EV SYS
INTEGRATED TESTING

EV-SYS

Integrated Testing

CREATING ELECTRIC MOBILITY

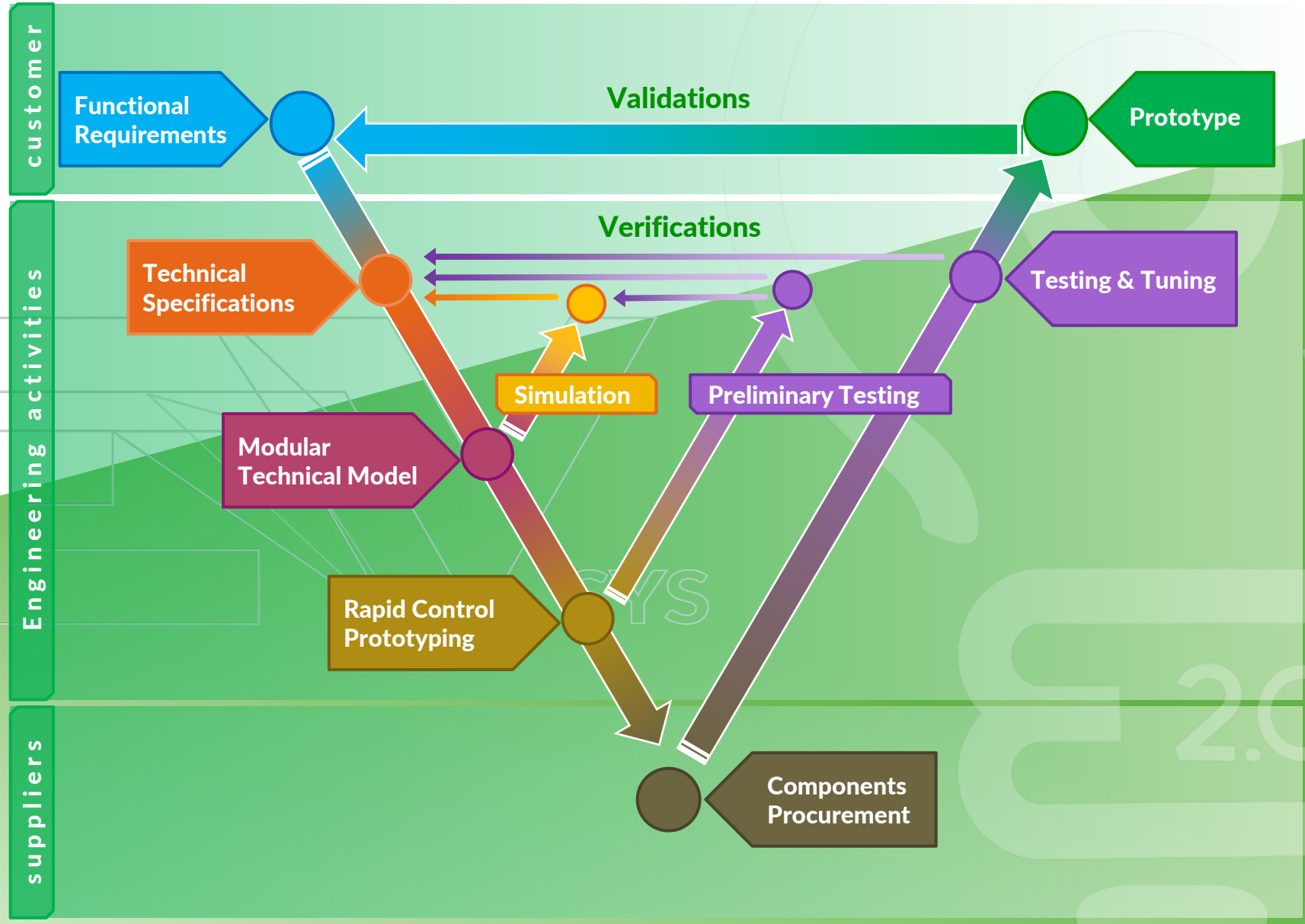
CUSTOM 2.0®
Design solution, enjoy success

Vision & Mission

MISSION create electric mobility starting from models, integrating components, building prototypes, verifying performance.

