

Our
commitment,
your
success

IDOM

IDOM

Our commitment,
your success



Ignacio Rey Gómez
Chief Executive Officer
.....



Luis Rodríguez Llopis
President
.....

I am proud to reintroduce this book, which showcases some of the important projects we are developing for our clients in the areas of Engineering, Consulting and Architecture.

We live in a global geopolitical environment characterized by uncertainty, but also by the profound and rapid transformation of many sectors as a result of the digital revolution, energy transition, relocation of production, and the general objectives of sustainable development.

It is an exciting challenge to be a major player in this transformation, offering society projects with a high technological component and integrating solutions with a clear commitment to sustainability.

The growing demand for talent, knowledge and adaptability is a great opportunity to highlight the essential elements of our style of action: commitment to the client, the importance of people and the expectations of professional development. These values have remained unchanged since our origins and today, more than ever, they guide our future path.

This book is also our way of saying thank you to our clients for the trust they have in us to develop their projects together.

Finally, I would not like to forget the people of more than 70 different nationalities who make up IDOM and whose commitment and daily efforts make these projects possible. This diversity of talent is the result of the importance we place on people at IDOM, and it undoubtedly improves the service we provide to our clients and strengthens us for the future.

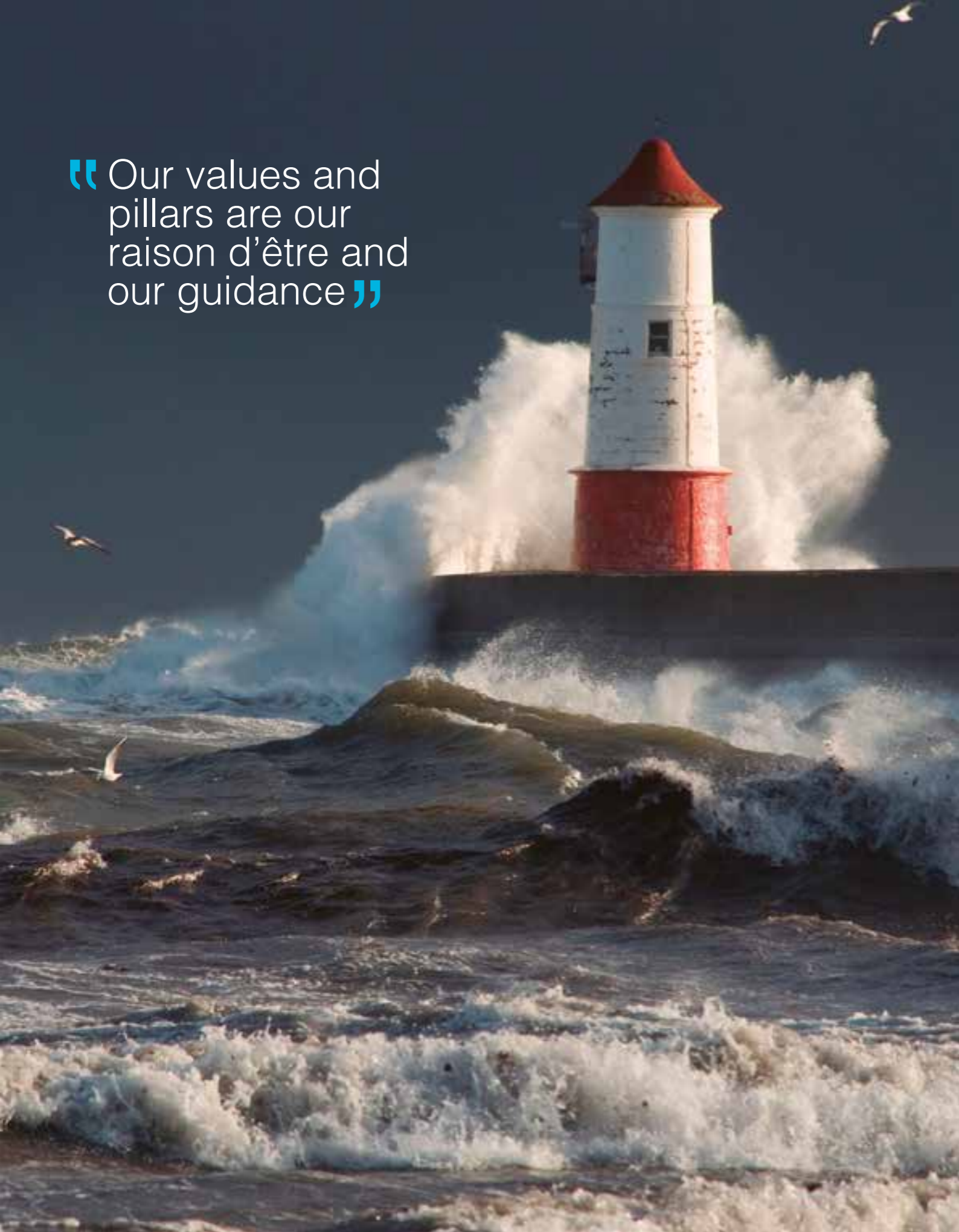
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01

About us_

“ Our values and pillars are our raison d’être and our guidance ”



We are an independent company providing professional services in Consulting, Engineering and Architecture, united in our way of doing things and shared objectives, at the service of our clients

Our values



The Client is the core of our activity.



People are the heart and soul of IDOM.



Professional development IDOM is a group of highly qualified people who strive for excellence.

Our pillars



We pursue excellence Our way of working is to do the best we know how and improve as we go.



We believe in the power of human relationships as a motivating force to overcome difficulties.



We are passionate about resolving problems that no one has solved.



Innovation is present in all our activities.



Sustainability is the fifth pillar, as this approach maximizes the contribution of our activity to the environment, to people, to local communities, to the planet, and to society as a whole.

Sustainability policy

Our sustainability policy applies to all the companies that make up the IDOM group, all the people who are part of them, and all their collaborators



By embracing the Sustainable Development Goals and adopting the ten principles of the Global Compact, we wish to demonstrate and underscore our commitment to human rights, labor standards, the environment, the fight against climate change and the fight against corruption



IDOM's commitment to sustainability is manifested in our professional activity through the four dimensions: environmental, social, economic and governance

We understand this to be the best approach to increase the quality of the services we provide to our clients, enhance the professional development of the people at IDOM, and ultimately maximize the benefits that this brings to the environment, the planet, and society as a whole.

“ IDOM is made up of people from more than 70 different nationalities who share their knowledge at the service of our clients, without any discrimination of race, affective orientation, sex, age or religion ”

Sustainability is integrated across the board in all areas of our activity, covering four aspects:

01

We associate sustainability with the quality of **our projects**, designing sustainable solutions, which are then developed in a sustainable manner throughout the project life cycle.

02

In the **way we work** and develop our professional activity.

03

In our **workplaces**, our offices, designed, operated, maintained and lived with sustainability and the fight against climate change at the forefront.

04

In the **conduct of people** at IDOM, our activity and our relationships with collaborators, suppliers, the environment and society.



We designed our own corporate headquarters as examples of cutting-edge sustainable architecture

Design that prioritizes technology, energy efficiency, water-consumption cost savings, respect for the social and natural environment, and the use of local natural resources



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An example of sustainability, energy efficiency, comfort and flexibility

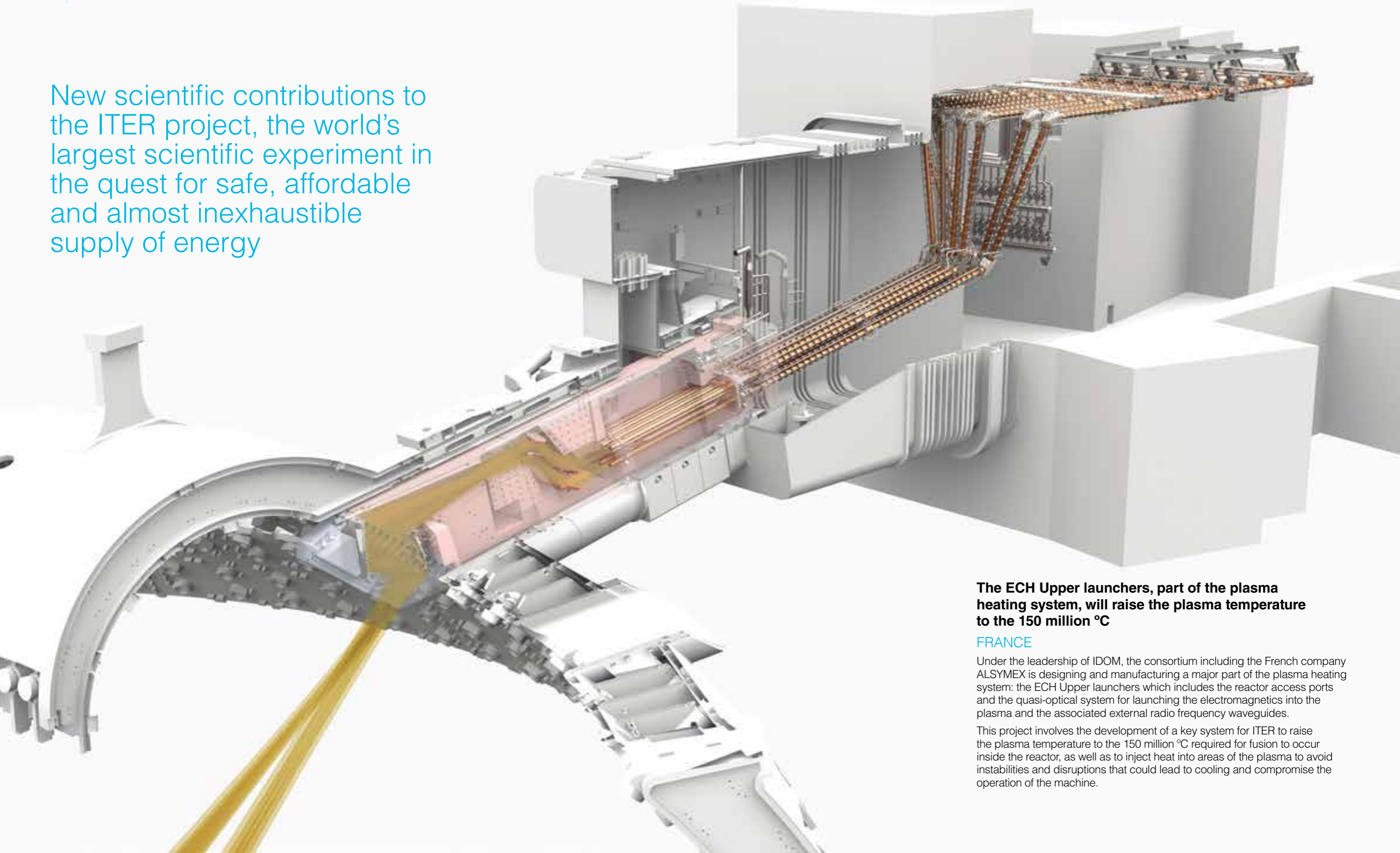


02

SOME PROJECTS

Advanced
analysis_

New scientific contributions to the ITER project, the world's largest scientific experiment in the quest for safe, affordable and almost inexhaustible supply of energy



The ECH Upper launchers, part of the plasma heating system, will raise the plasma temperature to the 150 million °C

FRANCE

Under the leadership of IDOM, the consortium including the French company ALSYMEX is designing and manufacturing a major part of the plasma heating system: the ECH Upper launchers which includes the reactor access ports and the quasi-optical system for launching the electromagnetics into the plasma and the associated external radio frequency waveguides.

This project involves the development of a key system for ITER to raise the plasma temperature to the 150 million °C required for fusion to occur inside the reactor, as well as to inject heat into areas of the plasma to avoid instabilities and disruptions that could lead to cooling and compromise the operation of the machine.

