



Évolution Synergétique Automotive

E-Mobility Engineering & Solutions

www.evo-syn.com

Moving the future, responding to the new challenges of mobility

What we do

Activities
Figures
Certifications

Engineering Portfolio. ePowertrain

Engineering
ePowertrain
Aux & Interface

Our references

Software Engineering
System Engineering
Hardware Engineering

Safety, Security and Quality

Safety
Cybersecurity
Quality Management System

R&D Projects

CONTACTO

What we do



évo Activities

Engineering

Solutions / Prototypes

évo Figures

70 Employees

5 Years on the market

3 Locations

3M € Turnover on 2022

évo Certifications

Quality Management

Certified to ISO 9001: 2015

Environmental Management

Certified to ISO 14001: 2015

Information Security Management

Certified to ISO 27001: 2022 and
TISAX AL3



Engineering Portfolio



ePowertrain Portfolio at a glance

Engineering

System & Function

Calibration & Validation

Software

Hardware

Mechanical & Integration

ePowertrain

On-Board-Charger

HV Battery

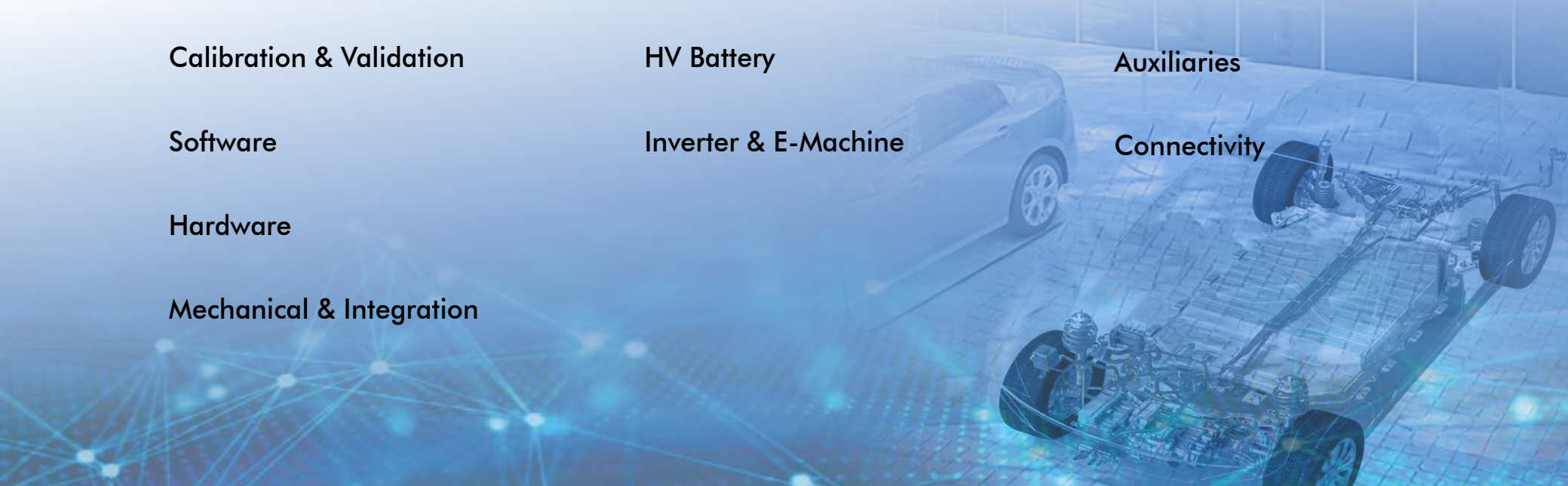
Inverter & E-Machine

Aux & Interface

Thermal Management

Auxiliaries

Connectivity



Our references (Just a selection)



More than 40 references on e-Mobility projects for OEMs and Tier1s

Software Engineering

Battery Cooling

Series Project for German Tier1
Full SW-Development

Traction Inverter

Preseries Project for German Tier1
BSW AUTOSAR Integration

On-Board-Charger

Series Project for Italian Tier1
BSW and Application Development

Cyber-Physical System for Battery Management of Electric Vehicles

Internal R&D
Full Software Development / HW Design and Testing / System Design and Testing

System Engineering

Battery cooling

Series Projects for German Tier1
System development engineering

HV-ePowertrain components

Series Project for German OEM
Full system validation

Inverter & eMotor

Series Project for German Tier1
Functional and electrical validation

Hardware Engineering

Electrical Auxiliaries

Series Project for German Tier1
HW Development



Software Engineering

High Quality Development

based on main standards



Software Engineering Process Group (SWE)

Experienced senior team with high know-how

AUTOSAR 3.X and 4.X, BSW Stack Integration and MCU MCAL from third party, Complex Device Drivers development, Hardware to Software integration.

