



Future Trends on Battery Systems - ready for the next Generation

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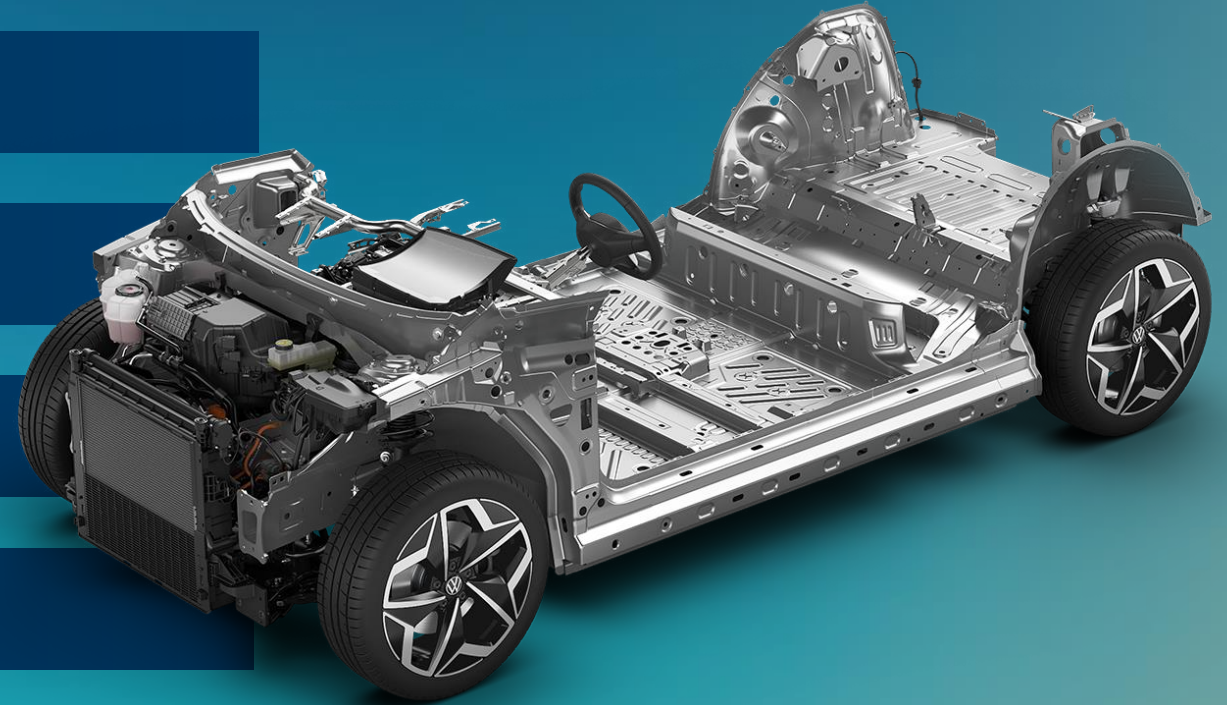
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The MEB-Platform

Market requirements of a "next gen" Battery-System

- ▶ Energy-Density (China)
- ▶ Thermal propagation behaviour (China)
- ▶ Serviceability (e.g. <math><60\text{ V}</math> per module)
- ▶ Backward compability



The MEB-Platform

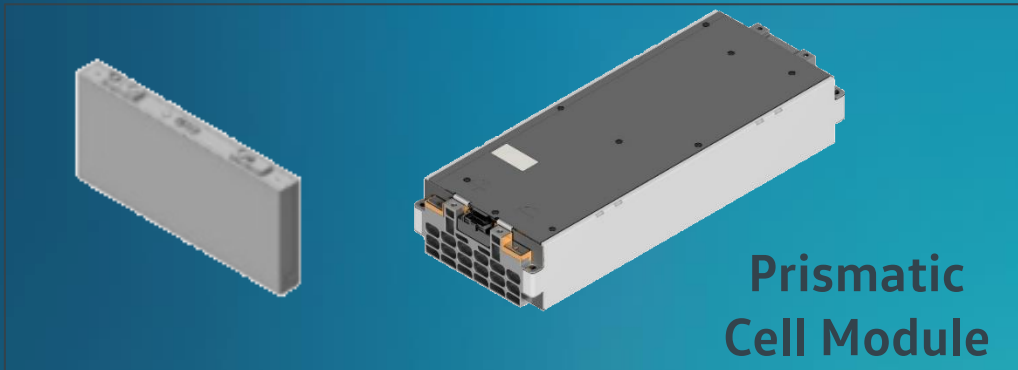
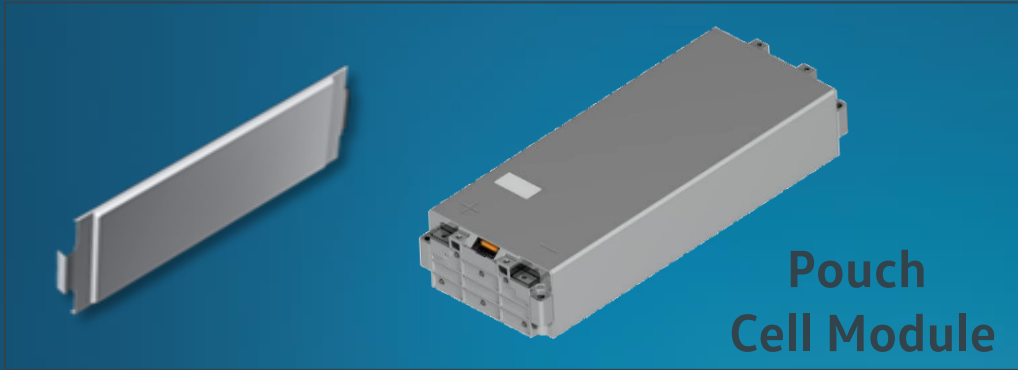
Technical requirements of a "next gen" Battery-System

