



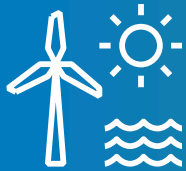
**Connected eH₂ Cycle:
Industrial Sector Coupling
Dr.-Ing. Michael Reinstädler**

Climate protection becomes specific:



Increase energy efficiency

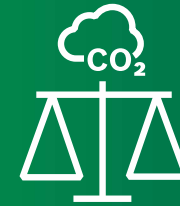
The four levers of CO2 neutrality



Supply with renewable energies



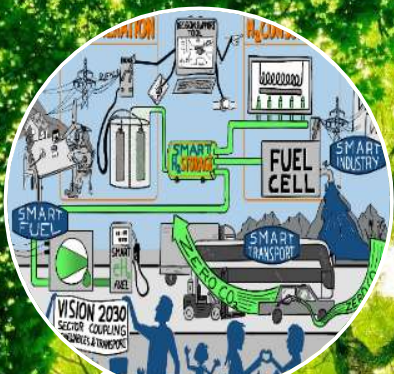
Green electricity purchase



Offset CO2 emissions



Reduced consumption through efficiency
Savings: - 40% kWh/pcs.



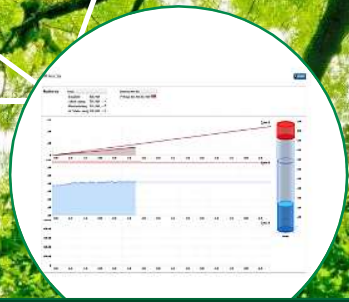
Connected eH₂-Cycle
Storage & sector coupling



Energy Platform
Cross-linking:
Datapoints: 15.000 Stk.



Self-generated energy
PV, Solar thermal, heat pump, SOFC
Actual: 3,8MW_{Peak}
Plan: 8,3MW_{Peak}



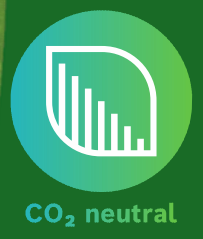
Cost reduction through flexibility
Actual : 2MW

