



# **Sektorenkopplung mit Wasserstoff im industriellen Bereich**

**Michael Reinstädler**

Leiter Fertigungsentwicklung Balance of Plant (BoP) Komponenten

Bosch Werk Homburg (HoP1)

# Bosch Homburg Site



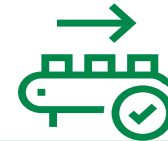
~1bn

Turnover



4 500

Associates

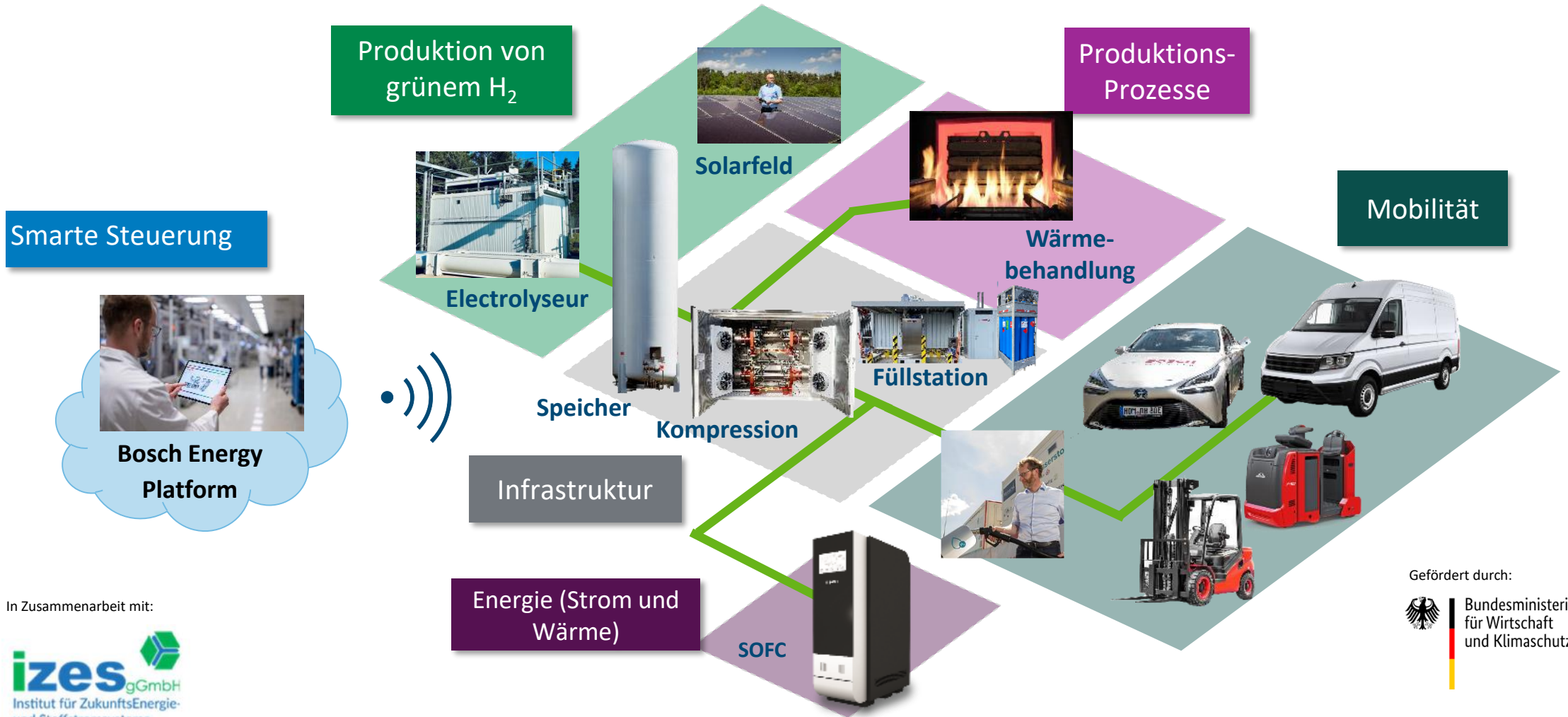


6

Hydrogen Component Production lines



# Bosch Homburg: Wasserstoff Ökosystem



In Zusammenarbeit mit:



