

# Digital Transformation ACADEMY



[Benefits of Transformation](#)

## Tips manufacturers should follow to meet the imperative of modernization

Transformation can be a frustrating undertaking full of competing priorities, incompatible technology, and questions about the investment and production impact.

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### What you'll learn:

- With strategic planning and clear vision, manufacturers can lay the groundwork for a modernization plan designed to drive long-term success.
- Before any assessment or design begins, bring the right people to the table to thoroughly discuss the goals for modernization.
- Examine the condition of the facility's network infrastructure.
- Plant teams need to understand why modernization matters, not only for the business but for their day-to-day roles.

Modernization is an imperative for business. But for many manufacturers, it can be a frustrating undertaking full of competing priorities, incompatible technology, and questions about the investment and production impact required to achieve.

However, with strategic planning and a clear vision, manufacturers can lay the groundwork for a modernization plan designed to drive long-term business success. Here's a clear path to follow to set up your organization for modernization success, including tips to help ensure your goals and network infrastructure are strong and your employees are adequately prepared for change.

### Tip 1: Identify and align stakeholders and set clear business goals

Before any assessment or design begins, it's important to bring the right people to the table to thoroughly discuss both the goals for modernization and the details of what may be needed to achieve those goals. This team may include business unit leaders, IT and OT personnel, maintenance teams, and key OEMs when relevant.

This hand-picked group should work together to define:

- **Business goals:** What are you trying to achieve with modernization—increased production, improved quality, risk mitigation, etc.?
- **Key performance indicators (KPIs):** How will you measure success? Examples might include decreased downtime, fewer manual data entry steps, or improved troubleshooting response time.
- **Technical requirements:** What's needed to meet these goals—increased network bandwidth, remote access for equipment support, or new security protocols? Also, what standards, procedures, or installation methods must be considered, especially when it comes to any required infrastructure updates?

Fostering early alignment will prevent miscommunication later in the process and ensure each group's priorities are considered upfront. For example, IT may prioritize having a secure and patchable network, production teams may focus on essential reporting tools for making data-driven decisions, and engineering teams may desire improved remote connectivity.

**See also:** [Split surfaces in survey over product quality and teams' understanding of AI](#)

Addressing, or at least identifying and discussing, those requirements upfront will help avoid conflict and costs down the road.

### Tip 2: Audit your current state and identify infrastructure gaps

Too often, planning for a modernization effort is solely focused on identifying the tools needed to achieve certain outcomes such as improved production rates, faster troubleshooting, or quality tracking measures. This typically happens at the expense of understanding what's

operating behind the scenes in your facility and what might be needed to make these types of gains possible.

**See also:** [Manufacturers cite widespread labor shortages, use of automation and AI to help](#)

One of the most frequently overlooked factors for modernization is the condition of the facility's network infrastructure. It can be challenging to know all the physical and digital requirements to support your vision for modernization, as this may include items such as cabling standards, network segmentation, or an evaluation of hardware compatibility.

To overcome this, you need either internal or third-party experts to help you take a hard look at your current infrastructure including:

- **Performing a documentation review:** Do you have up-to-date records of your network design, hardware, and connections?
- **Inspecting the physical assets on your plant floor:** Are network enclosures organized and cables labeled? Are there signs of wear, clutter, or haphazard installations?
- **Evaluating equipment compatibility:** Can your current control systems connect via Ethernet, or are outdated communication protocols still in use?
- **Assessing network performance:** Are there single points of failure or do you have redundancy and network traffic segmentation in place?

Some common issues to keep in mind during this type of detailed infrastructure audit include:

- A patchwork of equipment added over the years resulting in "islands" of disconnected automation
- Incompatible or obsolete hardware
- Legacy IP schemes that increase vulnerability and present maintenance challenges
- Flat network configurations
- Outdated cable installations that limit data bandwidth

This type of audit will help you understand how infrastructure gaps can prevent improvements from delivering their full value and will show you not just what needs to be replaced and updated, but why those upgrades must go forward.

**See also:** [How predictive AI can help manufacturers forecast demand for their products](#)

Additionally, while infrastructure improvements may not always be the most visible part of modernization, they are critical for long-term success. Without a solid foundation, even the best new technology won't perform as expected.

### Tip 3: Create a culture conducive to modernization success

Since modernization often requires changes in how your plant teams operate, interact with technology, and measure performance, building a culture that supports this transformation early on is critical to long-term success. Ways to achieve this include:

- **Illustrating the benefits of modernization for everyone:** Plant teams need to understand why modernization matters, not only for the business but for their day-to-day roles. This requires going beyond explaining the technical benefits of modernization to showing how it will make their jobs easier, safer, or more impactful.
- **Explaining each person's role and how they will impact the plan:** In general, people are more likely to support change when they understand their role in it. Involving plant teams early and clearly outlining their responsibilities helps build ownership and reduce resistance.
- **Gathering input on how each person sees modernization benefiting the team:** Rather than treating communication as one-way, facilitate an open forum to actively solicit feedback from your plant team. This reinforces that modernization is a partnership and not a top-down decision.

By clearly communicating benefits, defining individual roles, and incorporating team input, manufacturers can foster a culture of ownership and collaboration that will help drive modernization success.

At its core, modernization is about much more than installing new hardware or improving data visibility. It's about building resilient, efficient, and flexible operations capable of meeting today's performance goals and tomorrow's challenges.

**See also:** [Edge expands from a collection of hardware to realize its platform potential](#)

Therefore, modernization efforts must start with a grounded, realistic understanding of your plant's current state and the strategic alignment of the people responsible for driving change.

Then, by clearly defining your goals, thoroughly assessing your current infrastructure, and properly preparing your organization for change, your modernization efforts will have the best chance for long-term success. With the right foundation in place, manufacturers can stop reacting to problems and start building toward progress.

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