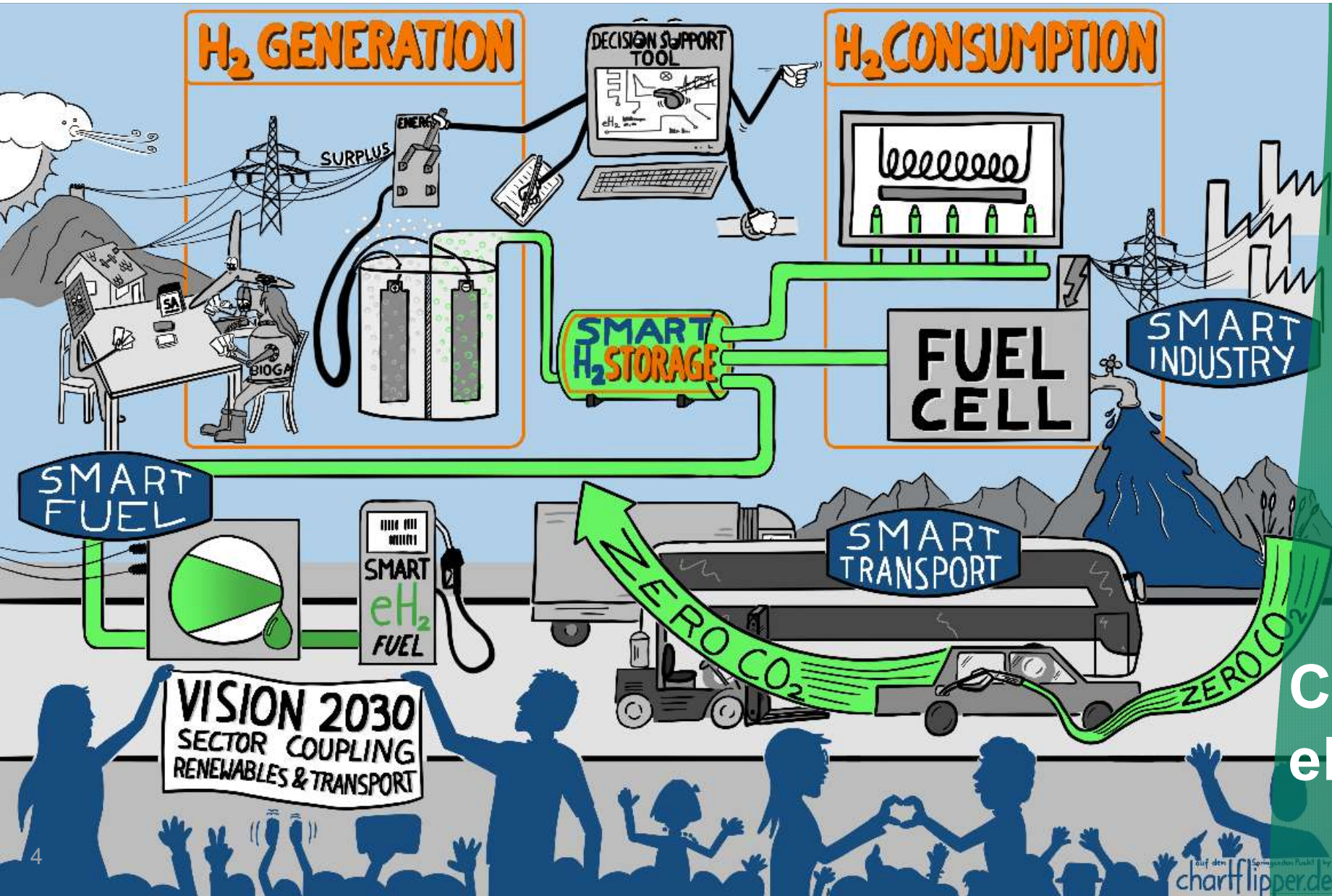
Challenges

- Rising costs
- New mobility concepts
- High volatility

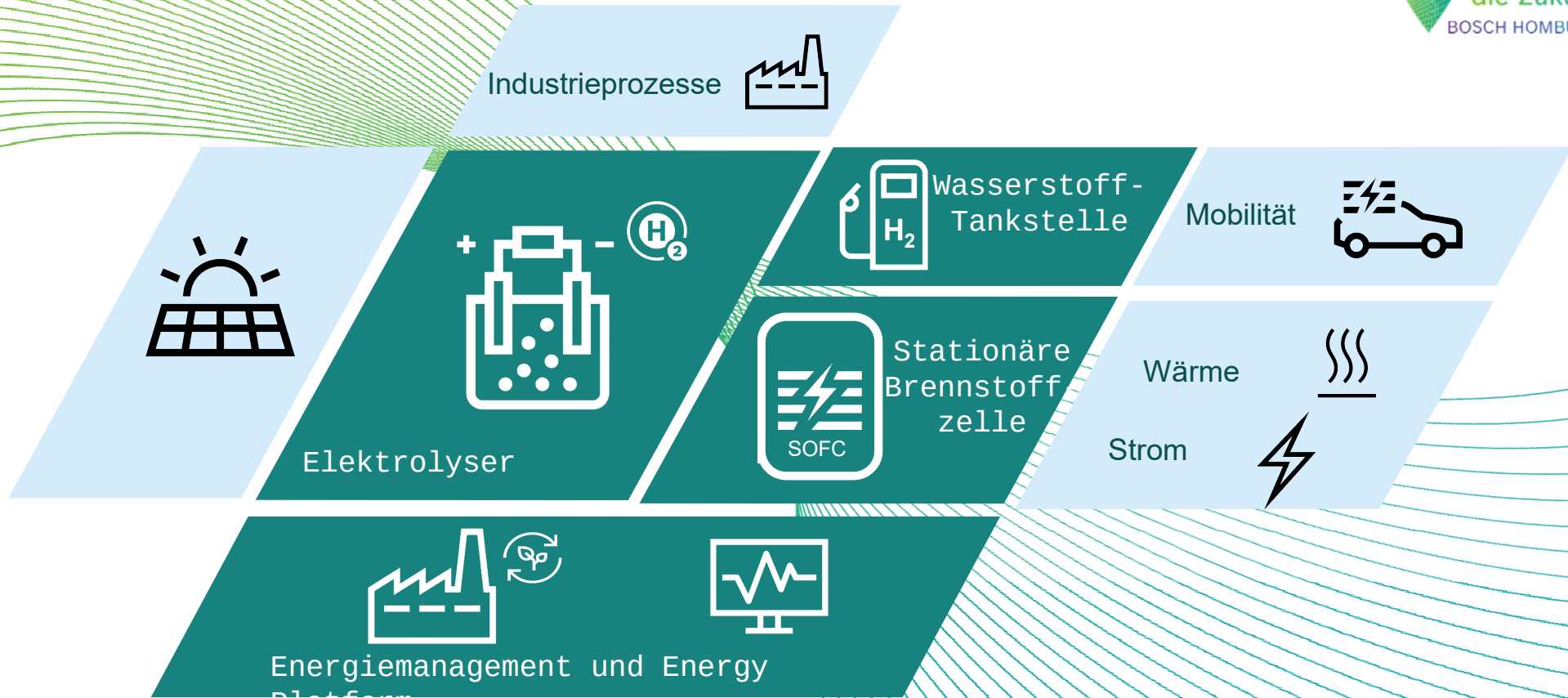
Strategy

- Efficient and flexible use
- Connection through the Energy Platform
- Optimized generation in regard to consumption
- Storage and sector coupling, e.g. through H₂-Cycle





Connected eH₂-Cycle





Connected eH₂ Cycle





**PV w/
3.8 MW_p**
(2023: >8 MW_p)





Electrolyser





Electrolyser



Bosch Homburg
649 Follower:innen
2 Wochen •

Heute haben wir 4 kg grünen **#wasserstoff** erzeugt **#LikeABosch!