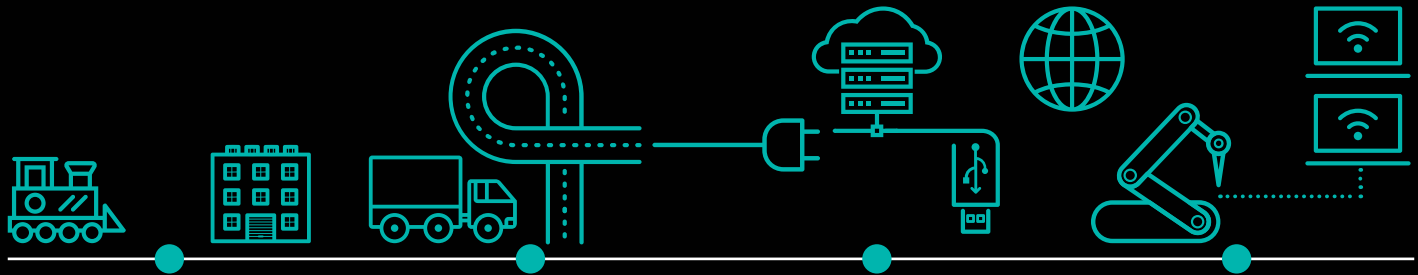


Deloitte.

**Digital Core
Transformation**

Underpinned by S/4HANA
Enterprise Management

Industry 4.0 – The pace of change...



Power Generation

Late 18th century

Steam engines and hydraulic power drive improved productivity and enabled industrialisation

Industrialisation

Start of the 20th century

Electricity and assembly lines paved the way for mass manufacturing, improved infrastructure and advances in financing and credit markets

Electric Automation

1970s to 2000

Advances in computing and the internet allow for information to be captured and transferred more quickly than ever before

Digital Supply Networks

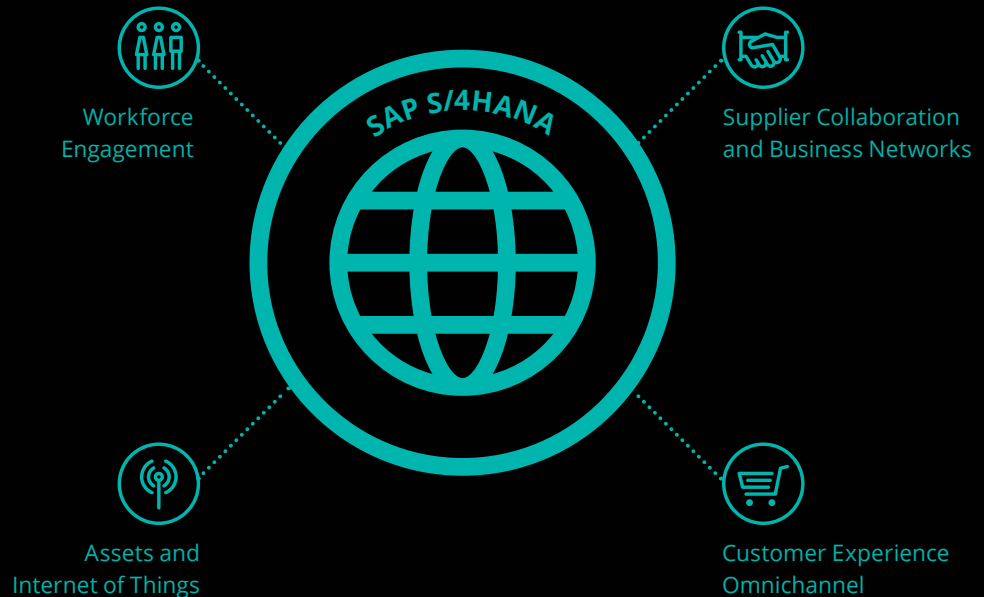
4th Industrial Revolution

Execution of connected products, customers and supply chain and operations – driven by a vast network of cyber-physical systems

Embrace the digital world

Enterprises have the challenge to keep pace with the digital economy because their current core business-management system is too limited to support the digital transformation.

