

GENIVI ALL MEMBER MEETING – A DIGITAL EXPERIENCE

DIGITAL TWIN CONCEPTS APPLIED TO VEHICLE DATA

RAINER LANG

CHIEF DIGITAL OFFICE MOBILITY



www.linkedin.com/in/lang-rainer

DIMITRIOS STAVRIANOS

E/E-ARCHITECT POWERTRAIN SOLUTION

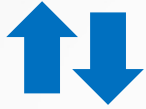


www.linkedin.com/in/dimitrios-stavrianos

Digital Twin Concepts Applied to Vehicle Data

We are working on the Data Driven Life Cycle

Closing the loop ...



As engineered

As produced

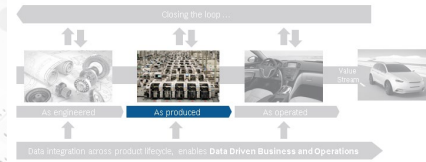
As operated

Value Stream

Data integration across product lifecycle, enables **Data Driven Business and Operations**

Digital Twin Concepts Applied to Vehicle Data

Closing the Loop needs Open Standards & Partnering



Data as produced – example: Open Manufacturing Platform (OMP)

OPEN MANUFACTURING PLATFORM

ABInBev BMW GROUP BOSCH Microsoft ZF

accenture Capgemini Cognizant faurecia FORCAM

NorCom pwc Red Hat SIEMENS Healthineers SUPPLYON

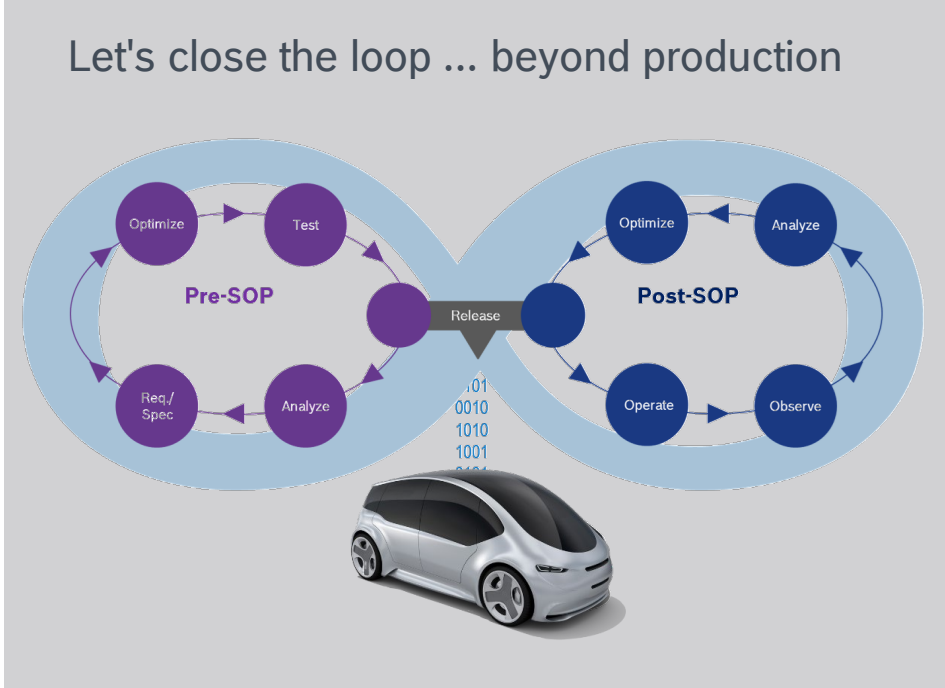
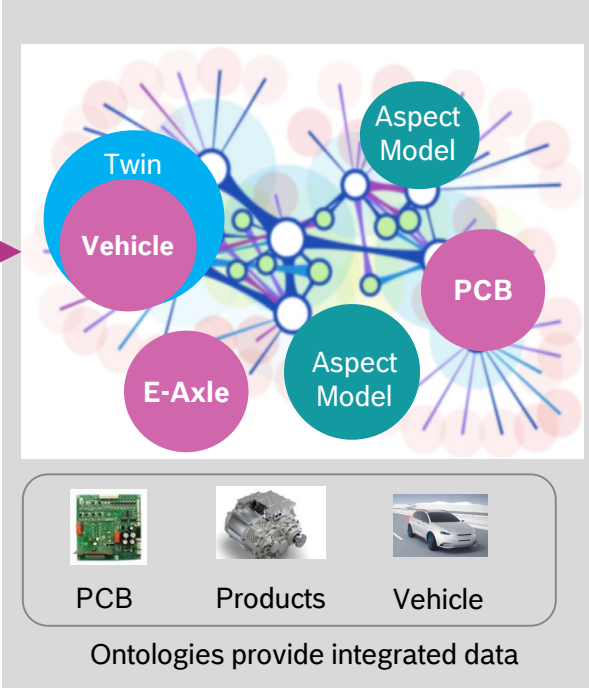
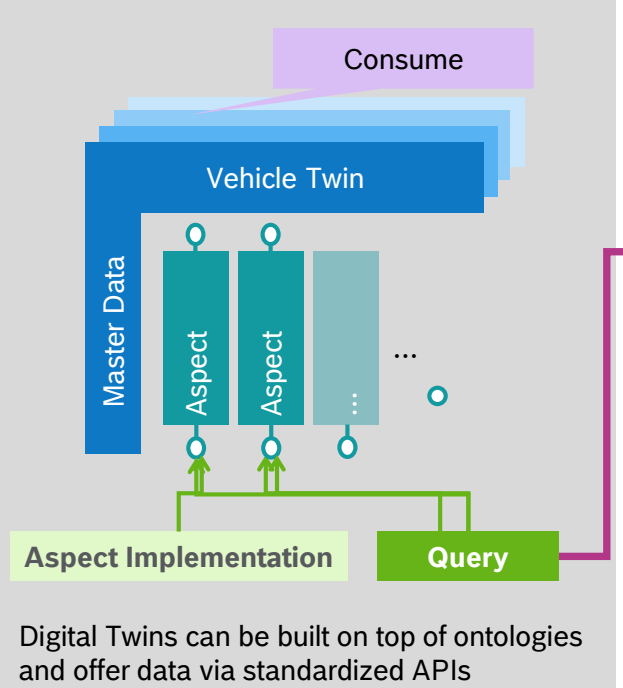
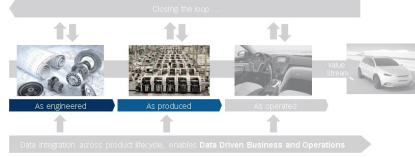
wandelbots