Gefördert durch:







# Connected eH<sub>2</sub> Cycle



# Connected eH<sub>2</sub> Cycle



PV

3.8 MW<sub>p</sub>

(2025: >8 MW<sub>p</sub>)







PV  
3.8 MW<sub>p</sub>  
(2025: >8 MW<sub>p</sub>)





Green  
Electrolyzer

**Electrolyzer**

 **BOSCH**



# Electrolyzer



# Electrolyzer

Wir bewegen  
die Zukunft  
BOSCH HOMBURG

**MISSION H<sub>2</sub>**

Das Wasserstoff-Ökosystem –  
**Bei uns schon Realität**



**BOSCH**

**H<sub>2</sub> Storage  
> 300 kg**

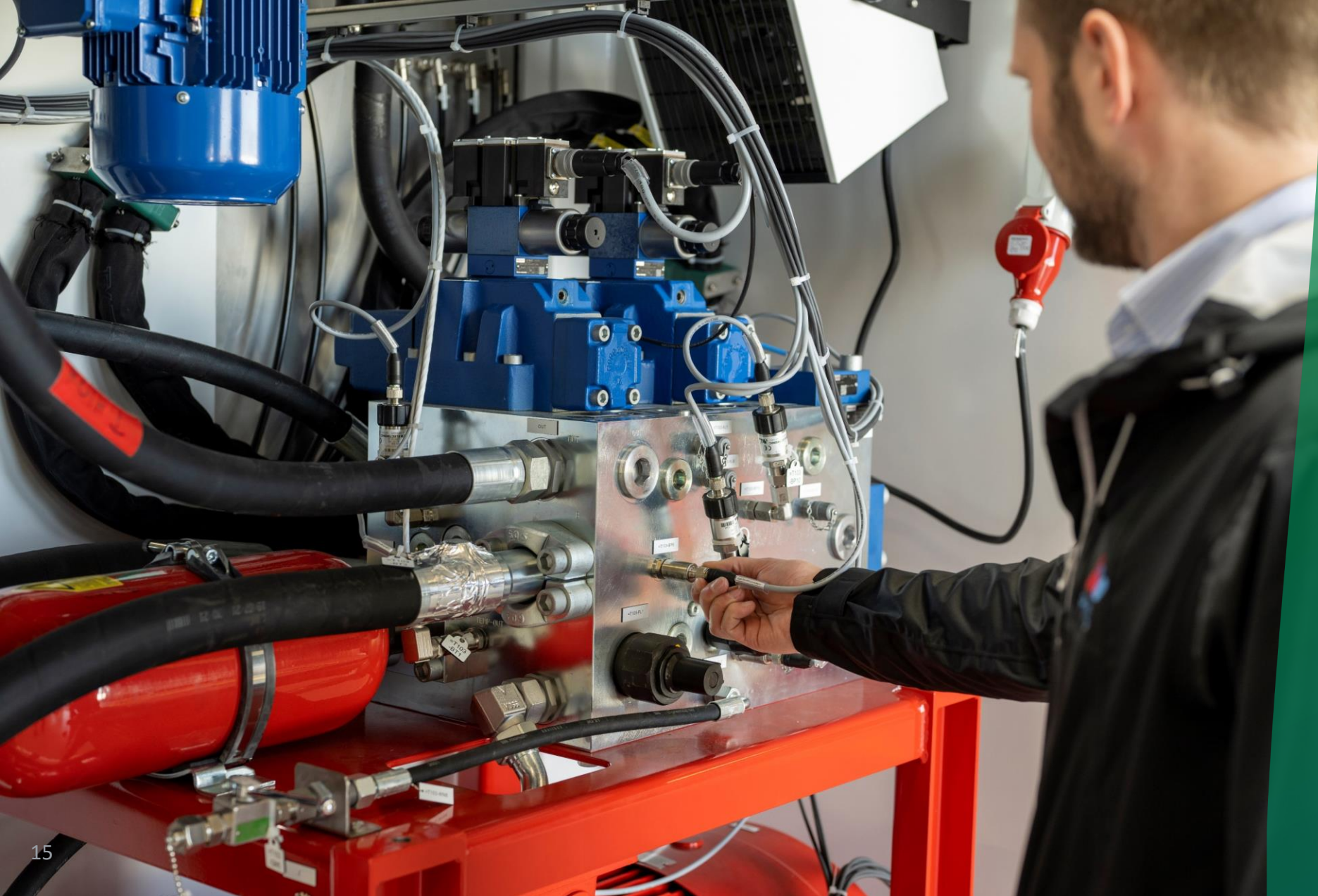


**BOSCH**



1000 bar  
Verdichter





Compressors from  
Maximator Hydrogen  
w/ Bosch Rexroth  
technology





# Piping / Valves







H<sub>2</sub> Storage

 **BOSCH**



## H<sub>2</sub> Storage

 **BOSCH**



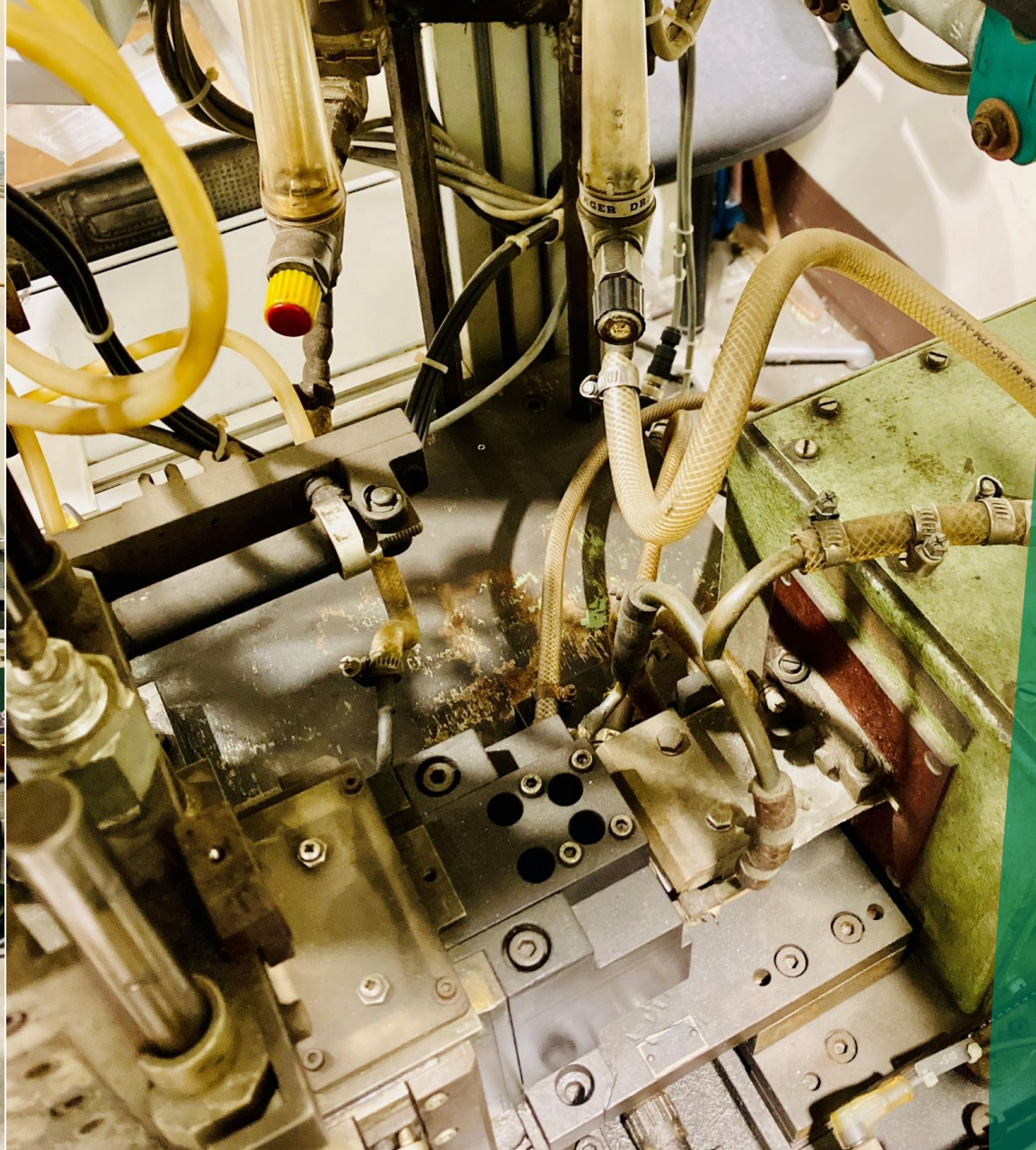
## Filling-station for H<sub>2</sub> Bundles

