



IÑIGO LARMAN
Product Engineer

Irizar Group



Founded in
1889



6 Leading companies
in their sector and
22 companies of their own



11 production centres
worldwide



1 R&D Centre



3.960 people



1.072 M€ (2024)



Locations



PASSENGER
TRANSPORT

ELECTRONICS

MOTORS AND
GENERATORS

ELECTROMOBILITY

ENERGY

CONNECTIVITY

Companies in the Group

IRIZAR

Diesel, biofuel, natural gas, hybrid, biodiesel and HVO coaches, suburban segments, medium and long distance, regular, occasional and Premium services

MASATS

Electric and pneumatic door components and systems, station platform doors and PRM lifts for the road and rail transport sector

CREATIO

The Group's research and development centre created to boost their applied research and technological development capacities

IRIZAR E-MOBILITY

100% electric zero-emissions urban buses and vehicles, charging infrastructures and connectivity

ALCONZA

Permanent magnet electric motors and generators for the marine, hydraulic and industrial generator and electromobility industries

HISPACOLD

Climate control systems for buses, coaches and rail vehicles

JEMA

Power electronics, smart grids, photovoltaic, solar, multiplexed power plants, R&D and HMI electronic projects

Historic Milestones

Creation of the electromobility area



2011

Manufacturer of the first 100% electric 12 m zero-emissions bus



2013

Creation of Irizar e-mobility



2016

Implemented 3 BRT projects in France The zero-emissions vehicles are already on the road in several European cities



2019

The Irizar ie truck wins the Ecological Industrial Vehicle of the year



2021

2009



From bodywork maker to bus and coach manufacturer
Industrial diversification process

2012



Creation of the Group's R&D centre

2014



First European manufacturer in the sector to deliver two vehicles as part of the ZeEUS project

2017



Launched the Irizar ie tram Bus of the Year in Spain and Sustainable Industrial Vehicle of the Year awards

2019



Start of urban waste collection operations

2024



Introduction to the market of the Irizar ie truck NG

First Hydrogen Fuel Cell prototype

Sustainable range of Irizar vehicles



Irizar i8



Irizar i6S



Irizar i6



Irizar i4



Irizar i3



Irizar iebus



Irizar ietram



Irizar ietruck

Diésel



Híbrido



Gas Natural Comprimido



Gas Natural Licuado



Eléctrico



Hidrógeno



Irizar 100 % electric product range

 **Irizar i3**



Irizar ie bus



Irizar ie tram



Irizar ie truck



Irizar ie truck

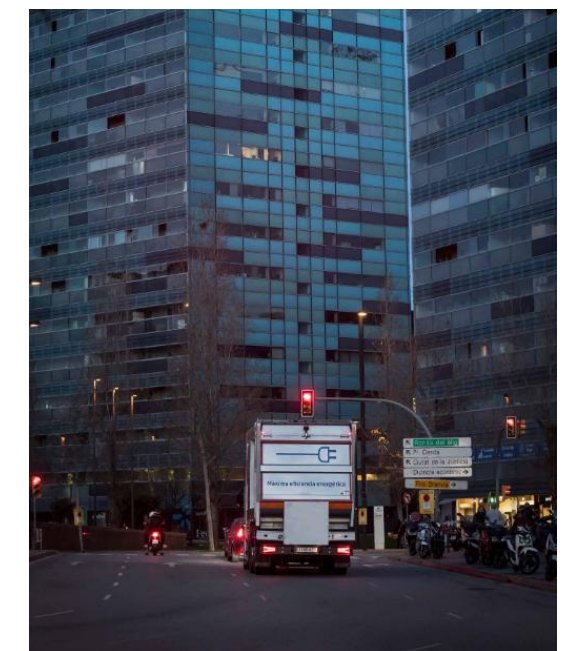
Sustainable urban waste collection



First generation



- Urban waste collection vehicles
- Operations start in 2019



2024

ieTruck NG introduction to market

- Additional applications
- Weight and size reduction
- Gen3 NMC and LFP batteries with higher capacity
- ADAS GSR2 (pedestrian radar, new camera)
- Ultra-rapid charging up to 360 kW