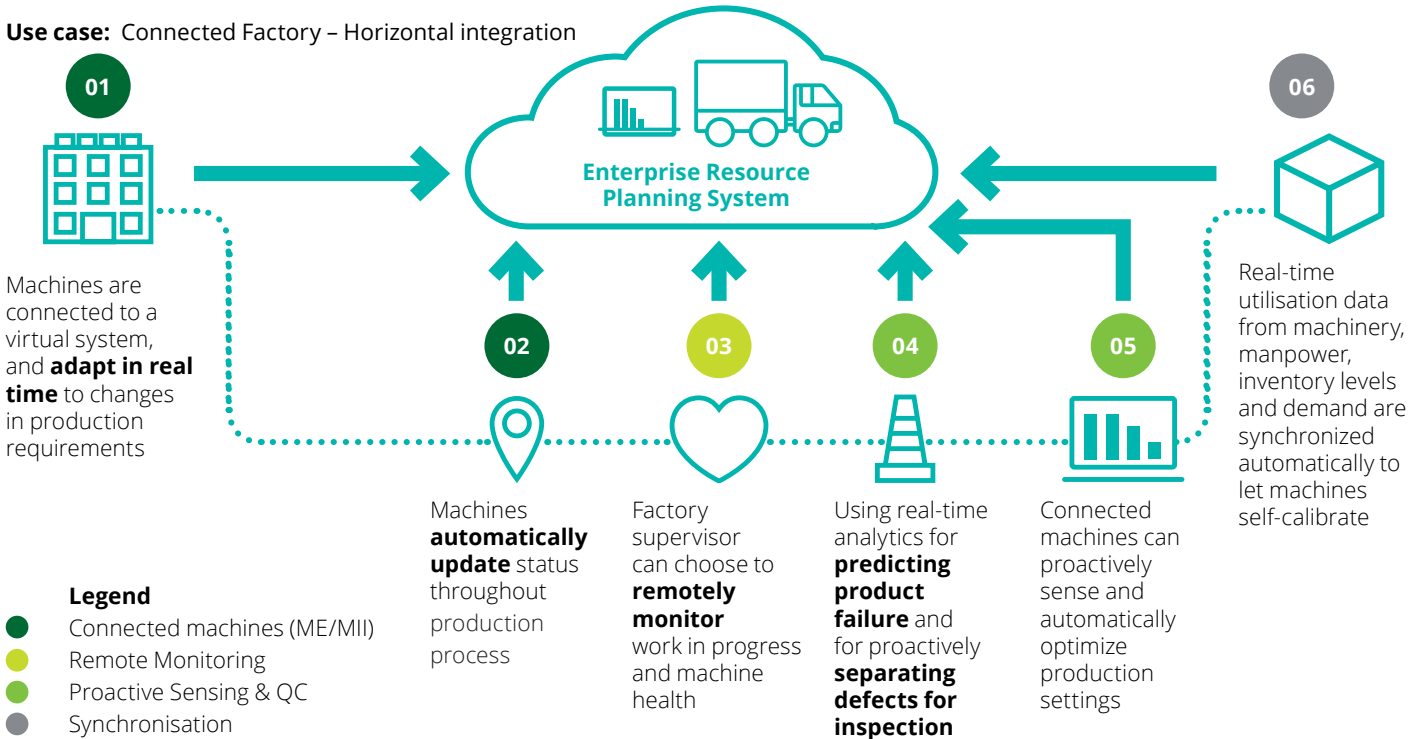
SAP S/4HANA Enterprise Management provides the lean digital core that serves as a foundation for business innovation and optimisation, enabling the enterprise to start the digital journey in line with its individual benefits/risk profile.



Enabled business opportunities

Improving productivity, pace and quality of discrete manufacturing significantly through seamless integration of manufacturing business operations, machines and people underpinned by S/4HANA and RFID

Use case: Connected Factory – Horizontal integration



Use case

- **Less manual interventions** on the shop floor leading to higher throughput and quality
- Improved visibility of manufacturing relevant data **in real-time**
- Ensuring business continuity in MES systems **supporting 24/7** operations
- **Quick adaption** of manufacturing process to changes in production requirements (Lot Size One)
- **Traceability** of individual product along the whole supply chain

Use case: Connected Factory – Vertical integration

SAP S/4HANA ME/MII

Extends the core to the shop floor and enables leveraging IIoT (Industrial Internet of Things) Machine-to-Product, Machine-to-Machine and Machine-to-Human capabilities.

