

Industrial
Engineering and
Construction



Smart
Solutions



ICT
Installations



Civil Engineering
and Architecture



Consultancy and
Outsourcing



Aeronautics and
Defence



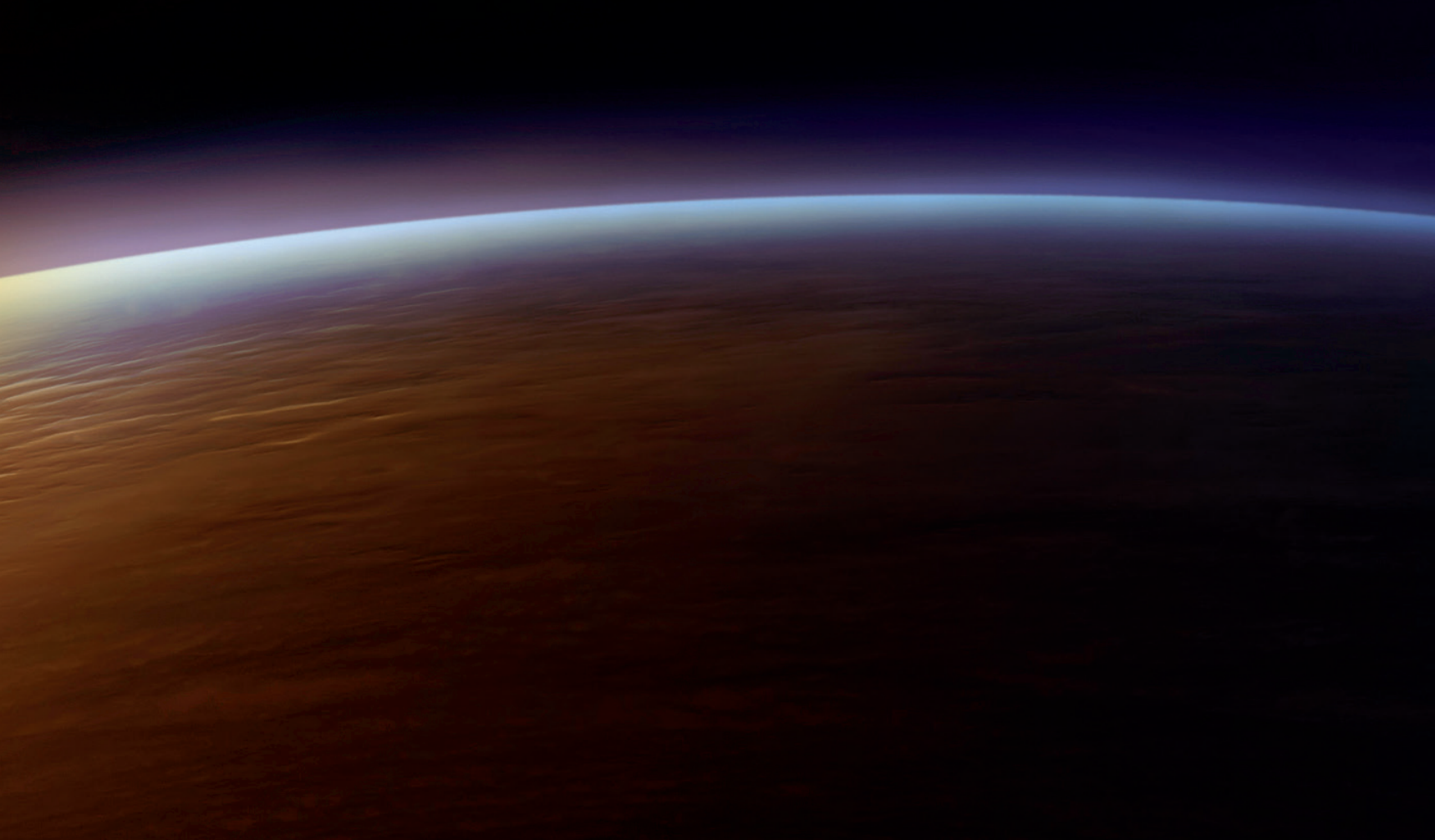
ayesa 

Engineering.
Information.
Imagination.

2014

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Knowledge makes dreams come true



Ayesa - Work and Sectors 2014



Civil Engineering and Architecture Area

Infrastructures

Road Construction:

Motorways · Main Roads · Traffic

Intercity Rail Systems:

High Speed · Urban Stations · Technical Bases · Freight

Urban Rail Systems:

Metros · Trams · Workshops and Garages · Operation Supervision

Bridges and Structures:

Bridges · Epic Structures · Stations

Land Engineering:

Tunnels · Special Foundations · Stability

Speed Circuits:

Permanent · Urban · F1

Intelligent Transportation



Water and Environment

Hydrology:

Planning · Predictions · Regulation · Floods

River Hydraulics:

Channelling · Estuaries · Defences

Dams: Concrete · Loose Materials · Pools · Tanks

Transportation and Use of Water

Canals · Supply · Sanitation · Irrigation · Drainage

Plants and Pumping Stations:

Hydroelectric Power Stations · Pumping Stations · Transient Analysis

Water Quality:

Water Purification Plants · Water Treatment Plants · Desalination Plants

Sustainability:

Environmental Impact · Monitoring · Ecosystems · Corrective Measures



Architecture and Management

Construction:

Residential · Hospitals · Industrial · Sporting · Non-Residential · Stadia · High-rise buildings

Town Planning:

Planning · Urban Development

Fairs and Theme Parks:

Fairs and Exhibitions · Shopping Centres

Restoration:

Monuments



Land Management

Management of Infrastructures and Assets:

Asset Inventory · Georeferencing · GIS · Inventories · Infrastructures

Expropriations:

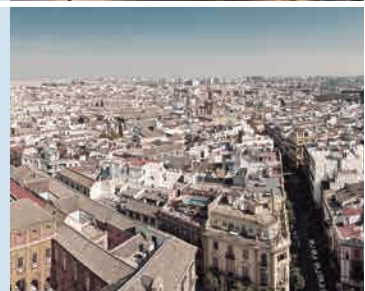
Land Management · Rights of Way

Permitting:

Management of Permits · Legalisation · Administrative Processes

Cadastrals:

Cadastral Management · Registry Management



Airports and Ports

Airport Infrastructures:

Terminals
Airport Facilities
Airfields

Urban Development, Access and Parking
Commercial Ports
Marinas
Coastal Engineering



Consultancy and Outsourcing Area

Consultancy and Outsourcing Area

Public Sector

Economy and Taxes

Human Resources and Employment

Justice and Home Affairs

Education and Universities

Environment, Territory and Concessions



Banking

Core Banking

Risk Management

Channels and Mobility

Integrations and Mergers

Investee Companies and Financial Agents

Corporate Groups

Business Intelligence



Industry

Technological Planning

Economics and Finance

Purchases

E-commerce

Construction Companies

Fleet Management



Water and Natural Resources

Resource Management

Commercial Management

Mining



Utilities

Commercial Systems

Distribution and Transport Networks

Energy Management

Power Generation

Renewable Energy Management

Business Systems



Telecommunications

Systems Designed with the Customer in Mind and Portability:

Marketing · Sales · Customer Support ·

Invoicing and Payment · Interfacing ·

Portability

Operational Systems Solutions

for the End Client:

Network Planning · GIS ·

Resource Management · Project Management · Workforce Management

Business Systems:

Financial · Logistics · Purchases · HR ·

Contracting · Document Management ·

Process Management

Management of Social Media Content



Health and Social Services

New Health Environments

Social Services

Management of Human Capital

Management of Concerts

Management of Ancillary Services

Support for ICT Infrastructures and

Change Management



Industrial Engineering and Construction Area

Energy and Industrial Installations

Mining:

Permitting · Mining Complexes · Utilities ·
On and Off-Site

Building Services and Industrial Complexes:

Industrial Systems · Electrical Power
Systems

Energy:

Solar · Wind · Biomass · Conventional ·
Energy Efficiency



Processing Plants

Yeast

Biofuel

Chemicals

Pharmaceuticals

Industrial Water Treatment



Oil & Gas

Upstream

Refinemen,

Storage and Treatment of LNG



Industrial Construction

EPC

Procurement



Engineering

Design and Project Engineering

Supervision of Construction,

Commissioning and Implementation



Smart Solutions Areas

Smart Cities

Strategic Consultancy

Energy Efficiency



Smart Grids

Smart Meters

Data Management



Smart Mobility

Smart Logistics

Recharging of Electric Vehicles



Smart Cloud

Housing

Hosting

Information Technologies Outsourcing



Aeronautics and Defence Area

Aeronautics

Design and Calculations
Manufacturing
Assembly

Line of Flight
Services and Maintenance
Lean Manufacturing



Airport Services

Consultancy ·

Noise Studies



Defence and Space

Unmanned Aircraft
Military Transport and Refuelling
Aircraft

Systems Integration
Space



ICT Installations Area

Water and Environment Systems:

Hydrological Control:

Hydrologic Warnings · AHIS · AWQIS

Regulation, Transport and Distribution:

Automated Canals ·
Centralised irrigation · Network Efficiency ·
Decision Support Systems

Plants and Pumping Stations:

Energy Efficiency

Influent Water Treatment

Effluent Water Treatment

Seawater and Brackish Water

Desalination Plants



Transport Systems

Urban Transport:

Traffic Management · Control Centres

Rail Transport:

Rail Control · Tunnel Safety ·
Railways · Management of Installations ·

Workshops and Garages · Tunnel Safety

Intercity Transport:

Tolls · Traffic Management · Tunnel
Safety · Intelligent Transportation
Systems



Energy and Industrial Systems

Energy Efficiency
Renewable Energy
Conventional Energy
Industrial Processes

Smart Installations

Air Conditioning · Fire Protection ·
Low Voltage



Security Systems:

Access and Surveillance:

Prisons · Military Bases ·
Unmanned Facilities

Integration of Subsystems:

Smart Prisons



Data Centres

Comprehensive Construction:

Data Centres · Switching Centres





Services

Design and Construction	<ul style="list-style-type: none">• Studies and Designs• Site Management and Supervision• Procurement• Construction and EPC• Commissioning, Implementation and Maintenance• Modernisation and Simulation	
Consultancy	<ul style="list-style-type: none">• Technology• Security• Social Networks• Cloud Computing• Change Management• E-Administration and Processing	
Information Systems	<ul style="list-style-type: none">• Tailored Applications• Software Factories• Geographic Information Systems• Business Intelligence• ERP and CRM• Advanced Internet Services	
Outsourcing	<ul style="list-style-type: none">• Infrastructure Outsourcing• BPO Process Outsourcing• Contact Centre and Virtual Assistance• Outsourcing of Applications	
Technological Installations	<ul style="list-style-type: none">• ICT Solutions• Data Processing Centres• Mission Critical and Value Solutions• Instrumentation and Automation• Remote Control and Command• Installations	
Project Management	<ul style="list-style-type: none">• Project Management• Construction Management• Facility Management• Building• Operation of Infrastructures• Installations	

A few words from the President

“Knowledge has allowed mankind to leave the caves of the past, build cities and enjoy previously unimaginable ways of life”.

The world is undergoing a change in era. The internet has revolutionised human attitudes. Now, anyone, anywhere on the planet, can witness the way of life of the developed world and aspire to become part of it. And this global distribution of information is revolutionising behaviour, shaking up societies and radically changing mankind's journey.

People today, whatever their race or beliefs, aspire to build modern infrastructures and facilities for themselves; they want to be equipped with devices and tools that improve their quality of life; and they dream of a guaranteed supply of food, water and energy. They also seek correct management of the massive amount of information that regulates the social structures that sustain their lives. Your public administration bodies, health, education, justice, security, transportation, communication, personal databases and leisure all require cutting-edge systems to manage them with efficiency, transparency and guarantees. And they also dream of having these. After all, people in today's society demand a broad range of technological services that provide everything they rightfully dream of having.

The necessary tool for such is knowledge, as has always been the case. Knowledge has allowed mankind to leave the caves of the past, build cities and enjoy previously unimaginable ways of life. Wisdom has evolved with the times and has provided solutions to man's problems during each era insofar as possibilities have allowed.

The new era we find ourselves in requires the most cutting-edge knowledge. The needs, technology, human rights and sense of urgency which fill the dreams of the modern global man demand cutting-edge services founded on first-rate knowledge which enable progress to occur for the benefit of man and his environment. Supplying this knowledge, which makes dreams come true, is Ayesa's challenge and mission.

José Luis Manzanares Japón
President



A professional portrait of José Luis Manzanares Abásolo. He is a man with dark hair, wearing glasses, a dark grey suit jacket, a light-colored shirt, and a grey tie. He has his arms crossed and is wearing a watch on his left wrist. The background is plain white.

José Luis Manzanares Abásolo
Executive Vice President
Engineering and Territory

A professional portrait of Arancha Manzanares Abásolo. She is a woman with dark hair pulled back, wearing a dark grey blazer over a light-colored button-down shirt. She is smiling slightly and looking directly at the camera. The background is plain white.

Arancha Manzanares Abásolo
Executive Vice President
Consultancy and Technology

President's Office



José Luis Manzanares Japón
President



Ana Manzanares Abásolo
President of the Ayesa Foundation



José Luis Manzanares Abásolo
*Executive Vice President
Engineering and Territory*



