flour mill into Gilster-Mary Lee, one of the nation’s leading private-label food manufacturers. Alongside his business accomplishments, Welge has been a passionate advocate for southern Illinois, supporting community development, historic preservation and food supply chain security.

Marsha Serlin, founder of United Scrap Metal, has built one of the nation’s largest recycling companies while becoming a nationally recognized leader in sustainability. Since founding the company in 1978, she has demonstrated that environmental stewardship and business success can go hand in hand, growing the business to employ more than 750 people across nine states.

Dr. David Boulay has devoted his career to strengthening Illinois manufacturing through workforce development and operational excellence. After executive leadership roles with Frito-Lay and Pillsbury, he spent 15 years leading the Illinois Manufacturing Excellence Center, helping thousands of manufacturers improve productivity, innovation and competitiveness.



Photo by Ingrid Bonne Photography

PRODUCTS THAT BECAME ICONS

The Hall of Fame also recognizes four products that demonstrate Illinois’ extraordinary ability to blend ingenuity, craftsmanship and commercial success.

White House China, handcrafted by Pickard China in Antioch since 1893, has graced the tables of American presidents, Air Force One and U.S. embassies around the world. Its elegant craftsmanship and timeless designs have made it one of the nation's most recognizable symbols of American excellence.

Eli's Cheesecake has become synonymous with Chicago. What began as a signature dessert at Eli Schulman's legendary steakhouse evolved into one of the city's most beloved culinary icons after its debut at the inaugural Taste of Chicago in 1980. Its rich, creamy texture and signature caramelized top continue to delight dessert lovers around the world.

NERDS™ Gummy Clusters, introduced by Ferrara in 2020, quickly became one of the candy industry's biggest success stories. Combining a chewy gummy center with the crunchy, tangy coating of classic NERDS candy, the product has become a global sensation and one of the company's fastest-growing brands.

Spray Paint revolutionized painting when Edward H. Seymour adapted aerosol technology into a practical paint delivery system in 1949. His Illinois invention forever changed industries ranging from manufacturing and construction to art and home improvement, with more than 400 million cans produced annually in the United States.

COMPANIES THAT CONTINUE TO SHAPE INDUSTRY

Four organizations join the Hall of Fame for their lasting impact on manufacturing and innovation.

Celebrating its centennial, **Lapham-Hickey Steel** has spent 100 years supplying high-quality steel products that support manufacturers and critical industries across North America. The fourth-generation family-owned company has grown from its Chicago roots into a leading steel service center with 13 locations and more than 1,000 teammates.

Since its founding in 1911, **S&C Electric Company** has been at the forefront of electrical innovation. Best known for inventing the Liquid Power Fuse, the company continues to develop technologies that make the electric grid safer, more reliable and more resilient.

Headquartered in Chicago, **ADM** has evolved into one of the world's leading agricultural processors and nutrition companies. Through innovation and sustainability, ADM continues to strengthen global food systems while supporting resilient supply chains and the growing bioeconomy.

Founded in 1866, **C.H. Hanson & Co.** remains a fifth-generation family-owned manufacturer serving construction, plumbing and metalworking professionals. Its family of trusted brands reflects more than 160 years of craftsmanship, innovation and commitment to quality.

RECOGNIZING EXCELLENCE ACROSS THE INDUSTRY

In addition to the Hall of Fame inductions, the event spotlighted standout achievers in manufacturing through the 2026 Manufacturing Excellence Awards, honoring leadership, innovation, sustainability, and community engagement across eight categories:

CHAMPION OF OPERATIONAL EXCELLENCE:
QUALITY METAL PRODUCTS

This manufacturer implemented a comprehensive operational excellence strategy rooted in lean manufacturing, automation, and workforce development. And the results speak for themselves. From improved performance metrics to supplier awards and third party recognition, this manufacturer exemplifies operational excellence.

ECONOMIC DEVELOPMENT PARTNER OF THE
YEAR: **MHUB**

mHub is an innovation platform that has driven the commercialization of hard tech, helping companies build and scale. To date, they have worked with 500+ startups that have generated \$4.5 billion in economic activity.

INNOVATOR OF THE YEAR:
QUESTEK INNOVATIONS

QuesTek Innovations has supported programs with NASA, the US Navy, and the commercial sector. Their work is transforming how business operates today and laying the foundation for the future of advanced manufacturing.

SAFETY CHAMPION:
FERRARA & LAYSTROM MANUFACTURING

The 2026 awards resulted in a tie! Ferrara has transformed the safety culture at their Bellwood Facility and the data proves its success. They led the recent agreement for a Food Safety Alliance in Illinois between OSHA and the IMA. Laystrom Manufacturing achieved a record of 1,489 days with no lost time! As they note, “everyone deserves the right to go home the same way they came in every day.”

SUSTAINABLE CHAMPION OF THE YEAR:
HOFFER PLASTICS CORPORATION

Hoffer Plastics diverted 10,000 pounds of material annually from landfill to recycling, 50% reduction in annual water usage, 40% green energy use, a significant reduction in both scope 1 and scope 2 emissions, and the prestigious Illinois Governor’s Sustainability Award.

WORKFORCE EXCELLENCE AWARD:
ADM

Through strategic partnerships, innovative training models, and intentional early career engagement, ADM is strengthening the regional talent pipeline and ensuring long-term workforce sustainability.

COMMUNITY IMPACT AWARD:
SPARKFORCE FMA FOUNDATION

Sparkforce FMA Foundation worked with IMEC, Kane County Workforce Development, two disability services non-profit organizations, and 12 local manufacturers to provide soft and hard skills job training , experiential learning opportunities, and career exploration to 22 young adults.

EDUCATOR OF THE YEAR:
KERRY PETERS, UNIVERSITY OF ILLINOIS
INTEGRATED BIOPROCESSING RESEARCH
LABORATORY

Kerry Peters has revolutionized training and education for industry employees and expanded the Business of Fermentation course along with downstream modules. She created custom courses with industry partners while expanding hands-on-workforce training by nearly 400 percent.

PRESERVING ILLINOIS' **MANUFACTURING
LEGACY**

As Illinois continues to lead in advanced manufacturing, technology and innovation, these honorees serve as a reminder that the state's greatest achievements are built on generations of ingenuity, determination and an unwavering commitment to excellence. Their stories not only preserve Illinois' manufacturing legacy but also inspire the next generation of makers who will define its future. ♦

Congratulations again to our 2026 Hall of Fame and Excellence Award winners. Your contributions continue to move our industry forward, one bold idea at a time.



Photos by Ingrid Bonne Photography

DEMAND RESPONSE

The Opportunity Is Only Increasing

Changes in the Capacity Market Provide Revenue Opportunities

Today, the cost of capacity accounts for a meaningful percentage of energy spend for commercial and industrial customers. For businesses, planning for these costs, managing them proactively, and looking for ways to turn them into a strategic advantage is essential to help avoid financial strain and seize emerging opportunities.

The rapid growth of AI-driven data centers and cloud computing, and the electrification of transportation, heating, and industrial processes, is adding significant demand to the grid. After years of low capacity prices, older, less efficient generating resources are retiring, and interconnection bottlenecks are slowing the pace of new capacity additions. Grid operators are also reconsidering the contribution of various resources to reliability, which has led to changes in how they view the availability of supply during periods of peak demand. Further, much of the grid infrastructure was built decades ago and isn’t necessarily optimized to handle today’s requirements. Extreme weather events, from heatwaves to severe cold weather, add another layer of pressure on reserve margins.

Using Demand Response to Manage Capacity Costs

Demand Response is one of the most effective ways to manage capacity costs. This strategy goes beyond meeting compliance requirements and could give businesses a competitive advantage that helps control costs while delivering operational benefits.

By participating in Demand Response programs, businesses can earn new revenue streams to help offset capacity costs. These demand-side management programs pay participants for reducing load during grid emergencies, offsetting rising energy costs, and supporting grid reliability. Modern Demand Response programs are designed for flexibility by allowing businesses to choose manual curtailment, automated load control, or seamless integration with energy management systems so they can respond to grid needs without disrupting critical operations.

Here’s how Demand Response creates measurable value for businesses:

- **Revenue opportunities:** Earning payments for load reductions during grid emergencies, with some programs guaranteeing minimum payments for added budget certainty.
- **Direct financial impact:** Reducing electricity use during peak events may lower future capacity costs for all users on the grid.
- **Grid reliability and sustainability:** Supporting a stable grid and reducing reliance on carbon-intensive peaker plants.
- **Flexible participation:** Choosing manual or automated and integrated curtailment options to fit a variety of operational needs.
- **Long-term strategy:** Incorporating Demand Response into energy strategy to turn a cost challenge into a strategic advantage.

Maximizing Value with Constellation’s Energy Optimization Services

Along with managing capacity costs, businesses need strategies that balance cost control with operational continuity and sustainability goals. Constellation’s Energy Optimization services, powered by GridBeyond’s intelligent technology, are designed to help businesses take control of their energy strategy by lowering costs, earning revenue, and supporting grid stability through advanced load response programs. These programs use machine learning and real-time data to determine the best times to curtail demand so that businesses can capture value without compromising performance.

Our standard and enhanced demand response options address today’s market challenges by bringing advanced automation and real-time data analysis to the forefront. This makes it easier to identify opportunities to reduce load and maximize program value.

With GridBeyond’s AI-driven platform, customers gain actionable insights into energy usage and market conditions, enabling smarter decisions about when and how to respond to grid events. Whether a business’s operations require hands-on control or prefer automated participation, these solutions adapt to their needs and integrate seamlessly into existing operations.

Unlike transmission and distribution costs, capacity costs present an opportunity to proactively plan an energy strategy to prepare for future market conditions and operational demands. By leveraging demand response and load flexibility, your business can turn capacity costs into long-term value for your organization. ♦

At Constellation, our Energy Optimization services make participating in demand response programs simple and effective. Our team can provide insights, automation tools and program options to help your business succeed.

To learn more reach out to Rich Cialabrini at Richard.cialabrini@constellation.com or call Rich at 847-738-2510.

We Can Process the Data — But We Still Own the Decision

Over the past few years, we have added more technology to our operations than at any other time. Data systems, automated reporting, and now AI tools that can pull together and summarize information almost instantly. What used to take days can now be done in minutes. On paper, it looks like progress. And in many ways, it is.

But sitting in the control room—or reviewing a report before it goes out—something feels different than what you would expect. *We are clearly moving faster, but not necessarily with greater certainty.*

The data systems, reporting tools, and AI summaries do a good job of telling us what is happening. They can pull together operating data, emissions trends, and historical patterns in seconds.

Internal reviews move faster. Data requests can be answered more quickly. What used to take a coordinated effort across teams can now be handled in a much more streamlined way. In many ways, the mechanics of compliance—and the regulatory review process that supports it—have become more efficient.

But the underlying question has not changed: What does the information actually mean?

Is this within the intent of the permit?

Is this how it would be interpreted in a regulatory review?

Is this a one-time condition, or the start of something we need to address?

Those are not questions the system answers.

Those are still decisions businesses have to make.

There is also a subtle shift that comes with all of this.

When data was harder to gather, we spent more time understanding how it was built. We knew where the numbers came from, what assumptions were behind them, and where the gaps might lie. Now, the process is streamlined. Cleaner. Faster. Easier to use. But it also creates distance.

We see the output more than the inputs. We trust the summary more than the process behind it. And that works—right up until it does not. From a regulatory standpoint, that distinction matters. A report can be technically correct and still raise questions.

A trend can look stable and still reflect something that has drifted from original assumptions—changes in production rates, raw materials, or operating schedules that may not immediately stand out in a summary report.

A system can show “within limits” and still leave you wondering how it would hold up under scrutiny. Because at the end of the day, the system is not the one answering those questions. The responsibility still rests with the business.

Technology does not carry responsibility.

- It can organize information.
- It can highlight what looks unusual.
- It can even suggest what might need attention.

But it does not:

- sign the submittal,
- respond to the agency, or
- explain decisions when they are challenged.

That responsibility has not shifted.

If anything, it has become more visible.

So the question is not whether these tools are useful.

They are.

The process has improved. The tools are better. The speed is undeniable. But the outcome still depends on how that information is interpreted—and that has not been automated. We can process the data faster than ever. *But the decision hasn’t gotten any easier, and the responsibility still rests with the business.* ♦

John Tsun is Project Director at SCS Engineers. He may be reached atjtsun@scsengineers.com, or 571.353.2043.

