

# CORPORATE BROCHURE

Innovation in underground solutions

www.swsglobal.com





# ABOUT SYSTRA SWS

#### **FOURTY YEARS PROJECTS**

SYSTRA SWS is an independent design firm working across every aspect of responsible and sustainable design of modern infrastructural projects.

Our strong commitment in providing valuable, reliable and innovative solutions represents a distinctive characteristic of the company since its foundation, in 1982.

Since 1982, SYSTRA SWS has been providing specialized engineering, project management and risk management services for infrastructures. For almost 40 years, SYSTRA SWS has been supporting its Clients in conceiving civil works that form the infrastructural backbone of local communities.

SYSTRA SWS is committed to technical quality and deeply devoted to excellence & innovation. The Company is organized to provide effective solutions for every Client's requirement, assuring not only comprehensive, detailed and truthful information, but also confidentiality, flexibility, accuracy and punctuality.

SYSTRA SWS, finally, recognizes the value of future generations, developing its wide and sound technical knowledge bearing in mind the importance of designing and building infrastructures that are safe, sustainable, economic and characterized by a low environmental & social footprint.

# 64km designer of the longest rail tunnel in the world



#### Our markets





of buildings









#### Our services

#### Design

Feasibility studies
Concept design
Preliminary design
Detailed design
Architecture & Landscape design

#### Project Management

Project planning Project monitoring Project risk assessment

## Construction Management

Construction planning
Construction monitoring
Construction risk assessment
Construction design

#### Value Engineering

Project optimisation Implementation of new technologies Advanced FE Simulation

#### MEP Design

Complete Safety System Design Ventilation and Fire safety CFD Simulation Definition of ventilation strategies Commissioning support

#### BIM Modeling

Civil works Roads & Terrain Finishes & MEPs

#### Tender Assistance

Communication strategy Professional graphic support Schematics & Renders Illustrative Videos

#### Independent Check

Code compliance Technical content Project buildability

#### Our expertise

SYSTRA SWS strength lies in its original method of facing design problems through "out of the box" solutions and creative passion.

By continuously investing in high innovation, the Company has gained full trust of Clients and decision makers and is now ready to win the new exiting challenges of modern engineering.



#### **TUNNEL TECH**

We conceive innovative solutions for tunnel design, providing specialized value engineering services to solve the unconventional challenges emerging from both traditional and mechanized excavation techniques.



#### SSS.INFRA

SSS.infra is the rational compendium of SYSTRA SWS experience in the field of sustainable infrastructure multicriteria analysis. Thanks to its rigorous and analytical approach, SSS.Infra brings the world of sustainability in the field of quantitative performance assessment.



#### **DIGITAL PROJECT**

SYSTRA SWS developed an innovative approach that digitalizes all the relevant input data within a flexible database, providing powerful automatic manipulation algorithms. The calculated results can be visualised through different tools, ranging from GIS technology to BIM models.



#### i.BIM

The ambitious mission of BIM is to create a "digital twin" of the "real infrastructure", containing all the relevant geometrical information and metadata, and being able to collect and manage information coming from the different stakeholders involved in the process.





05
patents & copyrights



03

#### Our people

SYSTRA SWS strength mainly lies in its passioned staff. Our belief is that people performing activities which can influence the quality of services must be qualified and accurately trained. That is why SYSTRA SWS strives to pursue the utmost professionalism, involvement, awareness and education in the following ways:

Providing a certain number of extra hours for every project, with the purpose of fostering continuous improvement;

Identifying "areas of interest" where the Company is engaged in providing excellence;

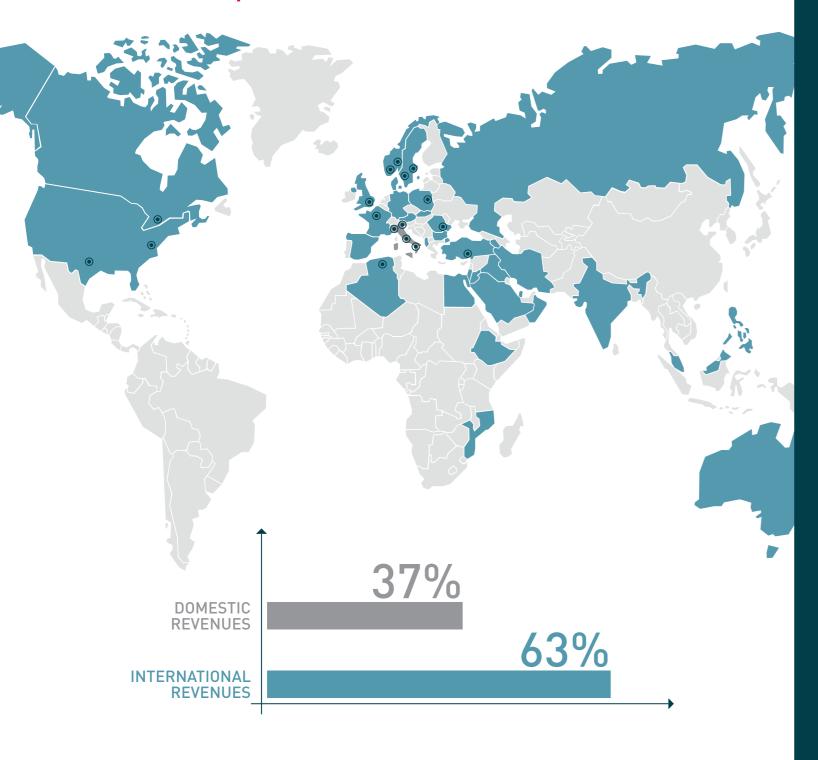
Promoting a wide range of training actions such as:

- self-training
- courses and seminars
- conferences
- collaboration with universities

Stimulating the publication of technical papers for conferences and technical journals.



#### International presence



**17** 

offices worldwide

 $\bigcirc$ 

32

different countries



10+

spoken languages

CANADA USA

CONTINENTAL EUROPE
UK & IRELAND
NORDICS
MIDDLE EAST
INDIA
AFRICA

AUSTRALIA & NEW ZELAND ASIA

During the last years SYSTRA SWS moved a step forward, increasing its presence worldwide.

Each branch is represented by a regional responsible who is the direct contact for the development of new market opportunities and local partnerships, acting ad a legal representative if needed.

SYSTRA SWS revenues, finally, are currently generated from projects developed in more than 30 different countries.

Norway, Sweden, Denmark, UK, France, Poland, Austria, Italy, Romania, Turkey, Algeria, Saudi Arabia, Qatar, Canada, USA, Iraq, Germany, Spain, Singapore, Russia, Australia.



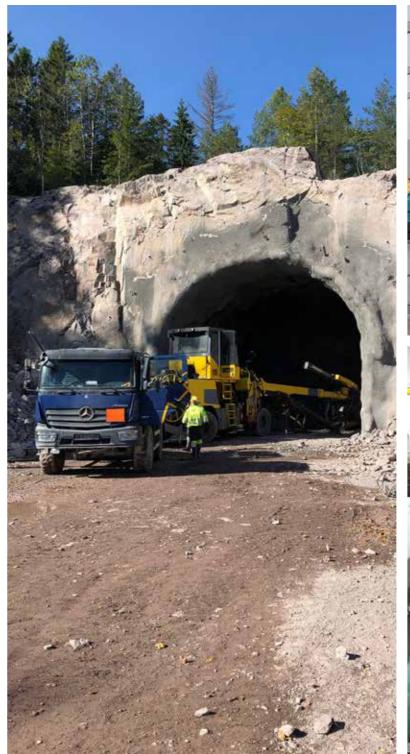


### Railways

Our offices conceive innovative and reliable solutions for the most widely used rail transportation systems

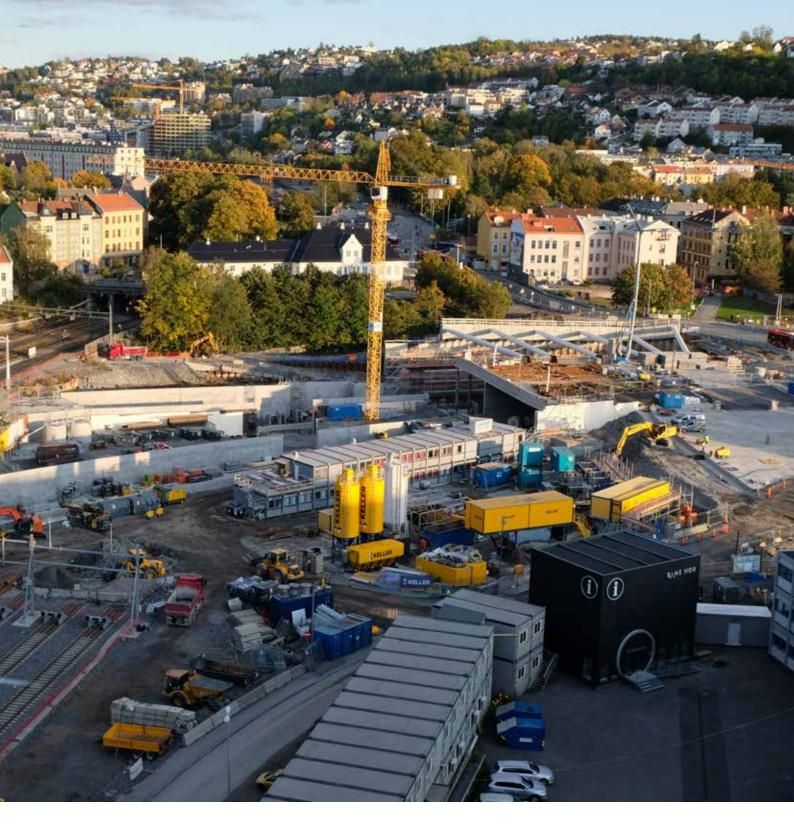
SYSTRA SWS expertise in Conventional Rail Links, High-Speed Lines (HSL) and Light Rail Transit (LRT), covers alignment and general design, structural and geotechnical design of civil works, trackworks, signalling, earthworks and drainage, MEPs, environmental criteria.











### Follo Line project Oslo S



Railways







Roads



YEAR:

2016 - ongoing

CLIENT:

Bane NOR SF

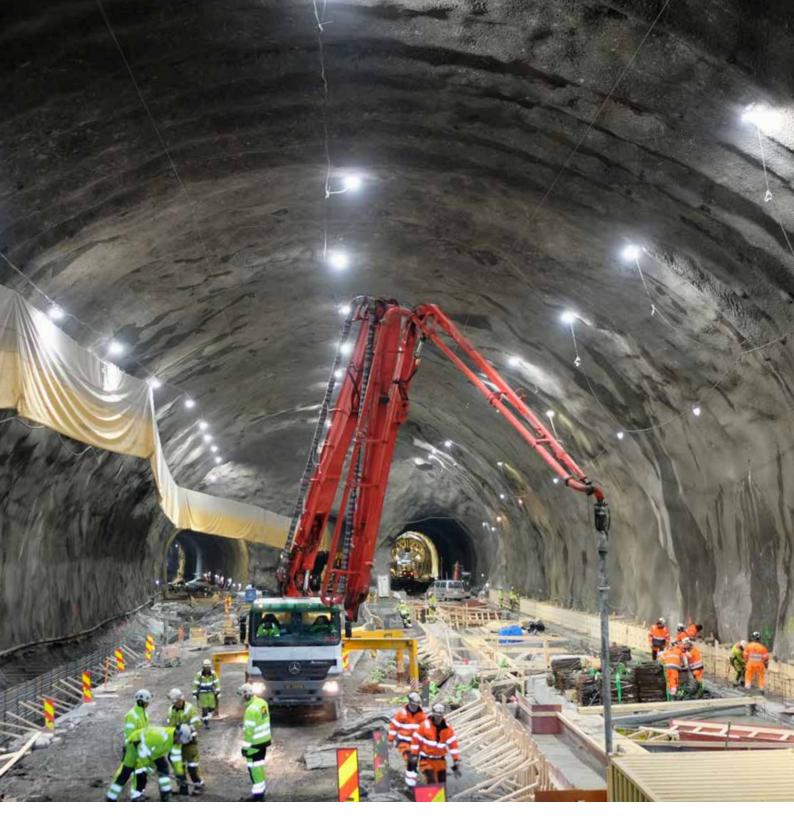
PROJECT VALUE: € 200 mln

SERVICES:

Design consultancy
BIM modeling

Value engineering

Construction management



# Follo Line project Drill & Blast









Roads



YEAR:

2015 - ongoing

CLIENT: Bane NOR SF

PROJECT VALUE: € 150 mln

SERVICES:

Design consultancy BIM modeling Value engineering Construction management



### Vestfold line Nykirke - Barkåker



Railways







Roads



#### YEAR:

2019 - ongoing

#### CLIENT

SAPINOR (Webuild S.p.A. and Impresa Pizzarotti & C. S.p.A.)