Arancha Manzanares Abásolo
*Executive Vice President
Consultancy and Technology*

Management team



Rosalío Alonso Peces
*Head of
Civil Engineering and
Architecture*



Javier Alonso Gorostiza
*Head of
Consultancy and
Outsourcing*



Pablo Gómez Falcón
*Head of
Industrial Engineering*



Juan de Dios Hermosín
*Head of
Smart Solutions*



Pedro Sanz Marcos
*Head of
Aeronautics and Defence*



Xavier Minguillón Cebrián
*Head of
ICT Installations*

Corporate team



Francisco García Martín
*Adviser to the
President*



Nagi Chehab
*International Vice President
Institutional Relations*



Isidoro Carrillo de las Heras
Head of Expansion



Germán del Real Urbano
*General Corporate
Director*



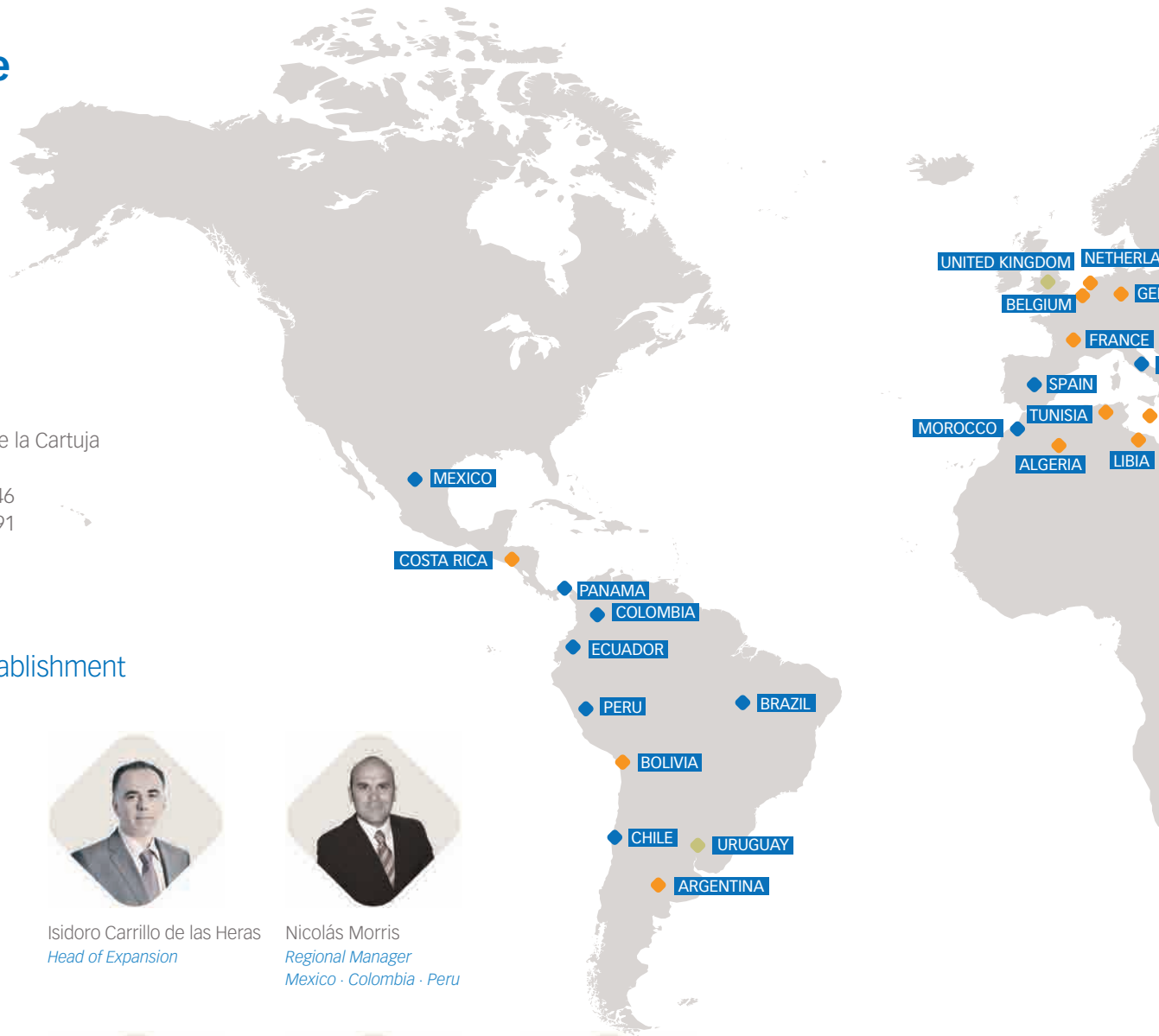
Rafael Fernández Cantillana
Senior Vice President

Worldwide

- ◆ Delegations
- ◆ Projects
- ◆ Commercial Offices

Head Office

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International Establishment



Nagi Chehab
*International Vice President
 Institutional Relations*



Isidoro Carrillo de las Heras
Head of Expansion



Nicolás Morris
*Regional Manager
 Mexico · Colombia · Peru*



Juan Luis Campos Fernández
Country Manager for Brazil



Artur Majczak
*Country Manager and Head of
 Civil Engineering and
 Architecture for Poland*



J. Ignacio Saura Díaz
*Country Manager and Head of
 Industry for Peru*



Antonio Sierra Millán
Country Manager for Chile



Antonio Galán Vázquez
*Country Manager and Head of
 Consultancy and Outsourcing
 for Ecuador*



Mariluz Ramírez Gálvez
*Country Manager and Head of
 Civil Engineering and
 Architecture for Colombia*



Mariano Álvarez Arce
*Country Manager and Head
 of Civil Engineering and
 Architecture for India*



Mohsine Edfouf
Country Manager for Morocco



Antonio Martínez Romero
Country Manager for Malaysia



Engineering



Raúl Bravo Ávila
Panama



Abderraouf Mirhiss
Morocco



José Ramón Delgado González
Ecuador



Carlos Sorni Fortea
Ingeniería Santo Domingo



Luis Castillo Cano-Cortés
Peru



Luis Garrido Romero
Mexico

Smart Solutions



Manuel Urquiza Estrada
Managing Director of Actica



José Manuel Reina Gil
Panama



Manuel Castro Ruíz
Peru



Luis M. Ruíz del Portal
Colombia

Consultancy and Outsourcing

Establishment in Spain

Directors



Ignacio Hinojosa Sánchez-B.
Spain



Xavier Minguillón Cebrián
*Catalonia and
the Balearic Islands*



Lorenzo Moreno de la Cruz
Levante



Joseba Inchaurreaga
Basque Country

Civil Engineering and Architecture



Sebastià Ribot Florit
Barcelona



Antonio Molina Ortíz
Córdoba

Consultancy and Outsourcing



Jesús Martínez-Herrada
Madrid



Julio Román Gil
Mérida



Manuel Fernández Fernández
Barcelona



J. Antonio Vázquez Rodríguez
Canary Islands

Corporate Management



Antonio Figueroa Romero
*Head of Economics and
Finance*



Ana Fuentes Cruz
*Head of Corporate Legal
Services*



Pablo Rodríguez Izquierdo
*Head of HR and
Communication*



Óscar Alcobendas Capella
*Chief Information
Officer (CIO)*

CaixaBank Tower. Seville (Spain).



AYESA in Figures

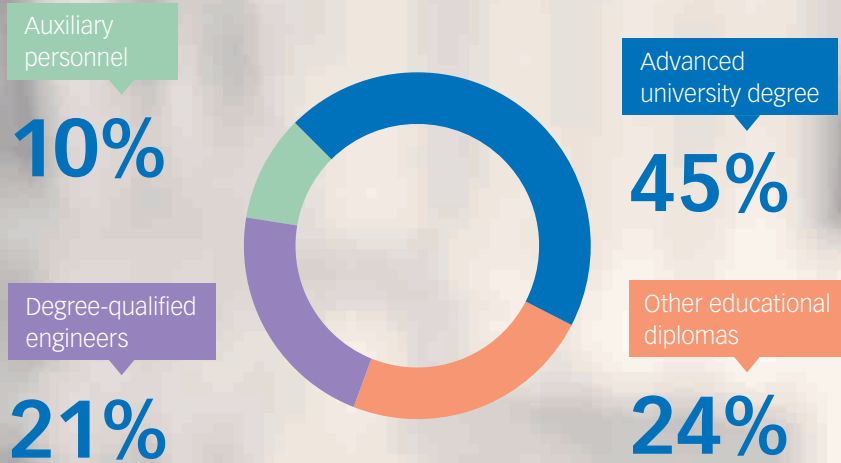
Balance Sheet

	2013	2012
Fixed Assets	38,25	37,20
Current Assets	118,44	115,22
Liquid Assets	31,10	30,30
Total Assets	187,79	182,72
Net Assets	68,81	66,28
Long-term liabilities	27,31	30,47
Short-term liabilities	91,68	85,97
Total Liabilities	187,79	182,72
Number of employees as of 31st December	3.165	2.836
Profits after tax	4,61	3,85
Total Income	239,06	213,23
Portfolio as of 31st December	335,20	332,30

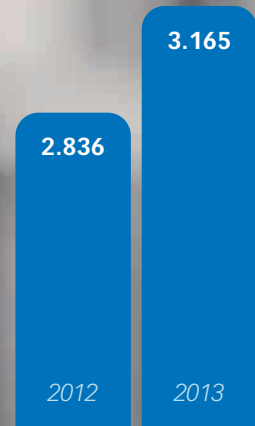
Data given in millions of euros

Human Resources

Percentage of employees according to qualification



Number of employees as of 31st December 2013



Civil Engineering and Architecture Area

Some dreams have to be achieved.
Others have to be built.
In both cases you need someone
who knows how to plan.



Rosalío Alonso Peces
Managing Director



Fernando García Valero
Head of Engineering



Práxedes Giménez Jiménez
Technical Director



Javier Descarga Nápoles
*Infrastructures and Airports in
the Americas*



Marisa Concha Chabaneix
*Infrastructures and Airports in
Europe, Asia and Africa*



José M. González de Castro
Water and Environment



Juan I. de Cea García
Land Management




José Manuel Santiago Calvo
Architecture and Project Management

Our more than forty years' experience carrying out extremely varied architectural and civil engineering studies, projects, and developments, combined with the energy and expertise of our personnel, have made us a benchmark as far as engineering companies go.

All our work combines functionality, design, the demands of aesthetics and formality, concern for the environment, careful consideration of urban impact and integration into surroundings –however sensitive it need be to environmental issues, however complicated its geotechnics and orography–, optimisation of costs and resources, and constant innovation to produce the best performance with the highest security.

The needs of the modern world in 2014 reflect complex processes which do not have standard solutions; they require multidisciplinary teams capable of turning obstacles, whether technical, technological, or even regulatory or social, into crossroads, and new ways of coexisting.

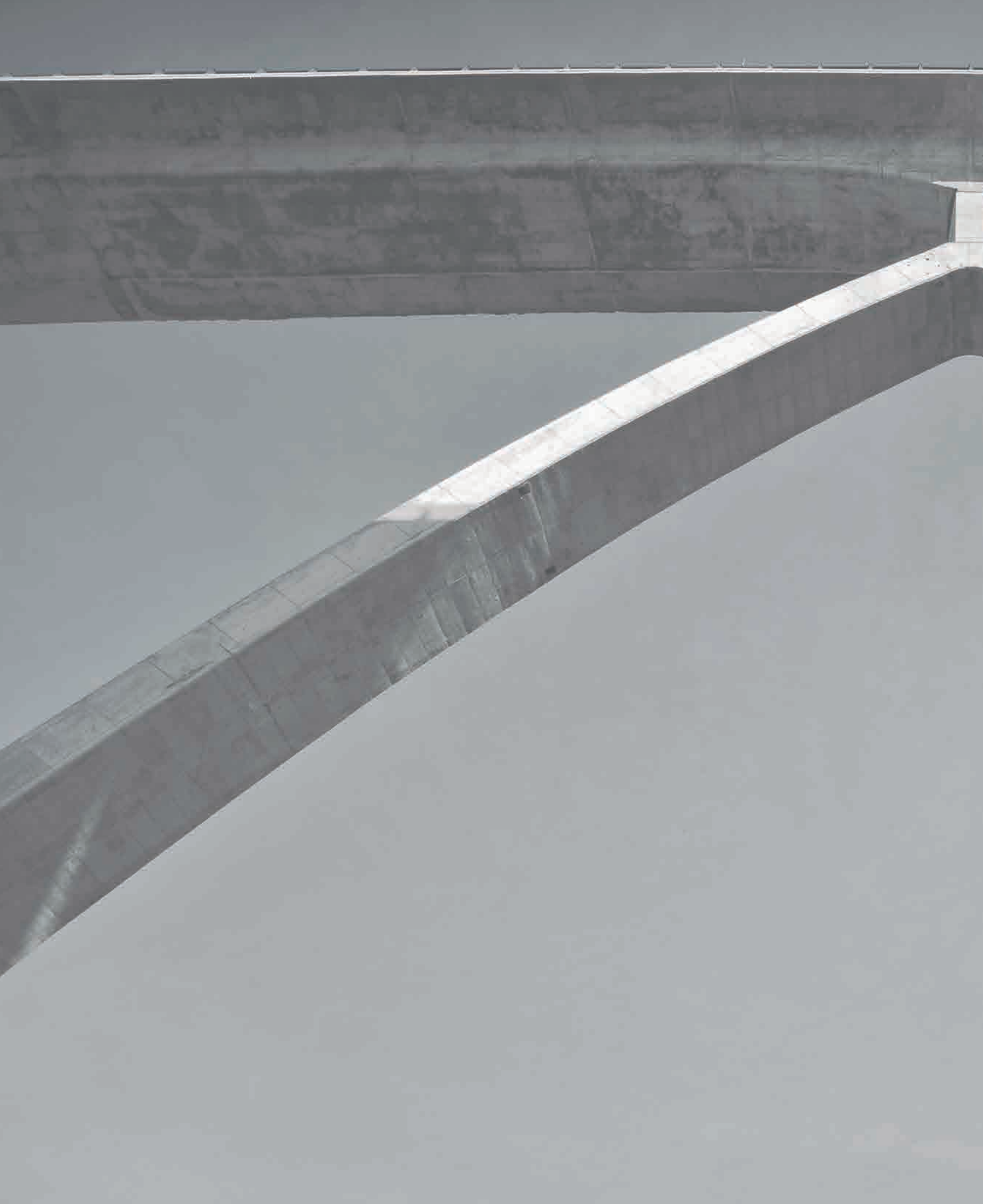


Controlling the topography of surveying, measuring the compaction of fill and quality of concrete. The technical approach to site supervision is just one component of this monitoring that a client requires for peace of mind. For this we must combine adherence to deadlines and budgets, prioritisation of critical paths, communication with relevant authorities and the keeping of thorough records. We have increasingly applied this way of working, and incorporated it into our philosophy for supervision.

Last year, it also helped us to develop ourselves with bigger and better guarantees in the English-speaking world. A good example is the joint venture tender with CAF-Ansaldo for the Depots of the Doha Metro for Qatar Rail, which we have carried out almost exclusively using Indian production methods, supervised and directed by Spanish personnel.

It is especially pleasing to see how we can rely on staff in India who are highly trained and educated in English to tackle projects relating to architecture, structures and installations with our own methodology. We constantly fill our teams with professionals who, as well as their great technical talent and project leadership abilities, bring new skills which allow them to adapt flexibly to increasingly demanding and changeable environments, often out of their comfort zone, maintain last decade's successful growth rate in Latin America, and finally, grow in non-Spanish-speaking countries, thus overcoming the cultural barrier.

Rosalío Alonso Peces
Managing Director



Civil Engineering and Architecture - Infrastructures

Road Construction

Functionality, design, integration into the surroundings, optimisation of costs and resources, as well as permanent innovation, are the foundations of our formula.

Road Construction



Viaducto Autovía del Mediterráneo (Motorway Viaduct). Almuñécar (Spain).



Viaducto Autovía del Mediterráneo (Motorway Viaduct). Almuñécar (Spain).



Motorways and Main Roads

More than 2000 km, half of which motorways, built in Spain, Mexico, Brazil, Peru, Poland, India, Canada, etc. Urban, metropolitan, intercity, mountain, and coastal roads. Large high-quality communication nodes. Informational, feasibility and preliminary studies, preliminary designs, surveying projects, detailed engineering and tenders. Site supervision and projects. Road safety projects. Audits. Cutting-edge software for the optimisation of surveying, visibility, design, virtual models of the terrain, and graphic treatment.

Tunnels

Specialists in the development of road tunnels. Experts in geotechnics, civil construction, and safety installations. A wealth of experience in projects, technical assistance and site management, as well as the management of their safe operation, with references in projects involving large diameters, increased length, Karstic regions, urban surveying, tunnel boring machines and alternative drilling methods).



Traffic and Intelligent Transportation

Studies of accessibility, road management, traffic, demand and mobility. Specific studies on the functioning of complex junctions, roundabouts, intersections, traffic light systems, and studies on capacity. Specific software (TRIPS, CUBE) for evaluating road networks. Screening surveys, appraisals, taking registrations. ITS (Intelligent Transport Systems) applications: toll systems, safety and monitoring in road tunnels, management of urban and road traffic, public transport, fleet management.

Speed Circuits

Knowledge of the strict requirements issued by the FIA, ASN, F1M and the CIK-FIA. Design of our own IT applications and simulation programs (Computer Safety Analysis System). Finalists in the FIFA Facilities Advisory Partner Contest. Official provider of technical consulting services regarding sporting facilities for the Royal Spanish Motor Racing Federation (ASN of Spain). Permanent and street circuits.



Civil Engineering and Architecture - Infrastructures

Rail Systems Urban and Intercity

A wealth of experience in high speed facilities.
Over 140 studies and large-scale rail projects.
Worldwide leaders in metropolitan railway systems.
Urban and architectural integration of projects.



