



THRIVING IN THE MANUFACTURING INDUSTRY IN 2022 AND BEYOND

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Thriving in the Manufacturing Industry in 2022 and Beyond

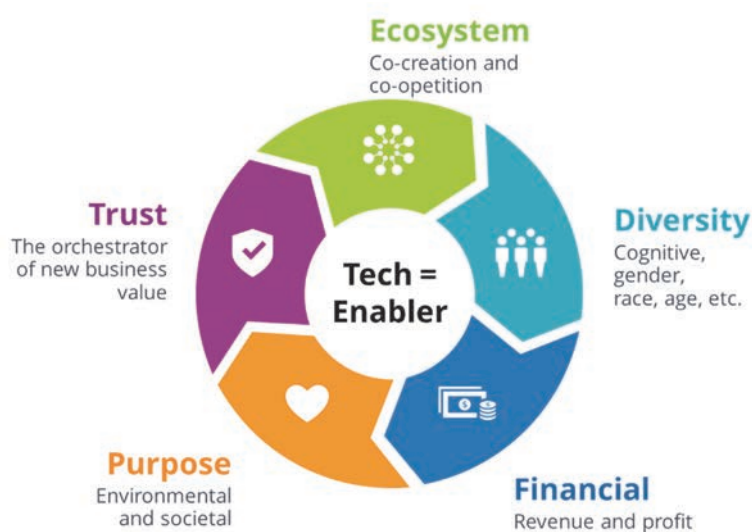
A Holistic End-to-End Approach for Digital Transformation Will be Key

Introduction

Manufacturing organizations today and in the future will have to operate in an environment that will continue to be volatile, uncertain, and complex. At the same time, they will have to operate in a digital and sustainable economy.

To face these challenges and thrive in the future, manufacturers must be at the forefront to deliver a "new business value" that goes far beyond financials and meets the demands and requirements of a broad group of stakeholders, including investors, customers, regulators and lawmakers, employees, and suppliers.

FIGURE 1
The Race to New Business Value



Source: IDC Insights 2021

They also need to build transparent and responsive operational practices enabling them to respond to changing market and customer requirements in a timely and flexible manner.

This IDC Spotlight will look at the key challenges and opportunities that manufacturing organizations must consider to thrive in the future. It will also cover SAP's role in the manufacturing industry and how Fujitsu can support manufacturers during their digital transformation journey.

AT A GLANCE

As manufacturers continue to operate in an increasingly digital society, they need to prioritize building sustainable and efficient operations while delivering high-value customer experience and profitable outcomes for the organization.

To meet the varying needs of several stakeholders and execute on their strategic priorities, manufacturers must apply a holistic end-to-end approach to their digital transformation journey.

By accelerating the adoption of digital technologies for their strategic priorities, manufacturing organizations can become more resilient and successful in the years ahead.

Key Operational Challenges and Opportunities in the Manufacturing Industry

The manufacturing industry depends on reliable and continuous production processes. Key traditional challenges faced by the manufacturing industry can be bucketed in two broad categories — shortage of talent and operational inefficiencies.

- **Talent Gap:** Manufacturing has been experiencing a growing talent gap. The manufacturing workforce tends to be older, with many approaching retirement age, meaning years of knowledge leaving with them. Manufacturers now have to turn to a younger workforce to continue operating. These younger employees grew up using digital technology but lack the years of experience held by experts leaving the workforce. IDC research found that 45% of organizations are understaffed in their high-skilled positions. However, even if current staffing levels were adequate, almost every organization is focused on improving its talent levels, as 96% of organizations stated that talent management is a top priority.
- **Operational Inefficiencies:** Historically, the drive in operations in the manufacturing industry has been to increase efficiency and reduce waste. Manufacturing organizations have also had an overreliance on legacy systems, manual processes, spreadsheets, and clipboards for critical operational functions, which results in a lack of much-needed productivity, transparency, and insights. They risk losing competitive advantage to those that have richer data, more readily available information, and clearer operational reporting capabilities to make better real-time business decisions.

While data is non-partisan, there remains a human factor to decision making. People need to have access to the right data to make reliable and fast decisions. Empowering the workforce with the right digital tools and skillsets not only supports decision making but also fosters innovation. To truly be operationally resilient, there must be one single source of the truth.

Manufacturers are currently dealing with several other disruptions in the aftermath of the pandemic, including supply chain constraints (port congestion, container shortage, and product shortages), rising energy and commodity prices driving the need for supply chain optimization, and visibility/transparency to cover data synchronization and reaction rapidness.

