

CONSOLIS



Shaping *the* Future

We pride ourselves on contributing to the economic development of local communities by creating employment, developing business with local partners and playing an active role in the community.

"Wherever people live, work, play and travel, our products are present."

As a concrete precast manufacturer, we are helping to build a strong and mobile society for tomorrow. We provide sustainable solutions for urban and rural planning, water treatment and distribution, transportation infrastructure (roads, railways, airports, bridges and tunnels), and energy management hubs.

Our long-standing commitment to sustainability means that we contribute to protecting the planet's natural resources by proactively addressing pressing environmental issues such as air and water quality, and improvements in energy efficiency. As one of the most sustainable construction materials, concrete is at the heart of the construction industry, and we strive to maintain this through constant innovation.

We build trust with our clients through a keen interest in challenging projects and truly innovative products. Our multi-disciplinary R&D teams are part of ambitious research and development programs that focus on product and system development, operational performance and process improvement for our industry.

Our offer is organized into market segments: Building, Rail, Infrastructure and Urban Planning. This enables us to design products perfectly adapted to each market and to consistently deliver smart, reliable solutions. Behind our wide range of products and services lies the will to respond to the varied needs of a global market while safeguarding the environment.

Not only do we provide solutions that fit the needs of a rapidly evolving global marketplace, but we also anticipate the market's future requirements. Our focus on innovation and on exceeding our customers' expectations are what make us a key player in the building, infrastructure and rail markets, and we are proud to play a key role in Shaping the Future.

Pierre Brousse
President and CEO

2013 sales
€1.3bn



People
10,000



Countries
30



EXCEEDING EXPECTATIONS

INNOVATION

Innovation plays a central role at CONSOLIS. Our R&D teams continually develop new, innovative materials and products and improve manufacturing processes to meet our customers' needs as efficiently as possible.

Innovative Teams and Tools

- Our engineering teams include architects, engineers and industrial designers.
- We use specific calculation tools in order to design every precast or reinforced concrete product: dedicated Eurocodes software, end product software, proprietary work component calculation software.



Innovative Solutions

Thanks to our engineering experts, we can:

- Offer tailor-made solutions.
- Respond to the most challenging situations and develop first-class solutions through technical partnerships.
- Guide and assist clients and partners throughout the entire process, from design and production to final delivery and implementation.

Innovative Expertise

Our production site labs go far beyond routine quality control: they provide expertise in developing complex engineered concrete products. Upon request, they can even complete prototyping case studies based on the appropriate qualification tests. CONSOLIS' expertise guarantees the success of technically complex and ambitious projects.

A Reputation Built on Innovation: Smart Concrete

CONSOLIS has created Smart Sleepers®: by embedding electronic sensors in concrete sleepers, CONSOLIS is able to determine how rails react when trains roll along the tracks. CONSOLIS has also embedded micro-chips in some of its concrete elements for tracking purposes.

Achieving Our Sustainability Ambitions through R&D

Our R&D programs are intrinsically linked to our sustainability initiatives.

To reduce our environmental impact and lower our carbon footprint, we are working on producing less CO₂ and waste and implementing recycling and energy efficiency practices.

By nature, concrete is recyclable and prefabrication helps to reduce energy and raw material consumption during construction.

A maximum amount of waste is recovered and reused in CONSOLIS' production processes. This applies to fresh concrete residue as well as hardened concrete.

Our industrial sites are spread throughout the countries where we operate, so as we source, produce and sell our products locally we consider ourselves to be part of the communities where we operate.

Thanks to our numerous industrial sites, we are able to minimize the distance between the production and delivery locations, thus considerably reducing CO₂ emissions generated through transport. Every single one of our solutions incorporates a long-term view.

We are constantly working on the following:

- New materials such as depolluting concrete, intelligent thermal concrete, UHPFRC and GFRC, etc.
- Energy savings and cooling solutions.
- Water treatment solutions and waste management.
- Fire prevention, seismic resistance and concrete robustness.
- Recycling concrete.



BUILDING

We are the largest provider of concrete building elements and solutions in Europe, working with a diversified base of clients that includes contractors and developers. We design and manufacture a comprehensive range of structural and non-structural elements and integrated frame solutions, primarily for public and private new build projects in the residential and non-residential markets. Our product portfolio includes prestressed hollowcore floors, facades, walls, roofing elements, beams and columns, flooring supplies, stairs, individual steps, one-piece helical staircases and balconies.