Urban and Intercity Rail Systems



High Speed

Drafting of over 540 km of rail projects, including purpose-built structures for tunnels and structures and over 850 km of lines laid in Spain, Morocco and India.

Design of experimental facilities and testing at the Centre for High Railway Technology in Spain. Architecture and engineering projects for complex urban stations.

Design and supervision of base assembly.

Conventional Rail Systems

Ayesa also carries out conventional rail projects for passenger and freight lines. It specialises in projects involving rail yards, modal interconnection centres and all rail operations. It has extensive references with regards to the installations of workshops and garages, for railway lines as well as for trams and metro systems. Its teams are experts in urban integration, functionality of facilities, specific needs of rolling stock, environmental implications, efficiency of construction work, etc.



Línea 1 Metro de Panamá.



Rail complexes in PLAZA Zaragoza (Spain).

Metros and Trams

Ayesa has worked on the metro systems of Seville, Malaga, Donostia, Mexico City, Delhi, Panama City, Bogotá, Lima, Jaipur and Quito. It is also one of the most prestigious engineering companies in the tram sector with references in Parla, Zaragoza, Leioa, Casablanca, Oran, Olsztyn (Poland).

It specialises in the management of urban lines, the optimisation of transport services, and new methods of payment. It supervises the quality of operation and service. It assesses and organises transport management systems in their entirety.

Railway Installations

Designs for safety facilities, communications and electrification of high-speed, conventional, metropolitan and tram railways. Assistance systems for operation and safety: ATP/ATO, ERTMS, ABAS.

Interlocking of geographic units and electric technology. Communication systems: PIS, TETRA, data transmission, video surveillance, structured cabling, telephony, intercoms, public address systems, GSM-R, ticketing systems. Local and remote control. Catenaries for trams, rigid catenaries, those for conventional lines, as well as those for high-speed lines. Traction substations: powered by continuous alternating current for indoor, reinforced and outdoor substations. Energy efficiency of lines.



Civil Engineering and Architecture - Infrastructures

Bridges, Structures and Geotechnics

Design, shape, function, efficiency, scenery...

Specialists in the design and calculation of purpose-built structures.
Knowledgeable about land and experts on complex and unstable areas.
Creativity in construction methods and economy of means, as well as in
the simplicity of forms, innovation and technical research.



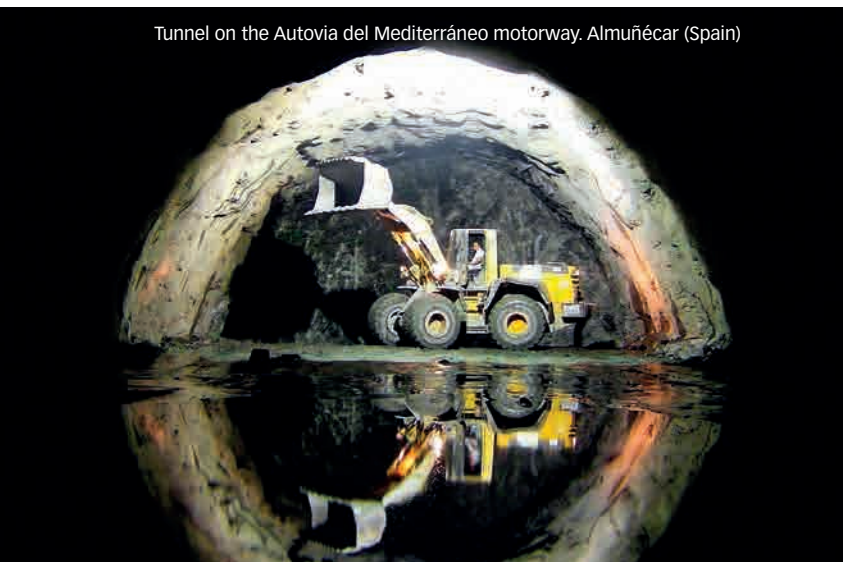
Ibn Firnas Bridge, Cordoba (Spain).

Bridges, Structures and Geotechnics

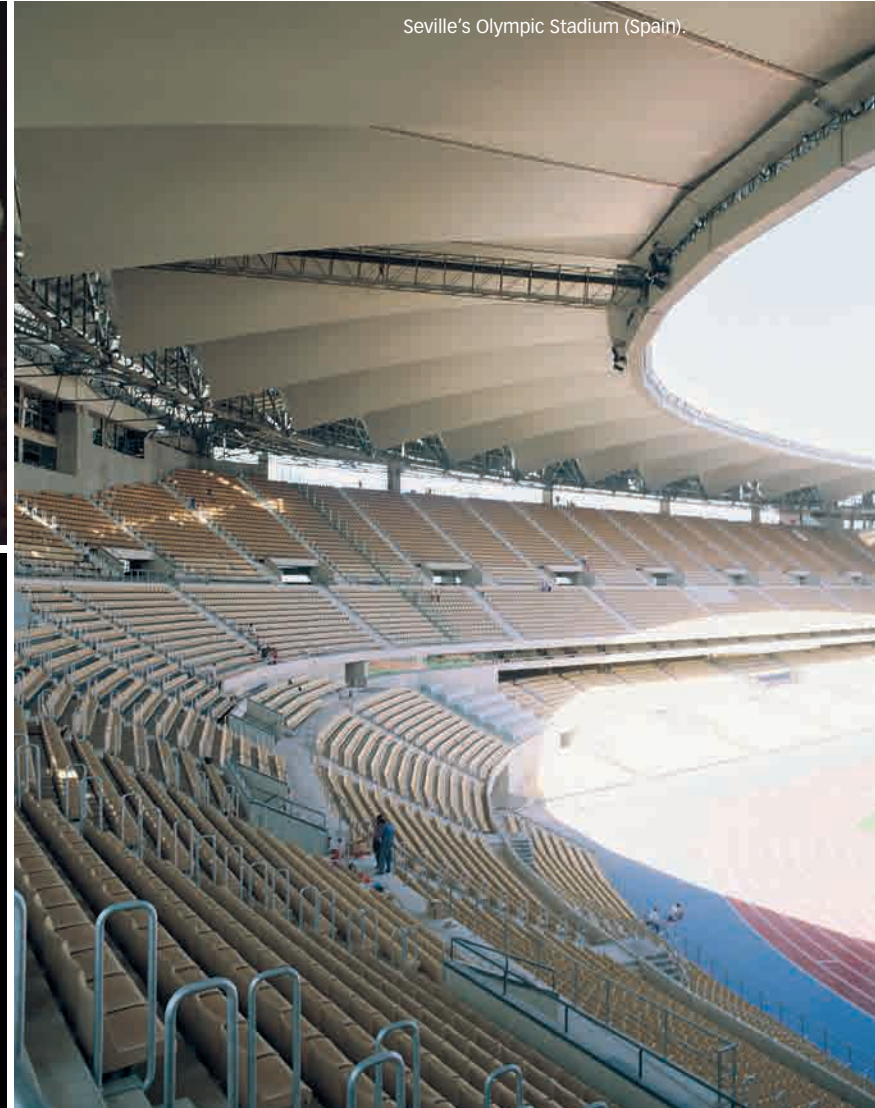
Aqueduct II. Querétaro (Mexico).



Tunnel on the Autovia del Mediterráneo motorway. Almuñécar (Spain)



Seville's Olympic Stadium (Spain).



Tunnels

For the underground work associated with hydraulic conductivity and large transport tunnels, Ayesa provides a wide range of services: technical feasibility studies, numerical calculation models, complex analysis of geotechnical issues and solutions regarding the presence of groundwater. Site management and management of services related to the monitoring of tunnels, whether drilled with tunnel boring machines or using conventional methods, through rock or soft earth.

Special Foundations

Advanced calculation tools for the design and optimisation of special foundations in any type of earth. Designs of complex solutions for foundations and retention, linked to geotechnical problems such as major landslides, as well as expansive and collapsible soils.

The 'Guardián del Castillo' Bridge. Seville (Spain).



Bridges and Stadia

The design, planning and supervision of purpose-built bridges, from small to large, long-span ones for every type of load and use. Dynamic analysis for the passing of high-speed trains. Experience in the designing of sporting and concert facilities. The structural design of Seville's Olympic Stadium stands out, being one of Spain's most emblematic both in terms of the number of spectators it holds and the diversity of events which can be hosted there.

Epic Structures

Ayesa is the only engineering company in the world to design epic structures, structures which, as well as their solid and harmonious nature, have a design which forms a dialogue with the onlooker, through their shape and by way of a message inspired by historic and legendary events.



Puente Genil Specialised Hospital, Cordoba (Spain)

Civil Engineering and Architecture - Architecture and Management

Architecture

Excellence in design, function and efficiency for hospitals, schools, courts and prisons, offices, shopping centres, industrial buildings, stations and housing.

Architecture



Administrative Building, Regional Government of Andalusia. Seville (Spain).



CaixaBank Tower. Seville (Spain).

Building

Industrial building to achieve maximum process efficiency, from the simplest processes to the most complex. Functional result and optimal cost-image relation. Architecture for transport, including railway and metro stations, interchanges, terminals and airports. Building projects in unique port areas and those linked to the shipping industry. Smart and human hospitals, from large hospitals to small primary care centres. Ultramodern offices, including modular offices, corporate headquarters and public administration headquarters. Courts and prisons. Universities and educational institutions. Housing.

Purpose-Built Buildings

Architecture for successful shopping centres. Design as a key component for attracting customers. Planning and distribution of work. Management of movement flow. Accessibility of facilities. Sizing of the various components to ensure the comfort and safety of users. High-rise buildings, with experts in vertical circulation, fire safety, the effects of wind and seismic activity; foundations which support heavy loads; use of light and rarely used materials; and unique construction processes.



The Universal Exposition of Seville (Expo '92). - Seville (Spain).



Restoration of Seville Cathedral (Spain).

Town Planning and Large Spaces

Experts in planning, sociological analysis and the design of habitable, sustainable and human areas and spaces. Analysis and legal and economic management of land. Projects of various scales, from the urban design of public spaces and the various components which make them up, right through to the planning and design of infrastructures which give them shape, roads, transport, water, energy, sanitation, etc. Architecture for large spaces, logistics parks, industrial estates, play parks and theme parks. Theme parks Fairs and universal expositions.

Restoration

Architectural restoration of monuments and highly fragile buildings. Reproduction through IT systems for construction methods. Functional and aesthetic reconstruction of the parts to be repaired. Conservation (structural consolidation of a building without changing its use) and renovation (change in use) of monuments, maintaining the aesthetic and historic character of the building, their formal and contextual quality, their representative and documentary value, and their historic and artistic history unchanged.





Civil Engineering and Architecture - Water and Environment

Transportation and Use of Water

Leading experts in the design and supervision of large water regulation, supply and sanitation systems, as well as being at the forefront of technology and the optimisation of irrigation systems.

Transportation and Use of Water



Navarra Canal (Spain).



Aqueduct II. Querétaro (Mexico).

Canals and Networks

Large, automated and conventional canals. Ayesa's own technology for regulation, simulation, geotechnics and construction methods. Supply networks in large cities and regions. Hydraulic, technical and functional design of installations, tanks and purpose-built elements. Mathematical simulation models. Management plans for drainage and sanitation. Large emitters and collectors. Inventory and network diagnostics. Design of modern irrigation facilities. Efficiency for water, energy and risk investment with optimal networks and smart response.

Network Efficiency

Optimisation of supply network efficiency.
Reduction in percentage of leakages.
Improved overall management of the network. Monitoring Methodology Active monitoring of the network which facilitates monitoring of and a reduction in water unaccounted for.
Subdivision and monitoring of minimum nocturnal flow (MNF).
Actions to improve the network. Training of operating personnel in the methodology of active monitoring of the supply network.



Zapotillo Dam (Mexico).



Carboneras Desalination Plant. Almeria (Spain).


Dams

Execution of projects and management of the construction of gravity dams, arch dams and double-curvature arch dams. Dams made from vibrated and roller compacted concrete; loose materials, both homogeneous and heterogeneous and area-focused. Calculations of dam stability using advanced software. Design of outlet systems, spillways and stilling basins.

Hydroelectric Plants and Pumping Stations

Detailed study of the transient regime and protection components. Design, supervision and technical and efficiency optimisation of projects relating to hydroelectric plants, run-of-river power stations, plants at the foot of dams, and storage plants. Optimisation of energy and operations in all kinds of pumping stations, including hydraulic and mechanical systems. Studies on the regulation of complex systems. Variation in speed. Advanced metal fabrication.





Civil Engineering and Architecture - Water and Environment

Water and Sustainability

Water sustainability requires a multidisciplinary approach to hydrology, river hydrology, quality of resources and the environment. Science, innovation, process simulation software and the intervention of our own experts are the basic tools we use to guarantee success.

Water and Sustainability



Atotonilco WWTP (Mexico).

Hydrology

We plan and manage the efficiency of water use, the optimisation of energy and the integration of projects into their surrounding environments, or the improvement of these components in the case of poor performance.

We use simulations and online management for the prediction and prevention of floods, the determination of areas at risk of flooding, the temporal distribution of water from a basin and its regulation, the protection and fight against erosion, sedimentation and any changes in the quality of river water (salinity and dispersion of pollutants).

River Hydraulics

Experts in river channelling and estuaries. Ayesa has extensive experience in projects and the supervision of work related to the channelling of rivers and streams, simulations of the performance of channels for extreme systems and the integration of modified channels into their natural environment. We have models for the quality of rivers, sediment discharge and the role of erosion and dredging. The Company has extensive knowledge in the dynamics of estuaries, the development of hydrodynamic models, restoration projects, specific studies, and hydrological planning in the sphere of transitional and coastal waters.



Water Quality

At the forefront of technique for treatment, purification and water desalination facilities. With proven experience in the purification of over 2,500,000 m³/day, management of the world's largest sewage treatment plant, reuse of effluents and 600,000 m³/ day of desalinated water. Remote control of the environmental quality in rivers and ecosystems. Modelling and simulation of pollution and corrective measures.

Environment

Techniques which incorporate environmental variables into the planning process and design of infrastructures and installations; environmental impact studies, sustainability reports, specific studies of habitats and taxa, projects involving corrective measures, landscape restoration and integration, compensatory measures, environmental monitoring, sensing and the biological monitoring of the quality of bodies of surface water. The study and decontamination of polluted soils, infrastructures for the management and treatment of waste and their hydrogeological impact. EPC of biogas harnessed from landfills.



Terminals

Planning, supervision and management of construction work on passenger terminals, whether building from scratch, expanding or redeveloping, in Spain, Mexico, Peru and Panama.

Platforms, Runways and Taxiways

Planning, supervision and management of construction work both in Spain and in Mexico with all airport agencies in these countries. New designs, expansion projects and repairs to aircraft parking aprons. Feasibility studies for the execution of new runways. Projects to create new runways. Taxiways and rapid-exit taxiways. Expansion and renovation of tarmac. Repaving of runways and taxiways. References in Spain, Mexico and Nepal.



Airport and port infrastructures have undergone a significant makeover in the past decade. We have made a decisive contribution to the world's most modern airports, in their construction, expansion and renovation, with design, supervision and maintenance services.

Ancillary Installations and Special Works

Projects and site supervision for firefighting buildings, electricity power plants, improvements to electricity grids, fuel distribution networks, fire prevention networks, installations involving beacons, aircraft approach, drainage and the treatment of water. Ensuring that aerodromes adhere to ICAO regulations.

