








3TI PROGETTI





Oman, Muscat International Airport

CONTENTS:

TWENTY YEARS'PROJECTS

with much more to come

2017 was quite a special year.
On July 2017, 3TI Progetti celebrated its 20-years-long activity.
Each anniversary is worth not only its deserved celebrations, but also its moments for deliberation on the long lasting journey, and the future which is still to come.
And we still do expect so much more from the future.

Since 3TI's foundation, our interests and goals have equally ranged between the buildings and the infrastructures aimed to transform the surrounding environment which we fully explored to any details. We diachronically moved from the feasibility studies and the plan for construction to the acceptance test, while synchronically engaging in each specialist field, none excluded.
In our experience, therefore, the infrastructures' design has represented the best synthesis of these two models, the main engineering topics related to the buildings and the infrastructures being entangled in them.
This ability to transversally encompass different disciplines ensured us the opportunity to operate also in the social sector (healthcare, education, culture, sport infrastructures) and to cooperate both with important engineering companies and excellent architectural ateliers.

Alfredo Ingletti,
Giovanni Maria Cepparotti,
Stefano Luca Possati

Algeria, High speed railway Oued Tletat-Teclemen

1997

2017

3TI PROGETTI

is the largest Italian independent fully employee - owned engineering company, ranked in the ENR TOP 225 INTERNATIONAL DESIGN FIRMS, offering consulting services for 20 years in planning, design, pmc of transport infrastructures, hospitals & buildings, energy & water.

Italy, Pedemontana Lombarda motorway

BEYOND ENGINEERING

Qatar, Metro Doha Red Line underground

We have significantly grown over the years whilst retaining our entrepreneurial spirit.

Our first goal was to make technical excellence and client service the core of our business.

www.3tiprogetti.it

+ 30 COUNTRIES

+2500 PROJECTS

+100 PARTNERSHIP

+500 CLIENTS

Saudi Arabia, Riyadh Metro Line 3

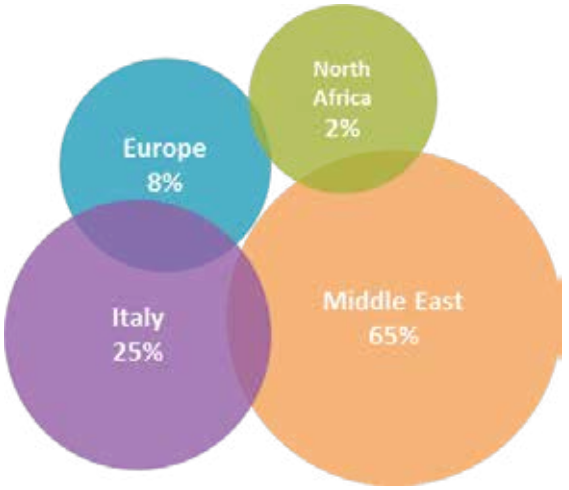
INTL. REVENUES 75%

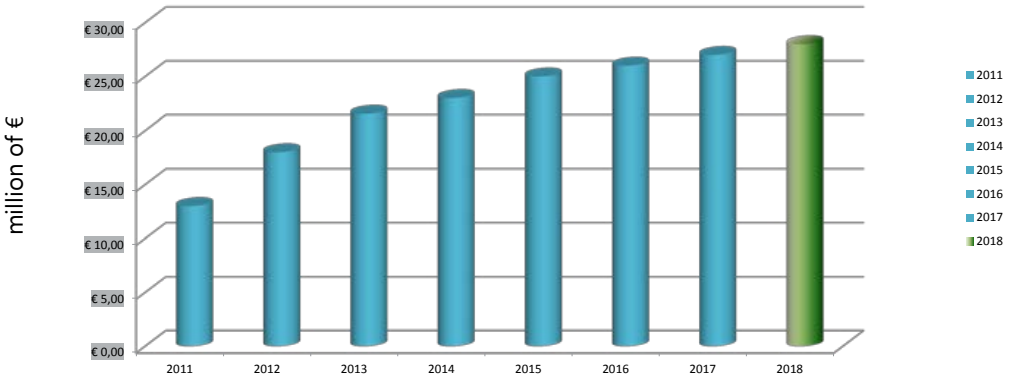
TURNOVER 2017 25mln €

TURNOVER 2017/11 +100%

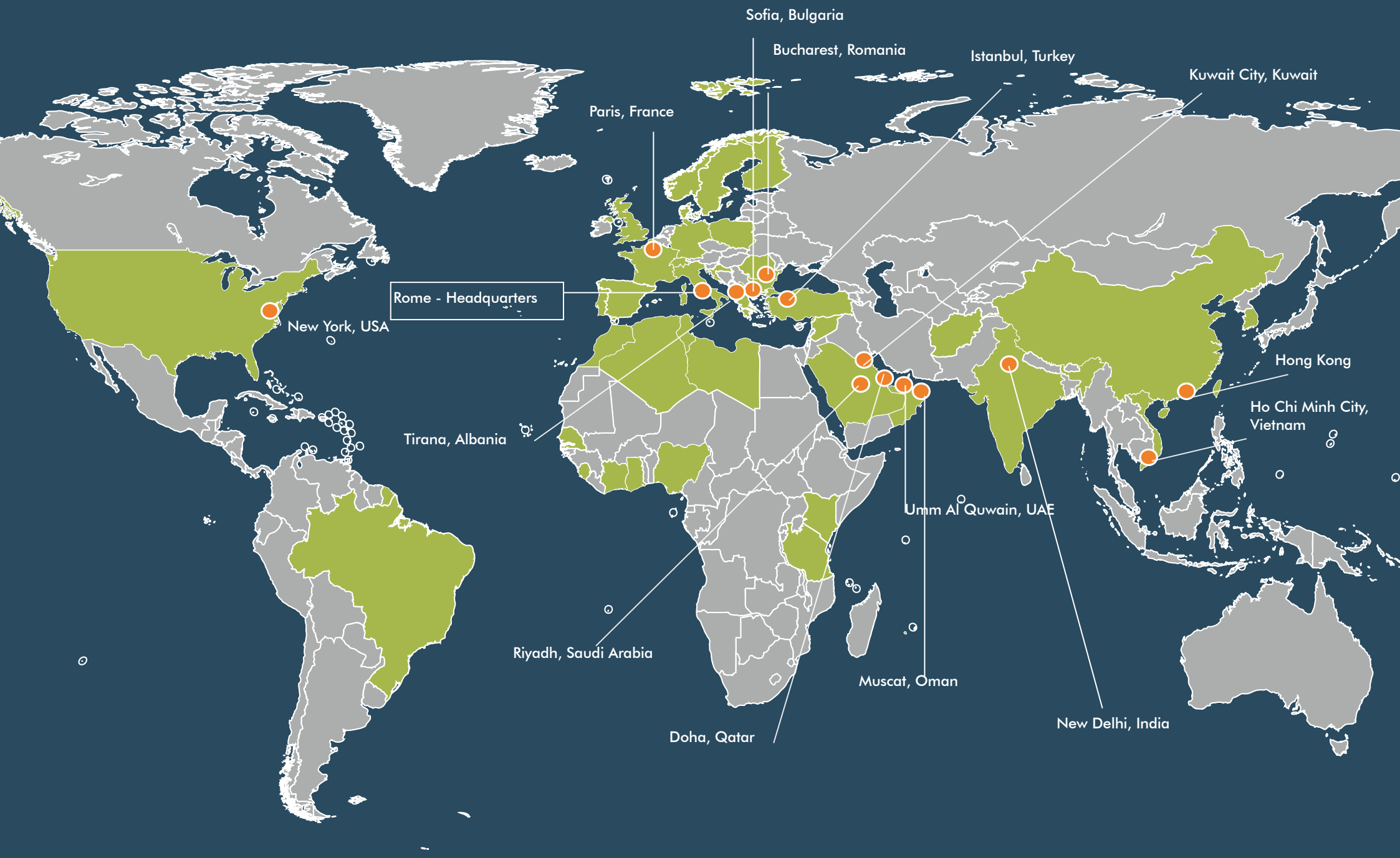
Qatar, Metro Doha Red Line underground

TURNOVER





INTL. REVENUES 75%


Sofia, Bulgaria
Bucharest, Romania
Istanbul, Turkey
Kuwait City, Kuwait
Paris, France
Rome - Headquarters
New York, USA
Hong Kong
Ho Chi Minh City, Vietnam
Tirana, Albania
Umm Al Quwain, UAE
Riyadh, Saudi Arabia
Muscat, Oman
New Delhi, India
Doha, Qatar

Qatar, Metro Doha Red Line south underground

INDEPENDENT

Is the largest Italian independent fully employee - owned engineering company part of the Employee Ownership Association (EOA).

EMPLOYEE OWNERSHIP ASSOCIATION

INTERNATIONAL

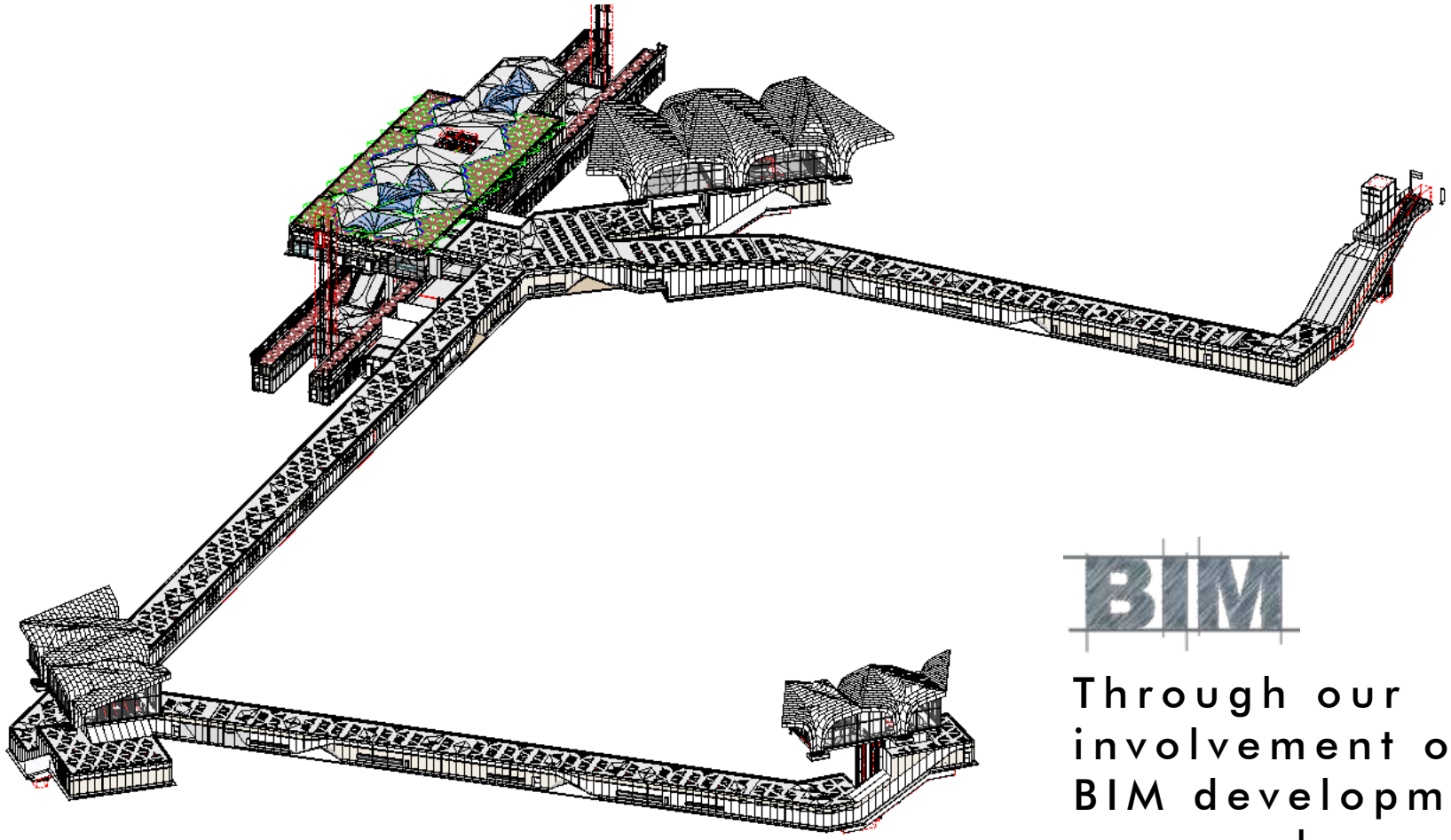
We are a global player, ranked in the ENR TOP 225 INTERNATIONAL DESIGN FIRMS, operating in more than 30 Countries: Europe, America, Africa, Asia and Middle East.

2017 ENR TOP 225

INNOVATIVE

Among our staff we have young talents and experienced professionals from 20 different countries, speaking 15 different languages and with outstanding skills and knowledge in all fields of engineering, as well as in new technologies (such as BIM design).

BIM



BIM helps us to provide solutions able to increase the benefits achieved through optimization and greater efficiency solutions, reducing both time and project delivery, reducing risk, enhanced sustainability and better whole-life performance.

Designing in **"BIM oriented way"** means communicate, through the exchange of a unique model, with colleagues and partners, without loss of quality.

BIM

Through our involvement of BIM development we now have fully defined processes to make best value of the data that is now created during the whole building lifecycle.

Our team is a cohesive team with a common purpose consisting of experienced professionals able to deal with complex issues providing a range of services on the international market balancing functionality & form with environmental stewardship to achieve our Client's desired results.

More than 98% of 3TI staff holds university degrees in the relevant fields of our company operations.

While working abroad we believe that real integration is key in approaching business, and we respect the countries' history, traditions and local culture, providing our international experience to create a diverse blend of contemporary design.

People

Our staff are diverse,15 languages,20 nationalities, equal opportunities

Italy, A3 Salerno-Reggio Calabria motorway

SECTORS & SERVICES

TRANSPORT INFRASTRUCTURES

Feasibility Studies
Environmental Impact Studies
Landscaping
Preliminary and Detailed Design
Shop Drawings
Road Design
Rail Design
Airport Design
Port Design
MEP Engineering
Geology, Hydrogeology and Geotechnics
Hydraulic Infrastructures
Project and Construction Management
Quantity Surveying and Cost Control
Health & Safety
Works Supervision
Monitoring
Value Engineering

ENVIRONMENT ENERGY/WATER

Master Planning and Feasibility Studies
Environmental Impact Studies
Environmental Monitoring and Laboratory
Water and Wastewater Sewerage
Wastewater Treatment
Water Management
Renewable Energy
Health & Safety management
Construction Site Planning
Works Supervision

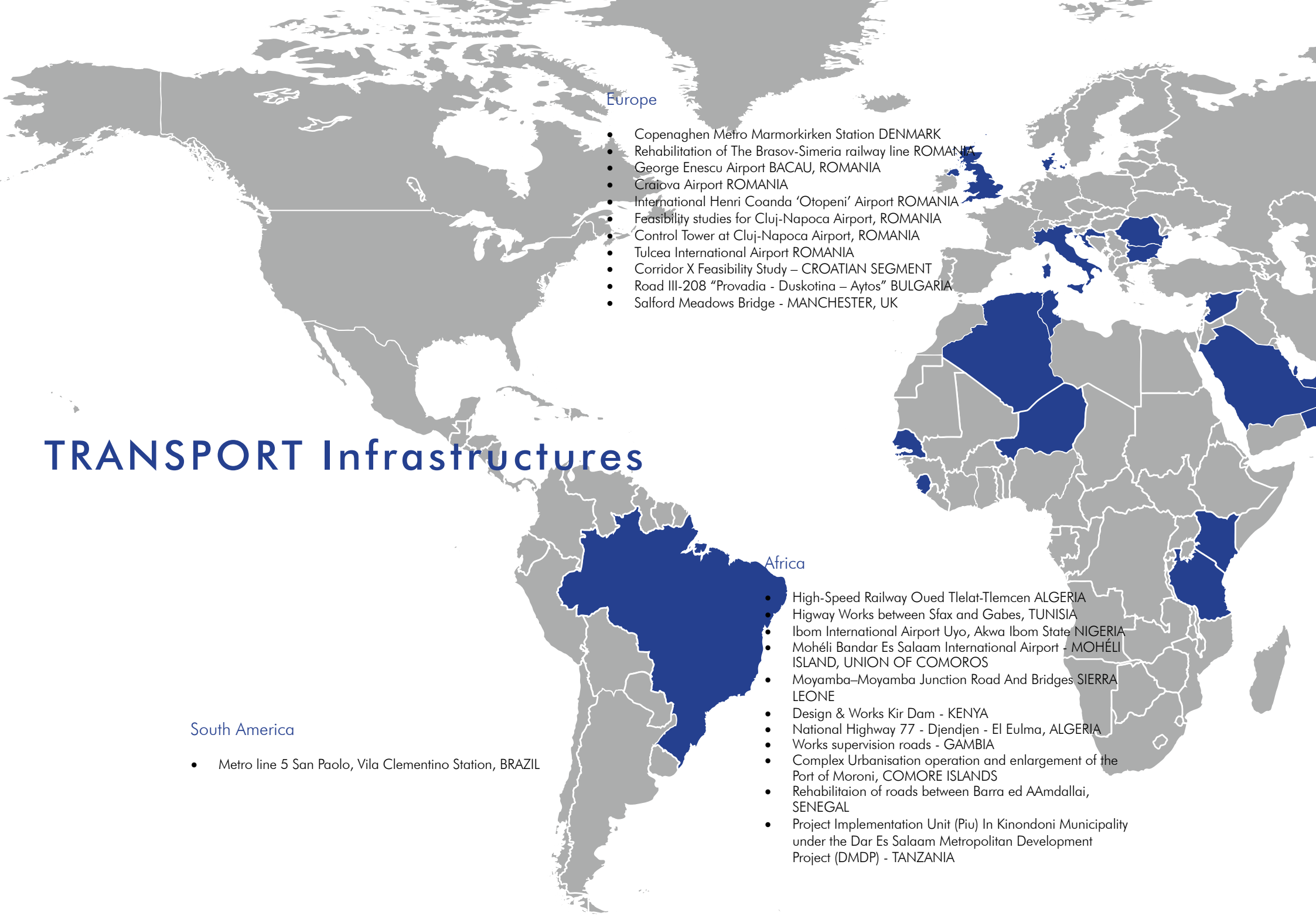
SOCIAL INFRASTRUCTURES

Environmental Impact Studies
Master Planning and Feasibility Studies
Preliminary and Detailed Design
Shop Drawings
Socioeconomic Impacts
Geology, Hydrogeology and Geotechnics
Architectural Design
Structural Design
MEP Engineering
Renewable Energy
Fire Prevention Design
Quantity Surveying and Cost Control
Project and Construction Management
Health & Safety
Works Supervision
Value Engineering

TRANSPORT
infrastructures

Rail and Metros
Airports
Roads
Ports

TRANSPORT Infrastructures



Europe

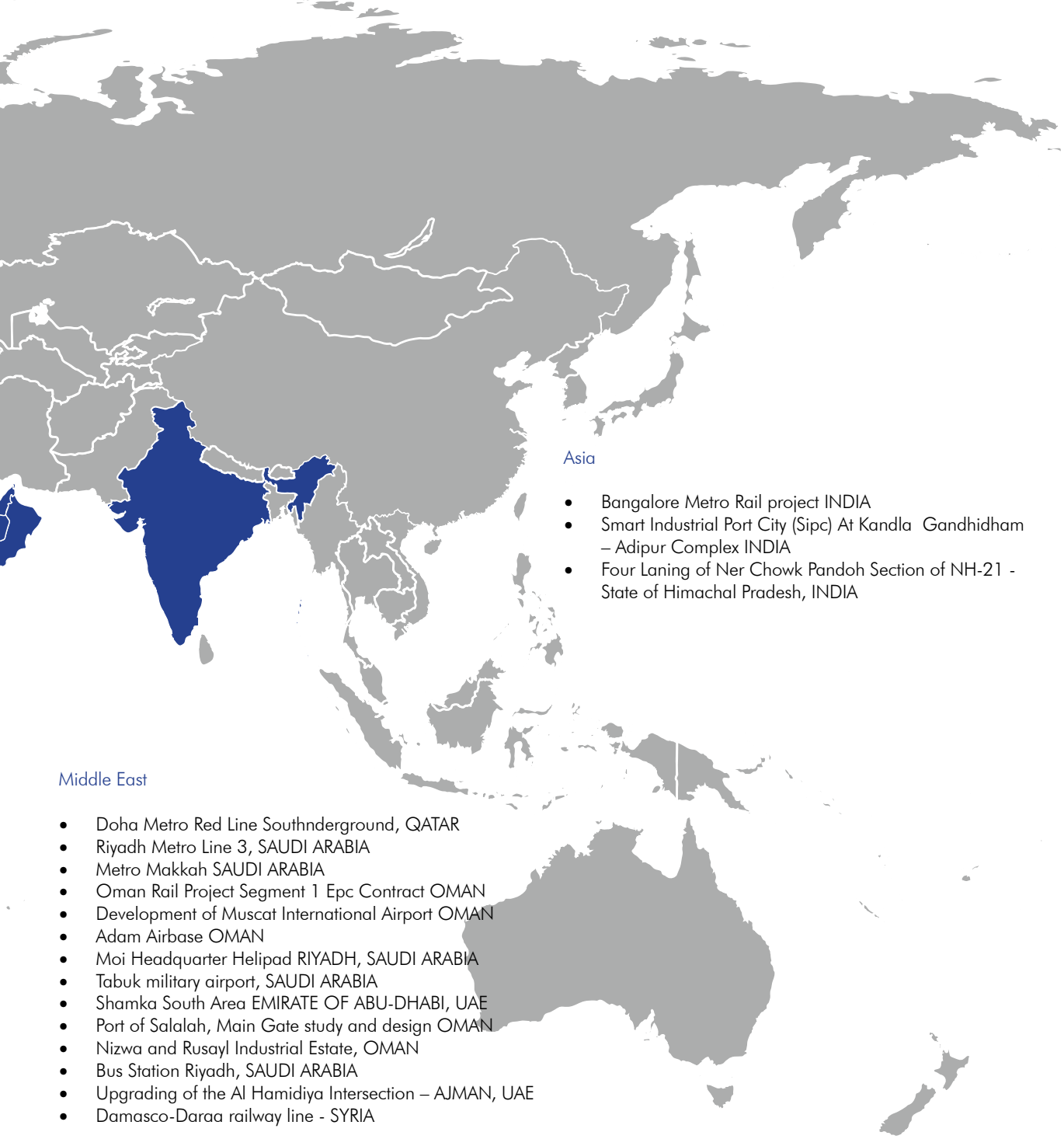
- Copenaghen Metro Marmorkirken Station DENMARK
- Rehabilitation of The Brasov-Simeria railway line ROMANIA
- George Enescu Airport BACAU, ROMANIA
- Craiova Airport ROMANIA
- International Henri Coanda 'Otopeni' Airport ROMANIA
- Feasibility studies for Cluj-Napoca Airport, ROMANIA
- Control Tower at Cluj-Napoca Airport, ROMANIA
- Tulcea International Airport ROMANIA
- Corridor X Feasibility Study – CROATIAN SEGMENT
- Road III-208 "Provadia - Duskotina – Aytos" BULGARIA
- Salford Meadows Bridge - MANCHESTER, UK

Africa

- High-Speed Railway Oued Tlelat-Tlemcen ALGERIA
- Higway Works between Sfax and Gabes, TUNISIA
- Ibom International Airport Uyo, Akwa Ibom State NIGERIA
- Mohéli Bandar Es Salaam International Airport - MOHÉLI ISLAND, UNION OF COMOROS
- Moyamba–Moyamba Junction Road And Bridges SIERRA LEONE
- Design & Works Kir Dam - KENYA
- National Highway 77 - Djendjen - El Eulma, ALGERIA
- Works supervision roads - GAMBIA
- Complex Urbanisation operation and enlargement of the Port of Moroni, COMORE ISLANDS
- Rehabilitaion of roads between Barra ed AAmdallai, SENEGAL
- Project Implementation Unit (Piu) In Kinondoni Municipality under the Dar Es Salaam Metropolitan Development Project (DMDP) - TANZANIA

South America

- Metro line 5 San Paolo, Vila Clementino Station, BRAZIL



Asia

- Bangalore Metro Rail project INDIA
- Smart Industrial Port City (Sipc) At Kandla Gandhidham – Adipur Complex INDIA
- Four Laning of Ner Chowk Pandoh Section of NH-21 - State of Himachal Pradesh, INDIA

Middle East

- Doha Metro Red Line Southnderground, QATAR
- Riyadh Metro Line 3, SAUDI ARABIA
- Metro Makkah SAUDI ARABIA
- Oman Rail Project Segment 1 Epc Contract OMAN
- Development of Muscat International Airport OMAN
- Adam Airbase OMAN
- Moi Headquarter Helipad RIYADH, SAUDI ARABIA
- Tabuk military airport, SAUDI ARABIA
- Shamka South Area EMIRATE OF ABU-DHABI, UAE
- Port of Salalah, Main Gate study and design OMAN
- Nizwa and Rusayl Industrial Estate, OMAN
- Bus Station Riyadh, SAUDI ARABIA
- Upgrading of the Al Hamidiya Intersection – AJMAN, UAE
- Damasco-Daraa railway line - SYRIA

Italy

- Turin High Speed Cross Rail and New Porta Susa Station ITALY
- Brenner Basis Tunnel Construction Lot (Mules 2-3) ITALY
- High Speed Railway Station of Reggio Emilia ITALY
- Refurbishment and restyling of the Italian Rail Stations ITALY
- Pescara Porta Nuova Railway Station ITALY
- Lunghezza - Guidonia railway Line ITALY
- New Metro C (T2 - T3) ROME, ITALY
- Rome Fiumicino “Leonardo Da Vinci” International Airport ITALY
- Metrotram Padua ITALY
- Milano-Parco Nord-Seregno Metropolitan Tramline ITALY
- Aosta airport «Corrado Gex» ITALY
- Expansion of Orio Al Serio international Airport BERGAMO, ITALY
- New Helicopter Emergency Medical Service PIEVE DI CADORE, ITALY
- New Helicopter base Maratea ITALY
- Command Building at the “O.savini” Airport BRACCIANO, ITALY
- Salerno-Reggio Calabria
- Motorway Modernization and upgrading (Macro Lot 4 - Macro Lot 3 Part 1 & 2) ITALY
- 3rd lane of the Motorway A4 between the New Bridge over the Tagliamento River and Gonars ITALY
- Pedemontana Lombarda Motorway (2Nd Lot) ITALY
- Addition of a 3th lane to the A4 Motorway between Quarto D’altino and San Donà ITALY
- S.S. 96 “Barese” - (Gravina - Bari) ITALY
- Ss 38 Morbegno By-Pass between the Fuentes and Tartano and Cosio interchanges (Lot 1) ITALY
- New Motorway link Brescia and Milan ITALY
- A31 Trento - Rovigo Highway Between Trento - Valdastico - Piovene Rocchette ITALY
- Serralunga Driven Tunnel L’AQUILA, ITALY
- Road Link between Highways N. A/8 And A/52 - Rho Monza ITALY
- Substitute Road Infrastructure to State Road S.s.125 ITALY
- E90 Highway: S.s. 106 Ionica ITALY
- New Off-Shore-Multimodal Terminal in Venice ITALY
- Commercial Port Of Augusta ITALY
- Construction of the Outer Breakwater, Port of Ancona ITALY
- Extension and statutory compliance of the ‘Marina Di Nettuno’ Tourist Harbour ITALY
- Requalification and restyling of the Maritime Station Port of Palermo, ITALY
- New Tourist Port of Formia ITALY
- New Drawbridge On The Candiano Channel RAVENNA, ITALY
- Porto Grande & Porto Piccolo Sustainable Development Plan Syracuse, ITALY

RAIL AND METROS

Doha Metro - Red Line

> 2000 KM
RAILWAYS DESIGNED

Rail,Metros, Light-Rail, Stations,People mover,Cross rail

Improving conditions of accessibility and transport

We have been actively contributing to the design of important projects to modernise and upgrade the Italian railway network for many years.

