

Soletanche Freyssinet

2023

Essentials

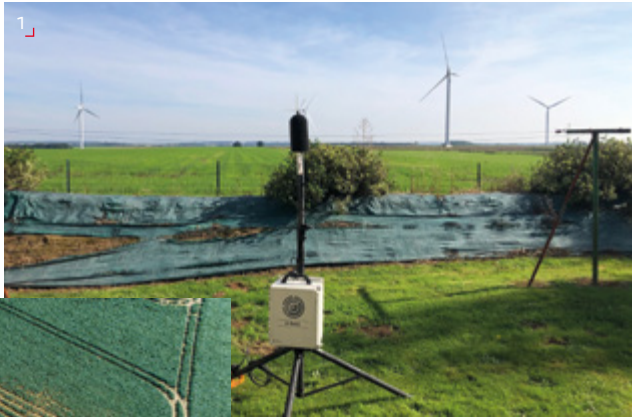


— Thank you ever so much to Marie Brunel, Mélanie Cadennes, Florian De Sousa, Julia Dennis, Marie Ducourtil, Daphné Druelle, Sophie Fromion, Jacqueline Gallo, Inès Gilbert, Juliette Léchard, Richard Loudin, Alexandre Miletitch, Tiphaine Moreau, Magali Mounier de Vérot, Ayelen Ottaviani, Delphine Parmentier, Charlotte Renard and Laura Schweitzer for your invaluable help and contribution.

And thank you, to those who work day after day to keep Soletanche Freyssinet's light shining bright around the world.

#buildbettertogether





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**WE ARE COMMITTED TO BUILDING
ALL-ROUND PERFORMANCE,
WE ALWAYS...**



Place **PEOPLE** and **SAFETY**
at the top of our list of priorities.



Ensure we are the partners
that our **CUSTOMERS** and
STAKEHOLDERS trust.

Strive to step up our **PRODUCTIVITY** and deepen our **EXPERTISE.**



Deliver projects that have a **POSITIVE IMPACT.**



INNOVATE and embrace **TRANSFORMATION.**



A FORCE FOR GOOD IN A CHANGING WORLD

The women and men at Soletanche Freyssinet put passion into their work every day to improve the daily lives of thousands of people around the world. Because each city and region is different, each project has unique challenges. That's why the management teams' trust in the people at Soletanche Bachy, Menard, Terre Armée, Freyssinet, Nuvia and Sixense is both essential and enduring. The range of expertise in these companies makes Soletanche Freyssinet a major, trusted player in the building of the world we live in and the world to come.



#MAKINGYOURDAYEASIER

Making everyday life easier is one of the great challenges of our world. Soletanche Freyssinet's six companies are working hard to resolve the many challenges of mobility. Our teams are involved in designing and building the infrastructures people use every day, such as bridges, tunnels, metro tracks, stations, airport runways or motorways.

#FOSTERGROWTH

Construction fuels economic growth. Wherever they operate, Soletanche Freyssinet companies are actively involved in the country's economy, by helping to build ports, museums, commercial buildings or sports arenas.

#ACCESSPOWER

Whether it's turning on a tap, turning on the oven, streaming the latest hit series or setting the thermostat... the little things we do every day are only possible because of the world's many energy sources. Soletanche Freyssinet companies are involved in the design, build and upgrade of dams, water towers, silos, nuclear power plants and wind turbines on every continent.

#CAREFORALL

There are few things more precious than personal health and safety. Soletanche Freyssinet companies provide practical solutions to health and safety challenges, such as the manufacture of medical equipment, the seismic upgrading of industrial or residential facilities, the monitoring of engineering structures and construction sites, the safety of nuclear facilities or the reinforcement of buildings.

#GREENISGREAT

Soil remediation, photovoltaic façade systems, nuclear decommissioning, taller wind towers made of prestressed concrete to reach higher and stronger winds...

Those are just some of the wide-ranging techniques Soletanche Freyssinet companies are using to address the challenges of the environmental and energy transition.