Fast prototyping, flexible and low-cost projects

In-house software architecture AUTOSAR, useful, full flexible, and adaptable for non AUTOSAR projects with high-quality development requirements.

Application Software Development

Function, Model-based application, C-hand-coded application, Continuous integration, Unit, Integration and Functional tests (MiL SiL PiL)



System Engineering

eMobility System competences

Development, Integration, Test and Validation



System Engineering
Process Group (SYS)

System design and Function development

Functional Safety Analysis. Control Strategies Design.
Model-Based Software Design and Development.
Diagnosis Functionalities Design. Vehicle Architecture Design.

System Integration

Components commissioning. Calibration of Functional
Subsystems. Protection functionalities calibration.
Vehicle systems integration.

System Test & Validation

Electrical/mechanical/environmental test specification.
Test plan and test management. Testcase specification.
PV / DV tests. Data analysis. Defect management.
Test automation.



High expertise in test specification and data analysis

Hardware Engineering

Hardware Development

In-house design, customisation and innovation for e-Mobility

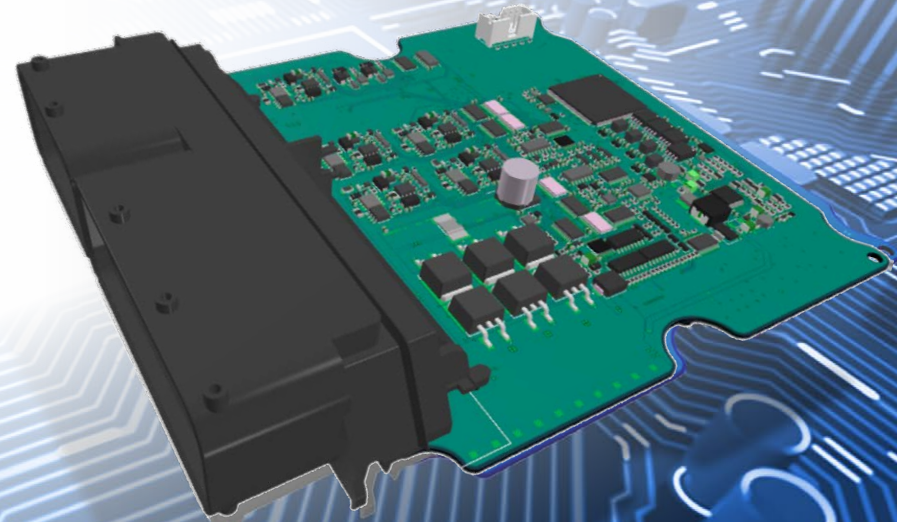


Electrical and Electronic design

Elicitation. HW requirement definition.
Design of HW architecture. Schematics and PCBs.
Cost-optimised component selection.
Mechanical interface analysis / Variant analysis.
Implementation. Test specification. Test plan and test management.

Applications

Battery Management System.
Power electronics: On Board Charger. AC/DC.
DC/AC and DC/DC power converters
Auxiliaries' components for electrical vehicles.



Advanced design services from concept to commissioning, using the latest technology, while closely collaborating with clients to meet objectives

Safety, Security and Quality



Safety and Security Engineering

Highest reliability on safety and security in e-Mobility

Safety

Functional and Technical Safety development, improvements of safety concepts, Safety Analysis (FMEA, FTA, etc), development of Safety Case.

Cybersecurity

Our cybersecurity experts ensure state-of-the-art practices in hardware and software engineering, under automotive standards (ISO-21434), aimed at mitigating any risk of intrusion, increasing detection capability and reducing incident response time.

Quality Management System

Initial assessment of actual status, processes, process improvement based on A-SPICE, Procedures: toolchain definition and integration. Integration on customer's engineering processes.

Senior Expert team on A-SPICE

Certified provisional assessor, Consulting on customer for OEM assessments, development of projects based on A-SPICE level 1 to 3.



Modular and Scalable Mobility applications 2023-2024 I+D+i | 2024 First prototype | 2025 FID

FCEV native vehicle architecture and requirements

Modular and scalable intelligent platform for FCEVs

AI algorithms for vehicle energy management

Optimal energy management system

Power Electronics Control Algorithms

V2X 5G connectivity

Digital twin of the vehicle through a **Cyber Physical System**

FID: Demonstration and validation of **FCEV pilots on field**



PYME INNOVADORA

H2TRACTOR



Cyber-Physical System for Battery Management of Electric Vehicles (CPS4EV)





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Moving the world forward



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