

# ANNUAL REPORT 2018

Designing future,  
connecting people



anniversary



ineco



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# LETTER FROM THE CHAIRWOMAN

Dear employees, shareholders and clients:

On 20 July, 2018, we celebrated a very important date: the company's official 50th anniversary. Five decades of modernization and development of Spanish transport infrastructures in which Ineco, Government's in-house resource and technical service has actively participated. It has provided its shareholders Enaire, Adif and Renfe, as well as other public and private clients, with the ingenuity and talent of the hundreds of professionals responsible for the transformation of the transport and mobility model in our country since 1968 and was directly involved in the improvement of people's quality of life.

Half a century of a history also marked by experience gained in improving transport in more than 50 countries.

Throughout 2018, we had the opportunity to take stock of this journey that has led us to grow from the initial five employees who accompanied our founder, the civil engineer Carlos Roa Rico, in Ineco's early stages, to the 3,000 professionals employed by the company today. We have come a long way, but obviously not without the challenges we have been able to overcome successfully and that have allowed us to continue growing year after year. This is demonstrated by the results of the 2018 financial year, which ended with an increase in turnover of over 20%, with 273.79 million euros, and an operating profit of 8.81 million euros, in comparison with 2017.

However, beyond the figures that show that we are undoubtedly on the right track to successful teamwork, effort and dedication of the **professionals** at Ineco, the celebration of our 50th anniversary has shown that the values that shape our corporate culture are solid and effective: commitment, respect, rigour, providing value and integrity, as well as our commitment to society as a whole and to the environment. Values that broaden the specific scope of our activity through the firm commitment of our company to the Ten Principles of the Global Compact, as well as effective and real equality between men and women in the field of engineering.

In terms of the activity, we have remained faithful to the spirit of innovation, flexibility and technological evolution of our origins. In 2018, we continued working in the **railway sector** on large-scale projects,

both in Spain and abroad. Since it was founded, Ineco has continued to provide support to Adif and Renfe throughout Spain.

In terms of foreign activity, the company was awarded the first ORAT rail contract for the commissioning of the new Moynihan station in New York, as well as the company's first railway contract in Australia. 2018 has also marked a milestone with the commissioning of the high-speed line between Makkah and Madinah, in Saudi Arabia, where Ineco will continue to work in the coming years. At the same time, it has continued developing projects like HS2 in Great Britain and others in Mexico, Denmark or Turkey.

In the **aviation sector**, Ineco has continued its close collaboration with Aena and Enaire on different airport projects as well as the optimisation of airspace and update and improvement of ATM/CNS systems. At international level, it is important to note that the company was awarded a contract for designing a new airport in Heraklion, Crete, and that it has continued its work at Schiphol and Abu Dabi airports, as well as others in Jamaica, Costa Rica or Peru.

As for the area of **roads**, at an international level, work in Mexico, Argentina or Costa Rica has continued. In Spain, Ineco has continued to support the Ministry of Public Works in multiple initiatives to improve and modernize the national road network.

In the **intermodal sector**, special emphasis must be given to the increase in activity in smart cities and support for digitisation of the Administration.

In short, 2018 has closed with a positive balance as well as the celebration of five decades of history, projects and experiences of enormous value. Fifty years during which we have had the support of clients and shareholders and, of course, the hundreds of professionals who have made it possible, and we hope to continue to do so. I would like to thank all of you, from the past and the present, and I would like to invite you to join us in facing future challenges, which, like our journey, have only just begun.



Carmen Librero Pintado  
Chairwoman



# ABOUT INECO



# WHO WE ARE

INTEGRATED, INNOVATIVE AND TECHNOLOGICAL SOLUTIONS FOR MORE SUSTAINABLE, SAFE AND EFFICIENT MOBILITY THAT IMPROVES PEOPLE'S QUALITY OF LIFE

As regards transport engineering and consulting, Ineco has been designing integrated, innovative and technological solutions for 50 years, which has allowed it to advance towards a new mobility model that is more sustainable, safer and more efficient. Solutions that directly contribute to improving the quality of life of millions of people.

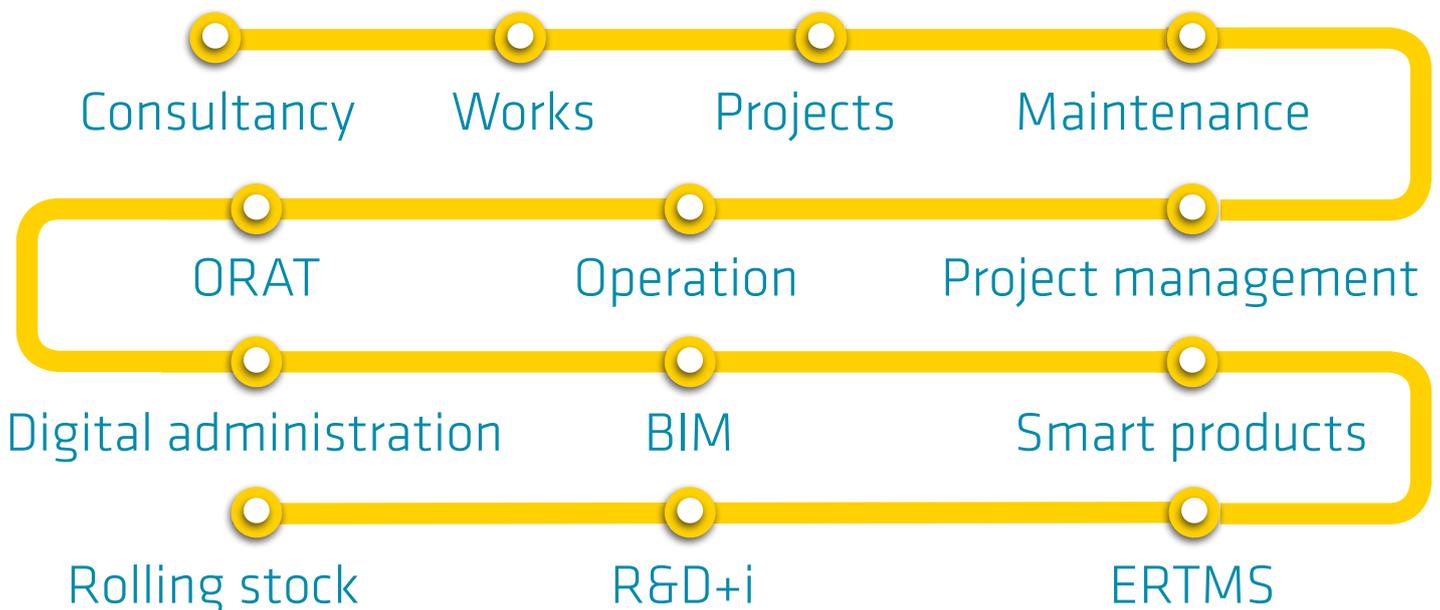
With a multidisciplinary team of 3,000 professionals, the company is present in more than 50 countries where it deploys its experience and ability to face technically complex projects thanks to its specialized knowledge and the application of the most advanced and cutting-edge technology. From conception, consultancy, design and works, to operation and maintenance, Ineco offers solutions to its clients at all stages of its projects. A value that, together with the diversity of markets in which its activities -aviation, railway, roads, urban transport, ports, digitisation, planning and architecture- and its commitment to sustainability and innovation, make Ineco a key ally in the development of future transport systems.

MORE THAN **50 YEARS OF EXPERIENCE**

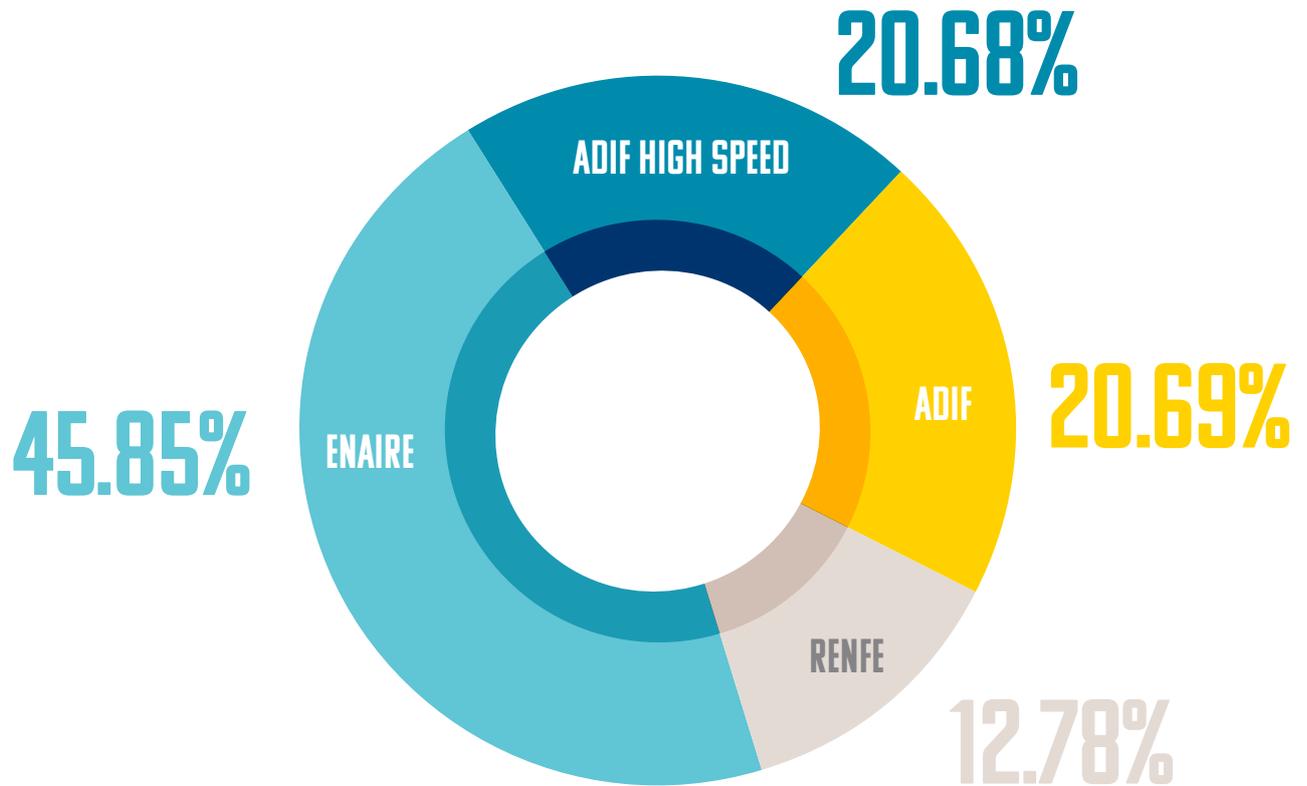
MORE THAN **3,000** **PROFESSIONALS**

MORE THAN **50** **COUNTRIES**

## SOLUTIONS

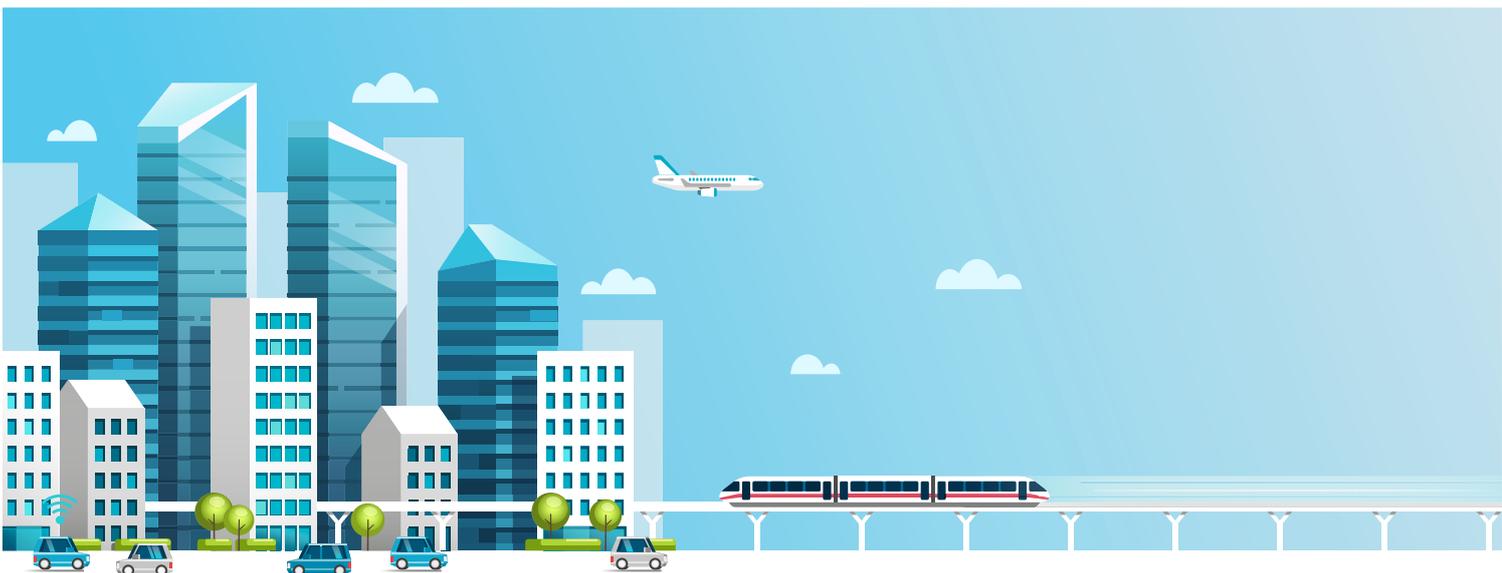


## SHAREHOLDERS



## MARKETS

- Mobility
- Railway
- Airports
- Air navigation
- Roads
- Ports
- Urban development
- Sustainability
- Architecture
- ICT



# MANAGEMENT TEAM

Chairwoman:  
**CARMEN LIBRERO**

National Business General  
Directorate:  
**CASIMIRO IGLESIAS**



Organization and  
Corporate Services General  
Directorate:  
**EVA PULIDO**

International Business  
General Directorate:  
**IGNACIO  
FERNÁNDEZ-CUENCA**

Engineering and Consultancy  
General Directorate:  
**ANA ROJO**

# STRATEGIC MODEL

In 2018, a roadmap defined under an open, participatory and collaborative model was implemented, both phases of analysis and reflection as those related to execution.

- Its focus was on achieving the following **strategic goals and objectives:**
- **Strengthening and enriching the people policy** to establish the ideal environment for our professionals to develop their career at Ineco while we equip ourselves with people in key areas and acquire the necessary skills to face new motivating and interesting challenges for the future and the whole of the organization.
- **Promote business development and active management of stakeholders** in order to consolidate and strengthen our relationships with the environment by maximizing the satisfaction of our national clients, as well as the loyalty and recurrence of our international clients and partners.
- **Foster active and open innovation** in order to increase the commercial application of same, both in terms of sales through new products and services that generate added value, as well as through activities and actions that promote collaboration with other companies and agents involved.
- **Achieve an excellent operating model** that guarantees the competitiveness of our offer by defining a coherent structure of processes and procedures that minimizes management times and avoids their repetition.
- **Promote the process of organizational transformation** so that the digital strategy reaches every corner of the organization, which implies adaptation to the understanding and execution of business operations and involves cultural transformation towards a completely digital environment.

TO ACHIEVE THESE OBJECTIVES, THE COMPANY MUST RELY ON THE FOLLOWING STRATEGIC ELEMENTS:

- 1 People**  
 Fundamental asset of the organisation due to their ability to add value and their role as key differentiators.
- 2 Ecosystem**  
 Bilateral relationships with our stakeholders and how to interact with them become essential elements for a better projection of our abilities.
- 3 Transformation**  
 Key that allows a better competitive positioning through the transformation of our skills and knowledge in order to generate impact and differential value through the promotion of innovative activity and new business models.
- 4 Operational excellence**  
 Operational excellence must be understood as common practice within the organization, since its mainstreaming must continue to support leadership in the sector.
- 5 Digitisation**  
 Integration of technology and definition of new digital experiences both internally and externally within the framework of the organization's daily activity.

Being aware of the rapid evolution of the environments in which Ineco carries out its activity and of the need to adapt as soon as possible to the changes made, the roadmap was defined on a flexible basis that allows quick monitoring and supervision.

In 2019, Ineco will keep progressing in the development and implementation of a roadmap based on the nature of the company as the Administration's own tool, and in the utilization of the opportunities emerging in the market. This entails combining the dedication and development of the company's capabilities in terms of national projects with an increase in knowledge and improvement in its position on the international market, as a reference firm in the transport engineering and consulting sector.

## MISSION

Contribute to sustainable and secure development of the best global network of transport infrastructures and generate value and wealth for countries in which we operate by offering innovative, tested, flexible engineering and consulting solutions and services with a view to maximising our capacity to provide our stakeholders with a differential value.

## VISION

To be the reference firm in the provision of consultancy and transport engineering services in the world, being recognised for our technological and innovative capacity, our productive excellence and specialised knowledge.

## VALUES

With the help of our employees, we have identified those corporate values that represent us and are the driving forces behind our company's activity.

# THE VALUE OF WHAT IS OURS

COMMITMENT



RIGOUR



INTEGRITY



RESPECT



ADDING VALUE

# OUR FIGURES

In 2018, we earn 273.79 million euros, around 17.76% more than in 2017, with our involvement in the railway sector and 41.43% in the intermodal sector.

## TURNOVER

**273.79** millions of €

## OPERATING PROFIT

**8.81** millions of €

## STAFF

**3,097** employees

December 2018

## INCOME BY GEOGRAPHIC REGIONS IN 2018

REGIONS	ANNUAL PRODUCTION
Europe	238,894,315 €
Spain	225,503,215 €
Asia	21,932,284 €
America	12,139,722 €
Africa	781,742 €
Oceania	38,919 €
Total	273,786,982 €

## INCOME FROM PROVISION OF SERVICES

SERVICE	2018	2017
Public sector	237,775,196 €	204,009,352 €
Private sector	36,011,786 €	23,473,403 €
Total	273,786,982 €	227,482,756 €

## INCOME BY ACTIVITY

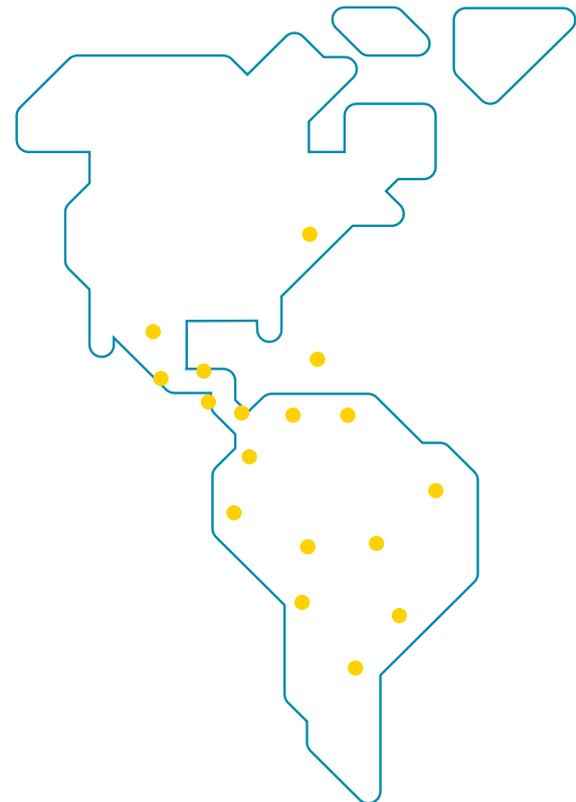
SECTOR	2018	2017
Aeronautical	53,243,488 €	50,655,475 €
Railway	146,980,798 €	124,811,027 €
Intermodal	73,562,695 €	52,016,253 €
Total	273,786,982 €	227,482,756 €

## DISTRIBUTION OF THE 2018 PORTFOLIO BY ACTIVITY

SECTOR	NATIONAL	INTERNATIONAL
Aeronautical	4.4%	19.4%
Railway	64.2%	55.0%
Intermodal	31.5%	25.6%

# INECO AROUND THE WORLD

- BULGARIA
- CROATIA
- DENMARK
- ● ● ● SPAIN
- ESTONIA
- ● FRANCE
- GREECE
- ● ● ● ITALY
- ICELAND
- LATVIA
- LITHUANIA
- MALTA
- NORWAY
- NETHERLANDS
- ● ● POLAND
- ● ● PORTUGAL
- ● ● ● UNITED KINGDOM
- RUSSIA
- SERBIA
- ● ● ● TURKEY
- ● UKRAINE
- ● ● ● ● ARGENTINA
- ● BOLIVIA
- ● ● ● BRASIL
- ● ● ● CHILE
- ● ● ● COLOMBIA
- ● ● ● COSTA RICA
- ● ● ECUADOR
- ● USA
- EL SALVADOR
- JAMAICA
- ● ● MEXICO
- ● NICARAGUA
- ● ● PANAMA
- PARAGUAY
- URUGUAY
- ● ● ● PERU
- ● ● ● VENEZUELA



● AIRPORTS

● AIR NAVIGATION

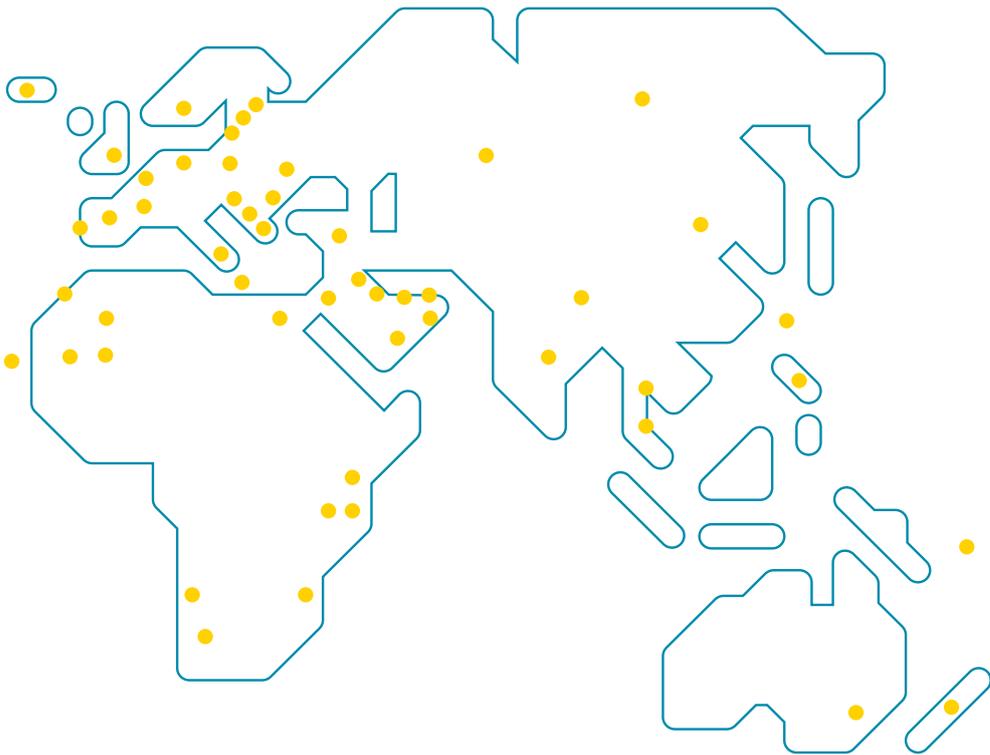
● RAILWAYS

During 2018, Ineco continued its international expansion process through the award of projects of great relevance worldwide in markets considered strategic for the company.

In Latin America and the Caribbean, Ineco maintained its position of reference with new projects throughout the region, mainly in Peru, Brazil, Colombia, Argentina, Costa Rica, Mexico and Jamaica not only with the consolidation of ongoing projects but also with the award of new contracts of great importance for the future of transport in these regions.

In North America, after being awarded the first airport contract in 2017, Ineco also achieved a new milestone in the region with the award of the first railway contract in New York city.

In Europe, it is important to highlight the consolidation of the United Kingdom, the Netherlands and the European Commission as priority markets in which major international projects are being developed. Another important feature is the launching of new strategies and commercial operations involving the development of the "Rail Baltica" infrastructure.



- ● ● SAUDI ARABIA
- ● QATAR
- UNITED ARAB EMIRATES
- IRAQ
- JORDAN
- ● ● KUWAIT
- ● ● OMAN

- ● AUSTRALIA
- ● CHINA
- PHILIPPINES
- INDIA
- KAZAKHSTAN
- ● MALAYSIA
- ● NEPAL
- NEW ZEALAND
- SAMOA
- SINGAPORE
- ● TAIWAN

- ● ANGOLA
- ● ALGERIA
- ● CAPE VERDE
- ● EGYPT
- ● ETHIOPIA
- KENYA
- MALI
- ● ● MOROCCO
- ● MAURITANIA
- ● MOZAMBIQUE
- NAMIBIA
- ● UGANDA

- URBAN TRANSPORT
- ROADS
- MOBILITY 4.0

The Middle East is still one of the key regions for Ineco and where it continues to work towards broader goals by developing important railway and airport projects.

Finally, in the Asia Pacific region where aviation and railway projects have been developed in Taiwan, Singapore and Malaysia, it is important to mention the first railway contract commissioned in Australia.

# MORE THAN 50 COUNTRIES

# ACTIVITY







# AVIATION

anniversary

50

1996: Tenerife North Terminal, Ineco's first major airport project.

## POSITIVE TREND

The year ended with a favourable balance in Ineco's aeronautical sector, where revenues have registered an average increase from 50.6 million euros in 2017 to 53.2 million in 2018. Ineco began its aeronautical activity in 1993 after becoming a shareholder of Aena and is currently working on hundreds of projects for ENAIRE (operations, airspace, physical and operational safety, communications, CNS and ATM systems, satellite navigation, design of flight procedures, etc.) and Aena, as well as for the General Directorate of Civil Aviation (DGAC) and the Spanish Aviation Safety and Security Agency (AESA).

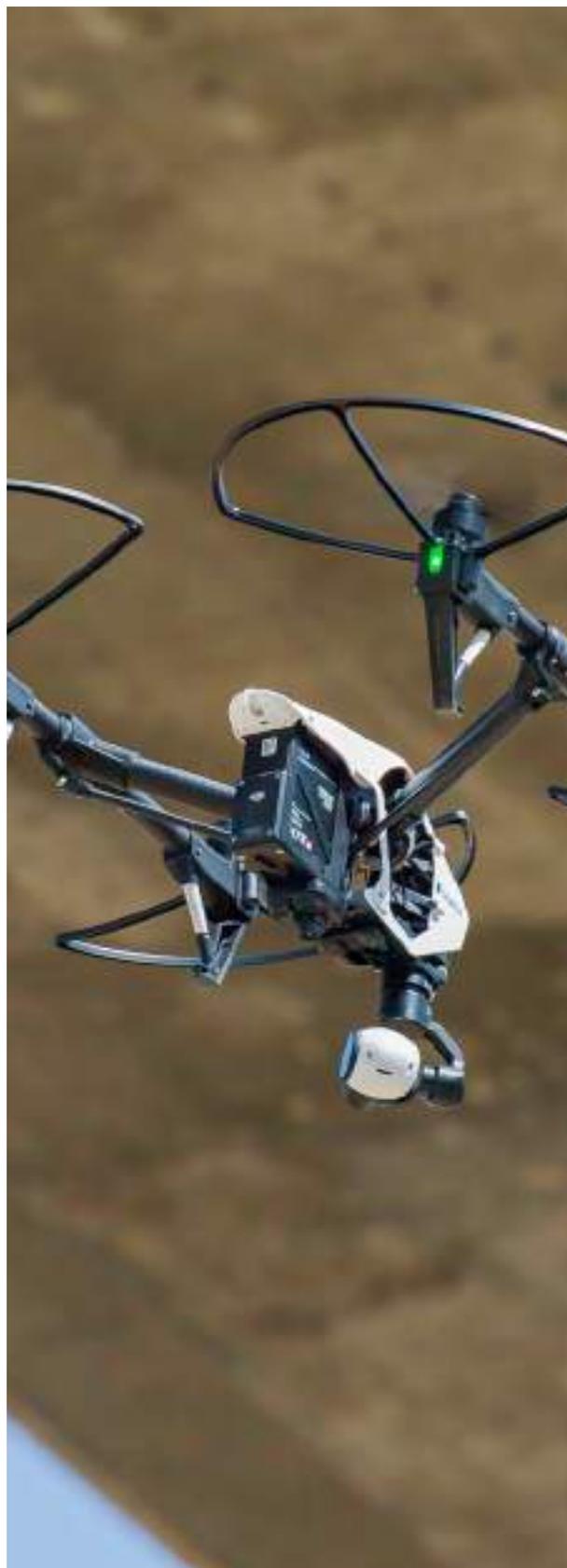
At international level, work already started has been ongoing in Europe, Latin America, Africa and the Middle East, both in airports (design of the new Schiphol terminal, ORAT in Abu Dhabi, expansion of Cape Verde airports, etc.) and in air navigation. In 2018, work terminated in Saudi Arabia, Singapore, Taiwan and Mozambique and other contracts were commissioned for the design of a new airport in Crete (Greece).

