



SAIPEM
INFRASTRUCTURES



SAIPEM

WORLDWIDE PERMANENT PRESENCE



ENGINEERING CENTRES

dedicated to research & development, business process management and information technology



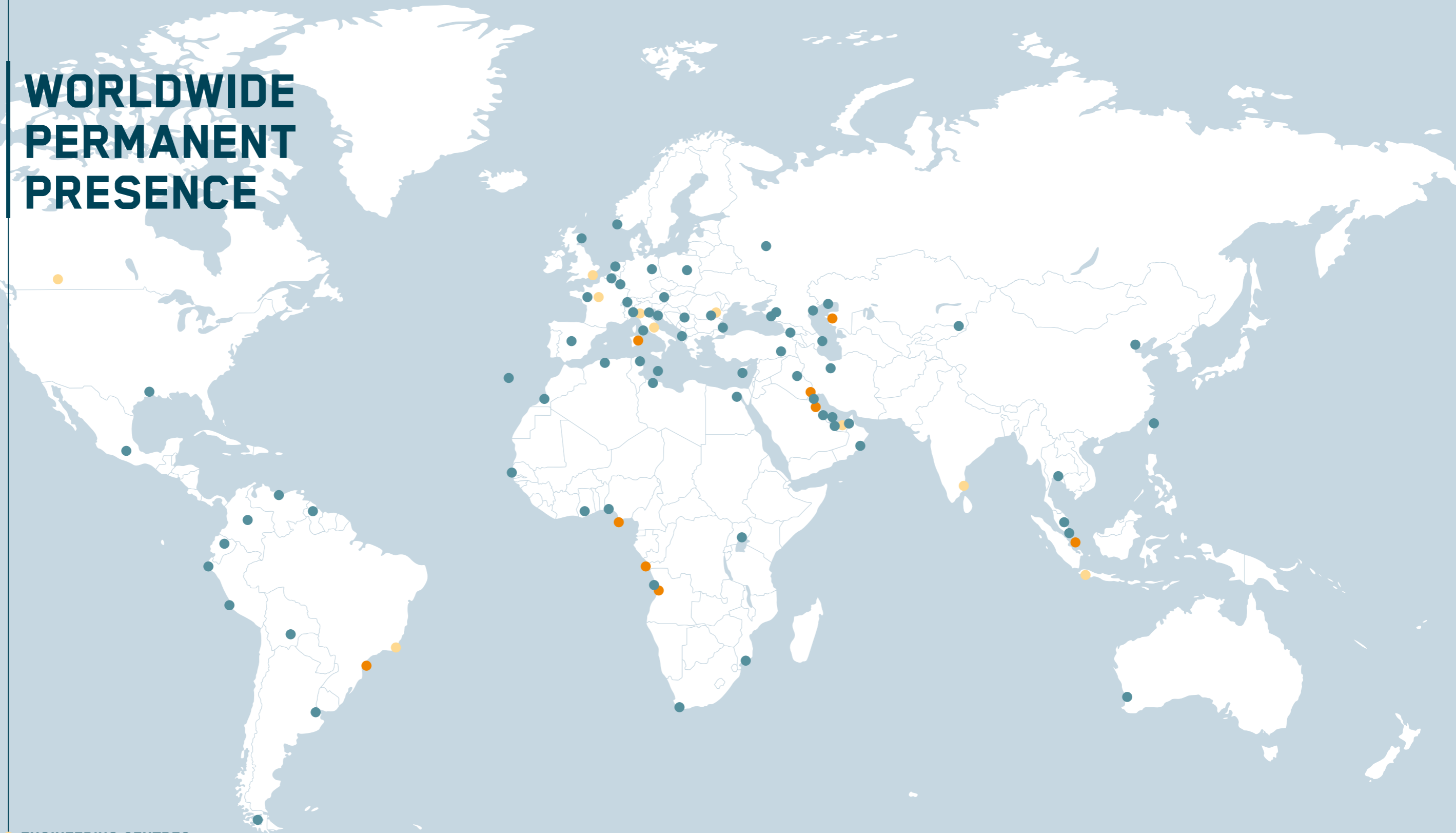
YARDS

focused on prefabrication, assembling and erection operations of large and complex manufactures as offshore platforms, plant modules, subsea manifolds and components



OTHER MAIN SITES

headquarters, branches and subsidiaries



SAIPEM INFRASTRUCTURES EPC CAPABILITIES

MAIN FIELDS OF EPC ACTIVITIES



10 BILLION \$ OF PROJECTS SUCCESSFULLY DELIVERED.

Saipem, a world-wide leader in the Energy Business, since 1990 is also a leading global EPC General Contractor of challenging mega infrastructures projects. Saipem has developed complete in-house capabilities to design and manage the largest and most complex integrated projects.

