

# Boost Your CO<sub>2</sub>-Neutral Manufacturing With SAP DM

Climate-friendly manufacturing starts with connectivity for every single machine. Boost your manufacturing with **SAP Digital Manufacturing** powered by **FORCE EDGE CONNECT** of **FORCAM-ENISCO**



[sap.com/products/scm/manufacturing.html](https://sap.com/products/scm/manufacturing.html)

## The Challenge

The digitization of production is the major challenge for maintaining competitiveness and for climate-friendly manufacturing.

## The Solution

**FORCE EDGE CONNECT** solution offers full connectivity for heterogeneous machine parks (Brownfield/Greenfield). Even old equipment can be digitally networked retroactively, regardless of age and manufacturer. The connectivity effort for some machine types is reduced to a minimum.

**FORCE EDGE CONNECT** provides a semantic data model for real-time analyses within the SAP Digital Manufacturing (SAP DM). Resource and energy consumption is optimized with a digital twin of production – a key step towards climate-neutral manufacturing.

“With **FORCE EDGE CONNECT**, customers can connect their brownfield to SAP solutions and integrate with SAP processes so they can take full advantage of the digital twin”

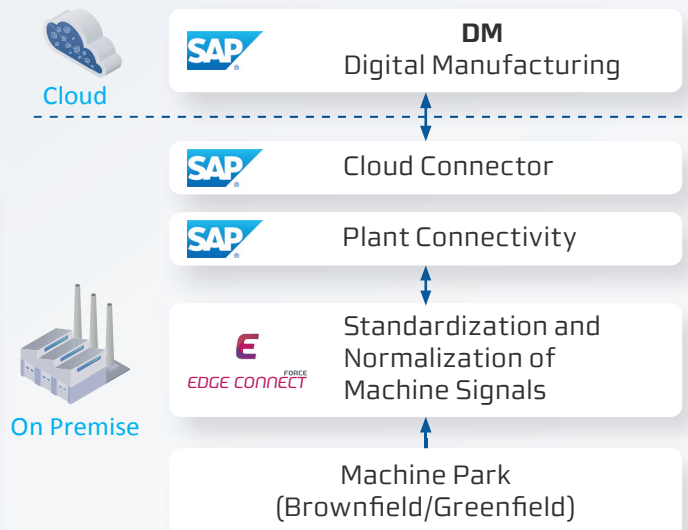
**Mani Pirouz**,  
COO & Chief Partner Officer, SAP Signavio

## Strong Partners

- ▶ SAP – as leading international ERP provider
- ▶ FORCAM-ENISCO – experts for the digitalization of discrete manufacturing

## Major Benefits

- ▶ Real-time integration of heterogeneous machines into SAP’s IT systems
- ▶ Increased transparency and cost efficiency
- ▶ Semantic data model for comprehensive analyses in SAP Digital Manufacturing
- ▶ Support of sustainable production through energy monitoring
- ▶ No need to invest in new machines



## Your Personal Contact

You would like to learn more? As your contact person, I will be happy to answer any questions you may have. You can reach me at: [pedro.iglesias@forcam.com](mailto:pedro.iglesias@forcam.com)