In Spain, in the **airport sector**, it is important to mention projects developed for the General Directorate of Civil Aviation (DGAC). Among them, over 800 evaluation reports for the study of airport conditions in relation to urban planning, support in the environmental processing of airport planning or monitoring the application of Airport Regulation Document 2017-2021 (DORA); more specifically in the areas of investment, capacity, quality and economic aspects, airport management and coordination of initiatives. Technical support has also been provided to the DGAC for the preparation and monitoring of the Strategic Plan for the Development of the Civil Sector of Drones in Spain 2018-2021, presented by the Ministry of Public Works.

For the Spanish Aviation Safety and Security Agency (AESA), inspection and control of safety requirements were carried out in the areas of ground assistance, as well as easement inspections and authorization, inspection and verification of restricted use airfields and private management that will be continued in 2019. Ineco also started a new ICT activity by incorporating a portal with public information on fauna risk maps in the vicinity of airports for public use within the AESA website.

Many different projects have been carried out for Aena, among which we can highlight phase II of the South Pier project of T1 at Barcelona-El Prat Airport, the technical management of more than 80 building and civil works projects, like the adaptation to the new functional design of the terminal buildings of the airports of Reus, Seville, Tenerife South, Palma de Mallorca and Madrid. In addition, more than 100 pavement evaluation reports have been prepared for flight fields (PCI, surface regularity, friction and texture, carrying capacity reports, and operational studies) of most airports in the Aena network.

At the same time, several planning studies have been prepared for the development of the network's



**Ineco has collaborated in the preparation of the Strategic Plan for the Civilian Drones Sector.**



airports. Technical support has also been given for the implementation and monitoring of the Energy Efficiency Plan and renewable energies at Aena, as well as the development of a strategy against climate change.

In the field of operational safety, Ineco has also continued its certification work at 48 airports in the Aena network, as well as Madrid-Barajas and Barcelona-El Prat.

The Department of Commerce continued with the introduction of shopping areas at airports and development of the marketing plan, functional support for the system used for the control and analysis of sales and commercial income, and studies and development of Aena's airport marketing.

In terms of communication and institutional relations, it is worth mentioning the functional development of Aena's web and intranet content and media relations, advertising and corporate identity.

Among the projects carried out for other national clients is the entire renovation of the meteorological facilities of the Barcelona-El Prat airport for AEMET, which included field stations, equipment at the Airport Meteorological Office (OMA), control towers, fibre optic rings, etc.

In the international market, work has continued at European airports, which includes the design of the new Schiphol airport terminal in Amsterdam through the Spanish-Dutch consortium KLAIR. In 2018, Ineco was also awarded a contract for the design of the new

Heraklion airport in Crete, on which the company has already started preliminary work, which will start in 2019.

In 2018, Ineco continued to supervise the construction work of the New Mexico City International Airport (NAICM), as well as that being carried out for the Pacific Airport Group (PAG). These projects included the functional design of the terminal buildings of the airports of Tijuana and Puerto Vallarta, and the elaboration of the Master Development Programme 2020-2034 of the airports of Bajío, Aguascalientes, Guadalajara, Hermosillo, La Paz, Los Mochis, Morelia, Mexicali, Puerto Vallarta, San Jose del Cabo, Tijuana and Manzanillo.

In Central America, Ineco has once again developed projects for planning, design and supervision of work carried out at Sangster International Airport, in Montego Bay, Jamaica. In Costa Rica, the construction project for the rehabilitation of the pavement at the Daniel Oduber Quirós international airport flight field was drafted for the International Civil Aviation Organization (ICAO).

In Colombia, the Master Plan for the Germán Olano airport in Puerto Carreño and the airport planning schemes of San Bernardo de Mompox and Contador de Pitalito have been developed. In Peru, assistance continued to be provided for improvements to the Jorge Chávez airport in Lima, as well as the modernisation of Chiclayo airport. Work was also carried out to improve pavement management at Pucallpa, Iquitos and Pisco airports.



**In 2018, work continued on the design of the new Schiphol airport terminal in Amsterdam through the Dutch-Spanish consortium KLAIR.**

During the past year, work also continued in the Middle East, which included commissioning and operational transition (ORAT) for the new MTC terminal (Midfield Terminal Complex) of the Abu Dhabi International airport, started in 2014, and the project for the integrated management of the expansion of the airport in the city of Fujairah. On the other hand, the Master Plan was finalised in 2018 for King Fahd international airport in Dammam, Saudi Arabia, the first aeronautical project to be developed by Ineco in this country.

Activity in 2018 in the African continent was focused on Cape Verde, where important projects were carried out. On the one hand, the company supervised the most recent works to expand the passenger terminals of the international airports of Boa Vista and Sal, which registered the highest tourist traffic. On the other hand, it developed two consultancy studies to analyse the feasibility of developing new airport infrastructures in the country, for the aerodromes of the islands of Santo Antão and Brava, and for the airport of São Filipe, on the island of Fogo.

As for **air navigation**, in 2018 Ineco continued to participate in many national projects, providing support to almost all Enaire units.

In the field of operations management in TWRs, Approach and Route, Ineco has collaborated in the development of the new version of the APP (eDEN) of the new electronic diary of new routes and approach operations. It has also been involved in the processing

of radar data. The new drone application on the Enaire website has continued to be developed in support of Enaire's AIS Department.

Ineco has participated in the restructuring of the arrivals and approaches in South Configuration at the Adolfo Suárez Madrid-Barajas airport relating to airspace structuring and organization.

PNR APCH manoeuvres have been designed in several airports as part of the PBN implementation plan, in particular those of Barcelona, San Sebastián, Córdoba and Seville. To support the work of the SESAR Project, GBAS manoeuvres have been determined for Madrid, Barcelona and Logroño airports.

As far as operational safety activities are concerned safety studies have been drafted to meet the changes made in the air navigation system, due to the implementation of the new PBN manoeuvres at Vigo, Barcelona, La Seu de Urgell, Lanzarote and La Coruña airports. Periodic surveys have also been carried out.

In terms security, during the course of 2018, Safety Programmes were developed for 112 air navigation facilities and the "Enaire Training in Physical Safety 2019-2020" master plan was concluded.

Within the scope of aeronautical communications, Ineco has supported the updating and commissioning of the voice and land/air communication systems of the Madrid-Barajas airport. It has also participated in facility monitoring and control, integration

and acceptance tests and coordination of the commissioning of VoIP integration of ATC voice/air communications at DNER South through the deployment of VoIP gateways at the Seville ACC and at Land/Air communications centres. Ineco has also conducted studies on L/A communications coverage of the new PNR APCH procedures for the airports of Vigo, La Coruña and Barcelona.

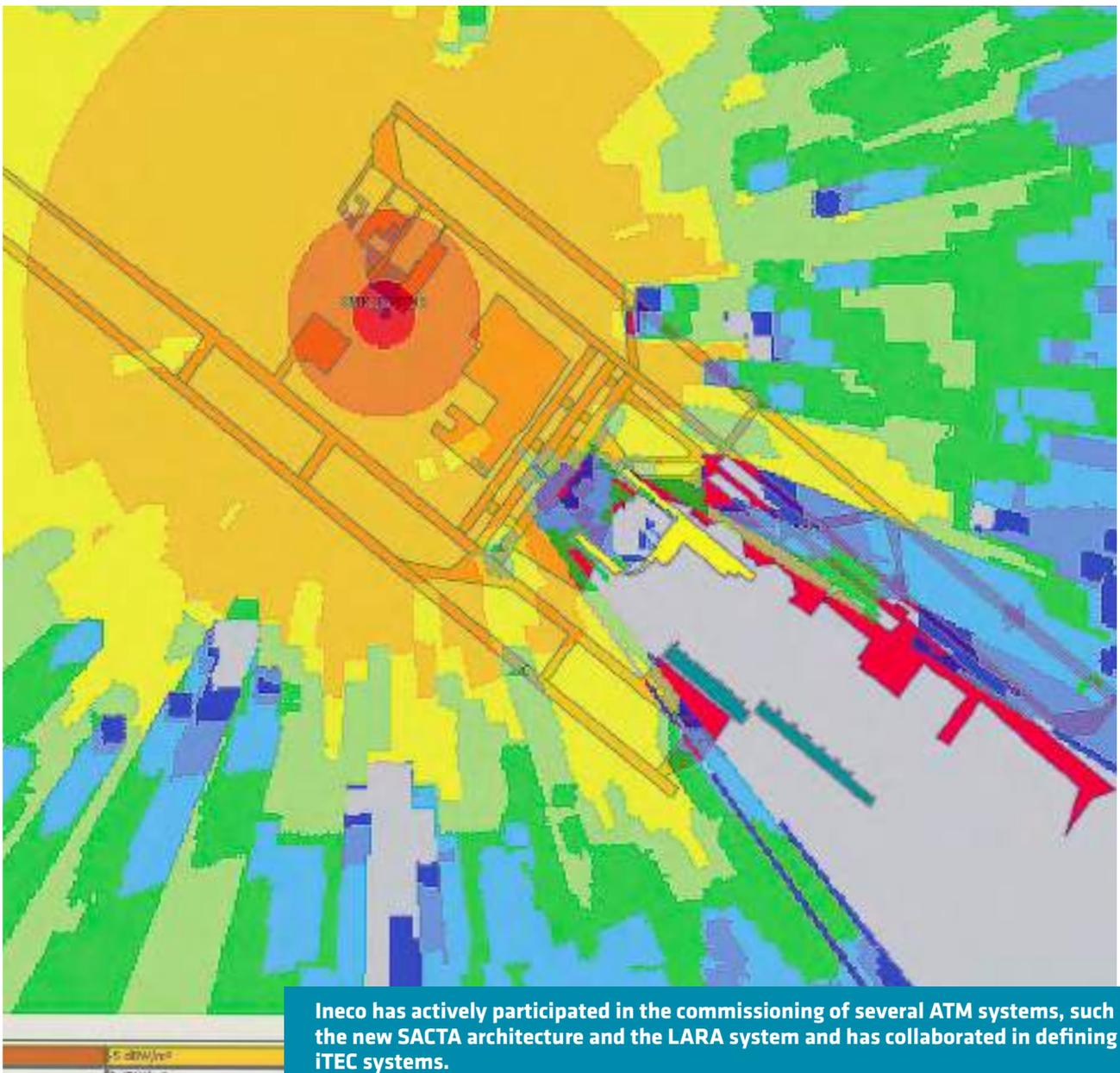
During 2018, more than 120 radioelectric simulation studies have been carried out at the Enaire and Aena air navigation facilities.

By updating navigation and surveillance systems, in 2018 Ineco provided technical support in the following deployments: new surface surveillance systems, new RADAR equipment in Lanzarote and Turrillas or the new ADS-B station at Bilbao or Menorca airport. It has also participated in factory tests in the USA on the first SELEX CVOR in Enaire's SNA network.

In relation to CNS remote monitoring systems, it is worth mentioning the support provided for the implementation of the SCADA Infrastructures system for the supervision of energy, air conditioning and fire systems at various Enaire sites and for migration of the ORION version in the eastern regions, Balearic and Canary islands.

In the field of satellite navigation, Ineco continued to collaborate in the continuous update of applications and tools. Within the European SESAR programme, it contributed with five solutions for different projects.

As part of the automation of the air traffic control system, Ineco actively participated in the following projects: new SACTA architecture; LARA system for flexible use of airspace, new ICARO supervision system and new Collateral ACC in Agadir (Morocco). It also collaborated in work groups defining iTEC systems.



**Ineco has actively participated in the commissioning of several ATM systems, such as the new SACTA architecture and the LARA system and has collaborated in defining iTEC systems.**



**In the Middle East, the design of operational procedures at five airports in Oman has been completed.**

In the field of air navigation, at an international level, more specifically Europe, Ineco consolidated its participation in the European Galileo Service Centre (GSC), located in Madrid. Ineco also continued to provide support to the European Space Agency (ESA) for the development of the European satellite navigation system EGNOS.

In the Middle East, it completed the project for the design of operational procedures at five airports in Oman.

In Asia, consultancy work for the transition taking place at Singapore-Changi airport and an aeronautical study at the port of Kaohsiung in Taiwan have been completed.

In Africa, it is worth mentioning the development of the current contracts for the design of instrumental procedures and the installation of an ILS in Cape Verde and the completion of the CNS/ATM project in Mozambique.



# RAILWAYS

anniversary

50

1992: High-Speed Spanish (AVE) train at Santa Justa station, Seville, first high-speed line in Spain.

## RENEWED CONFIDENCE



1981: Illustration for the Bogotá Metro feasibility study, first international project developed by Ineco with its own resources.

In 2018, Ineco celebrated the 50th anniversary of the first steps taken by its founder, Carlos Roa, in 1968, precisely in the railway field. Very soon it was commissioned to carry out the first Spanish high-speed study for Renfe, the Madrid-Barcelona-Zaragoza-Port Bou (1975), and later, in 1986, the NAFA project (New Railway Access to Andalusia) that would end up being the first high-speed line in Spain between Madrid and Seville (1992).

During those first decades, Ineco did not stop working in multiple railway engineering and consultancy studies inside and outside Spain, both on travellers and goods, and metro projects (Bilbao, 1977; Bogotá, 1981), and from 1989 (Green Hall of Madrid), also in project management (Line 8, 1994-98). In the 2000s decade, while new high-speed lines were being built and the large stations in Madrid and Barcelona were preparing to host them, work continued on underground and tram lines throughout Spain. Railway projects were initiated abroad, including the Buenavista-Cuautitlán project in Mexico City (2006), that open markets to other areas - aeronautics, roads - while activity continues in Latin America (Argentina, Venezuela, Colombia, etc.) or Africa (Algeria, Ethiopia).

At the beginning of the current decade, the experience in high speed is exported abroad with contracts such as the British HS2 and the Haramain project in Saudi Arabia - both current - while in Spain Ineco continues to provide services to Renfe and Adif for planning, development and maintenance of the conventional and high-speed rail network. In relation to the latter, Ineco's pioneering experience in ERTMS in Spain - where it first started operating in 2006 - has also resulted in important contracts like the one signed in 2014 with the European Commission for supervision of the deployment of the system in Europe, which will last until 2021, or the implementation of the entire railway network in Denmark, until 2023.

Therefore, the railway activity has persisted and has become consolidated over five decades. Today, it is

the area that generates the highest source of income, with almost 147 million euros in 2018, which represents a significant increase compared with the 125 million registered in the previous year.

At **national level**, there has been a particular increase in the planning and programming of new lines. Ineco has collaborated with infrastructure manager, Adif, in the preparation of different demand studies, master plans, etc. for the development of network commuter hubs and in different functional studies, such as defining the best configuration of the Mediterranean Corridor for mixed-gauge rail traffic.

Construction projects for high-speed lines have also been drafted: Antequera-Granada, Valladolid-León, Olmedo-Zamora, Loja variant, Atocha-Chamartín tunnel, stations of the Extremadura line, etc. In the conventional network, it is important to mention the projects of the Ourense-Monforte-Lugo sections, as well as the new rail access to El Prat airport, the adaptation of the Pola de Lena-Oviedo section and renovations of the track to Extremadura. Projects for the implementation of the standard gauge in the Mediterranean Corridor have also continued. In railway systems, it is worth mentioning the functional projects for the renewal of the telecommunications and security infrastructure in the High-Speed Madrid-Seville line, signalling in different sections of the Mediterranean Corridor, civil protection facilities in different network tunnels, etc.

At the same time, site management and technical assistance have been carried out in addition to supporting the development of commuter plans and the renewal of the conventional network in Galicia. Technical assistance for supervision and surveillance for track assembly, ERTMS, telecommunications, energy, etc. has been carried out in different sections: Antequera-Granada (track assembly); Atocha-Torrejón de Velasco, high-speed lines to Extremadura, Levante and Galicia; Astigarraga-Irún section, Pajares or Mediterranean Corridor variant,

where technical assistance has also been carried out for the implementation of standard gauge in the Valencia-Sagunto section; and in the conventional network variant between Zamora and La Coruña, with qualitative and quantitative control.

Other important activities include construction management and environmental management of the new commuter railway access to T1 at Barcelona airport, a tunnel that crosses under the flight field with a new intermodal station at T2 whose drilling was successfully concluded at the end of 2018. Ineco drafted the project in 2009 and will continue to work on the following stages of it, which include the laying and equipping of the road, the supply of energy and railway equipments, and the commissioning of the two new stations.

Regarding performances at stations, collaboration has continued to improve accessibility and interoperability, and Ineco has participated in the reconstruction of the façade, roof and lobby of the historic station of Almería, among others.

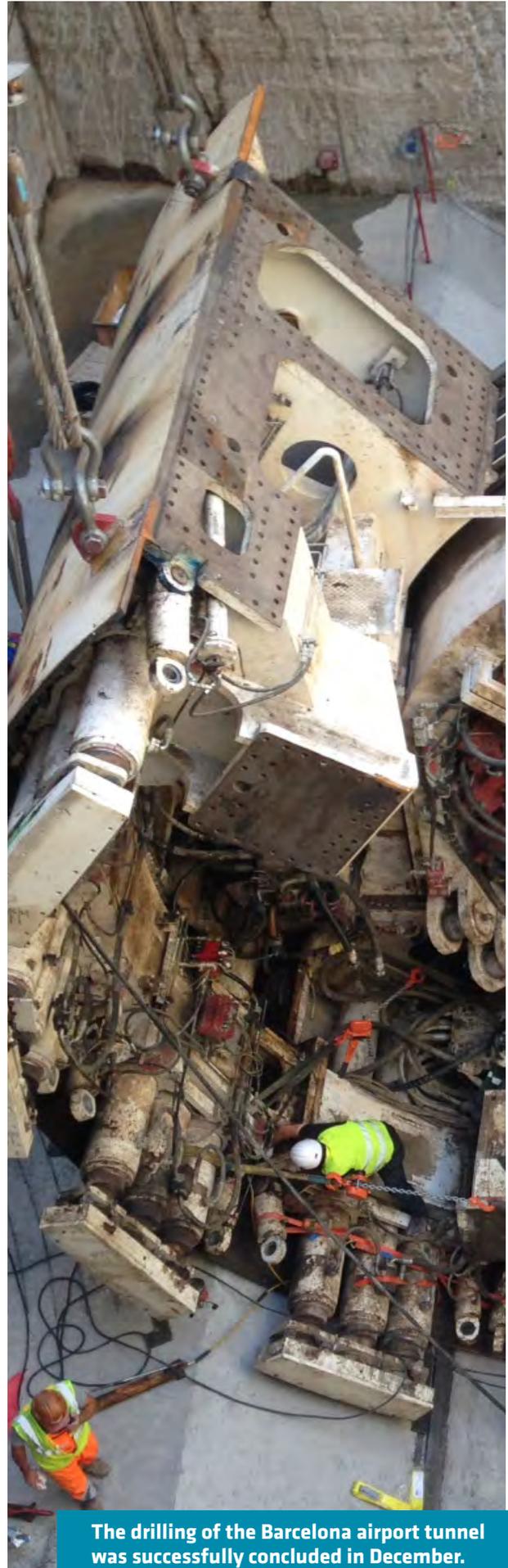
In railway systems, we can highlight the implementation of the protection and signalling systems and fixed telecommunications facilities in the connection between the Mediterranean Corridor and the HS Madrid - Barcelona - French border line; in the Madrid - Chamartín - Torrejón de Velasco section or the Antequera - Granada section. In particular, fire and evacuation studies of the whole Gerona tunnel and station have been carried out.

Regarding the commissioning phase, Ineco has continued to collaborate with Adif in carrying out risk analyses and Independent Safety Assessments (ISAs), coordinating operational risk management and applying the common safety method.

The company has also continued to provide service to the railway manager for another fundamental task: maintenance of the four high-speed lines in service, North, East, South and Northeast, and the high-performance sections (up to 200 km/h): Mediterranean Corridor, Galician Atlantic Axis and Seville-Cádiz branch; as well as the 16 variable gauge changeover facility distributed throughout the network. Operators are also provided for the supervision of the security facilities of the four high-speed RCCs (Regulation and Control Centres), located in Albacete, Atocha, Villaverde and Zaragoza.

Work was done for Renfe on the improvement of stations, more specifically in the drafting of construction projects, project management and health and safety coordination, project management and coordination and capacity building studies for travellers in the Madrid Commuter network and northern lines. Work has also been carried out on the implementation, development and maintenance of IT systems, both for the management and coordination of production and for the on linesales system, and throughout the life cycle of the rolling stock.

For the Ministry of Public Works, informative studies have been drawn up for new sections, among which are the high-speed lines Burgos-Vitoria, Sevilla-Huelva and Aguilar de Campoo-Reinosa; the new rail access to Marbella and Estepona, the Os Peares and Rubián



**The drilling of the Barcelona airport tunnel was successfully concluded in December.**

variants on the Ourense-Lugo line, railway accesses to Bilbao and Vitoria, the tunnel at Torrelavega in Cantabria, the future high-speed rail access to the airport of Adolfo Suárez Madrid-Barajas and the functional and informative studies of new stops in the Madrid commuter network, among others. Also of interest are other studies on the interoperability of cross-border traffic on the Zaragoza-Canfranc-Pau line or the functional study of railway integration in Vitoria.

Ineco also provided support for the Spanish Railway Safety Agency (AESF) in various works related to railway safety and interoperability; issuance of risk assessment reports, identification of essential requirements and normative development for tramway operation of certain sections of the General Interest Railway Network (RFIG); and characterisation and study of RFIG tunnels.

At **international level**, work continued in 2018 on large high-speed projects started in previous years, such as the design of a section of the second phase of the British high-speed line, High Speed Two, HS2 (HS1 connects with the English Channel tunnel). This is the second Ineco contract for HS2, awarded in 2017 and which will last until 2022. The company started working in the United Kingdom in 2012, with the preliminary design of another section of phase 1, together with Capita.

Throughout the year we also worked on circulation tests of the high speed line between Makkah and Madinah, in Saudi Arabia, which officially began its commercial operation in October. The services will be expanded progressively throughout 2019; meanwhile, Ineco will continue providing its maintenance management services. On the other hand, the company completed a feasibility study in 2018 on the Mumbai-Nagpur high-speed corridor in India.

Other ongoing contracts during 2018 were related to the development and implementation of the common European railway traffic management system, the ERTMS. On the one hand, it has continued to collaborate with Banedanmark, Denmark's railway infrastructure manager which, in 2023, expects to become the first European country to its whole railway signalling network completely renewed. At the same time, services have continued to be provided to the European Railway Agency (ERA) and the European

Commission in supervising the development and implementation of the system in the main European railway corridors.

In Turkey, work has also continued on the modernisation of the line between Samsun and Kalin. In 2015, in a consortium with UBM and Mott-McDonald consultants, Ineco was awarded the contract to supervise and direct the modernisation of the 377.8 kilometre line (plus the branch between Samsun and Gelemen, of just over 10). It links the cities of Samsun, on the Black Sea coast, and Kalin, in the centre of the country, where it connects with the Ankara-Sivas line. Within the consortium, Ineco will supervise signalling and communications and energy supply for 46 months, and coordinates the electromechanical installation team. For Malaysian railways, a new regulatory framework for railway liberalization has been developed, based on the implementation of an open access model, in which the ownership and management of the service operation infrastructure are separated.

In South America, supervision of the acquisition or remodelling and start-up of rolling stock for the Quito, Santiago de Chile and Medellín metros, which are equipping or modernising their fleets, as well as for line 13 of CPTM (Companhia Paulista de Trens Metropolitanos) of São Paulo, in Brazil. Work also continues on the Independent Safety Assessment (ISA) of the expansion of the Panama City Metro.

Other relevant projects in Latin America in 2018 were the viability and financial feasibility studies for the Bioceanic Corridor that crosses Peru, Bolivia and Brazil.

In North America, two projects are particularly relevant: In Mexico City, Ineco, through its subsidiary Inecomex, in a consortium with Cal y Mayor y Asociados, has been directing the expansion project for Line 12 or Dorada since 2016, 4.6 kilometres of tunnel and three new stations. On the other hand, in 2018 Ineco achieved its second contract in the USA, (after that of ORAT services for the new airport terminal in Newark, New Jersey, completed in 2017) as well as ORAT (Operational Readiness and Transfer), the first railway type abroad, for the new Moynihan station in New York, USA. It is a historic building in the heart of Manhattan, located opposite the current Pennsylvania station, which is being remodelled into a modern underground transfer station.



**Makkah-Madinah high-speed line: A Talga 350 Train during the circulation tests, which began in 2017. In October 2018, commercial operation was officially inaugurated.**

ineco

ECONOMIA  
INGENIERIA  
PLANIFICACION



# INTERMODAL AND ROADS

anniversary

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1992: Ineco advert.

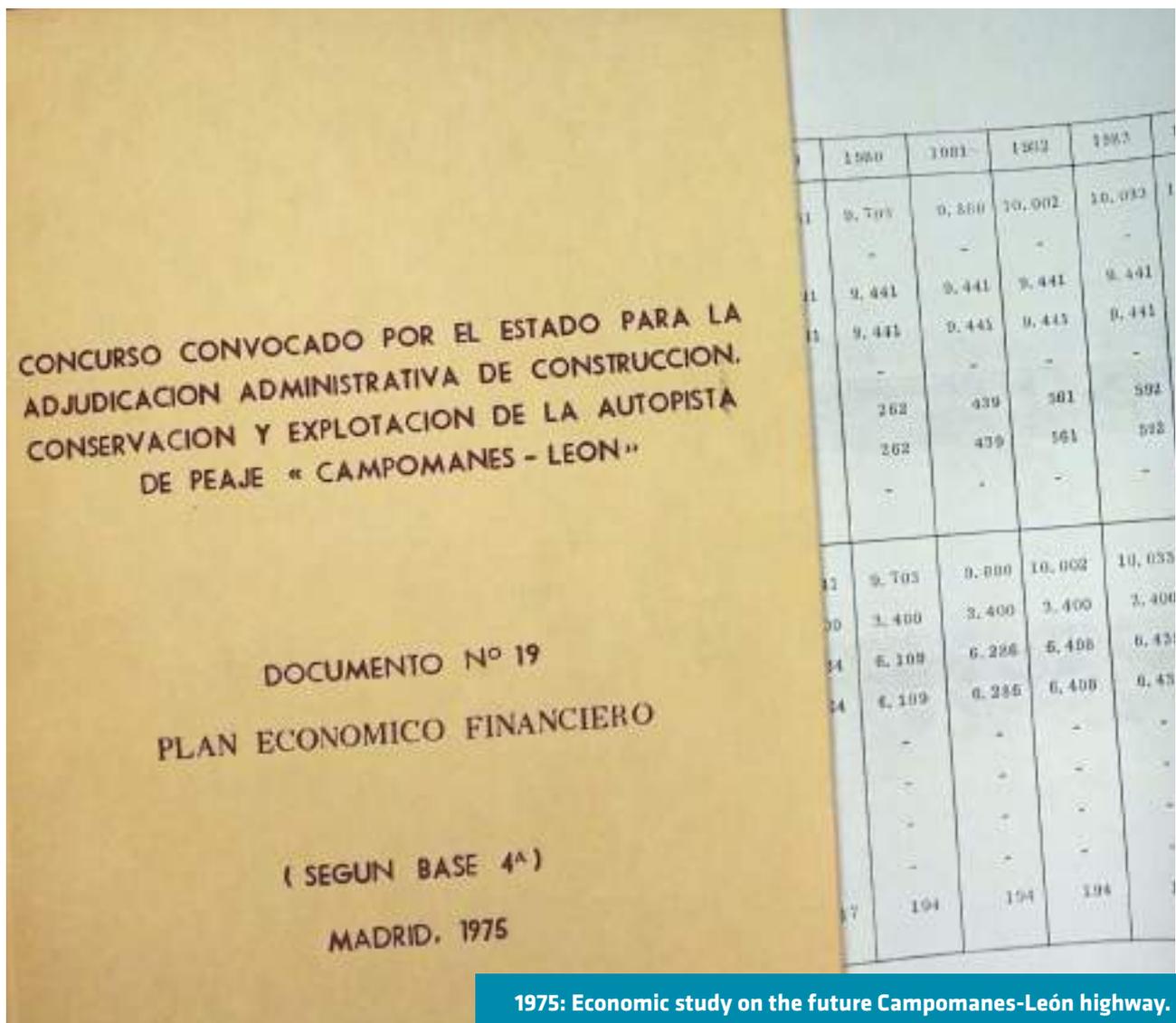
## CAPACITY TO ADAPT

Since the beginning and up to the present day, in addition to its traditional engineering and consultancy activities in the railway and aeronautical fields, Ineco has demonstrated its versatility throughout its 50-year history with all types of work in different areas and in modes of transport, including ports and roads: architecture, environment, urban transport, planning, technological services, management, etc., mainly for the General State Administration and different Spanish public bodies, but also in other countries.

At the beginning of the 1990s, for example, Ineco developed the Renfe's Real Estate Inventory for three years; it worked on **construction** projects ranging from site management of a prison (1995) to the design of university buildings and even banks. More recently it has inspected Spanish consulate and embassy properties in 16 countries of America and has supervised the reform of buildings for Economic (2015) and Foreign ministerial offices such, started in

2016 and still in progress: in 2018, site management and coordination of safety and health continued and has also begun to be provided for the repair of the façade of the INE building (National Institute of Statistics) located on the Paseo de la Castellana, 183 in Madrid. Likewise, a support service was also started in technical work in the field of the Administrative Office of the Ministry of Health, Consumer Affairs and Social Welfare.