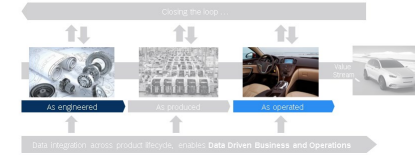
Bosch is currently active in manufacturing with its digital twin. With the increasing relevance of the integrated life cycle management, manufacturing, supply chain and logistics

Digital Twin Concepts Applied to Vehicle Data

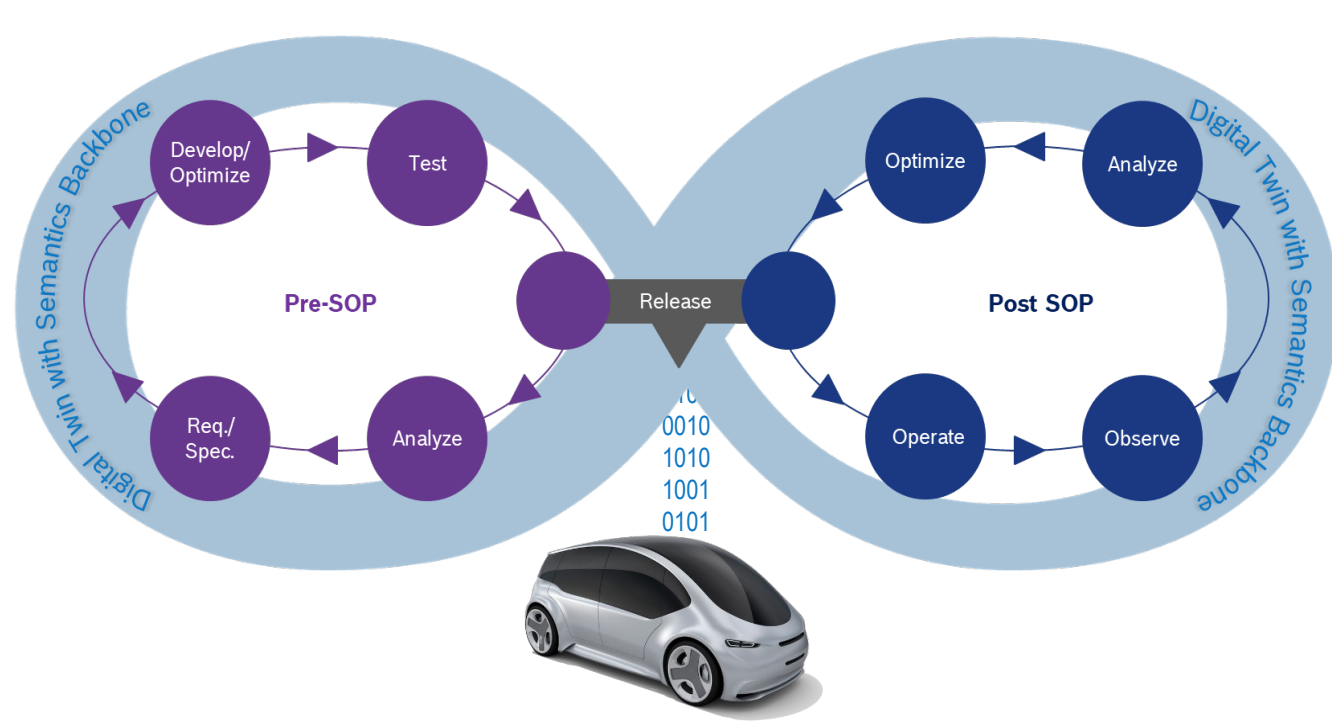
Interoperability of Digital Twins needs open standards



