

INNOVATION FÜR DEN ELEKTRISCHEN ANTRIEBSSTRANG DER ZUKUNFT

FCP Fuel Cell Powertrain GmbH

THE CLEANTECH REVOLUTION



DEMAND FOR GREEN AND CLEAN TECHNOLOGY



ENVIRONMENT

Products and systems for a clean and green future



ENERGY

Provide uninterrupted power supply



MOBILITY

Emission free transportation with extended range



KEY INFORMATION

Is a new Company for Fuel Cell and Powertrain Technology, based in Chemnitz, Germany

Well connected in the EU and Brussels Fuel Cell Community

Will serve as Joint Venture Technology Partner

Strong Network with German based Universities and Institutes

FCP

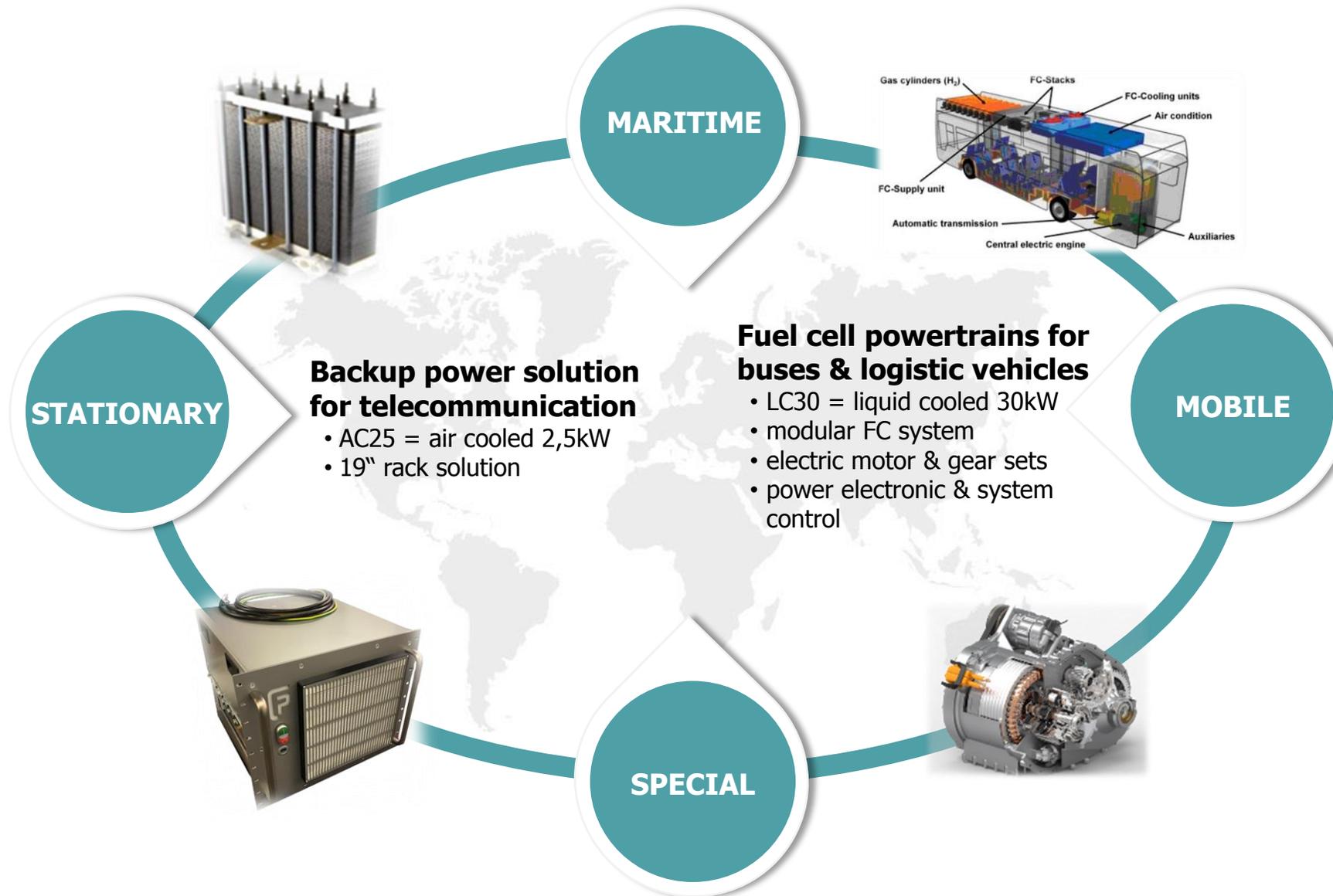
Well connected in China with leading Industrial Players