MEGA EPC PROJECTS

High Speed Railway Milan-Bologna, Italy

High Speed Railway Milan-Verona, Italy

Freight Railway Shah-Habshan-Ruwais, UAE

RECORDS

1,000	450	45,000	40
KM OF RAILWAY TRACK	KM OF HIGHWAYS	M ² OF BUILDINGS	KM OF VIADUCTS AND COMPLEX BRIDGES

TRANSFORMING BUSINESS

We anticipate the changes in our reference sectors, focusing on digital technologies and on a true sustainable value creation. Through an internal development Programme and with the establishment of Strategic Partnership we support the Business transformation being the front-runner of new pioneering Services and Products.

PROJECT FINANCING

We are capable of leading the coordination of Project Financing structures as early as the feasibility stage. Saipem is very well positioned to offer economic, financial and legal advisory services as well being part of the project implementation.

CONCRETE MARINE CONSTRUCTIONS

Within the gas value chain and to support the industry's transition to a lower-carbon energy future, Saipem provides innovative solutions implementing very-large Gravity Based Structure for LNG facilities.

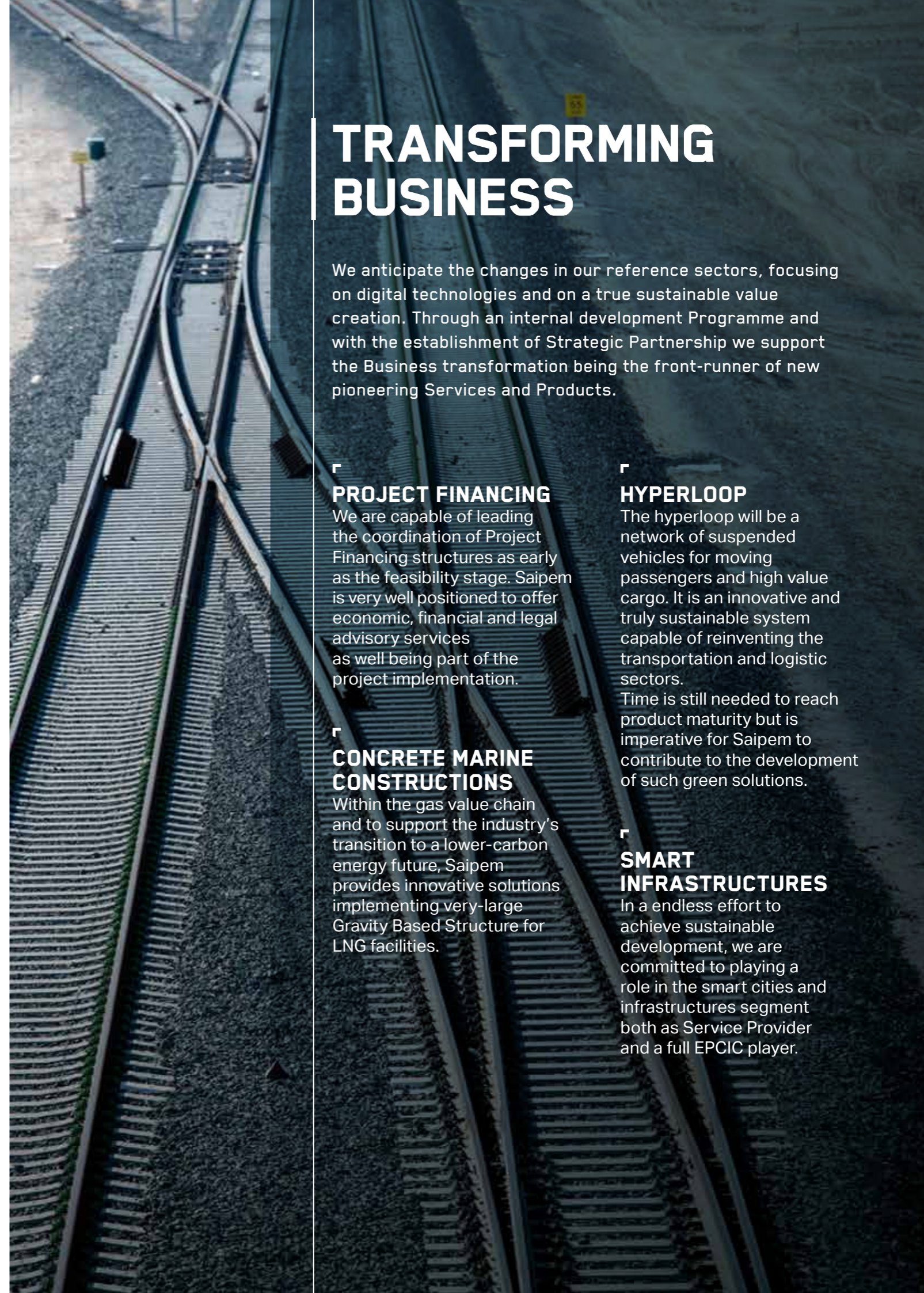
HYPERLOOP

The hyperloop will be a network of suspended vehicles for moving passengers and high value cargo. It is an innovative and truly sustainable system capable of reinventing the transportation and logistic sectors.

Time is still needed to reach product maturity but is imperative for Saipem to contribute to the development of such green solutions.

SMART INFRASTRUCTURES

In an endless effort to achieve sustainable development, we are committed to playing a role in the smart cities and infrastructures segment both as Service Provider and a full EPCIC player.



ENGINEERING SERVICES

HIGHLY EXPERIENCED ENGINEERING TEAM

Within the traditional Infrastructures segment, Saipem is an active player in the field of multidisciplinary integrated engineering services in the following sectors:

- Railways, both rehabilitation and high speed/high capacity
- Special bridges and underground works
- Roads, earthworks, site preparation
