

DAIMLER TRUCK

Daimler Buses



H2 Coach – Technology carrier: First Setra touring coach powered by fuel cell

Aachen Automotive Colloquium – October 05-07th, 2026

Dominique Portmann, Hannes Mayer

DAIMLER BUSES IS AN **INTEGRAL PART OF DAIMLER TRUCK.**



OUR FULL-LINE PORTFOLIO: BUSES & CHASSIS FOR ALL SEGMENTS.

INTEGRAL BUSES



CITYINTERURBANCOACH

>8t

CHASSIS



CITYINTERURBANCOACH

>8t

5 STRATEGIC TOPICS TO STAY #1 IN OUR CORE MARKETS

BUS 7
2030

**SUSTAINABLE
PRODUCT
PORTFOLIO**

DIGITALIZATION

**BEST IN CLASS
SERVICES**

FUNDAMENTALS

**PEOPLE &
PLANET**



SUSTAINABLE BUSES – TRANSFORMING AT THE SPEED OF RIGHT.



We **electrify** every segment – city, interurban, coach and chassis.



2018

eCitaro in Europe



2022

Electric chassis in Brazil



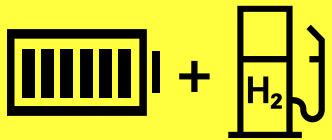
2026

Mercedes-Benz eIntouro



by **2030**

Electric coach



We're pursuing a **dual strategy** of battery-electric and hydrogen technology.



Interurban, coaches and chassis segment further available with **Diesel** drive.

NEPTUN was approved in 2022 to enable **early know-how buildup** and gain a competitive edge... based on Truck technology platform

Where do we come from?



NEPTUN as Pioneer in Technology

... take on the competition with innovative technology



Knowhow Buildup

... in all-new technology for us



Early Test Vehicle

... to safeguard (Truck) fuel cell powertrain in eCoach

Fast Follower Truck

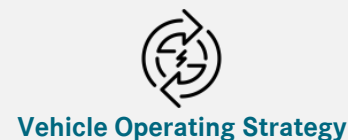


Fuel Cell Twin System Integration

with focus on Delta to Truck



Thermal Management with new materials and requirements



Different **Operating Strategy** for different vehicle applications required



First application of **compressed hydrogen gas** (CHG) technology on **700bar** basis



Strategic working direction:
High commonality with Truck

While technical premises changed, NEPTUN **focus topics remain valid**. Even more so with **FC series project @DT** gaining traction again.

How did we tackle the project?

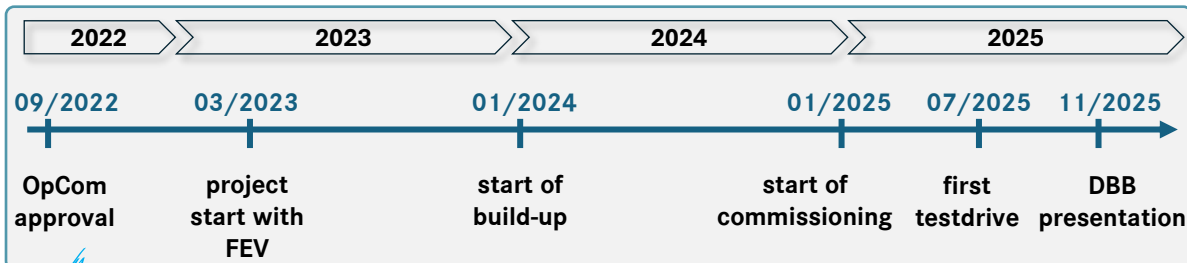
Stayed on course during constant times of change!

