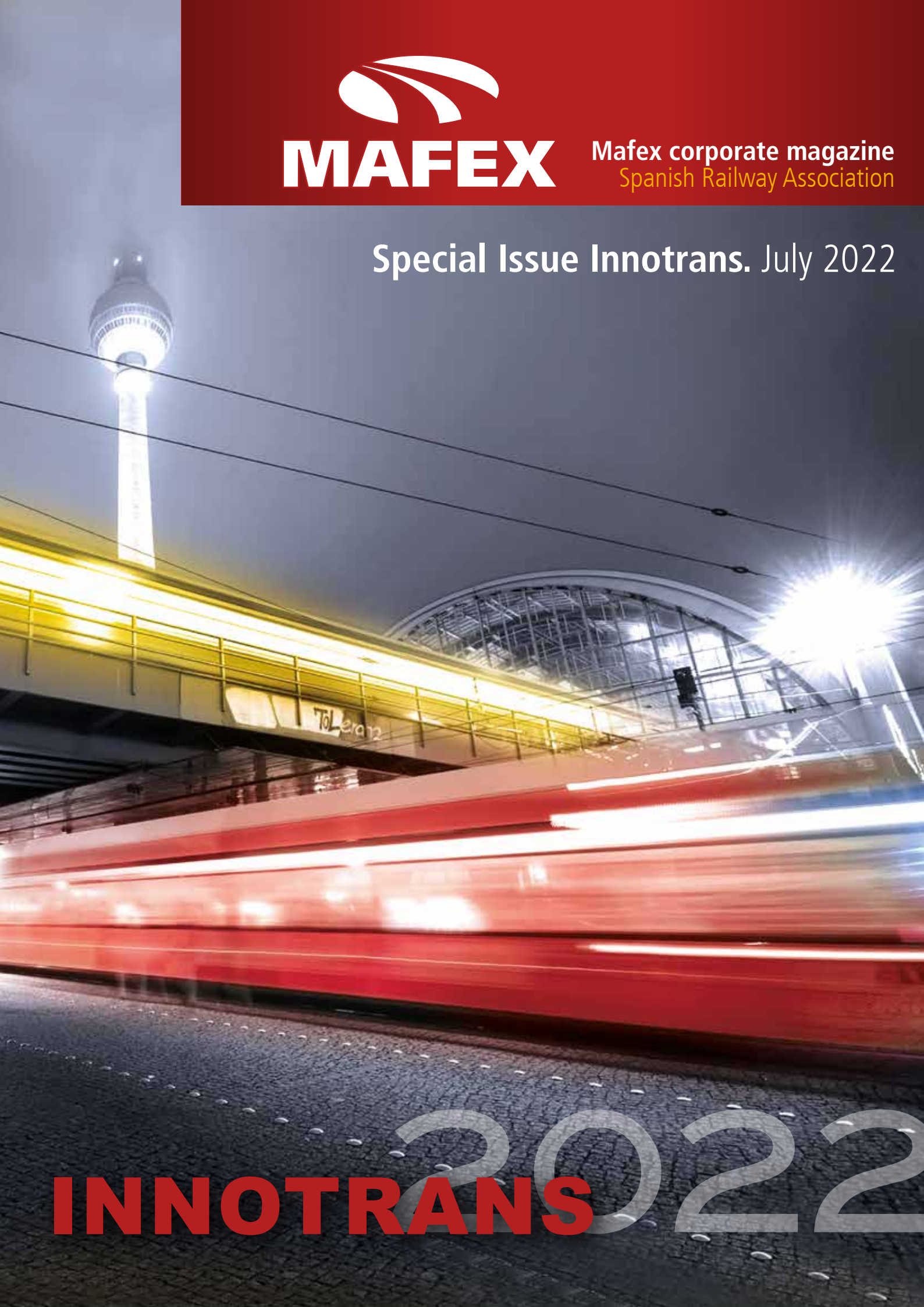




MAFEX

Mafex corporate magazine
Spanish Railway Association

Special Issue Innotrans. July 2022



INNOTRANS 2022

At the forefront of rails solutions

XCarb®
Towards carbon neutral steel



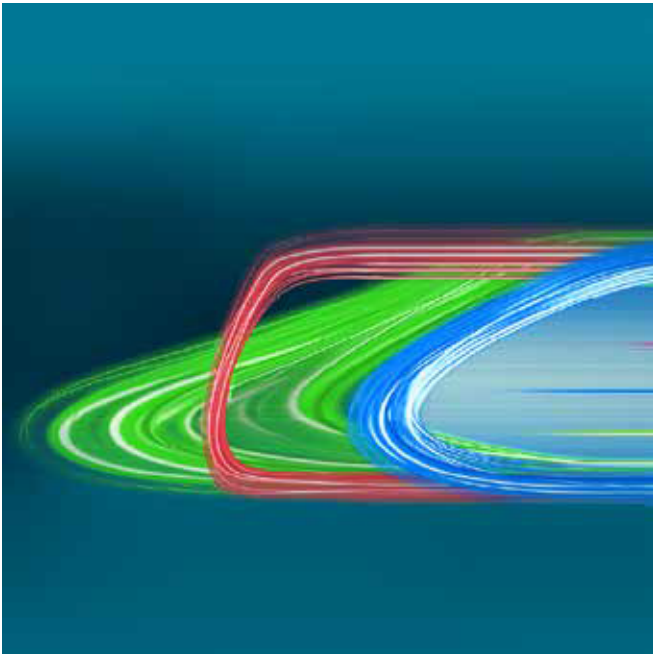
ArcelorMittal Rails & Special Sections with production facilities in Poland, Luxembourg and Spain, offers a wide portfolio of products, covering rails for subways, trams, trains, light rails, crane rails, crossings and rail accessories. ArcelorMittal is a specialist in rails for high-speed networks, with over one million tonnes produced and is present in infrastructure projects in over 30 countries. Its high technologic quality allows us to participate in the more demanding tenders all over the world.

ArcelorMittal's main trending topics for railway:

- **RailCor®** a completely new range of specific corrosion resistant rail products, to meet the most demanding customer requirements.
- **Climate Action: XCarb™** will bring ArcelorMittal's reduced, low and zero-carbon products,steelmaking activities, wider initiatives and green innovation projects, into a single effort focused on achieving carbon neutral steelmaking.
- **R&D:** ArcelorMittal operates a dedicated rail research and development unit which includes pilot plants and prototyping facilities. Its Rail Excellence Centre also includes a dedicated welding unit which can provide advice and support for current and future grades for its customers.
- **Digitalisation:** ArcelorMittal Rails & Special Sections is extending its 4.0 transformation with the launch of several digital tools. New Rail Tool version available.
- **Increasing the length of rails:** in order to provide further track safety, welding, track laying and maintenance cost savings.
- **Increasing the service life of rails:** with the most appropriate solutions related to different applications: for Light Rail Transit operators a complete range of Low Carbon Vanadium (LCV) grades of grooved rails; for ports and heavy loads, R340, a top wear performance crane rail and for transport rails, new hardness grades for heavy haul.

InnoTrans 2022
20-23 September, Berlin

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Hall 26 - Booth 808



04/ REPORT
THE SPANISH RAILWAY INDUSTRY, A WORLDWIDE BENCHMARK
The Spanish railway industry has a is well renowned not only within Spain, but also internationally. A recognition that companies have earned thanks to the work and effort made in each of the aspects that make up the value chain.

SPANISH HIGH SPEED, AN EXAMPLE TO BE FOLLOWED INTERNATIONALLY
The arrival of high speed in Spain, in addition to the paradigm shift in terms of national mobility, brought another milestone with it: the internationalisation of our industry, which became a benchmark for the rest of the countries.

URBAN TRANSPORT: TAILOR-MADE SOLUTIONS FOR EACH CITY
Countries around the world want to count on the work of Spanish companies for public transport networks, such as commuter trains, tram, or metro.

INFRASTRUCTURE: CONSOLIDATED EXPERIENCE IN ACHIEVING MAJOR CHALLENGES
The solid experience acquired by the Spanish sector is now reflected in its international projection.

19/ NEW PRODUCT AND TECHNOLOGIES
Mafex's partners display their innovations at Innotrans.

36/ SPANISH PARTICIPATION AT INNOTRANS 2022

MANAGEMENT: MAFEX.
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The Spanish railway industry, a worldwide benchmark

THE SPANISH RAILWAY INDUSTRY HAS A IS WELL RENOWNED NOT ONLY WITHIN SPAIN, BUT ALSO INTERNATIONALLY. A RECOGNITION THAT COMPANIES HAVE EARNED THANKS TO THE WORK AND EFFORT MADE IN EACH OF THE ASPECTS THAT MAKE UP THE VALUE CHAIN. THIS IS IN ADDITION TO ITS COMMITMENT TO INNOVATION AND ITS INVESTMENTS IN R&D. ITS BEST COVER LETTER? THE SPANISH RAILWAY NETWORK, EQUIPPED WITH CUTTING-EDGE TECHNOLOGY THAT PLACES IT AMONG THE BEST IN THE WORLD.

FEATURES OF THE SPANISH RAILWAY INDUSTRY

Presence throughout the railway value chain.

Know-how consolidated after more than 30 years of the arrival of high speed in Spain.

Own technological development, exported to the five continents.

Source: In-house/Mafex

Great diversity of companies, added to the implementation of synergies.

Adaptation to the different realities and needs of each country and project.

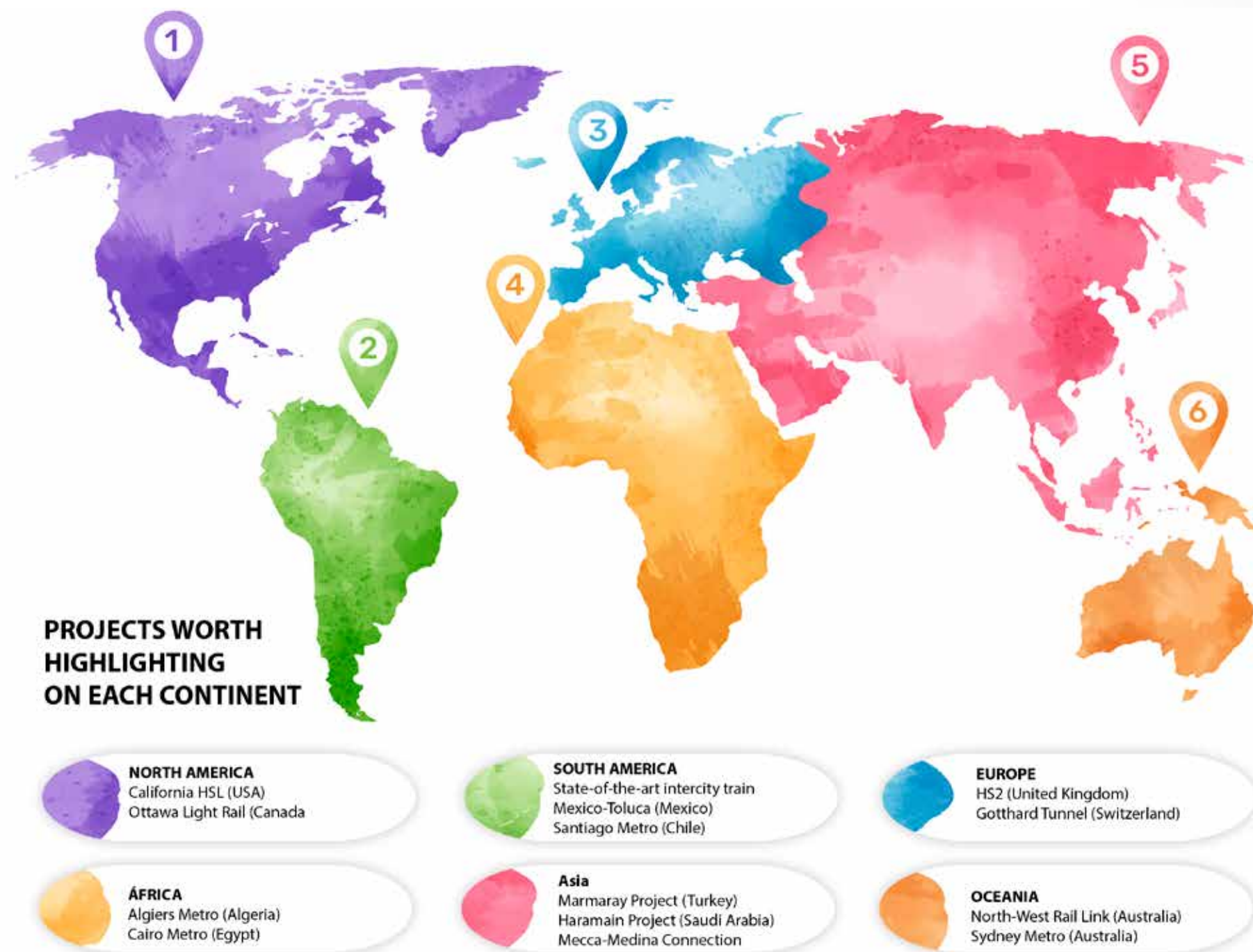
The Spanish railway industry has established itself as one of the main providers of cutting-edge solutions for transport in the twenty-first century

The Spanish railway industry experienced a before and after 30 years ago, with the arrival of high speed in our country. Since then, Spanish companies have placed themselves at the top of mind of the sector and today they are an international benchmark that exports their know-how to the five continents.

The Spanish industry is able to offer a "turnkey" service that ranges from the first steps of planning and financing to the final commissioning. And this is precisely where the value of Spanish companies lies, which are able to design, build and maintain metro, tram, traditional or high-speed railway lines anywhere in the world, with national technology, but adapting to the needs and particularities of each country.

An expertise and specialization that covers the entire value chain or life cycle of the railway infrastructure and that is currently present in more than 90 countries, particularly Australia, Colombia, Turkey, or New Zealand. The Marmaray project in Turkey; the CrossRail in the United Kingdom; or the Gotthard tunnel, - which have been three of the most technically difficult underground works in Europe, stand out among the most relevant international milestones.

All in all, the Spanish railway industry has established itself as one of the main providers of cutting-edge solutions for transport in the twenty-first century. Its portfolio of state-of-the-art services is based on the experience acquired in the construction of the Spanish railway network, one of the most extensive and advanced in the world. The contribution to the implementation of a modern high-speed system,





the second most important in the world with more than 3,200 kilometres, as well as the largest deployment of ERTMS in Europe or the numerous metro and tram systems in the country have earned them international recognition.

Its main cover letter is the Spanish railway network itself, one of the most extensive and modern in the world. It is home to high speed, mid distance, commuter trains and metro lines in the main cities, as well as innovative light rail and tram systems.