- ▶ Scalable
- ▶ 2WD/4WD
- ▶ Lightest possible weight
- ▶ easy to assemble
- ▶ integrated cooling
- ▶ Adaptable to different cell types

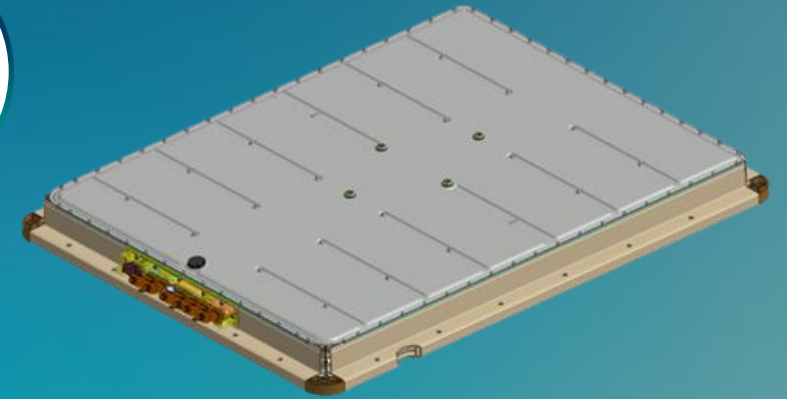


The MEB-Platform

Flexible for different cell types

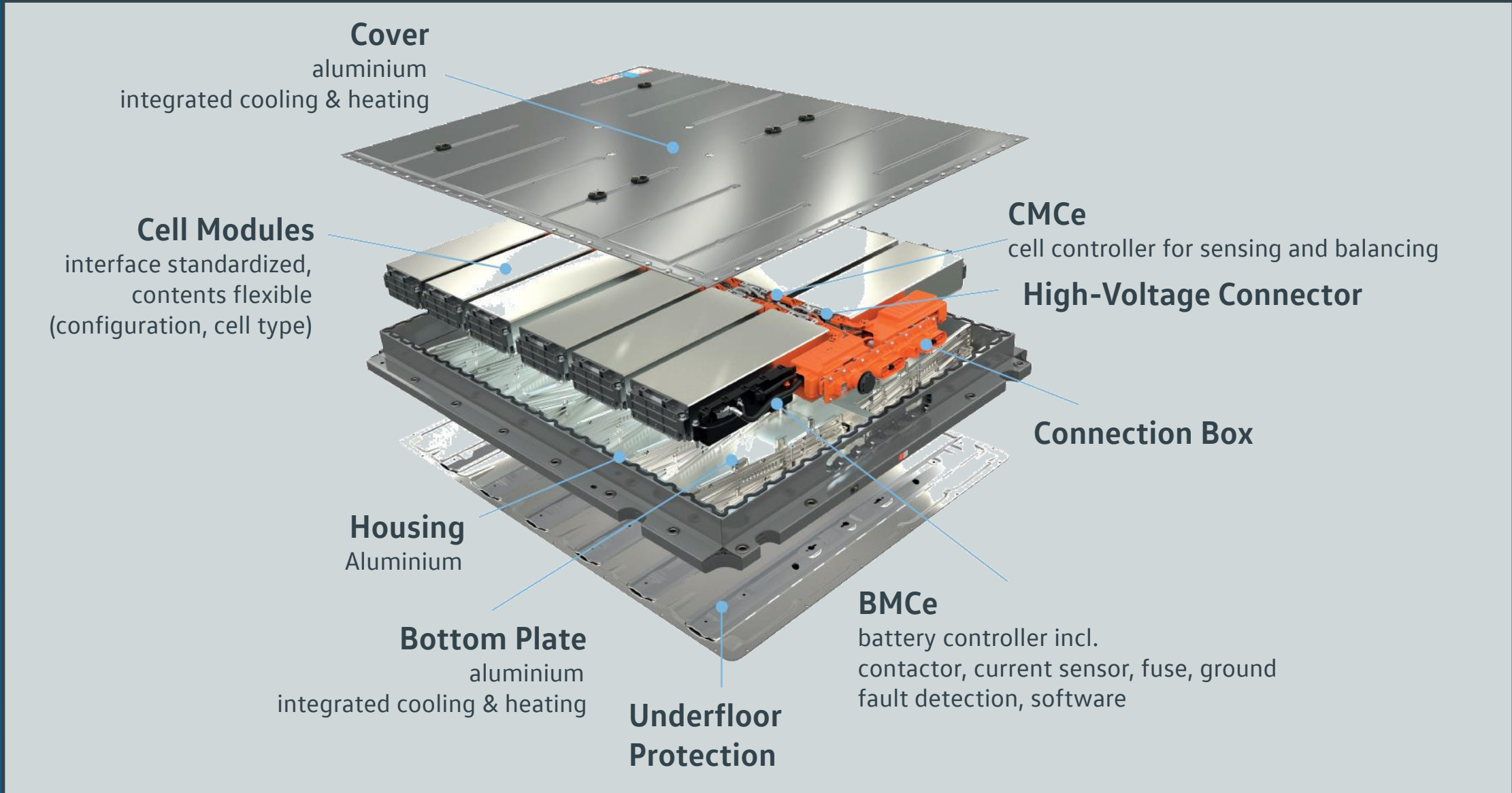


