

Advanced Manufacturing Companies in Northern Kentucky

The shift in manufacturing to Industry 4.0 is centered in the [advanced manufacturing companies of Northern Kentucky](#). Because of its geographical location, the region has long been an important manufacturing center.

Businesses in nearly every industry have found a competitive advantage with Northern Kentucky's manufacturing innovation. This innovation has created benefits for companies *and* consumers alike.

Innovation *draws* advanced manufacturing companies to Northern Kentucky, and success comes from:

- supplier alliances
- technology breakthroughs
- easy access to materials
- growth support
- a forward-thinking workforce

In this article, we'll explore these innovation drivers. We'll also look at how they provide the backbone for the development of the Industry 4.0 movement.

What Is Advanced Manufacturing?

Advanced manufacturing involves the creation of goods using cutting-edge technologies. This can involve manufacturers utilizing:

Artificial Intelligence and Machine Learning (AI/ML)

AI and ML analyze outputs, processes, and production time markers. With that information, algorithms can:

- determine optimal preventative maintenance periods
- suggest pricing patterns
- identify areas to improve efficiencies along the production line

Robotics

Using machine automation can speed up production. It can also ensure end-product consistency and eliminate production-related errors

Smart manufacturing processes fueled by SaaS

Software services can help modernize the production line. They can be used to centralize control of new manufacturing systems or to drive the performance of existing equipment. With its customization potential, SaaS can scale with the productivity output of its install base.

Cloud connectivity

Cloud-based services connect *all* systems involved in the manufacturing process. They also provide insight and control from anywhere. From the factory floor or a thousand miles away you could have the same input and information available.

Big data

An argument can be made that data is the base of Industry 4.0 in Northern Kentucky. With big data, companies can analyze any information produced during the manufacturing process. This helps manufacturers better understand their business. That knowledge can help them make educated decisions that will enhance business growth.

Advanced materials

Scientific innovations have led to the development of new materials. The materials listed below can improve both the manufacturing process and the end product.

- nanomaterials
- hybrid materials using some combination of metal, foam, cement or ceramics
- polymers
- radiation-resistant alloys

The benefits of using advanced manufacturing technology (AMT)

The focus on advanced manufacturing technology in Kentucky can lead to the following:

- improved factory floor efficiency
- lower inventory management costs
- stronger quality controls
- more consistent output
- decreases in water and energy usage, and machine downtime
- flexibility in the line
- greater opportunities for order customization
- increased manufacturing value potential

It can also lead to large competitive advantages for individual companies and the region.

The State of Industry 4.0 in Northern Kentucky

The state of the advanced manufacturing sector in the region is strong. In 2023, advanced manufacturing companies in Northern Kentucky accounted for [56% of new jobs in the region](#). Regional employment in manufacturing is anticipated to grow by double digits through the end of 2025. The growth in this sector far outpaces the national average.

That growth is driven in part by the region's:

- transportation infrastructure
- supplier pool
- tax support plans
- talent base

Key advanced manufacturing industries

There are over 300 manufacturing companies operating in the Northern Kentucky region. The top five industry sectors are:

1. [Automotive](#)
2. [Aviation & Aerospace](#)
3. [Food & Flavoring](#)
4. [Materials & Packaging](#)
5. [Medical Device Manufacturing](#)

Manufacturing's economic impact

Across the state, manufacturing accounts for over [\\$40 billion](#) in revenue. That's more than 17% of the total revenue from *all* businesses in the state.

This boom to the Northern Kentucky economy is also felt by those *doing* the work. According to [ZipRecruiter](#), the median salary for manufacturing workers in the region is roughly \$50,000. [The Ball State Center for Business gave the region an "A"](#) for the health of its manufacturing industry.

A ready workforce

Another reason high-tech manufacturing companies in Northern Kentucky thrive is the labor pool. There are an estimated 1.5 million eligible workers in the region. Currently, nearly 50,000 of those residents are employed in manufacturing.

Advantages for Advanced Manufacturing Companies in Northern Kentucky

There are several advantages advanced manufacturing companies in Northern Kentucky have.

Air, rail, road, and water access

Advanced manufacturing companies in Northern Kentucky have several routes for:

- importing supplies
- exporting finished goods

Transport options include:

- There are over 1,000 miles of navigable waterways in the state. These can be easily accessed through the [Ports of Cincinnati and Northern Kentucky](#).
- Two Class I railroad operators can cross the state using 2,600+ miles of rail track.
- [The Cincinnati/Northern Kentucky International Airport \(CVG\)](#) has two dedicated air cargo hubs. CVG was rated by Skytrax World Airport Survey as one of the top five regional airports in North America.
- 20 interstate highways and state parkways provide easy accessibility.

