

# 2024 Annual summary



# 2024

# **Facts and figures**



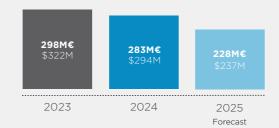
/isit COMSA Corporación website

# Sales

Million Euros Million Dollars



# International sales



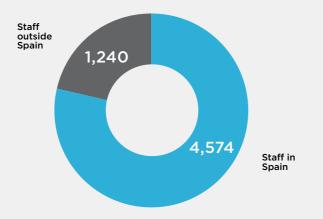
# **Confirmed orders**

TOTAL: 2,020M€ \$2 098M



**Staff** 

TOTAL: 5,814 staff



# International certifications







# International sustainability certifications





Design (LEED)





মCDP





# We build a sustainable future

COMSA Corporación is a leading global group in infrastructure development, industrial engineering and services which offers society its more than 130 years of experience in the development of large-scale and highly technological projects, always following the highest quality standards and a profound respect for the environment. The group exports its know-how in infrastructure construction and maintenance all over the world, and has a consolidated presence in international markets, especially in Latin America and Europe.

Firmly committed to sustainability, responsible growth, and the territorial cohesion of the countries in which it operates, the group strives to provide value-added solutions in which innovation plays a fundamental role as a driver of growth and in the generation of sustainable solutions.

For this reason, the group's business strategy is aligned with the Global Compact and contributes to the achievement of the SDGs established by the United Nations.

The company's strategy to position itself as a reference in the sector focuses on promoting synergies between its different business lines so as to provide its customers with a comprehensive service with turnkey and high added value solutions.

Thus, with the aim of satisfying the needs of its clients. COMSA Corporación bases its excellence on the professionalism and talent of its human team, on the search for new opportunities and on the commitment to provide the best solutions to each client, carrying out projects with the highest quality standards.

# Index

# **Areas of activity**

Construction

Industrial engineering

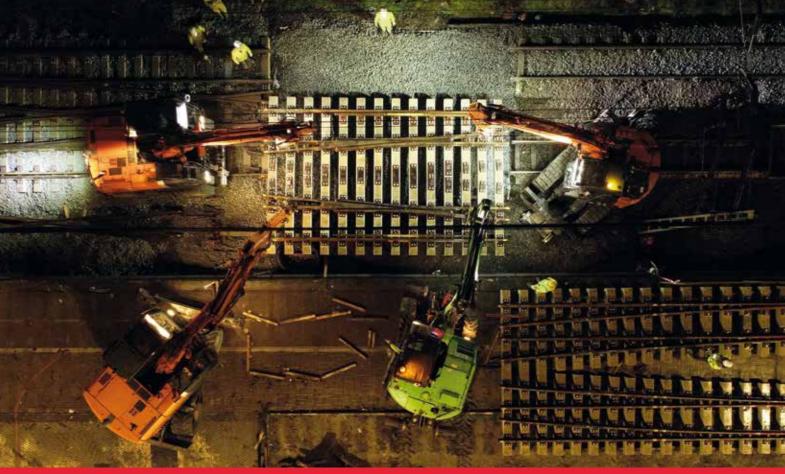
Maintenance, conservation and services

Railway machinery management

Infrastructure concession and promotion of renewable energies Innovation R&D+i

Sustainability





# Construction



COMSA specialises in turnkey railway projects in the construction and maintenance sector of high-speed lines, trams, metropolitan and regional railways. The company also implements civil work projects such as roads, tunnels and bridges, as well as hydraulic, port and airport projects as well as singular buildings.

COMSA is a leading construction company in Spain which, throughout its history, has also established a solid international presence in markets such as Portugal, Mexico, Colombia and Brazil, among others.

Photo on the left: New railway access to terminal T1 at Barcelona-El Prat Airport.

Photo above: Construction of the track superstructure of the Lugaritz - Easo section and Morlans connection of the Donostia Metro, Topo.



For further information











# **Railway infrastructures**



### Spain

Rail surfacing services on the high-speed, conventional gauge and metric gauge networks.

Extension of the Puebla de San Julián bypass, part of the new Ourense -Monforte de Lemos - Lugo high-speed line.

Integral improvement of the infrastructure of the Yeles - Guadalmez section of the Madrid - Seville high-speed line.

Remodelling of tracks and platforms at Puertollano station, on the Madrid - Seville high-speed line.

Maintenance of infrastructure, tracks, switches and crossings on the Madrid-South high-speed line (Mora and Calatrava bases)

Maintenance of infrastructure, tracks, switches and crossings on the Madrid-Northeast high-speed line (Brihuega and Calatayud bases).

Deployment of second track between Renedo and Guarnizo on the Cercanías line between Torrelavega and Santander. The track duplication works on the Renedo-Guarnizo section are part of the improvements to the Palencia-Santander Axis included in the Cantabria Suburban Railway Plan. The construction project includes all the platform, track and electrification works required for the implementation of an electrified double track. The execution of these works has significantly increased the circulation capacity for both the

Underground excavation of the Barcelona R2 commuter line through the town of Montcada i Reixac (Barcelona) and construction of the new station in the municipality. **BIM** 

New railway access to terminal T1 of Barcelona-FI Prat Airport

Duplication of standard gauge track north of Valladolid Campogrande station to the Valladolid-Variante Este north junction. Infrastructure, track and electrification.

Emergency works for the refurbishment of the track superstructure and electrification in different areas of the section between the Valencia Sud exit and Castelló on the Metrovalencia (FGV) railway network, due to the impact of the Dana floods.

Works for the recovery of the C1 and C2 lines of Valencia Cercanías, managed by Adif, after the impact of the Dana floods. Section between Alfafar and Benifaió stations.

Construction of sector 3 of the Mondragón, Elorrio and Bergara branch line corresponding to the Basque high-speed railway (Y Vasca).

Bergara junction is considered the 'heart of the Y Vasca', since t is the point where the three branches of the railway line that will connect the Basque Country to the high-speed rail network converge. It is a major axis within the infrastructure, since it allows the line to branch off and connect to the three Basque capitals: Vitoria/Gasteiz, Donostia/San Sebastián and Bilbao. This project represents a major technical and engineering challenge, since it consists of a series of tunnels and viaducts in which the infrastructure bypasses the complex orography and geography of the area in a setting with maximum respect for the

Construction of the viaduct for the Barcelona - Mataró - Maçanet Massanes railway line over the future Port de Badalona canal

Construction of the access to the railway network in Villadangos del Páramo in León.

Vegetation control services on conventional and metric gauge lines on the north-eastern rail network.

Construction of a new underpass at Cantillana station. Seville.

Refurbishment of the San Pablo -Almoraima section of the Bobadilla -Algeciras line.

Construction of a train depot in Zumaia, Gipuzkoa.

Track duplication on the R-3 suburban line between Parets del Vallès and La Garriga, in the province of Barcelona.





Completion of track refurbishment on the Monforte de Lemos - Lugo section.

Infrastructure renewal on the Monforte - Ourense section.

Track renewal on the Pobla Llarga - Silla section of the Valencia Cercanías network.

Track renewal on the Brazatortas -Guadalmez section of the Ciudad Real -Badajoz line.

Complete track refurbishment on the Colloto - Infiesto section of the metric gauge network in Asturias.

Rail refurbishment on the tracks of the Perthús Tunnel on the Figueres -Perpignan line.

Infrastructure and track maintenance for Adif's conventional and metric gauge lines in the northwest, north and east sectors.

Mechanised maintenance and track works on ETS railway lines.

Construction of the track superstructure for the Lugaritz - Easo section and Morlans connection of the Donostia Metro, Topo.

Construction of the Galdakao - Hospital section of the new Line 5 of Metro Bilbao.

Extension of line M1 of the Palma de Mallorca Metro, from the UIB station to Parc Bit.

Tunnelling works on the central section of Line 9 of Barcelona Metro.

Track refurbishment project and works on line 4 section of the Barcelona Metro between Maragall and Trinitat Nova stations.

Comprehensive refurbishment of the track between the Cornellà Centre and Ernest Lluch stations on Line 5 of the Barcelona Metro.

Improvement works on Line 2 of Barcelona Metro, between La Pau and Clot stations.

Maintenance of the railway superstructure on all Barcelona Metro lines.

Partial remodelling works on the Sacedal depot on Line 9 of Metro Madrid.

Rail refurbishment in the southern and eastern areas of the Metro Madrid network.

Comprehensive refurbishment of the track superstructure between Laguna and Avenida de América stations on line 6 of Metro Madrid.

Maintenance of a tertiary element of the Metro Madrid network.

Refurbishment of turnouts and level crossings on the Valencia Sud - Villanueva de Castellón section of Metrovalencia Line 1.

Rail refurbishment on Metrotenerife lines 1 and 2.

Remodelling and extension of the Chamartín station concourse and construction of four additional tracks for high-speed trains. **BIM**  Execution of the construction project for the implementation of the 4+4+2 track layout at the Atocha commuter train station in Madrid.

Remodelling of Atotxa station in San Sebastian. **BIM** 

Remodelling of Amurrio, Lezo - Rentería and Herrera stations on Adif lines in the Basque Country.

Modernisation of Mendaro station and renovation of the Ariz depot tracks on ETS lines, in Gipuzkoa.

Comprehensive refurbishment of Bidebieta-Basauri station, in Bizkaia.