In addition to operational requirements that are the center of any manufacturing organization, there are also ever-evolving customer demand patterns and expectations along with changing regulations and laws which they must meet to stay aligned with their markets. While the challenges continue to exist and evolve, they also provide an opportunity for manufacturers to tackle them and gain competitive advantages. Some of the opportunities for manufacturers include:

- **Automation of Business Processes:** Business processes in core manufacturing operations have great potential for automation. There are plenty of opportunities to automate manual tasks across maintenance execution, work scheduling, spare parts

procurement, and asset life-cycle management. Trusted automation can be applied and scaled effectively and quickly to improve operations-related KPIs. Automation does not lead to the replacement of workers; rather, it improves the stability and reliability of processes. Manufacturers that apply automation and artificial intelligence to their business processes enable better visualization, streamline workflows, and help organizations process insights faster.

- **Data-driven Approach to Drive Operational Efficiency:** To increase the efficiency of operations, digital transformation initiatives relating to increased throughput or improved quality can utilize technologies such as industrial IoT, data analytics, or AI. To reduce time to market, simulations can be used to speed up the design and engineering phase. To reduce the time to have a production asset up and running in live production, digital twins can be used for virtual commissioning. The need to rethink existing operating and business models often has a lot to do with data and initiatives, for example, related to offering data-driven services such as predictive maintenance services. In today's data-driven world, the more data that manufacturers can access in real time, the faster they can take decisions, thereby gaining a competitive advantage.
- **Improved Asset Utilization by Leveraging Technology:** The use of technological applications can enable manufacturers to optimize their assets, minimize asset downtime, reduce maintenance costs, and maximize the profitability of their assets. Trust and security play a very important role when utilizing technology. The conditions created by the COVID-19 pandemic have forced organizations worldwide to shift to more remote, contactless, and virtual methods to observe, inspect, maintain, and optimize complex assets. Shifting toward a more predictive asset management approach is where the true value is generated and serves as the foundation for resilient manufacturing operations.

Strategic Business Priorities for Manufacturers

As manufacturers deal with current disruptions, it is important not to lose sight of the key strategic priorities. They must keep their hands in the now and their eyes on the future.

- **Resiliency, Efficiency, and Security:** Manufacturers need to move away from the traditional customer-supplier sourcing approach towards orchestrating a network-driven supply chain to be more resilient and future proof. Also, while bringing technology into the factory can enable higher productivity and resiliency, it also comes with risks. Smart sensors and sophisticated analytics are bringing OT into the 21st century, improving production and supply chain efficiencies. But this connectedness leaves manufacturers exposed, caught between the threat of cyberattacks and the opportunity to manage production processes more efficiently, securely, and profitably.
- **High-value Customer Experience:** The customer is the cornerstone of any business. To provide a seamless customer experience, manufacturing organizations need to connect with existing customers through ongoing engagement and collaboration. They can then take data-driven actions based on analysis, personalization, and prioritization to help drive new products, services, and experiences. At the same time, this explosion of

customer data accentuates the importance of data and system security — how customer data is collected, stored, and used — and this must be appropriately addressed.

- **Green Business:** Most manufacturers are aware of the opportunities that can arise from green transition and are adopting a sustainability framework as well as the concept of circular manufacturing. The main drivers, as well as key objectives for digitally enabled circular manufacturing, include resource efficiency, waste reduction, and reduced emissions. Initiatives such as product redesign open the opportunity to move from the linear to the circular economy or energy management strategies integrated into a corporate business strategy that can truly support a manufacturers' decarbonization efforts.
- **Ecosystems of Innovation:** As part of a mutually beneficial ecosystem based on a shared data model, manufacturing organizations can learn from others, and are also able to bring even greater value such as spark innovation; augment skills, capacity, and knowledge; and enable resiliency in their own operations. Manufacturers can create new products rapidly, resulting in their ability to meet customer needs quickly and accurately.
- **New Ways of Working:** To respond to the reality of digital disruption, the transition to the new way of working and thinking requires the right mix of human skillsets aligned correctly with the technology's smart algorithms. Blending data, analytics, and AI is a critical place to start, but there are limits to technology without talent. Human-machine augmented decision making will further the business experience beyond just the automation and optimization of business processes. The new informed digitally savvy decision-making employee is the way to go.

The Role of SAP in Manufacturing

SAP's experience and footprint across the manufacturing sector are long and extensive, making it well-positioned to address the industry's challenges and opportunities.

- SAP's extensive breadth and depth of Enterprise Asset Management (EAM) functionality coverage emphasizes automation and artificial intelligence, addressing key challenges for manufacturers.
- SAP handles a variety of structured data, unstructured information, and digital content and uses AI to predict asset failures, recommend maintenance actions, and optimize scheduling, addressing the need for improved asset performance on the shop floor.
- SAP's ability to integrate EAM with its wider product suite, including asset performance management, field service, supply chain, procurement, manufacturing, finance, and HR is a certain advantage. Specifically, unifying EAM and Asset Performance Management (APM) processes and data across planning allows for harmonious execution of real-time monitoring of time horizons and can serve as the foundation for predictive/prescriptive asset management.
- SAP is also investing in SaaS as a "cloud-first" company, although asset-intensive industries have been slower to accept cloud deployments. There are already several cloud solutions for industrial manufacturers which tend to operate on complex value chain

structures and the capabilities of the SAP supply chain suite have proven very valuable for manufacturers to stay agile and resilient throughout the pandemic.