 **BOSCH**



Industry





Mfct





SOFC





Mobility





# H<sub>2</sub> Fueling Station





# H<sub>2</sub> Fueling Station





# H<sub>2</sub> Fueling Station



# FCEVs





eler  
refueling

Wasserstoff-Tankstelle

innovativ

nachhaltig

technologieoffen

BOSCH

Kevelaer

BOSCH

# H<sub>2</sub> Forklifts

 **BOSCH**



# H<sub>2</sub> Van



# Sektorenkopplung mit Wasserstoff im industriellen Bereich

## Fast Track – short Time to Market with Partners

**2018**

- PowerCell license
- System and BoP development

**2020**

- First A samples
- JV foundation with Qingling

**2022**

- Stack SOP
- Large test fleet

**2023**

- FCPM SOP

**Bosch's FCPM – First Series Launch of Fuel Cell System designed for Commercial Vehicles**



Ligier  
JS2 RH2

 **BOSCH**



Safety





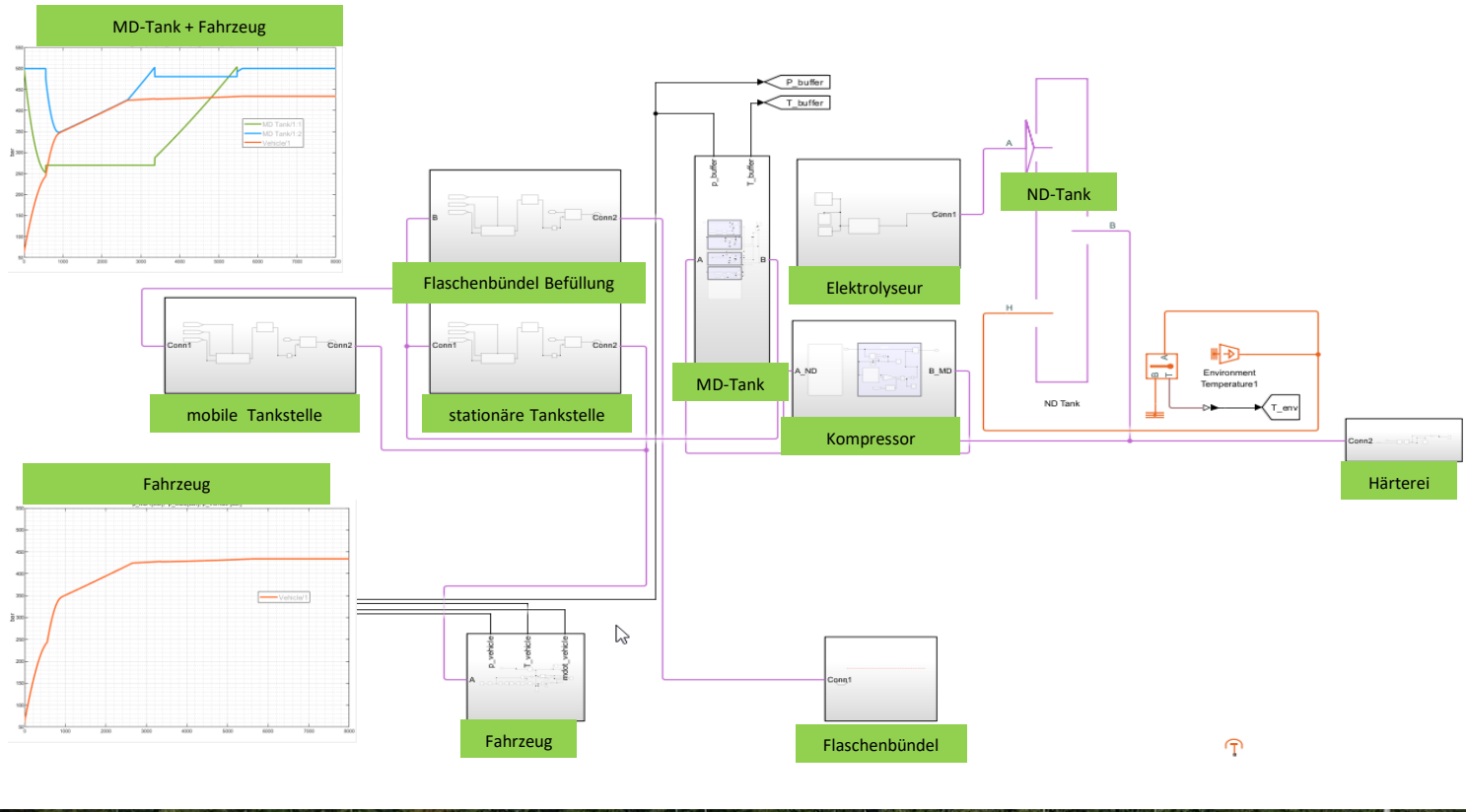
Safety





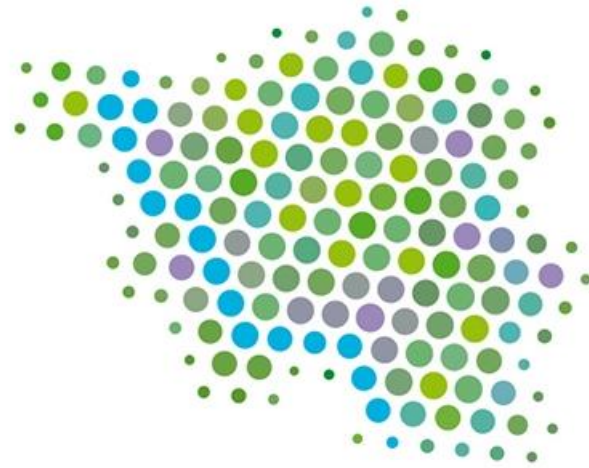
Safety





Digital Twin





# SAARLAND

Großes entsteht immer  
im Kleinen.