E-VISION inspired by the vision of an engineering that DRIVES the energy transition.

eV-CYCLE in accordance with the preparatory methodology for the certification of automotive products.



EV-SYS ecosystem

Know-how

- Electrified powertrains
- Electrification components
- System Integration Models and digital simulation

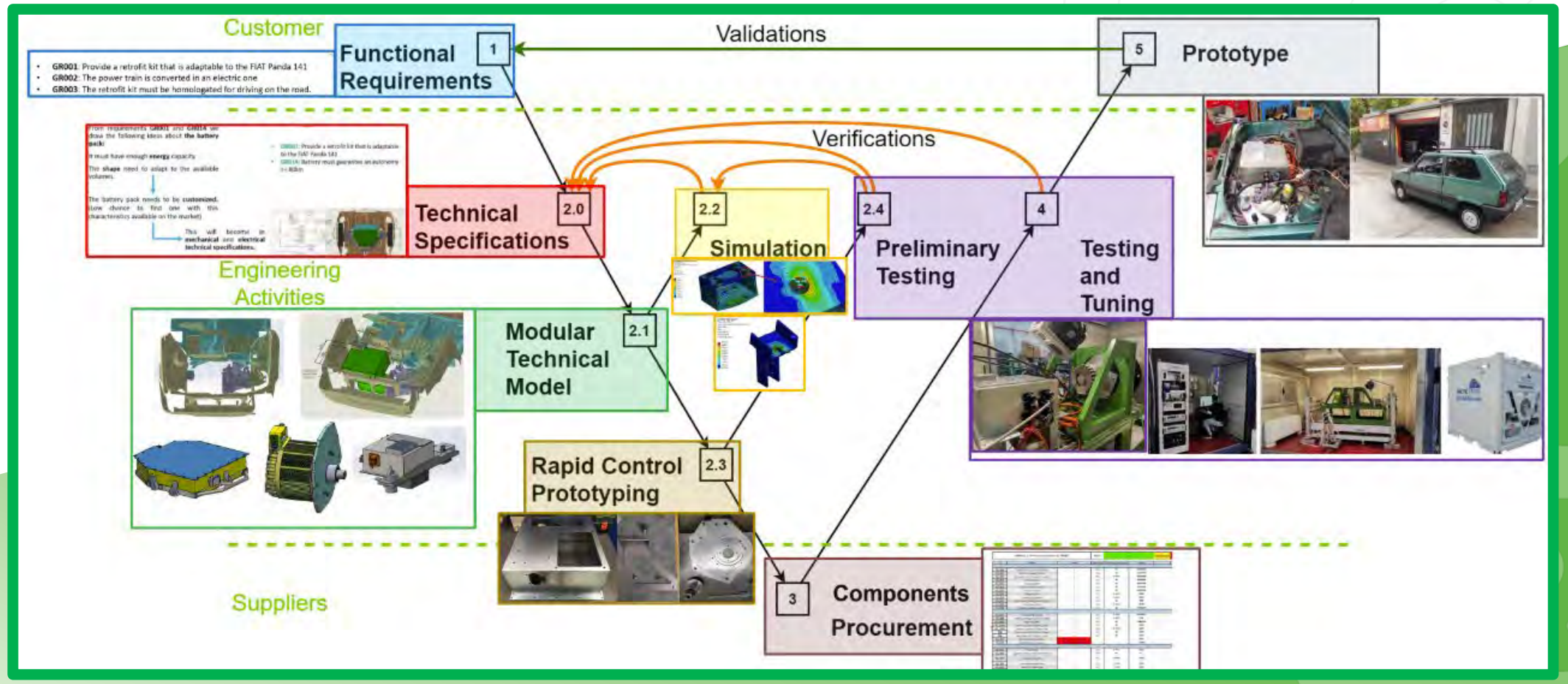
CONSULTING

SERVICE

TESTING BENCHES

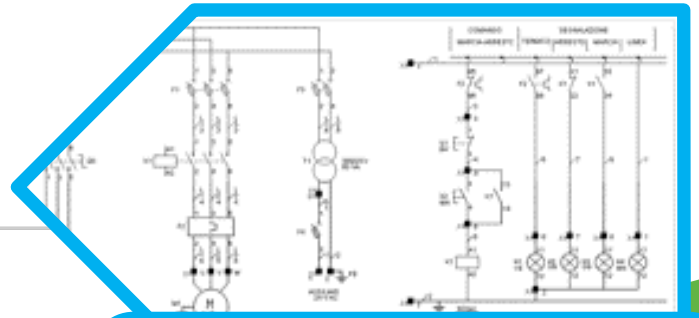
EV-SYS CONSULTING

eV-CYCLE application

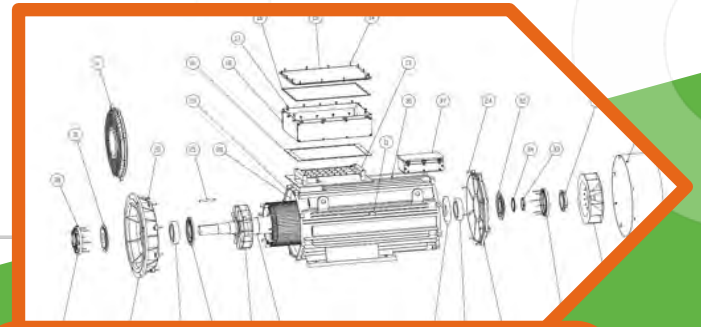


EV-SYS CONSULTING