Leveraging IIoT/M2P/M2H



Enabled by

MII for manufacturing environments requiring higher flexibility

- Supports standard connectors to other MES and shop floor systems
- All data affecting manufacturing is visible in real-time (reporting/visualisation)

ME for more stringent manufacturing environments

- Provides standard processing instructions to the machines
- Enables management and control of manufacturing and shop floor operations

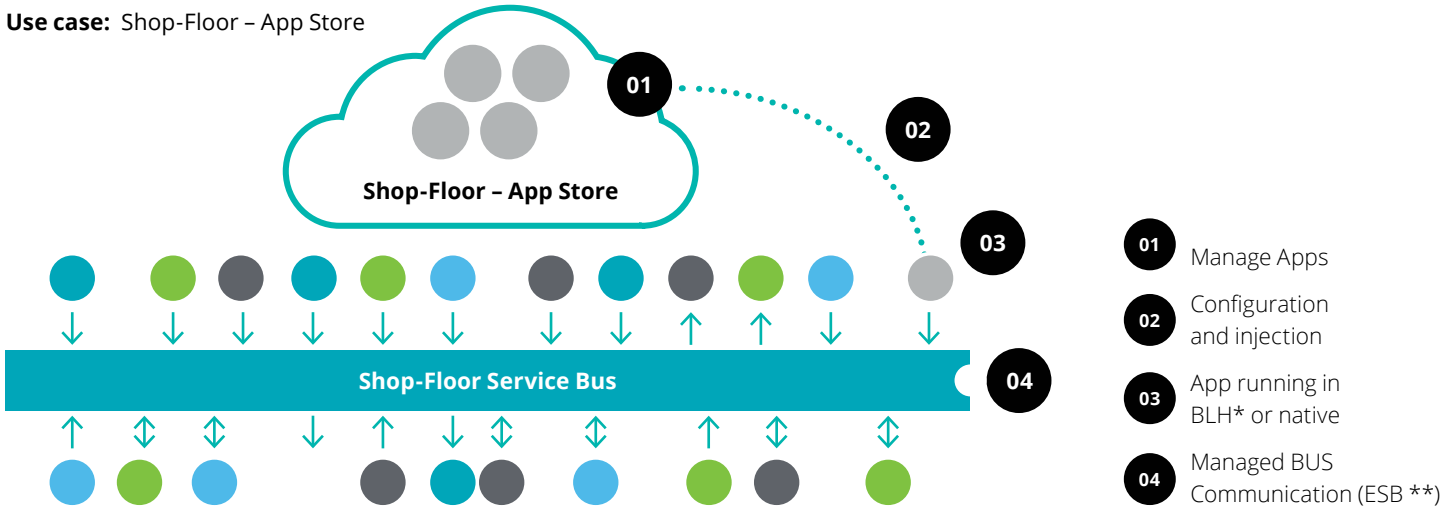
RFID integration

- Enables inter/intra equipment connectivity
- Facilitates scheduling & synchronisation of manpower, inventory, products and asset availability
- Monitors process characteristics, production count and production issues in real-time
- Reads and optimises pro-activity production settings (quality control)
- Ensures regulatory compliance requirements with unit-level traceability

Enabled business opportunities

Shop-floor technologies are diverse and are getting even more complex. We assessed the adaption of the App Store concept for production IT with the Fraunhofer Institute and automotive customers. “Empowering the shop floor” will result in a number of short-term business benefits and increase the ability to accelerate change, an important characteristic of the digital transformation.

Use case: Shop-Floor – App Store



* BLH: Business Logic Host **ESB: Enterprise Service Bus

Use case

- Simplify line setup of nut runner installation using an **App-like** mechanism to provide installation by a centralised **shop-floor App store**
- Integrated **App store** will provide proven Apps as centralised process registry. Business users can initiate, execute and maintain nut runner configuration without support (e.g. IT Department)

Enabled by

Shop-floor App store

- Increases flexibility of line changes due to in-time status alerts to the shop-floor
- Reduces complexity of set-up by up to 18% (due to configuration wizard)
- Saves set-up time and reduces test effort significantly
- Enables user self service for production business to set-up nut runner without support e.g. from IT
- Changes responsibility of configuration to business owner
- Ensures IT governance to shop-floor and standardised configuration for all nut runner type

Lead Question:

“Does App-like shop floor functionality empower simplification and therefore increase the agility of production line modifications?”

How to get started?

Think big, but start small and act fast...

Think big



Immerse in innovation

Join an IoT lab to explore the “art of the possible”, incite ideas and cultivate a culture of innovation



Build your ecosystem

Evolve your supply chain by collaboration with suppliers

Start small



Scale the edges

Disconnect from the core business and set-up teams to enable disruption within an established organisation



Pick one or two use cases

Prioritise your desired tactics and pick just one or two use cases to start with proofs of concept

Act fast



Prove it works (quickly)

Use agile approach to move from strategy to prototyping as quickly as possible – “fail fast” and achieve rapid results



Market your own success

Champion your successes to gain traction and achieve enterprise-wide adoption

How to continue the journey?