« WE STARTED 2023 FEELING CONFIDENT, WITH A SOLID BACKLOG THAT SHOWS TWO THINGS: THAT OUR CUSTOMERS TRUST US AND THAT OUR MARKETS ARE HEADING IN THE RIGHT DIRECTION. »

Interview with Manuel Peltier

CHAIRMAN
SOLETANCHE FREYSSINET



— Soletanche Freyssinet grew its business significantly again in 2022. Its revenue rose 20% to €4.3 billion. Its operating margin grew and order intake increased in all its specialty networks. These positive results reflect our teams' hard work and dedication around the world as well as the breadth of our technical expertise and the strength of our international network. Soletanche Bachy, Menard, Terre Armée, Freyssinet, Nuvia and Sixense work side by side with our customers through their 150-plus subsidiaries in more than 90 countries. As they have grown solid local roots, they are in a position to tap into the countless opportunities in those markets. Today, we are doing 80% of our business outside France. The most buoyant countries in 2022 were England, Australia, the United States and Mexico.

Progress on projects around the world

— Soletanche Bachy saw record business levels and its order backlog remained very high. Its main projects included the High Speed 2 (HS2) line in England; works packages on the Grand Paris Express programme then the Austerlitz tank that will improve the quality of the Seine's water in France; the underground tram stop at Warsaw West station in Poland; the Shoreline Storage Tunnel, which will contribute to strengthening Ohio's sanitation system in the United States; the foundations and infrastructure for Hong Kong airport's new Terminal 3; support-of-excavation works for the Antara tower in Mexico City; and the Canoas wastewater treatment plant in Colombia. Lastly, our subsidiary Bessac (which specialises in tunnels and microtunnels) expanded significantly in Canada and Côte d'Ivoire.

— Menard posted record growth, thanks to brisk activity in the Middle East and Oceania. In the United States, it acquired Earth Tech, a Florida-based company that specialises in soil improvement and sinkhole mitigation. Its main projects in 2022 included an industrial platform in Canada, a logistics centre in the United States, a Levi Strauss & Co logistics site in Germany and disposal of polluted materials from construction work at an SNCF train maintenance centre in France.

— Terre Armée generated strong growth in Asia, Oceania and Canada. It continued to diversify its solutions in reinforced steep slopes, protective barriers and anti-erosion systems. It also developed its industrial base in order to increase its prefabricated concrete capacities in the United States and Australia, and to step up production of its geosynthetic materials.

— Freyssinet's growing business volume was evenly split between new builds and repairs to existing structures, and order intake was brisk, particularly in Asia and Latin America. Freyssinet also won its first contracts in Azerbaijan and Uruguay, thereby extending its international network.

The principal projects it was involved in include the Saemangeum bridge in South Korea, the HS2 programme in the United Kingdom, the Site C hydroelectric generating station in Canada and the Puente Industrial, which will be Chile's longest bridge.

— Nuvia recorded a slight decrease in total revenue but its business volume picked up in France. It strengthened its position on the radiation protection market in the United Kingdom, as well as in Sweden where it was selected for a large dismantling contract at the Ringhals nuclear power plant.

— Sixense reported continued growth in its traditional engineering services (condition survey of existing structures and monitoring of soils and structures), while also expanding into innovative digital technologies, which enable the company to collect, analyse and harness asset-related data and make a host of new services available to infrastructure constructors and operators. Thanks to this innovation strategy, Sixense won three major contracts in Australia, France and the United States.

Strong commitments around the environment and safety

— Soletanche Freyssinet is rolling out a vigorous environmental policy, matching VINCI Construction's commitments, across all its subsidiaries. The solutions developed by Soletanche Bachy, Menard, Terre Armée, Freyssinet, Nuvia and Sixense are playing a pivotal role in tackling the challenges surrounding the energy and ecological transition. We are also taking a variety of initiatives to shrink our own carbon footprint, which include developing and using low-impact materials (Exegy® low-carbon concrete), construction techniques that save materials (post-tensioning at Freyssinet and structures with Terre Armée® in particular) and solutions to scale up energy-efficiency retrofits (ActivSkeen façades).

Then we are pushing ahead with our action plan to establish our safety culture a little more solidly, year after year, in all our companies. We all need to work hand in hand to make our jobsites and workplaces ever safer.