Advanced manufacturing hubs

AMIP, or the [Advanced Manufacturing Industry Partnership](#), is a regional organization. It provides resources, training, and support.

[The Kentucky Federation for Advanced Manufacturing Education](#) (KY FAME), including [NKY FAME](#) at Gateway Community & Technical College, certifies students as Advanced Manufacturing Technicians (AMT) through a 2-year associate's degree program.

The [OneNKY Center](#) will be a dedicated incubator for the development of new technologies across industries. Construction is scheduled to be completed in the first quarter of 2025.

Advancing worker capabilities

Industry 4.0 has a unique set of needs.

The [manufacturing workforce](#) in Kentucky can meet those needs by upskilling.

Within a 75-mile radius, there are:

- 25 four-year colleges
- 11 community and technical colleges

Many of these offer specific degrees focused on manufacturing.

Degree and certification programs

Gateway Community & Technical College offers a degree in [Advanced Manufacturing](#). Students can choose to take 1 of 3 focus tracks:

- Industrial Maintenance
- Electrical Technology
- Computerized Manufacturing & Machining

At [Northern Kentucky University](#) students can obtain a degree in Mechanical & Manufacturing Engineering Technology.

A Manufacturing Engineering Technology degree is available at [The University of Cincinnati](#). One of the highlights of this program is the opportunity for students to obtain hands-on experience working with robotics.

A top place to live (and work)

[Forbes](#) named the Cincinnati metro area one of the top 25 places for young professionals in 2024. It particularly called out the region's:

- earning potential
- affordable rental costs
- restaurant diversity

Finding Success in Northern Kentucky Manufacturing Innovation

Manufacturing companies across industries are finding success in Northern Kentucky.

[Balluff](#) is focused on building IoT-ready solutions at their smart manufacturing factory. This will enable them to develop "building blocks" to customize customer orders.

In 2025 [Niagara Bottling](#) will begin construction of a \$129 million new facility. This will be built in Kenton County. The factory will add 60 jobs to the region. It will also boost the food and beverage manufacturing profile of the region.

[Bakery Express](#) is expanding with a Boone County manufacturing facility. This \$20 million, 50,000 sq. ft. facility will expand the bakery's output for the tri-state area.

[Camco Chemical Co.](#) is investing \$3 million to expand its Northern Kentucky facility, adding state-of-the-art operations and creating 30 new jobs.

Opportunities and Trends in AMT

Northern Kentucky is home to a number of companies invested in advanced manufacturing.

3D printing

UPS has been operating an [empty spare parts warehouse](#). It's empty because anything that's needed is made to order. 3D printing is an example of smart manufacturing in Kentucky. By using innovative new materials, companies can:

- lower overhead
- lower inventory costs
- meet customer demands

Redefining robotics

[Kinemetrix](#) is building the future of advanced manufacturing. This Lexington-based manufacturer is building the next generation of production line robots. More specifically, they build intelligent automation machines to improve line flexibility and adaptability. These machines utilize:

- agile machine designs
- machine learning
- 2D/3D machine visions

Delivering big data

The SmartBox 2.0 is the latest innovation from the [Mazak Corporation](#). It "improves data exchanges and interoperability with a broad range of industrial systems." It utilizes an edge computing system to process and analyze large data sets in real time.

Connecting with the Internet of Things (IoT)

[Schneider Electric](#) has a smart manufacturing facility in Lexington. This facility uses the Internet of Things to create a fully-connected facility. This provides floor managers with a new degree of control over the manufacturing process. It also has led to a decrease in waste-related costs.

"Manufacturing is a top employer in Kentucky. It's a major user of industrial facilities. A leading driver of the Commonwealth's economy...but [manufacturing is also cool](#)."

- John-Mark Hack, KAM Board Chairman

Growing the Advanced Manufacturing Industry in Northern Kentucky

Northern Kentucky has long been an important center for manufacturing. Many manufacturers are building on the region's successes as they transition to Industry 4.0 practices. Key components of that shift come from innovation and technology. And that's **all** driven by leadership.

As we've seen, Northern Kentucky is a leader in:

- Providing opportunities for workers in manufacturing to keep their skillsets current.
- Fostering business partnerships that utilize the strengths of each company in the supply chain.
- Developing new innovation hubs where manufacturing companies can develop new technologies and processes.
- Creating environments that enable advanced manufacturing companies to grow.

[Contact BE NKY Growth Partnership](#) today to learn about the future of advanced manufacturing companies in Northern Kentucky.