This own know-how makes them a leading partner to support transport administrations around the world in the development of new infrastructures, public transport plans, network upgrades and implementation of the most avant-garde technologi-

Mafex, an industry with muscle

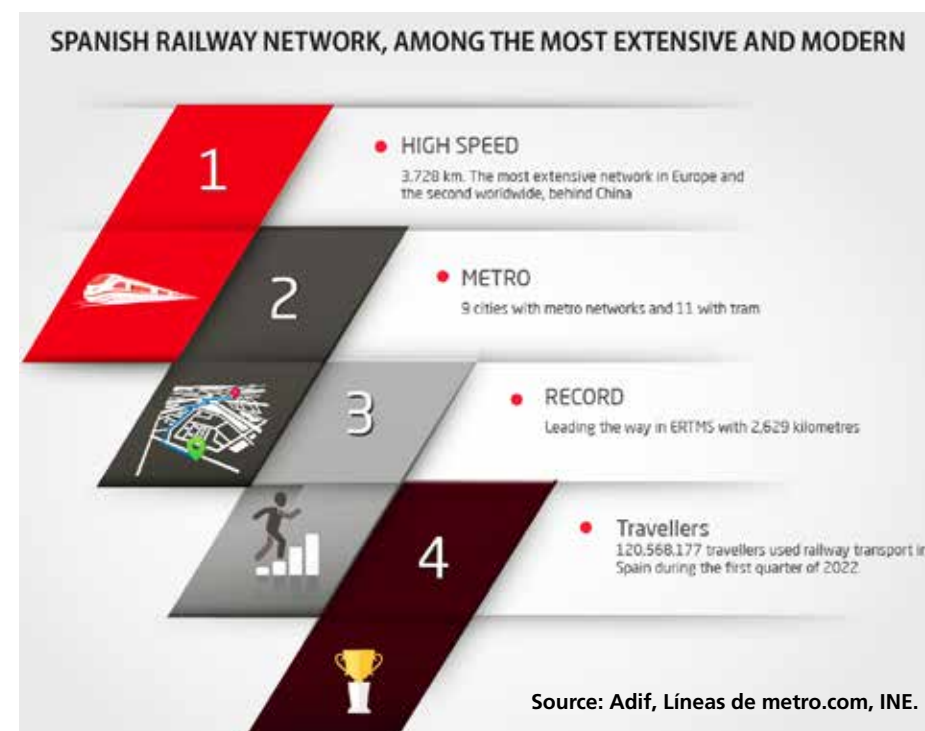
The more than 100 Mafex partners form a complete, representative value chain and are highly qualified to respond to the challenges posed by the implementation of the railway of the future: digital, connected and environmentally friendly.

This chain integrates all the subsectors of the industry, from engineering, consulting, certification, and infrastructure, to rolling stock manufacturers that are currently leading pioneering projects. A large number of companies specialised in signalling, telecommunications, traffic control, as well as a robust auxiliary industry in equipment and components are also part of it.

This constitutes an integral model which combines the high expertise of each of them and that allows them to provide customised solutions with turnkey projects, with the endorsement of having launched the most relevant transport projects around the world, both in high speed and in urban mobility and goods.

cal advances. An experience that, in addition, is reflected by the figures of the sector: over the past year, the

total turnover reached 17 billion euros and created more than 30,000 jobs.



The know-how of the Spanish railway industry makes it a leading partner



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Multidisciplinary teams focused on safety, integration and the technological evolution of rail systems.

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Hall 22, stand n.7

OUR COMMITMENT, YOUR SUCCESS

IDOM

THE OFFER OF SPANISH COMPANIES COVERS ALL PROJECT CYCLES



Source: In-house/Mafex

A unique and highly competitive value chain

One of the strengths of the Spanish railway industry, and the key to its strength at an international level, is its value chain. The offer of Spanish companies covers all project cycles, which allows them to adapt to the needs of each project and each client.

The great diversity of the companies that make up this industry is one of its most characteristic factors and, often, it is achieved thanks to the creation of ideal synergies to adapt each proposal to the specific demands of the client; a competitive advantage makes it possible to have global solutions.

Commitment to research and innovation

Another characteristic feature of the Spanish railway industry is its clear commitment to research and innovation (an average of 2% of its turnover is invested in R+D+i) and technological development, with the creation of its own technology within the framework of digitalisation, sustainable mobility, and energy efficiency. This contribution has had a very positive impact on the promotion of avant-garde, efficient and sustainable transport networks. A technological development that, in addition, is applied

TURNKEY PROJECTS

The competitive value chain of the Spanish railway fabric allows the offer of customised solutions adapted to each project and the delivery of turnkey projects:



Source: In-house/Mafex

in all segments of each project, from the design phase to commissioning, of course, going through rolling stock and maintenance.

In short, a cutting-edge technology that offers significant and constant advances in environmental management, interoperability, system automation, accessibility, user comfort and safety.

Digitalisation

Digital transformation has reached all sectors and it is here to stay, and the industry that does not commit to digitalisation will be left behind. The Spanish railway industry, aware of this situation and the many advantages of implementing new technologies on railway transport, is working to introduce the most avant-garde advances. One of the most outstanding achievements in this regard is the use of technology that allows the operation of driverless trains, which makes the country have the longest automated line in Europe.

Another great challenge where the Spanish experience is playing a key role is in the implementation and development of the CBTC in metro lines, compatible with the European ERTMS signalling standard (European Rail Traffic Management System).

It is also worth mentioning the use of Big Data and Artificial Intelligence to be able to analyse a myriad of data to know in real time the correct functioning of the train fleet and transport infrastructures and thus, perform highly reliable predictive maintenance.

The technological solutions that the industry provides are present from the control and signalling systems, to communications or passenger information. A cutting-edge technology with which the Spanish railway industry faces the

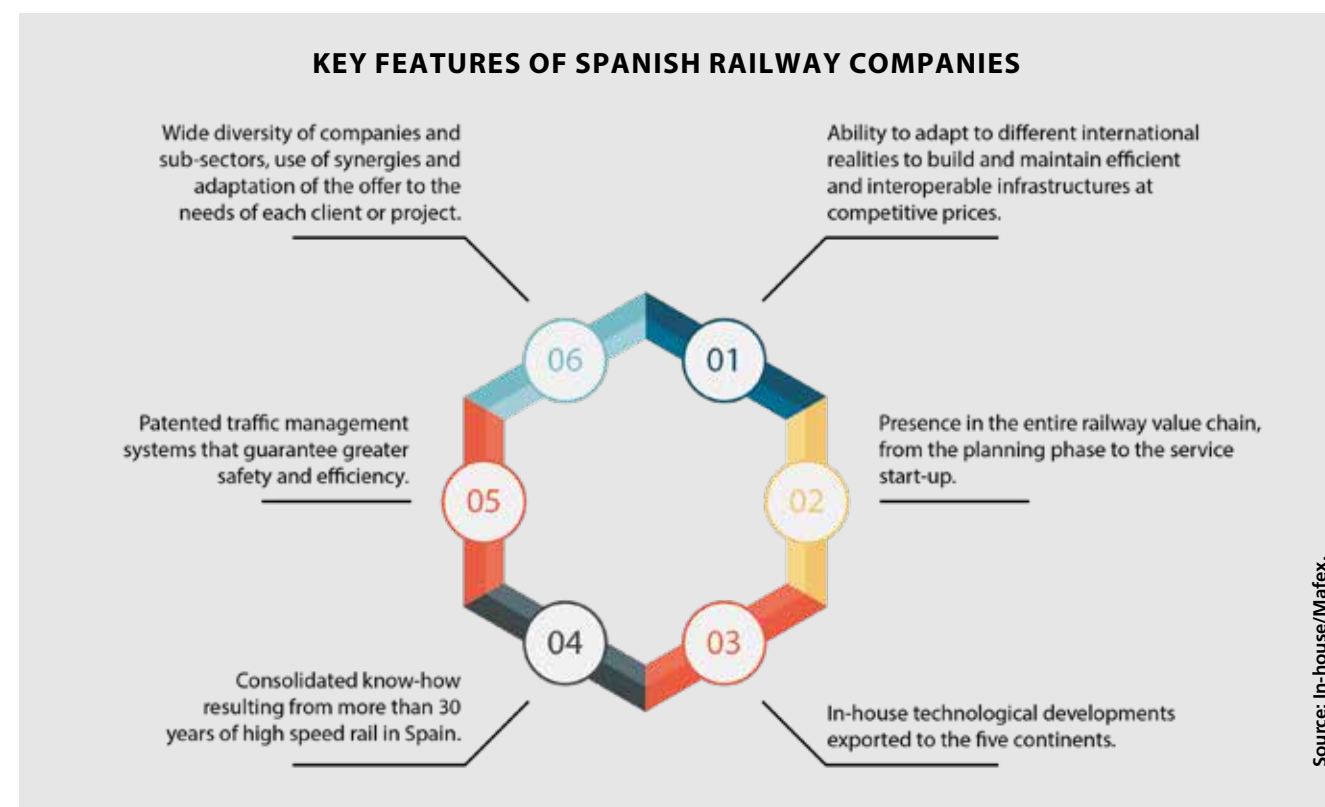


Spanish presence in innovation projects at European level

A clear example of their expertise and experience in this area is its presence in far-reaching technological programmes such as the European R&D instrument Shift2Rail and its successor, Europe's Rail. Both initiatives have a wide representation of Spanish companies, either as founding members, or as collaborators or subcontractors working on the railway of the future and improving the quality of infrastructures and services.



A characteristic point of the Spanish railway industry is its clear commitment to innovation

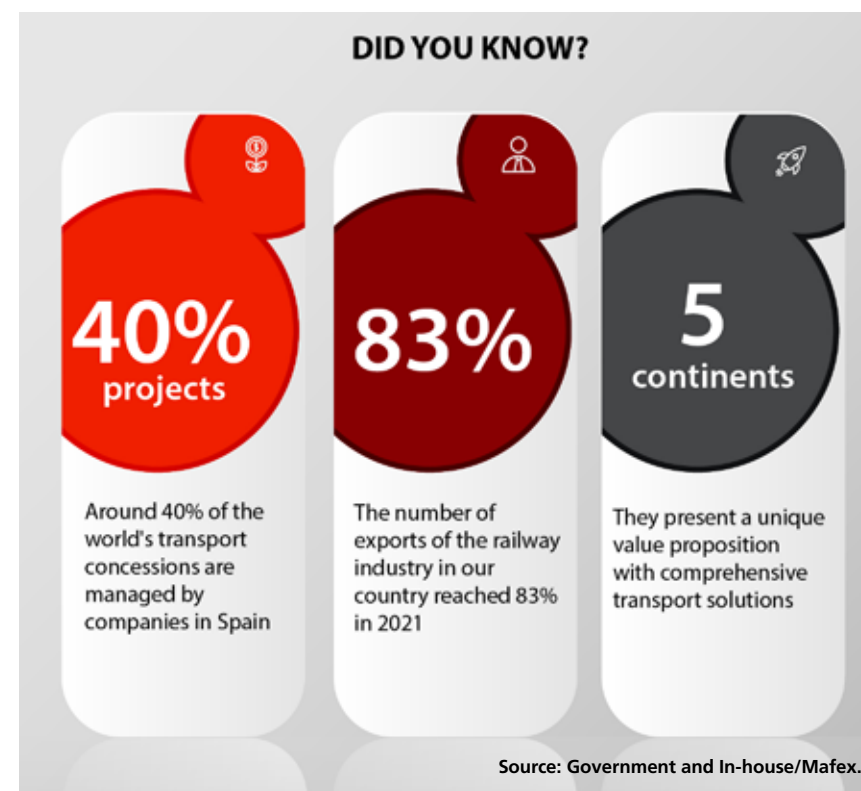


digitalisation of the sector and the need to include the railway within a sustainable mobility. In short, own technologies that aim to promote energy efficiency and environmentally friendly transport that will help achieve the goals to

which the European Green Deal and the UN SDGs aspire.

Spanish companies are constantly evolving to build the most advanced trains for all types of networks, a high-quality product with a clear

commitment to innovation. Some of the latest contributions are the tram-train, which efficiently combines railway with tram and becomes the ideal means to connect different municipalities; new high-speed platforms; or systems for the circulation of trams without catenary.



The Spanish industry, a demand outside our borders

The Spanish footprint is present in railway infrastructures around the world, where they have invested their experience and expertise to develop the most efficient, safe, and sustainable networks.

The extensive experience of Spanish professionals has been requested for metro, trams, conventional railway lines and high-speed projects in countries such as India, Canada, the United States, Australia, Poland or countries in the Middle East and Latin America, where they have helped plan the transport programmes of the main cities and of numerous metro networks.



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SIEMENS

Spanish high speed, an example to be followed internationally

Spain's high speed, with its 3,728 kilometres in length, is the largest network in Europe and the second in the world, only behind China. One of the keys to success has been the synergy and joint work of multinationals, Spanish manufacturers, and SMEs, to launch the most pioneering solutions and become a worldwide benchmark.

And the challenge was not small, especially at infrastructure level, since the particularities of the orography have led to the construction of large tunnels in long sections to overcome the technical difficulties of the terrain. Challenges that, however, the industry knew how to face successfully.

The successful achievement of the challenges that the Spanish industry has faced for the construction of the national high speed has now translated into a world leadership, whose expertise is demanded for the planning and construction of the largest high-speed projects in the world. Not surprisingly, Spanish companies are international benchmarks in the construction and management of high-speed railway infrastructures.

In addition, Spanish companies also participate in studies prior to the construction of high-speed lines, as is the case in countries such as Egypt or India. In the Indian case, its transport administrations relied on Spanish advice to analyse the feasibility of a high-speed line between New Delhi and Kolkata.

THE ARRIVAL OF HIGH SPEED IN SPAIN, IN ADDITION TO THE PARADIGM SHIFT IN TERMS OF NATIONAL MOBILITY, BROUGHT ANOTHER MILESTONE WITH IT: THE INTERNATIONALISATION OF OUR INDUSTRY, WHICH BECAME A BENCHMARK FOR THE REST OF THE COUNTRIES.



Spanish industry expertise is demanded for the planning and construction of the largest high-speed projects in the world

SOME OF THE MAIN HIGH-SPEED PROJECTS IN THE WORLD THAT HAVE A SPANISH HALLMARK

HS2 (United Kingdom)

It is planned that it will be in 2026 when the high-speed line will be inaugurated, which, in its first phase, will link the cities of London and Birmingham. Afterwards, the infrastructure will be extended to Manchester and Leeds. The Spanish railway industry also has a decisive role in this line, contributing its expertise in the design, engineering, and preparatory work for the implementation of the largest current European infrastructure project (531 km with speeds of up to 350 km / h). Ferrovial, Ineco and Sener take part in this project.

Oslo-Ski

22.5 kilometres will link the cities of Oslo and Ski in a project that is the largest civil work of transport infrastructure in the Norwegian country. Spanish companies have participated in the civil works and electrification.