#### PROJECT VALUE:

€ 370 mln

#### SERVICES:

Detailed design
BIM modeling
Value engineering
Construction management



#### **Brenner Base Tunnel** Lot Mules 2-3







Metro



Roads



YEAR:

2016 - ongoing

CLIENT:

BTC

PROJECT VALUE:

€ 993 mln

SERVICES:

Detailed design based on BIM models and technical

Assistance during construction works of lot Mules 2-3



### **Brenner Basis Tunnel**







Metro



Roads



YEAR: 2005 - 2007

CLIENT: BBT SE

PROJECT VALUE: € 4.6 Bil

SERVICES: Final design



### Sivas - Erzincan High-speed rail









Roads



YEAR: 2012 - 2019

CLIENT: TCDD

PROJECT VALUE: € - confidential

SERVICES: Preliminary design Final design Detailed design



### Tunnel El Maten



Railways





Metro







#### YEAR:

2016 - ongoing

CLIENT: Cosider Travaux Publics

#### PROJECT VALUE:

€ - confidential

#### SERVICES:

Tunnel and external works Detailed design



### Uşak (Eşme) - Salihli High-speed rail



Railways







Roads



YEAR: 2013 - 2018

CLIENT: TCDD

PROJECT VALUE: € - confidential

SERVICES: Preliminary design Final design Detailed design



# Łódź cross-city line Underground railway node











YEAR:

2019 - ongoing

CLIENT:

Pbdim and Energopol

PROJECT VALUE: € 302 mln

SERVICES:

TBM tunnel civil works MEP systems

Railways

Metro



### Florence railway link











YEAR: 2009 - 2012

CLIENT: Nodavia

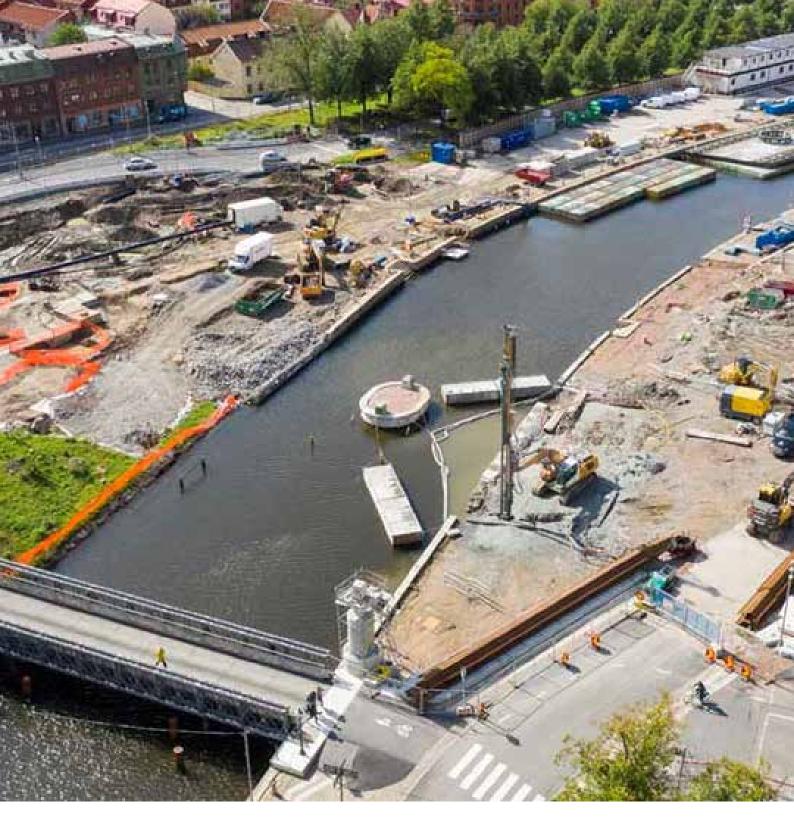
PROJECT VALUE: € 248 mln

SERVICES: Detailed design



Railways

Metro



### West link Haga





Railways



Metro



Roads



YEAR:

2019 - ongoing

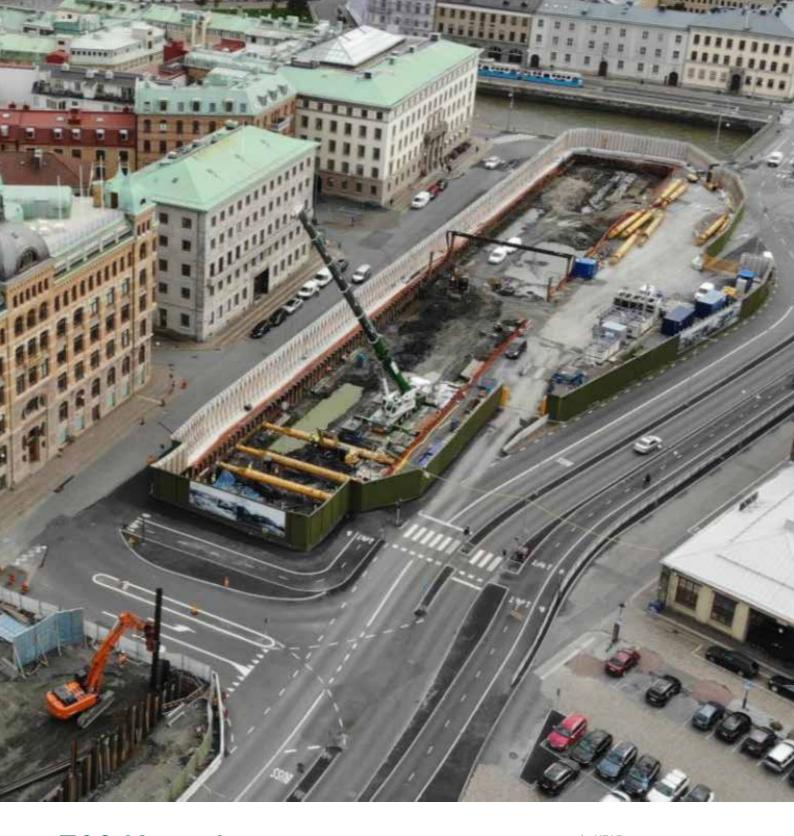
CLIENT: AGN Haga (Astaldi, Gülermak and NRC Group)

#### PROJECT VALUE:

€ - confidential

#### SERVICES:

Detailed design BIM modeling Value engineering Construction management



### E03 Kvarnberget West link Göteborg



Railways







Roads



#### YEAR:

2019 - ongoing

#### CLIENT

AGN Haga (Astaldi, Gülermak and NRC Group)

#### PROJECT VALUE:

€ - confidential

#### SERVICES:

Detailed design
BIM modeling
Value engineering
Construction management



### Toprakkale - Bahçe Construction of tunnels









Metro



Roads



YEAR:

2018 - ongoing

CLIENT:

TCDD and Demce

PROJECT VALUE:

€ - confidential

SERVICES:

Detailed design



### Varberg tunnel







Metro



Roads



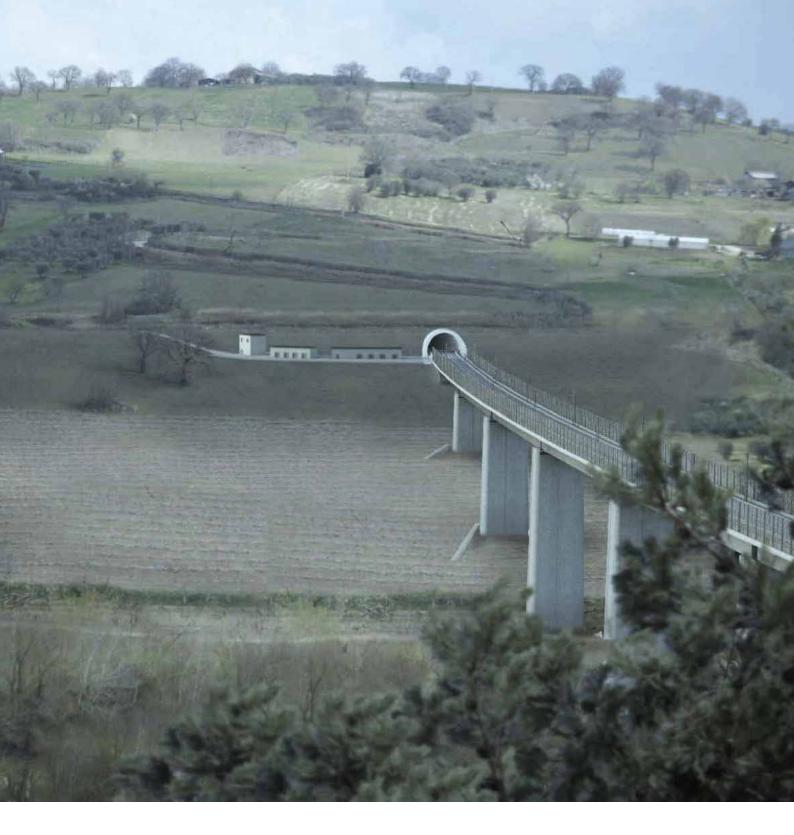
YEAR: 2019 - ongoing

### CLIENT: Implenia

### PROJECT VALUE: € - confidential

#### SERVICES:

Detailed design BIM modeling



### Apice - Hirpinia Conventional railway







Metro



Roads



YEAR: 2017

CLIENT: Italferr S.p.A.

PROJECT VALUE: € 608 mln

SERVICES: Preliminary design



### Storstrøm bridge







Metro



Roads



YEAR:

2020 - ongoing

#### CLIENT:

Rambøll

#### PROJECT VALUE:

€ 282 mln

#### SERVICES:

Structural engineering services

BIM consulting for detailed design activities



# Brenner Base Tunnel Aicha - Mules







Metro



Roads



YEAR: 2007 - 2011

CLIENT: BBT SE

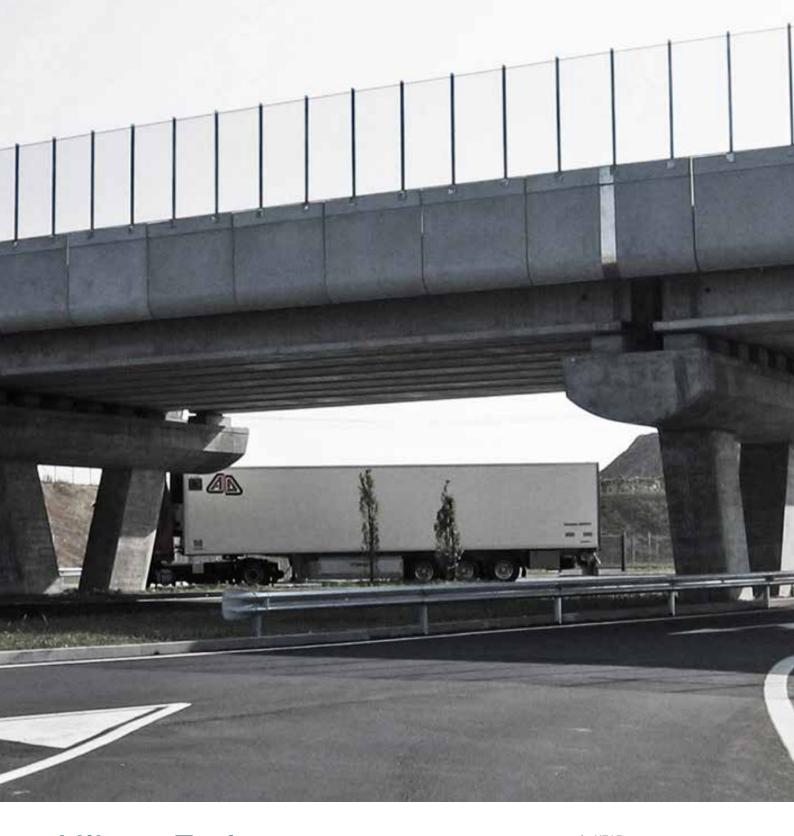
PROJECT VALUE:

€ - confidential

#### SERVICES:

First phase of the works for the realisation of the service tunnel

Assistance to supervision of works and safety coordination



### Milan - Turin High-speed rail











YEAR: 2001 - 2005

CLIENT: Fiat Engineering S.p.A.

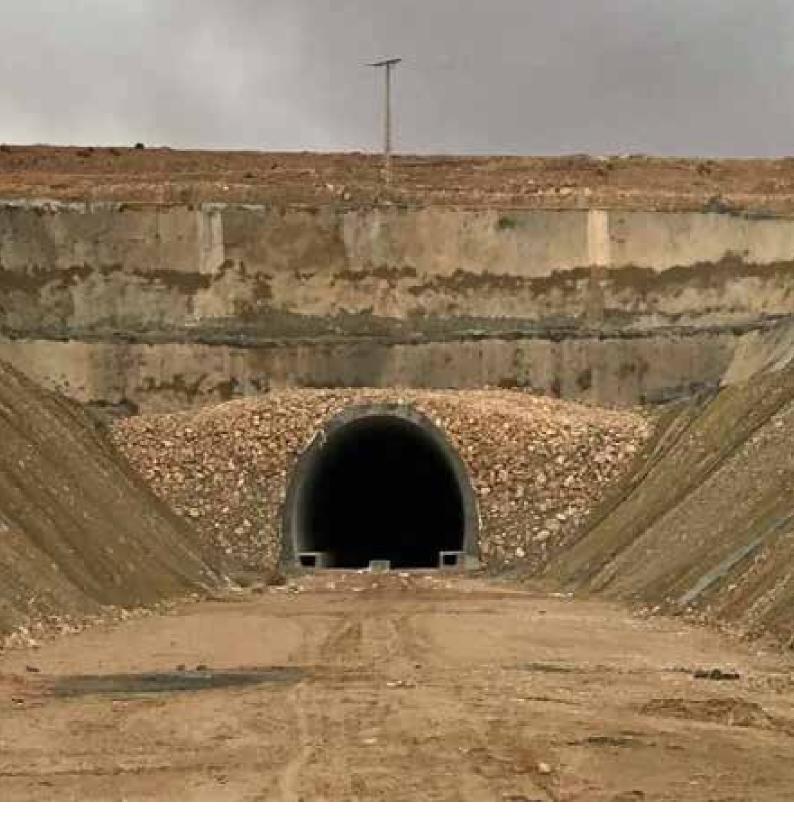
PROJECT VALUE: € 250 mln

SERVICES: Detailed design



Metro

Roads



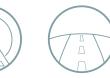
### Tunnel T3 Djelfa



Railways



Metro







YEAR: 2015 - 2017

CLIENT:

Cosider Travaux Publics

PROJECT VALUE: € - confidential

SERVICES:

Tunnel and external works Detailed design



# BBT Periadriatic fault Crossing tunnel



Railways







Roads



YEAR: 2011 - 2016

CLIENT:

BBT SE

PROJECT VALUE: € - confidential

SERVICES: Construction supervision



### Mürşitpınar - Şanlıurfa Conventional railway



Railways







Roads



YEAR: 2012 - 2018

CLIENT: TCDD

PROJECT VALUE: € - confidential

SERVICES: Preliminary design Final design Detailed design



# Cepav 2 High-speed rail













YEAR: 2014 - 2017

CLIENT: Cepav 2

PROJECT VALUE: € 125 mln (tunnel)

SERVICES:

Preliminary design

Railways

Metro



Gaziray Conventional railway in metro standards



Railways







Roads

YEAR: 2012 - 2017

CLIENT: TCDD

PROJECT VALUE:

€ - confidential

SERVICES:

Turkey

Preliminary design Final design Detailed design



### Rome - Florence Technological upgrade



Railways







Roads



YEAR: 2016 - ongoing

CLIENT: Ansaldo STS and Alpiq EnerTrans

PROJECT VALUE: € 124 mln

SERVICES: Detailed design



### South-East Railway Light rail train project



Railways









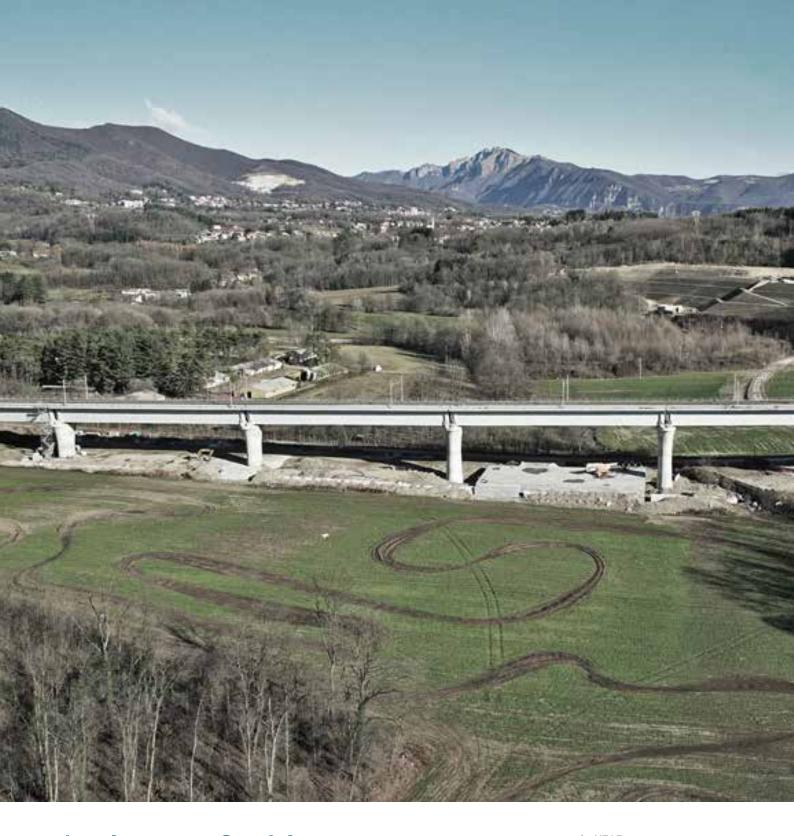
YEAR: 2014 - 2015

CLIENT

FSE (Ferrovie del Sud Est)

PROJECT VALUE: € 82 mln

SERVICES: Detailed design



### Arcisate - Stabio Conventional railway



Railways





Roads







YEAR: 2006 - 2008

CLIENT:

RFI (Rete Ferroviaria Italiana)

PROJECT VALUE: € 184 mln

SERVICES:

Preliminary design



### Turin - Padua Technological upgrade



Railways







Roads



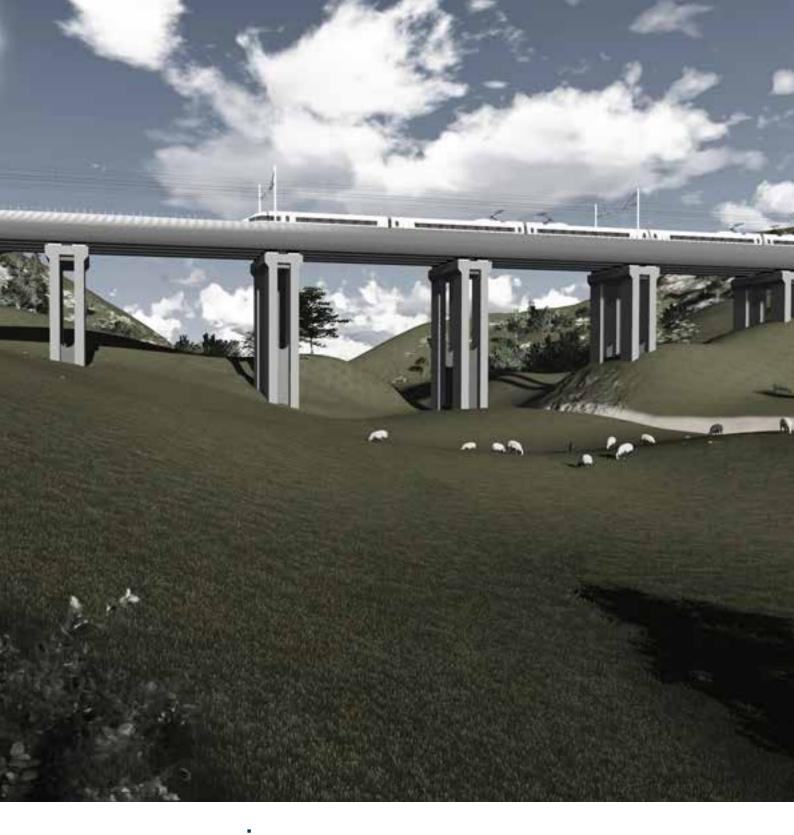
YEAR: 2011 - 2017

CLIENT:

Ansaldo, Coopsette and Salcef Group S.p.A.

PROJECT VALUE: € 71 mln (civil works)

SERVICES: Detailed design



### Adapazarı - İstanbul Northern pass high-speed railway







Metro



Roads



YEAR: 2011 - 2019

CLIENT: TCDD

PROJECT VALUE: € - confidential

SERVICES: Preliminary design Final design Detailed design



### Orte - Falconara Conventional railway



Railways



Metro







YEAR:

2004 - 2006

CLIENT:

Torno Internazionale S.p.A.

PROJECT VALUE: € 64 mln

SERVICES: Detailed design



## Toprakkale - Bahçe Conventional railway



Railways







Roads

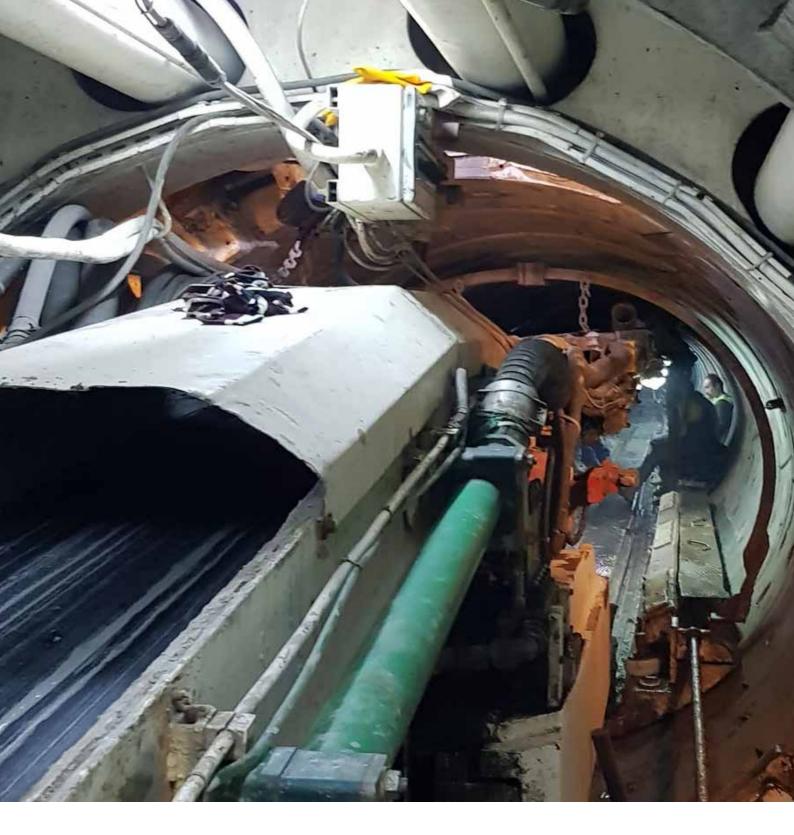


YEAR: 2012 - 2018

CLIENT: TCDD

PROJECT VALUE: € - confidential

SERVICES: Preliminary design Final design Detailed design



## Gebze - Sabiha Gökçen Airport Conventional railway



Railways







Roads

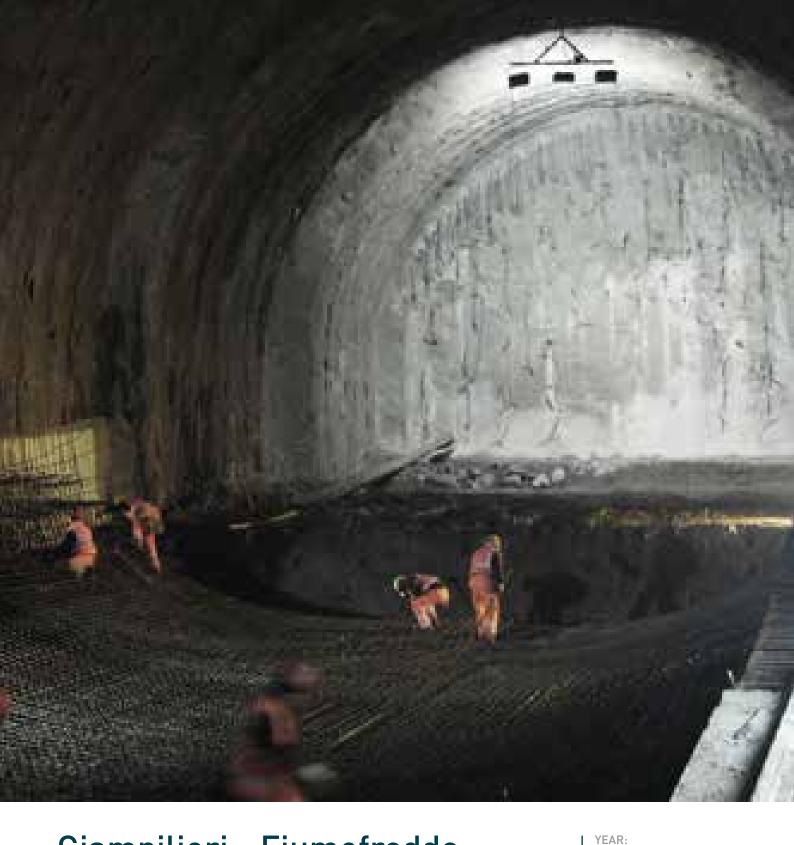


YEAR: 2017

CLIENT: TCDD

PROJECT VALUE: € - confidential

SERVICES: Final design



## Giampilieri - Fiumefreddo Underground station







Metro



Roads



2017

CLIENT: Italferr S.p.A.

PROJECT VALUE: € 48 mln

SERVICES: Preliminary design



## Monte Olimpino 2 Revamping



Railways







Metro Roads



YEAR: 2007 - 2010

CLIENT:

Impresa Luigi Notari

PROJECT VALUE: € 34 mln

SERVICES:

Preliminary design
Detailed design



# Adriatic Railway Upgrading



Railways





Metro

Roads



YEAR:

2017 - ongoing

#### CLIENT

RFI (Rete Ferroviaria Italiana)

#### PROJECT VALUE:

€ 25 mln

#### SERVICES:

Detailed design



## Trento - Malè Light rail train project



Railways







Roads



YEAR:

2010 - ongoing

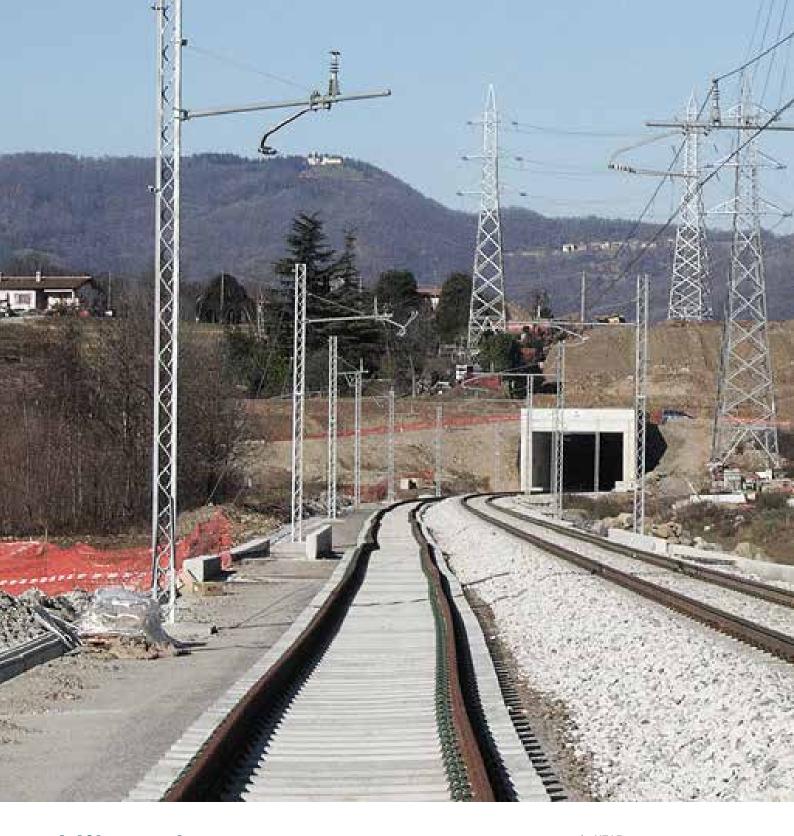
CLIENT:

Provincia Autonoma di Trento

PROJECT VALUE: € 15 mln

SERVICES:

Preliminary design
Detailed design



# Milan - Lecco Conventional railway











YEAR: 2002 - 2003

CLIENT:

RFI (Rete Ferroviaria Italiana)

PROJECT VALUE: € 150 mln

SERVICES: Detailed design

Railways

Metro



# Genoa - Ventimiglia Conventional railway



Railways







Metro

Roads



YEAR: 2005 - 2006

CLIENT: Italferr S.p.A.

PROJECT VALUE:

€ - confidential

SERVICES: Geotechnical consultancy



# Naples - Bari High-speed rail



Railways







Roads



YEAR: 2016 - 2017

CLIENT: Italferr S.p.A.

#### PROJECT VALUE:

€ - confidential

#### SERVICES:

Basic design for the main designer Italferr S.p.A.



## Turin - Genoa Railway line speed upgrade









Railways

Metro

Roads

YEAR:

2018 - ongoing

CLIENT

RFI (Rete Ferroviaria Italiana)

PROJECT VALUE:

€ - confidential

SERVICES:

Detailed design
Value engineering



## Cefalù underground station







Metro



Roads



YEAR:

2011- ongoing

CLIENT: Italferr S.p.A.

#### PROJECT VALUE:

€ - confidential

#### SERVICES:

Geotechnical consultancy



## Cefalù tunnel







Metro



Roads



YEAR: 2010 - 2012

CLIENT: Italferr S.p.A.

PROJECT VALUE: € - confidential

SERVICES:

Specialized support to final design



## Nusaybin - Cizre - Habur Conventional railway



Railways







Roads



YEAR: 2012 - 2019

CLIENT: TDCC

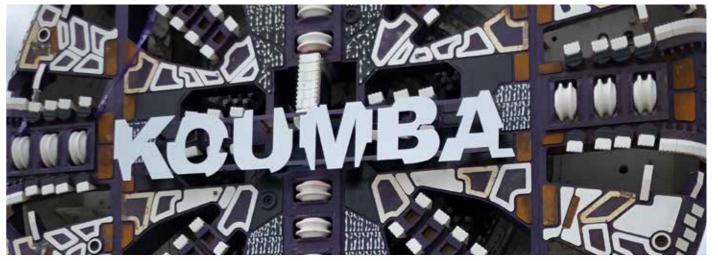
PROJECT VALUE: € - confidential

SERVICES: Preliminary design Final design Detailed design

## Metro

SYSTRA SWS
is strongly
committed to
delivering a 360°
design service for
Mass Rapid Transit
in urban areas

Our expertise covers different technical areas such as alignment and general design, structural and geotechnical design of tunnels and associated civil works, settlement analysis and monitoring, MEPs, stations and temporary works design.











