

SELI OVERSEAS

75 YEARS BENEATH THE SURFACE

2025 EDITION

1950 2025 **seli**
overseas 
webuild group

SELI OVERSEAS

75 YEARS BENEATH THE SURFACE

ON THE COVER:
DAULE ESPERANZA HYDRAULIC TUNNEL - ECUADOR 1998

This story does not begin with a project. It begins with a commitment. The commitment of a visionary engineer.

SELI was founded in 1950. Its goal was not only to build projects, but to build them better. Its drive stemmed from a desire to innovate underground excavation for large, complex infrastructure, as well as a moral urgency to reduce accidents among workers.

Its founder, Carlo Grandori, was an engineer, a machine designer, one of those people who labours over technical drawings until everything works. He was a man who believed in innovation, but - above all - in responsibility. He would receive requests from electric power utilities of the time in need of a company capable of applying innovation to reduce accidents drastically.

SELI was born for this purpose: to bring technology along with safety to the excavation of major infrastructure, such as railway and subway tunnels, and those serving hydroelectric plants.

In the early years, SELI developed important solutions to mechanize production and improve safety. And when the first U.S. TBMs¹ arrived in Europe in the 1960s, SELI was among the first to understand their potential. It did not merely use them: it studied and reinvented them. From that experience, the Double Shield TBM is born, designed together with Robbins for difficult geological terrain in Italy. SELI did not grow only as a company – it contributed to the birth of a market that did not yet exist in the country. It was also a technical school,

an accelerator of skills. The SELI of today that oversees projects all over the world has roots also here, in the determination of an engineer, his company and the innovative expertise of a business.

Throughout the course of these more than 75 years, the milestones that have been achieved by SELI are many. From the first Italian TBM to the “impossible” jobs solved by entering construction sites managed by others. From hydroelectric projects to urban infrastructure works. Then there were increasingly complex designs requiring specialist skills for unique challenges, such the Cityringen metro line in Copenhagen, where excavations were done a few meters under buildings such as the Marmorkirken Church or the historic Magasin du Nord in the heart of the city. The milestones also include the entry into Asian and South American markets and the obtaining of major international projects.

In 2021, SELI entered the Webuild Group as a global center of excellence in tunnelling, all the while working independently for clients across the globe.

It is a story that combines human and industrial, created by the services offered to clients the world over for the construction of tunnels and the delivery of complex projects that have improved the development of entire countries and the lives of their citizens.

¹Acronym for Tunnel-Boring Machine, a large mechanical mole that excavates tunnels and installs prefabricated concrete segments into rings to support the tunnel's walls.

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SELI OVERSEAS

WHO WE ARE

OPENING PASSAGES
WHERE IT SEEMED
IMPOSSIBLE



Since 1950, SELI - Società Esecuzione Lavori Idraulici - has brought engineering to where it matters most: beneath the surface, deep underground, under the most complex conditions.

SELI is a company specialised in the excavation of tunnels for complex infrastructure projects. Owned by Webuild, it works with clients all over the world.

In its 75 years of activity, it has excavated about 100 tunnels for a combined total of 846 km in 32 countries. It has contributed to the development of water, energy, sustainable mobility and urban infrastructure on 5 continents.

In 2014, SELI became SELI Overseas, setting a new course for itself toward foreign markets. It also began a deeper collaboration with Webuild (then Salini Impregilo).

Since its founding, SELI has stood out for its ability to tackle difficult geology

and complex projects, finding pioneering solutions to improve worker safety in tunnels, adopting a rigorous technical approach.

It is a trajectory that has led to the consolidation of unique skills in reading the geological conditions of the ground/rock, managing risk and conducting tunnel-boring machine (TBM) excavations in extremely variable environments.

Today, SELI Overseas embodies the technical and cultural heritage of 3 generations of engineers and technicians, expanding its scope of activity to become an international point of reference in mechanized excavation and underground infrastructure.

SELI OVERSEAS TRACK RECORD

TOTAL COMPLETED
PROJECTS

~ 100

846km

excavated

TOTAL CURRENT
PROJECTS

> 10

146km

excavations in progress

COUNTRIES SERVED

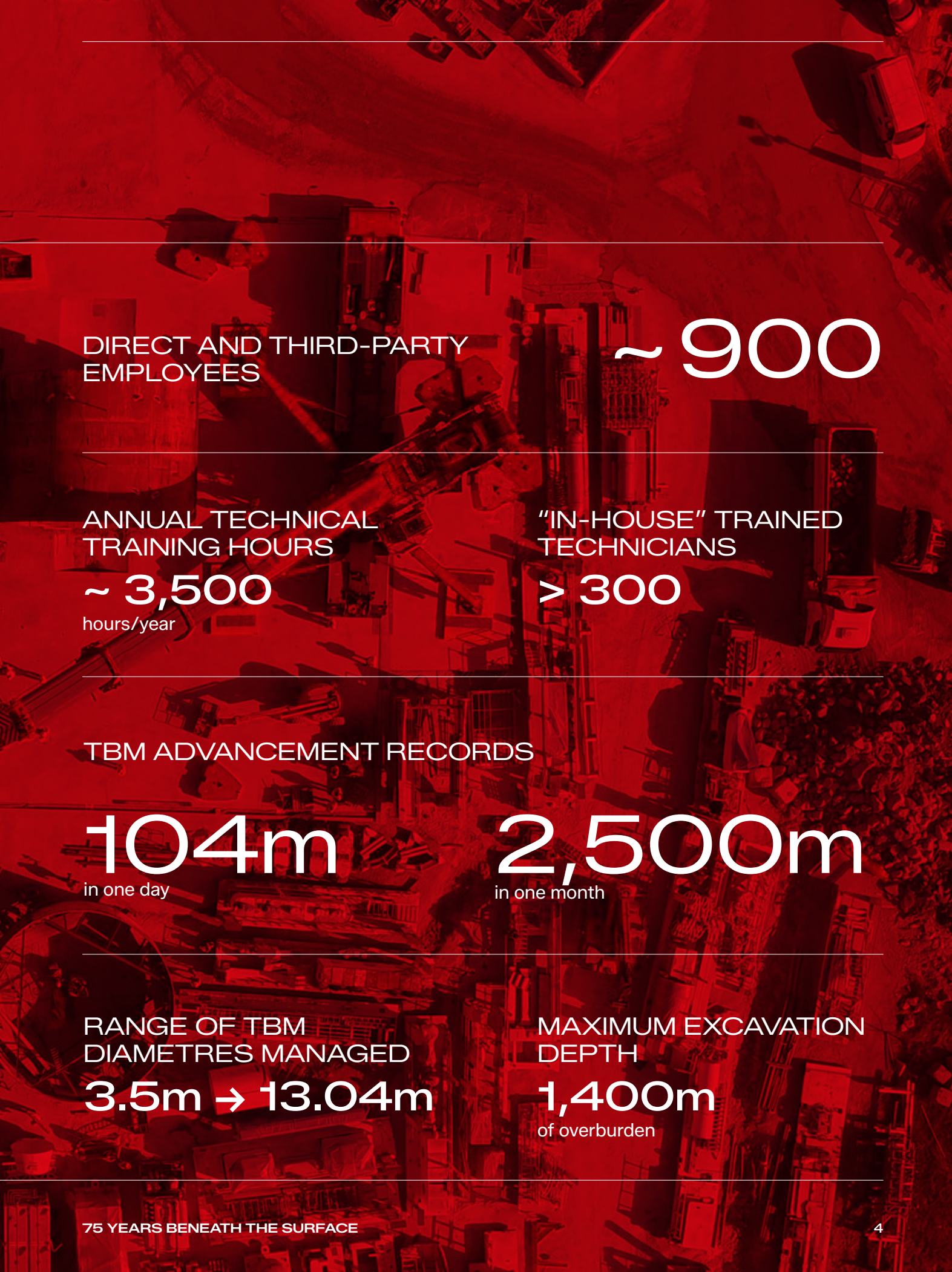
32 countries

on 5 continents

CLIENTS SERVED
(PUBLIC/PRIVATE)

70 Clients

80% public/20% private



DIRECT AND THIRD-PARTY
EMPLOYEES

~ 900

ANNUAL TECHNICAL
TRAINING HOURS

~ 3,500
hours/year

"IN-HOUSE" TRAINED
TECHNICIANS

> 300

TBM ADVANCEMENT RECORDS

104m

in one day

2,500m

in one month

RANGE OF TBM
DIAMETRES MANAGED

3.5m → 13.04m

MAXIMUM EXCAVATION
DEPTH

1,400m
of overburden

SEI OVERSEAS GLOBAL PRESENCE

The main ongoing and completed projects for clients all over the world.