The aim is to respond to the technological and scientific challenge of improving reactor safety and performance. This will involve testing samples of nuclear fuel and structural materials under extreme conditions and in a nuclear environment

Europe's largest fission infrastructure

Design, manufacture and installation of the UGXRC (Underwater Gamma and X-Ray) test bench for the future Jules Horowitz Materials Research Experimental Reactor (JHR)

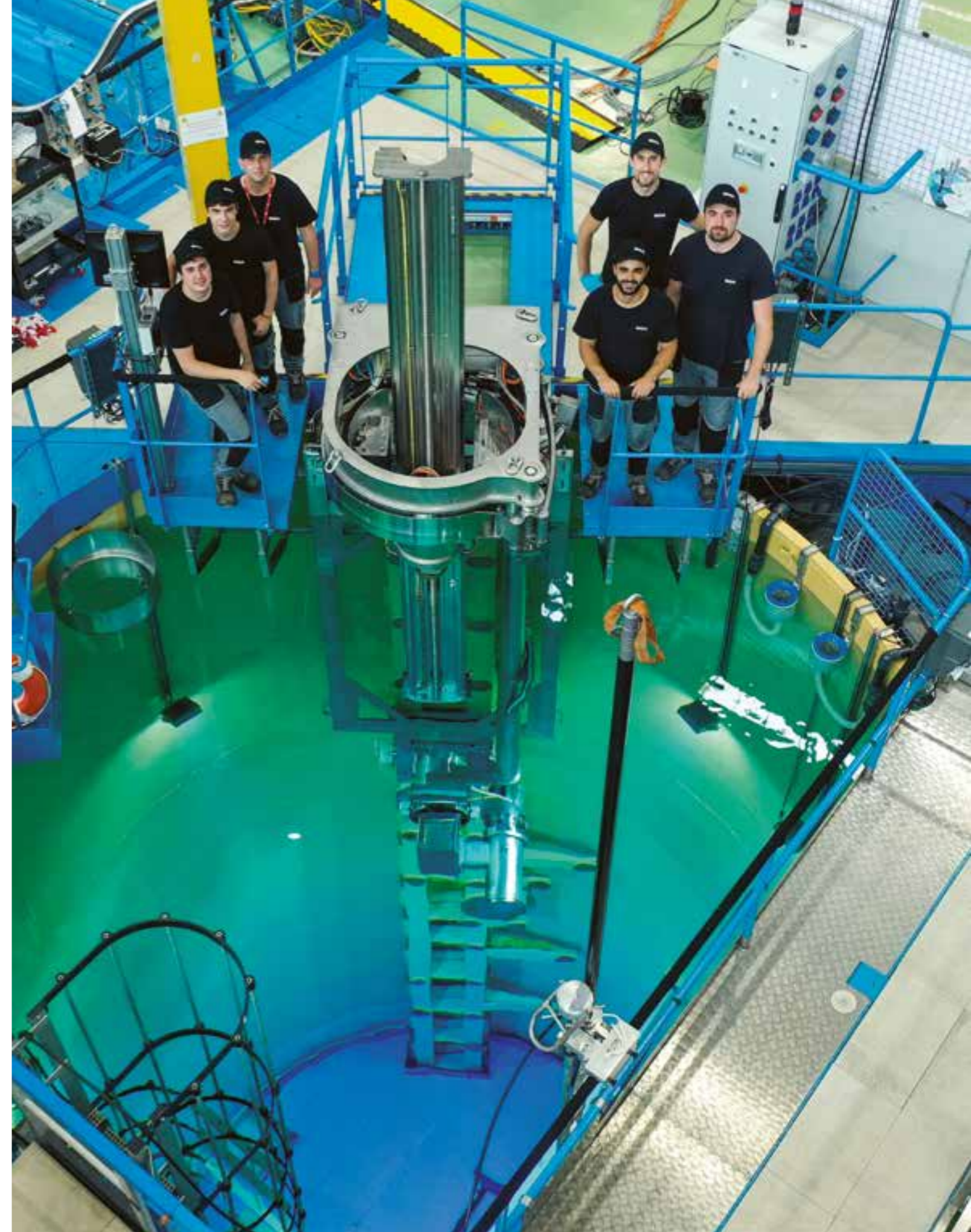
FRANCE

IDOM has been contracted by VTT Technical Research Centre of Finland.

Finland's contribution to the reactor includes two underwater test bench units (UGXR) to be installed in the main reactor pool and in the storage pool of irradiated components.

Their function is to manipulate and position the samples,

previously exposed to radiation in the core, to perform gamma measurements and X-ray radiography. Each test bench is composed of the underwater test bench part, immersed in the pool water, and the Gamma-ray and X-rays collimation systems, confined in a sheath within the walls of the pool and exposed to the test sample.





Underwater gamma scanning & X-Ray radiography benches

The underwater Bench design stands out for the positioning accuracy and unprecedented movements to manipulate materials to be tested. In the developed design, (almost) all the mechanisms and component parts with relative movement, actuators, connections, data and power cables, etc., are located out of the reactor pool.

Over 4-m long poles of different shapes and diameters can be allocated to position them under water with a point-to-point accuracy of 25 μm in linear movements and of 36 " in rotating movements. In addition, the design of the Bench allows the micrometric positioning and horizontal alignment of the X-ray camera. Bench manipulation, allows to perform testing works underwater and under radiated environment.

Gamma ray & X-ray spectrometric analysis

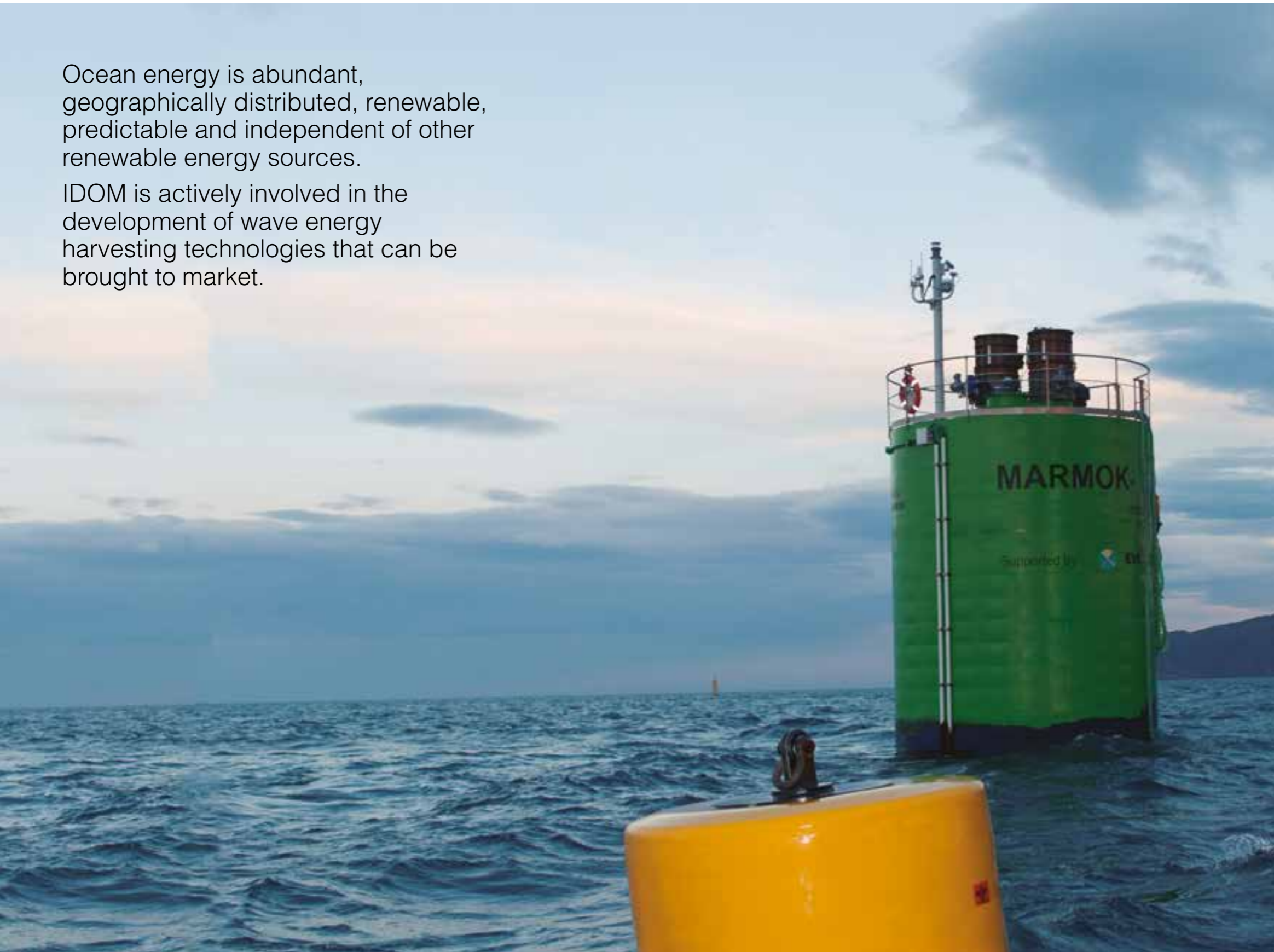
The role of the Gamma-ray collimator is to control and direct with great precision, through the several collimation and filtering stages, the gamma rays emitted by the submerged sample towards the gamma detector located in the room next to the pool. Meanwhile, the X-ray collimator directs the beam (generated by the accelerator) from the adjacent room towards the sample and imagining measurement system located in the pool.

Hot cell X-Ray & Gamma-ray radiography

The HGXR equipment is composed of a test bench providing micrometric precision in all movements and a fine positioning and horizontal alignment of the X-ray camera, and two X-ray and gamma-ray collimators made of tungsten with multiple slits with a minimum opening of 0.25mm in height and 200mm in length. For its part, the HGRX station stands out for its compatibility with high doses of radiation, as it is designed to withstand a radiation dose of 10^6Gy without damage, as well as its compatibility of remote operation.

Ocean energy is abundant, geographically distributed, renewable, predictable and independent of other renewable energy sources.

IDOM is actively involved in the development of wave energy harvesting technologies that can be brought to market.



Waves, tides, the thermal and saline gradient could generate 10% of global energy by 2050

MARMOK-A-5 Wave Energy Collector (WEC). A floating device, based on oscillating water column technology

SPAIN

The MARMOK-A-5 is a wave energy collector (WEC) with two 15 kW turbines.

The prototype was installed on the BIMEP marine energy platform and is the first WEC connected to the electrical grid in Spain and one of the first grid-connected devices in the world.

This prototype has operated for several years in the open waters of the Atlantic, negotiating waves of more than 14 m. It has also provided IDOM with an enormous amount of data and invaluable experience in all phases of its life cycle: modeling, design, certification, manufacturing, installation, operation, maintenance and decommissioning.

One of the biggest challenges for wind technology is to anticipate problems

that can occur and impact negatively on the operation of the resource, prompting the need for full-scale testing of the major components

DyNaLab, a full-scale test bed for large wind turbines up to 8 MW for the Fraunhofer Institute in Bremerhaven

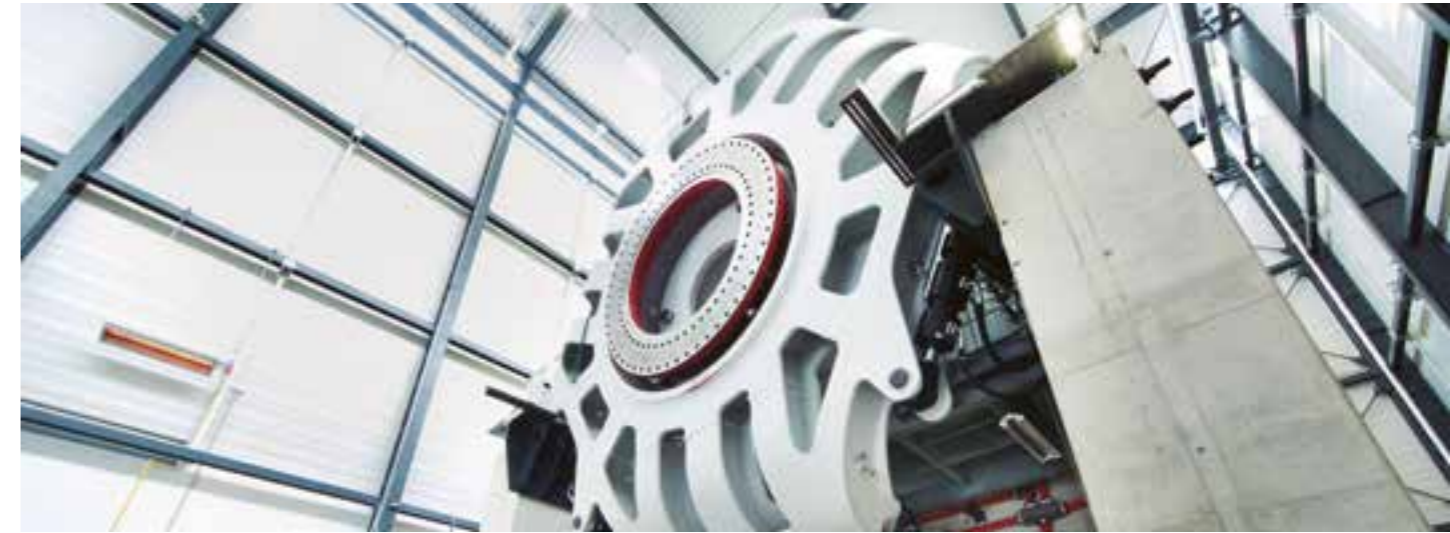
GERMANY

IDOM has been a pioneer in the development of full-scale wind turbine testing facilities, becoming the first to build the first facility capable of performing accelerated track testing of complete machines.

IDOM has continued this activity by collaborating in the development and construction of the Clemson University Wind Turbine Test Facility and the turnkey execution of DyNaLab, developed for the Fraunhofer Institute.

This facility distinguishes itself by providing the most advanced capabilities because of its high dynamic performance, and the wide variety of tests possible in terms of its large capacity to simulate different wind conditions, as well as power grids.