Follo Line (Norway)

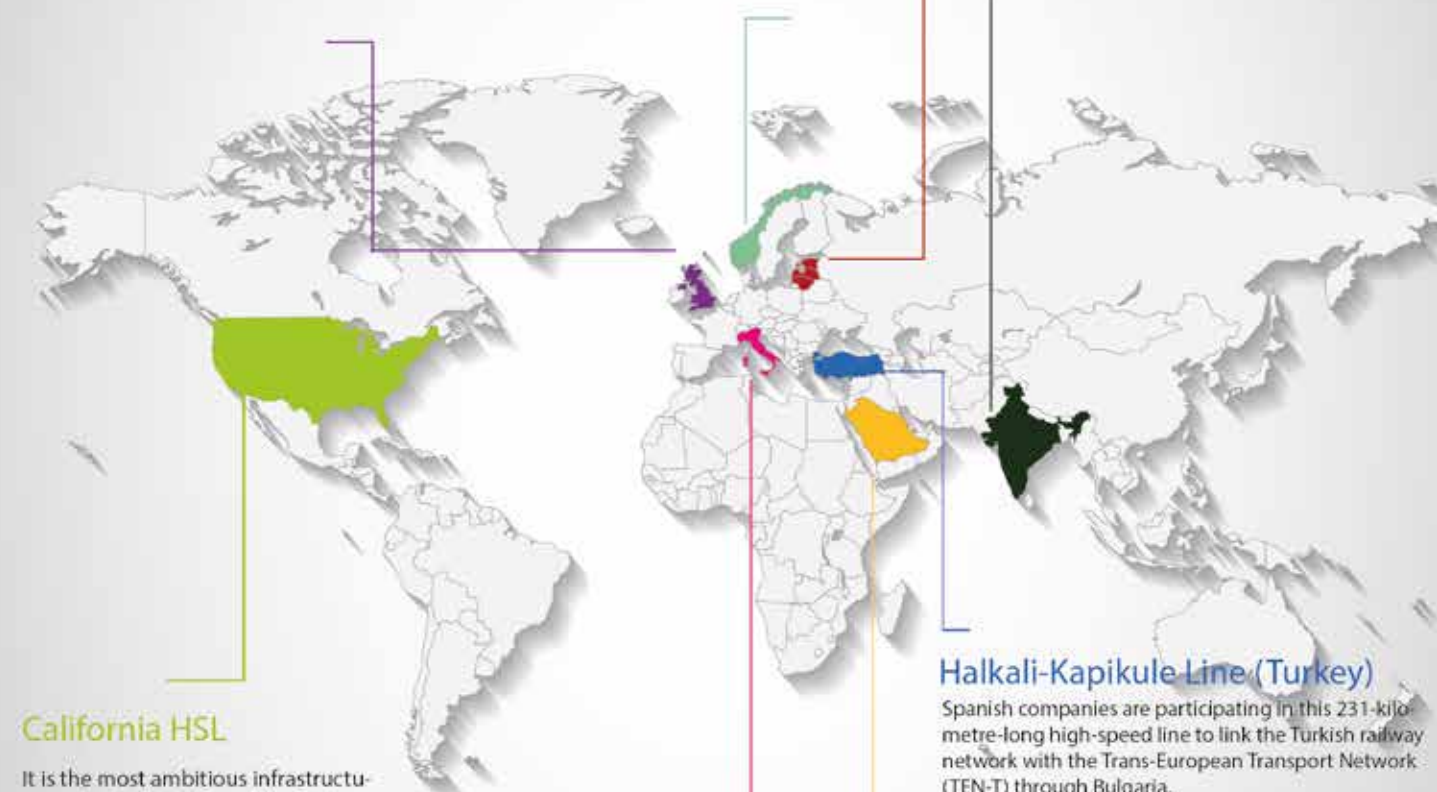
Three Spanish companies, Acciona, OHL and Elecnor, are involved in Norway's largest infrastructure project, consisting of a new 22-kilometre double-track railway line between Oslo Central Station and the new station at Ski, to the south of Oslo.

Rail Baltica

Finland, Estonia, Latvia, Lithuania, and Poland will be linked by a high-speed line in one hour and 42 minutes. Spanish engineering and signalling companies are involved in the development.

New Delhi-Kolkata Line (India)

The Spanish industry has participated in the consultancy that analysed the viability of this high-speed line. A project with which the Indian government aims to rejuvenate the country's railway network.



California HSL

It is the most ambitious infrastructure project in the U.S. and the first high-speed line in California. It will allow travel from Los Angeles to San Francisco in less than three hours. The US state has also counted on Spanish companies for feasibility studies and their construction. Specifically, ACS and Ferrovial are taking part.

Milan-Naples

The neighboring country of Italy also had the Spanish experience for the adaptation of 400 kilometres of single track, as well as for mobile detours for high speed or the laying of 184 kilometres between Rome and Naples. Acciona designed and built the Bologna connection of this line.

High-speed train from Texas (United States)

Spanish presence as well in the project called Bullet Train, which will connect the 386 kilometres that separate the cities of Houston and Dallas / Fort Worth in less than 90 minutes.

Rome Naples

Comsa was responsible for the construction, which involved more than 400 km of single track, 50 mobile detours for high speed, four stations and the laying of the 184 km that separate both locations.

Halkali-Kapikule Line (Turkey)

Spanish companies are participating in this 231-kilometre-long high-speed line to link the Turkish railway network with the Trans-European Transport Network (TEN-T) through Bulgaria.

Ankara-Istanbul

The renewal of the high-speed line linking Europe and Asia also relied on the expertise of the Spanish companies Ineco, CAF and OHL. Specifically, they participated in the design and engineering phase, as well as in the signalling and provision of rolling stock.

Connection Mecca-Medina

This is the most important infrastructure project in the Arab world in recent decades, built by the Spanish-Saudi consortium 'Al Shoula', in which 12 Spanish companies participate: Renfe, Adif, Ineco, Talgo, OHL, Copasa, Cobra, Consultrans, Imathia, Inabensa (Abengoa), Dimetronic (currently Siemens) and Indra.

Source: In-house/Mafex

Urban transport: Tailor-made solutions for each city

The experience and expertise of the Spanish industry is not only demanded for the development of high-speed networks, but countries around the world want to count on the work of Spanish companies for public transport networks, such as commuter trains, tram, or metro. What is the goal they pursue? To implement modern, sustainable, and highly efficient systems.

MAIN CONVENTIONAL LINES

- The East Side Access (ESA), New York
- London Crossrail Project
- Electrification Ghaziabad-Moradabad (India)
- North-West Rail Link, Sydney
- Electrification Network Rail - Southern Region (United Kingdom)
- Rail Baltica. Sestokai-Marjampole section
- Vidin-Calafat Bridge over the Danube (Bulgaria)
- State-of-the-art intercity train Mexico-Toluca

EUROPE

- Karlsruhe Tram-train (Germany)
- Berlin Metro (Germany)
- Cologne Metro (Germany)
- Jena Tram (Germany)
- Erfurt Tram (Germany)
- Augsburg Tram (Germany)
- Chemnitz Tram-Train (Germany)
- Postdam Tram (Germany)
- Gmunden Tramlink (Austria)
- Vienna Tram (Austria)
- Brussels Metro (Belgium)
- Lijn-Antwerp and Ghent tramway (Belgium)
- Liège Tram (Belgium)
- Copenhagen Tram (Denmark)
- Odense Tram (Denmark)
- Helsinki Metro (Finland)
- Besacon Tram (France)
- Nantes Tram (France)
- Saint Etienne Tram (France)
- Tbilisi Metro (Georgia)
- Athens Tram (Greece)
- Utrecht Trams (Netherlands)
- Amsterdam Tram (Netherlands)
- Pamukova-Köseköy Line (Turkey)
- Amsterdam Metro (Netherlands)
- Palermo Trams (Italy)
- Metro LAN (Line Afragola-Naples) (Italy)
- Rome Metro (Italy)
- Milan Trams (Italy)
- Cosenza Tram (Italy)
- Naples Metro (Italy)
- Cagliari Tram (Italy)
- Dublin Metro-Metro link (Ireland)
- Cork Tram (Ireland)
- Luxembourg Tram (Luxembourg)
- Oslo Tram (Norway)
- Warsaw Tram (Poland)
- Mondego Metrobus. Coimbra (Portugal)
- Lisbon Metro (Portugal)
- Docklands Light Railway. London. (United Kingdom)
- London Underground (United Kingdom)
- Sheffield Tram-train (United Kingdom)
- Birmingham Trams (United Kingdom)
- “Wales and Borders” network Tram-Train (United Kingdom)
- Glasgow Metro (United Kingdom)
- Belgrade Tram (Serbia)
- Stockholm Metro (Sweden)
- Lund Tram (Sweden)
- Lugano-Ponte Tresa Tram-train (Switzerland)
- Limmattal Light Rail (Switzerland)
- Bern Tram (Switzerland)
- Basel Tram (Switzerland)
- Ankara Metro (Turkey)
- Izmir Metro (Turkey)
- Istanbul Metro (Turkey)
- Bucharest Metro (Romania)

AMERICA

- Buenos Aires Metro (Argentina)
- San Isidro Tram (Argentina)
- East Line of the Fortaleza-Metrofor Metro (Brazil)
- Sao Paulo Metro (Brazil)
- Rio de Janeiro Metro (Brazil)
- Salvador Monorail (Brazil)
- Porto Alegre Metro (Brazil)
- Cuiabá Tram (Brazil)
- Fortaleza Metro (Brazil)
- Santos Tram (Brazil)
- Eglinton Crosstown Light Rail. Toronto (Canada)
- Light Rail in Ottawa (Canada)
- Santiago de Chile Metro (Chile)
- Valparaiso Metro (Chile)
- Medellín Metro (Colombia)
- Bogotá Metro (Colombia)
- Ayacucho Tram (Colombia)
- Medellín Metrocable (Colombia)
- Quito Metro (Ecuador)
- Boston Light Rail (United States)
- New York City Subway (United States)
- Washington Metro (United States)
- Kansas City Tram (United States)
- Cincinnati Tram (United States)
- Houston Tram (United States)
- Miami Metro (United States)
- MetroRiel (Guatemala)
- Guatemala Metro (Guatemala)
- Electric train of Guatemala (Guatemala)
- Mexico City Metro (Mexico)
- Mexico Light Rail (Mexico)
- Guadalajara Light Rail (Mexico)
- Monterrey Metro (Mexico)
- Puebla Light Rail (Mexico)
- Panama Metro (Panama)
- East Side Access Project (New York)
- Lima Metro (Peru)
- Santo Domingo Metro (Dominican Republic)
- Caracas Metro (Venezuela)
- Maracaibo Metro (Venezuela)
- Mayan Train (Mexico)
- Port of Montevideo Line (Uruguay)

AFRICA

- Algiers Metro (Algeria)
- Constantine Tram (Algeria)
- Ouargla Tram (Algeria)
- Cairo Metro (Egypt)
- Cairo Monorail (Egypt)
- Casablanca Tram (Morocco)
- Mauritius Tram (Mauritius)

MIDDLE EAST

- Riyadh Metro (Saudi Arabia)
- Integrated fare management of public transport in Riyadh (Saudi Arabia)
- Ouargla Tram (Algeria)
- Algiers Metro (Algeria)
- Doha Metro (Qatar)
- Lusail Trams (Qatar)
- Dubai Tram (United Arab Emirates)
- Abu Dhabi Trams (United Arab Emirates)
- Muscat public transport master plan (Oman)
- Astana Tram (Kazakhstan)
- Kuwait City Metro Master Plan (Kuwait)
- Gold Line Monorail of Bangkok (Thailand)

ASIA AND OCEANIA

- Parramatta Light Rail (Australia)
- Sydney Metro (Australia)
- Canberra Tram (Australia)
- Newcastle Tram (Australia)
- Ho Chi Minh Metro (China)
- Shanghai Metro (China)
- Seoul Metro (South Korea)
- Manila Metro (Philippines)
- New Delhi Metro (India)
- Chennai Metro (India)
- Nagpur Metro (India)
- Mumbai Metro (India)
- Dhaka Metro (India)
- Kochi Metro (India)
- Bangalore Metro (India)
- Ahmedabad Metro (India)
- Palembang Tram (Indonesia)
- Kuala Lumpur Metro (Malaysia)
- Singapore Metro Jurong Region Line (Singapore)
- Bangkok Automated Monorail (Thailand)
- Kaohsiung Tram (Taiwan)
- Almaty Tram (Kazakhstan)
- Hanoi Light Rail (Vietnam)

MAJOR METRO AND LIGHT RAIL PROJECTS

Infrastructure: consolidated experience in achieving major challenges

THE SOLID EXPERIENCE
ACQUIRED BY THE SPANISH
SECTOR IS NOW REFLECTED
IN ITS INTERNATIONAL
PROJECTION.

The high degree of experience
accumulated by the railway
industry translates into over-
coming major challenges at an in-
ternational level also at the level of
infrastructures, both for its cons-
truction and maintenance. Entities
from the five continents seek the
technical advice of Spanish com-

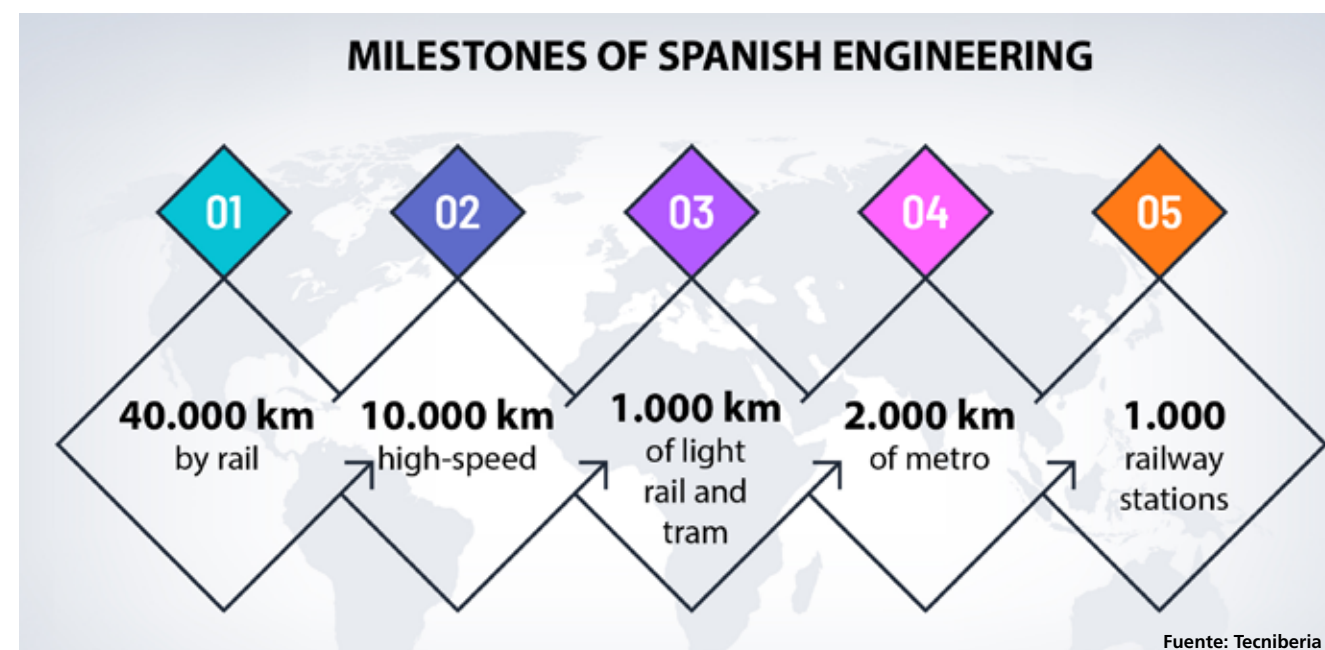
The largest infrastructures of
recent years have had
Spanish engineering for their
implementation

panies to implement the most mo-
dern and efficient networks. Not in
vain, the largest infrastructures of
recent years have had Spanish engi-
neering for their implementation in
countries such as the Middle East,
India, Australia, the United States or
Canada. 🌐

