

MAKE IT HAPPEN

We have a vision to lead the world in smart manufacturing. This requires radical changes in four areas: talent, innovation, technology, and leadership.

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Top 10 Tips to Transform Your Company with Technology

THE FACTS: Smart manufacturing is predicted to be a **\$395 billion industry** by 2025. But Northeast Ohio is falling behind because manufacturers aren't investing enough, fast enough in Industry 4.0 technologies. Here's how to get started.



1

Start small. Invest incrementally. The best, low-barrier way to begin is real-time data monitoring. Spend a few thousand dollars installing sensors to track and analyze how your machines are performing. This can improve efficiency, cut costs, and boost quality. Plug your numbers into a simple ROI calculator to begin to understand how your investment in real-time tracking will come back to you.



2

Take a step-by-step approach. Prove technology investments are worthwhile in smaller projects, then move to larger, more transformational projects. This staggers your cost burden and allows you to gain valuable insights to shape where and how to invest for the highest return, snowballing into more successful implementations as time goes on. It also helps demonstrate that technology adoption enhances jobs, not reduces them.



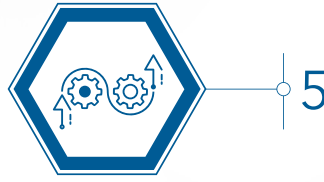
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Explore technology to help reshore production. The supply snarls of the pandemic and increasing tensions with China are putting pressure on manufacturers to bring home production. Automation and other advanced technologies are the only way to competitively do this. You can even choose to start with just a single collaborative robot before moving on to entire sections of your manufacturing floor, and eventually your entire factory.



4

Build more flex capacity with robotics. Industry 4.0 technologies like collaborative robots and machine monitoring can help increase surge capacities and efficiencies. Batch your technology upgrades—for example, doing 20% of your manufacturing floor per year over five years—and you'll see your company make incremental efficiency gains without as heavy a price tag.



5

Take advantage of computer modeling. We're at the point where we can recreate an entire warehouse, and its individual physical components, in digital form. These digital twins enable us to get an up-close, digital look at what's happening inside any given machine, while accurately simulating future performance. This unlocks a new level of precision, efficiency, productivity, and quality.



6

Use technology for training. Consider advanced technology like artificial intelligence, machine learning and virtual reality as you update how you onboard new talent and design training to upskill your existing teams. The options are abundant, they come at a wide variety of price points, and they can make training faster, better, and more appealing – particularly to younger generations.



7

Look for avenues into the electric vehicles industry. EVs represent an incredible opportunity for manufacturers willing to think ahead and invest early. Injection molders, for instance, should be looking at the thick plastic boxes that form the outside of EV batteries. Cable makers and connection makers should be assessing the wiring needs of the EV industry. Now is the time to enter the EV ecosystem and advanced technology is the key to pivoting your production.



8

Pursue grants and investment to help fund technology transformation. From the \$280 billion CHIPS Act to new funding at all levels of government that's sprung up to help improve the post-COVID strength of American manufacturing and the resilience of the supply chain, there is money to be had. Get educated about the opportunities, build relationships with all different types of funders, and hire advisors to help you navigate the process.



9

Learn from other manufacturers. Reach out and share learnings with other companies. Take part in MAGNET's lighthouse factory tours that showcase local companies who are leading the way in Industry 4.0. Most companies are very forthcoming with their peers, and this is an excellent way to learn from early adaptors. It can help you find partners, technology providers, and avoid costly mistakes.



10

Get expert help. There are many people and organizations who can help guide you along your technology transformation journey. Find a local consulting firm or experts from the Manufacturing Extension Partnership network who can help you get started with Industry 4.0 technologies. Start small if you have to – but start now!