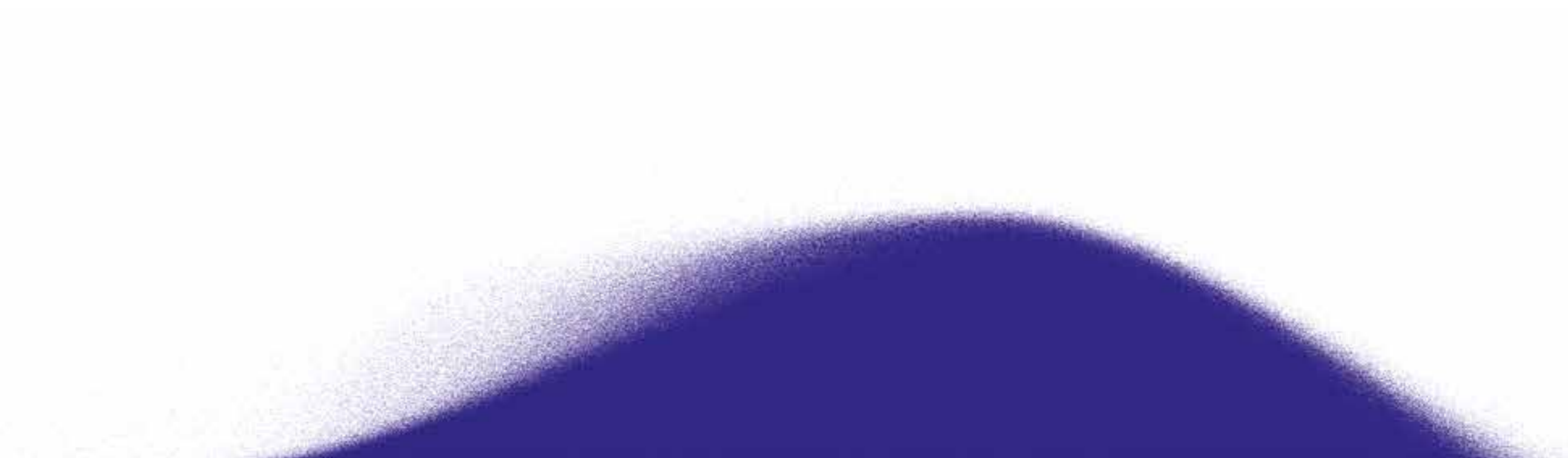
The design developed by IDOM has a rotary drive (a tandem motor) with a test capacity of up to 10 MW, as well as an innovative load application system consisting of a Stewart platform with six 3,000 kN servo-hydraulic cylinders, which allows the application of cyclic loads (not torque) of thrust force up to 1,900 kN, in moments up to 20,000 kNm, at frequencies of up to 2 Hz. The system is also equipped with a pioneering in-house artificial power supply system and HIL (Hardware-in-the-loop) simulator.



03

SOME PROJECTS

Environment_



Environmental sustainability strategies



.....
Green methanol - SolWinHy

Environmental processing of the SolWinHy green methanol project

SPAIN

IDOM is carrying out the environmental and engineering design work for this project, to produce green methanol through a process of electrolysis with water and subsequent synthesis with CO₂.

The concept of “island” operation allows this project to be self-sufficient and completely independent from the grid.

Framework contract for the implementation of environmental and social safeguards in projects financed by the IDB

LATIN AMERICA

IDOM provides support to Multilateral Institutions to apply their environmental and social performance policies and standards to the projects they finance.



.....
Infrastructure
BOLIVIAN AMAZON



National waste management & circular economy plans

Design of an urban waste management complex

GIPUZKOA

Technical assistance for the design and construction of the different infrastructures for the urban waste management of Gipuzkoa consisting of:

CMG1 mechanical biological treatment plant, and energy recovery plant.

CMG2, a biowaste anaerobic digestion plant and a slag maturation plant.

Hospital waste management in Lima

PERU



Climate change strategies

National climate change adaptation plan

PERU

Definition and planning of measures to reduce the risks of the adverse effects of climate change.

- Development of management instruments (Regional Climate Change Strategy, NDC and Local Plans).
- Climate risk analysis at national and regional level for 5 thematic areas (Water, Forests, Agriculture, Fisheries and Aquaculture and Health).
- Economic assessment and financing.

Climate change resilient territories

COSTA RICA

The objective of the project is to reduce vulnerability and build Costa Rica's resilience to the impacts of climate change by strengthening capacities to integrate climate change adaptation actions into the country's regional and municipal planning.

IDOM has been in charge of developing 12 Climate Adaptation Action Plans (PAAC) in 12 cantons of Costa Rica.

“Coastal Cities & Climate Change” project

MOZAMBIQUE

Build capacity to adapt to climate change by developing sustainable drainage and sanitation management systems.





Natural capital incorporated into investment decisions

Natural capital helps to estimate the value of the ecosystem in productive terms (oxygen production, natural water purification, erosion prevention, nutrient generation, etc.). Integrating natural capital into decision-making reduces biodiversity loss.

Bioconnect Project. Action plan for ecological connectivity in Jalisco

MEXICO

IDOM is designing this Plan as the instrument for coordinating inter-institutional actions to contribute to the development of a national ecological connectivity policy for Mexico and integrated landscape management, the ultimate objectives of Project Bioconnect.

Aqueduct in Bogota

COLOMBIA

IDOM is developing three projects that integrate the return of three ecosystem services (sediment retention, nutrient retention, and base flow), all of which have a positive impact on the revenues of the client who is supplied with improved water quality and other additional benefits.

Sustainable remediation of contaminated soils

IDOM is part of the NICOLE Network for the Investigation of Contaminated Soil and Industrial Environmental Liabilities in Europe and is accredited as an inspection body according to ISO 17020.



Bioremediation for sustainable development in Viña del Mar

CHILE

IDOM is participating as Project Manager in this project for the recovery of 16 hectares of land with an industrial past (storage of petrochemical products), using the bioremediation technique.

Protected by the Natura 2000 Network



Monitoring, control, and evaluation of EU LIFE projects

This European Union program aims to contribute to the development of resource-efficient, climate-resilient, and low-carbon economies by protecting, maintaining and improving the environment, biodiversity, ecosystems and, in particular, the Natura 2000 network.



04

SOME PROJECTS

Water_





Water and wind,
the ingredients for
100% renewable
energy on
the island

**The reversible use of the
hydro-wind power plant
achieves energy self-sufficiency
for the island of El Hierro**

CANARY ISLANDS

The growing need for the supply of renewable energies has made it necessary to increase the flexibility of electricity systems to manage the natural fluctuations of these energy sources and guarantee the security and reliability of supply. In this sense, conventional and reversible hydropower plays a fundamental role in the management of renewable energy sources, storing and generating energy and, overall, making the system more flexible.

IDOM designed the Gorona del Viento project, which has set the world record for an island running 100% on renewable energy. IDOM's design included the upper and lower reservoirs, the reversible pumping system and the wind farm.

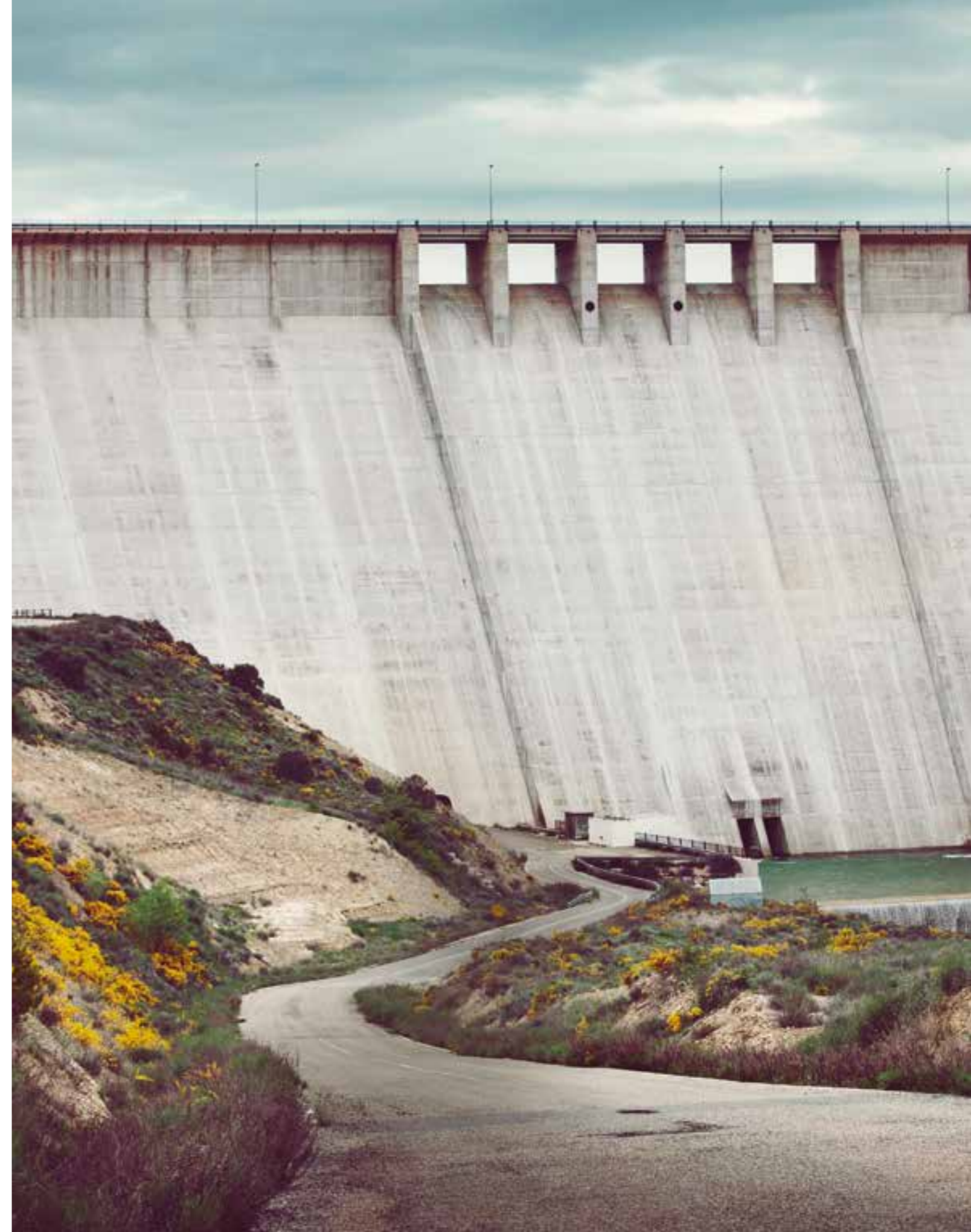
New information systems for reservoir operation in the management of risks related to climate change

Improving in the operation of 24 dams for the Duero and Guadalquivir hydro-graphic confederations

SPAIN

The application of the recent Technical Safety Standards for dams and their reservoirs in Spain seeks to improve the governance of state-owned dams and reservoirs. IDOM is working on the revision, updating and redrafting of the Operating Rules for 16 dams managed by the Guadalquivir Hydrographic Confederation and 8 dams of the Duero Hydrographic Confederation.

In this new stage, new factors are incorporated to those traditionally contemplated, highlighting the application of new information systems in the operation, the automation in the identification of extraordinary situations, the reduction of pressures, the sustainability and the management of risks linked to climate change.





Planning & management of recycled water in Medina and Riyadh

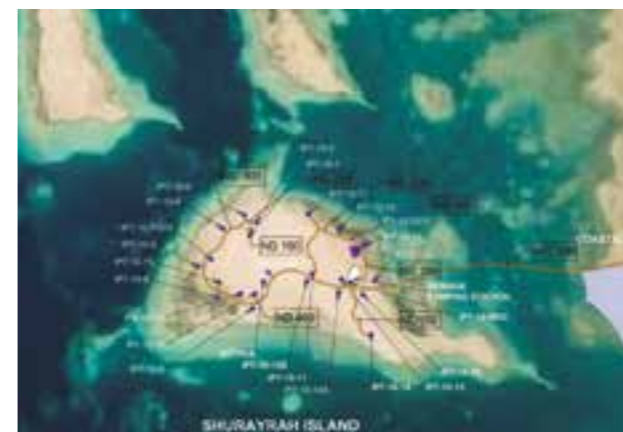
SAUDI ARABIA

One of the great challenges worldwide is the reuse of available resources as the only sustainable solution in a large part of the planet.

In Saudi Arabia, the use of recycled water is being promoted, one of the pillars of the Saudi Green Initiative and Vision 2030. IDOM is collaborating with the public entity SIO

(Saudi Irrigation Organization) to promote the use of recycled water in the country.

IDOM has developed recycled water management studies and the design of the distribution network in the cities of Medina and Riyadh, actions that optimize the use of water, making it sustainable and boosting the agricultural sector.



Integral plan and design of all water supply and sanitation infrastructures or The Red Sea Project

SAUDI ARABIA

The Red Sea Project is the most ambitious tourism development in the world.