We provide the full range of skills necessary for the safe, successful and reliable design of metro and rail schemes.

As well as developing new systems, we help our clients modernise their existing installations to improve efficiency and capacity working side by side with general contractors, other engineering and design companies, and consultants in finance, environmental and socio-economic services.

We work in close contact with local authorities to identify the most economic and sustainable solutions, capable of integrating the design of railways with passenger interchange/ intermodal areas enriched by attractive public, commercial and retail spaces and for meeting and social interaction.

We boast a vast experience in this field, consolidated over the years under various framework contracts with important clients, offering support and strategic advice at the large and small scale.

client
QDVC JV

completion
2015 - ongoing

value
confidential

services
Lead Designer

Doha Metro
Red Line South Underground
QATAR

Doha Metro is the most prominent and visible project of Qatar. The metro system will be built in two phases: the first will see the construction of three out of the four lines (Red, Gold, and Green) and 37 stations.
3TI is Lead Designer of Red Line South underground, with 32 km of tunnels at an average depth of 25 meters below ground level of central Doha, 5 underground stations, 4 on the Red Line and one on the Green Line, between the Msheireb Underground Station and the New Doha International Airport. The RLSU incorporates 5 switchboxes, 4 underground emergency exits, 35 cross passages and will be completed on 2018.
Qatar Rail's metro network will have big impact on the lives of Doha's population providing a convenient and practical service with a specific mission:

- Create a world-class public transportation network
- Establish a Network Identity recognizable in the urban surroundings
- Improve the existing local urban connectivity

BIM station design:
AL DOHA AL JADEDA STATION, OQBA IBN NAFIE STATION
AL MATAR STATION, UMM GHUWAILINA (AMC), AL MANSOURA STATION

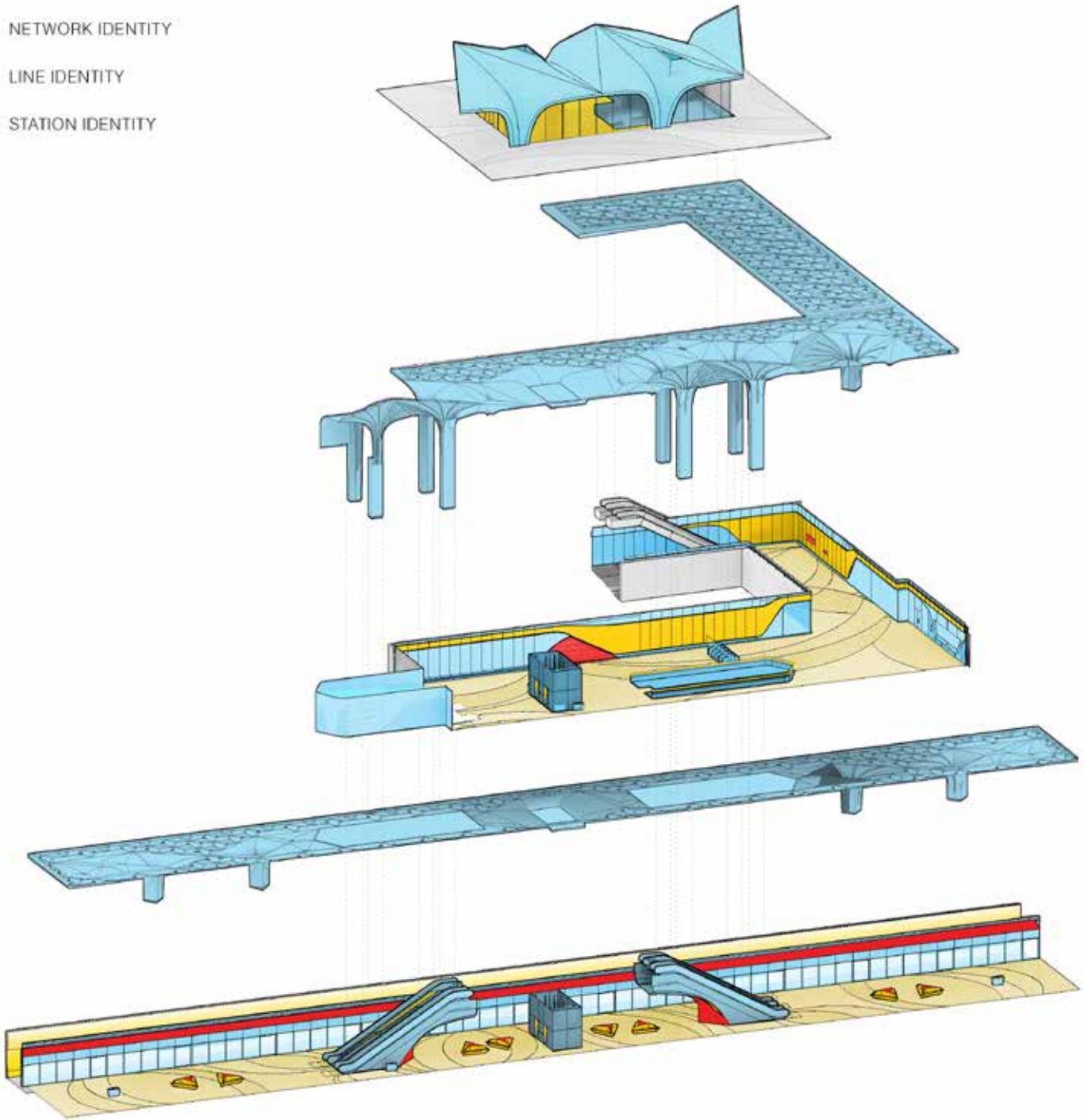
5
underground stations

5
switchboxes

4
emergency exits

35
cross passages

NETWORK IDENTITY
LINE IDENTITY
STATION IDENTITY



LANDSCAPING
the road plan and the landscaping

ENTRANCES
and POP-UPS access to the station including the surrounding technological buildings

The underground STATION BOX
- up to the platform

client
CIVIL WORK GROUP JV (CWG)
on behalf of ARRIYADH
DEVELOPMENT AUTHORITY (ADA)

completion
2014 - ongoing

value
€ 3,720,000,000.00

services
Monitoring Services
Audit
Design Services
Value Engineering

22 Stations
40,4 km of length

Riyadh Metro Line 3
SAUDI ARABIA

New Underground Line 3, the longest of the giant underground project consisting of 6 New Underground Lines running through the Saudi Arabia capital for about 180 km.
Line 3 runs in the East West direction along Al – Madinah Al Munawwarah Road and Prince Saad Ibn Abdulrahman Road.
The main technical data of the line are:

- Total line length: 40.4 km
- Number of stations: N. 22 Total
- Line over concrete slab viaducts: 25.73 km
- Line in all types of tunnels: 9.73 km (including about 3.5 km with TBM)
- Surface line: 4.10 km
- Multi-level parking facilities for users: 5 - 114,000 m^2
- Train maintenance depots: 2
- Streets/Green areas: 362,000 m^2

client
ARAIL Ltd

completion
2015 - ongoing

value
€ 675,371,454.30

services
Civil Shop Drawings
CSD
(combined
services drawings)
MEP Engineering

LINE 3
9 STATIONS
DESIGN:

3 Elevated Stations
3D1, 3D2,3D3

4 Underground
Stations
3E1, 3E3, 3E4, 3E5

Shallow
Underground
Station 3K1

3B2 - Western
station
(iconic station)

client
RFI S.p.A.

completion
1st phase – 2005
2nd phase – 2014

value
€ 626,441,000.00

services
1st Phase:
Detailed Design
2nd Phase:
Construction Site Assistance
and Design

Turin High Speed Cross Rail and New Porta Susa Station

ITALY

The quadrupling of the railway lines between Turin's Porta Susa and Stura stations is part of a vaster programme of infrastructural expansion and urban requalification.
In particular, this project includes a new underground line and the redevelopment of the road connecting Porta Susa Station with Corso Grosseto. Works included the layout of the new underground line and the construction of a new rail link between the aforementioned rail stations. The project site is characterised by a high concentration of heritage buildings, situated in proximity to planned railway tunnels. For this reason, the crossing of the Dora River was achieved using an artificial underpass (nearly 3 km long) rather than a bridge.

1 billion $ investment
4 lanes

The railway has a total length of about 2.8 km and uses a systematic structural design approach for artificial tunnels.

The Dora station features a four barrel tunnel: two barrels for railway traffic - west for slow traffic, east for high-speed traffic – with a cross section of 21.20 m; the remaining two barrels - with a reduced cross section of 7.60 m - are located close to the stairs, elevators and service rooms.


4
Do not cross the railway lines

client
SALINI COSTRUTTORI S.P.A.

completion
2012 - 2013

value
confidential

services
Geothecnical consultancy
Buildings assessment stage

Copenaghen Metro Marmorkirken Station

DENMARK

Geotechnical activities:

- Analysis and interpretation of results related to geotechnical surveys;
- Definition of geotechnical model finalized to 3D Soil Structure Interaction analysis.

The geotechnical model was developed in order to study the detailed 3D soil-structure interaction. This analysis was carried out to evaluate the effect induced on Marmorkirken Church by the construction of the adjoining underground station.

The problem under investigation was very complex due to a number of factors: heterogeneous structural and architectonical layout of the church, Cityringen station layout and sequences of excavation, construction details and geometry of the different elements to be modeled.

It's worth to note that an increasing level of detail and rigor have been applied at each stage of assessment, refining the geometrical, geotechnical and structural model to a higher degree of sophistication having now acquired a deep knowledge of the issue.

client
COMPANIA NATIONALA DE
CAI FERATE "CFR" SA

completion
2014 - ongoing

value
€ 586,814,978.00

services
Works supervision

33 bridges/viaducts
92 km of railway line

Rehabilitation of the Brasov-Simeria railway line
ROMANIA

3TI has been awarded the management of works and verification of the execution of infrastructures, over-structures and systems for the rehabilitation of the Brasov – Simeria railway line, on the stretch between Sighisoara and Coslariu, in Romania, in the framework of the wider ranging Corridor IV European project.
The scope of this project is the enhancement of the railway circulation conditions along the Pan-European Corridor, ensuring the circulation of passenger trains at 160 km/h and freight trains at 120 km/h, increasing transport safety and protection of the environment.
The Sighisoara - Coslariu stretch covers a total distance of approximately 92 km and is subdivided into the following three geographical lots:

Lot 1: Sighisoara - Atel	length: 28 km
Lot 2: Atel - Micasasa	length: 29 km
Lot 3: Micasasa – Coslariu	length: 35 km

In addition to the construction of the railway structures, hydraulic piping and replacement of the reinforcements on all the lines, the project involves the construction opf 33 new bridges/viaducts, 2 tunnels (401 m and 969 m long), approximately 8 km of support works, over 100 manholes.

client
RIZZANI DE ECCHER S.p.A.

completion
2012 - 2016

value
€ 233,000,000.00

services
Detailed Design
Site Assistance

33 Km of railway Line
12 Viaducts

High-Speed railway Oued Tlelat-Tlemcen
ALGERIA

This intervention involved the construction of a new 33 km long high-speed railway line (with double electrified rail), running through a wide level plateau 550 meters above sea level. The line features 12 viaducts (total length of 5.4 km) and the Bel Abbès-Sidi Lahcène link that serves as an interchange hub between the new (NLGV Oued Tlelat/Tlemcen) and existing lines.

- 2 Point Of Connection With The Existing Line
- 1 Point Of Connection With The National Road «Rn13»Overpasses
- 4 Underpasses
- 1Km Of Retaining Wall
- 47 Sewer Systems for Railways
- 13 Sewers Systems for Roads

The work was divided into different segments according to local ground conditions and existing constraints, such as the presence of a gas pipeline or interferences with the construction of a new East-West Motorway.

client
BBT SE

completion
2016 - ongoing

value
€ 1,000,000,000.00

services
Healt & Safety
Management

with
Sintel Engineering

Brenner Basis Tunnel
Construction Lot (Mules 2-3)
ITALY

3TI is responsible for the Health and Safety Management during construction of the Brenner Basis Tunnel (lot "Mules 2-3").
This lot is the final part of the BBT, on Italian territory stretching from Mules town to the Italian border (Bolzano area).
The BBT consists of two-tubes each equipped with a single track, linked every 333 m by connecting side tunnels.
The BBT is characterized by the "exploratory tunnel" running from one end to the other between the two main tunnels and situated about 12 m below them.
The excavation of the two main tunnels (40,3 km), and the exploratory tunnel (14,7 km), will be carried out using traditional methods (drill and blast) and mechanical methods (TBM).

client
ITALFERR S.p.A.

completion
2007 - 2008

value
€ 83,204,798.17

services
Final Design
Health & Safety
Management

High Speed Railway Station of Reggio Emilia

ITALY

3TI has developed the upgrading of the project of Santiago Calatrava to the Italian RFI standards, the layout rail safety and site preparation. The station, the only stop in the new line is High Speed Milan - Bologna, will be from the perspective of a node transport terms “intermodal” interchange between various modes of transport: the trains of the regional line Reggio Emilia - Guastalla, road traffic and public private and connections with the exhibition center located in the immediate vicinity of the stop.

client
CENTOSTAZIONI S.P.A.

completion
2003 - 2008

value
€ 14,000,000.00

services
Final Design
Detailed Design
Health & Safety
Management

Refurbishment and restyling of the Italian Rail Stations

ITALY

This series of redevelopment projects involved various medium-sized railway stations, including those in Salerno, Cagliari, Barletta, Taranto, Brindisi, Lecce, Ancona, Foggia, Rimini, Termoli and Roma Ostiense.
The projects forecast actions for the ordinary and extraordinary maintenance of degraded elements and the commercial development of unused area or spaces freed up during the reorganisation of activities and functions.
The planning process redefi ned spaces assigned to different functions inside passenger terminals to enhance the overall image of the stations. Other works included the recovery of original architectural characteristics and the elimination of architectural barriers.


FERROVIE DELLO STATO
Cagliari

client
DI PROSPERO Sas

completion
2006

value
€ 4,110,000.00

services
Detailed Design
Health & Safety
Management

Pescara Porta Nuova Railway Station

ITALY

This project involved the detailed design of the Pescara Porta Nuova Railway Station as part of the vaster conversion of the Molino De Cecco Area included in the urban requalification programme developed as part of the international competition winning design by Oriol Bohigas.
The design concerned:

- the reconstruction of the passenger terminal;
- the requalification of the surrounding area;
- the completion of the railway underpass beneath Via Italica;
- the reconstruction of the historical façade of the original Pescara Porta Nuova station;
- the completion of various unfinished structures and existing works from a previous intervention.

and includes: Engineering Design Management, Topographic / Track Surveys, Civil, Structural, Electrical and Mechanical Engineering, Overhead Electrification, Geotechnical Services, Earthworks and Earth Retaining Structure Design, Permanent Way Design, Signalling and Telecommunications Design, Environmental Management, Drainage Design, Design Assistance to Construction Supervision.

client
TECNE SRL

completion
2007 - 2008

value
confidential

services
Geotechnical consultancy

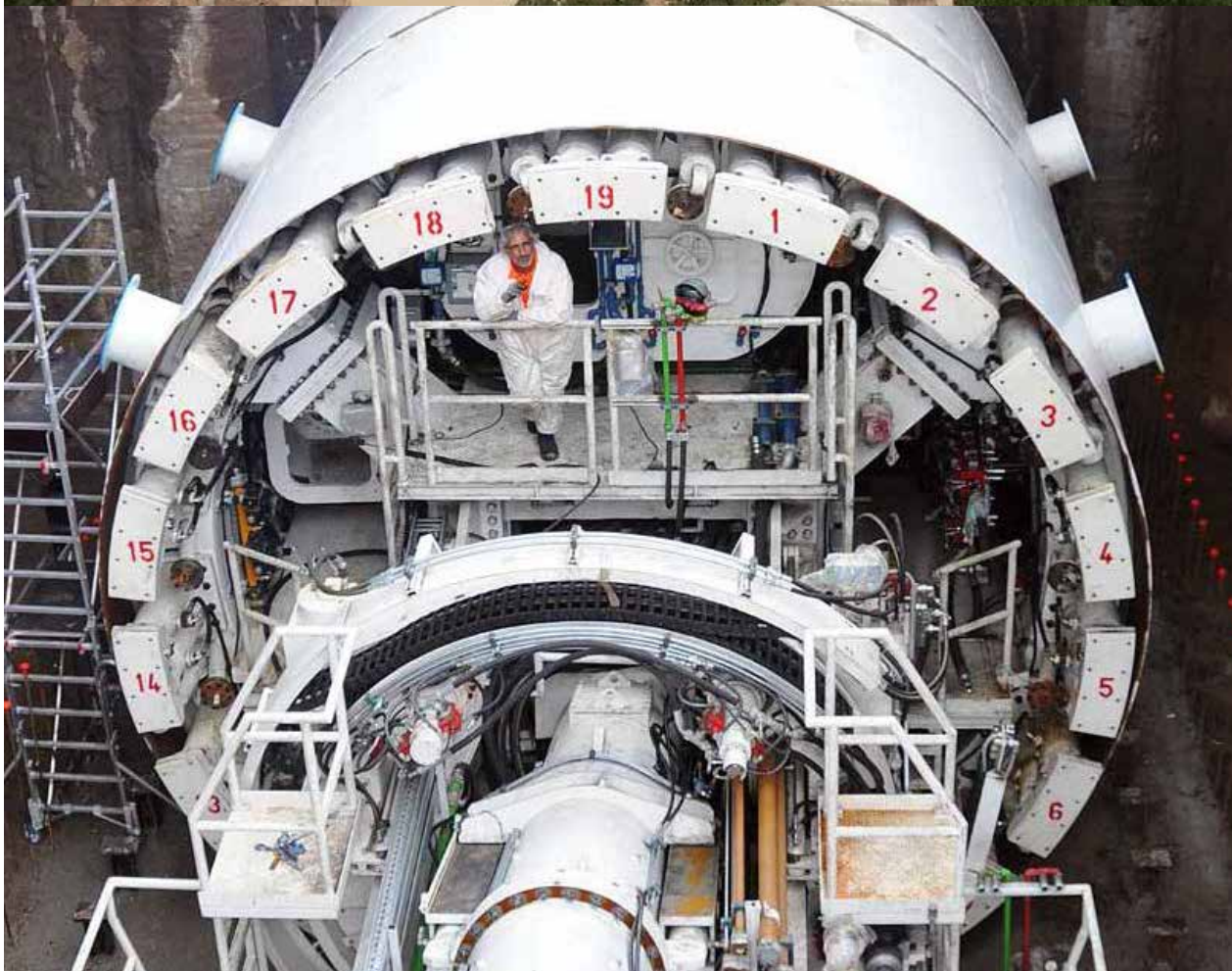
New Metro C (T2 - T3)

ROME, ITALY

Geotechnical activities

- Analysis of soil investigation results;
- Definition of detailed geotechnical model finalized to the study of excavations effects on hystorical monuments.

