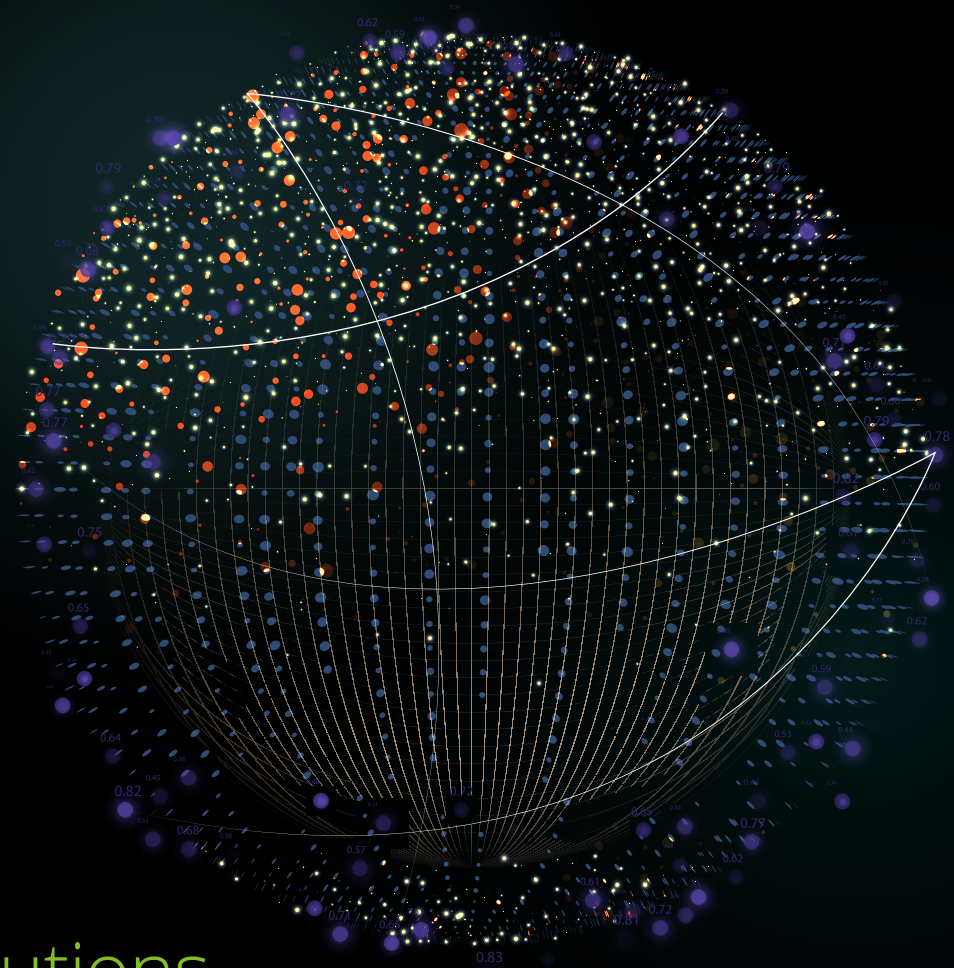


Deloitte.



Smart Factory— powered by SAP[®] solutions

Intelligent manufacturing for the 'built to evolve'
enterprise *Connected. Transparent. Agile.*

Smart Factory

Smart Factory— powered by SAP solutions

Intelligent manufacturing for the 'built to evolve' enterprise *Connected. Transparent. Agile.*

Manufacturing leaders see the writing on the wall. The future of the factory will be smart—driven by intelligent tools and processes. In fact, 86% of surveyed manufacturers believe that smart factory initiatives will be the main driver of manufacturing competitiveness in the next five years.

The possibilities for “smart” processes are virtually limitless, yet many organizations can struggle with defining and beginning the journey—unsure of how to effectively deploy new solutions and how to make an impact that matters.