Standardized interface



The cell module is the uniform component of the battery, suitable for different cell formats

The MEB-Platform Scalable Battery system



The MEB-Platform Scalable Battery system

Potsdam

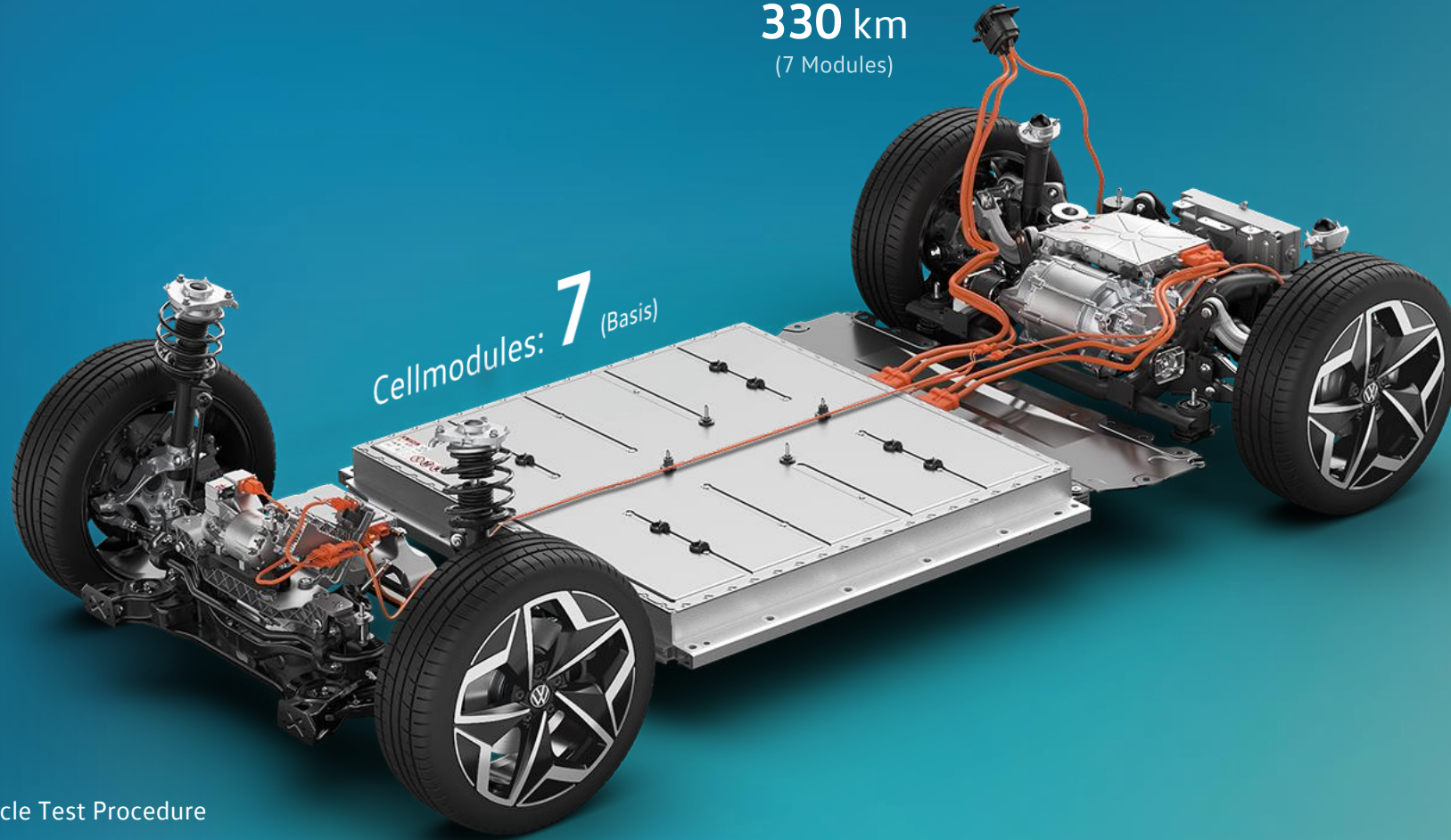


Range WLTP*

Bayreuth

330 km
(7 Modules)