The provided services dealt with the analysis and interpretation of the results of geotechnical investigation conducted for the design of new Metro C of Rome. In particular, the activities aimed to define the geotechnical model for the study of excavation effects on some important hystorical monuments such as Basilica di Massenzio, Palazzo Sforza Cesarini and Palazzo Massimo di Pirro.



client
GEODATA S.P.A.

completion
2011

value
confidential

services
Geothecnical consultancy
Monitoring plan

Bangalore Metro rail project
INDIA

The provided services were finalized to the analysis and interpretation of results from geotechnical investigation conducted for the design of the North shaft.
North shaft is divided into two sub-shafts, one for north bound and one for south bound TBM extraction. Retaining structures consist of secant pile walls, sustained by 3 strut levels. The maximum excavation depth is approximately 17.5m and the maximum width of the excavation is 11.7m for north bound and 13.6m for south bound. Struts levels are installed at depth of approximately 3.5m, 7.5m and 11.5m from ground level. Due to the importance of the excavation works and the context in which the structures are located (urban environment with retaining walls near to the existing buildings), a monitoring system has also been designed, in order to control the accordance between project assumptions and measured quantities.

client
LISTA APPALTI SRL

completion
2014 - 2015

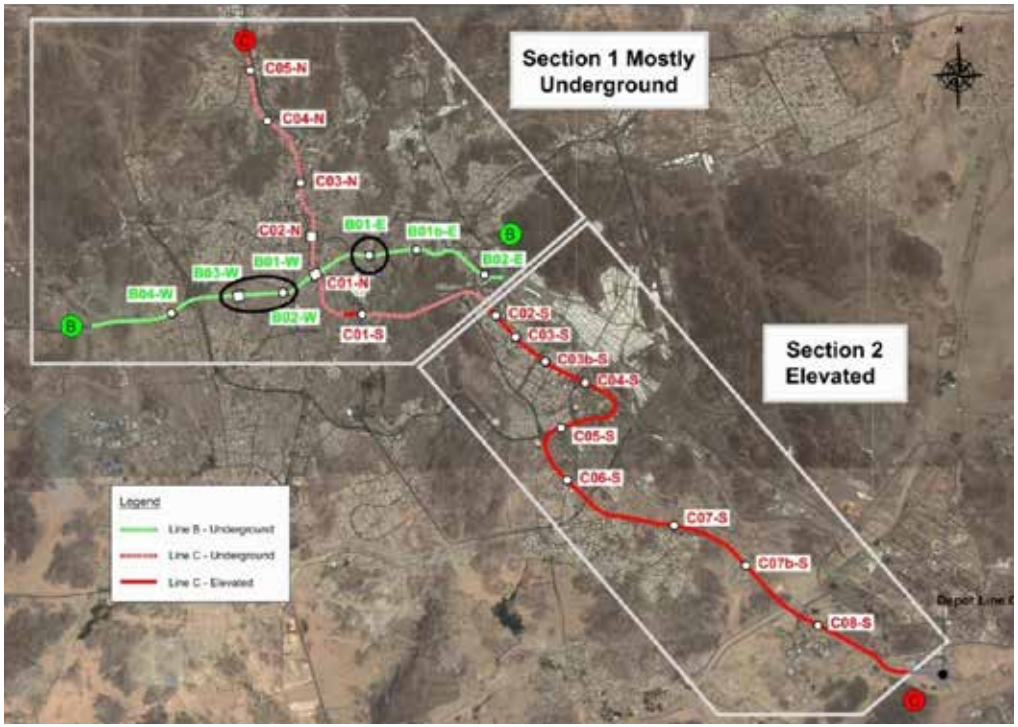
value
confidential

services
Geothecnical consultancy

Lunghezza - Guidonia railway line
ITALY

The project concerns the doubling of Lunghezza-Guidonia railway line, with regard to the settlements of Tivoli Terme and Villalba di Guidonia.
The monitoring system was developed within the scenario of the whole detailed design. The provided services include:

- Definition of the monitoring plan respecting the neighborhood. In fact, in many places the railway line develops in close proximity of residential buildings
- Supply and installation of instrumentation and material
- Acquisition and interpretation of data.



client
NESMA & PARTNERS

completion
2015

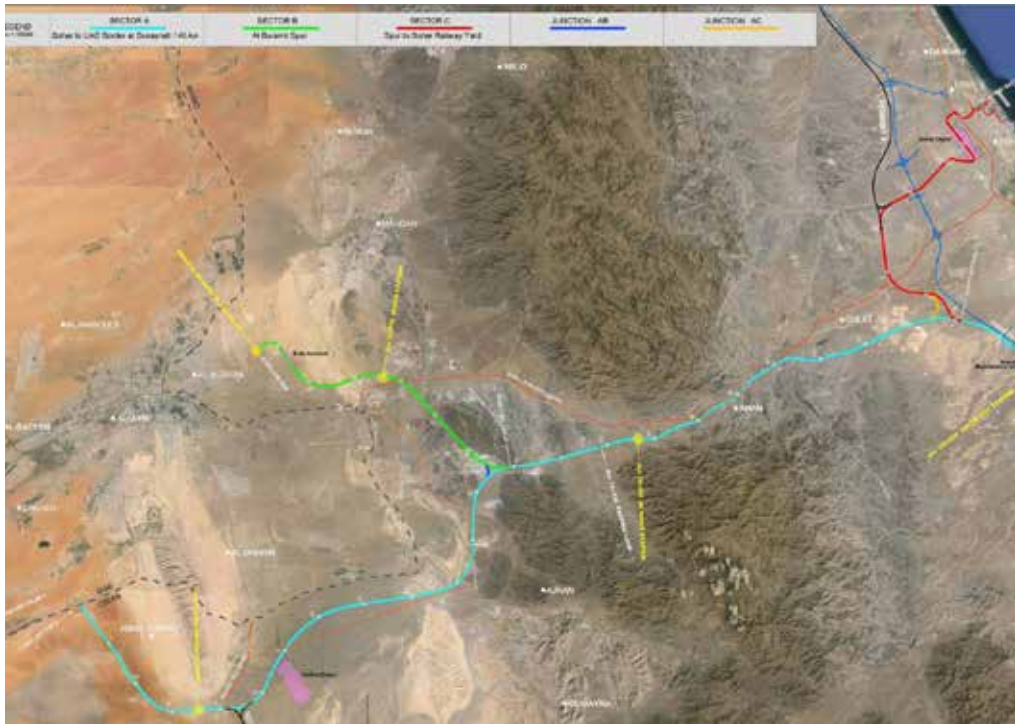
value
confidential

services
MEP Design

Metro Makkah
SAUDI ARABIA

The project, referring to systems contract, includes the design of two new metro lines (line B and C) on a total of four forecasted lines in the holy city of Makkah.
The mentioned metro system is a track line equipped with a third electrified rail with 45 km total length, 22 stations and 1 depot:
- Line B: 12 Km lengh, No. 7 stations
- Line C: 33 Km lengh, No. 15 stations

Design services for t MEP, including BoQs, calculations, drawings and reports as well as methodologies, with reference to stations, depot, tunnels and ancillaries buildings.



client
SALINI IMPREGILO S.P.A.

completion
2014 - 2015

value
confidential

services
Design activities (tender phase)
Value Engineering
BoQ

Oman Rail project
Segment 1 Epc Contract
OMAN

The estimated total length of the Oman National railway network is 2135 km. 3TI dealt with section 1 (about 200 km long).
It is divided into several segments linking Oman's borders with the UAE to Muscat, as part of the GCC Railway Network and also to the southern parts of the country - Port of Al Duqm, the Port of Salalah and the Yemen border.
The railway is double track, non-electrified and it is designed to serve mixed freight and passenger traffic. Freight train maximum speeds shall be 120 km/hr and for passenger trains - 220 km/hr.

client
APS HOLDING S.p.A.

completion
2003 - 2008

value
€ 30,320,000.00

services
Works management
Health & Safety management

Metrotram Padua
ITALY

The project involves the realisation of a mass rapid transit surface line linking the Northern Suburbs, Historic Centre and Southern Suburbs of the Municipality of Padua (the so-called SIR1; approx. length: 11 km).
The main features of the project are: average distance between stops generally not less than 300-400m; average peak hour waiting time inferior to 6 minutes; 18 hours of daily operation (from 6 a.m. to midnight); max. capacity of 1,800 passengers/hour. The work was rendered particularly complex by conditions in the existing urban environment, by important interferences with daily life in the historical centre of Padua, and by the presence of numerous public utility lines, frequent traffic jams and night and Sunday shifts, the coordination of civil, electrical and mechanical works and temporary occupations of private property.

client
CMC
COOPERATIVA
MURATORI
CEMENTISTI

completion
2011 - ongoing

value
€ 106,700,000.00

services
Detailed Design

Milano-Parco Nord-Seregno metropolitan tramline
ITALY

The project involves the transformation of a current tram system into a new metropolitan tramline, achieved through the radical redesign of the tram routes and technologies, including the typology of vehicles and the criteria of the network.
The intervention is situated in the Municipal areas of Milan, Bresso, Cusano Milanino, Paderno Dugnano, Nova Milanese, Desio and Seregno. The new line extends for approximately 16 km. Trams will run in a dedicated corridor atop a parterre positioned at the centre of the road, flanked by two lanes of travel on both sides, serving side streets and driveways.
Of the current tram system, the new project reutilises only the railbed. The new design includes the complete reorganisation of all spaces (railbed, road network, pedestrian and bicycle routes).

AIRPORTS

Muscat Internationa Airport - Oman

> 12
AIRPORTS DESIGNED

Airport Facilities,Passenger Terminals, ATC Towers and Facilities,Cargo Terminals and Systems,Hangars and Maintenance Facilities,Runway, Pavement Design & Refurbishment, Aprons, Heliports, Low-Cost Carrier Facilities, Taxiway Planning, Surface Access, Infrastructure and Integrated Transport Access, Carpark Facilities, GSE Areas, Airside engineering, Landside infrastructure, Fire safety.

We help airport authorities implement their programmes for new and expanded airport facilities.

We offer complete high quality solutions for every stage of airport development, as a leader in the management, planning and design of landside and airside facilities optimizing aeronautic infrastructures and increasing the airports' capacity.

We help airport clients solve complex business, developmente and operational challenges through innovative planning, design, technology and management consultancy.

Whe have an extensive experience in providing globally innovative world-class airport projects based on integrated solutions including aviation, ground, retail leisure, office spaces and hospitality facilities.

We have reached a high level of expertise being active in all stages of infrastructure and airport facility development including the optimization of airport operation.

client
URS
(formerly SCOTT
WILSON Ltd)

completion
2011 - 2012

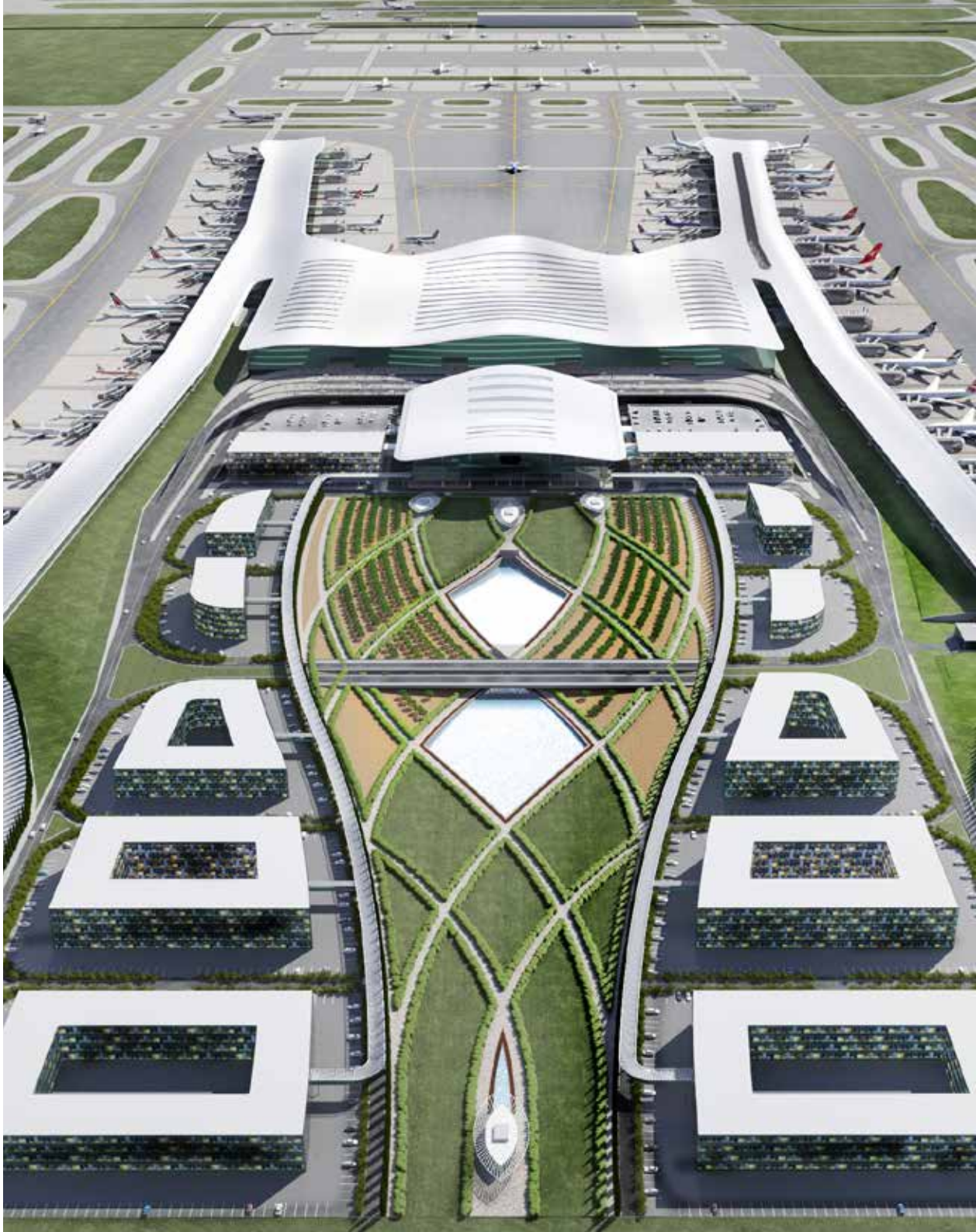
value
€ 8,543,042,000.00

services
Environmental Impact Assessments
Project and Construction
Management

Rome Fiumicino "Leonardo Da Vinci" International Airport

ITALY

3TI PROGETTI is the local partner to the team of experts, led by Scott Wilson Ltd, who awarded the contract tender for "Drafting the Long-Term Master Plan and Relative Environmental Impact Study for the Airport of Roma Fiumicino" organised by Aereoporti di Roma S.p.A.
As requested by the proposal, the Master Plan development has been structured around the following work-packages:
input analysis, traffic forecasts, landside development, airside development, new passenger handling building and baggage claim, public utilities and systems, building development, cargo transport development, environmental impact study, graphics, videos and simulation models.
The proposed solution considers such aspects as: operative sustainability, cost/benefit supports to the business plan, the appropriateness of the planning conceived in successive stages (Stage 1 year 2020, stage 2 2044 and post-2044), flexibility and environmental impact.



The Master Plan activities deal with airside and landside infrastructure, ground transportation, environment and terminal building.

The current number of 35 mln passengers per year will increase up to 100 mln by 2040 with some intermediate steps.

client
HILL INTERNATIONAL LLC
(OMAN) on behalf of
THE MINISTRY OF TRANSPORT
AND COMMUNICATIONS OF
THE SULTANATE OF OMAN

completion
2013 - ongoing

value
confidential

services
Airside/Landside
Infrastructures Design
Sub-Consultancy Services
Project Management
Design resident team

12 million passengers per annum (MPPA)

for Airbus A380 (the world`s largest aircraft)

Development of Muscat International Airport

OMAN

3TI PROGETTI is involved in the development of Muscat International Airport as a Design Sub-Consultant for airside/landside infrastructures mainly under Main Contract MC1. The New Muscat Airport is designed according to four growth scenarios over the time: 12 million passengers, 24 million passengers, 36 million passengers and 48 million passengers with an area of 350,000 m^2, a new 4,000 x 60 meter runway and associated taxiways, a new Air Traffic Control Tower and Air Traffic Management Centre. The project also includes a new ATC Contingency and Training Centre, new access road, a 6,000 vehicle car park and more than 50 ancillary buildings.
With an operating office located on site, 3TI PROGETTI is in charge of two types of activities. First provide a technical office able to manage all the daily aspects related to the design during construction stage as Variations, Requests for clarification, Issue of instructions, Design review, etc. Second provide a dedicated design for particular or complex tasks such as the Refurbishment of the existing airfield to ICAO code F (which includes the complete reorganization of the runway and taxiways layout), the review of the Fuel Farm Philosophy to follow the new Operator requirements, Hydraulic studies, Airport Certification drawings, the Concept design for an Automated People Mover between the existing and the new terminal and Aircraft manoeuvring simulations.

client
AZVI S.A. on behalf of
CRAIOVA AIRPORT

completion
2015 - 2017

value
€ 11,390,000.00

services
Final Design
Detailed Design
Technical assistance on site
Project management

Craiova Airport

ROMANIA

The project for the rehabilitation, upgrading and modernization of the runway of the Craiova Airport in Romania, consists of the the rehabilitation works of the 09/27 Runway for takeoff-landing, the rehabilitation and expansion works of the Taxiway BRAVO to the dimensions and the characteristics necessary for the operation of aircraft with code letter C and the rehabilitation and expansion works of boarding-landing platform.
The project provides: rehabilitation of the old Apron and construction of a new APRON, as well as the development of a new AGL system and the drainage of the airside infrastructures, replacement of the current lighting system with modern lighting, construction of a new sewage network.


AEROPORTUL CRAIOVA

client
NATIONAL BUCHAREST
AIRPORTS COMPANY

completion
2018 - ongoing

value
confidential

services
Feasibility Study

International Henri Coanda "Otopeni" Airport
ROMANIA

The 3TI PROGETTI and SC ADURO IMPEX SRL joint venture has been appointed by The National Bucharest Airports Company to provide the technical expertise and feasibility study for the Romania's busiest international Airport Henri Coanda 'Otopeni'.
Ranked among European airports with highest air traffic growth, the study has been commissioned to achieve the investment "Systematization of the AIHCB's airside infrastructures in order to increase operational capacity and compliance with R139/2014 ".


HENRI COANDĂ
115

client
ALCON NIGERIA Ltd

completion
2012 - 2014

value
€ 70,840,000.00

services
Preliminary Design
Detailed Design
Post-Design (Procurement Assistance) Services

1.5 mln pax/year
A380 facilities

Ibom International Airport
Uyo, Akwa Ibom State
NIGERIA

3TI PROGETTI has been engaged to design the International Terminal Building at Ibom International Airport in Uyo – Nigeria as a design consultant to Alcon Nigeria Ltd, the contractor awarded the D&B Tender.
The project consists of the following three sections:

- the new international passenger terminal (1.5 mln pax/year, 750pax/hour peak);
- the air side apron, with fixed fittings and equipment;
- the land side access road system and car park system.

The design gives prominence to the interior and exterior public areas, all below continuous roof. The gentle curve of the airport's roof is inspired by an aircraft-wing that defines the cross section of the structure.
The terminal is furthermore equipped with halls, lobbies, waiting rooms, staff offices, check-in areas and areas for police and security services. By preferring the language of essential forms, clearly defined spaces and natural materials such glass, steel and stone, all placed under a pastel green roof, the designer has created a bright, clear, simple yet comfortable environment designed to ease passenger flows.

client
MINISTRY OF DEFENCE
OF SULTANATE OF
OMAN

completion
2012 - ongoing

value
confidential

services
Masterplan
Concept design
Preliminary Design
Detailed Design
Tendering
Works Supervision

with
Hill International

Adam Airbase
OMAN

Master Plan and Project Design of Land and Air Side Infrastructures and Buildings for the new Adam Airbase RAFO, Ad Dakhiliyah Region - Oman. Delivery to MoDES - Omani Ministry of Defense a turn-key project of a new military airbase for the Royal Air Force of Oman on a site currently known as Adam Airport, actually hosting just an abandoned greenfield.
3TI PROGETTI is in charge of designing the whole infrastructure and some main/ancillary facilities for Adam Air Base including but not limited to the following:
Representative, Administration and Operative buildings, Airfield Layout comprehensive of new parallel Taxiway, Apron, Links and AGL, MEP including Fire Fighting Network and Fuel Installations,
Drainage System including Sewage Treatment Plant,TLC/IT network and Public Address,Landscaping.

client
JUDETUL BACAU

completion
2016 - ongoing

value
confidential

services
Detailed Design

Bacau Airport "George Enescu"
ROMANIA

Bacau is the capital of Bacau county and it's the second largest city from the north-east region of Romania.
It covers a land surface of 41km^2 and has an estimated population of 175,921. Bacau Airport, entitled to "George Enescu", located in the centre of the country, is one of the major airport in Romania. The project involves the improvement of the bearing capacity and the modernization of the runway and taxiway..

client
VALLE D'AOSTA REGION

completion
2017 - ongoing

value
confidential

services
Masterplan

Aosta Airport "Corrado Gex"
ITALY

Designed as an international and national cornerstone in the air traffic between France, Italy and Switzerland, both for touristic and commercial routes, the masterplan of the Aosta Airport will include the development of the air-side and land-side services, and all complementary activities with the aim of increasing the efficiency, safety, security and air traffic capacity.
The masterplan will propose also an optimized management methodology "Airport Development Plan" to increase the infrastructure's strategic value, for the socio-economic development of the area and a valuable support to the enhancement of the tourist vocation of the Valle D'Aosta Region.

client
CIMOLAI S.P.A.

completion
2012

value
€20,168,000.00

services
Final Design

Expansion of Orio Al Serio Airport
BERGAMO, ITALY

The substantial growth in traffic at Orio al Serio International Airport required the elaboration of a five-year action plan (2010-2015) for the expansion and transformation of the existing structures to accommodate a capacity of between ten and eleven million passengers per year.
The objectives identified for the upgrading and modernisation of the airport include the expansion of the passenger terminal, with the approximate doubling of the current surface; the construction of new passenger areas aligned with IATA Standards service levels; an increase in the number of shops and restaurants in the landside and airside areas and the reinforcement of the airport's image through a continuity of expression between existing and new elements.

client
MINISTRY OF INTERIOR

completion
2016 - ongoing

value
confidential

services
Concept Design
Shop Drawings
Aereonautical design
Interior design

MOI Headquarter Helipad
RIYADH, SAUDI ARABIA

The project envisages the design of the new Helipad for the Ministry of Interior.
As per the functional program, in addiction of the Helipad area, the project include the hospitality lobby/lounge, the enclosed ground passageway, the Lift Tower, the Link Bridge and the office foyer.
The main data of the Helipad are:

- Helipad area; including control room 3.930 sqm.
- Remaining VIP car parking (44 x 64 m) 2.800 sqm.
- Landscaping elements, including water features 890 sqm.

New building rises closely to the MOI Main building creating a link between the new helipad area and the existing context for Hospitality Lobby/Lounge, Lifts Tower, First floor Link Bridge, Office Foyer

client
U.L.S.S. BELLUNO

completion
2016 - ongoing

value
€2,500,000.00

services
Preliminary Design
Final Design
Detailed Design
Health & safety
Management

with
DBA Progetti,
Ing. Marinoni,
Studio Colleselli
& Partners, G.A.

New Helicopter Emergency Medical Service
PIEVE DI CADORE, ITALY

The heliport for the Helicopter Emergency Medical Service, to support the Hospital, will host simultaneously two helicopters, thanks to the hangar parking at the same level, capable of flying more than 3 thousand meters of altitude also in night flights.
The new location of FATO (Final Approach and Takeoff area) will directly connect the landing area to the hospital emergency room.

client
UNIONE LUCANA DEL LAGONEGRESE

completion
2017 - ongoing

value
confidential

services
Feasibility Study
Final Design
Detailed Design
Works supervision

New Helicopter base Maratea
ITALY

3TI PROGETTI has been awarded the final, detailed design, health and safety management and works supervision of a new Helicopter base which will be constructed to upgrade the currently operational infrastructure system as part of the regional touristic development plan.

client
ITALIAN MINISTRY OF DEFENCE

completion
2011 - 2013

value
€ 2,852,000.00

services
Final Design
Detailed Design
Health & Safety Management

Command Building at the "O.savini" Airport
BRACCIANO, ITALY

3TI was responsible for the architectural, structural and MEP design of the new command building at the "O. Savini" Airport in Bracciano, north of Rome. The site is characterised by the presence of buildings used as warehouses, housing and helicopter hangars.
The new building will replace an existing structure and provide more workplaces with more suitable layouts and hygienic conditions.
The new building will house the offices of the Commander and Chief Adjutant, meeting rooms and staff offices. The design also includes parking for 98 vehicles, with two reserved spaces for the disabled.

ROADS

3rd lane of A4 between Quarto D'Altino and San Donà di Piave, Italy

>1500 KM
ROADS DESIGNED

>500 Km Bridges and viaducts,
>300 km tunnels

We have taken part in modernisation of existing highways, in planning of new roads and collaborated in their construction.

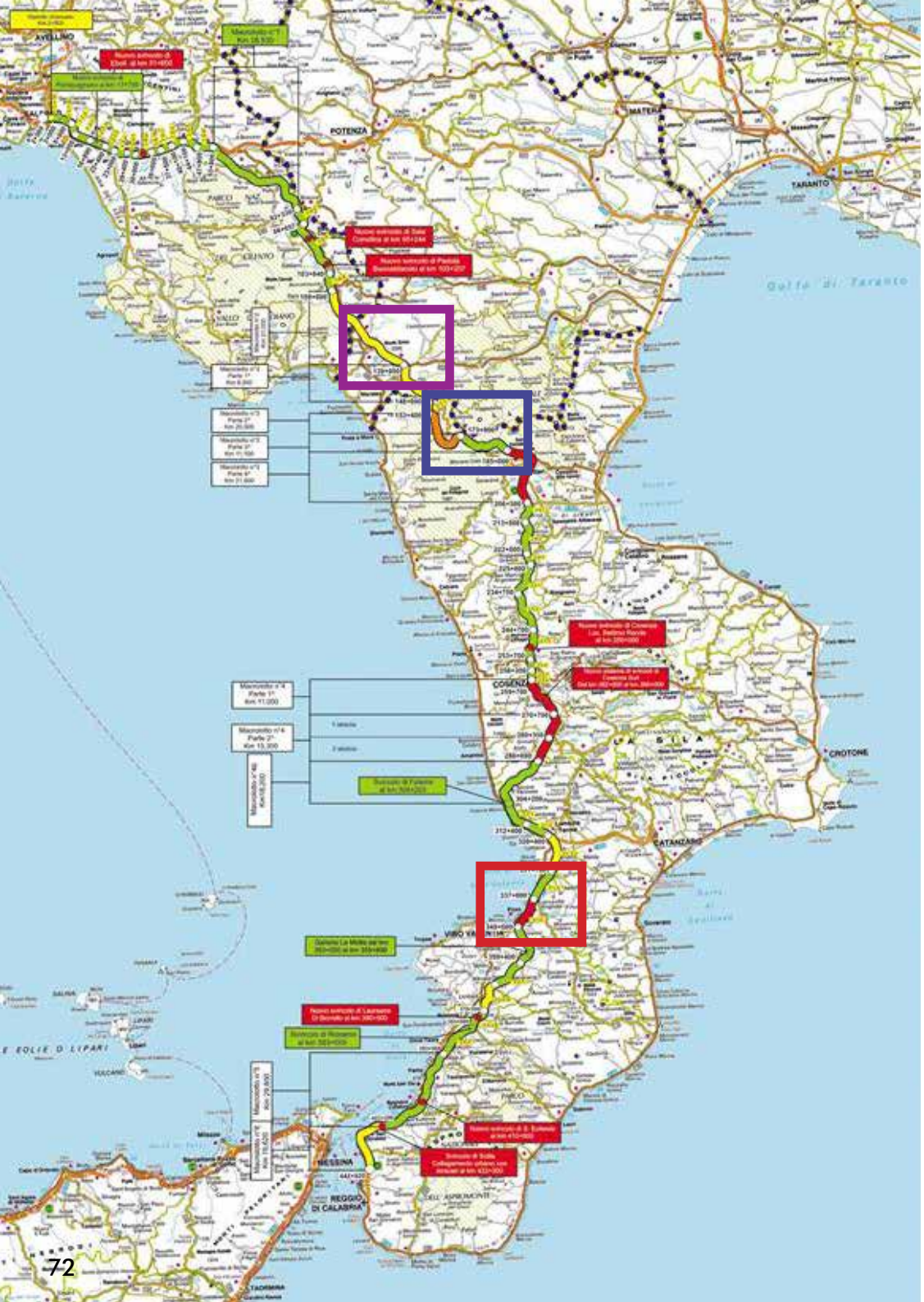
Our pourpose is to work for a safe, quick and confortable road system.