CREATING *LIVING WORKING MEETING* SPACES





A WIDE RANGE OF PRODUCTS AND SOLUTIONS

Whether it's residential or public buildings, offices or industrial sites, we can develop a solution tailor-made to your needs.

Key Advantages

FLEXIBLE AND INNOVATIVE

Our products enable the creation of inventive and cutting-edge contemporary architectural designs.

COST-EFFICIENT AND GREEN

By implementing energy-efficient elements in a building's design, we lower the building's environmental impact and total cost of ownership.

Setting New Standards

CONSOLIS works with renowned architects, contractors and building owners to develop sophisticated technical solutions that constantly set new standards in the following areas:

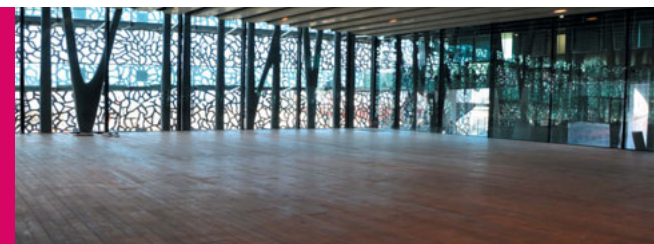
TEXTURE AND COLOUR

Our concrete solutions come in a multitude of colours, shades and textures. Grey is no longer the only option: precast concrete offers many combinations for colourful and creative building design.



SPACE OPTIMIZATION

CONSOLIS solutions allow infinite flexibility in workspace configuration thanks to complete precast systems that use extra-long-span hollowcore slabs for flooring. The technology enables the design of extra-large open floor spaces with high load capacities and a minimum number of columns — or even no columns at all.



VERSATILITY

Our flexible production techniques allow us to manufacture facades, lift shafts, stairs and much more. For example, we provide precast concrete elements for sports facilities such as stadiums, grandstands, skating rinks and even bobsleigh runs. We also have extensive experience in the design and construction of car parks.



DESIGN AND DURABILITY

Precast concrete is perfectly adapted to the construction needs of the 21st Century: it combines the benefits of mass production and customization with systematic quality control and cost-efficiency. CONSOLIS is constantly developing new and improved concrete products in order to reduce buildings' energy consumption and overall carbon footprint.

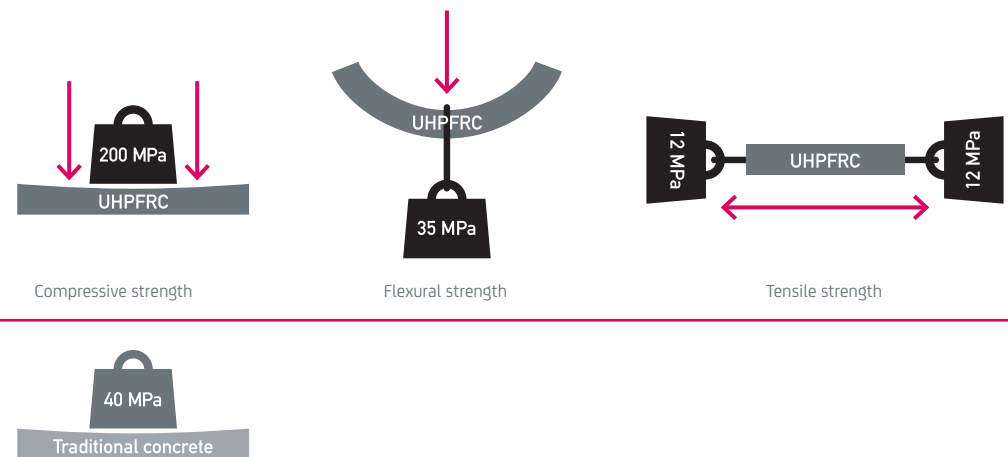


2013 Sales
€805m



Countries
15





MORE EFFICIENT, FLEXIBLE, COST-EFFECTIVE SOLUTIONS

Today's construction industry requires innovative materials that are strong, flexible and cost-effective. CONSOLIS precast elements, such as hollowcore slabs and ready-made sandwich walls, speed up construction and ensure quality results. Pipe floors, integrated hollowcore slabs and FlexCasco walls allow space for pipes and conduits for increased building flexibility and adaptability. These unique solutions comply with current standards for thermal and acoustic insulation, fire resistance and air quality.

BALCONIES, TERRACES

CONSOLIS has engineered connection systems that eliminate weak thermal points between balconies and internal floors.

COLUMNS

According to the project, column heights can vary from one storey to 24 meters.