Was founded from Experts in the Fuel Cell & Powertrain Industry

Strong connections in the Fuel Cell Supply Industry

Is a Joint Venture between PTT, Germany and HET, China

APPLICATIONS AND PRODUCTS



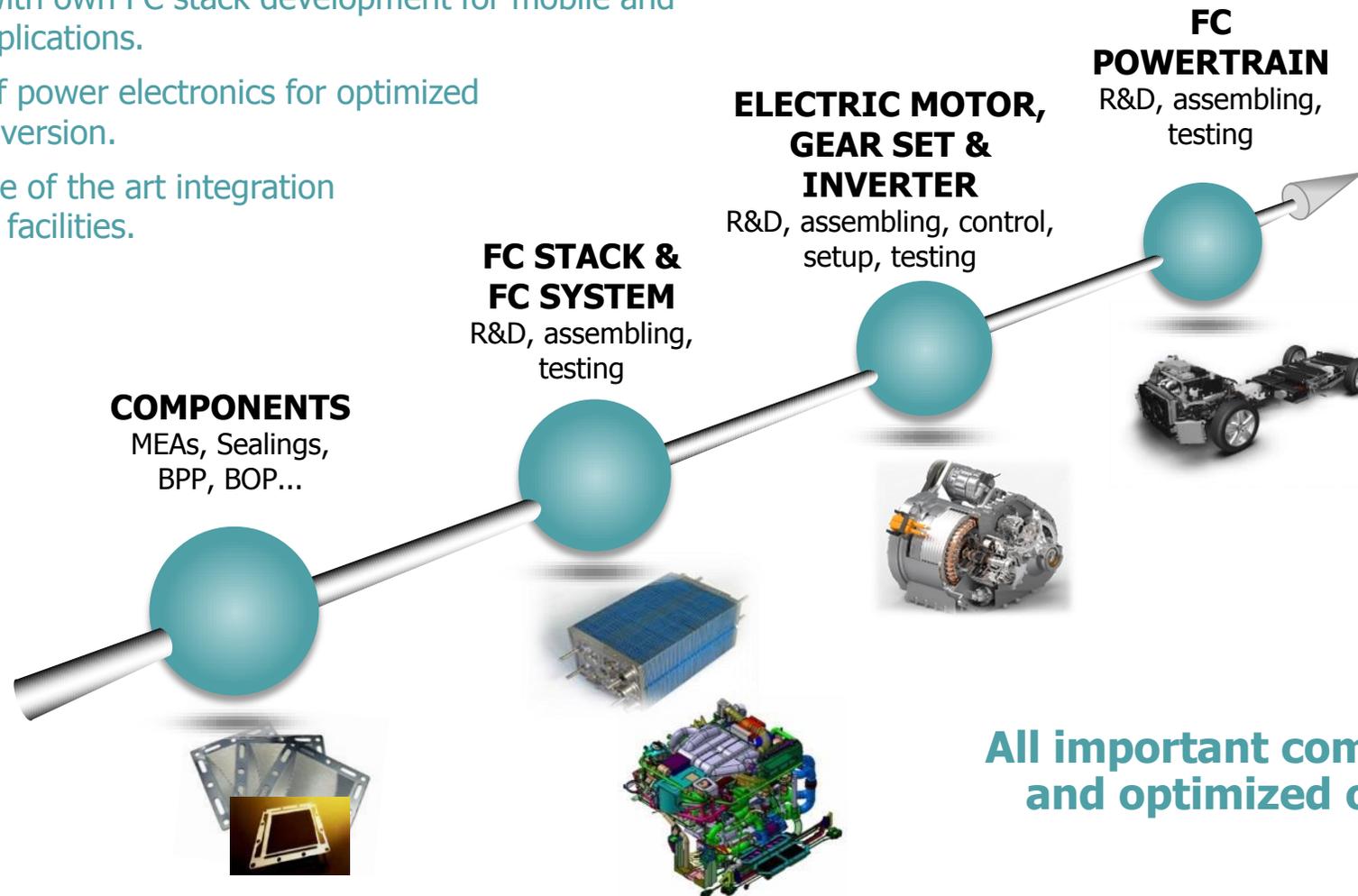
WORKFLOW AND BENEFITS

Planning and simulation of complete systems.

FC systems with own FC stack development for mobile and stationary applications.

Integration of power electronics for optimized DC or AC conversion.

New and state of the art integration and test field facilities.