Our integrated solutions aim at reducing traffic congestion and minimising environmental impact.

3TI has developed a remarkable experience in the road field, working since many years both in the public and private sector for important clients carrying out prestigious projects in and outside Italy.

The Company committed in the road infrastructure design deals with all aspects linked to it including the design of viaducts, tunnels, underground channels, pedestrian areas, road surfaces, signage and lighting.

The design stage starts from the evaluation of the user behavioural dynamics:
the road project, that is the plano-altimetric geometry, the cross-section, the boundary conditions and the intersections are certainly the major conditioning elements for the driver of a vehicle.
To significantly reduce the accidentalness, the user needs to adopt his/her behaviour to the road characteristics and the latter has to intervene positively in this process favouring the adaptation.



Salerno - Reggio Calabria motorway modernization and upgrading

(Macro Lot 4 - Macro Lot 3 Part 1 & 2)
ITALY

Three different projects for diverses clients for the improvement of a stretchs of the Italian National Road System, the A3 Motorway linking Salerno and Reggio Calabria.

DG10: MACRO-LOT 4 from km 259+700 to km 286+000
client ANAS
completion 2004 - 2009
value € 950,000,000.00
services Final Design, Transportation and Traffic Review, Mitigation Measures Design, Cost Estimation, Health & Safety Management, Environmental Impact Assessment
with: SPEA, STE.

ASR17: MACRO-LOT 3 PART 1 from km 139+000 to km 148+000
client GRANDI LAVORI FINCOSIT
completion 2010 - works supervision ongoing
value € 396,000,000.00
services Project and Construction Management, Detailed Design for Road Systems , Environmental Impact Assessment
Transportation and Traffic Review, Mitigation Measures Design, Cost Estimation, Works Supervision, Health & Safety Management.
with: Lombardi SA – Lombardi-Reico - Cilento

ASR18: MACRO-LOT 3 PART 2 from km 153+400 to km 173+900
client ITALSARC S.C.A.R.L
completion 2013 - ongoing
value € 424,000,000.00
services Detailed Design, Health&Safety Management, Environmental Monitoring Plan, Works Supervision
with: TECHNITAL, SMA, Soil, Siteco, Prometeo

Italia Viaduct

DG10: MACRO-LOT 4 from km 259+700 to km 286+000

This project section relates to lots 6 to 10, from km 259+700 to km 286+000.
The motorway's passage through a mountainous region required the design of some 30 viaducts (total length 5.7 km) and 16 tunnels (total length 5.9 km).
The first phase of the project focused on road analyses to improve alignments, safety and alternative links, including the mitigation measures necessary to reduce tunnels and viaducts and increase road traffic.
The second phase focused on the technical and detailed design of the highway. The project also included a review of an existing transportation study.

ASR17: MACRO-LOT 3 PART 1 from km 139+000 to km 148+000

This specific section regards the detailed design of the alternative route of Lot 3 of the A3 Salerno – Reggio Calabria from km 139 +000 to 148+000.
This approximately 10 km stretch of highway situated in a mountainous region is an alternation of 4 tunnels and 4 viaducts. The project concerns the divestment of the existing road and the demolition of its viaducts and the environmental rehabilitation of the former route.
The design include the development of the 3,787 m long Serra Rotonda double lane tunnel, with 6 pedestrian by-passes and 4 driveway by-passes, as well as 5 emergency areas (1 every 600 m).

ASR18: MACRO-LOT 3 PART 2 from km 153+400 to km 173+900

The Detailed Design involves the Macro Lot 3 Part 2 extending from km 153+400 (excluding Laino Borgo Interchange) to km 173+900 (excluding Campotenese Interchange). This Macro Lot consists of 4 stretches: DG28, DG29, DG30, DG31. This approximately 20,5 km stretch of highway situated in a montainous region is an alternation of tunnels and viaducts.
Compared to the Final Design, the Detailed design includes some upgrades such as:

- Layout adjustments between the Jannello viaduct and the Italia viaduct
- Layout adjustments between the Mormanno Interchange end the Bettendiero II viaduct
- Ordinary Mainteinance in the "grandi luci del Viadotto Italia" Stretch

client
TILIAVENTUM

completion
2012 - ongoing

value
€ 400,000,000.00

services
Final Design
Detailed Design
Health & Safety Management

with
Technital
Sintel Engineering
Arch. Vermiglio

3rd lane of A4 motorway between the new bridge over the Tagliamento river and Gonars

ITALY

The project involves the enlargement to the A4 motorway to 3 lanes between the new bridge over the Tagliamento River (km 63 +300) and Gonars (km 89 +000).
The major structures include:

- a new bridge over the Tagliamento River consisting of two adjacent viaducts, each of which is the seat of a roadway. The roadways are placed at the net distance of 13.454 m with respective lengths of 1,522.88 m (west) and 1,517.22 m (east). The structure is comprised of 20 spans with 19 piers for each roadway.
- a continuous deck bridge over the Stella and Comor Rivers with a mixed steel-concrete section consisting of five steel beams of differing heights. The first bridge has a total length of 110 m and the second of 90 m.
- the San Giorgio di Nogaro Junction overpass with a steel and concrete section characterised by the presence of only two principal double-T bearing beams, placed at a distance of 11.5 m, with double-T connection beams.

Credits: Petrussi-Autovie Venete

client
NUOVA BRIANTEA SCARL

completion
2012 - ongoing

value
€ 1,600,000,000.00

services
Detailed Design
Project Management
Health & Safety Management
Construction Design
Site Assistance

31 km of civil engineering structures
30 viaducts
58 overpasses
50 artificial tunnels
2 natural tunnels
74 underpasses

Pedemontana Lombarda Motorway

(2nd Lot)

ITALY

The Pedemontana Lombarda motorway is a strategic project of national interest that constitutes a fundamental element of a new framework of improved viability and economic and regional development in the region of Lombardy. The project is highly complex in both its engineering aspects and environmental impact due to: the important length of the route, its connected infrastructures and the type of territory crossed. The new road corridor runs through a densely populated area situated between the city of Milan and the urban centres of Como, Lecco and Bergamo, characterised by the presence of numerous residential settlements and major manufacturing districts.

- The motorway has a total length of 141 km, comprised of:
- 53 km of urban motorway;
- 18 km of suburban motorway;
- 70 km of new local roads;
- 90 km of bicycle paths.


RALLSÄNTARE

client
TORITTO MODUGNO SCARL

completion
2013 - 2014

value
€100,000,000.00

services
Detailed Design
Health & Safety Management during design
Construction design

S.S. 96 “Barese” - (Gravina - Bari)

ITALY

The project is part of the strategic corridors which connect Lucania with Puglia region, also in view of the forthcoming proclamation in 2019 of Matera, European Capital of Culture.
With the upgrading to section B the 40 km between Modugno and Altamura will be completed:
Two carriageways with double lane and divider for a total width of 19 meters platform.
In particular, the viaduct is part of the modernization works of the section from Toritto to Modugno with a total length of about 9.0 km, from 105+705 to 114 + 385.
The Viaduct, with a mixed concrete steel structure is built to overcome a narrow valley with a total length of 240 m and the axis of the bridge has a curved profile with a 2600 meters constant radius.

client
IMPREGILO S.p.A.

completion
2009 - 2010

value
€ 294,470,000.00

services
Detailed Design
Health & Safety Management
Environmental Monitoring

with
Scott Wilson ltd
Proteco
Sm Ingegneria

3rd lane of A4 motorway between Quarto D'Altino and San Donà di Piave

ITALY

The project includes:

- the elimination of the Quarto d'Altino junction by demolishing the interchange overpass, to be replaced by a new toll booth planned as part of the Passante di Mestre by-pass;
- the demolition and reconstruction of five highway bridges, including the one over the Piave River (600m), with a section designed to accept a future enlargement to four lanes;
- the redevelopment of the area at the current toll collection barrier of Venezia East-Roncade;
- the construction of acceleration and deceleration lanes at the new Meolo junction (not in this contract).

18.55 km long section
5 bridges
9 steel overpasses
6 underpasses

client
eng. CLAUDIO SALINI
Grandi Lavori S.p.A.

completion
2007 - 2008

value
€ 144,446,000.00

services
Environmental Impact Assessment
Detailed Design
Geotechnical Engineering and Tunnelling
Transportation and Structural Analyses
Economic and Financial
Feasibility Analyses
Health & Safety Managemen

S.S.38 Morbegno By-Pass between the Fuentes and Tartano - Cosio interchanges (Lot1)

ITALY

With a total length of 19.3 km, Lot 1 stretches between the Fuentes interchange and the Tartano-Cosio interchange, with a link to the SS 38 at km 9+301.77. The "B" category typical transversal section of Extract 1, Link A, from the Fuentes Interchange to the Cosio Interchange is characterised by the following minimum dimensions: 2 carriageways with two 3.75 m wide lanes, a 0.50 m left shoulder and 1.75 right shoulder and a 2.50 m central traffic island.
The design involved the following modifications to the road section: widening of the central traffic island (0.50 m) and of the left shoulder (0.50 m) due respectively to the necessity to guarantee available space for the deformation of the central guardrail and facilitate water runoff and improve visibility in curves.
The primary civil engineering works included the Fuentes Viaduct (total length of 400 m), the Borgofrancone Viaduct (106 m) and the Valtellina Viaduct (3,850 m).

client
S.d.P BREBEMI S.p.A.

completion
2004 - 2008

value
€ 1,167,058,000.00

services
Preliminary Design
Final Design
Environmental Impact
Assessment

New motorway link Brescia and Milan

ITALY

The new 60.9 km motorway connecting Brescia to Milan (part of TEN Corridor V) consists of 35 km of embankment, 18.5 km of trench, 5.2 km of viaducts and 2.2 km of tunnels. It is composed of a 49.8 km link that runs from the SP19 (District Road n. 19) near Brescia and to Melzo along an 11.1 km long access link to Milan. The design also included links with several local main road interferences and local by-passes.
The two roadways have a double lane, plus emergency lane with an 11.5 m wide divider in embankment and trench conditions, able to accommodate a future third lane.
Typical multi-span viaducts have spans of 40 m, while the main bridges crossing watercourses feature 150-180 m spans, with suspension cables forming a central arch to the deck .
The design of the road includes carefully studied architectural details and aspects that set it apart from the existing road infrastructures in the area.


A35
A35 BREBEMI
IL VIAGGIO
COMINCIA OGGI
controllo elettronico della velocita'

client
S.p.A AUTOSTRADA BRESCIA VERONA VICENZA PADOVA

completion
2011 - ongoing

value
€ 1,768,672,000.00

services
Preliminary Design
Environmental Impact Assessment
Detailed design of the 1st functional lot (18km)

A31 Trento - Rovigo highway between Trento - Valdastico - Piovene Rocchette

ITALY

This project involved the design of a 39.10 km long northbound extension of the A31 highway.
The design focused on creating an infrastructure that combines the functional and strategic roles of a similar infrastructure with the need to ensure its integration within the local environment and territory. The majority of the route passes in a tunnel, eliminating any important visual interruptions within the landscape. The structures of particular value in the open sections contribute to enhancing the qualities of the territory.
The route begins at the current terminus of the A31 and is linked to the A22 motorway within the municipal territory of Besenello in the Province of Trento.
The main structures include:

- 11 Tunnels: 8 natural (7 realised using traditional excavation techniques, 1 using mechanised excavation) and 3 artificial;
- 10 Viaducts;
- various minor structures.

client
SAFAB S.p.a.

completion
2009 - 2011

value
€ 12,350,000.00

services
Final Design
Construction Planning
Site Assistance

Serralunga driven tunnel l'Aquila
ITALY

3TI was involved in the construction design of the Serralunga natural tunnel as part of the construction works for the road connection between the Campo Felice plain and the Delle Rocche plateau in the town of Rocca di Cambio (L'Aquila province).
The entire route covers a total of 2467.46 metres, with a difference in level of 135 metres. The design tunnel is 1299 metres long, of which 48 metres are in cut-and-cover tunnel, and, in particular, 25 metres constitute the Rocche-side cut-and-cover tunnel and 23 metres that on the Campo Felice side. It is a single-barrel tunnel, with shoulders and carriageways having dimensions equal to those of the highway. The inner radius of the tunnel top is 5.50 m. Three rest stops, each 45 metres long, are planned along the tunnel route. The planned driving method will be the "traditional", using explosives and mechanical means.

client
ATI
CCC - SOCOSTRAMO

completion
2011

value
€ 159,900,000.00

services
Detailed Design
Environmental Impact Assessment
Health and Safety Management During Design

Road link between highways N. A/8 and A/52 - Rho Monza
ITALY

This intervention is part of the urban requalification project promoted for EXPO 2015 in Milan.
The entire Infrastructure spans some 6 km and consists on the conversion of the existing provincial road SP 46 into an highway (between the "S.S. 35 dei Giovi" junction and the bridge over the Milan-Varese rail line), as well as on the realisation of a new road parallel to the SS 35 between the S.P.46 and the A52 North ring road junctions. The project focuses on providing continuity to both the North Ring Road of Milan and the A4 highway, establishing a direct connection between the A52 and the Rho-Monza, a natural continuation of the highway system in the West.
The project also included new single-carriageway roads, predominantly coplanar with the main road, designed to ensure local connections with the areas crossed by the new infrastructure a cable-stayed bridge crossing the S.S. 35 Milano-Meda.

client
TODINI S.p.A.

completion
2008

value
€ 73,336,000.00

services
Health & Safety Management
during design

Substitute road infrastructure to State road S.S.125 (Section II – Lot 2)
ITALY

The project concerned the realisation of the last section of the "SS125 Orientale Sarda" by-pass (Lot 2 of Section II) between the Terra Mala and Villasimius/Capo Boi interchanges. The total length of this lot, including the two interchange ramps, is 6.6 km.

- 3 Natural Tunnels (Marapintau 1,290 m; Is Stellas 212.5 m; Martineddu 65 m);
- 3 Viaducts along the main road (Murtaucci 357.9 m; Rio Cadelano; Santu Lianu II 75.9 m);
- the widening of two existing decks (S. Orixeddu and Santu Lianu) to connect with the existing SS 125;
- supporting works (reinforced soil walls, concrete walls);
- strengthening works for the construction of a particularly difficult trench section;
- technological and lye-by areas in proximity to tunnels;
- 3 underpasses;
- hydraulic manholes;
- environmental mitigation works;
- implementation of measures designed to secure a decommissioned quarry front.

client
GOVERNMENT OF THE
REPUBLIC OF SIERRA LEONE

completion
2014 - ongoing

value
confidential

services
Preliminary Design
Detailed Design
Works Supervision

Moyamba – Moyamba junction road and bridges

SIERRA LEONE

3TI PROGETTI is carrying out the work supervision for the construction/rehabilitation of the existing 33,6 km of gravel road from Moyamba to Moyamba Junction and the reconstruction of 4 bridges (Gbangbama, Magbele, Mabangand Moyamba):

- rehabilitating the road section M-MJ by upgrading the class of the road from Class B (un-asphalted) to Class A (all weather road);
- reconstructing the 4 bridges to modern design and construction standards:

GBANGBAMA BRIDGE (36m, 1 span) on the Moyamba-Moyamba junction road, MAGBELE BRIDGE (163 m, 6 spans) on the Rokel River, MABANG BRIDGE (231m, 3 spans the major 105m long) on the Ribi River, MOYAMBA BRIDGE (42m, 1 span) on the Yambatui River.
The new larger Magbele Bridge, which crosses over the Rokel River, will also be constructed on the road from Freetown to Conakry, which is part of the West-African Coastal Road.

E90 highway: S.S. 106 Ionica
ITALY

This project was part of the programme of improvements to the National Road System in the region of Calabria. It is part of the Strategic Infrastructure Improvements identified in Order No.121/2001 issued by the CIPE (Interministerial Committee for Economic Programmes).

E90 HIGHWAY: S.S. 106 JONICA AND EXTENSION OF THE S.S. 280
"DEI DUE MARI" – LOT 1-2, ITALY

client **ANAS**
completion **2003 - 2004**
value **€ 539,500,000.00**
services **Final Design, Environmental Impact Assessment**

This particularly project involved the stretch of road between Squillace (km 178+350) and Simeri Cricchi (km 191+500) - lots 1-2-3-4 -5 and extension of SS 280 ending at the junction with the SS 106 lots 1-2.
This Standard "Type B" Road was designed for speeds of 70-120 km/h, for a length respectively of:
State Road SS 106 Jonica: 17+200 Km;
State Road SS 280 "Dei due Mari": 5+220 Km.
The passage of the SS 106 through a mountainous region required the design of some 13 bridges and viaducts, 10 natural tunnels, and one artificial tunnel. Approximately 50% of this stretch runs in tunnels.
The SS 280 "Dei due Mari" runs along the left bank of the Corace River and its alignment is completely embanked.

E90 HIGHWAY: S.S. 106 JONICA CAULONIA-SQUILLACE LOT 1-7 AND PALIZZI-CAULONIA LOT 9 FROM (KM 118+850) TO (KM 162+860) (LOT 7)

client **ANAS**
completion **2004 - 2008**
value **€ 1,120,700,000.00**
services **Preliminary Design, Feasibility Study**

The road alignment is located in a hilly region facing the Ionian Sea, and therefore, the project included 11 bridges, 36 viaducts, and 34 tunnels.
The project focused on the technical design, Environmental Impact Assessment and on transportation study.

E90 HIGHWAY: S.S. 106 JONICA FROM SQUILLACE (KM 178+350) TO SIMERI CRICHI (KM 191+500) AND FROM PALIZZI (KM 50+000) TO CAULONIA (KM 123+800)

client **ASTALDI S.p.A.**
completion **2005 - 2007**
value
Squillace - Simeri Crichi € 211,449,000.00
Palizzi - Caulonia € 175,573,000.00
services **Detailed Design, Environmental Impact Assessment, Cost Estimation**

SQUILLACE - SIMERI CRICHI: The intervention concerned the S.S. Jonica between the Squillace junction and the Simeri Crichi junction (approx. 17.2 Km) and the S.S. 280 “dei Due Mari” (approx. 5.2 Km) between the San Sinato junction and the Germaneto junction.
The passage of the motorway through a hilly area required the design of 2 bridges, 10 viaducts and 10 tunnels, as well as 7 interchanges and 2 ramps connected to existing roads.

PALIZZI - CAULONIA: This project refers to the first lot of a “type B” standard road with a design speed of 70-120 Km/h, stretching for 17 km between Locri and Gioiosa. The passage of the motorway through a hilly area facing the Ionian Sea required the design of 11 bridges, 36 viaducts and 34 tunnels.

client
URBAN DEVELOPMENT
COMMITTEE ABU DHABI

completion
2008 - 2011

value
€ 3,746,000,000.00

services
Master Plan Analysis
Feasibility Study
Preliminary Design
Final Design
Detailed Design
Supervision of Earthworks

6.5 X 6.5 km area:
130,000 non residents
165,000 residents

Shamka South Area
EMIRATE OF ABU-DHABI, UAE

Abu Dhabi city was planned in the 1970s for an estimated maximum population of 600,000. The economic boom of the emirate of Abu Dhabi has produced convulsive development of the city. Then a comprehensive Urban Framework Development Plan, PLAN ABU DHABI 2030 has been compiled. Following the PLAN, Abu Dhabi Municipality has decided to perform urban and neighbourhood development thru a series of Master Plans: one of these regards the Area of Shamka South, a 6.5x6.5km area some kms SE of the Airport, to the desert side of Emirati Highway.
South Shamkha is a mixed use development for up to 165,000 residents and an estimated 130,000 non-residents working in offices, retail, and commercial activities, served by public and social facilities. The development provides a residential community for people working in the Capital District and Airport District and those in the surrounding districts.
The Central Core was based on creating a walkable downtown and open park structure prove to be attractive in creating a market demand for additional residential, hospitality and office uses, there is ample room for the density to be increased without altering the framework of streets, zoning and open spaces.

INFRASTRUCTURE WORKS

Roads for a total length of 89 km
(as regards only primary roads)

Parking areas driveways, sidewalks

Storm-water and Sewerage systems

Potable water system and buildings connection
(Systems have been calculated for a total of 293,840 people)

Development of the Power Distribution
and the Street Lighting systems

Telephone lines and house connection

LANDSCAPE ARCHITECTURE

Demolition and Site Plans

Storm water protection

Plant material
(tree protection, plants to be removed or salvaged)

Construction limits

Typical and special construction details

PORTS

“Building with nature approach”

Our objective is to prepare, manage and supervise the construction and development of ports qualitatively, quickly and efficiently, supporting sustainable solutions.

Small Harbours
Container Terminals
Intermodal Tourist Terminals
Cruise Terminals
Ship Building and Repair Yards
Dredging and Reclamation

This approach combines nature development with functions such as flood protection and development of infrastructures.

The expertise gained over the years in the sector of infrastructural engineering and in traditional and landscape architecture have allowed 3TI PROGETTI to develop several projects for maritime tourist facilities.
Each of our projects is adapted to the specific needs of the developers, while ensuring the necessary and total respect for the marine and coastal environments in which they are located.

The interventions include areas by the sea, external and internal maritime works, land areas, installations and structures on yards, docks and piers, until the management of fireproof safety, that, inside the harbours, represents an important objective in relation to the kind of activites and goods that can be found in these fields.

client
VENICE PORT AUTHORITY

completion
2017 - ongoing

value
€ 802,826,887.00

services
Geological -geotechnical-chemicalphysical surveys
Bathymetric surveys
Environmental monitoring
Final design

3TI successfully managed the ground investigations of New Venice Offshore terminal.

The offshore investigations have been conducted through a drilling vessel, 24/7, with onboard laboratory testing. Investigations included CPT testing, boreholes to 80 m depth, downhole sampling and seismic CPTs.