Scale, build, pick and implement...

Immerse yourself in innovation

- Conduct creative design sessions (agile)
- Define new use cases
- Identify relevant digital ecosystem

Build your ecosystem

- Define IT Strategy
- Define implementation approach & roadmap
- Conduct tool selection
- Determine S4/HANA transition roadmap

Pick one or two use cases

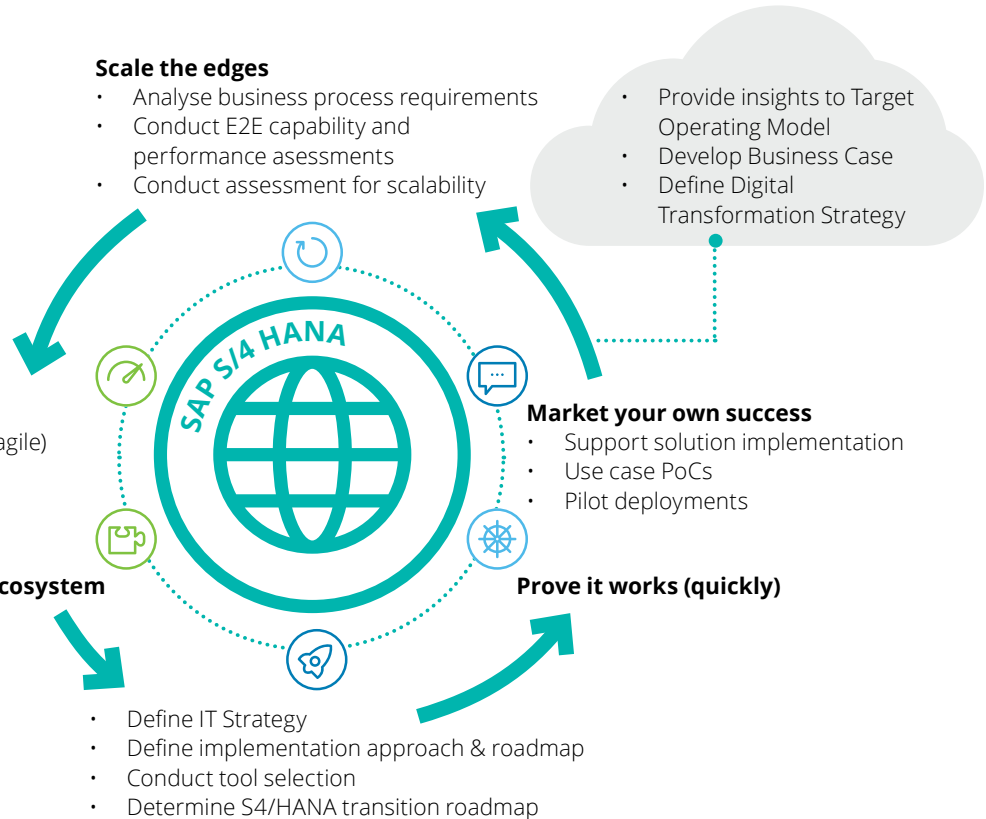
Scale the edges

- Analyse business process requirements
- Conduct E2E capability and performance assessments
- Conduct assessment for scalability

Market your own success

- Support solution implementation
- Use case PoCs
- Pilot deployments

- Provide insights to Target Operating Model
- Develop Business Case
- Define Digital Transformation Strategy



Industry 4.0 Manufacturing transition – From Top-floor down to Shop-floor

The digital transition takes time and focus and therefore a “Step-by-Step” approach is essential but at the same time the speed of delivery is important to make sure to get the momentum of first movers.



01

Map out Industry 4.0 strategy

Evaluate own digital maturity

Identify most business value

Readiness of company leadership



02

Create pilot initial project

Define a confined scope

Collaborate with digital leaders

Cooperate with industry organisations



03

Define capability need

Building Pilot lesson learnt

Map out needed capability

Recruit people needed



04

Increase the data analytics capability

Set up cross-function expert teams

Build direct links between decision-making and intelligent system design

Think big – Start small



05

Transform into a digital enterprise

Set up “tone from top” with clear leadership commitment

Set up digital culture with DevOps and Design Thinking

Be willing to experiment with new technology/new ways of operating



06

Plan an ecosystem actively

Develop a complete product and service solution

Look for bridges to fill gaps

Understand/develop the future ecosystem between all involved partners

Deloitte has a deep expertise in integrating organisational and technology change management in SAP S4/HANA implementations



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