- Buildings and logistic bases
- Accommodation camps
- Logistic studies: logistic site location studies for both energy and infrastructures sector

An in-house highly expert Engineering Team with vast knowledge acquired through decades.

Saipem services range from Feasibility studies to Detailed Design, including technical, economic, environmental and social related aspects, thanks to its highly skilled resources and to its wide network of reliable Partners and Vendors.

WIDE RANGE OF EXPERTISE

A delivery oriented team focused on developing strong and trusting relationships with our Clients through the provision of innovative, valued services:

- Project Integration, Configuration Management
- Civil and complex structures
- Soil and alignment advanced modelling, geotechnics and underground special works
- Systems: Signalling, Communications, Freight Control, Power Control Systems
- Maintenance: Asset Management System, MMIS
- Freight and logistic facilities
- Sustainability and Environmental mitigations

**WE ARE FRONT RUNNER IN DISRUPTING
THE BUSINESS MODELS TO SET
INNOVATIVE AND SUSTAINABLE
INFRASTRUCTURES VALUE CREATION.**



TECHNOLOGICAL SKILLS

PROJECT INTEGRATION

Integration of sub-systems into complex Systems:

- Project Requirements identification and verification through most innovative technics
- Digital oriented Configuration and Interfaces Management
- Digital single data repository from early design stages to commissioning and performances validation
- Development of Asset Management System / Maintenance Management Information System (MMIS)

PROJECT EXECUTION SUPPORT AND RAIL OPERATION THROUGH STRUCTURED DATABASE.

DIGITAL ADAPTATION

We are committed to renewing the way we do business and redefine our approach to Value creation:

- Cooperation with Technology Partners and universities to promote innovation oriented and start-up culture
- Standardised project data management embracing digital transformation to support a stable data-centric approach

BUSINESS TRANSFORMATION TO RECOVER EFFICIENCY AND IMPROVE PROFITABILITY.