New Off-Shore-Multimodal Terminal in Venice

ITALY

The Venice Port Authority is planning an offshore platform to extend its capacity and strengthen North Adriatic's role as European gateway. Positioned 8 miles offshore, where the sea bottom is at least 20 meters deep, the offshore platform will be protected by a 4.0 km long breakwater dam which will shelter an oil terminal and a container terminal able to accommodate up to three latest generation container ships at the same time. The offshore terminal off the Port of Venice will berth larger ships and will bring both economic and environmental benefits.
The project has involved multiple disciplines and studies, among which the waves numerical simulations, carried out by 3TI PROGETTI, and the related physical models.

container capacity: 1,5 mln TEU

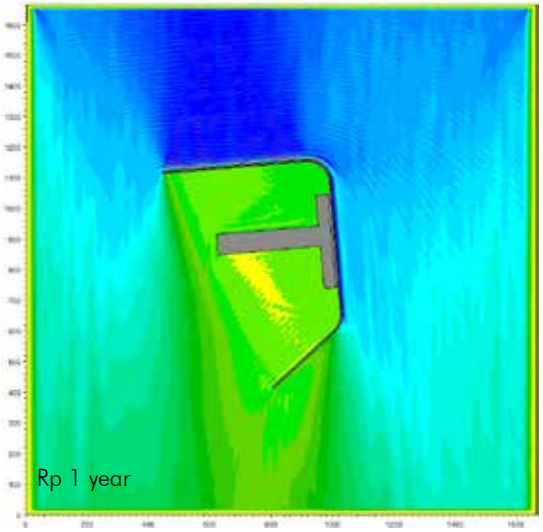
The terminal offshore consists of the following elements

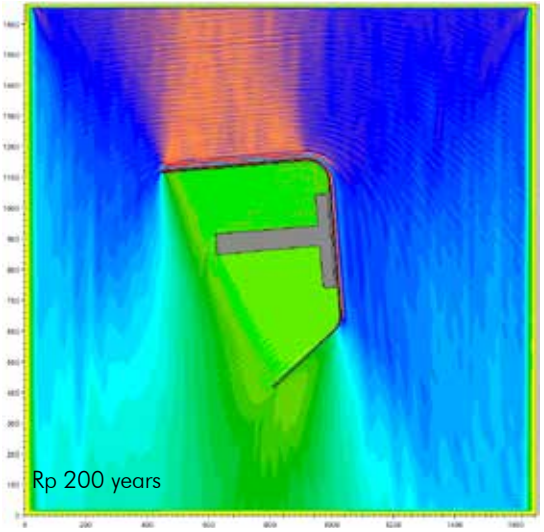
Breakwater dam: 4000 m lenght

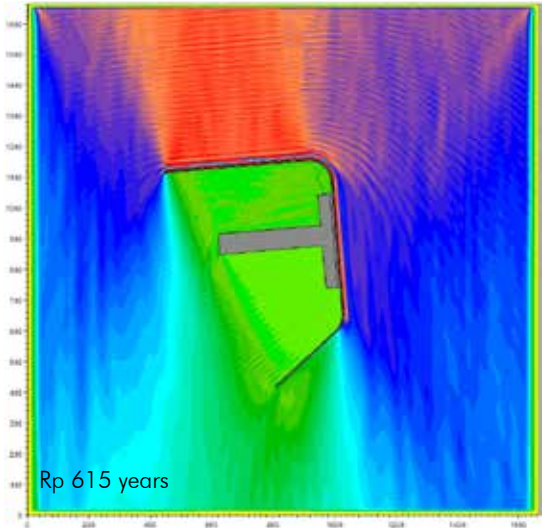
Terminal container: 1000 x 200 m, 200000 sqm

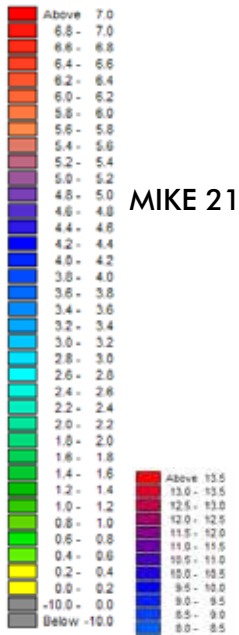
Terminal logistics: 900 x141 m, 126900 sqm

20TEU ships



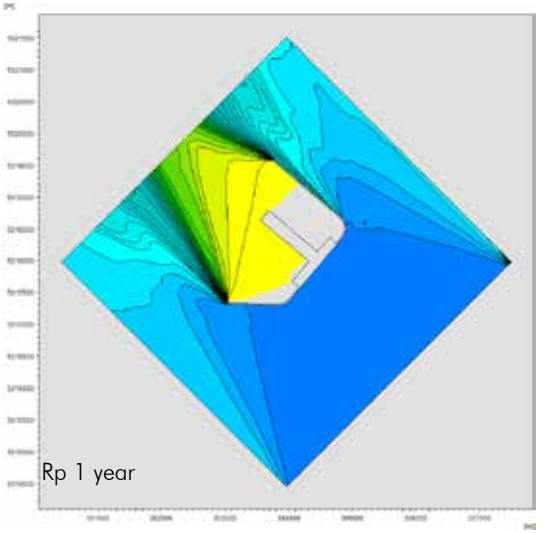


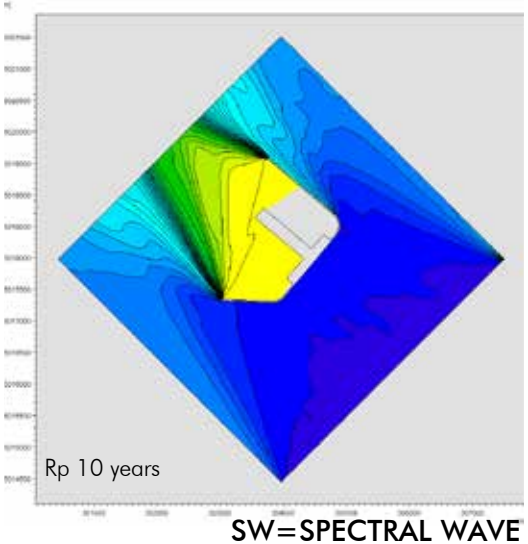


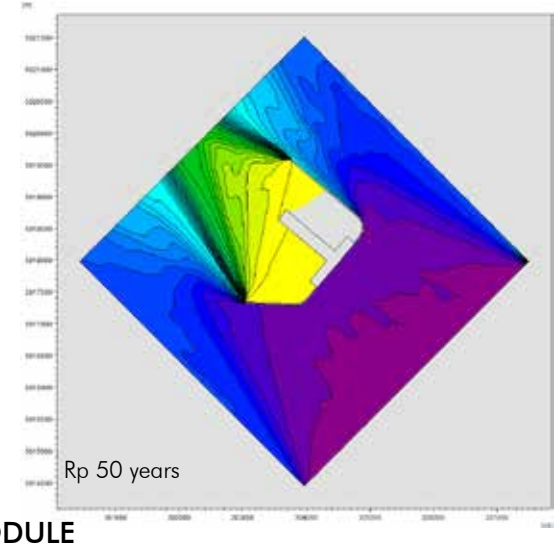


MIKE 21

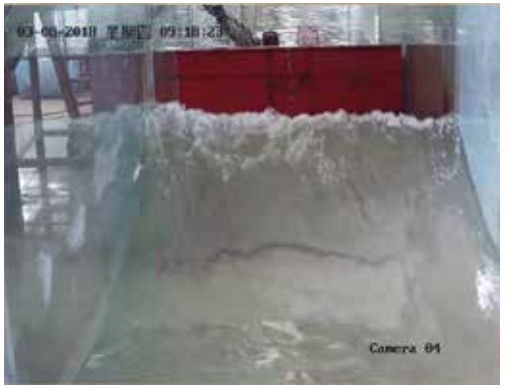
BW=BOUSSINESQ WAVE MODULE







SW=SPECTRAL WAVE MODULE



client
KANDLA PORT TRUST

completion
2016 - ongoing

value
€ 100,000,000.00

services
Overall planning & coordination
Preparation of bid documents
Bid Management
Stakeholder management
Monitoring and coordination the execution of the Project

235 ha smart city
378 ha smart industrial activities

Smart Industrial Port City (SIPC) at Kandla Gandhidham – Adipur Complex
INDIA

KANDLA PORT is the most economical major port in terms of tariff and operational expenditure.
With the Kandla Port Trust's Vision to entirely master plan this comparatively large site area of 235ha at the heart of Gandhidham, the unique opportunity arises to not just give the city an environmentally friendly residential neighborhood, but also a new 'Mixed Use District Center' that will change the image of Gandhidham and Kandla and builds on its reputation as a well-planned modern city.
At the heart of the Smart Township should be a Commercial and Civic Zone, a mixed use, pedestrian friendly environment that will be an attractive destination for shopping, leisure, recreation for all citizens from Gandhidham.


HANJIN

client
MONDELLO S.p.A.

completion
2011

value
€ 56,000,000.00

services
Final Design

Commercial Port of Augusta
ITALY

The Port of Augusta is an important commercial, industrial and tourist port, that is also home to an Italian Naval base.
The Port offers more than 250,000 square meters of facilities, with extensions envisaged as part of the project to reutilise adjacent brownfield areas. The Port includes shipyards, repair yards, supply yards and storage depots. A substantial portion of the site is comprised of docks and equipment dedicated to tourism and pleasure-boating.
The project for the works for the first and second lots of the third phase of the development of the commercial port of augusta, envisages the construction of a further 81,000 square meters of space entirely surrounded by water and a break wall.

client
RAVENNA
PORT AUTORITY

completion
2016 - ongoing

value
€ 1,469,030.93

services
Health & Safety
Management
Works Supervision

Improvement of the Dock's navigability of the Port of Ravenna

ITALY

3TI is leading the health & safety management and works supervision of 4 steel piers for the mooring of the nautical means services in the port of Ravenna.
In order to improve the dock's navigability, the project developed by the Port Authority has been fully revised by 3TI, with the introduction of the steel cofferdams' design and the installation of the walkways.

client
CMC

completion
2012 - 2013

value
€ 86,000,000.00

services
Detailed Design
Technical
assistance on site

Construction of the outer breakwater, Port of Ancona

ITALY

3TI PROGETTI was commissioned with the detailed design of the third-phase of the realisation of sea structures involved in the construction of an outer breakwater.
The breakwater consists of three segments, with a total length (measured along its centreline) of 776 meters. The new port entrance features a 375 meter long opening.

client
GOVERNMENT OF THE SULTANATE OF OMAN MINISTRY OF TRANSPORT & COMMUNICATION

completion
2015 - ongoing

value
confidential

services
Concept Design
Feasibility Study
Preliminary Design
Final Design
Tender documents

Port of Salalah, Main Gate study and design
OMAN

The port of Salalah is located in Dhofar Region in the southern part of the Arabian peninsula some 9 km south west of Salalah city. Situated right at the major East-West shipping lines the city of Salalah enjoys an attractive strategic location in the heart of the indian Ocean area and Caters for some of the world's largest ocean going vessels.
The Port of Salalah is a world class trans shipment hub in the west Central Asia Region. It's a common-user-multipurpose port, with facilities to handle bulk kargo and containers. The majority of the business comes from the Container Terminal which handle about 3,5 million TEU and more than 3.000 vessels. The Project features 20,000 cu.m of buildings, 10 lanes for the pre-gate, 15 lanes for the main-gate and 4 lanes for the alternative gate. The services will cover all the task associated with the design and construction of the Port Main Gate and security Project from Conceptual Design to Final Design and tender documents issue.

client
MODIMAR S.r.l.

completion
2009

value
€ 9,380,000.00

services
Health & Safety coordination
during construction

Extension and statutory compliance of the "Marina Di Nettuno" Tourist Harbour

ITALY

This project involved the functional development of the Nettuno Marina south of Rome to improve the safety of navigation and reduce silt build-up.
The scheme included the extension of the port bottleneck and the realisation of two new docks within this space: one to accommodate pleasure and sporting boats and a second outer platform for fishing activities. Designed works include five new buildings, bunkering and a retaining wall. A multipurpose building with sanitary facilities, decompression chamber, dry-docks, amenities and one heliport was located at the end of the dock.

client
PORT AUTHORITY OF PALERMO

completion
2011 - 2012

value
€ 26,120,000.00

services
Detailed Design
Health & Safety Coordination During Design

Requalification and restyling of the Maritime Station
PORT OF PALERMO, ITALY

The project area included the inbound dock and a building designated as the new home of the Maritime Station.
This structure was the object of rehabilitation, expansion and restyling works developed to adapt it to new requirements. More specifically, primary interventions focused on improving the efficiency of transit for embarking and disembarking passengers and conditions of security and control, as well as the optimisation of reception facilities in order to elevate the functionality of the Maritime Station to contemporary standards

client
PORT AUTHORITY OF
RAVENNA

completion
2004

value
€ 8,748,000.00

services
Final Design

New drawbridge on the Candiano Channel

RAVENNA, ITALY

This project was developed together with Edin S.r.l. and William Brown, an internationally recognised specialist in the design of similar structures.
The new bridge, designed to replace an existing floating swing bridge, has a free span of 64.90 m. It consists in two equal and symmetric parts that rotate around a knuckle joint arranged on the abutments so as to obtain a clear opening of more than 50 m for the passage of ships.
The structure is constituted by two principal box-section beams, connected by open-section crosspieces. Each main beam is supported by a tie-rod, whose forces are transferred to the centre of mass of the knuckle joint through three struts arranged radially.
One of the most distinctive aspects of the project is the system used to control and manage all safety plans for persons and equipment.

client
CITY OF SYRACUSE

completion
2010

value
€ 4,483,316.34

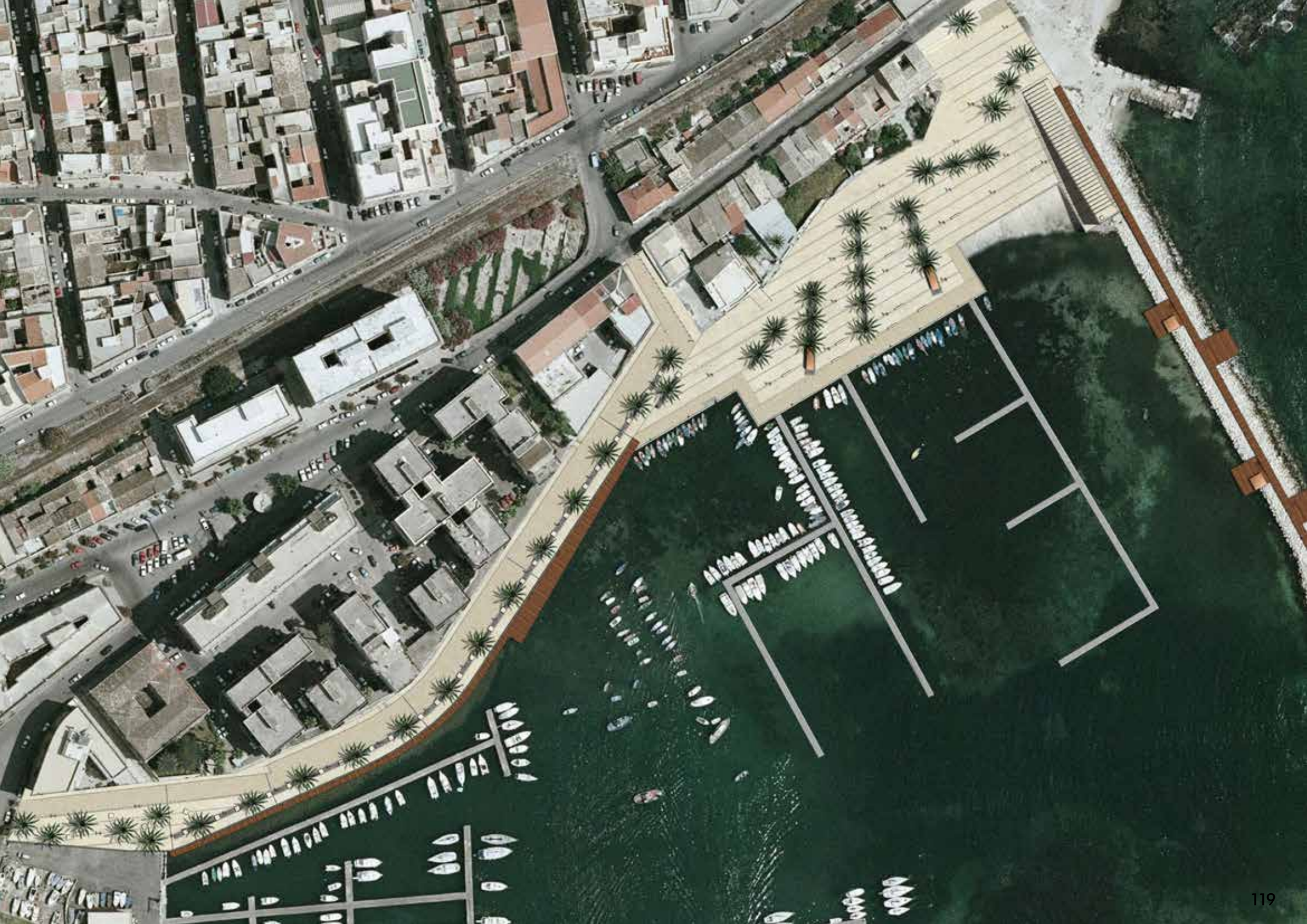
services
Feasibility Study
Preliminary Design
Detailed Design
Health & Safety coordination
during design

Porto Grande & Porto Piccolo sustainable development plan

SYRACUSE, ITALY

The Port of Syracuse, with its important shipyards, pleasure boating and storage facilities, coupled with new commercial spaces and a heliport, is slated to become one of Southern Italy's major ports.
Our assignment concerned the Health & Safety Coordination of works related to the modernisation of the platforms of the Porto Grande, realised in precast concrete caissons.

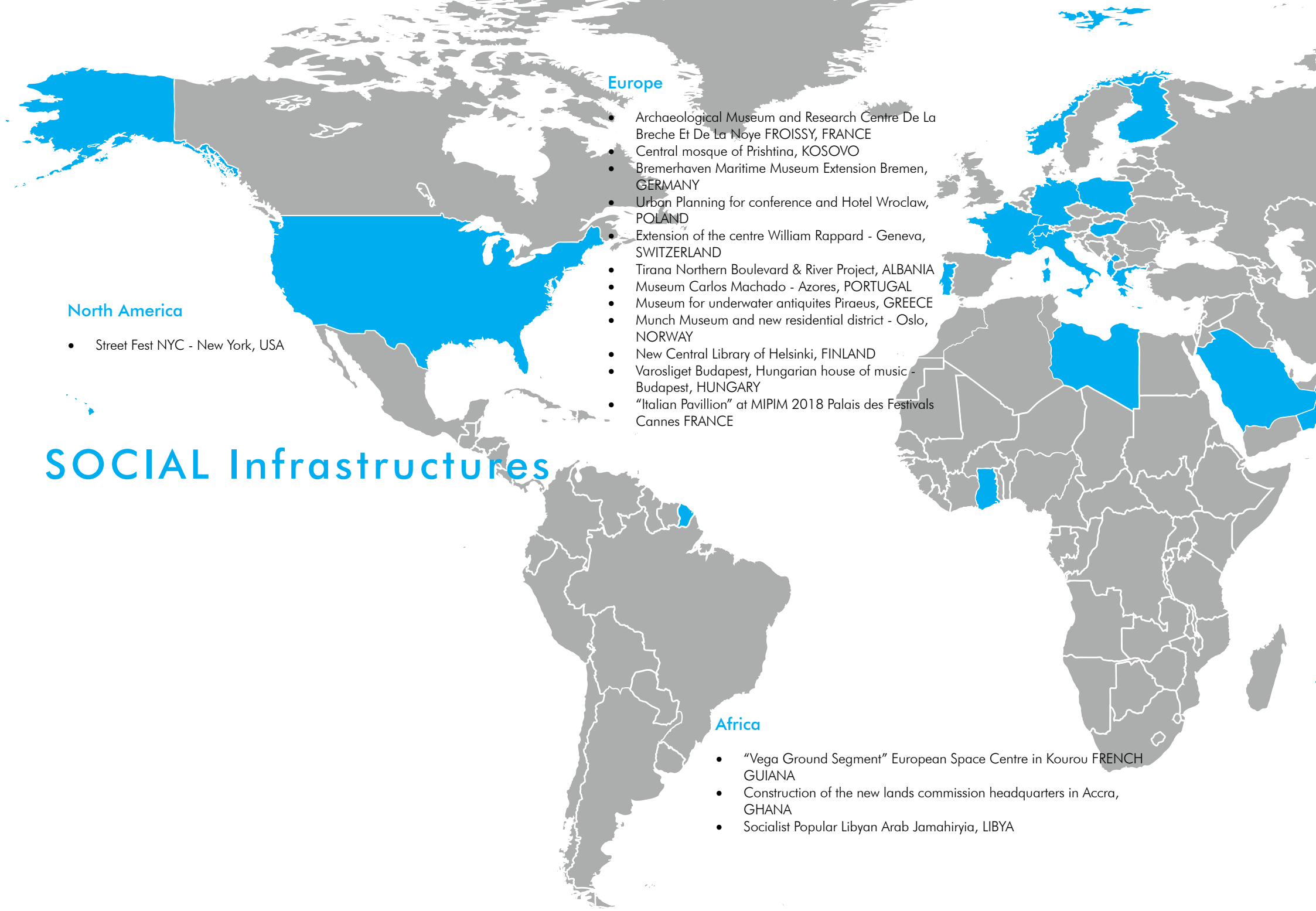
The project foresees also the restoration and preservative renewal of municipal buildings and works of extraordinary maintenance to requalify the Porto Piccolo, as well as the construction of a new Nature Park on the Maddalena Peninsula.



SOCIAL
infrastructures

Residential
Healthcare
Office
Education
Sport & Culture

SOCIAL Infrastructures



North America

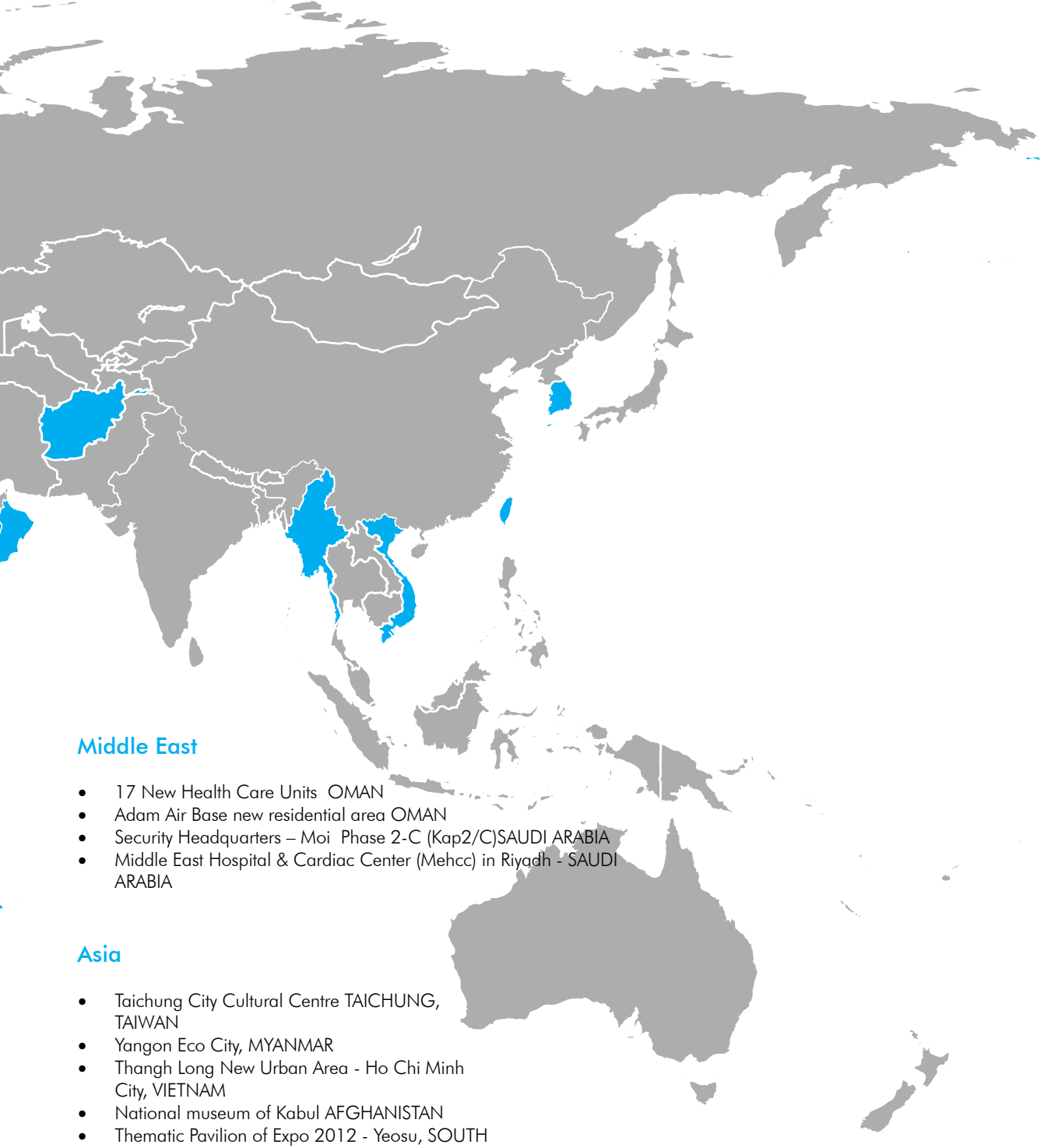
- Street Fest NYC - New York, USA

Europe

- Archaeological Museum and Research Centre De La Breche Et De La Noye FROISSY, FRANCE
- Central mosque of Prishtina, KOSOVO
- Bremerhaven Maritime Museum Extension Bremen, GERMANY
- Urban Planning for conference and Hotel Wroclaw, POLAND
- Extension of the centre William Rappard - Geneva, SWITZERLAND
- Tirana Northern Boulevard & River Project, ALBANIA
- Museum Carlos Machado - Azores, PORTUGAL
- Museum for underwater antiquites Piraeus, GREECE
- Munch Museum and new residential district - Oslo, NORWAY
- New Central Library of Helsinki, FINLAND
- Varosliget Budapest, Hungarian house of music - Budapest, HUNGARY
- "Italian Pavillion" at MIPIM 2018 Palais des Festivals Cannes FRANCE

Africa

- "Vega Ground Segment" European Space Centre in Kourou FRENCH GUIANA
- Construction of the new lands commission headquarters in Accra, GHANA
- Socialist Popular Libyan Arab Jamahiryia, LIBYA



Middle East

- 17 New Health Care Units OMAN
- Adam Air Base new residential area OMAN
- Security Headquarters – Moi Phase 2-C (Kap2/C)SAUDI ARABIA
- Middle East Hospital & Cardiac Center (Mehcc) in Riyadh - SAUDI ARABIA

Asia

- Taichung City Cultural Centre TAICHUNG, TAIWAN
- Yangon Eco City, MYANMAR
- Thangh Long New Urban Area - Ho Chi Minh City, VIETNAM
- National museum of Kabul AFGHANISTAN
- Thematic Pavilion of Expo 2012 - Yeosu, SOUTH KOREA

Italy

- “City of Sun” ITALY
- “Mother Earth Kindergarden” ITALY
- New Hospital in La Spezia ITALY
- Functional reorganisation of the wards of the Umberto I hospital – Turin, ITALY
- P.I.S.U. Technological Innovation Center ITALY
- “Diamanti Palace” FERRARA, ITALY
- Gemelli Hospital, Rome ITALY
- Upmc Radiotherapy Centre at the San Pietro Fatebenefratelli Hospital – Rome, ITALY
- Reorganisation and renovation of the Policlinico Umberto I Hospital ROME, ITALY
- Restart Scampia Project ITALY
- “Tor Vergata” University, Rome ITALY
- New Headquarters of the Prefecture And Police Station of Monza and Brianza ITALY
- New Headquarters of the Port Authority Rome, ITALY
- University Campus Expansion “Polo Dei Rizzi” UDINE, ITALY
- “Viale Adige” High School Institute ITALY
- New Mestre Hospital, ITALY
- “Guiso Gallisai” Museum ITALY
- New Civic Centre and redevelopment of the surrounding Urban Area Villacidro ITALY
- Refurbishing of the Former Flour Mill In Nuragus, ITALY
- New Sports Hall Oristano ITALY
- New Civil Defence Centre ARCO DI TRENTO, ITALY
- Hampton By Hilton Rome East - ITALY
- New Eur Convention Centre ROME, ITALY
- “Church of The Holy Family” Diocese of Montecassino ITALY
- Enel Real Estate Holdings: Conservative renovation and maintenance interventions, ITALY
- Rehabilitation of the area around the Ara Pacis Museum in Rome, ITALY
- New Courthouse Offices In The “Cittadella Della Giustizia” (Citadel Of Justice) Salerno, ITALY

RESIDENTIAL HEALTHCARE OFFICE EDUCATION SPORT & CULTURE

Rehabilitation of the area around the "Ara Pacis " Museum
Rome, Italy

The buildings in which we live, work and heal are vital to the fabric of society

They must not only embrace comfort and functionality, they should also enhance our way of life and wellbeing.
3TI PROGETTI is committed to achieving these aims.