Irizar ietruck Sustainable urban distribution



Possible applications



Container transport



Construction waste tipper



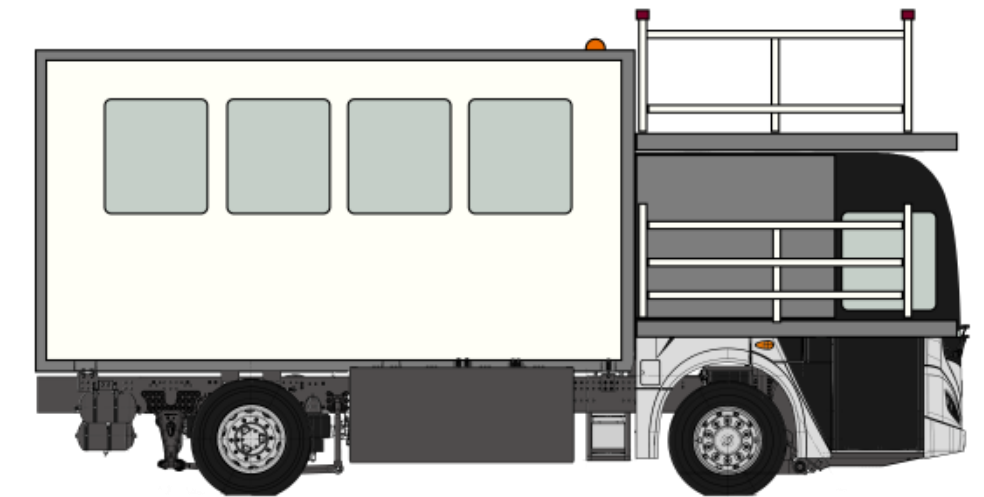
Tipper + crane



Delivery (Dry or fridge)