STAIRS

CONSOLIS offers a variety of precast stairs, from individual steps to straight or helical one-piece units.

BEAMS

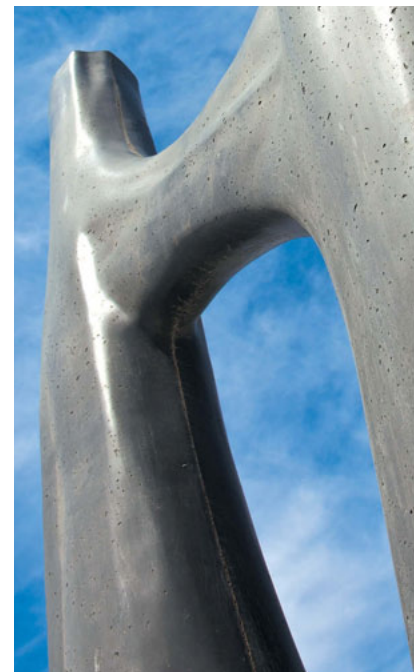
The cross-sectional dimensions of the product are standardized, but the prestressing force and the beam length are adapted to each specific project.

BETEMI COLUMNS

Produced automatically by shotcreting, the surface of Betemi columns can either be grey troweled or polished. Coloured concrete and different types of aggregates can also be used to produce a variety of surface textures.

FLOOR SYSTEMS

CONSOLIS prestressed hollowcore floors provide maximum flexibility with adaptable unit depth, capacity and surface finish. A hollowcore slab requires 50% less concrete and 30% less steel prestressing than a plain slab.



Gateway to Creativity

Ultra-High Performance Fiber-Reinforced Concrete

The breathtaking concrete latticework created for the MuCEM (Marseilles, France) and the Jean Bouin Stadium (Paris, France) demonstrate UHPFRC's adaptability and strength.

This exceptionally strong material was used for the construction of several nine-meter high "N" and "Y" shaped supporting columns, as well as a 78-meter footbridge for the MuCEM. The building also features canopies, awnings and other architectural elements requiring strong and accurate elements.

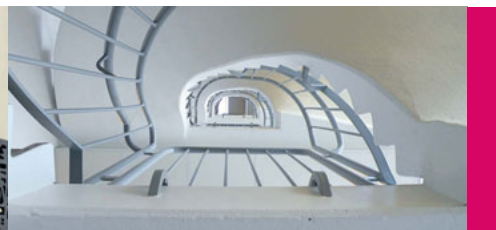
The molds used in UHPFRC have an error tolerance of less than a millimeter, yielding results with pinpoint accuracy. The machining of the sealing surfaces ensures their perfection. Every molded element is made according to a predetermined protocol where no room for variation is allowed. Each product is checked thoroughly before its delivery to the construction site. UHPFRC is durable and resistant to harsh conditions such as salt water and frost. The fact it's waterproof means it doesn't require additional treatment to look amazingly beautiful.



Beams and columns



Balconies







Stairs

Designed by Rudy Ricciotti, the Jean Bouin stadium in France boasts a 20,000 m² covering of concrete latticework in ultra-high performance fiber-reinforced concrete. The first-of-its-kind latticework is made of a triangular mesh of 3,543 self-supporting prefabricated concrete triangles. The inclusion of glass inside the holes of the concrete panels ensures that the latticework remains waterproof.

FROM DESIGN TO DELIVERY







MUCEM - MUSEUM OF CIVILIZATION IN EUROPE AND THE MEDITERRANEAN

-  Latticework panels, voussoirs, post-tensioned supporting columns, cantilever beams, passageway panels
-  Architect: Rudy Ricciotti
-  Marseilles, France
-  2013







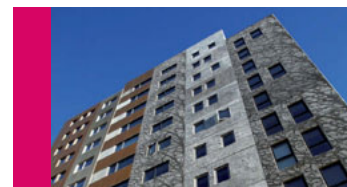
PGE ARENA GDAŃSK - FOOTBALL STADIUM

-  Precast concrete columns, beams, tribune elements, seats, stairs, walls, solid and hollowcore slabs
-  Architect: Rhode Kellerman Wawrowsky
-  Gdansk, Poland
-  2012







STATOIL OFFICE BUILDING

-  Precast concrete for seamless facade
-  Architect: A-Lab
-  Oslo, Norway
-  2012







