

Winning the Industry 4.0 Marathon

Manufacturers across all industries are entering a new era, where their digital investments are starting to pay off.





Introduction

Five years ago, it was very difficult for companies to access the information generated by their products and services, also called "field information." To define their strategy and objectives, these companies had to make do with macro figures they obtained manually. It was very difficult to measure, store and integrate the indicators related to each product, byproduct, activity, sensor and so on.

Today, digitization not only supports a decrease in human errors, but also enables reliable information aligned with different management key performance indicators (KPIs). The information is accessible through a dashboard, which empowers actions based on indicators in real time.

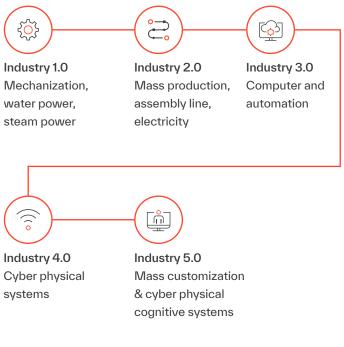
Thanks to new technologies and changes in customer behavior, manufacturers are entering a new stage of the Industry 4.0 era, where digital investments are starting to pay off.

Organizations that adopted digital strategies before the pandemic were better equipped to navigate its disruptive impacts. These organizations tend to be more agile, more connected and more resilient than their less digitally advanced peers, who will be challenged to keep pace.

The future of the Industrial sector: Unlocking accelerated growth

The future of every industry lies in data visualization:

- · Enabling data-driven decision making
- · Ensuring value chain resilience
- Offering sustainability, transparency and omnichannel communication to customers
- · Retaining and optimizing competitive values



In an increasingly competitive, globalized world, all industries have the obligation to not only digitize, but to reach digital maturity—where the company bases its decisions according to the different levels of data management, so that processes are digitized and there is a digital corporate culture.

There is a latent need for every company to strengthen its competitive values through technology, digitizing, automating and integrating IT information with operational technology (OT). Digitization is vital for breaking down information silos to increase data visibility within organizations, and for their customers and suppliers.

The most important question to ask any company is not whether they are backing up information, but whether they are integrating that information into their enterprise resource planning (ERP) tools and analyzing it for use in strategic or robotic decision-making.

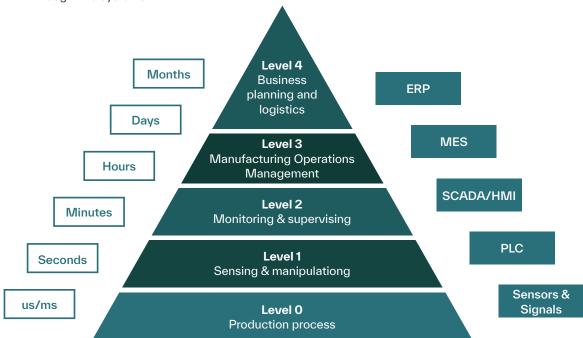


Figure 1: International standards of ISA-95

A continuous quest for innovation

In the face of the post-pandemic global recovery, a number of technology trends are accelerating and converging to create new challenges and opportunities on an exponentially larger scale. Industrial companies cannot simply focus on returning to pre-pandemic normalcy. The scale of ambition must be much greater: shifting gears to enter a new phase of accelerated growth.

According to BDO, 47% of manufacturers will increase investment in AI or machine learning in 2024, and will also need to prioritize their data maturity. The top priority for Industry 4.0 is improving manufacturing efficiencies and safety, as well as enhancing decision-making to improve customer experiences.



Digital divergence is increasing:

Manufacturers (re)born in the digital age will continue to improve their responsiveness to changing customer demand patterns, their speed to detect and adapt to constant change, and their ability to identify and seize new opportunities for their businesses.



The supply chain:

The most successful manufacturers will be those who can go beyond getting products to their customers quickly. Manufacturing companies that can use every node of the supply chain to improve profitability and create new value will reap the greatest rewards and hone their competitive edge in the long run.



The digital thread is still more dream than reality:

The goal of the digital thread is to generate collective solutions that go beyond the limited vision of a single person, function or entity. The challenge lies in time to market. Sometimes, it is necessary to integrate an increasingly innovative offer with a demand aligned with the new consumer needs. This integration is achieved through the control of the value chain, not only through digitalization but also open-source solutions that enable an information ecosystem between IT and OT.



Manufacturers focus on customer experience to drive success:

Global-local competition pushes companies towards the pursuit of continuous innovation to improve and modify the value chain. One technology that is gaining relevance in the production chain is 3D printing, which allows the customization of any product according to the customer's preferences. 3D printing technology is particularly practical when spare parts are needed, especially now that the traditional supply chain is being put to the test.

The digital wake-up call for industries

The secret of success for any company is the ability to visualize and adapt to the challenges of the future. The company that best adapts to the new needs of consumers will be the winner, so the goal of every company is to uncover and align with the needs of its end customers.

As consumers give more and more importance to the sustainability policies of companies and their products, it becomes more relevant to understand what the end customer values. Today's consumers are increasingly informed and concerned about the environment, which forces companies to take actions to generate more sustainable products, translating into the reduction of energy used, CO2 emitted, packaging materials and recyclability. All these factors can diversify a company or a product and impact its success.

It's easy to forget that organizations are not only made of products and production lines, but also of people, technologies, processes and culture that need to be aligned on a vision of the future and its challenges.

Ask yourself:

- Are you prepared to face today's challenges and those of the medium term (2030) and the long term (2050)?
- Do you have the necessary digital maturity to support your strategic objectives?



Competition in all sectors can be brutal. A major success factor across industries is becoming a data-oriented company, where a deep knowledge and a proper exploitation of data is essential to success. Like any other valuable resource, data's value lies in the best way to exploit it.