Water/Liquids/Fuel tank



Transport for people with reduced mobility

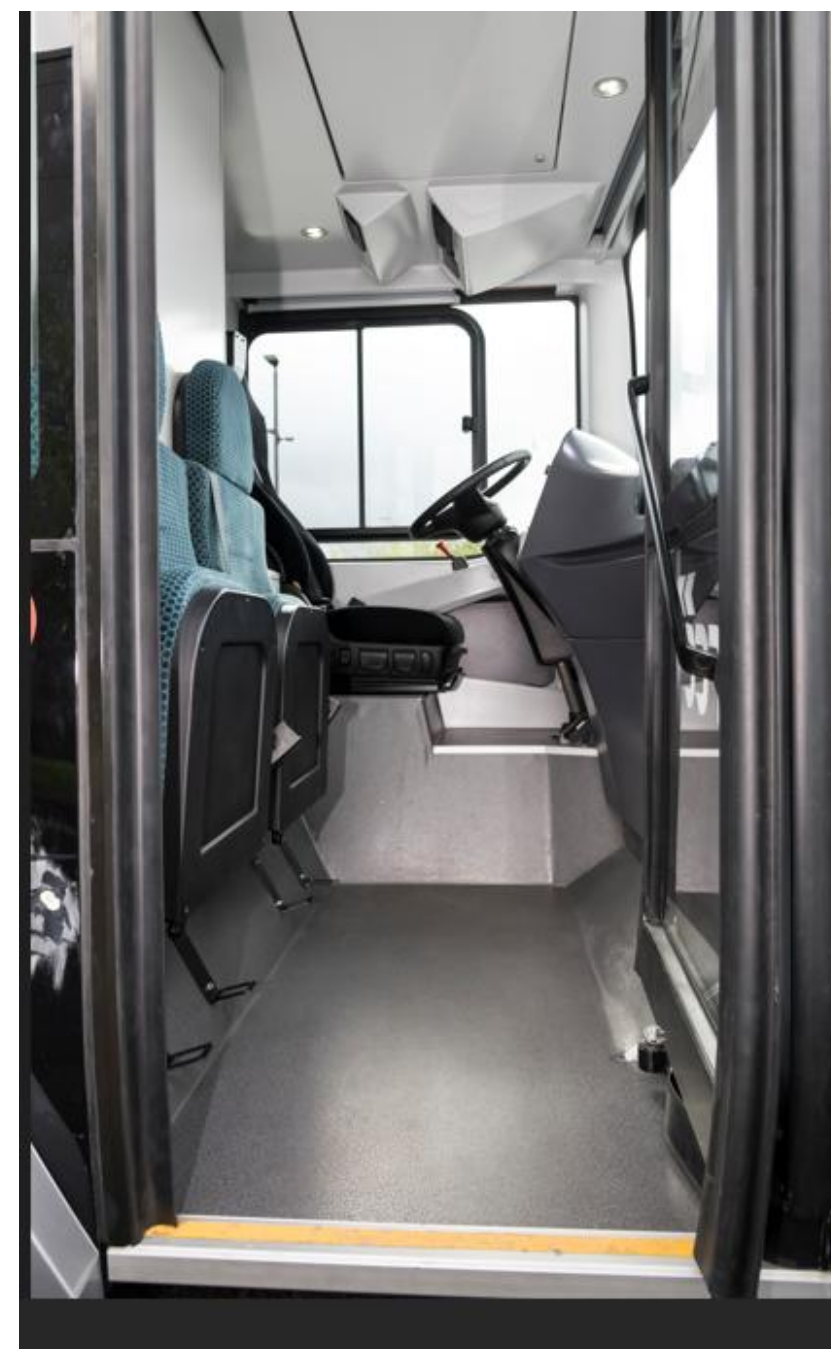


MORE ACCESSIBLE VEHICLES

Designed for urban people and settings

The floor, at 370 mm, has the **lowest access height currently on the market**, making access and movement easy for drivers and their companions.

The door opens inwards to ensure entrance and exit regardless of obstacles.



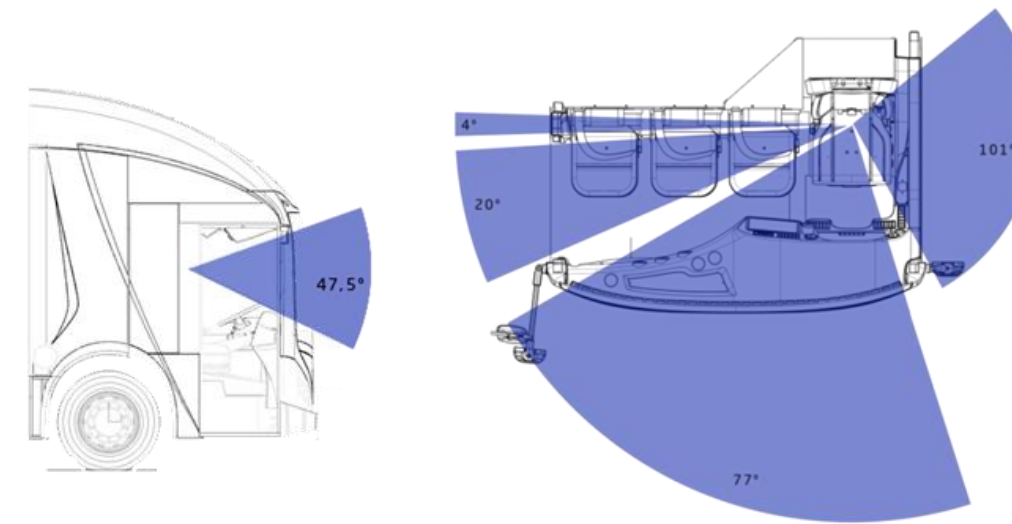
The foldaway seats leave the **aisle open and free of obstacles**.
Up to 3 passengers.

DIRECT VISION

The direct vision is unsurpassed because of the low position of the seat and the large front, side and door windows.



It ensures an optimum 202° field of vision and ergonomic accessibility to all the controls and dashboard screens.