Now is the Time to Implement AI

MILLER COOPER

Industry 4.0 is already reshaping how leading manufacturers operate. Artificial intelligence (AI), once experimental, is now being embedded in production environments to improve throughput, visibility, and decision-making. AI infrastructure investment by leading technology companies has fueled U.S. economic growth post-pandemic.

Now, it’s emerging as an arbitrage opportunity in manufacturing, much like the labor cost differences that drove offshoring two decades ago, but with even more impact. Private equity and strategic investors, including Jeff Bezos, target manufacturers for modernization that replaces fragmented systems and manual processes with digital advanced technology. While labor cost remains important, competitive advantage is increasingly driven by responsiveness, visibility, and supply chain resilience.

AI’s most practical and visible aspect is that so long as the data are available, analysis that used to take hours or days can be completed in seconds. Advances in machine learning, industrial IoT sensors, robotics, and cloud-based analytics now allow manufacturers to collect data and act on it in real-time. Platforms from established providers such as Rockwell Automation, Siemens, and GE Digital make capabilities accessible without requiring full system replacement.

For middle-market manufacturers, the question is no longer whether to adopt AI, but the best place to apply it first. The decision can start with visibility, then focusing on constraints, proving return on investment (ROI), and scaling. Ideally, projects can be self-funding through internally generated cash flow, operational savings, and phased reinvestment rather than through large upfront capital raises or enterprise-wide technology overhauls. Businesses that move incrementally may also avoid locking themselves prematurely into expensive systems that become outdated or poorly integrated.

Target Inefficiency

Most successful implementations start by targeting specific operational inefficiencies where data visibility and automation can quickly drive worthwhile improvements. To prioritize, management assesses how processes most in need can be improved with upgraded technology. Real-time operational data and tracking are the first steps; for example, IoT sensors can provide data on machine monitoring and production visibility.

Common high-impact starting points include:

Procurement and inventory: Having materials available when needed is increasingly challenging amid tariffs, commodity volatility, labor constraints, and geopolitical disruption. AI shifts planning from reactive to predictive through SKU-level demand forecasting, purchasing workflow automation, supplier performance monitoring, and real-time inventory visibility. Companies adopting these tools typically achieve 15% to 25% improvements in inventory turns, while reducing stockouts by 20% to 50% through better demand alignment and replenishment discipline. These gains translate into lower working capital requirements, reduced carrying costs, and improved on-time delivery, strengthening both operational resilience and customer service.

Production scheduling and throughput: AI-enabled scheduling better aligns prioritized demand with available capacity, while real-time analytics identify bottlenecks and optimize machine performance. AI-enabled scheduling and analytics typically drive 5–15% increases in throughput, along with better utilization and effectiveness. Significant improvements are possible without adding equipment. For example, a mid-sized fabricator installed IoT sensors on key machines to capture real-time data on uptime, cycle times, and changeovers. Using AI-driven scheduling, the company reduced changeover time by 18%, increased effective machine utilization from 78% to 92%, and quickened throughput by over 15%.



Predictive maintenance (PdM): Sensors and analytics platforms detect changes in vibration, temperature, and performance before failures occur, which supports planned downtime rather than emergency stops. PdM increases utilization and extends asset life. PdM is also one of the most proven applications, reducing unplanned downtime by 25–50% and delivering meaningful cost savings.

Quality and yield: Computer vision and anomaly detection enable near real-time quality control instead of after-the-fact correction. This results in fewer defects, lower warranty exposure, and more consistent production performance. In quality and yield, computer vision and advanced analytics can reduce scrap and rework by 10–30%, with even higher gains in targeted processes.

Quoting and continuous improvement: Closed-loop systems analyze prior jobs, material usage, labor efficiency, machine performance, and customer behavior to improve quoting and pricing accuracy and create more reliable schedules.

With priorities, the next steps are comparing expected operational gains with implementation costs, and deploying resources where they generate the most return.

Prove ROI

The dollar benefits are best measured based on what changes before and after implementation, rather than relying on traditional cost allocations. They include better output at lower cost by mitigating downtime, scrap, rework, late shipments, and bloated working capital. Integrating these improvements across the operation can generate significant savings.

Implementation costs include equipment, engineering time, integration work, training, installation, freight-in, commissioning, and the learning curve impact on output. Indirect costs unaffected by the projects are omitted from the analysis. Monitoring outcomes is critical, as they become the basis for decisions on whether to scale pilot projects to the next level.

For example, if an operation with an annual cost of \$10 million improves productivity from 85% to 120% through reduced downtime and better scheduling, total output increases by approximately 40% without proportional increases in cost. If the related costs are largely variable, the operation could reduce annual spending to approximately \$7.1 million, for savings of \$2.9 million annually.

Management then determines how much can be invested to achieve these benefits:

- ▶ Annual savings: \$2.9 million
- ▶ Target return: 20% IRR
- ▶ Payback period: 5 years
- ▶ Implied investment capacity: ~\$8.7 million
- ▶ Less ramp-up adjustment, assuming 50% of one year’s savings: (\$1.5 million)
- ▶ Adjusted investment limit: ~\$7.2 million

If implementation costs are expected to exceed \$7.2 million, the project fails to meet the desired ROI.

However, tax benefits can increase the limit significantly. Bonus depreciation allows for immediate expensing of qualifying

equipment, while federal and state tax credits for research and experimentation can offset a meaningful portion of development and implementation costs incurred to improve production processes. Illinois also offers targeted incentives for qualifying manufacturing investments. The Illinois Advancing Innovative Manufacturing tax credit provides 3% to 7% on qualifying purchases of \$10 million or more, which can reduce state taxes and payroll withholding.

In the example above, tax benefits might increase the effective investment capacity from \$7.2 million to approximately \$10.8 million, which is 50%. For those readers interested in the details, assuming immediate tax savings, a tax rate of 30%, and a 20% tax credit for 25% of total expenditures, the benefit totals 33.5%. The 33.5% rate consists of 75% of expenditures at a 30% rate, plus the remaining 25% at a 24% rate, due to the loss of the deduction. Finally, 5% is added for the research credit, representing 25% of expenditure multiplied by 20% rate. \$7.2 million divided by (1 – 33.5%) equals \$10.8 million.

After a successful pilot, manufacturers should move to full implementation with training, change management, and ongoing performance tracking. Those who take a disciplined, step-by-step approach—focusing on high-impact issues, proving ROI, and scaling what works—can meaningfully boost profitability, resilience, and enterprise value. Those who wait risk falling behind more data-driven competitors. ♦

S I D E B A R

Going forward with AI in Manufacturing:

- ▶ Start with a single bottleneck or constraint.
- ▶ Capture related real-time operational data.
- ▶ Implement a focused pilot with clear success metrics.
- ▶ Measure incremental ROI—not allocated costs.
- ▶ Reinvest savings to scale successful initiatives.

Bill Wiersema is an Audit and Transaction Advisory Services Principal with Miller Cooper.

He may be reached at bwiersema@millercooper.com

Artificial intelligence (“AI”) notetaking and transcription tools have become increasingly common across manufacturing organizations. HR professionals are using these tools to document safety meetings, employee relations discussions, training sessions, and operational reviews. While these technologies offer clear business advantages, they also introduce complex legal risks—particularly under the Illinois Biometric Information Privacy Act (“BIPA”).

BIPA is widely regarded as the most stringent biometric privacy law in the United States. For manufacturing employers with operations, employees, or even meeting participants in Illinois, the use of AI notetaking tools can trigger compliance obligations that are often overlooked. This article provides HR professionals with practical, manufacturing-focused best practices to minimize liability while still leveraging the efficiency benefits of AI tools.

Understanding BIPA and Its Impact on HR Practices

BIPA regulates the collection, use, storage, and destruction of biometric identifiers such as voiceprints, fingerprints, and facial geometry. AI notetaking tools frequently analyze voice characteristics to distinguish speakers, which can result in the creation of “voiceprints.” Because voiceprints are explicitly covered under BIPA, organizations must comply with strict requirements before collecting such data.

The law requires employers to provide written notice, disclose the purpose and duration of data collection, and obtain written consent prior to collecting biometric data. Organizations must also establish and follow a publicly available retention and destruction policy. Failure to comply can result in significant statutory damages, even in the absence of actual harm.

Why AI Notetaking Tools Create Unique Risks in Manufacturing

Manufacturing environments present unique challenges. HR teams often operate across multiple facilities, coordinate with unions, engage contractors, and interact with third-party vendors. Meetings frequently include participants who may not be employees or who are located in different jurisdictions.

AI notetaking tools can automatically join meetings and begin recording or transcribing without verifying that all participants have provided consent. In some cases, individuals may be unaware that their voice data is being captured and analyzed. This creates a significant risk under BIPA, particularly because liability may extend to employers who enable the use of such tools, even if the software being used by the Illinois manufacturer is provided by a third-party vendor.

Best Practice 1: Conduct a Comprehensive Risk Assessment

Before implementing any AI notetaking solution, HR manufacturing leaders should collaborate with legal, IT, and data privacy teams (as applicable) to conduct a thorough risk assessment. This assessment should determine whether the tool collects or processes biometric data, whether speaker identification features are enabled, and how data is stored and used by the vendor.

Best Practice 2: Develop Clear Written Policies

HR departments should establish formal, written policies governing the use of AI notetaking tools. These policies should specify which tools are approved, outline procedures for obtaining consent, and define acceptable use cases. Policies should also address data retention, access controls, and incident response.

Best Practice 3: Obtain Informed Written Consent

Obtaining written consent is a cornerstone of BIPA compliance. HR professionals must ensure that all participants—employees and non-employees alike—receive clear, written disclosures explaining what data is being collected, why it is being collected, and how long it will be retained. In practice, this may require implementing pre-meeting consent workflows, electronic acknowledgment forms, or standardized disclosures included in meeting invitations.

Best Practice 4: Limit or Disable Biometric Features

Whenever possible, organizations should configure AI tools to minimize risk by disabling features that may create biometric identifiers. This includes speaker recognition, voice profiling, and analytics that rely on identifying individuals based on their voice characteristics.

Best Practice 5: Identify Who is Permitted to Enable AI Notetaking

Without disabling biometric features, employees may be using AI note-taking during virtual work-related meetings without the employer’s knowledge. This is extremely problematic if, among other things, the necessary consents have not been procured from all participants, externally or internally. So, manufacturers should limit use to those to whom it has given express authority, and only after all necessary safeguards have been put in place.

Best Practice 6: Establish and Enforce Retention Policies

BIPA requires organizations to develop and adhere to a written policy governing the retention and destruction of biometric data. HR professionals should ensure that AI-generated recordings and transcripts are retained only as long as necessary to fulfill their purpose and are securely deleted thereafter.

Best Practice 7: Perform Vendor Due Diligence

Because AI notetaking tools often involve third-party vendors, HR teams must conduct thorough due diligence before adoption. This includes reviewing vendor privacy policies, understanding how data is processed and stored, and ensuring that contractual agreements include appropriate safeguards such as indemnification and data protection obligations.

Best Practice 8: Train Managers and Employees

Training is critical to ensuring compliance. HR should provide targeted training for managers, supervisors, and employees on the appropriate use of AI notetaking tools, emphasizing consent requirements, prohibited uses, and reporting procedures for potential issues.

Best Practice 9: Implement Meeting-Level Controls

HR should establish standardized meeting protocols that include clear disclosures at the beginning of each meeting, confirmation of participant consent, and verification that AI tools are authorized for use. These controls help ensure that compliance measures are consistently applied.

Best Practice 10: Monitor and Audit Usage

Finally, HR should implement ongoing monitoring and auditing processes to ensure compliance with internal policies and legal requirements. Regular audits can identify unauthorized use of AI tools and provide opportunities for corrective action. AI notetaking tools offer significant benefits for manufacturing organizations, but they must be deployed thoughtfully and responsibly. For HR professionals, the key to minimizing BIPA liability lies in proactive governance, clear communication, and rigorous compliance practices. By conducting thorough risk assessments, obtaining informed consent, limiting unnecessary data collection, and maintaining strong vendor oversight, manufacturing employers can harness the advantages of AI while protecting employee privacy and reducing legal exposure. ♦



Photo by Scott Graham on Unsplash

IMA QUARTLY HR FORUM

The quarterly HR Forum, a group designed for our HR professionals, has been discussing this issue and other legal risks - with solutions - to stay in compliance.