## **Grand Paris Express** Line 14 lot 4







Metro



Roads

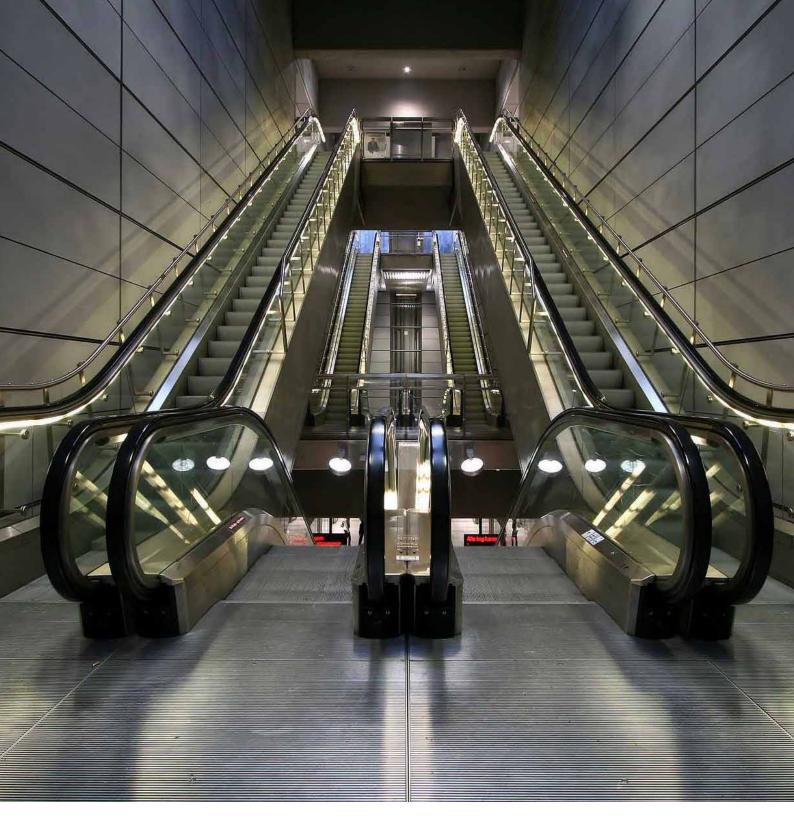


YEAR: 2018 - ongoing

CLIENT: RATP Group

PROJECT VALUE: € 400 mln

SERVICES: Detailed design



## Copenhagen metro Metro line









Metro

Roads



YEAR:

2011 - 2017

CLIENT:

CMT Copenhagen Metro

PROJECT VALUE:

€ 1500 mln

SERVICES:

Detailed design

BIM modeling

Value engineering

Construction management



## **Toronto Metrolinx** Cross passage propping system



Railways









YEAR: 2015

CLIENT: Obayashi USA

PROJECT VALUE: € - confidential

SERVICES: Detailed design review Value engineering Structural and ground improvement design SEM design



## Grand Paris Express Line 16 lot 2



Railways





Metro



Roads



YEAR:

2019 - ongoing

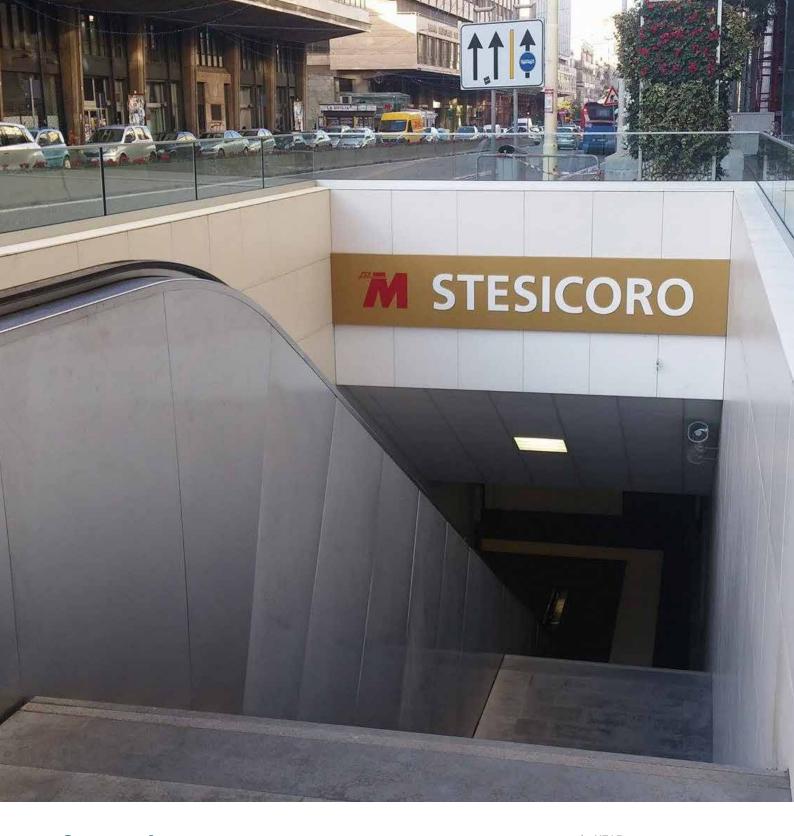
CLIENT:

Salini Impregilo (Webuild S.p.A.) and NGE

PROJECT VALUE: € 720 mln

SERVICES:

Independent check



## Catania metro Stesicoro metro station











YEAR:

2015 - 2016

CLIENT:

CMC di Ravenna

PROJECT VALUE:

€ 133 mln

SERVICES:

Detailed design

Tender assistance during construction

Railways

Metro



## Grand Paris Express Line 15 lot T2A



Railways









YEAR:

2019 - ongoing

CLIENT:

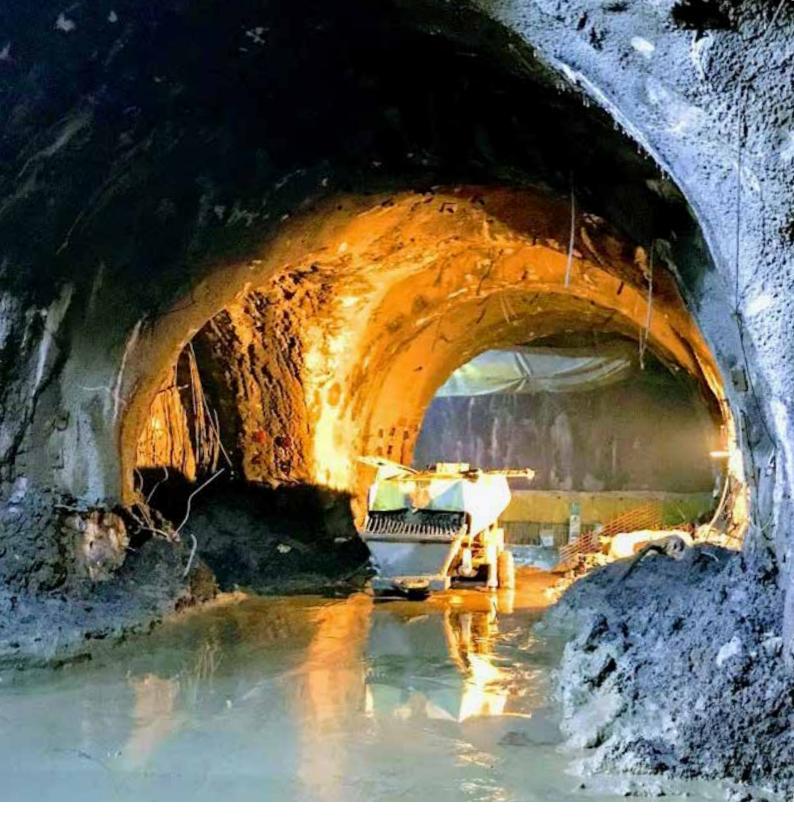
Horizon Engineering S.p.A.

PROJECT VALUE:

€ - confidential

SERVICES:

Detailed design



## F. Altay - Narlidere - Kaymakamlik Metro line



Railways







Roads



YEAR: 2018 - ongoing

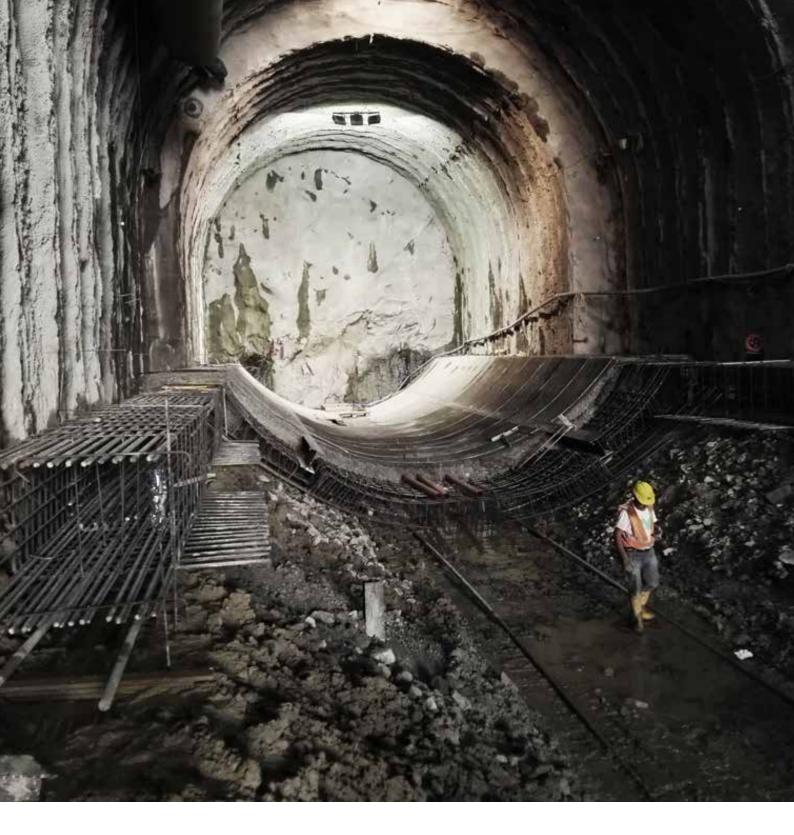
İzmir Municipality, Gülermak and Prota Engineering Ltd

#### PROJECT VALUE:

€ - confidential

#### SERVICES:

TBM & NATM Tunnel designs including stations



## Catania metro Nesima metro station



Railways







Roads



YEAR: 2015 - 2016

CLIENT:

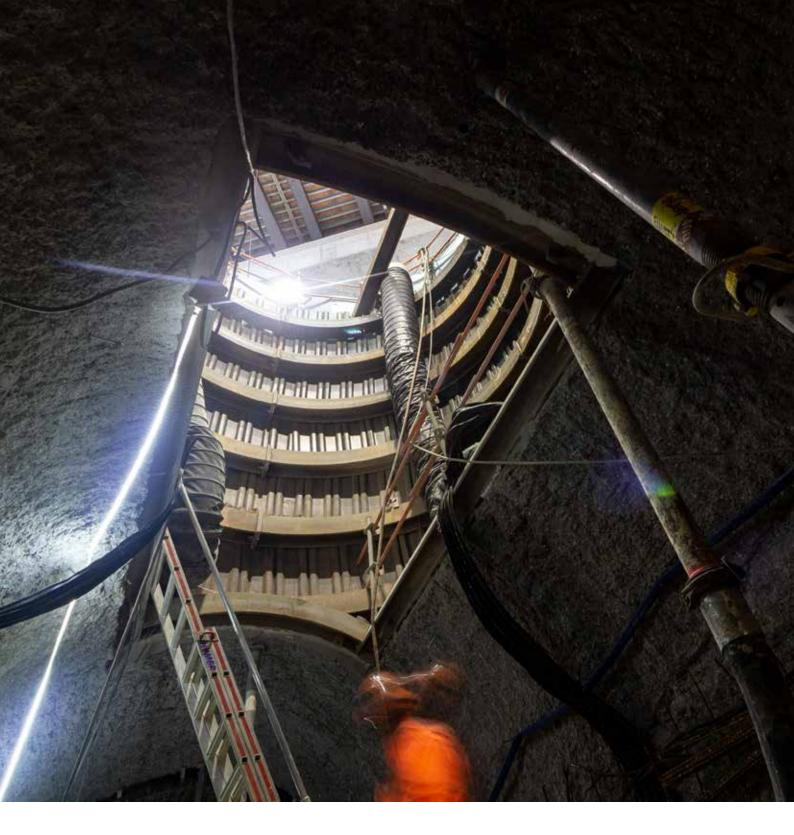
CMC di Ravenna

PROJECT VALUE: € 75 mln

SERVICES:

Detailed design

Tender assistance during construction



## Grand Paris Express Line 15 lot T3B



Railways





Metro



Roads



YEAR: 2018

CLIENT:

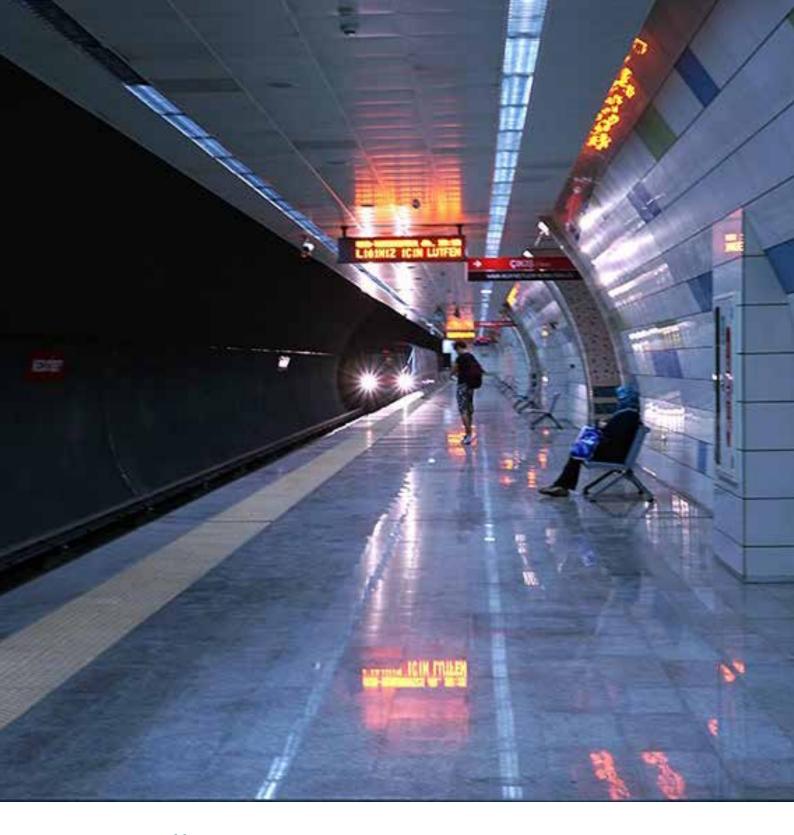
Horizon Engineering S.p.A.