Leveraging external capacities and know-how

Daimler Buses



FEV



Targets set for 2022 were achieved



Knowhow Buildup



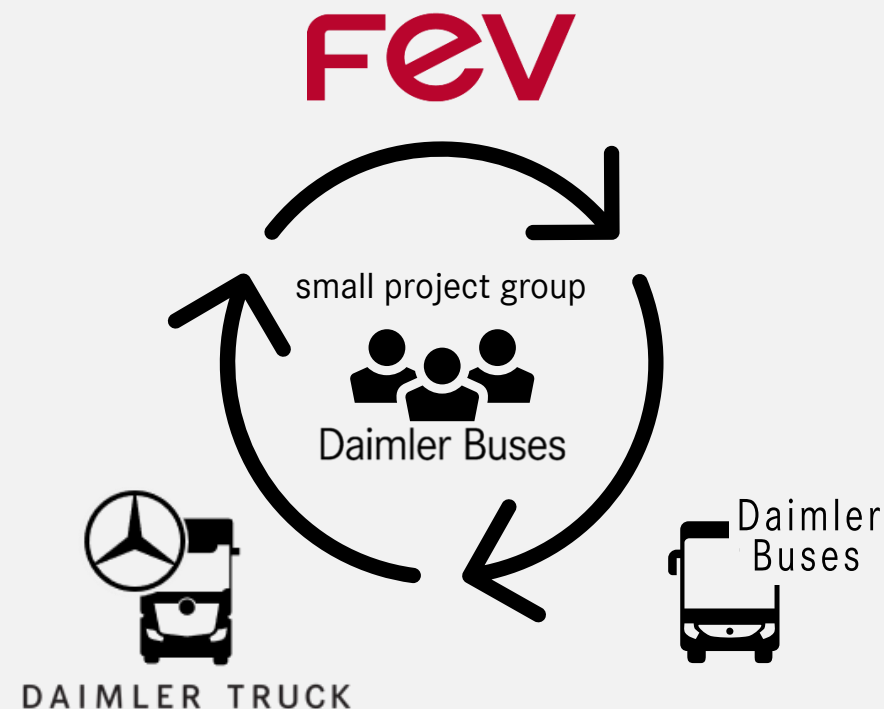
Early Test Vehicle



NEPTUN as Pioneer in Technology

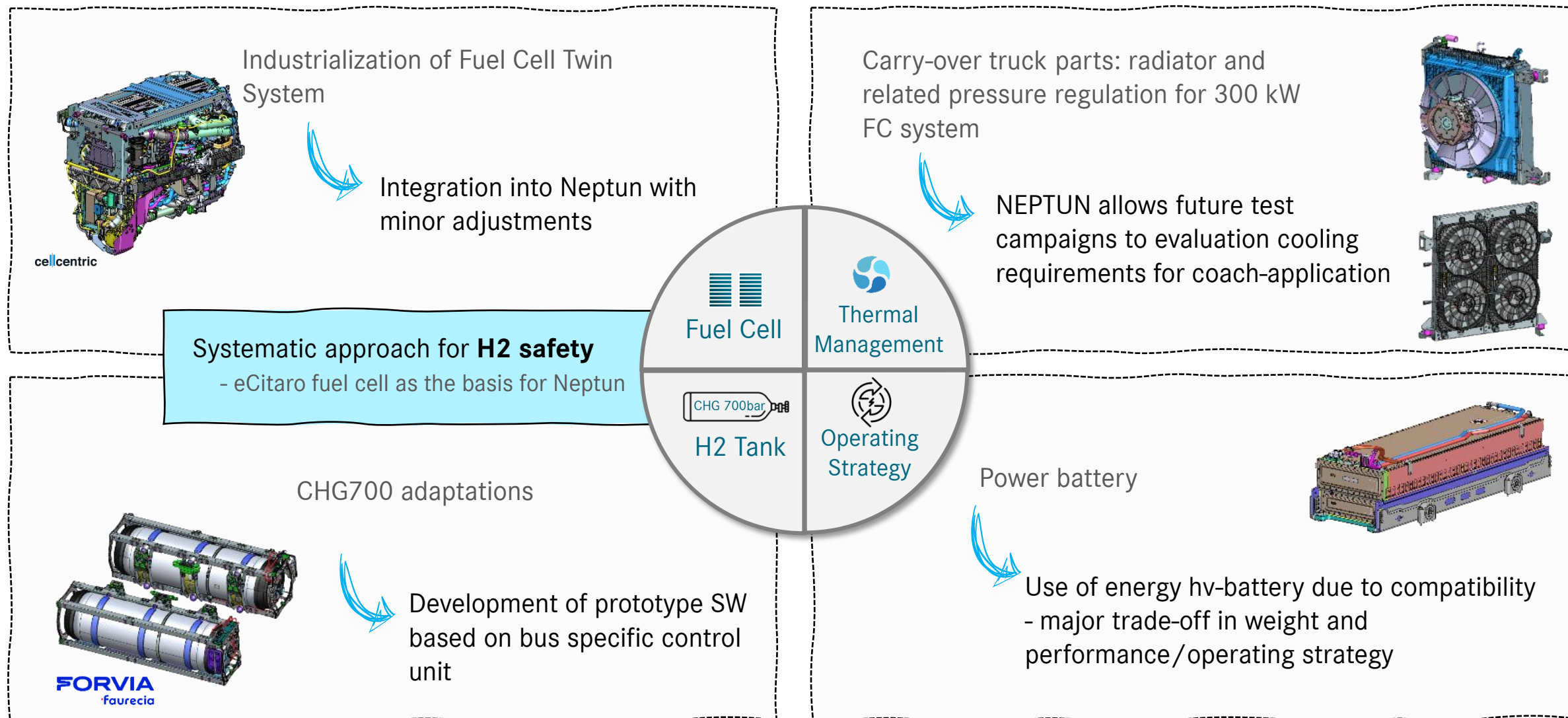
first electric and hydrogen Coach available for testing