Smart Factory—powered by SAP solutions

01

A solution in sight

From *possible* to *real*

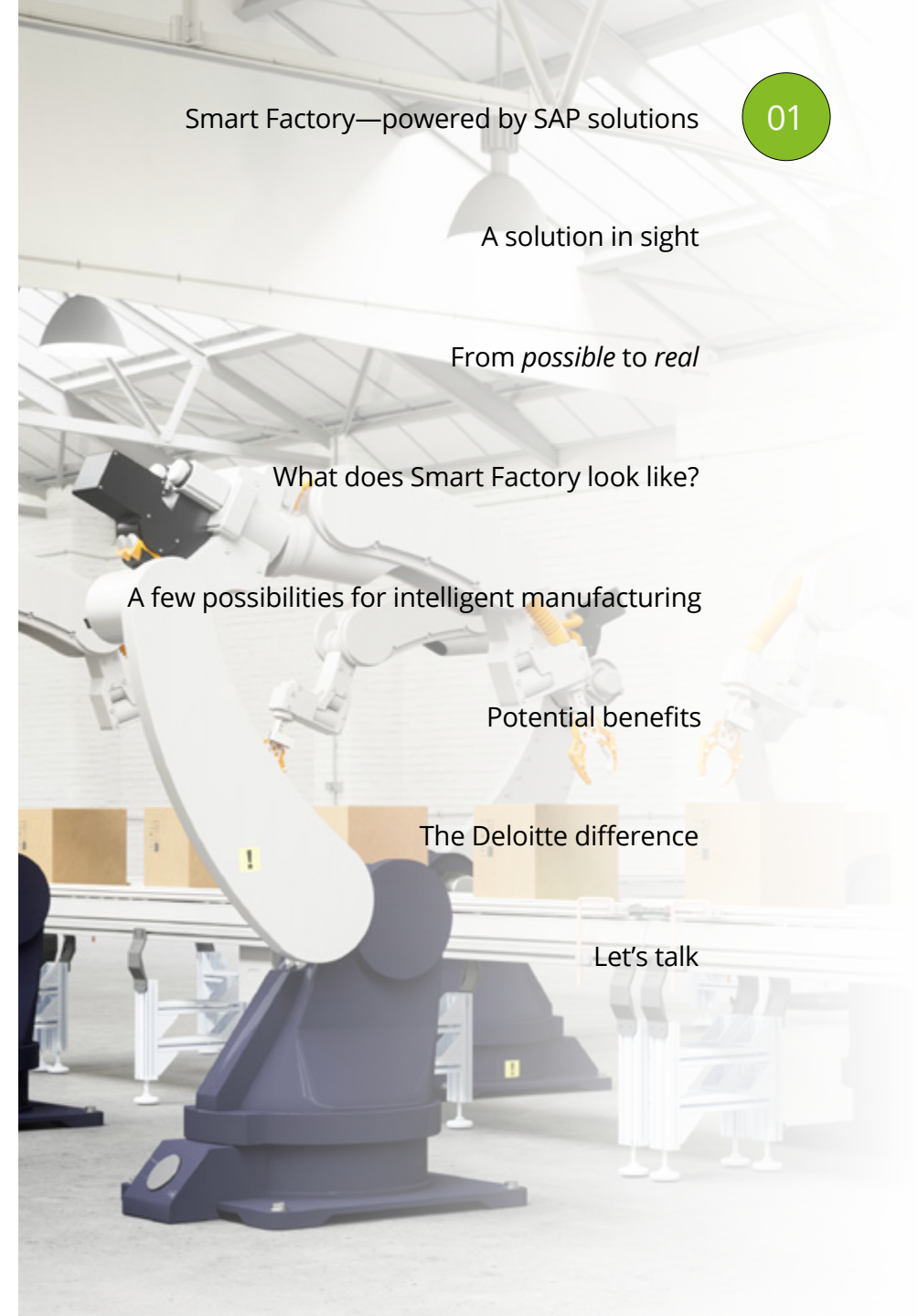
What does Smart Factory look like?

A few possibilities for intelligent manufacturing

Potential benefits

The Deloitte difference

Let's talk



A solution in sight

To help leaders more confidently transform manufacturing and support tomorrow's digital supply chains, Smart Factory by Deloitte combines industry-specific services plus a portfolio of innovative SAP solutions. The offering is designed to help you envision, build, and run the future-ready factory and enable intelligent capabilities that go beyond the traditional "four walls" of the shop floor.