IDOM is designing the entire potable water, recycled water and sanitation generation and distribution system that includes more than three desalination plants (RO), 200 km of pipelines, storage systems and eight treatment plants.



Data mining and business intelligence for Smart Water systems

IDOM is developing data mining and business intelligence modules and dashboards to improve all areas of water management, increasing the performance of the company, its efficiency, and the quality of service to the client.

Smart Water master plans for water cycles in Seville, Oviedo and Campo de Gibraltar

SPAIN

Master plan for the digitalization of the water cycle in the water utilities of Oviedo (Spain), modeling, sectorization and advanced management plan for the drinking water network of Cartagena de Indias (Colombia), and master plan for the digitalization of the water cycle in the water utilities of Campo de Gibraltar (Spain).

Thimphu integral reduction of non-revenue water plan

BHUTAN

IDOM has developed a wide variety of projects at international level, where advanced procedures have been applied to improve the efficiency of water management, highlighting, among others, the integral plan for the reduction of non-revenue water in Thimphu (Bhutan).

Design of the largest desalination plant in the world

Saline Water Reverse Osmosis (SWRO) production of 900 million liters per day in Taweelah

UNITED ARAB EMIRATES

IDOM has developed the basic and detailed engineering of the world's largest desalination plant with a capacity of 900 MLD equipped with a 70 MW photovoltaic plant.

Desalination technology: Reverse osmosis membranes.

The permeate water is remineralized by the addition of CO₂ and calcite beds.

Photovoltaic plant for the generation of 70 MW of on-site solar power, in line with the plant's environmental sustainability goals. The use of renewable energy will reduce operating costs and harmful gas emissions.



05

SOME PROJECTS

Energy_

100% renewable and 100% emission-neutral off-grid energy systems

The Hybrid Renewable Energy System (HRES) for The Red Sea Project

SAUDI ARABIA

The Red Sea Project is a mega tourism project on several islands in the Red Sea.

The entire energy system (HRES - Hybrid Renewable Energy System) operates as an isolated grid with 100% renewable and 100% carbon neutral generation.

IDOM has designed the entire system composed of a smart grid connected to two photovoltaic plants of 222 MWp and 102 MWp, a wind farm of 36 MW, three battery storage systems (BESS) of 52 MW each, three microgrids with their BESS, as well as three desalination plants and two district cooling systems connected to the smart grid.





**Lightning Project:
High Voltage Direct
Current (HVDC)
connection, reducing
the carbon footprint
of ADNOC**

ABU DHABI

IDOM is designing the 4 HVDC converters and the integration of the connections.

The ADNOC project includes two subsea interconnectors, 140 and 124 km long, which will connect TRANSCO's grid to the DAS and ZAKUM islands and will allow the transmission of renewable energy to the industrial complexes.



**2,000 MW bi-directional
HVDC link between
Ethiopia and Kenya,
500 kV DC - 400 kV AC**

KENYA-ETHIOPIA

East Anglia Offshore Wind Farm



The 714 MW wind farm, located in the North Sea, will supply almost 500,000 British homes.

The farm consists of 102 wind turbines (235-meter high), each generating 7 MW.

With an investment of close to 3 billion euros, the wind farm will cover an area of approximately 300 km².

Engineering for the offshore substation of the East Anglia One offshore wind farm

UNITED KINGDOM

IDOM has provided SCOTTISH POWER with different engineering services:

The 3D modelling of the metallic structure of the substation, including equipment, auxiliary systems, and the different levels of the topside (cable deck, main deck, utility deck, and roof deck).

Pre-FEED of the electrical system (study of loads, according to UK Grid Code), short circuit, reactive compensation, intrinsic and trafo losses.

Study of electromagnetic fields in offshore substations

UNITED KINGDOM

The energy from the 102 wind turbines arrives at the Andalucía II substation.

This energy is transformed to 220 kV and transmitted to land through a submarine cable.

IDOM carried out the electromagnetic field study of the substation.

The software used, ANSYS MAXWELL 3-D, made it possible to work with a single model for the entire substation, which required a meshing of 2 million tetrahedrons.

The study was presented by IDOM at the Ansys Innovation Event.



Waste to energy recovery in Kwinana

AUSTRALIA

IDOM is developing the basic and detailed engineering of the Waste to Energy plant treating 400,000 tons of municipal waste to produce 41 MW in Kwinana, Australia.

The largest reversible pumping station in the country, Aguayo II

SPAIN

PMC of the FEED of the CHR Aguayo II project, with a capacity of 1,000 MW.

At the same site, REPSOL already operates Aguayo I (340 MW), a reversible pumping plant located at the foot of the dam, with both powerhouse and waterways above ground. Aguayo II will share with Aguayo I, the already existing Upper reservoir and Lower reservoir. However, it will be built as a new totally underground facility with 4x250 MW pump-turbine motor-generator sets (Francis vertical, fixed speed).





IDOM has designed simple and combined cycle plants, in total, generating over 50 GW

The Alba combined cycle power plant incorporating high-efficiency H-class gas turbines

KINGDOM OF BAHRAIN

IDOM has developed the basic and detailed engineering for the 2GW combined cycle power plant.



06

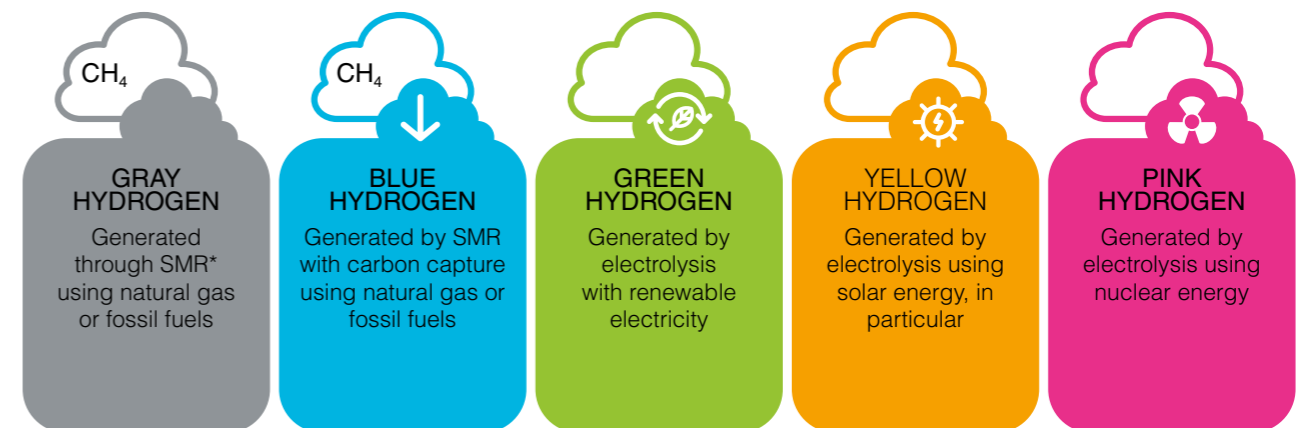
SOME PROJECTS

Hydrogen_



Mass production of hydrogen with renewable energies (green hydrogen)

This is the beginning of a major transformation of the industry towards cleaner and more sustainable production and will be the main component of the new energy vectors of a decarbonized economy.



*SMR = Steam Methane Reformation

Green hydrogen production, one of the main ways to decarbonize industry

100 MW green hydrogen production plant

EUROPE

Development of conceptual engineering for green hydrogen production as part of the decarbonization and energy transition strategy of a multinational petrochemical company.

Production will be used to decarbonize large industrial consumers and will also be supplied for mobility and heavy transport decarbonization applications.

Owner's engineering for the production of green hydrogen for Galp

PORTUGAL

Review and supervision of the basic engineering of a 100 MW green hydrogen production plant. The new facility will be located in the vicinity of the Sines refinery (Portugal) with the objective of decarbonizing its hydrogen production.

36 MW yellow hydrogen production plant using a 50 MWp photovoltaic solar farm

Feasibility study, configuration optimization and preparation of documentation for the EPC tender.



Basque hydrogen corridor

SPAIN

Development of the basic and detailed engineering for the hydrogen corridor in northern Spain. The project includes the design and selection of materials for the construction of the new gas pipeline that will link hydrogen producers with new potential industrial consumers in the area.

Hydrogen pipeline study

Study and engineering for the injection of 10 MW - 2,500 Nm³/h of hydrogen in a 35 km hydro-pipeline.

Green ammonia from green hydrogen as a new fuel or storage of surplus renewable energy

Green ammonia production and export projects

Development of conceptual engineering and feasibility studies for green ammonia production plants from hydrogen electrolysis, including storage and export port facilities.

IDOM has project references for up to 1,000 MW of electrolysis and 900,000 tons per year of ammonia production.



Green methanol - produced from green hydrogen and captured biological CO₂ - and green ammonia will be the sustainable fuels for the marine sector



Needs study for a green methanol plant

MIDDLE EAST

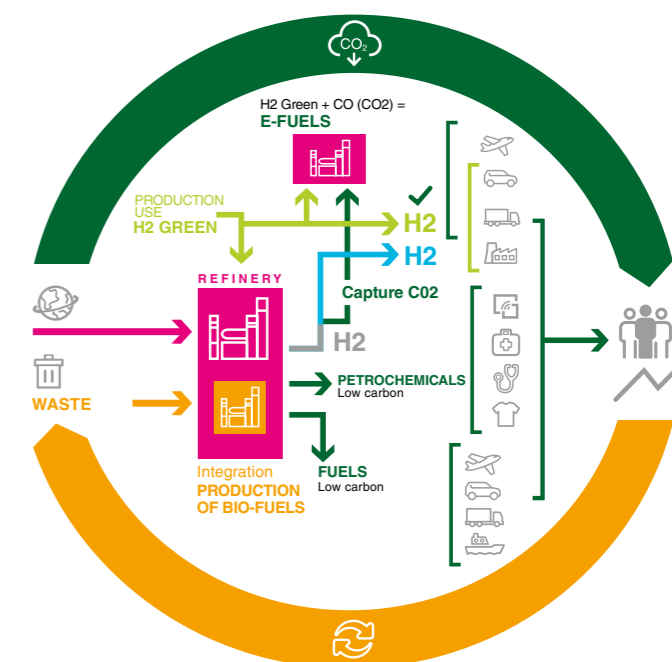
07

SOME PROJECTS

Oil & gas_

Decarbonization projects for the refinery of the future

IDOM is working with several refineries to achieve the decarbonization objectives set by the European Union and to make refining processes sustainable



Decarbonization program 2029 for one refinery

EUROPE

The program includes more than 46 actions to reduce more than 4 MTA of CO2 emissions, including:

- Evaluation of carbon capture technologies.
- Energy efficiency improvements.
- Process improvements.

Circular economy: biofuels from used oils and fats



Renewable diesel (HVO) and jet fuel (SPK) plant from used cooking oils, animal fats and soybean oil

PARAGUAY

Biofuels, such as hydrotreated vegetable oil and renewable jet fuel, can be produced from used oils and fats, which are direct replacements for fossil fuels.

The substitution of crude oil by renewable raw materials

in the production of fuels contributes to combating climate change by preventing significant quantities of fossil greenhouse gases from entering the atmosphere.

IDOM has carried out the FEED project for the new plant.



Engineering framework contract for upstream and downstream engineering at several Ecopetrol refineries

COLOMBIA

The contract includes projects in its different plants and production centers:

HUB Offshore, HUB Bogotá, HUB Caribe, HUB Piedemonte, HUB Llanos, HUB Sudeste, HUB Exploración.

Part of IDOM's Oil & Gas team in Colombia during a training session at the corporate headquarters in Madrid.



“ IDOM is proud to be designing the first DMC/EMC plant to be built in the USA ”

Tom Lorentz, President of IDOM Inc.

Dimethyl carbonate plant / ethyl methyl carbonate plant (DMC/EMC)

UNITED STATES

IDOM is undertaking the FEED engineering for this plant, which will be the first in the USA.

DMC and EMC are the main component of the solvent for the electrolyte in lithium-ion batteries and DMC is also used as a development solution in the semiconductor manufacturing process. The demand for DMC is expected to continue to grow with the spread of electric vehicles and the advancement of digitalization.



Revamping of two ammonia plants (Kellogg and Chemico technology) in Annaba

ALGERIA

With an ever-growing world population, the use of fertilizers has become essential to satisfy the global demand for crops and food. However, the environmental impact of their traditional production makes it necessary to modernize existing production processes to make them carbon neutral.

Green ammonia, produced from green hydrogen, is becoming an essential player in enabling sustainable food production.

IDOM has been the Project Management Consultant (PMC) for both projects.



Well gas treatment plant at Tendara

MOROCCO

The upstream project is located at the foot of wells and has a gas treatment capacity of 2,000,000 Sm³/d.

IDOM has carried out the FEED for Sound Energy Morocco for Enagas and Elecnor, in Morocco.

**Conversion of the VGO
hydrotreating unit into a
mild hydrocracker at
Sines Refinery**

PORTUGAL

EPCM to carry out the conversion of the existing VGO hydrotreating unit into a Mild Hydrocracker at GALP's refinery in Sines Portugal.