Join us at our next meeting on **August 12**.

Details on the IMA website calendar or email tgraham@ima-net.org"

Scott Cruz is a Partner in the Labor & Employment Practice Group of UB Greensfelder LLP. Scott can be reached at 312.658.6608 or scruz@ubglaw.com.

AI and Automation in Manufacturing:
A Shift Already Underway

Illinois Manufacturing Excellence Center
Dan Hofmann, Interim President and Vice President of Finance and IT

Manufacturing has always evolved alongside technology. Conveyor systems transformed production flow in the early 20th century, CNC machining reshaped precision manufacturing decades later, and industrial robotics began appearing on factory floors in the 1960s. More recently, ERP systems and digital manufacturing tools changed how companies manage operations, inventory, scheduling, and production planning. Today’s conversations around AI and advanced automation are part of that same long trajectory of industrial modernization.

Artificial intelligence, integrated software systems, advanced analytics, robotics, and digital process improvements are beginning to influence how manufacturers operate across the business — from production scheduling and quality management to inventory planning, maintenance, training, and administrative workflows.

While the technologies themselves continue to evolve quickly, one thing is already clear: manufacturers are actively looking for ways to modernize operations while strengthening long-term resilience.

That demand is visible across Illinois. The Made in Illinois program — launched in 2024 through a partnership between the State of Illinois, the Illinois Department of Commerce and Economic Opportunity (DCEO), and IMEC — has shed further light on where small and mid-sized manufacturers across the state are eager to adopt automation, given the right support.

Over its first two years, the program received more than 1,000 applications representing over \$2 billion in proposed automation and modernization investments from Illinois manufacturers.

The proposals themselves offer an important snapshot of where manufacturers believe investment is most needed. Across both funding rounds, companies prioritized:

- ▶ production equipment modernization,
- ▶ automation,
- ▶ digital and cybersecurity upgrades,
- ▶ product improvement,
- ▶ and operational efficiency enhancements.

These investments are not centered on technology for technology’s sake. Manufacturers are responding to practical pressures: workforce shortages, rising customer expectations, supply chain instability, aging equipment, capacity limitations, and the need for greater operational visibility. In many cases, automation is being used to reduce repetitive manual work, improve consistency, shorten turnaround times, and allow employees to focus on higher-value responsibilities.

At the same time, AI is beginning to expand the conversation beyond physical automation alone. Many manufacturers are exploring how AI tools can support reporting, forecasting, documentation, scheduling, maintenance planning, quality analysis, and operational decision-making. For most companies, adoption is still incremental. The focus is less on large-scale disruption and more on solving specific operational problems efficiently.

That practical approach is important because successful modernization rarely happens through a single large technology investment. More often, it develops through smaller operational improvements that gradually build stronger systems, cleaner data, better visibility, and more efficient workflows.

The workforce implications are equally significant. As manufacturers adopt more advanced systems, employees increasingly need skills tied to troubleshooting, digital literacy, process analysis, communication, and continuous improvement. Technology may automate certain repetitive tasks, but it also increases the importance of human judgment, adaptability, and cross-functional understanding.

The Made in Illinois data reflects this balance repeatedly. Manufacturers pursuing modernization efforts frequently connect automation investments with workforce upskilling, process improvement, safety enhancements, and long-term growth strategies. That balance matters because modernization alone does not create competitiveness. Strong processes, workforce engagement, operational discipline, and leadership alignment remain foundational. Advanced technologies can strengthen those systems, but they cannot replace them.

For Illinois manufacturers, the broader trend is less about chasing emerging technology and more about building operations capable of adapting to changing market conditions over time. AI and automation will continue evolving. The larger challenge — and opportunity — is determining how manufacturers integrate those tools in ways that improve operations, support employees, and strengthen long-term resilience.♦



Dan Hofmann is Interim President and Vice President of Finance and IT of the Illinois Manufacturing Excellence Center.
He may be reached at dboulay@imec.org, or 309.677.3766



MACHINERY DIRECTIVE 2006/42/EC AND NEW 2023/1230:

Evolution of the legal framework, Key Provisions for Market Access in the EU

Post January 20, 2027

AC&E

Among the legislative instruments governing product safety in Europe, Directive 2006/42/EC on machinery stands as the primary mandatory framework regulating the placing on the market of machinery and related products within the European Union. It constitutes one of the cornerstone pieces of EU product legislation, fulfilling a dual purpose: ensuring a high level of protection for health and safety, and facilitating the free movement of goods through harmonization across Member States.

The Directive applies to all new machinery placed on the EU market for the first time, irrespective of whether it was manufactured within or outside the European Union. This principle is fundamental: compliance obligations are triggered by the act of placing a product on the EU market, not by its geographical origin. As a general rule, used or second-hand machinery falls outside the scope of the Directive and is instead governed by national measures implementing Directive 2009/104/EC on the minimum safety and health requirements for the use of work equipment. A notable exception, however, applies to machinery previously in service outside the European Union that is introduced into the EU market for the first time: such equipment is treated as new and must therefore satisfy the requirements of the Directive in full.

The range of products within scope is extensive. In addition to complete machinery, the Directive covers partly completed machinery, interchangeable equipment, safety components, lifting accessories, and transmission elements, including chains, ropes, and webbing. This broad scope reflects the legislator’s intent to address safety comprehensively across the entire machinery ecosystem.

The legislative text itself sets out only the Essential Health and Safety Requirements (EHSRs) that machinery must satisfy, while the technical means of fulfilling those requirements are delegated to harmonized European standards and to the “State of the art”. Although the application of such standards is voluntary, compliance with them confers a presumption of conformity with the Directive’s essential requirements — a mechanism that has made harmonized standards an indispensable practical tool for demonstrating compliance.

The Directive was conceived to harmonize safety requirements across Member States, eliminate barriers to intra-market trade, and reduce the social and economic costs associated with machinery-related accidents. It achieves this by promoting inherently safe design, sound construction, and correct installation and maintenance. Within this framework, the manufacturer occupies a central and non-delegable role: responsibility for compliance rests primarily with the entity that designs and builds the machinery, which must ensure that all applicable essential requirements are met before the product is placed on the market.

Compliance is formally declared through the CE marking process, which constitutes the manufacturer’s final assertion that the machinery satisfies all relevant EU requirements and may therefore circulate freely throughout the European Economic Area. This process is not a mere administrative formality but a structured and integrated path combining legal analysis, technical design, and conformity assessment activities.

Once the regulatory perimeter has been established, attention turns to identifying the applicable technical requirements, which involves selecting the relevant harmonized standards — those that translate the essential requirements into concrete technical solutions — along with any additional specifications deemed appropriate.

The characteristics of the machinery and its associated risk level determine the applicable conformity assessment procedure. In many cases, the manufacturer may conduct this process autonomously through internal checks. For certain categories of machinery, however, the involvement of a third-party conformity assessment body becomes mandatory. Regardless of the route taken, compliance must be substantiated through verification activities such as testing, inspection, validation, and technical analysis.

A central element of the entire conformity assessment process is the preparation of the technical file. This documentation must provide a comprehensive description of the machinery and include all relevant evidence of conformity, from drawings and diagrams to calculations and test results. At its core lies the risk assessment — a fundamental document requiring the systematic identification of all hazards associated with the machinery throughout its entire life cycle, and the implementation of appropriate risk reduction measures in accordance with the

three-step method (also known as the safe design hierarchy). The technical file must be kept available for national authorities to consent to, upon request, to verify the machinery level of compliance.

The process is completed by the drafting and signing of the Declaration of Conformity and the affixing of the CE marking to the machinery. Only upon completion of these steps may the product be considered compliant and lawfully placed on the European market.

Particular attention is required for machinery presenting a higher level of risk, as identified in Annex IV of the Directive. For such machinery, the conformity assessment procedure is more stringent. Where harmonized standards fully cover the relevant essential requirements and are correctly applied, the manufacturer may retain a degree of autonomy in the process. Where such standards are not fully applied, or do not address all relevant risks, the intervention of a Notified Body becomes mandatory. These independent organizations, designated by Member States and notified to the European Commission, are entrusted with specific conformity assessment tasks. Their role is restricted to Annex IV machinery, and their designation and supervision remain the responsibility of national authorities.

Over time, the regulatory framework has evolved in response to technological developments and the increasing complexity of machinery systems. This evolution is now culminating in a significant legislative transition: the replacement of the current Directive with Regulation (EU) 2023/1230 on machinery, which will become applicable on 20 January 2027. Unlike a directive, a regulation is directly applicable in all Member States without the need for national transposition, thereby ensuring a more uniform and consistent application of the legislation throughout the European Union.

The new Regulation introduces several substantive changes. It aligns the machinery legislation with the principles of the New Legislative Framework established by Decision No 768/2008/EC, clarifying conformity assessment procedures and reinforcing the overall legislative architecture. It also places greater emphasis on the responsibilities of all economic operators in the supply chain — including manufacturers, importers, distributors, and authorized representatives — thereby broadening the accountability framework beyond the manufacturer alone.

Above all, “cybersecurity” is now an explicit component of safety-related risk assessments. Regulation (EU) 2023/1230 introduces Essential Requirement 1.1.9, which requires manufacturers to address cybersecurity and resilience against both intentional and unintentional corruption of hardware and software, as well as unauthorized access that could create safety hazards.

In practice, compliance with 1.1.9 requires that risk assessments explicitly treat cyber threats as potential sources of physical harm, incorporate secure-by-design principles, and demonstrate that protective measures (technical and organizational) reduce cyber-induced safety risks to an acceptable level. Documentation in the technical file should include threat models, attack surface analysis, justification of security controls, software version traceability, and a vulnerability management lifecycle aligned with the machine’s intended life span.

Practical compliance implications of Essential Requirement 1.1.9 and alignment with OT cybersecurity frameworks

Managing the obligations related to cybersecurity includes: Risk integration , Secure-by-design and secure-by-default², software lifecycle & traceability³, access control and network segmentation⁴, Monitoring, detection and response⁵, Supply chain and third-party components⁶. The European Union Agency for Cybersecurity issues guidance on industrial cybersecurity, risk assessment¹, and secure product development; Harmonized standards (EC/ISO 62443 series) are the primary technical reference for OT cybersecurity in Europe. The US Cybersecurity and Infrastructure Security Agency publishes operational recommendations, alerts for ICS vulnerabilities, and best practices for industrial control environments; incorporate CISA recommendations into vulnerability handling and incident response plans. For machines destined for international markets, harmonized evidence to satisfy both EU Regulation 2023/1230 requirements and US best-practice expectations, an integrated compliance dossier eases cross-border market access.

Implications for Authorized Representative under Regulation (EU) 2023/1230

Another important implication of the new Regulation (and before by Regulation EU) 2019/1020) is that the machine may be placed on the Union market only if there is an economic operator established in the Union who is responsible for the tasks set out in the Regulation with respect to that product.

“Economic operator” means: the manufacturer established in the territory of the EU; an importer, if the manufacturer is not established in the Union; an authorized representative who has received a written mandate from the manufacturer; a logistics service provider established in the Union (if no other economic operator is present).

Accordingly, because the manufacturer is not established in the territory of the EU, it must ensure that an economic operator established in the Union is properly identified and communicated to the interested parties. Where the manufacturer has identified an authorized representative, the representative’s full name and identification details (address and contact information) must be indicated in the declaration of conformity of the machine/related product.

Manufacturer shall ensure that the economic operator established in the Union complies with the obligations set out in Article 4 of Regulation (EU) 2019/1020, in particular, a) where the Union harmonization legislation applicable to the product requires an EU declaration of conformity or an EU declaration of performance and technical documentation, ensure that such EU declaration of conformity or declaration of performance and the technical documentation have been drawn up, keep the declaration of conformity or the declaration of performance available to market surveillance authorities for the period required by that legislation, and ensure that the technical documentation is made available to those authorities upon request;

For manufacturers established outside the Union, compliance options under the Regulation include: (a) appointing an Authorized Representative in the EU; (b) placing the machine on the market through an importer established in the EU who assumes the obligations of an importer under the Regulation; or (c) appointing an EU-based mandatary /establishing an EU subsidiary that assumes the manufacturer’s obligations. In other words, the presence of an Authorized Representative is a contractually available compliance route, not a universally imposed precondition for market access.