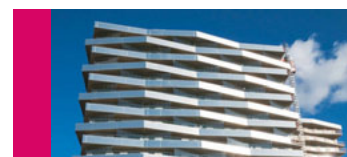
GRUNDFOS STUDENT HOUSING

-  Hollowcore slabs, columns, beams, walls and facades in both plain and graphic concrete
-  Architect: Cebra A/S
-  Aarhus, Denmark
-  2013







EMPORIA SHOPPING CENTRE

-  Columns, beams, hollowcore and roofing slabs, stairs, wall panels, steel profiles
-  Architect: Gert Wingårdh (MIPIM award 2014)
-  Malmö, Sweden
-  2012







TULETORNEN RESIDENCE

-  Low energy TermoDeck slabs, untreated/sandblasted facades
-  Architects: Mats Eriksson and Tobias Nissen
-  Stockholm, Sweden
-  2013



FLOORANAUKIO RESIDENCE

-  Slabs, walls, facades, balconies, lift shafts
-  Architect: Heikkinen-Komonen Oy
-  Helsinki, Finland
-  2011

At CONSOLIS, when we take on a project, we aim to go above and beyond the client's expectations. We strongly believe that in addition to being a precast concrete manufacturer, our job is to improve the quality of life in the communities we work in. We constantly strive to achieve this when designing and manufacturing precast concrete solutions for public works.

IMPROVED NETWORKS, ENHANCED QUALITY OF LIFE

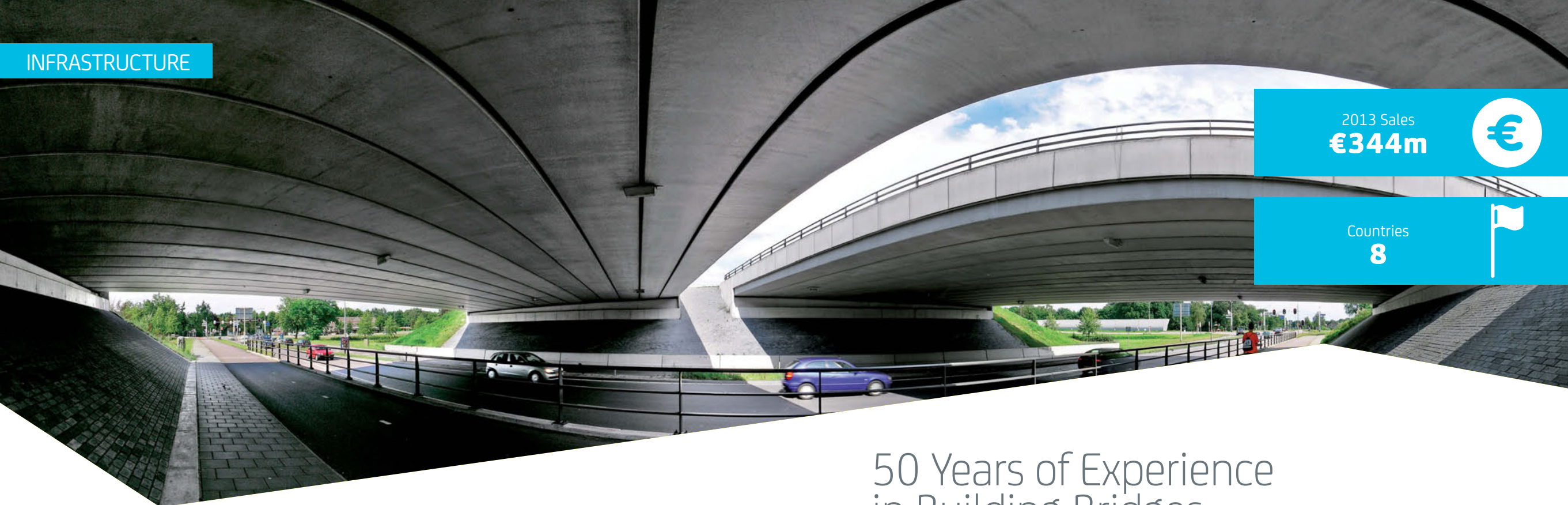
Our wide-ranging expertise enables us to be a one-stop shop for our customers. As such our offer encompasses an array of products specifically designed to facilitate and improve community services: drainage and pressure pipes for water and sewage networks; bridge, road, and tunnel components for civil engineering; curbstones, paving and street furniture for urban designers and telecom and electrical shelters for dry networks.



2013 Sales
€344m



Countries
8



OPTIMIZING INFRASTRUCTURE FOR THE 21ST CENTURY

With its extensive experience in designing, manufacturing and supplying precast concrete solutions for public and private contractors, CONSOLIS offers a complete range of solutions for all types of infrastructure.