In **planning**, which is another of the activities that Ineco has developed from the very beginning, 2018 saw the extension for one more year of work on the Observatory of Transport and Logistics in Spain for the Ministry of Public Works: preparation of the annual report, maintenance and improvement of the database, etc. This experience, which started in 2013, has been transferred to Brazil, where support has been provided to the public company, EPL, for the implementation of the National Observatory of Transport and Logistics.



1975: Economic study on the future Campomanes-León highway.

**In the intermodal area**, and also in the American continent, specifically in Peru, the Master Plan for the Lima and Callao Metro has been initiated to organise and improve its mass transport system until 2050, which will be developed for 21 months.

The company's first projects in **ports** date back to the 70s (master plan of El Musel in Gijón, studies for the ports of Algeciras or La Cruz, in Las Palmas de Gran Canaria). In the 90s, collaboration began with the port authorities to improve land access, both by rail and by road. In 2004, the first projects were carried out for the port authority of Valencia, more than 80 in total. In 2018, technical assistance was provided in the construction of the draft increase in the on-shore transverse pier. It also continued to draft the new southern rail access for the Castellón Port Authority. It is also worth highlighting continuous collaboration

with Puertos del Estado, with the renewal of public concessions.

Regarding work related to the **environment**, during the past year we can mention collaboration with the Ministry for Ecological Transition in drafting projects and management support for financing the adaptation of high voltage power lines to new requirements established.

**Technology** has been present throughout the history of the company, which already began to use the first computers to perform cost calculations and simulations of rail traffic in the 70s and 80s. In the 90s and 2000, the company's own software tools are developed. In 2010 Ineco began to apply in its projects the new BIM methodology (Building Information Modelling), a collaborative system that advances in

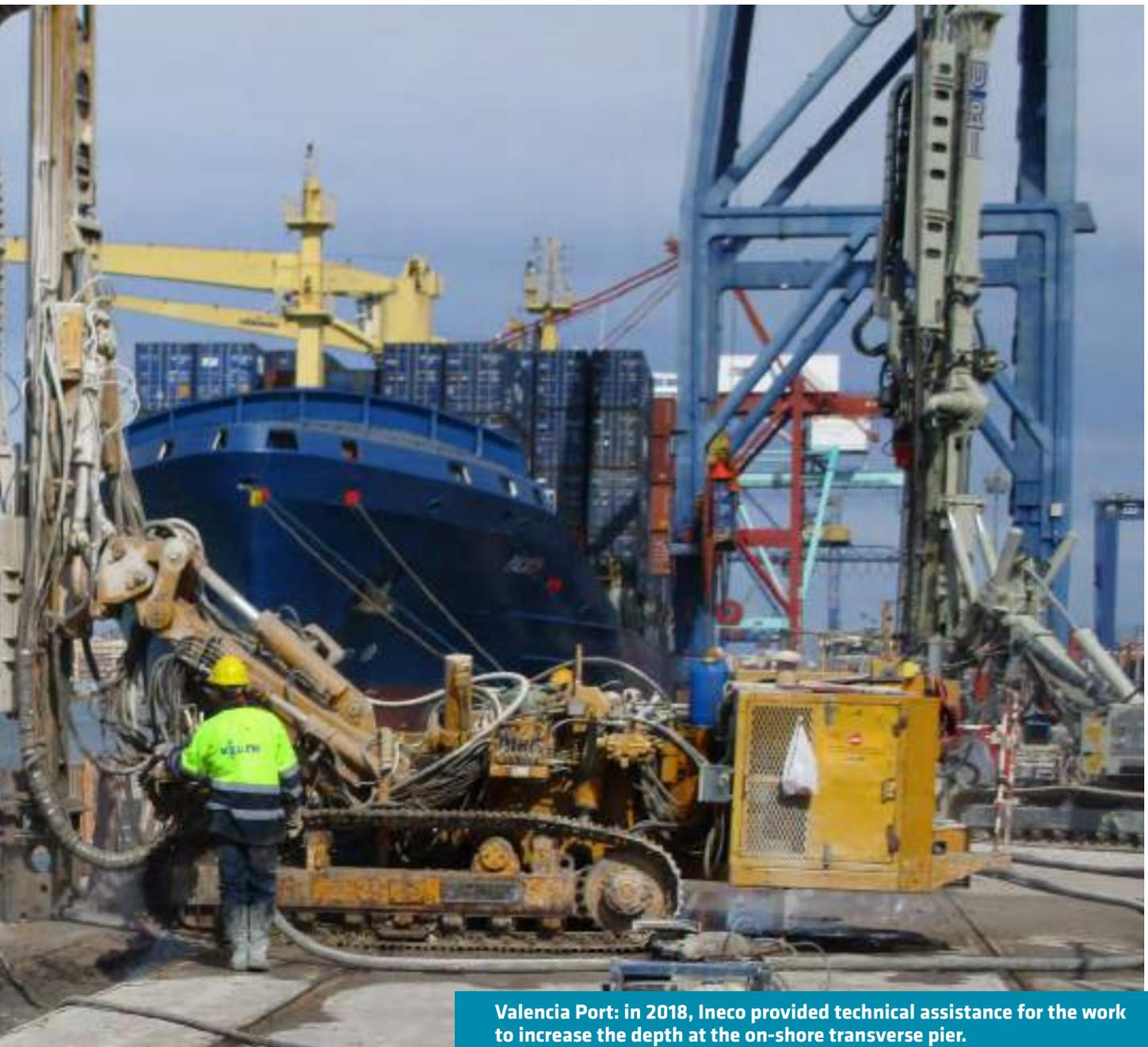


digitisation in recent years have made possible. The company not only uses it in its own projects, but also provides technical support to the Ministry of Public Works to generalize its use in the engineering and architecture sectors in Spain. Therefore, in 2015, with the technical support of Ineco, the Ministry launched the es.BIM initiative, to promote BIM in public procurement, which continued in 2018.

At the same time, the continuous evolution of ICT (Information and Communication Technologies) has generated new social demands, such as the **digitisation of public services** to make them quicker and more accessible for everyone. In recent years, Ineco has developed new specific lines of activity to help the administration meet this demand, which have been consolidated during 2018.

Among these projects, special mention should be made of the support provided to the Ministry of Justice for the implementation of the Electronic Judicial Administration, which began in 2016 and includes the management of a centre for the development and digital transformation of judicial offices; and support for the provision of shared services, for the General Secretariat for Digital Administration (SGAD), of the Ministry of Territorial Policy and Public Administration.

It is also worth mentioning the provision of support for systems and a database of the Spanish General Directorate for Cadastre, specification and development of new computer systems for the management of the Commission for the Tobacco Market, or the construction of the new application for the management of files of the State Attorney's Office, which is being provided



**Valencia Port: in 2018, Ineco provided technical assistance for the work to increase the depth at the on-shore transverse pier.**

with links to the common digital services of the Justice System and of the Public Administration, the latter also being supplied by the SGAD.

Other support projects for the Public Administration developed during 2018 cover various tasks ranging from the management of salary processing for the Ministry of Justice to consultancy services and studies in general, as well as advice to the National Centre for the Protection of Critical Infrastructures (CNPIC, Ministry of Internal Affairs) in the development of a safety standard; or coordination of public and private initiatives and dissemination in the field of the National Smart Territories Plan for the Ministry of Industry, Commerce and Tourism.

Ineco creates its first department of **roads** in 1995, and is awarded the first public contract relating to roads for the Ministry. Previously they had performed consultancy work such as the economic study of the Leon-Campomanes highway (1975), and others such as traffic studies, projects to eliminate level crossings, widening, new accesses, etc. From the mid-90s, it has worked on a large project: the design of the new access roads to the Madrid-Barajas airport; and since 2007, it has participated in the Renovation Plan for First Generation Highways, which is still underway.

In 2018, at the national level, Ineco continued to provide support to the General Directorate of Roads of the Ministry of Public Works. Last year project drafting continued on the enlargements of the A-67 between Polanco and Santander, the A-67 and S-10 on the Santander-airport section, the A-8 between Solares and the P.L. (provincial limit) of Vizcaya, the Potes variant, the upgrading of the N-627 at Puerto de Los Tornos and the Lanestosa variant.

In addition, the drafting of the preliminary projects for the adaptation of six stretches of first generation highways has continued: the A-1 between Madrid and El Molar, the A-2 between Igualada and Martorell, the A-3 between Madrid and the P.L. of Cuenca, the A-4 in the stretches between Ocaña and Puerto Lápice and between P.L. of Jaén and the P.L. of Seville, and A-5 between Madrid and Maqueda. Another preliminary draft of the stretches of the A-73 highway between Burgos and Aguilar de Campoo pending execution has also been drafted, and work has continued on drafting the layout projects of four sections included in the N-II corridor between Orriols and La Jonquera.

On the other hand, feasibility studies have been prepared, under a 10-year construction and maintenance concession, of two interventions in the Murcia area: the expansion of the A-7 between Crevillente and Alhama de Murcia and the north-south axis A-30 alternative route between Archena and Paloma knot.

Work was also carried out on the remodelling of the A-55 in the section of Avenida de Madrid in Vigo and for the improvement of the capacity and environmental integration of the AC-11 in Avenida de Alfonso Molina in La Coruña. Work also began on the A-68 highway project in the stretch between Calahorra and P.L. of Navarre.





In 2018, work began on the drafting of the project to improve the connection of the N-330 with the N-234 variant in Teruel, the adaptation of accesses and improvement of road safety between Villastar and Teruel and the construction project for the improvement of the connection between the dual carriageways A-2 and B-40 in Abrera (Barcelona).

As a result of the reversal on 31 December 2018 of the AP-4 toll highways between Seville and Cádiz and AP-7 between Alicante and Salou, Ineco has carried out an assessment of the state of the infrastructure.

Supervision and surveillance, health and safety coordination and environmental monitoring have also been provided in more than 30 projects for the construction of new road sections and highway.

Work continued on the preparation of 29 tunnel adaptation projects of the Spain's Road Network under RD 635/2006 on minimum safety requirements involving intervention in almost 100 tunnels.

At international level, work on roads started three years previously continued in 2018: In Argentina, inspection of the Paseo del Bajo site in Buenos Aires is still underway. It is one of the major civil works in the country; and its objective is to decongest the traffic of the city and improve north-south connectivity through 12 new lanes over six kilometres long.

In Mexico, the company has continued to perform its work as Supervising Administrator Agent (AAS) of the 148 km-long Guadalajara-Colima highway. As it has been doing since 2011. In 2018, the expansion of the mountain section of just over 18 km near the volcano of Colima and major reconstruction work on section 2 of the highway and the San Marcos toll continued.

In Costa Rica, Ineco has also continued to work as head of the consortium that acts as the executing unit of the Transportation Infrastructure Programme (PIT) for the Ministry of Public Works and Transportation (MOPT). The PIT, a nationwide plan financed by the Inter-American Development Bank (IDB), includes seven projects to improve and expand roads and three ports.

Another international project that is already close to completion is the Northern Section of the Rodoanel of São Paulo, the last section that remains to be closed to complete the bypass of one of the largest urban agglomerations in the world. Ineco supports the mixed company, DERSA (Desenvolvimento Rodoviário S.A) for the coordination of different contracts (about 50) and participating organizations in this complex project, which began in 2013.

**In 2018, at the national level, Ineco continued to provide support to the General Directorate of Roads of the Ministry of Public Works. Work abroad has continued in Argentina, Mexico, Costa Rica and Brazil.**



# PROJECTS IN FOCUS

anniversary

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2003: Work on the Córdoba-Málaga high-speed line: River Cabra viaduct.



## RAILWAYS

### HIGH SPEED BETWEEN MAKKAH AND MADINAH

In October 2018, the official inauguration of the commercial operation of the Haramain High Speed Railway, the high-speed train between Makkah and Madinah, took place. Ineco conducted the circulation tests prior to the start of the commercial operation and will continue to provide its experience in the maintenance of the line for twelve years.

The first high-speed line in Saudi Arabia has become a reality since 11 October 2018, when commercial operation was officially inaugurated, which will be extended throughout 2019. In 2014, an Ineco team of experts began to work on the line's circulation tests, which began in December 2017 and were completed on 25 September 2018, with the first official trip between the stations of Jeddah and Madinah. During the tests, Talga 350 trains travelled 430,000 kilometres and reached a speed of 320 km/h.

In 2011, the Al Shoula consortium, formed by twelve Spanish companies, amongst which were Ineco, Renfe and Adif, and two Saudi companies, was awarded phase 2 of the project, which is organised into two phases: construction (supply, installation and commissioning of the track and railway systems, i.e. overhead line, signalling, communications, etc.) and the manufacture and commissioning of 35 trains; and commercial, which includes the operation and maintenance of the line for 12 years.

During the construction phase, Ineco was responsible for the areas of design, quality assurance, technical assistance and rail traffic management. As from its

commissioning, which will be expanded progressively throughout 2019, the company will continue providing its maintenance management services.

The 450 km, double-track line will have five passenger stations, a railway branch to the new terminal of King Abdulaziz International Airport, two train maintenance workshops, three track work bases and two traffic control centres. 200,000 tons of rail, 4.1 million tons of ballast and 4.45 million metres of overhead lines have been used for the construction of the track superstructure. The manufacture in Spain of the 35 Talga 350 SRO trains has also been completed, which have more than 30 technologies specifically developed to overcome the harsh conditions of the Saudi Arabian desert.

**11 October 2018: Official start of operation**

**Over 430,000 km travelled during preliminary tests**

**35 Talga trains specifically adapted to the desert**

**Start of the 12-year maintenance period**



INTERMODAL AND ROADS

## SUPPORT FOR THE IMPLEMENTATION OF BIM IN PUBLIC PROCUREMENT

The Ministry of Public Works adopted the initiative es.BIM and assumed the five-year role of promoting this new work method in the public and private sectors of engineering and architecture in Spain, for which it has had the technical support of Ineco since 2015. BIM Observatory data reveals that in 2018 the use of BIM in administration has begun to be consolidated, with practically twice the number of bids than the previous year.

The Ministry of Public Works created the es.BIM initiative in 2015 in order to promote the collaboration of public and private sectors to implement the use of BIM (Building Information Modelling) in architecture and engineering projects in Spain. To this end, it received technical support from Ineco, which has since been responsible for the coordination and secretarial work of the initiative, which is divided into three elements: the BIM Committee, the Technical Committee and five working groups. The company is also responsible for the development and maintenance of the es.BIM web page and communication plan.

The es.BIM initiative coordinates days, conferences, meetings and different activities to promote the use of BIM and develops manuals, standards and user guides to encourage the application of this work methodology among professionals.

In 2017, the es.BIM Observatory was also created to monitor the evolution of BIM in Spain, through

the analysis of public tenders, and to determine how many of them include BIM requirements in the bidding documents, what volume of investment they represent and what level of demand they request. Data indicates that in 2018 the use of BIM in administration has begun to be consolidated, with practically twice as many bids as in the previous year. The volume of investment of each sector was maintained in construction, although the number of tenders increased considerably, especially in health and educational buildings. The greatest advances, however, have occurred in the infrastructure sector, with an increase in investment of 223% and four times more BIM bids than in 2017.

Regarding international activity, the objectives of the Commission include monitoring and participation in those initiatives abroad in order to align the work of the Commission with other transnational approaches. In this sense, Ineco continued to actively collaborate throughout 2018 with both the EU BIM Task Group and the European Committee for Standardization CEN TC-442.

**In 2018, the number of public BIM tenders almost doubled**

**The health and educational buildings, in head in use of BIM**



AVIATION

## NEW TERMINAL AT SCHIPHOL AIRPORT

The Spanish-Dutch consortium KL AIR, formed by the architects Kaan and Lamela and the engineering companies ABT and Ineco, won the international tender in 2017 to design the new terminal at the Amsterdam-Schiphol airport, beating other firms of outstanding prestige in the final phase. In 2018, the Master Plan design phase was concluded and progress was made in the preliminary design.

The future Dutch Schiphol airport terminal will have a built-up area of around 100,500 m<sup>2</sup> and capacity for 14 million passengers. The Spanish-Dutch consortium KL AIR, formed by the architects Kaan and Lamela and the engineering companies ABT and Ineco, won the international tender in 2017 to design the new terminal as an extension of terminals 1, 2 and 3, to the south of "Schiphol Plaza".

Ineco, as airport engineering, provides the consortium its specific knowledge in this field: airport planning, security, baggage process, commercial, airport systems, signage and information, compliance with EASA regulations, maintenance, accesses and platform.

In 2018, the Master Plan design phase was concluded and progress was made in the preliminary design,

whose final delivery is scheduled for 2019. Likewise, the collaboration of KL AIR with Capital Programme has been extended in a new work area to prepare the space in which the new terminal will be located.

The spatial distribution of the new terminal and its design seek integration with the existing airport, the railway station and other future expansions. This will be possible thanks to the architectural proposal presented that gives the terminal a great spatial amplitude and different scenarios in an environment full of natural light. Inside the building, the overlapping of passenger flows at different levels will make it possible to distinguish perfectly the departure hall and the luggage collection area. On the other hand, the access roads to the terminal will be integrated urban elements that will contribute to keeping Amsterdam a "compact city". This project is also developed using BIM technology.

**New terminal of around 100,500 m<sup>2</sup>**

**Capacity for 14 million passengers**



RAILWAYS

## ERTMS IMPLEMENTATION

In 2018, Ineco continued working on the development and implementation of the common European railway traffic management system, the ERTMS. On the one hand, it has continued to collaborate with Banedanmark, Denmark's railway infrastructure manager which, in 2023, expects to become the first European country to its whole railway signalling network completely renewed. At the same time, services have continued to be provided to the European Railway Agency (ERA) and the European Commission in supervising the development and implementation of the system in the main European railway corridors.

**Denmark.** For the second year in a row, Ineco has continued with projects to introduce the ERTMS level 2, version 3.4.0 of Baseline 3 in Denmark. With this project, called F-Bane, the country plans to become the first in Europe in 2023 to have a completely renewed railway network equipped with a system that is the safest and cheapest to maintain. For travellers –about 70 million in 2030 according to the Danish government– the main advantages will be the increase in punctuality and capacity and the shortening of travel times on some lines.

The main tasks carried out in 2018, based on the operational requirements of Banedanmark, include the elaboration of the test specification to verify ERTMS operation in the Danish network, and the design of operational scenarios for the first two pilot lines (EDL EAST and EDL WEST), as well as for the new line between Copenhagen and Ringsted, and for the Thisted-Humlum line.

Ineco has also participated in test campaigns carried out on all these lines, in the JTL laboratory in

Copenhagen, as well as in the analysis and drafting of the test results reports.

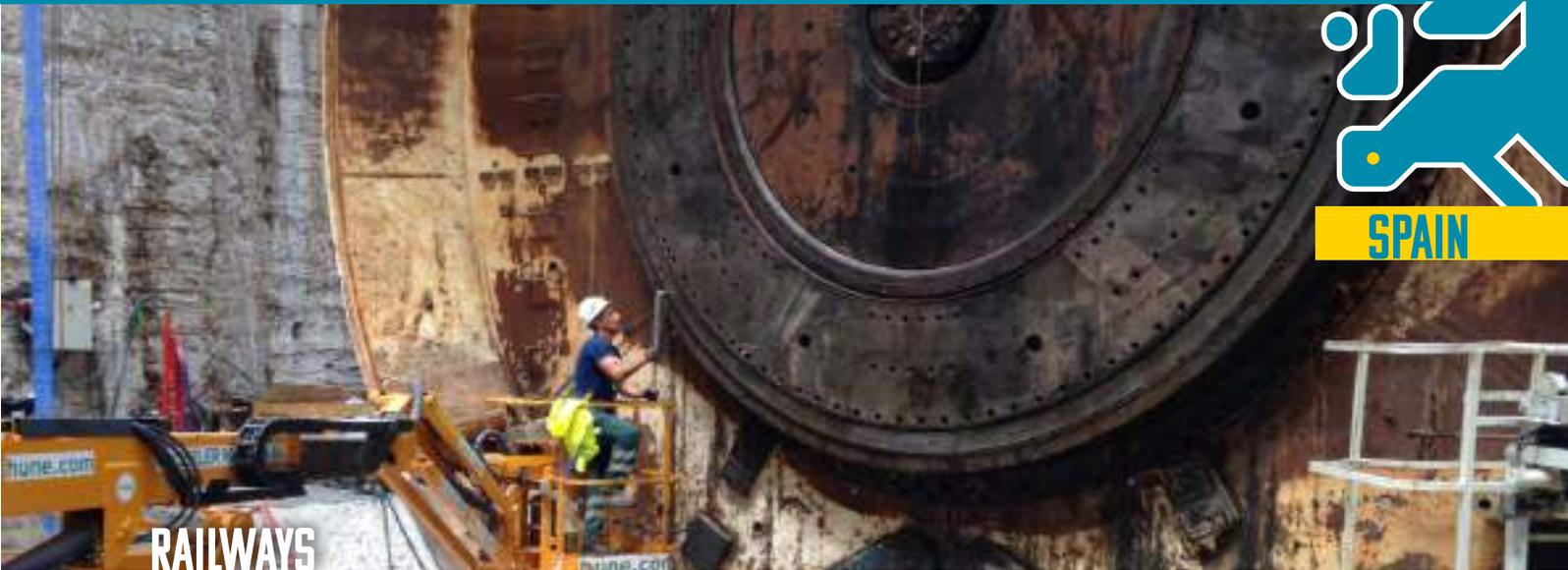
**European Commission.** Since 2015, the company has been in charge of the supervision and monitoring of the ERTMS deployment plan in the nine main European corridors until 2020, with a total of 65,000 km. The European Commission hired a consortium led by Ineco to monitor and supervise more than 100 railway projects to deploy the system, both infrastructure and rolling stock.

The work also includes the technical supervision of the projects, monitoring of the deployment and implementation of the ERTMS Action Plan set by the European Commission; the provision of economic-financial support and several outreach activities directed towards all railway entities involved.

During the last year it is worth noting the support for the new European Coordinator of ERTMS (Matthias Ruete), participation in the ERTMS Stakeholders Platform (the main body responsible for the definition of the ERTMS strategy at a European level), the drafting of the migration strategy of the system in Europe and the technical monitoring of almost 70 deployment projects.

**First ERTMS tests on 4 Danish railway lines**

**Monitoring of 70 projects for deployment of ERTMS in 2018**



RAILWAYS

## NEW COMMUTER RAIL ACCESS TO EL PRAT AIRPORT

In December 2018, the drilling of the three-kilometre-long tunnel under the flight field was completed, which will house the extension of the Barcelona commuter line 2 to T1 of the El Prat airport. Having drafted the project in 2009, Ineco is now managing the works, which include a new intermodal station in terminal T2, currently under construction. The company is also drafting the project for the second phase. It is, according to Adif, the largest project of its kind in terms of scope and budget currently being carried out on Spain's conventional and commuter network.

With the excavation of the last metres of the 3,400-metre tunnel – 3,048 metres of which were bored using a tunnel boring machine – in December 2018, one of the major milestones of the works, which began in 2015, was achieved. When the new commuter access is completed and operational, it is estimated that between 8 and 9 million passengers will be able to use it to travel from Sants station to terminal T1 at Barcelona-El Prat airport in just 19 minutes. Until now, the commuter train (known locally as Rodalies) only reached the old terminal, T2, where a new underground intermodal station is currently being built.

The new double-track stretch starts on the Barcelona-Tarragona conventional line, and runs to terminal T1, with an intermediate stop at terminal T2, where it will connect to Metro Line 9. Access also includes a new station at terminal T1, not included in this project (the civil works were executed during the construction of the terminal itself).

For the excavation, an earth pressure balance tunnel boring machine (EPBTBM), with earth pressure balance shield and 10.60-metre excavation diameter and 9.60-metre internal diameter, was chosen. The

tunnel, which is lined with 32-cm thick concrete voussoirs, has a maximum depth of approximately 28 metres and was executed between 56,700 m<sup>2</sup> of screens.

Ineco was also in charge of environmental works management to ensure compliance with the project's environmental impact study (EIS) during the different phases of the work and after reception. From the environmental point of view, the most notable aspects were monitoring impact on the hydrogeological system of the area, consisting of two aquifers, one deep and the other superficial, management of anthropic landfills (soil containing waste) found in some areas and corrective measures to avoid noise nuisance.

This first phase, for which Ineco was commissioned by Adif to carry out site and environmental management, will conclude when the works on the new intermodal station and shafts are completed. The next step will be to install and equip the tracks, power supply and railway facilities and bring into service the two new stations, projects on which Ineco is also working.

**New commuter railway tunnel,  
3.4 km-long**

**Maximum depth: 28 metres**

**Access to T1 in 19 minutes**

**Between 8 and 9 million passengers**



## AVIATION

### GALILEO PROGRAMME

In 2018, Ineco continued to lead the activities of the European Centre of Services to users of the Galileo programme (European GNSS Service Centre, GSC), located in Madrid. A nerve centre that serves users of Satellite Navigation Systems (GNSS) from all over the world. The 18 satellites initially deployed by the Galileo have been operational since December 2016 and will increase to form a constellation of 30 satellites in 2021.

In 2018, Ineco continued to provide highly qualified engineering services for the development and operational validation of the GNSS User Services Centre, for which it designed the procedures and processes for the operation, maintenance and definition of products and services, leading a consortium formed by Isdefe, ESSP and INTA. Once the preparation work is completed in 2017, Ineco becomes responsible for operation and maintenance.

The GNSS User Services Centre, located in Torrejón de Ardoz (Madrid), is integrated and coordinated with the two Galileo control centres, located in Germany and Italy. All of them within a global framework contract, awarded in 2016 to Spaceopal (formed by the Italian Telespazio and the German DLR GfR) for over 1,000 million euros for a period of 10 years.

Ineco's participation in the Galileo project began in 2010 when it carried out a study to define the scope of the GSC Centre for the European Commission,

funded by Aena under the supervision of the Ministry of Public Works. In addition, key Spanish space engineering companies participated: Indra, GMV, Deimos, Hispasat, INSA and INTA. However, since 1998, the company has been providing engineering services in the field of satellite navigation under various contracts signed with the European Commission, the European Space Agency (ESA) and the European Global Navigation Satellite Systems Agency (GSA).

**4 countries in Europe with GNSS tolls and over 6 countries interested in its implementation**

**Over 604 procedures based on EGNOS at 320 airports and heliports in Europe**

**As from April 2018, all new models of vehicles sold in Europe will be equipped with Galileo**



## PROJECTS FOR THE MEXICO CITY, QUITO, MEDELLÍN AND SANTIAGO DE CHILE METROS

In 2018, Ineco continued its work for the metro authorities of different Latin American cities. For Medellín, Santiago de Chile and Quito it supervises the modernisation or acquisition of rolling stock, while in Mexico City it is responsible for the project management of the extension of line 12.

**Mexico City.** Through its subsidiary Inecomex, Ineco and its partner in the country are responsible for the integral management of the project (project management) for the extension of line 12 or the Dorada line, the most recent of the extensive metro network of the Mexican capital, which totals 200 km. The new section will have three new stations (Valentín Campa, Álvaro Obregón and Observatorio) and will have a 4.6 kilometre-long tunnel. During 2018, the execution of the working shafts and advance of excavation and tunnel structuring continued, as well as progress in conducting notarial surveys of buildings in the area of influence of the works and in the follow-up to the Urban Impact Study Report.

**Quito.** The capital of Ecuador is equipping its first metro line –22 kilometres long with 15 underground stations– with trains manufactured by the Spanish company, CAF. Since the beginning of 2017, Ineco has been supervising the entire process of acquiring rolling stock (18 trains with six carriages each), auxiliary vehicles, workshop equipment and tools and spare parts for the Quito Metro Metropolitan Public Company. Ineco's work consists of monitoring the meeting of manufacturing deadlines, deliveries, fulfilment of design specifications, manufacture, testing and operational readiness. The project will continue until mid-2019.

**Medellín.** Metro de Medellín chose to modernise its fleet of 42 first generation trains, manufactured by MAN and Siemens AG, which are nearing completion

of their 30-year lifespan. Ineco, which already carried out a study on the feasibility of the project in 2016, is in charge of supervising the work. On the other hand, the Spanish company, CAF, delivered the 38 new trains to Metro de Medellín in mid-2018, all supervised by Ineco.

**Santiago de Chile.** Metro de Santiago awarded the company the detailed engineering of the remodelling of NS74 trains manufactured by Alstom, the first ones to circulate in the city's suburbs. There is a total of 35 pneumatic rolling trains manufactured between 1974 and 1981, which have been subject to modernisation since 2011 to give them another 20 years of operation. Since then, Ineco has been providing services to Metro de Santiago to supervise the entire process. The first of the remodelled trains, renamed NS16, began to circulate again in September 2018 on line 2.