The practical effect is that machinery may be exported without an Authorized Representative, provided the non-EU manufacturer ensures that one of the other legal constructs (notably a compliant importer or mandated EU entity) fulfills the Regulation’s obligations (technical documentation availability, Declaration of Conformity, CE marking, cooperation with authorities, incident reporting, etc.). Market surveillance authorities will enforce the obligations against the operators identified in the chain (importer, distributor, or the actual person who placed the machine on the market), consistent with the allocation of responsibilities in the Regulation and with Decision No 768/2008/EC.

The transition from the Machinery Directive to the new Machinery Regulation reflects a broader strategic shift in European product legislation, aimed at addressing the challenges posed by digitalization, automation, and increasingly interconnected and software-intensive systems. Ensuring compliance in this evolving regulatory landscape demands not only a thorough understanding of the applicable requirements but their proactive integration into the design and development process from the earliest stages.

The 2027 deadline is approaching. The time to prepare is now. ♦



Photo by Getty Images on Unsplash

¹ Treat cyber threats as safety hazards in the three-step risk reduction process. Risk assessments must document plausible attack vectors, potential safety impacts, likelihood estimates, and residual risk after controls

² Apply secure development lifecycle practices to machine control software and embedded components (threat modeling, secure coding, code signing, build reproducibility, and supplier software bill of materials). Ensure minimal enabled services and hardened default configurations

³ Maintain software version records, change logs, and evidence of vulnerability remediation. Implement vulnerability disclosure and patch management policies proportionate to safety impact and operational constraints. Demonstrate how updates are authenticated, tested, and deployed without introducing new hazards

⁴ Apply role-based access control, multi-factor authentication for privileged functions, and network zoning between IT and OT domains. Document logical and physical separation measures and compensating controls where segmentation is limited.

⁵ Include intrusion detection/monitoring appropriate to OT environments, logging with integrity protection, and incident response plans that consider both cyber and safety consequences. Evidence of incident handling procedures (including coordinated vulnerability disclosure and notification routes to relevant authorities) should be part of the technical file.

⁶ Assess cybersecurity posture of suppliers, require secure product development clauses in contracts, and vet third-party components (including firmware and field-updatable modules)

Eng. Elisabetta Marzufero is Factory Automation Engineer at AC&E S.r.l.
She may be reached at elisabetta.marzufero@ac-e.com.

From Reactive to Predictive: How AI and Advanced Technology are Redefining Capital Planning for Manufacturers

FARNSWORTH GROUP

Manufacturing leaders in Illinois (and throughout the nation) are facing a new reality. Facilities are aging, systems are more complex, and the tolerance for downtime is shrinking. At the same time, experienced facilities staff are retiring, capital dollars are under greater scrutiny, and expectations around reliability, sustainability, and uptime continue to rise.

Against this backdrop, artificial intelligence, data analytics, and advanced facility technologies are no longer optional tools. They are becoming essential for manufacturers seeking to make better, more defensible capital planning decisions before failures occur.

Organizations that are leading the way are moving beyond reactive capital planning and adopting advanced, data-driven strategies that integrate reliability, risk, and life cycle thinking across the enterprise.

From Reactive Budgets to Intelligent Capital Planning

Traditional capital planning has often relied on a mix of experience, anecdotal evidence, and urgency. Decisions are frequently driven by what broke last year, what feels risky, or which system is receiving the most attention. While experience remains critical, this approach becomes less effective as facilities grow more complex and staffing becomes leaner.

Advanced capital planning replaces reactive budgeting with structured intelligence. Rather than producing a single one-time report, successful programs are perpetual and evolve year after year. Asset condition data, failure risk, and reliability metrics are integrated into a living system that helps organizations forecast risk, prioritize investments, and justify budgets.

This shift mirrors what manufacturers already expect from their production systems: predictability, optimization, and informed decision making.

The Role of AI and Analytics in Asset Intelligence

At the heart of advanced capital planning is data that is clean, integrated, and actionable. Manufacturing facilities generate enormous amounts of information through maintenance systems, condition assessments, monitoring devices, and operational logs. Historically, much of this data remained underutilized.

AI and advanced analytics now make it possible to convert this information into insight. Pattern recognition helps identify recurring failure modes. Pareto analysis focuses attention on the small percentage of risks responsible for the majority of downtime. Failure Mode and Effects Analysis can be applied consistently across critical systems, while Risk Priority Numbers and System Condition Indexes allow teams to rank assets based on likelihood and consequence of failure.

When combined, these tools enable facilities teams to move from asking what failed to asking what is most likely to fail next and what the cost of inaction would be.

Reliability as a Capital Planning Strategy

Maintenance strategy directly affects operating cost and capital effectiveness. Reactive maintenance and time-based

preventive maintenance can lead to unnecessary replacements or catastrophic failures.

Reliability-centered maintenance, supported by analytics and AI-driven insights, allows organizations to focus resources where they matter most. Non-critical systems may be allowed to run to failure, while critical assets receive targeted investment. Maintenance procedures are aligned with actual failure modes rather than calendar intervals.

The result is reduced downtime, lower operating costs, and capital dollars that are applied with greater precision.

The Greatest Leverage Happens Early

One of the most important insights in advanced capital planning is that the ability to influence long-term reliability is greatest before a facility is built.

Leading organizations are using digital tools earlier in the asset life cycle to define reliability expectations in pre-design and basis of design documents. Single points of failure are identified before construction. Monitoring and data logging requirements are built into specifications. Physical layouts are designed to support safe and efficient maintenance.

Technologies such as digital twins, AI-enabled asset models, and integrated building information modeling allow teams to simulate performance and maintenance scenarios before systems are installed. By the time a facility enters operation, much of its inherent reliability is already determined.

Turning Data Into Defensible Capital Budgets

Facilities teams are increasingly expected to justify capital requests to executive leadership with clear data. Advanced capital planning makes this possible. Instead of requesting large capital allocations based on age or intuition, teams can explain which systems pose the highest operational risk, how deferred maintenance impacts reliability, and how different investment strategies affect long-term operating cost.

In advanced manufacturing and healthcare environments, this approach has enabled organizations to shift from spreadsheet-based planning to multiyear capital programs that balance uptime, safety, sustainability, and cost.

Addressing the Knowledge Gap

Many manufacturers are also facing the loss of institutional knowledge as experienced staff retire. AI and data platforms help mitigate this risk by embedding decision logic and asset intelligence into systems rather than individuals. Equipment condition, reliability strategies, and prioritization methods are documented, improving continuity even as teams change. Technology does not replace expertise. It scales it.

Smart Facilities Enable Smarter Decisions

Advanced capital planning aligns closely with the rise of smart facilities. Condition-based monitoring, connected sensors, and integrated control systems feed real-time data into planning models. This allows earlier intervention and better prioritization.

While robotics and automation often draw the most attention, their supporting infrastructure plays an equally critical role. Power, exhaust, water, and life safety systems must be reliable to avoid production interruptions. Advanced capital planning ensures these systems do not become hidden constraints.

Starting the Journey

Advanced capital planning is not implemented all at once. Successful organizations often begin by improving equipment inventories, standardizing condition assessments, defining reliability-based Key Performance Indicators (KPIs), and prioritizing assets based on risk rather than age alone. Over time, these foundations allow AI and advanced tools to deliver meaningful value.

Conclusion

AI and advanced technologies are transforming how manufacturers approach capital planning, but technology alone is not the solution. The real shift is moving from reactive decision-making to proactive, data-driven stewardship of assets.

For Illinois manufacturers navigating aging infrastructure, competitive pressure, and workforce changes, advanced capital planning offers a path to greater reliability, smarter investment, and sustained operational performance. ♦

Jan
One of the
RSM team

Discover insights as unique as your challenges.

RSM and our global network of consultants specialize in working with middle market companies. This focus leads to custom insights designed to meet your specific challenges. Our experience, combined with yours, helps you move forward with confidence to reach even higher goals.

rsmus.com/manufacturing

THE POWER OF BEING UNDERSTOOD
ASSURANCE | TAX | CONSULTING

RSM

RSM US LLP is the U.S. member firm of RSM International, a global network of independent assurance, tax and consulting firms. Visit rsmus.com/aboutus for more information regarding RSM US LLP and RSM International.

Brandon Ekberg, PE, is a Managing Principal and Professional Chemical Engineer with Farnsworth Group. He may be reached at bekberg@f-w.com.

THE GENESIS MISSION

Argonne's Role in America's AI Future



Argonne's Materials Engineering Research Facility, where researchers are scaling up material manufacturing from the theoretical to the practical.

As artificial intelligence becomes more important to industrial innovation, the U.S. Department of Energy (DOE) is investing in new national capabilities through the Genesis Mission. This initiative is designed to accelerate American leadership in supercomputing and AI while strengthening U.S. industry and economic competitiveness.

DOE's Argonne National Laboratory is playing a leadership role in the Genesis Mission. Located just outside Chicago, Argonne has long been a national hub for advanced manufacturing research, high-performance computing, and materials science. Through the Genesis Mission, the laboratory is using those strengths to develop next-generation AI tools.

"The Genesis Mission reflects how science, AI, advanced computing, and partnerships can come together to strengthen American innovation," said Argonne Director Paul Kearns. "At Argonne, we are focused on building the capabilities that accelerate discovery, support industry, and help solve complex challenges facing society."

Building AI Tools for Science

Argonne is leading the Genesis Mission's AI models and data thrust through the Transformational AI Models Consortium, or ModCon. ModCon brings together DOE national laboratories, universities, and private-sector partners to develop shared AI capabilities for scientific and industrial applications.

While many public discussions focus on generative AI or consumer tools, the AI systems being developed through the Genesis Mission are aimed at technical challenges in areas such as scientific discovery, manufacturing, energy systems, robotics, and materials discovery.

"We're creating an environment where research teams can move faster, collaborate more easily, and build AI tools that can really scale," said Rick Stevens, associate laboratory director for Computing, Environment and Life Sciences. "When you bring this much expertise to the table, you start to see what's truly possible in AI-driven science."

One example is AI-driven engine optimization systems. Researchers are developing a "co-scientist" platform that combines AI agents, advanced simulations, and scientific models to help



Argonne's Materials Engineering Research Facility, where researchers are scaling up material manufacturing from the theoretical to the practical.

engineers test ideas, analyze behavior, and quickly improve engine and fuel performance. This approach could help manufacturers shorten development timelines for next-generation engines, energy systems, and industrial processes.

Researchers are applying AI to manufacturing-related challenges in other areas:

- Advanced materials discovery:** AI models can identify promising materials for batteries, semiconductors, and energy technologies, reducing the time needed for traditional trial-and-error experimentation.
- Automated experimentation:** Researchers are combining robotics, AI, and scientific instruments to create self-driving laboratories that can run experiments autonomously and adjust conditions in real time.
- Digital manufacturing and process optimization:** AI tools are being developed to improve operations, optimize industrial systems, and analyze sensor data from complex manufacturing environments.
- Microelectronics research:** Argonne scientists are using AI techniques inspired by biological systems to accelerate the design and testing of next-generation semiconductor materials and devices.

The Power Behind the Research

One advantage Argonne brings to the Genesis Mission is access to some of the world's most advanced scientific infrastructure. That includes the recently upgraded Advanced Photon Source, a DOE Office of Science user facility that uses ultra-bright X-rays to study materials at the atomic scale.

Argonne is also home to the Aurora supercomputer, one of the world's fastest supercomputers. Aurora allows researchers to train and run large AI models capable of analyzing massive datasets.

Together, these systems allow researchers to combine AI with real-time experimental data in ways that were previously impossible. For example, AI can analyze data from manufacturing or materials experiments as they happen, allowing scientists to adjust conditions immediately instead of waiting days or weeks for results. That capability could help companies develop and test new products faster.

The Genesis Mission also includes major investments in AI infrastructure that could benefit U.S. industry more broadly.

Argonne is helping develop the American Science Cloud, a secure computing ecosystem designed to connect researchers, laboratories, universities, and industry partners. The goal is to make advanced AI and computing resources more accessible to organizations working on large-scale problems.

In addition, Argonne is partnering with NVIDIA and Oracle on future AI supercomputing systems. These next-generation systems will support larger and more advanced AI applications for science.

Supporting the Future of Manufacturing

Argonne leaders say the Genesis Mission can help ensure Illinois's strong manufacturing base remains competitive as AI becomes more integrated into industrial operations.

