SmartFactory's Industrial IoT Platform

Operational Excellence driven by Digital Transformation

Move away from paper and spreadsheets

Spend more time fixing losses than finding them

Use data-based decision making to drive continuous improvement

Increase transparency and improve accountability

Fig. 1 **WAPS**-Work Area Performance System by SmartFactory

Highlights:
Increase OEE* >13%
Reduce Scrap/Re-work* >6%
Engineering solutions to CAPAs
Connect to legacy equipment
Uncover hidden losses
Rapid *time to value* sprint

*Results from SmartFactory Customers 2019

Where to begin:

- Specify – What problem needs to be solved?
- Success – What does success look like?
- Start Small – Rapid proof of concept, with scalable technology
- Leadership & Vision – Is there support for how the technologies will create business value?
- Culture – Is your organisation ready for change?

STRATEGY **BEFORE** TECHNOLOGY

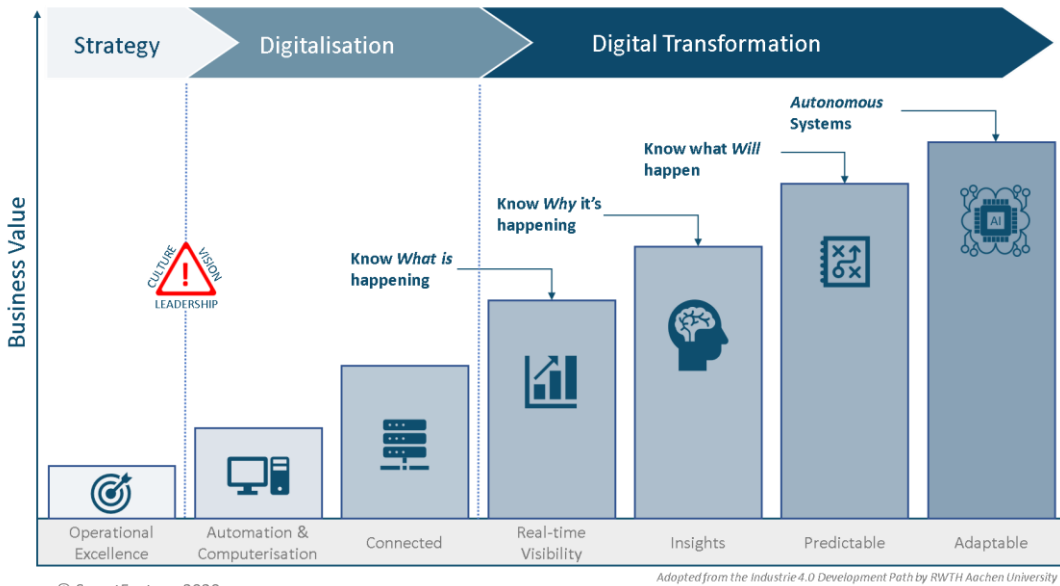## Digital Transformation Strategy:

© SmartFactory 2020

Fig. 2 **Digital Transformation Strategy** - from Operational Excellence to Autonomous Systems

SmartFactory's Out-of-the-Box data collection, analytics and visualisation solution includes:

- Secure industrial connectivity with industry proven hardware
- Wired/Wireless Gateways, to connect to any equipment or process
- Manual data-entry system (product, scrap, etc.)
- Pre-configured dashboards with standard KPIs (OEE, *Day-by-Hour*, Downtime Viewer, Energy, etc.)
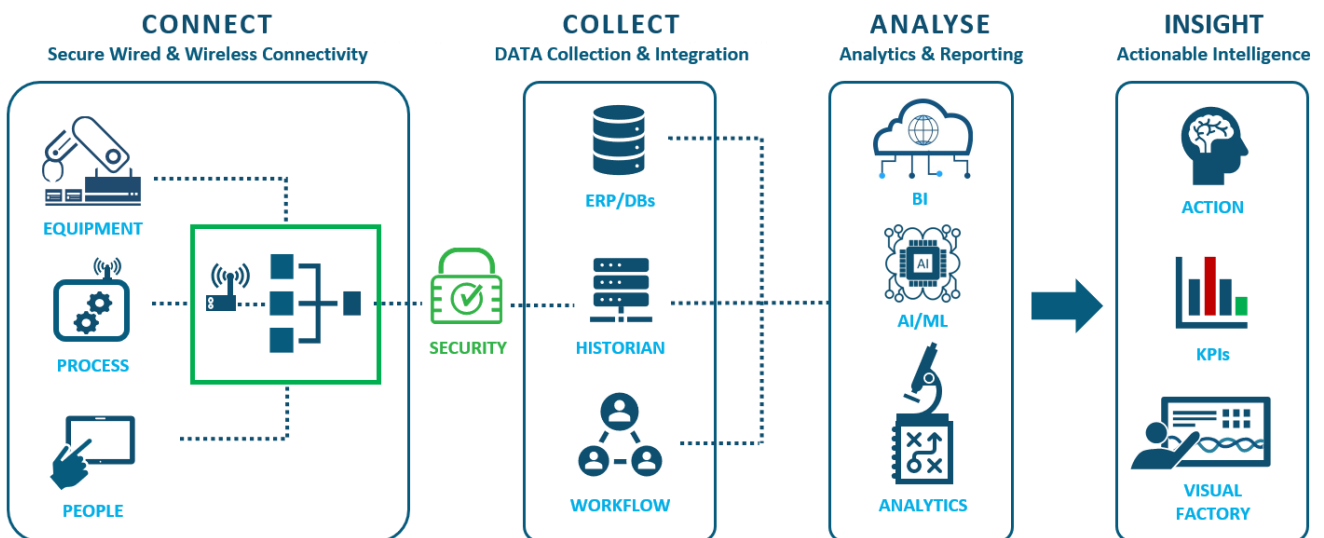- Microsoft *Power BI* templates for detailed analytics