Ports

Renovation, expansion and construction of new port infrastructures, such as fishing ports, docks and breakwaters, coastal and estuarine engineering, marinas and sports facilities, industrial ports, etc.



Expropriations, Land Management and Rights of Way

Management of more than 30,000 records. Comprehensive technical and legal assistance. From public information processes to legal aspects, in addition to market studies, issuing of certificates, negotiations to reach agreements, drafting evaluations and appraisals, as well as their defence before public bodies and private agencies etc. Valuation of land, buildings, easement, temporary occupancy, closing or moving businesses, rights in rem and compensatory damages, etc.

Management of Permits and Legalisation of Installations and Infrastructures (Permitting)

Management of the corresponding authorisations and permits issued by a variety of public bodies and private agencies. Monitoring of technical, legal, environmental and administrative aspects.



Management of Property Inventories

Legal and registry regularisation of property, processes of purchase and transfer and optimisation of real estate. Graphic, alphanumerical and cadastral databases, those for urban property and buildings in rural areas. Management of real estate for public and private companies. Outcropping of property, knowledge on the state of conservation, property management, accounting adaptation of property, depreciation control, etc. Processes involving the defence of assets, profitability of assets and optimisation of management. Preparing, carrying out and constantly updating inventories.

Territorial Infrastructures

Georeferencing systems. Topographic control networks. Infrastructure inventories: supply networks, sanitation, telephony, oil & gas, roads, railways, etc. Calculation of algorithms for automated and intelligent management for their running. Design and development of territorial databases with GPS support. Linking these systems to ERP management environments, Ayesa's own information management system for the purchase of land by expropriation, land management and rights of way.

Consultancy and Outsourcing Area

We know the potential of technology to change the world. But we don't forget that it is our spirit, as individuals and as a society, which allows technology to advance.



Javier Alonso Gorostiza
Managing Director, Consulting and Outsourcing



Margarita López Sánchez
Deputy Managing Director



Isidro Fornos Morón
Public Administration, Banking and Insurance



Juan de Dios Herмосín
Information Technology Outsourcing



J. Manuel Velarde Gestera
Health and Social Services



Javier Requejo Sigüenza
Industry and BPO



Cayetano Sierra Rivera
Water and Natural Resources, Telecommunications and Utilities

We are pioneers in a sphere in which, as we go deeper and deeper, we are constantly pushing the boundaries of our knowledge. This is no small feat and all of us, individuals, companies and public administrations, have become means of communication, connected to many variables in the real world through information technology.

Ayesa transforms these technologies into concepts, services and solutions which provide added value to companies and public institutions in many lines of business. In this way, we maximise the benefits of our collaborative effort and provide mechanisms which ensure the mission, vision and values of our clients, to whom we are always committed, are respected.

Ayesa's consultancy services are different. A breath of fresh air to breathe fresh life into old methods with virtual solutions which join management and reality.



We currently find ourselves in the midst of a cultural and organisational transformational process, which is why each small change is a milestone in itself. However, I believe that for the Consultancy and Outsourcing Area, 2013 was a year in which we consolidated our strategy of specialising in SAP and in which we made great strides towards our goals regarding international presence.

From this point onwards, we'll be moving forward along a path which, on the one hand, will lead to the improvement of our services and solutions, and on the other, will allow us to fully integrate new local resources into our international teams.

Javier Alonso Gorostiza
Managing Director

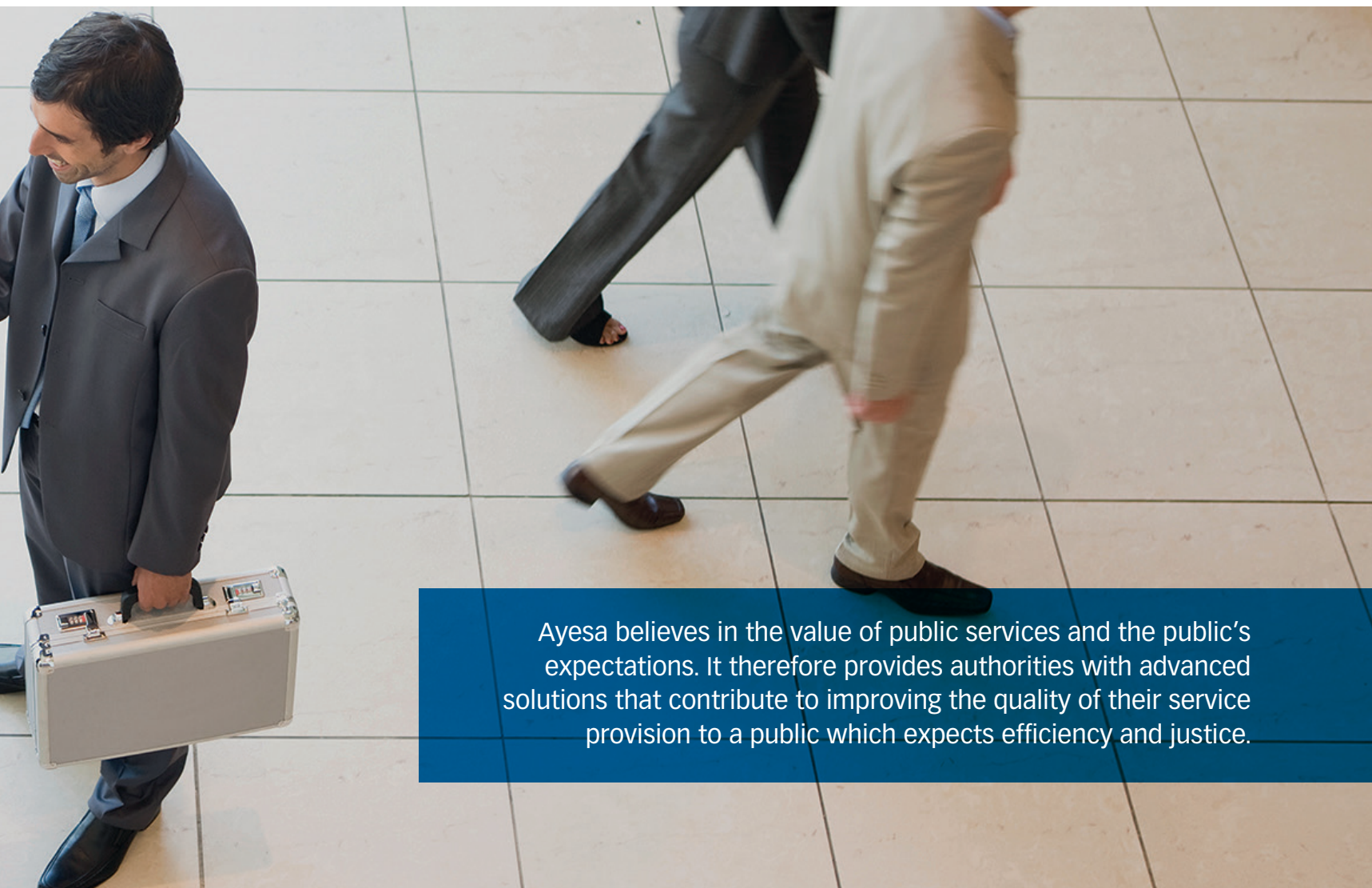


Public Finances

ERP corporate solutions covering the functional needs of any public organisation. Public procurement, budgets, expenditure and invoice management, accountancy, control of public corporations, subsidies, earmarked funding and treasury. Solutions integrated with e-administration platforms for local and national taxes.

Human Resources and Employment

Ayesa has its own model of comprehensive solutions for public institutions, which are integrated, centralised and can be easily customised. They have a transmission platform and a high-capacity document management system. Training and people management. Management framework called 'Itinerario Personalizado de Inserción Laboral' (Customised Job Placement Plan) with comprehensive information systems based on advice, real-time information, customisation and integration. Comprehensive file management systems: establishment and implementation of processes and management of training on e-administration platforms.



Ayesa believes in the value of public services and the public's expectations. It therefore provides authorities with advanced solutions that contribute to improving the quality of their service provision to a public which expects efficiency and justice.

Justice

Ayesa built the Comprehensive Technological Platform known as A-LEX for the New Judicial Office (NOJ). Management and Procedural Consultancy Projects. Themed portals, management of institutes of legal medicine, legal offices, young offender centres, free legal assistance and civil registries. Business intelligence solutions to represent information on crime rates, offences and infringements of criminal law (Crime Observatory).

Education & E-learning

An evolved educational model consisting of educational management software, teaching and academic performance systems, school-family communication tools, apps, e-learning solutions, virtual desktops and repositories for learning resources.



Social Services

Comprehensive corporate system for social services: management of incentives, aid and benefits. Management of dependant persons: assessment of dependency and rights. Registering of victims of gender-related violence and notification of protection orders. Systems for the detection and notification of child abuse. Management system for residences for the elderly. Immigration management. Advanced, home-automated and multimedia remote care for dependent persons. Assistance system at the workplace of people with a visual, auditory or cognitive disability.

Health

Information systems in hospitals and primary care centres. Model divided into four main areas to provide support in corporate tasks. Monitoring model which ensures compliance with Service Level Agreements (SLAs) and the fulfilment of tasks. Health portals and integrated solutions for the needs of the public health system in its dealings with private hospitals.



We are a benchmark technological partner in the area of health-related human resource management, serving more than 120,000 public sector workers and millions of patients.

Health and Social Services

Consultancy and solutions targeted at managing and supporting health services. Systems of coordination and collaboration between public and private institutions and personal care. Comprehensive management of services with proven experience in healthcare institutions, the management of their professionals and public services. Collaboration with the best experts in the field.

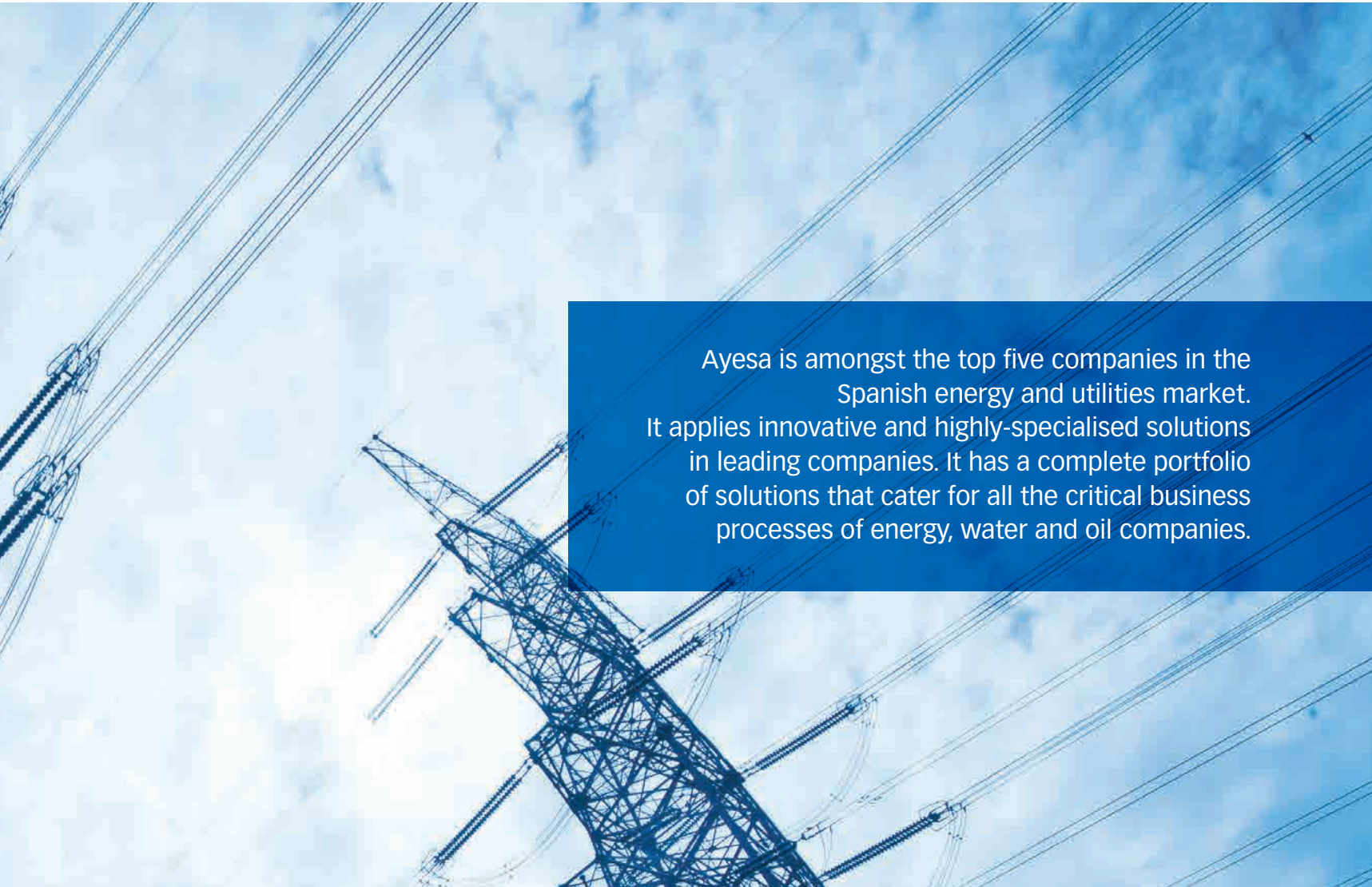


Trading Systems

Business management systems (back office), customer service (front office), both integrated with Business Intelligence, Data Warehouse and Data Mart. Large proprietary systems with millions of lines of code and the capacity to process enormous volumes of information securely. Systems integrated with SAP IS-U, Oracle Siebel, etc. Development, maintenance and support of systems which manage more than 12 million supply points, with 10 million customers, issuing more than 600,000 invoices each day and managing 2 million field transactions per year.

Distribution and Transportation of Energy

Systems to run electricity, gas and oil networks. Remote control and operation of the electric network; network simulation and distribution tariff model simulation. Inventory of facilities, maintenance, management of construction work, projects and work on the network, as well as planning related to the setting-up of energy networks. Smart electricity distribution networks. Ayesa's systems allow automatic action in real time and the integration of remotely-managed digital electric meters onto the network.



Ayesa is amongst the top five companies in the Spanish energy and utilities market. It applies innovative and highly-specialised solutions in leading companies. It has a complete portfolio of solutions that cater for all the critical business processes of energy, water and oil companies.

Energy Management

Development and support of systems in collaboration with trading companies on a global scale: systems for oil, gas, electricity, and especially CO₂, systems to manage energy in local markets, demand forecasting systems, energy movement and energy balance management systems, management of pool offers (OMEL in Spain's case) and transaction settlement (matching) systems.

Energy Generation

Comprehensive management of electrical power plants: SAP, RFID devices, SCADA, and tailored developments in web environments. Monitoring and operation systems, management of work, predictive, preventative and corrective maintenance, management of fuel, integrated logistics systems and management of coalfields. Environmental systems: control of emissions, waste disposal and refrigeration circuit treatment. Monitoring of sites distributing renewable energy, with control of production, metering systems, special systems for energy sales, and operation of plants.



We bring innovation and knowledge so that operators and the media sector adapt to new technologies and provide better services to consumers.

Management of Audiovisual Content

Creation and management of audiovisual portals, as well as making them more dynamic.

Creation of audio and video channels, on-demand services through streaming and downloads, content delivery networks (CDNs), inclusion of various advertising models and advertising campaign managers. Integration with external social networks and tools for the updating of content and press agencies.

Customer Loyalty

Management and utilization of large amounts of information relating to customer loyalty programs, prediction and detection of customer attrition (CHURN) and the classification of campaigns.