CONSOLIS provides its clients with tailor-made solutions for the following:

WATER AND SEWAGE NETWORKS

Pressure pipes, underground pipes, advanced water cooling systems for power plants, drainage pipes, watertight solutions in reinforced concrete, manholes.



CIVIL WORKS

Road and rail infrastructure, industrial sites, special encapsulating vaults for stocking low-level radioactive waste, bridges, beams, tunnels, underpasses, artificial reefs, anti-noise panels, dry networks.



URBAN PLANNING

We work in close cooperation with town planners, civil engineers, architects and public contractors to make towns and cities enjoyable places to live in.



DRY NETWORKS

Telecom chambers, technical walls, electricity shelters.



50 Years of Experience in Building Bridges

With over 50 years of experience in precast bridges, tunnels and underpass construction, we offer a wide range of precast solutions developed for road and rail infrastructure and industrial sites. Precast bridges are well suited for projects where the cost of traditional scaffolding is prohibitive and where construction speed is crucial. Our expertise lies in designing specialized systems such as solid slab bridges, girder bridges with cast in-situ decks and complete precast box girder bridges.

Custom Tunnels to Fit your Needs

The CONSOLIS Group has been in the precast tunnel lining segments business for more than 35 years. Over the decades we've built more than 220,000 meters of tunnel.

The company applies its experience and know-how to a variety of markets: transportation tunnels (road, train, mass transit); water, stormwater and wastewater tunnels; utility tunnels, and more. We have collaborated on projects throughout Europe and the Mediterranean region. Through technical innovation, we constantly refine and improve our products.

A Pioneer in Pressure Pipes

Our expertise in water infrastructure comes from our BONNA brand. BONNA has been setting the standard for the pressure pipes industry for more than a hundred years.

Today we deliver state-of-the-art pipe designs and offer the most extensive range of products and solutions available for water and sewage networks, including a complete range of reinforced concrete pipes (up to a diameter of 32 meters).

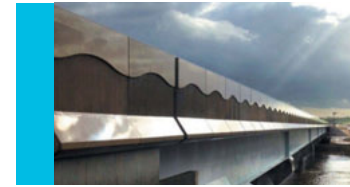


Our experience in bridge and viaduct construction ranges from small simple bridges to some of the most complex structures in the world, several kilometers long, crossing land and water.

The natural strength, durability, rapid installation and cost-effectiveness of precast concrete bridges have made them the premier bridge technology worldwide.

Our particular expertise lies in designing specialized systems such as prestressed concrete solid slab bridges, girder bridges with cast in-situ decks and complete precast box girder bridges, like the 3.3km Westrandweg viaduct in Amsterdam, Netherlands.

TECHNICAL KNOW-HOW



SOUTHERN EUROPE ATLANTIC HIGH-SPEED TRAIN LINE
 Civil works, water, drainage and sewage pipes, dry networks, acoustic barriers (20,000 panels), sleepers, bearers
 340km of new high-speed lines
 France
 2017



WESTRANDWEG MOTORWAY VIADUCT
 Prestressed concrete, prefabricated for rapid on-site assembly, PIQ beam box (developed with Van Hattum & Blankevoort contractors)
 3.3km of viaduct, the longest in the Netherlands
 Amsterdam, Netherlands
 2011



HOLMESTRAND HIGH-SPEED TRAIN TUNNEL
 Tunnel lining segments, walls, roof elements, foundations
 12,000 sections of tunnel elements supplied
 Holmestrande, Norway
 2014



WATER DRAINAGE NETWORK & PRESSURE PIPES UNDER A9 MOTORWAY
 Civil engineering precast concrete chambers, pressure pipes with steel cylinders
 Customized chambers up to 9.4m high and weighing 20 tonnes
 Nimes-Montpellier, France
 2014



LONDON OLYMPIC VENUES OFFICIAL SUPPLIER
 Precast concrete circular pipes, manholes, jacking pipes, cable troughs, sleepers
 Over 7km of circular pipes, 6,000 twin block sleepers, 500m cable pipes supplied
 London, UK
 2012



LØREN TUNNEL - RV 150 RING 3 ULVEN - SINSEN
 41,000m² curved tunnel elements
 3,652 tunnel segments
 Oslo, Norway
 2013



CAIRO METRO - LINES 2 & 3
 Tunnel lining segments
 11km of tunnel lining segments supplied
 Cairo, Egypt
 1994-2013



CERN LARGE HADRON COLLIDER
 Tunnel lining segments
 19km of tunnel lining segments for the most powerful particle collider in the world
 French/Swiss border
 1984

A city is more than the sum of its parts. It is an organic whole, a living thing that is constantly changing, evolving and morphing into an increasingly eco-friendly and welcoming entity. Given this, what is then the best way to create a lasting and aesthetically pleasing city in the future? From its outset our Urban Planning business has striven to answer this question.