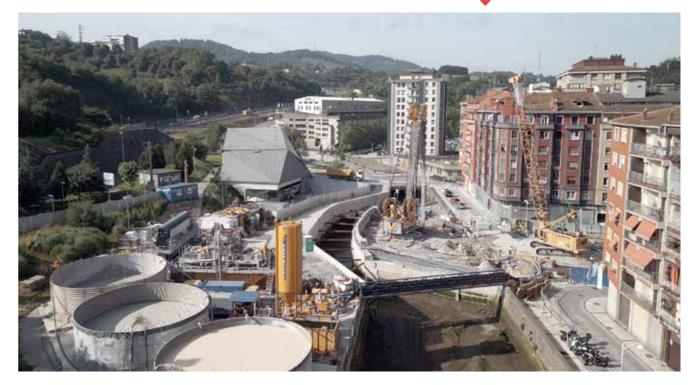
Extension of the sidings at Campillos (Malaga) and Setenil de las Bodegas (Cadiz) stations on the Bobadilla - Ronda section of the Bobadilla - Algeciras line.

Execution of the superstructure for the underground construction of the Langreo Tunnel, on the Laviana - Gijón metric gauge line.

1 Mandri Tunnel breakthrough on L9 of Barcelona Metro.

# Works on the Altza - Galtzaraborda section of the Donostia Metro.

The construction of the Topo bypass between Altza and Galtzaraborda includes the construction of a new 2 km tunnel section, the construction of a new underground station in the centre of Pasaia and the integration of the new line in the Galtzaraborda station. This project will transform mobility in the area, improving commuter trips to the Donostia city centre.



1 Construction - Railway infrastructures 1



Construction of the new emergency exits in the tunnels of the Vitoria - Bilbao section of the high-speed line.

Repair of emergency exits in the Meagas Tunnel in Donostia.

Tunnel repairs in the Jaca - Canfranc line, in Huesca.

Reinforcement of the lining of the Gorosmendi tunnel in Gipuzkoa.

Extension of the final track section at the Valliniello quay in the Port of Avilés in

Construction of the railway access to the North Quay of the Port of Gijón.

Construction of the new railway siding at the Industrial Logistics Platform Salvaterra de Miño as Neves (PLISAN) at the Port of Vigo in Asturias.

Refurbishment of the north track of the Raos central breakwater in the Port of Santander.

# Construction of the AVE highspeed train station at La Sagrera (Barcelona).

Designed to become a large-scale transport hub of Barcelona, it will connect high-speed, suburban and metro lines as well as buses, among other means of transport COMSA is participating in the execution of this innovative the central roof of the future intermodal terminal, a pioneer engineering framework structured in 8 modules in the shape of an inverted pyramid that constitutes a revolution in the construction of railway stations in Spain. This project will transform mobility in Barcelona, boosting the city's urban and economic development.

# Completion of the Barcelona tramway link along Diagonal, between Glòries and Verdaguer.

It represents a further step towards sustainable mobility in the city. The new route has an APS surface power supply system, which eliminates overhea catenaries.

### Construction of the Guadalajara-Marchamalo Railway Terminal in the Port of Tarragona.

The new Intermodal Terminal of the Ciudad del Transporte in Marchamalo (Guadalajara), will become the main dry port in the peninsular centre. A total of 7,750 metres of Iberian gauge track will be built and 100,000 square metres will be paved for operations and goods storage.

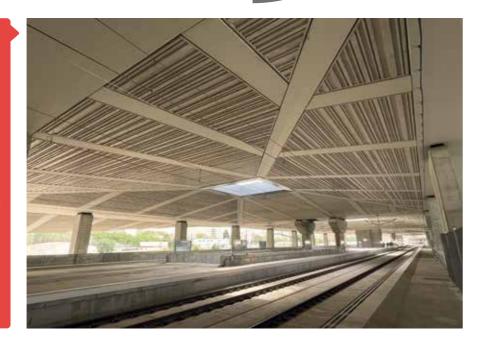


Procurement of the safety certificate for operations as a railway operator.

Addition of 3 state-of-the-art universal tamping machines and 1 locomotive for rail transport for the machinery fleet



The 2022-2025 railway machinery renewal plan entails an investment of over 40 million euros.





# Section 5 North of the Mayan Train.

COMSA is firmly committed to infrastructure development in Mexico. The company has carried out track assembly works on section 5 North (Playa del Carmen - Cancun) of the Mayan Train, a key project for improving connectivity in the southeast region of the country and boosting the development of the local economy.

### Renovation of the Beira Alta line, Pampilhosa-Santa Comba São section and construction of the Mealhada bypass.

COMSA and FERGRUPO are executing the renovation project of the Pampilhosa - Santa Comba Dão section of the Beira Alta line, which also includes the construction of the Mealhada bypass. This new rail link, in addition to ensuring the modernisation of the line, will enhance the north-south rail connection, thereby increasing the Portuguese rail network's management capacity.



### Portuga

Expansion project for the Lisbon Metro Yellow and Green lines.

Refurbishment of the track superstructure of the Vouga line.

Cascais line track and catenary modernisation project.

Completion of the new railway section between Évora Norte and Freixo.

Construction of the Mondego Metrobus section between Serpins and Alto de São João.

Excavation and buttressing works for the Ramales section tunnel, part of the future Oporto Metro Circular Line.

Acquisition of services to carry out corrective rail grinding on the national railway network.

Acquisition of services for catenary and track maintenance for the operational maintenance centres in the northern and central areas.

# Mexico

Refurbishment of several sections of Line Z of the Tehuantepec Isthmus Railway.

Refurbishment and maintenance of tracks and systems on Line 1 of the Mexico City Metro.

Track Refurbishment of the Velódromo -Pantitlán section of Line 9 of the Mexico City Metro.

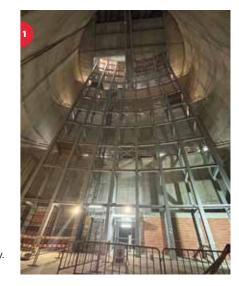


### Croatia

Completion of the remodelling project of the railway between Vinkovci and Vukocar.

### Colombia

Maintenance, preservation and improvement of the La Dorada - Chiriquaná railway corridor.







Find out about COMSA Corporación's railway specialisation here.

- 1 Lisbon metro works.
- 2 Catenary maintenance works in Portugal.
- **3** Works on the Mexico City Metro.

1 Construction - Specialised civil works 1

# Railway electrification

### Spain

Electrification of the new railway terminal in Marchamalo, Guadalajara.

Electrification of the new viaduct over the future Badalona port canal on the Barcelona - Mataró - Maçanet Massanes railway line.

Electrification of the access to the railway network in Villadangos del Páramo, León.

Completed construction project for the overhead contact line on the La Robla - Campomanes section of the León - Asturias high-speed line (Pajares Bypass).

Maintenance of overhead contact lines, substations, stations and associated FGV systems in Alicante.

Preventive and corrective maintenance as well as auxiliary works on electrification facilities (overhead contact lines, traction substations and high voltage lines) on Adif's conventional north-western subdirectorate.

Comprehensive refurbishment of the catenary between Maçanet and Caldes de Malavella, in Girona.

Electrification works for the new Atotxa station in San Sebastian.

Construction of the new Guarnizo traction substation in Cantabria.

Completion of construction works

### **Portuga**

Catendary refurbishment on the Cascais line.

Electrification of the Algarve railway line, Tunes - Lagos sector.

## Croatia

Electrification of the railway section between Vinkovci and Vukovar.



# Catenary refurbishment in the railway access to T1 at Barcelona-El Prat Airport.

t will boost public transport mobility in the Barcelona metropolitan area, establishing 19-minute trips between the T1 and Sants stations. The execution of this project includes the connection to the Iberian gauge /ilanova line at El Prat, the track assembly and the electrification system, among other works. The route, with double track and a total ength of 4,510 metres, extends to terminal T1, with an intermediate stop at terminal T2, where it will connect to line 9 of Metro de Barcelona.

# **Specialised civil works**

on the B-40 dual carriageway between Abrera and Viladecavalls in the province of Barcelona. The entry into service of the new 6.2 km section of the B-40 dual carriageway between Olesa de Montserrat and Viladecavalls will boost industrial and business growth in the area, while also channelling long-distance traffic and connecting to routes integrated into the State Road Network, such as the A-2 dual carriageway and the AP-7 motorway. The project included the construction of the tunnel between Abrera and Viladecavalls. with electrical and mechanical installations and the commissioning of the ITS systems.

### Spain

Extension of the Baix Llobregat dual carriageway, which will link the Ronda Litoral (B-10) to the Castelldefels motorway (C-32) in the province of Barcelona.

Refurbishment of the Pontevedra Norte junction of the AP-9 motorway, known as the 'Firemen's Junction'.

Refurbishment of the bridge over the Cubas estuary on the CA-141 road between Somo and Pedreña in Cantabria.



Adaptation of the breakwaters on the west side of the Port of Santoña in Cantabria.

Extension of the Castro Urdiales breakwater in Cantabria.

New promenade in the northern area of Puerto de Sagunto. **BIM** 

Duplication of the Ebro Motorway (A-68) section between El Burgo de Ebro and Fuentes de Ebro.

Construction of the access bypass to the port of Tazacorte in La Palma.

Construction of the San Lorenzo Sports Technification Centre in Las Palmas de Gran Canaria.

Construction of noise protection barriers based on the action plans against noise in Madrid and Castilla-La Mancha.

Works to upgrade the tunnels at Fabares, Villaviciosa, Deva, Infanzón, Cefontes, Brañaviella and Niévares in the province of Asturias.



# New intermodal terminal in A Coruña.

The A Coruña intermodal terminal will be a modern and efficient infrastructure at the service of the Galician territory. COMSA is participating in the construction of the bus station, which also includes works on the car park to increase the number of parking spaces and expand the terminal's capacity.





