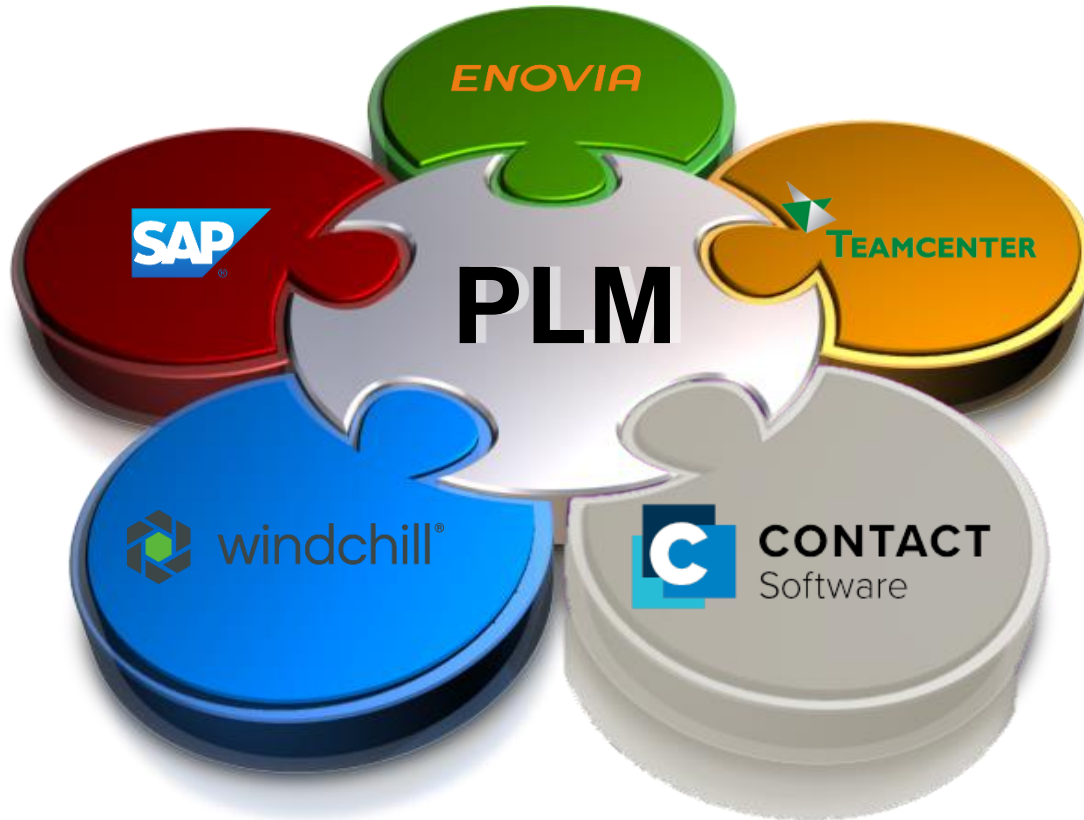


ROBERT BOSCH ENGINEERING AND BUSINESS SOLUTIONS

DIGITAL TWIN

PLM Competency & Domain Offerings



Solutions across multiple PLM platforms in multiple domains



Digital Twin:

“A digital twin is basically a virtual version of a physical entity, whether product, factory, or some other type of asset or system.”

► Digital Thread:

“A Link that binds Together the Product Data and Organization in End to End Digital Process spanning from Product Design, Manufacturing, Product Support



HVAC machine in Bosch Engineering is retrofitted with Bosch XDK sensors and the performance of the HVAC is monitored through CONTACT Elements