USA

- Bergen Point water treatment system outfall tunnel in New York 2022
- New York Metro access CM 009 east side 2011

CANADA

- Vancouver Metro, Canada Line 2008

SPAIN

- "Navarra" Channel hydraulic tunnel project 2003
- "Talave" hydraulic tunnel project 2007
- Cordoba-Malaga high-speed railway- "Abdalajis East" project 2007
- "Sant Just" hydraulic tunnel and MV cable project 2009
- Leon-Asturias high-speed railway- "Pajares" project 2009
- Perpignan-Figueres high-speed railway- "Pertus" project 2009

POLAND

- ▶ Lodz Node railway ONGOING

DENMARK

- Copenhagen Cityringen Metro 2016

SLOVENIA

- "Plave Doblar" hydropower project 2000

SVIZZERA

- Hydroelectric Power Plant Penstock - CCD great dioxine project 1998
- Large Hadron Collider (LHC), CERN project - cavern and shafts 2005
- Great european nuclear accelerator - 300 GEV project - circle tunnel 1976

PANAMA

- "El Alto" hydropower project 2013
- "Pando" hydropower project 2014
- "Monte Lirio" hydropower project 2014
- "Esti" hydraulic tunnel repair works 2014

PORTUGAL

- Porto Metro, Line A 2002

ALGERIA

- Algiers Metro, Line 1 2025

COSTA RICA

- "La Joya" hydropower plant 2006

VENEZUELA

- Caracas Metro, Lines 3 and 4 2006

COLOMBIA

- "Tunjita" hydropower project 1985
- "Chivor" hydropower project 1985
- "Los Rosales" water adduction tunnel project 1990

BRAZIL

- São Paulo Metro, Line 4 2009

EGYPT

- ▶ Cairo Metro, Line 4 ONGOING

ECUADOR

- Hydroelectric project "Paute C." 1985
- Water Adduction Project "Daule Esperanza" 1999
- Water Adduction Project "Poza Honda" 2001
- Hydroelectric project "San Francisco" 2006

CILE

- "Los Bronces" Mining Inspection Tunnel project 2012
- "Los Condores" hydropower project project 2021

- "Suviana e Brasimone" hydropower project and diversion tunnel 1975
- "Orichella e Timpagrande" hydropower project and diversion tunnel 1979
- "Edolo" hydropower project and diversion tunnel and cavern 1982
- "Albi" hydropower project diversion tunnel and cavern 1982

ITALY

- Carnia highway tunnel "Campiolo" 1983
- Romagna aqueduct of "Ridracoli & Isola" 1986
- Romagna aqueduct of "Gronda di Corniolo" 1986
- "Rovereto" aqueduct 1990
- "Presenzano" hydropower generation and pumping plant 1991
- Pilot tunnel for Frasnadello-San Pellegrino road tunnel 1996
- "Frasnadello and Antea" road tunnels San Pellegrino 1998
- "Varzo II" hydropower plant and diversion tunnel 2000
- "Pieve Vergonte" hydropower plant and diversion tunnel 2000
- "Piceno" aqueduct and hydraulic tunnel 2002
- Treviso-Calalzo "Monte Zucco" railway tunnel 2003

▶ Ongoing project

■ Completed project

XXXX Completion date

GREECE

- "Evinos & Mornos" hydraulic tunnel 1994
- Athens Metro, Line 3 2004
- Athens Metro, Line 3 extension 2008
- Thessaloniki Metro, Line 1 2012

TURKEY

- "Mavi Tunnel" hydraulic tunnel project 2009
- "Sukur Tunnel" hydraulic tunnel project 2013
- "Nosud Tunnel" hydraulic tunnel project 2013

IRAN

- Tehran Metro, Line 7 2014

INDIA

- "Parbati" hydropower project 2007
- "Kishanganga" hydropower project 2014
- "Vishnugad" hydropower project 2022
- "Tapovan" hydropower project 2022
- Bangalore Metro, Line 1 2019

RUSSIA

- Service tunnel for the Winter Olympic Plants of "Sochi" 2010

CINA

- "Yindaruquin" diversion tunnel 1992
- "Yellow River Tunnel" diversion tunnel 1999
- "Wanjiazhai Yellow River Diversion" diversion tunnel 2001
- "Xinjiang Daban" diversion tunnel 2007

LAOS

- "Xe - Pian Xe - Namnoy" hydropower project with hydraulic tunnel 2014

VIETNAM

- "Dai Ninh" hydropower project with hydraulic tunnel 2006

HONG KONG

- "Tolo Harbour" water treatment pipeline project 1992
- "Silvermine Bay" water treatment pipeline project 1996
- "Chai Wan to Kwun Tong" water treatment pipeline project 1999
- "Tseung Kwan - Kwun Tong" water treatment pipeline project 2002
- "Tsuen Wan" hydraulic diversion tunnel project 2012

PHILIPPINES

- "Umiray Angat" water and sewer system expansion project (MWSS) 1992

ETHIOPIA

- "Gilgel Gibe II - Intake and Outlet" hydropower project 2009
- "Beles - Headrace and Tailrace Tunnel" hydropower project 2009

NEW ZEALAND

- Service tunnel for passage of MV power cables in Auckland 2000

QATAR

- Doha Metro, "Gold" Line 2014

ISRAEL

- High-speed railway "Jerusalem - Tel Aviv" 2014

IRAQ

- Mosul Dam - Inspection, repair and maintenance of some parts of structure 2017

LESOTHO

- "Mohale" hydraulic tunnel hydropower project 2001

- New "Val Viola" canal hydraulic tunnel 2004
- Connection of Colle Pedrino quarry to "Monte Giglio" cement plant 2005
- Adduction tunnel from the reservoir on the "Menta" stream 2005
- Turin Metro, Line 1 - Lots 3, 4 and 5 2003-2006
- Lamezia Terme-Catanzaro railway tunnel, "Settingiano" section 2007
- Hydropower Plant and diversion tunnel on the "Passirio" stream 2008
- Rome Metro, Line B1, "Bologna - Conca D'Oro" section 2010
- Rome Metro, Line B1, "Conca D'Oro - Ionio" section 2012

- Brenner Base Tunnel (Verona-Munich), exploratory tunnel in the "Aica-Mules" section 2011
- Milan Metro Line 5 extension "Garibaldi-Bignami" section 2014
- ▶ High-speed/high capacity railway Terzo Valico dei Giovi - Genova Junction, "Serravalle" lot ONGOING
- ▶ High-speed/high capacity railway Terzo Valico dei Giovi - Genova Junction, "Radimero" lot ONGOING
- ▶ High-speed/high capacity railway Terzo Valico dei Giovi - Genova Junction, "Vallemme" lot ONGOING
- ▶ High-speed/high capacity Turin-Venice railway, Brescia-Verona functional lot, "Lonato" tunnels ONGOING

- ▶ Messina-Catania high-capacity railway, Lot 2 Giampilieri - Fiumefreddo, "Sciglio and Forza D'Agrò" tunnels ONGOING
- ▶ Four-tracking of the Fortezza-Verona high speed railway, Fortezza-Ponte Gardena section ONGOING
- ▶ Salerno-Reggio Calabria high-speed railway, Lot 1A Battipaglia-Romagnano ONGOING
- ▶ Naples-Bari high-speed railway line, Orsara-Bovino section ONGOING

SELI OVERSEAS

OUR HISTORY

75 YEARS OF VISION
AND INNOVATION
IN TUNNELLING



For 75 years, SELI has been building passages where none existed before for clients all over the world. A journey with vision, engineering and specialist skills, spanning 3 generations of engineers and technicians, leaving its mark on the history of mechanized tunnelling.

Each stage of its journey has been marked by pioneering solutions that have changed the way underground infrastructures are built worldwide.

1969: SELI uses a TBM for the first time in Italy, opening the market to mechanized excavation.

1972: Carlo Grandori, with Robbins Company, files for a patent for the telescopic Double Shield TBM, adopted in international projects such as the Channel Tunnel and the Brenner.

1978: Collaboration begins with Salini Costruttori, destined to grow over the years.

1989: Carries out the first TBM excavation in China, contributing to Asian infrastructure development.

1990–1995: Expands into Europe, the Far East and South America.

2001: In the “Poza Honda” water adduction project, SELI sets world TBM advancement records (104 m in one day, 2,333 m in one month).

2003: Develops the Universal Double Shield TBM, a new benchmark technology for rock excavation.

2009–2014: At Kishanganga (India), completes the first tunnel under the Himalayas with a single TBM.

2014–2020: SELI Overseas is established and its global presence expands (Doha, New York, Laos, Algiers...).

2021: SELI Overseas enters the Webuild Group as a global tunnelling center of excellence.

2021–2022: In the Terzo Valico dei Giovi - Genova Junction project, it carries out the first TBM excavation in Italy in asbestos-bearing rock, thanks to innovative safety solutions.

From 2024: Engaged in projects on the main high-speed/high-capacity railway corridors in Italy.