**Mexico City: New section of 4.6 km and 3 new stations**

**Quito: Supervision of 18 new trains manufactured by CAF**

**Medellín: Modernisation of 42 trains, MAN and Siemens**

**Santiago de Chile: Remodelling of 35 pneumatic NS74 trains manufactured by Alstom**



**UNITED KINGDOM**



**RAILWAYS**

## HS2 PHASE 2B: HIGH SPEED BETWEEN BIRMINGHAM AND SHEFFIELD

During 2018, Ineco continued working on the preliminary design of civil works and environmental impact studies for lot 2, phase 2B of the HS2 high-speed line in the United Kingdom. More than one million people will be connected to the capital city of London in just one hour.

During the last year, work continued for the second contract awarded to Ineco in 2017 for the high-speed line (HS2) that will link London with Manchester and Leeds. The company, together with US-based Aecom and the British company Capita, will be responsible for the preliminary design of civil works and environmental impact studies for lot 2, a section of Phase 2B of the project (Crewe-Manchester and Birmingham-Leeds).

This work will be carried out in the southern section, around 90 kilometres long, and extend from the phase-1 connection, which ends in Birmingham, all the way to the south of Sheffield. The aim of the contract is to submit the project to Parliament for consideration through the so-called Hybrid Bill, which is subject to the scrutiny of a Select Committee, that also manages public consultations and requests for change. A study will also be carried out on the origin of the project from the point of view of public interest and the adequacy of its effect on properties, due to which the environmental design and evaluation process is highly detailed and documented.

Given that the expected total cost of the work continues to be the main challenge facing the developer, the first part of 2018 focused on implementing a first battery of design optimizations in time for the second design control point (CP2),

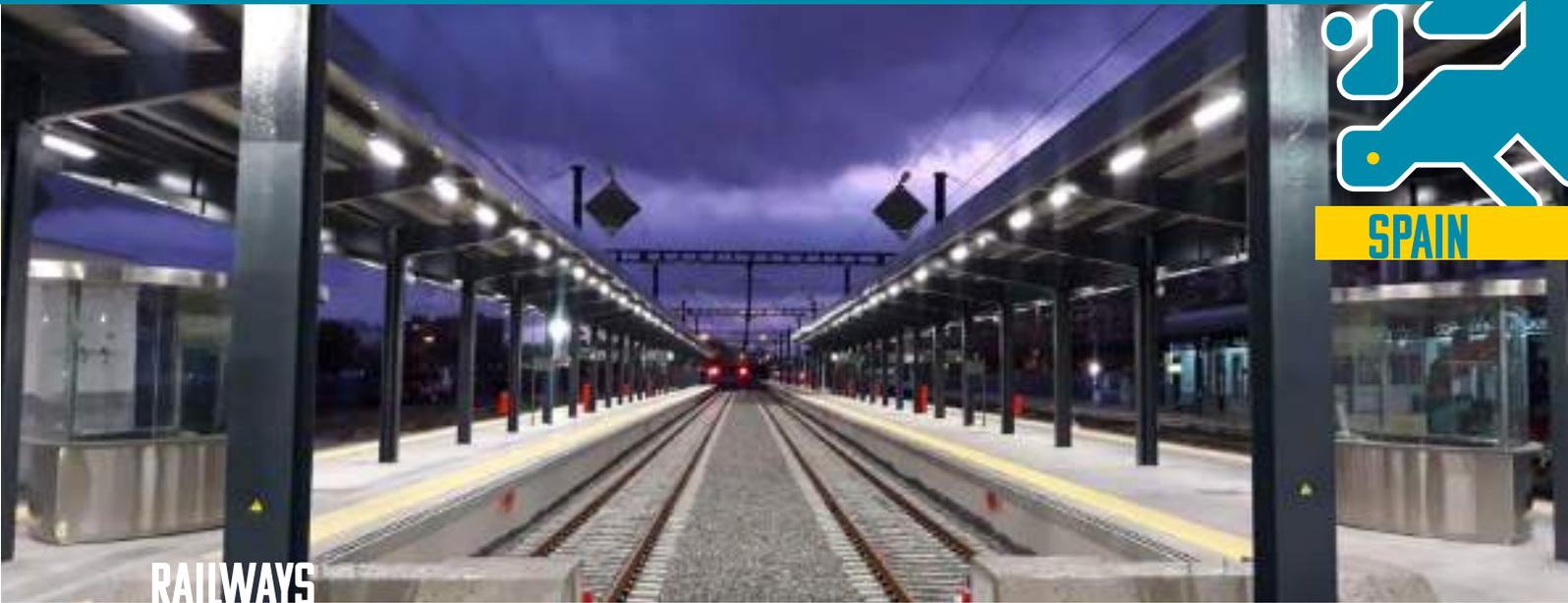
which in turn supported the WDES (Working Draft Environmental Statement, first draft of the Environmental Impact Statement). This also constitutes another of the main milestones of the year, based on which public consultation events taking place during the autumn were held.

The need to continue progressing in the economic optimization of the design, and to incorporate new connections with the existing network requested by DfT (Department of Transport), have led HS2 to extend the programme to Hybrid Bill, introducing in the last third of 2018 a focus activity in value engineering that was used to obtain additional savings that will be implemented during 2019. Parallel to these main activities, an ambitious multidisciplinary environmental research programme on the ground, which will document the final version of the Environmental Impact Statement, has progressed throughout 2018 and is expected to be completed during 2019.

Ineco started working on the HS2 line in 2012, in the first phase between London and Birmingham (225 kilometres), which is expected to start operating in 2026.

**Second Ineco contract in British high speed**

**Lot 2 phase 2b: 90 km section, 2 branches: Crewe-Manchester and Birmingham-Leeds**



## WORKS FOR SPANISH HIGH SPEED

Ineco has been collaborating since it was founded more than 25 years ago in the development of all phases of the Spanish high-speed railway network: design, construction of infrastructure and superstructure, electrification and signalling maintenance and commissioning and operation. In 2018, the work of the company's 49 project managers distributed throughout Spain, as well as the numerous actions of supervision and surveillance of power installations, signalling, ERTMS, RCC, telecommunications and detection systems in high-speed sections all over Spain.

From the drafting for Renfe of the first high-speed project in Spain in the mid-70s (Madrid-Barcelona-Zaragoza-Port Bou) and years later, with the entry into service of the Madrid-Seville line, in 1992, the company's trajectory has been linked since it was founded, and fundamentally during the last 25 years, to the planning, construction and maintenance of Spain's high-speed network.

In 2018, different sections continued to be laid in 12 autonomous communities, involving 49 Ineco construction managers: Madrid-Galicia, Madrid-Extremadura-Portuguese border, Madrid-Barcelona-French border, León-Asturias, Madrid-Castilla La Mancha-Valencian Community-Region of Murcia, Vitoria-Bilbao-San Sebastián, Antequera-Granada and Almería-Murcia. These services of optional management of works are part of the contract signed in 2016 between Ineco and Adif Alta Velocidad for the period 2016-2018. In total, Ineco manages more than 100 works underway.

In parallel, and also for Adif High Speed, in 2018 it is worth noting the supervision and surveillance

of the installation, testing and commissioning of power systems, signalling, ERTMS, detectors, RCC, fixed telecommunications and GSMR mobile telecommunications in the following sections: Vandellós-Tarragona, Olmedo-Zamora-Pedralba, Plasencia-Cáceres-Badajoz, Barcelona-Figueres, Chamartín-Torrejón de Velasco, Valladolid-León and Venta de Baños-Burgos, Antequera-Granada, La Robla-Pola, Monforte del Cid-Murcia, Atlantic Axis Vigo-Santiago-La Coruña. In addition, similar actions have been developed in conventional mixed gauge network sections, such as: Mediterranean Corridor and in the "Y Vasca", stretch Astigarraga-Irún.

Ineco is responsible for supervision and surveillance throughout the entire design and construction process of the facilities and collaborates in the review of construction projects, redefinitions, quality control of equipment, installation, system integration and testing and commissioning.

**49 site managers from Ineco all high-speed lines under construction in Spain**

**Project management of over 100 works**

**Supervision and surveillance of electrification and signalling on 10 high-speed lines**



AVIATION

## EXPANSION OF ABU DHABI AIRPORT

Ineco continued to work throughout 2018 on the expansion of Abu Dhabi International Airport, which will allow airport traffic to grow from 24 to 70 million passengers. The company has been providing operational readiness and transfer services (ORAT) since 2014.

The airport management company, Abu Dhabi Airports (ADAC), has been promoting the construction of a new terminal, MTB (Mildfield Terminal Building) since 2012. When completed, the new terminal will have the capacity for over 40 million passengers. It will occupy 742,000 m<sup>2</sup>, will have 65 parking spaces for aircraft in contact plus 14 remote positions, a baggage handling system capable of processing more than 19,000 bags per hour and two parking lots (short and long stay) with capacity for almost 5,000 vehicles.

In 2014 Ineco, together with Aena, won the international tender to take charge of the Operational Readiness and Airport Transfer (ORAT) services of this enormous infrastructure, thanks to the experience of over a decade in another 20 Spanish airports. The ORAT services comprise the elaboration of the schedule and the Concept of Operations at the new airport terminal, as well as the coordination of the training, familiarisation, tests and transfer of personnel and equipment from the current to the future Terminal area.

The most important milestone of the year 2018 is the start of the basic operating tests on 1 November. These tests were prepared, coordinated and performed by the Ineco team deployed in Abu Dhabi in collaboration with ADAC and Etihad, the national airline of the United Arab Emirates. During the last two months of last year, five check-in, boarding and baggage handling tests were successfully carried out.

It is also worth mentioning the start of specific training in the new systems for the different groups

that will take part in the daily operation of this new terminal. Ineco is responsible for coordinating the training.

In 2017, 24 million passengers passed through Abu Dhabi airport, a figure that is expected to increase in the medium term with the opening of the new terminal building and the improvement of the region's economy.

**Terminal area: 740,000 m<sup>2</sup>**

**Capacity for over 40 million passengers**

**65 contact aircraft stands**

**14 non-contact aircraft stands**

**Automatic system for baggage handling with capacity for over 19,000 cases/hour**

**Two new car parks (short and long stay) for 5,000 vehicles**

## INTERMODAL AND ROADS

### TRANSPORT INFRASTRUCTURE PROGRAMME (PIT)

In 2018, Ineco continued to support the Ministry of Public Works and Transport of Costa Rica in the management of the PIT, the Transportation Infrastructure Programme, which includes seven improvement measures on roads and three in ports.

In 2016, the Ministry of Public Works and Transport (MOPT) of Costa Rica contracted a consortium led by Ineco along with another Spanish firm to manage its Transport Infrastructure Programme (PIT). The consortium works as a 'programme execution unit' and is responsible for the planning and monitoring of all technical and administrative work in close collaboration with MOPT.

It is a national plan, financed by the Inter-American Development Bank (IDB). This PIT, which is in line with the National Transport Plan 2011-2035 (PNT) –and also developed by Ineco– includes actions in seven road projects and three port projects, with remodelling, reconstruction, paving, road expansion, improvements in road safety, bridge expansion or the construction and improvement of ports.

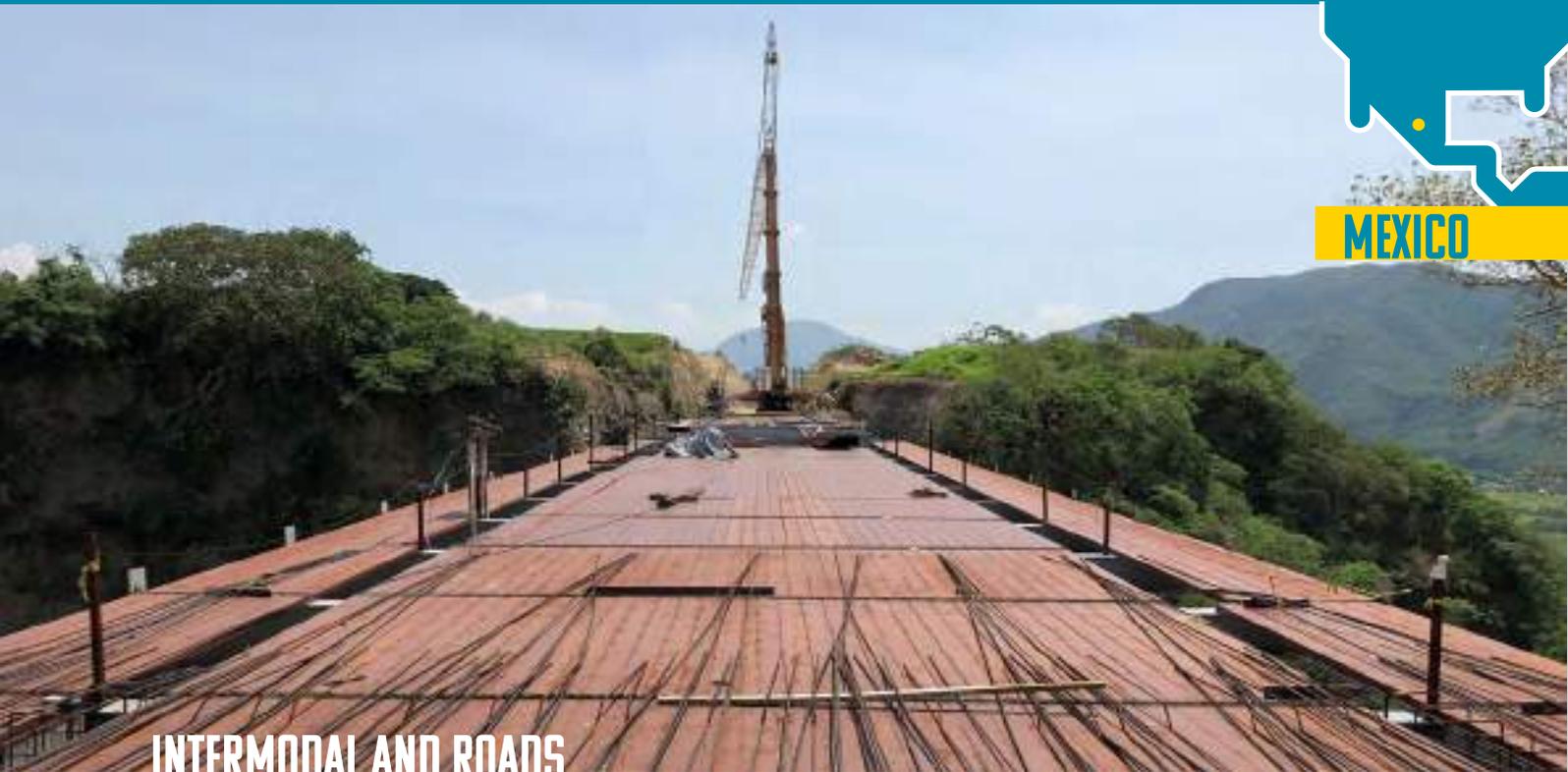
The company will provide consultancy services for the administrative, technical, legal and environmental

management of the Programme, ending in 2020. Ineco has been present in Costa Rica since 2004, where it has developed works such as the National Transport Plan, the Integral Plan for the Modernisation of the Airport Network or the study for the implementation of a rail transport system in the metropolitan area of the capital, San José.

7 road projects

3 port projects

PIT horizon: 2020



## INTERMODAL AND ROADS

### ADMINISTRATION AND SUPERVISION OF THE GUADALAJARA-COLIMA HIGHWAY

Since 2011, Ineco has been supervising and managing this 148 km section of road for Banobras, Mexico's National Works and Services Bank. In 2018, the expansion of the mountain section of just over 18 km near the volcano of Colima and major reconstruction work on section 2 of the highway and the San Marcos toll continued.

In 2018, Ineco continued its supervision, planning and advising of the 148-km Guadalajara-Colima toll road, which runs through the Mexican states of Jalisco and Colima, and forms part of the important Manzanillo-Tampico road axis. The toll road, which came into operation in 1989, has three toll collection posts which have recently been modernised and expanded: Acatlán II, Sayula and San Marcos II; and a remote one, Sayula Remote.

For the eighth consecutive year, Ineco has continued to carry out its supervisory work, in addition to being responsible for the construction of a new part of the highway in the section between km 103.5 and 120. Due to the fact that it is a mountainous area near the Colima volcano, Ineco decided to maintain the existing layout for one direction and build a new separate part in the other, so that each one has two lanes.

The works are extremely complex and require the construction of 22 bridges and viaducts –some more than one hundred metres high– which are close to

completion. Once these works are completed, the increase in traffic and revenues will be even greater than those obtained since the implementation of the model, well above the country's average.

The new management model, for which the Mexican government applied for the first time in this toll road in 2011, is structured around three figures, assigned to different companies: an advisor and supervisor (Administrator-Supervisor Agent or AAS) that administers the contracts and acts as representative before Banobras; an operator that manages the collection of tolls, user assistance and emergencies; and a maintainer-rehab technician, who is responsible for the routine and general maintenance of the road. The management model is based on the application of a system of performance indicators. In 2011, Ineco was awarded the contract as AAS with a duration of 14 years.

**14 year contract**

**148 km long**

**3 traditional tolls and 1 remote**



## INTERMODAL AND ROADS

# TECHNOLOGICAL MODERNISATION OF THE JUSTICE SYSTEM AND PROVISION OF SHARED SERVICES TO THE PUBLIC ADMINISTRATION

Since 2016, Ineco has been collaborating with the General Secretariat for Spanish Justice Administration in its modernisation process, which involves the implementation of new information technologies. Also since 2016, the company provides support to the General Secretariat for Digital Administration in the provision of shared services in the field of communications.

**Modernisation of the Administration of Justice.** The Subdirector General of New Technologies for Justice (SGNTJ) is in charge of the work, which is divided into three large sections: support for electronic judicial administration, management of a development centre and digital transformation of judicial seats and other actions.

During 2018, it is important to mention maintenance of new corporate platforms, as well as the development of new systems and business applications designed through the Ineco on-site Development Centre. In turn, other more technological lines have been promoted in the field of software architecture, source code security and Big Data, and a technological observatory has been implemented.

The main achievements this year are the implementation of the Digital Prosecutor's Office, the creation of a specific computer application for the effective processing of the legal proceedings of the iDental macro-cause and a new application for the management of Legal Medicine Institutes. In addition, Ineco has contributed to making Spain the first EU country to achieve 100% connectivity in the judicial field with the remaining 27 member states.

**Support for the provision of shared services to different Public Administration entities.** Also since 2016, Ineco has supported the General Secretariat

for Digital Administration, under the Ministry of Territorial Policy and Public Administration, mainly in the provision of shared services in the field of communications, within the framework of the Commission for the Reform of Public Administrations (CORA).

In order to respond to the calendar of shared services, the main activity is focused on supporting the management of the Public Administration's unified telecommunications service, on participation of the drafting of the tender in its second phase, support of level 2, operation of CPD and management of procurement requirements and orientation towards shared services.

During 2018, work carried out in 2017 and started in 2016 continued, among which is the drafting of phase II of the Centralized Telecommunications Contract, as well as the start-up of data processing centres between different physical locations through a technical office to start production, coordination with the rest of the ICT units of the Ministry of Territorial Policy and Public Administration and monitoring of their consolidation at the ministerial level.

**Spain, leader in connectivity within the judicial framework with other EU member states**

**Drafting of phase II of the specifications of the Centralised Telecommunications Contract and support for service management**



AVIATION

## STUDIES FOR THE MODERNISATION OF CHICLAYO AIRPORT

Throughout 2018, the Peruvian Ministry of Transport processed the approval of the second phase of preliminary studies carried out by Ineco with its partner CESEL, for the modernisation of the airport of Chiclayo, the fourth city in Peru. The analyses that started in 2015 to define and plan improvement and expansion initiatives are concluded. These are aimed at converting Chiclayo into the air hub of northern Peru and boosting commerce and tourism, linked to the enormous archaeological wealth of the area.

The CESEL-Ineco consortium concluded the second phase of studies at the end of 2017 for the modernisation project of the Chiclayo airport, managed by the concessionaire Aeropuertos del Perú (AdP). The next step was the processing and approval of the studies by the Peruvian Ministry of Transport and Communications, which processed throughout 2018. This second phase of work involved an important technical development of all infrastructures necessary for the expansion of the airport.

The definition of these infrastructures was carried out during the first phase of the project, also developed by Ineco and CESEL since the beginning of 2015, and approved by the Peruvian government in 2017. During this stage, both the overall conceptual design of the project and the specific conceptual design of the terminal building and other buildings were developed.

In the second phase, the temporary and economic conditions for the commissioning of the planned infrastructures have been established, giving way to

the tender by AdP of the technical file (equivalent to the drafting of a construction project). The engineering on the land side focuses on the design of the new terminal building of almost 44,000 m<sup>2</sup>.

In addition, all airport buildings have been designed, such as the control tower, cargo terminal, fire station (SEI), aviary control, aeroclub, hangars for aircraft maintenance, electrical substations, service block, police station, maintenance workshops, sanitary block, fuel plant, administrative building and access controls, which together add an additional 44,000 m<sup>2</sup> of built-up area to the terminal building.

Meanwhile, the runway in the flight field of flight was extended by almost 500 metres and a new commercial platform (29,000 m<sup>2</sup>), a general aviation platform (39,000 m<sup>2</sup>) and a loading platform of (51,000 m<sup>2</sup>) were built.

**2 study phases between 2015 and 2017**

**Design of a new 44,000 m<sup>2</sup> terminal building**

**Extension of the runway by 500 m**

**3 new parking platforms**



AUSTRALIA

## RAILWAYS

## UPDATE OF THE SYDNEY COMMUTER RAILWAY NETWORK

**In 2018, Ineco signed its first contract in Australia, specifically for the Sydney commuter network. The company will provide support in the improvement and modernisation of 815 km of network, where new digital signalling and rail traffic management systems will be installed.**

As systems integrator, Ineco will be in charge of supporting the transport authority for New South Wales (TfNSW) in the definition, integration and implementation of the new railway systems for the Sydney commuter network operated by Sydney Trains, together with Network Rail Consulting, Acmena and The Go-Ahead Group. This is a critical role for the 815 km network to significantly increase its capacity and absorb future demand. The digital systems will be delivered in successive stages, and will start operating progressively from 2020.

The ultimate goal is to increase by more than 60 percent the number of trains that can access the central district of Sydney and increase the capacity of areas such as Western Sydney and South West Sydney by up to 100,000 people per hour.

The programme is structured into three lines of action: the updating of its entire signalling network to ETCS level 2; implementation of the ATO system (Automatic Train Operation) to help the driver

and installation of a railway traffic management system to improve the efficiency of incidents; and the service of the entire network. Ineco signed the participation in the first phase, corresponding to the identification of the costs, benefits and risks of the implementation of the ATC system, which is developed throughout 2019, but it is expected to collaborate in the following phases of the project.

This programme is part of the plan "More trains, more services", launched by TfNSW in June 2018 and which seeks to modernise the Sydney railway network to improve user experience. The project is the first Ineco contract in Australia, a country in which major investments are being made in infrastructures.

**815 km of network**

**Increase in capacity of over 60%**

**2020: start-up of the new digital systems**



AVIATION

## DIGITALISATION OF EN-ROUTE VOICE COMMUNICATIONS AND TMA

Ineco is providing technical assistance services to ENAIRE in the process of gradually migrating voice services supported by analogue systems to VoIP-based digital systems, in order to integrate them into the air navigation data network (REDAN). To this end, equipment that converts the analogue signal into VoIP data (gateways) is being installed temporarily in the Land-Air control and communications centres. In 2018, it worked in about twenty centres of the ENAIRE network throughout Spain.

Oral communication systems (Voice Communications Systems and Land-Air Communications Systems) for air traffic control provide the voice link with pilots and between controllers. These systems are located in air traffic control centres and Land-Air communications centres to provide the route control and terminal area voice service (TMA). The strategy set by the SESAR programme and by certain international organizations, such as ICAO, is to use the VoIP protocol for ATS to provide voice services, improving system integration and interoperability. For this reason, the ATS service provider, ENAIRE, is gradually migrating to the new VoIP technology systems, and transporting voice services through IP networks, already supplied to ENAIRE: wide area (WAN) air navigation (REDAN) data network.

However, and given the extent and scope of the systems to be migrated, this must be done gradually, so ENAIRE has chosen to adapt, in a transitory phase, most of the dependencies and systems involved using VoIP gateways, that is, new generation equipment that converts the signal of the current analogue oral communication equipment, and integrate them into the new digital data network.

Ineco, as technical advisor of ENAIRE, is actively participating in all the works and projects associated with this task: it has collaborated in the definition of VoIP gateway specifications, in accordance with the European EUROCAE standard, so that they adapt to operation in the Spanish Aeronautical communications environment, and subsequently it has elaborated and performed validation tests. The company has also carried out the installation and transition plans for the gateways so that they have the least operational impact on the systems in operation. In addition, once the migration is complete, it also participates in the monitoring and resolution of incidents that arise during its operation.

The main projects undertaken during 2018 included the renewal of the Earth-Air to VoIP communication system in the communication centres of: Linares, Paracuellos, Zaragoza and Almería, the integration in REDAN of the communications centres of the Central region: Alcolea, Zamora, Calamocha, Cáceres, Valladolid, Valdespina, Solórzano and Cancho Blanco, and South: Vejer, Turrillas, Málaga and Cuesta de la Reina. Integration in REDAN of the control centres of: ACC Madrid, ACC Seville and CATS Seville.

**Renovation of the Land-Air communications system to VoIP at 4 communications centres**

**Integration into the network of air navigation data from 3 control centres and 12 communications centres**



RAILWAYS

## ORAT FOR NEW YORK'S NEW MOYNIHAN STATION

The historic Farley Building, in the heart of Manhattan, is being transformed into a new railway transfer station called Moynihan Train Hall, which will relieve the congested Penn Station, the busiest for passenger traffic in all of the US. Since October 2018, Ineco has been providing ORAT services to the engineering firm WSP USA, which is responsible for overall project management for the end client Empire State Development Corporation (ESD).

More than 650,000 users a day pass through Pennsylvania's Penn Station in New York: it is the busiest railway station in the United States. The railway complex, owned by the national railway operator Amtrak, is completed by the Farley Building, located opposite Penn Station, a spectacular construction that occupies two blocks -32,000 m<sup>2</sup>- completed in 1913, which until now housed New York's main post office.

After years of projects and negotiations, the State of New York, through the public entity Empire State Development Corporation (ESD) finally reached an agreement with a private investment trust and concessionaire (Related-Vornado) to convert the Farley Post Office into a modern underground railway station in the centre of Manhattan. The project, called 'Moynihan Train Hall,' in honour of the senator who promoted it three decades ago, will serve two operators: Amtrak, with 16 medium and long-distance lines, and LIRR, with 10 commuter lines.

The project includes the underground construction of nine platforms and 17 tracks, which will be

served by 11 escalators and seven elevators. On the upper levels, the large central space, the former mail sorting room, will be covered by a new 23,690 square metre steel and glass skylight, reaching a height of 28 metres. In this naturally lit space, ticket offices, waiting rooms, luggage handling areas and commercial and catering outlets will be installed. The new station will be equipped with state-of-the-art signage and passenger information systems. The reform will respect the building's historic elements.

It is expected that Moynihan will be operational at the beginning of 2021, making it a highly complex challenge. Therefore, WSP USA, acting as programme manager (overall project supervisor) for the public corporation Empire State Development (ESD), selected Ineco's proposal to provide operational readiness and transfer (ORAT) services to the new facilities in September 2018. Ineco's work started in October 2018; it includes planning the entire process of putting Moynihan Train Hall into operation and opening it to the public, and it will have a duration of 30 months.

**New interchanger with 9 platforms and 17 tracks**

**Early 2021: expected commissioning date**

**ORAT: 30 months of work**



## INTERMODAL AND ROADS

# MASTER PLAN FOR LIMA AND CALLAO METROS

The Peruvian capital will have a Master Plan to organise and improve its mass transportation system until 2050, which Ineco will develop together with another Spanish engineering company. The Plan will be developed during 21 months and will cover the expansion of the network, interconnection with other modes of transport and the location of the interchanges between the metro and the future suburban train, among others; improvement of costs and revenues, elaboration of a new demand model and transfer of knowledge to local staff.

In December 2018, Ineco, in a consortium with another Spanish engineering company, won the international tender called by the Autonomous Authority of the Electric Transportation System (AATE), attached to the Peruvian Ministry of Transport and Communications, with the cooperation of the IDB (Inter-American Development Bank), for the development and implementation of the Master Plan of the Mass Transit System of Lima and Callao.

The general objective of the Plan, expected to be completed in 2050, is to update and optimize the approved basic network of the Lima and Callao Metro, which has a total of six lines. In 2012 and 2014 the two stretches of the L1 were put into service, with a total of 33.1 km, and 26 stations. The L2, which will be 35 km long, is currently under construction, and the rest are planned.

The Master Plan will be elaborated during 21 months, and will analyse the proposals for extending the existing lines as well as the new ones, reconciling this growth with different urban planning instruments. In addition, restructuring of the transport network based on a bus system or other complementary modes will be proposed, in a comprehensive overall picture of the network.

At the same time, a demand model will be designed and measures will be proposed to improve efficiency, reducing construction, operation and maintenance costs. In addition, the tariff policy will be defined and strategies will be implemented to generate non-tariff revenue.