Technological Offices, Restoration and Retail, Sport and Culture, Leasure and Lounge, Social Facilities, Educational Buildings, Residencial Buildings, Urban Requalification, Hospital Design, Nursing Homes, Ambulatories, Medical Centres.

3TI PROGETTI has extensive experience in the field of integrated building design. Our approach increases the efficiency of building processes and ensures more sustainable solutions.

Our primary objective is and remains the achievement of the Client's desired result.
We have gained an excellent reputation for its achievements in complex and large projects, primarily for the public sector.
The firm is renowned for its innovative engineering solutions, including the management of building performance with a focus on the sustainability of new and existing buildings.

The requirements of construction and function are integrated within the design of environments and structures that, assisted by engineering and technological innovations, render these structures more appropriate to their purpose and able to enhance the quality of life for people.

Credits: Labics studio

client
HINES ITALIA SGR S.P.A. (INPGI HINES FUND)
GENERAL CONTRACTOR: PARSITALIA S.R.L.

completion
1st phase: 2007
2nd phase: 2010 - 2011

value
1st phase: €14,850,000.00
2nd phase: € 6,605,000.00

services
1st phase: Preliminary
Structural and MEP Design
2nd phase: Final MEP Design
Bioclimatic design

with
LABICS Studio

"City of the Sun"
Mixed-Use Building of the year
2017

"City of the Sun"

ITALY

The project was developed as part of the contract tender for the alienation of the former ATAC storage depot in Via della Lega Lombarda, in an area covering 11,000 square meters, to regenerate a triangular lot of land situated between the modernized train station Tiburtina, the ICP1 Tiburtino quarter and the Verano Monumental Cemetery.
The aim of the project is the development of a totally and truly sustainable piece of the city able to defend the environment and contribute to the wellbeing of its inhabitants. The entire design was structured to achieve maximum energy efficiency, proper water cycle management, a reduction in polluting emissions, the removal of risk factors for users and environmental quality in inner areas.
The project includes:

- commercial spaces, offices, directional spaces, a public library;
- two types of housing: "urban villas" and "tall houses." The 8 urban villas are distributed over two floors plus a roof terrace and are designed as real single-family homes. The tall houses, simplex accommodations of various sizes, are located in the tower volume east of the lot, with 9 levels above ground;

The entire design was structured to achieve maximum energy efficiency, proper water cycle management, a reduction in polluting emissions, the removal of risk factors for users and environmental quality in inner areas.

client
MUNICIPALITY OF BISCEGLIE

completion
2009 - 2012
construction phase:
2015 -2016

value
€ 1,500,000.00

services
Preliminary Design
(design competition winner)
Final Design
Detailed Design

with
Luca Peralta Studio

Among the 10 most avant-garde and green schools of Italy:

a model of sustainable educational building for design, use of recycled materials and low energy consumption.

Kindergarten “Sandro Pertini”

ITALY

In 2009, the project was awarded with the first prize in the international design competition, commissioned by the local Municipality under the “Qualità Italia” Program, and shortlisted at the “Leaf Award 2016” in the category “Future Building - Under Construction”.
Is a model of sustainable educational building for design, use of recycled materials and low energy consumption.

Site Area: 4,000 sqm
Indoor Area: 1,500 sqm

SPECIAL CHARACTERISTICS
Passive energy systems are carefully designed in order to reduce the need and dependency for active ones.
A geothermic system is used for free thermal contribution from the ground, reducing the need for electric thermal energy.
Renewable energy production for electricity (photovoltaic panels) and sanitary hot water (solar panels).
Rainwater collection and storage for sanitary uses and garden irrigation.
Use of local, recycled and recyclable building material.

Credits: Alessandro Peralta

client
I.R.E. S.p.A
AGENZIA REGIONALE
LIGURE

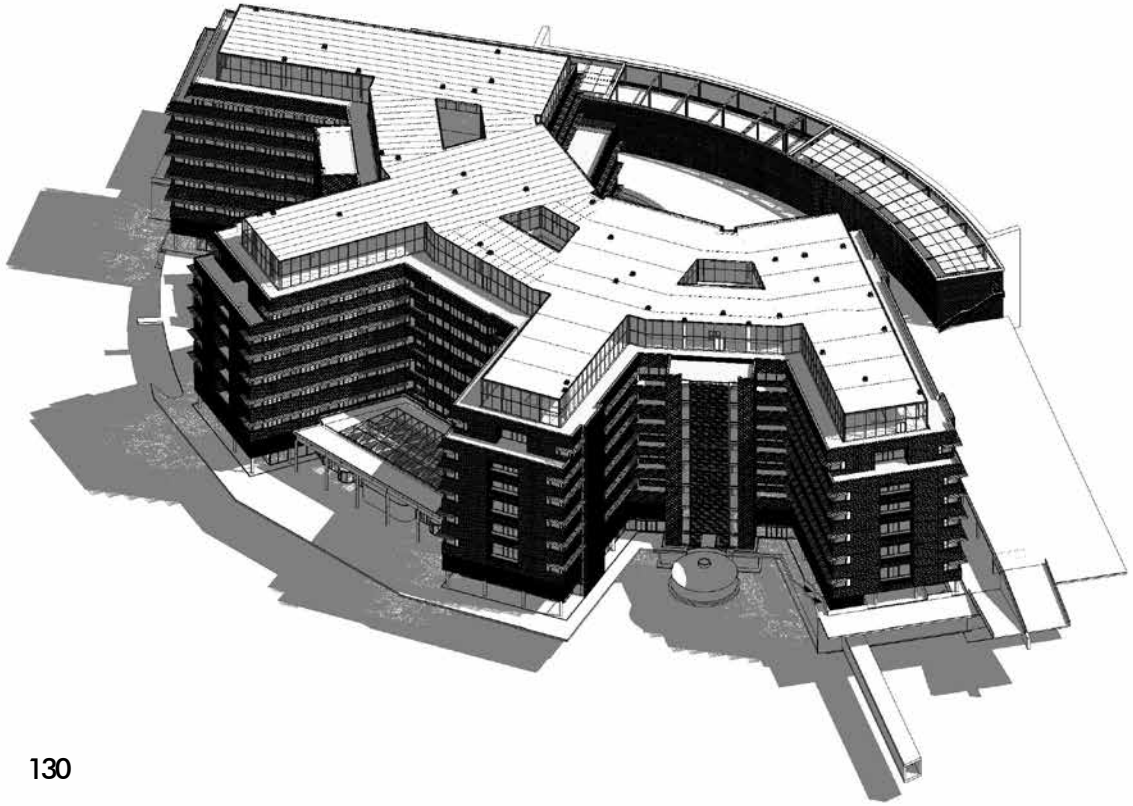
completion
2015 - 2016

value
€ 123,982,258.80

services
Detailed Design
BIM Design

55.000 smq
520 beds
750 parking spaces

Emergency Department
Radiation Therapy Department
Convention Center
Shops and restaurant



New Hospital in La Spezia

ITALY

The project involves the design of a new 520-bed hospital in La Spezia, Italy. A fan-shaped building opens up to the sea, in order not to interfere with the panoramic view.

The project also includes other activities, such as the emergency department , a convention center , shops, a restaurant and a building of radiation therapy and parking spaces carefully hidden by a series of terraces.
A large atrium is a covered public square, with cafes and shops from which visitors access the upper floors with lift blocks and waiting areas on the outside of the building.

client
CITY OF NOVARA

completion
2013

value
€ 8,540,000.00

services
Final design
Detailed Design
Health & Safety Management
during Design

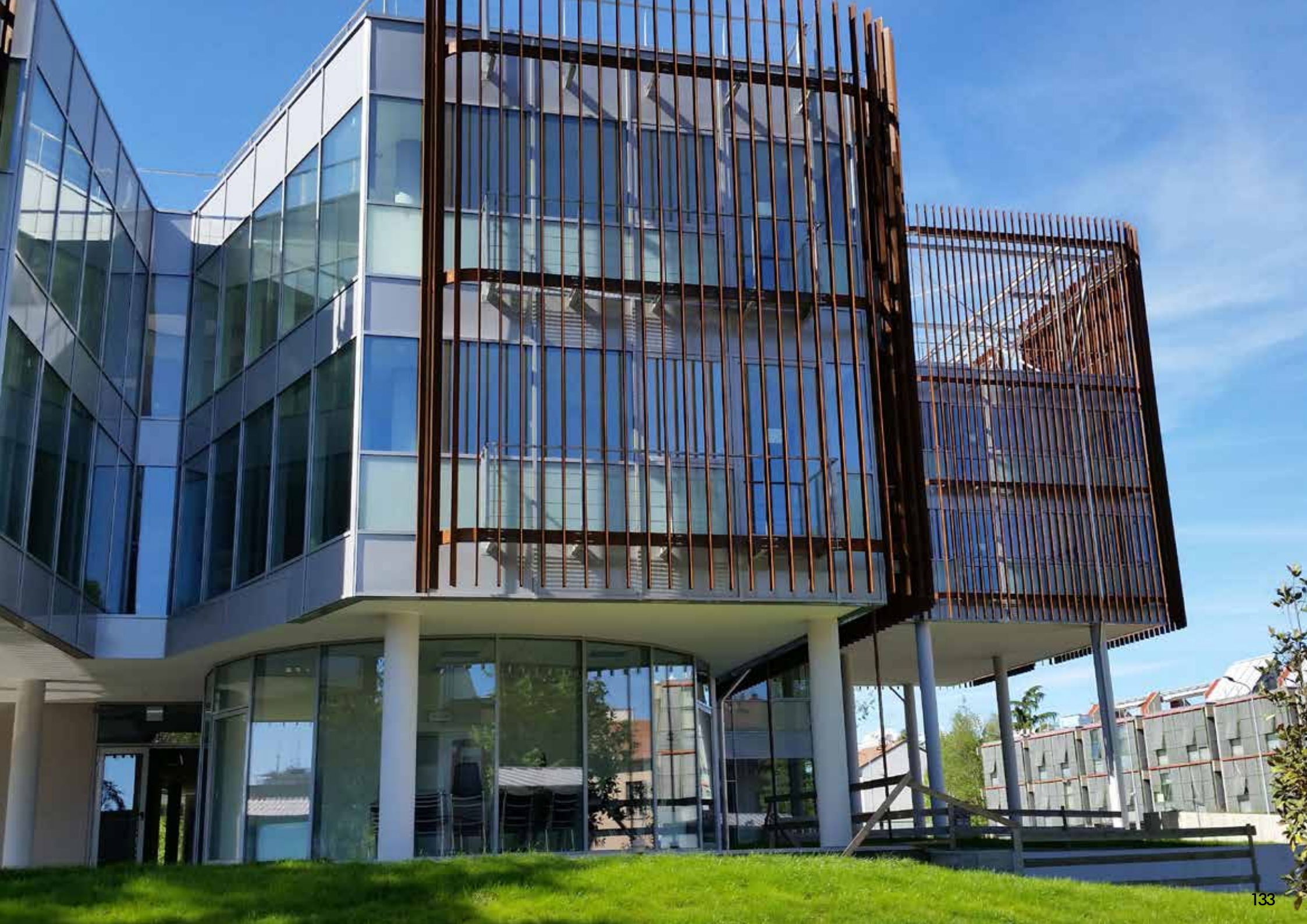
P.I.S.U. Technological innovation center

ITALY

The project involves the construction of the new technological innovation centre in Novara and the urban refurbishment in via Bovio in the quarter of Sant'Agabio.

The complex will have a volume of 25,000 m3, of which 24,700 will be research buildings.
The intervention involves a total area of 20,000 m3. Specifically, the project involves the construction of::

- Full-scale incubator and business and personal services centre which will host the Research Centre for Autoimmune Diseases in the City of Novara
- Restructuring of the market area;
- Refurbishment of Via Bovio;
- Square, urban park and green areas;
- Parking lots.



client
COMMUNAUTÉ DE
COMMUNES DES VALLÉES
DE LA BRÈCHE

completion
2006 - 2011

value
€ 1,650,000.00

services
Preliminary Design
Final Design
Detailed Design
Works Supervision

with
n!studio

Archaeological Museum and Research Centre De La Breche et De La Noye

FROISSY, FRANCE

The project is set into the earth, to be almost invisible from the historic Gallic-Roman amphitheatre.
It is designed as an extension of the landscape and an insertion within the chain of valleys and depressions that the Picardie topography forms along the horizon.
The museum is a sign, excavated into the earth.
The building is not defined by its presence or its materiality but, on the contrary, by its absence. It is through a play of excavations and openings that the museum attempts, like the archaeological site that surrounds it, to reveal the invisible.

1150 sqm , 4500 mc

international design competition
WINNER

client
FERRARA MUNICIPALITY

completion
2017 - ongoing

value
€ 2,615,500.00

services
Technical, economic
feasibility project

with
Labics
Arch.Fabbri
Vitruvio srl

“Diamanti Palace”
FERRARA, ITALY

3TI PROGETTI project for the extension of the Modern & Contemporary Art Gallery in “Diamanti Palace” (Italy), has been awarded by the Ferrara Municipality with the design competition’s 1st prize.
Designed by 3TI PROGETTI with Labics, Arch. Fabbri and Vitruvio, the proposal is focused on the restoration of the ground floor, which actually hosts the “Risorgimento Museum”, and the smart extension of the exhibition spaces with a new construction, located in the garden area behind the building, integrated and connected with the old spaces.

client
POLICLINICO A.GEMELLI

completion
2008 - 2010

value
confidential

services
Detailed Structural Design

Gemelli Hospital, Rome

ITALY

3TI was responsible for the detailed structural design of the redevelopment and expansion of the Catholic University of Rome: modernisation of existing structures and new construction for the reorganisation of waiting and reception areas and the new medical service offices.
The project included the reorganisation and expansion of the ground floor waiting and reception rooms.
In addition, the project involved the verification and adjustment of existing structures and the realisation of new structures to host the new offices of the intramoenia medical services department.

client
POLICLINICO UMBERTO I

completion
2008

value
€ 76,800,000.00

services
Preliminary Design

Reorganisation and renovation of the Policlinico Umberto I Hospital
ROME, ITALY

3TI participated in the international design competition for the reorganisation and renovation of the Umberto I hospital in Rome.
The architectural design of the new hospital and related areas focused on transforming the site from a closed structure into a part of the city: a free public space dedicated to a specific function that still belongs to the rest of the city.
The proposed solution allows for highly functional and state-of-the-art layouts and a balanced relationship between economic and aesthetic aspects.
The proposed typology is a hybrid scheme capable of mediating between the current structure of pavilions and the podium scheme.
At grade the building touches the ground in a discontinuous way to ensure transversal permeability, respecting the original format and layout of the pavilions.
The upper levels of the building are characterised by five volumes organised around a series of internal courtyards hosting twenty-four operating rooms and eighteen inpatient units, each with 100 beds.
The new structure was deigned to be constructed in successive phases.

client
MINISTRY OF HEALTH OF
SULTANATE OF OMAN

completion
2014 - 2015

value
€ 121,885,000.00

services
Preliminary Design
Final Design
Detailed Design

with
Hill International

17 New Health Care Units
OMAN

The design for the Primary Health Care Units in 17 cities of the Sultanate of Oman (Qairon Hariti, Al-Hamra, Mjis, Ghail al-Shibool, North Ibra, Al-Hazim, Al-Buraimi, Al-Diriz, Maabelah, Al-Mahaj, Sur Al-Baloush, Mukheilif, Somhan, Jalan Bani Bu Ali, Nizwa, Dhamar and Al-Hussailah), identifies a design methodology that can be easily applied for all the different contexts and allows to reach very high levels of energy performance, environmental sustainability and comfort.
Two different typologies of units, serving a population of 5.000 – 10.000 people or more than 10.000, have the same 'architectural guidelines', which can be adapted to every single site, in order to have different projects, appropriately integrated according to all the specific surrounding conditions.
The building is organized in blocks that can be aggregated to define a structure that is able to adapt itself to the specific conditions of the place. The composition of functional blocks allows different combinations, characterizing the building as an urban aggregate, a small 'city of health' that hosts healthcare facilities for the community. This approach guarantees the possibility to realize contemporary buildings, well-advanced for its architecture and its functional aspects, at the same time related to the local traditions and appropriately integrated with the natural and urban landscape.

client
NAPLES MUNICIPALITY

completion
2017

value
€ 27,000,000.00

services
Detailed Design
Health & Safety Management
Works supervision

with
Servizi Integrati

Restart Scampia Project
ITALY

Vele di Scampia" urban renovation project is part of IT Government's programme for suburbs rehabilitation.
3TI provided detailed design, health & safety management and Works supervision of the demolition of three buildings "Sails A,C,D), the upgrading of the building called "Sail B" (to be used for temporary housing) and urban design.
The refurbishment and redevelopment of the "Sail B" also known as "Sail Blue" is focused on the elimination of the buildings degradation through technical and functional solutions that can improve the quality of the building and the environmental and living comfort of the surrounding areas.
The total financed cost consists of 27 million euros. The demolitions activities are expected to start on January 2018.

client
INGENIUM REAL ESTATE

completion
2007 - 2008

value
€ 8,700,000.00

services
Detailed Structural Design

1500 beds
accommodations for
university residences

"Tor Vergata" University, Rome

ITALY

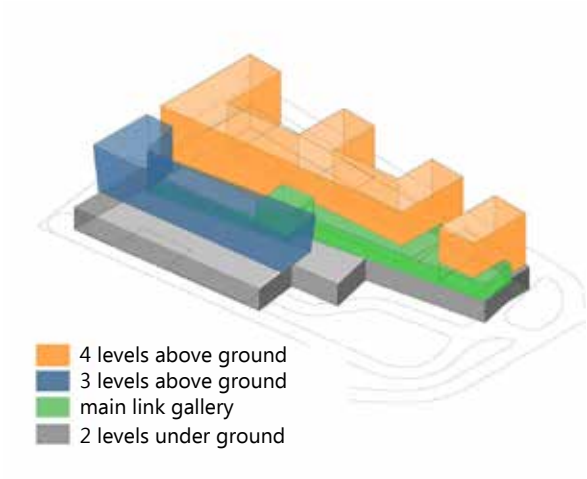
3TI was involved in the structural design of the new Tor Vergata campus. The new university residences and related services will work toward the creation of a modern university campus of more than 560 hectares.
The project's eighteen buildings, surrounded by open spaces, create a fragmented and discontinuous structure. The different height of the buildings helps to define a non-uniform skyline.
Public services (reception, assistance, areas for study, meeting, leisure, dining and sport) are arranged on the ground floor and linked with outdoor and indoor spaces.the San Giorgio di Nogaro Junction overpass with a steel and concrete section characterised by the presence of only two principal double-T bearing beams, placed at a distance of 11.5 m, with double-T connection beams.

client
SELI MANUTENZIONI GENERALI S.r.l.

completion
2008

value
€ 20,725,000.00

services
Detailed Design
Health & Safety Management During Design



New Headquarters of the Prefecture and Police Station of Monza and Brianza

ITALY

The construction of the new headquarters of the Prefecture of Monza and Brianza, located in the city of Monza, is part of a new institutional centre in th eex military area of “ex-Caserma IV Novembre” .
This area will host the new headquarters of the Province of Monza and Brianza and the main territorial office of the Lombardy Region, the Police headquarters, the barracks of the Financial Guard, the Inland Revenue Office and an exhibition and conference centre.
The project also includes valet parking and landscaped areas.
The structure occupies a surface area of approximately 16,000 sqm.
The complex consists of five buildings, the two main volumes of which house the Police headquarters and the Prefecture, for a total volume of 96,910m3

client
ABV ROCK GROUP Ltd.

completion
2015 - ongoing

value
confidential

services
Detailed Design
Shop Drawings

318 buildings
+
64 minor service Buildings

religious and facilities buildings:
theatres
administration offices
restaurants and others services buildings
residential

Security Headquarters – MOI

Phase 2-C (Kap2/C)
SAUDI ARABIA

"The Custodian of Two Holy Mosques King Abdullah Bin Abdul Aziz for developing the Security Headquarters – MOI – Phase 2-C (KAP2/C)" is one of the top ten projects awarded in Saudi Arabia, and one of the major projects in the country.
3TI Progetti has been requested to perform the Design for the sites namely ABHA and NAJRAN (KAP2C-2).
The project includes designing of all the works, civil, structural, architectural, electrical, sanitary, air conditioning, mechanical, interior furniture, equipment and external works for each site and it's technical engineering needs, for a total of 318 buildings.
In 2016, in addition to the main contract, 3TI has been appointed on the design of 64 Minor Service Buildings located within the same sites as Abha and Najran.

client
UNIVERSITY OF UDINE

completion
2008 - 2012
university departments
2015 - 2017
new library

value
€ 16,510,000.00
€ 8,850,000.00

services
Preliminary Design
Final Design
Detailed Design
Health & Safety Management
Works supervision

University Campus expansion “Polo Dei Rizzi” Udine
ITALY

This project for the expansion of the “Dei Rizzi” University campus involved the construction of two new buildings, one for the university departments “scienze Agrarie e Biologia” and the other for a new library.
The project also involved an extensive landscaping project for the entire campus.
The spaces surrounding the Campus will serve as public square. Integral to the new complex and the neighbourhood, this new space will provide students and citizens with a place for various leisure and outdoor activities.

international design competition WINNER

client
SARDINIA REGION

completion
2009 - 2013

value
€ 8,130,000.00

services
Preliminary Design
Final design

with
Studio Azzurro

“Guiso Gallisai” Museum

ITALY

This project involves the conversion of the former Guiso Gallisai Mill, an important local example of industrial archaeology, into the new home of the “Museum and Laboratory of Identity”.
A portion of the structure damaged by fire in March 1991 is to be fully renovated to host an innovative museum that replaces traditional art collections with an interactive multimedia experience.
The design included the construction of new underground and basement structures adjacent to the former Mill, the recovery of an existing basement level, the realisation of new technical rooms, the reinforcement of existing floor slabs, masonry and roof structures, together with a landscaping project for the outdoor areas with access paths to the building inside the courtyard.

client
MUNICIPALITY OF VILLACIDRO

completion
2014

value
€ 4,000,000.00

services
Preliminary Design

"Villacidro"
Best Future Building of the year
2015

New Civic Centre and redevelopment of the surrounding urban area Villacidro
ITALY

The project for the new Civic Centre in Villacidro is located in a site that is an important urban reference point for the city and its inhabitants, due to its history and its morphological and natural features. The architecture of the new Centre, essential pole in the next future for the city, re-interprets the main aspects of the urban and natural surroundings. The new building is located inside the historic garden of the Episcopal Palace, on the higher part of the area, minimizing the land use and maintaining the morphology and the function its cultivated terraces intact as much as possible. The complex, adapted to the morphology of the site, is opened to the city and becomes urban park, theatre, forum and arena, but also atelier, workshop, exhibition space. A building that is in direct relationship with the historic centre, with the cultural activities inside the Episcopal Palace and the renovated building of the old prisons, that accommodates workshops, learning spaces and exhibition areas. The theater-auditorium, the heart of the building, is clearly visible as it occupies the largest rock body, with 300 seats.