** Dieser wird nächste Woche analysiert, um die Freigabe unseres Wasserstoffs für unsere Industrieprozesse zu bekommen. Danke an **#iGas** für die toll ... mehr anzeigen



Bosch Homburg
649 Follower:innen
1 Woche •

Analyse des hausgemachten **#wasserstoff** **#likeabosch**. Danke **#ZBT Duisburg** für die Unterstützung. **#H2**



Veröffentlicht von Michael Reinstädler • 7.11.2022



H₂ Storage
> 300 kg





Industry









SOFC

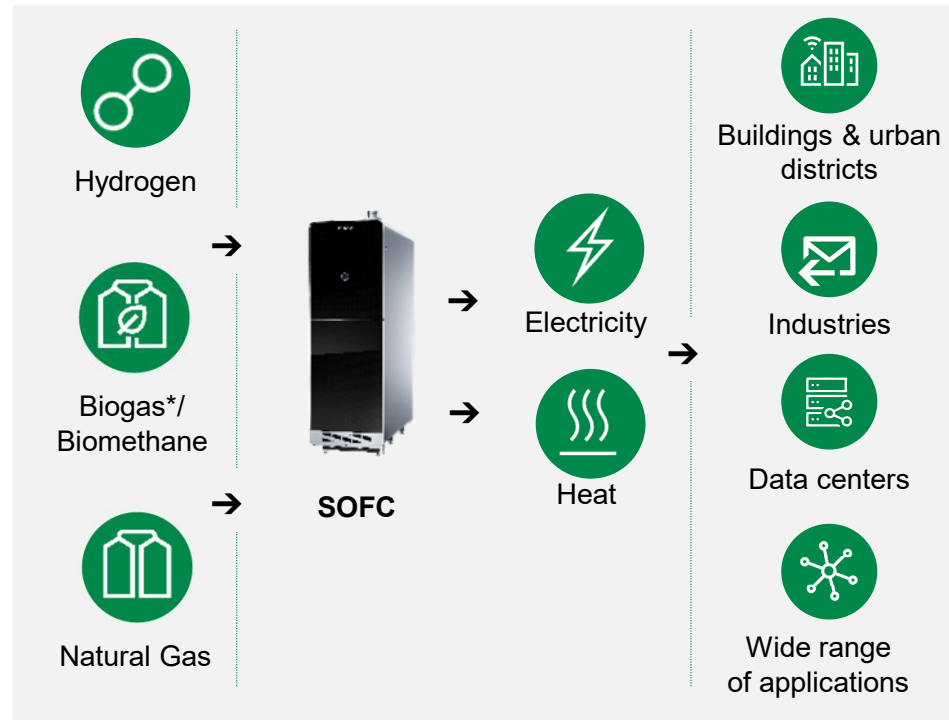


Performance and application of SOFC

Performance

-  **> 60 %**
Electrical efficiency (AC)*
-  **> 85 %**
Overall efficiency*
-  **10 kW_{el}**
Nominal power (AC)*
-  **> 3 kW_{th}**
Thermal output*