Build Better Together in 2023!

— We started 2023 feeling confident, with a solid backlog that shows two things: that our customers trust us and that our markets are heading in the right direction. We will continue to grow our companies and build lasting progress, as enthusiastically as ever, all together.

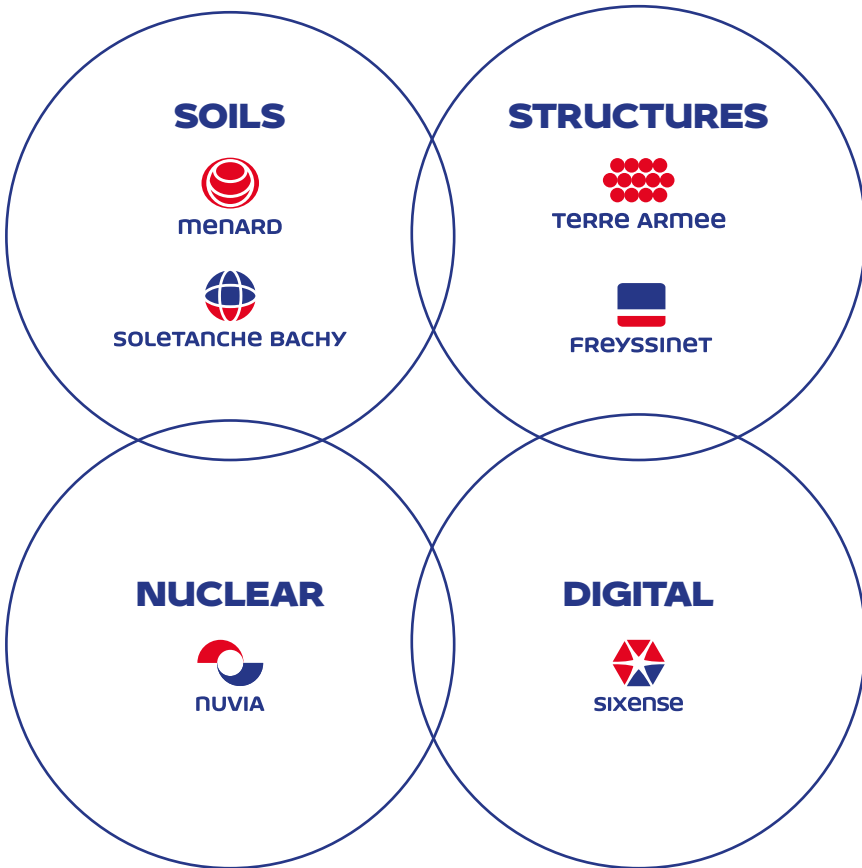
Management team

at 1 March 2023

- ▶ **Manuel Peltier**
Chairman, Soletanche Freyssinet
- ▶ **Christophe Dauchy**
Chief Executive Officer,
Soletanche Bachy
- ▶ **Stéphane Abry**
Managing Director,
Soletanche Bachy
- ▶ **Marc Lacazedieu**
Chief Executive Officer, Menard
- ▶ **Vincent Oudin**
Chief Executive Officer, Terre Armée
- ▶ **Jean-Philippe Ricard**
Chief Executive Officer, Freyssinet
- ▶ **Bruno Lancia**
Chief Executive Officer, Nuvia
- ▶ **Pascal Berger**
Chief Executive Officer, Sixense
- ▶ **Mark Deary**
Chief Administrative and Financial
Officer, Soletanche Freyssinet
- ▶ **Xavier Planchon**
Human Resources Director, Soletanche
Freyssinet
- ▶ **Guillaume Billaroch**
Marketing and Communications
Director, Soletanche Freyssinet
- ▶ **Lorenzo Alessi**
Quality, Safety and Environment
Director, Soletanche Freyssinet
- ▶ **Édouard Siret**
Information Systems Director,
Soletanche Freyssinet

6 BRANDS, 4 BUSINESS LINES

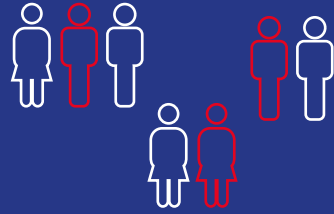
Soletanche Freyssinet encompasses an unrivalled array of construction and engineering expertise and brands. Soletanche Bachy, Menard, Terre Armée, Freyssinet, Nuvia and Sixense harness their technical excellence to deliver high-performing, long-lasting structures.



