



EMT Madrid – Sustainability and Financing Strategy

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Alberto Alonso
CFO, EMT Madrid



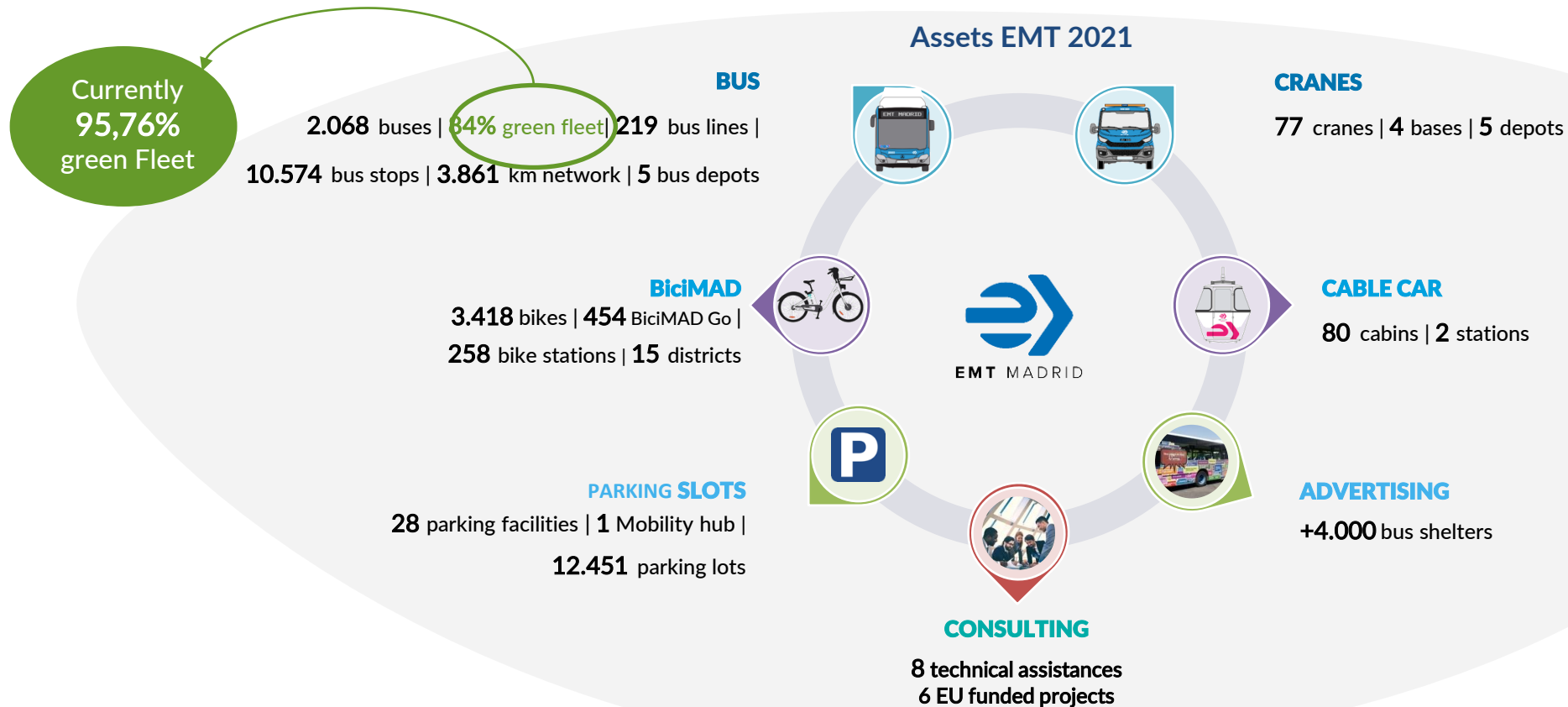
Strategic Framework for EMT Madrid 2021-2025



Strategic Framework for EMT Madrid

Main figures – Starting Point

EMT is the **reference of surface mobility** in the city of Madrid. It count with 9.816 workers, 7 business lines and 5 Operational Centers that enables the company to provide integrated, client-oriented services that foster a **sustainable and efficient mobility**.



Strategic Framework for EMT Madrid

International Roadmap transferred to the local level

Sustainable Development Goals (SDG)



European Green Deal



Next Generation Funds



Sustainability Strategy MADRID 360



Sustainability Strategy Madrid 360 reflects Madrid's commitment to:

- the SDGs and the decarbonisation objectives of the European Green Deal, and
- the reduction of carbon dioxide emissions in the city by 6.5% is marked as an outstanding objective.