**Project Management
Consultant for the
expansion of the
refinery that will
produce cleaner
fuels in Talara**

PERU

IDOM is managing an investment of more than US\$5 billion for Petroperu to adapt the refinery with new processing and auxiliary units that will enable the production of more sustainable fuels.





08

SOME PROJECTS

Nuclear
services_

Liquid Lithium to molten salt heat exchanger with Tritium extraction

UNITED KINGDOM

Several fusion energy concepts propose the use of liquid lithium as the primary coolant and tritium breeder. To avoid possible direct contact between lithium and water, a molten salt can be used as a secondary coolant, and water as a tertiary system.

The conceptual design developed consists of a series of plates with a unique embedded leak detection system

Multiple layers of different structural, insulating and conductive materials make it possible to detect when lithium contacts the detection system, closing an electrical circuit. In addition, a series of channels not only allow the extraction and recovery of tritium, the fusion reactor fuel, but also prevent leakage into the secondary cooling system.

Fluid dynamics, tritium transport, thermal, electrical, structural and fabrication analyses demonstrate the viability of the proposed design as a feasible solution for fusion energy concepts using liquid lithium as the primary coolant.



Thermomechanical design of collective thomson scattering components to measure the velocity of fast ions in the ITER nuclear fusion reactor

FRANCE

ITER's Collective Thomson Scattering (CTS) is a diagnostic system for measuring plasma parameters related to the velocity distribution function of ions, in particular fast ions. The diagnostics are based on the principle of collective Thomson scattering of a powerful millimeter-wave beam of radio-frequency in the plasma.

The radiation scattered in certain directions is collected and measured and provides information about fast ions. The diagnostics will consist of a millimeter-wave source (60 GHz, 1.2 MW, X-mode gyroscope), transmission lines, front-end components such as a series of launcher mirrors to inject the probe beam into the plasma, an array of receiver mirrors to collect the scattered radiation, re-

ceiver lines, data acquisition and processing electronics.

F4E coordinated the work of this diagnostics project, where IDOM performed the thermal and mechanical design of all front-end components of the CTS. The design was performed with FEM and evaluated according to ITER SDC-IC/RCC-M Rx code criteria.



Leak Detection System

FRANCE

Safety, sustainability, and innovation are the fundamental principles that allow us to develop design, engineering, and construction projects of great technological complexity. For example, as part of a consortium, IDOM was awarded the design and manufacturing of 9 Leak Detection Systems for the ITER project. Unprecedented in their size, the systems are aimed at verifying that no leaks are present in the ITER components that need ultra-high vacuum for proper operation. This project involves many different engineering disciplines (mechanical and piping design, CAD design with ENOVIA, I&C design and vacuum engineering, among others).



Safe and reliable long-term operation of nuclear power plants

CATALONIA

Engineering of choice for the operator of Ascó and Vandellòs II NPP, developing projects that ensure a safe and reliable long-term operation of Ascó NPP and Vandellòs II NPP. Projects that include both design modifications and consultancy to manage aging.



.....
Decommissioning of Santa María de Garoña nuclear power plant (Burgos)

CASTILE AND LEON



09

SOME PROJECTS

Manufacturing_

Manufacture of Li-ion batteries from the perspective of sustainability

IDOM collaborates with several clients in the design of facilities for the entire Li-ion battery value chain, from a sustainable perspective: p-CAM and CAM plants, gigafactories for cell manufacturing, assembly plants and end-of-life battery recycling facilities (Black Mass + BMR), which close the cycle by reintroducing the raw materials into the chain

Li-ion battery recycling plant

EUROPE

Confidential project - detailed engineering design, procurement assistance and construction management.



Industrial plants based on the circular economy

IDOM's commitment to society is to make efficient and sustainable projects a reality with the objective of adding value to waste, recovering raw materials so that they can re-enter the production cycle, allowing our clients to make their industries more competitive.

Net Zero. The plant is designed to be fully self-sufficient in thermal needs and partially self-sufficient in electrical energy



Plant to produce rCB, steel and biofuel from tires

EPCM for the new plant for the treatment of end-of-life tires to recover raw materials (rCB, steel and biofuel) with a capacity of 27,010 t/year.



EPCM - Chemical plant for the production of solid-state amino acid derived from liquid methionine for animal feed



**EPCMV
for a new
pharmaceutical
production plant**

SPAIN

IDOM has been entrusted by FAES FARMA with the complete definition, procurement and construction management of its new production center in the Science and Technology Park of Bizkaia, where solid, semi-solid and liquid formats will be produced.

The project consists of more than 350 clean rooms and adds an automated warehouse with more than 12,000 positions.

The EPCMV service provided has successfully met the challenge of coordinating nearly 100 construction companies and suppliers in terms of time and cost.



Extensive activity in the paper and paperboard sector

UNITED STATES

IDOM has developed different engineering services for one of the main producers in the United States of America.

Ranging from Due Diligences of the location, FEL2, FEL 3 engineering, detailed engineering and supervision for different plants, and for different types of plants: recycling, packaging, cartons, containers, etc.



Cold repair of a float glass plant

MIDDLE EAST

IDOM continuously carries out flat glass projects for the main producers in the world. For this project, which is subject to confidentiality, IDOM acts as PMC and performs the detailed design as well as the supervision of the whole execution including the start-up (heating of the furnace).



EPCM of an oat processing plant in Arakil

NAVARRA

Harivenasa has entrusted IDOM with the design, contracting and construction management of its new plant in Arakil. The project is a perfect example of IDOM's multidisciplinary approach, integrating the Manufacturing team with the Architecture team, achieving a unique result.

10

SOME PROJECTS

Metals
& minerals_



Iron ore concentration processes to meet the growing demand for high quality pelletizing for the production of green pre-reduced iron ore

These pellets will feed the DRI plants to subsequently produce green steel.

FEED for iron ore mine and pellet plant

MAURITANIA

IDOM is carrying out the FEED phase of the ATOMAI project in Takamul (Mauritania).



Green steel production using hydrogen-prereduced iron technology: a wager on the decarbonization of steel



.....
FEED + EPCM to produce green steel
MIDDLE EAST

.....
FEED of DRI plant in new integrated steel complex to produce green steel
EUROPE



**FEL 3 for the new
aluminum billet plant**
SCOTLAND

The ALVANCE BRITISH ALUMINIUM plant in Scotland is one of the most sustainable plants in the UK because it uses hydropower and biodiesel for its aluminum smelter.

IDOM has been awarded the FEL-3 contract for the new billet plant next to the existing facilities.



New projects with repeat clients



EPCM of the new steel mill, modernization of the rolling mill, new profile rolling mill, lime plant, and vacuum furnace for Aceros Arequipa in Pisco

PERU



11

SOME PROJECTS

Health_

Quality evaluation of rare disease care programme

EUROPEAN UNION

More than 30 million people suffer from a rare disease in the European Union.

The ERNs concerning patients' rights in cross-border care guarantee the availability of the necessary treatments regardless of the patient's origin.

IDOM has been appointed by the EU as an evaluator of the Rare Diseases Programme (RDNs), which includes more than 25 networks and 900 health care providers.

25 networks and 900 health care providers in the Member States.

End-to-end solution design, from IT strategy through to implementation

Digital technology in the fight against pandemics for the IDB

LATIN AMERICA

The COVID-19 pandemic highlighted the importance of robust public health emergency response systems (PHERS).

IDOM Consulting is collaborating with the Inter-American Development Bank (IDB) on an analysis to determine the preparedness and robustness of PHERS and develop a digital response system for pandemics in Latin America.

The initiative included a comprehensive analysis of best practices, processes and key digital tools employed by countries such as South Korea.

Design of patient-centered policies





**Improvement of
influenza and
pneumococcal
conjugate vaccine (PCV)
production system**

COLOMBIA

IDOM is supporting members of PROSUR (Forum for the Progress of South America) in an initiative funded by the Inter-American Development Bank (IDB) to explore options for scaling up the manufacture of influenza and pneumococcal conjugate vaccines (PCV) in the Latin American region.

To this end, the IDOM team is conducting a diagnostic and pre-feasibility study to identify costs, production factors, capacities and regulations to be taken into account.

Feasibility studies, functional programs, architectural and engineering design of hospitals



Proton therapy center
GEORGIA

The high complexity and technical particularities of this type of projects requires, on the one hand, the integration of a highly specialized multidisciplinary team (including nuclear services necessary for radioprotection and licensing) and, on the other hand, the experience and knowledge in similar projects. IDOM has extensive experience in Proton

Therapy projects, Radio-pharmacy laboratories, and other Nuclear Medicine equipment integrated in the field of hospital architecture. The new building located in Kutaisi, Georgia will house, in addition to the Proton Therapy Center for the treatment of patients, a Scientific Research Center for nuclear medicine and physics.



CUF Descobertas hospital
PORTUGAL



National emergency treatment center
GAMBIA

National cardiovascular center

MONGOLIA

Expansion of the Shastin hospital with state-of-the-art facilities for the diagnosis and treatment of all cardiac patients. It will have 80 inpatient beds, 18 intermediate care beds, 23 intensive care beds and 12 day-care unit beds. In addition, there will be three operating rooms and 4 Cath-Labs, one of them dedicated to electrophysiology.

Specialized pediatric hospital

BULGARIA

Feasibility study of the pediatric hospital and the functional distribution of spaces. In addition, assistance was provided on the definition of economic feasibility and identification of financing opportunities for construction.

Design:
IDOM architectural team



12

SOME PROJECTS

Architecture_



Excellence in terms of
functionality, logistics, economy,
energy and comfort

**CEIBS university
campus in
Beijing**
CHINA

Headquarters of a business school in China, the building received First Prize at the 6th edition of the Architectural Awards of the Architectural Society of China, the First Prize at the 15th edition of Beijing excellent design and was awarded at the IX International Biennial of Architecture of São Paulo.

India International Convention and Expo Centre (IICC) will be the world's largest exhibition center and an example of sustainability

INDIA

An icon and a destination.

IGBC (Indian Green Building Council) platinum certification.

To host major international events.





The sleek stadium of Athletic Club

Design, technology and safety to the highest UEFA standards

One of the most important aspects for the Club was that it could be built without disrupting play

IDOM's design brings together exceptional architecture with the most sophisticated design tools.

The roof, a cost-effective solution, generates a sonority that enhances the atmosphere at the matches.

Careful study and planning of the construction sequences were decisive for the team to be able to play La Liga all season during construction.





Remodeling of the Monumental, River Plate's majestic stadium

ARGENTINA

River Plate awarded IDOM the contract for a major renovation of the Monumental, maintaining the essence and tradition of the historic stadium, while undergoing an intense transformation to make it the largest stadium in South America.

The largest stadium in South America



The new Camp Nou, a magnificent stadium for FC Barcelona: Barça

BARCELONA

The design, developed by the architectural firms IDOM, b720 and Nikken Sekkei, integrates the improvements required by FC Barcelona for the comprehensive remodeling of Camp Nou, in terms of sustainability, innovation, technology and accessibility, and will also increase its economic potential.

The largest stadium in Europe

21st century soccer requires safe spaces that maximize returns



The conversion of San Carlos Apoquindo into a multipurpose stadium and a landmark in Chile

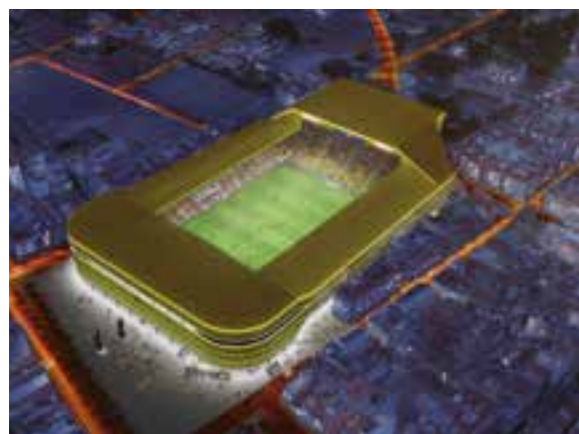
CHILE

The management team of Cruzado intends to modernize the stadium and its surroundings, so that it will be a multipurpose venue that will become a landmark for the Las Condes district and the city of Santiago, allowing the organization of high-level sporting events, while generating new revenues.

The San Lorenzo Stadium will be the multicultural engine of the Almagro neighborhood with activities 365 days a year

ARGENTINA

The open and transparent design is reminiscent of the old gasometer, while the elements of local pride, represented, for example, by the murals of the Boedo art group, will be integrated into the squares and new public spaces generated, forming part of the neighborhood with permanent activities.