Collaboration Model



Coordination of the relevant stakeholders via small project team from Daimler Buses

Volatile project landscape **depending on Truck technology** and political framework resulting in **change of scope** and efforts.



Project completion with FEV marking a major milestone on our H2 roadmap: Start of functional vehicle testing.

SETRA

Spotlight

09. September 2025

Technologieträger „H₂ Coach“: erster Setra Reisebus fährt mit Brennstoffzelle



Leinfelden-Echterdingen/Neu-Ulm. Daimler Buses schickt seinen ersten Reisebus mit wasserstoffbasiertem Brennstoffzellenantrieb auf Testfahrten. Der Technologieträger „H₂ Coach“ der Marke Setra ebnet den Weg zur Zukunft von lokal emissionsfreien längeren Busreisen, zusätzlich zu batterieelektrischen Reisebussen. Daimler Buses plant bis zum Ende der Dekade batterieelektrisch angetriebene Reisebusse im Portfolio zu haben, Brennstoffzellen-Reisebusse sollen dann in einem nächsten Schritt in Serie gehen. Die Technologie des H₂ Coach basiert zu weiten Teilen auf den Antriebskomponenten des Brennstoffzellen-Lkw Mercedes-Benz GenH2 Truck aus dem Daimler Truck Mutterkonzern. Die Reichweite des H₂ Coach mit einer Tankfüllung ist mit Minimum 800 Kilometern definiert.

Herzstück des 13,9 Meter langen Hochdeckers mit der Modellbezeichnung S 517 HD ist eine Kombination aus zwei Wasserstofftanks mit insgesamt 46 Kilogramm Tankkapazität und dem cellcentric Brennstoffzellen-Aggregat. Gemeinsam mit der Volvo Group verfolgt Daimler Truck mit dem Joint Venture cellcentric das Ziel ein weltweit führender Hersteller von Brennstoffzellen zu werden und damit entscheidend zu einem nachhaltigen Transport bis zum Jahr 2050 beizutragen.

Daimler Truck AG, Stuttgart, Germany
Sitz/Domicile: Stuttgart, Registergericht/Court of Registry: AG Stuttgart,
HRB-Nr./Commercial Register No.: 762884
Vorstand/Board of Management: Karin Röslein, Vorsitzende/Chairwoman; Joe Kassar
Jörgen Hartwig, John O'Leary, Achim Puchert, Eva Scherer

Fassnertweg 10
70771 Leinfelden-Echterdingen, Germany
newsroom.daimlertruck.com

PROJECT COMPLETION WITH FEV

- Collaboration with FEV ended on time and in budget
- Closing event in Aachen 11/2025
- Press release FEV done