SELI OVERSEAS OUR HISTORY



FOUNDATION OF SELI ITALY

A new culture of safe
underground excavation
is born in Italy



"EDOLO" HYDROELECTRIC PROJECT AND DIVERSION TUNNEL ITALY

Use of innovative metal-PVC lining
in traditional excavation



"LOS ROSALES" WATER ADDUCTION TUNNEL COLOMBIA

Use of a telescopic shield
to excavate safely mixed ground
for the Bogotá aqueduct

1950

1977

1987

1950

1970

1990

1960

1980

2000

1969

"SUVIANA AND BRASIMONE" HYDROELECTRIC PROJECT AND DIVERSION TUNNEL ITALY

First TBM in Italy

1979

"ORICHELLA AND TIMPAGRAN- DE" HYDROELECTRIC PROJECT AND DIVERSION TUNNEL ITALY

Patent for the Double Shield TBM
with Robbins to excavate under
squeezing rock/ground conditions
highly deformable and complex)

2001

"POZA HONDA" WATER ADDUCTION PROJECT ECUADOR

World record for daily and monthly
TBM advancement





**"KISHANGANGA"
HYDROELECTRIC PROJECT**
ASIA

First tunnel excavated beneath the Himalayan mountains



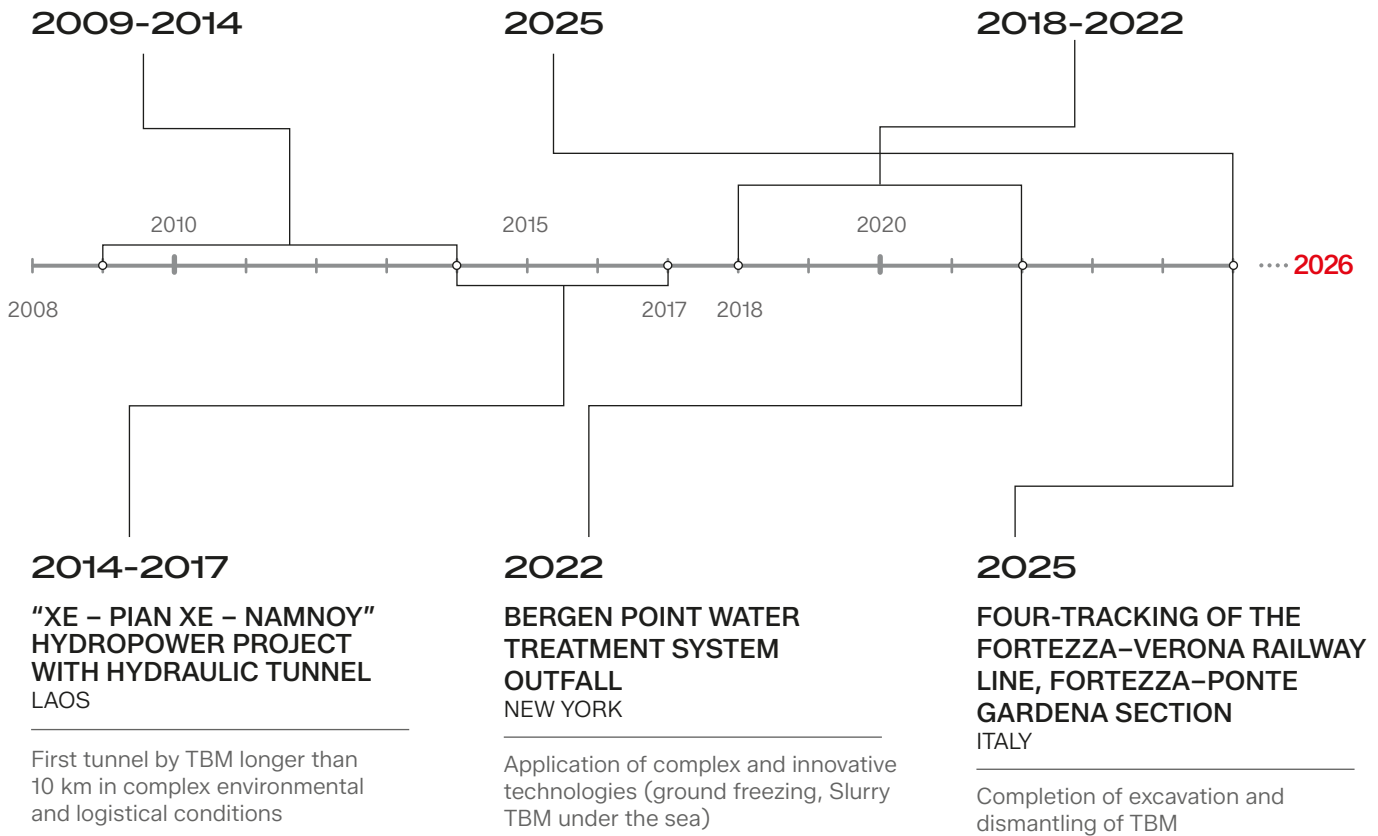
**ALGIERS METRO,
LINE 1**
ALGERIA

Completion of the tunnel excavated by TBM for the city's first metro line



**TERZO VALICO DEI GIOVI -
GENOVA JUNCTION**
ITALY

First time in Italy that a TBM excavates asbestos-bearing rock



SELI OVERSEAS

STRENGTHS

KNOWLEDGE THAT IS BORN
DEEP UNDERGROUND



SELI Overseas has built up a knowledge base that is not just technical: it is the ability to read the ground to be excavated, anticipate how it will react, and transform complexity into solutions. It is a unique expertise acquired not from manuals, but experience earned underground, making it possible to design and build complex projects with care and ingenuity.

ADVANCED KNOW-HOW IN ALL INFRASTRUCTURE SECTORS

The work of SELI Overseas spans continents and infrastructure types, with a common thread: making possible what on the surface is needed to move, live, and enable communities to grow.

Railways

The main activity concerns the construction of cross-Alpine tunnels for new high-speed railways. It is a sector in which the company has developed cutting-edge technological solutions and execution capacity recognised internationally.

Subways

It has built metro lines in Europe, North and South America and the Middle East, operating in densely populated and technically complex settings.

Roads

It introduced the mechanised system in road tunnel excavation, opening new perspectives for urban and interurban mobility.

Hydroelectric Plants

It has a long tradition in the construction of tunnels for hydroelectric plants, with 35 projects completed for approximately 275 km of hydraulic tunnels.

Sewer Networks

Sewer tunnels and overflow structures have always been among its areas of expertise. Over the years, it has completed numerous projects that have improved urban networks and drainage.

Aqueducts

It has developed qualified expertise in the excavation of tunnels and other water infrastructures capable of ensuring the supply to increasingly large metropolitan areas.



量 强 国

时 代

SPECIALIST SKILLS AND INNOVATION IN TUNNELLING

SELI Overseas has become **a point of reference in tunnelling**. Today, it continues to expand its scope of activity by introducing new technologies and innovative solutions.

It is a specialist partner for:

- **Mechanized excavation** with TBM (EPB, Hard Rock, Double Shield, Slurry, Dual Mode).
- **Advanced technical services:** TBM assembly, operational management, maintenance, start-up and production optimization.
- **Selective general contracting** for complex underground projects.

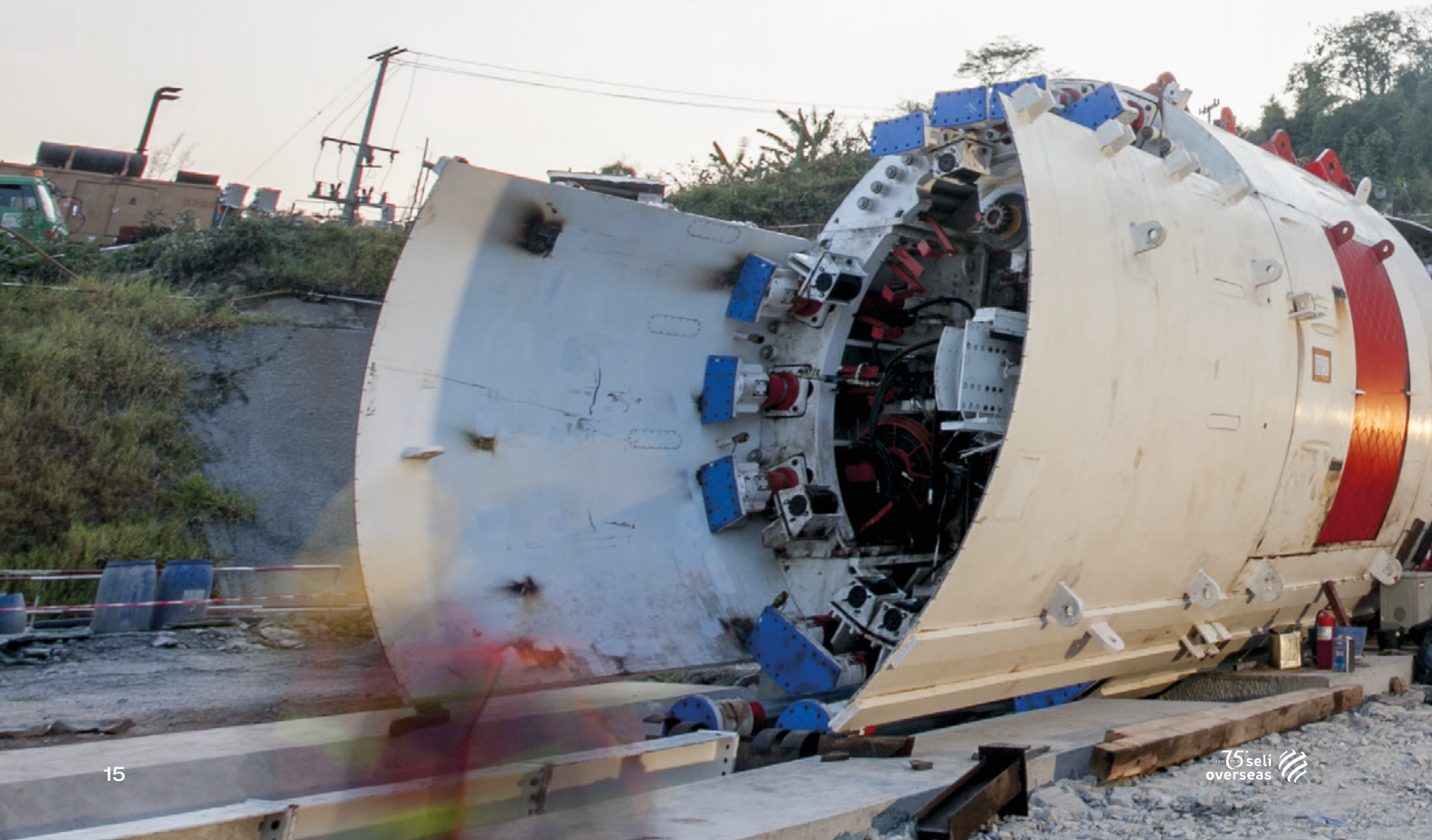
These areas enable the company not only to play a leading role on national and international construction sites, but also to **guarantee strategic technical support to clients, authorities, consortia and companies**, by offering specialist expertise in:

- Design of hydraulic and metro systems.
- Development and supply of equipment for underground excavation.
- Technical-contractual assistance for major works.
- Design and construction of tunnel cutterheads.
- Technical direction of works.

SELI OVERSEAS

FOOTPRINT

AN OPERATING MODEL
THAT MAKES THE DIFFERENCE



In a sector in which every operational detail makes a difference, SELI Overseas does everything in-house: **it designs, selects the machines, leads the teams that operate them.**

Because managing every phase internally means total control, tailor-made solutions and maximum productivity through advanced technologies.

TBMs are designed together with partners and leading suppliers of the sector in order to implement **tailor-made solutions suited to every client, every ground condition, every design challenge** - even the most complex one. Every meter that is excavated is a calculated decision, a strategic choice, a step that makes possible what matters on the surface.



SELI OVERSEAS THE ROOTS OF OUR EXCELLENCE IN TUNNELLING

The evolution of SELI is a path made of technical **innovations**, **operational records** and the **ability to face extreme ground conditions**. Since 1950, about 100 projects have been completed.

From the **Brasimone–Suviana**, where SELI used the first TBM in Italy, to the **Orichella–Timpagrande**, where the Double Shield TBM was born, up to the monthly excavation production record at **Poza Honda**: each project has added a piece to the company's expertise, with new machines, new methods, new solutions.



ITALY

"SUVIANA AND BRASIMONE" HYDROELECTRIC PROJECT AND DIVERSION TUNNEL

The origins of mechanization.

The first TBM used in Italy. For the construction of a tunnel approximately 4,800 meters long and a piezometric shaft for the hydroelectric project, SELI introduced mechanized tunnelling to the country, starting a transition that transformed the entire sector. A pioneering project that opens the way to a new technological cycle.

Completion date: 1975

TECHNICAL / PRODUCTION KPI

6.40 m

Excavation diameter

~ 4,800 m

Tunnel length

Prefabricated segments

Type of support



ITALY

"ORICHELLA AND TIMPAGRANDE" HYDROPOWER PROJECT AND DIVERSION TUNNEL

The invention that changed the sector.

The telescopic Double Shield TBM was born. As part of the construction of the main tunnels of the project, SELI and Robbins developed the technology that allows to continuous excavation in deformable and complex ground/rock conditions.

It became an innovation that set sector standards for decades.

Completion date: 1979

TECHNICAL / PRODUCTION KPI

4.32 m

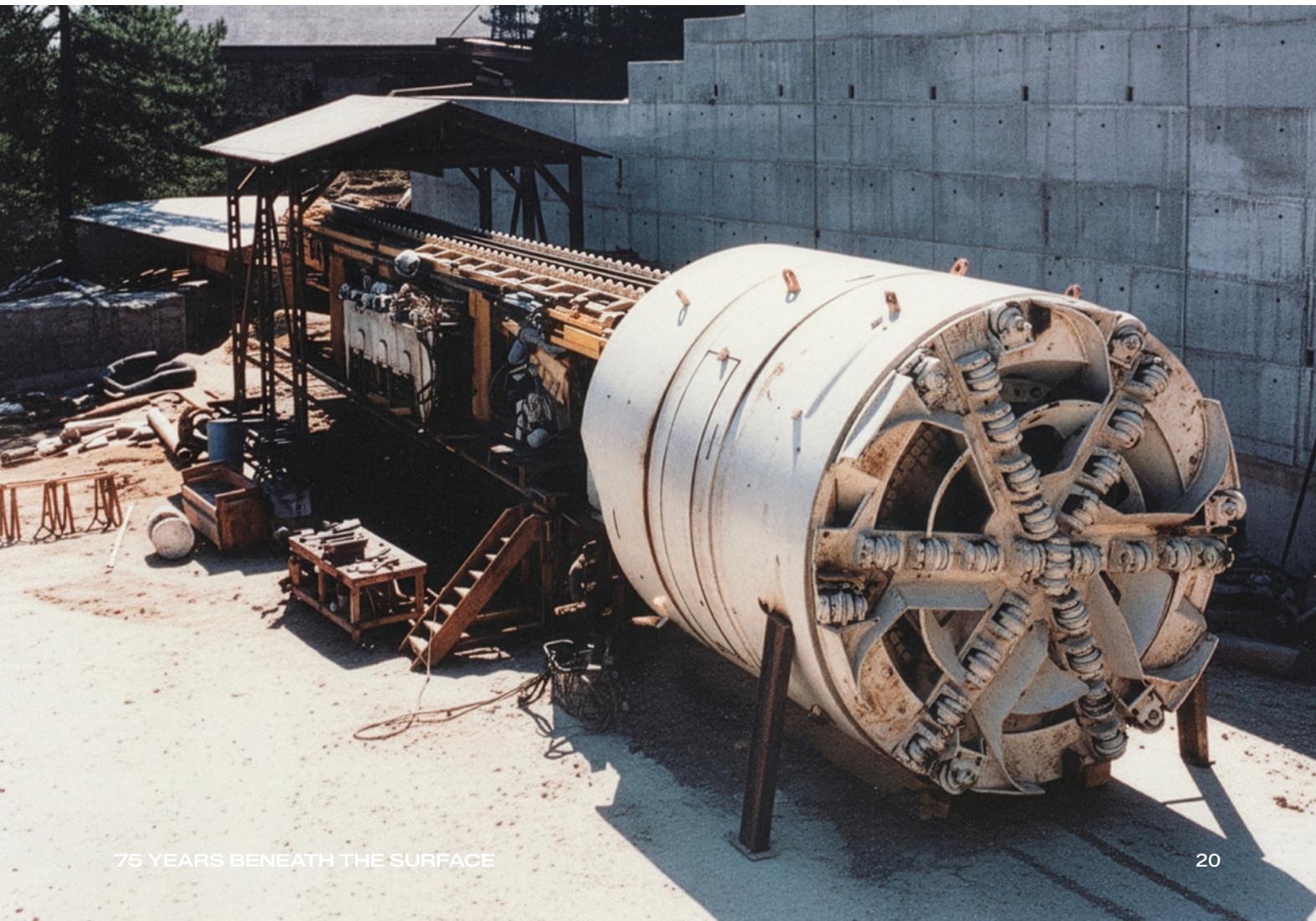
Excavation diameter

3.68 m

Finished internal diameter

4,100 m + 4,100 m

Tunnel length





COLOMBIA

"LOS ROSALES" WATER ADDUCTION TUNNEL

Use of the telescopic shield to safely excavate mixed ground for the Bogotá aqueduct.

SELI faced a very different geology than what was expected: a complex ground that put both the TBM and excavation plans to the test.

The choice of a telescopic Double Shield TBM with ad hoc designed solutions proved decisive to manage sudden variations, unexpected pressures and intermittent advances.

The project made it possible to collect valuable data on TBM behavior under extreme conditions and to define technical improvements now applied in new projects.

Completion date: 1990

TECHNICAL / PRODUCTION KPI

3.54 m
Excavation diameter

9,080 m
Tunnel length



GREECE

"EVINOS-MORNOS" HYDRAULIC TUNNEL

30 km of hydraulic tunnel under extreme overburden.