PROJECT VALUE:

€ - confidential

SERVICES:

Detailed design



## Esenboğa - Kuyubaşı Metro line







Metro



Roads



YEAR: 2016

#### CLIENT:

AYGM and Italferr S.p.A.

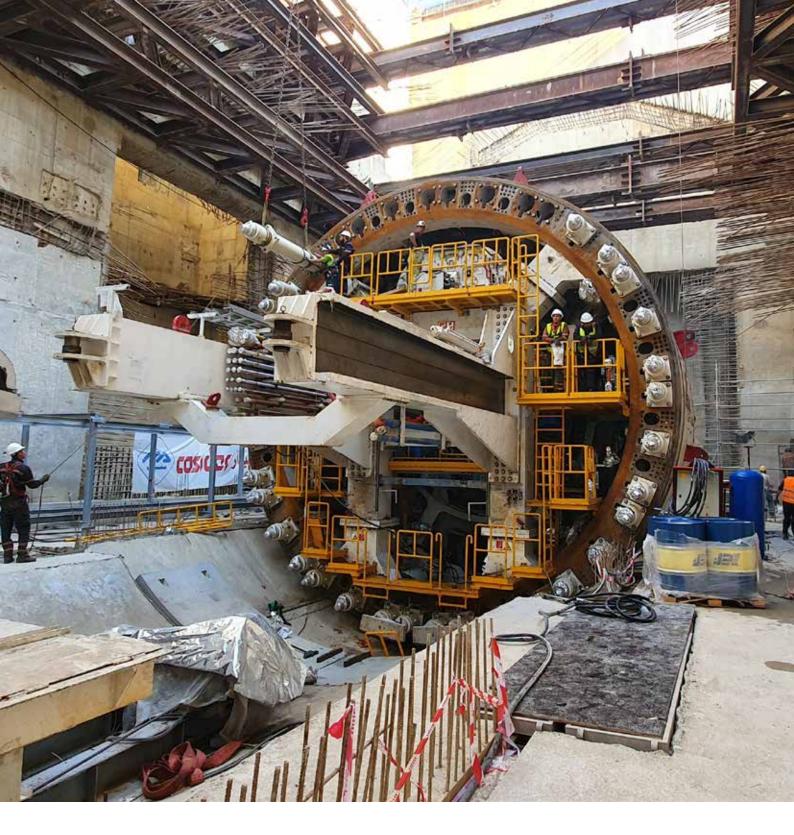
### PROJECT VALUE:

€ - confidential

#### SERVICES:

Tunnel design

Geotechnical services



## Algiers metro Metro extension



Railways



Metro







YEAR:

2019 - ongoing

CLIENT: Seli Overseas S.p.A.

PROJECT VALUE:

€ 60 mln

SERVICES:

Site assistance for mechanical excavation



### Rome metro Metro line C









Roads



YEAR: 2008

CLIENT:

Comune di Roma

PROJECT VALUE: € 7 mln

SERVICES:

Geotechnical consultancy



## Grand Paris Express Line 14 lot 1



Railways











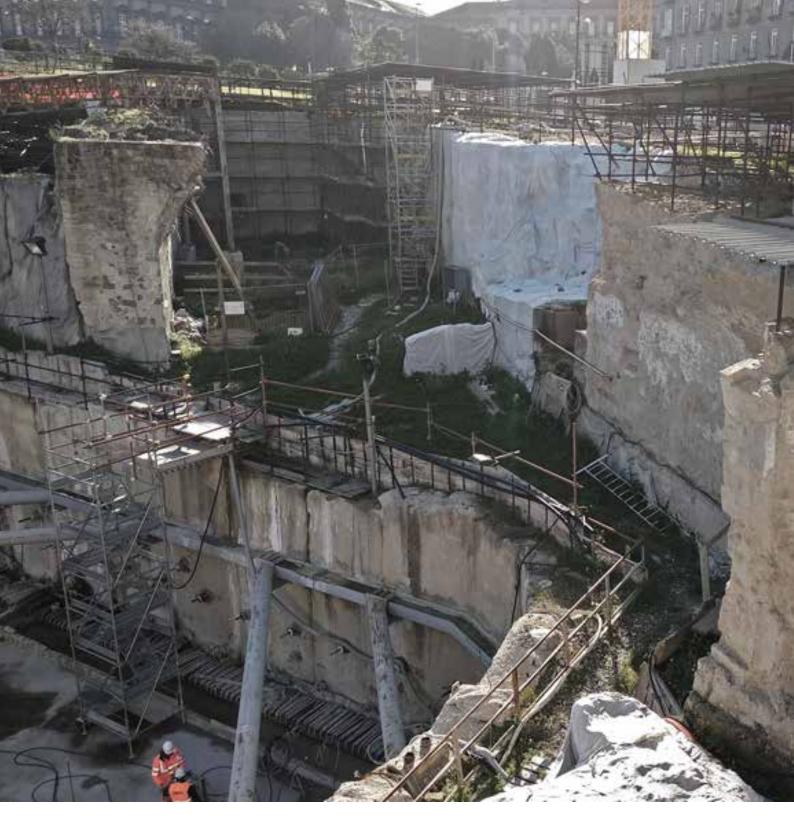
YEAR: 2018

CLIENT:

Léon Grosse and Soletanche-Bachy

PROJECT VALUE: € - confidential

SERVICES: Detailed design



## Naples metro Metro line



Railways









Roads



YEAR: 2017 - 2018

CLIENT: Trevi Group

PROJECT VALUE: € - confidential

SERVICES:

Geotechnical consultancy



## Sofia metro Metro line







Metro



Roads



YEAR:

2014 - 2015

#### CLIENT:

Grandi Lavori Fincosit S.p.A. Seli Overseas S.p.A. and HSS Group Inc.

### PROJECT VALUE:

€ - confidential

#### SERVICES:

Tender design



### Gebze - Darıca Metro line



Railways







Roads



### YEAR:

2018 - ongoing

#### CLIENT:

Kocaeli Municipality Metgün-Eze and Prota Engineering Ltd

### PROJECT VALUE:

€ - confidential

#### SERVICES:

TBM & NATM Tunnel designs including stations



## Greater Cairo metro Metro line 4











Railways

Metro

Roads

YEAR: 2018

CLIENT:

**Bouygues Construction** 

PROJECT VALUE:

€ - confidential

SERVICES:

Tender design



## Grand Paris Express Line 16 lot 1-3



Railways







Roads



YEAR: 2017

CLIENT:

Salini Impregilo (Webuild S.p.A.)

PROJECT VALUE:

€ - confidential

SERVICES:

Tender design



## Mersin Gar - Mezitli Metro line









Roads



YEAR: 2018

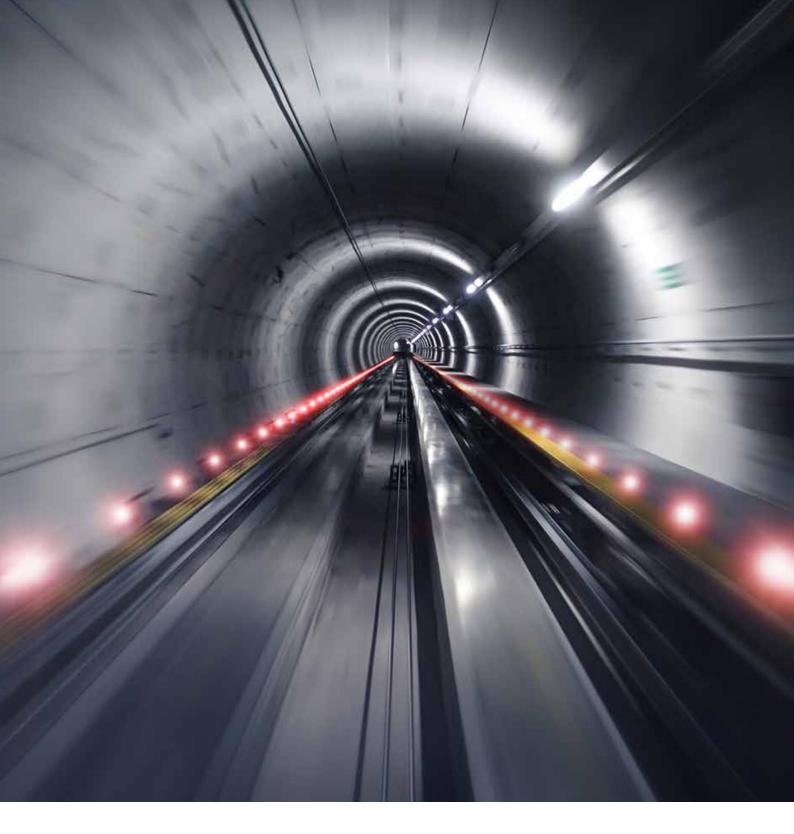
CLIENT:

Mersin Municipality and Prota Engineering Ltd

PROJECT VALUE: € - confidential

SERVICES:

Datailed design



## Grand Paris Express Line 18 lot 3



Railways







Roads



YEAR: 2017

CLIENT: Vinci Construction

PROJECT VALUE: € - confidential

SERVICES: Tender design



## Singapore metro Metro line



Railways



Metro



Roads



Singapore

CMC di Ravenna

PROJECT VALUE: € - confidential

SERVICES:

CLIENT:

SERVICES: Tender design



### Grand Paris Express Line 15 lot T3A



Railways







Roads



YEAR: 2016 - 2017

CLIENT: Salini Impregilo (Webuild S.p.A.)

PROJECT VALUE: € - confidential

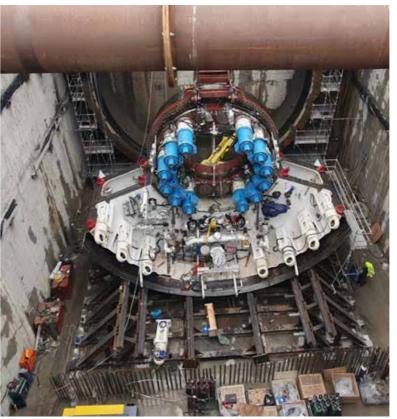
SERVICES: Tender design

#### Roads

We manage a wide variety of projects, from the simplest to the most complex highway and road interchanges

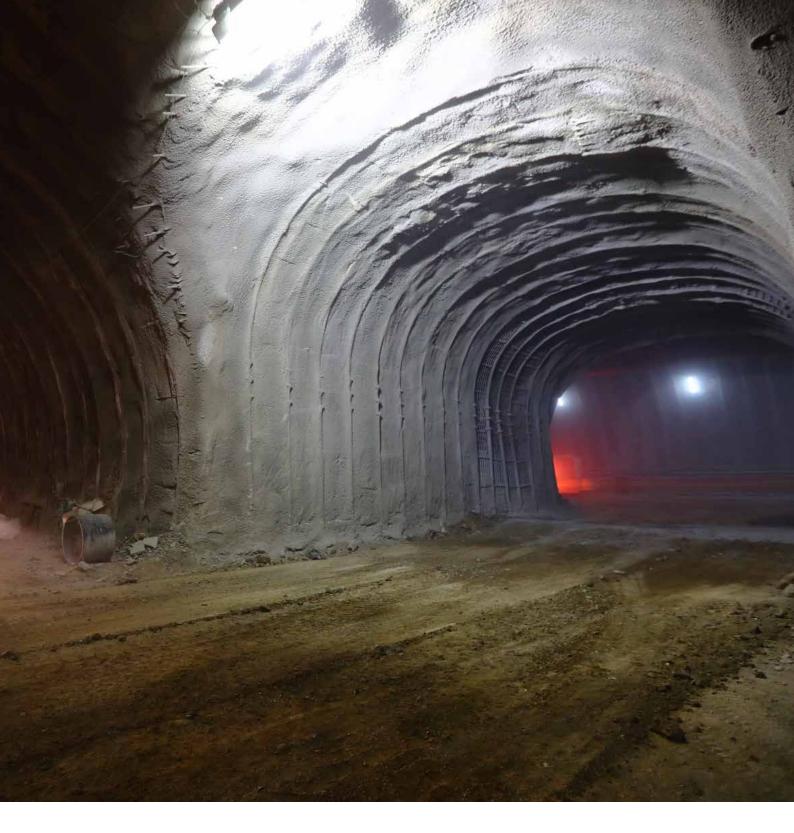
Our expertise covers different technical areas such as alignment and general design, structural and geotechnical design of civil works, roadworks, earthworks and drainage, MEPs, environmental criteria.











#### Israel road 6









etro Ro



YEAR:

2014 - 2016

CLIENT:

Impresa Pizzarotti & C. S.p.A. and Shapir Eng & Industry

PROJECT VALUE: € 375 mln

SERVICES:

Preliminary design
Detailed design



### Frejus new tunnel









Metro



Roads



YEAR: 2008 - ongoing

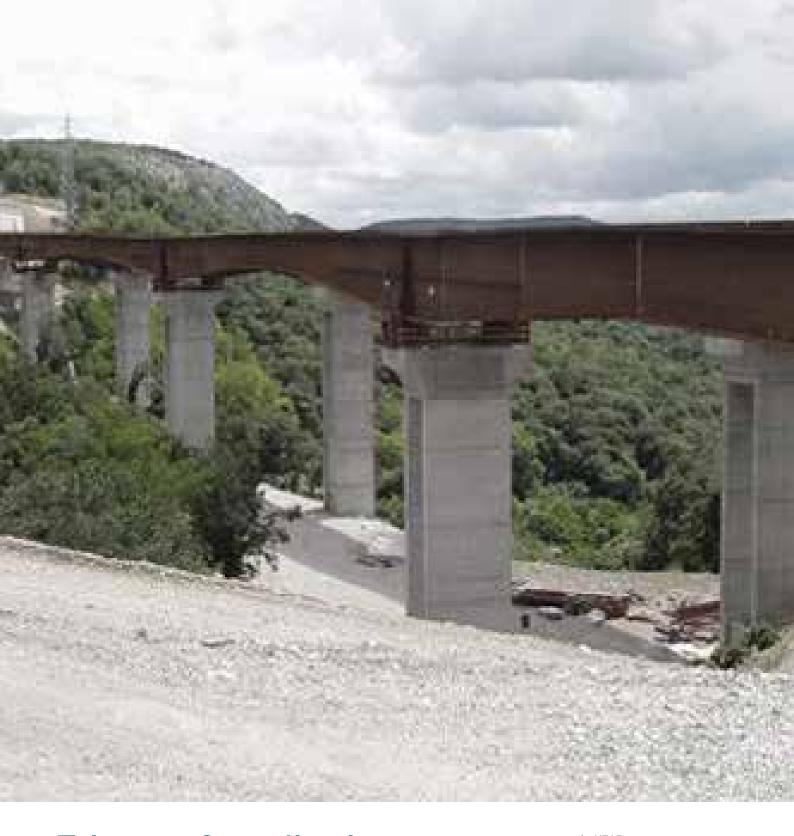
CLIENT: SFTRF and SITAF

PROJECT VALUE:

€ 350 mln

SERVICES:

Construction management



### Trieste - Capodistria Freeway







Metro



Roads



YEAR: 2005 - 2008

CLIENT:

Municipality of Trieste

PROJECT VALUE: € 321 mln

SERVICES: Load testing



## S52 Expressway Two-way express road











YEAR:

2020 - ongoing

#### CLIENT:

GDDKiA

(General Directorate for National Roads and Motorways)

#### PROJECT VALUE:

€ 320 mln

#### SERVICES:

Geotechnical and structural construction design of the cut&cover tunnels T04 and T14

Railways

Metro



### A14 Bologna - Taranto Highway







Metro



Roads



YEAR: 2012 - 2017

CLIENT: Ghella S.p.A.

