LESGO

# Light to Store chemical Energy in reduced Graphene Oxide for electricity generation

## PROJECT PRESENTATION

This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 952068

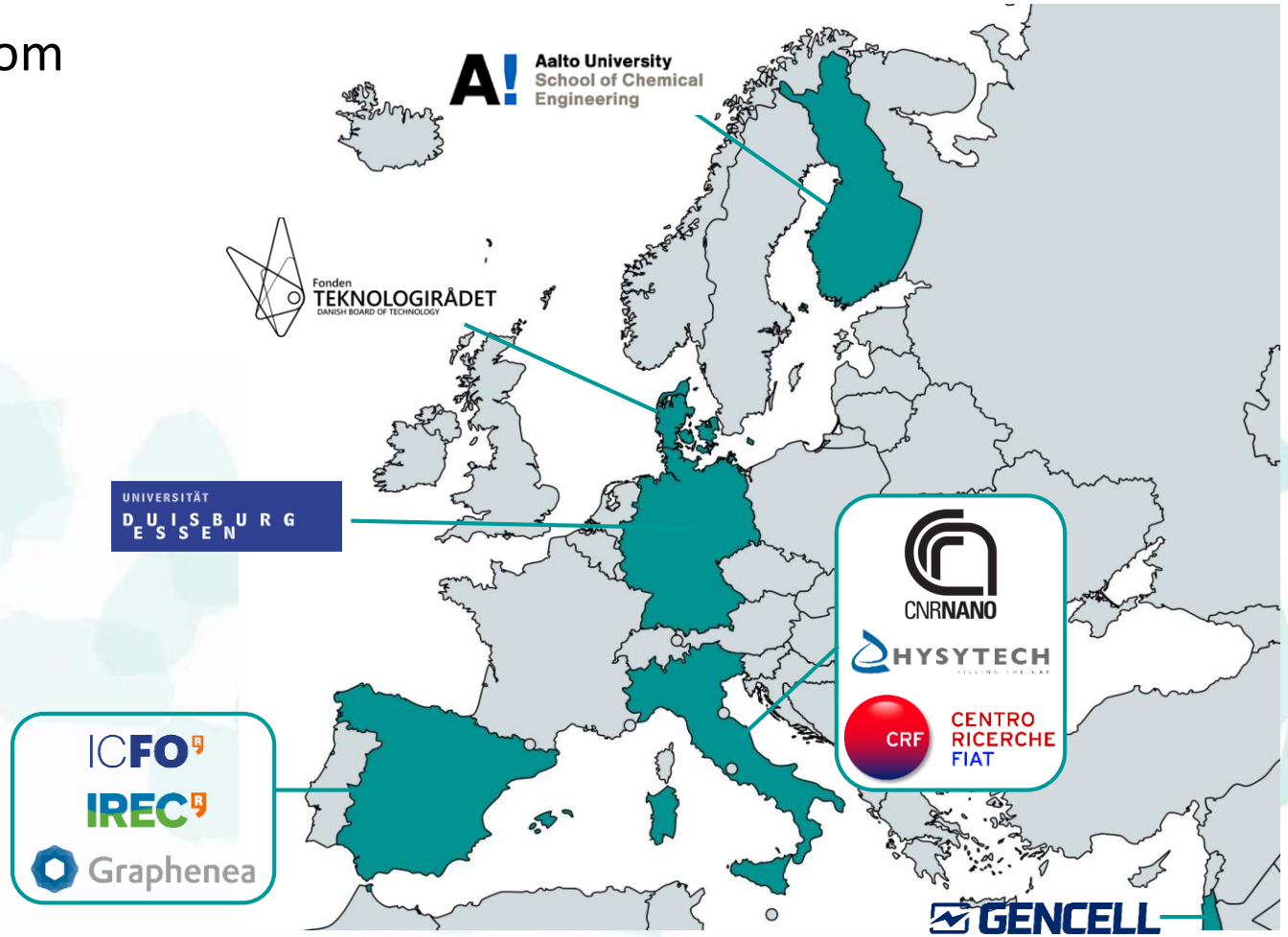
# About

**LESGO** involves **10** partners (from research and industry) from **6** countries

November 1 2020

October 30 2023

4,193,488.75 €





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# Mission & Vision

1 Set the foundations for a predictable zero-emissions electricity generation where the only raw materials needed are water and graphite.

2 Cost-effective energy storage with no negative impact for the environment by the circular character of the solution proposed.

3 Widespread implementation of a hybrid rGO-H/battery technology as a means of powering Electric Vehicles.


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# Mission & Vision



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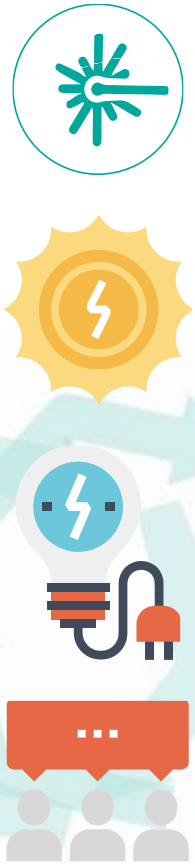
# Objectives

- Design, develop, and fabricate electrode and storage matrix materials necessary to enable large scale, safe, and cost-efficient hydrogen storage in hydrogenated reduced graphene oxide (rGO-H).
- Determine the conditions under which solar energy could be harnessed to promote C-H bond formation in rGO-H and demonstrate the feasibility of this approach.
- Demonstrate the generation of electricity from hydrogen stored in rGO-H using a commercial alkaline fuel cell and assess the feasibility of its incorporation into an electric vehicle.
- Build a coherent, innovative, and societally responsive ecosystem for the widespread use of LESGO's, findings and concepts by expanding engagement with scientists, researchers and wider communities of stakeholders.

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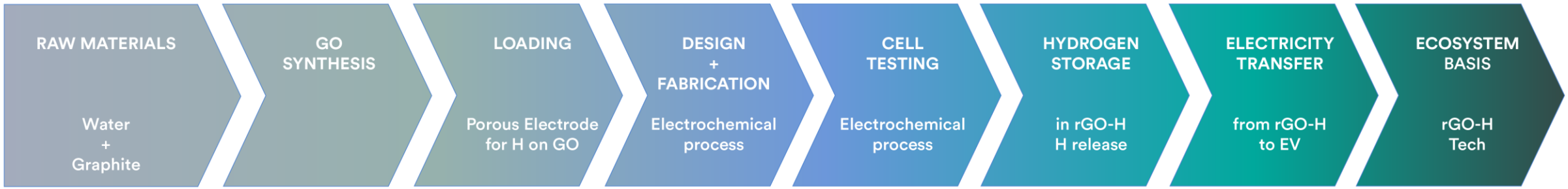
# Concept




Graphenea → HYSYTECH → GENCELL → CRF CENTRO RICERCHE FIAT

IREC Shaping Energy for a Sustainable Future

Aalto University

ICFO

UNIVERSITÄT DUISBURG ESSEN

CNR NANO PISA NEST

Fonden TEKNOLOGIRÅDET DANISH BOARD OF TECHNOLOGY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# THANK YOU

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