# Mexico

Refurbishment of the Los Fresnos - Ocotlán section of the Maravatío -Zapotlanejo motorway.

Modernisation and extension project of the Ecuandureo - La Piedad section of the Western Road Network.

### **Brazil**

Completion of the Belém integrated transport system, known as BRT Metropolitano.

Construction of a bridge over the Araguaia River and its accesses on the BR-080 road. **BIM** 

Duplication of the BR-101 motorway between the municipalities of Rio Largo, São Miguel dos Campos and Teotônio Vilela

# Sweden

Completion of the Ekerö road 261 project, including the construction of a mobile swing bridge and width extension works for a 2.3 km section of the road between the towns of Ekerö and Lindö.

Design and construction of two access tunnels to the Stockholm ring road on the E4 motorway at Skärholmen. 1 New promenade in Puerto de Sagunto,

**2** Extension of the Baix Llobregat motorway in Barcelona.

# BRT works in Brasilia.

COMSA has made major progress in the implementation of the Bus Rapid Transit (BRT) lane in Brasilia. The project includes the construction of an exclusive bus lane, 8 viaducts, 14 stations and 3 pedestrian underpasses, as well as a new bicycle lane and the improvement of the public lighting network, among other elements. This project will not only improve the efficiency of public transport in Brasilia but will also facilitate the daily mobility of thousands of citizens contributing to a more connected and sustainable city.



1 Construction Construction

# **Hydraulic works**

## **Spain**

Works on the sewer drains project for the drainage of the upper basin of the river Nervión, Araba.

Completion of the irrigation conversion project in sector XVII of Payuelos, Leon.

Rainwater regulatory tank for Rambla Prim in Barcelona.

Construction project for the Salmorras collector of the Llobregat basin in the final section that extends to El Prat de Llobregat, Barcelona.

Execution of the building for a new refrigeration plant in the Parc del Poblenou area for the 'Bogatell Plant' project in Barcelona.

Construction of the Torrefarrera and Torre-Serona (Segrià) drains system and water treatment plant, Lleida.

Work projects on the WWTP and upstream drains in Riba-Roja de Ebro, Tarragona.

Improvement of the water evacuation system in El Endrinal, section B5, Canal de Isabel II, Salamanca.

### Croatia

Extension and refurbishment of the Metković drainage and supply network.



New tank at the Trinitat distribution station, Barcelona. The refurbishment of the water tank at elevation 70 at the Trinitat distribution station is essential to guarantee the water supply to different parts of Barcelona. With a storage capacity of 14,100 cubic metres, it ensures the supply to the city at all times. COMSA's intervention, based on BIM methodology, shall enhance Catalonia's water network, optimising distribution and increasing the system's resilience in the face of drought scenarios.

# **Building**

### Spair

Works below ground level, structure and roof of the new Zero pavilion at Fira de Barcelona **BIM** 

Comprehensive refurbishment of the Abaceria Central market in Barcelona.

Construction of the new outpatient building at the Arnau de Vilanova Hospital in Lleida. **BIM** 

Refurbishment of the Koldo Mitxelena Kulturunea building in Donostia, which will reopen as a cultural centre.

Inauguration of the new Mossos d'Esquadra police station building in La Jonquera, Girona.

Refurbishment of the Ourense - San Francisco station building to house the new Ourense Regulation and Control Centre.

New multi-service centre for long-term care for the elderly in Zamora.

New building for tertiary use in the Port of Pasaia, Gipuzkoa.

New industrial warehouse for Alstom in Santa Perpètua, Barcelona.

Construction of the Border Inspection Point (BIP) at the Port of Las Palmas.

Adaptation and improvement of the office and technical building in the Adif logistics complex in Villaverde, Madrid.

Comprehensive refurbishment of the building located at Calle Cardenal Herrera Oria 3 to change its use into training classrooms in Madrid.

Structural refurbishment of the Palacio de la Tinta in Malaga, which will be converted into a 5-star hotel. **BIM** 

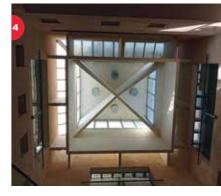




New building for the Joan XXIII Hospital in Tarragona.
COMSA and COMSA Industrial are participating in the refurbishment of the Joan XXIII Hospital in Tarragona, the largest public healthcare centre in southern Catalonia. The project includes the construction of the new main CORE building of almost 76,000 square metres, as well as the facilities and equipment of the













- 1 New building in the Port of Pasaia, Gipuzkoa.
- **2** Panoramic view of the construction works of the new residence for the elderly in Zamora.
- **3** Complete refurbishment of the Palacio de la Tinta building in Malaga and conversion into a 5-star hotel.
- **4** Skylight in the central courtyard of the Koldo Mitxelena Kulturunea building in Donostia.
- **5** Progress of the works on Hall Zero at Fira de Barcelona.
- **6** Works on the new Abaceria Central market in Barcelona.
- **7** Execution of the new outpatient building for the Arnau de Vilanova Hospital, in Lleida.

# **Commitment to digital construction**

Based on its firm commitment to innovation with the aim of offering the best service to its clients, the company has created the Digital Construction department to promote digitalisation in the execution of work projects. The implementation of BIM and Lean methodology, as well as other digitalisation software and processes, facilitates cooperation with the other agents involved and improves the efficiency of our activities, also increasing the quality of our works.

# Projects executed with the BIM (Building Information Modelling) model:

# **RAILWAY INFRASTRUCTURES**

Extension and remodelling of Chamartín-Clara Campoamor station in Madrid.

Underground excavation of the Barcelona R2 commuter line in Montcada i Reixac and construction of the new station in the municipality.

### BUILDING

New outpatient building at the Arnau de Vilanova Hospital in Lleida.

Below ground level of the new Hall Zero at Fira de Barcelona Gran Via.

Complete refurbishment and usage change for a 5-star hotel at the Palacio de la Tinta in Malaga.

# SPECIALISED CIVIL WORKS

New promenade in the northern area of the port of Sagunto, Valencia.



COMSA has been a pioneer in BIM implementation. Find out its history.



# **Industrial engineering**



**210M€** \$218M



**(2)** 1,330

With over 60 years of experience in the development of engineering projects with a high technological component, COMSA Industrial has consolidated its position in the infrastructure, industrial and services sectors, particularly specialising in the fields of energy and telecommunications.

In electrical networks, it carries out the construction and maintenance of high and medium voltage lines and substations and transformation centres. In telecommunications networks, it takes care of the planning, engineering, deployment, operation and maintenance of turnkey systems for large infrastructures.

The company also boasts excellent know-how in the design and execution of installations and systems linked to the mobility sector, with a particular focus on railways, roads, and airports, and in the industrial, tertiary, pharmaceutical, and high-tech sectors.

In this way, it carries out diverse installations which cover the engineering, installation, implementation and maintenance of networks and advanced wireless communication systems, fully integrating everything under a single operating and control system.



Photo above: Operations by COMSA Industrial for UFD in Arcos de Jalón area, Soria.











# **Energy and telecommunications**

# **Energy**



Comprehensive framework contract for development and maintenance services for high, medium and low voltage, transformer substation management, comprehensive substation maintenance, and protection and remote control in the areas of Madrid North, Segovia, Guadalajara and Cuenca, for Unión Fenosa Distribución (UFD). One of the projects carried out or **UFD** was the relocation of the Hortaleza - Azca high voltage line circuit from its original position next to the Santiago Bernabéu stadium in Madrid in order to build a new car park.

Framework contract for the construction and maintenance of the distribution network and activities on the smart grid in **Iberdrola's** distribution network in

Framework contract for the construction and maintenance of high-voltage substations for **Endesa** in Girona, Manresa

Multi-service framework contract for Endesa's medium and low voltage networks in Girona.

Framework agreement for **Endesa** live works within the area of Girona



Work to restore the electricity supply in the Valencia area after the Dana floods for Iberdrola



1 Working to restore the electricity supply in the Valencia area after the Dana floods.

2 Assembly, testing and commissioning of MV

# **Telecommunications**



Maintenance and adaptation of the communications towers and level 1 and level 3 maintenance services of Canal de Isabel II's telecommunications network.

Energy optimisation of Canal de Isabel II's telecommunications stations.

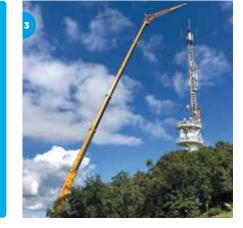
Deployment of telecommunications networks in rural areas for Ericsson in Castilla-León, Madrid and Catalonia.

### Renovation of the communication infrastructure in the south and entral area for Adif

eployment of the multiservice P network adapted to current ibre-optic network that is part of Adif's conventional network. The works include the renovation of the existing cables and the adaptation c the fibre to transport all services, in addition to the deployment of fibre n new areas and the integration of subsystems and installations.

Turnkey contract to upgrade to a hybrid TDM-MPLS transport network and maintain UFD's nationwide data transmission network.

Renovation of Extremadura's Scientific-Technological Network (RCT). IRIS Network Project, managed by Red.es and financed with funds from the Recovery, Transformation and Resilience Plan.



Supply, installation and commissioning of high capacity and redundant digital radio link spans in Cadiz, Gran Canaria. Tarragona, Murcia and Alicante for the Guardia Civil.

Supply, installation and commissioning of the new integrated radio communications system for the control centres of the Port of Barcelona.