LESSONS LEARNED



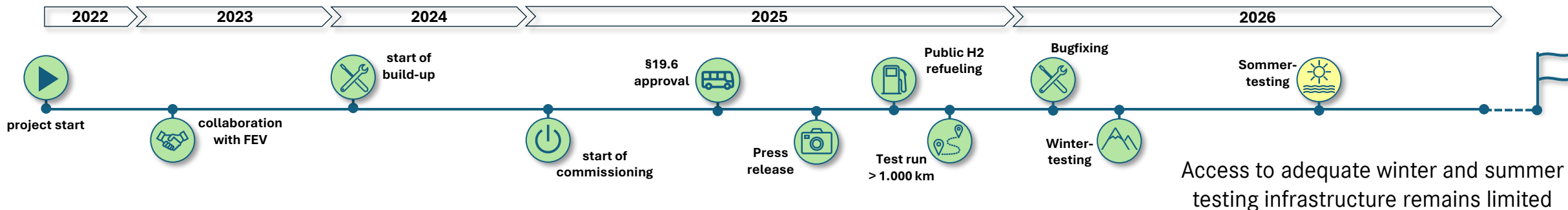
Workshop planned to leverage NEPTUN learning for future collaborations with external partners and demonstrator/KAF vehicles

START OF TESTING ACTIVITIES

- Neptun vehicle handed over to testing department in NU
- Realize **DRIVE** experience



Validation planning and key-facts



Public H2 refueling



H2 infrastructure for testing

Refueling station base for fundamental testing at **GVZ Augsburg:**



Test run >1000km

- The fuel cell system operated reliable, with smooth and silent performance
- Very limited 700-bar infrastructure for commercial vehicles
- Charging at motorway service areas is currently not practical for everyday operations



Winter testing

- close collaboration with the truck team
- Focus on functional validation Fuel Cell for cold temperatures



Summer testing

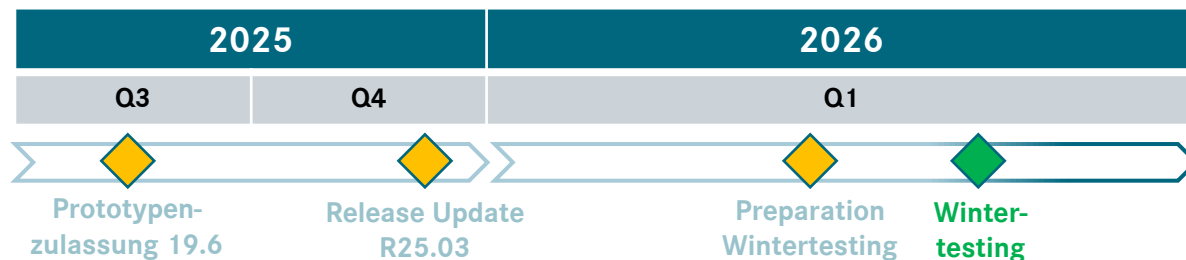
- Focus on the thermal system's performance and functions in hot conditions



