



# **AHK – Business Meets Innovation**

## **Bosch 2023 Tech Challenge**

Dr. Walter Lehle, Carlo Mannu

# Who we are

94% of company shares are held by Robert Bosch Stiftung GmbH,  
a charitable foundation

In 2022



88.2

billion euros  
sales revenue



3.8

billion euros EBIT  
from operations



421,300

Bosch associates  
worldwide at year-end  
(approx.)

**5,600 in Italy across 18  
locations and with 3  
R&D centers**



CO<sub>2</sub>-neutral

2020

Bosch achieves carbon  
neutrality worldwide in  
scopes 1&2

# Who we are

## Our business sectors



**Mobility Solutions**



**Industrial Technology**



**Energy and Building  
Technology**



**Consumer Goods**





# Where we want to go

## Future mobility

Bosch is pursuing a vision of mobility that is as safe, sustainable, and exciting as possible. To get there, we are focusing on four megatrends: **connectivity**, **electrification**, **automation**, and **personalization**. Thanks to our decades of cross-domain expertise, we are an **innovation leader** in all these areas.



# Where we want to go

Software and services are gaining importance, and hardware will continue to play a central role in our business

- **Application software** and **services expertise** goes hand in hand with **hardware know-how**
- We will focus on **building a platform business** and enter segments that generate **annually recurring revenues**.
- Today software is embedded in the hardware. In future, we will also see **hardware and software applications being separated**.
- New business models are emerging, **upgrades can be made over the entire life cycle**. Opportunities: shorter time to market, end-to-end architecture, and **hardware-agnostic software & services**.

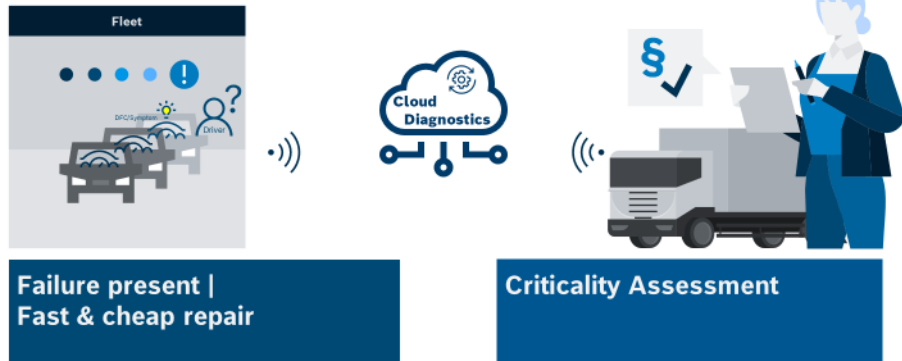


# Bosch 2023 Tech Challenge

## Vehicle Should Run

### Enhance availability fast & cheap repair

Data based Services  
**Cloud Diagnostics** | Repair Faulty Vehicle



2 Internal | Commercial Vehicles and Off-Highway (PS-EC/PJ-CPS-4) | 17.05.2023  
© Robert Bosch GmbH 2023. All rights reserved. No part may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage or retrieval system, without permission in writing from Robert Bosch GmbH.