Remodeling of the Estadio de la Cerámica for Villarreal CF to create an incomparable atmosphere

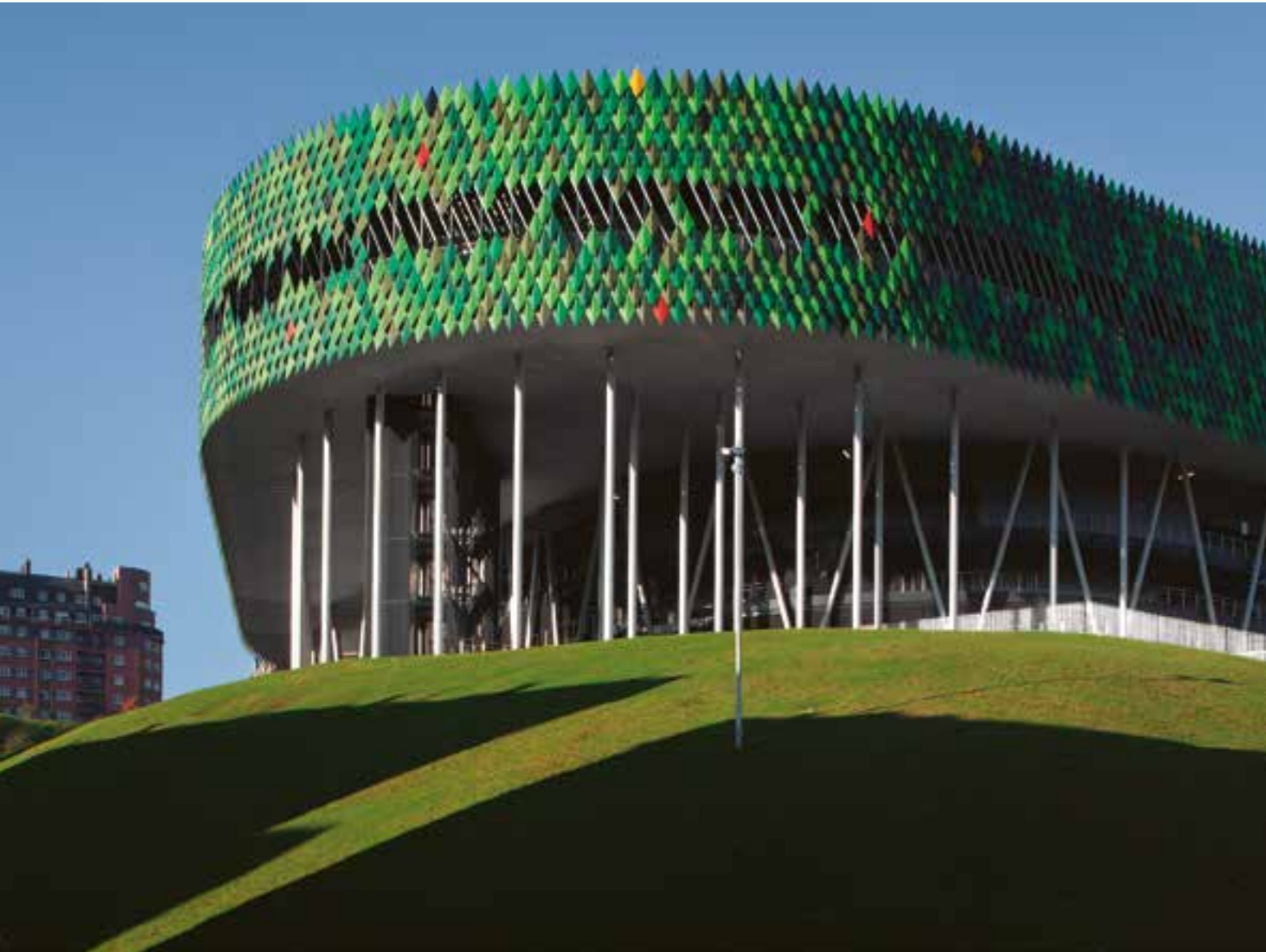
SPAIN



Roof technology for Levante's stadium

SPAIN





Bilbao Arena and Miribilla sports center, a design for international competitions and a model of sustainability

SPAIN

High energy efficiency, Cistern to maintain the lawn without irrigation.

Reuse of pool water for cleaning the streets of Bilbao.

A large skylight for natural light.

Cogeneration system for hot water and electricity.



Transforming an industrial building into a multi-purpose sports facility

Multi-sport Center for the city of Tarbes

FRANCE

The project is the result of an ideas competition for the transformation of a former military industry building from the early 20th century into a large sports center of importance for the city, the region and the country.

Combining our
experience in
mobility with
the ability
to generate
attractive spaces

**Parking facility
and intermodal
station in Nantes**

FRANCE

Winner of a public tender, the project is located in a low-density residential area in the town of Bouguenais, southeast of Nantes. The proposal is part of Nantes Metropole's desire to improve the public transport network of the city of Nantes with a hub consisting of a parking lot, a bus station and a tramway station.

Our design approach integrates functional and technical requirements, with the aim of reducing the impact that the building could generate in a low-density residential environment of high environmental quality.



A school equipped for new educational methodologies and information technologies

SAN SEBASTIAN

The Aldapeta María Ikastetxea School in San Sebastián aims to implement a new pedagogical model based on modern educational methodologies, in addition to the use of information technologies as tools to support education. The building has been equipped with the highest features to achieve an efficient building in its consumption, using solar geothermal energy to maximize energy efficiency in its operation.

Other designs by the IDOM architectural team:



Pg. 129 Health.
Descobertas Hospital



Pg. 129 Health.
Emergency center in Gambia



Pg. 128 Health.
Proton Therapy Center, Georgia



Pg. 111 Industrial plants.
Oat processing plant

Sustainable buildings,
low-cost, easy to construct
with local techniques and with
almost zero maintenance



**Universities of Saint
Louis & Bambej**

SENEGAL

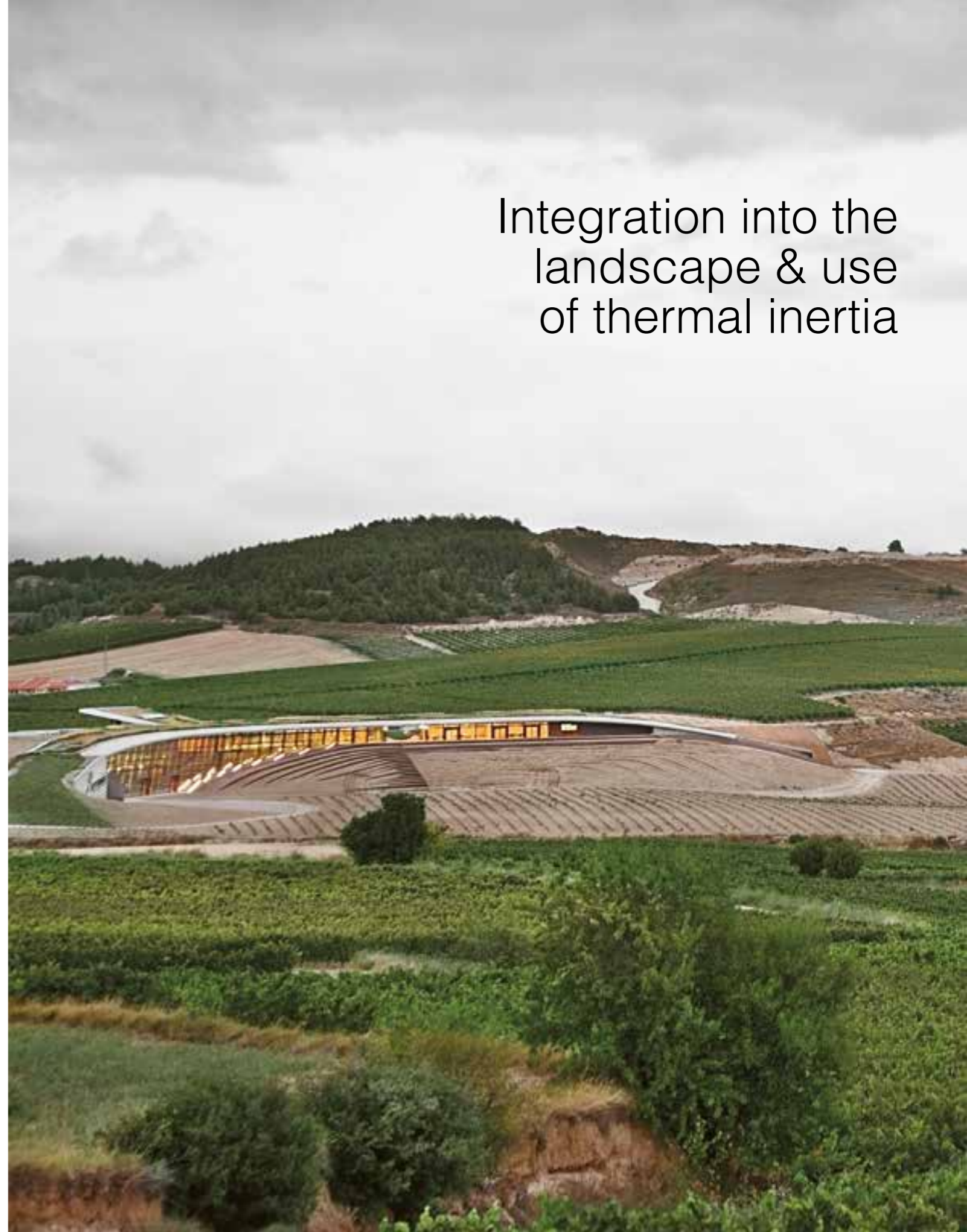
In Bambej, four buildings were designed to incorporate classrooms, an amphitheater, laboratories, computer rooms and offices. In Saint Louis, three buildings were designed to house an indoor gymnasium, a swimming pool, a laboratory, a documentation center, classrooms and offices.

**Beronia winery
in Ollauri**

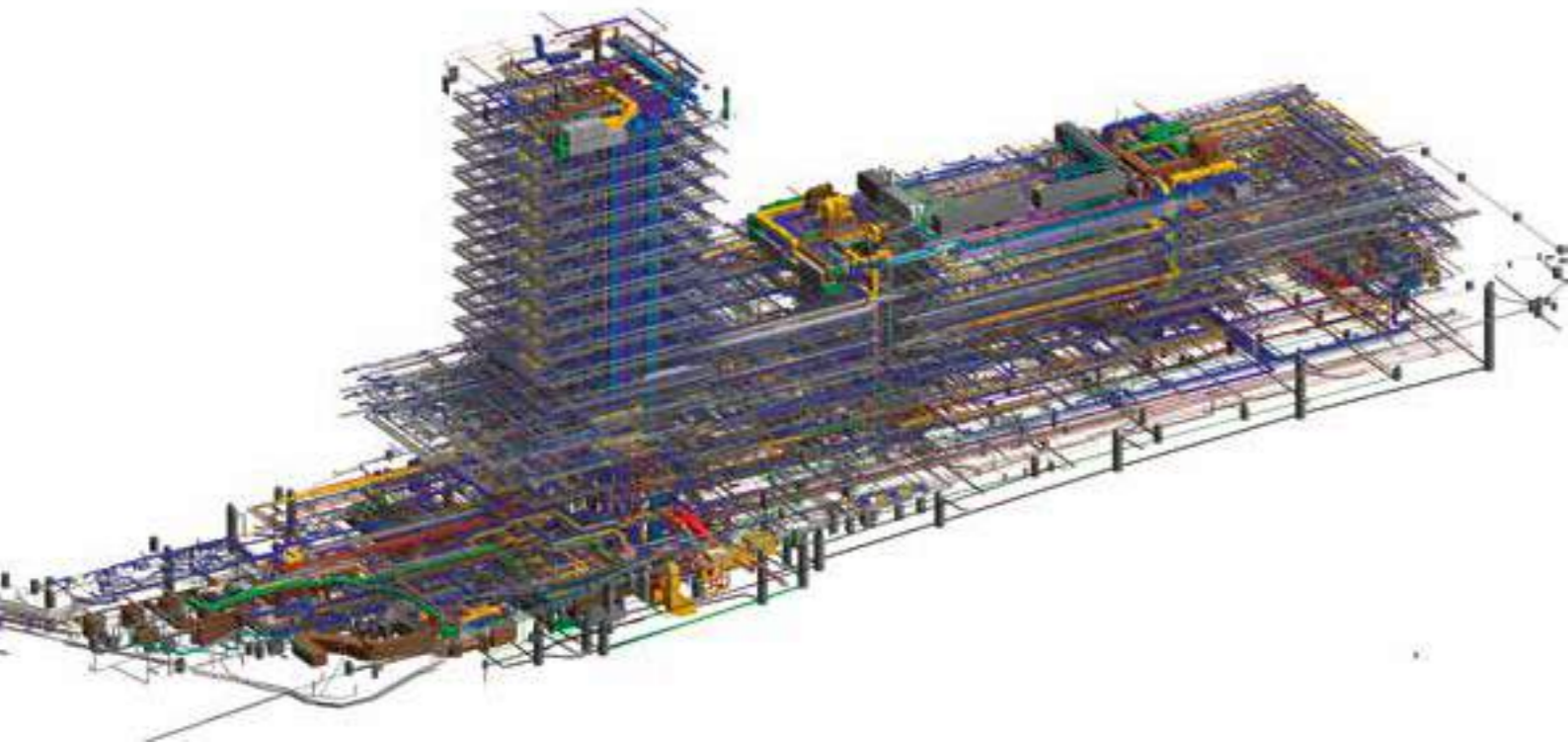
LA RIOJA

The winery for Gonzalez Byass is a uniform response to the place, the program and the production process. A building that is integrated into the landscape, rooted in the depths of the earth, participating in its cycles and resulting in a respectful interchange between nature and the final product, wine.