3 Network modernisation and expansion in rural areas for Ericsson.

strial engineering - Installations and systems 1 Industrial engineering - Installations and systems

# **Installations and systems**

# **Railway installations**

Electromechanical installations in the refurbishment of Chamartín station in Madrid.

electromechanical infrastructure, mproving energy efficiency, safety and functionality. The work s aimed at optimising services refurbishment of Chamartín s aligned with sustainability standards and cutting-edge technology, contributing to the development of a key infrastructure for the city's

## **Spain**

Conversion of L6 into Metro Madrid's first automatic metro line, including the supply and installation of automatic doors at all stations.

Modernisation and improvement of the remote control systems of all Barcelona Metro lines.

Refurbishment of San Francisco station to house new regulation and control centre (CRC) in Ourense.

Maintenance of communications, station control and PCC (Central Control Post) on line 1 of the Seville Metro.

Execution of the photovoltaic plant on the roof of the Barcelona Metro L9/10 workshops, carried out by Infraestructures de la Generalitat de Catalunya.

# **Portugal**

Design and construction of the extension of the Yellow and Green lines of the Lisbon Metro.

# **Mexico**

The renovation and maintenance of tracks and electrical systems on line 1 of the Mexico City Metro is aimed at modernising and optimising the key infrastructure of the metro's oldest line, improving the safety and reliability of its operations. It includes track renovation works, upgrading of electrical systems and optimisation of signalling and control equipment, which will increase the capacity and efficiency of the service.



- 1 Automation of L6 of Metro Madrid.
- 2 Renovation of line 1 of Metro Mexico City.
- 3 The photovoltaic plant on the roof of the Barcelona Metro's L9/10 workshops is one of the largest investments made by Infraestructures de la Generalitat de Catalunya.







# **Road installations**

# Colombia

Design, supply, installation and commissioning of traffic control systems, dynamic signalling, fixed signalling, gallery equipment, SOS posts, closed circuit TV, ventilation control, lighting, energy control and fire detection for the third Tertiary sector of the Bogotá-Villavicencio Corridor.

Maintenance of control systems and ITS (Intelligent Traffic System) in the 27 tunnels of the Bogotá-Villavicencio road.

Design, supply, installation and commissioning of the control and ITS system equipment for the Tesalia tunnel, the largest tunnel of the Autopista Conexión Pacífico 3 project, which is 3.4 kilometres long.

Maintenance of ITS infrastructure in the Sinifaná and Amagá tunnels for the concessionaire Covipacífico, for a period of 10 years.

Supply, installation and commissioning of the control system and ITS installations for the Mulatos tunnels

ITS installations on 456 km of the Santana - Mocoa - Neiva project of the Concesionaria Ruta al Sur, the longest road in the country.

### Spain

Electrical, mechanical and systems (ITS) installations for the B-40 tunnel (Barcelona's fourth ring road).

Operation and maintenance of the AP-2 and AP-7 Control Centre in Granollers, including the stretches from Zaragoza to Barcelona and from Castellón to the French border.

Technical support service for users of the Centre de Telecomunicacions i Tecnologies de la Informació de la Generalitat de Catalunya (CTTI).

ITS installations in the T4 Tunnel in Agaete, Las Palmas de Gran Canaria.

Photovoltaic installation on the Baix Llobregat motorway, which will connect the Ronda Litoral (B-10) with the Castelldefels motorway (C-32), in the province of Barcelona.







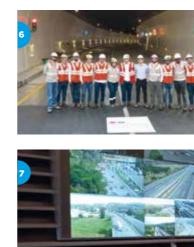
Supply, installation, configuration, commissioning and operational support of electromechanical, control and radio communications equipment for the Guillermo **Gaviria Echeverri Tunnel (Túnel** del Toyo) project and its access roads, which will be the longest in the country.

This project incorporates advanced technologies to ensure the safety nd efficiency of the tunnel and ts access roads. The operational supervision, optimising the performance of the infrastructure and enabling a rapid response to





- 4 Tesalia Tunnel, the largest tunnel of the Autopista Conexion Pacifico 3 project in
- 5 Installations for the B-40 tunnel in Barcelona.
- 6 COMSA Corporación team in the maintenance of the ITS infrastructure in the Sinifaná and Amagá tunnels in Colombia.
- 7 AP-2 and AP-7 Control Centre, in Granollers.



1 Industrial engineering - Installations and systems 1

# **Airport facilities**

### Spain

Installation of efficient LED lighting for the T4 and T4S Adolfo Suárez Madrid-Barajas airport terminals.

New transformer substation at Adolfo Suárez Madrid-Barajas airport.

Supply and installation of equipment for apron lighting control, using the SITIA application, at 19 airports in the Aena network.

Installation and supply of remote assistance equipment for aircraft at Adolfo Suárez Madrid-Barajas airport.

Plan for the installation of recharging stations at Josep Tarradellas Barcelona-El Prat airport and Adolfo Suárez Madrid-Barajas airport.

New conduits and replacement of high voltage lines at the Josep Tarradellas Barcelona-El Prat airport.

Supply and installation of passenger boarding bridges and auxiliary equipment at Fuerteventura, Bilbao, Alicante, Palma de Mallorca and Menorca airports.

Innovation agreement with Aena for the pilot development of a remote/autonomous boarding bridge control system. The images show the boarding bridge and control console developed by COMSA Industrial at Menorca Airport.

### Greenland

Modernisation of the navigation systems of Greenland's 3 main airports: Nuuk, Ilulissat and Qaqortoq.





# Installations for industry and tertiary sector

### **Spain**

Installations for the new outpatient building at the Arnau de Vilanova Hospital in Lleida, including the installation of advanced HVAC systems, electricity, telecommunications networks and medical equipment, as well as optimisation works to ensure energy efficiency and compliance with the highest standards of sustainability.

Installation work on the Phase 1 building for the global transformation of the Joan XXIII Hospital in Tarragona.

Facilities for the expansion of the surgical block and the Oncology Day Hospital (ICO) at the Josep Trueta Hospital in Girona

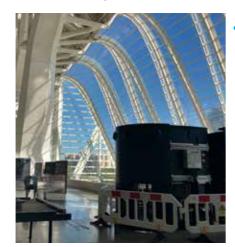
Installations for the refurbishment project of the Palacio de la Tinta building in Malaga.

Installations for the complete refurbishment of the Abaceria Central market in Barcelona.

General installations for the new local police station in Santa Coloma de Gramenet, Barcelona.

## **Andorra**

Ordino Mountain Resort residential project.



Energy improvement of the air-conditioning system of the Príncipe Felipe Science Museum in Valencia.

One of the new developments in the project is the installation of geothermal wells that will cover 7,299 square meters.
Once operational, the museum's geothermal plant will generate 4,500 kW and will be the largest such plant installed in Spain, reducing energy consumption by 30%, shrinking the building's carbon footprint and optimising its energy consumption.







1 Construction of the new heliport at the Joan XXIII Hospital to free up the space to be occupied by the new hospital.

**2** HVAC installations for the sterilisation module and the Oncology Day module (ICO) at the Josep Trueta Hospital in Girona.

**3** Installations in the refurbishment of the Palacio de la Tinta building in Malaga.

# Pharmaceutical and high-tech facilities

### Spain

Execution of the electromechanical installations at the EUROCAT headquarters in Tarragona.

HVAC installations for the Applus+ IDIADA components laboratory in Santa Oliva, Tarragona.

R&D&I works and installations for clean rooms and laboratories in Barcelona's 22@ district.

HVAC systems and panelling for the Abbott laboratories plant in Granada.

Realisation of electromechanical installations at Laboratorios Aldo-Unión, syrup area.

HVAC systems for the Rovi laboratories plant in Granada.

Construction of a production room with air and humidity control in Montcada i Reixac.

Installations of the new Novartis plant in Salamanca.

Installations for Synthon's pharmaceutical plant (Barcelona), including panelling and clean rooms.

Pharmaceutical architecture system, HVAC system (ISO 8) and integration of production equipment for the Natura Bissé cosmetics plant in Cerdanyola del Vallès, Barcelona.

### France

Renovation of the AAA Quality Control Laboratory in Saint Genis Pouilly.

### Colombia

Supply of sterilisation equipment for a new Mainco medical equipment production plant in Cali.

### Mexico

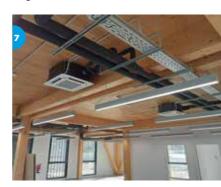
Expansion of the Electrolite production building (Line 12) of PiSA Laboratories in Guadalajara, classified HVAC, control and thermal fluids.

Critical refurbishment of the liquid's areas of the Pfizer plant in Toluca.

HVAC of the new semi-solids area of the Liomont Laboratories in Cuajimalpa, including adjoining areas and microbiology laboratory.

Engineering, manufacturing, installation and qualification of the HARRO project (phase 1 and phase 2) of the AstraZeneca laboratories in Naucalpan.

State-of-the-art room conditioning and waste collection system for spinning mills, in cooperation with Swiss machine manufacturer Rieter, for the companies Zagis and Satex.







Renovation of the electrical and fibre-optic installations and network and telecommunications support at CERN's sites in Prevessin and Meyrin (Switzerland and France).

Comprehensive upgrade of the electrical and telecommunications infrastructure to ensure the performance and security of operations at both sites. Work will be carried out to renovate the electrical installations, upgrade the fibre-optic network and reinforce support for the communication networks, ensuring greater capacity and reliability. The initiative is key to maintaining the state-of-the-art technological infrastructure needed for CERN's experiments and projects.