Digital Twin Concepts Applied to Vehicle Data Lifecycle Interaction Beyond Production



Lifecycle Interaction Beyond Production



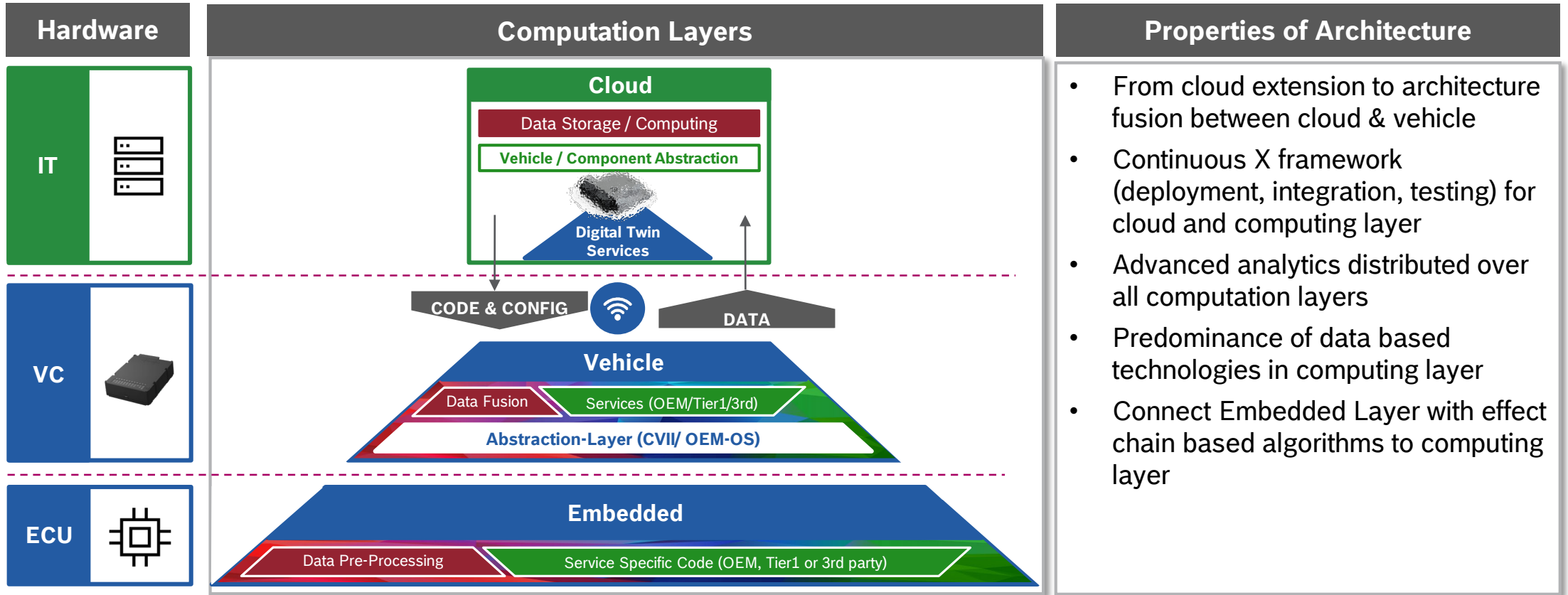
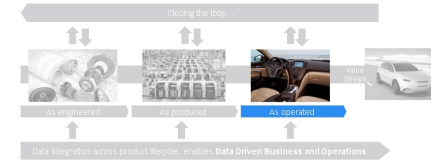
Key Facts

- Use statistical robustness of vehicle fleets for real world fitting
- Vehicles are part of extended development and validation environment
- Optimize Hard- & Software
- Speed up SW development and innovation Cycles
- Establish digital twin based services

End-2-End Service Architecture Mandatory for Secure & Safe Handling of Data / Configuration / Code

Digital Twin Concepts Applied to Vehicle Data

End-2-End Service Architecture



SW building blocks are distributed over all computation layers from embedded to cloud