VALUE ENGINEERING

A dedicated in-house Engineering Team:

- Implementation of optimized solutions to reduce Capex and Opex
- Innovative resolution of engineering issues such as sand mitigation, alignment design in challenging environment, mock-up and full scale trials
- Adoption of low cost and reduced environmental footprint construction materials

TRANSFORM NEEDS OF STAKEHOLDERS INTO SERVICES AND CUSTOMIZABLE PRODUCTS.





MODELLING

Processes and Workflows structured for the adoption of computer aided modelling through the entire project life cycle:

- Use of BIM-ready software

- Acquisition of data through latest digital technologies
- Analysis and processing of raw data and Big Data management

PROVIDING ADDED VALUE WITH THE MOST CUTTING-EDGE TOOLS IN THE INDUSTRY.

SUSTAINABILITY AND ENVIRONMENT

Focus on Project Legacy:

- Sustainability integrated in our product and services
- Flexible and customized approach to Stakeholders' engagement
- Promotion of widespread Environmental awareness and adoption of best practices

- Experienced in the application of Sustainability Standards and Rating systems: International LEED®, ESTIDAMA® (UAE)
- Consolidated track records for environmental monitoring and mitigation



OVER 1,500
ENVIRONMENTAL
CHECKS



350,000 M²
NOISE BARRIERS



LEED® CERTIFICATION
AND ESTIDAMA® (UAE)
PEARL RATING SYSTEM



8,000,000 M²
GREEN
MITIGATION

RISK MANAGEMENT AND QHSE THROUGH SAIPEM CONSOLIDATED PROCESS.

FREIGHT RAILWAYS

ETIHAD RAILWAY STAGE 1 – ABU DHABI, UAE

A CHALLENGING PROJECT

Freight railway to transport granulated sulphur from the Shah and Habshan Gas plants to the Ruwais port. Two trains, each one 1.9 km long and composed by 110 wagons, carry 2x11,000 tonnes of sulphur on a daily basis.

- 264 km long, design speed 200 km/h
- ERTMS (ETCS level 2), first in Middle East
- 235,000 m³ of concrete
- 11x11kV and 1x33kV substations, 300km of MV cables
- O&M Depot, 18 multiservice buildings
- More than 40 key Stakeholders
- Multicultural project with over 20 nationalities involved
- 30,000,000 manhours with 4,000 workers at peak
- N. 5 simultaneously active work fronts

COMPLETED AND FULLY OPERATIONAL.

>50

KM OF SENSITIVE PROTECTED GREEN AREAS CROSSED

7

BUILDINGS WITH ESTIDAMA^(*) PEARL CERTIFICATION (FIRST TIME IN UAE)

260

KM INNOVATIVE SAND MITIGATION

442

KM EQUIVALENT TRACK

93

MILLIONS M³ EARTHWORKS

8

CROSSINGS ON MAIN OIL&GAS PIPELINE CORRIDORS

16

BRIDGES ON ROAD CROSSINGS

2

MAIN RAIL BRIDGES OVER HIGHWAYS



A SUSTAINABLE PROJECT

- Rigorous procurement activities with strong involvement of local companies
- Immediately after award, high focus in value engineering to reduce Capex and Opex
- More than 30 million worked Man Hours without fatalities
- 3,000 HSE training courses and HSE innovative campaigns carried out with Client support



