THE TEMPEST PROJECT WILL PRODUCE LIGHTER BATTERIES FOR THE EUROPEAN TRANSPORT INDUSTRY

- **THIS EUROPEAN PROJECT, FINANCED WITH €3.6 MILLION BY THE EU COMMISSION UNDER THE RESEARCH AND INNOVATION FRAMEWORK PROGRAMME HORIZON EUROPE.**
- **WILL REDUCE SIGNIFICANTLY THE QUANTITY OF CO2 EMISSIONS, PROVIDING A NEW GENERATION OF BATTERIES FOR THE EUROPEAN AUTOMOTIVE, AEROSPACE, MARITIME, AND RAILWAY INDUSTRIES.**
- **THE INITIATIVE IS SUPPORTED BY A MULTIDISCIPLINARY CONSORTIUM OF 11 PARTNERS COMPRISING RESEARCH CENTRES, UNIVERSITIES, CONSULTANCY COMPANIES, MATERIAL SUPPLIERS, AND BATTERIES MANUFACTURERS FROM 8 EUROPEAN COUNTRIES.**

Bordeaux (France) May 11, 2022. – Europe needs a new generation of batteries that allow for greater durability, without the potential risk of current overcharging, also guaranteeing more sustainable manufacturing. To this end, the **TEMPEST project started today after its kick-off meeting in Bordeaux (France), aiming to provide and refine a new generation of safe, recyclable, lightweight and high-performance batteries for as many transport applications as possible before 2026.**

TEMPEST has been financed with more than €3.6 million by the EU Commission under the Research and Innovation Framework Programme Horizon Europe. This initiative is supported by a multidisciplinary consortium of 11 partners comprising research centres, universities, consultancy companies, material suppliers, and batteries manufacturers from 8 European countries.

The TEMPEST initiative will develop and mature a new generation of safe by-design, recyclable, high-performance, and lightweight batteries for the largest possible swath of transport applications. To this end, it will enhance the innovation in advanced, module-free battery systems, optimised using artificial intelligence algorithms, and based on new chemistries methods, through different demonstrator battery types selected as the representative for some of the key European transports sectors, such as automotive, aircraft, maritime, rail, and stationery. The TEMPEST **action will reduce the costs and manufacturing time of batteries and their structure by 30%, reducing their weight by 15%, and increasing their performance by another 15%.** This strengthening of the efficiency in the entire value chain will contribute to generate a 72% reduction in energy grid overload.

The TEMPEST's project impact

This project will have a significant impact at the economic, social, and environmental levels in Europe, and will contribute directly to the European Union's ambition of self-sufficiency in the batteries manufacturing cycle, especially in the cell/pack reinforcement. TEMPEST will advance innovation in module-free battery manufacturing systems, based on current and future

Contact : Armando Serra Carles. Communications Manager.
armandoserra@sustainableinnovations.eu +34 910 06 34 20
www.sustainableinnovations.eu

applicable chemistry technologies, through three different types of demonstration batteries, crucial for automotive, aeronautical, marine and railway applications, as well as stationary energy storage for companies and individuals.

This European initiative represents a turning point for these sectors and could generate a significant boost in terms of employment. It is estimated that the European battery market will employ more than 300,000 people and be worth up to €250 billion by 2030, of which TEMPEST will indirectly contribute €200 million in revenue and create more than 10,000 additional jobs in battery manufacturing. However, the TEMPEST project greatest impact is on the environment, increasing the recyclability of batteries by up to 70%. In this sense, **the optimisation of the weight of the batteries, their different components and processes in the different sectors mentioned, will allow the reduction of greenhouse gases by up to 62% in the maritime sector compared to their current level; and more than 78.7 tonnes of CO2 in the aircraft sector**.

For 36 months, until 2026, the TEMPEST consortium will work under the supervision of the European Climate, Infrastructure and Environment Executive Agency (CINEA) on different milestones, covering the development of the new generation of lithium-ion batteries and solid-state cell; the implementation of new manufacturing models and the improvement of their circularity, as well as the optimisation of their value chain and improvement of energy efficiency.

About TEMPEST

TEMPEST is the European Project to provide a new generation of batteries needed by Europe and its key sectors. Led by RESCOLL, TEMPEST is made up by ABEE, Fraunhofer, IAAPS, the Kemijski Institute, Tekniker, the Universities of Kaunas, Patras, and Bath, Sustainable Innovations, and Albion Technologies.

This project has received €3,614,902.50 of funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No. 101103681.

Contact : Armando Serra Carles. Communications Manager.
armandoserra@sustainableinnovations.eu +34 910 06 34 20
www.sustainableinnovations.eu