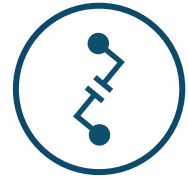Fig. 3 **Enterprise Ready Industrial IoT Platform** – built for Digital Transformation

SMARTFACTORY

Day-by-Hour Data Visualisation

Increase Efficiency

Downtime Analysis

Real-time Insights

IIoT

Data Visualisation: Medical Device Manufacturer - Catheter assembly

Highlights:

Semi-automatic assembly process

PLC Connectivity with NAT/Firewall devices

IIoT Sensors for capturing takt time from manual processes

Manual Reason entry from drop-down lists

Real-time Day-by-Hour loss analysis with Target vs. Actual

Automated Pareto Analysis of Alarms and Reasons

Detailed Process Analysis using Microsoft Power BI

THE SHINGO PRIZE for OPERATIONAL EXCELLENCE

EFFICIENCY THROUGH INNOVATION

SMARTFACTORY

Real-time Data Visualisation

Downtime Analysis

System Integration

Business Insights

Operational Excellence

Data Collection & Visualisation: Global leader in FMCGs (Nutrition)
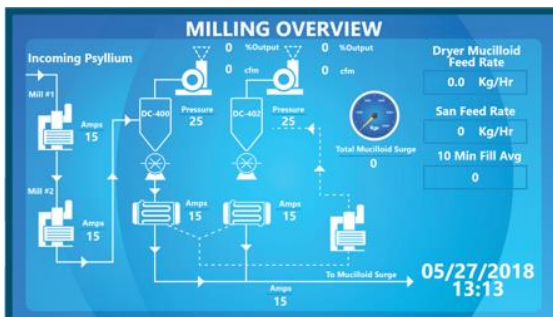
Highlights:

Customised, real-time display of >1,000 process variables

High-speed – logging 1,200 tags/sec to Historian

FDA regulated site in USA with approx. 100 displays

Integration with ERP (SAP) system (Work Order, Product, Target to make, Actual produced, etc.)

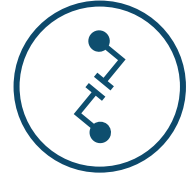Improve operator response times, by only highlighting out-of-range parameters

EFFICIENCY THROUGH INNOVATION

SMARTFACTORY

IIoT & Error Proofing (CAPA resolution)

Workflow	System Integration	Increase Efficiency	IIoT

Digital Workflow: Medical Device Manufacturer - Catheter assembly

Highlights:

Microsoft AD and User Training DB Integration

SAP and MES systems Integration

Spanish and English languages for site in Mexico

End-to-end solution including design, project management, commissioning and validation (TDS, IQ/OQ and Test Case documentation, etc.)

Siemens DiagMonitor (monitor health of industrial server, UPS battery and OT devices, etc.)