**4** COMSA Industrial has been working at CERN for more than ten years.

**5** HVAC installations in the engine room for Idiada.

6 Integral installations in clean rooms in the syrup area at Laboratorios Aldo-Unión.

**7** COMSA Industrial executes the electromechanical installations at the EUROCAT headquarters in Tarragona.



# Maintenance, conservation and services



**115M€** \$120M



(2) 1,731

COMSA Service is a leading company focused on comprehensive maintenance, with experience in a wide variety of sectors. It provides multidisciplinary services in the field of maintenance and energy efficiency thanks to its high degree of specialisation in facility management and property management, as well as in the optimisation of energy resources..

Through TFM, its renewable energy division offers the development, design, engineering, execution and maintenance of photovoltaic solar energy installations, and through GdES Greentech, it operates and maintains wind farms, in addition to offering maintenance and repair services for wind turbine blades. The Bioenergy unit supplies biomass for thermal energy and maintains and operates thermal plants.

To complete the service offering, COMSA Solutions provides auxiliary services such as cleaning and landscaping, and COMSA Security specialises in security systems.

Under the OTB brand, it leads the market with the design, construction and maintenance of ornamental fountains.



Photo above: Maintenance worker.















# **Maintenance of installations**



### Spain

Regulatory, preventive and corrective maintenance of HVAC, solar thermal and photovoltaic energy installations, as well as other energy sources in the municipal facilities of Esplugues de Llobregat, in Barcelona.

Preventive and corrective maintenance of the cooling installations of the building of the Barcelona Supercomputing Center headquarters.

Comprehensive maintenance of the installations and equipment of the building of the headquarters of Radiotelevisión del Principado de Asturias, as well as the rest of the premises used by RTPA.

Preventive and corrective maintenance of the Seville. Bilbao and Miranda de Ebro stations, as well as some of the subdirectorate of the Galicia headquarters and the maintenance of the Freight Transport Terminals assigned to the Central Logistics Services Sub-directorate.

Comprehensive maintenance of the offices and facilities of the Regional Ministry of the Presidency, Justice and Local Administration, in Madrid.

Comprehensive maintenance of the thermal installations, legionella control and disinfection of several care centres for the elderly for the Lugo Provincial Council.

Maintenance of the HVAC installations of the buildings of the Directorate General of the Civil Guard and the officer academy in Madrid.

Corrective, preventive and conductive maintenance, as well as management of the installations and construction elements of the aerial service at the National Institute of Aerospace Technology in Torrejón de Ardoz, in Madrid.

Maintenance of the institutional headquarters of the Balearic Islands Port Authority in the Port of Palma.

Comprehensive maintenance of mechanical and plumbing installations at Port Aventura, Tarragona.

Comprehensive maintenance of installations in the prison facilities in Ávila, Cádiz, Madrid, Salamanca and Seville.

Preventive and corrective maintenance and improvement of the environmental standard of the HVAC and DHW





installations in the municipal buildings of Seville City Council.

Maintenance of HVAC in the Alicante City

Corrective maintenance in the UMIVALE mutual insurance company's heritage buildings in Asturias, Malaga and Granada.

Corrective, preventive and technicallegal maintenance of the Midat Cylops mutual insurance company in Lleida, Aragon, the Canary Islands, Andalusia and Extremadura.

1 Barcelona Supercomputing Center building.

2 Comprehensive maintenance of mechanical and plumbing installations at Port Aventura, Tarragona.

Maintenance, conservation and services

# Health sector

Multi-technical maintenance of the Consorci Mar Parc de Salut de Barcelona.

COMSA Service maintains the facilities of the different centres of this consortium, which make up the largest health park on the coast of Barcelona. Its infrastructure concentrates one of the city's most dynamic centres of healthcare, teaching and research knowledge.

### Spain

Thermal installations in the building of the International Vaccination Centre of the Region of Madrid.

Partial adaptation of the Nazaret residence in Malgrat de Mar, Barcelona.

Comprehensive maintenance and treatment against legionella at the Valencian Institute of Oncology.

Comprehensive maintenance of the buildings and installations of the Reina Sofía General University Hospital, area VII - Murcia East.

Maintenance of the mechanical installations and cooling equipment in the buildings of the Vall d'Hebron campus and the gas turbine of the trigeneration plant of the Vall d'Hebron University Hospital in Barcelona.

Maintenance of the installations of the Tres Torres clinic in Barcelona and its annexes.

Maintenance of installations and construction elements of several primary care centres of the Institut Català de la Salut in the southern metropolitan area.

Regulatory and preventive maintenance of the facilities of the Medimar hospital in Alicante, Prado de Aravaca hospital in Madrid and Turias hospital in Valencia, belonging to Vithas Sanidad.

Interior refurbishment of the preimplantation diagnosis service (DPI) at Clínica Corachan, in Barcelona.

Work on the Intermediate Respiratory Care Unit and comprehensive refurbishment of a wing of a floor of the outpatient clinic building at the Hospital Universitario Doctor Peset in Valencia.

Refurbishment of two floors of the Sant Hospital de la Seu d'Urgell Foundation in Lleida.

Replacement of the Air Treatment Unit for the ICU monitor area at the Instituto Valenciano de Oncología (IVO).

Refurbishment of the residence for the mentally ill in Cádiz and adaptation of premises in Alicante for the day hospital activity.

Expansion of the endoscopy service and environmental improvements for the PIUS Hospital de Valls, in Tarragona.

Comprehensive maintenance of the Román Alberca Psychiatric Hospital in Murcia.







Comprehensive maintenance of the hospitalisation, speciality and peripheral primary care centres in area VI: Vega Media del Segura and Morales Meseguer Hospital, in Murcia.



<sup>1</sup> Valencian Institute of Oncology (IVO).

# Refurbishment and renovation



# Spain

Construction of the new lift and improvement of accessibility at Atxuri-Bilbao station.

Construction of phase one of the Guissona Museum in Lleida.

Work on the Puente Princesa access building at UFD, part of the Naturgy group, in Madrid.

Central installations work at the UNED's Las Rozas Campus, in Madrid.

Replacement of heat pumps in the Montilivi library of the University of Girona.

Renovation of the HVAC system in the Port of Palma.

Supply and installation of HVAC equipment in the luggage room of maritime station 2, and adaptation and improvement of the HVAC system in maritime station 6 of the Port of Palma. Both actions improve the energy efficiency in the buildings of the Balearic Islands Port Authority, which continues to make progress in decarbonisation.

Supply, installation and commissioning of two autonomous thermal production plants at the Centre d'Alt Rendiment (CAR) in Sant Cugat del Vallès, Barcelona.

# Installation, maintenance and operation of renewable energies

# Photovoltaic solar energy

### Spain

Photovoltaic installation for comprehensive energy self-generation of the road network on the C-32 north, in Santa Susana, Barcelona

Photovoltaic installation in several schools as part of framework agreement for the improvement of facilities with Infraestructures de la Generalitat de Catalunya.

Phase I of the Cal Monés executive project for the El Prat de Llobregat Town Council, with the aim of converting it into a public space and climate refuge.

Photovoltaic installations for selfconsumption, and conversion of 9 pergolas in Salvador Espriu street in Barcelona for BIMSA.





# Photovoltaic installation in the port police building in the Port of Tarragona.

The energy produced will be used mainly for the building's own consumption and the surplus will be sent to the low-voltage networ of the transformer station at the Reus Quay.

# Wind energy



### Spain

Corrective maintenance at the Brañas wind farm in Salamanca.

Repair and maintenance of the Trucafort, Pebesa, Calobres (Tarragona) and Sierra Sesnandez (Zamora) wind farms.

# Thermal energy

### Spair

Management and execution of forestry projects and marketing of biomass for Cromogenia Units, in Tarragona.

Supply of biomass to the company Piensos Mazana, in Huesca.

5 Sierra Sesnandez wind farm in Zamora

<sup>2</sup> Installation of Phillips equipment in healthcare centres throughout Spain.

**<sup>3</sup>** Maintenance of the Tres Torres Clinic in Barcelona.

# **Ancillary services**

# Spain

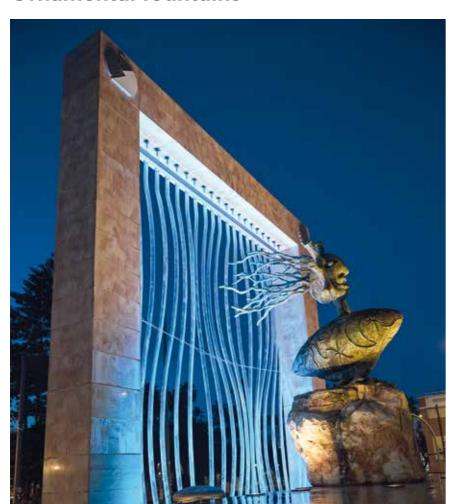
Cleaning, landscaping, disinfection and waste management services for Naturgy premises and buildings in Spain, as well as event management and support for rooms.

Cleaning service for rooms and common areas of the Holiday Inn Sant Cugat hotel in Barcelona.

Contract for maintenance, cleaning, surveillance, gardening and concierge services for the Seguros RGA building in Madrid.



# **Ornamental fountains**







enovation and commissioning f the Castellón Port Centennial

Supply and installation of a stone fountain in León de Uruñuel, Bilbao.

Renovation of the fountain in Sa Riera Park, Palma de Mallorca.

Design and construction of an ornamental fountain for a private garden in Rivas-Vaciamadrid, Madrid.



# Railway machinery management



GMF is a company devoted to the maintenance and management of railway rolling stock, the manufacture and marketing of spare parts, and the design of new equipment. In 2024, it managed the maintenance of 991 vehicles.



