

TECHNOLOGY & INNOVATION INSIGHTS

Companies adopting **Industry 4.0 technologies** are rapidly advancing, but the rest are falling behind.



MAGNET's 2023 survey of Northeast Ohio manufacturers tells an exciting story of growth and change, and highlights persistent challenges, as our region strives to execute the [Blueprint for Manufacturing in Northeast Ohio](#). This is a summary of key findings on Industry 4.0 technologies (including robots and cobots, automation, sensors, and 3D printing) and manufacturing innovation.

80%

jump in adoption since 2019

Manufacturers embracing Industry 4.0 technologies are rapidly increasing adoption.

Companies report using advanced technologies for three things: productivity/reducing costs, increasing capacity, and compensating for labor shortages. While an 80% increase is great news, we're still looking at adoption rates below 20% for most technologies because we started from such a low base.

Our new Industry 4.0 Index measures and tracks the adoption rate of advanced technologies.



- We considered eight technologies: Basic 3D printing, Advanced 3D printing, Use of 3D printing in products, Smart/Connected Machines, Smart/Connected Products, Artificial Intelligence/Big Data, Virtual/Augmented Reality, and Collaborative Robots.
- Adopters are defined as those driving ROI or maximizing the use of the technology, not those piloting or experimenting.
- For all companies, the index has risen from 25 to 45 since 2019 which represents a rapid increase in our region's Industry 4.0 capabilities.
- The 80% increase is great news, but it is tempered by the fact that we started from a low adoption rate. This means there is still much more work to do on Industry 4.0.

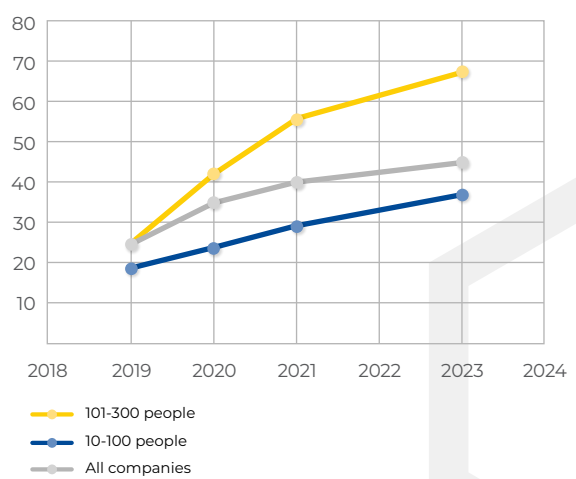
72%

are still not making the Industry 4.0 leap.

The gap between the technology "haves" and "have nots" is widening.

The companies embracing advanced technologies like cobots, automation and 3D printing are all in, but 72% – a vast majority – are not yet using these technologies. This is a huge gap for the region. Larger companies with more than 100 employees are moving much more rapidly on Industry 4.0 than smaller companies.

Industry 4.0 Index by Company Size



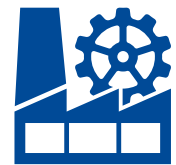
32%

are innovating for sustainability.

Sustainability is the largest driver of innovation.

One third of NEO companies are investing in technologies to reduce waste, water usage or energy consumption, or that use renewable resources.

70%



of NEO manufacturers say innovation is not one of their top 3 priorities.

But manufacturers continue to launch new products and services.

Despite innovation reportedly not being a top priority, 58% of companies say they launched a new product in 2022-2023, up 10% over two years ago. And this innovation is driving substantial dollars. Companies report that 7% of their revenue (~\$3.5B) comes from these new products.