USE CASE EXAMPLES

Paris (France) – Cooled freight transport



Oviedo (Spain) – Rear loading refuse truck



Solothurn (Switzerland) – Rear loading refuse truck





Donostia (Spain) – Lateral loading refuse truck



4x2 Dry box 15 pallets

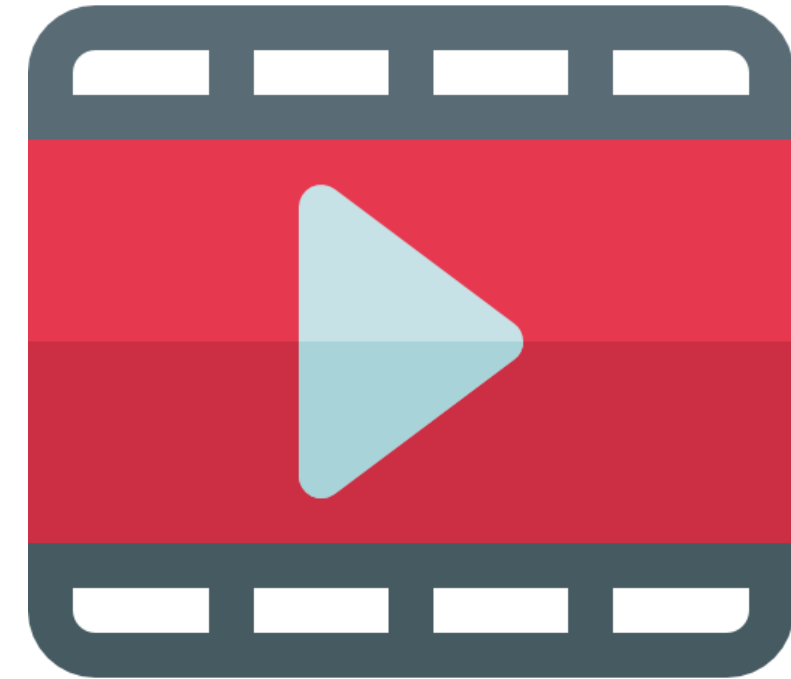


Irizar and NextETRUCK



NextETRUCK presentation video

Next
ETRUCK






Truck features

 Drivetrain: 4x2

 Category: N3

 100 % electric






 Tipper open box

 GVWR: 20 ton





New GEN3 NMC batteries

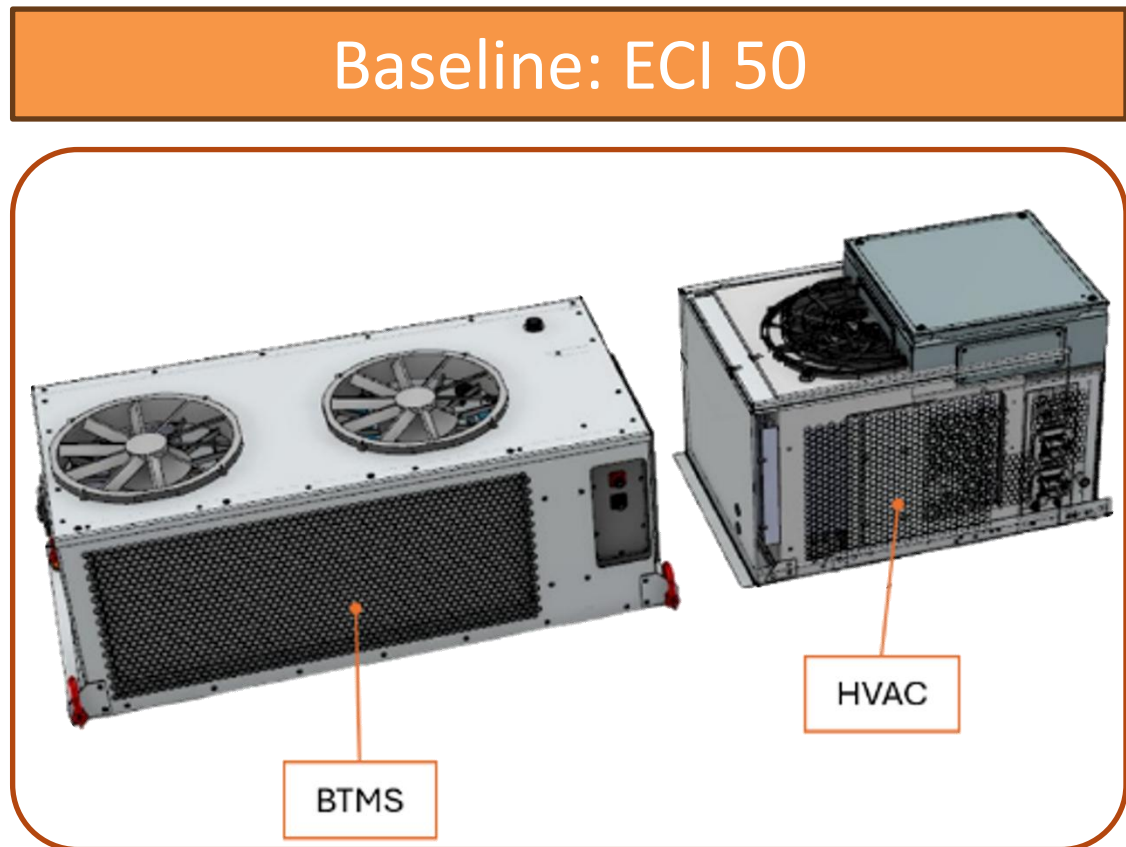
Model	Baseline	Demo	Change
 Technology	NMC 2.0	NMC 3.0	↑
 Total energy	170 kWh	307 kWh	↑ 80 %
 Energy density	121 Wh/kg	196 Wh/kg	↑ 62 %
 Nº UBP	4	3	↓ -1
 Total weight	1400 kg	1575 kg	↑ +175 kg