# INGMF +20 AÑOS

Preventive and corrective maintenance and guarantee of 8 Iberian gauge E6000 locomotives and 8 UIC gauge locomotives -three more than in 2023-, located in its own workshops in Medina del Campo (Valladolid) and Constantí (Tarragona), as well as at Renfe's Can Tunis base. These locomotives have begun services to France with destinations in Lyon and Toulouse.

Restoration of a V16 diesel engine.

Replacement of 9 traction engines and 6 running gearboxes.

Maintenance of rolling stock for the construction of railway infrastructures.

Change of locomotive and track machinery lights to LED technology.

25% increase over 2023 in preventive and corrective overhauls of wagons at the company's own workshop in Constantí.

Approval of 66 vehicles for TMB, COMSA Machinery, MECNO, Sineox and INFESA, among other companies.

On-track Technical Assistance: replacement of 1,639 on track axles.

Adaptation of a DT20 draisine together with its remotorisation to Stage V.

Design and installation of a new traction system in the works of the C330 scraper.

Repair of gear tamping set.

Pit lathe: 250% increase in operations compared to 2023

Comprehensive maintenance of line 2 of the Lima and Callao Metro, the first underground metro line in Peru. The project, which will run for 25 years, is being carried out with the assistance of Metro Madrid.

FCC: overhaul, installation of tachograph and exterior painting of a GE 1400 locomotive.

COMSA Machinery: overhaul, exterior painting and approval of 10 hoppers.

Tatravagónka: assembly and brake

protocol for 17 wagons.

Carris - Lisbon Public Transport: refurbishment of 16 tram units, replacement of wood and sheet metal, interior and exterior painting.

New maintenance facilities in Palmela, with a surface area of 7,300 m<sup>2</sup>.











- 1 Restoration of tram units for Carris.
- 2 Captrain E6000 locomotive.
- 3 Railway maintenance at the Lima Metro.
- COMSA railway machinery.
- 5 Installation of the new traction system at the C-311 ballast cleaning machine.



For further

<sup>1</sup> Cleaning service for Naturgy.

<sup>2</sup> Installation of walkable fountains on the Paseo



# Infrastructure concession and promotion of renewable energies

COMSA Concesiones has gained a wealth of experience in infrastructure promotion and concession, carrying out the development, design, financing, maintenance and management of assets in the fields of transport, mobility and social facilities.

Moreover, COMSA Green Energy has specialised experience in the promotion and development of renewable energy assets, mainly focused on photovoltaic solar and wind energy in Spain. Its participation in complex projects, as well as the synergies existing between the different companies that comprise the group, have enhanced the added value of its know-how.





CONCESIONES





# **Experience in infrastructure concessions**

RAILWAY INFRASTRUCTURES	LENGTH (km)	INVESTMENT (M€)
Barcelona Metro. Line 9. Sections 2 and 4	21.5	1,339.42
Malaga Metro	13.6	712.09
Light Metro West Madrid (ML2 and ML3)	22.2	584.20
Baix Llobregat / Besòs tramway (Barcelona)	30.8	577.58
Murcia tramway. Line 1	18	264.00
HSL Albacete - Alicante	165	142.13
ROAD CONCESSIONS	LENGTH (km)	INVESTMENT (M€)
C25 (Transversal axis)	151	759.00
Eix del Ter, Vic - Ripoll (Catalonia)	48.6	283.56
Eix del Llobregat (Barcelona)	40	281.62
Eix d'Aro (Girona)	27.7	73.54
SOCIAL INFRASTRUCTURE	AREA (m²)	INVESTMENT (M€)
Hotel W Barcelona	75,000	179.6
Mas d'Enric Prison (Tarragona)	74,130	108.79
Nova Bocana Business	28,626	65.35
Courts of Terrassa and La Bisbal (Catalonia)	22,279	27.34
Car parks in Catalonia, Valencia, Galicia, La Rioja, Basque Country and Asturias	9,447 parking spaces	125.45



1 COMSA Concesiones is operating the Moisès Broggi Hospital car park, in Sant Joan Despí (Barcelona)

# **Promotion of renewable energies**

Development of the largest photovoltaic plant in Catalonia, with a capacity of 16.6 MWp in the municipality of Constantí, Tarragona.

COMSA Green Energy, as the delegated developer, has completed the process by obtaining the final administrative authorisation for operation. After obtaining all the necessary permits and licences, COMSA has carried out the works associated with the construction of the photovoltaic plant and has begun the legalisation process and its commissioning.

This project reaffirms COMSA Corporación's ability, through its different business units, to comprehensively manage all stages: design, permit processing, execution of works, legalisation and commissioning, operation and maintenance of the facilities.

Following its incorporation as a company integrated 100% in COMSA Concesiones, COMSA Green Energy S.L. -together with all the strengths of the businesses associated with COMSA Corporación- is advancing in its will to be a major player in the implementation of infrastructures to contribute to the energy transition and decarbonisation.

Promotion of 1.2 MW for self-consumption with storage for installations in the real estate and tourism sectors.

Development of 10 MW of photovoltaic power for sale to the grid in Tarragona.

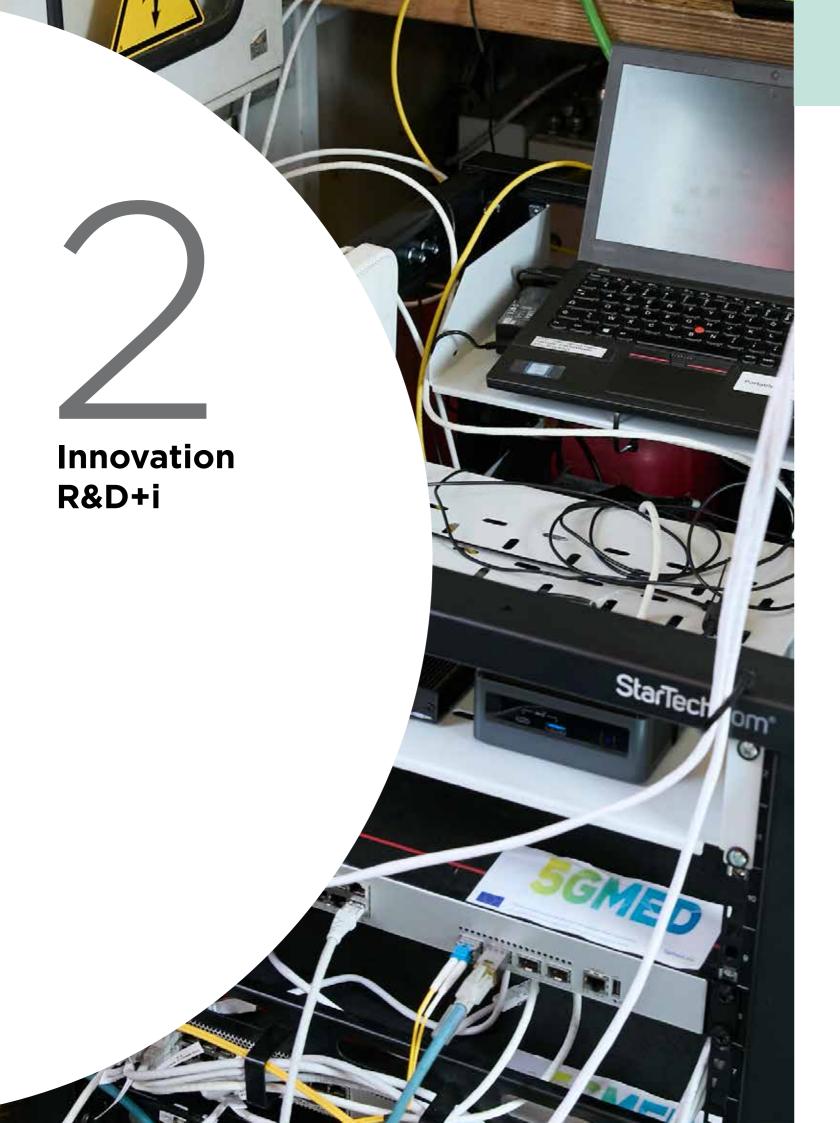
**2** Photovoltaic plant in Constantí (Tarragona) with a capacity of 16.6 MWp.



Experience in renewable energies in Spain



Promotion of 120 MW wind and 30 MWp photovoltaic.



# Innovation R&D+i

# **Railway projects**

### Europe

Participation in 4 of the 6 projects financed by the first call of Europe's Rail Joint Undertaking, an EU initiative of which COMSA Corporación is a founding partner:

- R2DATO. Digitalisation and automation of the European railway system. Participation in the development of two prototype multiconnectivity systems, supporting critical services, their evolution to FRMCS and train support over multiple networks, including the 70GHz 802.1lad network.
- IAM4RAIL. Comprehensive and integrated asset management for the European rail system. Monitoring of the track platform over the Arroyo de las Huertas de Mateo viaduct (Cuenca), on the Madrid Valencia high-speed line, by installing inclinometers and accelerometers and analysing the collected data.
- Rail4EARTH. Innovative solutions to improve the sustainability of railways. Development and laboratory testing of NEOBALLAST® with limestone aggregate to provide an outlet for this type of aggregate and maximise replicability in areas where high-performance ballast is not available. COMSA is also involved in the development of a catalogue of solutions for vibration mitigation.
- FutuRe. of the high-level communication requirements between track and train on regional lines, including the development of the 70GHz Gigabit Radio solution and its integration with FRMCS and non-FRMCS solutions, defining the communication interfaces for the R2DATO train-to-ground multiconnectivity platform.