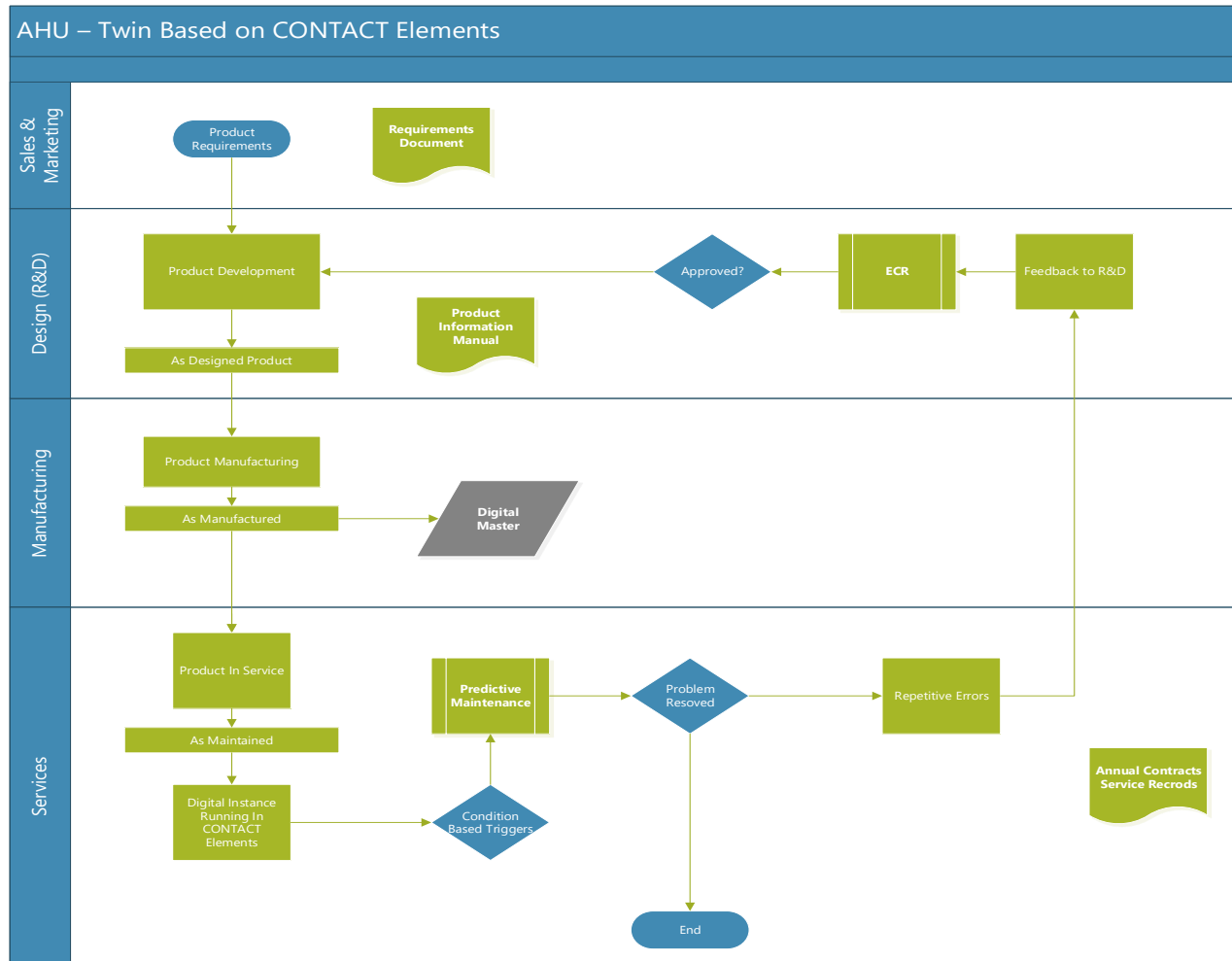
Business Need:

- ▶ Remote Monitoring of machines
- ▶ How do we take data from old machines
- ▶ Monitoring Different Parameters
- ▶ Condition Based Triggers
- ▶ Services Lifecycle & Feedback