Mobile Channels for Operators

Generation of multi-device portals which include self-services, automatic content adjustment, access through two-dimensional codes for users, location services and integration services with external data sources.

Social Media as a Means of Communicating

Implementation of SEO services to improve the positioning of businesses online and increase traffic. Development of social media strategies for various portals and information systems.



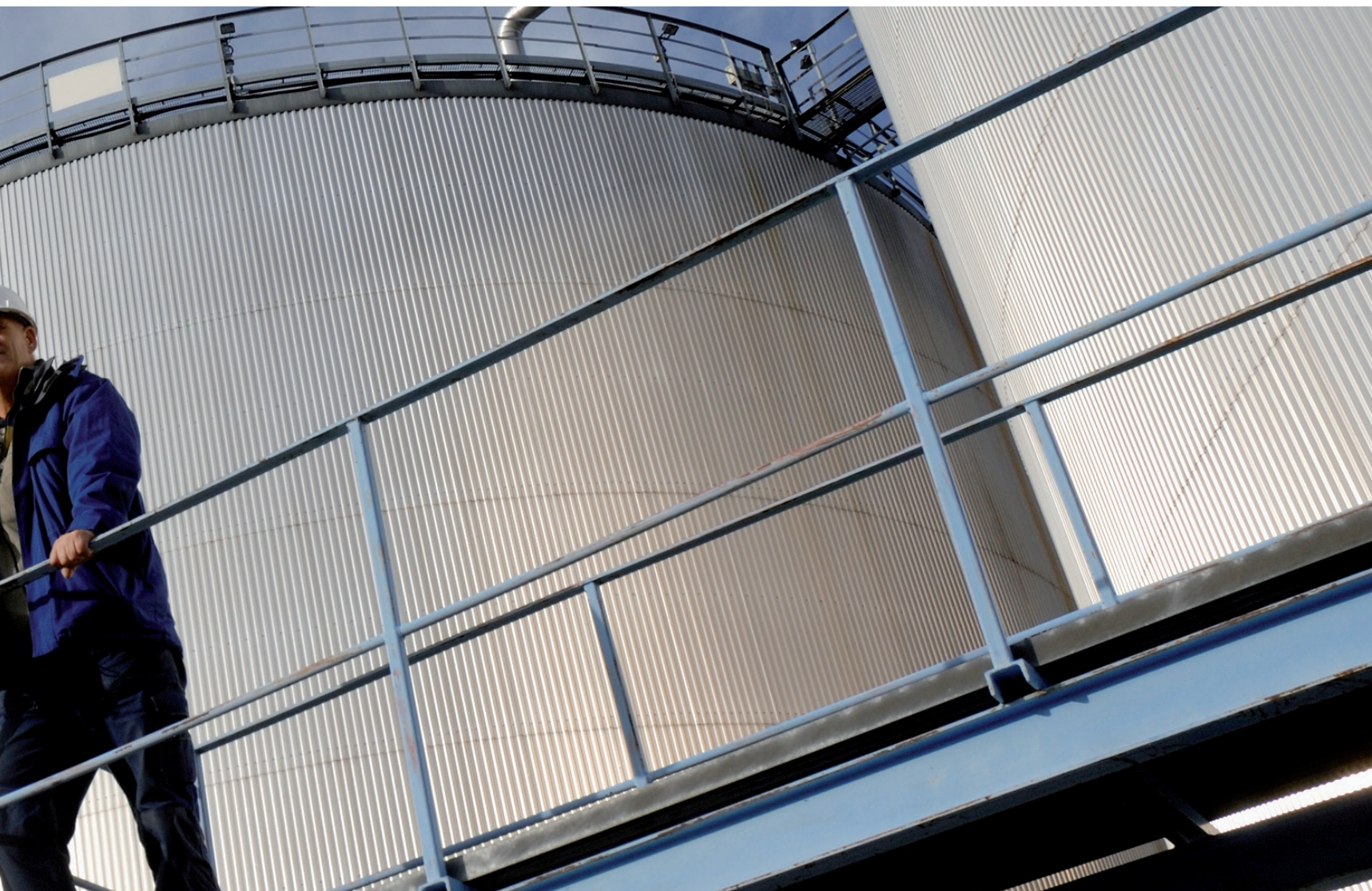
Ayesa offers solutions adapted to each sector and size in order to improve management capacity and internal processes.

Technological Planning, Economics and Finances

Design of information systems which enable us to be aware of the current situation of an organisation and thus aid in the decision-making process. Integration of the operational needs of all areas of management (purchases, sales, finances, human resources etc.) and industrial processes, especially in the food-processing, port and distribution sectors. Implementation of sectorial ERPs, operated with solutions based on the standards of manufacturers such as SAP, Microsoft and Oracle, and tailored for each sector.

Purchases

Consulting services and implementation of Supplier Relationship Management (SRM) in order to optimise the supply process through an information repository of suppliers, which can be accessed through a central database. These systems allow businesses to capture and integrate information about interactions with suppliers, including control of outsourcing costs, expenses, audits, and inventory visibility.



E-commerce

Design, construction and implementation of corporative business portals, virtual stores and knowledge management portals for various e-commerce models (B2B, B2C, etc.) and various channels.

Fleet Management

We develop, market and implement technological solutions for the tracking, management and localisation of vehicles, based on GPS technology. Cloud-based platform www.mivehiculo.com. Client platforms (private control centres). Complete management of fleets of vehicles, allowing for a considerable saving in costs.

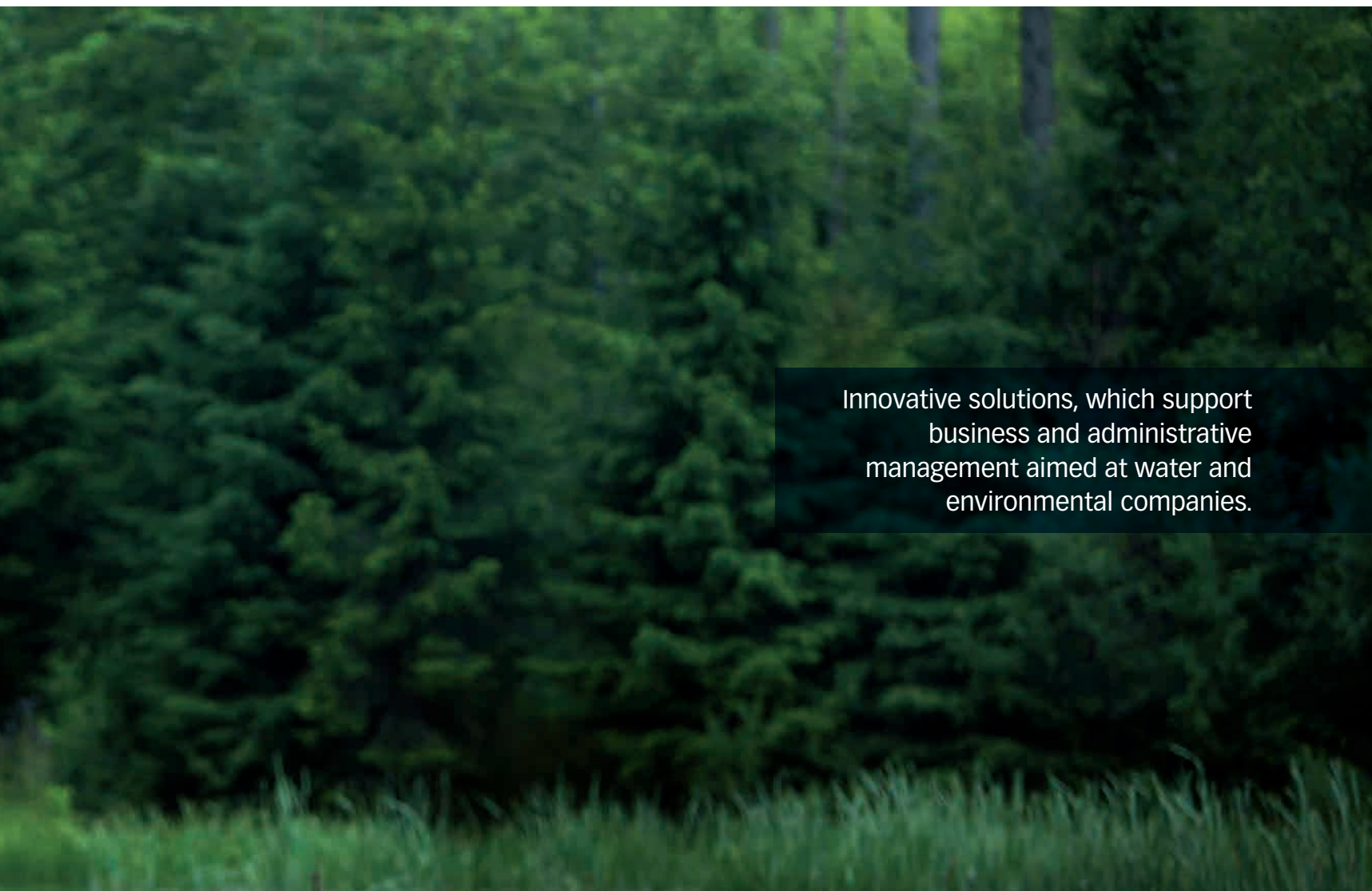


Administrative Management of Water

Internal management systems, with simplified administrative processes, operational management systems and decision support systems for water companies. Projects of non-technical loss monitoring on the network. Services aimed at the public, including advanced e-processing, electronic payment and digital signatures. Geographic Information Systems (GIS).

Commercial Management of the Entire Water Cycle

Integrated information systems which offer solutions for the various areas involved in the water supply process: extraction, transport, distribution, supply, commercialisation, advanced e-processing and the subsequent management of sewage systems. Solutions to support business management and incidence management in water companies, which cover the entire cycle of business invoicing and incidence management of the network, based on the SG-Aqua solution.




Innovative solutions, which support business and administrative management aimed at water and environmental companies.

DSS

Decision Support Systems (DSS) in emergency hydrometeorological situations: processing hydraulic data taken in real time and meteorological forecasts with hydrological models, hydraulic models, management models for volumes stored in dams and GIS tools.

Banking and Insurance



We are experts in the outsourcing of applications and we offer specific solutions for corporate acquisitions, mergers and integrations.

Core Banking

Core banking system outsourcing services: service level agreements, CMMI and software factories, in terms of the core banking solution “Financial Server”, which has a modular, flexible and stable architecture, both in open systems and host environments. Satellite applications: management of deposit boxes (vaults), management of complaints and claims (user support) and management of customer loyalty programmes.

Credit Risk Management, Asset Recovery and Arrears

IT solutions for efficient recovery of assets. Ayesa’s Unique Risk Information Model. Information analysis services to determine propensity default ratios.

Ayesa has developed its own solutions for the recovery of debt and related assets based on the concept of a single debtor dossier.

Recovery management.



Business Intelligence and Clients

Business Intelligence Systems, business information models, risk information models and office audits. Our Integrated Channel Manager (ICM) reports on financial terminals, ATMs, e-banking, telephone banking and mobile banking, combining it with operational information and information regarding the efficiency of processes. Mobile banking platform, accessible through native applications for each terminal.

Management of Financial Agents and Corporate Groups

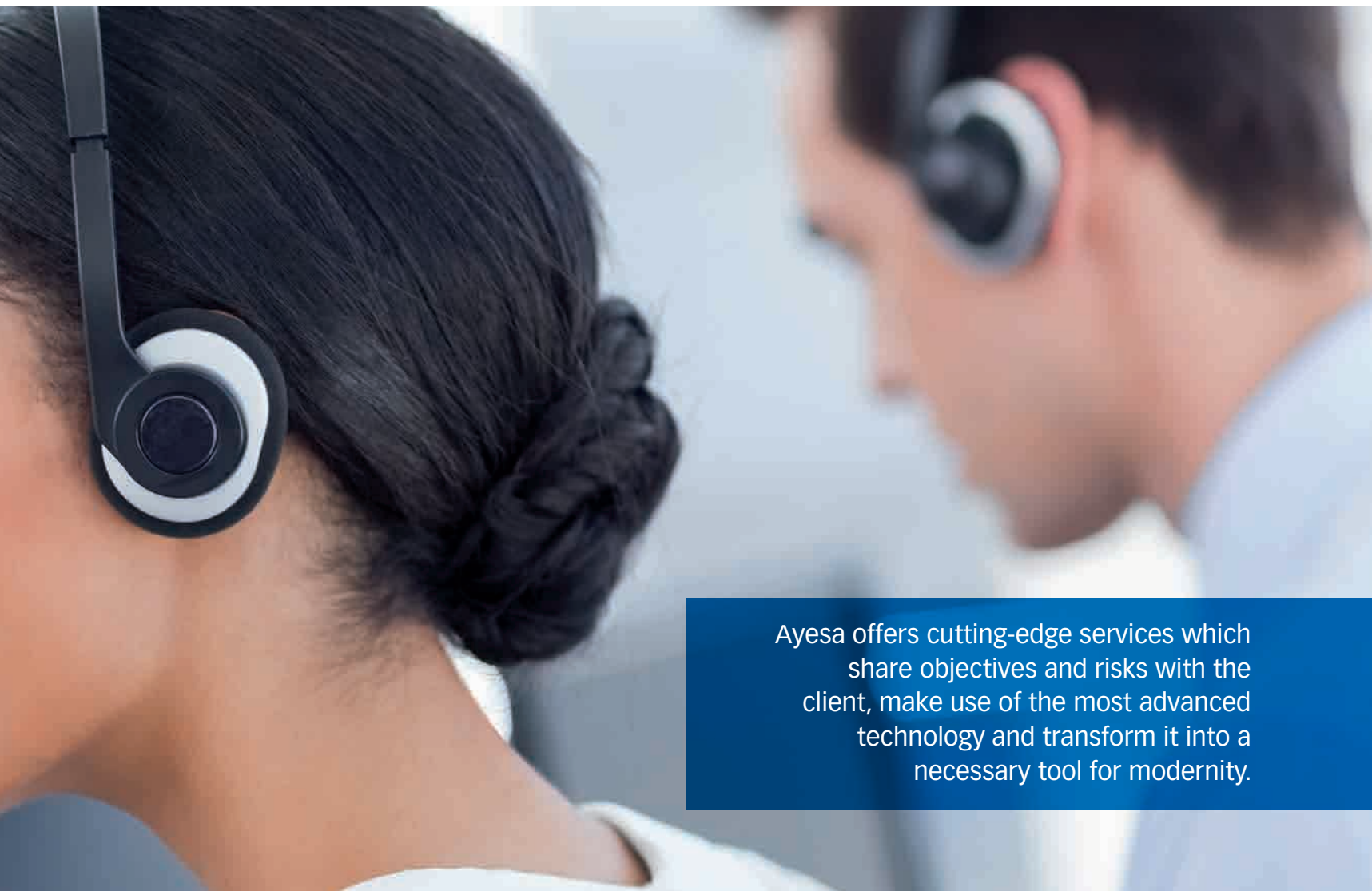
System of Financial Agent Management (SFAM): a portable IT solution. SIGEP, a leading solution in the management of groups of affiliate companies, set up in more than ten financial organisations in Spain, features: easy integration with the market's main ERPs, an integrated and configurable document manager, modules to manage balance sheets, portfolio of investees and real-estate portfolio, and monitoring of the organs of government; analysis of information from the Portfolio of Investees.