**5GMED (Completed).** Engineering, installation and commissioning of 1Gbps symmetrical connectivity along 17km of the Figueras-Perpignan corridor, using an innovative 70GHz wireless communications solution and trackside mast deployment systems. COMSA designed a multi-connectivity platform for the train, capable of choosing between existing or optimal 5GNR, 70GHz, or satellite wireless connectivity at each point along the track. The main challenge was to achieve ultra-fast roaming without impacting non-critical communications during the France-Spain border crossing.

REPAIR (Completed). Development and optimisation of a system based on laser technology to carry out different manual maintenance operations (cleaning, hardfacing, polishing) on rail elements, mainly Vignole type rails (standard) and crossings. The specific characteristics of laser technology in terms of flexibility, localised energy input, high productivity and ease of use make it a suitable technology for carrying out these rail recovery operations.





1 Presentation of the European 5GMED project in Peralada, to share the conclusions of four years of work, including successful tests of advanced technologies to ensure continuous high-speed connectivity on European rail corridors.

2 Demonstrator of the IAM4RAIL project on the viaduct over the Arroyo de las Huertas de Mateo (Cuenca) on the Madrid - Valencia high-speed railway line



Find out more about our R&D&I projects in the railway

# Circular economy projects

### Europe

**RE-PLAN CITY LIFE+.** Raise awareness of the use of end-of-life tyre products in the public sector, including roads, railways, street furniture, buildings, sports and leisure facilities, as well as in construction and public works in general.

# Spain

HORMICARB. Research on structural concretes reinforced with carbon fibre recycled from the aeronautical industry.

**BUILDING LEGACY.** Industrial research project for the conceptualization, development and prototyping of a technological system to make the reuse of construction materials and products viable by applying disruptive Industry 4.0 technologies.

**RECONSTRUCT.** Development of low-carbon alternatives to ordinary Portland cement (OPC) to produce, together with recycled and bio-based materials, prefabricated components and sandwich panels designed to be demountable, repairable and reusable.



In 2024
COMSA
Corporación
invested
over 5.5
million
euros in
innovation
projects.

**3** Reuse of rubber from end-of-life tyres on roads.

Photo left: COMSA Corporación has participated in Use Case 3 of the 5GMED programme for the improvement of railway communication services on the border between Spain and France.

2 Innovation R&D+i
Innovation R&D+i

# **Digitalisation projects**

### Spain

SRT4SSM. Development of a smart road services platform as part of the Korea Spain Strategic Programme (KSSP). This initiative focuses on improving safety, driver comfort, road condition and maintenance efficiency through a system based on artificial intelligence (AI), distributed fibre-optic sensing systems and image processing. This system will provide the operator and drivers with real-time communications on the condition of the infrastructure, offering Intelligent Transport System (ITS) and Infrastructure Health Monitoring (IHM) solutions.

**ENLACE.** Research and development of innovative solutions from laboratory to pilot plant scale, including systems, components and subsystems with advanced photonic technologies. Its main focus is a new free-space optical link, based on devices with integrated photonics (PICs) and communication channels with high repetition rate ultrashort pulse lasers, for applications in key industrial sectors.

MARTINI. Development of an algorithm based on structural AI, adapted to the specifications of railway tunnels to enable real-time analysis to detect, identify, catalogue and assess damage and pathologies.

WIBAND. Monitoring of Personal Protective Equipment (PPE) using UWB technology. The tool detects anomalies in their use and incorporates UWB-radar to improve safety on construction sites, identifying those who do not use them correctly.

### PROVIDENTIAL (Completed).

Development of a multimodal system to detect workers and heavy machinery, generating alarms to prevent risks in construction site environments.

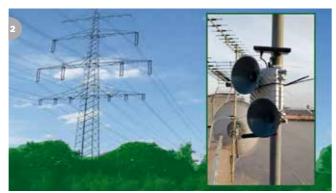
**ISAPREF (Completed).** Creation of software that uses artificial intelligence (AI) to prevent forest fires caused by poorly maintained vegetation near railway tracks and power lines.

**OPERATING CABINET.** Design and development of a centralised management system for the operation and maintenance of aircraft handling equipment.

1 COMSA Industrial participates in the PROVIDENTIAL project, which develops a multimodal system to detect workers and heavy machinery, generating alarms to prevent risks in construction site environments.

**2** The technology offered by ISAPREF has enormous potential to prevent forest fires and protect electrical infrastructure.





# **Energy transition projects**

### España

LIFEBIPV (Completed). Solutions to integrate photovoltaic modules into buildings to increase generation of renewable energy and sustainability of buildings and infrastructure. In 2023, a full-scale demonstrator was installed in the shelters of the Port of Barcelona's Fisherman's Wharf, consisting of a 29.5 kWp flexible photovoltaic installation, which also formed part of the first energy community of the Port of Barcelona, as part of the CREATORS project. In this project, completed in 2024, COMSA led the coordination of four local energy communities, including the execution of the Barcelona pilot.

**AEGIR.** AEGIR. Development of modular, renewable and industrialised building envelopes to reduce costs and completion times in building renovation.

**MULTICLIMACT.** Adaptation actions to improve the resilience, preparedness and response capacity of the building environment to multiple risks generated by climate change, at different scales. In this project, COMSA is designing a pavement with recycled glass aggregates that will be

tested in the city of Barcelona to combat the 'heat island' effect in cities.

# **CORPORATE VENTURES**

NEOBALLAST. NEOBALLAST S.L. has studied new NEOBALLAST\* coatings, as well as their industrial production. NEOBALLAST\* is a new type of high-performance ballast that extends the useful life of this material in comparison with conventional ballast and also reduces the vibrations caused by train traffic thanks to the properties of rubber from end-of-life tyres.

COMSA
Corporación
takes part in
27 innovation
projects aligned
with the SDGs.



To learn more about

# Strategic partnerships

As a company specialized in the development of railway infrastructure, COMSA Corporación is a member of the Board of In-Move by Railgrup and is also part of the Spanish Railway Technology Platform (PTFE), integrated in European Rail Research Advisory Council (ERRAC).

COMSA Corporación is a founding partner and member of the Management Committee of **The Railway Innovation Hub Spain**, a hub which aims to strengthen the international image of the Spanish railway system.

In the Spanish construction sector, COMSA Corporación is a member of the R&D&I Commission of the Association of Construction Companies and Infrastructure Concessionaires (SEOPAN). In Europe, COMSA Corporación is a member of the Steering Committee of the European Construction Technology Platform (ECTP). Since 2019, the group has been part of the governing body of this organisation, recognised by the European Commission as a key player in the promotion of innovation, knowledge transfer and competitiveness.

In the field of BIM methodology, since 2019, the group has been part of **Building Smart** and the **Commission for the Implementation of BIM in Spain**, led by the Ministry of Transport and Sustainable Mobility.

Since 2017, COMSA has collaborated with **IQS** of the Universitat Ramon Llull, on different research and technology transfer projects.

Lastly, as part of the group's commitment to sustainability and collaboration, COMSA Corporación participates in various innovation clusters, including the Catalonia Energy Efficiency Cluster (CEEC), and Clúster de Materiales Avanzados (MAV), the Design Cluster (BCD) and Madrid World Capital of Construction, Engineering & Architecture (MWCC).





























# **Participation in forums**

# Spain

**5GMED Final Event**. Presentation of the conclusions of the European 5GMED project, in Peralada.

Webinar 'MAV projects: funding opportunities and success stories'. Event organised by the Clúster de Materials Avançats de Catalunya. COMSA presented the Building Legacy project, a pioneering initiative to make the reuse of construction materials and products viable through disruptive Industry 4.0 technologies.

Client webinar 'Control of work progress at the Hospital Universitari Arnau de Vilanova in Lleida with Dalux'.

# BIMexpo, Feria CONSTRUTEC.

Participation in the round table 'Collaboration throughout the life cycle', where we analysed how the implementation of BIM improves the efficiency of the project.

### 2nd R+D+i Conference on materials and technologies for the construction and maintenance of railway infrastructure. Organised by the PTFE - Spanish Railways

Foundation and the Construction Engineering Laboratory of the University of Granada (LabIC.UGR).

# Technical conference 'Innovation and Digitalisation in Road Maintenance'. Organised by the Asociación de Empresas de Conservación y Explotación de Infraestructuras (ACEX).

Presentation on innovation and BIM, for students of the Universitat Politècnica de Catalunya (UPC), in the framework of the company's collaboration with the 50th anniversary of the Escola de Camins.

# Portugal

### CongrEGA, 1st edition of the Ibero-American Congress on Engineering Asset Management, held in Lisbon. Participation in the round table 'Digital Transformation in Railway Infrastructure' and presentation of the success story 'Digitalisation and Management of Railway Assets'.

# II Iberian Meeting of Young Engineers, organised by the Young Engineers Group of the Ordem dos Engenheiros and the UPCI-Professional Union of Engineering Colleges in Lisbon. Presentation on the Future of Railway Mobility.

# Germany

**InnoTrans.** The world's leading event marking the future of mobility and innovation in railway sector.



**3** Participation of the director of the Technical and Innovation Area, Valentí Fontserè, in the round table on digital transformation in railway infrastructure, within the framework of CongrEGA.



# **Sustainable management**



Our approach to sustainability aims to help improve the quality of life of our teams, promote ethical, social and environmental principles in our relations with our internal and external partners and, ultimately, to generate a positive impact on the well-being of society.

As the backbone and driving force behind our activity, the group is working on the **2025-2030 Sustainability Strategy** to increase its contribution to the Sustainable Development Goals, over which it has a greater influence as a key player in the **2030 Agenda**.

