# Profiling the future of mobility

The various companies that form part of the Irizar Group actively participate, hand-in-hand with major European brands, in key European projects for the future of electrification of cities and public passenger transport.

These projects relate to driverless vehicles, improvements in energy storage systems, energy efficiency, standardization of charging systems, connectivity or big data, which are basic in the new generation of clean, efficient, fast, standardized and smart transportation.



### Driverless vehicles

The goal of the AUTOMOST "Dual Transport System Automatic Guidance" is to develop technologies that make it possible to automate vehicles for urban and industrial transport applications in order to significantly increase efficiency, safety and sustainability. It is financed by the CDTI (Centre for Industrial Technological Development) of the Ministry of Economy of Spain.

The demonstrator of a dual-mode bus will function as a commercial shuttle at the cruise terminal in the port of Malaga. Testing will take place during a number of months in real traffic conditions.

AUTODRIVE is a programme funded by the European Commission involving a consortium of more than 40 companies in the automotive world (Mercedes, Bosch, Infineon, VDL, Irizar, AVL, Murata, ZF, Tecnalia...)

AutoDrive brings together leading companies, suppliers, manufacturers and research centres from the European semiconductor industry to create a pan-

European ecosystem with the critical mass needed to create standards and provide components and subsystems for driverless vehicles.

The results of AutoDrive will significantly contribute to safer and more efficient mobility.

# Energy efficiency

#### EBSF2 (European Bus System Of The Future 2)

The European Bus System of the future 2 project, funded by the European Commission's H2020 program, involves the development and validation of different solutions combining the efficiency of bus systems in an organized way with the lower energy consumption of electric buses.

Currently work is taking place to demonstrate advanced energy efficiency techniques in electric vehicles (A / C system, eco-assistant and smart management of auxiliary elements). This great

European demonstrator is being used to test, among other technologies, those developed by Irizar in the area of assistance for efficient driving.

## Power storage

#### **SADE: Safe Storage Systems**

This project has been co-financed by the Ministry of Energy, Tourism and Digital Agenda as part of the National Plan for Scientific Research, Development and Technological Innovation.

The project aims to research and develop a battery-pack solution designed for the urban mobility opportunity charging strategy. The development will have a working prototype, to be validated and tested on a laboratory scale.

# Fast and intelligent vehicle charging infrastructure

# ASSURED: Fast and intelligent vehicle charging infrastructure for large vehicles

The ASSURED project proposal addresses "The integration of electric commercial vehicles into the fast-charging infrastructure" of the Green Vehicle work programme. A consortium of 40 participants from 12 EU member countries will carry out the work.

The overall objective of ASSURED is to analyse the needs of cities, operators and end users to capture the characteristics and requirements of the new generation of heavy electric vehicles (such as buses), medium-load trucks and light vehicles for operation in urban environments. This leads to cost improvements and the development of the new generation of HV charging system for electric vehicles and new innovative strategies for managing charging.

# Connectivity - Big Data

#### eFleet

Based on the premise that the electrification objectives of urban bus transport are not achievable with current technology, the Irizar Group is proposing the eFLEET project to develop technologies and strategies to create eMobility solutions (100% electric buses for public transport) that are modular, flexible and scalable to make feasible the mass deployment of medium / large fleets of electric buses, while minimizing the impact on the electricity grid and reducing initial and operating costs.

eFLEET is an important strategic challenge as it seeks to unlock the limitations of a booming market in which the Irizar Group has been positioning itself since 2011.