Other aspects of the Master Plan will include proposals for interconnection of the metro with future commuter lines and location of interchangers, as well as the transfer of knowledge and experiences to staff of AATE's Management Development Unit.

**21 months of work**

**Master Plan Horizon: 2050**

**Basic 6-line network**



## SUPPORT FOR AENA IN THE DEVELOPMENT OF ITS CLIMATE CHANGE STRATEGY

Ineco has been working closely with Aena's Environmental Management Department for over 15 years providing environmental technical assistance. During 2018, the most important projects in this assistance provided to Aena is the development of the latter's Environmental Sustainability Strategy.

Aena plays an active role in the fight against climate change, developing numerous initiatives. As a sign of the commitment acquired before this worrying problem, in 2018 it began to elaborate its Environmental Sustainability Strategy. To this end, Ineco has collaborated with Aena's Environmental Management Department, providing environmental technical assistance on the assessment and management of air and noise pollution in the airport environment for more than 15 years.

Therefore, this Strategy reflects the strategic initiatives and objectives that the Spanish airport manager has incorporated in its airports to minimize climate change and integrate adaptation to this planetary phenomenon in its airport management.

The objectives are developed through concrete action measures for the airports in its network, which allow it to achieve its goal. These measures fall into seven categories of action: electricity, fuels, refrigerant gases, sensitization, neutralization and adaptation and third-party emissions.

Ineco concluded the studies of the first phase at the end of June 2018, globally defining the objectives for the Aena network and analysing and proposing actions for the two main airports: Adolfo Suárez Madrid-Barajas and Josep Tarradellas Barcelona-El Prat.

The second study phase, in which work continued throughout 2018, increased the progress in defining concrete measures for ten other airports, which together contribute to 87% of the total greenhouse gas emissions in the Aena network. These airports were: Málaga-Costa del Sol, Gran Canaria, Alicante-Elche, Palma de Majorca, Tenerife South, Ibiza, Valencia, Fuerteventura, Seville and Santiago.

By developing this Strategy, Ineco has maintained its active contribution in the design of sustainable transport infrastructures and in the definition of proposals for the operation of infrastructures that minimize the environmental impact and climate change.

### 7 categories of action

### Study of actions taken at 12 airports in 2018



## INTERMODAL AND ROADS

### NATIONAL TRANSPORT AND LOGISTICS OBSERVATORY

In October 2017, Ineco began to develop the “Observatório Nacional de Transporte e Logística” (ONTL) in Brazil, which the “Empresa de Planejamento e Logística” (EPL) of the Federal Government of Brazil started with the objective of obtaining rigorous, up-to-date and complete information to facilitate analysis and decision-making in matters of transport and logistics.

Brazil, the ninth largest economy in the world, has a network of 1.5 million kilometres of roads, 29,000 kilometres of railways, 32 public ports and 128 private ports, more than 4,000 airports and aerodromes and a network of 28,400 kilometres of waterways, including coastal routes.

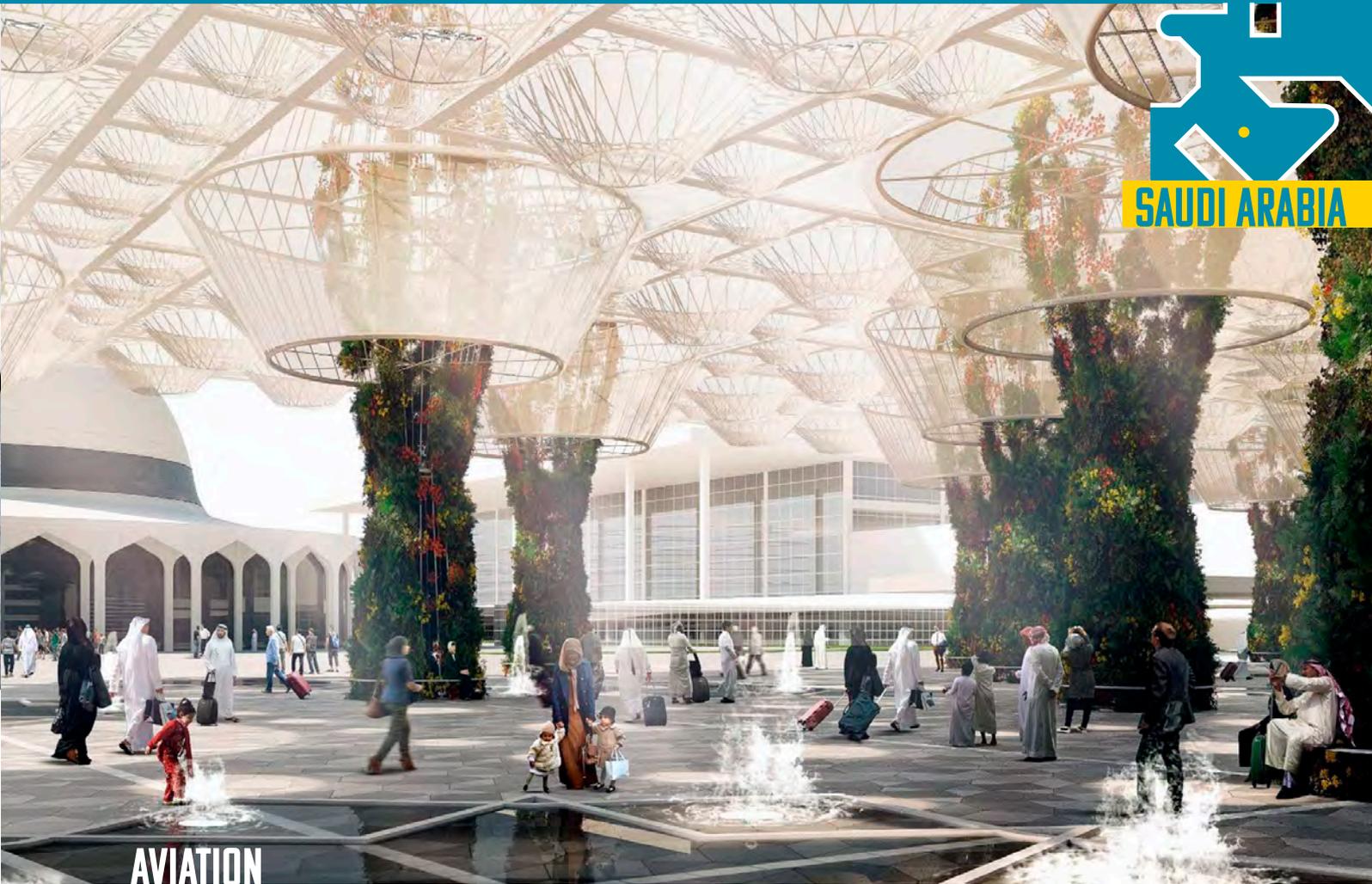
To efficiently plan the high investments required by this immense transport network to reduce logistics costs and thus increase the country's competitiveness, the Federal Government launched the National Observatory of Transport and Logistics (ONTL) in 2017, through the public company EPL (Planning and Logistics Company), under the Ministry of Infrastructure of Brazil, with which Ineco has collaborated. Thanks to the ONTL, planners -and the general public- can consult the website ([www.ontl.epl.gov.br/index.php](http://www.ontl.epl.gov.br/index.php)) at any time for invaluable information to facilitate the decision-making process when it comes to optimising investment on infrastructure.

The Brazilian Observatory collects data from more than 50 sources of information, supplied by numerous agents related to infrastructures, operations, security, financing and other key aspects of the Brazilian transport and logistics system. All of them generate valuable knowledge that is disseminated in work sessions, workshops and specialized seminars, such as the one held in June 2018, inaugurated by the Spanish ambassador in Brazil, Fernando Villalonga; data panels, logistics bulletins -since 2015 nine have been published in total, two in 2018-, statistical yearbooks, etc., all available on the internet for consultation.

Based on the experience accumulated since 2013 in the Observatory of the Spanish Ministry of Public Works, Ineco has designed and developed the database, a set of indicators and the data collection system, of which EPL has been informed.

**9 logistics bulletins published since 2015**

**Over 50 sources of information revised and analysed**



## MASTER PLAN FOR DAMMAM AIRPORT

In 2018, Ineco produced the Master Plan for the Rey Fahd international airport in Dammam, the third most important city in Saudi Arabia. The document plans the growth of the airport until 2046, up to a maximum capacity of 48.4 million passengers per year, compared to 10.4 in 2018. It includes a new cargo area and the connection with the country's rail freight network.

According to the General Authority of Civil Aviation (GACA) of Saudi Arabia, the King Fahd airport in Dammam received 10.4 million passengers in 2018, compared to 9.8 in 2017. To meet growing demand, the airport manager DACO (Dammam Airports Company) awarded Ineco the contract for the preparation of the Master Plan in 2017, in an international tender.

Planned to be completed in 2046, this project aims to turn the airport into a regional hub and an important intermodal node for the movement of passengers and freight in the region.

This plan includes the study of the expansion of all airport facilities, both airside and landside, to adapt them to growing demand, as well as the study of the connection between the cargo area and the main freight railway line in the country. A new Airport City is also being developed in which the airport is considered an important node of activity in the economic development of the region.

**10.4 Mpx in 2018**

**Maximum capacity 2047: 48.4 Mpx**

**Cargo: 1,183 Kton**



## INTERMODAL AND ROADS

# PLAN FOR THE ADAPTATION OF ROAD TUNNELS TO CURRENT SAFETY REGULATIONS

Road tunnels must verify compliance with European safety regulations already transposed into Spanish law since 2006 through a Royal Decree. In the State Roads Network (RCE) there are currently 348 tunnels, of which 278 are to be adapted to new demands. In 2016, Ineco began to collaborate with the General Directorate of Roads (DGC) of the Ministry of Public Works to define and implement the Adjustment Plan that involves the drafting of 43 large projects, of which 29 are the company's responsibility.

In 2016, Spanish legislation transposed European Directive 2004/54/EC on minimum safety requirements for tunnels of the Trans-European Road Network by Royal Decree 635/2006. The European requirement limited the scope of application of these measures to the tunnels of this network that were over 500 metres long.

To this end, an Adjustment Plan was defined that initially affects 278 of the 298 road tunnels managed directly by the General Directorate of Roads. The

State Roads Network consists of 348 tunnels, 50 of which are integrated into the Highway Toll Network that must have its own form of adaptation to current regulations. Ineco began to support the planning and programming of the actions in 2016.

In 2018, work continued on the drafting of 29 adaptation projects, involving intervention in almost 100 tunnels, which is equivalent to about 109 km or approximately half of the tunnel length managed by the DGC.

Ineco is also responsible for monitoring the objectives of the Plan, both temporary and economic. The work has a duration of 42 months and will continue until 2020.

**Drafting of 29 projects in almost 100 tunnels in 2018**

**42 months of work**



AVIATION

## AIRPORT PLANNING FOR AEROCIVIL

Civil Aeronautics of Colombia commissioned Ineco and its local partner to prepare the Master Plans of the Germán Olano airports of Puerto Carreño, San Bernardo de Mompox and Contador de Pitalito. Although small in size, the three are of great importance for the connectivity and economic development of their respective regions.

Secondary airports are essential for connectivity in a country with such rugged landscape as Colombia, crossed by the Andes mountain range and by large rivers such as Magdalena, Orinoco and the Amazon. More than a dozen populations throughout the country depend on air or river transport, including Puerto Carreño (Vichada), in the east of the country and bordering Venezuela. During 2018, Ineco and the Colombian consultancy firm Concol (now WSP), prepared the master plans for the German Olano airport in Puerto Carreño, the San Bernardo de Mompox airport, in the north, in the department of Bolívar, and Contador de Pitalito, Huila, in the centre-west of the country. All three are administered directly by Civil Aeronautics, the Civil Aviation Authority of Colombia.

Proper planning of different scenarios is fundamental to organize future growth and meet the expected demand with all the guarantees of safety and quality of service. Ineco has extensive experience in this field accumulated in airports in Spain and other countries.

In the cases of these three Colombian airports, the current situation of each one has been studied first, characterizing the infrastructures of each airport to date. At the same time, a socioeconomic study of their area of influence has been carried out to serve as the basis for calculating traffic projection for the next

30 years. Traffic projection has enabled future needs to be established in the short, medium and long term as well as some design alternatives to the current situation. Afterwards, an environmental and urban and social impact analysis was carried out, which, together with the rest of the factors studied, made it possible to determine the chosen alternative for the development of the airport. Finally, the selected alternative has been developed in detail, establishing the economic investment of the different actions required in the short, medium and long term at each airport.

All three airports contemplate long-term development integrating improvements to airport infrastructures on both the air and land sides to meet the demand according to national and international quality standards and in compliance with the regulations in force in the country. They have good growth prospects –at an annual average of 4%– in the next 30 years (with 2028, 2038 and 2048 horizons), which is mainly related to the development of tourism, fostered by the Colombian peace process among other factors.

**3 airports**

**Planning in three scenarios for 30 years: 2028, 2038 and 2048**

**Average traffic growth approximately 4% a year**



## RAILWAYS

# MONITORING OF PROJECTS FOR THE RENFE GROUP ROLLING STOCK PLAN

**Ineco will provide technical support for monitoring and controlling projects for the Renfe Group Rolling Stock Plan. The operator will renew its fleet until 2028, transforming or acquiring new rolling stock of different types: commuter, medium distance, high speed, metric width, etc.**

The scope of the work is part of the Renfe Group Rolling Stock Plan 2017-2028, which encompasses several types of rolling stock: high speed –we must highlight the recent acquisition of 30 new Talgo trains– commuter, medium distance, metric width , locomotives, vehicle transformation projects. These will include train-hotel cars that will be transformed into self-propelled compositions to form, together with newly acquired driveheads, new high-speed trains- signalling (ERTMS installation in Commuter trains), as well as research prototypes or other projects required by the Plan.

Ineco's experience in the supervision of manufacturing, inspection and remodelling of all types of rolling stock in Spain dates back more than 20 years, and covers both high speed, conventional (suburban and medium distance), locomotives, metros and trams and freight wagons, in addition to auxiliary material such as draisines, special vehicles for the maintenance of infrastructures and on-board equipment. At the international level, the acquisition and commissioning of new rolling stock for the Quito

Metro (Ecuador) and the modernisation of suburban trains in Medellín, Colombia and Santiago de Chile are being monitored.

Action taken in these areas has shaped and refined a knowledge and methodology in the company for training and specialising a qualified human team in the specific fields involved in this type of projects.

Ineco has been accredited by ENAC (National Accreditation Entity) of Spain for the Inspection of Railway Rolling Stock with accreditation number 76/ EI058, since February 2003, according to the criteria included in the UNE EN ISO/IEC 17020 standard, both for the Inspection of Rolling Stock according to Specifications of the Client and/or Manufacturer as an independent evaluator of railway applications.

**Renovation plan for the Renfe fleet 2017-2028**

**High-speed, commuter, medium distance, locomotives and metric width**

**Over 20 years' experience**



**RAILWAYS**

**FEASIBILITY STUDY OF THE HIGH-SPEED CORRIDOR BETWEEN MUMBAI AND NAGPUR**

The feasibility study for a 772-kilometre high-speed line between Mumbai and Nagpur, the first phase of the Mumbai-Kolkata corridor, is the most recent project being carried out by Ineco and Adif for the Indian Government. The study was officially submitted in October 2018 and is part of Spain's advisory services for the plan to develop an ambitious high-speed rail network in India (The Diamond Quadrilateral Project).

Its extensive experience in the planning of high-speed lines, accumulated over many years of constructing the Spanish network, led Adif, an Ineco shareholder, and the Indian state-owned enterprise HSRC (High Speed Railway Corporation) to sign a collaboration agreement in 2016. In October 2018, Ineco and Adif officially submitted to the Indian Government the feasibility study of the first phase of the Mumbai-Kolkata high-speed line between Mumbai and Nagpur.

The aim of the study, in which up to 80 people were involved over a period of 24 months, was to provide HSRC with sufficiently detailed technical, economic and environmental data and criteria to enable it to make decisions with respect to the development of high speed in the country.

The section between Mumbai and Nagpur, running through the state of Maharashtra (India's second most populated with more than 100 million inhabitants), will complete another of the routes of the so-called Diamond Quadrilateral, a project that seeks to connect the four great metropolises of India - Mumbai, Kolkata, Chennai and Delhi- through a network of 11,000 kilometres of high-speed railway lines.

The study includes demand studies; prior analysis of the different routing alternatives; an operational plan; a rolling stock proposal; analysis and selection of railway technology to be implemented; necessary special works; rehabilitation and relocation of the population from affected areas; environmental analysis; rail operation and maintenance; cost estimate; and an economic/financial analysis, as well as a financing proposal for the project.

This is the second high-speed study in India in which Ineco is involved: in 2017, the Delhi-Kolkata corridor was presented, this time as a result of the award of an international contract to the Joint Venture Ineco/Tyrsa/ICT.

**772.3 km of double track for passengers**

**Maximum speed: 350 km/h**

**Demand and prognosis studies to be concluded in 2050**

**Pre-design of 5 stations, 2 workshops and 6 maintenance workbases**

**Pre-design of 8 tunnels and 526 structures**

ineco

**INTEGRITY**

**AND TRANSPARENCY**

Universario  
necc50



Ineco's values are based on two key axes: transparency with all its customers and integrity as an essential principle of action and professional ethics.

Firmly committed to its environment, the company has maintained its adherence to the ten principles of the United Nations Global Compact since 2008, based on respect for and promotion of human, labour, environmental and anti-corruption rights. This decalogue has the corporate culture of Ineco

as a basis, and applies it in its daily activity and integrates it in the services it provides.

In 2019, Ineco also has the strong desire to incorporate as its own the Sustainable Development Objectives and 2030 Agenda, aligning and committing itself to them. Ineco will integrate into its activity a strategy, policies, procedures and social activities as the best way to achieve Sustainable Development Goals, incorporating this perspective as the backbone of the company.

# SUSTAINABLE DEVELOPMENT GOALS



# 1. REGULATORY FRAMEWORK. INTEGRITY STANDARDS

In terms of sustainability, Ineco is firmly committed to social trends and the environment in which it operates, leading the company to closely monitor its management model. It is not only a matter of complying with the current laws of each country in which it operates, but also of preventing, promoting, facilitating, correcting and ensuring that Ineco, and all its professionals, act in accordance with the main international standards, corporate values and social demands in force at any given time.

For this, Ineco has Integrity, Transparency and Commitment Standards, which contain all the policies and standards that govern the ethical behaviour of the company with its stakeholders:

- **Corporate Responsibility Policy**
- **Code of Conduct**
- **Zero Tolerance Policy on Corruption**
- **Information transparency and veracity policy**
- **Gift Policy**

These Standards also include applicable procedures and operating methods to ensure the consistency of Ineco in all its activities and are managed by the Ethics Committee to ensure their fulfilment. Meanwhile, the organization is responsible for publicizing the Rules through its corporate intranet.

These Policies, Norms and procedures, of obligatory fulfilment by directors and employees, are available on the intranet and are open documents subject to update to adapt them to the new trends and increasing legal requirements.

Furthermore, these Standards of Integrity, Transparency and Commitment are a differential element that directly affects SDG 16 "Peace, Justice and Solid Institutions", which promotes universal access to justice and the construction of responsible and effective institutions at all levels.

In 2018, it has made an effort to update the Integrity, Transparency and Commitment Rules that will culminate in 2019 with the approval thereof and their dissemination to all employees.

Furthermore, unlike the Standards of Integrity that govern ethical conduct and are managed by the Ethics Committee, the **Organization and Management Model for Crime Prevention** that includes all Ineco's procedures, helps to prevent crimes from occurring and is managed by the **Compliance Committee**. However, there is a set of texts that are included in both documents due to their nature.

## MAIN DIFFERENCES BETWEEN BOTH DOCUMENTS

Document	Defaults	Management Body
Organization and Management Model for Crime prevention	Criminal offences	Standard Compliance Committee
Standards of Integrity, Transparency and Commitment	Unethical behaviour	Ethics Committee

## 1.1. CORPORATE RESPONSIBILITY POLICY

Ineco contributes to the development and improvement of the society in which it operated incorporating social, labour and environmental aspects in its strategy and management to help develop and improve the society in which it operates. Integrity, transparency and commitment are the principles that govern the activity of the company and the pillars on which Ineco's relationship with all its stakeholders are based.



# COMMITMENTS

## Clients: outstanding service

- Quality and service excellence
- Committed to long term success
- Ongoing dialogue and trust relationship
- Confidentiality and objectivity

## Suppliers: trust and transparency

- Advertising, concurrence, non-discrimination
- Confidentiality
- Mutual benefits and trust
- Objectivity
- Promotion of Corporate Responsibility principles

## Employees: attractive corporate project

- Increase in welfare and progress
- Clear bet on innovation research and dissemination of knowledge
- Quality employment:
  - » Merit and skill
  - » Professional development and training
  - » Equal opportunities, reconciliation
  - » Safety and health in all workstations
  - » Teamwork, communication and participation

## Society: cultural, social and economic development

- Inclusion of people with disabilities or handicaps
- Increase in welfare and progress
- Cultural, social and economic development
- Innovation, research and dissemination of knowledge
- Cooperation with other companies from the sector
- Relations with the third sector (non-profit organisations)

## Shareholders: sustainable results

- Creation of sustained and sustainable value
- Efficient management
- Profitability and transparency

## Environment: Preventive approach

- Priority given to environmental aspects upon drafting projects and rendering services
- Responsible use of resources
- Adequate management of our waste
- Demanding practices for our employees and suppliers

## 1.2. CODE OF CONDUCT

Ineco has a set of rules of conduct that define corporate culture that are assumed and implemented to achieve ethical and responsible management in the development of the services and products it offers, and in the relationships it establishes with different interest groups.

## PRINCIPLES

### Loyalty to the organisation

- Reputation and loyalty to the company
- Respect for confidentiality
- Efficient and responsible involvement
- Non-concurrence with other companies
- Appropriate use of the company's resources
- Compliance with environmental, health and safety measures

### Relationship between professionals

- Respect for people
- Non-discrimination
- Cooperation and collaboration

### Relationship of professionals with the stakeholders

- Relationship with clients: excellence, confidentiality, objectivity and trust
- Relationship with suppliers and partner companies: trust and mutual benefit, transparency and impartiality
- Relationship with the international environment: respect for legislation, culture and customs
- Strict compliance with legality
- Transparency and truthfulness of information
- Rejection of gifts, compensation and bribes
- Compliance with environmental, health and safety measures

### Administrators and structure staff

- Knowledge and communication: ethical and responsible professional practice
- Respect and promote the fundamental rights of workers
- Professionalism and subordination of own interests to those of the company
- Veracity, accuracy and honesty in economic/financial management
- Apply principles of merit and ability when contracting
- Encourage professional training and promotion of staff in an objective manner
- Facilitate and promote labour integration and reconciliation
- Compliance with environmental, health and safety measures



### 1.3. TRANSPARENCY AND TRUTHFULNESS OF INFORMATION

Ineco maintains a commitment to transparent management with its stakeholders, striving to always provide them with accurate and transparent information.

### 1.4. ETHICS COMMITTEE

The Ethics Committee is responsible for supervising compliance with corporate integrity standards, proposing preventive or corrective actions in relation to their possible non-fulfilment, evidence, where appropriate, and updating and internal dissemination of the code of conduct, as well as its interpretation in case of doubt.

## 1.5. TRANSPARENCY PORTAL

In compliance with Law 19/2013, of 9 December, on Transparency, Access to Information and Good Governance, Ineco has enabled a Transparency Portal on its corporate website, whose objectives are:

- Host the contents required by the Transparency Law.
- Open a specific communication channel for inquiries related to information transparency issues.

An internal procedure has also been established to comply with said transparency objectives and with the provisions of the law, differentiating between:

- **Active publicity:** Information that must be published ex officio, whose knowledge is relevant to ensure the transparency of the company's activity, related to the operation and control of public performance.
- **Passive advertising or right of access to public information:** Information that must be provided at the request of a third party.

In accordance with the above, Ineco publishes in this portal periodic, updated and relevant information for the transparency of its activities, in order to increase and reinforce transparency in public information, and to recognise and guarantee all citizens access to information.

In relation to the inquiries that Ineco receives through the Transparency Portal, and to guarantee the right of citizens to receive a response to their requests for information, in a timely manner, Ineco has developed a procedure that culminates with a reasoned resolution, which is sent to the requesting citizen.

## 1.6. COMPLIANCE PROGRAMME

Ineco adopts corporate compliance as an essential part of its corporate culture. The company has a Compliance Programme that integrates processes and policies aimed at preventing and avoiding actions that are contrary to the law, and which enables the detection and management of risks of non-compliance with internal and external regulatory obligations in its business area.

This entails implementing the appropriate management and control measures to prevent crimes from being committed.

The company created a compliance body consisting of executives with sufficient authority and independence who represent all its sectors. It

is in charge of analysing with rigour, objectivity, independence and confidentiality the facts or behaviour allegedly occurring outside the ethical standards of society and that could generate a risk of criminal charges. It is also responsible for maintaining a proactive prevention and training policy on compliance at all levels of the company.

This programme is channelled through three instruments to ensure that the company acts in accordance with current laws and regulations, as well as internal principles and standards:

- **Prevention instruments:** for identification of risk situations within Ineco's activity; an organization and management model has therefore been approved, as well as a for the prevention of criminal charges; approval of a Code of Prohibited applicable to all Ineco's staff and suppliers.
- **Control instruments:** to verify the existence of adequate internal and/or external control instruments, which continuously monitor compliance with the internal regulations established to prevent irregular crimes or conduct from occurring and ensure their protection. These instruments are the Compliance Committee and the channel of complaints and queries addressed to the Compliance Committee, available to all Ineco staff.
- **Disciplinary instruments:** in order to ensure proper control of compliance with the rules of conduct established by the company, the catalogue of internal sanctions affecting all employees and managers of Ineco is revised to suit the monitoring and control programme.

A channel of complaints and queries that is easy to access and available to all employees has been incorporated in the company's intranet.

Relations with suppliers and business partners have also been strengthened to demand a standard similar to Ineco's in terms of compliance and to ensure that its practices, even in countries outside the EU, are sufficient to ensure ethical behaviour.

Finally, a training plan on compliance was established on a permanent basis, aimed reinforcing the knowledge and ethical commitments of all employees with Ineco and with third parties and the consequences of violating such commitments, both for Ineco's workers and for the company itself.



## 2. GOVERNANCE MODEL

Ineco has the necessary governing bodies to ensure that its values and management model reach all areas and disciplines of the company. The governance model is determined by the strategy and current organisation, depending on company needs.

The president of Ineco is the head of the Board of Directors, Management Committee and Ethics Committee.

### BOARD OF DIRECTORS

The Board of Directors of Ineco is responsible for making decisions and agreements on strategic issues, formulating accounts, approving budgets and other proposals raised.

### COMPOSITION OF THE BOARD AS OF 31 DECEMBER 2018

#### CHAIRWOMAN (DIRECTOR)

**Ms. Carmen Librero Pintado** Chairwoman of Ineco

#### DIRECTORS

**Ms. Belén Bada de Cominges** Deputy Director for Legislation of the General Technical Secretariat of the Ministry of Public Works

**Mr. Manuel Martínez Cepeda** Treasury and Accounts Manager of Adif

**Mr. Francisco Gijón Romero** Deputy Director of Information Technologies and Electronic Administration, Inspectorate General for Public Works

**Mr. Jesús Antonio Pérez Blanco** Deputy Director of Airports and Air Navigation, General Directorate of Civil Aviation. Ministry of Public Works

**Mr. José Luis Rodríguez Castro** CIO of Enaire

**Mr. Miguel Ángel Carrillo Suárez** Deputy Director of Services and Works Inspection Inspectorate General for Public Works

**Mr. Antonio Sánchez Bustamante** Deputy Director of Commercial Policy with Ibero-America and North America. Ministry of Economy and Competitiveness

**Mr. José Salvador Trigueros Rodrigo** Chief Executive Officer of CEDEX, Ministry of Public Works

**Mr. José María Santacana Gómez** Delegate Auditor, Ministry of Public Works

**Mr. Mariano Gasparet Romero** Cabinet Advisor, Ministry of Public Works

**Mr. Miguel Ángel Marfull Robledo** Executive advisor of the Spanish Cabinet Office

**Mr. Juan Tébar Molinero** Construction Manager II of Adif-High Speed

**Ms. María Esther Mateo Rodríguez** Managing Director of Safety, Corporate Processes and Systems of Adif

**Ms. María Magdalena Bodelón Alonso** Renfe Operadora

#### NON-BOARD MEMBER SECRETARY:

**Mr. Carlos Moro Valero** Director of Legal & Compliance of Ineco



## DISMISSALS AND APPOINTMENTS DURING 2018

### BOARD OF DIRECTORS OF INECO

#### EXTRAORDINARY UNIVERSAL GENERAL MEETING (19-02-2018)

##### DISMISSAL

Mr. Ángel Luis Arias Serrano

##### APPOINTMENT

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#### EXTRAORDINARY UNIVERSAL GENERAL MEETING (23-03-2018)

##### DISMISSAL

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##### APPOINTMENT

Mr. José María Santacana Gómez

#### EXTRAORDINARY UNIVERSAL GENERAL MEETING (28-09-2018)

##### DISMISSAL

Mr. Isaac Martín Barbero

Mr. Juan Alfaro Grande

Mr Julio Manuel Poyo-Guerrero

Mr. Fernando Ignacio Ayres Janeiro

Mr. Juan Pablo Villanueva Beltramini

Ms. Concepción Crespo Asenjo

##### APPOINTMENT

Ms. Carmen Librero Pintado

Mr. Isaías Táboas Suárez

Mr. Miguel Ángel Marfull Robledo

Mr. Mariano Gasparet Romero

Mr. Juan Tébar Molinero

Ms. María Esther Mateo Rodríguez

#### EXTRAORDINARY UNIVERSAL GENERAL MEETING (13-12-2018)

##### DISMISSAL

Mr. Isaías Táboas Suárez

Ms. Almudena de la Peña Robles  
(Non-board member Secretary)

##### APPOINTMENT

Ms. María Magdalena Bodelón Alonso

Mr. Carlos Moro Valero  
(Non-board member Secretary)

## 2.2. SHAREHOLDERS' MEETING

The Company's deliberative body is the Shareholders' Meeting. Its agreements, legitimately adopted, are binding upon the Company and all of its shareholders.