It offers a wide range of concrete solutions, from classic concrete products to highly innovative materials such as Ultra-High Performance Fiber-Reinforced Concrete (UHPFRC) and coloured aggregate concrete.

CONSOLIS works hand-in-hand with architects, engineering offices, design offices and contractors to provide the most relevant solutions to urban planning challenges.

SERVING COMMUNITIES





URBAN INSIGHTS

Our approach to urban planning is firmly aligned with the demographic and economic trends that influence our cities. People and goods are more mobile than ever before and towns and cities are perpetually reinventing themselves to meet the expectations of urban dwellers.

At CONSOLIS, we collaborate with town planners, architects and civil engineers to develop sustainable solutions that will serve communities today and tomorrow. Our constant innovation in concrete and derived materials means that we can offer a range of purpose-built structures with endless design possibilities.

TOWN PLANNING

Slabs, tiles, low walls, kerbs (pavements, tramway and bus platforms), separators, speed bumps, roundabouts, urban furniture (bus stops, benches, tables), cycle paths.

HYGIENE AND SANITATION

Public restrooms, water fountains, waste containers.

CEMETERY PLANNING

Creation and refurbishment of burial sites and columbaria for local authorities, marble work companies and funeral parlours.



Tramway platform



Public restroom



Cemetery solutions

SITINAO

Our SITINAO brand offers complete city centre urban planning solutions, from the design of esplanades, parks and gardens to a complete neighbourhood overhaul, from bike lanes and speed bumps to pavement kerbs and bus and tramway platforms.

Inspired by stonemasonry, we use natural and local materials, such as basalt, porphyry and granite. These quality aggregates are used in the making of SOBÉRITE®, a high-quality precast concrete material developed by SITINAO that is extremely durable and can be worked like stone. SOBÉRITE®'s optimum density guarantees high mechanical strength and good freeze-thaw resistance.

SITINAO's aesthetic and highly durable concrete aggregates are available in 27 different colours and several surface treatments to suit every urban planning need.

Concrete Wonders

Ultra-High Performance Fiber-Reinforced Concrete (UHP-FRC), Glass Fiber-Reinforced Concrete (GFRC) and concrete aggregates allow the construction of beautiful and original buildings – in a wide range of colours – that are highly durable and vandalism-proof.

In addition to our off-the-shelf product offer, we provide ad hoc solutions for customized town planning and urban architectural projects.



Bordeaux's tramway extension is equipped with high-tech precast concrete solutions. SITINAO created a customized product for the 27km of track border and supplied platform kerbs, ramps, polytram slabs and high-performance tactile paving surface slabs for 20 tram stops and 6 train stations.



EMBELLISHING OUR CITIES



ARENA
 10,000m² of bi-coloured and castblasted tiles, 500 meters of street curbs and 500 meters of pedestrian steps
 Rouen, France
 2013



LOUVRE PARK URBAN FURNITURE
 33 different sized benches in glass fiber reinforced concrete (GFRC)
 Architect: Catherine Mosbach
 Lens, France
 2013



SCENTED COURTYARD GARDEN
 Walls, staircase, benches, slabs, flower containers
 Versailles, France
 2014



URBAN SIGNAGE
 11 orientation table maps in UHPFRC, 68 hotspots, 45 pavement markings
 Lyon, France
 2013



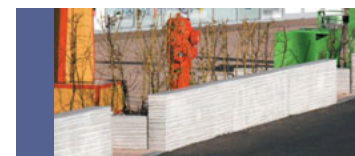
PUBLIC CONVENIENCE
 16 public lavatories with customized finish
 Saint-Etienne, France
 2014



CYCLE PATH
 Stone-profile concrete borders - 5km of borders supplied
 Vaulx-en-Velin, France
 2010



EXTENSION OF THE SUBURB CEMETERY
 187 cinerary vaults, 228 columbaria, 20 inhumation vaults, including 4 dedicated to temporary use, 1 ossuary, furnitures for localization and a garden of remembrance
 Savigny le Temple, France
 2012



CARREFOUR SHOPPING CENTRE
 950 linear meters of precast concrete planters, low walls, benches, slabs, kerbs
 Mondeville, France
 2014

CONSOLIS Rail is the European leader in the design and manufacture of precast concrete sleepers and bearers. CONSOLIS Rail operates in 14 countries and manufactures more than 3.5 million concrete sleepers each year while continually developing new technologies through a strong R&D program. CONSOLIS Rail also provides engineering services for the construction of sleeper factories.