Multi-fuel system & flexible application



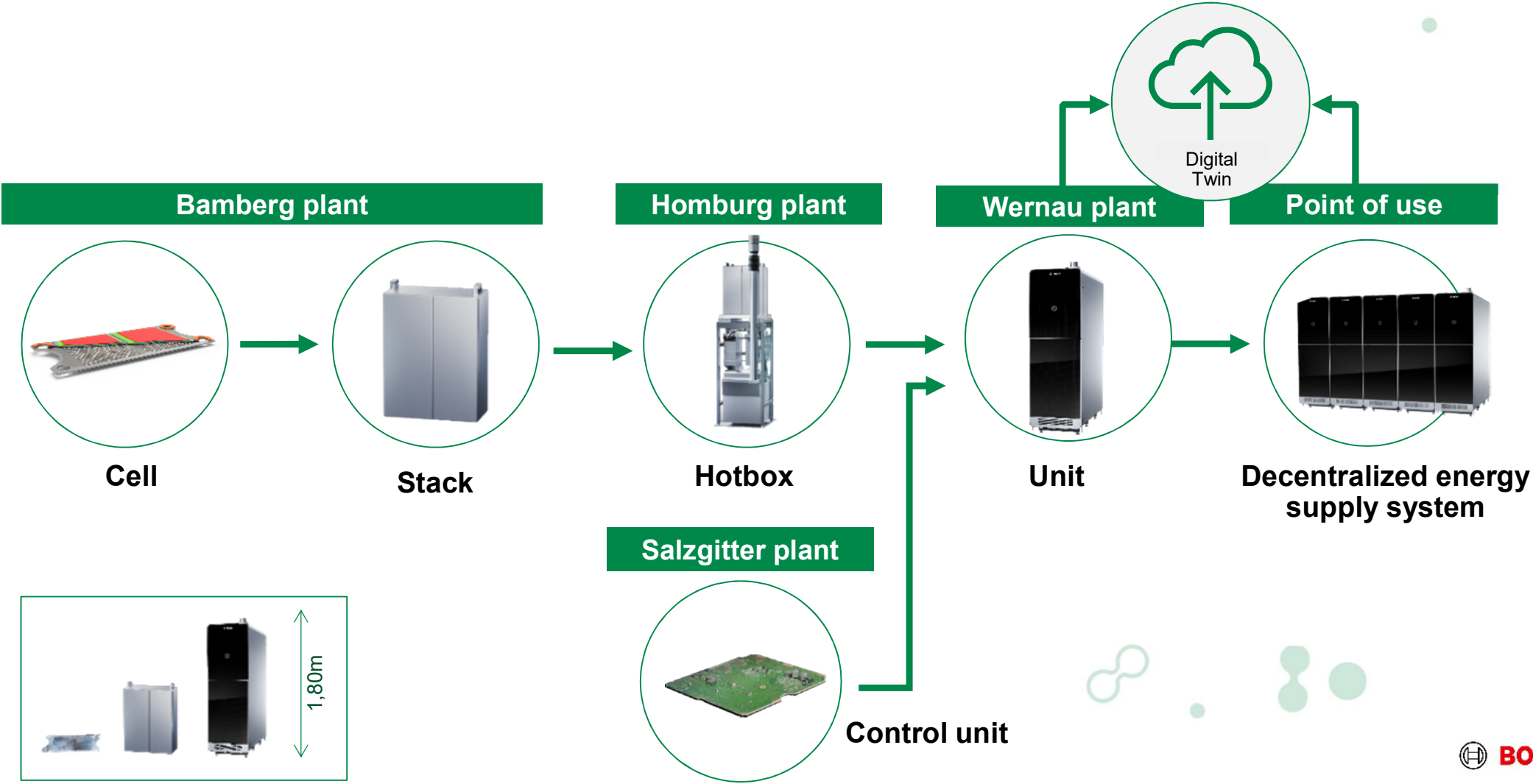
1 A stack of several hundred cells

* Currently in the pilot phase, the Bosch SOFC system is to be mass-manufactured by 2024. All technical specifications given in this informational document are development objectives.