BPO and Horizontal Services



BPO and Horizontal Services

- Outsourcing of business processes.
- Outsourcing of applications.
- Outsourcing of infrastructure.
- Technology consultancy.
- Security consultancy.
- Change management.
- ERP - CRM.
- Tailored applications.
- Business intelligence.
- Portals.
- Document management.
- Online training (e-learning).
- Advanced internet services.
- Geographic information systems.
- Cloud computing.
Advanced technology practices: search engines, virtual assistants, two-dimensional codes, radio frequency identification (RFID).
- Freeware.
- Value solutions in infrastructures.
- IP networks.
- IT equipment.



Ayesa offers cutting-edge services which share objectives and risks with the client, make use of the most advanced technology and transform it into a necessary tool for modernity.

Public Digital Strategy

Projects involving planning, establishing, implementation, monitoring and control of public digital strategies. Public Services. Projects involving the automation and digitalisation of public administration and clients: support and services to users, contact centre services, services offered to the public and to users.

Change Management and Training of Employees | E-Processing | E-Administration | E-Government

Open Government

Applications which manage the publication of data, active listening, business intelligence, geographic positioning and public interaction.

Industrial Engineering and Construction Area

Maybe a better world is just a dream; but only those who can imagine it can make it reality.



Pablo Gómez Falcón
Managing Director



José Luis Murillo Esteban
Head of Construction



Alberto Sánchez de Rojas
Head of Expansion



Xavier Güell Domínguez
Head of Engineering



Óscar Martí Magriña
Oil & Gas



José Antonio García Bermudo
Energy and Industrial Installations



Santiago Barberá Ciurans
Processing Plants




Stefan Pardo Kolesch
Head of Engineering, Barcelona

Overcoming food shortages, helping provide universal access to medication, and finding more efficient alternatives to traditional fuels, are challenges which demand the best in the daily execution of our tasks.

Ayesa provides quality services in the industrial engineering sector across the globe, from large processing plants, electric power plants and chemical process plants, to industrial systems packages, especially in HVAC and electrical power.

Services which cover the life-cycle of projects, from engineering phases through to construction: feasibility studies, simulations, conceptual engineering, FEL and FEED engineering, basic and detailed engineering in pre-construction services and EPC, engineering supervision, site engineering and commissioning of construction.



After eight years of working in the refining sector, we have consolidated our position as one of the top engineering companies in the area of Oil & Gas.

Major clients such as Repsol and Petrobrás have confirmed this position by awarding us contracts with a value of more than ten million euros.

The importance of these projects, with a clear strategy, provide a new launchpad to tackle increasingly complex challenges.


Thus, for the immediate future, our strategic plan does not only target further growth of 50%, but also aims to link it to a continual process of improvement.

One of our main objectives is to carry out a large part of our work in industrial construction and to continue to strengthen our position as a high added-value engineering company, as well as the technology we have developed in the design of processing plants.

Pablo Gómez Falcón
Managing Director

Building Services and Industrial Complexes

Heineken Factory, Seville (Spain).



Experienced engineers, with backgrounds in all fields, equipped with cutting-edge tools. Installations designed with rigour and efficiency, with minimal cost and energy efficiency, in the areas of industry, building and electrical power.

Industrial Systems

Comprehensive design and supervision of complex industrial plants. Development and implementation of industrial processes. Electrical Installations: Transformer, LV, HV and control centres; urban street lighting, building and industrial installations; HVAC, industrial refrigeration, industrial ventilation, fire protection, protection of persons and property, security, intrusion and access control, industrial safety, improvement and optimisation of processes, sound and stage installations, communications systems, voice/data and public address systems, supply and sanitation, designs geared towards the LEED Energy Certificate and Control Systems and Centralised Management for Facilities.

Cutting-edge Technology

First-rate partners who specialise in new solutions and applications for industrial refrigeration, air conditioning, desalination systems for waste and thermosolar technology.



Electrical Power Systems

Entire projects for electrical substations and high-voltage lines. Consultancy, basic and detailed engineering and site management for electrical power companies and installation companies. Engineering work ranging from the choice of layout and location of substations, to the construction and operation of the designs.

Areas of Work

Oil & gas, chemicals, the food industry, cogeneration, thermosolar and photovoltaic plants, wind power generation, power for electric railway traction installations, various types of industrial plants and complexes, Formula 1 speed circuits and buildings of various degrees of uniqueness and complexity.

Energy



Solar

EPC generation projects in both thermosolar and photovoltaic power stations. Participation in the development of CSP thermosolar technology worldwide. Site engineering in 50 MW plants, approving designs and production: supervision of engineering and construction, and managing start-up. Experts in the fields of power, the solar market and salt storage.

Wind

Onshore Wind Farms. Geotechnics studies, foundations, HV networks, substations, infrastructures for transmission and processing.

Feasibility studies, basic construction designs and site supervision in more than 27 wind energy projects in Mexico and Spain, with thousands of MW of power which serve as references.



Cutting-edge engineering for electrical energy generation. Design, detailed engineering, supply, construction, tests, start-up and operational support. Drafting of tenders for the sale of energy, turnkey supply of facilities, feasibility studies and valuing of assets, renovation and improvements to existing facilities.

Cogeneration and Biomass

Feasibility studies. Project planning and efficiency studies. Selection and development of sites. Environmental studies and licences. Engineering and design of the project in its entirety. Supply of equipment and materials. Construction management. Tests and start-up. Operation and maintenance support. EPC turnkey projects. Projects relating to bids for biomass plants. R&D&I projects. Ayesa has developed its own technology for hybrid thermosolar and biomass electrical plants: hybridisation alternatives, execution and start-up.

Hydraulic and Conventional

Preliminary designs and feasibility studies. Civil and electro-mechanical projects of hydraulic plants, mini-plants and pumping stations. Execution of turnkey projects. Redevelopment and renovation of plants already in operation. Automation, regulation and remote management of facilities. Structures and foundations for coal-powered generation plants. Hydraulic cooling systems at nuclear power plants.

Oil & Gas



Expansion of the Olefin Cracker for Repsol YPF Tarragona (Spain).



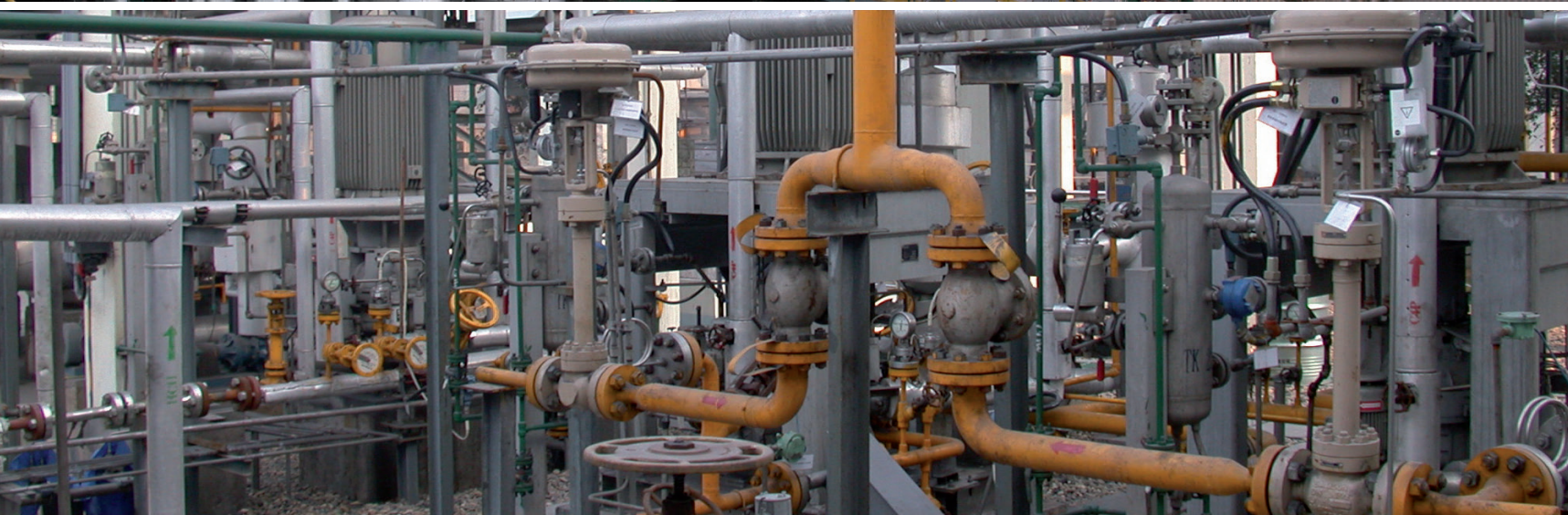
Upstream

Projects on offshore oil rigs for Petrobrás in the Brazilian states of Sergipe and Alagoas, as well as onshore facilities in the state of Spirito Santo. Sustainable engineering solutions with the means to develop and use new oilfields: roads, piping, industrial water treatment plants, urban plants, electricity generation and distribution in areas difficult to access, and supply of infrastructures.

Refinery

Process engineering and detailed engineering drawing on the process book of each licensee. High-pressure processes, energy optimisation, storage, reception and transport of oil products, integrated safety systems, and distillation systems.

Ayesa works in the field of oil and gas, thanks to its expert process team and cutting-edge industrial engineering. It is approved by major clients with stringent performance standards such as Repsol, Petronor, Enagas, Petroperú, SK, Braskem, Petrobras, Pemex, Petrobras and Pemex.



Storage and Treatment of LNG

Design of LNG loading and unloading onto methane carriers, LNG storage and transport facilities, LNG regasification facilities, facilities for the compression and reliquification of BOG (Boil-off Gases), LNG tank loading facilities, measuring and regulation stations (MRSs), intake valves and seawater pumping systems, and fire-fighting systems for regasification plants.

Biofuel

Technology for manufacturing bioethanol from multiple sources of sugar and biomass (lignocellulosic). Studies of energy integration with cogeneration. Technology for the production of biodiesel and glycerine from untreated or reused vegetable oils. Fuel plants using RSU.



Yeast

Completely automated plants in line with GMP standards. Treatment of molasses, sterile fermentation, commercial propagation and fermentation, drying, ancillary services: CIP, HVAC etc. Auditing, automation and redeveloping of existing plants. Comprehensive solutions for the treatment of effluents, recycling all the water used in the process. Extraction of enzymes, yeast for beer, starch and other products.

Chemicals

Chemical reaction processes, unit operations which form part of more complex processes, as well as highly automated batch and continuous manufacturing processes. In the areas of: solid and liquid detergents, bleaches, formaldehyde and its derivatives, esterification, resins and polymers, synthesis of chloromethane, solvents and plasticisers, plasticisers.

Pharmaceuticals

Process development: laboratories, pilot plants and scaling, design of plants for single products, multiple products and multi-purpose plants, clean and sterile plants, CIP and SIP systems, special reactions: reactants and/or conditions, protection and containment of products, application of GMPs and certification (DQ, IQ OQ at installations). Processes for the synthesis and purification of aromas, synthesis and fermentation of antibiotics, and synthesis of intermediates and APIs.

Industrial Water Treatment

Design and construction of effluent treatment plants for both urban and industrial wastewater.

AYESA offers pre-treatment solutions (sieving, roughing, degritting, degreasing), physical and chemical treatments (clarification, flotation, filtration, decanting), aerobic treatments (activated sludge with fixed or mobile biomass, SBR, MBR, MBBR), anaerobic treatments for highly contaminated loads (advanced chemical oxidation), separation systems using membranes (ultrafiltration, reverse osmosis), thermal and evaporation processes and sludge treatment (aerobic stabilisation, anaerobic digestion, mechanical and thermal drying).



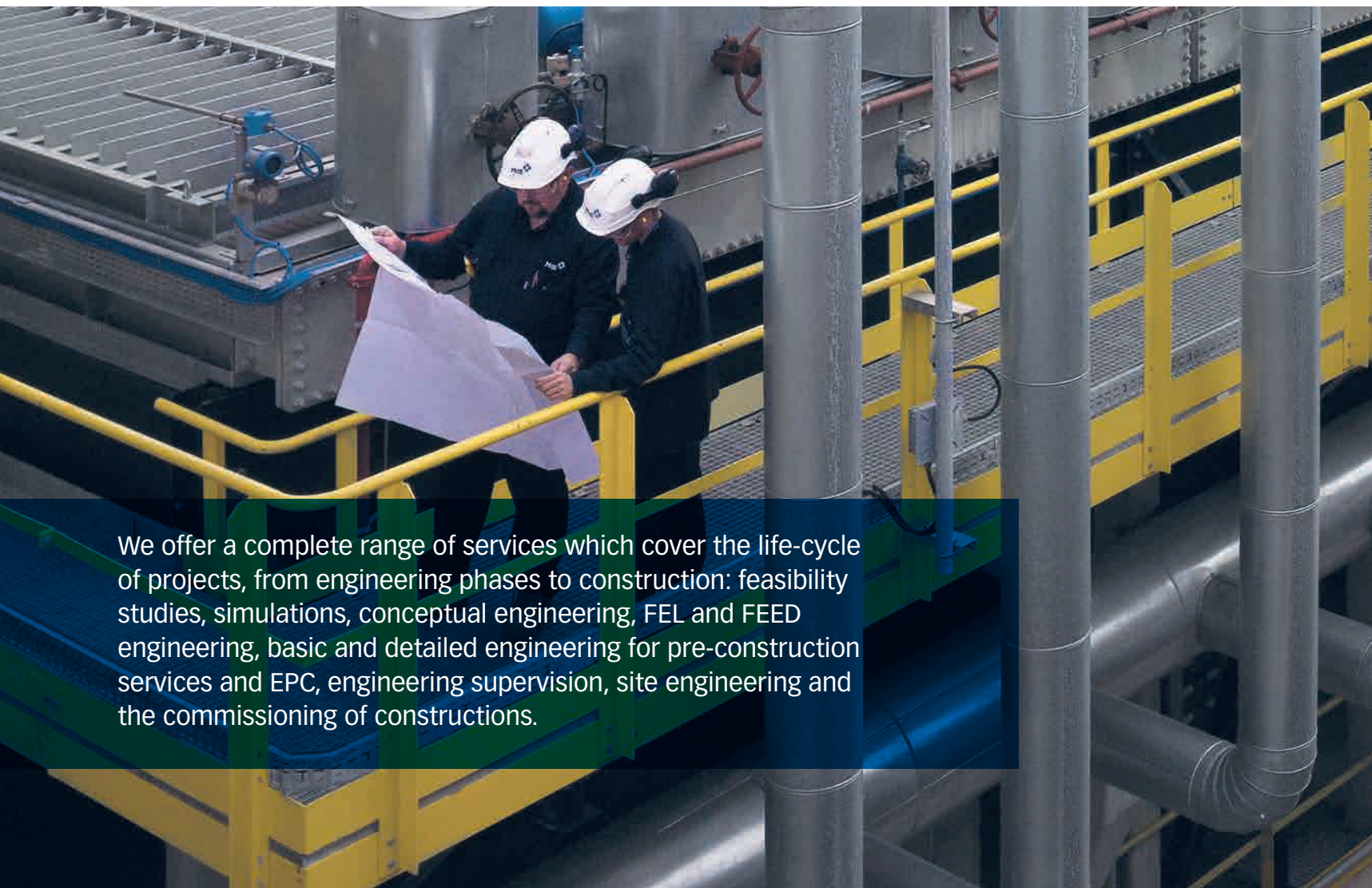
Industrial Engineering and Construction - Processing Plants

Processing

Experts in chemical reaction processes, unitary operations which form part of more complex processes, as well as in highly automated batch and continuous manufacturing processes.

Ayesa works in the chemical and petrochemical industry and in refinement, with its own technology and international licensees.