As a sign of this commitment, COMSA Corporación has been a member of the **Global Compact** since 2019, actively participating in its various accelerator programmes. Worth pointing out is having joined in 2023 **the Global Compact's Construction and Engineering' working group** to address the main environmental and social challenges facing the sector and develop solutions through collaborative work with other companies.



At a sectoral level, in 2023 it contributed to the development of the first **AENOR Guide on sustainability in construction**, and in 2024 it also became the first construction company to obtain the **Sustainability Contribution Index** certification for construction companies.



<sup>1</sup>Global Compact, a United Nations initiative, is a leader in corporate sustainability worldwide.

# **Transparency and ethics**

- Training on the ethics channel and updating of the Compliance Module for the Onboarding programme for new recruits.
- Modification of the Compliance Policy on Competence and Training.
- Implementation of the Prevention Plan for the Risk of Corruption and Related Infringements, a Code of Conduct and a Whistleblowing Channel in the branch of COMSA S.A.U. in Portugal, as well as in two of its subsidiaries.
- Renewal of ISO 37001 on Anti-Bribery Management Systems for COMSA Industrial.



# **Social contribution**

At COMSA Corporación, awareness of social issues is manifested through different collaborations with common elements such as long-term alliances as well as the collaboration of the workforce, allowing us to maximise social awareness and its positive impact:

- Solidarity Payroll Programme with UNHCR: On the 5th anniversary of the initiative, it has managed to provide shelter to more than 3,500 families through the voluntary contribution of employees and the matching of these donations by the company.
- Ambassadors for Sustainability: With the aim of bringing sustainability closer to the different territories, this programme was created in 2023 to contribute to different local entities. Since then, different social and environmental campaigns have been carried out.



**1** Reforestation day promoted by the Ambassador for Sustainability in Colombia.

Photo left: Works on the BRT project, Brasilia (Brazil).

**AENOR** 

# **People**

At COMSA Corporación there is a clear commitment to equal opportunities, professional development and the culture of merit. In this sense, the group has established several policies and actions that favour reconciliation, flexibility and disconnection, within the framework of the different organisational realities and needs. These actions are reflected in the Equality Plans, an instrument used to guarantee equality between women and men, including enforceable and applicable measures, and which is aligned with SDG 5-Gender Equality. In 2024, the Equality Plans of COMSA Corporación and COMSA Service were

Staff	5,814 Total direct jobs		
Breakdown by category and gender		2	
Senior management	17%	83%	
Executives	17%	83%	
Middle management	21%	79%	
Technical and administrative staff	43%	57%	
Operators	9%	91%	

# Training

814,064 €

Training investment in 2024

89,861 h

Hours of training in 2024 (on-site and e-learning)



16 h

Average hours of training per person in 2024

# A commitment to diversity

For COMSA Corporación, having diverse profiles represents added value. For this reason, it works to promote and guarantee equity and the inclusion of diverse talent. As proof of this commitment, in 2023 it signed the **European Diversity** Charter and thus it carries out awareness campaigns to combat **biases** in relation to different groups throughout the year. In 2024, with the aim of increasing the positive impact of the actions carried out within the group, it has begun to develop projects in the field of integration with some of the actors in the value chain.



# Health and safety

Ensuring safe and healthy working environments is crucial for COMSA Corporación. This commitment has materialised in the **Strategic** Prevention Plan 2024- 2026 - Plan UNØ, in which more than 700 professionals from the group have participated in its design and content, in more than 40 working days and in 5 countries, which shows the transversality and relevance of this plan.



# **Accident rates**

Frequency rate (accidents per million hours worked).

> 2024 20.29

2023

20.45

Severity rate (Working days lost per thousand hours worked).

2024

0.78

2023 0.79



# **Environment**

# **Energy**

170,756 MWh of green energy managed, equivalent to a municipality of over 132,000 inhabitants.

100% of corporate offices in Spain are powered by renewable energy.



AENOR

# Climate change

# **Carbon Footprint**

- Full quantification from 2022.
- · ISO 14.064 certification.
- CDP¹ registration at International level and in MITECO2 reaching the 'Reduzco' level in 2024.



**TICDP** 

Discloser





# Climate commitments



Check here for our commitments within the framework of the International Day against Climate Change



# Actions taken

- · Acquisition of low-emission machinery.
- Disruptive advances towards decarbonisation and energy transition of buildings and infrastructures with the constitution of energy communities.
- Analysis of climate risks and opportunities according to the TCFD<sup>3</sup> methodology.

<sup>1</sup>CPD: Carbon Disclosure Project.

MITECO: Ministry for Ecological Transition and the Demographic Challenge of the Government of Spain. <sup>3</sup> TCFD: Task Force on Climate-related Financial Disclosure

# **Circular Economy**

· Signatories of the Circular Economy Pact of the Spanish Government.



Participants in the 1st Guide to the Circular Economy in the construction sector of SEOPAN Environment Commission, Construction, Water and Infrastructure Concessions, along with the Spanish Association for Quality.



• Zero waste certificate thanks to the fact that more than 95% of the waste generated in the corporate offices in Barcelona is revalued, avoiding landfill and contributing to the promotion of sustainability through the circular economy.



Objective To implement the 'Zero Waste' methodology in all construction works in Spain by

# **Biodiversity**

Accessions in 2024 that increase the ambition to care for the environment and accelerate the development of specific initiatives:

· Biodiversity and Spain Natural Capital Pact of the Spanish Business and Biodiversity Initiative (IEEB).

1 4,170.18 m³ of concrete reused in the new

promenade of Puerto de Sagunto, Valencia

• The Taskforce on Nature-related Financial Disclosures (TFND).







2 Planting of 3,102 trees, 2,243 shrubs and planting of 46,635 m<sup>2</sup> in the project for the sewerage collectors of the Upper Nervión basin in Araba and Bizkaia, Basque Country.

# International vocation

COMSA Corporación exports its professional know-how in construction, industrial engineering and infrastructure maintenance to international markets. It provides a great competitive advantage, with a special focus on sustainable mobility projects.

With more than 130 years of experience, the group has a consolidated presence especially in

Latin American and European countries such as Portugal, Mexico, Brazil, and Colombia.

In line with its Strategic Plan, the company is committed to the development of infrastructures in territories where it has stable activity, driving its global growth.



### Brazil



National Department of Transport Infrastructure

Construction of a bridge over the Araguaia River and its accesses on the BR-080 road.

### Colombia



National Infrastructure Agency

Installation and commissioning of electromechanical, control and radio communications equipment for the Toyo Tunnel.

# Spain



Adif

Refurbishment and extension of the concourse at Madrid Chamartín-Clara Campoamor station and construction of four additional tracks for high-speed

### France



Mairie de Paris

Maintenance of over 100 ornamental fountains in Paris.

## Greenland

- 51D



Kalaallit Airport Holding

Modernisation of air navigation systems at Nuuk, Ilulissat and Qagortog airports.

### Mexico



CRRC Zhuzhou Locomotive

Refurbishment of tracks and systems on line 1 of the Mexico City Metro.

### Peru



Lima Metro Concessionaire Company Line 2

Comprehensive maintenance of line 2 of the Lima and Callao Metro.

# Portugal



Lisbon Metropolitan

Expansion project for the Yellow and Green lines of the Lisbon Metro.

# Switzerland



# CERN

Electrical installations and support for communications and network installations, as well as maintenance service for industrial electrical installations, at CERN's Prévessin and Meyrin sites.

# **COMSA Corporación at a glance**





Total turnover



Confirmed orders



Staff





corporate video 2024

# **Construction**



**Industrial engineering** 



# **COMSA**

High-speed and conventional lines, metros and tramways Construction and maintenance of railway lines and installations

### Railway electrification

Construction, maintenance and renovation of overhead contact lines, traction substations and high-voltage lines

### Specialised civil works

Roads; airports; maritime, port and hydraulic works; urban works

Road maintenance; tunnels and underground works

# Building

Educational centres, hospitals; institutional and office buildings; sports facilities; shopping and leisure centres

Own state-of-the-art machinery

Railway operation

## Aggregates and precast

Sorted aggregates, pre-stressed concrete sleepers and track ballast

# **COMSA INDUSTRIAL**

Construction and maintenance of power generation, transmission and distribution facilities

Construction and maintenance of railway electrification facilities

Deployment and maintenance of telecommunication networks

### **Electromechanical installations**

Electrical and mechanical installations for industry, airports, railways, hospitals and the tertiary sector

Installation, commissioning, validation and maintenance of industrial HVAC and fire protection systems

Cleanroom construction for the biopharmaceutical, high-tech and food industries

Installation of air and maritime navigation aids systems

Equipping and operational testing of intelligent transport

Installation of monitoring and control systems





# Maintenance, conservation and services

**COMSA SERVICE** 

Ornamental fountains

Building and infrastructure maintenance, energy services and facility management

Installation and maintenance of security systems connected to alarm monitoring centres or video surveillance control stations

Auxiliary services, cleaning, concierge, gardening, etc. Installation, maintenance and operation of renewable energies

# Railway machinery management



Rental, repair and maintenance of rolling stock Railway spare parts

# 115M€

23M€

\$24M

# Infrastructure concession and promotion of renewable energies

# **COMSA CONCESIONES**

Transport infrastructure

Social infrastructure

Investment and management of concessionaire assets

Operation and maintenance of railway and road infrastructures

Comprehensive management of public facilities

### **COMSA GREEN ENERGY**

Development of energy projects







Annual summary 2024 (Spanish)



Annual summary 2024 (Portuguese)



Annual summary 2024 (French)



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