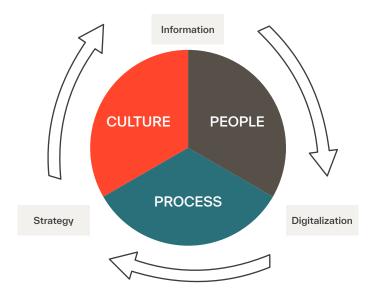
So, the ultimate question is: are you aware of the information you have and its usefulness?

Talent and technology to support growth

How do we start?

By equipping the right technologies, we can achieve the evolution an organization needs. Culture is fundamental in this transformation and is also part of the information that we must evaluate and develop. At the same time, processes must be aligned and integrated with the democratization of data.

Processes must allow for control but also for stakeholders to be heard, enabling the evolutionary and natural maturity that will provide exponential improvements in business results.



What is a digital twin?



A digital twin is the digital representation of any type of machine. But what is the purpose of digitizing a machine? To understand the impacts that would be created by modifying a movement. In this way, we evaluate how to create a new product and reprogram a robot to create a new part by simulating how it would affect the entire assembly line and other consequences.

Globalization is a major challenge in this industry. Although it is also a source of great benefit, globalization also brings imminent global competition. We see how products historically made in the same country can be easily imported today, with manufacturing costs taking predominant value over the decision to purchase products.

Successful organizations will be those who can use the intelligence gained from their customers and their operations to inform how their products and service offerings evolve to anticipate and meet customer needs.

Sales manager

Production manager

Final customer

- Data-driven decision-making
- Differentiation and innovation
- · Cost control
- Cost and material efficiency
- · Security
- Data management
- IT and OT integration
- Customer conversion and retention
- Omnichannel communication
- Loyalty
- Real-time stock
- Agile supply chain
- Efficient production chain
- Inventory management
- Proactive maintenance
- Differentiating experience
- · Visibility
- · Competitive value
- Sustainability

The final consumer demands personalized experiences

Manufacturers know that the quality of their customer service is a value driver for their businesses and are making investments to further improve. BDO research found that meeting higher customer expectations is the third top priority for CFOs,¹ and recommend relying on data about the company and customers to inform decision-making.

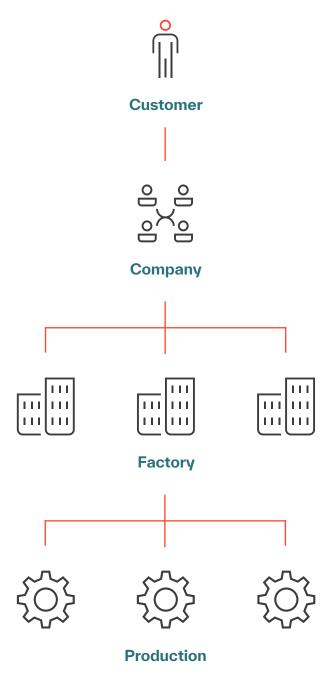
Some companies' strategies respond directly to changing customer expectations due to COVID-19. For example, the pandemic made it a necessity for manufacturers to be able to interact with all their customers digitally. As a result, more manufacturers are planning to develop conversational Al chatbots.

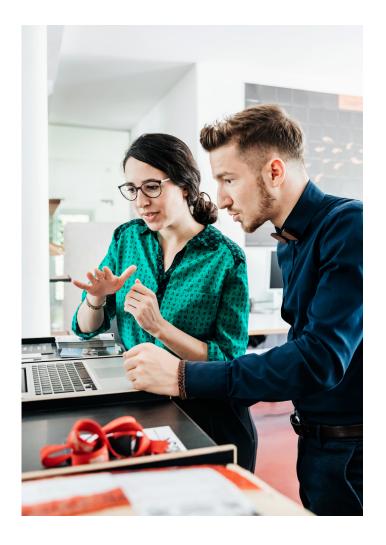


Why Kyndryl?

Now more than ever, companies need a holistic vision to define digital maturity and develop a human, technological and cultural roadmap that aligns with the company's strategic objectives and the challenges of the sector.

At Kyndryl, we work with our ecosystem of technology partners to offer 360-degree consulting at all company levels where technology and business knowledge integrate.





Kyndryl aims to be a technological ally who understands the needs of your business through strategic consultants who analyze your industry to define a digital maturity path through two dimensions:

- Hard skills: The review of the production chain from integration, digitization and data management
- Soft skills: Communication, innovation, HR management and overhaul of the production chain from an agile point of view

The most visionary manufacturers will develop strategies that allow them to adapt to a constantly evolving environment, full of unforeseen challenges where technology plays a critical role in achieving sustainable growth.

How we deliver

Our added value

Improvement

Cloud & HW Edge

- Private Wireless & Wi-Fi Connectivity
- Cloud & Edge
 Computing Integration
- Data Lake
- Artificial Intelligence
 & Business Insights
- · Edge Analytics

Digitalization and automation

- Streamlining and digitization of processes
- Data integration with ERP
- Digitalization of the production chain
- · Digitization of IoT

Hygienic

- Hyperscalers
- Cybersecurity
- Microsegmentation (internal security)
- IT/OT integration
- Networking
- Hardware (factory, shop floor and corporate level)
- Gen Al Policy Enforcement

Figure 2: How Kyndryl delivers



Kyndryl offers a consultative and customized business model for industries. We develop a strategy based on business knowledge as a central axis to generate alliances and longterm relationships.

Are you ready to improve and enhance your customer experience, achieve value chain automation and increase the productivity of your operations?

Let's talk -



Thomas HenwoodDirector, Customer
Technology Advisor



 $LinkedIn \rightarrow$

Referencias:

1. New Rules for Resilience, BDO, 2024

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