Engineering Services



We offer a complete range of services which cover the life-cycle of projects, from engineering phases to construction: feasibility studies, simulations, conceptual engineering, FEL and FEED engineering, basic and detailed engineering for pre-construction services and EPC, engineering supervision, site engineering and the commissioning of constructions.

EPC

Comprehensive development of turnkey projects: complete and fully operational solutions, mainly in the spheres of energy, oil & gas, fine chemicals and pharmaceuticals, biotechnology, basic chemicals and refinement. Planning and planning control services, legalisation, consistency analysis of basic engineering, materials and equipment purchasing management, site supervision, project management and environmental management.

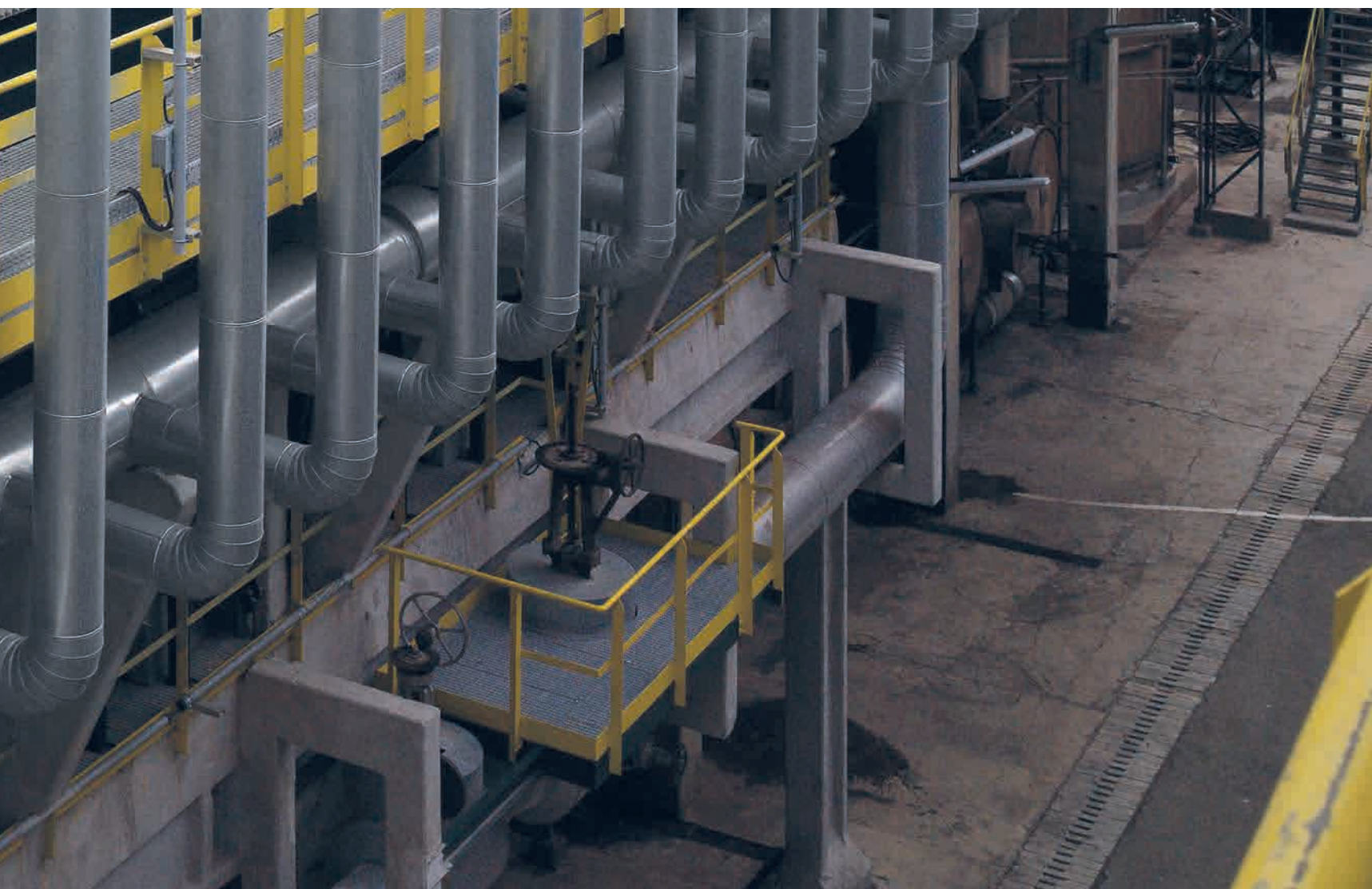
Procurement

Purchase, activation, inspection, shipping, logistics, transit and reception services for materials, equipment and items necessary to carry out a project under the best possible conditions.

Construction and assembly of installations anywhere and at an optimum level in terms of delivery on schedule, quality and price. Management and monitoring of offers and orders. Approval and monitoring of suppliers.

Design and Project Engineering

2D/3D design, calculation and simulation tools: our 3D tools encompass all the necessary components and disciplines to ensure the quality and precision of the final design documents for projects and optimise the management of materials. Own software, specific techniques and powerful IT tools. Structuring of: scope, context and integration of designs, schedule, costs, quality, human resources, communications, risks and possible commercial procurements.




Site Supervision

Ayesa has a team of engineers who are site managers with experience relating to all kinds of infrastructures: access, supply, industry, chemicals, complex facilities etc. IT tools and document management systems adapted to the needs of each situation. A convenient and streamlined way of monitoring progress made in terms of construction. The most advanced techniques, instruments and quality control resources. Regular audits, both external and internal, of the Quality and Environmental Management System, certified in accordance with Regulations UNE-EN- ISO-9001 and UNE-ENISO- 14001001.

Commissioning and Start-up

Allocation of a team, led by a PeM (Specialist in Process, Automation and Control) manager. Drafting of a document with the systems division, start-up plan and commissioning protocol. Plant handover and revision: functional checks. Recording of deviations to be corrected. Pre-commissioning and commissioning of each system. Remote or in-person assistance for the maintenance of optimal working conditions.



Prerequisite administrative processes (documentation for public tenders for mining registries, town planning, expropriation management, document management and monitoring of permitting). Environmental procedures (EIA, AAU, AAI, dumping permits, water concessions etc.). External engineering services (access roads, railway lines, power plants, electric power lines etc.)
Water cycle (water balances, water treatment plants, desalination plants, pumping plants, aqueducts etc.)
Expertise in detailed engineering regarding the processes required for operations.

Operations in Russia, Mexico, Panama, Peru and Spain, with clients including Saint Gobain, Goldcorp, Doe Run Perú, Inmet, Petaquilla, and Emed Tartessus.



Industrial Engineering and Construction - Energy and Industrial Installations

Mining

Engineering services focused on the sustainability of natural resources and the technical and social feasibility of mining.

Smart Solutions Area

We are moving towards a city which, instead of being a mere container interacts with us, becoming a more and more human city.



Juan de Dios Hermosín
Managing Director




Manuel Rodríguez Urbina
Smart City, Smart Mobility



Martín Huerta de Merodio
Smart Grids

How do we achieve the intelligence required for smart cities? We think that it will be possible to attach common sense to all the kinds of intelligence present in such cities: that of people, means of transport, electricity networks, the data which multiplies in every node, road crossings and access points. Managing these gigantic volumes of information is equal to transforming obstacles into new paths, opening up cities to the future.



2013 has been a year in which we have exceeded our limits. Amongst others, the project involving the outsourcing of technological services for the CDTI serves as a good example. We have thus stepped out of the comfort zone of our client portfolio to oust competitors which previously enjoyed leading positions and a seemingly permanent working relationship.

Our next steps will lead us to surpass our limits: on the one hand becoming leaders in technological solutions for electric vehicles, and on the other, continuing, through effort and investment, to incorporate our extensive R&D&I work into the European Horizon 2020, the greatest source of funding in innovation and technology in the history of Europe. We will be there within our own right.

Juan de Dios Hermosín
Managing Director



Ayesa is a European leader in information technology for the management of electric cars.

Smart Cities and Smart Grids

The inclusion of initiatives designed to improve quality of life, sustainability and the efficient management of services, leading innovation in terms of materials, resources, models, services, sensors and, above all, making massive and intensive use of technology. The Smart City initiative affects all services offered in a city, including mobility, production, distribution of urban services (power, water, gas, telephones, data, etc.), education, health, emergency services, security, assistance, etc.

Smart Mobility

Development and installation of support systems for operating public transport. Recharging management systems for electric vehicles. Management systems for fleets of vehicles, parking spaces, etc. Smart logistics. Development of the mobile logistics software www.mivehiculo.com. This website has a unique function for the management of fleets of electric vehicles, and control of their specific parameters.



Smart Cloud

Housing & ITO

Construction of high-security installations. DPCs, in accordance with the highest banking and defence standards. Management and administration of complex hardware and software infrastructures. Integrated supplier of hosting and management of third-party technological infrastructure. Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). Hosting capacity on its own DPC... (Tier III, EN 1047). Cloud services. IP Networks.

Aeronautics and Defence Area

To advance surefootedly
through the air.



Pedro Sanz Marcos
Managing Director



Luis García García
Head of Operations



Manuel Gavira Gómez
*Director of the Technology and
Lean Area*

Our presence in the skies has exponentially grown. This has all been possible thanks to our principals of calmness and safety. Everything we deal with and make great efforts to protect has also played a major role. This includes: ideas, information, technology, economic development, personal and professional relationships, peace and progress. Each stop-off on this journey is a new goal reached and a new runway from which to take off once more.

Ayesa has supported Airbus Defence & Space in the support engineering for the line of flight and delivery centre for the A400M military transport plane. This project required us to work under great pressure to finalise the functional details of the plane just before its delivery, with any error having a very visible impact for the end client. We are pleased and proud to have seen through the first deliveries of the plane, as well as to have seen the favourable reactions towards it. Behind all this is the effort and passion of our engineers. Over the two years that we have spent working for

Airbus Defence & Space, we have shown our ability to reach a very high level in aerospace engineering. Our greatest challenge is to export this knowledge and to build relationships with many more clients and in other countries. Diversification is, without a shadow of a doubt, the greatest challenge we currently face.

Pedro Sanz Marcos
Managing Director



Aeronautics

Design, Manufacture and Maintenance

Support for all aircraft-related work. Advanced tools of assisted design, calculation and simulation. Design projects and modification of aircraft, for operators and workshops or to be integrated into multidisciplinary teams for large manufacturers. Quality certifications EN-9100, PECAL-2110 and EASA Part 21 (DOA). Complete management of manufacturing, industrialisation, assembly line support, delivery to the client and line of flight. Technical support for manufacturers and aircraft operators throughout the phases of operation and maintenance.

- *Batch 3 weight reduction for the Belly Fairing of the A-350, Alestis, Spain.*
- *Participation in civilian and military programs: Airbus A350, A400M, medium-size military transport planes produced by Airbus Military (C-295, CN-235).*
- *NC programming and development of HMI for Triceps machines for the HTP A-380, Airbus Operations, Spain.*
- *Aerospace structural engineering for ailerons, flaperons and rudders on the Boeing 737 and Boeing-777, Spain.*
- *Process monitoring and introduction of Lean Standard Work in the EADS factory in Puerto de Santa María, Spain.*



Airlines and Airport Services

Support for commercial aviation activities, from project design through to the setting up of a new company. Feasibility studies. Manuals and procedures to receive certification from the air operator AESA and operating licences. Removal of administrative obstacles. Organisation of the technical and operative needs regarding flight. Prevision, supervision and outsourcing of the necessary services at various airports to provide safe, efficient and economical assistance to aircraft.

Defence

Mission Systems

Definition and integration of mission systems into large programmes: Eurofighter and the Atlante and Talarion UAVs.

Electronic Warfare

Analysis, integration and testing of self-defence systems.

Unmanned Systems

UAV programmes, guide systems, navigation and control, and integration of systems.

Weapons

Integration of airborne weapons: air-to-air missiles such as the AIM-120 AMRAAM, AIM-9L SideWinder and IRIS-T, as well as the integration of smart bombs guided by laser and INS/GPS.

ICT Installations Area

Water, Energy, Transport and Security...
On our path towards a better future, we
intelligently and remotely manage these
four critical issues.



Xavier Minguillón Cebrián
Managing Director



Javier Avilés Gómez
*Head of Operations
Transport, Energy and
Industrial Systems*



Rafael Martín Salinas
Head of Engineering



Joaquín Bono Caraballo
Security Systems




Margarita Guillén González
Data Centres




Antonio Calsina García
*Water and
Environmental Systems*

Our experience and level of technological expertise allow us to enthusiastically tackle some of the most exciting challenges we face as a society.

Therefore, we are able to track each drop of water to guarantee better access to water resources, their drinkability and their treatment with the least possible impact on the natural environment. We can direct traffic towards an increasingly human transport system; we are able to renew sources of energy at the same time we renew the ways we use it; and we are making the information upon which our safety depends increasingly secure.



2013 has been a year in which things have moved from paper to reality, going from a mere project to something tangible in the real world, with all its potential and strengths which can be achieved. Our most iconic project has been the remote control work in the IV area of Taibilla. Here, we have clearly established a milestone in the efficient management of water, becoming, in the short-term, a benchmark company in this area.



Our nearest point on the horizon is driving us to bring added value to installation systems, making them more efficient and investing many hours of work by qualified professionals, as a response to the economic crisis we all find ourselves in.

Likewise, I cannot refrain from highlighting our delight at the implementation of the Granada tram system in 2014, which, once made available for use by the general public, will be an expression of a job well done for all those who have worked on it.

Xavier Minguillón Cebrián
Managing Director

Water and Environment



Hydrological Control

Design, implementation, operation and maintenance of automatic hydrological information and water quality systems. Electricity supply, instrumentation (levels, flow rates, state of electromechanical components, etc.), remote stations, communications (radio, satellite, GPRS, etc.), information (control centre, web access), operating (mathematical modelling, decision support systems, statistical data handling, etc.). Development and implementation of analytical and predictive models.

Regulation, Transport and Distribution

Automation and monitoring of infrastructures for an efficient supply at each point of consumption, a reduction in wasted water and the optimisation of operating costs. Network efficiency, centralised irrigation, dam auscultation and decision making support systems for hydraulic steering. Regulation of canals and the design and implementation of complex automatic monitoring systems, and turnkey automation of both existing and newly-built canals.



Doñana National Park Monitoring System. Huelva (Spain).

Design, construction, start-up, operation and maintenance of information systems, automation systems and monitoring of the entire water cycle.



Navarra Canal (Spain).

Water Treatment

Design and construction of water purification plants and plants for industrial use, desalination plants and urban and industrial effluent treatment plants. Physical-chemical treatments: clarification, flotation, filtration. Separation using membranes: ultrafiltration and reverse osmosis. Ion exchange systems. Recovery of energy from brackish waters (ERI), post-treatment for the removal of boron and remineralisation. Electrodeionisation. Sterilisation: chlorination, ozonification and UV. Aerobic treatments: activated sludge with fixed or mobile biomass, SBR, MBR, MBBR. Anaerobic treatments. Thermal and evaporation processes. Sludge treatment.

Plants and Pumping Stations

Design, execution and redeveloping of hydroelectric power plants and pumping stations. Design and implementation of regulation algorithms for optimal and safe performance of installations. Ayesa has its own method for energy savings, through the monitoring of hydraulic variables, smart demand management and actions adapted to the pumps. Renovation of electromechanical and electrical equipment and equipment for automation and control of old power stations.