SOME EMBLEMATIC INFRASTRUCTURES OF THE SPANISH INDUSTRY



MILESTONES OF SPANISH ENGINEERING

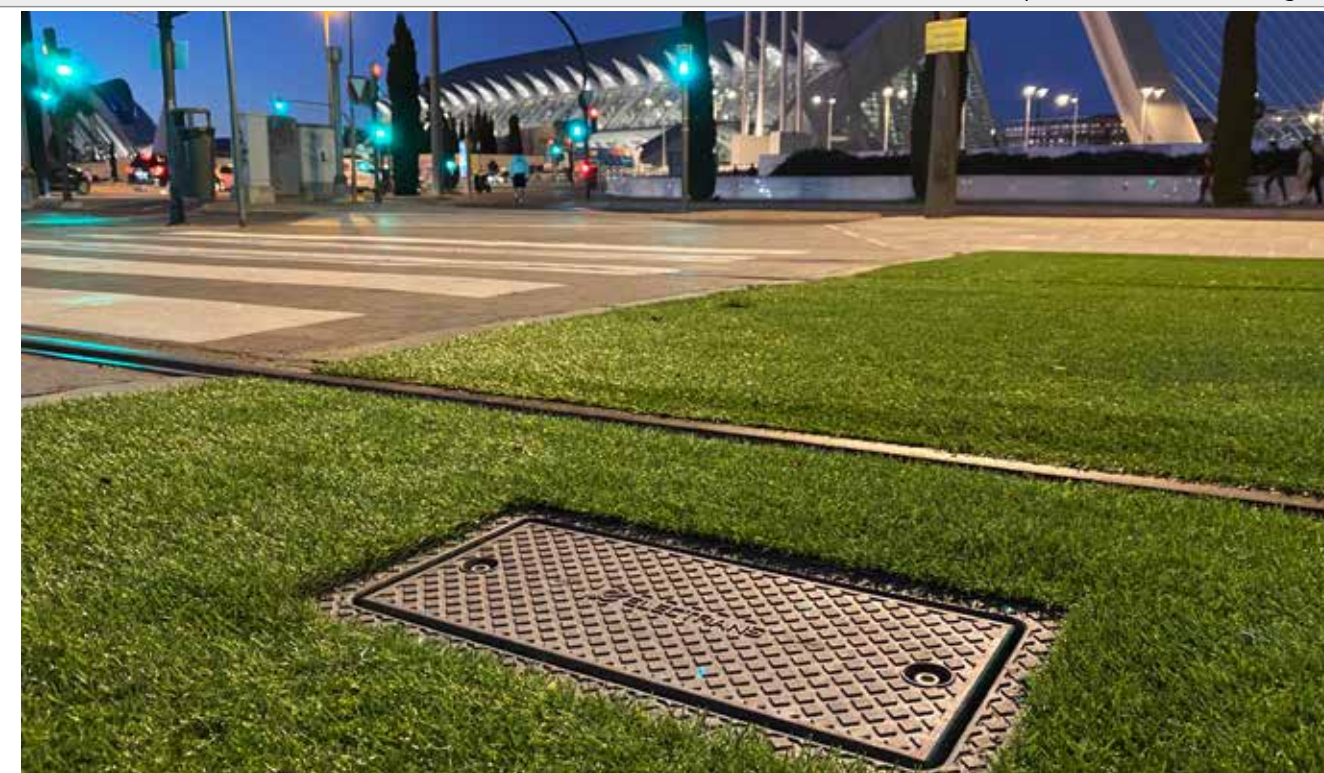


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our job

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child could do it... or may be
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installing railway equipment
since 1880.

Experience has taught us to
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complex problems appear
simple.
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paths: conventional, high

speed, urban rail and heavy
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Cas-e automatic speed supervision and control system for trams and light rail

ELECTRANS

At ELECTRANS we are experts in providing integrated ATP solutions for tram and metro networks. Our journey for more than 45 years has allowed us to accumulate great knowledge, have a wide return on experience and invest in constant R&D through projects carried out around the world.

The experience has allowed us to see first-hand the great differences between a new construction project and the extensions to an existing

network. In the latter case, closed systems, proprietary software and technological incompatibilities pose significant challenges as they severely limit viable options.

Our solution is the ATP CAS-E system, which allows automatic speed supervision and control to be carried out simply by means of an on-board processing unit and passive beacons located on the track, which do not require any type of connection not even for its power supply or relation to existing signalling systems.

The on-board unit makes it possible to monitor driving speed through

speed maps for the entire track route, receive fixed telegrams from the beacons or establish temporary speed restrictions and define three braking curves with their respective configurable warnings and action levels in each case.

This architecture allows simple integration into existing networks, improves the cost-efficiency ratio and the possibility of future extensions of functionalities, such as protection of restrictive aspects of signals, route requests, priority management at traffic signalized junctions or rolling stock detection among others, thanks to the modularity of the system.

CERTIFER celebrates 25 years

CERTIFER

And we want to celebrate with you! Join us at our stand to celebrate and discover our recent global expansion after the creation and acquisition of various entities around the world. CERTIFER is now positioned with 21 locations and projects in over 50 countries. We are committed in offering our clients the best and simplest solutions to meet the requirements of an international market.

Come and check our ISA, NoBo, AsBo accreditations and DeBo recognitions to discover how we can support the placing into the market of your products. Come and listen to our success stories, including rail-

way cross-border, light rail, urban insertion, testing campaigns and innovation projects. At CERTIFER we believe in rail transport as the future of transport and the solution towards a sustainable world.



NEW PRODUCTS AND TECHNOLOGIES
MAFEX'S PARTNERS DISPLAY THEIR INNOVATIONS AT INNOTRANS



ArcelorMittal at the forefront of innovative rail solutions

ARCELORMITTAL

ArcelorMittal continuously brings new solutions with breakthrough advantages for rail market, in order to increase service life of our rails, adapted to different railway applications:

For tramway, our low carbon vanadium grades solution provides

better performance due the right combination of excellent wear resistance and good weldability for gauge corner restoration.

A new crane rail grade has been developed by R&D to optimize Life Cycle Cost thanks to top wear performance for an increased service life especially for heavy loads and port operations. The combination of a customized microalloying in the chemical composition along

with specific rolling process results in a new steel grade with improved hardness and mechanical properties.

Our new family of corrosion resistant rails designed and tested under most extreme corrosion conditions in track, with an outstanding performance. The product family includes an electrical insulation product specifically developed to reduce corrosion due to stray currents.

Ardanuy Ingenieria presents the ISA accreditation at Innotrans

ARDANUY INGENIERIA

Ardanuy participates in the new edition of Innotrans. The Consultant Company will present the accreditation granted by the Spanish National Safety Authority that recognizes Ardanuy as an Independent Security Assessor. Ardanuy maintains the ISA accreditation in all railway subsystems: infrastructure, energy, rolling stock, Control-Command and Signaling Systems, Safe Integration, and Maintenance.

This Accreditation allows Ardanuy to carry out Safety Evaluations in the railway field. Ardanuy has already carried out about 100 di-

fferent contracts in recent years. Being capable to carry out the Evaluation in all the Subsystems

allows the company to offer a comprehensive service.



CAF is ready to show its most digital side at innotrans

CAF

In this Innotrans edition, CAF will present the evolution of its railway solutions as well as the latest digital developments. Emphasizing the most digital part of CAF; its services and solutions will be reflected in a virtual environment.

The Digital Depot and operational excellence concept will also be in Innotrans in this 3D format showing the new equipment and services for optimizing the operation and maintenance of any type of the railway fleet.

All these solutions will be endorsed by success stories where different aspects, such as energy efficiency, safety and passenger experience have been worked; in addition to successful projects based on Condition



Based Maintenance and Predictive Maintenance.

Applying the LeadMind digital platform is the basis for providing service improvement solutions and competitiveness to operators and maintainers; through quality data management in a cyber secure way. The benefits of having real-time information and applying advanced analytics to improve ser-

vice reliability and fleet availability will be shown, where automatic measurement equipment such as WaySide solutions, contribute significantly.

Under the slogan TRUST IN MOTION, the possibility of interacting with CAF's Smart Urban Mobility solutions will be offered in a complete virtual portfolio, thus leading the way to futures mobility.




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Revengea Smart Solutions (RSS) presents the latest generation of its rail solutions at Innotrans

REVENGA SMART SOLUTIONS

Revengea Smart Solutions will be present at Innotrans 2022, as customary since the company attended the event for the first time near 15 years ago. In this edition, RSS will fo-

cus its presence on the presentation of the latest generation of its safety and user experience solutions: XThings, RailXcan and RailRox.

XThings, RSS's solution for real-time sensorization and control of stations and terminals, allows the digitization of all operational processes of the facility.

RailXcan, the most advanced solution for real-time sensorization and control of rail tracks and train parameters at a central location.

RailRox, the level crossing protection system that stands out for its adaptability to country-specific operation and safety processes.



ICF- axle counter system AC-900

ICF

ICF, a Spanish railway signalling technology company, will present the AC-900 Axle Counter System at Innotrans. Developed and validated 100% by ICF, its manufacture and verification are carried out entirely in Spain and is exported all over the world.

The AC-900 system is the first in the world that allows the axle sensors to

be connected by bus, which translates into a saving of up to 80% in cable. The simplicity of assembly thanks to this architecture, elimination of drilling, self-adjustment system and 100% software configuration, means that installation, modification, temporary situations, testing and commissioning times are dramatically reduced.

Installed on conventional and high speed lines, it allows centralised

maintenance through IP connection with the interlocking and continuous reporting of parameters, such as axle speed among others, in real time.

The AC-900 Axle Counter System has successfully completed all the SIL4 and interoperability tests required for its installation outdoors and in such a demanding environment as the railway, highlighting its immunity to electromagnetic noise.

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MAFEX Revista corporativa de Mafex
Asociación Ferroviaria Española



ABB captures, stores and regenerates braking energy

ABB

ABB's 1,500 Volt DC Enviline energy storage system (ESS) stores and recycles surplus braking energy from trains, reducing energy consumption and peak demand.

Antonio Colla, global railway marketing and sales manager at ABB, says: "The energy management system stabilizes the network power demand and reduces energy costs. Regenerative braking systems improve energy efficiency of traction systems due to the regular braking that takes place each day, recovering up to 30 percent of otherwise wasted energy".

ABB's ESS is also used to manage voltage drops: trains draw peaks of power during acceleration which



can lead to performance problems causing operation delays. Projects such as Melbourne Metro and LAX

demonstrate the vast environmental, cost and operational benefits afforded by this technology

GMV's its systems present at the Innotrains Fair

GMV

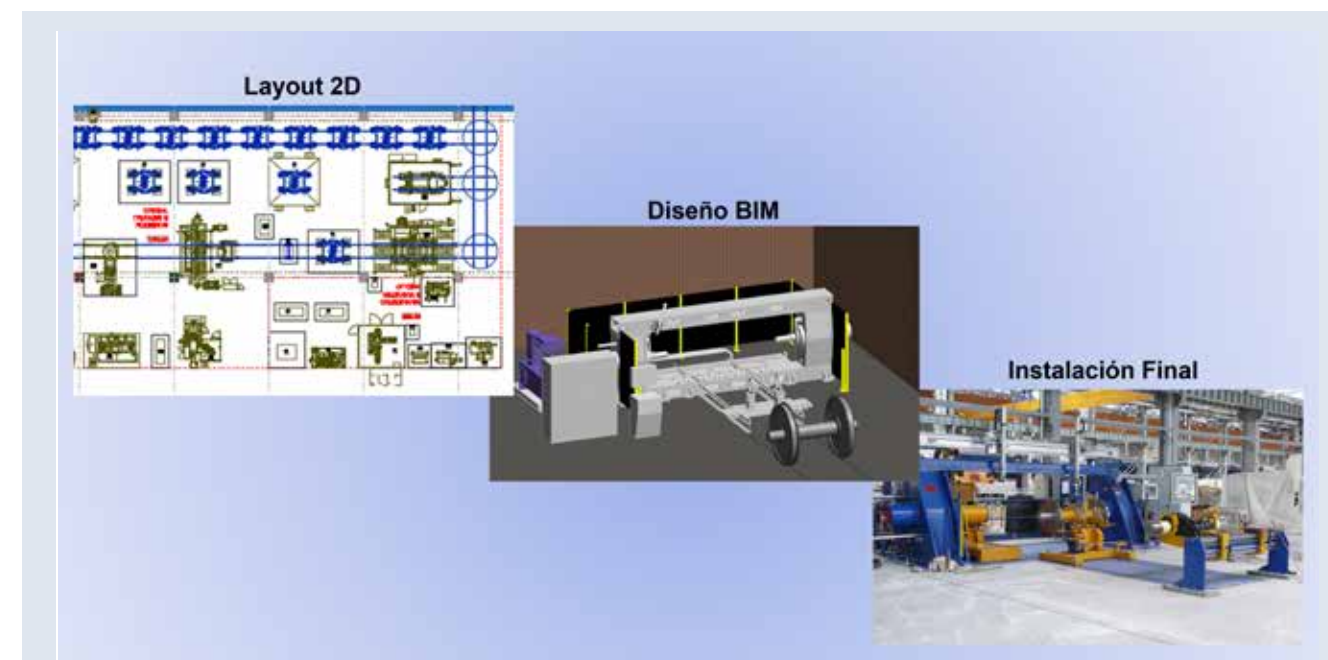
At the next 2022 edition of the Innotrans fair, GMV will present its innovations in intelligent transport systems, where it has a long international track record. GMV will present its ticketing systems for rail transport, both on board and at the station, including compatibility with EMV bank cards and its new backoffice systems capable of managing account-based ticketing.

The advanced fleet management systems will also be present the innovations in the SAE-R product, successfully implemented in a large number of clients and with constant evolution. Without forgetting the onboard systems, integrated or not with SAE-R, from passenger



information systems to onboard video surveillance or public address and intercom systems. GMV will

also present its innovations in planning and optimization systems for rail transport.



ACYGS has as mission to offer comprehensive rail maintenance solutions to customers around the world

ACYGS

ACYGS provides cost-effective engineering and equipment supply services. Its vision is To be a world reference in the design of railway

workshops that improve the efficiency of maintenance processes. At this Innotrans exhibition, the aim is to publish the engineering services in the design of railway depots and the latest references that have had since the last edition.

Feasibility studies, definition of workshop equipment, "BIM mo-

deling" workshop layout, optimization of workflows, definition of purchase requirements, technical evaluation of offers and project management, are the services that they provide to their clients. HITACHI, ACCIONA, Metro de Madrid, Trenitalia, RENFE, ALSTOM, FGC... have the support of ACYGS in different projects.

BE MOTION.

The energy transition is an unstoppable process.

To face this challenge, **The Real Dream Team** is born, a movement based on Heroes and Heroines that just like you do, share the same dream: a world where the energy production and consumption are clean. Will you join?



INNOTRANS 2022

20-23 SEPTEMBER
BERLIN, GERMANY

- TRACTION SYSTEMS, CONVERTERS & ELECTRICAL MACHINES
HALL 9, STAND 615
- CONTROL & MONITORING SYSTEMS
HALL 27, STAND 700

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REAL
DREAM
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THE ENERGY
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ELECTRIFYING
A SUSTAINABLE
FUTURE

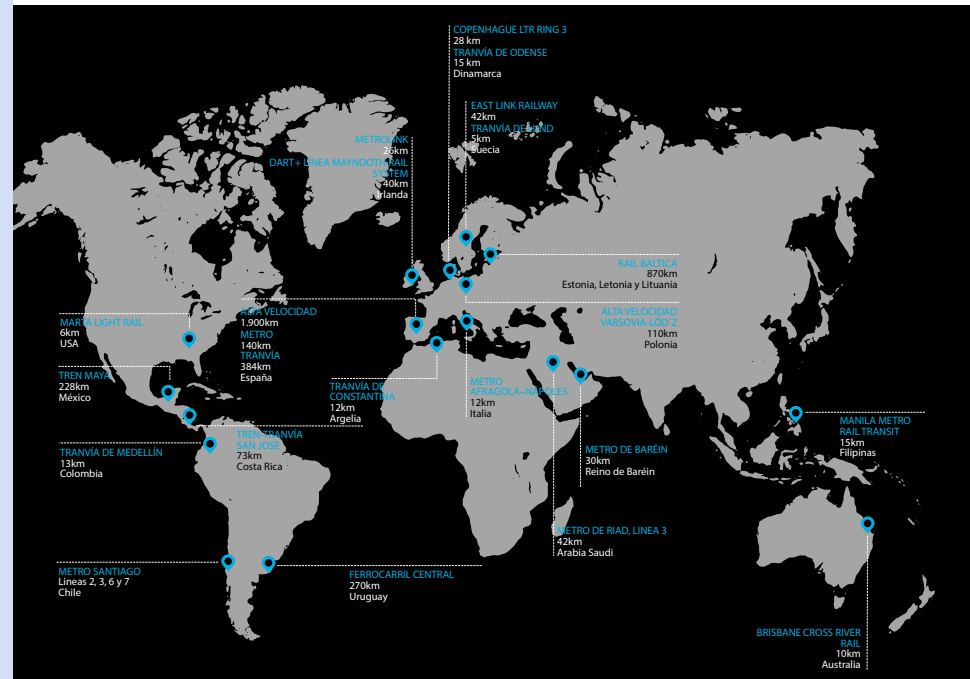
IDOM, more than 50 years leading the railway sector

IDOM

IDOM has accumulated experience over more than 50 years, designing metro, light rail, bus rapid transit, and high-speed railway projects. During this time we have developed more than 7,000 km of railway lines, 1.200 Km of tramways, and about 400 km of Metro lines.