Integration into the
landscape & use
of thermal inertia



Use of advanced design tools



Building engineering for the new headquarters of the European Investment Bank

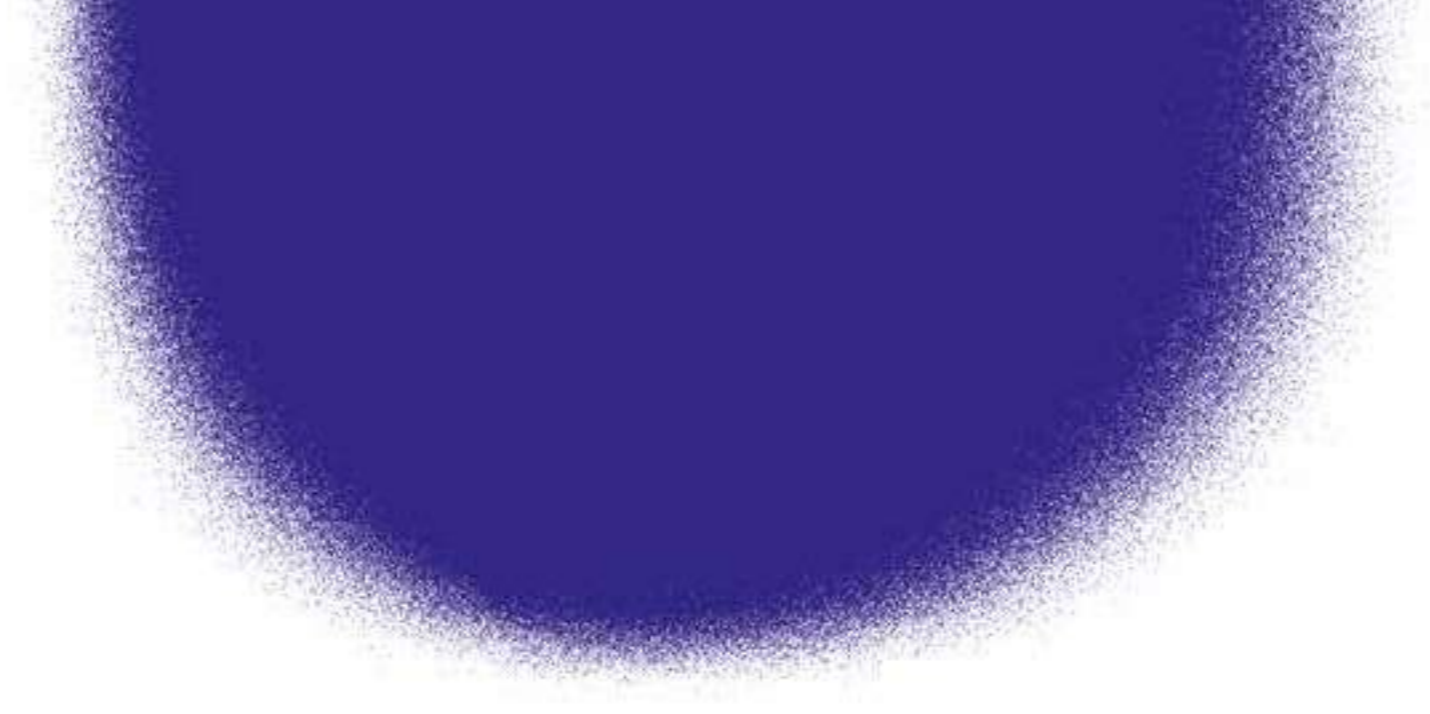
LUXEMBOURG

A project that has been carried out with an extensive degree of development in BIM integrating all the necessary design tools: Revit, Navisworks, Dynamo, Caneco, Magicad, Design Builder, CostX, Synchro, Dialux.

.....
**High-Voltage
research center**

SPAIN





13

SOME PROJECTS

Digital
technology –



The Spanish national smart cities plan aims to improve the quality of life, making cities more inclusive and participatory

Innovative Smart City projects to increase universal accessibility to cultural heritage

SPAIN

Red.es, a Public Business Entity under the State Secretariat for Digitalization and Artificial Intelligence, has entrusted IDOM with the development of several innovative projects: Granada Human Smart City, Smart Costa del Sol (which includes thirteen municipalities), Impulso VLCi Project in the city of Valencia, Smart Digital Segovia and El Hierro en Red.

IDOM is developing a wide range of technological tools that will guarantee, for example, the universal accessibility to and promotion of cultural heritage.

Smart Cities require the optimization of public transportation through the use of Big Data and Business Intelligence

Big Data of 800 routes, 15,000 stops and more than 1.6 million trips per year to optimize transportation management

Smart transportation planning for the Community of Madrid

SPAIN

IDOM -in partnership with Fujitsu- has developed an advanced analytics solution in the Amazon Web Services (AWS) cloud for the Consorcio Regional de Transportes de Madrid (CRTM).

With a better understanding of the user's mobility profile and behavior, it provides the CRTM

with a real-time analysis system. The purpose is to manage and plan its operational and economic resources in a more agile way, adjusting the supply to the existing demand.

The solution is based on Big Data and Business Intelligence technology.



Robotic Process Automation (RPA) for a multinational communications company

SPAIN

IDOM managed the construction of robots in certain areas with the aim of optimizing tasks and reducing the number of hours spent on repetitive and uncreative activities. These are "software robots" that act as a virtual workforce to provide support to the business areas.

Industry 4.0 for the digital transformation of a steel company

(CONFIDENTIAL)

Implementation of the Siemens MES (Manufacturing Execution System) (SIMATIC IT) in one of its plants. This has been done in the blanking press line with full connectivity with the press signals by means of OPC DA technology. In addition, a master plan has been developed to propose the deployment strategy of the chosen solution to the rest of the company's plants.

Planning, managing and optimizing business decisions with the implementation of SAP S/4HANA 1610 in an industrial company

SPAIN

ERP system planning, implementation and Roll Outs for industrial companies with multiple international sites.

14

SOME PROJECTS

Telecommunications_

RED COMPARTIDA
Altan Consortium - Mexico

“ We add value in the
digital transformation
of our clients ”



Communication networks are the backbone of the digital society

Roll-out, support and technological upgrading, both in fixed networks (fiber, cable, NGN, ...) and wireless networks (mobile, TETRA, DMR, radio links, ...) and broadcast (DVB-T). The new transport network project for radio broadcasting (DAB-T) and digital television (DVB-T).

Radio (DAB-T) and digital television broadcasting network (DVB-T)

ALGERIA

This network for TDA (Télédiffusion d'Algérie) provides Algeria with a secure and available telecommunications platform, a starting point for the digitalization of this country. Another example is the Broadband Plan for the Republic of Congo, whose main objective is to increase Internet access in the country.



Roll-out, support and technological upgrades of networks

High level of
integration
of security
technologies

Security and cybersecurity are critical elements in a connected society

Improved security at the Luxor, West Bank and Gizah archaeological sites

EGYPT

The security of goods and people and the management of emergencies are critical services in any advanced society.

In our projects, specialists in various areas of expertise evaluate security requirements, detect risks and define the necessary conditions in each infrastructure, using three axes: processes, people and technology.

The scope of the project incorporates security systems, management systems (3D platform) and control centers for the archaeological sites (Luxor, West Bank and Gizah). In addition to improving the visitor experience with the development of augmented reality applications, the design of monumental lighting and increasing access capacity with a new ticketing system.





Technology convergence services for the transformation of networks and services to ensure the separation between information and operational technologies (IT/OT) and improve efficiency and security levels (network cybersecurity)

Telecommunication networks for the digitalization of woodland environments for sustainable forest management

El Bosque Iluminado (The Illuminated Forest)

CHILE

Innovative project in the forestry industry that enhances the safety, productivity and sustainability of operations. The project will provide mobile data signal coverage that will improve productivity and enable early fire detection cameras.

In Chile, the Illuminated Forest project has been developed to provide telecommunication networks to digitalize forestry production and extraction processes.



15

SOME PROJECTS

Competitiveness
& innovation_

Access to green finance & technology transfer in industrial sectors

Low carbon business models, circular economy & green financing

LATIN AMERICA

IDOM is working on the facilitation and acceleration of business agreements to speed up the green transition of the private sector and facilitate access to financing for climate and circular economy projects.

Several operations have been completed, including the signing of commercial and technological agreements in Argentina, Brazil, Chile and Colombia, as well as the acceleration of new circular business models with green financing in Mexico and Peru.





Creation of technological and innovation ecosystems for industry transformation

Innovation Hubs are initiatives that originate from companies, institutions and knowledge centers to provide an integrated response based on innovation and technology in response to the profound changes that arise in the environment.

IDOM has collaborated in the deployment of several of these Hubs in areas such as smart and sustainable mobility, Oil & Gas, aerospace and off-shore marine energy.



Creativity and culture as catalysts for the sustainable development of territories

New business models for cultural and creative industries

IDOM helps cultural and creative companies and organizations (performing arts, visual arts, music, books, audiovisual, film and photography, design, cultural heritage and popular culture, museums and video games) to adapt their business models and access international markets.



Japan-EU cooperation models to boost connectivity

Within the scope of the EU-Japan Strategic Partnership Agreement, IDOM provides support to the Delegation of the European Union in Tokyo in the implementation and operational implementation of this agreement involving hundreds of organizations

Work is being carried out in sectors such as connectivity (infrastructure, energy, digital and social in geographies such as the Indo-Pacific, the Balkans, Central Asia or Eastern Europe), climate change and green recovery, development cooperation in Africa, digitalization, gender equality or security and defense.



16

SOME PROJECTS

City & territory_

Strategies for resilience and sustainable development

Strengthening capacities in disaster resilience to reduce vulnerability

DOMINICAN REPUBLIC

Contracted by the EIB (European Investment Bank) with resources from the Caribbean Investment Facility, the European Union's regional blended finance mechanism, IDOM is supporting the Dominican Republic in the implementation of an ambitious project to improve territorial and urban planning, with the aim of reducing vulnerability and increasing resilience to disaster risk in several of the country's provinces.

Sustainable strategic management of the metropolitan area of Lima and Callao

PERU

The challenges of large metropolises such as Lima, in a context of current and future climate change, require new city models with changes in governance systems, technology, urban processes and management.

The World Wide Fund for Nature (WWF) has awarded IDOM this project, funded by the WWF, GEF and IDB.

It proposes sustainable strategies that include natural infrastructure, green infrastructure and nature-based solutions for a resilient and sustainable city model by 2040.



Urban regeneration strategies



Cultural territories and creative districts in Bogotá: tactical urban planning and co-creation of spaces for a new economy with an integrated approach

COLOMBIA

Within the framework of the District's public policies, creative districts and cultural territories were created in the city of Bogotá, which require a territorial positioning strategy along two lines, communications and physical space.

This project generates tools that will make the identity of these territories visible to tourists, visitors and locals through the design of a communication strategy, as well as a proposal of actions in the territory that will allow -through tactical urban planning- to make visible and differentiate the creative districts in the spaces of the built city.



Urban regeneration and economic diversification

SOUTH KOREA

IDOM has been commissioned to develop strategic and territorial studies that will lay the foundations of the future regional strategy for the province of Gyeongnam in South Korea and the island of Geoje, which has a long tradition in the naval sector and heavy industry. Currently in decline, Geoje is looking for new models of economic development based on tourism and sustainable housing, culture and leisure and health activities.

These are strategic projects with a greater attractiveness for public-private investment and with the potential to trigger a diversified and intelligent economic development in the region.



Update of regional and provincial strategic plans

SAUDI ARABIA

The Government of Saudi Arabia, as part of an ambitious plan to update urban and regional planning in the country, has contracted IDOM to prepare a Master Plan for the Hafr Al-Batin sub-region in the north of Saudi Arabia, including a Territorial Plan, a Metropolitan Strategic Plan and the definition of strategic projects, as well as a Training Plan for the beneficiary entities.