## 2.3. AUDIT AND CONTROL COMMISSION

The main role of the Audit and Control Commission is to support the Board of Directors in its supervisory tasks.

## 2.4. MANAGEMENT COMMITTEE

The Management Committee is the highest internal decision body of the company. It meets weekly and it is responsible for the implementation and development of the strategic guidelines approved in the Board of Directors meeting.

### AS OF 31 DECEMBER 2018:

<b>Carmen Librero</b>	<b>Chairwoman</b>
<b>Casimiro Iglesias</b>	<b>National Business General Directorate</b>
<b>Ignacio Fernández-Cuenca</b>	<b>International Business General Directorate</b>
<b>Ana Rojo</b>	<b>Engineering and Consultancy General Directorate</b>
<b>Eva Pulido</b>	<b>Organization and Corporate Services Directorate</b>
<b>Celestino Rodríguez</b>	<b>President's Office Directorate</b>
<b>Daniel Latorre</b>	<b>Strategy and Management Control Directorate</b>
<b>Carlos Moro</b>	<b>Director of Legal &amp; Compliance</b>

## 2.5. OTHER BODIES

Ineco also has other corporate management and communication bodies such as the Trade Committee, Operations Committee, International Development Commission, Project Monitoring Committee, Innovation and Product Committee and Quality or Delegated Committee, among others. The aim of the company is to create working groups on subjects of special interest and to be able to perform comprehensive monitoring of initiatives and approved plans.

INFRAESTRUCTURA  
INFRASTRUCTURE

eco





# COMMITMENTS





# COMMITTED TO OUR CUSTOMERS

1972: Carlos Roa, founder and president of Ineco, receiving dignitaries from Zaire (now the Democratic Republic of the Congo) for the Kindu-Kisangani line feasibility study.

anniversary  
**50**

We strive to meet the needs of our customers by offering them the highest standards of excellence and quality. Strengthening and expanding our capacity for innovation is an inescapable commitment. For this, Ineco promotes a relationship of mutual trust with its customers, adapts to their requirements and designs tailored solutions with the most advanced tools.

## 1. INNOVATION, KEY DRIVER

In 2018, Ineco maintained its strong commitment to innovation, following the principles on which this decisive commitment is based:

- Promotion of knowledge in strategic lines of activity for the company, in addition to responding to needs detected in different areas.
- Development of transversal projects and creation of interdisciplinary working groups, in such a way that cooperation between different business areas of the organization is promoted, thus improving the collaborative environment.
- Promotion of shared knowledge, as well as generation of new knowledge in technologies and key sectors within Ineco.
- Creation of products and services with high added value that provide Ineco with a competitive advantage within its sector.

### INVOLVEMENT

R&D+I EFFORT **2.36 MILLION EUROS**

INNOVATION INTENSITY **0.86%\***

PERSONNEL INVOLVED IN  
INNOVATION PROJECTS

**182 PERSONS**

HOURS DEDICATED TO  
INNOVATION PROJECTS

**40,376 HOURS**

% OF ALL PERSONNEL INVOLVED  
IN INNOVATION PROJECTS

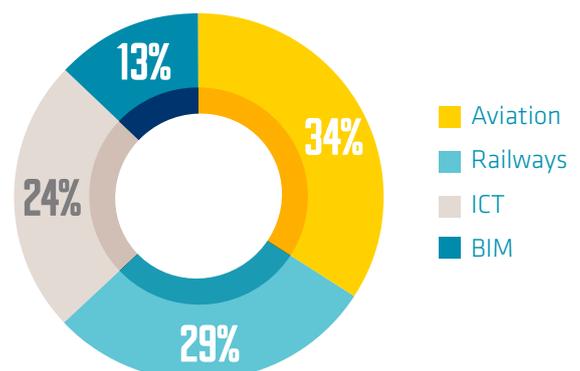
**5.9%**

\* Intensity in innovation is understood as the relationship between the effort in innovation and the annual turnover.

### PROJECTS DEVELOPED

Innovation projects during 2018	No.
Internal projects	37
Collaborative projects	18
<b>Total innovation projects during 2018</b>	<b>55</b>

### PROJECTS PER SECTOR (DEVELOPED IN 2018)



## 1.1. INNOVATION FOCUSING PROJECTS IN 2018

Ineco sees innovation as a constant change (not only technological), based on knowledge (not only scientific) that generates value (not only economic). For this purpose, in 2018 it created two new teams dedicated, on the one hand, to technological surveillance and innovation, and to knowledge management on the other. Both strive to improve the strategic positioning of the company taking advantage of the knowledge that it treasures thanks to its extensive experience and focus on its innovative capacity.

The main lines of action followed in 2018 are:

- **Focus on collaborative and open innovation**, a fundamental pillar for involving Ineco in the innovative and entrepreneurial ecosystem to improve the quality of its products and services and to create new lines of business. The objective is to promote an innovative network that integrates solutions and facilitates the creation of connections in order to grow and be more agile, efficient and sustainable.
- **Technological surveillance as one of the pillars of the innovation model**, which consists of an organized, selective and permanent process of collecting information from abroad in order to know the latest technologies and developments applicable to the company.
- **Reinforcement of external diffusion**, aimed at improving the image of Ineco as an innovative company, and internal diffusion, through the internal communication channels available to the company.
- **Promotion of the culture of innovation, based on two lines:** awareness (to print value), making teams aware of their role in the process, recognizing innovative profiles and generating awareness of the importance of time and work dedicated to innovation; and communication (to generate impact), increasing the visibility of innovation and transferring the need and importance of it at all levels.

With regard to achievements in 2018, the implementation of the Innovation Plan for Transport

and Infrastructures 2018-2021 of the Ministry of Public Works, drafted by Ineco in 2017 and integrating and coordinating the innovation carried out in the different companies and institutions of the Public Works Group. This is aimed at identifying common objectives and pooling resources to obtain agreed results, better contrasted and more useful for all and, ultimately, contributing to improving transportation and infrastructure in our country.

Following on with reinforcement of external diffusion, Ineco was present in 2018 in important national and international congresses and events such as the South Summit, the Smart City Expo World Congress and the City and Innovation Without Precedents. In addition, the organization works to promote innovation projects by submitting to invitations to prizes and contests. In this sense, the RONIN project was recognized in the 1st Call for Recognitions GoOODS Pacto Mundial España (ODS 9) and finalist in the 3rd edition of the PTC Innovation Awards. It is also important to mention participation in research centres, platforms and work groups, for which Ineco actively collaborates with a Railway Innovation Hub, Technological Railway Platform, Technological Construction Platform, Spanish Technological Automotive and Mobility Platform (Move2Future), Innovation and Knowledge Club, European Innovation Partnership-Smart Cities and Communities, CRIDA (Reference Centre for ATM Research, Development and Innovation) and CTF (High Railway Technology Test Centre).

The call for internal innovation projects is one of the important milestones framed by the reinforcement of internal dissemination. It is an open call for anyone from Ineco to present ideas that can later be developed as innovation projects. In 2018, more than 130 ideas were received that, after the evaluation phases, resulted in 8 approved projects.

Another important achievement together with promotion of the culture of innovation, is the celebration of the third edition of the Innova Awards, in annual recognition of the talent of Ineco's professionals in their search for the best innovative solutions for society. Following this philosophy, it is also important to refer to the seminars and workshops held in 2018 at the company on drone innovation, integration of Galileo in the applications of the Public Works Group or deployment of the ERTMS in the national network.





## 1.2. COLLABORATIVE PROJECTS

In its commitment to open innovation models, Ineco cooperates with other external professionals in research and development projects. Throughout 2018, Ineco consolidated its participation in the following programmes for national and international collaborative projects:

- **TERRA and IMPETUS (2017-2019)**

These two projects, resulting from the award of projects of the so-called Exploratory Research (ER) of SESAR2020 regarding UAVs (Drones) investigate the services that must be provided to drones to allow them to plan and execute their missions (IMPETUS) and the ground infrastructure necessary to control the traffic of these aircraft at very high flight levels (Very Low Level - VLL). Ineco leads the consortium that develops TERRA.

- **ERSAT GGC (2017-2020)**

ERSAT GGC is a project belonging to the Horizon 2020 programme which continues on the line of research that involves the application of satellite positioning technologies to rail transport. In this case, using the Galileo constellation, our work will focus on the characterisation of railway lines to assess their suitability for the use of ERTMS virtual beacons.

- **SESAR2020 Programme (2017-2020)**

Programme for research into the future of air traffic management (ATM) in Europe, as well as the civil aviation strategy within the framework of the Single European Sky (SES).

The aim of this programme is to demonstrate the feasibility of the technological and operational solutions already developed within the SESAR

Programme (2008-2016) in broader and more operationally integrated environments. Ineco, as affiliate of Enaire, participates in eight of the projects in this programme:

- ▶ SESAR 2020 PJ01: Enhanced arrivals and departures
- ▶ SESAR 2020 PJ02: Enhanced RWY throughput
- ▶ SESAR 2020 PJ03a: Integrated surface management
- ▶ SESAR 2020 PJ04: Total airport management
- ▶ SESAR 2020 PJ06: Trajectory and performance based free routing
- ▶ SESAR 2020 PJ10: Separation management en-route and TMA
- ▶ SESAR 2020 PJ14: CNS
- ▶ SESAR 2020 PJ24: Network collaborative management

- **VITE - Virtualisation of the Testing Environment (2016-2018)**

The VITE project belongs to the EC R&D sectoral programme focusing on rail transport: Shift2Rail. Ineco is leader of this project, which is aimed at transferring to the laboratory (virtualisation) part of the tests performed on the ERTMS system. To this end, the project has three objectives: define a testing framework, including optimization of protocols; define, develop and demonstrate the necessary laboratory architecture to achieve the main objective of reducing the costs of testing in real environments; and validate the proposed methodology and ensure that it complies with the European process for commissioning signalling components and subsystems.

- **DOMUS- Demonstration Of Multiple U-Space Suppliers**

This project enables Ineco to carry out the most advanced demonstration of U-Space services (drone traffic management system) in its first deployment capabilities. The different U-Space service providers will act in a federated manner under the coordination of a central administrator, Enaire, which enables different providers to be present in the same geographical area.

- **INFRADAPT (2017-2019)**

This project belongs to the CDTI Innterconecta tender, within the Feder Innterconecta Programme Andalusia 2016. The project investigates BIM models of existing road infrastructures to facilitate their maintenance during operation. Elements of the road that are likely to be affected by climate events were specifically chosen, so that preventive action can be taken to increase resilience to these effects. Ineco is part of a consortium with AZVI, Ferrovial, CEMOSA and Ingeniería InSitu.



### 1.3. INTERNAL PROJECTS

Ineco has continued to invest in its own projects for the development of products and services with high added value, which include the following fields:

- **Information Technologies**

Supporting and promoting the development of computer software programmes is part of Ineco's digitalisation process. In line with this strategy, it is worth mentioning the TEAcompañó innovation project, which consists of the development of an application to facilitate air travel for children suffering from ASD (Autistic Spectrum Disorder) and their companions.

With the SIMA Fleet Management innovation project, new functionalities of the tool in use have been developed for spatial management of information, for example, and generation of heat maps.

In the innovation project, Methodology App Surveys, software has been developed that allows users to complete mobility surveys so that this more digital method can be compared with traditional ones (field interviewers). This project has been developed with the collaboration of Adif and Renfe.

On the other hand, Smart Route is an innovation project that is developing possible indoor positioning methods in an industry 4.0 environment. As part of the project, a feasibility study is being carried out with Acciona.

The SAID (Documentation Assistance and Integration System) project has developed a tool that will convert paper into electronic format and incorporate it into the life cycle of the documents compiling a file. This will facilitate the incorporation and processing of paper documents into digital format and their incorporation into systems existing in the different organizations in the most automated, fast and efficient way possible.

- **Smart cities**

One of the verticals of the innovation project Cityneco 2.0, is its application to mobility: it allows information to be collected from sensors and traffic centres to compile algorithms that improve the management and use of different means of transport in the city. For example: forecasting traffic agglomerations, redirecting drivers who are looking for parking spaces, etc. In this version 2.0, the ecosystem is given a new technological architecture that improves performance. A pilot project has also been developed in Granada and Ineco is working with the Málaga City Council to implement the parking software.



In line with the concept of smart cities, a study was carried out in the Smart Station project on the available systems and technologies currently offered by the market to create smart stations. After this preliminary study, we proceeded to develop a Smart Station prototype based on a real station, establishing and detailing the systems/technologies to be implemented in it. The station chosen for the study is the commuter concourse under the tracks of Chamartín station.

- **Railways**

The highlight in the railway sector is the Asset Management project: its main aim is to manage track maintenance, stations, systems, mobile material, personal and financial resources, and that would apply throughout the useful life of an infrastructure, project phase, construction, commissioning and operation of the project.

Also related to this sector, the GIOS (Obstacles Implementation Gauge) railway project has also been carried out, consisting of the development of a web application to calculate the structure gauge and manage the issuance of reports, standardising the methodology, simplifying the steps and increasing the efficiency, effectiveness and productivity of the organization's experts.

The CALCAT project consisted of the development of a software programme capable of performing

the most common mechanical calculations for the optimisation of overhead line projects. This has led to improved efficiency with respect to the methods previously used.

The Machine Learning project involved the development of automatic learning algorithms for predictive maintenance by Ineco, in order to minimise the risk of failure for customers and avoid unnecessary preventative maintenance. This obviously implies saving considerable amounts of money and improved system efficiency. A pilot test started in collaboration with Renfe, facilitating data from the Vicálvaro maintenance workshop.

From the very beginning, Ineco has also collaborated in the implementation of the Spanish high-speed network, with constant focus on state-of-the-art technology, as demonstrated by ERTMS (European Rail Traffic Management System). The pilot project on the Parametrization of ERTMS test results was developed, which serves as a collection and repository of ERTMS validation tests in order to detect errors and generate a scorecard for the customer.

Phase 2 of a Lab project carried out during 2016 has been developed through focusing on the integration of the human factor in risk analyses. This involved a methodology used to integrate the



study of the human factor in conventional safety studies, currently implemented to analyse various systems from different industries.

Also in the field of security, two other projects are being developed. The Tunnel Blast Wave project, which aims to study the spread of the blast wave in tunnels in case of explosion (accidental or intentional) in commuter networks and its impact on adjacent stations, ventilation and emergency wells and, in general, on all infrastructures near the point of explosion. And the Methodological Guide project for generating the Cybersecurity Annex in signalling projects, describing how to systematically address the design of cybersecurity protection of a new command and control system within the railway environment.

- **Aviation**

Related to the aeronautical sector and more specifically within the project entitled In-flight verification of radio aids through RPAS, an unmanned aerial vehicle (UAV) has been equipped with an antenna capable for recording in-flight data provided by radio aids so that it can be processed and validated in a console on the ground using a computer tool developed by Ineco.

In the GAVILAN project, Ineco develops a web tool that automates and streamlines troubleshooting and engineering tasks related to Galileo users in the GSC (European Centre for GNSS Services).

As part of the Smart CNS project, a tool is being developed that consists of models that integrate predictive maintenance data to be used by BI (Business Intelligence) in order to generate control panels and reports related to cycle forecasts, system lifespan and the incidence of different conditioning factors in same.

The HEDIPRO project, currently under development (started in 2012), is intended to provide the flight procedure design service, offered by Ineco, with a tool that provides the necessary utilities to carry out the tasks and, as such, covers the need to comply with the ADQ regulation (Regulation EC-73/2010 of 26 January). All this will make it possible to obtain a tool for the design of flight procedures that, in addition to saving costs compared to the current tool, will also allow part of the flight design processes to be automated.

- **BIM**

Ineco continued in 2018 with its strategic commitment to the implementation of the BIM methodology in the drafting of projects in various areas of the company, positioning itself and anticipating the mandatory adoption of this methodology.

With the innovation projects BIM Team, The VR Lighthouse of the BIM Theatre, BIM Bridges and Tunnels, inBIMeco and Audits of BIM models, they have worked together in different areas of the company, such as engineering, technology and BIM. It has continued to develop projects in order to apply the BIM methodology in linear projects, analysing the softwares existing on the market and its suitability for infrastructure projects. The applicability of the BIM methodology to the infrastructure planning phase has also been investigated, so that information can be reused in later phases of the infrastructure's life cycle. Finally, a procedure has been developed to identify the asset life cycle phases in which BIM quality control must be carried out, those responsible for carrying it out, systems used, whether manual or automated, necessary software packages, input documents such as checklists, classifications and audit rules, as well as process output documents.

## 2. QUALITY, ROAD TO EXCELLENCE

Ineco believes that it is fundamental to offer maximum quality products and services to its customers. In order to do so, it has a management system that involves the whole organization and whose pillars are customer satisfaction, focus on processes and continuous improvement. The cohesion of the teams, best work practices, sustainability of the system and focus on processes are the keys to achieving technical excellence in our work.

### 2.1. CERTIFICATES

Ineco has a **management system certified** by TÜV Rheinland Cert GmbH, in accordance with the latest versions of the ISO 9001:2015 international quality standards, ISO 14001: 2015 environmental management standards and the OHSAS 18001: 2007 standard for safety and health at work, covering all activities carried out by the organization.

This certification has been carried out under a multi-site scheme covering various offices in Spain and other locations in 13 countries (Mexico, Saudi Arabia, United Arab Emirates, Oman, Panama, Brazil, Ecuador, Peru, Singapore, Israel, the United Kingdom, Turkey and Costa Rica).

In the **railway sector**, Ineco is accredited by ENAC (National Entity of Accreditation) as Inspection Entity (Type C) of Railway Rolling Stock and Safety of Railway Applications, in accordance with the criteria set out in UNE-EN ISO/IEC 17020:2012, which enables Ineco to carry out inspections in the industrial sector for the following subsystems: Infrastructure, Energy, Rolling Stock, Command and signalling control, operation and management of traffic and maintenance.

In 2018, Ineco obtained the Cyber Essentials-UK certification, certificate of compliance with the essential cybersecurity requirements scheme in the United Kingdom.

Ineco also has other accreditations and certifications **associated with products and services:**

- **Supplier of railway products and services.**

As supplier of railway products/services, the company is certified as a supplier in Link-Up, according to the RISQS (Railway Industry Supplier Qualification Scheme) requirements. This certificate, for the areas of systems engineering, signalling, telecommunications and civil engineering, includes the following products:

Heritage Automatic Train Protection (ATP) unit Design, Track Circuits (including Level Crossings) Design, Colour Light Signals Design, Banner Signals Design, Draw Ahead Signals Design, Ground Position Light Signals Design, Signal Lamps (including LEDs) & Lamp Holders Design, Signal Lenses Design, Points Indicators Design, Point Machines Design, SSI Design, Ansaldo Design, Signal Control Panel NX Design, VDU Based Systems Design, Train Describers (Electronic) Design, ATP Equipment Design, Telephone Exchanges (Including Switching Equipment) Design, Transmission Systems



Design, Telecomm Cabling (Multiple Pair Copper) Design, Telecomm Cabling (Fibre) Design, Battery Back-up - Rectifier Design, Modern Services Design, Radio Systems Design, Wireless Services Design, Masts (Including Earthing & Lightening Protection) Design, CCTV DOO Systems Design, Hot Axle Box Detectors Design, Plain Line Design, Plain Line (Absolute Geometry) Design, Gauge Measurement (Discreet Restrictions) Design, Gauge Measurement (Tunnels) Design, Track on Longitudinal Timbers Design, Direct Fastening Track Systems (e.g. Slab Track/Viper) Design, Switches & Crossings Conventional Design, Switches & Crossings (Absolute Geometry) Design, Switches & Crossings (Modular Systems) Design, Track Drainage Design, Tunnels Design, Tunnel Linings Design, Tunnel Drainage Design, Track Support Concrete (Slab Track) Design, Foundations (Piled) Design, Foundations (Conventional) Design, Steel Frame Design, Concrete Frame Design, Timber Frame Design, Stairs Design, Transformers & Transformer Rectifiers Design, Batteries Design, U.P.S. Design, Main Steelwork Design, Small Part Steelwork Design, Support System Design, Wiring Design, Earthing & Bonding Design, Switching Design, Substations/Switching Stations Design, HV Cabling Design, Trackside Equipment Design, Substations/Switching Stations/Track Paralleling Huts Design, DC Cabling Design, Trackside Equipment Design, Traction SCADA Design, Non-Traction SCADA Design.

and registration in the following products:

Signal Sighting Service, Development & Review of Signalling Standards Service, Civil Engineering Consultancy Service, Development & Review of Civil Engineering Standards Service, Highway Engineering Service, Absorptive Barriers Design, Reflective Barriers Design, Access Way & Steps Design, Concrete Fences Design, Timber Fences Design, Metal Fences Design, Plastic Fences Design, Boundary Gates Design, Level Crossing Stiles, Gates & Barriers Design, Safety Barriers & Restraints Design, Noise Barriers Design, Acoustic Linings Design, Track Consultancy Service, Development & Review of Track Standards Service, Level Crossing Ground Plans Service, Electrification Consultancy Service, Development & Review Electrification Standards Service, Operational Planning Service, Assessment of Infrastructure Options Service, Capacity Modelling Service, Network Optioneering Service, Peak Load Management Service, Rail Economics Service, Strategic Business Studies Service, Timetable Optioneering Service, Timetable Simulation Service, Train Performance Simulation Service, System Integration Design, General Environmental Consultancy Service, Clerk of Works Service, Programme Management Service, Project Planning Service.

- **Software development**

CMMI (Capability Maturity Model Integration)- Level 3.

In 2016, the software development methodology was accredited in level 3 of the CMMI-DEV v1.3 model for work carried out by the Sub-Directorate of Information Technologies.

Certificate granted by PROQUA (Process Quality Engineering), CMMI Institute Partner.





- **Air navigation services**

- ▶ **Air navigation service provider in accordance with the requirements of EU Implementing Regulation No. 1035/2011.**

Air Traffic Services (ATS) certification includes Air Traffic Control (ATC), Flight Information Service (FIS), Alert Service (AL) and Flight Information Service to the Aerodrome (AFIS) (Combination of FIS and AL at an aerodrome without ATC services).

Certificate granted by AESA (Spanish Aviation Safety and Security Agency - Ministry of Public Works), with number PSNA-0002 and valid until December 2021.

During 2018, all observations identified in the three inspection processes developed by AESA were resolved, in accordance with the corrective action plans approved by said supervisory and regulatory control authority.

- ▶ **Air Traffic Controller Training Provider in accordance with the requirements of EU Regulation No. 2015/340.**

The certification appoints Ineco to organise the training of air traffic controllers in the following areas: ATCO unit training and ATCO continuous training (refresher training and conversion training)

In 2018, the extension of Ineco's certification as an organization providing training of civil air traffic controllers (ATCO) was obtained on 24 April 2018, which allows for the initial and refresher training of instructors and evaluators of ATC training.

Certificate granted by AESA (Spanish Aviation Safety and Security Agency - Ministry of Public Works), with number PF-ATC-0001 and valid since December 2015, for an indefinite period of time whilst the regulatory requirements are complied with.

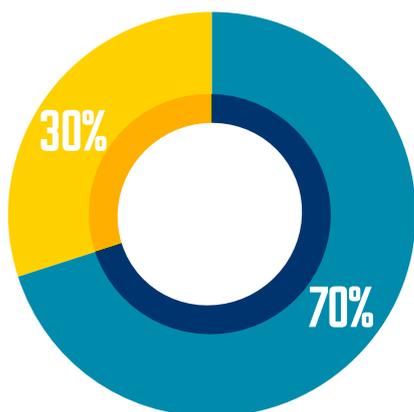
## 2.2. CLIENTS' OPINIONS

A specific survey shows that Ineco is aware of the evaluations and concerns of its clients, which is a key to achieving excellence in the provision of its services. In recent years the search for the most appropriate communication channel with each client has been strengthened, however, this year the percentage of telephone survey has been reduced, so that the response rate has decreased compared to 2017 to reach 70% in 2018.

Out of the total number of surveys received, **34% include express congratulations** in the commentary to the work teams and / or have a global rating of 10. The percentage of this type of responses is higher than in 2017, with 29% of congratulations received. The **overall evaluation** of Ineco's service in 2018 was **8.8 points out of 10**.

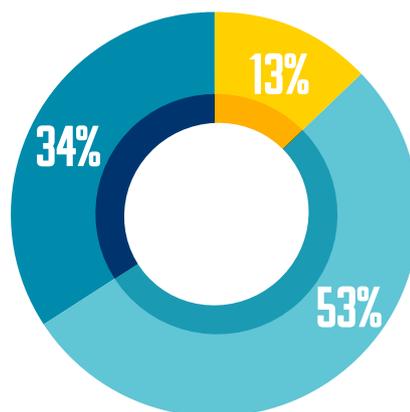
The results of the average evaluation are very positive. With respect to the previous year and other years dating back to 2015, the assessment of the qualification and professionalism, treatment received, level of communication, fulfilment of technical requirements and the ability to adapt the services have increased. The evaluation of the documentation delivered was also reduced by tenths of a percentage point and three tenths of the deadlines were met, while the rest of the values remained stable.

PARTICIPATION 2018



■ Received    ■ No response

RESPONSES 2018

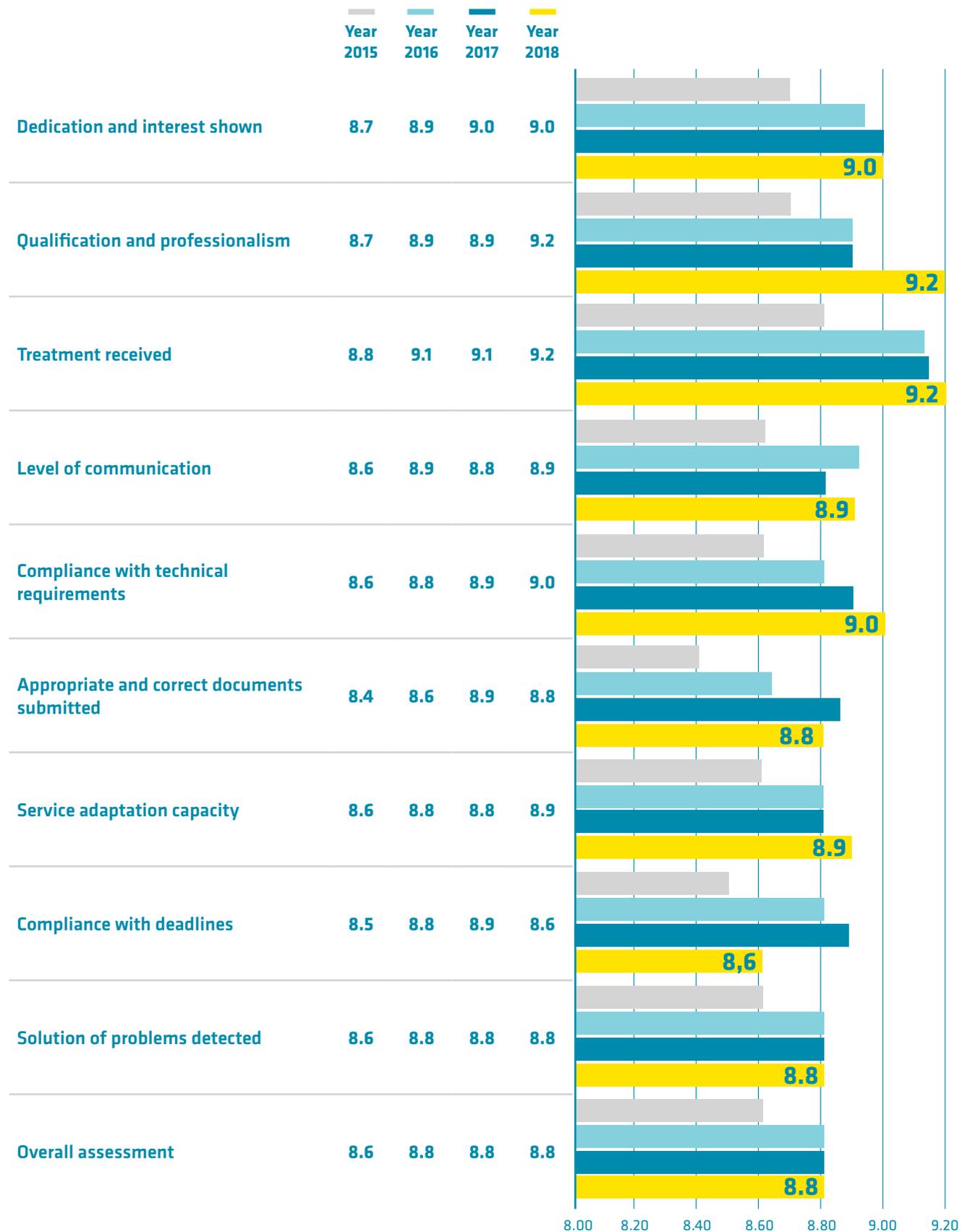


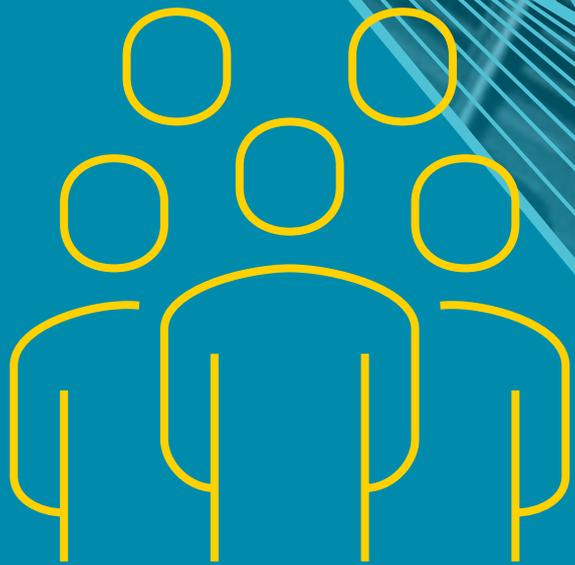
■ Analysis    ■ Satisfactory    ■ Congratulations



**1985: The company signs a contract with Ferrocarriles Nacionales de Colombia, the first financed by the World Bank led by Ineco.**

## OVERALL COMPARATIVE ASSESSMENT 2015-2018





# COMMITTED TO OUR TEAM

1989: Ineco engineer Monserrat Hernández,  
in the construction works of Pasillo Verde, Madrid.

anniversary

50

# 1. IDENTIFICATION AND DEVELOPMENT OF TALENT

## 1.1. SELECTION

People and talent are the main asset of Ineco, which positions itself as a reference employer firm. The company is committed to young talent so, in 2018, links with universities and schools were strengthened. It is worth noting the growth of the scholarship plan and the high percentage of interns who continue their professional career at Ineco as technicians, as well as the increase in the company's presence in forums and employment events, both nationally and internationally.