Among our latest projects there are the urban light rail of Odense (Denmark), the metrolink in Dublin (Ireland), the mega project of Rail Baltica crossing Latvia, Estonia and Lithuania and various metro lines like the one in Santiago del Chile and Metro Manila in the Philippines. We have carried out projects in many different countries across Europe, South America, Middle East and Asia.

At IDOM we work with our sights set on a sustainable future, provi-



ding our clients with bold and innovative engineering solutions that

guarantee financial, social and environmental sustainability.

Indra: railroad digitalization to achieve more connected and sustainable mobility

INDRA

Indra is continuing to develop its advanced technology for the railroad sector with the aim of leveraging all the benefits of CyberRail IoT, the satellite-based ERTMS, big data and Artificial Intelligence to place the train at the center of the new mobility.

At Innotrans it will showcase its breakthroughs in open signaling systems (low-cost ERTMS) and wireless signaling solutions, facilitating progress towards more automated, safer and smarter rail management and the handling of secure assets.

Indra will also display its solutions for smart stations, smart ticketing and Account Based systems. In particular, its stand will feature the innovative access control systems developed for Metro de Madrid.



Ineco strengthens its leadership in the deployment of ERTMS and the digitisation of the railway in Europe

INECO

Since 2015, Ineco has provided technical services for the coordination and supervision of the deployment of the ERTMS system in the TEN-T network of strategic European corridors. The company has signed a new contract that reinforces its leadership in the deployment of this system in European railway corridors.

The focus of this project, which Ineco has been awarded with its partner EY, is located in the European Transport Corridors (ETC), where there are commitments from the different Member States to deploy ERTMS, but technical support will also be provided to other projects, including neighboring countries of the Member States such as the EEA (Norway and Switzerland) or the



Western Balkans. In addition, we will promote digitisation projects that will improve the efficiency and safety of the railway, among which the future mobile telecommunications system (FMRCs) and the digital automatic wagon coupling system (DAC) stand out.

This new contract reinforces our position in the most innovative areas of the Railway and with the European Commission's Directorate-General for Mobility and Transport (DG MOVE), Europe's Rail Joint Undertaking, ERA and CINEA.

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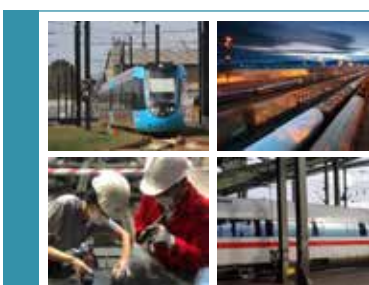
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employees
worldwide



20
languages
spoken



Testing

Inspection

Certification

Railway Transportation

Urban Mobilities

Hoisting, Piling & Lifting Equipment



Ingeteam will extend its presence at innotrans 2022

INGETEAM
INGETEAM designs and supplies complete Traction systems and converters, control (TCMS & Subsystem controllers) and predictive maintenance solutions, based on in-house developments of power and control electronics.

Our traction systems offer high energy performance, maximum

reliability and reduced maintenance costs, adapted to our clients' requirements, based on INGETRAC traction converters, electrical machines and auxiliary elements, and cover the entire range of catenary voltages (750 Vdc, 1,500 Vdc, 3,000 Vdc, 15 kVac, 25 kVac) and powers, for light tramcars, metros, EMUs, locomotives and high-speed vehicles. At InnoTrans 2022, we will be showcasing products applied on latest railways rolling stock.

INGETRAC traction converters are based on Basic Power modules, applying the latest advances in the field of power semiconductors; they are the key to modularity on our designs along with a high degree of standardization.

Our stand on Hall 9 will be showcasing the basic power modules which are at the basis of INGETRAC converters.

INGETEAM boosts its railway and sustainable mobility activities including on its offer traction motors and generators adapted to the individual requirements of each project.

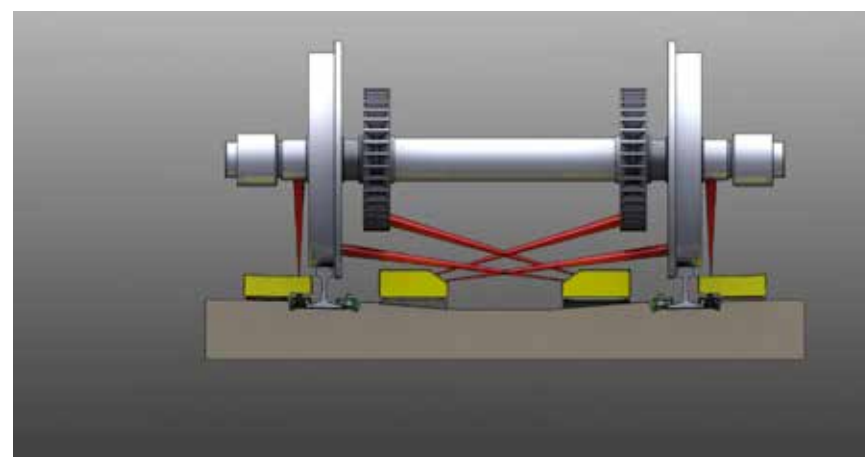
INGETEAM will show on Hall 27 its INGESYS control range, specifically designed for railway applications with EN50155 and EN45545-2 certification, responds to both the automation needs existing in the train (VCU, RIO, RCM, Dataloggers, Communication Gateways, etc.), and in its subsystems (HVAC, WC, doors, etc.).

The new generation of DCC/DFA detectors has greater versatility

IBERICA TECNOLOGIA EN SISTEMAS DE SEGURIDAD FERROVIARIOS SL (ITSS)
IBERICA TECNOLOGIA EN SISTEMAS DE SEGURIDAD FERROVIARIOS SL (ITSS) is currently implementing a new generation of hot axle box/hot wheel detector (HABD/HWD).

After reviewing feedback and an analysis carried out by their engineering team, ITSS has made a substantial shift in the performance and design of the new PEGASUS-GENIUS in order to meet the needs of their customers.

The greatest technological leap lies in the installation: a new solution allows for temperature measurement rea-



dings to be taken in different monitoring areas and the new design allows for the device to be installed without the need for a hollow sleeper. The installation and dismantling is now cost efficient and comfortably carried out at any point on the network.

ITSS is proud to introduce the Pegasus Genius which is shaking up the railway marketplace due to the quality of service, product features and considerable reduction in cost this solution brings to its customers.



MainRail develops predictive algorithms for risk of rail buckling in ballasted tracks

MainRail

Buckling in ballasted tracks is caused by the accumulation of energy due to the thermal variation experienced by the RAIL. MainRail has deployed a pilot to predict buc-

ling on Mallorca Railway Network (SFM) with the support of Azvi and Yeltech.

This deployment lies in buckling prediction algorithms and IoT devices for temperature measurement. The algorithms allow to predict the risk of buckling while the IoT devices send real-time alerts of track



temperature collecting data to optimize the algorithms.

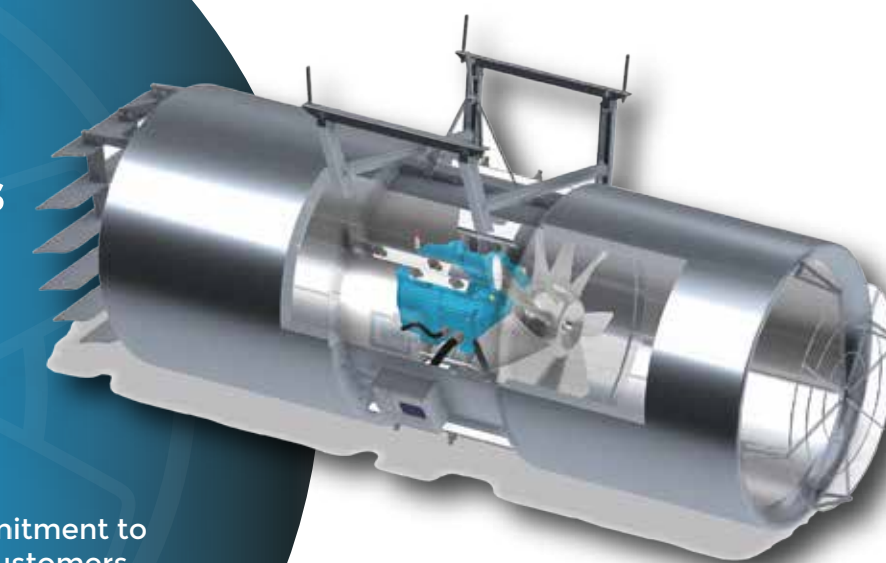
MainRail keeps developing predictive algorithms for track quality and rail wear. This development is carried out through Hybrid Models thanks to the use of digital twins, track data and AI algorithms.

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InnoTrans

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booth #720. Hall 5.2



Digitalización de la logística ferroviaria

CEIT

Ceit will be present at the INNOTRANS 2022 fair, in the booth in Hall 24 stand 330, and Outdoor Display Track 04 Stand 17 with the Extended Market Wagon, a rolling stock demonstrator resulting from the FR8RAIL4 project of the European Shift2Rail initiative. In both places you will be able to appreciate the advances presented around the digitalization of the freight rail sector. On the one hand, it will be possible to witness the detail of an axle mounted energy harvesting ring that provides the necessary electrical power for the Wa-



gon On Board Unit systems. With these telematic systems distributed in the wagons, the composition of the train is provided and its integrity is ensured, among other functions. On the other hand, the Digital Automatic Coupler

controller designed for the DELLNER company can be seen in action. This will be included in the Extended Market Wagon system that also adds relevant positioning and sensor functions to improve logistics applications.

CETEST monitoring systems and services

CETEST

CETEST, as an accredited laboratory, offers solutions both through the provision of testing services and through the provision of monitoring systems and/or services. Special systems have been developed for vehicle and infrastructure monitoring, such as, for example, vehicle dynamics measurements, wheel-rail contact force monitoring systems using instrumented wheelsets, monitoring of ride comfort parameters, contact forces for pantograph-catenary interaction, energy consumption or measurement of harmonics, among others.

These different systems have been installed in vehicles that circulate in different countries: Spain, India, Saudi Arabia, South Africa, the United States, Turkey or New Zealand... Among customers, public administrations and operators (RDSO, Transnet, Metro Madrid...), engineering/construction companies (COPASA, Dogus, Yapi Merkezi,...), rolling stock manufacturers (CAF, Tesmec, ALSTOM...).



Fully digital network rail infrastructure

SIEMENS

Moving infrastructure to the cloud means an entirely digitally network-

ed rail infrastructure controlled from a single place, a single data center.

The "Distributed Smart Safe Sys-



tem" or DS3 platform by Siemens Mobility provides the basis for moving interlockings and radio block centers to the cloud. Just a few elements such as point machines and balises remaining in the field, while all other components (e.g. axle counters, track circuits) move to the cloud. DS3 is compatible with existing systems and supports current standards like Eulynx or Neupro.

It paves the way for a cost-efficient country-wide approach with seamless geo-redundancy of one data center.

This increases train punctuality thanks to highest availability, reduces hardware costs, and ensures future-proof infrastructure investments while meeting the highest safety standards in operation, SIL4.

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Innovative solutions
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ONE STEP AHEAD.

Alstom to at InnoTrans 2022, the broadest sustainable and digital mobility portfolio on the market

ALSTOM

Alstom's latest innovations and digital solutions, present at InnoTrans, enable sustainable mobility for customers and provide greener transport choices for passengers.

A pioneer of the world's 1st hydrogen-powered train, Coradia iLint™, Alstom will bring the market up to date with its green traction solutions -hydrogen and battery - ready for new rolling stock projects and existing projects with green re-tractioning and fleet modernisation.

Alstom will also present its latest developments in digitalisation, both in Signalling and Services. In addition, attendees will be able to learn first-hand about the latest developments in Automatic Train Operation (ATO), European Train Control System



(ETCS), cybersecurity or Services digital predictive and Artificial Intelligence technologies.

In addition, two major Rolling Stock premiers will be revealed in the outdoor area.

Cybersecurity in the railway sector

TELDAT

Teldat has developed next generation security solutions (NGFW) that helps analyze what is happening within any railway network and to understand the events involved in external attacks as well as react accordingly.

Teldat presents be.Safe solution is an active element that protects the railway network and prevents intrusion (IDS-IPS) by intercepting malicious traffic through the use of configurable policies, traffic inspections and SSL decryption, among others.

Moreover, be.Analyzer which monitors and analyzes physical/virtual networks. It uses telemetry generated by the network as



a passive element to listen, memorize and diagnose user activity,

actions and protocols used for visualization purposes.



RTP-800, the first MCX cab radio terminal for transport

TELTRONIC

RTP-800 is a next generation on-board radio unit that integrates in one compact rack TETRA, LTE and Wi-Fi technologies.

It is the first MCX cab radio terminal for transport environments in the

market. Its platform supports MCPTT, MCData and MCVideo 3GPP standard functionalities, as well as the rail functions described in the FRMCS specification.

It offers wide connectivity possibilities, including the Train Control Management System (TCMS), and its technology is validated for main signalling applications: ETCS, CBTC and

PTC. A digital audio switching matrix facilitates integration with the train's audio subsystems, such as intercom and PA.

EN50155 and EN45545 certified, it meets all the voice and data communication needs of future trains, offering the levels of availability and quality of service required in such demanding scenario.



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Technical data



Thales, innovation for sustainable mobility

THALES

Thales will be exhibiting at Innotrans with a wide range of products and solutions for conventional and high-speed lines as well as urban transport.

Thales booth #570 (Hub27) is structured in different areas with solutions created to last, to deliver, to adapt or for everyone, where CBTC, OCC, asset management, ETCS, and passenger journey analysis tools, among others, will be on display.

Thales will also showcase in its Lucy Lab different innovations integrated in the lab such as obstacle detection solutions, metro autonomy, passenger information and on-board solutions, and video analytics tools for passenger distribution.



You will be able to experience live connections with rail transport laboratories in other different European cities.

Looking forward to meeting you in person, the company will showcase its new solutions and discover more innovations at booth #570 (Hub27).