Cellmodules: 7 (Basis)



* Worldwide harmonized Light vehicle Test Procedure



The MEB-Platform Scalable Battery system

Potsdam

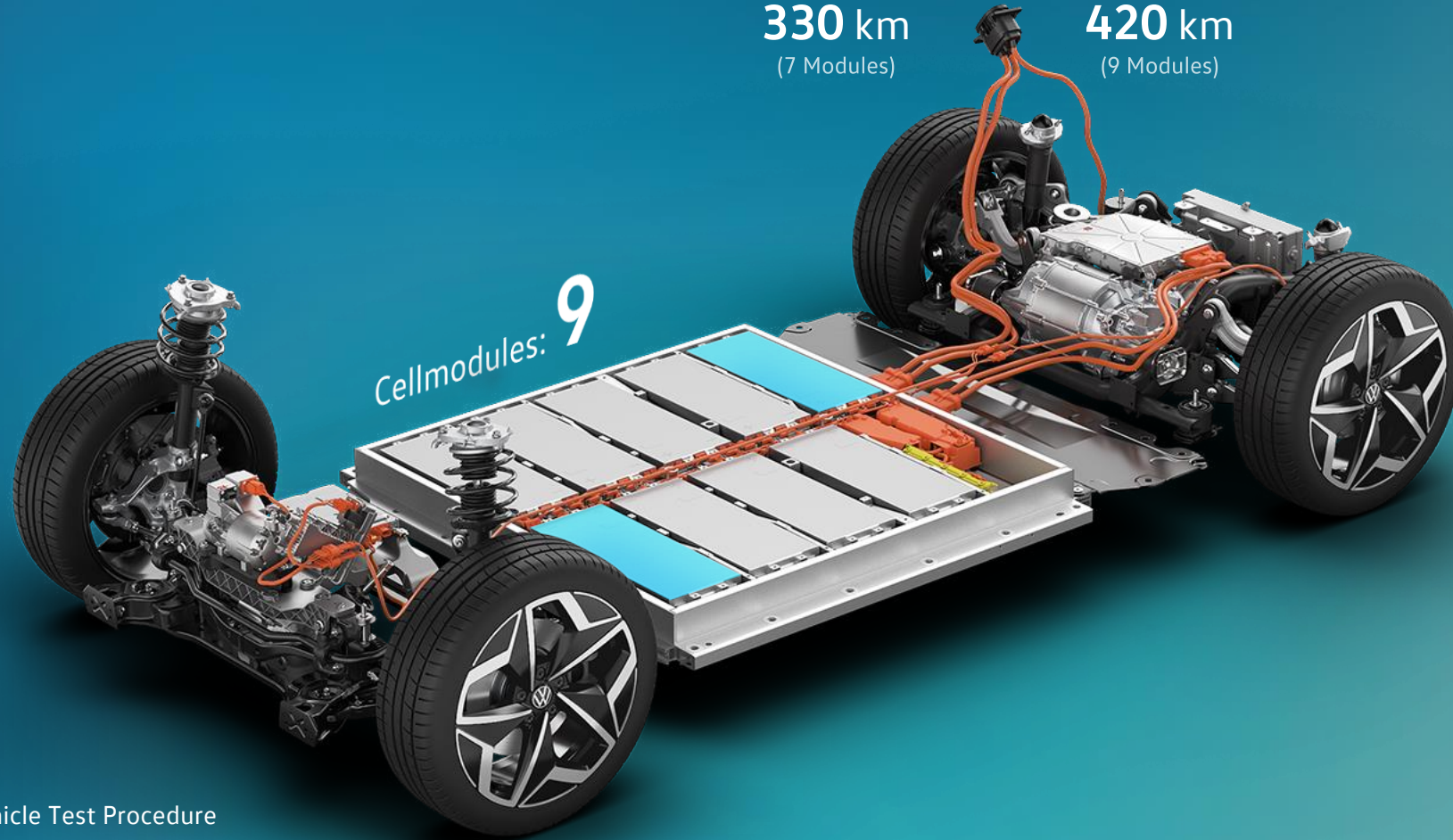
Bayreuth

Nürnberg

Range WLTP*

330 km
(7 Modules)