PROJECT VALUE:

€ 296 mln

SERVICES:
Preliminary design
Detailed design
Support on-site during construction



### Palermo - Lercara Revamping







Metro



Roads



YEAR: 2009 - 2013

CLIENT: Bolognetta

PROJECT VALUE: € 193 mln

SERVICES: Detailed design



### Cispadana Highway









Roads



YEAR: 2012 - 2013

CLIENT: Consorzio ARCCOS

PROJECT VALUE: € 184 mln

SERVICES: Detailed design



## SS 554 Cagliaritana



Railways



Metro



Roads

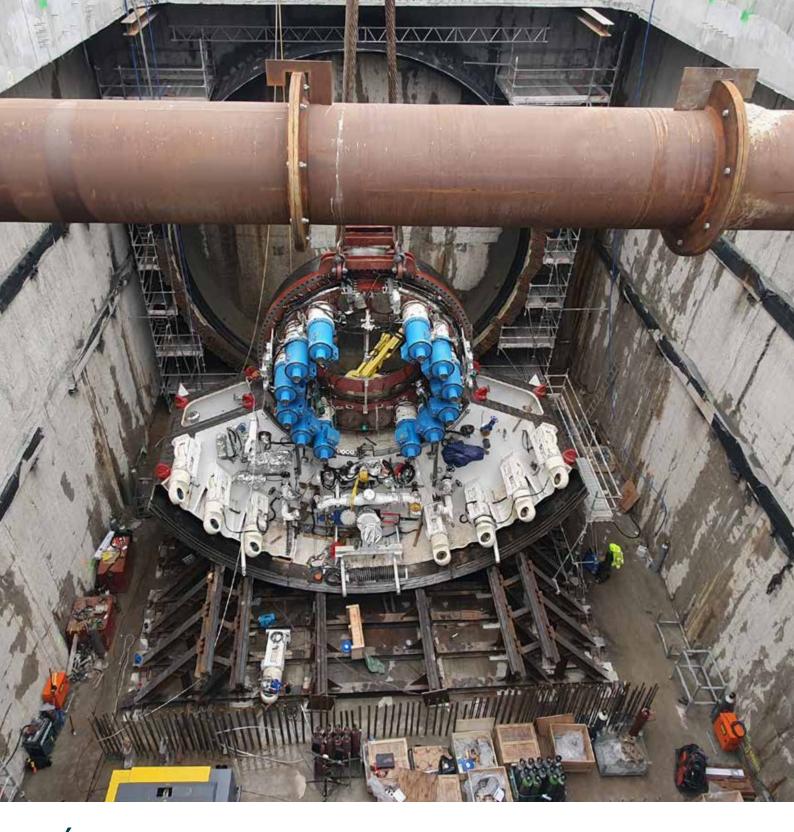


YEAR: 2016

CLIENT: Astaldi S.p.A.

PROJECT VALUE: € 154 mln

SERVICES: Tender final design



### Świnoujście tunnel Tunnel under the Świna river



Railways





Metro







YEAR:

2018 - ongoing

CLIENT:

TSC

PROJECT VALUE: € 150 mln

SERVICES:

Final design
Execution design
Tunnelling supervision



# Campogalliano - Sassuolo Highway







Metro



Roads



YEAR: 2012

CLIENT: Impresa Pizzarotti & C. S.p.A.

PROJECT VALUE: € 137 mln

SERVICES:



### **Tirano** Road bypass









Metro



Roads



YEAR: 2009 - 2010

#### CLIENT:

Municipality of Sondrio

#### PROJECT VALUE:

€ 94 mln

#### SERVICES:

Preliminary design EIA (Environmental Impact Assessment)



### SS 195 Sulcitana







Metro



Roads



YEAR: 2009 - 2011

CLIENT:

Grandi Lavori Fincosit S.p.A.

PROJECT VALUE:

€ 88 mln

SERVICES:



## Tunnel T1 Djebel El Ouahch Collapsed tunnel restoration











#### YEAR:

2017 - ongoing

#### CLIENT

Cosider Travaux Publics (Division Ouvrages Travaux Speciaux)

#### PROJECT VALUE:

€ 56 mln

#### SERVICES:

Expertise Additional investigations

Executive design

Technical assistance and monitoring

Railways

Metro



### **A4** Highway







Metro



Roads



YEAR: 2016 - 2017

CLIENT: CMB, CCC and CGS

PROJECT VALUE: € 54 mln

SERVICES: Detailed design



### SS 125 Orientale Sarda







Metro



Roads



YEAR: 2017 - ongoing

CLIENT: Oberosler

PROJECT VALUE: € 49 mln

SERVICES:

SERVICES: Final design



## Martignano road tunnel







Metro



Roads



YEAR: 2001 - 2002

CLIENT:

Provincia Autonoma di Trento

PROJECT VALUE: € 47 mln

SERVICES: Detailed design



#### SS 237 del Caffaro







Roads



YEAR: 2009

CLIENT:

Provincia Autonoma di Trento

PROJECT VALUE: € 36 mln

SERVICES:

Preliminary design

Railways

Metro



# Battipaglia Road interchange



Railways







Roads

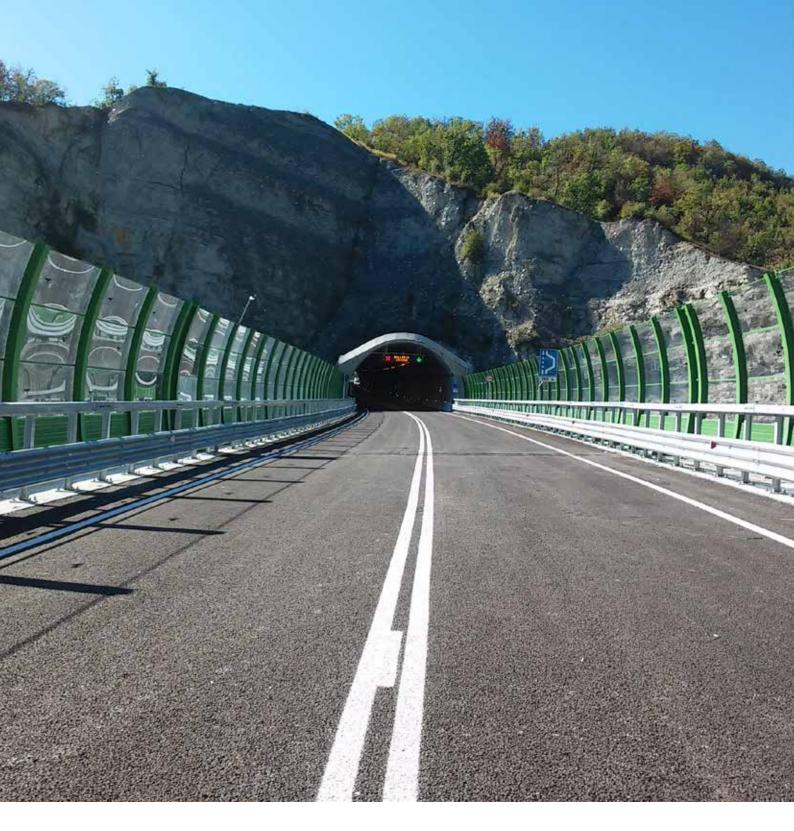


YEAR: 2008 - 2009

CLIENT: Tecnis S.p.A.

PROJECT VALUE: € 32 mln

SERVICES: Detailed design



#### SS 63 Valico del Cerreto



Railways



Metro







YEAR: 2011 - 2013

CLIENT: CCC. Bologna

PROJECT VALUE: € 31 mln

SERVICES:



#### Civezzano Road bypass







Metro



Roads



YEAR: 2008 - 2009

CLIENT: Adige Bitumi Impresa

#### PROJECT VALUE:

€ 25 mln

#### SERVICES:



## Tehran - Shomal Highway











YEAR: 2016 - 2017

CLIENT:

Tehran Shomal Freeway Co.

PROJECT VALUE:

€ - confidential

SERVICES:

Environmental design Architectural design

Railways

Metro

Roads



### **East-West Highway**







Roads



YEAR: 2016 - 2017

#### CLIENT:

Cosider Travaux Publics (Division Travaux Infrastructures)

#### PROJECT VALUE:

€ - confidential

#### SERVICES:

Final design

Technical assistance

Railways

Metro



### Santa Lucia Road bypass







Metro



Roads



YEAR: 2011 - 2016

CLIENT: Municipality of Sondrio

PROJECT VALUE: € 22 mln

SERVICES:

Construction management



### A1 Highway Overpasses







Metro



Roads



YEAR: 2006

CLIENT:

SPEA Ingegneria Europea

PROJECT VALUE:

€ - confidential

SERVICES:

Structural consultancy



### Caderzone Road bypass







Metro



Roads



YEAR:

1999 - 2007

#### CLIENT:

Provincia Autonoma di Trento

#### PROJECT VALUE:

€ 17 mln

#### SERVICES:



### Herøysund bridge





Railways



Metro



Roads



YEAR:

2021 - ongoing

CLIENT: Nordland Fylkeskommune

PROJECT VALUE: € 22 mln

SERVICES:

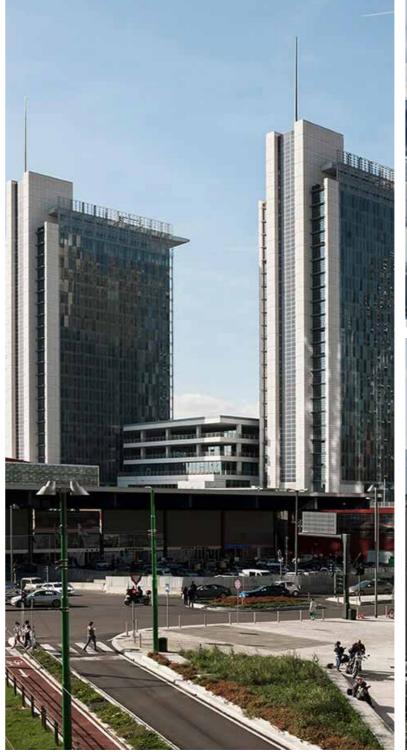
Geotechnical design consultancy



### **Buildings**

Our engineers have technical competence and functional sensitivity to help our Clients shaping their ambitious projects SYSTRA SWS expertise covers many different technical areas such as structural design, retrofitting, fire engineering, seismic engineering, performance-based design, MEPs, robustness analysis.











### Çapa & Cerrahpaşa Hospital & Campus



**Buildings** 



YEAR:

2014 - ongoing

CLIENT

Istanbul Üniversitesi Döner

PROJECT VALUE:

€ - confidential

SERVICES:



### Garibaldi Twin Towers



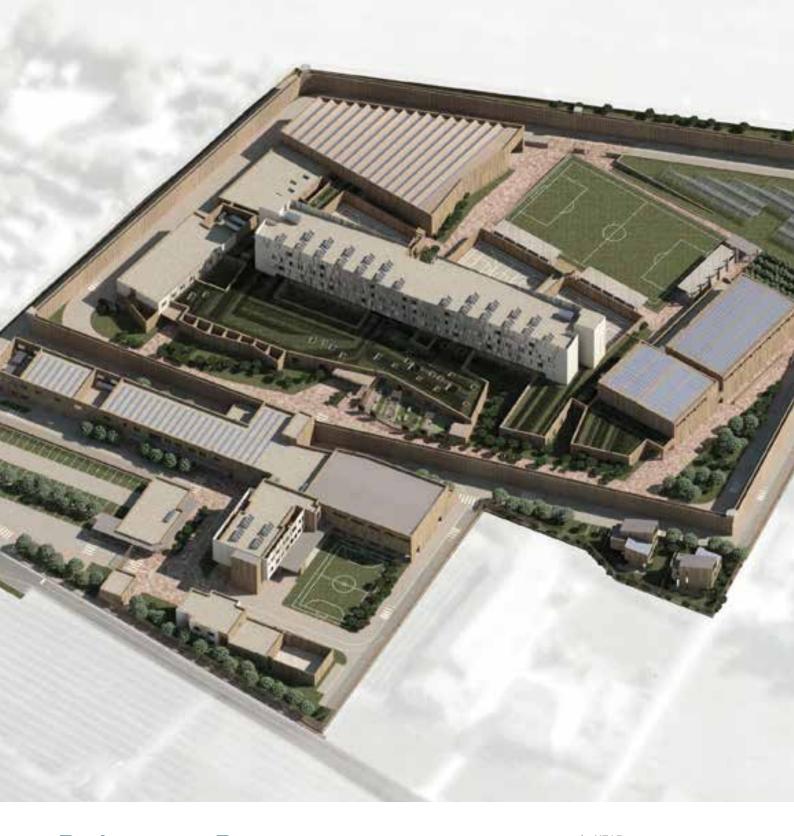


YEAR: 2009 - 2010

CLIENT: Beni Stabili S.p.A.