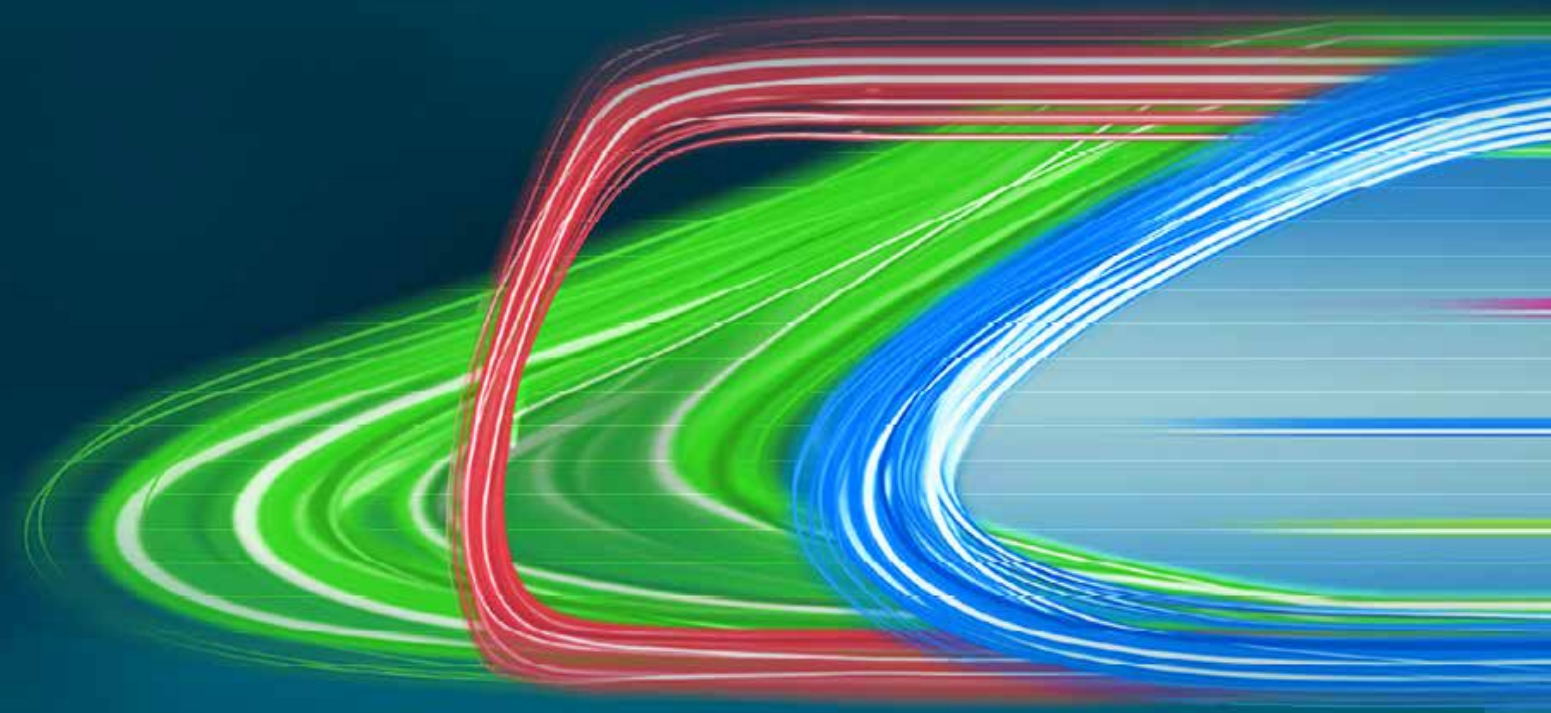
Zeleros accelerates the shift towards sustainable and smart mobility with hyperloop and solution to boost port logistics

ZELEROS

Zeleros keeps going forward in the demonstration of its technology to develop the scalable hyperloop. The

company has recently presented together with other partners its proposal for Europe's first hyperloop tender (800M€) to connect Padua and Veneto in Italy and initiated the construction of a 100 meter test track in Sagunto in Spain to both demonstrate in pre-commercial conditions one of Zeleros' hyperloop relevant

technologies -the linear motor- and to propose a new product, called SELF, to optimize the flow of containers within ports in a fully electric, autonomous way. Zeleros also works hand in hand with the European institutions for the creation of a regulatory framework to ensure hyperloop cross-border interoperability.



SPANISH PARTICIPATION AT INNOTRANS

2022



SPANISH PARTICIPATION AT INNOTRANS

ABB	4.2	150	IDOM CONSULTING, ENGINEERING, ARCHITECTURE	22	710
ACYGS SALES MANAGEMENT	9	325	IKUSI	4.1	355
ADIF	23	590	INDRA	4.1	610
GRUPO ALSTOM	3-2	460	INECO	5.2	165
AMURRIO FERROCARRIL Y EQUIPOS	26	880	INGETEA	9	615
AQUAFRISH	6.2	240		27	700
ARCELORMITTAL	26	808	INDUSTRIAL DE TRANSFORMADOS (ITSA)	3.1	430
ARDANUY INGENIERÍA	5.2	468	IBÉRICA TECNOLOGÍA EN SISTEMAS DE SEGURIDAD FERROVIARIOS. (ITSS)	22	710
ARTECHE	11.1	165	KIMUA	6.2	910
AZVI	22	710	LA FARGA YOURCOPPER SOLUTIONS	22	380
CABLES DE COMUNICACIONES ZARAGOZA	22	710	LANDER SIMULATION & TRAINING SOLUTIONS	4.2	130
CAF	4.2	130	LIMMAT	22	710
CAF MIIRA	20	550	MAFEX	22	710
CAF POWER & AUTOMATION	4.2	130	MAINRAIL	23	220
CAF SIGNALLING	4.2	104	MEREFSA	8.1	120
CAF TURNKEY & ENGINEERING	4.2	130	METROTENERIFE	22	710
CEIT TECHNOLOGY CENTER	24	330	MIERES RAIL	26	880
CERTIFER	CITYCUBE A	850	NEWTEK SOLIDOS	22	710
CENTRO DE ENSAYOS Y ANÁLISIS CETEST	CITY CUBE A	400	RENFE	22	710
COLWAY FERROVIARIA	1.1	530	REVENGA SMART SOLUTIONS	22	300
COMSA CORPORACIÓN	22	720	SATYS INTERIORS RAILWAY SPAIN	1.1	550
CUNEXT GROUP	22B	200	SGS	22	710
DANOBAT	22	620	SICE	4.1	700
DTA	22	710	SIEMENS MOBILITY	HUB27	230
ELECTROSISTEMAS BACH (ELECTRANS)	25	255	SMART MOTORS	24	220
FUNDICIONES DEL ESTANDA (ESTANDA)	22	710	STADLER	2.2	160.
FORGING STEEL PRODUCTS.	22	710		OUTSIDE AREA T04, T08, T09, T10	
FUNORSA	22 A	820	PATENTES TALGO	4.2	450
GAMARRA	1.2	630	TALLERES ALEGRÍA	26	307
GEMINIS LATHES EQUIPOS DE MANTENIMIENTO TALGO	22	610	TALLERES CORRAL MECANIZADOS	22	840
GMV	2.1	265	TEL DAT	4.1	840
GOAL SYSTEMS	2.1	375	TECNIVIAL	22	710
GURUTZPE	22	830	TELTRONIC	4.1	580
HASLERAIL	9	230	THALES	27	670 & 571
INTERNACIONAL HISPACOLD	3.1	260	TÉCNICA Y PROYECTOS (TYPESA)	22	710
S.A.E. IBERTEST	22.A	710	VOESTALPINE RAILWAY SYSTEMS JEZ	21B	150
ICF - INGENIERÍA Y CONTROL FERROVIARIO	5.2	110	XUBI GROUP	20	650
ICON MULTIMEDIA	22	710	ZELEROS GLOBAL	4.2B	238
			ZITRÓN	5.2	720

- Railway Technology

Interiors incl. Travel Catering & Comfort Services

Railway Infrastructure

Tunnel Construction

Public Transport incl. Mobility+ / Mobility+ Corner

Outdoor Display Gleis- und Freigelände

Bus Display
- InnoTrans Campus
- Opening Ceremony Eröffnungsveranstaltung
- InnoTrans Convention
- Speakers' Corner
- Messe Berlin Studio
- Business Lounge (Marshall-Haus)
- Press Center Pressezentrum
- FoodCourt

Shuttle Lines - Shuttle Linien

Olympischer Platz P+R

BER T1 + T2 - Expo North - Expo Nord

BER T1 + T2 - Expo South - Expo Süd

City Transfer

Hotel Transfer

Fairground Shuttle - Geländeshuttle

Fast Shuttle

South Entrance - Hall 18

Eingang Süd - Halle 18

South Entrance - Hall 20

Eingang Süd - Halle 20

South Entrance - East Entrance

Eingang Süd - Eingang Ost

East Entrance - Outdoor Display

Eingang Ost - Gleis- und Freigelände

ABB

ABB makes transportation stronger, smarter and greener through innovative products, solutions and services that support the future of mobility. By providing leading-edge technologies, turnkey systems, superior service and asset management, ABB can help train builders, railway operators and network managers to deliver energy-efficient and cost-effective innovations.

ABB (ABBN: SIX Swiss Ex) is a technology leader that is driving the digital transformation of industries. With a history of innovation spanning more than 130 years, ABB has four customer-focused, globally leading businesses: Electrification, Industrial Automation, Motion, and Robotics & Discrete Automation, supported by the ABB Ability™ digital platform. ABB operates in more than 100 countries with about 105,000 employees.

► contact.center@ch.abb.com
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► HALL 4.2 STAND 150
► HALL 9 STAND 325

ACYGS SALES MANAGEMENT

ACYGS offers engineering services to define and manage railway workshop projects, analysing clients' needs and proposing the best solutions for the maintenance workshop equipment in new or existing depots, freight or passenger, 1st or 2nd level maintenance depots from tramways to high-speed projects.

ACYGS supplies Packages of Equipment for workshops and machinery for track maintenance, studying the different types of equipment in the market and adapting to the needs of each client and project.

To demonstrate the commitment to quality, client satisfaction and continuous improvement, ACYGS has been accredited by AENOR with UNE-EN ISO 9001 and 140001 certifications.

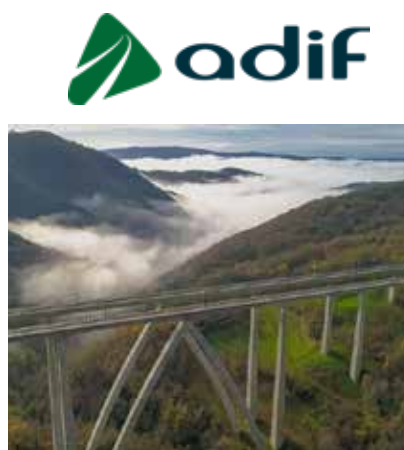
► jleon@acygs.com
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► HALL 23 STAND 590

ADIF

Adif is the Railway Infrastructure Manager in Spain, a public entity attached to the Ministry of Transport, Mobility and Urban Agenda. Its aim is to promote the railway as the most sustainable mode of transport and its main functions include the operation and maintenance of the network, both high-speed and conventional, as well as the capacity allocation to the railway undertakings. Adif also manages the passenger stations and freight logistic terminals and is in charge of the planning, design, construction and upgrading the lines.



► gadifinternational@adif.es
► <https://www.adif.es/> <https://www.adifaltavelocidad.es/>

► HALL 22 STAND 710

ALSTOM GROUP

This edition of InnoTrans is particularly important for Alstom, as it is the first edition after the acquisition of Bombardier Transportation. On its more than 1,000 m2, the Alstom stand will present its entire portfolio of solutions and global presence. In addition, Alstom will be present on the outdoor track platform, with different rolling stock solutions and a world premiere. All this, with a single objective: to share with customers, partners and collaborators our leadership in innovation for a greener and smarter mobility, worldwide and do not disclose the contents to another person, use it for any purpose or store or copy the information in any medium.

► javier.hinojal-calvo@alstomgroup.com
► www.alstom.com



► HALL 2-3 STAND 460

AMURRIO FERROCARRIL Y EQUIPOS

Amurrio is a global leader in the design and manufacture of complete railway turnouts for High Speed, Conventional Rail, Urban Rail and Heavy Haul applications.

One of Amurrio's strengths lies in the manufacture of manganese steel monobloc crossings, cast and welded to rail in the company's own facilities. Amurrio also manufactures crossings with other technologies, such as mobile point crossings for High Speed, machined from steel plate, or special solutions for various track gauges.

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► HALL 26 STAND 880

AQUAFRISCH

More than 25 years of experience in the railway sector guarantee Aquafrisch as a manufacturer of Train Washing Tunnels, Bogie Washing Cabins, Toilet Extraction Systems and other equipment for the maintenance of rolling stock in railway workshops. Our equipment is installed in more than 30 countries on 5 continents. Aquafrisch is also a leader in industrial water treatment and purification. At Aquafrisch we deal with the design, manufacture, installation, commissioning, training and maintenance of the machines according to the needs of the client.



► pmartinez@aquafirsch.com
► www.aquafirsch.com

► HALL 6.2 STAND 240

ARCELORMITTAL

ArcelorMittal Rails & Special Sections operates four rail production facilities in Europe, offering wide portfolio of products for trains, subways, trams, light rails, crane rails, crossings, and rail accessories, building an incomparable knowledge and expertise of these product range. ArcelorMittal is at the forefront of bringing innovative solutions for rails: low carbon vanadium grades for tramway, new hardness grades for heavy haul and ports; RailCor®, corrosion resistant rails; new oriented solutions to citizens increasing passenger comfort and noise mitigation, and our in-house service centre that enable us to offer full solutions and advantages for our customers.



► rails.specialsections@arcelormittal.com
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ARDANUY INGENIERIA

Ardanuy Ingeniería, S.A. is an engineering consulting firm specialized in studies, design, works management, safety engineering, and technical consultancy for Railways (high-speed, conventional and freight lines), and Urban Transport (metros, trams, cable cars, etc). The company operates worldwide, with collaborations in more than 70 countries in all 5 continents. Currently, more than 60% of our turnover is implemented outside of Spain. This work is carried out from our offices in Spain (Headquarters in Madrid), and in the company's subsidiaries and branches in India, Algeria, Lithuania, Colombia, Peru, Mexico and Brazil.

Ardanuy



► alberto.gonzalez@ardanuy.com
► www.ardanuy.com

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ARTECHE

Arteche's expertise of more than 60 years manufacturing electromechanical relays gives the client the assurance of a technological leader. The dedicated Railway relays are suitable for general purpose and safety critical systems requiring up to SIL-4 safety level for both board and signalling applications. Installed in projects over 45 countries, the relays guarantee a long service life even in extreme situations, helping customers to reduce their operating and maintenance costs. This is further proof of their robustness and reliability that put them at the forefront of railway technology.



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► azvi@azvi.es
► www.azvi.es

Azvi



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CABLES DE COMUNICACIONES ZARAGOZA

"Cables de Comunicaciones Zaragoza S.L. is one of Europe's leading companies in the design, manufacture and sale of copper and fibre optic cables for telecommunications and signalling. Since its foundation in 1971, it has contributed to the development and expansion of telecommunications infrastructures.

Operating companies in more than 50 countries on all five continents trust us to manufacture their cables.

Cablescom carries out its activity in Zaragoza, on a surface area of 77,000 m2, which includes a production plant, offices and warehouses.

Cablescom has been part of the Hengtong Group since 2016"

► comercial@cablescom.com
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CABLES COM



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CAF

CAF is one of the international leaders in the design and supply of comprehensive transportation systems. A benchmark in sustainable mobility solutions, the company offers a wide range of products and services that includes the supply of trains, buses, components, signaling systems, services and concessions and comprehensive systems.

► caf@caf.net
► www.caf.net

CAF



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CAF MIIRA

CAF MiiRA is a global reference in the supply of comprehensive solutions for rolling gear in the railway sector. We provide state of the art engineering, manufacturing and maintenance solutions for complete wheelsets and portal axles including gearboxes for all kind of train types, as well as services like technological assessment, inspections, and life cycle optimization analysis. MiiRA is moving towards sustainability as it is one of our strategic axis, along with continuous optimization and competitiveness of its solutions, meeting our clients requirements and ensuring their satisfaction.