Lessons  
Learned





Lessons  
Learned



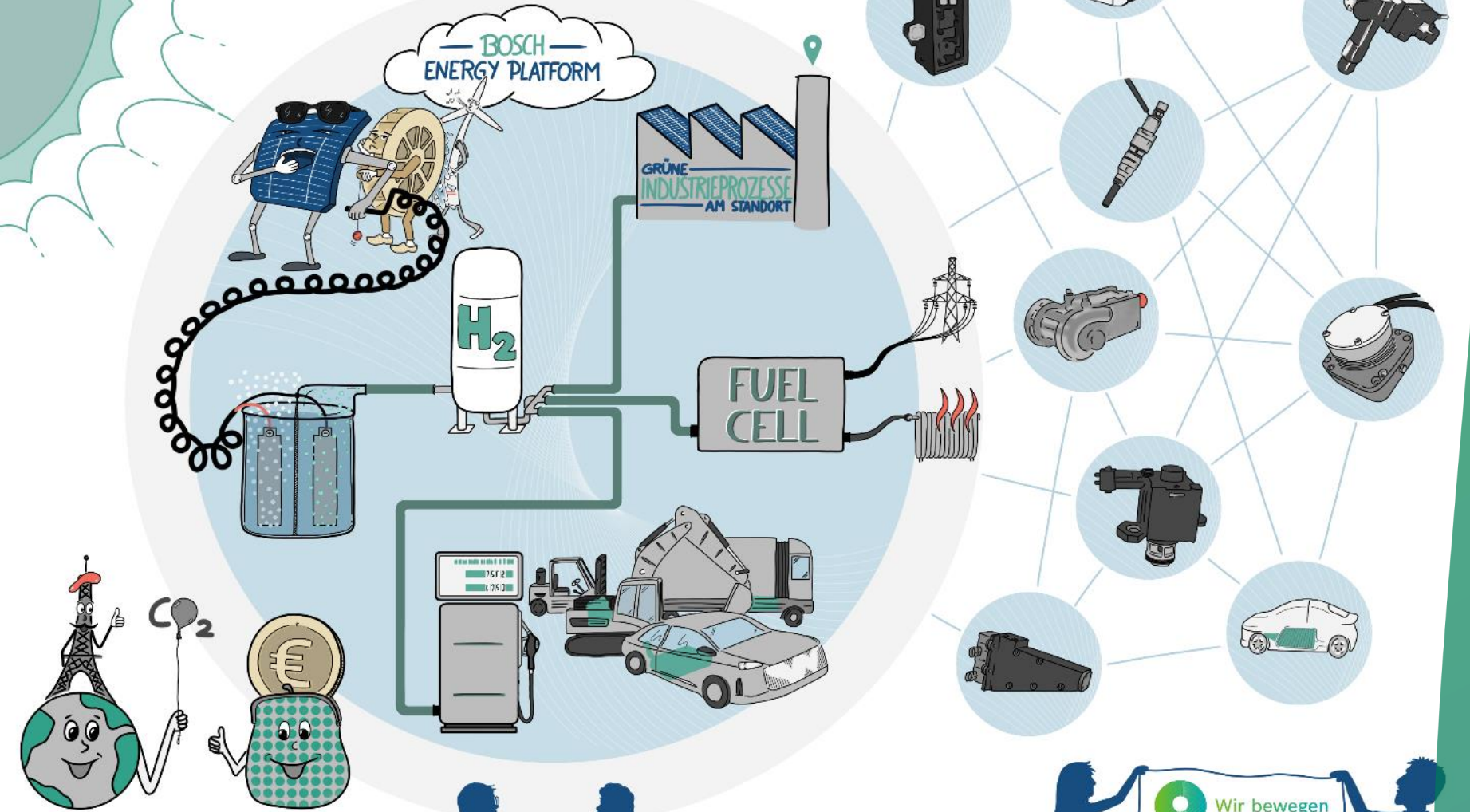


# Woche des Wasserstoffs



# H<sub>2</sub> STRATEGIE

## BOSCH HOMBURG



Wir bewegen  
die Zukunft  
BOSCH HOMBURG

 **BOSCH**

Wir bewegen  
die Zukunft  
BOSCH HOMBURG

# Bosch Homburg Manufacturing Hydrogen Components

## HYDROGEN TECHNOLOGY

### Components for Mobile Fuel Cells

**Electric Air Compressor**



**Anode Recirculation Blower**



**Hydrogen Gas Injector**



### Components for Hydrogen Storage Systems

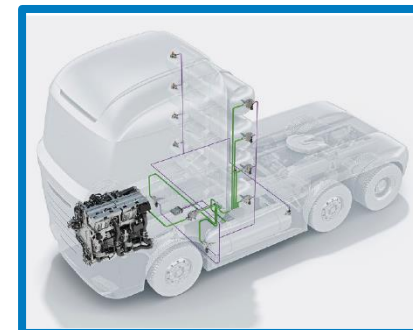
**Hydrogen Tank Plug**



**Hydrogen Tank Valve**

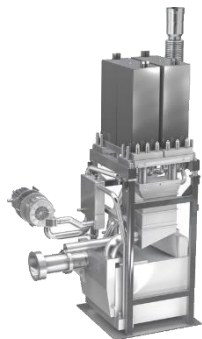


**Hydrogen Tank Manifold**



### Components for Solid Oxide Fuel Cell

**SOFC Hotbox**







stelle

**BOSCH**  
Technik für alle

Stromversorgungsstation  
Modulare Stromversorgung



SCAN ME

