

PROJECT

POCOL

Power Conversion Units for LifeRCraft demonstrator

Funding: European (Horizon 2020)

Duration: Dec 2015 - Jun 2019

Status: Complete

Total project cost: €1,229,831

EU contribution: €499,000



Call for proposal: H2020-CS2-CFP01-2014-01

[CORDIS RCN : 200805](#)

Objectives:

The growth of Power Electronics has been driven by the demand for more electrical solutions in a very diverse range of application sectors, including transport electrification, energy generation, transmission and distribution, consumer electronics and lighting, industrial motor drives. This range of applications has brought increasing demands on the performance, reliability and cost of power electronics and the associated power conversion techniques, leading to a rapid and dynamic improvement in a range of essential technologies.

In this context, two leading institutions in the field of power electronics, Techniques et Fabrications Electroniques (TFE) and the University of Nottingham (UNOTT) are combining their forces in order to propose a project (POCOL) that will enable a step change in the development of high specification power converters for modern aircraft application such as for the lifeRCraft helicopter.

The two partners of the project will be organized as to get the best of their specificity. Being a University well known for its strong research activity allows UNOTT to lead the project at the beginning for the three first work packages, setting up the bases of the design. As an equipment designer and manufacturer working in the aeronautic area, TFE will be the leader of the rest of the project and will be able to propose an industrialization of the product made under the POCOL project.

TFE and UNOTT will work together to:

- Develop models and design the required power converter and inverter to meet the functional and operational performance and reliability requirements set out in the CfP
- Manufacture B1 prototypes that meet the design criteria up to TRL5
- Test the B1 demonstrators under relevant environmental and operational conditions
- Re-iterate knowledge gained from B1 models into updated B2 models
- Build B2 demonstrators and test and validate up to TRL6
- Provide relevant documentation to prove required certification.

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Tfe Techniques Et Fabrications Electroniques Sas

Address:

18 RUE JEAN PERRIN
31100 TOULOUSE
France

EU Contribution: €292,455

Partner Organisations:

The University Of Nottingham

Address:

University Park
Nottingham
NG7 2RD
United Kingdom

EU Contribution: €206,545

Technologies:

Aircraft design and manufacturing
Power electronics

Development phase: Demonstration/prototyping/Pilot Production

STRIA Roadmaps: Transport electrification, Vehicle design and manufacturing

Transport mode: Air transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Other specified

Geo-spatial type: Other