► miira@caf.net
► www.cafmiira.com

MiIRA



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CAF POWER & AUTOMATION

CAF Power & Automation is a global reference in the design and manufacture of railway systems. A technological subsidiary of the CAF Group, it develops solutions for traction, control and communication, and on-board energy accumulation, which are integrated in railway vehicles in 32 countries. Therefore, it has a broad background, in which research, innovation and the desire to excel are constants.

The company has a workforce of more than 300 multidisciplinary employees specialised in power electronics, automation and communications, distributed in the headquarters in San Sebastian, Irura and Madrid, as well as in the commercial offices in India and the United States.

► info@cafpower.com
► www.cafpower.com



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CAF SIGNALLING

CAF Signalling is the technological division of the CAF Group. It is dedicated to the development, design, manufacture, supply and maintenance of Railway Signalling Systems, for which it provides integral signalling solutions in infrastructure and rolling stock with references in more than 20 countries on 5 continents.

It has its own capacity and engineering to undertake highly complex and diverse "turnkey" projects.

CAF Signalling has its own products for the integral development of these signalling solutions and has a highly qualified team committed to business objectives and to its customers.

► ge
► w

CAF



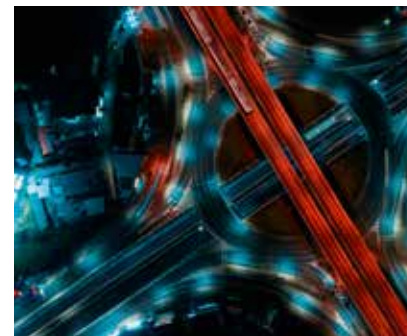
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CAF TURNKEY & ENGINEERING

We are the CAF Group business unit which manages the development of comprehensive projects for sustainable mobility infrastructures. We design, build and integrate high capacity and performance transport systems under the turnkey scheme. We are distinctive for working with an agile and streamlined process that spans the entire project life cycle, from the planning and requirements definition to the operations, tuning and maintenance phase, optimizing resources and providing tailor-made solutions. We boast an international multidisciplinary team which covers all the needs and requirements that these types of projects entail, thereby allowing us to guarantee the turnkey solution that best adapts to each case.

► info@cafte.com
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CAF TURNKEY
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CEIT

Created in 1982, Ceit is a non-profit Technology Centre that uses its high specialisation in advanced manufacturing, mobility, sustainability and information technologies to develop industrial applied research projects in close collaboration with companies. Ceit combines its capabilities and technologies and brings them to the market to offer solutions to key industrial sectors such as Railways, Aeronautics, Energy, Health and Food, Automotive, Environment, ICT and Industrial Manufacturing.

► infoceit@ceit.es
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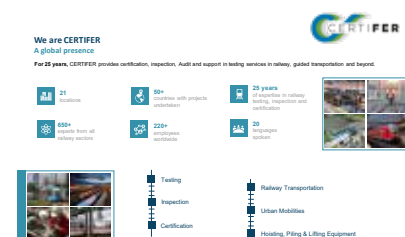
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CERTIFER

For 25 years, CERTIFER offers certification, inspection, audit and testing services in railway, guided transportation and beyond. With our network of 650 experts, we are committed to making railway, urban transport and new mobilities safer, more reliable and more connected around the world. We are aware of the future needs of rail transport and we involved in several innovation projects related to Cybersecurity, Hyperloop, Supraways, Hydrogen trains, etc. At CERTIFER we work with a collaborative and pragmatic approach in order to help our customers succeed in the certification and placing into service of their products.

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► emartinez@cetestgroup.com
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COLWAY FERROVIARIA

COLWAY Ferroviaria is specialized in toilet modules, interiors and special projects and refurbishment of rolling stock. For WC modules we offer development, validation and supply of complete STD and PRM modules, in compliance with the TSI. For interiors and special projects, we offer solutions for the entire interior and for special components such as restaurant and particular seats, PRM or comfort areas or sleeping cabins. For refurbishment, we offer complete interior and exterior modernization of our clients' coaches at our facilities or customer premises.

► jlperalta@colwayferroviaria.com
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COMSA CORPORACIÓN

COMSA Corporación is a global group focused on infrastructure development, industrial engineering and services with more than 130 years of experience, specialised in railway projects involving the construction and maintenance of high-speed lines, trams, metropolitan and regional railways, as well as railway electrification on high-speed lines, metros, trams and conventional lines. Thus, it carries out all types of electromechanical work in the railway sector, such as traction substations, overhead contact lines, rigid catenary, transformation centres, lighting and ventilation of tunnels, stations, maintenance workshops and track installations.

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CUNEXT GROUP

One of the main supplier of processed copper and aluminium products. It has production centres in Spain, Italy and EEUU. Leader in the manufacture of efficient materials for energy and data transmission in industries related to mobility, the automotive and railway sector, electrical energy and renewable energies, telecommunications and construction. Cunext Group is strongly committed to sustainability and innovation through our portfolio of environmentally friendly copper and aluminium products, which bring added value to the market, contributing to technological progress and digitalisation.

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DANOBAT

Danobat is a leading global solution supplier for the maintenance of railway rolling stock components. We offer specialised Machine Tools and comprehensive solutions to all processes of rolling stock parts: from the axle or the wheel, through the wheelset and to the bogie, offering stand-alone machines as well as turnkey lines. Danobat offers technologically advanced solutions and services, including among others engineering, consultancy, which are fully adapted to clients' needs.

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DTA

DTA is a Spanish company with an international vocation specialized in the design and manufacture of automated solutions for the movement of heavy or special loads within plants, from 1 ton to 1,200 tons. Since 1972, our vehicles have been used in all types of heavy industry such as the Railway, Aeronautics, Automotive, Iron and Steel, Ports, Wind Power, Foundries, Construction, in short, for any type of industry where a heavy or special load needs to be moved.

► oraisuni@dt.es; gonzalo@dt.es; dt@dt.es
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ELECTROSISTEMAS BACH (ELECTRANS)

Electrans is leading innovation in the railway industry since 1977.

Electrans stands out for developing its own product line, always being at the technology forefront, and sustaining its competitive advantage in the capacity to be responsive to the needs of each customer.

Our long and successful career path has led us to become a key player in Railway Signalling, particularly in the field of level crossing protection solutions, signals and LED lighting, train detection, and passenger information.

Maximum commitment to each project. Our capacity for adaptation is our biggest asset.

Today, the systems developed by Electrans are found in service around the world, becoming an international reference in the industry.

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We also produce a wide range of castings for Commercial Vehicles, Off-Road Construction Machinery, Public Works, Defence Industry and General Industrial requirements. Our products can be supplied rough cast, machined or assembled with other accessories. We produce more than 7,000 tonnes of castings per year in the range of 10 kg to 300 kg and dimensions up to 1,100 x 1,100 mm x 600 mm.

► joaquin.carbonell@gamarrasa.es
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GMV

Established in 1984, GMV is a leader in the design, development, implementation, and rollout of Intelligent Transportation Systems (ITS) that guarantee compliance with sector standards. GMV offers integrated, fully operational solutions, involved in the complete development of the project and including development of hardware and software and its own manufacturing. With over 950 clients in 35 countries, from Sydney, Warsaw and Tel Aviv, to Madrid and Barcelona, GMV's clients back the company as a global leader in the design and implementation of ITS solutions for rail.



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GOAL SYSTEMS

Goal Systems is a world leader in planning optimisation software for the passenger transport industry (bus, train and metro). A Spanish company founded in 1992, and present in more than 25 countries in the 5 continents, Goal Systems offers intelligent solutions to help operators and regulatory authorities to move towards an efficient, sustainable, intermodal and user experience-centred transport. Optimising resource planning, improving productivity and profitability to achieve our customers' service and quality objectives. www.goalsystems.com



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GURUTZPE

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With over 60 years of experience in the industry, GURUTZPE offers its customers customised, and innovative manufacturing solutions of the highest standards.

GURUTZPE has specific solutions for the railway sector, such as:

- Lathe for the maintenance of wheelsets with gearboxes, axle boxes, and integrated brake discs.
- Lathe for the maintenance and manufacture of railway axles.
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HaslerRail is the world's leading supplier of innovative On-Board Electronics, Data Acquisition and Recording, Speed Sensors and Odometry, Visualisation solutions and Speed Indicators, Energy Metering, Control, Protection and I/O, Software and data management solutions, and Cybersecurity for the railway industry. Our solutions are backed by our extensive global service and support network.

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ITSS IBÉRICA TECNOLOGIA EN SISTEMAS DE SEGURIDAD FERROVIARIOS

Ibérica Tecnología en sistemas de seguridad ferroviarios SL (ITSS) is a leading manufacturer and supplier of railway hazard monitoring equipment, mainly hot axle box (HABD), hot wheel (HWD) and flat wheel detection (FWD) systems for high-speed and conventional traffic railway networks.

The company's flagship PEGASUS, GENIUS and AGUILA systems use state-of-the-art infrared and fibre-optic technology, which makes these systems extremely reliable even under the most challenging operating conditions. ITSS's systems come with self-monitoring and predictive analysis features, which can detect potential problems well ahead of time.

Maintenance overheads are typically low since the systems are modular, auto-calibrating and can be remotely maintained.

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ITSS



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ICF - INGENIERÍA Y CONTROL FERROVIARIO

ICF offers technical and sustainable solutions for railway signalling. In this area, our vocation is betting heavily on the development and innovation, constantly releasing new products that can be used to improve existed technology solutions.

Sustainability is very important so we have worked hard to design systems that reduces power consumption which allows to use solar power supply, getting zero CO2 emissions and zero external power supply. Following this way of thinking we have designed systems with the possibility of using radio communication, avoiding environmental impact (no cable runs) and reducing time and costs of installation.

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ICON MULTIMEDIA

With 30 years of profesional experience, ICON Multimedia is specialists in the development and integration of Digital Signage software and Passenger Information Systems for the creation of digital experiences in Smart Cities and Smart Stations.

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IDOM ENGINEERING, CONSULTING AND ARCHITECTURE

IDOM is a multinational firm with offices in over 45 countries. We strive for professional excellence in all our dealings with the Client. Specifically, we have been working for over 20 years on high-speed, designing thousands of kilometres rail, and developing large-scale projects. From conception to operation and maintenance, our specialists draw on tried and tested experience to bring the project to life. The objective is to deliver state-of-the-art projects, clean and efficient transport systems using cutting-edge technologies. These solutions are resilient, resolve the challenges of changing environments, while always considering the the highest standards and environmental sustainability.

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IKUSI

Ikusi is an integration, engineering and technological development services company for the digital transformation of businesses.

Ikusi has a team of more than 800 highly qualified professionals and customers in more than 80 countries, present in: Spain, Mexico and Colombia. In the railway sector, Ikusi provides a high level of specialization in onboard technology. It addresses the implementation of on-board systems for operational digitalization, also providing flexible and adaptable integrated maintenance services on demand, providing the necessary intelligence to such maintenance through data analytics.

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INDRA

Indra is a leading technology and engineering company for the aerospace, defense and mobility sectors. It is the technology partner for the digitization and key operations of its customers around the world. Its technology has already modernized railway infrastructure in Spain, Turkey, Lithuania, Colombia, Argentina, Chile, China, Malaysia, USA, UK and Australia, and is currently working on the Irish and Estonian rail networks. Indra also highlights its position as a technological partner of the Mecca-Medina high-speed train, and participates in one of the largest contracts tendered so far to implement the public transport ticketing systems of Riyadh.

► pbustillo@indra.es
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INECO

Ineco is a leading engineering and consultancy company expert in sustainable mobility and digital transformation. For more than 50 years, has been developing comprehensive, innovative and technological solutions which have allowed to advance towards a new model of mobility. Its activity directly contributes to improving the quality of life of millions of people. With a multidisciplinary team of more than 4,000 employees, the company is present in the five continents, in which it deploys its experience and capacity to undertake challenging projects. All this, thanks to its specialized knowledge and the implementation of state-of-the-art technology.

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INGETEAM

INGETEAM designs and supplies complete Traction systems, including converters and electrical machines, control (TCMS & Subsystem controllers) and predictive maintenance solutions, based on in-house developments of power and control electronics. Our capacities and the experience on the railway sector allow us to offer advanced solutions, leading to minimize operational costs and focusing on reliability, availability, comfort, maintenance and energy efficiency.

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KIMUA

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LA FARGA YOURCOOPERSOLUTIONS

A pioneering family business in providing sustainable and efficient copper-based solutions for railway sector. The best partner for development of sustainable solutions with our technology and own patented process to offer circular copper solutions with the lowest carbon footprint.



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HALL 22 STAND 380

LANDER SIMULATION & TRAINING SOLUTIONS

LANDER Simulation & Training Solutions S.A. is a company which specialises in the design and development of simulators for the training of railway and automotive personnel.

Railway operations have evolved significantly in a short period of time and a comprehensive training approach seems nowadays unavoidable. Training of drivers, dispatchers, OCC operators, maintenance personnel, is essential in order to ensure safety of the operation.

Lander develops custom made solutions that enable the operators to provide a highly realistic training in both individual and collaborative environment ensuring the best training for their personnel.



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LIMMAT

LIMMAT is committed to developing technological products, such as the smart maintenance platform IMAS+®, which improve maintenance efficiency, resource management and facility availability.

The IMAS+® can detect hidden anomalies in data and explore factors that influence them using unsupervised machine learning applications and non-intrusive hardware, offering to the railway maintenance real benefits like:

A 10-20% reduction in maintenance costs.

IMAS+® reduces breakdowns by up to 25% detecting failures before they occur. Increase the safety.

Improvement of the availability and the capacity of the vehicles and the infrastructure.



info@limmat-group.com
www.limmat-group.com

HALL 22 STAND 710

MAFEX

Mafex is the Spanish Railway Industry Association. Its main objective is to represent and defend the interests of the Spanish Railway Industry in general, and their more than 100 members in particular, through the implementation of actions related to internationalization, innovation, competitiveness and public affairs. Mafex is widely supported by the experience and prestige of the Agex Group Federation, of which it is a member. Mafex is also an active member of CEOE (Spanish Confederation of Business Organizations), UNIFE (European Railway Industry Association), PTFE (Spanish Railways Technological Platform), AET (Spanish Transport Association) and ERCI (European Rail Cluster Initiative). It actively collaborates with entities such as the Ministry of Transport, Mobility and Urban Agenda, Adif, Renfe, Ministry of Industry, Trade and Tourism, The Spanish Railway Foundation, Metrotenerife, Alamys, Uitp, Icx and the Basque Government, among others.



mafex@mafex.es
www.mafex.es

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MAFEX

Spanish
Railway
Association

2022

FIND OUT MORE ABOUT ALL ACTIVITIES AND SERVICES WE HAVE PREPARED FOR
2022 REGARDING INTERNATIONALISATION AND COMPETITIVENESS AND INNOVATION

mafex@mafex.es

MAINRAIL

MainRail is a fully customizable modular platform for the comprehensive digitalization of railway infrastructures maintenance. MainRail integrates data from multiple sources, so clients have access to all the information in a single platform, enabling them to manage assets, activities, and resources to make their daily work easier and more efficient.