The Evinos–Mornos project, one of the longest hydraulic tunnels built with a TBM, required the excavation of 30 km under some of the most complex geological conditions in Europe: flysch, abrasive cherts, overthrust zones and overburden up to 1,300 m.

SELI operated two Double Shield TBMs simultaneously to meet an accelerated schedule, completing the work in less than 3 years. The tunnel required advanced technical solutions: a cutterhead with the possibility to overcutting excavation systematically in converging squeezing sections, hybrid linings (prefabricated segments and in situ casting), and special methodologies to manage frontal collapses, squeezing and the widespread presence of methane in the rock mass being traversed.

It was a project that brought together SELI's ability to operate across great lengths through extreme terrain, managing multiple fronts simultaneously and stabilizing the excavation cycle even in the most unpredictable contexts.

Completion date: **1994**

KPI TECNICI / DI PRODUZIONE

4.04 m

Excavation diameter

30,000 m

Tunnel length

Precast concrete segments

Tunnel lining type



ECUADOR

"POZA HONDA" WATER ADDUCTION PROJECT

The record that set the standard.

SELI built two tunnels of the water adduction project for the basins of the Chone and Portoviejo rivers. The project was characterized by a world record: achieving a TBM advance of 2,333 m in one month and 104 m in one day. These were results that are still a benchmark today in the international tunnelling community. It became a project that demonstrated what it means to bring operational continuity to the highest levels.

Completion date: 2001

TECHNICAL / PRODUCTION KPI

4.04 m

Excavation diameter

La Esperanza – Poza Honda tunnel, 11,400 m

Poza Honda – Mancha Grande tunnel, 4,100 m

Tunnel length

Precast concrete segments

Tunnel lining type



CHINA

"WANJIAZHAI YELLOW RIVER DIVERSION" DIVERSION TUNNEL

International expansion and large-scale management.

Excavation and supervision of 88.4 km of hydraulic tunnels, of which 86.6 km by TBM, with ad hoc designed mechanical and logistical solutions. The project includes the supply, design and management of multiple Double Shield TBMs.

The project consolidated SELI's ability to operate on multiple fronts with multiple fleets on construction sites in remote areas.

Completion date: 2001

TECHNICAL / PRODUCTION KPI

4.92 m

Excavation diameter

86,800 m

Tunnel length

Precast concrete segments

Tunnel lining type

TURIN METRO, LINE 1 – LOTS 3, 4 AND 5

TECHNICAL / PRODUCTION KPI

The school of European metro systems.

A series of lots of the first Turin Metro built for the 2006 Winter Olympic Games. Excavations in heavily populated contexts that refined SELI's ability to operate in urbanized areas with high geotechnical and architectural constraints, with sensitive utilities and confined construction sites.

Use of one of the first EPB-type TBMs (Earth Pressure Balance) in Italy, with control of pressure at the excavation face.

7.80-7.80-8.03 m

Excavation diameter

2,835-2,357-2,178

Tunnel length

Precast concrete segments

Tunnel lining type



ITALY

NEW "VAL VIOLA" CANAL HYDRAULIC TUNNEL

Reliability in an Alpine setting.

SELI built 18.8 km of tunnel for the "New Val Viola Canal" hydroelectric project, in complex mountain contexts with dolomites, metapelites and gneiss. An excavation diameter of 3.70 m with a Double Shield TBM and a lining with prefabricated segments 20 cm thick.

A project that strengthens the company's ability to work in Alpine geologies and remote construction sites.

Completion date: 2004

TECHNICAL / PRODUCTION KPI

3.70 m

Excavation diameter

18,804 m

Tunnel length

Precast concrete segments

Tunnel lining type





CANADA

VANCOUVER METRO, CANADA LINE

Urban expertise.

Construction of 2.4 km of twin tunnel using an EPB TBM with excavation diameter of 6.20 m in an urban environment, with 9 cross passages, stations, shafts and auxiliary works.

The project consolidates SELI's ability to operate in high-density urban areas, with advanced management of interferences and construction safety.

Completion date: 2008

TECHNICAL / PRODUCTION KPI

6.10 m

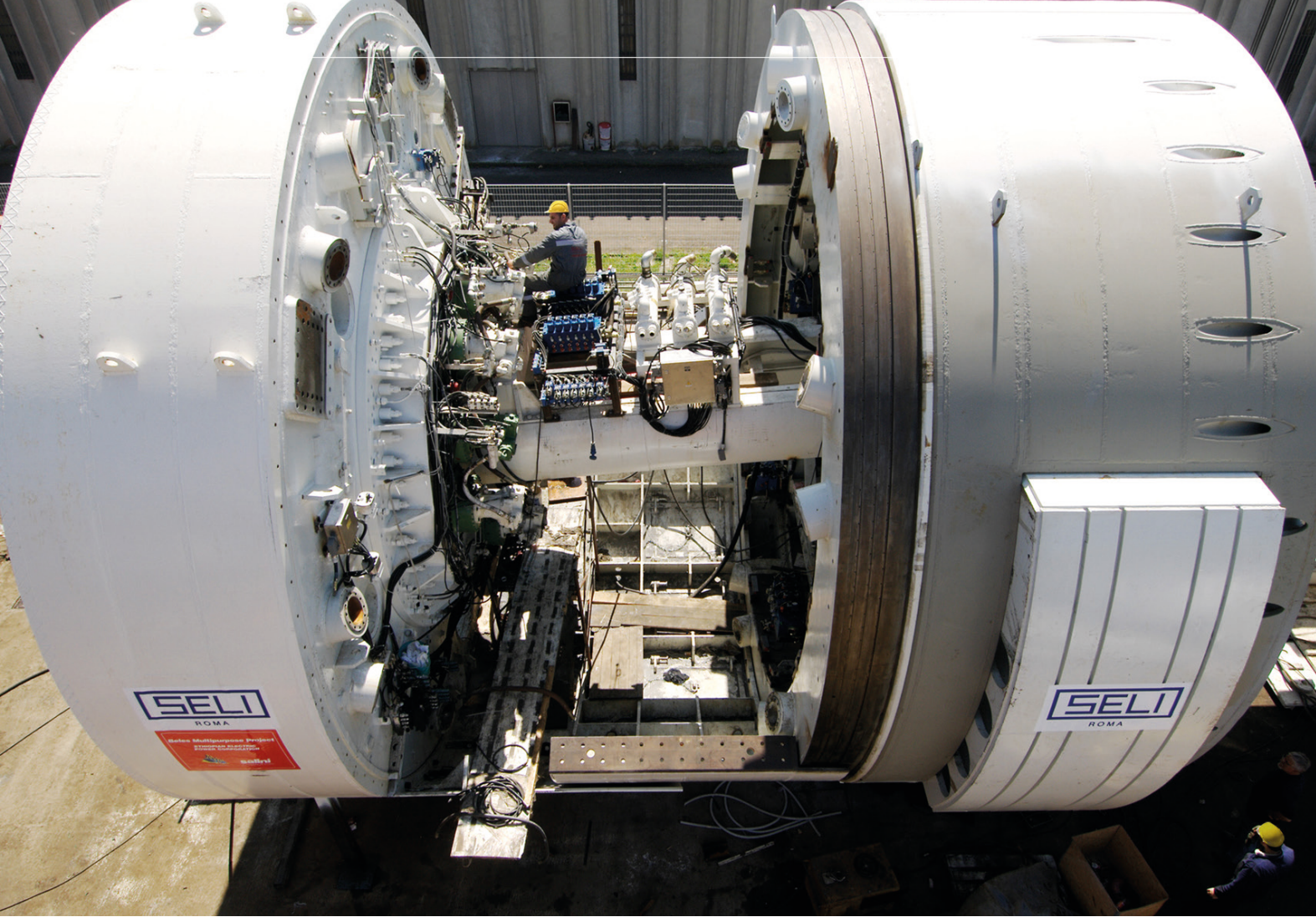
Excavation diameter

4,800 m

Tunnel length

Precast concrete segments

Tunnel lining type



ETHIOPIA

BELES HYDROELECTRIC PROJECT – HEADRACE TUNNEL

Large-scale hydroelectric works.

Construction of the project's diversion tunnel, extending for 12 km, through the use of a Double Shield Universal/EPB TBM, under tertiary basalt and lacustrine deposits. Lining with prefabricated segments 30 cm thick.

The project demonstrated SELI's ability to manage large-diameter sections with double mechanical configuration.

Completion date: 2009

TECHNICAL / PRODUCTION KPI

8.10 m

Excavation diameter

12,000 m

Tunnel length

Precast concrete segments

Tunnel lining type

BELES HYDROELECTRIC PROJECT – TAILRACE TUNNEL

TECHNICAL / PRODUCTION KPI

Experience in complex geology.

Construction of a 7.2 km long discharge tunnel. A second large-diameter excavation, completed with a Double Shield Universal TBM, in complex basaltic geology.