Specifications and Requirements Analysis

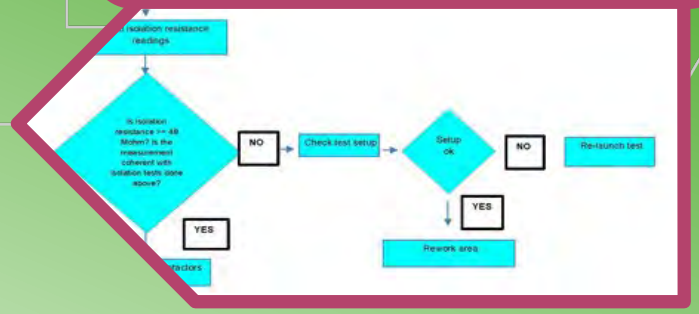


WIRING DIAGRAMS

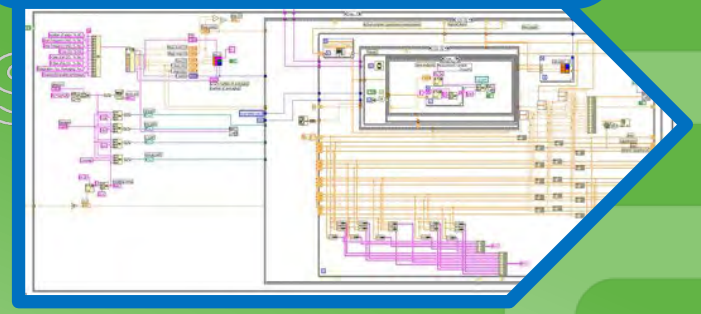


MECHANICAL DRAWINGS

TEST REQUIREMENTS



SOFTWARE DESIGN



EV-SYS CONSULTING

Modeling and Simulation

MATLAB® & SIMULINK®

Vehicle dynamics models and development of driving control strategies

NI VeriStand

I / O management environment, user interface and test cycle programming

LabVIEW

Driver customization

Perception

HBK ACADEMY

Environment for the acquisition and measurement of the signals detected by the sensors