KEY FIGURES

Soletanche Freyssinet is one
of the world's leading players in construction.

23,070
employees

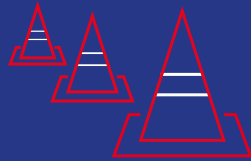


197 Business
Units



€4.357
million revenue

22,000+
projects a year



Soletanche Bachy

📍 Austerlitz storage tank, Paris, France

The teams from Soletanche Bachy France and Bessac are building a water storage and compensation tank (Austerlitz) and two structures to recover stormwater (Valhubert and Tournaire) in order to improve the quality of the Seine's water in preparation for the 2024 Olympic Games. This project is environmentally friendly in a variety of ways: the design is optimised to limit use of materials, spoil was removed from the site by river, and the project used an electric Hydrofraise® walling machine and Exegy® low-carbon concrete by Soletanche Bachy to reduce emissions.

[#greenisgreat](#)



OUR INTERNATIONAL FOOTPRINT

19%
North America

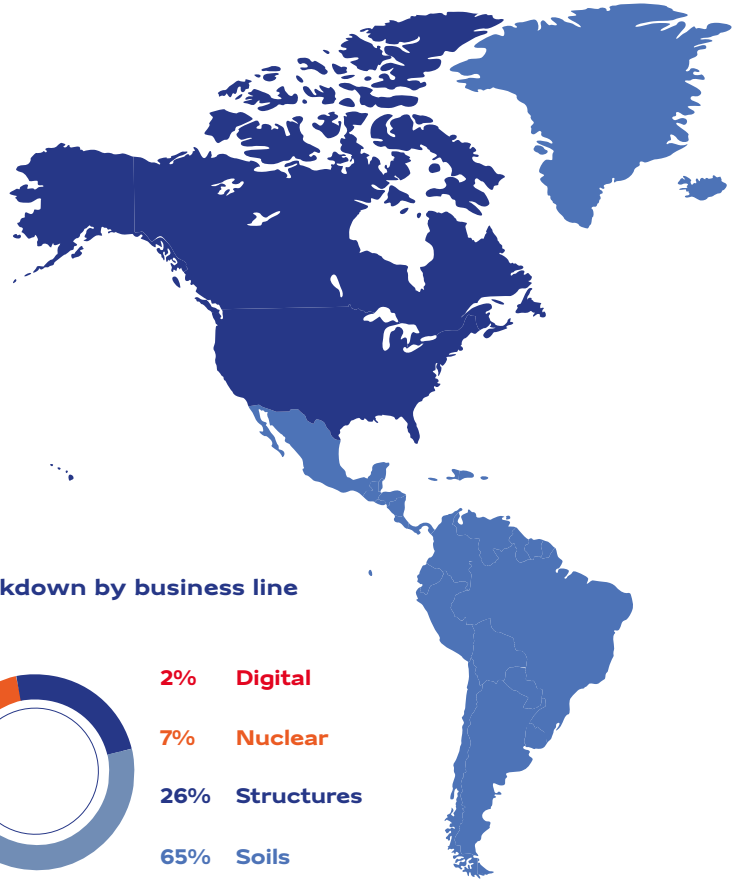
9%
Asia

5%
Africa and Middle East

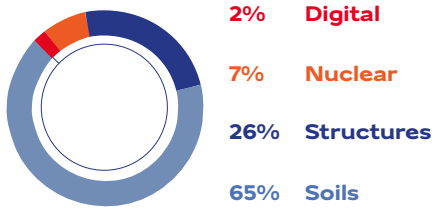
49%
Europe (o/w 20% France)