Argonne has a long history of working with manufacturers through research partnerships, technology commercialization, and industry collaborations. For Illinois manufacturers, that creates opportunities to work with new technologies and better understand how AI can be applied to operational challenges.

"The technologies being developed today will shape the next generation of American manufacturing," Kearns said. "Illinois has an opportunity to lead by combining world-class research with a strong industrial base." ♦

To learn more about how industry can get involved visit the Genesis Mission Consortium at: <https://genesismissionconsortium.org>.



The Aurora exascale supercomputer at Argonne National Laboratory is one of the most powerful systems in the world. It allows researchers to train and run large AI models capable of analyzing massive datasets.

Walk through almost any small or midsize manufacturing company, and the same challenge quickly appears. The information exists, but clarity does not. Financials sit in one system. Inventory may live in spreadsheets. Supplier information often exists separately from operations and sales data. Pulling everything together takes time, manual effort, and constant reconciliation.

This fragmented approach creates more than inefficiency. It creates blind spots. Leaders are forced to react to problems instead of making confident, data-driven decisions in real time.

The encouraging reality is that beginning an artificial intelligence journey does not require replacing an ERP system or launching a massive technology overhaul. The most important first step is far more practical. Manufacturers must centralize and structure their data into a trusted Data Lakehouse environment where information is cleansed, standardized, and continuously updated. For Illinois manufacturers, this foundational step can unlock faster decision-making, stronger margins, greater operational visibility, and long-term scalability.

The Power of a Single Source of Truth

Consider how many reports leadership teams compare before making major decisions. Finance may have one version of the numbers while operations or supply chain teams have another. Often, someone must manually reconcile information before action can even begin.

When financial, operational, inventory, customer, and supplier data are unified into a centralized Data Lakehouse, those silos begin to disappear. Leaders gain one trusted version of the truth built on structured and reliable data.

This is where transformation truly begins. Many companies are rushing toward AI initiatives without realizing that fragmented and inconsistent data limits the value of artificial intelligence itself. AI is only as effective as the quality and structure of the data behind it. With centralized data in place, manufacturers can begin creating an intelligence layer across the organization where finance, operations, inventory, supply chain, and sales all work from the same real-time understanding of company performance.

Seeing the Business in Real Time

Once data is centralized, the next evolution is visibility. Modern dashboards and AI-driven analytics allow leaders to see the health of the business in real time. Imagine opening a single dashboard and instantly understanding inventory levels, supplier performance, customer order trends, operational bottlenecks, and cash position. Imagine identifying margin erosion before it reaches the financial statements or receiving alerts about shortages before production is impacted. This kind of visibility changes leadership conversations. Teams stop focusing only on what happened last month and begin discussing what is happening now and what actions should be taken next. That is the shift from traditional reporting to decision intelligence.

Moving From Hindsight to Foresight

Manufacturers have always been disciplined about reviewing historical performance. What sold last month? What were production costs? Which customers generated the highest margins? Artificial intelligence allows organizations to move beyond hindsight and begin looking forward. With predictive tools layered onto centralized data, manufacturers can forecast demand based on historical trends, identify supplier risks before disruptions occur, and optimize inventory levels while protecting working capital. Manufacturers adopting centralized intelligence platforms are often reducing manual reporting effort, improving forecasting visibility, identifying margin issues earlier, and making faster operational decisions across the organization. Acting earlier is often the difference between protecting profitability and watching margins slowly disappear.

The Rise of Generative AI

One of the most exciting developments for manufacturers is the rise of Generative AI, which allows leaders to interact with business data as naturally as having a conversation. Instead of searching through spreadsheets and reports, a plant manager might ask which products carried the highest inventory costs last quarter. A finance leader might ask which customers are trending below expected margins. Generative AI interprets the question, analyzes centralized data, and delivers a clear answer within seconds.

Beyond retrieving information, Generative AI can summarize trends, explain performance changes, highlight operational risks, and surface opportunities across production, inventory, finance, sales, and supply chain operations. This capability shortens the distance between question and action while allowing employees at every level to make faster and more informed decisions.

A Practical Starting Point

For manufacturers wondering how to begin, the path does not need to be overly complex. Start by identifying where critical data resides across the organization. Bring it together into a centralized Data Lakehouse. Cleanse and standardize the information so it becomes trusted across departments. Establish real-time dashboards and operational visibility. Then, gradually introduce predictive analytics and Generative AI capabilities. Each step builds on the last. Each step creates measurable operational and financial improvement.

Manufacturing remains one of the most important industries in Illinois, but the pressures facing manufacturers continue to grow. Supply chain volatility, labor shortages, rising costs, and margin compression all require faster and more precise decision-making. Over the next decade, manufacturers will not compete on production capacity alone. They will compete on speed of insight, speed of decision-making, and the ability to act proactively before problems impact operations, customers, and profitability. The companies that centralize their data, embrace intelligent analytics, and leverage AI responsibly will spend less time gathering information and more time acting on it. *The future of manufacturing will belong to organizations that transform data into intelligence, intelligence into action, and action into competitive advantage.* ♦

Michael Bigda is V.P. Of Business Development with QXImpact. He may be reached at michael.bigda@qximpact.com or 773.407.4375



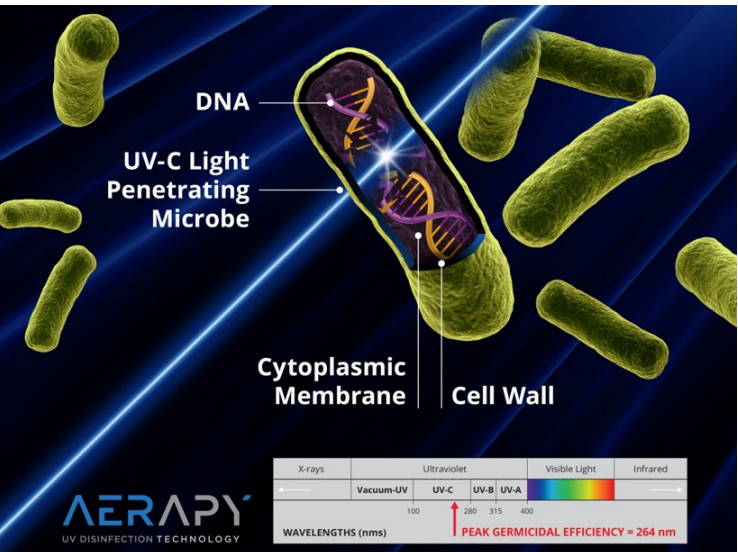
Photo by Getty Images on Unsplash

Manufacturing leaders have always tracked the variables that drive the P&L: uptime, line speed, yield, scrap, and recordable incidents. What they have not measured is the condition of the air itself. That is changing quickly, and for Illinois food and beverage processors, cold-chain operators, and any plant running in a controlled environment, the shift is opening up operational savings buried inside the “cost of doing business” line.

Three forces are driving the change. Industrial-grade environmental sensors have become substantially more affordable. AI and machine learning have moved from research papers to standard tooling in building automation platforms. And the engineered controls that govern indoor environments, including filtration, ventilation, and Germicidal Ultraviolet (GUV, also called UVGI), have matured to the point where their performance can be measured, logged, and verified the same way any other production input is. Pull those three together, and indoor air becomes something a facility leader can manage with the same rigor as any other operational variable.



Upper-air UV-C disinfection fixture and environmental control monitor installed in a walk-in cooler environment used in third-party microbial testing. Photo courtesy of Everidge.



UV-C light damages microbial DNA and RNA, preventing replication. The germicidal range falls within the UV-C band (200–280 nm). Image courtesy of Aerapy.

From Reactive Maintenance to Predictive Environmental Management

For most of the industry’s history, environmental controls were handled on a schedule. Filters were swapped on the calendar. HVAC service happened at fixed intervals. Microbial concerns surfaced only when they showed up as condensation, odor, spoilage, or an employee complaint.

A modern monitoring stack inverts that model. A continuous stream of temperature, humidity, differential pressure, particulate, carbon dioxide, and volatile organic compound data, fed into an analytics platform, lets a facility team see drift, anomalies, and equipment fatigue before any of those problems reach a production line. A rising particulate count near a packaging line can indicate a loading filter, an unbalanced air system, or elevated contamination risk. Subtle changes in cooler humidity or airflow can create conditions favorable to mold growth days before a finished-goods inspection catches it.

Different GUV applications serve different operational goals. HVAC-mounted GUV supports coil hygiene, system cleanliness, energy performance, and whole-building air treatment over repeated air changes. In higher-risk occupied spaces, particularly packaging areas, bakeries, confectionery operations, or facilities with continuous airborne particulates or product dust, properly engineered upper-air GUV adds airborne microbial control within the occupied environment. airflow, occupancy profile, and microbial-control objective all influence which strategy fits.

This is where AI is doing real work, not headline work. Anomaly-detection methods that catch a failing bearing on a production line are catching slow-loading filters, degraded UV-C lamp output, and HVAC components operating outside specification. Correlation analysis across environmental, maintenance, and operational data is exposing relationships humans rarely notice.

What Manufacturers Are Doing With the Data

Predictive spoilage management. Cold-chain operators are correlating environmental conditions with shrink and shelf-life data, and both halves are now quantifiable. Sensors track the conditions associated with microbial risk. On the microbial-control side, an independent third-party laboratory study of GUV inside a walk-in cooler documented untreated chicken and beef with lactic acid bacteria counts greater than 30,000 colony-forming units per gram; after UV-C treatment, that count dropped to 20 cfu/g, a 99.9 percent reduction, with meaningful drops in yeast and mold on the same

samples. Lettuce and spinach showed mold reductions of more than 99 percent. Pair those data streams with sales, yield, and shrink data, and the inputs for a credible predictive model are in hand.

Quantified shrink reduction. A field study at a regional grocery deli department tracking weekly shrink before and after installation of upper-air GUV documented a 100 percent reduction in shrink dollars on packaged greens (from \$139.79 weekly to \$0.00), a 75.75 percent reduction on deli-sliced meats, and a 26.85 percent reduction on beans. The translation: fewer dollars written off, longer shelf life, and more predictable margins on perishable inputs and finished goods.

Pathogen control on inanimate surfaces. Third-party laboratory testing per AOAC Official Method 961.02 and ASTM E1053-97 reported greater than 99.99 percent reduction of MRSA and multiple bacterial and viral challenge organisms on inoculated glass slides after 60 seconds of GUV exposure. Separate field and laboratory evaluations of upper-air GUV reported substantial reductions in airborne fungal spores, smuts, and mold-related contaminants, including non-detectable levels in certain post-treatment environments.

Workforce continuity. Few safety teams correlate absenteeism with indoor air quality, even though respiratory illness drives a meaningful share of unplanned absences, and a single bad week in a major food plant ripples through production schedules for a month. Independent laboratory testing of GUV HVAC equipment against SARS-CoV-2 (USA-WA1/2020) reported up to a 99.97 percent reduction of the virus in a single air pass and a 99.98 percent reduction on surfaces in two seconds. The relevance is broader than any one pathogen: engineered air controls can be measured and verified, and that visibility belongs in workforce-continuity planning.

Predictive maintenance of the controls themselves. UV-C lamps degrade on a predictable curve. Filters load on a known schedule. Sensor data combined with run-time hours and intensity readings lets a CMMS surface the right replacement at the right time, neither over-ordering nor running degraded equipment. Systems designed for rapid in-place servicing keep maintenance manageable, which is important for plants operating with constrained labor.

The Food Safety Overlay

Illinois food processors have invested heavily in HACCP plans, sanitation programs, and environmental monitoring under the Food Safety Modernization Act. What is new is the ability to fold non-thermal disinfection, particularly UV-C in the 200- to 280-nanometer range with germicidal peak near 253.7 nanometers, into those programs in a way that preserves food quality.

Unlike thermal processing, UV-C inactivates microbes by damaging their DNA, leaving texture, nutritional content, and sensory characteristics intact. Because each installation can now be instrumented and logged, food safety teams can produce an automated audit trail of dose delivered, hours operated, and verified outcomes, rather than a paper log of weekly bulb checks. That kind of continuous compliance documentation is increasingly valued under third-party audits and customer quality programs.



UV-C lamps in continuous operation at the cooling coil of an air-handling unit in a meat-processing facility. Properly engineered HVAC UVGI systems can support both airborne microbial reduction through repeated air treatment and coil-surface hygiene that helps preserve heat-transfer efficiency, reduce pressure drop, and lower HVAC energy demand over time. Photo courtesy of Aerapy.