PROJECT VALUE: € 62 mln

SERVICES: Detailed design



### Bolzano - Bozen New prison





YEAR: 2017 - ongoing

CLIENT: Società Italiana per Condotte d'Acqua

PROJECT VALUE:

€ 54 mln

SERVICES:

Preliminary design



#### Ilva of Taranto Steel shelters





YEAR:

2018 - ongoing

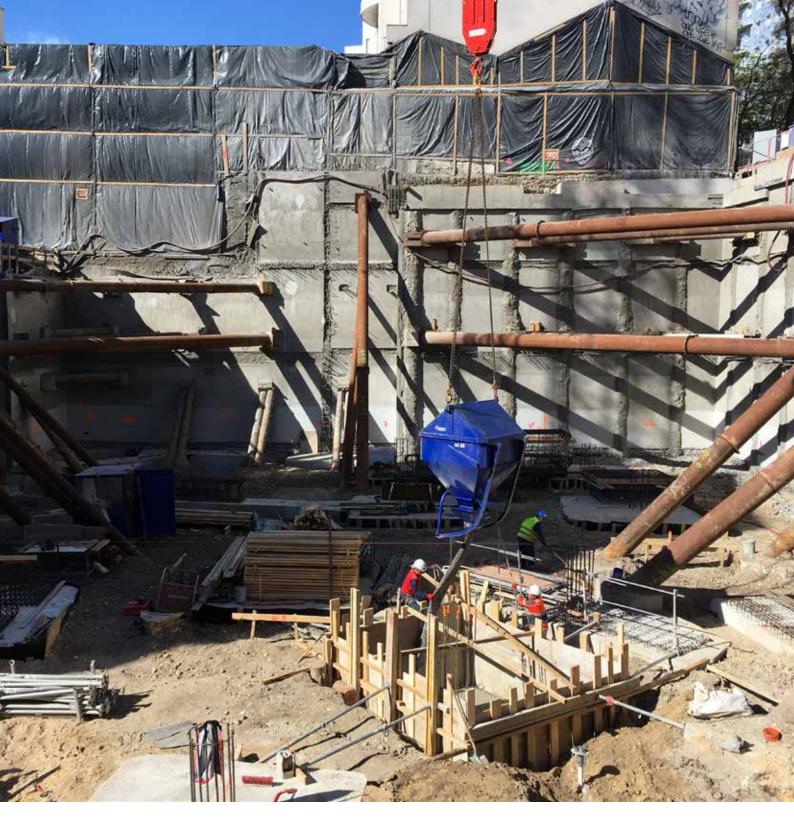
CLIENT:

ArcelorMittal S.A.

PROJECT VALUE: € 220 mln

SERVICES:

Construction management



### Residence Tolbiac Building over the metro line



**Buildings** 



YEAR: 2019

CLIENT:

Sicra

PROJECT VALUE:

€ - confidential

SERVICES:



### L'Aquila C.A.S.E. project Emergency houses



**Buildings** 



YEAR: 2009

CLIENT:

Ille Prefabbricati S.r.l.

PROJECT VALUE: € 22 mln

SERVICES:

Detailed design
MEP design
Construction management



### Trentino Trasporti Maintenance depot



**Buildings** 



YEAR:

2001 - ongoing

CLIENT:

Trentino trasporti S.p.A.

PROJECT VALUE: € 31 mln

SERVICES:

Preliminary design



### Borgo Valsugana Hospital



Buildings



YEAR: 2011

CLIENT: APSS Trento

PROJECT VALUE: € 14 mln

SERVICES: Preliminary design



#### **Arco Auditorium**





YEAR: 2007 - ongoing

CLIENT: Municipality of Arco

PROJECT VALUE: € 4 mln

SERVICES: Detailed design



### Mirandola primary school





YEAR: 2005 - 2007

CLIENT:

Municipality of Mirandola

PROJECT VALUE: € 7 mln

SERVICES: Detailed design



#### Belasi Castle Refurbishment





YEAR: 2004 - 2015

CLIENT:

Municipality of Campodenno

PROJECT VALUE: € 8 mln

SERVICES:

Preliminary design
Detailed design



#### Arpa of Ferrara Research center





YEAR: 2012

CLIENT:

Mario Cucinella Architects

PROJECT VALUE:

€8 mln

SERVICES:

Structural consultancy



### School of Quart Renovation & extension



**Buildings** 



YEAR: 2013 - 2019

CLIENT:

Municipality of Quart

PROJECT VALUE: € 6 mln

SERVICES: Preliminary design Detailed design Security coordination in design phase



#### Tassullo Headquarters





YEAR: 2003 - 2006

CLIENT: Impresa Tassullo

PROJECT VALUE:

PROJECT VALUE € 3 mln

SERVICES:

Complete design process



#### Mochovce nuclear plant





YEAR: 2013

CLIENT: Eni S.p.A.

PROJECT VALUE: € - confidential

SERVICES: Structural consultancy



### Mezzocorona winery





YEAR: 1995 - 2004

CLIENT: Nosio S.p.A.

PROJECT VALUE: € 73 mln

SERVICES:

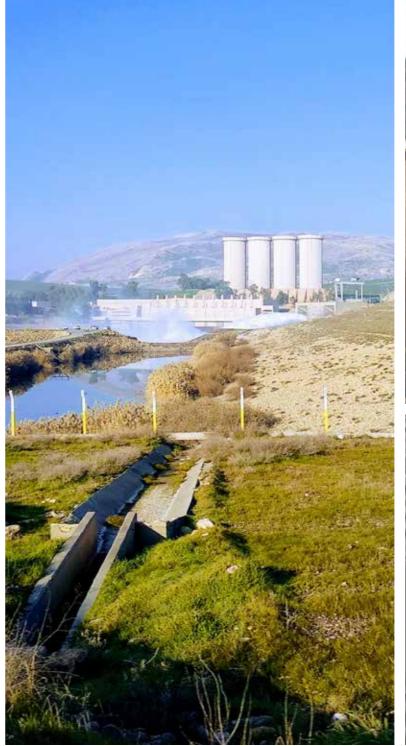
Complete design process



#### Water

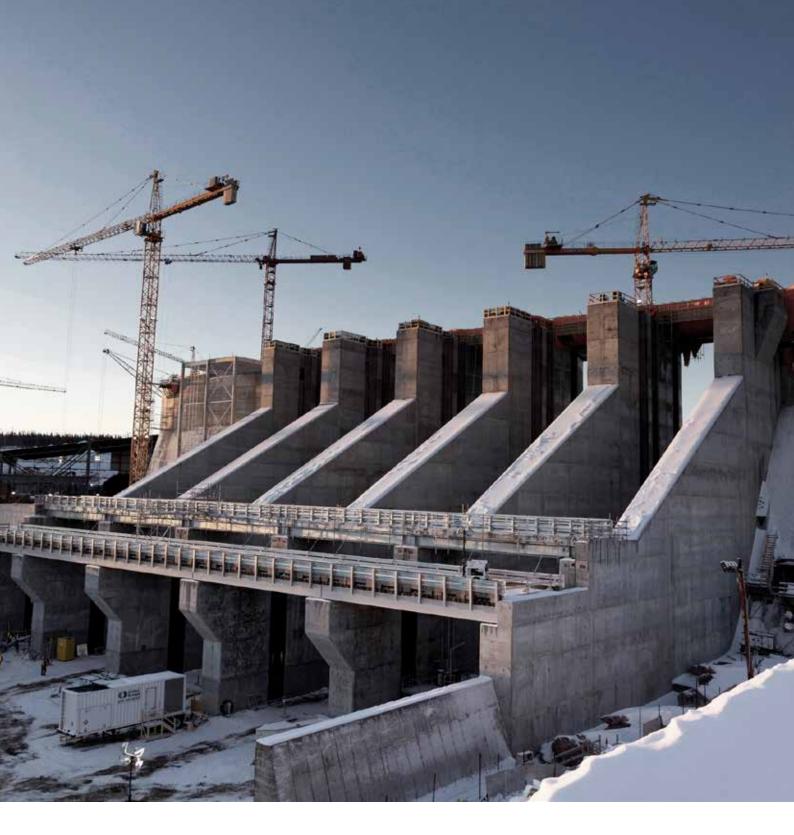
Since its foundation SYSTRA SWS has been developing advanced skills in the field of hydraulics studies and hydropower facilities The combination of quality and creative thinking allows our engineers to deliver a wide set of services, ranging from feasibility studies to detailed design and construction assistance.











#### Lower Churchill dam project New dam and powerhouse



Water



YEAR: 2014 - 2016

CLIENT:

Astaldi Canada Inc.

PROJECT VALUE: € 728 mln

SERVICES: Final design



#### Mosul dam **Existing dam**



Water





YEAR: 2016 - ongoing

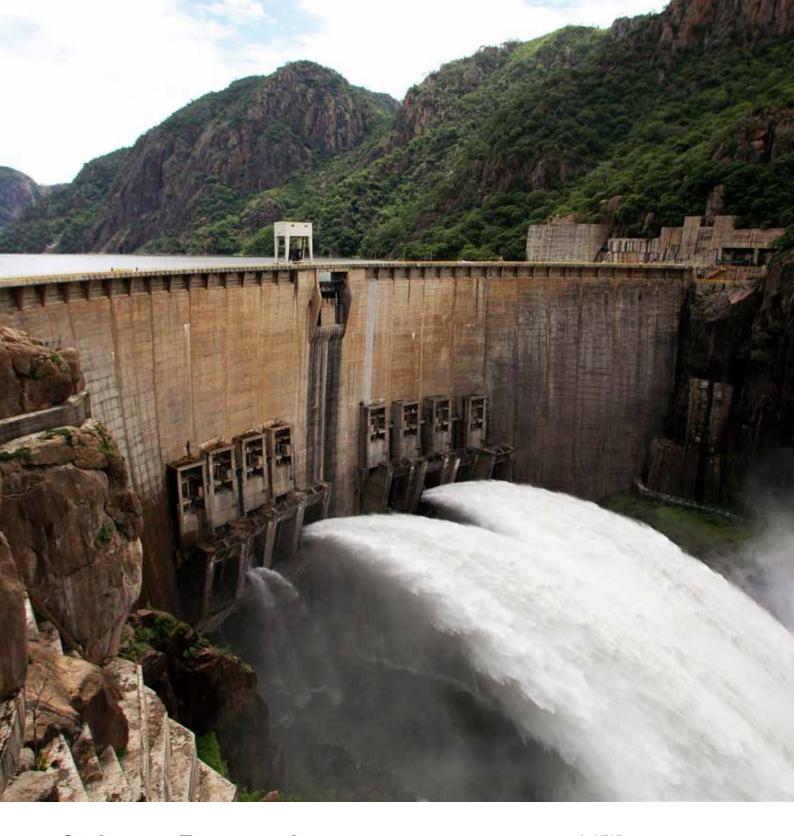
CLIENT: Trevi Group

#### PROJECT VALUE:

€ 273 mln

#### SERVICES:

Consolidation grouting management



#### Cahora Bassa dam **Existing dam**





YEAR: 2014 - 2016

CLIENT:

Golder Associates Mozambique

PROJECT VALUE: € - confidential

SERVICES:

Rockfall protection design



#### Gibe dam III **Existing dam**





YEAR: 2011 - 2017

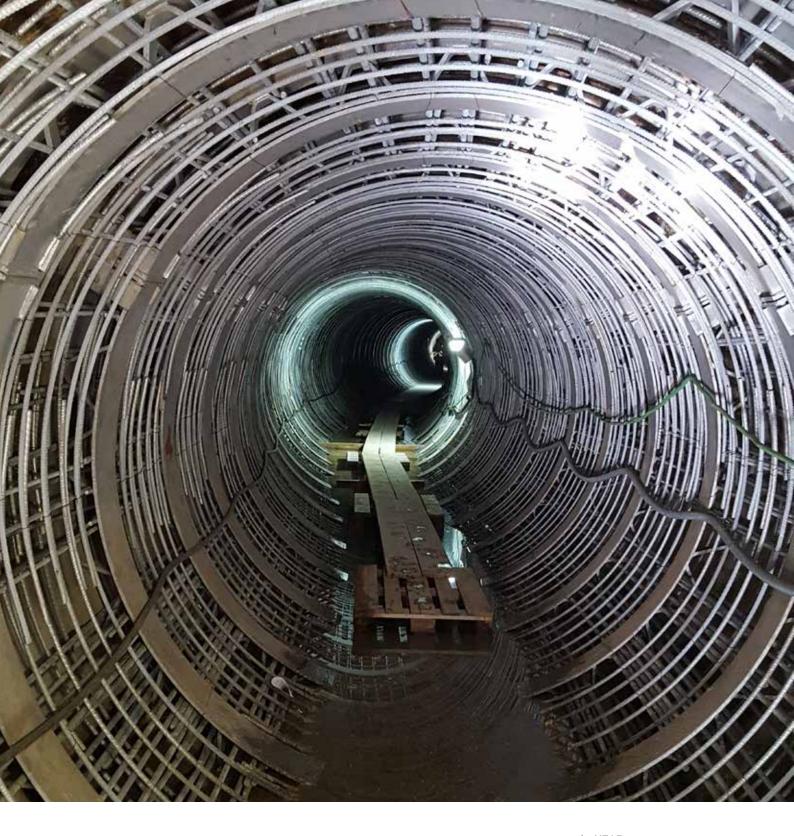
CLIENT: Salini Impregilo (Webuild S.p.A.)

PROJECT VALUE:

€ - confidential

SERVICES:

Monitoring system design



### Ilva of Taranto Existing hydraulic tunnel





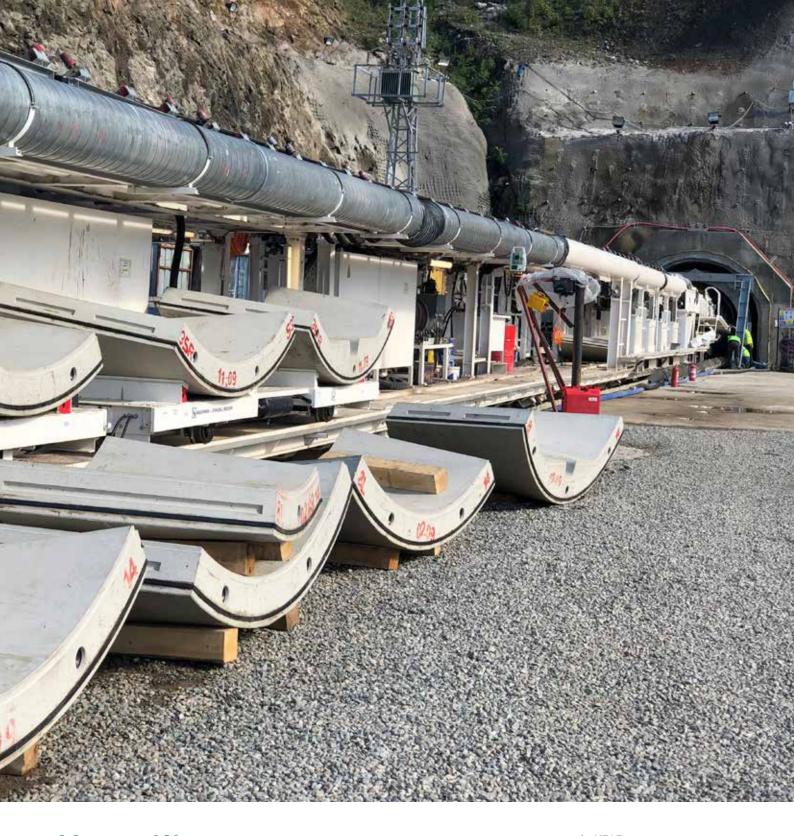
YEAR: 2017 - 2019

CLIENT: ArcelorMittal S.A.