**All important components designed
and optimized out of one hand !**

CORE COMPETENCES

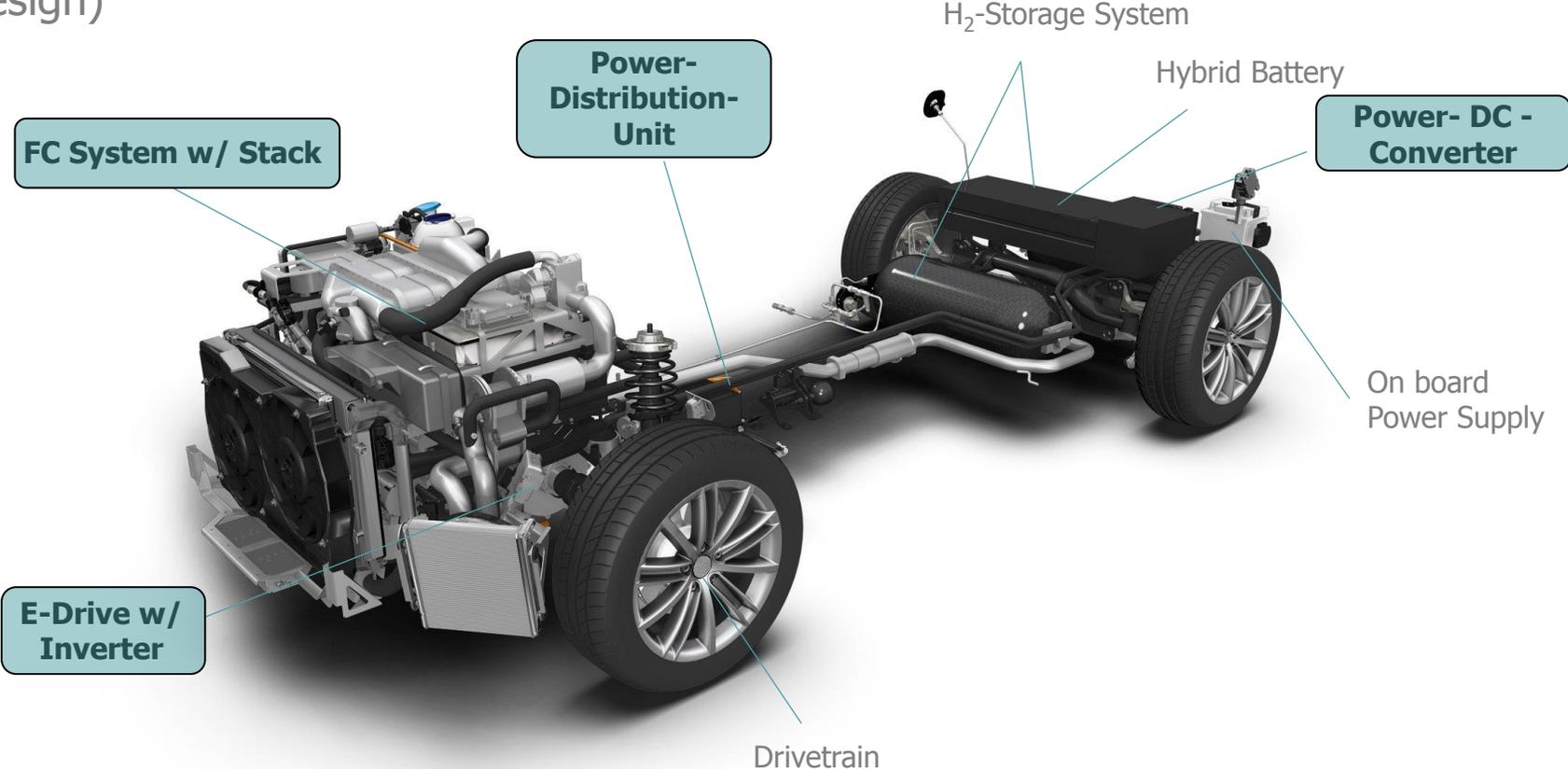


FCP - The sole supplier to provide the following products and technologies:

- Development and manufacturing of stationary and mobile FC applications
- Development of FC components
- Design and production of FC systems
- High-Efficiency automotive E-motor with integrated gearbox and control system
- Integrated power electronic
- Optimized system control
- Simulation and verification technology
- Design and manufacture of vehicle test platform and verification technology

EV POWERTRAIN SYSTEM FOR FC AND BATTERY SOLUTION

(exemplary design)



 Complete solution from FCP

SYSTEM OPTIMIZATION-SAMPLE

Sample: mid class SUV, VW Tiguan

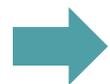
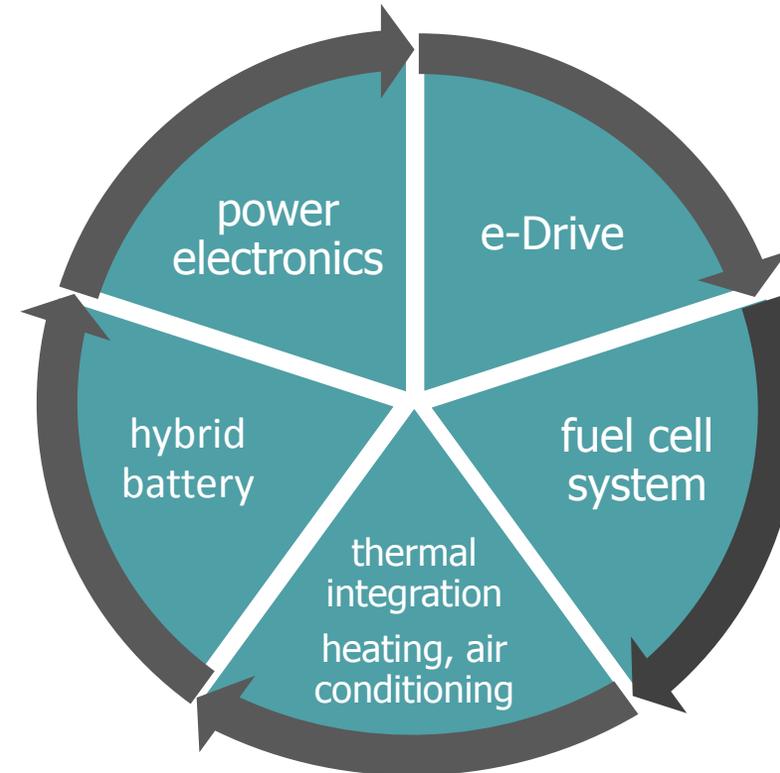
Original energy consumption: 1.5kg H2/100km

After optimization: 1.1kg H2/100km

No hardware was changed,
with consumption reduced by 30%

Results of optimization:

- Higher operation efficiency
- Lower operation cost
- Extended mileage



Simulate according to driving cycle and environmental conditions and set up an optimized system as a whole

ADVANTAGES OF FCP TEAM



- Powertrain overall from one hand
- All-inclusive „Tank-2-wheel“ solution
- Customer specific layout
- Optimized to efficiency AND costs
- Highly integrated design
- Tailor-made components and solutions
- Designed in Germany by FCP
- Pre-simulation for dimensioning
- Application related definition of parameters (power output, voltage-level, capacity, number of cells, cell area, vessel volume, gear ratios, etc.)

THANK YOU!

FCP Fuel Cell Powertrain GmbH

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