Smart Factory is focused on helping manufacturers operate more efficiently, effectively, and securely with an integrated and intelligent production environment that can deliver new levels of insights, service, and bottom-line value for your business. The offering brings together a range of transformation services from Deloitte, as well as SAP Industry 4.0 solutions and other SAP technologies:

Advisory Smart Factory services

- Deloitte SAP Digital Manufacturing Transformation Strategy
- Deloitte Smart Factory Capability Diagnostic
- Deloitte cybersecurity maturity assessment

Smart Factory technology implementation

- SAP® S/4HANA Manufacturing
- SAP Digital Manufacturing Suite
 - SAP Manufacturing Execution
 - SAP Manufacturing Integration and Intelligence
 - SAP Plant Connectivity
- Shop Floor Operations Technologies Design & Integration


Modular, flexible, and scalable shop floor operational services


- Application management services (AMS) for shop floor technologies [Operations Technology (OT) & Information Technology (IT)]
- Evaluating the performance of OT-IT applications, interfaces, and equipment integration
- Establishing a governance model to enable the effective delivery of services to support the shop floor
- Implementing monitoring tools to increase the visibility of daily operations
- Delivering services efficiencies through equipment automation, robotics, and AI solutions


Smart Factory

From *possible* to *real*

Deloitte's Smart Factory offering can deliver a more connected, autonomous, insights-driven, and predictive production environment driven by intelligent technologies. It can also help support the “built to evolve” Kinetic Enterprise™—an intelligent, cloud-enabled enterprise capable of moving at the pace of disruption, operating with a clean core and an inclusive ecosystem of capabilities. The solution supports the vision of the digital supply chain and helps enable responsive manufacturing capabilities, providing functionality such as:

 IoT and vision analytics via cloud

 Integration of the shop floor with SAP solutions for manufacturing and back-office processes

 Centralized, data-driven manufacturing insights

 Labor tracking and efficiency

Smart Factory | key capabilities:

- Autonomous process control
- Total operations synchronization
- Operations command center
- Digital process twin
- Augmented workforce
- Dynamic operations sensing



Smart Factory

From *possible* to *real*

As a “services plus solutions” offering, Smart Factory can help you understand what’s possible for transforming manufacturing and then take action in a meaningful way. Whether it’s bringing predictive, intelligent capabilities to a specific production line or undertaking an end-to-end transformation of your entire manufacturing and logistics environment, Smart Factory can allow you to think big, start small, and then scale fast—to unlock value while getting ahead of challenges and reducing risks.



Smart Factory

From *possible* to *real*

Smart Factory leverages machine intelligence, connected sensors, advanced analytics, control tower capabilities, and other intelligent tools to help you address a number of potential use cases, including:



Factory Asset Intelligence and Performance Management

Apply data science tools to provide insights around optimizing factory floor operations
Example: Plant control tower



Quality Sensing and Detection

Prevent quality issues in real time while reducing the need for human quality inspections
Example: Predictive quality analysis tools



Factory Synchronization & Dynamic Scheduling

Coordinate scarce factory resources for optimized manufacturing and operational activities
Example: Asset location tracking



Augmented Workforce Efficiency

Improve workforce efficiency through enhanced technologies and equipment
Example: AR/VR workforce training



Plant Consumption and Energy Management

Leverage contextual data to optimize energy usage and reduce overhead costs
Example: Asset auto-idle



Smart Warehousing Solutions

Automate warehouse operations by analyzing inventory distribution and use rates
Example: Warehouse management system



Smart Conveyance

Enhance warehouse material transfers using digital orders and autonomous vehicles
Example: Autonomously guided vehicles



Engineering Collaboration | Digital Twin

Use product performance data to improve design, engineering, and production
Example: Specification adjustment

What does Smart Factory look like?

With Smart Factory from Deloitte, you can begin to shape future-facing capabilities. Smart Factory enables a flexible system that can enhance performance across a broader network, self-adapting and learning from new conditions in real time or near real time, and autonomously running entire production processes across four key areas:

Secure



Security is the foundation of the program in all aspects of the design, architecture, and deployment



Real-time security monitoring



Integration with security and technology solutions (OT & IT)



Cyber risk management program

Transparent



Real-time data visualization



Role-based views



Real-time tracking and monitoring

Connected



Assets outfitted with smart sensors



Integration with suppliers and customers (sensor and data)