PROJECT VALUE: € - confidential

SERVICES:

Work supervision



#### Kovanlik Hydroelectric power tunnel





YEAR: 2017 - 2019

CLIENT: Kovanlik A.Ş.

PROJECT VALUE: € - confidential

SERVICES: Detailed design

Final design Technical assitance during construction



#### Newark flood alleviation New hydraulic tunnel



Water

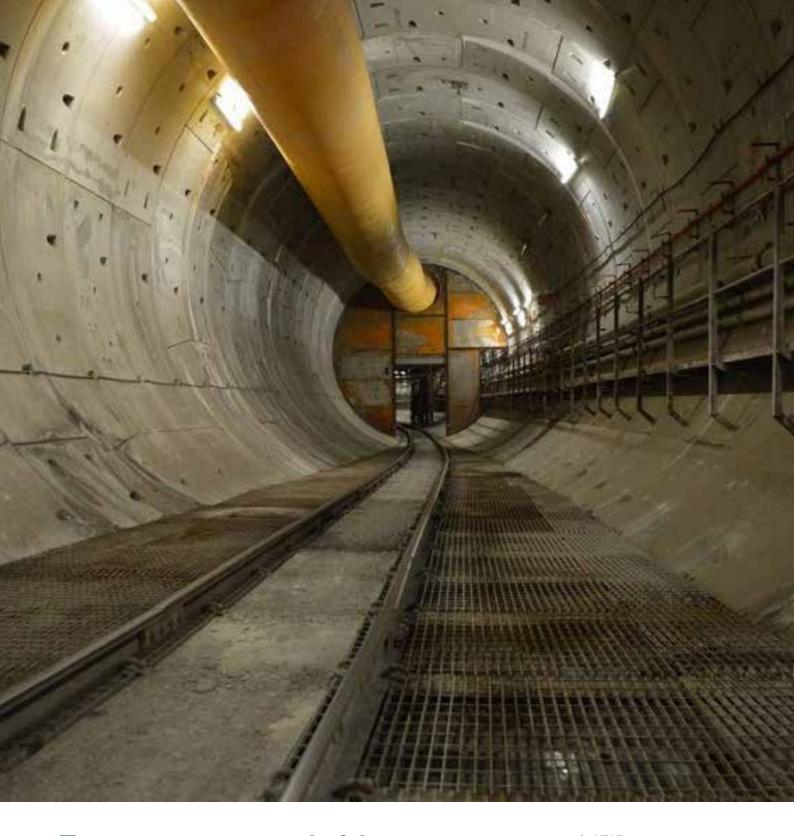


YEAR: 2016 - 2017

CLIENT: GHD Group Pty Ltd

PROJECT VALUE: € - confidential

SERVICES: Design check



## Frogmore tunnel tideway New hydraulic tunnel





YEAR: 2014 - 2019

CLIENT:

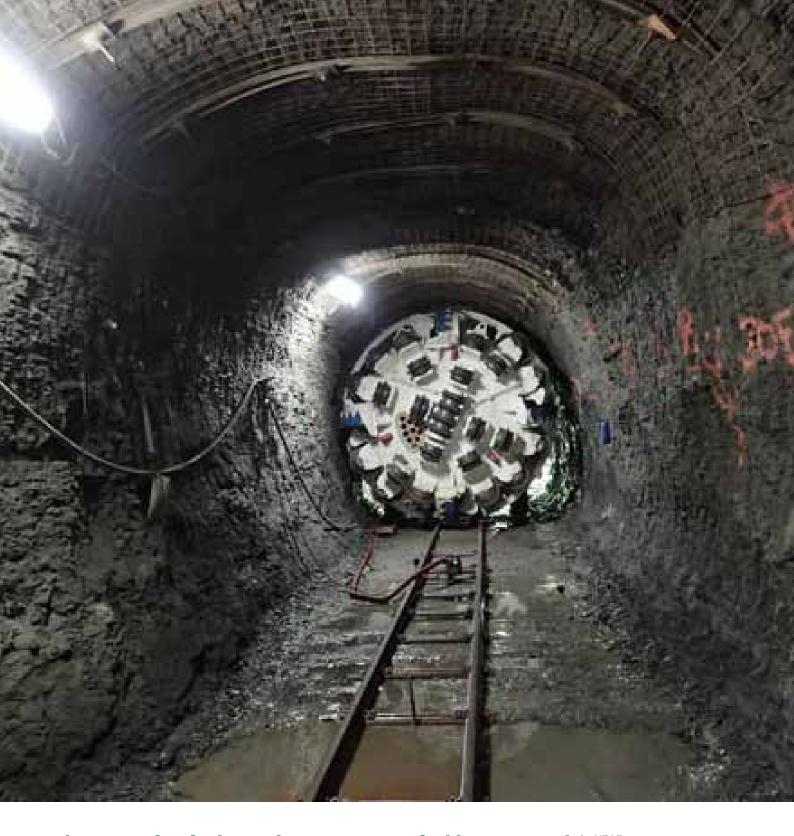
London Bridge Associates Ltd

PROJECT VALUE:

€ - confidential

SERVICES:

Construction activity support



### Annacis Island new outfall tunnel New hydraulic tunnel





YEAR: 2012 - 2018

CLIENT: STRABAG

SIKABAG

PROJECT VALUE: € - confidential

SERVICES:

Basic design during the tender phase



#### Forte Buso dam **Existing dam**







YEAR: 2013

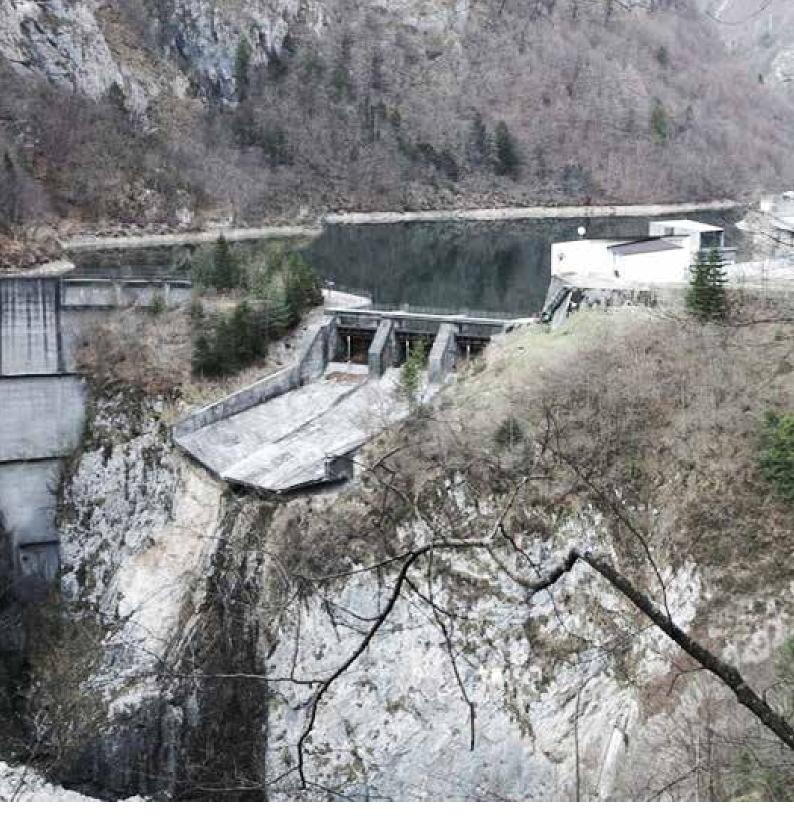
CLIENT:

Primiero Energia S.p.A.

PROJECT VALUE: € - confidential

SERVICES:

Structural consultancy



#### Val Shener dam **Existing dam**



Water



YEAR: 2013

CLIENT: Primiero Energia S.p.A.

PROJECT VALUE:

€ - confidential

SERVICES:

Structural consultancy



#### Valda dam New dam



Water



YEAR: 1983 - 1995

CLIENT:

Provincia Autonoma di Trento

PROJECT VALUE: € 151.000

SERVICES:

Detailed design



#### Crostolo dam **Existing dam**



Water



YEAR:

2019 - ongoing

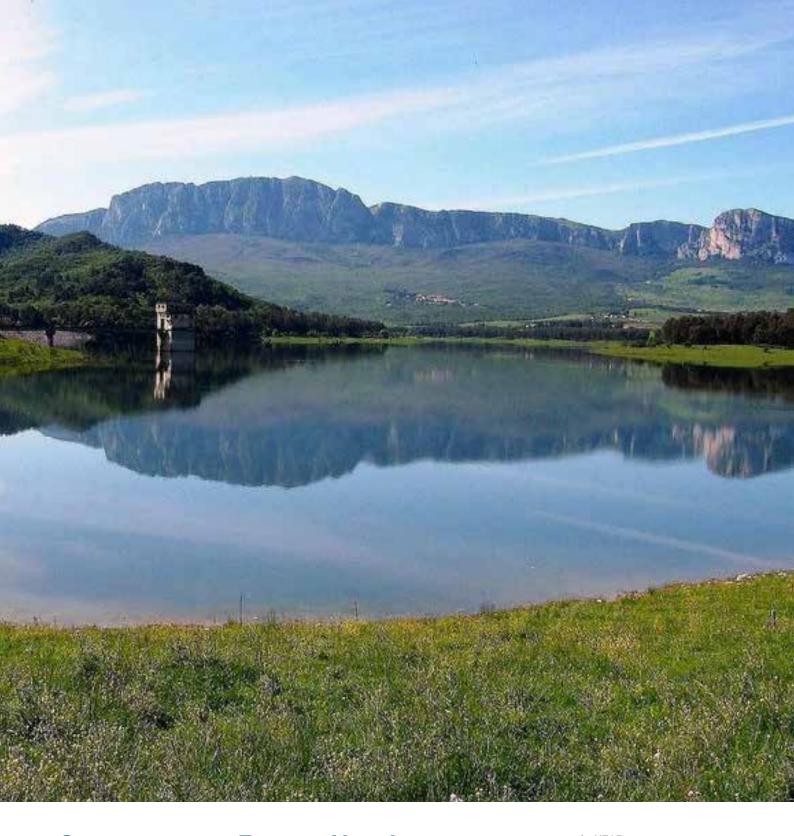
CLIENT: AIPo (Agenzia Interregionale per il Fiume Po)

PROJECT VALUE:

€4 mln

SERVICES:

Preliminary design Detailed design



#### Scanzano - Rossella dam Existing dam



Water



YEAR: 2020 - ongoing

CLIENT: Regione Sicilia

PROJECT VALUE: € 5 mln

SERVICES: Detailed design Final design



#### Paceco dam **Existing dam**



Water



YEAR: 2020 - ongoing

CLIENT: Regione Sicilia

PROJECT VALUE:

€3 mln

SERVICES:

Seismic analysis

Hydraulic management design



#### Comunelli dam Existing dam





YEAR: 2020 - ongoing

CLIENT: Regione Sicilia

PROJECT VALUE:

€ 4 mln

SERVICES: Seismic analysis Hydraulic management design



#### Grandi Derivazioni Lombarde Existing hydroelectric power



Water



YEAR:

2020 - ongoing

CLIENT

ARIA S.p.A., Regione Lombardia

PROJECT VALUE:

€ - confidential

SERVICES:

Hydroelectric power site visits and BOQ Asset evaluation



## Brenta hydroelectric plant Captation and adduction pipe



Water



YEAR:

2009 - 2012

CLIENT: Proming S.r.l.

PROJECT VALUE:

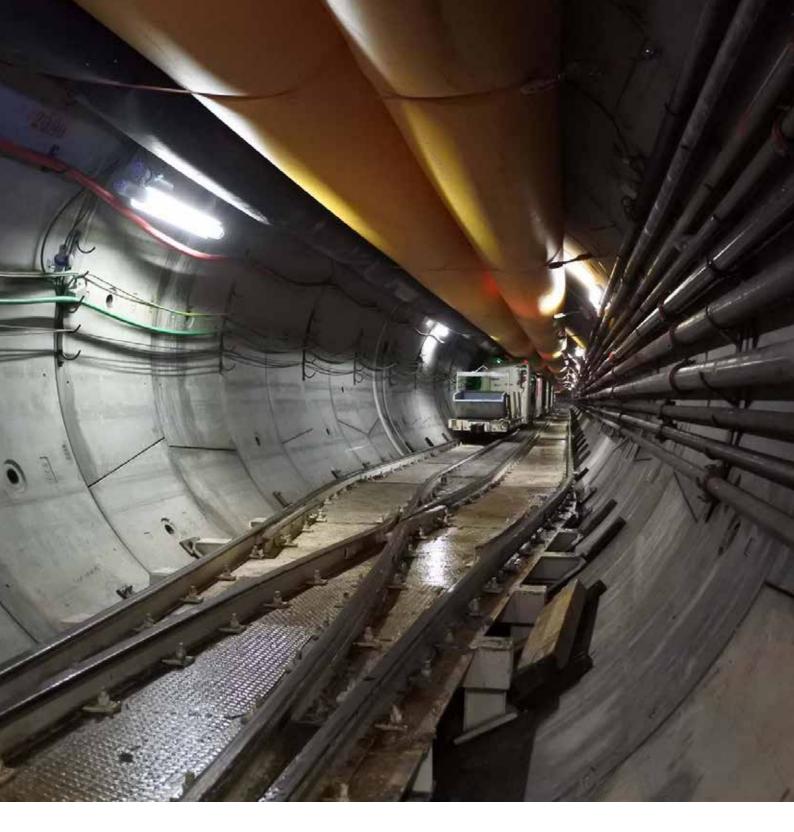
€ - confidential

SERVICES:

Detailed design

Final design

Technical assistance during construction



# Pavoncelli bis hydraulic tunnel New hydraulic tunnel





YEAR: 2016 - 2019

CLIENT: Vianini Lavori S.p.A.

PROJECT VALUE: € - confidential

SERVICES:

Technical assistance during construction



#### Iren water and sewage pipeline Water and sewage facilities



Water





2020 - ongoing

CLIENT:

Iren S.p.A.

PROJECT VALUE:

€ - confidential

SERVICES:

Italy

Framework agreement
Preliminary design
Detailed design



## Iren gas pipeline Gas pipeline network





YEAR:

2021 - ongoing

CLIENT: Iren S.p.A.

PROJECT VALUE:

€ - confidential

SERVICES:

Framework agreement Preliminary design Detailed design



### Innovation in underground solutions

#### SWS Engineering S.p.A.

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