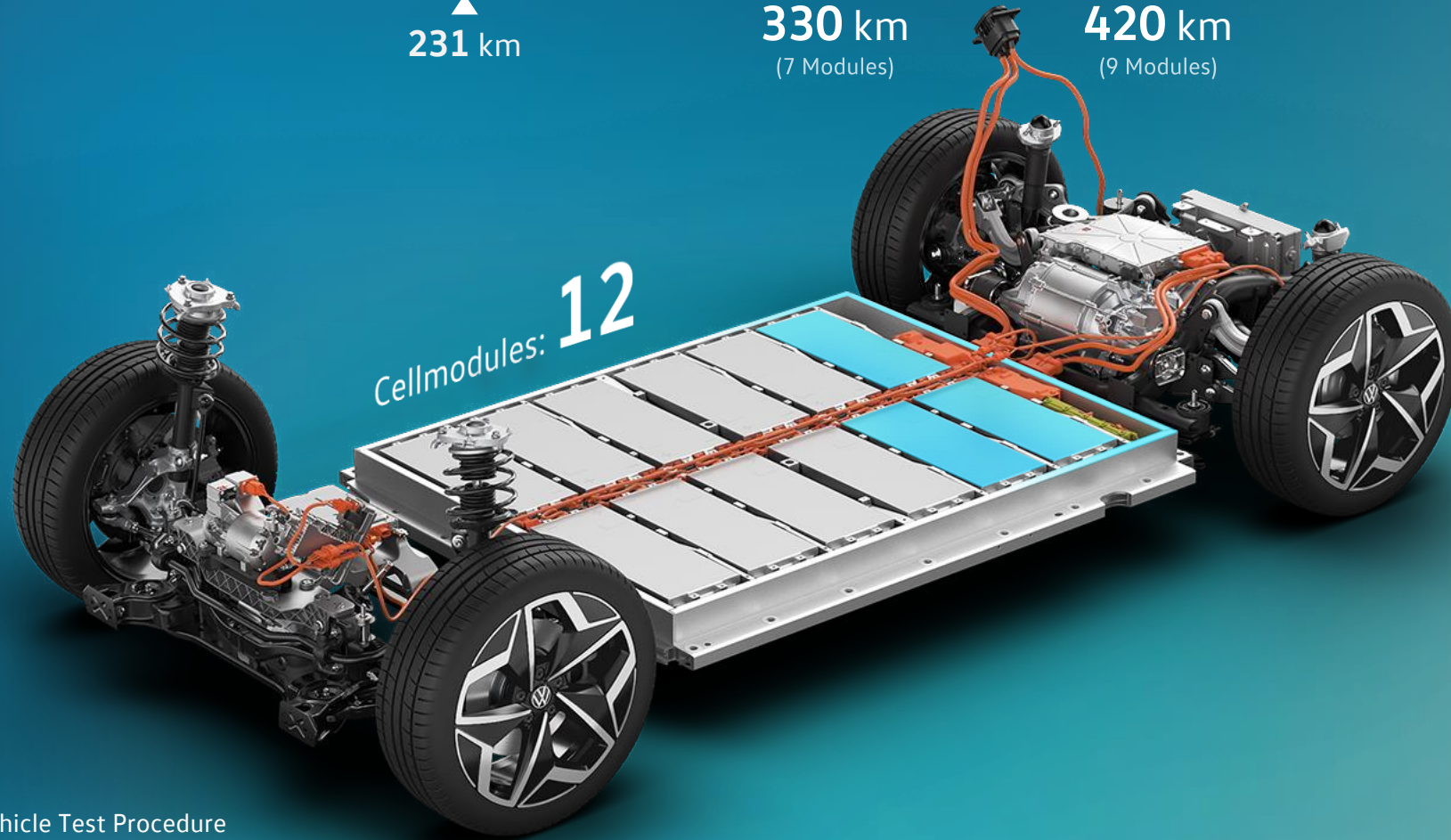
420 km
(9 Modules)



