



PowerDrive Project

PowerDrive “Power electronics optimisation for next generation electric vehicle components” is a European Project in the new Horizon Europe Framework Program (HORIZON-CL5-2021-D5-01). The 42 months research project, begun in May 2022, will do power electronics optimisation for next generation electric vehicle components, together with KU Leuven - EnergyVille as coordinator, Tampere University, Chalmers University of Technology, Volvo, SMA Magnetics, Infineon, Rogers Corporation, Consorzio SCIRE, Trinity College Dublin, and MathWorks.

The concept of PowerDrive brings additional opportunities to strengthen Europe’s supply chain in electromobility for road transportation and to achieve zero-emission road mobility.

Next generation, highly efficient, cost-effective,
and compact power electronics solution

This is PowerDrive!



Compact Electric Powertrain

A compact electric powertrain of BEVs and in SiC traction inverters that will allow further conception of novel topologies and arrangements to achieve integration of components in motors and batteries.

Passive Components

Improving and downsizing passive components, as well as integrating sensors and circuitry in semiconductor components. Both points are essential in achieving next generation EV components and in meeting the efficiency, cost, size, and weight targets.

Models

Using reliable surrogate models to integrate power electronics components in circuit/system level simulation.

Transport Modelling

Transport modelling as well as analysing the human effect on the driving and load profiles experienced by a vehicle.



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
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Learn more about PowerDrive and stay updated with its latest developments
www.powerdriveproject.eu



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