FROM SAND



THROUGH SAFE EXECUTION

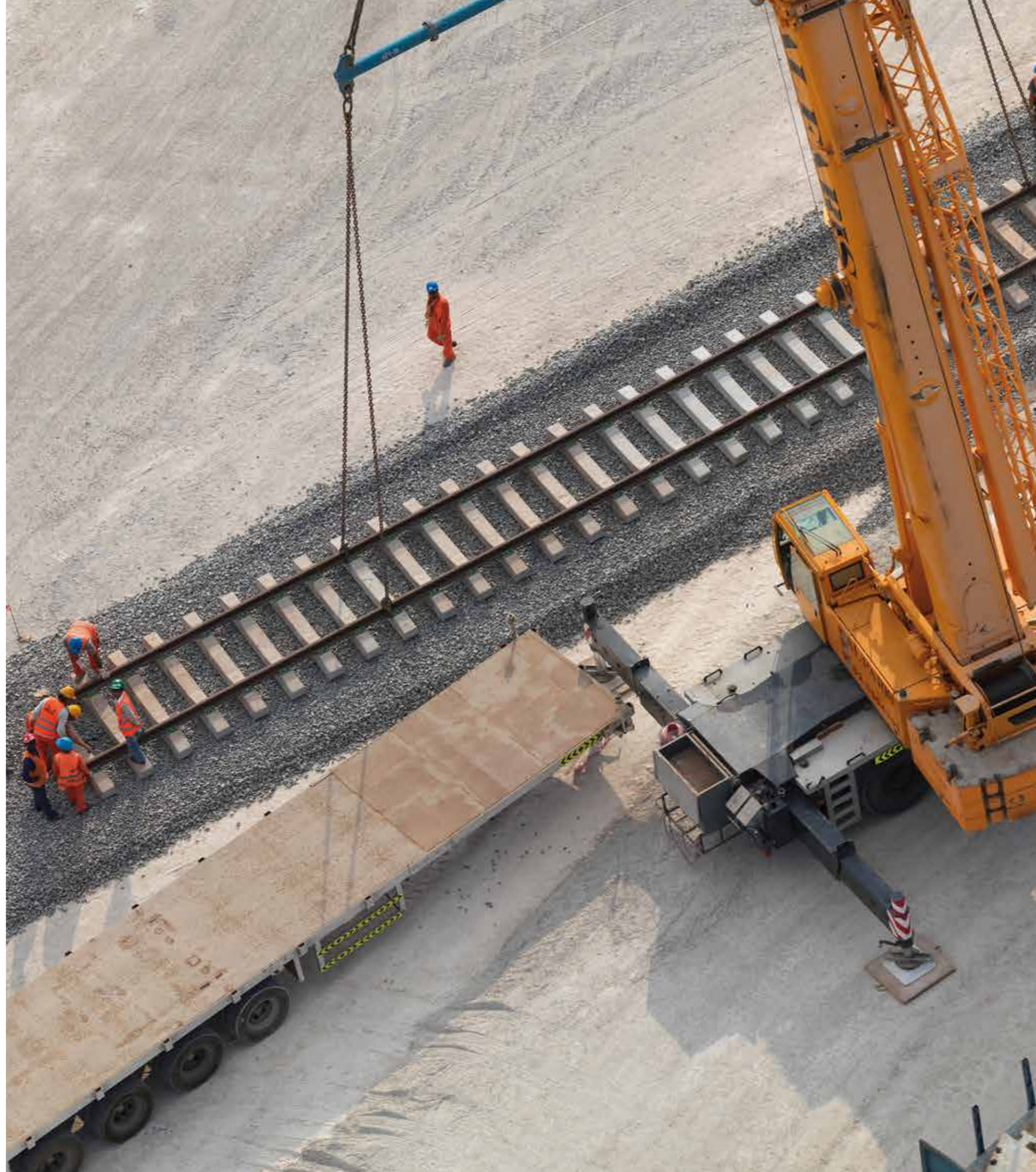
- Adoption of most effective System Integration and Configuration Management approaches
- 18 Buildings fully integrated through advanced Building Management System
- Transfer of know-how by 110 O&M training sessions with 2,700 hours and 40 trainers involved
- Asset Management with 40,000 assets making up the basis of the Maintenance Management Information System



AN INTEGRATED SYSTEM



TOWARD OPERATION



HIGH SPEED RAILWAYS

THE MILAN-BOLOGNA HIGH SPEED LINE, ITALY



A STRATEGIC LINK BETWEEN NORTH AND SOUTH

- 235 km double track (182 km high speed, 300 km/h)
- Huge interface with the Milan-Rome highway
- ERTMS (ETCS level 2)
- 8 interchanges with the traditional railway line
- 40,000,000 manhours, 5,000 manpower at peak

SAIPEM LEADER OF THE "CEPAV 1" CONSORTIUM,
THE GENERAL CONTRACTOR.