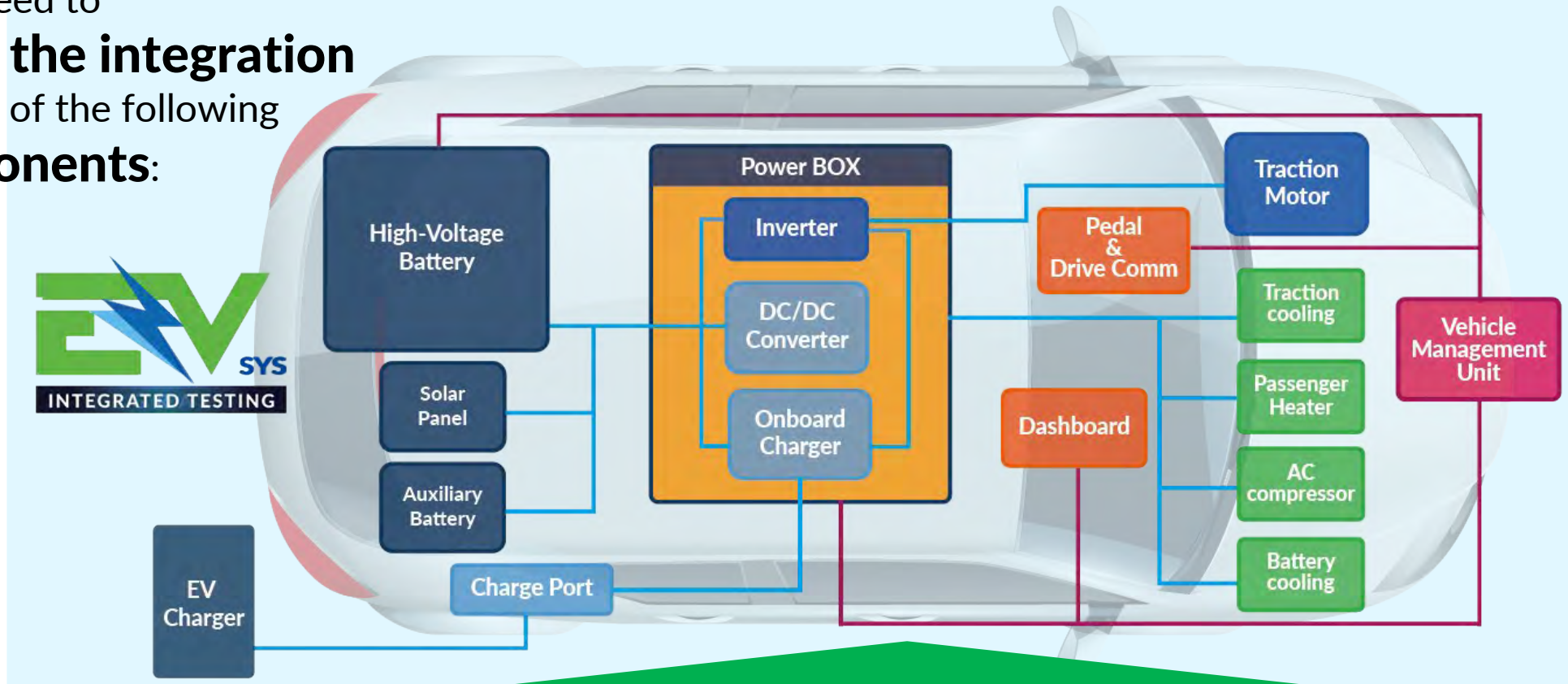
Design solution, enjoy success

Politecnico di Torino

DAUIN
Automatica e Informatica

EV-SYS as a SERVICE

If you need to
verify the integration
of some of the following
components:



EV-SYS is the **perfect cost-effective solution** for prototyping and testing
in short time and **under real conditions**

EV-SYS as a SERVICE

An **Integrated system** able to simulate perfectly **all** the **features** of an **Electric Vehicle**