In 2018, powerful talent attraction programmes were launched, aimed specifically at the company's technical areas. Continuing with its commitment as a socially responsible company, in 2018, Ineco awarded five Talent Opportunity Grants of the Once Foundation to highly qualified university students with disabilities, to contribute to their training and provide them with greater job opportunities. Ineco also strengthened its relationship with the Prodis Foundation, with which it has collaborated for many years as a company committed to training young people with different abilities.

Looking ahead to 2019, the company considers challenges to advance with the digitalization of processes and selection tools. In addition, the creation of specific attraction programmes for critical specialised fields will be addressed, focusing on the identification of global talent; and the selection of profiles related to new technologies will be strengthened.

## 1.2. DEVELOPING TALENT

Ineco is committed to talent management as the main competitive advantage and differentiating factor. With our integrated programmes, the capabilities of the teams are enhanced and high performance and commitment environments are generated, developing internal talent and implementing a model showing the commitment of the employees to the Organization.

**Developmental Evaluation**, DE, and DE 360°, are integral evaluation tools used for measuring performance by the person in charge, the direct team, colleagues, clients, etc. Its objective is to know the skills and abilities of employees, their development potential, as well as their interests, motivations and attitudes. This enables the identification of training needs, definition of individual development plans, management of geographical and functional mobility and the drafting of succession plans.

Throughout 2019, and after the pilot experience of 2018, the company will implement the 360° Developmental Evaluation for leadership and management profiles.



The main objective of the **2018 Training Plan**, based on the company's Strategic Plan, is to enhance the abilities, knowledge and skills of Ineco's professionals, with the aim of achieving the company's strategic goals. The Plan is comprised of 5 training programmes:

- **Technical specialisation programme**
- **Certification and working methodologies programme**
- **Language programme**
- **Work processes and models programme**
- **Skills programme**

Furthermore, the Up Grading programme provides help to finance training not included in the Plan.

In 2018, different initiatives were carried out aimed at spreading the company's know-how and valuing the experience of our professionals, as well as developing skills and abilities. Among these are:

- **Internal Training School:** Created in 2014, the School has not stopped growing ever since; and it has a team of 92 accredited and highly qualified trainers who are responsible for transmitting knowledge and experience within the organization.
- **Universal Training learning platform:** This new e-learning space was launched in 2018 on engineering, skills, business management or Digitalisation, with over 350 courses available.
- **Language Programme:** two new methods have been launched to facilitate access for all employees: telephone training, with a platform available 24/7, and cultural activities. The BEST and Totally Talking programmes are also still being developed. The course on preparation for the Cambridge CAE (Certificate in Advanced English) or CPE (Certificate of Proficiency in English) exams during 2018 achieved a 90% success rate. The programme on preparation for the Bulats Certificate exam was included in 2018.

- **Programme for the prevention of criminal accusations (compliance):** a training programme for all employees offering training in theory and practice on legal reforms implemented, as well as the firm commitment of the organization in compliance matters.
- **Protection of personal data in the workplace:** training for the entire company, aimed at understanding the functions and obligations of the staff to comply with the requirements of the European Data Protection Regulation and the new Organic Law on the Protection of Personal Data and the guarantee of digital rights.
- **Occupational Risk Prevention:** development of e-learning training sessions and classroom training in occupational risk prevention.
- **Ineco Let's design Programme:** Thinking together: Days of reflection and debate on values, skills, etc. organised by the company; a total of 12 (one per month) throughout the year.

The development of all these initiatives has not prevented working on the challenges foreseen for 2019, among which we should mention the establishment of two new skills programmes: Up programme, aimed at helping to develop interpersonal skills, and the Transform@-t programme for the acquisition of strategic behavioural skills.

In addition, we are working with different areas in future technical training paths, strengthening the Ineco technical school, which already has career paths such as site managers, project managers, project managers, document controller, etc.

**Knowledge management.** Our model is basically oriented towards the diffusion and transfer of the most critical knowledge of the organization, ensuring its capitalization. The Lessons Learned model has been strengthened, as a fundamental aspect in the continuous improvement and development of the organization.

## IMPORTANT DATA AND FIGURES 2018

GROUPING BY LEVEL	TOTAL MEN HOURS	TOTAL WOMEN HOURS	TOTAL HOURS	AVERAGE MEN HOURS	AVERAGE WOMEN HOURS	AVERAGE HOURS
Directorate	1,191.05	570.60	1,761.65	74.44	95.10	80.08
Management	9,906.13	3,467.79	13,373.92	55.03	63.05	56.91
Technicians	39,850.60	29,478.12	69,328.72	27.00	34.04	29.60
Support	5,329.78	2,378.34	7,708.12	21.67	9.44	15.48
<b>TOTAL</b>	<b>56,277.56</b>	<b>35,894.85</b>	<b>92,112.41</b>	<b>29.34</b>	<b>30.45</b>	<b>29.76</b>



## 2. MANAGING COMMITMENT

During this year, **the Climate Change and Commitment Survey 2018** was launched and periodically implemented. It was used to obtain indicators related to the organizational climate in different dimensions, with the aim of defining plans, policies and actions aimed at motivating, retaining and engaging employees, both nationally and internationally. This year Ineco obtained the highest satisfaction and global commitment index of the last editions and in comparison with other organizations of the sector, with superior ratings in 88% of the dimensions.

Furthermore, a series of workshops took place in which representatives of all areas and all organizational levels participated, in order to identify the lines of action that will enhance all the dimensions of our organization.

During 2018, activity of the **Employee Club** was promoted. With the Savings Club, employees have benefited from significant discounts on their regular purchases (through coupons and direct discounts). New agreements have been negotiated with various centres (educational, health and family support), as well as financial institutions and restaurants near the central headquarters, obtaining exclusive discounts for our employees. Likewise, in the Leisure Club, Sports Club and Solidarity Club, the activities proposed increased based on the interests of the employees, expanding their diversity in the different provinces of Spain and promoting the range of activities to be carried out. Interesting proposals for activities for "days without school" throughout the year were also published, as well as discounts in urban and non-urban camps for the summer and Christmas months.

### Concilia Plan

One year later, Ineco continues to implement the Concilia Plan, whose main objective is to promote the reconciliation of employees' personal, family and working lives. The Plan's scopes of action include:

- Organising working hours
- Social benefits
- Leave, absence and days off
- Personal and professional development

In all, in 2018, a total of 1,552 measures were processed and approved. The Concilia Plan has become a launching point for people's professional development and satisfaction, as well as for the retention of talent and maintenance of the commitment of all company personnel, highlighting the general acceptance of the workplace flexibility measure.

### Más Programme

Ineco offers its employees a package of social benefits that best suit their needs, which they can receive by choosing from the following products: food aid, child care, health insurance, or a combination of all of these. These benefits have been increased with the measures adopted for the Concilia Plan mentioned above. Ineco employees also have life insurance that covers death or permanent disability, as well as a supplement for Social Security benefits in case of temporary incapacity.

### Equality Plan

Ineco is negotiating with the objective of approving an update of the Equality Plan to adapt it to the new trends and possible normative changes that are being

approved in this matter. This requires an exhaustive analysis of the situation of all Ineco personnel, in order to be able to review the measures already implemented and establish others that help promote the effective equality of women and men; analysis carried out in a commission created ad-hoc and aimed at capturing in the final text the progress made in recent years and implementing new measures that comply with the current paradigm.

The company also has an action protocol, accessible to all employees, to channel possible cases of workplace harassment through the figure of a mediator who provides information and manages such cases, if they occur, guaranteeing the necessary levels of confidentiality.

### Integra Plan

This integration plan has been continued for people with disabilities or belonging to groups at risk of social exclusion, contributing to improve their employability and promoting social awareness in this regard. This plan establishes specific measures for access to employment, disabled employees and victims of gender-based violence, financial aid, job adjustment, care service, etc. and others directed at Ineco employees with relatives dependent on them as extensions of paternity/maternity leave, leave of absence, flexibility in terms of holidays, etc.



## COMPOSITION OF CORPORATE GOVERNANCE BODIES AND STAFF. BROKEN DOWN BY GENDER AND AGE GROUP

2018 DATA	TOTAL NO.	GENDER		AGE		
		MEN	WOMEN	< 30 YEARS OLD	30 - 50 YEARS OLD	> 50 YEARS OLD
Directorate structure	22	72.7%	27.3%	0.0%	68.2%	31.8%
Management structure	235	76.6%	23.4%	0.0%	72.3%	27.7%
Structure staff	257	76.3%	23.7%	0.0%	72.0%	28.0%
Technical structure	2,342	63.0%	37.0%	16.1%	75.6%	8.3%
Support structure	498	49.4%	50.6%	5.2%	72.5%	22.3%
Contract staff	2,840	60.6%	39.4%	14.2%	75.1%	10.8%
<b>TOTAL STAFF</b>	<b>3,097</b>	<b>61.9%</b>	<b>38.1%</b>	<b>13.0%</b>	<b>74.8%</b>	<b>12.2%</b>

## 3. WE ARE INTERNATIONAL

Guaranteeing international competitiveness means having the best global talent in the different countries and projects in which the company operates. Therefore, in 2018, the company focused on the support and coverage of the different teams displaced and on attracting and retaining international talent as a key element for the stability, specialization and added value of the projects.

### INDIVIDUALS BY GEOGRAPHIC REGION

2018 DATA	TOTAL	M	W
Europe	3,064	1,891	1,173
Spain	3,050	1,883	1,167
America	7	5	2
Asia	26	22	4

Therefore, and based on the pillars of shared management, proximity, rigour, objectivity, transparency and budget control, various initiatives were implemented throughout 2018, such as **international safety maps**, which enables Ineco to anticipate the needs and risks in the destinations in which it operates, as well as to plan and monitor any possible action to be carried out to ensure greater certainty and knowledge for teams. **Migratory maps** were also implemented, which provide excellent and sustainable migration solutions in project management

**Corporate development and talent retention programmes** were also organised for company professionals deployed overseas. This is accompanied by the first **international climate and commitment survey**, thanks to which we have been able to detect strengths and retention factors, as well as create joint working groups (this is planned for 2019), in the areas of development identified.

Looking ahead to 2019, and in line with the objectives already started in previous years, the attraction of talent will continue to be enhanced through the **Ineco Campus** and agreements with different universities in key countries. Moreover, professional development programmes will be expanded through specific training plans for the international community, and flexible mobility and return solutions will be proposed, adapted to both the needs of the projects developed and those of the teams and families.

## 4. PREVENTION AND SAFETY

In 2018, after its approval by the Management Committee, **a plan for transforming the safety and health service** was launched, both in focus and function. Without forgetting strict regulatory compliance, this plan is based on two pillars: to offer proximity and better service through the **Visitation Plan 2018**, and to improve the people's well-being, not only health, for which several projects have been carried out in emotional well-being and which has also been the main theme of the third edition of the company's **Health Week**.

In addition, the OHSAS 18001 work safety and health certification was maintained and transition to the new ISO 45001:2018 standard began, with the objective of renewing it with the new standard in 2019.

Other safety and health objectives at Ineco for 2019 include continuing with the 2019 Visitation Plan and increasing the protection of travellers and expatriates through risk assessment, by applying the Human and Organizational Performance (HOP) methodology, aimed at preventing human error and introducing the means to avoid possible damage.





# COMMITTED TO THE SOCIETY

2007: Project for the supply of water in Kigoma (Tanzania), in which Ineco collaborated.

anniversary

# 50

## 1. SPIRIT OF SOLIDARITY AND COLLABORATION

The company encourages the participation and involvement of its professionals in solidarity initiatives to achieve a more just and equal society. It therefore has a social action platform, iSolidaria, which is a space directed towards the management of corporate voluntary work where people can consult the initiatives of the company in this field, share experiences or be informed of the current situation of Ineco in the field of social action. This type of voluntary activities are evaluated by employees who participate through satisfaction surveys, and involve a continuous monitoring of the results obtained.

- **IN 2018, THE OVERALL DEGREE OF SATISFACTION OF VOLUNTEERS WHO PARTICIPATED IN SOLIDARITY ACTIVITIES WAS 4.94 OUT OF 5**
- **OVER 700 VOLUNTARY PARTICIPATIONS A YEAR**

In keeping with its zeal for solidarity, in 2018, the company renewed the collaboration agreement for which it is constituted as Friend Entity of the Lealtad Foundation. Based on this collaboration, Ineco relies on the Lealtad Foundation to ensure the highest level of transparency and objectivity in the company's participation in the various social programmes and actions.

## 2. INITIATIVES IN 2018

Ineco elaborates its annual Social Action Programme, which is part of its Corporate Responsibility Plan and includes the actions to be carried out in collaboration with independent non-profit entities with which the company carries out activities of a different nature, amongst which are corporate volunteering, with an excellent adherence and evaluation by Ineco's employees.



## IX EURO SOLIDARITY CAMPAIGN

It is a solidarity campaign in which employees donate a percentage of their monthly salary to finance a specific project. For its part, the company has undertaken to double the contributions of its employees, up to a certain maximum amount.

In order to select the project to which the funds raised in this campaign were allocated, a competition was held among the employees, the chosen option being the project "Protection of children on the street against exploitation by mafia at train stations in India" led by ITWILLBE, in which around 400 Ineco workers participated.

## CHALLENGE 2018

The Challenge is a charity run organised by Action Against Hunger to combat child malnutrition.

An event that combines sport and solidarity and allowed employees to have a good day with their partners, practice sports and offer a better future to thousands of children. Ineco participated in the editions of Madrid, Barcelona, Valencia and Seville, and thanks to the 1,300 km travelled by the entire Ineco team, Action against Hunger was able to provide 11,300 days of treatment for children with nutrition problems.

## EMPLOYMENT PROGRAMME. TRAINING FOR YOUNG PEOPLE AT RISK OF SOCIAL EXCLUSION

Ineco has undertaken to improve the training and employability of young people at risk of social exclusion and thus facilitate their integration into the labour market. To achieve this, it puts the knowledge and skills of its professionals at the disposal of this kind of educational project.

A year later, in 2018, the company collaborated with the Asociación Cultural Norte Joven through several corporate volunteer activities: more than 30 employees carried out simulated individual interviews with young people in order to help them sail through a job interview. Likewise, a module on basic financial notions of utility for their professional career was taught by volunteers from the Economic-Financial Department.





## GIFT OF COMPANY CAMPAIGN

In 2018, Ineco joined the fight against loneliness in old age in collaboration with the Friends of the Elderly Association, now Great Friends. A team of 10 people volunteered to accompany elders for a day on a guided tour of the History Museum in Madrid and then a meal. Ten elderly people were able to leave their solitude and routine during a great day of cultural activity.

## YOU CHOOSE CAMPAIGN

For the fourth year in a row, Ineco launched a You Choose Campaign in which employees propose and select three NGOs with which they want the company to collaborate in support of their social activities.

The most voted proposals by the employees in the contest, from more than 30 applications were: First, the Aladina Foundation; second, Duchenne Parent Project Association and Association for the Assistance for People with Cerebral Palsy (ATENPACE), and third, Childhood Cancer Association of the Community of Madrid.

## YOU ADD CAMPAIGN. SOLIDARITY CHRISTMAS

In December, Ineco launched a new edition of the You Add campaign. Campaign with the aim of collecting food, toys and baby clothes so that families in need can have a better Christmas.

The solidarity shown by employees enabled Ineco to raise:

- **Operation Kilo:** around 200 kg of food that was donated to the Madrid Food Bank for distribution among families in need, social kitchens, children and adolescents, homes for the aged, children and the disabled, foster homes, etc.
- **Toys:** donated to the No Child without a Smile Association and distributed to children coming from various social entities on 6 January.
- **Baby clothes:** donated to the Mothers' Network Association and distributed among women at risk of social exclusion.

## THE THREE WISE MEN CAMPAIGN

A year later, the Three Wise Men from the East visited the offices of Ineco to collect the letters written by children and grandchildren of the employees and give them a solidarity gift, this time in collaboration with the Friends of the Elderly Association and in benefit of a Special Employment Centre. The children also collaborated by delivering children's books to be donated to a public children's hospital in Madrid.

## BOTTLE TOPS FOR A NEW LIFE

Ineco continues to collaborate with the Seur Foundation's 'Bottle tops for a Life' project in order to raise funds to help children with illnesses not covered by ordinary health systems.

In 2018, Ineco employees were able to collect 290 kg of lids, which have been used to provide rehabilitation treatment to two boys: Laia and Bruno.

## EMERGENCY ASSISTANCE FUND

Since 2009, Ineco has collaborated with the Red Cross through the Emergency Assistance Fund whose mission is to provide assistance to the most vulnerable. This includes assistance and humanitarian aid and relieving human suffering caused by natural disasters, accidents, catastrophes and other collective risks or incidents, with the commitment to strengthen their capacities and reduce their vulnerability, preparing them to face future disasters.

Ineco is also committed to the Red Cross and discloses to employees the organization's emergency appeals, such as those for the devastating earthquake in Haiti in 2010, the food crisis in the Horn of Africa in 2011, the Nepal earthquake in 2015 and the earthquake in Ecuador in 2016. In 2018, collaboration was focused on a campaign for collecting funds for victims from the tsunami in Indonesia. The company doubles the amount collected by employees.

## ADAPTED HIKING

Ineco participated in a day of adapted hiking in collaboration with the Fundación Deporte y Desafío (Sport and Challenge Foundation) to promote the integration of people with disabilities through sport. Ineco volunteers accompanied a group of young people with disabilities on a day's hike along the through the Port of Canencia in Madrid.

## CHRISTMAS CARD COMPETITION

As part of the Social Action Programme, Ineco assumes the challenge of promoting actions aimed at improving the employability and working conditions of people with disabilities and to promote social awareness of this reality. For this reason, in 2018 a Christmas card contest was organized, in collaboration with the Prodis Foundation, for the children or grandchildren of company employees.

## INTERACTIVE CORNER AND SOLIDARITY FRUIT

In order to support the integration of disabled people and promote healthy habits among employees, during the second edition of Healthy Week and in collaboration with the Juan XXIII Foundation, a nutritional interactive corner was installed in the main offices in Madrid, where expert nutritionists gave guidelines and advice to employees to encourage healthy living. Fruit was also distributed from the Foundation's organic orchard, where organic fruits and vegetables are grown by a team of enthusiastic people with intellectual disabilities. In this project they learn a trade and healthy eating habits.





## ROAD SAFETY AWARENESS

For the first time, and as part of the Health Week, Ineco held an awareness workshop on road safety for which Fundtrafic collaborated. Ineco employees were able to perform road simulations with a car driving simulator (driving with distractions: mobile, GPS, etc.), a motorcycle driving simulator (defensive driving), tests with fatigue simulation glasses and consumption of alcohol and drugs and a workshop-circuit of functional diversity.

## PROFESSIONAL SOLIDARITY MARATHON

In 2018, Ineco celebrated the first Professional Solidarity Marathon, an innovative high impact volunteer activity that seeks to solve a challenge by providing technical solutions to a social problem.

An exceptional multidisciplinary team, consisting of experts in layout, environment, urban planning, transportation planning and consultancy, actively collaborated for eight hours, offering their knowledge and experience for the project aimed at urban improvement of Makeni, Sierra Leone.

Thanks to their contributions, the project has been enriched with the analysis and quality technical solutions that will improve the town's urban planning.

## ED DRAWING 2018

For the second year in a row, Ineco has collaborated with the Créate Foundation through a new volunteer action that promotes innovation in education. Volunteers from the company, with experience in the field of innovation and/or academics, have participated as mentors in the evaluation of innovative projects presented by young people between 10 and 16 years old in Drawing ED EXPO, one of the biggest educational innovation events Spain: The students exhibit the work developed during the course in primary and secondary school classrooms through active methodologies and a more experiential education. A competition was organized at Ineco's headquarters in which young people presented their proposals for the selection of Drawing projects on behalf of Ineco.

This activity implied a firm commitment to innovation in the classroom and development of young talents.

## IT TEAM DONATION CAMPAIGN

Ineco donated more than 450 computers to various non-profit organizations accredited by the Loyalty Foundation with the Certified NGO Seal that the Foundation grants to the organizations analysed that comply with the 9 Principles of Transparency and Good Practices.

## 3. FURTHER COLLABORATIONS

Ineco promotes cooperation between national engineering companies and is a member of various national and international associations and organizations. The objective is to contribute to enrich and strengthen the synergies between all agents from the sector, as well as to keep up-to-date their technical and management know how by exchanging state-of-the-art knowledge with other companies and organizations. In 2018, Ineco belonged to the following entities:

- Tecniberia Asince
- Asociación de Usuarios de SAP, AUSAPE (SAP Users' Association of Spain)
- Plataforma Tecnológica Ferroviaria Española (PTFE)
- Plataforma Tecnológica de la Carretera, PTC (Spanish Technological Road Platform)
- Club de la Innovación y el Conocimiento (Innovation and Knowledge Club)
- Fundación Lealtad (Lealtad Foundation)
- Asociación Latinoamericana de Metros y Subterráneos, ALAMYS (Latin American Train and Underground Association)
- Asociación Española de Fabricantes Exportadores de Material, Equipos y Servicios Ferroviarios, MAFEX (Spanish Association of Railway Services, Equipment and Material Manufacturers and Exporters)
- Cámara de Madrid (Madrid Chamber of Commerce)
- Asociación Técnica Carreteras, ATC
- Asociación Nacional de Auscultación y Sistemas de Gestión Técnica de Infraestructuras (National Association of Auscultation and Technical Infrastructure Management Systems) (AUSIGETI)
- Asociación Española de Túneles y Obras, AETOS (Spanish Association of Tunnels and Works)
- Asociación Científico-Química del Hormigón Estructural, ACHE (Scientific and Chemical Structural Concrete Association)
- Asociación Española de la Calidad, AEC (Spanish Association for Quality)
- Foro Español de Expatriados, FEEX (Spanish Expatriate Forum)
- Asociación de Reparación, Refuerzo y Protección del Hormigón, ARPHO (Spanish Association for the Repair, Reinforcement, and Protection of Concrete)
- Asociación del Foro de la Contratación Pública Socialmente Responsable (Association of the Socially Responsible Recruitment Forum) (AFCPSR)
- Grupo de Crecimiento Verde (European Green Growth Group) (GGG)
- European Innovation Partnership (EIP)
- Building Smart Spanish
- Asociación Española de Gerencia de Riesgos y Seguros (AGERS) (Spanish Association of Risk and Insurance Management)
- Centro PPP for Cities, Specialist Centre on PPP in Smart and Sustainable Cities (IESE)
- International Solid Waste Association (ISWA)
- PRL Innovation
- Aenor Smart Cities
- Cluster Andalucía Smart Cities
- Galileo Services
- Infra Eco Network Europe (IENE)
- Aenor Climate Change
- Move to Future (M2F)
- Plataforma Tecnológica de la Contrucción, PTEC (Spanish Construction Technology Platform)
- Entidad Nacional de Acreditación (ENAC) (National Accreditation Entity)
- Spanish Exporters' Club
- London First
- Grupo Español para el Crecimiento Verde (Spanish Group for Green Growth)
- Asociación Española de Ensayos No Destructivos (Spanish Association for Non-Destructive Tests) (AEND)
- Asociación Española de Empresas De Seguridad (Spanish Association of Security Companies)
- Club de Benchmarking del IE (IE Benchmarking Club)
- Asociación Mexicana de Ferrocarriles, AMF (Association of Mexican Railroads)
- Railway Industry Association (RIA)
- Railway Innovation Hub
- Asociación Española de Gerencia de Riesgos y Seguros (AEGVE) (Spanish Association of Risk and Insurance Management)
- Asociación para el Progreso de la Dirección (APD) (Association for the Advancement of Management)



2009: Ineco collaborated with Intermón Oxfam to build a well in the village of Namanhumbir, in Mozambique.

## SUSTAINABLE DEVELOPMENT GOALS AND AGENDA 2030

On 25 September 2015, at a historic Sustainable Development Summit in New York, world leaders adopted a set of global goals to eradicate poverty, protect the planet and ensure prosperity for all over the coming 15 years (2015-2030) as part of a new Sustainable Development Agenda.

The Agenda has 17 Sustainable Development Goals (SDGs) and 169 targets that range from the elimination of poverty to combating climate change, education, women's equality, environmental protection and the design of our cities.

Ineco is firmly committed to the SDGs so, in 2018, it drafted a Plan to be implemented in 2019, in which it focuses its activity and especially its corporate responsibility in this area through solidly contributing to the success of same, both direct, through the development of its business activity, and indirect, through the different actions of corporate responsibility that the company promotes.

Therefore, in 2019, Ineco will focus on its commitment on the SDGs and the 2030 Agenda through:

- Internal communication and awareness
- External dissemination
- Strategic alignment



# COMMITTED TO THE ENVIRONMENT

2000: Actions of the FSAM (study for the Future Airport System of Madrid).  
Drafted by Ineco for Aena, it was the first to include environmental aspects in  
an airport planning study.

anniversary

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Sustainability is one of the pillars of Ineco's strategy and, as such, it is of crucial importance in all company actions, being one of the fundamental values of its corporate identity. Based on this, the organization promotes actions and attitudes that balance the development of infrastructures, care for the environment and social responsibility, according to the values that define the company and the principles that govern the **United Nations Global Compact**.

During 2018, Ineco abided by its **commitment to the protection of the environment and sustainable development** at all times, under certain lines of action that will continue with new challenges in 2019.

management system according to the latest version of the international standard ISO 14001:2015, under a multi-site scheme, in a total of 13 countries.

Ineco identifies and evaluates its environmental aspects (consumption, generation of waste, emissions, etc.) on an annual basis. The result of this evaluation is deployed in the environmental management system taking into account that the evaluated aspects are controlled continuously throughout the year. Significant environmental aspects also serve as the basis for defining the annual environmental objectives.

## 1. ENVIRONMENTAL MANAGEMENT SYSTEM

Ineco is committed to environmental sustainability through proposals aimed at reducing negative environmental impacts. Therefore, in addition to carrying out the control, monitoring and measurement of environmental performance, an effort is made to ensure that all employees are aware of Ineco's commitment to make responsible use of resources, including the prevention of pollution, and the reuse and proper management of waste, as well as the promotion of environmental protection initiatives. The company established a certified environmental

## 2. RESPONSIBLE USE OF RESOURCES

The organization has internal processes and procedures that describe the methodology to follow in terms of environmental management. This methodology includes control of environmental indicators by heads of offices, data collection, analysis of its evolution and preparation and publication of periodic reports on the environmental aspects identified.

