

Hitachi Optimized Factory for SAP

Toward smarter, better manufacturing

Gain the visibility and insight you need to transform the entire value chain

Manufacturers are witnessing a changing world as digital transformation gains momentum all around us. It's being driven by new technologies like cloud, mobility, robotics, social and business networks, RFID, embedded sensors and the Internet of Things (IoT). These technologies can potentially generate vast amounts of data, but not all manufacturers are able to capture, manage and analyze it. For organizations that can, this rich data is creating new opportunities to make factories a source of innovation and profit.

Today's manufacturers face increasing complexity. They're doing business in a globalized environment with more dispersed, diverse supply chains. Market conditions shift fast, so they need the ability to scale production up or down when they need to and quickly adjust their product mix.

The manufacturing workforce is evolving. Employees are more tech-savvy, but are less likely to stay with an organization as long as their predecessors. Manufacturers need to empower these better-educated workers with decision-making tools, while coping with knowledge attrition.

Customer demands are changing, as well. They expect more product choices and options, top quality and low cost. Consumer preferences may change quickly, so manufacturers need flexible,

agile environments that they can retool. But manufacturers may not have the visibility, timely information and analysis they need to make smart decisions about their strategy, product portfolio and operations. Slow, manual processes can make it difficult to see what's happening on the factory floor. Without real-time insight into their data, it's hard to evaluate manufacturing processes and costs, understand where problems are occurring and spot areas to improve.

Smart manufacturing: spanning the supply chain

To navigate these issues, manufacturers need to take a smarter approach and review how their IT and business organizations can work together more effectively. Their global organizations require efficiency, agility and sustainability—not just in a single facility, but across all of their sites. It starts with building real-time insight from every element and process through a smart manufacturing platform such as Hitachi Optimized Factory for SAP.

Smart manufacturing lets you bring together information, technology and innovation to give you deeper insight and visibility into your manufacturing operations—across the entire supply chain. This intelligence enables you to:

- **Boost agility**—Make your manufacturing plants more adaptive to unexpected changes in demand and customer needs.
- **Improve decision-making**—Empower employees at all levels with the information and analysis they need to

make faster, better decisions during daily operations, as well as decisions about business strategy, product portfolios and supply chains.

- **Enhance productivity**—Optimize material resource and manufacturing resource planning and automate manual processes.
- **Improve safety and compliance**—Create a safer employee environment, respond to issues faster and safeguard valuable assets.
- **Optimize efficiency**—Minimize power consumption for green initiatives, while keeping operational expenses down.
- **Keep operations up and running**—Gain better visibility into the health of manufacturing machines and perform proactive maintenance to fix issues before they can impact your operations.

Three pillars for smart manufacturing

Smart manufacturing is based on seamless interaction between your factory floor operations and your business organizations. It needs to be able to collect the data you need, quickly analyze it and make business decisions that can improve your efficiency and streamline operations. It requires an intelligent, mobile environment that includes:

- **Factory floor connectivity**—Based on the Industrial Internet of Things (IIoT), your manufacturing environment employs sensors to acquire real-time data from machines and

Move toward smarter manufacturing

share it across your IT environment. Manufacturing integration engines such as SAP Manufacturing Integration and Intelligence (SAP MII) and SAP Plant Connectivity (PCo) enable direct connections between shop-floor systems and business operations.

- **Manufacturing intelligence**—Enabled by an in-memory platform such as SAP S/4HANA, this element provides the visibility required run in real time and tightly integrate your manufacturing processes with business operations.
- **Advanced analytics**—Predictive modeling and reporting capabilities, supported by business insight tools such as SAP Lumira and predictive analysis tools such as SAP Predictive, enable you to transform raw manufacturing data into useful, actionable intelligence to make better decisions.

SAP S/4HANA: Your digital core for manufacturing

To power their smart manufacturing operations, many organizations are turning to SAP solutions, including SAP S/4HANA, its next-generation business suite. With SAP S/4HANA as the digital core, you can connect all areas of your manufacturing organization, from the factory floor to the extended supply chain. The solution creates a single, consistent source of real-time information for your most important processes, to provide:

- **Current, centralized data** spanning supply, logistics, manufacturing production, inventories and demand.

- **Prediction, simulation and analysis**, including test scenarios and predictions of consequences.
- **Continuous manufacturing resource planning (MRP)** with connections to enterprise data from other business areas for better strategic and operational planning.
- The ability to **identify and prioritize** most critical material issues, options and consequences.
- **Faster execution** for a more current, accurate view of your manufacturing environment.
- **Enterprise-wide visibility** across supply, production, inventory and demand.

Hitachi Consulting: Your partner for successful development

SAP S/4HANA provides the cornerstone manufacturers need to transform their organizations. But to make the most of the solution, it must be aligned to your specific processes and business imperatives.

No matter where you are in your journey, Hitachi Consulting can provide the expertise and assistance you need for your smart manufacturing initiative. If you're just getting started, we can help you understand how digital transformation can improve your manufacturing environment. We can evaluate your processes and provide recommendations on where to automate, help you determine the best ways to collect and analyze real-time data and enable you to put these insights to work.

Hitachi Consulting has been providing expert advice on SAP for nearly two decades. Our global management consulting and IT services business is part of Hitachi, Ltd., a leading technology manufacturer. We apply what we've learned from our own experience as a global manufacturer to our consulting practice, to bring a unique perspective to every engagement.

We're not only an SAP Gold Partner, but a Top 50 SAP global customer, which gives us additional perspective into SAP operations. Our offerings span a full breadth of services, from strategy development and converged platform support to HANA appliances, accelerators, solutions and services.

About Hitachi Consulting

Hitachi Consulting is the global solutions and professional services organization within Hitachi Ltd., a global innovation leader in industrial and information technology solutions and an early pioneer of the Internet of Things. Hitachi Consulting is a business integrator for the IoT era and a catalyst for digital transformation. Using our deep domain knowledge, we strategically collaborate with our clients to help them innovate faster, maximize operational efficiency and realize measurable, sustainable business and societal value. As a consulting-led solutions company, we can help you leverage data as a strategic asset to drive competitive differentiation, customer loyalty and growth. To learn more, visit www.hitachiconsulting.com.