International design competition
WINNER

client
CITY OF ORISTANO

completion
2010 - ongoing

value
€ 4,800,000.00

services
Preliminary Design
Final Design
Health & Safety Management
Works Supervision

with
VPS Architetti
Arch. Rossella Sanna

New Sports Hall Oristano

ITALY

international design competition WINNER

3TI PROGETTI, was awarded the design competition for Oristano's New Sports Hall. 3TI ensures the supervision of the construction aspects and safety coordination during the construction work.
The design takes into account the interaction of the new structure not only with its immediate surroundings, but also the broader context in which it is inserted. The complex consists in a central body of playing fields and public area, and two transversal linear volumes situated at the east and west ends, hosting accessory functions. These latter help improve the insertion of the new structure within the site and ensure its articulated use and flexibility.
The structure is able to host up to 3,000 spectators for sporting and other events without jeopardising the playing surfaces.

client
CITY OF ARCO DI TRENTO

completion
2006 - 2013

value
€ 2,980,000.00

services
Preliminary Design
Detailed Design
Final Design
Health & Safety Management
during design
Works Supervision

with
Arch.Angelini
Arch.Pigoli

New Civil Defence centre

ARCO DI TRENTO, ITALY

The project was awarded the tender issued by the town of Arco.
Even within such a highly anthropic environment as the upper Garda region, the natural landscape of the morainic amphitheatre constitutes a reference point that cannot be ignored.
An essential design and formal rigour serve as the basis of a dialogue in "counterpoint" between the building and the irregular profile of the moraine mass. This dialogue is harmoniously developed through a choice of materials that clearly refers to this natural setting.
The layout of functions is used to articulate the building, with the technological and operational façade of the barracks to the south, toward the new by-pass road system, with a more "urban" front facing east and north toward the city centre and cemetery.
The training tower, located on the east side, serves as a landmark indicating the location of the new structure.

international design competition WINNER

client
ARKE S.R.L.

completion
2004 - 2005

value
confidential

services
Planning and execution of geotechnical investigation

New Eur Convention Centre
ROME, ITALY

Geotechnical activities:

- Data collection from previous geotechnical studies conducted in the area;
- Planning of geological and geotechnical investigations;
- Execution and supervision of site and laboratory investigation;
- Analysis and interpretation of results related to geological and geotechnical surveys;
- Definition of geotechnical model for final design related to foundations and retaining structures.

Located south of the city's core, in the business district of EUR, the complex follows the simple orthogonal lines of the surrounding 1930s rationalist design.

client
TAICHUNG CITY

completion
2013

value
€ 62,000,000.00

services
Preliminary Design

Taichung City Cultural Centre
TAICHUNG, TAIWAN

The right balance between pure volumes, in other words a simplicity volumetric and a strong matter appearance.
A Taichung symbol, a gate towards the park but in the same time a representative building and citylife cultural attractor . A Landmark symbol of the Taiwanese spirit but also a bridge between East and West, that takes into consideration energy savings and the presence of the nature in architecture, so important in Eastern cultures.

client
DIOCESE OF CASSINO

completion
2010 - ongoing

value
€ 6,626,438.68

services
Preliminary design
Final design
Detailed Design
Health & Safety
Management
Works Supervision

"Church of The Holy Family" Diocese of Montecassino
ITALY

The concept design borns as aggregation of volumes around the main body of the church. Each body is recognisable among the others and it's easy to guess its function. The complex structure is studied to welcome the followers and address them towards the place where the liturgical action takes place; becouse of this the church yard is connected with via Garigliano through a wide access ramp.
The complex is delimited by the courtrooms, the hall and the priest's house on the North side and the East side, these become a wall protecting the yard and the inner places. The liturgical hall volume characterizes the whole complex architecture, it is placed on the South side at 1,30 meters obove the ground level.
The curve characterizing the roof is an original element marking out the complex and the town.

client
CO.GE.L. S.p.A

completion
2006 - 2007

value
€ 30,000,000.00

services
Detailed Design Compliance

"Vega Ground Segment"
European Space Centre in Kourou
FRENCH GUIANA

3TI was awarded a framework contract for design activities related to the compliance of the design of civil works for the "Vega Ground Segment" of the European Space Centre in Kourou (French Guiana).
The services of detailed design review initial activity involved the structural testing of the existing Vega Ground Segment, to ensure its ability to support the overhead load of the Vega crane.
Other interventions were provided for the same scope, including metal and reinforced concrete stairwells, masonry structures, fire protection systems, plumbing and the modernisation of washroom facilities.

client
ICE - ITA Italian Trade Agency

completion
2017 - ongoing

value
€ 200,000.00

services
Detailed Design
Works Supervision

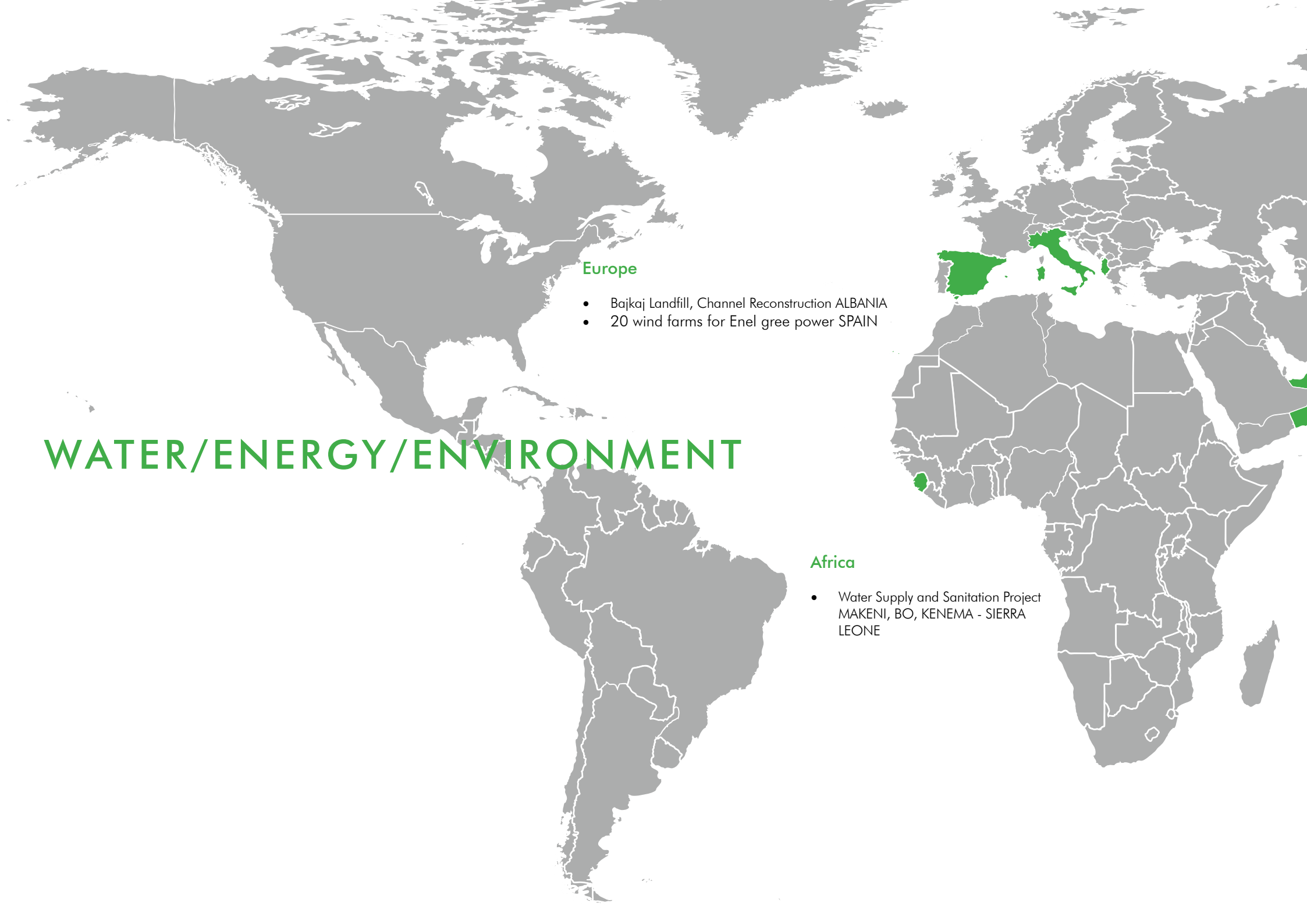
with
GPA Ingegneria srl

“Italian Pavilion” at MIPIM 2018

PALAIS DES FESTIVALS - CANNES, FRANCE

3TI Progetti, has been awarded the design for the “Italian Pavilion” at MIPIM, the world’s premier real estate event, at Cannes from 13 – 16 March 2018.
The world’s leading property market, offers some of the most attractive investment opportunities and tailor-made services for investors and even this year it will showcase a portfolio of outstanding projects at the Italian Pavilion offered by an ever more dynamic Italian real estate market.
The exhibition area, 300 sqm, includes: reception desk, open space, networking area, B2B space, additional services (storage, area catering, checkroom).

WATER / ENERGY
ENVIRONMENT



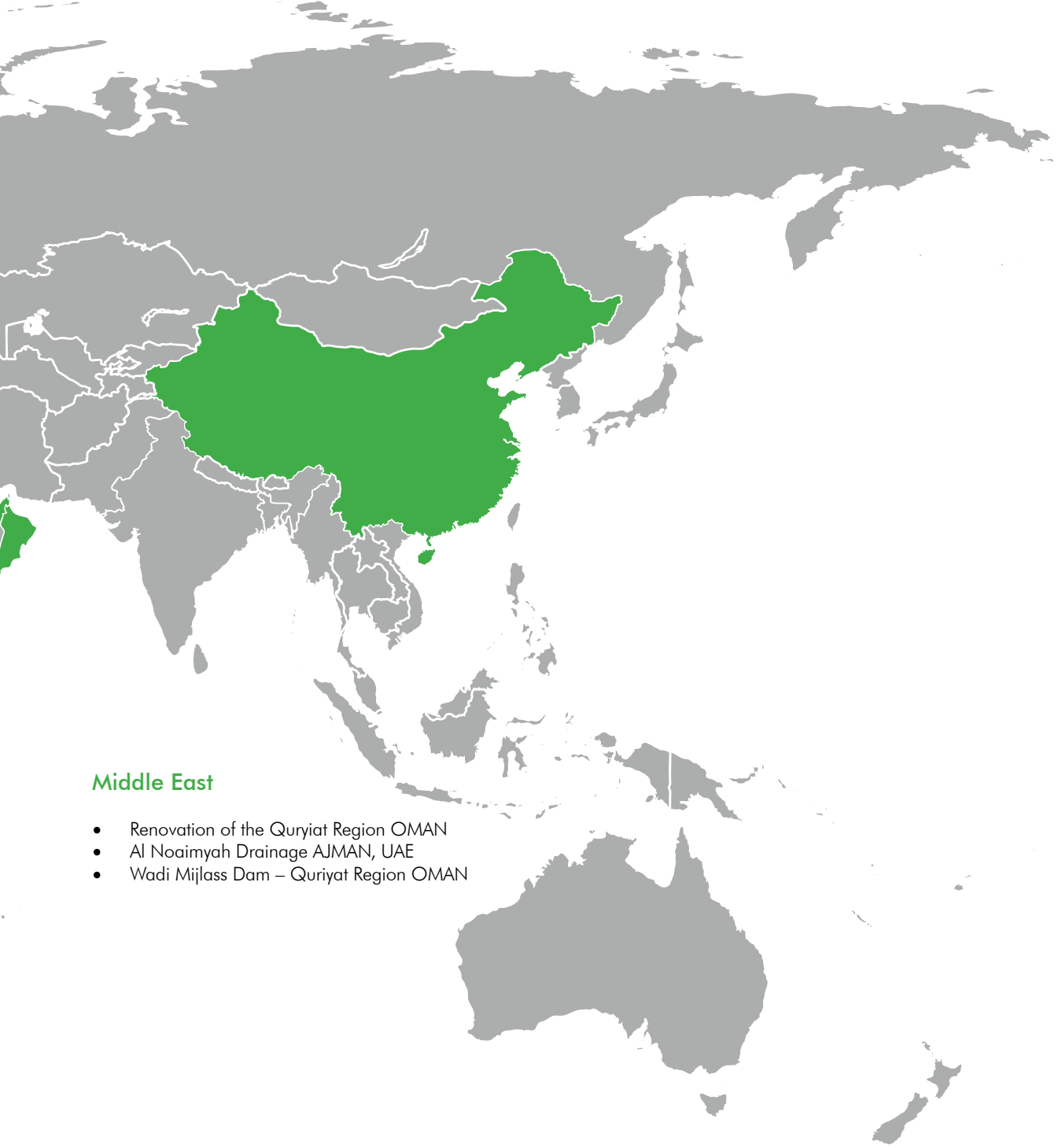
WATER/ENERGY/ENVIRONMENT

Europe

- Bajkaj Landfill, Channel Reconstruction ALBANIA
- 20 wind farms for Enel gree power SPAIN

Africa

- Water Supply and Sanitation Project MAKENI, BO, KENEMA - SIERRA LEONE



Middle East

- Renovation of the Quryiat Region OMAN
- Al Noaimyah Drainage AJMAN, UAE
- Wadi Mijlass Dam – Quriyat Region OMAN

Italy

- Hydraulic Securing of the Lower Course of the Tagliamento River ITALY
- Mitigation of the hydrogeological risk in the River Vomano Basin ITALY
- Idrovia Ferrarese between Finale di Rero and Migliarino ITALY
- Mechanical and biological treatment plant for the disposal of municipal waste in Timpazzo, Gela ITALY
- Caorso Nuclear Power Plant PIACENZA, ITALY
- Expansion and enhancement of the Purifier Lampedusa ITALY
- Sewage treatment doubling plant in Gela rafinery ITALY
- Marranella II sewage line Rome ITALY
- New Wind Farm in San Gregorio Magno Salerno ITALY
- San Martino Wind Farm CAMPOBASSO, ITALY
- Wind Farm in Monterosso ITALY
- Wind Farms in the regions of Apulia and Sicily ITALY
- Eleven new Photovoltaic Power Plants BRINDISI, ITALY
- Photovoltaic Systems Chieti L'AQUILA, ITALY
- Photovoltaic and Solar Systems for the E.r.s.u. of Camerino ITALY
- Photovoltaic Power Station LEGNAGO, ITALY
- Enel Green Power ITALY

Asia

- Solar Tower in Beijing CHINA

WATER - ENERGY

We aim to create “space for water”

by re-establishing the natural processes that characterise this resource and restoring its necessary equilibriums.

Environmental drainage, Stormwater design, Hydraulic/Hydroelectric solutions, Wastewater Treatment Plants, Sewerage Solutions, Urban waterfronts/ Energy Efficiency, Green Buildings, Solar Farms, Wind Farms, Geothermal Power.

When designed with the proper attention toward the environment and architecture, renewable resources can be used to construct new, dignified landscapes that represent the values of our time.

3TI PROGETTI boasts a lengthy commitment to soil protection, water drainage, rectification, harnessing the potentials and safeguarding the conditions of the sites and territories in which it operates.

Our integrated services cover the full range of technical, commercial, regulatory and environmental aspects also for renewable projects.
The use of alternative and renewable energy sources is increasing worldwide and the binomial “architecture plus new sources of energy” is now imperative.
Improving the energy efficiency of industrial and residential buildings through the production of energy from renewable sources and the application of innovative systems and products with a low impact on the environment.

The realization of zero emissions buildings is one of our goals. We consider to the conversion of urban and industrial areas into environment-friendly spaces to be an optimal solution.

client
REGIONE VENETO

completion
2014 - 2016

value
€ 154,000,000.00

services
Preliminary Design

Hydraulic securing of the lower course of the Tagliamento River

ITALY

The project for the hydraulic securing of the lower course of the Tagliamento river involves the enhancement of the structural work already planned in the Draft Plan for the hydraulic securing of the Tagliamento, for the defence of the Veneto-Friuli area, the reinforcement of the river banks in the stretch between Latisana and the river mouth and the construction of the open channels of the Cavrato hydraulic bypass and the structural enhancement of the bypass itself.

client
COMMITTEE OF QURYIAT
REGION RENOVATION

completion
2006 - 2010

value
€ 205,064,000.00

services
Feasibility Study
Preliminary Design
Final Design
Detailed Design
Works Supervision

720 m viaducts,
42 km rehabilitation roads
2 km new roads

Renovation of the Quryiat Region
OMAN

The project regards the rehabilitation and reconstruction of roads in the Region of Quriyat, Oman, severely damaged by Cyclone Gonu in June 2007.
Specifically the project concerned the following areas:
Hayl Al Ghaf Area:
design of a new bridge crossing the wadi along the road to the village of Hayl Al Ghaf (240 m) with approaching embankments.
Ramlah-Daghmar Area:
rehabilitation of approximate 20 km of road and three long viaducts: a new multi-span viaduct (180 m) across the wadi Al Misfah and two new multi-span viaducts across the wadi Dayqah (210 m and 90 m).
Dibab-Fins Road:
In this section the project called for the rehabilitation of approximately 20 km of road.
A new road was designed between Dibab and Bimmah to connect the coastal road with the parallel motorway running inland from the coast.
Quryiat Area:
The project involved the renovation of the corniche road as the completion of the wadi Majalass improvement project.

client
PROVINCE OF TERAMO

completion
2013 - 2014

value
confidential

services
Final Design

Mitigation of the hydrogeological risk in the River Vomano Basin
ITALY

The project's purpose for the mitigation of the hydrogeological risk, in the river Vomano basin, is to deal with hydraulic and environmental risk situations through works aimed at increasing the safety limits and preserving the environmental characteristics of the river, stopping the erosion phenomena along stretches of the water course.
The area of interest is located between the bridge over the road 16 'Adriatica' up to the bridge over provincial road 23b, in the locality of Castelnuovo Vomano, in the town of Castellato.
The project involves the hydraulic safeguarding of the total area respecting the limits imposed by the exixtent anthropic structures and the surrounding environment. The interventions are aimed at avoiding phenomena of flooding and/or overflowing in external areas ensuring the transit of the maximum water flow (return time 200 years) under safe conditions and in respect of the minimum clearances to be maintained in the proximity of the bridges and the crowning of the river banks.

client
MINISTRY OF PUBLIC WORKS & HOUSING - AJMAN

completion
2009 - 2011

value
confidential

services
Feasibility Study
Preliminary Design
Final Design
Tender Documents

Al Noaimyah drainage
AJMAN, UAE

This project was developed for an existing residential area of villas and apartment buildings (approx. 280 ha) in Ajman. Situated along the Sharjah-Ajman border, the area was prone to flooding problems due to the lack of a storm drainage system. This condition was exasperated by the fair to poor quality of local roads. The project site also featured low lying areas prone to storm water ponding, with no available outlets.
Finally, the elevated main roads surrounding the project created a further barrier to storm water drainage.
Project Numbers: Pipeline length: 54 km; manholes: 750; 2 Submersible Drainage Pump Stations; Outfall: 4 km from the site to the sea. Schedule: Tender Issue in August 2010.
The project provides a storm drainage collection, conveyance and disposal network for the residential community.

client
PF INGEGNERIA S.r.l. for SALWACO (SIERRA LEONE WATER COMPANY)

completion
2007

value
€ 40,000,000.00

services
Preliminary Design
Final Design

Water supply/sanitation project
MAKENI, BO, KENEMA - SIERRA LEONE

The project reviews the Feasibility Study of the technical, financial and economic viability of the three towns, preparing a nationwide Rural Water Supply and Sanitation Project (RWSS) to facilitate the mobilisation of financial support and to provide a detailed implementation program for the improvement of rural water supply and sanitation levels. Main targets:

- an economically and technically sound Water Supply and Sanitation (WSS) project for the towns of Makeni, Bo and Kenema;
- an assessment of the country's rural water supply and sanitation situation;
- a Rural Water Supply and Sanitation (RWSS) program with an Action Plan wich includes the Identification and Development of a Priority Scheme based on a Pilot Project.

client
PROVINCIAL
OF FERRARA

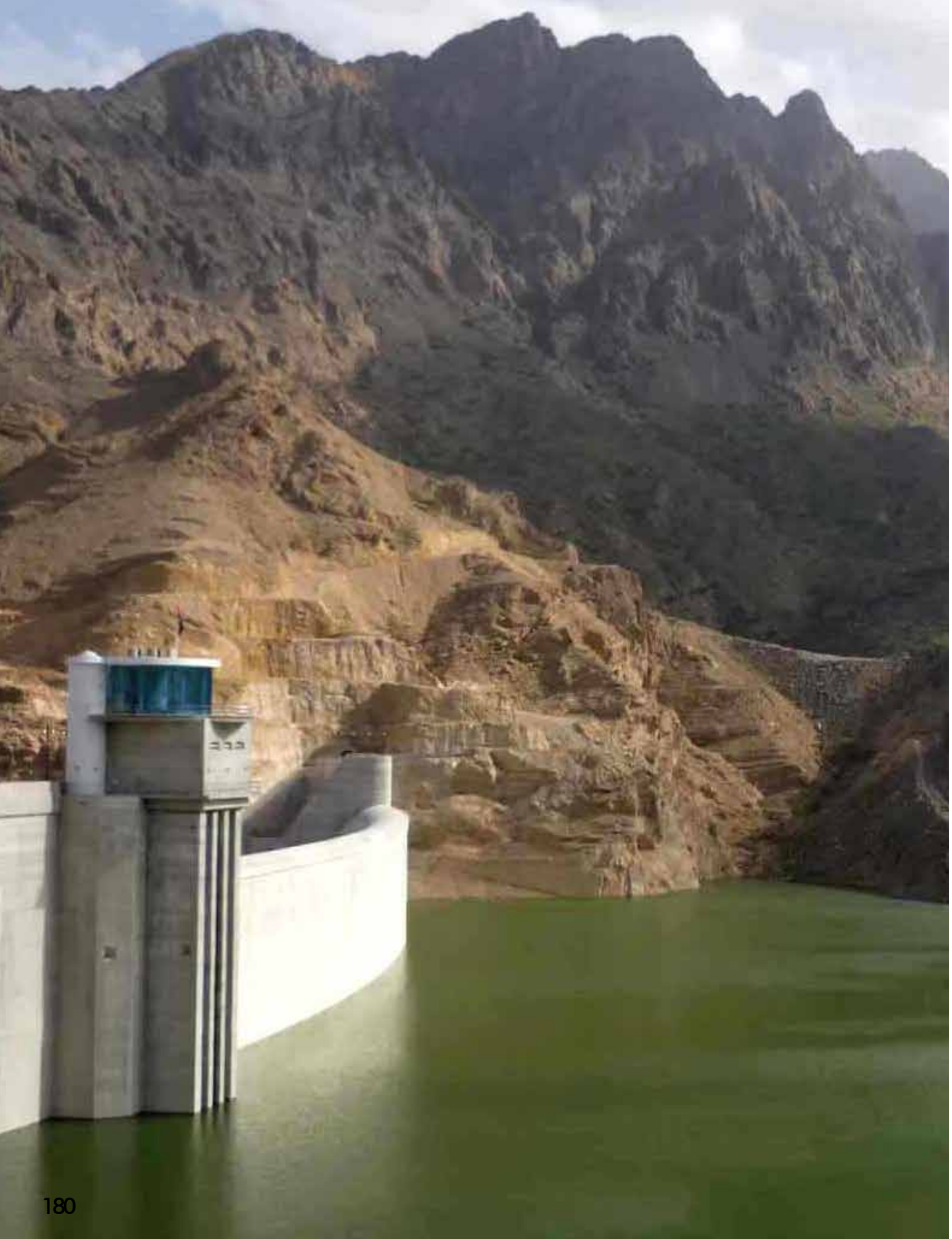
completion
2013

value
€ 75,712,000.00

services
Health & Safety Management
during construction
Works Supervision

Idrovia Ferrarese between Finale di Rero and Migliarino
ITALY

The execution of works was developed to upgrade an existing waterway to CEMT Class V (II LOT).
Works included adjustments to the channel layout, the enlarge-ment of the cross section and curves and the deepening of the waterway between the Valpagliaro basin and Fiscaglia Bridge north of Migliarino (junction with the Po' of Volano). The works involved also: the adaptation of existing viability through the construction of steel deck arch bridges, junctions with the local road network and the elevation of existing structures at the crossing of Migliarino the creation of a bicycle path along the left bank, from Valpagliaro to Migliarino, and from Migliarino to the sea along both banks.