The project was executed at high speed and continuity. The two tunnels consolidated SELI's leadership in large-scale hydroelectric excavations and supported the Webuild Group in its expansion in Ethiopia.

8.07 m

Excavation diameter

7,200 m

Tunnel length

Precast concrete segments

Tunnel lining type



"KISHANGANGA" HYDROELECTRIC PROJECT

TECHNICAL / PRODUCTION KPI

The most extreme altimetric and geological challenge.

14.6 km of discharge tunnel under the Himalayan range, built with a Double Shield TBM with an excavation diameter of 6.10 m.

The project required innovative technical solutions necessary to face the high geological pressures and stresses due to the significant planned cover (up to 600 m).

One of the most complex works ever undertaken by SELI, with geologies ranging from basalts to granodiorites.

6.10 m

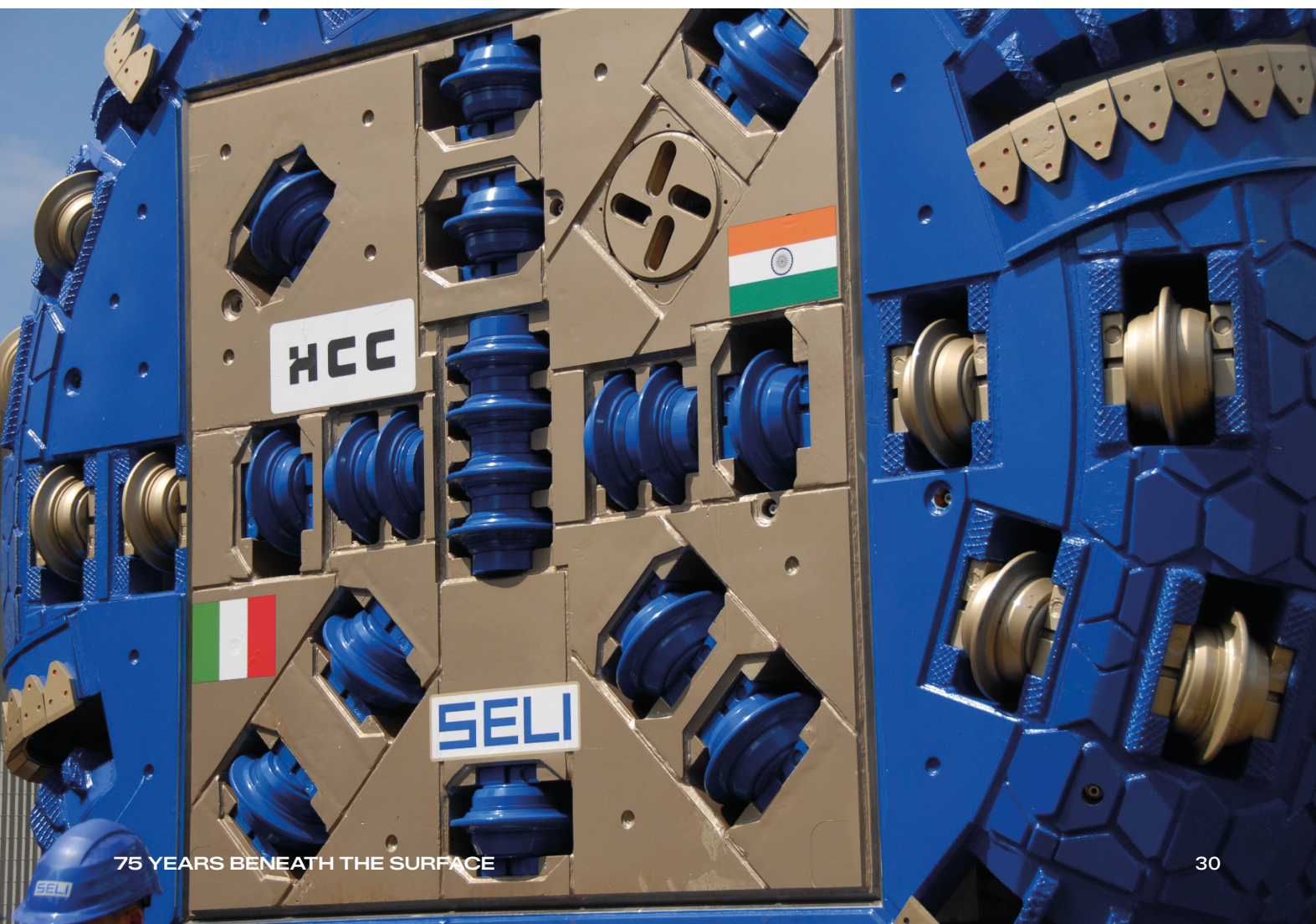
Excavation diameter

14,630 m

Tunnel length

Precast concrete segments

Tunnel lining type





USA

BERGEN POINT WATER TREATMENT SYSTEM OUTFALL TUNNEL

The project consisted of a submarine sewer tunnel in the State of New York built with cutting-edge techniques.

Ground-freezing technology was the most widely used method to stabilize the soil during shaft excavation. For the excavation of the submarine tunnel an innovative Slurry TBM was used, whose main strength lies in its ability to advance while installing lining rings made of prefabricated segments.

The project was awarded as the best infrastructure construction site in the United States in the category of projects under \$500 million in 2021.

Completion date: 2022

TECHNICAL / PRODUCTION KPI

3.81 m
Excavation diameter

4,328 m
Tunnel length

Precast concrete segments
Tunnel lining type



ALGERIA

ALGIERS METRO, LINE 1

The Algiers Metro aims to connect the city center with the airport.

Line 1 connects El Harrach station in the historic center to the airport where the Aéroport station will be built.

The project involves the mechanized method through the use of an EPB type TBM with an excavation diameter of 10.5 m. Eight stations have already been built and 10 ventilation shafts with transverse connecting tunnels along a route extending for about 9.5 km.

Completion date: 2025

TECHNICAL / PRODUCTION KPI

10.5 m
Excavation diameter

9,500 m
Tunnel length

Precast concrete segments
Tunnel lining type



SELI OVERSEAS FACING TODAY'S CHALLENGES TO BUILD TOMORROW

Today, SELI Overseas continues to push its expertise ever deeper, bringing it into dialogue with a living and changing ground and transforming uncertainty into method. Every project represents an opportunity to innovate.

On the **Bergen Point** water treatment project in the United States, it built an outfall tunnel for the water treatment system, using cutting-edge techniques such as **ground freezing for the shafts and a Slurry TBM for the tunnel**.

In the **Terzo Valico dei Giovi - Genova Junction** project, it builds tunnels under complex hydrogeological conditions, with the presence of gas and asbestos-bearing rock, adapting excavation tools to the ground.

At **Lonato**, it participates in the construction of a **tunnel for the high-speed line** and faces significant geological challenges.

In **Algiers**, the transfer of its excavation method to Line 1 of the Metro demonstrates how expertise generates expertise.

In the heart of **Cairo**, a few steps from the famous Pyramids of Giza, construction is underway of the new Metro Line 4, a project that combines modernity and respect for the precious and delicate historical heritage.

Every phase of the project is designed to safeguard the past, leaving the future free to explore new paths.

In **Lodz**, Poland, it is building a tunnel with an excavation diameter of over 13 meters in the center of a densely populated city.

For the section of the new **Fortezza-Ponte Gardena** railway, it is developing an engineered risk-based approach to pass under both the A22 motorway and the historic Brenner railway with minimal cover in complex geology.

And again, in **Sicily, the Messina-Catania high-capacity railway** sees the application of new technologies combined with an established method: in hybrid and complex ground, the **Dual Mode TBM technology** is used to adapt to the most difficult geological challenges.

On the **Palermo-Catania high-capacity line, the use of multiple TBMs and the Continuous Mining technique** leads to an improvement in construction times for large underground tunnels.



ITALY

TERZO VALICO DEI GIOVI - GENOVA JUNCTION, "SERRAVALLE" LOT

The Terzo Valico dei Giovi Project includes the new high-speed Genoa–Milan line that will connect Italy to the centre of Europe.

The Serravalle tunnels are two, each with the same length of 6,300 m and excavated with two TBMs, one for each tunnel.

The completion of the Serravalle tunnels was marked by numerous events that hindered their execution. These included environmental incidents, such as a flood that prevented regular construction site activity for months, and the crossing of aquifers characterized by high pressures and flow water rates, which slowed the TBM advance. In addition, there was the COVID-19 epidemic, which reduced the presence of workers on site and obliged the adoption of extraordinary protection measures for them.

Ongoing

TECHNICAL / PRODUCTION KPI

9.89 m

Excavation diameter

6,300 m

Tunnel length

Precast concrete segments

Tunnel lining type



ITALY

TERZO VALICO DEI GIOVI - GENOVA JUNCTION, "RADIMERO" LOT

The Terzo Valico dei Giovi Project construction site is a model for technologies, innovative solutions and environmental protection, allowing the two TBMs to excavate in asbestos-bearing rock formations and in the presence of gas.