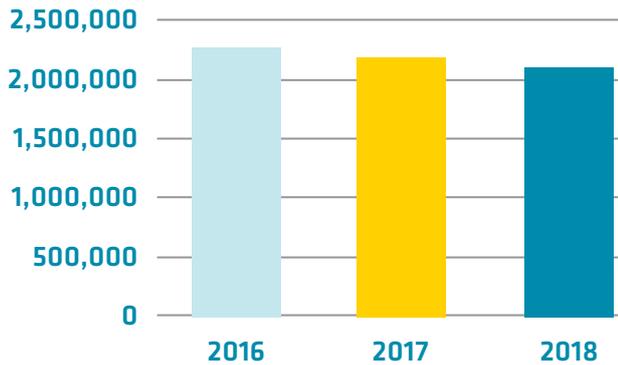
Ineco is also committed to using renewable energies and making responsible and efficient use of energy. During 2018, Ineco developed the following major initiatives to promote the responsible use of resources:

- Information and awareness: environmental thermometer**

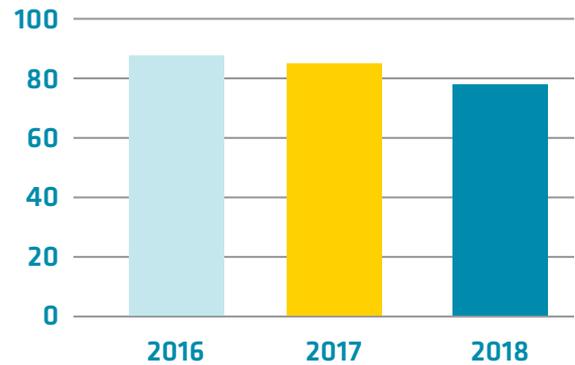
Dissemination of environmental management results through the updating and publication of the “environmental thermometer” in the corporate intranet:

## CONSUMPTION

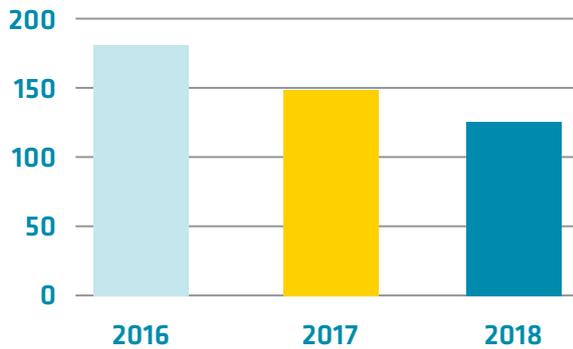
**Total electrical energy consumption (kWh)**



**Electrical energy consumption per office area (kWh/m<sup>2</sup>)**

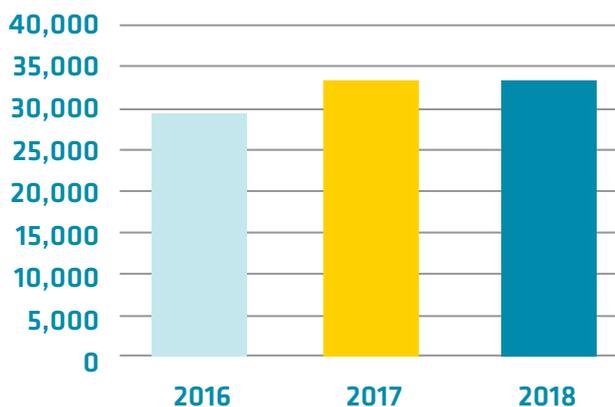


**White paper consumption per production in Spain (kg/million €)**

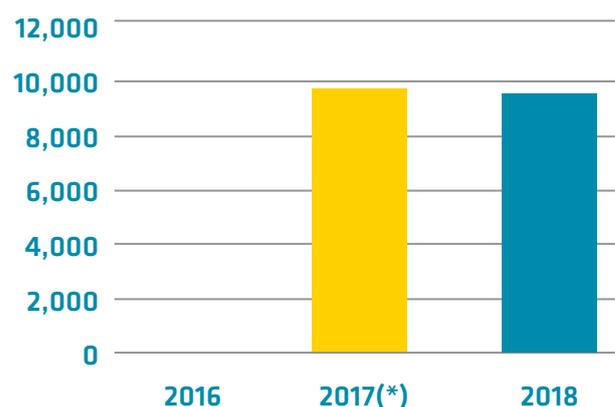


## WASTE AND EMISSIONS

**Paper waste in offices in Madrid (kg)**



**Ineco's total CO<sub>2</sub> equivalent emissions (t CO<sub>2</sub>eq)**



(\*) An error was detected in the calculation of HC-2017, due to confusion in the emission factor of vehicles during displacements in-itinerare. The HC-2017 previously indicated (11,626.88 t CO<sub>2</sub>e) is replaced by the real value (9,684.78 t CO<sub>2</sub>e).

- **Reduction of emissions: Calculation and reduction of the carbon footprint**

Ineco has calculated its carbon footprint since 2008. The objective is to know and evaluate the organization's greenhouse gas emissions in order to identify opportunities to reduce them. To perform the calculation, according to international regulations, three types of emissions have been taken into account: scope 1, or direct emissions, originated by the consumption of fuels in facilities and vehicles; scope 2, or indirect emissions for electricity consumption, and scope 3 (other indirect emissions), such as those due to paper consumption, waste production, travel and stays in hotels.

This results in a total footprint of 9,520 tons of CO<sub>2</sub> equivalent obtained in 2018. To reduce it, actions have been carried out, such as the change of electricity supplier in offices; production of 38,628 kWh by the photovoltaic electric power plant in the central headquarters that has avoided the emission into the atmosphere of 13,520 kg of CO<sub>2</sub> equivalent; application of sustainability measures for the vehicle fleet and introduction of environmental requirements in the tender for the new lease of rental vehicles.

- **Waste reduction: I Environment Week**

During 2018, the company's "Environment Week" initiative was organized for the first time on the occasion of the World Environment Day, under the theme "For a world without plastics", in which various activities and talks and an environmental volunteering day took place with SEO/ Birdlife at the Casa de Campo in Madrid. The decision was also taken to eliminate disposable plastic cups and instead a glass bottle and a ceramic cup were given to each employee.

The Ineco 2018 Environment Prize was also promoted, with 1,000 euros for the winning bid which, on this occasion, focused on waste reduction, and 500 euros for the 3 runners-up.

- **Energy efficiency plan**

In 2017, Ineco developed an energy efficiency plan with the objective of making efficient and rational use of energy, minimising consumption and consequently reducing CO<sub>2</sub> emissions into the atmosphere. This plan was implemented in the corporate headquarters, which has more than 1,700 employees.

As a result, in 2018, Ineco achieved savings in total electricity consumption of 7.2% at its headquarters (decrease of 10.7% of consumption/person) and 5.7% of other offices (with a decrease of 18.3% of consumption per person).

- **Mobility Plan**

In 2018, Ineco approved the Mobility Plan, which establishes a series of measures and initiatives to be taken within four years. The objectives of the Plan are to favour non-motorized mobility

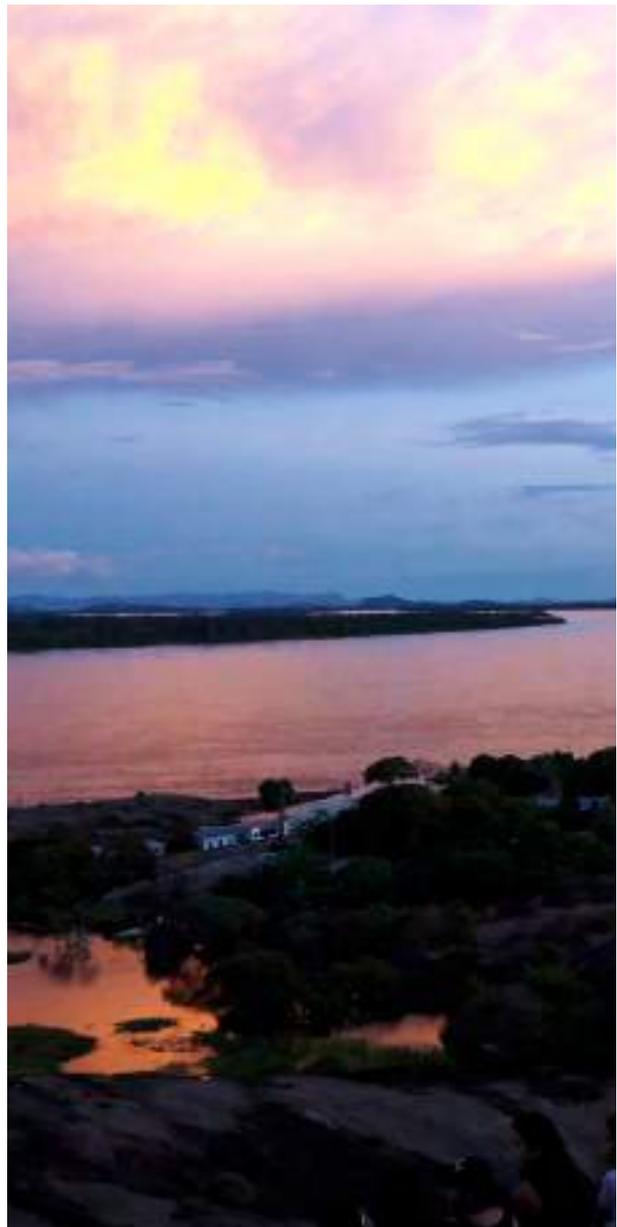
and the use of car-sharing, as well as improving road safety in labour mobility. The company also joined the celebration of the European Mobility Week, organizing various activities.

- **Protection of biodiversity**

Ineco applies the "Environmental aspects" procedure to all its projects, provided that it is within the scope of the contracts, detailing the environmental management and control activities oriented towards the protection of biodiversity.

- **Environmental awareness**

During 2018, measures were adopted in various areas to encourage and enhance the environmental awareness of employees: internal communications, launching of specific campaigns (World Water Day, Earth Hour, etc.), a new space on the corporate intranet, posters, etc.



**3. ACHIEVEMENTS**

**3.4% savings in electricity consumption in offices in Spain**

**3.4% savings in water consumption at the headquarters at Paseo de la Habana, Madrid**

**15.3% reduction in paper consumption per production in offices in Spain**

**17.8% reduction in fuel consumption of vehicles per production in Spain**

**The emission into the atmosphere of 13.5 t CO<sub>2</sub>eq has been avoided, through the generation of electrical energy by means of the photovoltaic plant located at the Ineco headquarters**



## 4. CONSUMPTION AND WASTE DATA



### WATER

Water consumption at Paseo de la Habana and Egeo building (m<sup>3</sup>)

ANNUAL WATER CONSUMPTION (m <sup>3</sup> )		
YEAR	P. HABANA	EGEO
2013	2,956	4,113
2014	2,796	5,028
2015	2,881	5,286
2016	2,656	4,576
2017	2,470	4,231
2018	2,386	4,629

ANNUAL WATER CONSUMPTION/ EMPLOYEE (m <sup>3</sup> )		
YEAR	P. HABANA	EGEO
2013	7.49	5.1
2014	7.14	6.0
2015	8.29	5.3
2016	7.81	4.6
2017	7.51	4.17
2018	6.97	3.95



### PAPER

Paper consumption in offices in Spain

PAPER CONSUMPTION (kg)			
YEAR	TOTAL	kg/EMPLOYEE	kg/PRODUCTION M€
2013	36,193	14	264.2
2014	30,980	13.4	247.1
2015	31,084	13.1	225.6
2016	27,219	11.7	179.4
2017	26,329	11.0	145.8
2018	27,851	10.6	123.5



### ELECTRICAL ENERGY

Total electricity consumption in all offices in Spain

ELECTRICITY CONSUMPTION (gigajoules)	
2013	11,301.8
2014	9,320.7
2015	8,906.4
2016	8,273.6
2017	7,817.2
2018	7,553.7



## HEATING FUEL

Total consumption of heating fuel in Paseo de la Habana

### HEATING FUEL CONSUMPTION (litres)

2013	7,403
2014	6,086
2015	5,687
2016	8,648
2017	7,750
2018	9,975



## VEHICLE FUEL

Consumption of vehicle fuel

### VEHICLE FUEL CONSUMPTION (litres)

YEAR	TOTAL	litres / VEHICLE	litres / PRODUCTION M€
2013	790,654	2,215	5,772
2014	640,894	2,173	5,112
2015	734,282	2,329	5,330
2016	756,901	1,991	4,989
2017	871,806	1,944	4,828
2018	895,132	1,756	3,969



## CO<sub>2</sub>

Total direct and indirect emissions of greenhouse gases

### GREENHOUSE GAS EMISSIONS

YEAR	DIRECT EMISSIONS (t CO <sub>2</sub> eq)	INDIRECT EMISSIONS (t CO <sub>2</sub> eq)	TOTAL EMISSIONS (t CO <sub>2</sub> eq)
2013	2,103	5,644	7,747
2014	1,702	4,989	6,691
2015	2,280	4,339	6,620
2016	2,364	3,448	5,813
2017 (*)	2,367	7,318	9,685
2018	2,406	7,114	9,520

(\*) In 2017, the calculation method, sources of information on emission factors and calculation limits were extended (e.g. Ineco international data, material consumption, in-itenerere, etc.). Data before 2016 is shown, for information purposes, but cannot be compared with 2017 or later years. Moreover, after detecting an error in the calculation of the value indicated in the 2017 Annual report (11,626.88 t CO<sub>2</sub>e) is replaced by the real value (9,684.78 t CO<sub>2</sub>e).



## INDIRECT ENERGY CONSUMPTION

### Flights and train journeys

#### TOTAL KM TRAVELLED BY PLANE (kilometres)

2013	24,383,483
2014	21,828,449
2015	21,472,103
2016	15,255,332
2017	12,228,749
2018	13,613,336

#### TOTAL DISTANCE TRAVELLED BY TRAIN (kilometres)

2013	3,149,540
2014	2,643,596
2015	3,004,083
2016	3,499,411
2017	3,526,956
2018	3,747,357

#### DISTANCE TRAVELLED BY PLANE/ EMPLOYEE (km/employee)

2013	9,642
2014	9,422
2015	9,041
2016	6,899
2017	5,176
2018	4,700

#### DISTANCE TRAVELLED BY TRAIN/ EMPLOYEE (kilometres)

2013	1,245
2014	1,141
2015	1,263
2016	1,499
2017	1,467
2018	1,422





## WASTE

Hazardous and non-hazardous waste generated in Paseo de la Habana and the Egeo building

### HAZARDOUS WASTE GENERATED (kg) (fluorescent lamps, batteries, WEEE in Paseo de la Habana and Egeo)

2013	2,637
2014	4,755
2015	4,871
2016	1,475
2017	1,288
2018	2.579

### DOMESTIC WASTE GENERATED (kg) in Paseo de la Habana and the Egeo building

#### FRACTION - OTHER (kg)

2013	25,250
2014	19,703
2015	20,140
2016	23,665
2017	23,354
2018	25,469

#### CONTAINERS (kg)

2013	7,720
2014	6,765
2015	10,728
2016	14,609
2017	16,168
2018	18,547

#### PAPER AND CARDBOARD (kg)

2013	36,900
2014	34,380
2015	33,480
2016	27,630
2017	31,260
2018	31,810



## 5. RESPONSIBILITY AND COMMITMENT TO THE ENVIRONMENT IN INNOVATION SOLUTIONS

Ineco promotes the development of innovation solutions that combine the improvement of our competitiveness with respect for the environment. Aware of the collateral effects that transport has on climate change, the company maintains its commitment year after year in its search for sustainable solutions.

Proof of this can be found in Ineco's participation during 2018 in the following R&D+i projects, aimed at reducing the environmental impact and promoting the efficient use of resources.

### Collaborative environmental innovation projects

- **MINOXSTREET:** (2013-2018) It studies the effectiveness of commercial materials that absorb nitrogen oxides (NOx) by carrying out measurements both in the laboratory and in the street. The ultimate goal of these materials is to reduce the concentration of NOx in the atmosphere in urban environments (pollution reduction).
- **SESAR 2020:** (2016-2020) Among the overall objectives of the SESAR programme is a reduction of emissions due to air traffic of up to 10% (average reduction of consumption of between 250 and 500 kg of fuel per flight), making air traffic management more efficient. This management will also result in a lower sound impact from operations.
- **INFRAADAPT:** (2017-2019) Project that studies the application of BIM methodology during the operation of a linear infrastructure (road) to optimise its maintenance and increase its resilience to climate change.

### Internal environmental innovation projects

- SIMA-Fleet Management
- SAID
- Cityneco 2.0
- Integration of the human factor in the risk analysis
- Smart Station
- Machine Learning

## 6. INECO FOCUSES ON ENVIRONMENTAL SUSTAINABILITY IN ITS TECHNICAL SOLUTIONS

Ineco, as an expert consultancy and transport engineering company that provides service throughout the life cycle of the projects, offers solutions in the area of sustainability and the environment. These range from environmental assessment, at strategic and project level, to specialised analyses of each of the potentially affected environmental factors, fauna and vegetation, archaeological heritage, soil or water (discharges), air (air pollution, emissions, etc.) and the environment in general (noises, vibrations, land occupancy, etc.). Tools based on Geographic Information Systems (GIS) and modelling are used for routine work.

The company has many years of experience and specialised equipment capable of carrying out all types of studies – from the sound track of an airport to the strategic environmental assessment of a transport plan or the impact studies of a road, railway, or multimodal corridor, for example – and to propose and design the corresponding preventive, corrective or mitigating measures. Environmental aspects are particularly important in planning decisions and in all pre-construction studies, as they greatly influence the costs – both ecological and economic – of building, expanding or exploiting infrastructure and transport systems.

ineco

**INECO**  
INGENIERIA Y ECONOMIA DEL TRANSPORTE, S.A.  
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CIRCULAR DE PRESIDENCIA Nº. 3/9

OLICITACION DE ADQUISICION  
NORMAS PARA LA COMPRA DE MATER  
CONTRATACION DE SERVICIOS NO DES  
PRODUCCION

FECHA  
DE  
Necesita para E  
DIA.....de.....  
HORA.....

CANTIDAD  
DATOS SOBRE SUMINISTRADOR Y  
IMPRESO ANEXO



# COMMITTED TO OUR SUPPLIERS

1994: Purchase regulations and Ineco announcement in the same year, in which it moves its headquarters to 138 Doctor Esquerdo Street, in Madrid.

anniversary  
**50**

Suppliers are a key figure in the smooth operation of the company and contribute to maintaining the best quality standards in the services that Ineco offers its customers. Therefore, the company seeks to establish good relations with them and guarantees transparency and equality in all its contracting processes. It is about selecting those who not only better meet the needs of the company, but who are also better aligned with the principles and values of the company.

## 1. COMMUNICATION, EQUALITY AND TRANSPARENCY

The principles that govern Ineco's internal contracting standards are the following:

### Principle of advertising

The company applies this principle by inserting the General Conditions of Contract on the website; publishing the procurement processes on the State Contracting Platform ([www.contrataciondelestado.es](http://www.contrataciondelestado.es)), and, as appropriate, also on the Ineco website, without resorting to other additional means of advertising contracts derived from management assignments.

### Principles of competition, equality and non-discrimination

Ineco guarantees free access to contracting by any company, starting with the non-discriminatory description of the subject matter of the contract. It also guarantees equal access

for all economic operators in all European Union member states, with the recognition of degrees, certificates and other diplomas from different EU countries. It is also a fundamental company policy to avoid providing information in a discriminatory manner which could give certain bidders an advantage over others.

### Principle of transparency

Ineco meets the requirements of this principle by publishing the Internal Contracting Standards which specify the contracting process used and the award bodies established.

It has also published the General Contracting Terms and Conditions applicable to contracts; and sets objective assessment criteria for each specification, in order to always award the most economically advantageous proposal, in accordance with those criteria.

### Principle of confidentiality

The guarantee of compliance with this principle is embodied in the confidentiality clause included in the General Contracting Conditions, which, in certain processes, are complemented by specific statements.

### Principle of sustainability

On the other hand, Ineco is aware of the most disadvantaged groups and is committed to socially responsible purchases by promoting the inclusion of both social and, as long as they are related to the object of the contract, environmental clauses: emissions, efficient use of water and energy; use of materials, procedures and ecological production methods, waste recycling and management, etc.

## CONTRACT WORKS, SUPPLIES AND SERVICES IN 2018:

The number of subcontracts for 2018 amounted to **121.089.404.45 €.**

**Ineco is strongly committed to hiring local suppliers as a strategy to positively influence the economy of the places where it develops its projects. Therefore, in 2018, in the international arena, the volume of subcontracting with local suppliers was €14,580,683.79, which meant 12.04% of the total subcontracted.**





## ASSETS

2018

2017

<b>NON-CURRENT ASSETS</b>	<b>16,736,698 €</b>	<b>15,906,894 €</b>
<b>Intangible assets</b>	<b>671,956 €</b>	<b>864,380 €</b>
Computer applications	671,956 €	864,380 €
<b>Tangible assets</b>	<b>9,100,530 €</b>	<b>9,862,822 €</b>
Land and buildings	5,460,148 €	€ 5,849,962
Technical facilities and other tangible assets	3,640,382 €	4,012,860 €
<b>Long-term investments in group and associate companies</b>	<b>697,852 €</b>	<b>648,125 €</b>
Equity instruments		
<b>Long-term financial investments</b>	<b>743,999 €</b>	<b>868,142 €</b>
Other financial assets	743,999 €	868,142 €
<b>Deferred tax assets</b>	<b>5,522,361 €</b>	<b>3,663,425 €</b>
<b>CURRENT ASSETS</b>	<b>183,482,962 €</b>	<b>164,944,462 €</b>
<b>Inventory</b>	<b>2,198,953 €</b>	<b>1,626,301 €</b>
Advances to suppliers	2,198,953 €	1,626,301 €
<b>Commercial debts and other accounts receivable</b>	<b>97,121,026 €</b>	<b>102,026,775 €</b>
Customers for sale and provision services	43,914,642 €	48,067,008 €
Customers, group and associate companies	49,104,678 €	50,189,656 €
Various debtors	574,594 €	359,212 €
Staff	939,290 €	867,143 €
Other credits with Public Administrations	2,587,822 €	2,543,756 €
<b>Short-term investments with group and associate companies</b>	<b>40,655 €</b>	<b>126,160 €</b>
Other financial assets	40,655 €	126,160 €
<b>Short-term financial investments</b>	<b>2,562,072 €</b>	<b>3,241,265 €</b>
Credits to companies	2,507,611 €	3,145,115 €
Debt securities	328 €	13,677 €
Other financial assets	54,133 €	€ 82,473
Short-term accruals	1,955,456 €	2,024,496 €
<b>Cash and other equivalent liquid assets</b>	<b>79,604,800 €</b>	<b>55,899,465 €</b>
Treasury	79,604,800 €	55,899,465 €
<b>TOTAL ASSETS</b>	<b>200,219,660 €</b>	<b>180,851,356 €</b>

# NET EQUITY AND LIABILITIES

2018

2017

<b>NET EQUITY</b>	<b>85,147,105 €</b>	<b>82,364,216 €</b>
Own Funds	85,115,706 €	82,324,511 €
Capital	8,250,660 €	8,250,660 €
Capital subscribed	8,250,660 €	8,250,660 €
Issue premium	12,857,007 €	12,857,007 €
Reserves	56,590,351 €	56,590,351 €
Legal and statutory	1,650,132 €	1,650,132 €
Other reserves	54,940,219 €	54,940,219 €
Results for the year	7,417,688 €	4,626,493 €
Subsidies, donations and legacies received	31,399 €	39,705 €
<b>NON-CURRENT LIABILITIES</b>	<b>321,682 €</b>	<b>721,880 €</b>
Long-term provisions	-	349,683 €
Other provisions	-	349,683 €
Long-term debts	251,574 €	287,393 €
Other financial liabilities	251,574 €	287,393 €
Deferred tax liabilities	70,108 €	84,805 €
<b>CURRENT LIABILITIES</b>	<b>114,750,873 €</b>	<b>97,765,259 €</b>
Short-term provisions	10,512,224 €	6,072,436 €
Short-term debts	50,270 €	46,893 €
Derivatives	3,378 €	-
Other financial liabilities	46,892 €	46,893 €
Short-term debts with group and associate companies	-	-
Commercial debtors and other accounts payable	104,188,379 €	91,645,930 €
Suppliers	40,265,733 €	34,449,455 €
Suppliers, group and associated companies	238,844 €	210,733 €
Various creditors	11,216 €	55,038 €
Staff (compensation pending payment)	4,355,788 €	4,610,075 €
Other debts to Public Administrations	10,623,879 €	10,792,320 €
Customer advances	48,692,919 €	41,528,309 €
<b>TOTAL NET EQUITY AND LIABILITIES</b>	<b>200,219,660 €</b>	<b>180,851,356 €</b>



# CONTINUING OPERATIONS

2018

2017

Net turnover	273,786,981 €	227,482,757 €
Sales	273,786,981 €	227,482,757 €
Supplies	(60,387,065 €)	(46,807,688 €)
Works performed by other companies	(60,387,065 €)	(46,807,688 €)
Other operating revenue	2,170,852 €	2,107,384 €
Accessory and other current revenue	1,642,255 €	1,800,341 €
Operating subsidies included in income for the year	528,597 €	307,043 €
Personnel expenses	(158,158,583 €)	(136,454,782 €)
Wages, salaries and similar	(115,652,188 €)	(99,230,045 €)
Social charges	(42,506,395 €)	(37,224,737 €)
Other operating expenses	(46,337,984 €)	(31,993,399 €)
External services	(30,495,123 €)	(25,621,558 €)
Taxes	(7,558,298 €)	(4,606,803 €)
Losses, impairment and changes in provisions for commercial operations	(8,278,435 €)	(1,765,038 €)
Other current management expenses	(6,128 €)	-
Amortization of assets	(2,278,757 €)	(2,603,465 €)
Impairment and result from disposals of fixed assets	(1,742 €)	(980,568 €)
Impairment and losses	(1,742 €)	(980,568 €)
Other results	19,839 €	137 €
<b>OPERATING INCOME</b>	<b>8,813,541 €</b>	<b>10,750,376 €</b>
Financial revenues	446,811 €	61,623 €
From stakes in equity instruments		
In group and associated companies	-	2,852 €
From marketable securities and other financial instruments		
From third parties	446,811 €	58,771 €
Financial expenses	(195,830 €)	(132,895 €)
For third-party debts	(195,830 €)	(132,895 €)
Change in fair value of financial instruments	(16,727 €)	13,677 €
Trading portfolio and others	(16,727 €)	13,677 €
Currency exchange differences	936,500 €	(4,465,074 €)
Impairment losses and income from disposal of financial instruments	(35,913 €)	87,215 €
Gains/losses on disposals and other	(35,913 €)	87,215 €
<b>FINANCIAL RESULTS</b>	<b>1,134,841 €</b>	<b>(4,435,454 €)</b>
<b>RESULTS BEFORE TAXES</b>	<b>9,948,382 €</b>	<b>6,314,922 €</b>
Income taxes	(2,530,694 €)	(1,688,429 €)
<b>PROFIT FOR THE YEAR FROM CONTINUING OPERATIONS</b>	<b>7,417,688 €</b>	<b>4,626,493 €</b>
<b>RESULTS FROM THE YEAR</b>	<b>7,417,688 €</b>	<b>4,626,493 €</b>

# 1968

Ingeniería y Economía del Transporte, S.A. is established on July 20th



# 1993

Aena, created two years before, becomes a shareholder of Ineco. The company begins its aeronautical activity.



# 1977

Preliminary draft for the Madrid- Barcelona-Port Bou high speed line. Bilbao Metro study



# 1999

Ineco and Tifsa join forces for more exhaustive control over the final contract work. Start of the expansions of Madrid and Barcelona airports



# 1981

The study of Bogotá Metro is launched



# 2000

Start of the deployment of ERTMS in Spain whilst the study of new airport for Madrid is initiated. Ineco do Brasil is created



# 1983

In November 30th Tifsa is created with the goal of developing custom technology for Renfe. First bridge and viaduct inspections



# 2008

Ineco Tifsa becomes a technical support service and resource of the Ministry of Publics Works



# 1992

The first high speed line in Spain, Madrid-Seville, is inaugurated. Ineco took part in its design and implementation, as well as in works in the Expo's



# 2010

Ineco and Tifsa merge under the name Ineco. Malaga airport's new T3, on which Ineco worked profusely, is inaugurated



## 2012

Ineco solidifies its international development with the contracts of the high speed lines of Makkah-Madinah and HS2 in United Kingdom



## 2014

ORAT of the new terminal at Abu Dhabi airport. Contract with the European Commission for the ERTMS deployment supervision throughout Europe until 2030



## 2016

Ineco, as part of the European consortium Spaceopal, begins to run and perform maintenance at the User Service Center for the Galileo System, located in Torrejón de Ardoz (Madrid)



## 2018

50 years since the creation of Ineco: five decades dedicated to the development of transport and its infrastructure



# 50 THE JOURNEY HAS ONLY JUST BEGUN ANNIVERSARY

anniversary

50