10%
Latin America

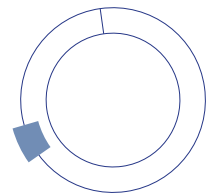
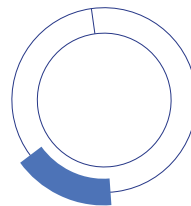
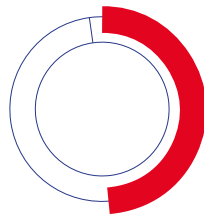
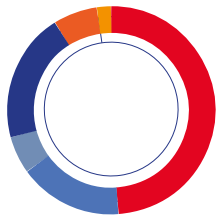
11%
Oceania



Breakdown by business line (%)



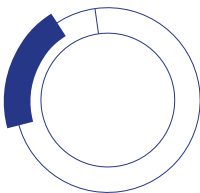
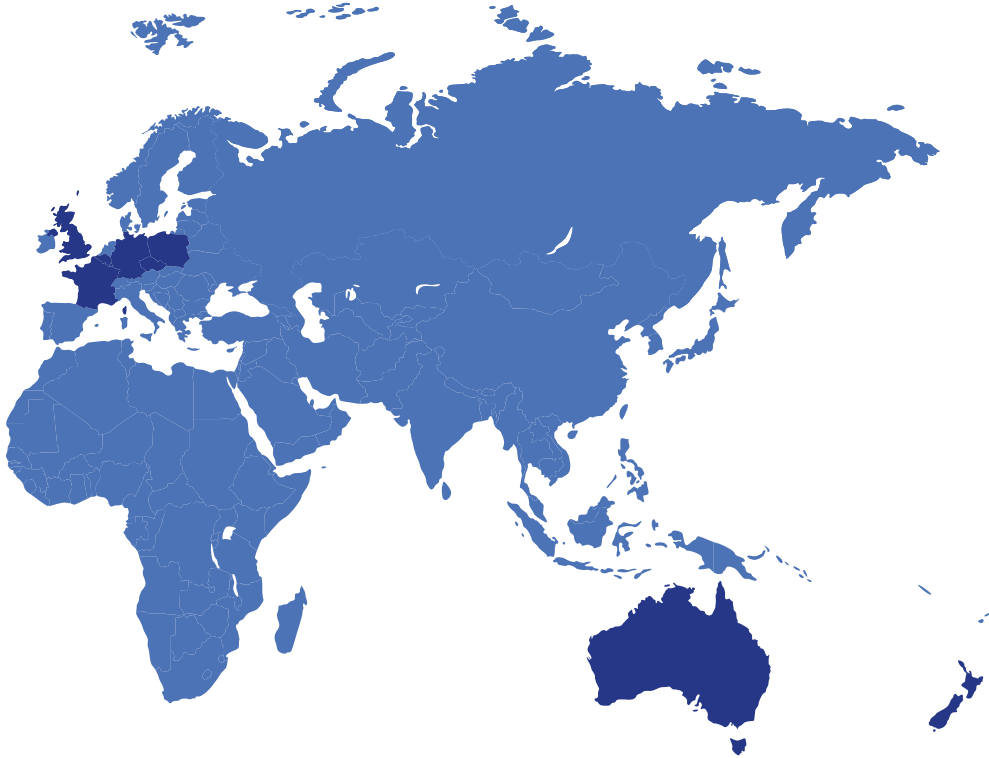
Breakdown by brand (%)



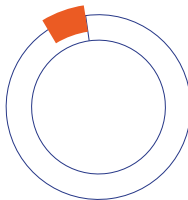
49%
Soletanche
Bachy

16%
Menard

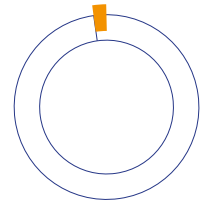
6%
Terre Armée



20%
Freyssinet



7%
Nuvia



2%
Sixense

Freyssinet

📍 Saemangeum bridge, South Korea

The teams at Freyssinet Grands Projets and Freyssinet Korea are involved in the construction of the Saemangeum bridge, designing, supplying and fitting 192 stay cables. This is the first time in the history of cable-stayed bridges that 2160 MPa steel strands are used. This bridge with a 420-metre main span will be one of the highlights on the new north-south Saemangeum motorway. It will carry a six-lane highway and connect the airport to the new districts now being built by the bay. Construction of the bridge is expected to be completed in 2023 with the post-tensioning and finishing works.