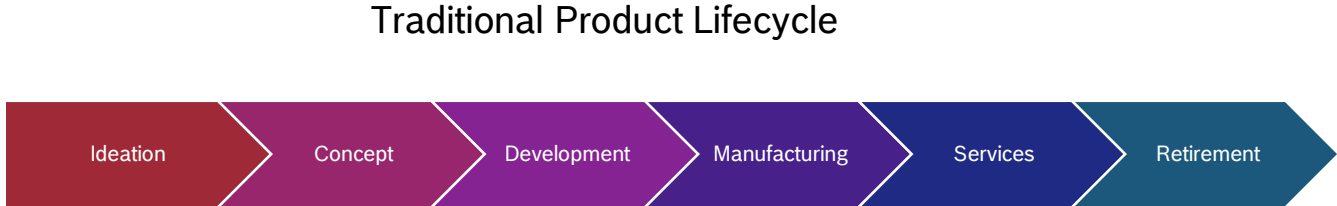
Solution

- ▶ Retrofitting the machines with Bosch XDK sensors
- ▶ Remote Monitoring via CONTACT Elements
- ▶ Condition based triggers (temperature, pressure)
- ▶ Document Management via CIM Database
- ▶ Product Structure Management via CIM Database
- ▶ Services Workflow through CIM Database Workflow