client
COMMITTEE FOR MUTUAL PROJECTS BETWEEN UAE AND OMAN

completion
2010 - 2012

value
€ 416,125,000.00

services
Feasibility Study
Preliminary Design
Detailed Design

Dam height: approx.100 m
Reservoir Volume: 250,000,000 m3
Volume of Roller-Compacted Concrete (RCC): 2,000,000 m3

Wadi Mijlass Dam – Quriyat Region
OMAN

The project for the construction of a dam along the Wadi Al Mijlass was commissioned by the Municipality of Muscat to considerably reduce the risk of flooding in the town of Quriyat.
The project also foresees various minor works (dikes, channel diversions) upstream of the dam site to preserve the villages of Mukhadah, Haifadh and Siya, damaged by previous flooding.
The dam will significantly reduce the risk of flooding in the city of Quriyat, while simultaneously working to prevent the relocation of existing infrastructures and villages in the surrounding area.
The most suitable site was identified at the end of the canyon formed by the Wadi Al Mijlass between the village of Al Mukhadah (upstream) and the city of Quriyat (downstream).
With this solution the basin created by the dam interests only the part of the Wadi within the canyon, without interfering with existing infrastructures and settlements.
The system intercepts almost the entire basin of the Wadi (570 km2 of the 630 km2 of the overall basin).

client
MINISTRY OF PUBLIC WORKS
AND TRANSPORT PROJECT
COORDINATION UNIT (PCU)

completion
2013 - 2015

value
€ 3,455,500.00

services
Construction Supervision
Health & safety
Management

Development/construction of :
a Sanitary Landfill
(Non-hazardous Waste)
a Solid Waste Transfer Station
access infrastructure

Bajkaj Landfill, Channel reconstruction

ALBANIA

The Government of Albania is implementing the Integrated Coastal Zone Management and Clean-up Project (ICZMCP) at the South Coast of Albania with World Bank support.
The ICZMCP is designed to protect the coastal natural resources and cultural assets and promote sustainable development and management of the Albanian coast, through supporting investments in: critical public environmental infrastructure and municipal services; remediation and containment of pollution hazards from a former chemical plant in Porto Romano, and community infrastructure improvements and revitalization and enhancement of architectural and cultural resources.
The new Sanitary Landfill will be constructed to meet modern controlled landfill environmental protection objectives for general Municipal Solid Wastes and should have a capacity of approximately 820,000m3. The area occupied by the proposed Transfer Station in Himara has a total surface of 3,500 m2 (50 x 70 m). The Transfer Station in Himara Municipality will require the rehabilitation of an access road of approximately 850 m in length.

client
SICILY REGION

completion
2015 - 2016

value
€ 22,800,000.00

services
Detailed Design

with
Studio T.En

Mechanical and biological treatment plant for the disposal of municipal waste in Timpazzo, Gela

ITALY

The project involves the realization of a Mechanical and biological treatment plant for the disposal of municipal waste, next to a landfill for non-hazardous waste.
The plant consists primarily of two main areas: the first is represented by an area with the function of selecting the incoming waste that through a series of mechanical operations subdivides materials:

- to recover
- to dispose of
- to be stabilized as organic matrix

In the second area, the organic matrix coming from the selection of the waste is treated by biological processes in order to obtain an output material stable from a chemical point of view and odorless.

client
SALC for SOGIN

completion
2016 - ongoing

value
€ 9,400,000.00

services
Detailed Design
Shop-Drawings
As Built Design

Caorso Nuclear Power Plant
PIACENZA, ITALY

3TI is involved in the detailed design, shop-drawings, and as built design, for the demolition and the reconstruction of 2 nuclear depots ERBA 1 and 2 dedicated to low radioactive wastes in Caorso Nuclear Power Plants.
Developed in a contaminated area, the project's aim is to depollute the site environment, remove the existing structures, and propose an efficient management for the residual radioactive waste.

client
MONDELLO S.P.A.

completion
2013

value
€ 6,000,000.00

services
Detailed Design

Expansion and enhancement of the Purifier Lampedusa
ITALY

The project is based on the insufficiency of the purification system in Lampedusa, undersized in terms of civil engineering works and poorly maintained. The interventions will therefore focus on the expansion and refurbishment of the existing purification plant, through the introduction of new sections of the plant and the enhancement of the existing ones. Specifically:

- New station for the final raising of the sewerage network, connecting collectors and permanent piping system
- Adjustment and enhancement of the purification plant
- New discharge system for the purification plant and submarine piping.
- functional and environmental reconnection of the existing works to the new systems, in the context of insertion through the refurbishment of the external areas.

client
NUROVI

completion
1st phase 2013
2nd phase 2016 - ongoing

value
€ 5,212,756.21

services
Final Design
Detailed Design

Sewage treatment doubling plant in Gela rafinery
ITALY

The project involves the construction of a new treatment line within the existing treatment plant of Gela, the project also involves the design of all the ancillary works necessary to the full functionality of the plant.
The two treatment lines will yield the purification of waste water cameing from the entire east area of the city of Gela, the connected population will reach the amount of about 78,200 units, as provided in the Sewerage Implementation Plan.

client
RPR S.p.A.

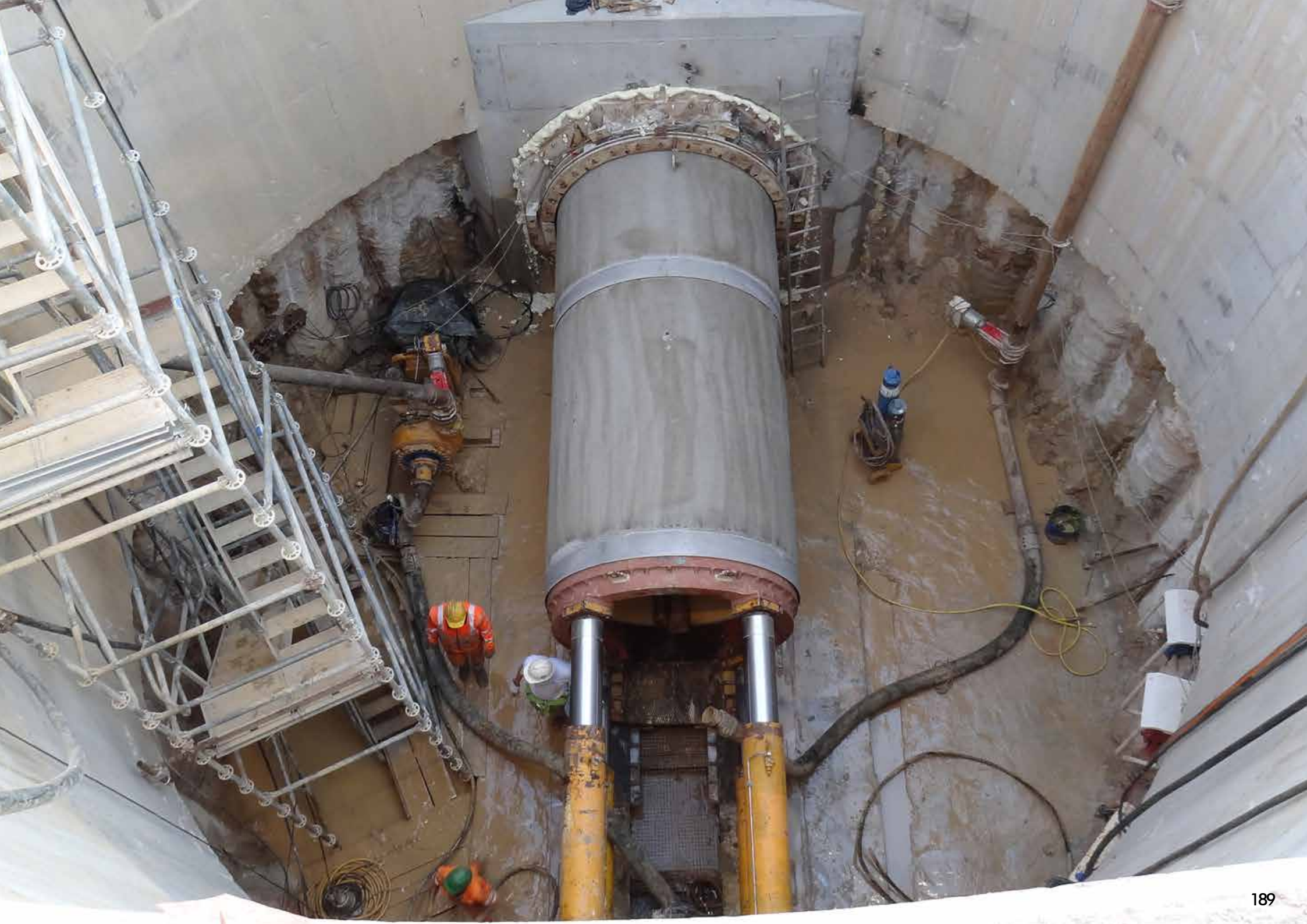
completion
2011 - 2012

value
€ 25,800,000.00

services
Final Design

Marranella II sewage line
ROME, ITALY

The new “Marranella II” interceptor sewer line was designed to “lighten” the flows transferred to the Marranella I, no longer sufficient for handling current capacity.
The sewer network was also adjusted to serve the new infrastructures and services planned for the Tiburtina and Pietralata districts, as well as the new Tiburtina Rail Station and its relative road network and service infrastructures. The new line serves a catchment area of approximately 100,000 inhabitants.
The new 1.815 m long manifold consists of two flanking conduits with an internal diameter of 2.75 m and a constant slope of 0.15%. The offshoot from the Marranella II trunk line will be realised by means of an intake structure designed to collect an important quantity of the flows currently handled by the Marranella I line (approx. 21 m3/s of a total of 38.0 m3/s).



client
SORGENIA S.pA.
(former Energia Progetti S.r.l.)

completion
2008 - 2010

value
€ 77,000,000.00

services
Health & Safety Management
during construction

New Wind Farm in San Gregorio Magno

SALERNO, ITALY

This project involved the realisation of a new wind-powered electrical generation facility consisting of 17 wind turbines, for a total installed power of 42.5 MW.
The turbines are situated at an elevation of 1,100 and 1,250 meters above sea level.
The project was realised by a group of important European Companies actively involved in the field of wind power generation, including Siemens and KR Wind.
3TI was responsible for managing the compliance between project activities and Italian Health & Safety regulations, in addition to providing support and advice to meet the Client's corporate health & safety standards and ensure the quality and environmental value of the project.


KR Wind
12,3t

client
SORGENIA S.p.A.

completion
2009 - 2010

value
€ 24,000,000.00

services
Health & Safety Management During Construction

San Martino Wind Farm
CAMPOBASSO, ITALY

This project concerned the realisation of a new plant for the production of electricity from wind power consisting of 17 large wind turbines, for a total installed power of approximately 42.5 MW.The plant was realised at an altitude of between 1,100 and 1,250 m above sea level.
3TI was responsible for managing health & safety issues during construction on behalf of Energy Projects S.r.l. The involvement of important European companies such as Siemens and KR Wind also required that 3TI manage their activities to ensure compliance with national regulations. The involvement of three main contractors in the civil and electro-mechanical works and turbine installation, together with the presence of various subcontractors, represented an ideal test for 3TI's ability to confront issues of job site health & safety coordination.

client
AIR SPEED S.r.l.

completion
2009

value
€ 44,000,000.00

services
Final Design

Wind Farm in Monterosso
ITALY

This project involved the construction of a wind farm in the area of "Carbonaio", situated in the Municipality of Monterosso Calabro.
The total installed overall of 30 MW corresponds with the energy generated by twelve, 2,500 KW wind turbines, with an output of 52,500 MWh/year.
Guideline criteria were selected to minimise environmental impact and ensure the restoration of the sites at the end of the plant's life cycle, in accordance with Regulation No. 55 from 2006 governing the construction of wind farms in the region of Calabria.

client
SER S.r.l.
SER1 S.r.l.

completion
2007 - 2009

value
€ 65,000,000.00

services
Civil Works Engineering

Wind Farms in the Regions of Apulia and Sicily
ITALY

This project involved the construction of a wind farm in the area of "Carbonaio", situated in the Municipality of Monterosso Calabro.
The total installed overall of 30 MW corresponds with the energy generated by twelve, 2,500 KW wind turbines, with an output of 52,500 MWh/year.
Guideline criteria were selected to minimise environmental impact and ensure the restoration of the sites at the end of the plant's life cycle, in accordance with Regulation No. 55 from 2006 governing the construction of wind farms in the region of Calabria.

client
BP SOLAR ITALIA S.r.l.

completion
2009 - 2010

value
1st phase - 8 systems:
€ 30,000,000.00
2nd phase - 3 systems:
€ 10,000,000.00

services
Final Design
Detailed Design
Health & Safety Management

11 new Photovoltaic Power Plants
BRINDISI, ITALY

3TI was responsible for the executive design and health & safety coordination services related to the construction of eleven 1 MW photovoltaic systems in the areas of Mesagne and Brindisi, in the Southern Italian region of Apulia.
The various projects provide for an open-field construction of two photovoltaic systems. With a nominal performance of 997,050 Kw, each system will produce over 1,539,535 kWh of electrical solar energy per year, with a specific return of 1525.0 kWh/kWp per year. The energy produced will be introduced into the public electric power grid.
This photovoltaic systems consists of 6,222 panels, arranged in 366 rows, each consisting of 17 serially connected panels. Each of the panels faces southward at an inclination of 30°.

client
E.R.S.U.

completion
2010 - 2011

value
€ 860,000.00

services
Preliminary Design
Final Design
Detailed Design
Health & Safety Management
Works Supervision

Photovoltaic and solar systems for the E.r.s.u. of Camerino

ITALY

This project was developed as part of the 2007/2013 Regional and Occupational Competition FESR Operative Program approved by the European Commission with Decision C (2007) 3986 dated 17 August 2007. The Decision concerns Axis 3, activity 3.1.1., intervention 3.1.1.40.01 "Promotion of Renewable Energies: Solar Energy". Two interventions were developed in this context:

- Photovoltaic solar energy;
- Thermal solar energy as part of the requalification of the Camerino E.R.S.U. estate's "Colle Paridiso" complex, situated approximately 2 km from the city centre.

The intervention aims to fulfil the following objectives:

- to increase the production of energy from renewable resources;
- to enhance sustainable energy development through the use of renewable resources, the improvement of energy efficiency and the promotion of energy saving measures;
- to contribute to the fulfilment of the balanced and sustainable energy development of the regional territory, overcoming difficult situations of strong dependence on external energy sources and enhancing the energy saving and energy efficient performance of the entire regional system.

client
GRANSOLAR GHELLA S.p.A.

completion
2011 - 2012

value
confidential

services
Detailed Design

Photovoltaic Systems Chieti
L'AQUILA, ITALY

The systems operate in parallel with the general electricity distribution network, as required by Regulations governing the promotion of energy produced by photovoltaic systems published in 2010.
The photovoltaic systems are composed of a field generator formed by photovoltaic panels, electronic measurement groups, inverters and voltage converters (step-up). Each group is linked with the other and connected to the general distribution network.
The electrical components of each single plant, as well as the placement and orientation of the photovoltaic modules, are designed to provide a level of energy efficiency in excess of 75%.
The two larger systems extend over an area of 72,282 square meters and 29,980 square meters respectively.

client
CLEAN ENERGY S.r.l.

completion
2010 - 2011

value
€ 3,600,000.00

services
Detailed Design
Health & Safety Management During Design

Photovoltaic Power Station
LEGNAGO, ITALY

The project involved the construction of a new photovoltaic power system in the S. Pietro industrial area of the municipality of Legnago, in the province of Verona.
The 21,469 sqm photovoltaic power system covers is divided into two sectors, one measuring 14,118 sqm and the other 7,351 sqm.
The plant consists of 4,140 mono-crystalline silicon fixed orientation solar panels with a unitary nominal power of 240 Wp, for a total power output of 993,600 Wp. The photovoltaic panels are installed on specially designed steel structures, making it a non-integrated system.
Ancillary services (such as lighting and FM technical areas, air conditioning, auxiliaries, special equipment) are supplied to the plant by a 400 V, 50 Hz dedicated low voltage supply.

client
ENEL GREENPOWER

completion
2017 - ongoing

value
confidential

services
Geotechnical Design

Enel Green Power
ITALY

3TI secured a 2-years framework agreement with Enel GreenPower for the geotechnical design of Renewable Infrastructures around the world. As part of the framework agreement, 3Ti has been so far involved in several projects including:

- Detailed Design of a deep excavation for a biomass heating system in Russi (RA);

The project comprises the design of the retaining wall for a 6 m deep excavation of area 102 m x 60 m. The design has to account for the possible damages caused by the deep excavation to the existing Eridania factory located at a few meters from the excavation which was kept working during the excavation stage. Soil conditions included very soft soils of sandy silts and soft clays up to 30m depth. A dewatering programme and a monitoring plan were also provided, the latter both to monitor the movements of the retaining wall and to ensure the integrity of the factory walls via dispersive prism instrumentation.

- Inclinometers data processing for slope stability analysis to secure a hydroelectric power plant in Palo Viejo (Guatemala);

The project included data processing for 25 inclinometers located in Guatemala for a total of 650 readings. Data output included relative and integral displacements, polar diagram and a summary report.

- Detailed design of shallow and deep foundations for twenty (20) wind farms around Spain.

The project involves the construction of Wind Turbines Generator (WTG) around several areas in Spain. The WTG have power capacity from 2-4 MW, hub height from 80-120 m and rotor diameter up to 130m and can be either concrete or steel. 3

client
YANGING COUNTRY

completion
2008

value
€ 10,000,000.00

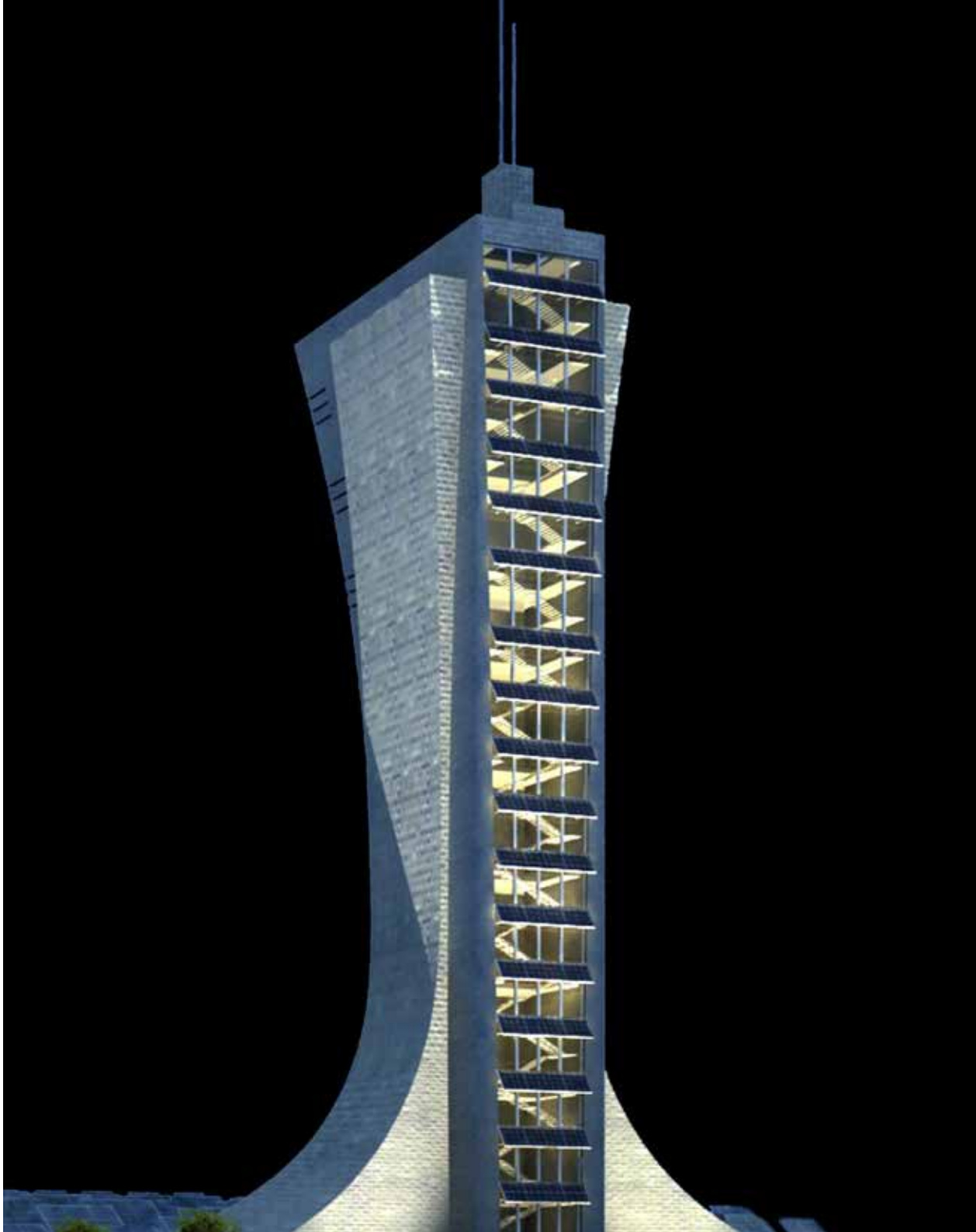
services
Preliminary Design

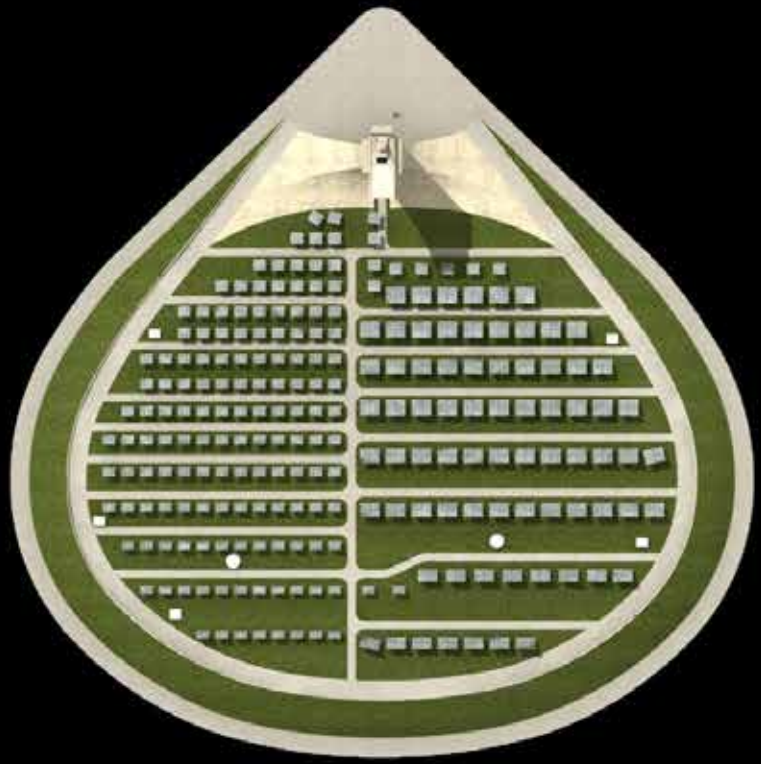
Solar Tower in Beijing

CHINA

3TI was involved in this preliminary design for a 1 MW solar tower in Beijing. The design was awarded first prize in the international design contest organised by Institute of Electrical Engineering CAS.
The design of the solar tower is based on a rounded configuration of the heliostat field with a sloping profile designed to minimise earth works.
Approximately 100 m in height, the tower can hold up to three receiver stations (at 70.80 and 90 m) based on a graded design that ensures all receivers have a full view of the mirror field. Each receiver room is equipped with an overhead light bridge crane, a tilt table for the receiver and a 6x6 front door. This latter element was hinged at its upper edge to the front wall and kept open by two push-pull hydraulic jacks.
The front doors feature a steel frame protected externally and internally by refractory ceramic foam panels and tiles.

international design competition WINNER





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