CONNECTING

PEOPLE, PLACES AND COUNTRIES

CONSOLIS Rail serves an extensive number of end markets such as high-speed rail, urban transportation, heavy haul, main lines and mining freight.





2013 sales
€174m



Countries
14



LEADING THE WAY

#1 European concrete sleepers and bearers manufacturer

Being an industry leader is not just about sales volume. It is a commitment to meeting our customers' needs one hundred percent while constantly putting quality, reliability and safety first.

We are dedicated to understanding the constraints and challenges of our customers' railway infrastructure projects in order to offer the appropriate solutions to:

- Increase reliability and quality
- Reduce setup time
- Limit noise pollution
- Decrease maintenance costs

Thanks to our strong focus on R&D, we're always refining the design and manufacture of our products to ensure the highest quality while optimizing maintenance costs for the railway track.

Market-leading Expertise in Railway Tracks

With a strong presence in Europe and more than 40 years' experience, CONSOLIS' expertise in manufacturing concrete sleepers and bearers is unmatched in the European market.

We serve all markets segments, with ballast or ballast-less solutions – high-speed rail, main lines, urban networks and heavy haul – and are able to work with all types of fastenings (Pandrol, Vossloh, etc.), gauges

(metric, standard, etc.) and different standards (AREMA, EN 13 230, Australian, etc.).

Thanks to our broad experience, we are able to rapidly develop solutions that fit our customers' requirements perfectly.

Our expertise enables us to anticipate market needs and offer innovative adapted solutions.

Lowering Costs for Railway Operators

Lifecycle costs are always on our mind from the start of the design phase right through to RAMS (Reliability, Availability, Maintainability, Safety) analysis.

Easier maintenance thanks to the complementarity of our products:

- The rail/sleeper interface is the same on slab-track and on ballast sleepers, therefore rails and fasteners can be replaced easily.
- The design of our slab track system enables an easy replacement of the sleepers.
- Our Harmelen level crossing solution eliminates the maintenance that is required in traditional level crossing systems.

Longer product lifecycle:

- Under sleeper pad solutions enable cost reductions including a heightened ballast lifecycle and reduction in ballast thickness (-20% on high-speed lines and -40% on main lines).



BALLASTED AND BALLASTLESS RAIL SOLUTIONS

Smart Rail Solutions

Working closely with national railways and their contractors, we provide technology leadership in design and production, engineering services and training. Our range – 50 products and 180 elements – is the widest available. Our key customers include numerous major national railways and large contractors.

Main Lines and High-speed Lines

CONSOLIS and its brands have over 40 years' experience in designing and producing concrete sleepers for main lines, high-speed and very high-speed lines, as well as bearers for switches and crossings. Our expertise has enabled us to play a significant role in such prestigious projects as ICE in Germany, TGV in France and Morocco and Eurostar in France and the UK.

VERY HIGH SPEEDS = VERY HIGH REQUIREMENTS

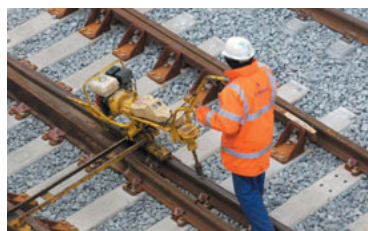
- Compliance with extremely tight geometrical tolerances
- High degree of quality and reliability in the replication manufacture process
- Tightly controlled logistics management to deliver on time
- Adaptability to ever-increasing speeds (most recent speed record over 600km/h)



TGV, France



ICE, Germany



Bearers for switches



Eurostar

Engineering Services

CONSOLIS can supply sleeper production machinery and technical assistance for the production of concrete sleepers anywhere in the world. In close collaboration with our clients, we have already developed turnkey solutions and joint venture projects in many countries, including Algeria, Pakistan, South Korea, Spain and the USA.

We are also partners in innovation and share our R&D expertise with customers and industry leaders for studies and development programs.