Digital Twin – Process Flow

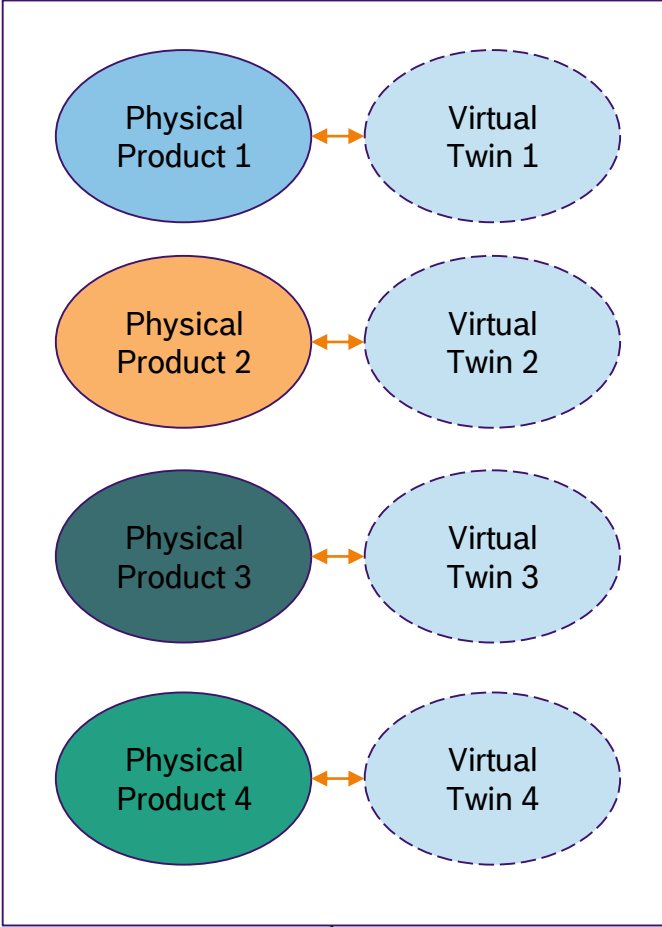


Digital Twin - Application

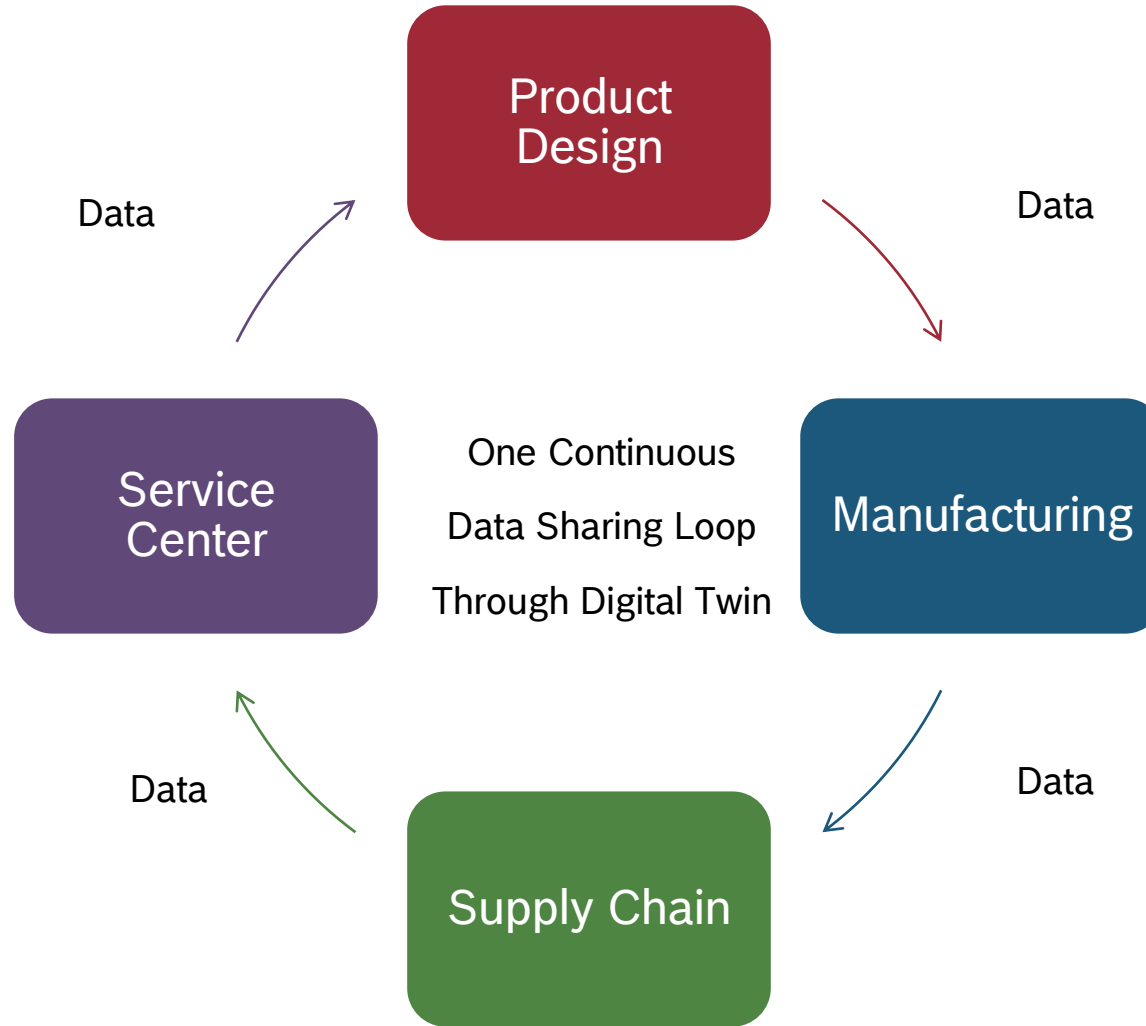


Regular Feedback Mechanism via Digital Product Lifecycle

Connected Products



Digital Twin & Closing The Loop

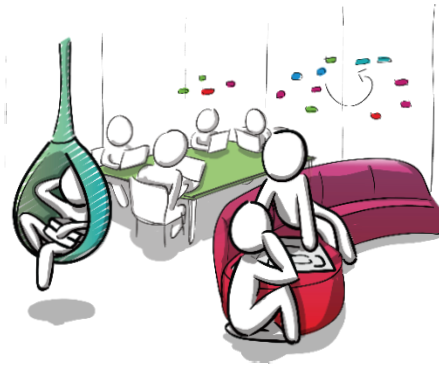


Advantages of Digital Twin & Closed Loop



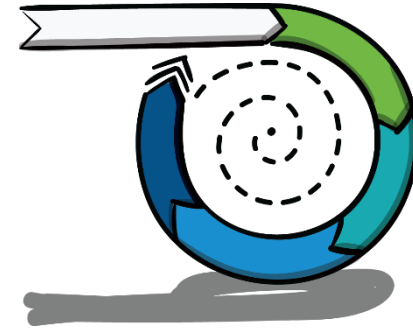
Requirements

Digital Twin & Closed loop ensures user requirements are properly understood and addressed continuously



End to End Connectivity

Digital Twin & Closed loop ensures the end to end connectivity and follows system of system approach



Principles of “Re”

Digital Twin & Closed loop encourages “Re-use”, “Re-cycle”, “Re-purpose”, “Re-manufacture”, “Re-tire” principles effectively

THANK
YOU