Masterplan of development poles for well-being

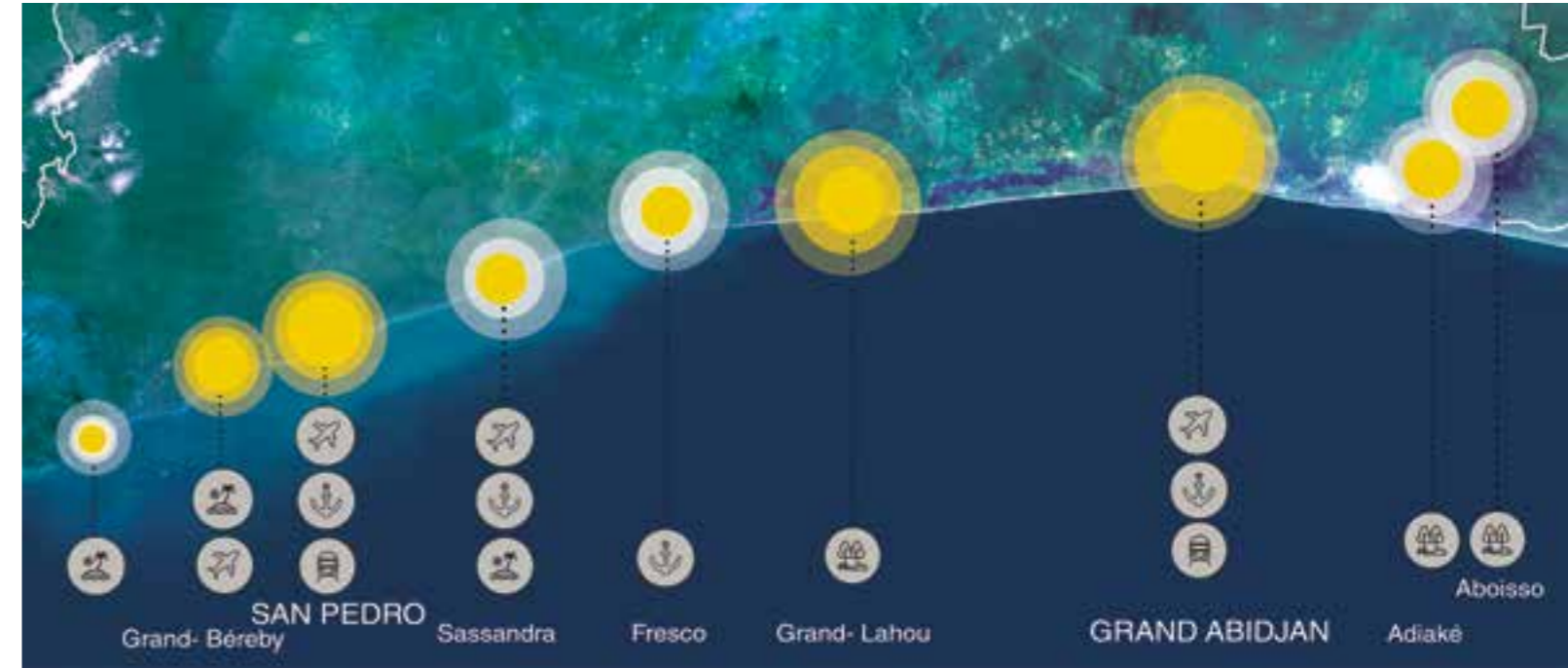
MEXICO

The Mexican government, through the "Program for the Development of the Isthmus of Tehuantepec" aims to improve the growth of the regional economy and the quality of life of its inhabitants, taking advantage of its geostrategic position to strengthen supply chains from the most important ports in Asia and to the East Coast of the USA and Europe.

The Program integrates the concept of the Interoceanic Multimodal Corridor to take advantage of the geostrategic position of the Isthmus of Tehuantepec and compete in world markets for the mobilization of goods through the combined use of various means of transportation.

Among others, the infrastructure works of the project include modernizing the railroad and the ports of Coatzacoalcos and Salina Cruz, improving road infrastructure, construction of a gas pipeline and fiber optics, and the construction of 10 development poles or industrial parks.

IDOM has been contracted to design the Master Plan and Feasibility Study for the first 5 industrial parks in the region.



Improving coastal resource management in Africa: Coastal development & management plan

IVORY COAST

In order to support the effort of West African countries to improve the management of their shared coastal resources and reduce natural and anthropogenic hazards affecting coastal communities, the World Bank under the West Africa Coastal Resilience Investment Project (WACA) and with the technical support of IDOM has undertaken a study that focuses on the 566 km of Ivorian coastline and aims to provide local and regional authorities with a strategic framework that favors a coherent, integrated and inclusive approach to the intervention and use of the coastal zone.

Creation of sustainable tourist destinations

Planning for efficient, sustainable tourism in harmony with the landscape

PANAMA



In order to dynamize and organize the tourist-oriented development of the districts of Pedasí, Bocas del Toro, Boquete, Tierras Altas, Soná and Taboga, the Panama Tourism Authority, with the support of the Ministry of Housing and Land Management, has contracted IDOM to prepare six Land Management Plans to generate a vision for the future, instruments to control the use and occupation of land and resources, programs and projects, instruments and regulations, as well as the necessary institutional basis to become a destination of tourist interest.

17

SOME PROJECTS

Infrastructure_



Vertiports, the future of air transport infrastructure for the new Advanced Air Mobility (AAM) ecosystem

Advising large airport operators on airport vertiports

UNITED STATES

The state-of-the-art of air mobility is called new Advanced Air Mobility (AAM) and requires for its implementation an important development in new associated infrastructures (vertiports).

Since 2018, IDOM has been working together with future operators and investors in the integral design of vertiports and in

the innovation of the necessary energy systems.

Sustainability is incorporated in all the projects we develop and, in addition, we advise large airport operators to obtain sustainability certifications, as is currently the case of Envision in the United States.

**Feasibility, design,
tender support and
contract administration
for Dublin Airport**

IRELAND

Services performed for
Dublin Airport Authority.

**Implementation of the
Security Standard-3
in the baggage
handling systems at
28 AENA airports**

SPAIN



**IATA Airport
Development
Reference Manual
Edition 12**

Since 2018 IDOM has been
a member of the think tank
team drafting the manual.





**Tunnels and road
in Jinali-Larsi**

GEORGIA

Project for the Ministry of Regional Development and Infrastructure involving unique structural engineering solutions in geologically and environmentally complex terrain and tunnels where expertise in safety, risk management, ventilation, lighting, evacuation strategies, fire engineering is applied.

**Dune bridge
Abi Bakr Al-Siddiq
Road in Riyadh**

SAUDI ARABIA

Design of the modernization of the high-capacity Abi Bakr Al-Siddiq Road for the Riyadh Development Authority.



“ The design must integrate the infrastructure into its environment, be it natural or urban ”



Infrastructure ITS enables open and interoperable management. Data collection, Big Data and artificial intelligence are solutions for managing these infrastructures

State-of-the-art technology to ensure integrated operation

Electronic toll collection system, with free-flow and multi-lane technologies (MLFF)

CROATIA

For the Croatian Ministry of Sea, Transport and Infrastructure, IDOM has designed the electronic toll collection & multi lane free flow and new barrier free toll systems.

Sustainable metropolitan transport management with the help of Big Data, AI, BTM antennas and GIS systems



.....
**Active mobility in Dubai
RTA (Roads & Transport
Authority)**
UNITED ARAB EMIRATES

.....
**Smart Mobility in Jubail and
Ras Al-Khair - Royal Commission
of Jubail and Yanbu**
SAUDI ARABIA

.....
**Smart Mobility.
Madrid Regional
Transport Consortium**
SPAIN

.....
**Metropolitan Mobility
Planning (MMP) of
Barcelona**
SPAIN



Decarbonising ports

Onshore power supply (OPS) projects in the ports of Palma, Ibiza, Alcudia, Mahón and La Savina

SPAIN

Within the framework of the 2030 Sustainable Development Goals and Directive 2014/94/EU, which aims to develop a network of infrastructures for the supply of alternative fuels, the Balearic Islands Port Authority is promoting the implementation of onshore power supply (OPS).

This system allows vessels at berth to switch off their fossil fuel engines and connect to the electrical grid provided by the port. It is the most attractive technological option for achieving zero local emissions and a significant improvement in the carbon footprint for the ships' stay in port, leading to very significant reductions in noise and vibration levels.



Maintenance and expansion of port commercial and service capacity

Port of Valencia

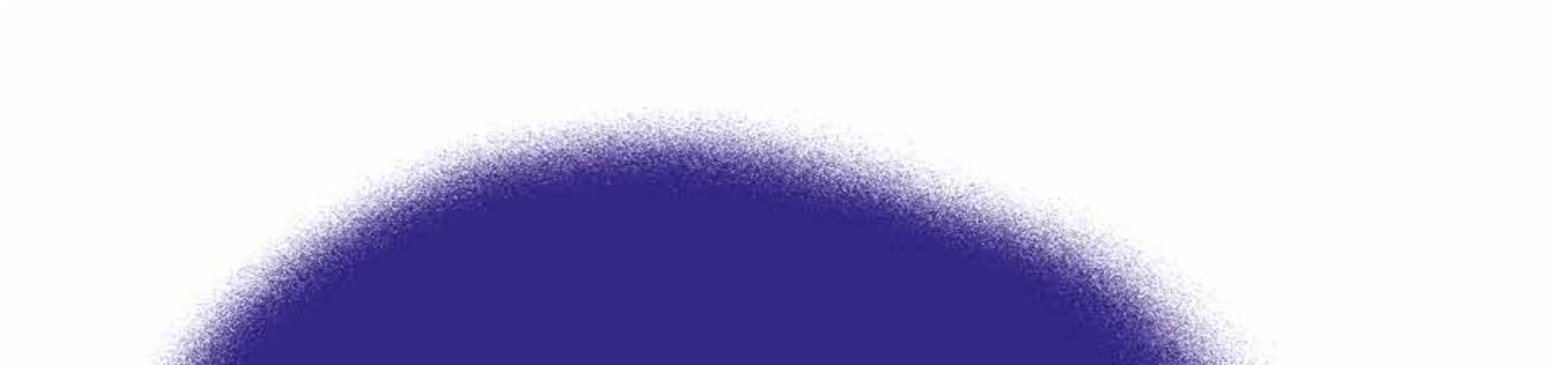
SPAIN

IDOM is participating in infrastructure expansion and rehabilitation projects, adaptation to new uses and adaptation to new ships, in addition to improving infrastructure, access and flow management, through the implementation of automation systems. In the port of Valencia, IDOM collaborated in the expansion and improvement of the container terminal, the adaptation of the ship-to-shore unloading systems to larger vessels, as well as the implementation of an automatic door system.

18

SOME PROJECTS

Rail systems _



The largest concrete rail arch structure for high-speed rail



.....
Viaduct over the Almonte River, Madrid - Extremadura high-speed line for ADIF (Administrator of Railway Infrastructures)

SPAIN





Metro with state-of-the-art
automated operation technology

Dublin Metro - NTA (National Transport Authority) and TII (Transport Infrastructure Ireland)

IRELAND



Riyadh Metro
SAUDI ARABIA

MetroLink, high-capacity, high-frequency line in Dublin, from Swords to Charlemont

IRELAND

Pioneering project in the use of BIM technologies, incorporating "Data Asset management" for project traceability throughout its useful life.

Bahrain Metro
BAHRAIN

Design based on robustness and sustainability, including from the outset analysis and optimization, energy efficiency and adaptation to the environment, in compliance with UN goal 11 to achieve inclusive, safe, resilient and sustainable cities.

Metro Afragola - Naples
ITALY

12 km, 14 stations, environmental impact assessment and driverless system (GoA4).

Light Urban Transport is a combination of technology and sustainability for urban mobility



**Ring 3 Light Rail
Copenhagen**

DENMARK

Lund Tramway

SWEDEN

Design and environmental solutions (noise mitigations, permeable slab systems, reduction of electromagnetic emissions).

**Costa Rica
Tramway**

COSTA RICA

Integrating automation, sensorization and safety technologies (obstacle and pedestrian detection cameras, predictive algorithms) and reducing driving times (traffic light priority), with an impact on energy consumption.



19

SOME PROJECTS

Strategy
& operations_

Identifying investment opportunities

International road show for the industrial city of Ras Al Khair

SAUDI ARABIA

Pre-selection of more than 100 investment opportunities, prioritization of investment opportunities and development of a detailed business case.

Organization of an international roadshow to promote the city of Ras Al Khair and the identified investment opportunities, an event attended by key industrial companies.



Financial structuring of the fast passenger train

COSTA RICA

Development of the technical and economic-financial feasibility, under the public service concession modality for the Passenger Rapid Train System of the Greater Metropolitan Area (GAM) of Costa Rica. As part of the work, the public-private financial model was developed, proposing the system's revenue scheme to be implemented.



Strategic and operational structuring and digital transformation of the Ministry of Public Works

PARAGUAY

Implementation of an operational improvement area focused on analyzing and resolving aspects related to the Ministry's strategic planning and digital transformation needs.

Design and evaluation of the tariff structure for the Port of Chittagong

BANGLADESH

Chittagong Port is the main port of Bangladesh with 2.9 million TEUs and 95 million tons handled in 2019. Its tariffs were last revised in 1986, so the Port Authority needed to adapt its tariff structure to the port's current traffic and circumstances. For this purpose, IDOM developed the analysis and characterization of the current situation, an international tariff benchmarking, the reengineering of the payment processes and the design of the new tariff structure.



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