Integrated data model between operational and business systems

Agile



Process anomaly detection



Automated replenishment



Real-time safety monitoring

A few possibilities for intelligent manufacturing

With Smart Factory from Deloitte, you can begin to intelligently transform production processes in a number of areas. Possibilities include:



Automatically trigger quality checks with sensor-driven capabilities



Make the shop floor more proactive, acting on deviations in production processes sooner, perhaps even before they occur



Use digital twin capabilities to let workers simulate scenarios, and monitor and service equipment remotely—as if they were really there



Leverage camera and imagery technologies to identify issues, inspect assets, and track and guide production processes



Connect intelligent technologies to back-end SAP systems to drive insights and transactions



Optimize warehouse operations and transportation



Enable energy-efficient “smart building” capabilities and expand them throughout the production environment—from the front door to the factory floor to the loading dock



Optimize labor and boost labor efficiency

Potential benefits

With Smart Factory and help from Deloitte, you can begin to build a more responsive manufacturing environment, support digital supply chain network capabilities, and deliver measurable bottom-line value to your organization. Here are some potential results you could see.

- Greater insights and information transparency for intelligently automated processes and decision-making
- Increased operational efficiency
 - Increased factory capacity utilization (20% vs. typical 11% overall)²
 - Increased labor productivity (19% vs. typical 12% overall)³
 - Increased production output (18% vs. typical 10% overall)⁴
- Improved order fulfillment rates
- Predictive, intelligently automated processes
- A more connected, integrated IT/OT and process landscape
- A unified, real-time view of operational data
- Agility and responsiveness to address current needs and future disruption—and to support the “built to evolve” Kinetic Enterprise™
- Reduced supply chain risk
- Greater overall impact from transformation, with quality implementation of new technology

The Deloitte difference

Specializing in total supply chain transformation, Deloitte operates at the intersection of business and technology. Our diverse team of professionals understands not only how to help deploy SAP solutions effectively—but how to align those technologies with the way you operate and with your business goals. It's about more than integrating digital and manufacturing technologies. It's about deeply understanding the details and the demands of your business—and then prioritizing them to help you make an impact.

Focused. Our worldwide team of more than 25,000 SAP specialists brings a tested methodology for creating value with the “built to evolve” Kinetic Enterprise—an intelligent, responsive, cloud-enabled organization powered by a clean core and an inclusive ecosystem of capabilities.

Experienced. When you work with Deloitte to transform manufacturing operations, you get access to our deep industry-specific experience—which grows daily as we help enterprise leaders across the globe solve complex business challenges. Our relationship with SAP dates back more than 30 years, with a lengthy history of collaboration and co-innovation.

Deloitte brings end-to-end capabilities, from the shop floor to enterprise systems, serving global clients across different industries in Smart Factory projects and IoT implementations. And to help clients reduce implementation time, we also bring to bear several innovative Smart Factory assets and accelerators—designed to speed time to value. Among them: Deloitte's Smart Factory Capability Diagnostic, which can enable companies to understand their

manufacturing maturity and digital readiness across 10 business functions, assisting them in developing a Smart Factory roadmap.

Recognized. Deloitte has a trophy case full of awards showing that we understand what it takes to help clients deliver real-world results with SAP solutions—earning us the 2019 North America SAP® Ariba® and SAP® Fieldglass® Services Partner of the Year (2019) Award as well as multiple SAP Pinnacle Awards, including:

-  SAP S/4HANA Partner of the Year—Large Enterprise (2016, 2017, 2018, 2020)
-  SAP S/4HANA Cloud Partner of the Year—Large Enterprise (2020)
-  The inaugural Digital Partner of the Year Award (2019)
-  Finalist: SAP Ariba Partner of the Year—Large Enterprise (2019)

Smart Factory

Let's talk

Building the intelligent factory is no small task. What's your plan for transforming your business as complexity grows and disruption accelerates? How will you make manufacturing more connected, intelligent, and efficient?

Contact us to learn more about how we can help you reimagine everything with Smart Factory—so you can effectively enable the “built to evolve” Kinetic Enterprise and address future disruption. We can provide a demo of Smart Factory use cases, share additional transformation insights, or discuss a specific challenge your organization is facing.

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¹ Source: Deloitte analysis of the 2019 Deloitte and MAPI Smart Factory Study data

² Ibid.

³ Ibid.

⁴ Ibid.





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