# Bosch 2023 Tech Challenge

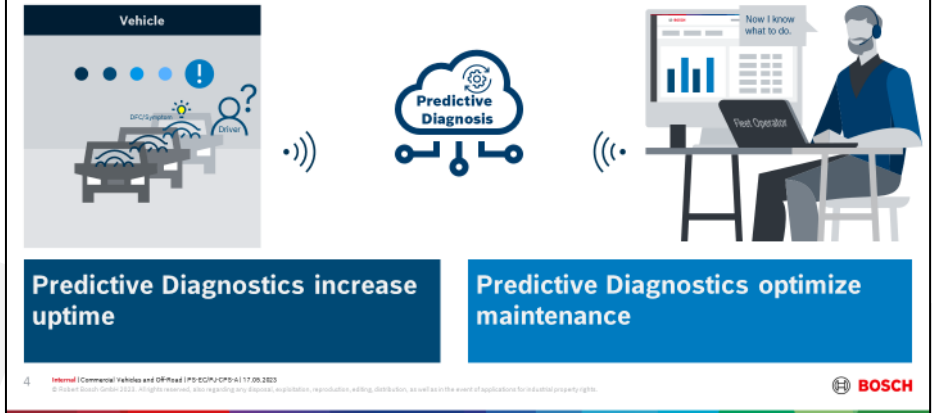
## Vehicle Should Run

### Enhance availability fast & cheap repair

#### Data based Services Cloud Diagnostics | Repair Faulty Vehicle



#### Data based Services Predictive Diagnosis | avoid unplanned repair



### Avoid unplanned repair

# Bosch 2023 Tech Challenge

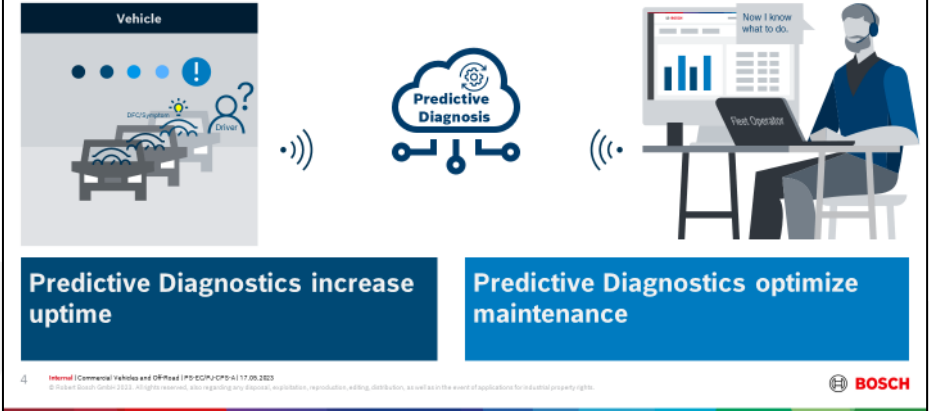
## Vehicle Should Run

### Enhance availability fast & cheap repair

#### Data based Services Cloud Diagnostics | Repair Faulty Vehicle



#### Data based Services Predictive Diagnosis | avoid unplanned repair



### Avoid unplanned repair

- Mobility2.0 increase the availability for commercial use for the fleet operators
- Reduce impact in failure case and go in the preventive maintenance
- One-solution cover the different vehicle brands

**Challenge: understand the technical language of all different vehicle**

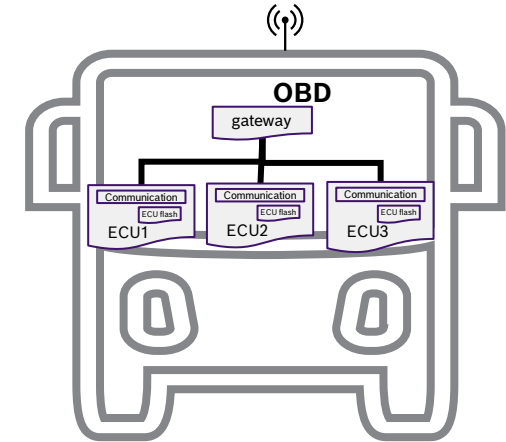


# Bosch 2023 Tech Challenge

## Translation of data of different vehicle in one common language

### Language:

- Diagnose based on UDS
  - Understand UDS sequences commands failure codes
  - **Translation to commands and failure codes**
- Different CAN networks (powertrain, infotainment, ...)
  - Understand the different CAN messages
  - **Translation to physical meaning**
- => brand specific implementation & vehicle specific adaption



### Challenges:

- **Translate Diagnose and CAN network in a common language**