- SAP has increasing focus on business networks including Ariba, Logistics, and Asset Intelligence — all areas that hold great promise as companies in industrial manufacturing support manufacturers' priorities to expand their industry ecosystems.
- As customer demand and sales channels change dramatically, SAP is also very well positioned with its products addressing the manufacturer's needs for B2B commerce and high-value customer experience.

Fujitsu SAP Manufacturing Solutions

Fujitsu has extensive knowledge of manufacturing processes through SAP co-creation as well as through its many years of expertise. As a long-standing SAP partner, Fujitsu helps manufacturers to bridge the gap between ERP and shop floor control, improving the visibility and execution of the shop floor. It allows manufacturers to establish common standards and best practices across multiple plants and sites, minimizing cost, lead-times, WIP, and inventory. Fujitsu is selected as a trusted advisor and system integrator by many major manufacturing clients around the world because of its value-focused capabilities.

1. **Value Identification:** Few companies realize the maximum value of their investment in IT/OT, especially on the shop floor. Poor alignment of business and IT is often one of the main culprits. Fujitsu provides the consulting service to improve the value that IT is providing to the business.
2. **Value Definition:** Fujitsu helps manufacturers define the scope of ERP and shop floor, the end-to-end scenarios from top floor to shop floor, in all major lines of business, including production, quality, maintenance, and sustainability.
3. **Value Realization:** Fujitsu has a best-in-class team with deep knowledge in manufacturing operations and unparalleled SAP implementation experience of SAP Manufacturing solutions, including, SAP Digital Manufacturing Cloud (DMCi, DMCe), SAP Manufacturing Integration and Intelligence, SAP Manufacturing Execution, and SAP Mobility solutions for manufacturers across the mills and mining, utility, discrete manufacturing, oil and gas, consumer products, and chemical sectors.
4. **Valuable Innovation:** Fujitsu is accomplished in the manufacturing services area thanks to its cutting-edge technology and thought leadership. The company's team is a pioneer of combining and leveraging Fujitsu IP and SAP's latest technology, such as SAP HANA, SAP Industry 4.NOW, RFID, Mobility and SAP Cloud Platform to pursue operational excellence on the shop floor with clients.

FIGURE 2
Fujitsu SAP Industry 4.NOW Portfolio



Source: Fujitsu, 2022

Conclusion

Fujitsu aims to drive a manufacturer's digital transformation holistically by building operational efficiency and optimizing every business process with a technology and vendor-agnostic approach. It brings in business consulting know-how, technological capabilities, and industry expertise resulting from its own DNA of being a manufacturing company. It has also been a trusted SAP global partner for over 40 years and has expertise in the SAP solution landscape.

As a long-standing SAP partner, Fujitsu helps its manufacturing clients to bridge the gap between ERP and shop floor control, improving the visibility and execution of the shop floor. Fujitsu offers solutions, services, and technology along with proven global project management experience in supporting manufacturers to enable new business models and optimize value chains across the entire ecosystem. The company conducts a complete personalized assessment and analysis to drive sustainable manufacturing transformation together with the customer to co-create solutions within a circular and end-to-end ecosystem.

As Fujitsu continues to build global awareness for its solutions in the industrial manufacturing space, the company has positioned itself well in solving end-to-end business challenges as well as supporting ecosystem-enabled business model innovations through trustful co-creation with customers, partners, and vendors leveraging personalized recommendations.

MESSAGE FROM THE SPONSOR

In the world of manufacturing, we see the impact of disasters such as pandemics, political crises, and labor imbalances. We are required to adapt to the unpredictable and act with flexibility to continuously provide products and services that enhance people's lives.

We aim to inspire sustainable and environmentally friendly lifestyles by building impactful and flexible ecosystems across industries and countries and by creating secure and resilient supply chains and a circular economy to achieve carbon neutrality.

We empower your people by combining our consulting capabilities with advanced technology, building on our strong experience in automation and IT/OT integration.

With over 129,000 employees supporting our customers in 180 countries and more than 80 years of experience as a technology manufacturer, we've learnt this: digital transformation is a journey, and that journey is best made one change at a time.

Plan big, but start small and start now: www.fujitsu.com/manufacturing

About the Analysts



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Gunjan has been an industry analyst for more than 12 years, and is based in London, United Kingdom. She works with manufacturing organizations, IT vendors and technology providers in Europe. Her research work is focused on supply chain, logistics, sustainability, and more broadly on manufacturing industry transformation.



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Stefanie has more than 20 years of industry experience, both from the analyst and IT vendor sides, and is based in Munich, Germany. She works with manufacturing organizations, IT vendors, and technology providers to help them understand how digital technologies such as IoT, robotics, AI and cloud will impact traditional operations and disrupt manufacturers' traditional business models

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