* Worldwide harmonized Light vehicle Test Procedure



The MEB-Platform Scalable Battery system

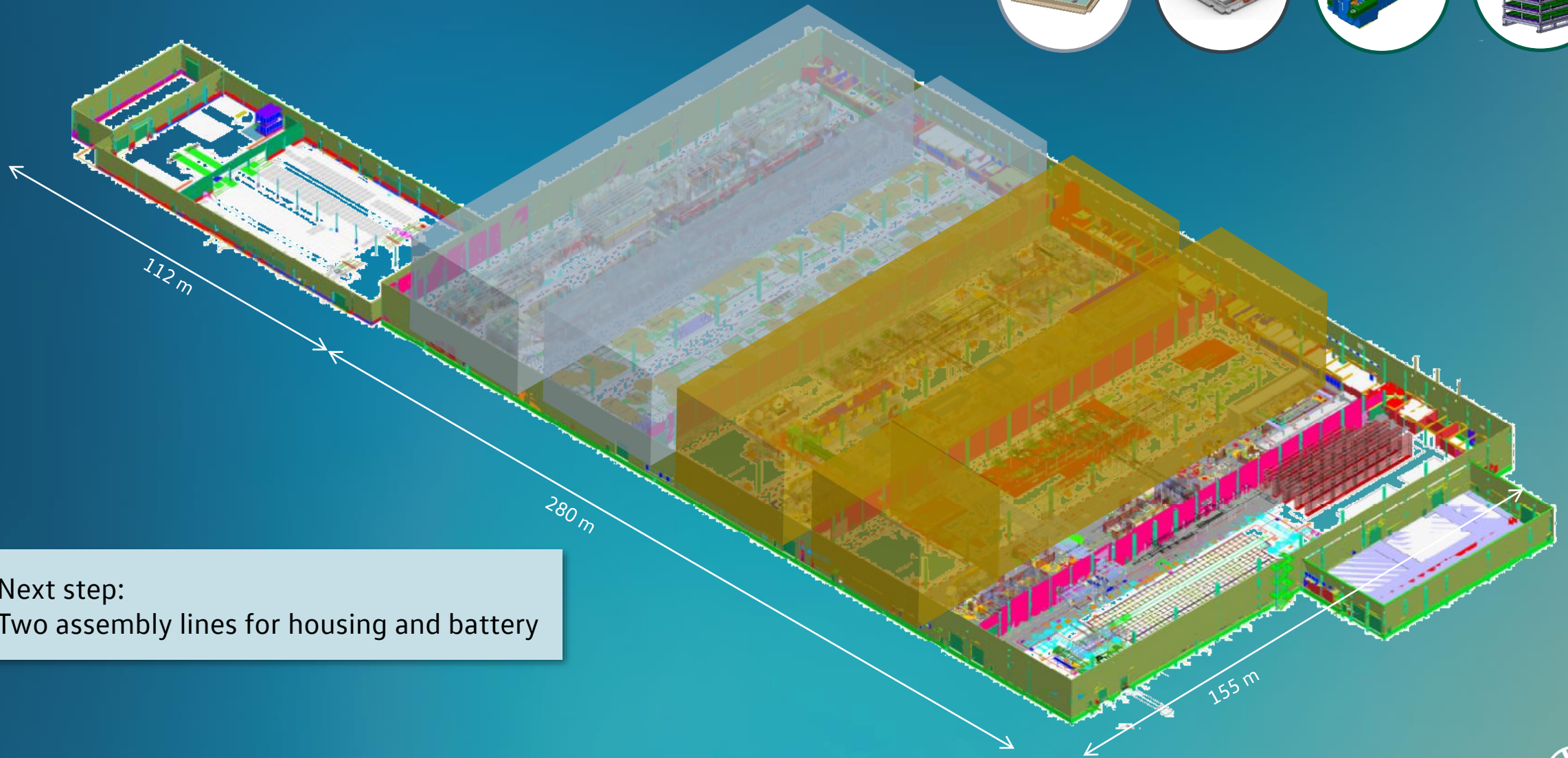
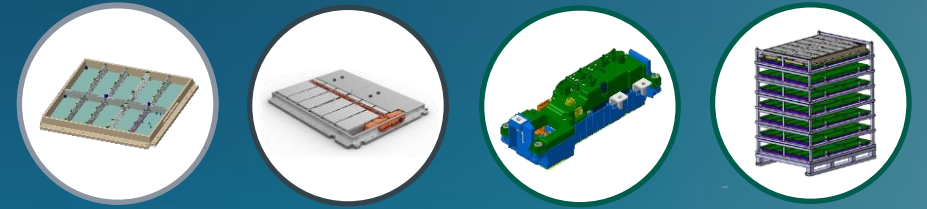


