



## **CIDETEC Energy Storage**

We are a research and development organization specializing in advanced battery technologies, designing, developing and testing the batteries of the future for more than 25 years.

Our activity covers the entire value chain from battery chemistry to final application. We design and develop cells, modules and battery packs tailored, with a clear commitment towards technology transfer to industry. We work in direct collaboration with leading national and international companies, including light and heavy vehicle manufacturers, the aerospace industry, battery manufacturers, energy companies and infrastructure operators. We have capabilities to test and characterize batteries, model and predict their duration with specific usage profiles, as well as to adequately size different systems, offering technological services for material validation, pilot plant manufacturing, battery engineering and testing.

CIDETEC Energy Storage has right now its headquarters in Gipuzkoa Technology Park, in Donostia-San Sebastian, where most of its staff, laboratories and unique equipment are located. But we are moving to a new location during this 2025, where CIDETEC Energy Storage will double the space available to 7000 sqm. CIDETEC Energy Storage will therefore have one of the largest centres in Europe for developing technologies around energy storage in general, and batteries in particular.



**A great technological complex**

CIDETEC is an organization for applied research that integrates three international reference institutes in the fields of Energy Storage, Surface Engineering & Nanomedicine.





MUBIL



### **CIDETEC'S role in the project:**

CIDETEC Energy Storage is the technical manager of the project and leader of the WP4: BMS algorithms and smart embedded functionalities. CIDETEC will assess 2<sup>nd</sup> life energy storage applications through the development of a diagnostic-sizing tool, which will first make a data-driven diagnosis of the state of the BS, followed by a techno-economical sizing to ensure a reliable BS exploitation in the short- and long-term use of each site. In addition, the development and validation of advanced BMS algorithms will be carried out. SOX estimators will be developed, such as the SOW, for which SOH evolution will be evaluated, or the SOS fed by early detection of risk phenomena. For this purpose, thermal runaway (TRA) and lithium – plating tests at cell level will be conducted, covering both fresh and aged cells. This way, CIDETEC will be able to contribute to the selection criteria of the modules valid for 2<sup>nd</sup> life depending on the electromobility 1<sup>st</sup> life behavior and stationary 2<sup>nd</sup> life requirements.