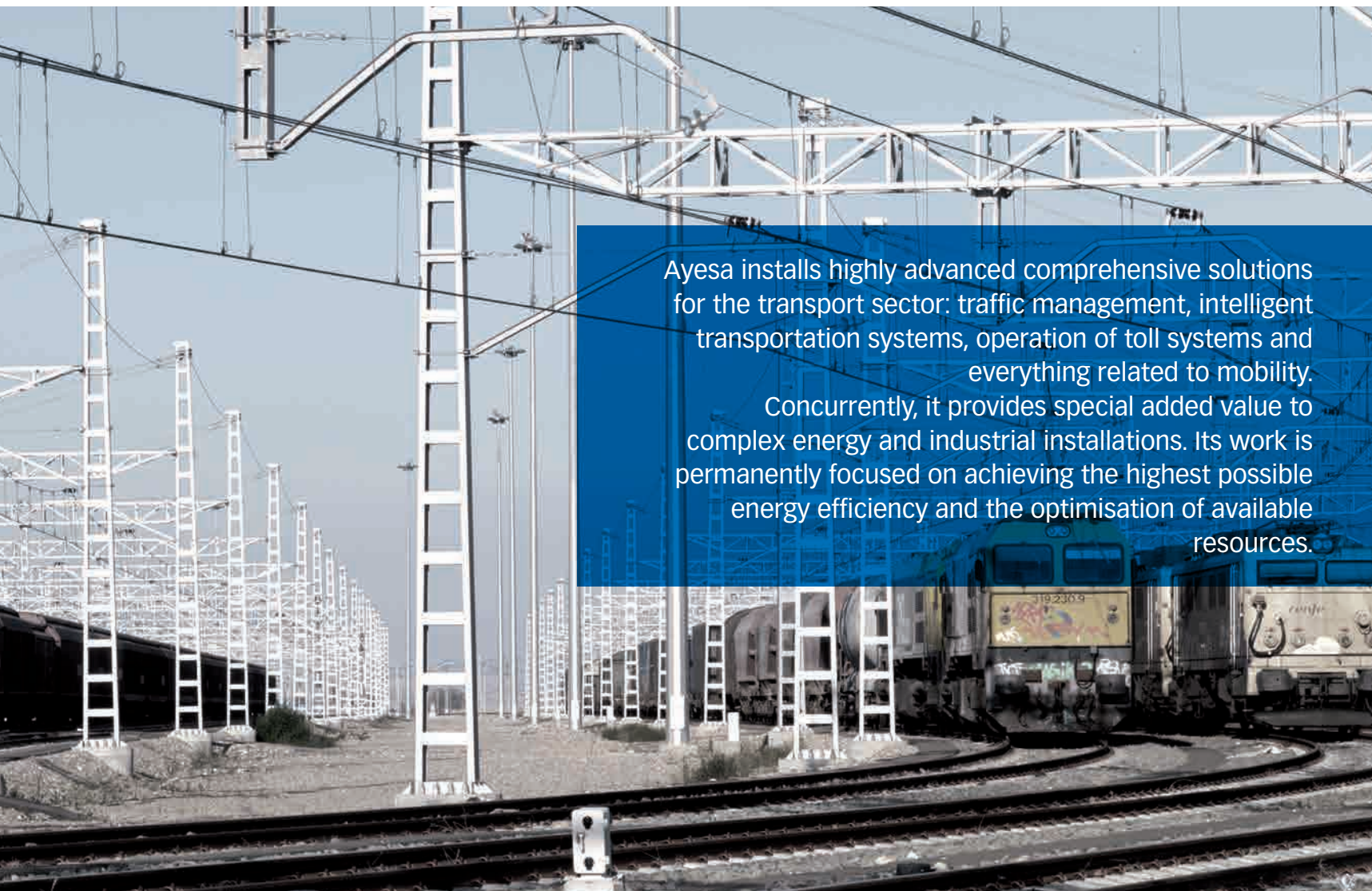
PLAZA Railway Complex. Zaragoza (Spain).

Traffic and Transportation

Design, execution, operation and maintenance of intelligent transportation and toll systems (ITS) for the optimisation and monitoring of urban transport, including monitoring of traffic, regulation of registration plates, control of speed and traffic lights, control centres, traffic violation management, etc. Traffic management. Design and implementation of traffic control Centres: latest-generation surveillance systems (video walls, LED screens, large-format TFT displays), integration of AV systems, interior design and technical equipment. Conventional toll systems, electronic toll collection and transport. Road tunnels, fire protection, electrification, communication, monitoring and safety.

Rail Transport

Traction substations, distribution catenaries, signalling and communication facilities, IT systems, machinery for workshops and garages. Safety and communications systems (ATP, ATO, ATS, infrastructure for fixed communications (optical fibre, networking), infrastructure for mobile communications (TETRA networks), telephony, intercoms, public address systems, CCTV, information display monitors, ticketing systems, access control and operation support systems). Railway workshops and carriage sheds, including winch pits, cleaning machines, sanding, jacks, gantry cranes, painting machines, road-rail vehicles, etc.



Ayesa installs highly advanced comprehensive solutions for the transport sector: traffic management, intelligent transportation systems, operation of toll systems and everything related to mobility.

Concurrently, it provides special added value to complex energy and industrial installations. Its work is permanently focused on achieving the highest possible energy efficiency and the optimisation of available resources.

Energy Efficiency

Preliminary audits. Detailed analysis of the plan of action. Implementation of corrective measures to reduce electricity consumption as much as possible and for a quicker return on investment.

Renewable and Conventional Energy

Generation of renewable energy, installation of photovoltaic solar farms. Automation and power plant control systems: production and performance control and development of control dashboards. Design, installation, operation and maintenance of automation and control systems in conventional energy power plants. Turnkey projects: basic and detailed engineering phases, construction, operation and maintenance.

Control Systems

Navarra Canal Control Centre (Spain).



Cutting-edge remote control technology for the smart management of centres and infrastructures, the safety of facilities and the management of information. Services which offer design, construction, technical assistance and logistical support for monitoring, operation and maintenance.

Industrial Processes

Development and implementation of the entire pyramid of control and automation: field instruments, electronic command and power systems, control systems (PLC) and implementation of the management systems (SCADA) and DCS systems with the strongest market presence. Construction of ancillary installations for industrial plants: low voltage, lighting, industrial refrigeration, fire safety facilities, etc.

Smart Installations

Electromechanical facilities (air conditioning) and control facilities (public address systems, CCTV, voice-data, fire detection and extinguishing, access and intruder control, control centres) related to buildings open to the public such as offices, hotels and residences.



Access and Surveillance

Access control and surveillance systems in prisons, military bases and unmanned centres. Live and prerecorded-view CCTV systems. Access control for cells and security gates in combination with biometric systems, which manage access permissions. Perimeter security systems and intrusion detection systems, in combination with CCTV and intrusion detection sensors (fibre-optic mesh, buried cables, infrared/microwave barriers). Detection of prohibited objects and substances.

Subsystem Integration

Implementation of security installations and an integration platform for information subsystems in various prisons.

Data Centres



Data processing centres, recently constructed and/or currently being redeveloped, specialised engineering services, turnkey projects, maintenance services and the monitoring of installations.

Caja Duero DPC (Spain).

Data Centres

Design and construction of data centres. Levels of security guaranteeing uninterrupted operation. High-level solutions to ensure continuity of service in adverse circumstances. Design and execution of shielding under standard EN1047-2, electrical subsystems with a minimum redundancy of 2N in all components from supply to the power source of IT equipment. Fire protection systems and secure access control systems. Scaling of hardware architecture, networks and software;

efficient management of the purchasing and supply of equipment.

-servers, storage and backup systems, high availability software, and structured cabling.



Caja Duero DPC (Spain).

- Design and implementation of the Data Processing Centre for RENFE and ADIF. Spain.

- Design and implementation of the main and redundant data processing centre for the Miguel Hernández University. Elche, Spain.

- Design and implementation of the data processing centre for Caja Duero. Salamanca, Spain.

- Design and implementation of the data processing centre for ICA. Tepozotlan, Mexico.

- Maintenance and updating of the DPC at the headquarters of the Salamanca Savings Bank. Salamanca, Spain.

- DPC for the following major clients: The Andalusian Corporation for the Development of the Information Society (Regional Government of Andalusia), Heineken, Arance, Hydrographic Confederation of Tajo, Hydrographic Confederation of Segura, Spain.



Ana Manzanares Abásolo
President



Ricardo Galán de Vega
Managing Director



Santiago Blanco Polo
Technical Director



Fermín Iniesta Maestro
*Director of the Research and Development
Unit for Engineering Products and
Solutions*

The journey of discovery towards the new reality we dream of as a society is not only dependent on our efforts and more specific work, but also on a foundation which represents a global vision for our society, its needs and its future.

This common commitment to quality and excellence is the spirit which inspires the Ayesa Foundation to reach a new model by which the following is highlighted:

- Excellence in its work, with criteria based on sustainability, efficiency and a vision for the future.*
- Excellence in research, the application of results and the promotion of innovation.*
- Guaranteeing equality and personal and professional development.*
- Commitment to its technological, environmental, economic, social, historical and cultural context.*
- Being a point of reference, which is inclusive, intercultural, Spanish, Andalusian and Sevillian, as well as being open and with national and international vision.*

To achieve these goals, the Ayesa Foundation focuses its work on four main areas:

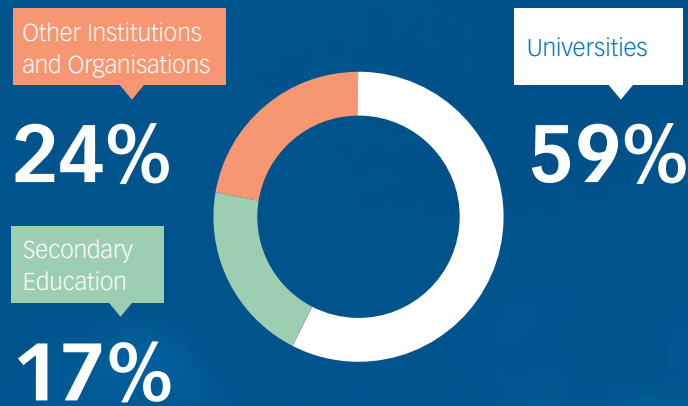
- Technological foresight
- The management of innovation
- Knowledge
- A Research Centre

Training

Training in 2013 encompassed the majority of fields in Engineering, Architecture (civil, water, lineal works, aeronautics, etc.), the areas of ICT Consultancy and Installations and Aeronautics, in addition to transversal educational areas. With a view to adapting to the different needs of employees who find themselves, as a result of the Company's institutionalisation, in different countries and offices, training has taken on various forms, with face-to-face training being the

main one, but with an increasing importance placed on e-learning.

During 2013, a total of 356 courses were run with 1,985 participants over a total period of 27,140 hours.





An African proverb goes "if you want to travel fast, travel alone. If you want to travel far, travel together." At Ayesa, we are aware that for a society to move towards its dreams, however far away they may seem, it can only achieve this by building solid bridges between "travelling companions" of the widest diversity. The combination of willpower, vision and experience is another source of our wealth, which we must not reject.

Education

We have contributed to various educational institutions such as:

- The Association of Friends of the University of Navarra and the IESE Business School.
- Participation in Leonardo Da Vinci work placement programme for the promotion of a "knowledge-based Europe".



Arts

We have supported the Teatro de la Maestranza, a point of reference in Spanish cultural life, for many years now.

Solidarity

Since its beginnings, Ayesa has contributed to the Hermanitas de los Pobres, a foundation entirely dedicated to the devoted care of the elderly.

Furthermore, it lends its support to various institutions, such as:

- The Red Cross.
- The Fundación Adecco, dedicated to helping people enter the labour market who are at the greatest risk of exclusion.
- The Spanish Association for Cancer (AECC).
- The Andalusian Association for Parents of Children with Cancer (ANDEX).
- Seville's Regional Blood Transfusion Centre.

Ayesa Universe

Awards Received

Whilst moving forward and growing on our journey, we are delighted to have been recognised by various institutions. These awards and distinctions are, as well as a kind of reward for dreams which have been made a reality, vital encouragement to continue making strides towards new objectives.

- V Prize for Research, Innovation, Development and Business in the Company category. Andalusian School of Social and Environmental Sciences, 2014.
- Contest for Recognition of Companies from Seville. Seville Chamber of Commerce, 2014.
- Internationalisation Award. III Cartuja Awards, October 2013.
- 'Capital Sevilla' award for Business Innovation, January 2012.
- Andalusian Economic Award. Magazine Andalucía Económica, February 2012.
- Award - Company History of Excellence. Seville's Confederation of Entrepreneurs (CES) and Social Council of the University of Seville, July 2011.
- XVIII Communication Awards. Press Association of Seville, February 2010.
- Award for best company history. XIV Edition. Ernst & Young Entrepreneur of the Year Award, February 2010.
- Entrepreneur of the Year for Andalusia and Extremadura. Ernst & Young, December 2009.
- IX Andalusian Award for Entrepreneurial Excellence in the field of Entrepreneurial Innovation within the Big Business category. Regional Department for Innovation, December 2009.
- Company Spirit Award. La Chambre, October 2009.
- Gold medal of the city of Seville for Sadiel, 2009.
- XI International Civil Engineering Award for the Segovia Aqueduct. Honourable Mention. "El Guardián del Castillo" Bridge, February 2010.
- "El Guardián del Castillo". First prize in the bridges category. Alcalá de Guadaíra (Seville). Regional Government of Andalusia, 2001.
- Eduardo Torroja Award 1999 for joint work of engineers and architects. Seville Olympic Stadium.
- First Prize in the 1995 bridge contest, Technological Park of Tenerife, for La Granadilla Bridge.
- First prize, International Alcántara Bridge Award for the channelling of the Río Segura, 1995.
- Honorary mention, International Alcántara Bridge Award for the La Serena Dam, 1989.

Ayesa Headquarters. Seville (Spain).

Ayesa Management Systems

To satisfy market requirements and client expectations, we adopt management procedures for all of our products and services which guarantee quality, respect for the environment, data protection and health and safety in the workplace, in accordance with international regulations and certified by accredited organisations:

- Quality Management, in accordance with standard UNE-EN ISO 9001.
- Environmental Management, in accordance with standard UNE-EN ISO 14001.
- Project Quality Management, in accordance with standard ISO 10006.
- Information Security Management, in accordance with standard UNE-ISO 27001.
- Aeronautical Quality Management, in accordance with standard UNE-EN 9100.
- Health and Safety Management, in accordance with standard OHSAS 18001.
- R&D&I Management, in accordance with standard UNE 166002.





Ayesa Universe

The previous pages aim to summarise Ayesa's extensive work.

They transmit the strength and ambition of a large team of professionals who give their best to stay well-informed, work rigorously, solve complex problems, comply with deadlines, guarantee prices, save resources, attend to clients' needs anywhere on the globe, overcome all kinds of difficulties, face adversity with a smile and have no other goal but to simply make people's dreams come true.

Behind each reference, each image, each project, there lies an immense effort, a strong and solid organisation, cutting-edge tools and a cutting-edge information system, procedures, mandatory standards, knowledge, honesty and a strong sense of ethics. Keeping the machinery of a company of Ayesa's size and scope running smoothly is not an easy task and requires a structure which is difficult to achieve.

It has accumulated fifty years' worth of experience, consolidated hour by hour, contract by contract, person by person, a company which is skilled, motivated and equipped in order to be of assistance anywhere on the globe. It has been perfecting its spirit of pride for five decades, encouraging its engineers who work under its name.

Over these pages, a brief outline has been given of the dreams which Ayesa has been able to make come true by using its knowledge.

Always there for its clients, always dreaming of a better world.

José Luis Manzanares Japón
President