* Worldwide harmonized Light vehicle Test Procedure



The MEB-Platform

Cost competitive inhouse assembly

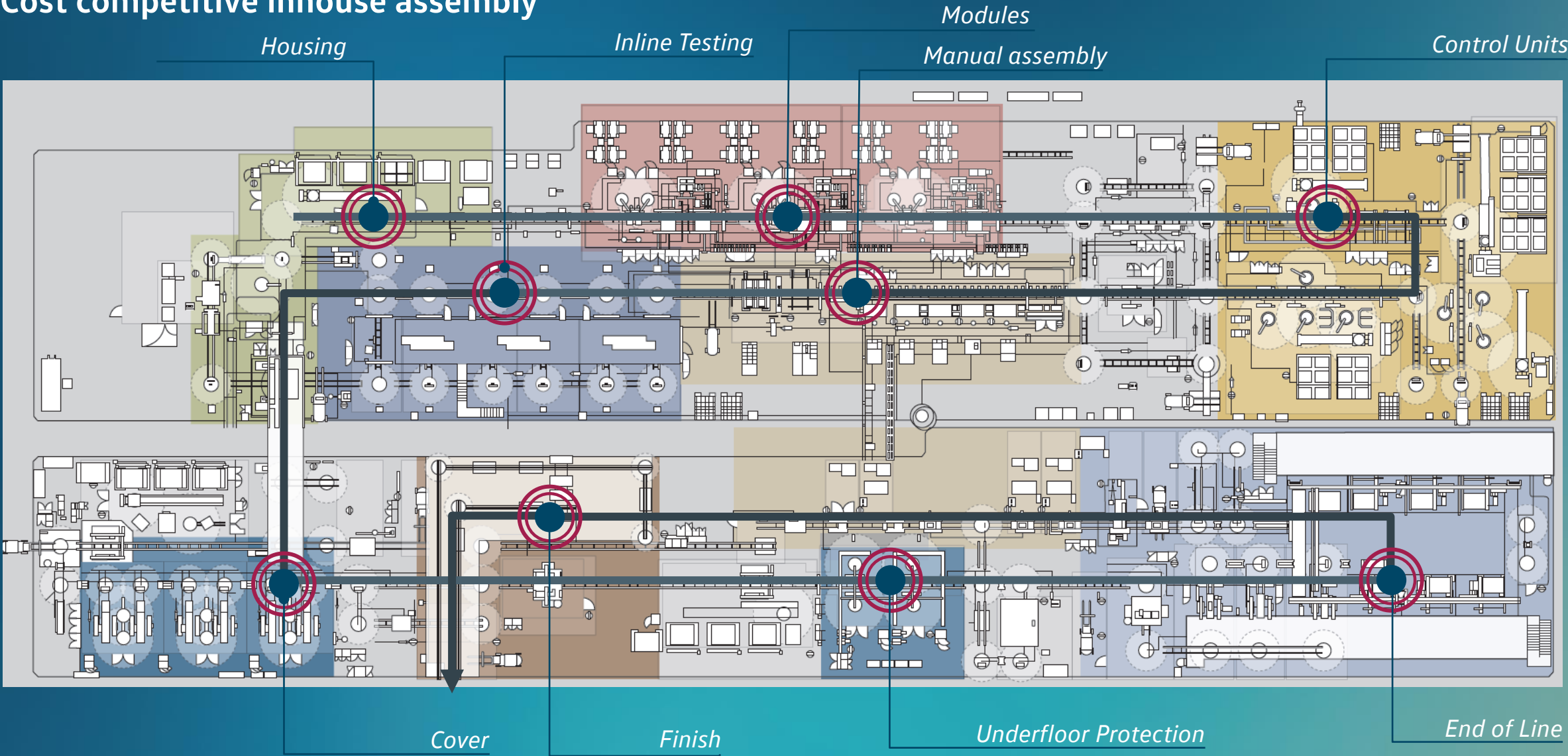


Next step:
Two assembly lines for housing and battery



The MEB-Platform

Cost competitive inhouse assembly



The MEB-Platform

Battery system with focus on cost reduction

Standardization

+

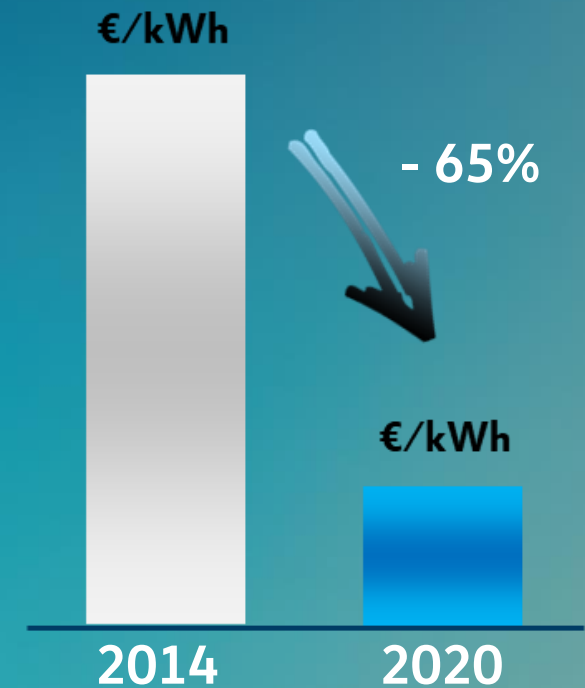
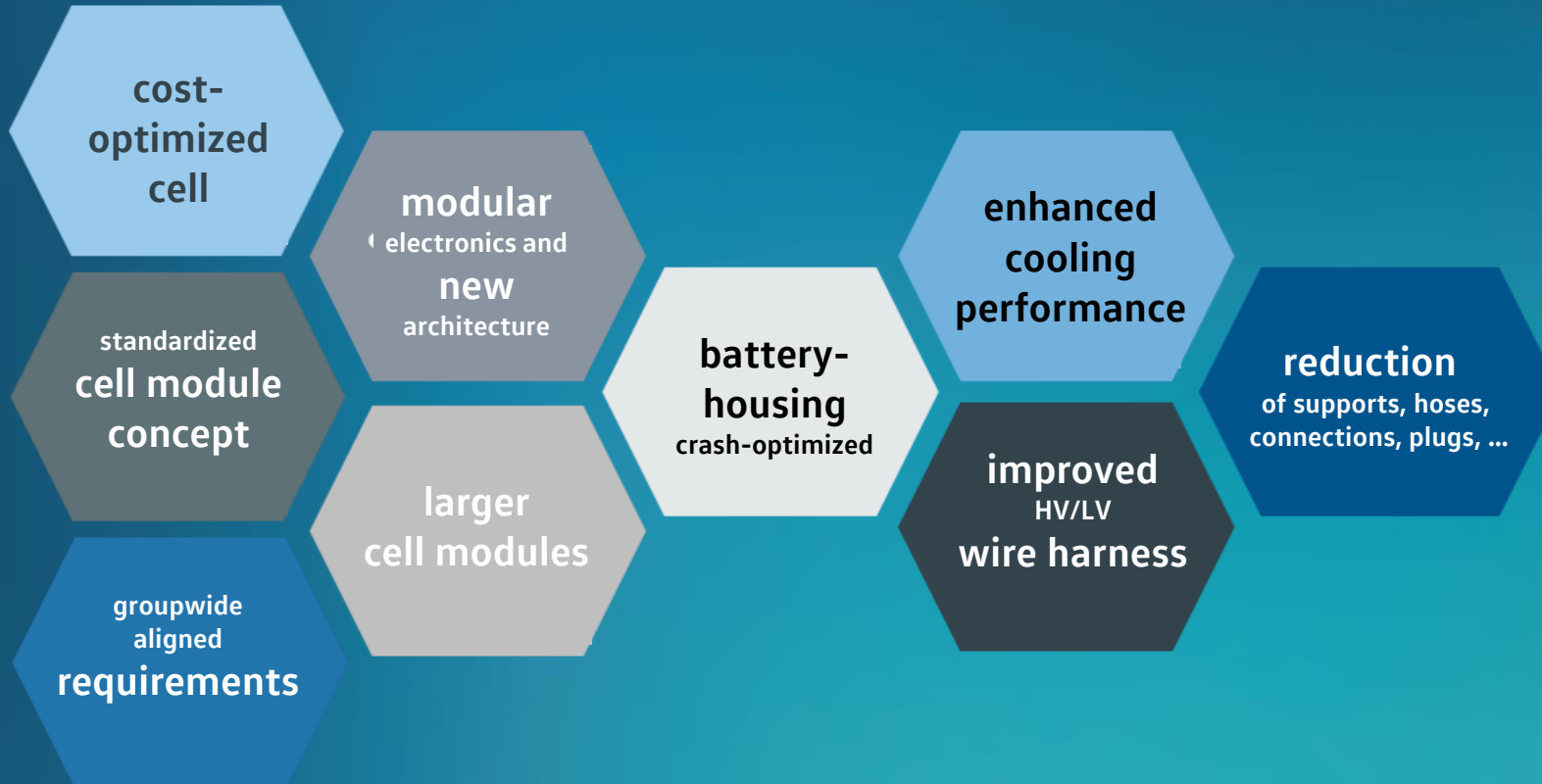
Modularization

+

Simplification

=

Cost-Optimization



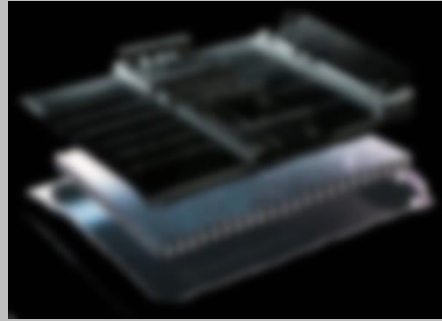