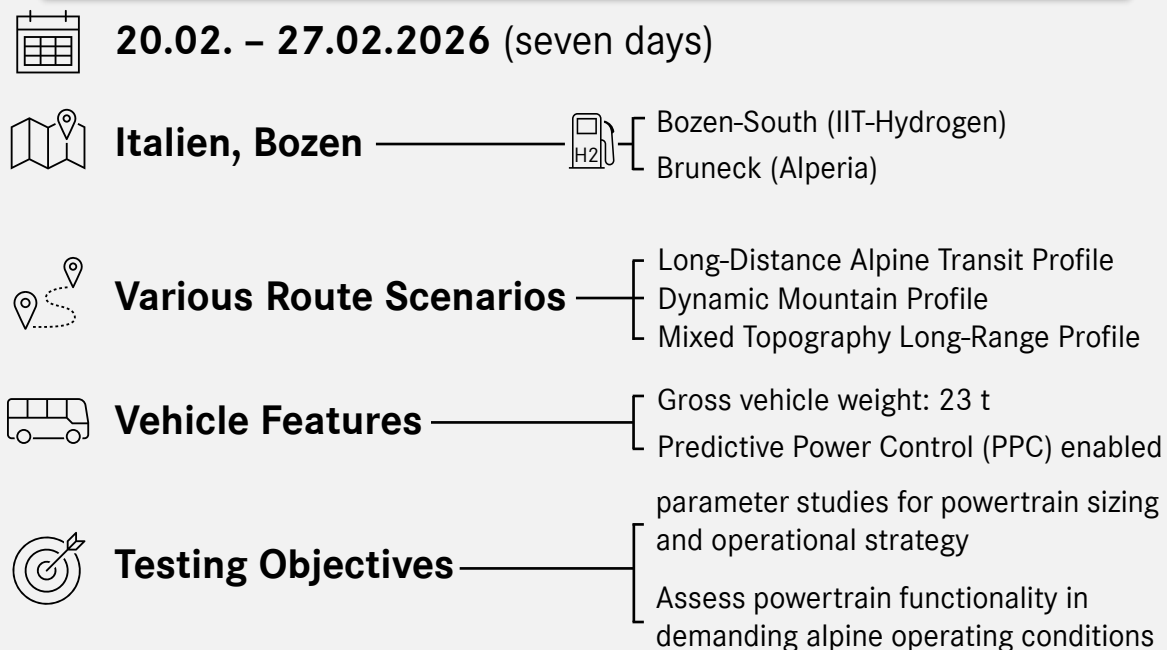
Energy Management

- Verification of simulation results
- Adaptation of the operating strategy for coach

Successful Winter Testing of the eCoach FCEV Generating Key Insights for Powertrain Configuration



winter test framework



winter test results & key insights

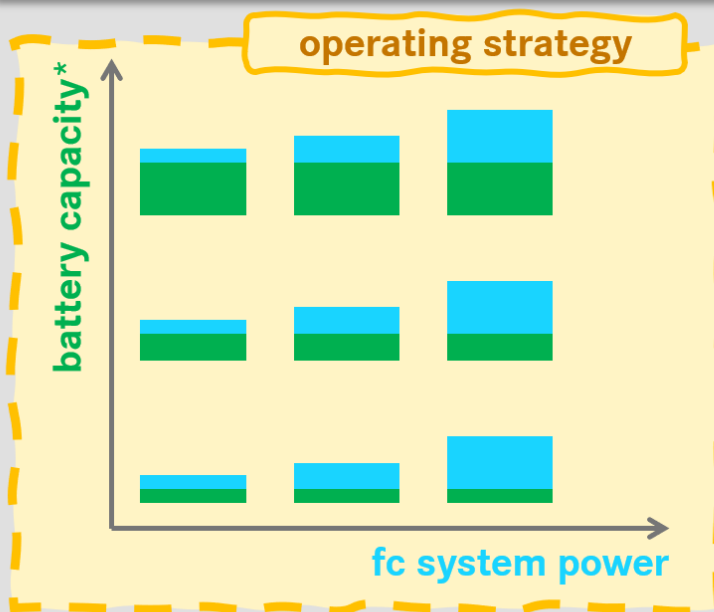
- ▶ Total **distance** covered: **2736 km**
- ▶ Total **hydrogen** consumption: **174,6 kg**
- ▶ Average hydrogen **consumption**: **6,4 kg/100km***
(*battery energy not taken into account)
- ▶ Highly reliable vehicle operation across all driving scenarios and operating points
- ▶ All planned validation tests successfully completed



Leveraging NEPTUN vehicle for early-stage testing – focus on parameter studies for **powertrain sizing** and operational strategy

- Verification concept studies: oversized FC and HV battery can be leveraged to **optimize powertrain sizing** by conducting parameter studies
- An **optimized operating strategy** is a **key** lever for maximizing the overall **efficiency** of a hydrogen-powered coach

Evaluation of multiple powertrain configurations, including operating strategy

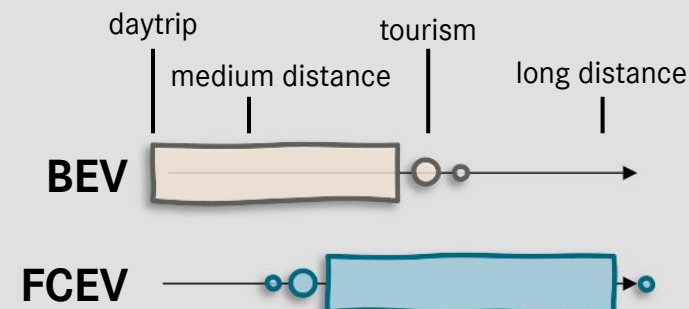


*taking into account the discharge and charging power

route scenarios



The results lead to the optimal hydrogen coach configuration.





Thank you for your attention!