Siemens RemoteConnect (connect to OT network via secure VPN tunnel)

Downtime Analysis

System Integration

Business Insights

Operational Excellence

Data Collection & Visualisation: Global leader in FMCGs (Cosmetics)

Highlights:

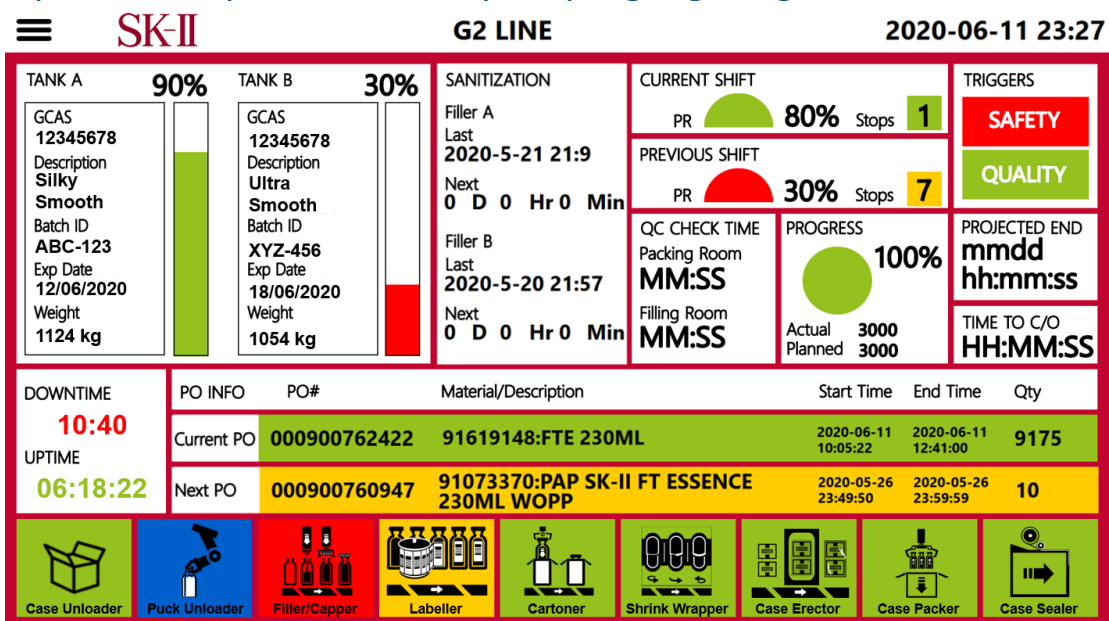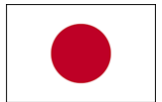Logging of all process variables to Historian

Microsoft AD Integration

Japanese and English languages

Real-time display KPIs for two new high-speed filling lines, designed to the Pack-ML standard

Integration with ERP (SAP) and MES (Proficy) systems (Work Order, Product, target to make, actual produced, etc.)

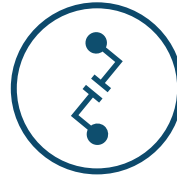Improve operator response times, by only highlighting critical KPIs

Energy Optimisation

Business Insights

IIoT

Increase Efficiency

Energy & Spray Dryer Process Optimisation: Global leader in Nutrition

Highlights:

Real-time visualisation of OEE and site-wide Energy usage

IIoT solution with wireless vibration & temperature condition monitoring

Logging of all process variables to Historian

Integration with Planning System

Detailed Process Analysis using Microsoft Power BI
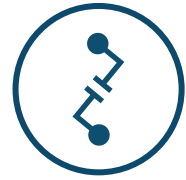
Use of AI/ML algorithms for process optimisation

Workflow

System Integration

Increase Efficiency

IIoT

Pick-to-Light: Medical Device Manufacturer

Highlights:

Standard Pick-to-Light/Put-to-Light Solution

Error proofing of Kanban material supply system

Microsoft AD User Management Integration

SAP and MES systems Integration

End-to-end solution including storage-system design, project management, commissioning and validation (TDS, IQ/OQ and Test Case documentation)

About us:

We understand manufacturing:

SmartFactory is led by a team of engineers with more than 25 years of experience in the manufacture of FMCGs, Medical Devices and Electronics.

SmartFactory can provide an end-to-end solution including IIoT readiness assessment, business value and RoI appraisal, design, engineering consultancy and industry-proven hardware.

Scalable, modular solution includes:

OEE/Downtime Analysis ✔   Data Visualisation ✔
Data Analytics/AI ✔   Digital Workflows ✔
Condition Monitoring ✔   Pick-to-Light ✔
Energy Monitoring ✔   Real-Time Locating (RTLS) ✔
Rapid Deployment ✔   Secure Remote Support ✔

WAPS

Operational Excellence Platform,
designed for
Digital Transformation

FDA ✔ **21 CFR Part 11**
COMPLIANCE

Our Partners

Approved Distribution Partner — **SIEMENS**

Microsoft Power BI Integration

TURCK | BANNER
System Solution Partner

ThingWorx *A PTC Business*
POWERED BY

GE POWERED BY **Workflow**

*" The SmartFactory initiative is the best
I have seen, in all my time in finance "*
Senior finance executive visiting the Irish site of a
Global Medical Device Manufacturer

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