MEB battery: Development focus on cost reduction, flexibility and robustness



Outlook on battery systems

New concept for integration

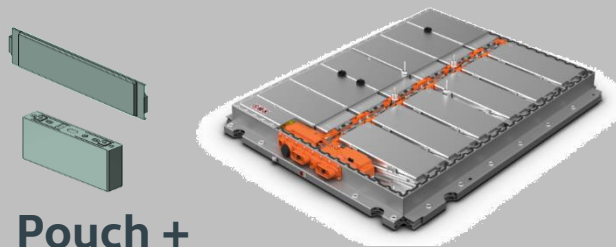
▶ Cell to Car??



2021

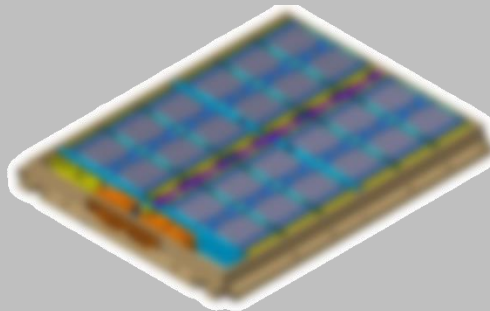
Outlook

▶ Cell-modules



Pouch +
prismatic

▶ Cell to Pack??



FOCUS TOPICS

- ▶ adaptable to new Cell-Chemistry
- ▶ cost efficiency
- ▶ standardization
- ▶ Scale effects in the whole group
- ▶ Efficiency of the whole high voltage system in terms of...
...charging, consumption, power,...





THANK YOU.