New HVAC-BTMS

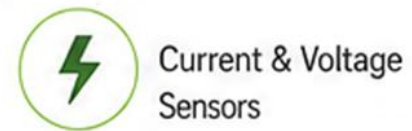
Model	Baseline	Demo	Change
 N° units	2	1	↓ -1
 N° compressors	2	1	↓ -1
 Total weight	190 kg	80 kg	↓ -58%





Digital twin for BTMS control

- 1 SMART TRUCK & IoT SENSORS
- 2 CLOUD & AI PLATFORM
- 3 BTMS CONTROL & OPTIMIZATION



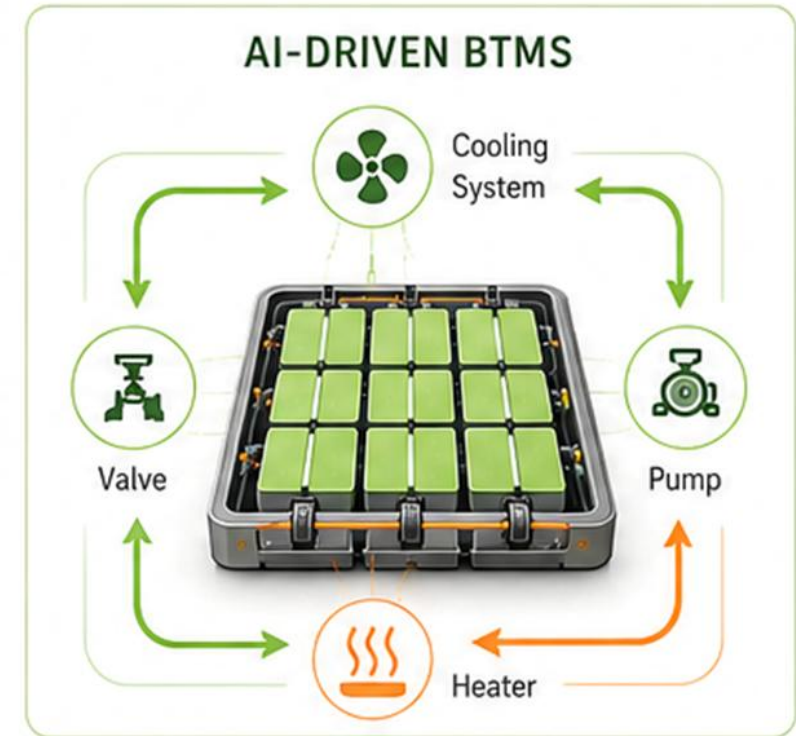
REAL-TIME DATA



INSIGHTS & CONTROL



- ✓ Predictive Analytics
- ✓ Anomaly Detection
- ✓ Thermal Prediction
- ✓ Optimal Control



OUTCOMES

- Battery Safety & Reliability
- Extended Battery Life
- Optimal Performance
- Energy Efficiency









IoT based smart navigation





New electric charger

	Model	Baseline	Demo
	Power	50 kW	180 kW
	Cloud connection	No	Yes
	Manufacturer	Jema	Jema
	Model	ECI 50	SIGMA 180

