MAKE IT SUSTAINABLE IN THE INDUSTRY RENAISSANCE

In our Experience Economy, consumers want product experiences. New categories of innovators are creating new categories of sustainable experiences for new categories of consumers; but switching from delivering products to delivering experiences requires profound change. Experiences include rich content—customization with users defining what’s needed and when according to the user’s desire. This adds complexity to operations, requiring more diversity and efficiency for predictable, consistent process execution.

Consumers also expect that companies will produce their experiences in ways that minimize impacts on the environment, society and people. People have shown that they are willing to change their behaviors and the brands they buy to help preserve the environment. With a global population of about 7 billion people and growing, we cannot produce and consume in the same way that we did in the 20th century, when the population was just 2.5 billion (1950).

The world is experiencing a global transformation in how we invent, learn, produce and trade. We call it Industry Renaissance. For Industry Renaissance, with the drive of the experience economy, sustainability is a central concern.

Follow along as we present 8 workshops with a dedicated scenario underlining the challenges and business value of a Digital Continuity showcase told through a relatable manufacturing story.
SUPPLY CHAIN PLANNING & OPTIMIZATION

When companies model their global operations, they can now optimize the entire value network on all planning horizons, from S&OP through Production Planning to Production Scheduling for industrial and services operations. The results are feasible plans, optimized against key performance indicators, always in sync with the realities of the business.

- Increase margins with cost optimization
- Reduce inventories, remove waste in value chain
- Lower supply, operations and transport costs

DIGITAL TWIN VISUALIZATION

Take a virtual “Gemba” walk through the Body-In-White line at a Shanghai facility from the comfort of your head office. Get a 3D point cloud view from any area of interest where you could precisely plan the position of new tooling. You can also view the actual production data and KPIs of any equipment; the digital twin is always up to date.

- Reduce cost of strategic factory planning by collaborating in the 3D environment and enabling a virtual assessment of the factory
- Smaller economic footprint by reducing travel in favor of a 3D environment
- Increase factory output by optimizing space utilization

OPTIMIZED PROCESS PLANNING

Discover how to connect and merge both Engineering and Manufacturing worlds, allowing you to understand the Manufacturing context and quickly assess a change on our BiW line. Witness the fastener Optimization process to efficiently balance across multiple robots.

- Improve flexibility to develop workforce skills - whenever or wherever needed
- Educate and empower the workforce, so they are capable of deploying new manufacturing processes with reduced risk of error
- Lowered environmental and financial cost of new product introduction
ROBOT PROGRAMMING & VIRTUAL COMMISSIONING

Based on an optimized fastener distribution, experience how to generate trajectories and robot programs for each robot and then simulate the entire cell.

Learn how the control engineer ensures full synchronization of all equipment by enriching the virtual model with its controlled devices.

- Simulate and validate virtually the line concept and the ability to execute specific operations and prevent unneeded waste in time, energy, and part usage. Optimize automatized operations setup and cycle time.

OPERATIONS & MONITORING

Take a look at the real-time state of the shop floor where we monitor critical information measuring performance and efficiency of production. See how you can quickly react based on real-time visibility. Automatically generated alerts ensure inspection steps and 3D Work Instructions help you to understand how to perform that inspection. If finally an issue is found, see how to share it with the production team and collaboratively solve the problem.

- Eliminate waste from non-value added activities thanks to strong real-time integration with equipment
- Ensure quick response and containment of issues in case of non-conformance event
- Reduce time needed for implementing Continuous Improvement

COLLABORATION & LEAN PRACTICES

Team communication is the core of Lean Digitization to treat problems and learn from them. Breakdown geographic barriers, departmental barriers and time lost through real-time collaboration, while empowering teams to share knowledge and know-how to solve operational problems.

- Employee empowerment and engagement for decision making and increased productivity
- Harness employee creativity for new innovation
- Capitalize and share know-how of the company for better collective intelligence
MAINTENANCE MANAGEMENT

The ability to accurately predict machine failures based on models from available data helps manufacturers manage costs, downtime, and improve overall business profitability. A 360° view of maintenance objectives will help to define maintenance planning, execution, and predict failures. Discover how Virtual Reality Training and tablet-enabled Work Instruction make the maintenance task even more efficient.

- Determine the best timing for maintenance planning execution with minimal disruption
- Increase product line and factory availabilities with maintenance cost optimization
- Reduce spare part inventories

INTERACTIVE AUTOMATION EXPERIENCE

Manufacturing in the Age of Experience attendees will have the opportunity to interact with the ABB robot by selecting programs and running them using Virtual Commissioning on tablet.

- System approach to calculation for Realistic Global Cycle time
- Orchestrated Simulations of all devices for minimal downtime at implementation
- True Integration for a full view of the Manufacturing Devices
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