

PROJECT

DIGIMAN

DIGital MAterials Characterisation proof-of-process auto assembly

Funding: European (Horizon 2020)

Duration: Jan 2017 - Jun 2020

Status: Complete

Total project cost: €3,486,965

EU contribution: €3,486,965



Call for proposal: H2020-JTI-FCH-2016-1

[CORDIS RCN : 207241](#)

Objectives:

The project's proposition and charter is to advance (MRL4 > MRL6) the critical steps of the PEM fuel cell assembly processes and associated in-line QC & end-of-line test / handover strategies and to demonstrate a route to automated volume process production capability within an automotive best practice context e.g. cycle time optimization and line-balancing, cost reduction and embedded / digitized quality control. The project will include characterization and digital codification of physical attributes of key materials (e.g. GDLs) to establish yield impacting digital cause and effects relationships within the value chain, from raw material supply / conversion / assembly through to in-service data analytics, aligning with evolving Industry 4.0 standards for data gathering / security, and line up-time, productivity monitoring. The expected outcome will be a blueprint for beyond current state automotive PEM fuel cell manufacturing capability in Europe.

The project will exploit existing EU fuel cell and manufacturing competences and skill sets to enhance EU employment opportunities and competitiveness while supporting CO2 reduction and emissions reduction targets across the transport low emission vehicle sector with increased security of fuel supply (by utilizing locally produced Hydrogen).

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:

Commissariat A L Energie Atomique Et Aux Energies Alternatives

Address:

RUE LEBLANC 25
75015 PARIS 15
France

Organisation Website:

<http://www.cea.fr>

EU Contribution: €649,076

Partner Organisations:

Toyota Motor Engineering & Manufacturing Europe

Address:

Bourgetlaan 60
1140 EVERE (BRUXELLES)
Belgium

Organisation Website:

<http://www.toyota.eu>

EU Contribution: €102,500

Freudenberg Performance Materials Se & Co Kg**Address:**

Hoehnerweg 2-4
69465 Weinheim
Germany

Organisation Website:

<http://www.ffcct.de>

EU Contribution: €500,625

The University Of Warwick**Address:**

Kirby Corner Road - University House -
Coventry
CV4 8UW
United Kingdom

Organisation Website:

<http://www.warwick.ac.uk>

EU Contribution: €560,230

Intelligent Energy Limited**Address:**

ASHBY ROAD HOLYWELL PARK CHARNWOOD BUILDING
LOUGHBOROUGH
LE11 3GB
United Kingdom

Organisation Website:

<http://www.intelligent-energy.com>

EU Contribution: €1,608,333

Pretexo**Address:**

36 CHEMIN D'ANTONEGRE
34660 COURNONTERRAL
France

Organisation Website:

<http://www.pretexo.com>

EU Contribution: €66,201

Technologies:

Fuel cells and hydrogen fuel
Development of new Fuel Cells and Hydrogen (FCH) technologies

Development phase: Research/Invention

STRIA Roadmaps: Transport electrification, Low-emission alternative energy for transport

Transport mode: Road transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Other specified

Geo-spatial type: Other