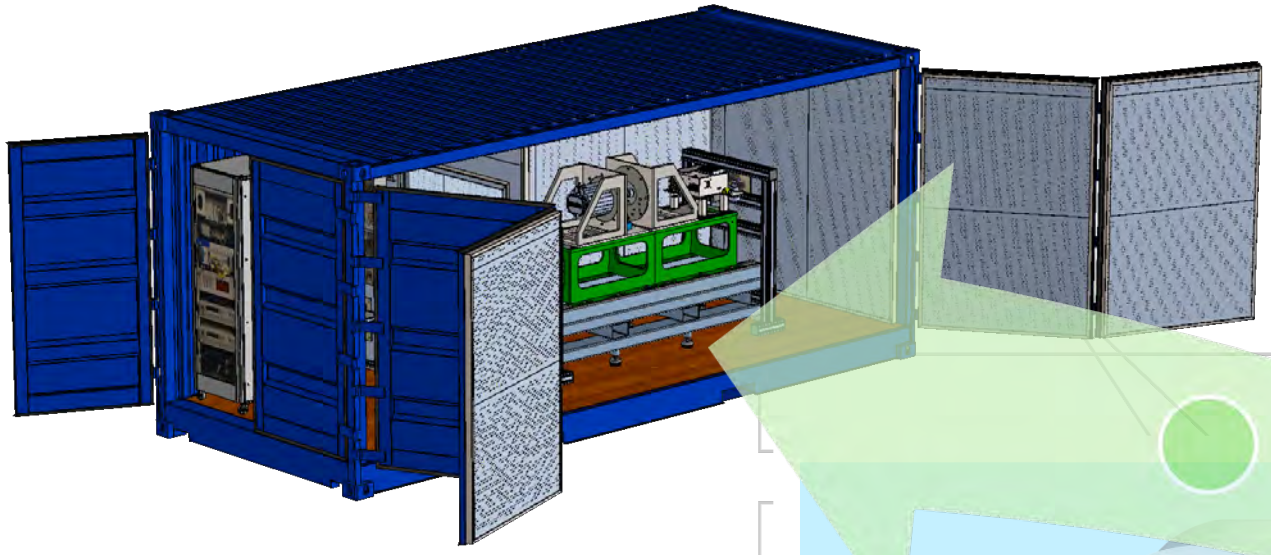
MANAGE THE INTEGRATION PROCESS | of the components and of the overall functionality of the system

TEST OF THE SINGLE COMPONENT | according to the customer's needs

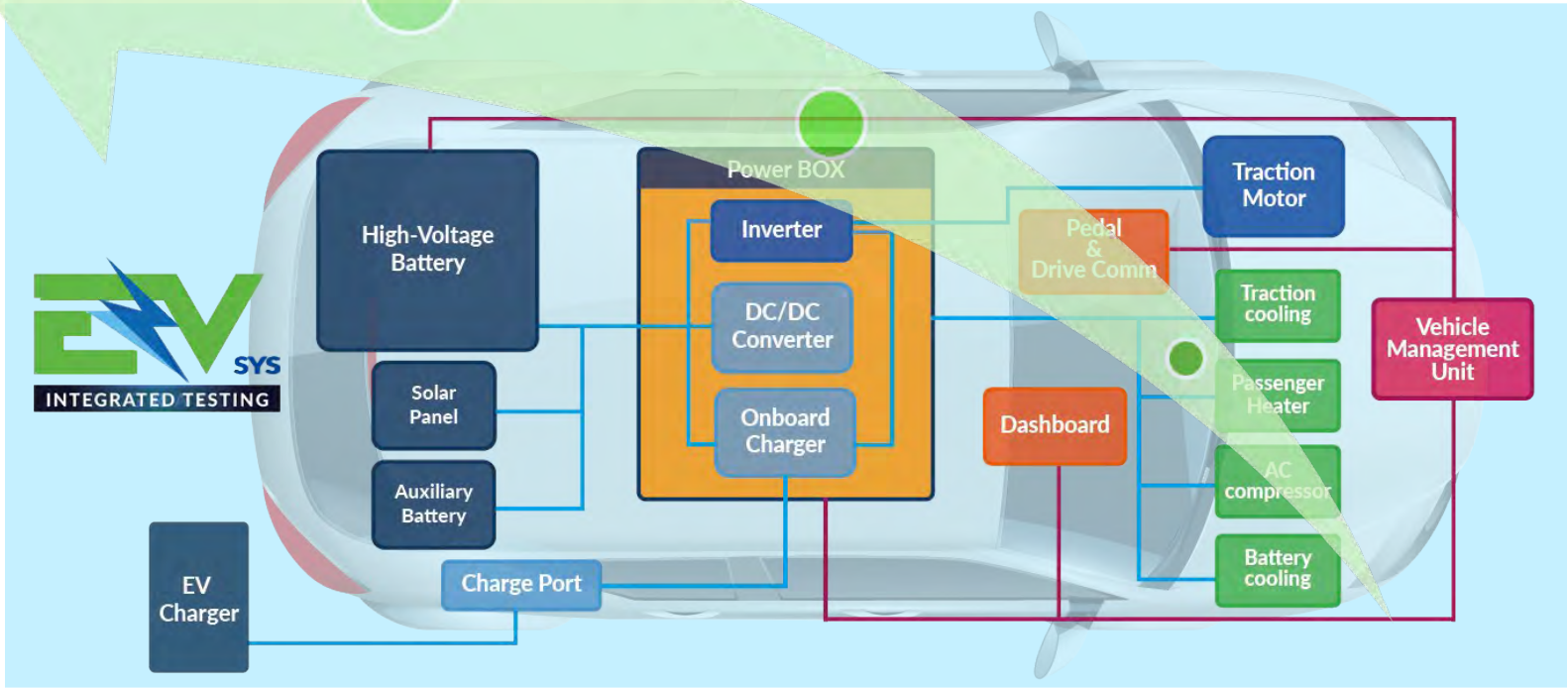
VERIFY THE COMPLIANCE | of the components compared to the technical specifications