- 142.5 km of railway's embankments
- 32 km railway viaducts
- 3.5 km of Railway Tunnels, 90 km of roads
- 450,000 tons of steel
- 6,000,000 m³ of reinforced concrete
- 168 over bridges and underpasses
- 200 km of powerlines
- 85 stakeholders
- 115 km of noise barriers installed

COMPLETED AND FULLY OPERATIONAL.





THE MILAN-VERONA HIGH SPEED LINE, ITALY

A STRATEGIC TRANSPORTATION SYSTEM INTO EUROPEAN CORRIDOR

- 132 km (300 km/h) double track (52 km completed)
- N. 10 railway viaducts
- 13 km of Railway Tunnels
- 33 Technological Buildings
- 80 bridges and underpasses
- 59 km of roads
- Huge interface with the Milan-Venice highway

SAIPEM LEADER OF THE CONSORTIUM "CEPAV 2", THE GENERAL CONTRACTOR.

Martina

CREG

RFI

ITALFERR

CEPAV 2

PIZZAROTTI

SAIPEM

ICM

THE TREVIGLIO-BRESCIA SUBSECTION

- 52 km Railway, 7 viaducts
- 600 utilities relocated
- 700,000 m³ of concrete
- 170,000 concrete sleepers
- More than 1,600,000 m² of site preparation
- 130,000 m³ of excavated/restored material from contaminated areas
- 68,000 plants on 420,000 m² for environment mitigation
- 27 Municipalities crossed

COMPLETED AND FULLY OPERATIONAL.

THE BRESCIA-VERONA SUBSECTION

- 47.6 km Railway
- N. 24 main bridge structures, 4 viaducts
- 481 utilities relocated
- 10.2 km of artificial tunnel
- 6.6 km double track tunnel excavated with 10.3m dia TBM
- 177,000 concrete sleepers
- 1,650,000 m³ of concrete
- More than 40 km of roads
- Environmental mitigation with 12km of noise barriers

PROJECT IN EXECUTION.

SERVICES

SOLUTION PROVIDER FOR SMART INFRASTRUCTURES

Within complex multi-billion and multi-Stakeholders Projects, Saipem provides services throughout the whole value chain, Infrastructures and Energy projects. We focus on highly innovative and ground breaking projects to create Infrastructures with higher performances while integrating them with the surrounding environment.


FLOATING AND UNDERWATER TRANSPORTATION SYSTEMS

In the most challenging environment, we are committed to delivering advanced solutions to the communities we engage with.

In the field of Infrastructure and Offshore hybrid products, high value services provided are focused on sustainable and efficient land use:

- Floating bridges
- Submerged structures
- Seabed installations
- Subsea constructions
- Offshore Wind Farm





INTEGRATED SOLUTIONS TO BRING VALUE TO OUR CLIENTS

IMPROVED BUSINESS EFFICIENCY



ASSET MANAGEMENT

Business transformation through an innovative and consistent approach to the delivery of the services to Quality, Time and Costs:

- Improve Infrastructure availability reducing Opex
- Focus over whole products life cycles
- Integrated with Maintenance Management Systems and Infrastructure models



AERIAL SURVEYS AND UAVS

UAVs to capture high-resolution and accurate position data automatically generating advanced asset information:

- Surveys and Mapping
- Reporting and Productivity monitoring
- Integrated with Asset Database and advanced modelization tools

DELIVERY OF COMPLEX EPC PROJECTS AND THE TALENT TO IMPLEMENT NEW OPERATING METHODS ARE PART OF SAIPEM'S DNA.

WITH OUR PARTNERS, WE INTEGRATE DIVERSE ATTITUDES WITH THE MOST PROFITABLE MODELS (DBFOM, EPC+F) TO BOOST INCOME GENERATION FOR OUR CLIENTS.

CLIENT ENGAGEMENT



FINANCIAL ADVISORY

Extensive experience of several Financing schemes and Export financing through the entire project life cycle and up to fund securing.

We are connected to a wide range of Investors to promote the development of bankable infrastructure projects that adopt inventive value creation and revenue generation schemes



OPERATION AND MAINTENANCE

We are firmly convinced that Clients, Operators and Contractors need to develop new competences to focus on new available technologies and reshape Business Models.



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LET'S KEEP IN TOUCH