OSHA's Minor Servicing Exception: Steps Manufacturers Can Take to Avoid a Common Lockout/Tagout (LOTO) Compliance Trap

CONN MACIEL CAREY

A caveat worth being direct about: GUV is a layered control, not a stand-alone solution. It complements rather than replaces sanitation, filtration, ventilation, and process hygiene. Performance depends on delivered UV dose, airflow rate, exposure time, fixture placement, and disciplined maintenance, and upper-air fixtures in occupied spaces must be certified to prevent occupant exposure. Published guidance from CDC, NIOSH, and ASHRAE consistently emphasizes that GUV systems require application-specific engineering, sized for the airflow, occupancy, and microbial-control objective at hand, rather than being treated as interchangeable equipment. Competent vendors will quantify those variables and provide documentation that supports audits, particularly during new facility design or HVAC retrofits.

Energy, Sustainability, and the Multi-Benefit Case

Rising energy costs and sustainability pressure are pushing facility leaders toward investments that solve more than one problem at once. Smart HVAC controls and AI-driven building analytics often surface inefficiencies difficult to spot manually, and properly managed airflow improves process consistency, worker comfort, and contamination control while reducing energy load. One specific application worth flagging is UV-C coil irradiation in air-handling units. Cooling coils that develop microbial biofilm lose heat-transfer efficiency and drive up static pressure, forcing fans to work harder and compounding HVAC energy consumption over a system’s life. Peer-reviewed multi-climate research has documented that fouled HVAC systems consume 41 to 60 percent more fan and blower energy than cleaned systems (Ildiri et al., 2025). Continuous UV-C coil irradiation helps prevent biofilm accumulation on coil surfaces, preserving heat-transfer efficiency, protecting total external static pressure (TESP) budgets, and reducing manual coil-cleaning labor. For Illinois manufacturers, the timing matters: the state’s Climate and Equitable Jobs Act (CEJA) and the newer Clean and Reliable Grid Affordability Act are driving an aggressive industrial energy-efficiency push, with utility-administered programs covering HVAC retrofits and building-automation upgrades.

Where AI Adds Real Value, and Where It Doesn’t

AI is not a substitute for engineering. A neural network cannot fix an undersized UV system or an unbalanced airflow pattern. The largest gains come from getting the engineering right first and then layering data analysis on top of it.

A Practical Starting Point

A workable first project: pick one high-value space such as a cold room, packaging line, or clean area. Instrument the environmental conditions most associated with elevated microbial risk: temperature, relative humidity, differential pressure, airborne particulate counts, and run-time and intensity data from any UV-C or filtration equipment in place. Pair that data with the microbial verification you already do under HACCP (environmental swabs, ATP testing, finished-product lab work), so the conditions data have known outcomes to correlate against. Implement one or two engineered controls with documented performance specifications

and independent verification, then continue collecting both data streams to see how conditions track against the operational outcomes that matter: shrink, complaint rates, downtime, and absenteeism. Environmental data can usually be integrated into existing building-automation, maintenance, or analytics platforms without significant additional lift.

For decades, the inside of a manufacturing facility was treated as a fixed input. Now, with inexpensive sensors, mature engineered controls, and AI, it is becoming one of the most measurable and adjustable variables on the plant floor. For Illinois manufacturers facing cost, workforce, and sustainability pressure, that visibility is becoming table stakes. ♦

References

- Singh H, Bhardwaj SK, Khatri M, Kim K-H, Bhardwaj N. “UVC radiation for food safety: An emerging technology for the microbial disinfection of food products.” *Chemical Engineering Journal*, 2021;417:128084.
- Jadhav HB, et al. “Non-Thermal Technologies for Food Processing.” *Frontiers in Nutrition*, 2021;8.
- George DS, et al. “Effects of UV-C and Heat Treatment on Fresh-Cut Chokanan Mango and Josephine Pineapple.” *Journal of Food Science*, 2015;80(2):S426–S434.
- Gršković B, et al. “Effect of Ultraviolet C Radiation on Biological Samples.” *Croatian Medical Journal*, 2013;54(3):263–271.
- Pearce-Walker J, Troup D, Verhougstraete M. “Ultraviolet Air Disinfection of Zoonotic and Enzootic Pathogens.” *University of Arizona, Mel and Enid Zuckerman College of Public Health*, 2018.
- BCS Laboratories, Gainesville, FL. *UVGI pathogen inactivation testing per AOAC Official Method 961.02 and ASTM E1053-97. (Third-party testing commissioned by Aerapy.)*
- Innovative Bioanalysis, Costa Mesa, CA. *SARS-CoV-2 (USA-WA1/2020) single-pass Air and surface neutralization testing of UVGI HVAC equipment*, 2020. (Third-party testing commissioned by Aerapy.)
- Independent third-party laboratory study, Baltimore, MD. *Walk-in cooler evaluation of upper-Air GUV on bean, meat, and produce samples*, 2022. (Testing performed for Everidge, Inc.; results shared with Aerapy.)
- Ildiri N, Biesiada E, Facchinetti T, Anglani N, Ahmed N, Hernandez M. “Impacts of HVAC cleaning on energy consumption and supply Airflow: A multi-climate evaluation.” *Energy & Buildings*, 2025;328:115147.

Manufacturers routinely perform short-duration production tasks such as clearing jams, removing scrap material, repositioning product, adjusting sensors, cleaning buildup, and resetting equipment, often assuming that they fall outside OSHA’s lockout/tagout (“LOTO”) requirements under the “minor servicing exception” (“MSE”). *That assumption can create significant risk.*

The MSE is one of the most misunderstood and frequently misapplied aspects of OSHA’s hazardous energy control standard. OSHA regularly scrutinizes employers’ reliance on the exception following serious injuries, amputations, and fatalities involving employees exposed to hazardous motion during production-related servicing activities. In many cases, employers believed machine safeguards, interlocks, or production procedures sufficiently protected employees, only to have OSHA conclude that the tasks required full lockout/tagout under 29 C.F.R. § 1910.147.

Ironically, the greatest compliance risks often arise not during large mAIntenance shutdowns, but during short-duration production tasks performed repeatedly throughout the workday. Because these activities become normalized over time, employees and supervisors may underestimate the associated hazardous energy exposure and gradually develop informal workarounds that erode safeguarding effectiveness.

The stakes can be substantial. Beyond serious or willful citations, OSHA may pursue per-instance citations where multiple employees routinely perform non-compliant servicing activities without adequate hazardous energy protection. Importantly, the issue is not whether the task occurs during production. Rather, the question is whether the task satisfies the narrow requirements of the minor servicing exception and whether employees are protected through effective alternative protective measures that provide protection equivalent to lockout/tagout.

OSHA's Lockout/Tagout Requirements

OSHA’s lockout/tagout standard, 29 C.F.R. § 1910.147, generally requires employers to isolate, block, dissipate, restrAIIn, and otherwise control hazardous energy before employees perform servicing or mAIntenance activities on machines or equipment. The standard is intended to protect employees from the unexpected energization, startup, or release of stored energy that could cause injury.

Hazardous energy includes more than moving machine parts. Employers must also consider electrical, pneumatic, hydraulic, mechanical, thermal, gravitational, and stored energy hazards.

The minor servicing exception permits employers to perform certAIIn limited servicing activities during normal production operations without implementing full lockout/tagout procedures. However, the exception applies only when very specific criteria are satisfied.

Importantly, the MSE does not eliminate the obligation to protect employees from hazardous energy exposure. Rather, it permits employers to rely on effective alternative protective measures instead of full lockout/tagout in limited circumstances.

Understanding the Minor Servicing Exception

Under OSHA’s standard, the exception generally applies to minor tool changes, adjustments, and other minor servicing activities that take place during normal production operations if the activities are routine, repetitive, and integral to the use of the equipment for production, provided employees are protected through effective alternative measures.

Employers frequently assume that short-duration production tasks automatically qualify for the exception. In practice, however, OSHA’s analysis is highly fact-specific, and relatively small differences in employee exposure or machine safeguarding can significantly alter whether the exception applies.

“*ROUTINE*” - To qualify under the exception, the activity generally must be regularly performed as part of normal production operations. OSHA often views unusual, infrequent,

or abnormal-condition tasks as falling outside the exception. For example, clearing an expected minor product jam during routine production may be more likely to qualify than servicing associated with a machine malfunction or breakdown.

“*REPETITIVE*” - The activity also typically must be repeated regularly as part of the production process itself. Employers sometimes incorrectly assume that a task is repetitive simply because it occurs from time to time. However, tasks performed only occasionally, during abnormal conditions, or in response to unexpected equipment issues may not satisfy this requirement.

“*INTEGRAL TO PRODUCTION*” - The activity generally must also be inherent to the production process and necessary for the machine to continue operating as intended. This distinction is often critical. Activities associated with ongoing production operations may be treated differently than troubleshooting, repAIr, or corrective mAIntenance activities that occur because equipment is malfunctioning or operating improperly.

Effective Alternative Protective Measures

Even when a task is routine, repetitive, and integral to production, the exception applies only if employees are protected through effective alternative protective measures. This requirement is often where employers encounter the greatest compliance difficulties.

Effective alternative protective measures typically involve a combination of engineering controls and administrative or work practice controls. Importantly, OSHA generally expects employers to rely primarily on safeguarding systems or control-reliable protective measures that actively prevent employee exposure to hazardous motion, rather than procedures or employee behavior alone.

Many employers focus on whether safeguards were installed. OSHA, however, frequently focuses on whether those safeguards actually prevented employee exposure to hazardous energy under real-world operating conditions. In other words, the issue is often not whether a safeguard existed, but whether it reliably functioned during actual production activities. Alternative protective measures may include:

- interlocked barrier guards;

Annette Uda is founder and president of Aerapy. She has spent more than two decades helping facilities improve Air quality, environmental control, microbial risk reduction, and energy performance in occupied environments, and serves on ASHRAE Technical Committee 2.9, Ultraviolet Air and Surface Treatment. She may be reached at auda@aerapy.com.

- ▶ light curtains;
- ▶ presence-sensing devices;
- ▶ two-hand controls;
- ▶ control-reliable safety circuits (particularly where employees may otherwise be exposed to hazardous motion during production-related servicing tasks);
- ▶ properly designed safeguarding systems; and
- ▶ task-specific work practices designed to prevent hazardous energy exposure.

However, OSHA generally expects these measures to provide reliable and effective employee protection during the specific servicing activity being performed.

Why Installed Safeguards Still FAIL OSHA Scrutiny

In practice, many OSHA citations involving the MSE arise not because safeguards were entirely absent, but because the safeguards proved ineffective, incomplete, or routinely bypassed during actual production operations. A recurring issue in OSHA investigations is the disconnect between the employer’s written safeguarding program and actual production-floor practices. These issues frequently arise in connection with production-line jam clearing and other short-duration servicing activities where employers rely heavily on interlocks, light curtains, and similar safeguarding technologies.

On paper:

- ▶ the interlock functions properly;
- ▶ the light curtain is installed;
- ▶ employees are trained not to bypass safeguards; and
- ▶ procedures prohibit employees from entering hazardous areas.

But OSHA interviews operators and learns:

- ▶ jams occur frequently;
- ▶ production slows if safeguards are followed strictly;
- ▶ employees developed workarounds;
- ▶ supervisors observed bypassing practices; or
- ▶ safeguards were routinely defeated during production.

At that point, OSHA may argue that the alternative measures were not truly effective and that the task should have been performed under full lockout/tagout procedures.

Bypassed or Defeated Interlocks

One of the most common issues involves employees bypassing or defeating safeguarding devices to maintain production speed or facilitate easier access to the machine. Examples may include:

- ▶ taped sensors;
- ▶ magnets defeating gate switches;

- ▶ bypass keys;
- ▶ overridden interlocks;
- ▶ reaching around light curtains; or
- ▶ opening guarded areas while hazardous motion continues.

In these situations, OSHA often focuses not merely on the existence of the safeguard, but whether the employer ensured the safeguard remained functional and effectively protected employees during actual operations.