CUSTOM 2.0
Design solution, enjoy success

EV-SYS as a SERVICE



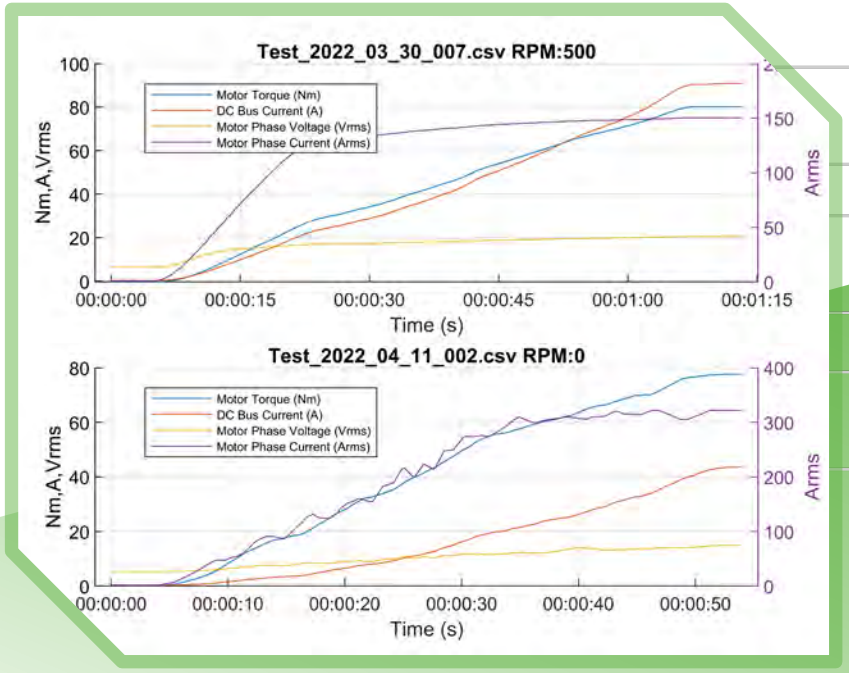
TEV2021

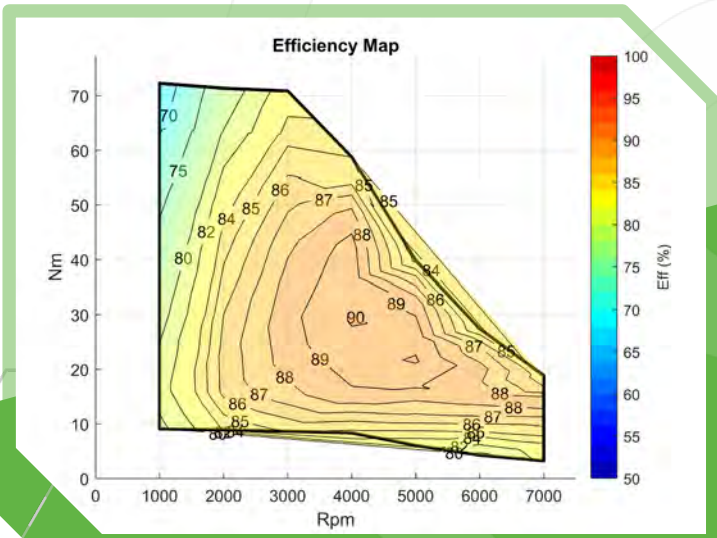


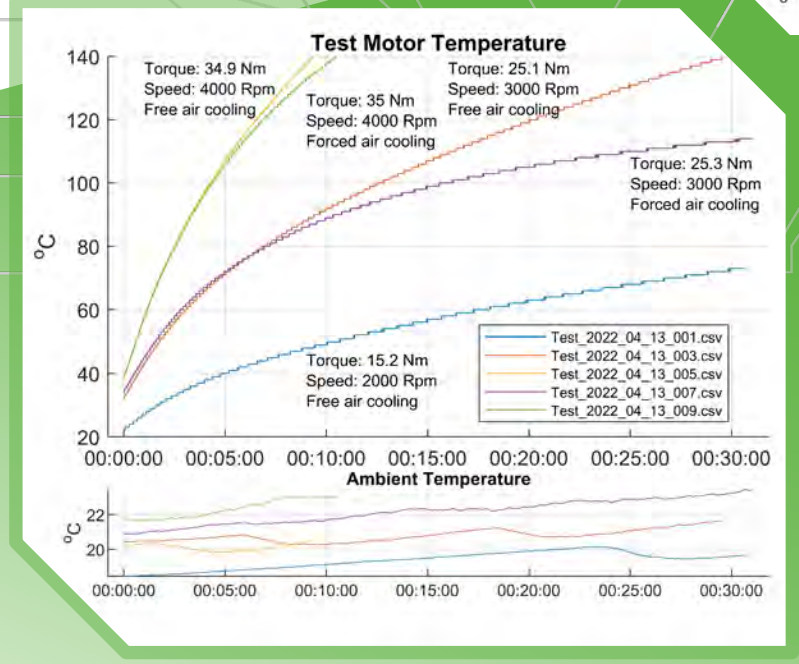
CUSTOM 2.0