EMT Madrid Strategic Plan 2021-2025



EMT Strategic Plan 2021-2025 aims to reinforce the Company as:

- the point of reference of sustainable mobility in the city,
- 100% free of diesel and with clear progress in the decarbonisation of the fleet.

Strategic Framework for EMT Madrid

Strategic Plan EMT 2021-2025

Corporate Goals

The corporate objectives characterize the general purpose in **transversal objectives** for the entire company, focused on **sustainability**, the **client**, **economic profitability** and **digital transformation**.



Move towards a **green, decarbonised company** that takes advantage of the benefits of the **circular economy**



Strengthen customer orientation with an **excellent** service of general interest



Guarantee **financial sustainability and business growth** through **new businesses and services**

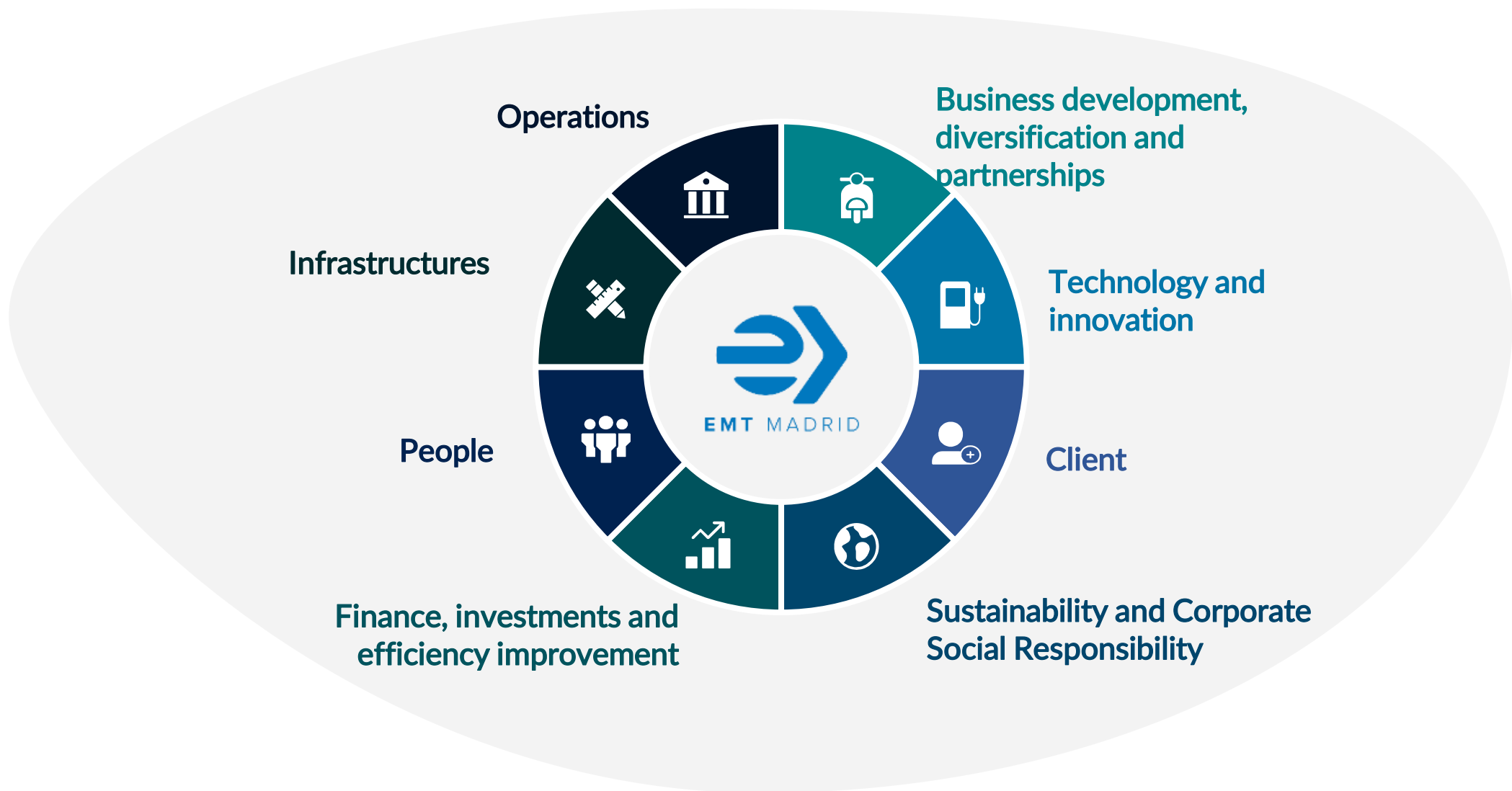


Promote the **digital transformation** of EMT and the improvement of **efficiency** in the provision of mobility services



