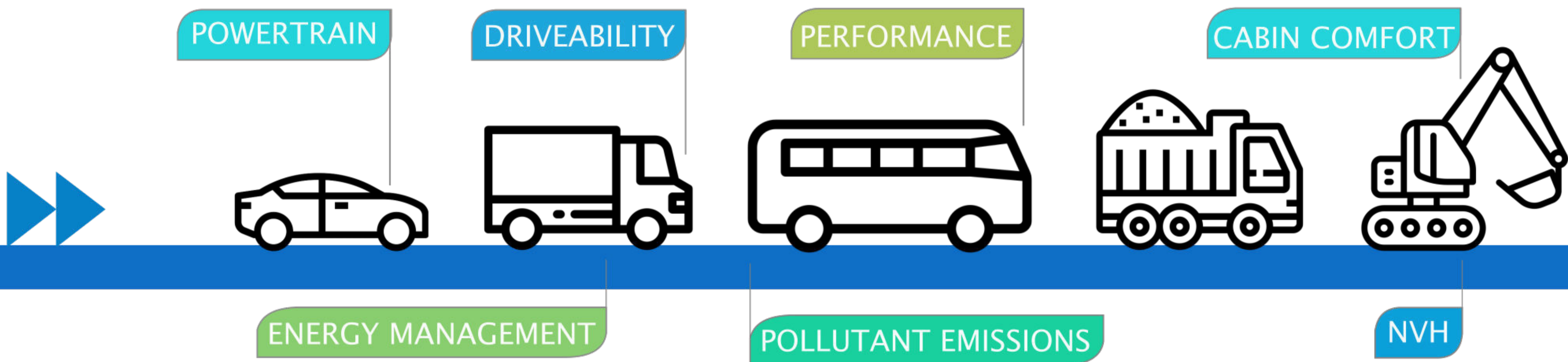


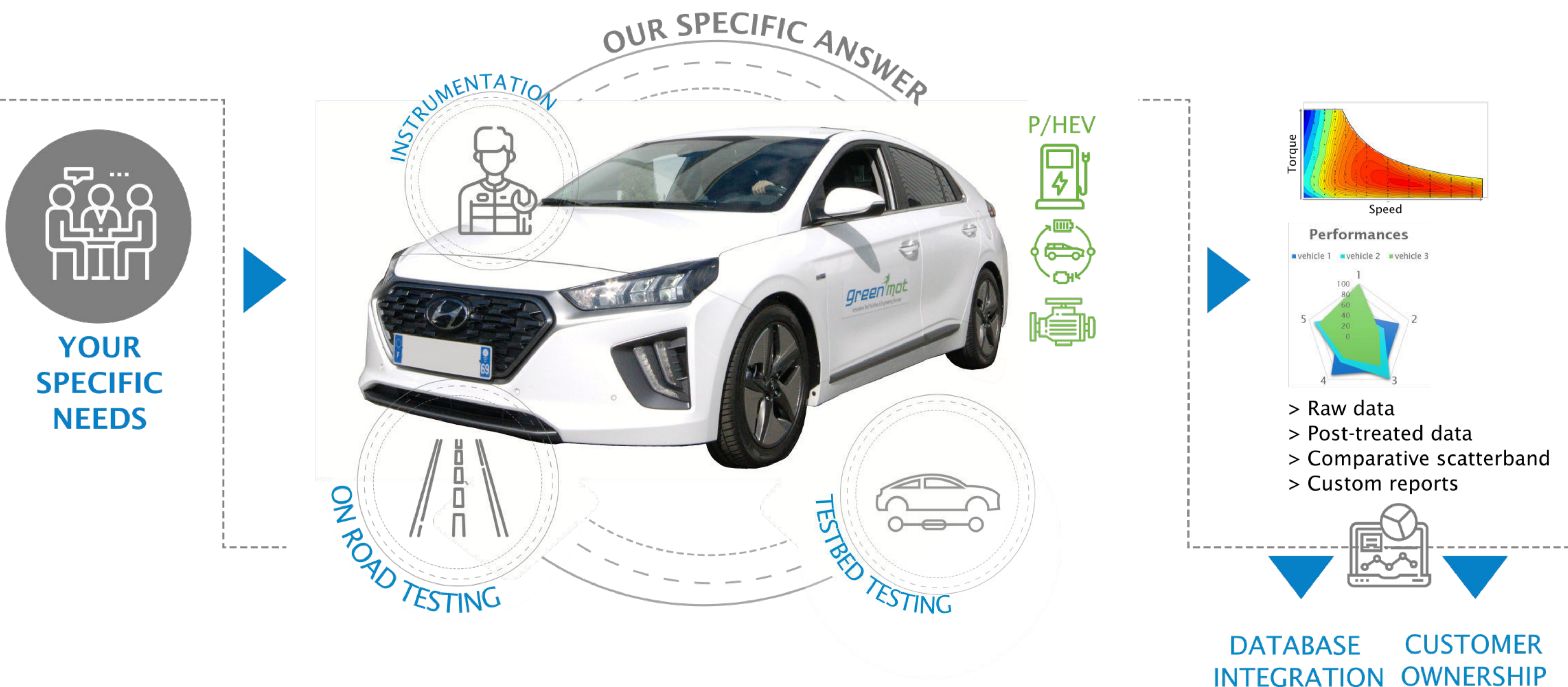
Vehicle Analysis : Global Approach

In a context of rapide changes and technological disruption, GREENMOT supports you through your R&D projects. Relying on its expertise and innovative test facilities, we are your strategic partner for facing current vehicle challenges such as **fuel consumption optimization**, **emissions reduction** or **powertrain hybridization**.

Our MOTTO : Drive a fully instrumented vehicle just like any other, on the road and on the climatic bench.



GLOBAL & CUSTOM PACKAGES



AVAILABLE FACILITIES



Multipurpose proving grounds
Open Roads

Asphalt, Off road



Automotive climatic test cell
High power climatic test cell

-46°C | +63°C

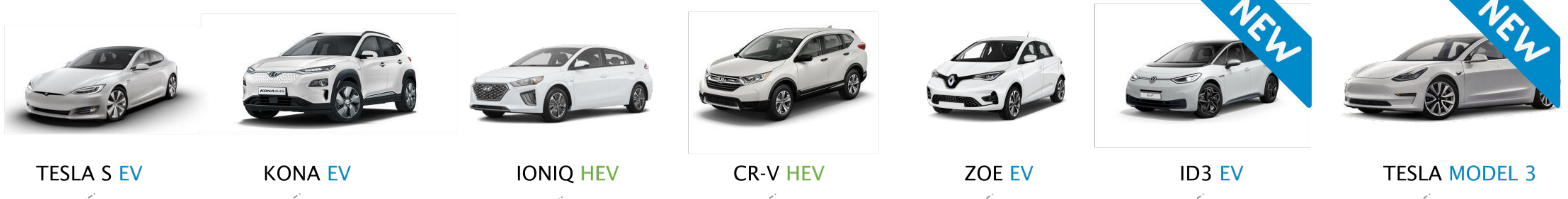
BENCHMARKING AREAS

Efficiency & Emissions
 Operation strategy
 Energy flow
 Thermal management
 NVH



The results are provided with a varying scale of detail, depending on your needs.

ON GOING PROGRAM



[Available Data] [Data Processing]

GETTING ACCURATE DATA WITHIN SHORT LEAD TIME



E-Powertrain performance & Efficiency Characterization

Thermal management System Characterization and analysis

OPTION : HVAC Performance & Efficiency Characterization

- > Global PWT efficiency mapping
- > Individual component efficiency mapping (inverter, motor, transmission)
- > Derating points identification
- > Regenerative braking performance
- > Analysis with different ambient t° & battery SOC
- > Complete thermal and energy analyses of the cooling/heating system
- > Coolant flow, temperature, energy consumption of compressor/heater
- > HVAC & Interior comfort measurements on dynamic driving cycles



Powertrain Performance & Efficiency Characterization

Thermal management System Characterization and analysis

Engine Lubrication Circuit Characterization

- > Full mapping characterization in terms of energy consumption and emissions. Complete thermal balance in real driving conditions (RDE type)
- > ICE efficiency mapping, electrical motor efficiency mapping, combustion analyses, fuel consumption, emission analyses
- > Dynamic hybrid powersplit strategy analysis on standard / custom cycles
- > EGR subsystem analysis
- > Global energy analysis, thermal management of components
- > Engine lubrication circuit management understanding & oil aging test

METHODOLOGY & INSTRUMENTATION

GREENMOT has developed an "in situ" measurement approach operating in a real environment.

Our knowledge and experience in the field of metrology allow us to implement customized sensors meeting your specific measurement needs: pollutant emissions, electric motor phases, engine torque, etc.

Get realistic data thanks to the "in situ" instrumentation and extreme repeatability of the test conditions.