These new technologies involved the entire system: from the TBM to transport and ventilation devices in the tunnel to the external plants for the management, bagging and transport to landfill of asbestos-contaminated material. Meantime, the presence of gas in the second part of the two tunnels required the direct modification of the TBM inside the tunnel, adapting it to current regulations to allow excavation under gas conditions.

Ongoing

TECHNICAL / PRODUCTION KPI

9.77 m

Excavation diameter

7,500 m x 2 = 15,000 m

Tunnel length

Precast concrete segments

Tunnel lining type

HIGH-SPEED/HIGH-CAPACITY RAILWAY TURIN – VENICE, BRESCIA – VERONA FUNCTIONAL LOT, LONATO TUNNELS

TECHNICAL / PRODUCTION KPI

10.03 m
Excavation diameter

9,500 m
Tunnel length

Precast concrete segments
Tunnel lining type

The Lonato Tunnel is the most complex project of the Turin–Venice high-speed/high-capacity line.

Located south of Lonato del Garda, it runs along the Brescia–Verona Lot of the planned railway. Built with TBM Martina, the twin-tube single-track tunnel includes - in addition to the two tunnels of about 4.8 km each - 12 cross passages, 29 niches excavated by traditional method and line platforms.



EGYPT

CAIRO METRO, LINE 4

Advanced technology with respect for history.

For the development of the new Line 4 of the Cairo Metro in Egypt, SELI Overseas is providing technical assistance to part of the local consortium for the excavation of the section under its responsibility using a Mix-Shield/Slurry type TBM with a diameter of 6.73 meters.

Ongoing

TECHNICAL / PRODUCTION KPI

6.73 m

Excavation diameter

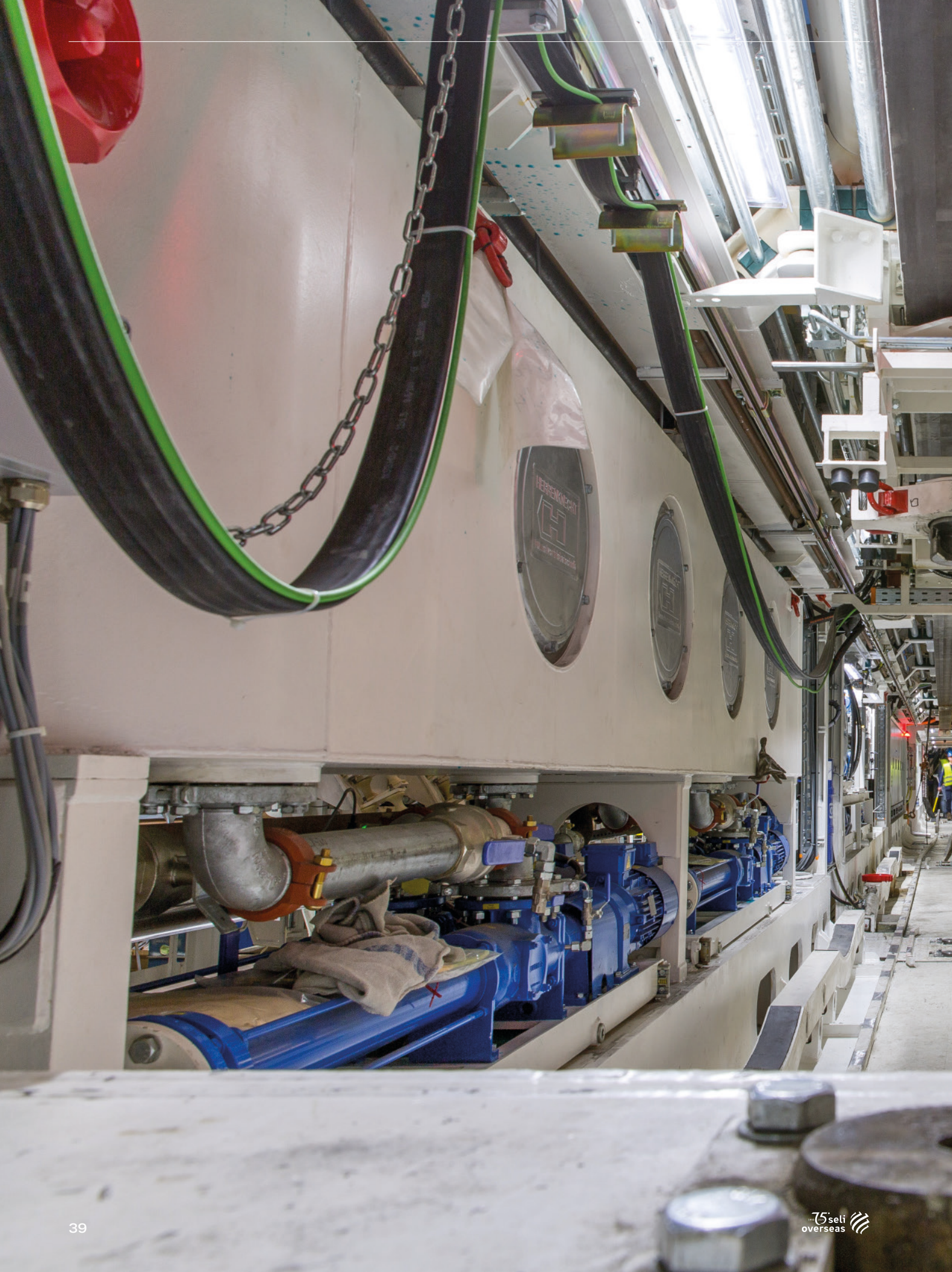
5,295 m

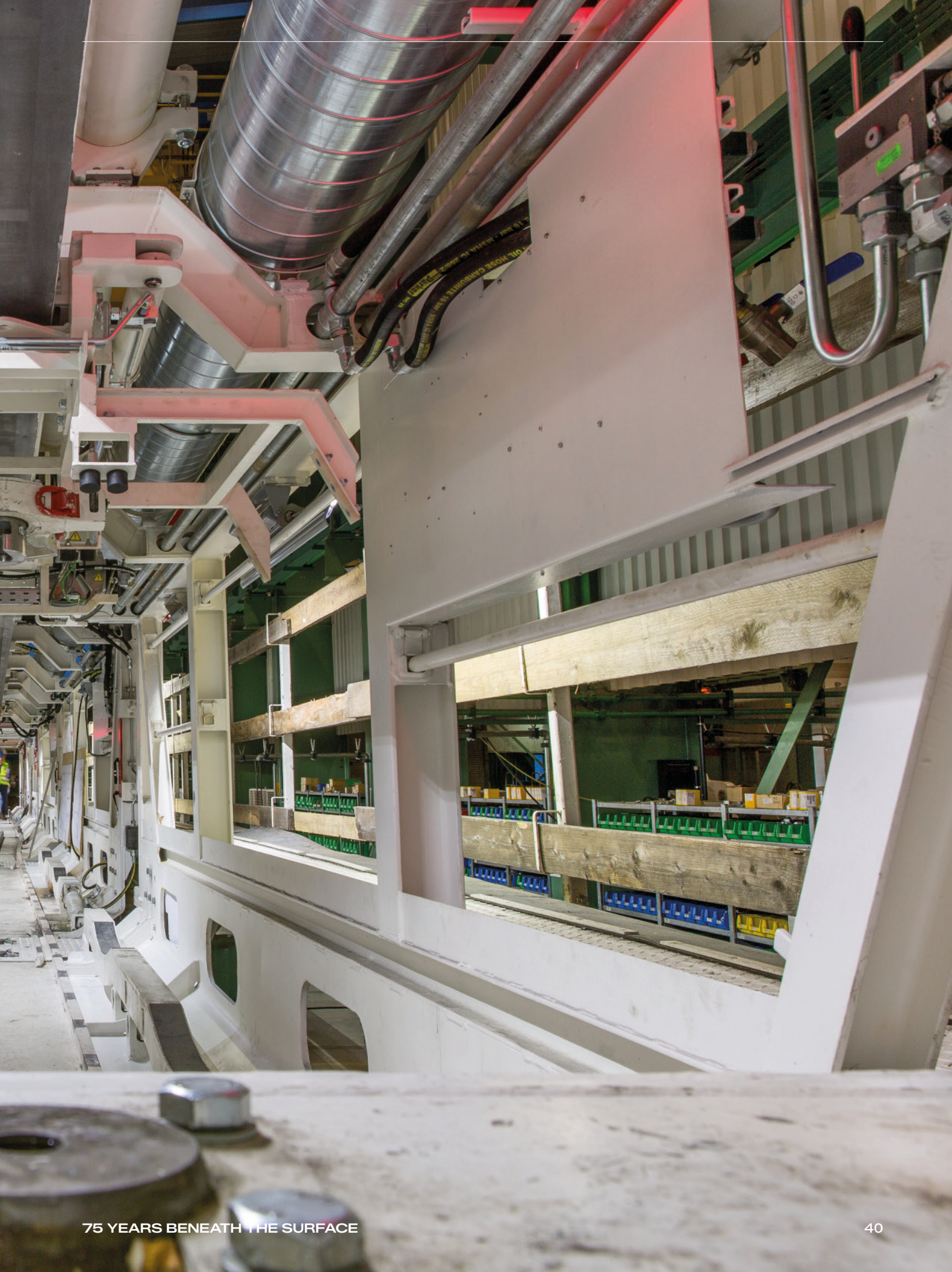
Tunnel length

**Reinforced concrete
prefabricated segments**

Tunnel lining type







POLAND

RAILWAY LINE OF THE LODZ NODE

Assembly and excavation with a TBM in a soft ground including alluvial deposits below the water table.

