Connected Manufacturing

Connected Manufacturing represents the next evolutionary step in optimizing industrial processes by seamlessly linking every component within a manufacturing ecosystem. It is a holistic approach that integrates the factory, supply chain, and workforce into a unified system, driving efficiency, productivity, and innovation.

What is Connected Manufacturing?

Connected Manufacturing is the integration of three key parts:

The Connected Factory

This is the core of Connected Manufacturing, where machines and systems communicate with each other. This connectivity enables real-time monitoring, predictive maintenance, and optimized production processes, leading to higher efficiency and reduced downtime.

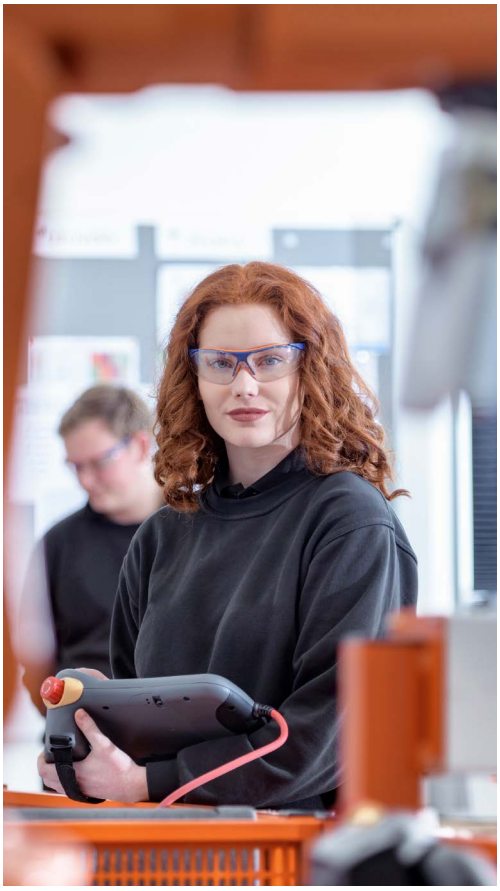
The Connected Supply Chain

This aspect focuses on seamless communication and transparency across the entire supply chain, from raw material suppliers to end customers. Real-time data access enables better decision-making, reduces waste, improves delivery times, and enhances responsiveness to market changes.

The Connected Worker

Empowering the workforce with tools, information, and training is essential for maximizing productivity and safety. Connected workers have access to real-time data, personalized insights, and training, enabling them to perform tasks more effectively and safely regardless of their skills.

None of these parts should exist in isolation, they all need to be interlinked to ensure seamless communication and coordination across the entire production ecosystem.



The Role of AI in Connected Manufacturing

AI is the driving force behind each component of Connected Manufacturing:

Connected Factory

AI analyzes data from sensors and machines, predicting maintenance needs and optimizing production schedules to reduce waste and enhance efficiency.

Connected Supply Chain

AI continuously analyzes supply chain data, ensuring optimal resource allocation and logistics, thereby reducing costs and improving delivery times.

According to the 2024 IFS Manufacturing Tomorrow: Insights into the Future (of Industry) survey, **63%** of global manufacturers are only at the initial stages of connecting to their machines and assets on the stop floor, although they recognize the benefits.

Connected Worker

AI acts as a personal coach, providing workers with insights, safety alerts, and personalized training to improve decision-making and job performance.

Why Invest in Connected Manufacturing?

Investing in Connected Manufacturing is a strategic imperative that offers numerous benefits:

- **Enhanced Efficiency**
  Streamlines operations and reduces waste
- **Improved Productivity**
  Optimizes resources and processes for better output
- **Better Forecasting**
  Provides accurate data for informed decision-making
- **Increased Employee Satisfaction**
  Enhances the work environment and safety
- **Sustainability**
  Reduces environmental impact through efficient resource use
- **Competitive Advantage**
  Offers a holistic view of operations, driving excellence and profitability

How IFS Cloud Supports Connected Manufacturing

IFS Cloud provides the digital backbone for Connected Manufacturing by integrating:

Connected Factory

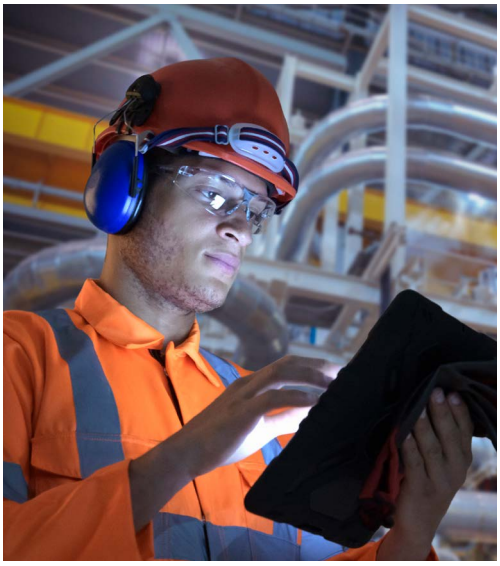
IFS Cloud's MES system enables real-time IoT communication, asset management, and predictive maintenance, ensuring optimal production performance.

Connected Supply Chain

IFS Cloud supply chain planning, warehousing and transport management capabilities offer end-to-end visibility and traceability, improving agility, resilience, and sustainability across the value chain.

Connected Worker

With tools like Poka, IFS Cloud empowers workers by providing digital access to essential information and training, driving not only improvements in safety and productivity, but also greater engagement and job satisfaction.



Challenges and Benefits of Transitioning to Connected Manufacturing

Transitioning to a Connected Manufacturing operating model can represent challenges such as technology integration, data quality, security, training, costs, and cultural shifts. However, the benefits outweigh these challenges by providing a comprehensive view of operations, enhancing efficiency, and ensuring long-term profitability. IFS is here to support you.

Conclusion

Connected Manufacturing is a transformative approach that integrates every aspect of the production process. By leveraging AI and platforms like IFS Cloud, manufacturers can achieve higher efficiency, productivity, and sustainability, ultimately gaining a competitive edge in the industry.

For more information, please contact us at

ifs.com