Design solution, enjoy success

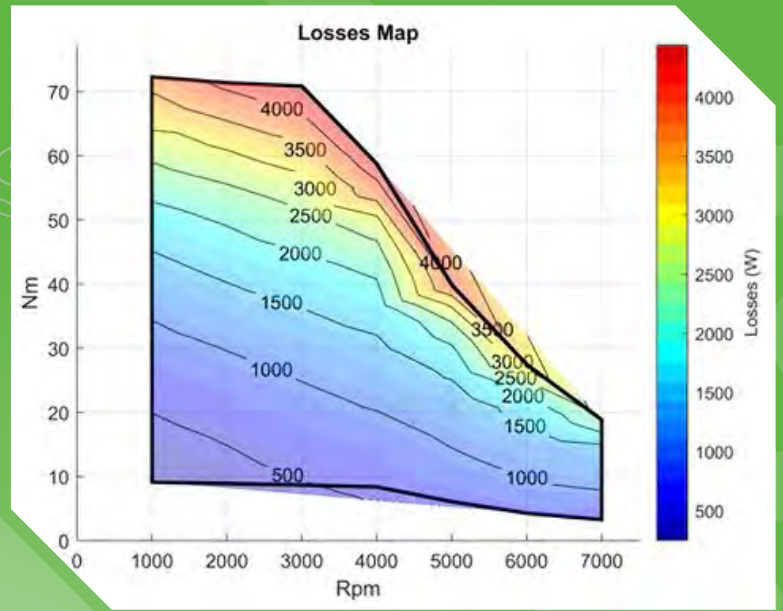
EV-SYS as a SERVICE

simulate the **exact same condition** of a **road test by verifying the results** together with the Customer