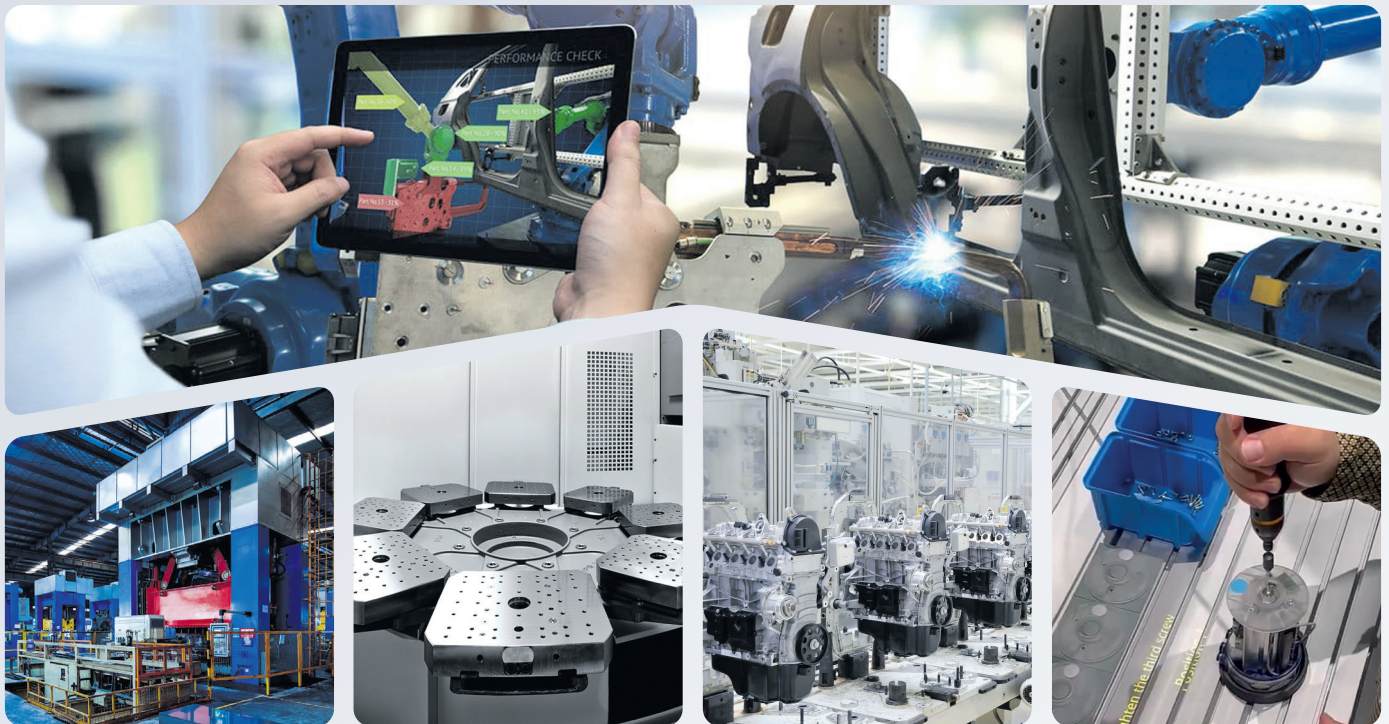


## Pedro Iglesias

Vice President of  
SAP Digital Manufacturing & IIoT  
FORCAM-ENISCO



## Easily Connect Your Heterogeneous Machine Park



**Presses**

**Pallet Machines**

**Assembly Lines**

**Manual Workplaces**

Profit from the data out of your heterogeneous machines – with **FORCE EDGE CONNECT**, enabling real-time analytics in SAP DM (Digital Manufacturing). With **FORCE EDGE CONNECT**, companies connect old and new machines, regardless of manufacturer, vintage or control system (Brownfield / Greenfield), as well as devices in manual workplaces. The solution standardizes the data and makes it available in MES systems such as SAP DM or SAP ME/MII.

### Presses

Pressing machines handle a very wide variety of tasks – primary shaping, forming, joining, dividing. The variety of press machines is diverse. **FORCE EDGE CONNECT** connects all common types.

### Assembly Line

Assembly lines involve highly complex processes – delivery of raw materials and parts, painting, coating, storage, delivery. **FORCE EDGE CONNECT** enables the sophisticated workflows involved.

### Pallet Machines

In smart manufacturing, pallet machines must be considered separately. They usually run several operations at once, each with a different work status. **FORCE EDGE CONNECT** covers this task.

### Connect any device with FORCAM-ENISCO

For resource efficiency, **FORCE EDGE CONNECT** offers the data base for real-time analytics in SAP DM. The solution connects all devices with SAP DM – even manual workplaces. The FORCAM-ENISCO showcase at the SAP Pop-Up Factory in Walldorf demonstrates the virtual inspection in SAP DM of the assembly with an Atlas Copco screw driver, operated by a human, and a robot hand supplying the material.

- ▶ Paperless real-time check of the assembly
- ▶ Flexibility to connect any additional device
- ▶ Delivery of standardized data to other applications
- ▶ Bi-directional communication between any device and SAP Digital Manufacturing
- ▶ Interfaces out-of-the-box (API / MQTT / OPC UA)