Baseline: ECI 50



Demo: SIGMA180






Operation in Barcelona

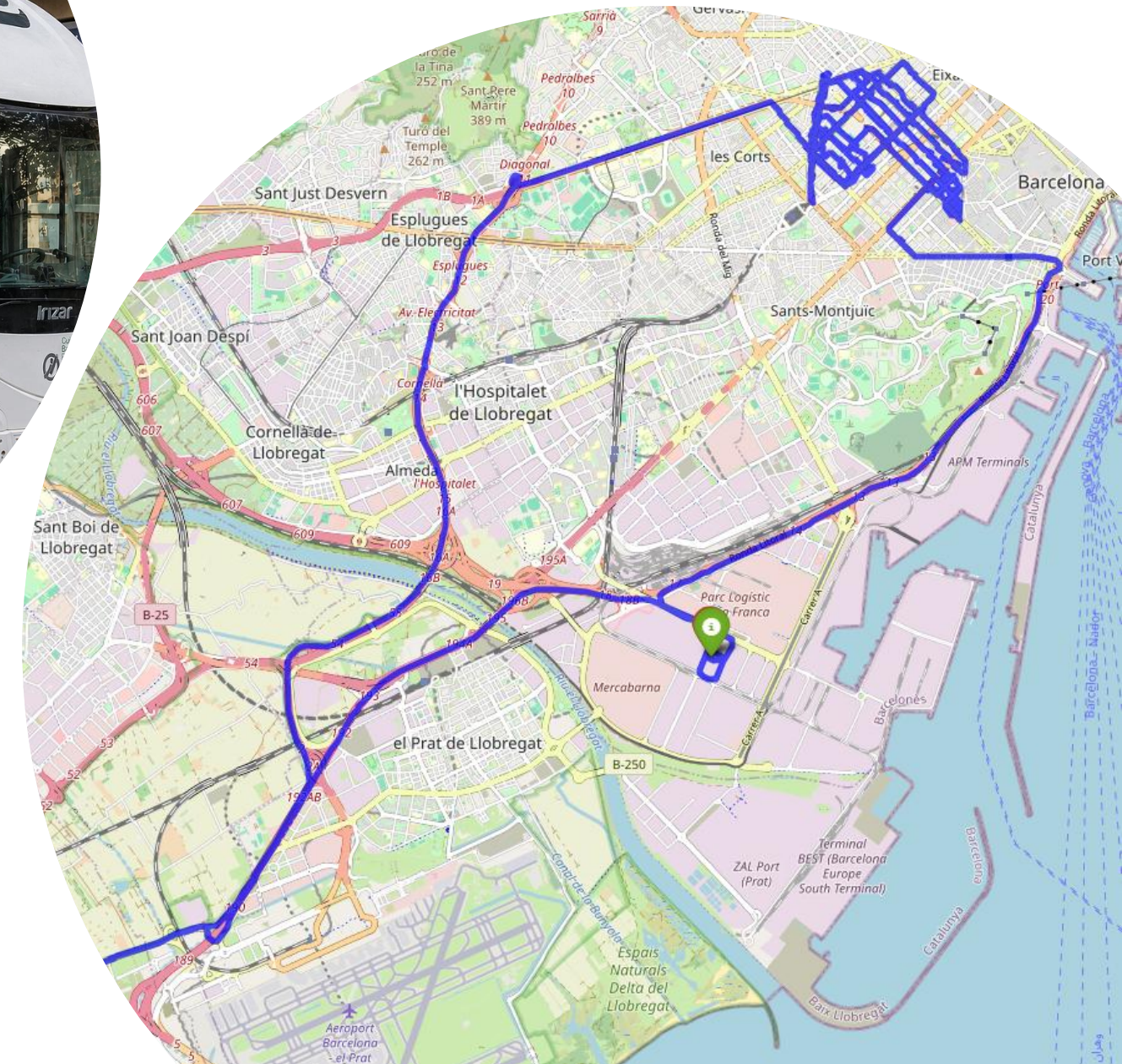
 Distance: 80 km

 Shift: Night

 Waste: Bulky

 Duration: 6 months

 Cloud data logging



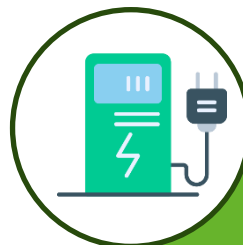


Service improvements



VEHICLE

Feature	Baseline	Demo	Change
Consumption	1,03 kWh/km	0,93 kWh/km	↓ -10 %
Range	165 km	330 km	↑ +100 %
TCO	Reference	<ul style="list-style-type: none"> • Lower energy consumption per km • Reduced maintenance: Fewer parts in HVAC-BTMS • New battery: Increased vehicle service life 	↓ -15 %



CHARGER

Model	Time charge SOC 0 – 80 %	Change
Baseline	5 h	-
Demo	1:20 h	↓ - 73 %



Lower consumption -10 %	More range +100 %	Lower TCO -15 %
-----------------------------------	-----------------------------	---------------------------



Next ETRUCK



Connect with us

Iñigo Larman

Product Engineer

Irizar

ilarman@irizar-emobility.com



@nextetruck



NextETRUCK



nextetruck.eu



Co-funded by
the European Union