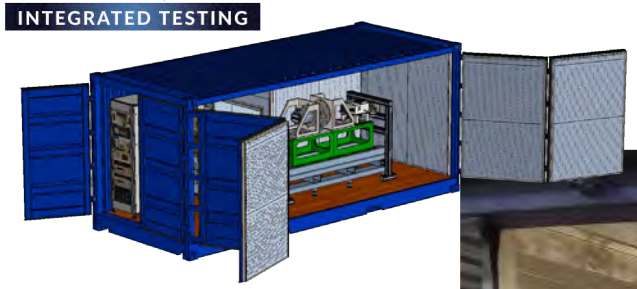






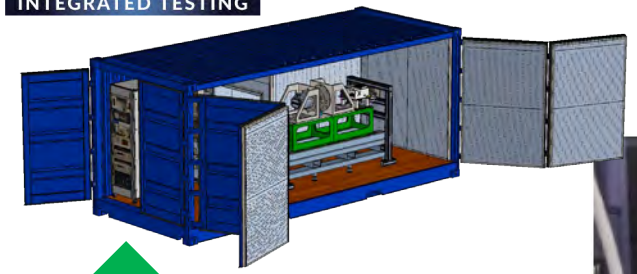


Testing Benches



TEV2021

Testing Benches



TEV2021

CUSTOM m2.0
Design solution, enjoy success

Hardware Composition

CONDITIONING EQUIPMENT				
Equipment Type	**Output Range**	**Resolution**	**Quantity**	**Equipment type**
HV DC Power Supply	0-300V, 225A, 18kW	0.01V	2x	Bi-directional DC Power Supply (ITECH IT6018C-300-225)
LV Signal Power Supply	0-60V, 30A, 400W	0.001V	1x	LV Power Supply (ITECH M3422-60-30)
Motor	Speed: 0 - 8.000 RPM Nominal Torque: 89 Nm Maximum Torque: 189 Nm		1x	ENGIRO type 205 water cooled motor
Inverter	Operating Voltage: 60-96V Current limit: 600Arms Continuous current: 300A		1x	DMC SuperSigma2 (IPM960T4-02C)
Environmental Temperature	Ambient 20-25°C		1x	Ambient climatization
CAN Communication	CAN, CAN FD 1Mbit/s		6x	PXIe-8510/6 on PXI Controller 8861

Hardware Composition

MEASUREMENTS (HBK GEN Series GEN4tB)				
Measurement Type	**Measurement Range**	**Accuracy**	**Quantity**	**Equipment type**
Torque	±200Nm	±0,05% of measurement range	1x	Torquemeter (HBM T40B)
Current (Supply DC)	±600A	±0,2% of measured value	2x	Current transducer (HBM GEN Series CTS400ID)
Current (AC Phase)	±400A	±0,2% of measured value	3x	Current transducer (HBM GEN Series CTS400ID)
Voltage (Supply DC)	1500V	±0,02% of measured value	3x	Three channels power card (HBM GEN Series GEN310B)
Voltage (AC Phase)	1500V	±0,02% of measured value	3x	Three channels power card (HBM GEN Series GEN310B)
Speed	0 - 24000 RPM	±2 RPM	1x	Torquemeter (HBM T40B)
Temperatures (contact)	-40°C to 250°C	±1°C	1x	Thermocouples K Type
Temperatures (acquisition)	-40°C to 250°C	±1°C	1x	Eight channels measurement card (HBM GEN Series GN840B)
Oscilloscope			16x	10 MSample/s
Vibration measurement	±50g	±5% of measured value	2x	Kistler 8752A50

Case Experience

BorgWarner

TEB2021 Banchi EOL
Testing Battery Packs

EVERGRIN

TEV2021 Facility di testing
per Electric-Vehicles

ELDOR® CORPORATION

PEV2020
Power Management Solutions

Thanks for the attention

SYS

INTEGRATED TESTING

Design solution, enjoy success

CUSTOM 2.0

Design solution, enjoy success

www.customsrl.com