Urban Transportation

We design urban transport solutions – from tramway platforms to subway tracks – to fit the needs of any city, in any climate. We work in close cooperation with our customers to design transportation projects tailor-made to their needs: all types of sleepers and bearers, transition slabs, ladder tracks, etc.

OUR URBAN SOLUTIONS

- **Shallow depth sleepers for Light Rail Transit (LRT):**
A simple and cost-effective method of constructing slab tracks in urban environments. They reduce tunnel construction depths and maintenance costs, comprise fastening systems for bridges and leveling to facilitate track alignment, and comply with noise and vibration mitigation systems.
- **Baseplate sleepers:**
Used for tracks with specific performance requirements (height adjustment, higher loads and/or speeds, noise and vibration mitigation systems).
- **Noise and vibration reduction sleepers:**
Customized to specific performance, requirements, available in one-piece, two-piece or switches and crossing bearer configurations.



Reims Tramway





CONSOLIS designs slab track solutions for various types of lines, including urban tracks in the form of ladder/grid track sections or embedded twin block sleepers.

All our systems are tailored to the client's exact requirements, ballast or ballastless, including grass tracks.

A RECOGNIZED INDUSTRY EXPERT







TANGIERS - KENITRA HIGH-SPEED LINE

-  On-site training in dedicated factory and manufacture of precast concrete sleepers
-  685,000 precast concrete sleepers (411km)
-  Morocco
-  2015







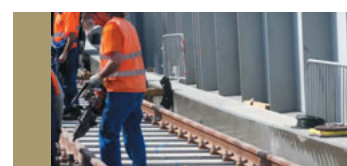
BOTTNIABANAN - NYLAND TO UMEÅ

-  Precast concrete sleepers
-  190 kilometers
-  Sweden
-  2010







HIGH-SPEED LINES BRITTANY/PAYS DE LOIRE, SOUTHERN EUROPE ATLANTIC, EAST EXTENSION

-  Rail sleepers and bearers
-  For all three lines a total of 117,000 linear meters of bearers and 1.4 million sleepers (840km)
-  France
-  Ongoing







POLAND - URBAN AND MAIN LINES

-  Sleepers, bearers, railroad crossings and foundation piles
-  13 million precast concrete sleepers supplied to the Polish Railways
-  Poland
-  40 years' presence







GERMANY - MAINTENANCE OPERATIONS

-  Sleepers, turnouts and ladder tracks
-  400,000 sleepers and 150 turnouts per year
-  Deutsche Bahn, Germany
-  More than 60 years of presence







HELSINKI METRO

-  Precast concrete sleepers and bearers
-  3,600 sleepers and 19,700 bearers
-  Helsinki, Finland
-  2012







MIDLAND METRO - BIRMINGHAM CITY CENTRE EXTENSION

-  Twin block sleepers, sleepers for ballasted and slab track
-  1,800 sleepers supplied
-  Birmingham, UK
-  2013 - ongoing



SPORVEIEN - KOLSÅSBANEN - 12KM METRO LINE (OPENING OCTOBER)

-  15,000 sleepers (9km) and 12 turnouts
-  1,800 sleepers supplied
-  Oslo, Norway
-  2012 to 2014

CONSOLIS

WORLDWIDE

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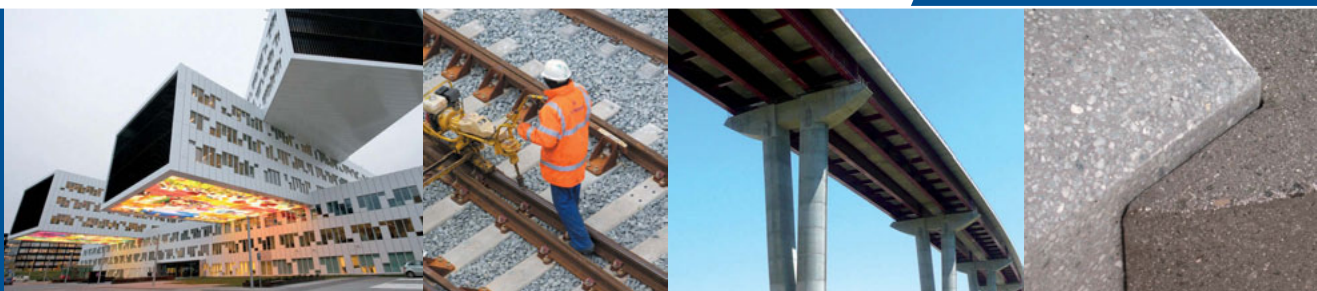
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