Photo by Getty Images on Unsplash

Improperly Designed Safeguarding Systems

Employers also may encounter compliance issues where safeguarding devices are improperly positioned or fail to fully protect employees from hazardous motion. For example, improperly positioned light curtains may still allow employees to reach around or under the safeguard and access hazardous motion before the machine fully stops. Common issues include:

- ▶ insufficient safety distances;
- ▶ reach-over or reach-around hazards;
- ▶ incomplete coverage of hazard zones;
- ▶ failure to account for stopping time;
- ▶ exposure to residual or stored energy; and
- ▶ safeguarding systems that protect one hazard while leaving others uncontrolled.

Importantly, employers must evaluate not only machine motion, but also stored pneumatic, hydraulic, mechanical, gravitational, and other hazardous energy sources.

Jam Clearing Is Not Automatically Exempt

Employers frequently assume that all jam-clearing activities qualify under the MSE. In practice, the analysis is far more nuanced. Relatively small factual differences can significantly alter whether the exception applies. Some jam-clearing tasks may qualify where effective safeguarding fully prevents employee exposure to hazardous motion. However, OSHA may distinguish between clearing routine production interference and addressing abnormal equipment conditions or malfunctions that suggest servicing or troubleshooting beyond the scope of the exception. Depending on the circumstances, full lockout/tagout may still be required based on:

- ▶ the extent of employee intrusion into the machine;
- ▶ whether guards must be opened or removed;
- ▶ whether employees enter danger zones;
- ▶ whether troubleshooting is involved;

- ▶ whether safeguards are bypassed; or
- ▶ whether hazardous energy remains present.

Best Practices for Employers

Because of the narrow and highly fact-specific nature of the exception, employers should take proactive steps to clearly define and control when the MSE may be used.

Develop a Finite List of Approved MSE Tasks

One of the most effective compliance strategies is developing a clearly defined list of approved minor servicing tasks. Under this approach:

- ▶ each approved task is specifically analyzed;
- ▶ required alternative protective measures are identified;
- ▶ procedures are documented; and
- ▶ employees are trained on the approved process.

Equally important, employers should clearly communicate that if a servicing activity is not specifically identified and approved as an MSE task within the employer’s hazardous energy control procedures, the activity must be performed under full lockout/tagout procedures. This approach helps prevent ad hoc operator decision-making during production.

Create Task-Specific Procedures

Employers should develop documented procedures addressing:

- ▶ the specific task;
- ▶ required safeguards;
- ▶ prohibited conduct;
- ▶ required positioning;
- ▶ methods for verifying protection;
- ▶ restart procedures; and
- ▶ circumstances requiring escalation to full LOTO.

Generic procedures are often insufficient for complex production environments.

Train Operators and Supervisors

Training should focus not only on procedural requirements, but also on:

- ▶ recognizing when LOTO is required;
- ▶ understanding safeguarding limitations;
- ▶ prohibitions on bypassing safeguards; and
- ▶ identifying abnormal conditions that fall outside approved MSE tasks.

Supervisory Training is particularly important because OSHA frequently evaluates whether supervisors knew or should have known about unsafe work practices.

Audit Real-World Work Practices

Employers should periodically audit not only written procedures, but also actual production-floor practices.

Auditing should include:

- ▶ observing servicing activities during production;
- ▶ evaluating whether safeguards are bypassed;
- ▶ verifying stopping times and safety distances;
- ▶ testing safeguard functionality; and
- ▶ confirming employees follow approved procedures under real operating conditions.

Audits also should evaluate whether safeguarding devices remain properly positioned, functional, and resistant to bypassing during production operations. In many OSHA cases, the core issue is not the absence of procedures, but the failure to ensure those procedures are consistently followed in practice.

Conclusion

The minor servicing exception can provide operational flexibility for limited production-related servicing activities, but it is not a shortcut around OSHA’s lockout/tagout requirements. Employers relying on the exception should carefully evaluate whether tasks truly satisfy the routine, repetitive, and integral criteria and whether alternative protective measures provide reliable and effective protection against hazardous energy exposure.

In OSHA investigations involving the minor servicing exception, the agency often evaluates not merely whether safeguards were installed, but whether those safeguards remained functional, were not bypassed, and protected employees during real-world production operations. As a result, employers should approach the MSE as a carefully developed, task-specific, and actively managed exception — not simply an operational convenience or production shortcut. ♦

LEGISLATIVE ADVOCACY



DONOVAN GRIFFITH

The Illinois Manufacturers’ Association (IMA) continues to serve as the leading voice for manufacturers at the State Capitol, advocating on behalf of businesses of all sizes and sectors across Illinois. Through strategic advocacy, coalition building, and direct engagement with lawmakers and state agencies, the IMA plays a critical role in shaping legislation and regulatory policies that impact the state's business climate. Looking back on the 2026 Spring Legislative Session, the IMA's influence is more evident than ever, having successfully advanced pro-manufacturing priorities, defeated costly and burdensome proposals, and ensured manufacturers had a seat at the table during negotiations on some of the most significant issues facing Illinois employers.

Key Legislative Wins in the 2026 Spring Session

TAX POLICY: As Illinois lawmakers struggled in the final weeks of session to craft a balanced budget during a fiscally constrained year, the IMA was on the front lines defending manufacturers and employers from proposals to increase taxes and eliminate key business incentives. With spending reductions largely absent from budget discussions, lawmakers instead explored a variety of revenue-generating measures aimed at businesses and investors.

The IMA led the business community's advocacy and messaging efforts against several proposals, including a MillionAire's Tax, the adoption of worldwide combined reporting, consideration of a mark-to-market valuation structure, further decoupling from federal research and development tax incentives, and the repeal of longstanding tax incentives that support investment, job creation, and economic competitiveness in Illinois. Among the most concerning proposals were efforts to eliminate tax credits for High Impact Businesses and construction jobs, as well as repeal portions of the Manufacturing Machinery & Equipment (MM&E) sales tax exemption by taxing tangible personal property consumed in the manufacturing process, such as oils, lubricants, rags, and other production-related materials.

Through sustained advocacy with legislative leaders, the Governor's Office, and coalition partners, the IMA successfully helped prevent these proposals from advancing. As a result, Illinois manufacturers retained critical incentives and tax policies that support capital investment, operational efficiency, and long-term economic growth in the state.

LABOR POLICY: While numerous efforts were made this spring to advance costly and burdensome labor mandates, the IMA served as the leading voice for Illinois manufacturers in protecting employers from policies that would have negatively impacted businesses of all sizes across the state. Among the many issues considered by lawmakers was legislation that would have imposed rigid, one-size-fits-all workplace temperature standards on employers. The IMA helped organize a broad coalition in opposition to the proposal, testified against the legislation in committee, and met directly with advocates and lawmakers to highlight the significant operational challenges the bill would create for manufacturers. The IMA argued that workplace temperatures and operational environments vary significantly across industries and facilities, making a one-size-fits-all regulatory approach both impractical and potentially disruptive.

The IMA also stopped legislation that would have given up to 26 weeks of unemployment benefits to striking workers, a move that would have fundamentally altered the balance of collective bargaining by giving one side access to taxpayer-supported benefits during negotiations. Union groups are expected to further push for this legislation in the fall veto session, and the IMA will remain adamantly opposed.

Additionally, the IMA led negotiations on proposed changes to Illinois’ unemployment insurance and workers’ compensation systems, representing the business community in discussions with labor organizations, legislative leaders, and the Governor’s Office to protect employers from costly mandates while maintaining the long-term stability of the unemployment insurance system. The IMA also worked to

reduce excessive penalties on employers within the workers’ compensation system and successfully pushed back against proposals that would have weakened or eliminated medical necessity standards that are needed to defend employers.

Finally, the IMA helped to prevent the elimination of non-competes in Illinois and stopped legislation that would have required employers with more than \$100 million in annual revenue and at least 100 employees to submit annual reports to the Illinois Department of Labor detailing workforce management policies, employment practices, and workforce performance metrics.

ENVIRONMENTAL POLICY: The IMA played a key role in the development and negotiation of environmental justice (EJ) legislation that advanced during the 2026 legislative session. For years, the IMA and a coalition of business organizations successfully opposed more burdensome EJ proposals that would have created uncertainty in the permitting process and discouraged economic development and investment across Illinois. This year presented a markedly different approach.

Working closely with the Illinois EPA, the Governor's Office, legislators, and coalition partners, the IMA helped shape legislation that largely codifies the Agency's existing EJ policies while providing greater transparency, consistency, and predictability for permit applicants. Throughout negotiations, the IMA advocated for clear standards, defined processes, and objective criteria to ensure businesses have a better understanding of how environmental justice considerations will be incorporated into the permitting process.

The resulting legislation represents a balanced approach that preserves Illinois' ability to attract and retain manufacturing investment. By helping move discussions away from subjective and ever-changing agency practices toward a more clearly defined statutory framework, the IMA secured important improvements that provide manufacturers with greater certainty when pursuing expansion projects and obtaining environmental permits through the Illinois EPA

Also on the environmental front, the IMA was instrumental in stopping or slowing several proposals that would have imposed significant new costs, operational challenges, and regulatory burdens on manufacturers. Throughout the spring session, the IMA worked closely with coalition partners and lawmakers to oppose legislation that would have banned polystyrene food containers, established state-specific appliance efficiency standards, expanded wetland regulations beyond existing federal requirements, and imposed restrictive new mandates on warehousing and distribution facilities. In each case, the IMA emphasized the importance of balancing environmental objectives with economic realities and the need to preserve Illinois' competitiveness as a destination for manufacturing, logistics, and investment.

WORKFORCE POLICY: For several years, the IMA has championed legislation to provide an exemption from Illinois' two-year foreign



language high school graduation requirement for students enrolled in career and technical education (CTE) programs. At a time when enrollment in CTE programs continues to grow, particularly manufacturing-related pathways, many school districts have been forced to reduce or eliminate valuable career-focused coursework to accommodate the additional foreign language requirement.

This session, the IMA successfully advanced legislation allowing students to opt out of foreign language requirements in favor of CTE.

FOOD POLICY: After years of serving as the lead business organization opposing legislation to ban specific food additives, the IMA was once again at the forefront of defending Illinois food manufacturers this session by leading opposition to legislation that sought to prohibit so-called "ultra-processed foods" in Illinois schools. While the proposal was framed as a public health initiative, it raised significant concerns for food manufacturers, school districts, and the broader food supply chain due to its broad scope and lack of scientific clarity.

The IMA worked closely with food manufacturers, national trade associations, and lawmakers to highlight the bill's reliance on vague and overly broad ingredient-based definitions that could have swept in a wide range of safe, nutritious, and FDA-approved food products. Because the legislation failed to establish a clear and workable definition of what constitutes an "ultra-processed food," manufacturers, schools, and suppliers would have faced substantial uncertainty regarding compliance.

The IMA also helped stop the momentum of a proposal to require food manufacturers, grocery stores, and restaurants to collect all their food scraps to ensure they are composted. The IMA argued that the proposal failed to adequately account for Illinois’ existing infrastructure and markets for compost and other diverted materials, while also overlooking the significant operational resources manufacturers would need to dedicate to compliance.

Hard-Fought Losses in the 2026 Spring Session

While the IMA successfully defends manufacturers and the broader business community on a daily basis, the influence and persistence of organizations and lawmakers who fundamentally disagree with pro-growth economic policies should not be understated. Each year, legislators introduce hundreds of proposals that would increase costs, expand regulatory requirements, create legal liabilities, or otherwise make it more difficult for manufacturers to invest and grow in Illinois.

Despite significant advocacy efforts by the IMA, several concerning proposals advanced and were ultimately approved by lawmakers. Among the most significant was legislation altering the federal 340B prescription drug program in Illinois. The IMA opposed the measure, arguing that it protects large hospital systems and other covered entities without providing meaningful transparency or guarantees that any savings generated through the program are passed on to patients. The legislation also raises concerns for Illinois' pharmaceutical manufacturers and the long-term sustainability of a program that has expanded far beyond its original intent.