Strategic Framework for EMT Madrid

Strategic Axes



Strategic Framework for EMT Madrid

Strategic Plan EMT 2021-2025

Investment planned: € 1.000M for the next 5 years



534M €
Buses acquisition



131M €
Construction



158M €
Installations



177M €
Other investments

| | 2021 | 2022 | 2023 | 2024 | 2025 | TOTAL |
|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|
| Buses acquisition | 112.132.900 | 108.584.200 | 81.403.900 | 116.284.200 | 116.284.200 | 534.689.400 |
| Premises | 200.000 | 17.692.900 | 45.155.800 | 52.655.800 | 16.050.000 | 131.754.500 |
| Industrial Infrastructure | 4.124.744 | 29.523.188 | 50.675.800 | 55.255.800 | 18.650.000 | 158.229.532 |
| Other investments | 25.362.310 | 59.719.861 | 45.038.420 | 23.000.495 | 24.064.208 | 177.185.292 |
| TOTAL INVESTMENT | 141.819.954 | 215.520.148 | 222.273.920 | 247.196.295 | 175.048.408 | 1.001.858.724 |

Strategic Framework for EMT Madrid

Main Reference Indicators

Sustainability and city structuring



% Electric Fleet

8.5%  25.2%

Buses (2021)

Buses (2025)

Which represents an increase of 477%



Reduction in tons of NOx emitted

200  40

Tn NOx (2021)

Tn NOx (2025)

Which represents a reduction of 80%



m2 of solar panels installed

1,430  42,220

m2 (2021)

m2 (2025)

With an installed capacity equivalent to 1,000 single-family homes*



Millions of travellers

440M  463M

(2019)

(2025, optimistic scenario)

Which represents an increase of 2.7%



Total investment

+1,000 M€

(2021-2025)

534M € Buses Acquisition

290M € Constructions and installations

177M € Other investments

Note: Assuming an average contracted power of 6.6KW, IDAE.

Strategic Framework for EMT Madrid

New business for the city

A series of **business diversification** opportunities have been detected in the transport and mobility sector, aimed at sustainability, digitization, connectivity and improving the customer experience aligned with the goals of the city Sustainability Strategy Madrid 360.



New services in car parks: shared mobility, logistics, storage, washing service



Sustainable energy sources: renewal of fleets to achieve zero emissions



Mobility as a Service: integration of different modes for personalized mobility



On-demand services: public transport with punctual demand



Mobility Hubs: services in one place, intermodality



Bicycles and other micromobility: a more sustainable and convenient mobility



Alliances for last mile delivery: logistics centers for distribution and parcel delivery