In addition, to corrective and preventive maintenance, MainRail has a predictive approach based on the hybridization of historical and synthetic data generated by physical and simulation based digital twins.



ana.cano@mainrail.com; info@mainrail.com
www.mainrail.com

HALL 23 STAND 220

MEREFSA

Our main processes are environmentally friendly with compact silicone and sponge silicone. The processes are mixing, calendaring, lamination, and formulation of customized silicone bases in platinum and chlorine-free peroxides, extrusion and co-extrusion; molding; welding and cutting.

We are ISO 9001: 2015, ISO 14001: 2015 certified.

From our Headquarters in Sant Boi (Barcelona) we export to more than 40 countries over the world providing the best solutions to the railway, aerospace, automotive, packaging, pharmaceutical, food, lighting, chemical... industries with the best quality systems in line.



export.fr@merefesa.com
www.merefesa.com

HALL 8.1 STAND 120

METROTENERIFE

METROTENERIFE is an LRT operator constituted in 2001 in Spain. The accumulated expertise operating and maintaining railway systems, provides the company the ability to offer a variety of consultancy services to other operators and Transport Authorities: planning, design, testing&commissioning, service simulations, trainings, O&M, etc. Furthermore, its engineering team develops innovative solutions that meet the needs of operators worldwide, creating more efficient transport systems, as for instance: SIMOVE for railways, Via-Movil and the Removable Insulating Chamber.

METROTENERIFE has developed projects for clients in Europe, America, Africa and Middle East, involving urban and interurban rail transport.



contact@metrotenerife.com
www.metrotenerife.com

HALL 22 STAND 710

MIERES RAIL

Mieres Rail S.A., certified ISO 9001, ISO 14.001, ISO 45.001 e ISO 50.001, is specialized in designing and manufacturing railway turnout systems and manganese steel casted crossings. We provide solutions to our customer's requests regarding geometries or technical specifications, for metro, conventional lines, High Speed lines, industrial railways, high axle loads, depots, ..., for any type of rail and inclination, gauge, type of track, fixed or swing nose crossings, wooden or concrete sleepers, speeds or axle/loads.



mieresrail@mieresrail.com
www.mieresrail.com

HALL 26 STAND 880

NEWTEK SOLIDOS

NEWTEK, founded in 1987, is a company dedicated to installations for the handling of granulated or powdered bulk materials for different sectors of industry such as foundry, iron and steel, ceramics, food, railways...

Specialized in the design, manufacture, and assembly of installations for loading sand into trams, trains, and locomotives for use in traction bogies.

It supplies installations consisting mainly of storage silos, fixed and/or mobile sand dispensers, including dust suction systems.

NEWTEK carries out a study of the specific needs of each customer to offer the best solution.



contact@newteksolidos.com
newteksolidos.com

HALL 22 STAND 710

PATENTES TALGO

Talgo is a Spanish engineering company with more than 75 years of experience, specialized in designing and manufacturing trains, as well as providing maintenance services to railway operators worldwide. Today, Talgo is the leading global reference for Spanish High Speed Technology and the number one player in Spain's railway market. Its key success factors are innovation, unique technology, sustainability, safety, competitiveness and tailor-made projects with clear focus on customer.



marketing@talgo.com
www.talgo.com

HALL 4.2 STAND 450

RENFE

Renfe is Spain's leading rail operator in Passenger and goods transport. We are committed to safe, efficient and quality rail transport. We set ourselves apart from other transport options and adapt to the needs and demands of the most crucial element in this entire structure: our customers. With more than 5,000 trains running every day in Spain, over 500 million passengers a year, 18,3 million tons transported each year, nearly 15,000 employees, and exceptional rates of punctuality, quality and satisfaction, Renfe is working to consolidate its leadership in Spain and extend its international reach, with presence in countries as wide-ranging as the United States, France, Mexico and Saudi Arabia.

► dgde@renfe.es
► www.renfe.com/es/es



► HALL 22 STAND 710

REVENGA SMART SOLUTIONS

Revenge Smart Solutions will be present at Innotrans 2022, as customary since the company attended the event for the first time near 15 years ago. In this edition, RSS will focus its presence on the presentation of the latest generation of its safety and user experience solutions: XThings, RailXcan and RailRox. XThings, RSS's solution for real-time sensorization and control of stations and terminals, allows the digitization of all operational processes of the facility. RailXcan, the most advanced solution for real-time sensorization and control of rail tracks and train parameters at a central location. RailRox, the level crossing protection system that stands out for its adaptability to country-specific operation and safety processes.

► marketing@revenga.com
► www.revenga.com



► HALL 22 STAND 300

S.A.E. IBERTEST

EN INGLÉS: IBERTEST is a manufacturer of material and component testing systems for the railroad and other sectors, with more than 50 years of experience, worldwide presence and satisfied customers in more than 60 countries. We are specialized in the development of systems for railway infrastructures and rolling stock, as well as the definition and execution of turnkey projects oriented to certifying and research companies or state managers of track infrastructure.

► info@ibertest.es
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SATYS INTERIORS RAILWAY SPAIN

Satys Interiors Railway has more than 40 years' experience in the design and manufacturing of custom interior systems for new and refurbished trains. Satys Interiors Railway products are lightweight, ready to assemble and reliable with R&D focus on cost effective and sustainable solutions. Presence in France, Spain, Switzerland, United States and China with a total of 400+ dedicated employees.

Examples of latest projects/products made by Satys Interior Railway Spain:

- Galley systems (modulable spaces and easily adaptive to the catering functions),
- Vending machines railway certified,
- Lavatories / toilet cabins

► mvega@satys.com
► www.satys.com



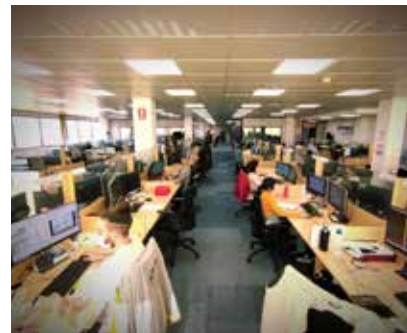
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SEGULA TECHNOLOGIES

SEGULA Technologies Spain is integrated within the Segula Technologies Group, a French engineering company that is positioned as an international leader in the consulting, technical assistance and the research & innovation sector.

Within the Segula Technologies Group, Spain is the reference engineering company in the development of railways systems, specifically rolling stock and signaling, for the main national and international constructors, being the main technological partner of all of them. Currently in full international expansion with new clients, consolidated from its Center of Excellence in Zaragoza (Rolling Stock) and Madrid (Signaling).

► jmartin@segula.es
► <https://www.segulatechnologies.com/es/>



► HALL A City Cube STAND 550

SGS

SGS is the world's leading testing, inspection and certification company. SGS is recognized as the global benchmark for quality and integrity. Our 96,000 employees operate a network of 2,600 offices and laboratories, working together to enable a better, safer and more interconnected world.

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► ge
► w

► HALL 22 STAND 710

SICE

SICE Tecnología y Sistemas is a leading multinational company in the integration of technologies for public infrastructure management. With more than 100 years of history, it has become an international benchmark in the areas of ITS, tunnels, transportation, mobility and intelligent urban services, tolling, water management, security and civil engineering. Offering a transversal vision that includes all phases of the project: consulting, engineering, implementation, maintenance and operation, SICE develops state-of-the-art integrated solutions and applications based on data science and artificial intelligence technologies.

► sice@sice.com
► www.sice.com



► HALL 4.1 STAND 700

SIEMENS MOBILITY

Destination Digital. At Siemens Mobility we will take our customers on a journey to experience how our innovative technologies are enabling the rail industry and countries to master digital transformation, ultimately making rail the backbone of mobility. Digitalization is the key to next-level mobility. By combining intelligent rail infrastructure, optimized life cycle costs and intelligent services we achieve better punctuality and availability rates of up to 100%. Integrating MaaS solutions we also make mainline and public transport more attractive for passengers. Connecting the real with the digital world simply delivers better performance, more flexibility and greater sustainability.

► comunicacion.web.mobility.es@siemens.com
► www.siemens.es/mobility



► HALL Hub27 STAND230

smart motors

smart motors® is the strategic partner for those railway operators and maintainers who believe that Digitalization and the uses of advanced analytics are the path towards service excellence. We boost knowledge and introduce railway know-how from the most experienced actors with a real day-to-day contribution, advanced data monitoring and exploitation systems satisfying the requisites of the most demanding environments. DAVANA®, our Digitalization Platform specialized in the rail sector, is the best choice for those who want to drive successfully their Digitalization Strategy.

► marta.miralpeix@smartmotors.org
► www.smartmotors.org



► HALL 24 STAND 220

STADLER

Railways protect the climate. For 80 years, Stadler has therefore been building rail vehicles that make rail transport more attractive, more competitive and more sustainable. So that even more passengers choose to travel by rail. So that even more goods can be transported by rail. So that the transport revolution succeeds.

At InnoTrans 2022 we will show you the technologies that are already making a significant contribution to this today: digital networking of trains and routes, sustainable electric, battery or hydrogen drives. In short: vehicles more sustainable and with maximum comfort.

► Stadler.valencia@stadlerail.com
► www.stadlerail.com

STADLER



► HALL 2.2 STAND 160

TALLERES ALEGRIA

Design, Manufacturing & Supply of Turnout Systems for High Speed Lines, Conventional Lines, metro & LRT.
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Design Manufacturing & Supply of Rolling Stock (Freight Wagons & Self-Propelled vehicles).

► talegria@talegria.com
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► HALL 26 STAND 307

TALLERES CORRAL MECANIZADOS

TalleresCorral is a medium size company, which was founded in 1958. Its focus is on the production of high quality and security requirement components for the railway industry.

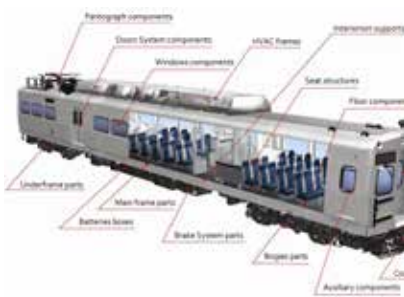
Our company is certified in accordance with the standards: ISO9001, ISO/TS 22163, EN15085 CL1, DIN 6701 A2, ISO3834 and EN1090.

In production of pressure vessels, for brake and air-conditioned systems, TalleresCorral is certificated in module H category I, II and III of 2014/29/UE and 2014/68/EC and the manufacturing of tanks according EN13445 and EN286 codes.

Our principal markets are new projects as well as after-market parts.

► tallerescorral@tallerescorral.com
► www.tallerescorral.com

TalleresCorral



► HALL 22 STAND 840

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TÉCNICA Y PROYECTOS (TYP SA)

TYP SA is a leading consulting engineering group providing solutions for transport and mobility, water, clean energy, green buildings and sustainable urban planning. We have 56 years of experience in assisting public, private and institutional clients in transforming concepts into reality. As a completely independent employee-owned firm with presence in 43 countries worldwide, we can leverage a wealth of knowledge and expertise to find optimal solutions for our clients. TYP SA is known for its high level of expertise and its local capacities, and it uses digital technologies and innovative approaches to provide integrated solutions covering technical, economic, environmental and social aspects. Clean, safe and efficient transport is our main areas of expertise, and rail

► exterior@typsa.es
► www.typsa.com



► HALL 22 STAND 710

TECNIVIAL

TECNIVIAL is its extensive experience in developing highly technological products, offering a wide range of leading products for railways.

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At TECNIVIAL, we are committed to R&D, that makes us pioneers in railway safety products and a specialist in all kinds of Marker Boards for Railways, both conventional and High-speed Lines, being the first company approved by ADIF in this last section

Our strong technical know-how allows us to take part in international projects.

► iramirez@tecnivial.es
► www.tecnivial.es



► HALL 22 STAND 710

TEL DAT

Since 1985, Teldat has been providing solutions for cloud access, remote office communications, cybersecurity and voice/data connectivity for railway, vehicle, offices and industrial environments.



► iramirez@tecnivial.es
► www.tecnivial.es

► HALL 4.1 STAND 840

TELTRONIC

Teltronic provides complete wireless communications solutions for transport sector, satisfying the most demanded needs in matters of voice and data, including integration with signalling applications and other railway subsystem such as Public Address, intercoms, CCTV, Train Control and Management System (TCMS) and Automatic Train Supervision (ATS), among many others. With more than 100 transport communication systems deployed worldwide, Teltronic offers TETRA, 4G/5G, as well as TETRA + broadband hybrid solutions, and has the most complete portfolio of products to provide integrated solutions: communications infrastructure, onboard radio equipment, user consoles, radio terminals, and Integrated Command & Control solutions.

► sales@teltronic.es
► www.teltronic.es



► HALL 4.1 STAND 580

THALES

Thales (Euronext Paris: HO) is a global leader in advanced technologies, investing in digital and "deep tech" innovations – connectivity, big data, artificial intelligence, cybersecurity and quantum technologies – to build a confident future crucial for the development of our societies. The Group provides its customers – businesses, organizations and governments – in the defense, aeronautics, space, transport, and digital identity and security domains with solutions, services and products that help them fulfil their critical role, consideration for the individual being the driving force behind all decisions. Thales has 81,000 employees in 68 countries.

► Info.es@thalesgroup.com
► https://www.thalesgroup.com/en/transportation-spain



► HALL 27 STANDS 670 & 571

voestalpine Railway Systems JEZ

voestalpine Railway Systems JEZ designs, manufactures, supplies, maintains and give Service to all types of turnouts for railways and trams. Our engineering department develops complete turnouts, including standardisation and installation projects for railway station equipment and the development of customised solutions with our own patents. One of our priorities is to achieve excellence in after-sales customer service. This involves the immediate presence of our technical staff to solve any problems, deal with customer requests, input and suggestions and the commissioning of turnouts.

► juancarlos.sanchez@voestalpine.com
► www.jez.es



► HALL 21 STANDS 150

XUBI GROUP

EN: Xubi Gears, founded in 1956, designs and produces all types of precision gears, with a wide experience in the railway industry, offers a wide range of products such as spiral bevel gear sets or helical gear sets.



comercial@xubi.com
www.xubigroup.com

HALL 20 STANDS 650

ZELEROS

Zeleros is the European company based in Spain leading the development of a scalable hyperloop system. Zeleros' unique technologies integrated in the vehicle radically reduce hyperloop infrastructure costs per kilometer. The system shortens path-to-market and offers a straight certification journey thanks to its operation at aviation pressure levels, using vastly proven safety systems for airplanes and railway. The company mobilizes more than 180 people worldwide, working with world-renowned leaders in the railway, infrastructure, aviation and energy sectors such as Renfe, Airbus, Acciona, Arcelormittal, Red Eléctrica de España, Capgemini Engineering, EIT Innoenergy, CAF Group, among others.



press@zeleros.com
www.zeleros.com

HALL 20 STANDS 650

ZITRÓN

Since 1963, ZITRÓN has been designing, manufacturing and supplying custom-made ventilation systems for underground mines, road and railway tunnels, and metro systems. Zitrón's commitment to quality and innovation has enabled it to grow into one of the most technologically driven and successful ventilation companies in the world. From its origins in Northern Spain, Zitrón's success has seen it expand operations into over 80 countries on 6 continents.



ouazzani@zitron.com
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HALL 5.2 STAND 720



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Railways help promote sustainability, which is why, for the past 80 years, Stadler has been building trains to make rail more compelling, more competitive and more environmentally-friendly. So that even more people choose to travel by train, more goods are transported by rail, and ultimately, that modal shift succeeds.

At InnoTrans 2022, we will present technologies that are already significantly contributing to this, such as digitally networking trains and routes and sustainable electric, battery and hydrogen-powered. In short, vehicles that offer maximum comfort. We are on the fast track to the future of mobility. Visit us and find out more at InnoTrans 2022.

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