Lawmakers also approved legislation granting the state greater authority to regulate homeowners and automobile insurance rates and policies. The IMA joined other business organizations in raising concerns that increased government intervention in insurance markets could ultimately drive up costs for Illinois families and businesses. Additionally, legislators enacted a new digital advertising tax, expanded paid leave requirements for employees serving jury duty, and increased the Attorney General's authority to investigate workplace complaints and conduct inspections at employer facilities. ♦



Scan here for the full 2026 End of Session Report

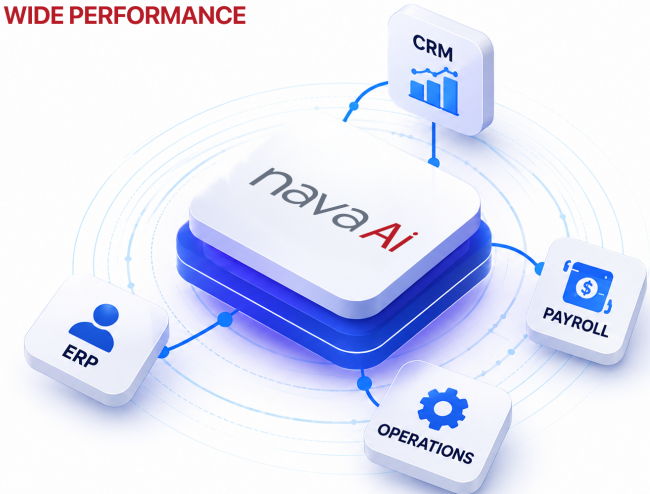
Donovan Griffith is the Executive Vice President and Chief Strategy Officer of the Illinois Manufacturers' Association. He may be reached at dgriffith@ima-net.org, or 217.953.4054



The Only Ai-Powered Digital Intelligence Platform for Industry

nava Ai is a fully integrated, AI-powered cloud platform purpose-built for modern manufacturing. It unifies data across ERP, CRM, MRS, payroll, supply chain, and shop-floor systems into a single intelligent ecosystem.

ONE AI PLATFORM THAT DRIVES COMPANY-WIDE PERFORMANCE



BUILT-IN ANALYTICS

Real-time visibility into production, costs, quality, and performance.



CUSTOMIZABLE DASHBOARDS

Role-based views for every team, from shop floor to top floor.



PREDICTIVE INSIGHTS

Forecast demand, detect issues early, and optimize outcomes.



AI AGENTS

Automate workflows across planning, maintenance, quality, and more.



AGENTIC AI

Autonomous agents that plan, act, adapt and continuously improve.



GENERATIVE AI

Accelerate reporting, root-cause analysis, and decision-making.

Industrial Waste Disposal and Environmental Services



The Complete Environmental Services Partner for Your Manufacturing Needs



Parts Cleaning Services

Manual, Automatic, and Ultrasonic Parts Cleaners Utilizing NSF Formulated Chemistries



Oil Collection Services

Safe, Scheduled, Environmentally Sound Removal of Used Oil and Oily Water



Containerized Waste Services

Reliable, Compliant, Cost-Effective Waste Disposal Programs Designed for Your Unique Needs



Membership Discounts

IMA Member Pricing Program

Crystal Clean offers the following IMA member-only pricing on parts cleaning, used oil, and containerized waste services:

- Minimum 25% discount on all services
- Larger volume discounts available
- No set-up or installation fees
- No waste profile fees
- Significant cost reduction to IMA members

About Crystal Clean

Crystal Clean is a national leader in the environmental services market, providing the smart alternative. Crystal Clean operates more than 130 service branches, industrial services facilities, and waste treatment centers serving the continental United States.

Additional Services Include:

- Vacuum Trucks / Wastewater Treatment
- Used Antifreeze Collection and Recovery
- Aqua Filtration Services
- Decontamination Services
- Universal and Oil-Only Absorbents
- Specialized Industrial and Field Services

For detailed product and savings information, contact:
Johanna Garcia: 877-938-7948 Johanna.Garcia@Crystal-Clean.com
or visit Crystal-Clean.com



REAL-TIME INSIGHTS

PREDICTIVE INTELLIGENCE

AUTOMATED ACTION

thenava.ai

2026
BUSINESS DAY
★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

The Illinois Manufacturers' Association (IMA), in partnership with the Illinois Retail Merchants Association (IRMA), hosted its annual Business Day at the Capitol on May 12, 2026, in Springfield. Events took place at the President Abraham Lincoln Hotel, the Illinois State Capitol, and the IMA offices. As the largest lobbying event in Springfield organized by and for the business community, Business Day at the Capitol brought together hundreds of manufacturers, retailers, and industry leaders to engage directly with legislators, members of the administration, and other policymakers on issues impacting Illinois businesses.

Activities began Monday evening with a joint IMA and IRMA Board of Directors reception and dinner at Illini Country Club. On Tuesday morning, the IMA Board of Directors convened for its regular May meeting before attendees gathered for registration and networking ahead of the sold-out luncheon program.

The luncheon opened with a special America 250 celebration sponsored by Coca-Cola. Attendees raised commemorative America 250 Coca-Cola bottles in a toast recognizing the nation's upcoming 250th anniversary on July 4, 2026. Welcome remarks were delivered by IRMA President & CEO Rob Karr and IRMA Board Vice ChAir Amanda Puck of Mariano's, followed by IMA President & CEO Mark Denzler and IMA Board ChAir Kara Demirjian Huss of TCCI Manufacturing and DCC Marketing.

Featured speakers included University of Illinois System President Tim Killeen, Republican candidate for the United States Senate Don Tracy, and Illinois Secretary of State Alexi Giannoulias, who shared insights on issues shaping Illinois' economic and political landscape. Following the luncheon, attendees received a legislative briefing from IMA Executive VP & Chief Strategy Officer Donovan Griffith, IMA General Counsel Patrick Schweska, Keith Staats of the Taxpayers' Federation of Illinois, and Patrick Evans of the Illinois Energy Association. IMA board members and participants then traveled to the State Capitol to meet with lawmakers and discuss key issues affecting Illinois manufacturers and employers.

During the visit to the Capitol, attendees met with all four legislative leaders, including House Republican Leader Tony McCombie, Senate Republican Leader John Curran, House Speaker Chris Emmanuel Welch, and Senate President Don Harmon. Discussions covered a range of issues critical to Illinois' business community, including the importance of maintaining competitive tax incentives to support business growth and retention, the negative impact of extending unemployment benefits to striking workers, concerns surrounding broad homeowners and auto insurance legislation, and broader tax policy considerations. Many members also held meetings with their local legislators to discuss operations and to further build relationships.

The day concluded with the IMA's traditional Business Day reception under the tent adjacent to the Association's offices on the corner of Second and Adams Streets. One of the most anticipated events of the year, the reception welcomed hundreds of business leaders, legislators, policymakers, and staff for an evening of networking, food, refreshments, and live entertainment.

The IMA extends its sincere appreciation to all attendees and sponsors whose support made Business Day at the Capitol a success and strengthens our ongoing advocacy efforts on behalf of Illinois manufacturers.



UPCOMING IMA EVENTS
SAVE THE DATES

2026

ENVIRONMENT AND
ENERGY CONFERENCE

Tuesday, October 20th, 2026
Tinley Park Convention Center

Join us for this comprehensive event where state environmental and energy experts lead discussions on key environmental issues impacting Illinois manufacturers. This event will provide vital information for CEOs, plant managers, safety, legal and environmental professionals, and more. This one-day program will focus on compliance, regulations, permitting, sustainability, future outlooks, and pending legislation. Participants will hear from state officials and regulators, legal experts and key issue leaders, on important environmental and energy related issues.

To learn more email dgriffith@ima-net.org



Please Join Us in Chicago for the 2026

IMA ANNUAL
LUNCHEON

Sheraton Grand Chicago Riverwalk
301 E North Water St., Chicago, IL
Friday, December 11TH, 2026

Built On
QUALITY

*Quality in construction
cannot be assumed, it
must be guaranteed. At
O'Shea Builders, quality
is essential to ensuring
every project is
completed correctly and
efficiently.*



217.522.2826
www.osheabuilders.com



*O'Shea Builders is proud to partner
with Industrial Clients in central Illinois.
Call us for your next project.*

NEW IMA MEMBERS

- AERAPY®

ALLWAYS PRECISION MACHINING LLC

BASOR ELECTRIC

D 1 NETWORKS

HARBOR MANUFACTURING

HEARTLAND COCA-COLA BOTTLING CO

HELLOFRESH SE

MARK ANTHONY SERVICES

NEHRING ELECTRICAL WORKS
- NIAGARA BOTTLING

SCOUT MOTORS

SIERRA FOREST PRODUCTS

SLATE AUTOMOTIVE

SOUTHWEST AIRLINES

SYSCO CORPORATION

TALLGRASS

WIELAND THERMAL SOLUTIONS

Welcome to the IMA!

MEMBER NEWS

FERRERO

Ferrero celebrated the official launch of Nutella Peanut with a ribbon-cutting ceremony at its Franklin Park manufacturing facility on April 24, marking a historic milestone for one of the world's most recognizable food brands. The event commemorated the start of U.S. production for Nutella's first new flavor innovation in more than 60 years and brought together company leaders, Walmart representatives, elected officials and community partners to celebrate the occasion. The new product is manufactured at Ferrero's Illinois facility and is now available at retailers nationwide.

Nutella Peanut blends the signature creamy cocoa hazelnut spread consumers know and love with the taste of roasted peanuts, creating what Ferrero describes as a new snacking experience while remaining true to the brand's iconic texture and quality. According to the company, the product was developed in response to years of consumer requests and represents a significant step in Nutella's continued evolution. The nationwide launch also reflects Ferrero's strategy of creating products specifically for the North American market while continuing to invest in innovation across its portfolio of iconic brands.

The Franklin Park facility plays a key role in Ferrero's growing North American manufacturing network, and the launch underscores the company's ongoing commitment to investing in Illinois manufacturing. Produced in the U.S. for the first time, Nutella Peanut represents both an expansion of Ferrero's domestic production capabilities and a celebration of the skilled workforce that brings the company's products to consumers across the country. The ribbon-cutting ceremony highlighted the collaboration between Ferrero, Walmart and local partners while recognizing Illinois' continued leadership in advanced food manufacturing and innovation.





**We invented the popcorn machine
THEN JUST KEPT GOING!**

C. Cretors & Company is celebrating 140 years of manufacturing excellence, marking more than a century of innovation that has helped shape the global snack food industry. Founded in Chicago in 1885 by Charles Cretors, the company revolutionized concession foods with the invention of the first steam-powered popcorn machine, establishing a legacy of engineering ingenuity that continues today. Still family owned and operated, Cretors remains headquartered in Illinois, where it designs and manufactures popcorn, nut roasting and snack food processing equipment used by customers around the world.

Throughout its 140-year history, Cretors has consistently advanced food manufacturing technology while remaining committed to American manufacturing. The company's equipment serves theaters, amusement parks, sports venues, retailers and commercial food producers, with generations of innovation helping customers improve efficiency, consistency and product quality. From its early mechanical inventions to today's state-of-the-art processing systems, Cretors has built a reputation for craftsmanship, reliability and continuous innovation.



American Airlines announced it will launch new daily non-stop service between Chicago O'Hare International Airport and Tokyo's Narita International Airport beginning March 27, 2027, restoring a key international route for the Airline's Midwest hub. Operated in partnership with Japan Airlines, the new service will provide travelers with expanded access to Tokyo and seamless connections to destinations across Japan and Asia. The announcement marks American's return to the Chicago-Tokyo Narita route after a seven-year hiatus and reinforces Chicago's role as a major gateway for international business and commerce.

The daily flight will be operated on a Boeing 787-9 Aircraft and is designed to meet growing demand for both business and leisure travel between the United States and Japan. Through its joint business partnership with Japan Airlines, customers will gain access to an extensive network of onward connections throughout the Asia-Pacific region. The restored route strengthens American's international network while enhancing connectivity for companies with operations, customers and supply chain partners across the Pacific.



Where can I get a **customized** energy strategy that's right for me?

Constellation is the easy answer to complex energy questions. As the endorsed energy supplier to the IMA, Constellation helps businesses across the nation maximize every energy dollar. Constellation Solutions team can assist you to create, and execute, a sustainability plan to reduce consumption, manage costs and achieve net zero carbon or meet specific sustainability goals. That's why more than 2 million customers – and three-fourths of the Fortune 100 – consider Constellation **America's energy choice®**.

To learn more about participating in the IMA Energy Program, please contact Rich Cialabrini at richard.cialabrini@constellation.com or **847.738.2510**.



constellation.com/IMA



© 2025 Constellation. The offerings described herein are those of either Constellation NewEnergy, Inc., Constellation NewEnergy-Gas Division, LLC or Constellation Navigator, LLC, affiliates of each other. Brand names and product names are trademarks or service marks of their respective holders. All rights reserved. Constellation is the endorsed energy supplier of this association which receives compensation for its promotional and marketing efforts from Constellation.