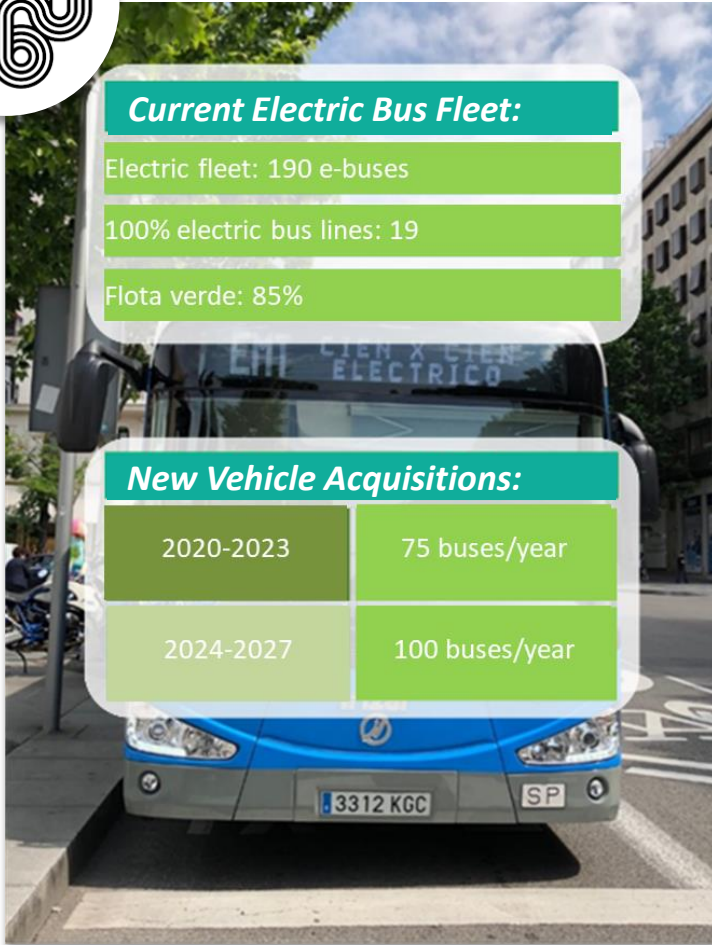
Connected bus: tests in urban sceneries



Bus Service Transformation at EMT Madrid



Bus Service Transformation at EMT Madrid



Fleet Transformation

Evolution of the EMT Madrid fleet: Forecast by fuel type

| Fuel | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Diesel | 388 | 196 | | | | | | |
| NGC | 1.552 | 1.678 | 1.829 | 1.744 | 1.661 | 1.561 | 1.451 | 1.351 |
| Hybrid | 47 | 47 | 17 | 17 | | | | |
| Hydrogen | | | | 10 | 10 | 10 | 20 | 20 |
| Electric | 81 | 179 | 254 | 329 | 429 | 529 | 629 | 729 |
| Total | 2.068 | 2.100 | 2.100 | 2.100 | 2.100 | 2.100 | 2.100 | 2.100 |
| % Electric fleet | 3,9% | 8,5% | 12,1% | 15,7% | 20,4% | 25,2% | 30,0% | 34,7% |

Evolution of the composition of the EMT bus fleet at the end of the year (units).

Bus Service Transformation at EMT Madrid

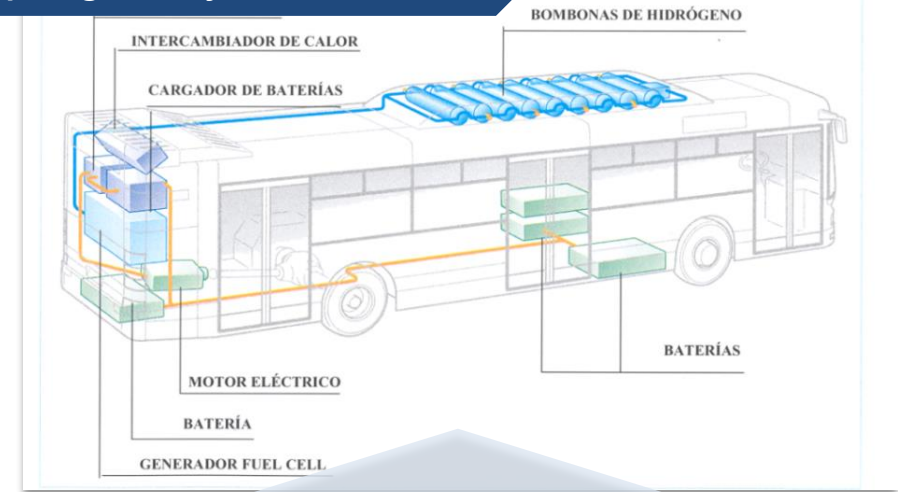
Fleet Transformation

Biogas Project



- **Circular Economy Project:** energy generated from organic waste from Madrid (Agreement EMT - Valdemingómez Technology Park)
 - EMT Madrid acquires renewable gas (biomethane)
 - 6 GWh of biomethane per year for EMT's CNG fleet.
 - Supply equivalent to the one needed by the circular line C1 (20 buses / 1 million kilometers traveled / 4.43 million passengers transported in 2021).
- Initial term: until December 31, 2023 (annual extensions)

Hydrogen Project



- ✓ Acquisition and commissioning of **10 Fuel Cell buses** in the EMT operation
- ✓ Investment of **€7,74 million** (Next Gen funding of €2,7 million under evaluation)
- ✓ Tender in process, planned acquisition: December 2023