The heavily urbanised area, the large excavation diametres, the crossings with partial excavation in station and the very low cover make the operation particularly complex. SELI Overseas is responsible for the excavation of several tunnels using two EPB TBMs.

Ongoing

TECHNICAL / PRODUCTION KPI

13.08 e 8.82 m

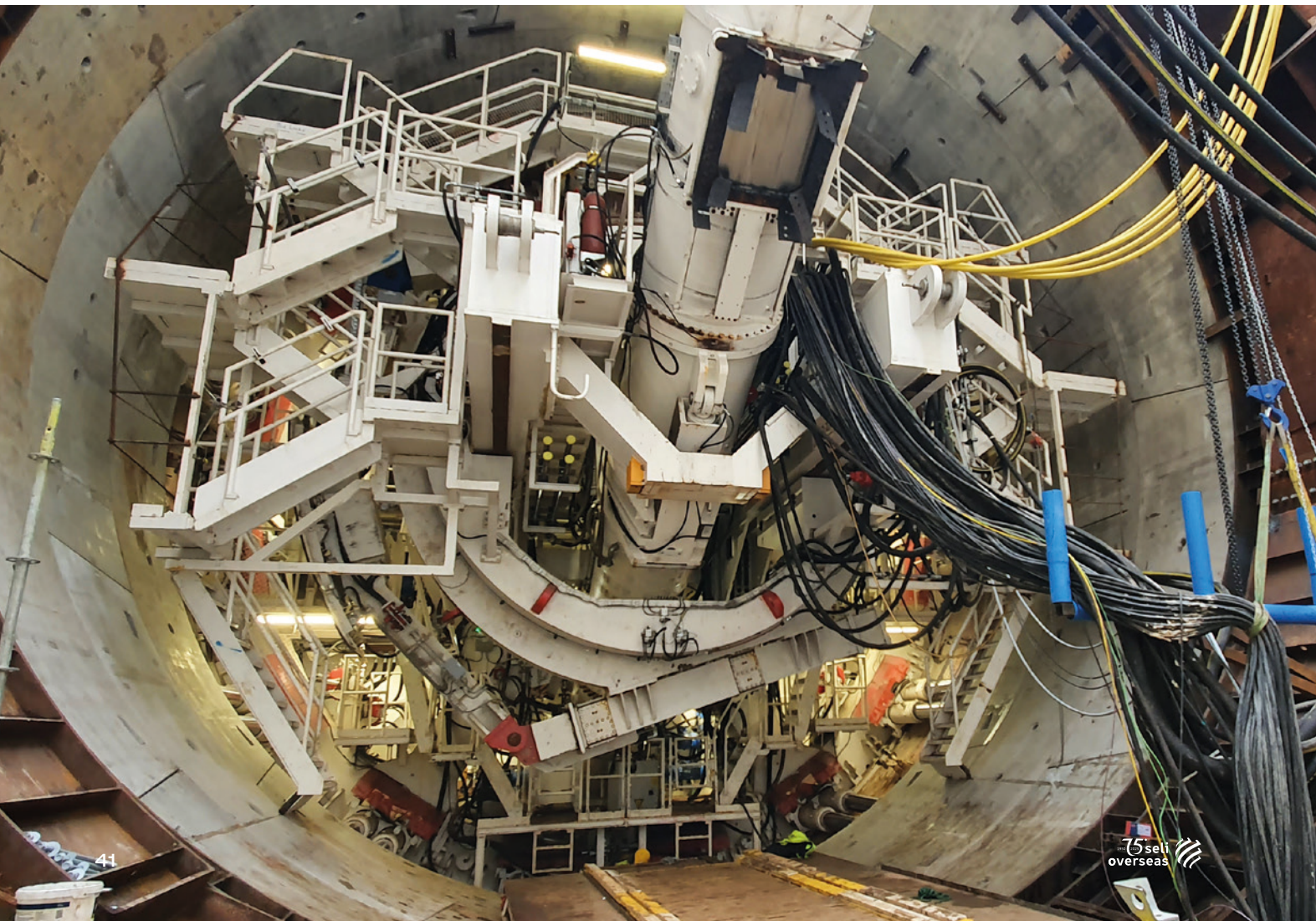
Excavation diameter

2,600 + 2,300 m

Tunnel length

Precast concrete segments

Tunnel lining type



ITALY

FOUR-TRACKING OF THE FORTEZZA-VERONA RAILWAY LINE, FORTEZZA-PONTE GARDENA SECTION

The new line is the continuation of the Brenner Base Tunnel.

The new Fortezza-Ponte Gardena railway involves the design and construction of the section of the new high-capacity line for about 22.5 km. It involves SELI Overseas in the construction of the Forch Window Tunnel, which will be built using an EPB-type TBM for a total of 1.29 km, and the Funes Window Tunnel, Gardena Tunnel with Dual Mode TBM for a total of 16.243 km.

Ongoing

TECHNICAL / PRODUCTION KPI

FINESTRA DI FORCH: 11.05 m

FINESTRA DI FUNES: 9.68 m

Excavation diameter

TBM EPB: ~ 1,300 m

TBM Dual Mode: ~ 16,300 m

Tunnel length

Precast concrete segments

Tunnel lining type





ITALY

MESSINA – CATANIA HC RAILWAY, LOT 2 GIAMPILIERI – FIUMEFREDDO, “SCIGLIO AND FORZA D’AGRÒ” TUNNELS

Part of a strategic infrastructure project for Sicily.

Lot 2 Taormina – Giampilieri is part of the Messina–Catania corridor and involves the construction of about 28.3 km of a double-track line. SELI Overseas is involved in the excavation of the Sciglio Tunnel, a twin-bore tunnel extending for 9.15 km for each bore, and the Forza D’Agrò and Letojanni Tunnels, respectively 6.2 km long, for a total of 12.4 km.

Ongoing

TECHNICAL / PRODUCTION KPI

Sciglio: 9.16m
Forza D’Agrò: 9.36m
Excavation diameter

Sciglio: 18,300 m
Forza D’Agrò: 12,400 m
Tunnel length

Precast concrete segments
Tunnel lining type





SELI OVERSEAS

THE FUTURE OF SUSTAINABLE MOBILITY, METER BY METER

The underground is not just a hidden space: it is also a strategic one. It is where water, energy, mobility and networks that make cities liveable and economies competitive.

This is where the world builds continuity. In the coming years, the role of underground projects will grow decisively: cities will become more densely populated, resources will need to be protected, and infrastructures will have to be integrated without consuming more land. In this scenario, SELI Overseas will contribute to shaping a new cycle of development.

A global company, **SELI Overseas** is part of the largest groups in infrastructure, **placing its vertical tunnelling expertise at the service of the most complex international projects.**

The future of the company consists of a collaborative operating model, capable of working with clients, contractors, utilities and international operators. SELI Overseas brings method, experience and execution capacity where the ground is complex, developing critical works for infrastructure resilience.

The challenges posed by future projects require new tools. For this reason, **the company invests in excavation technologies** and systems that guarantee operational continuity and safety:

- **Green TBMs** and solutions to reduce consumption and emissions.
- **Continuous mining** to increase the regularity of the excavation cycle.
- **Advanced digital systems** to read the ground, predictively monitor the wear of key components and optimize excavation parameters.
- **Automation of the most critical operations** to reduce human risk and stabilize productivity.

These are not theoretical innovations, **but real answers to real problems:** high pressure, unstable ground, discontinuous excavation cycles and logistical complexity.

The future of the company does not lie in a single technology nor a single market, but in the **ability to open sustainable, safe and resilient passages where they are most needed:** in growing cities, in ecosystems to be protected, in evolving regions.

*The future of tunnelling
has already begun.
SELI Overseas is there,
where it is taking shape.*



SELI OVERSEAS S.p.A.

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Project coordination

Webuild Corporate Identity,
Communication and Institutional Affairs

Credits

Webuild Image Library
Seli Overseas Image Library

Design

Hdrà ADV & Digital

Edition

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webuildgroup.com

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PHOTO ON THE ADJACENT PAGE:

Four-tracking of the Fortezza–Verona Railway Line, Fortezza–Ponte Gardena Section, Forch Window – Italy – ONGOING

75 YEARS BENEATH THE SURFACE