* Biogas processed according to DVGW G260

* Beginning of life

SOFC: Complete value stream covered at Bosch





H₂ Fueling Station





H₂ Fueling Station





Bosch Homburg

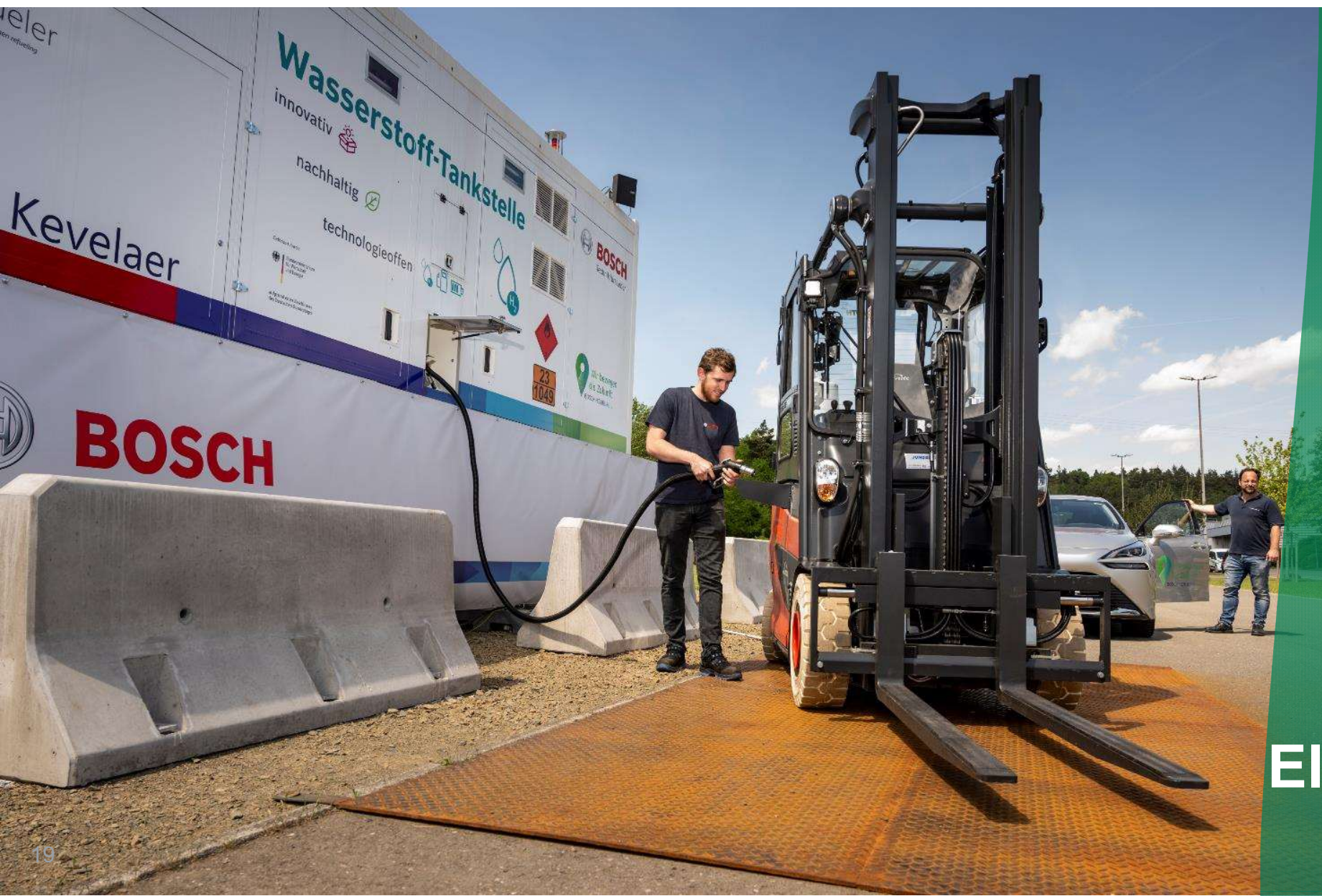
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4 Tage • 🌐

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Ab heute können wir im Werk Homburg unsere [#wasserstoff](#) Fahrzeuge 🚚 selbst betanken [#likeabosch](#) - zum ersten Mal 🏆 im Saarland auch Wasserstoffstapler & -schlepper [#H2](#) [#wirbewegendieZukunft](#) 👍 ... mehr anzeigen





Electrolyser



H₂ STRATEGIE

BOSCH HOMBURG