Bus Service Transformation at EMT Madrid

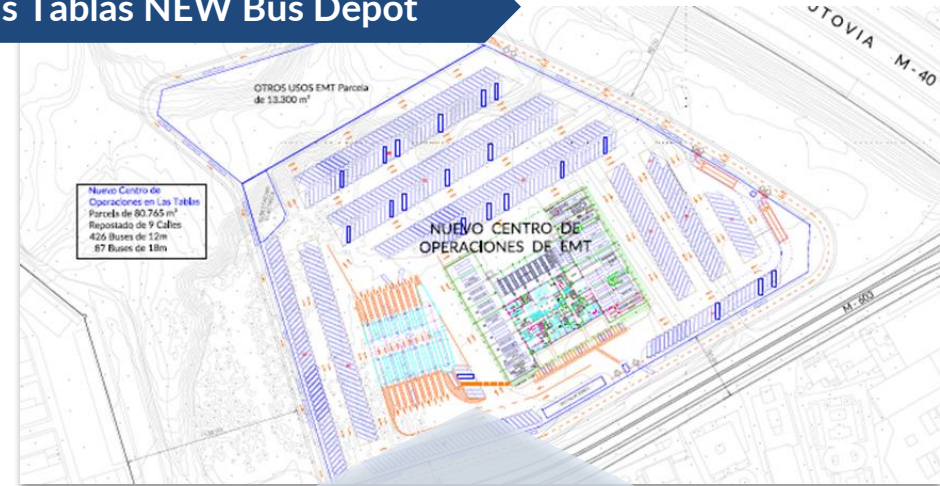
Infrastructure Transformation

La Elipa NEW Bus Depot



- ✓ Parking capacity for **318 buses**
- ✓ **100% electric fleet**
- ✓ Covered Depot, with photovoltaic installations
- ✓ Bus e-charging system through inverted pantographs.
- ✓ Execution in 2 fiscal years.
- ✓ Investment of **€127 million**.

Las Tablas NEW Bus Depot



- ✓ Design of 9,200 m2 with a “H” shaped building
- ✓ **100% low emission fleet** (electric and CNG)
- ✓ Parking capacity for 513 buses
- ✓ E-charging system by inverted pantograph and photovoltaic cover
- ✓ The use of photocatalytic materials for the roof of the garage building, to reduce greenhouse gas emissions.
- ✓ Investment of **€150 million**.

Bus Service Transformation at EMT Madrid



Infrastructure transformation

Hydrogen station construction



- ✓ **Hydrogen station for 10 buses** in the Entrevías Depot
- ✓ Photovoltaic panels on roofs for the production of 2 Mwh
- ✓ Hydrogen production equipment by electrolysis with the capacity to produce up to 18 kg of h₂/h (73 ton h₂/year)
- ✓ Maximum storage system of 1,013 kg of h₂
- ✓ Date for operation: December/2023
- ✓ **Total investment: €17.2 million** (including buses)

C.O. Carabanchel Depot electrification



- ✓ Infrastructure for 170 pantographs
- ✓ Acquisition of 170 pantographs
- ✓ Infrastructure and acquisition for cable charging points
- ✓ Smart charging system
- ✓ **Total investment: €20.5 million**

Photovoltaic installations



- ✓ For all depots (5).
- ✓ Total surfaces of 42,000 m²
- ✓ Savings of 6,135 thousand kWh/year
- ✓ Avoiding the emission of 1,533 tons of CO₂/year
- ✓ **Total investment: €8.6 million**

Bus Service Transformation at EMT Madrid

Concept Bus & Autonomous Bus

Concept Bus

- The Concept Bus is an **open competition of ideas** that seeks to design the **bus of the future**.
- It is a **design-driven initiative**, launched on September 27th 2022.
- A full-scale prototype will be placed in Madrid's streets in order to gather **inputs and engagement from the citizens** and serve as a test-bed of innovation and maturity of the solution.

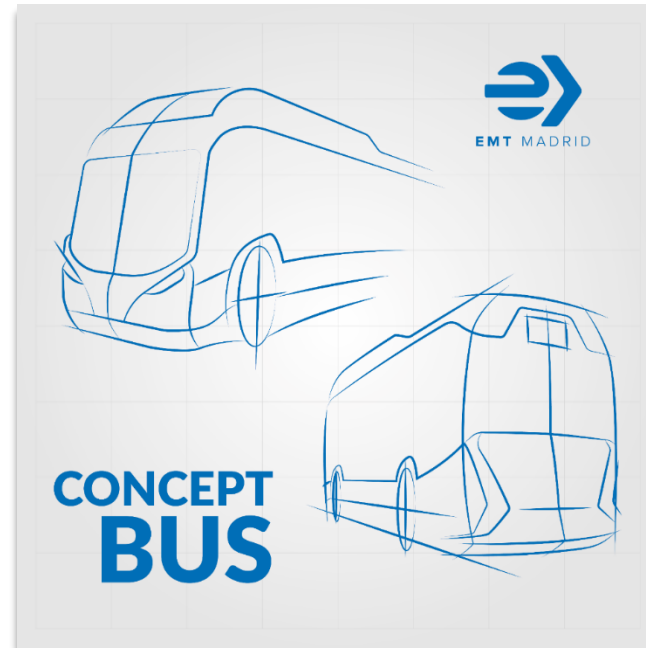
Autonomous Bus



New-generation buses

Deadline: December 2022

*We encourage you
to participate!*



**Public transport as an
image-booster for cities**



Thanks!

alberto.alonso@emtmadrid.es
@EMTMadrid