



WHY INFRASTRUCTURE MATTERS

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If you are an Industrial End User, an OEM or are engaged in manufacturing of any kind, digital initiatives have taken a revolutionary step up in corporate priorities, becoming a staple in the post-pandemic timeline.

Expectations to be digitally enabled have fueled Industry 4.0 acceleration and required organizations to do self-assessments. *Are we ready for what's next? Where are we, and where do we need to be, in say... a year?* The importance of intentional infrastructure design and strategy supporting digital initiatives are crucial to success.

Why does the infrastructure matter? Because the benefits of an intentional design can typically see reduced costs in deployment, optimization of capital and operational investments, as well as improved performance and safety.

A snapshot of industrial manufacturing and our partner ecosystems tells us we must understand what and where our organizations' capabilities are today vs. where they need to be in one to two years. The five-year strategies have been

compressed and have had to be accelerated. Now, corporate strategies and initiatives must align this short to long strategy. Equally important are the financial allocations needed to support the execution of these strategies.

If you're wondering where to start, I would recommend doing some light reading from consultants and manufacturers (PTC, Rockwell, NTT and Accenture — please see links in the reference section at the end of this post) that have roadmaps to help you in your journey.

PRELIMINARY STEPS SHOULD INCLUDE:

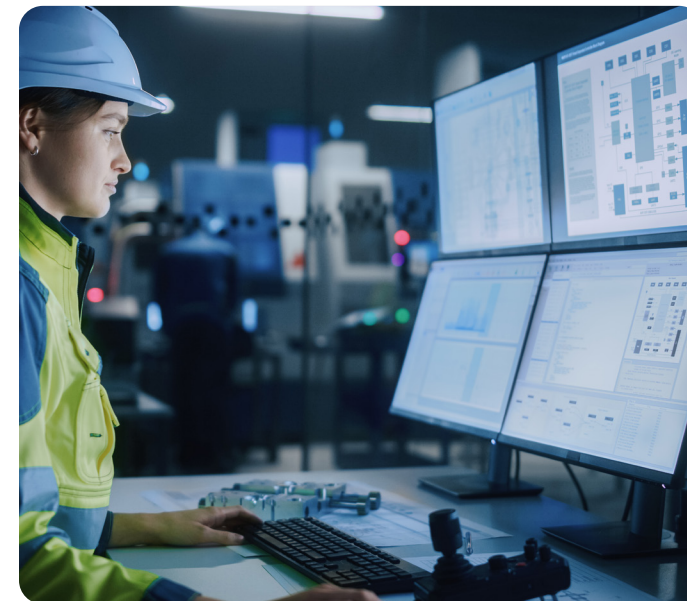
- 1 Auditing/Self-Assessment of the company's digital maturity
- 2 Understand where you are in a digital maturity model
- 3 What steps/timeline/money the company needs to progress through stages or milestones of the maturity model
- 4 When do you need to get there when tomorrow is really off the table



Additionally, [Panduit](#) provides an understanding of additional elements of infrastructure that are often overlooked, including designing and implementing building block layer solutions with partner enabled services to support the information data driven intelligence required in this transformation. "Digital Transformation has to be built on a foundation of digital connectivity," says Mike Berg of Panduit.

These foundational solutions are required as the "backbone" to support new technologies and initiatives of your Digital Transformation strategy by delivering real-time data back to the enterprise to support your acceleration. Support is intentional to design since around 80 percent of network issues are caused by the physical layer of the infrastructure. These subsequent steps should include a Logical Network Design as well as a Physical Network Design.

Each of the consultant companies outlined above look at organizations in several stages of maturity, often starting with a computing layer, then building through the early transformation stages up to the never-ending final stages being able to leverage automated intelligence or machine learning into your organization, which is ultimately a moving goalpost.



Many digital initiatives stall when information technologies (IT) is not in alignment with operational technologies (OT). When an organization aligns on its current state, it can then

put a scaled, time-guided plan in place with intentional considerations for design of the infrastructure within the office space, manufacturing facilities and warehouses. Standards-based network designs will provide support for the vast demands of information transfer from the various industrial applications and their respective environments on the plant floor. If your goal is to get upward movement in the maturity model with an upgrade, there is a roadmap for this.

If your goal is to begin to use data and data science in your plant operations, you can go and develop the roadmap alone and use tools the larger companies provide. If your goals and objectives are to continue your digital revolution and be able to turn data science into predictive and adaptive environments, these can be supported as well. All of these options can be supported through your partner ecosystem and your distributor/Kirby Risk and their partners.

There are tools and resources that can help with the functional and department requirements, ranging from supporting modernization activities, expansions and greenfield applications, to tactical execution level wireless communications, supporting control panel optimization, and newer technologies like single pair ethernet. These can be found with consultants in the partner ecosystem or from manufacturers like Rockwell, Panduit, Hoffman and others.

Large to small, simple to complex, strategic to actionable — as a manufacturer, you must identify the information that is critical to your operations and prioritize this information. Furthermore, you must be able to be intentional in your designs for greenfield, brownfield or migration investments. Any stage of the manufacturing maturity index can be impacted positively or negatively by infrastructure. Standards-based approaches with intentional design can be supported by the ecosystems supporting both IT and OT. [➔](#)

Want to take a deep dive into why infrastructure matters? Check out all the resources used for this article plus additional on the Connected web page.