[#makingyourdayeasier](#) [#careforall](#)



SOLETANCHE BACHY

Soletanche Bachy is a world leader in foundations and soil technologies. It has around 80 subsidiaries and branches operating in 60 countries, which provide public-and private-sector customers with high-performance, innovative geotechnical solutions. It acts both as a general contractor and as a specialist subcontractor for the design, build, upgrade and maintenance of a variety of structures including ports, dams, car parks, metros, tunnels, energy, buildings, etc. Soletanche Bachy also contributes to protecting the environment by building positive-impact structures and implementing optimised techniques.

9,970

employees

€2,120

million revenue



SOLETANCHE BACHY



North-South Corridor (project N105), Singapore

— The teams at Bachy Soletanche Singapore and Soletanche Bachy International are designing and building a 1.1 km cut-and-cover tunnel as prime contractors. This project is part of the North-South Corridor, a 21 km mostly underground expressway along the eight-lane-wide Thomson Road. The goal is to free up a tree-lined, traffic-free area for buses and bicycles.

[#fostergrowth](#)

Shoreline Storage Tunnel, Ohio, United States

— The Clean Lake project, run by the Northeast Ohio Regional Sewer District, aims to reduce combined sewer overflows into Lake Erie and surrounding waterways. On this project, the teams at Nicholson Construction are building three diaphragm-wall access shafts to launch and retrieve the tunnel boring machine, and two reinforced cement walls.

[#greenisgreat](#)



Wastewater treatment plant, Bonneuil-en-France, France

— To connect this plant northeast of Paris to the Garges-Épinay sewer, the teams at Bessac designed and built the world's first treated-water discharge pipe exclusively using Exegy® ultra-low-carbon concrete. This concrete's carbon footprint is four times smaller than that of traditional concrete.

[#greenisgreat](#)

High Speed 2, United Kingdom

— The teams from Bachy Soletanche Ltd and Soletanche Bachy International are playing a prominent role on the HS2 project, which will link London to cities in the Midlands and northern England. They are active on two works packages: the new Old Oak Common super-hub, which will be the most connected and largest railway station ever built in the country (construction of 2 km of diaphragm walls, retaining walls and foundation piles for the underground structure housing the main station and platforms), and lots N1 and N2 covering more than 200 structures in the Birmingham area, including 73 bridges and viaducts, 7 km of diaphragm walls and numerous piles.

#fostergrowth #makingyourdayeasier



IPM wharf, Altamira, Mexico

— This project involves a 350-metre extension to an existing wharf with a diaphragm wall (25 metres deep), barrettes and a soil improvement solution using more than 1,000 rigid inclusions spanning the entire platform. It is being carried out by the teams at Cimesa under the ForSHORE brand and includes installation of special marine facilities.

#fostergrowth

Warsaw West station, Poland

— Soletanche Polska’s teams are building the foundations (including diaphragm walls, foundation piles, jet-grouted cut-offs and a tunnel) for an underground tram stop and its pedestrian crossing, while widening and extending an existing tunnel. The new station will become the country’ largest transport hub.

#fostergrowth #makingourdayeasier



René-Thinat bridge, Orléans, France

— Soletanche Bachy France teams have finished reinforcing an infill retaining wall to solidify this bridge in central France. They used pioneering Biocalcis® biotechnology developed by Soletanche Bachy, which involves injecting calcifying bacteria into the soil then adding a calcifying solution that strengthens the ground, providing it with the target mechanical properties, in hours. This solution’s carbon footprint is substantially lower than that using standard cement-based alternatives.

#careforall #greenisgreat

MENARD

Menard is active in three fields of expertise: soil investigation, improvement and remediation. True to its founder Louis Ménéard's vision, it engineers and applies solutions that save resources, providing soils with a more sustainable future, the world over.

2,288
employees

€690
million revenue



Disposal of polluted and inert materials from an SNCF train maintenance centre near Paris, France

— Remea treated 36,000 tonnes of polluted and inert spoil for SNCF (French Rail) at its biocentre in Normandy, recovering 95% of the volume in full compliance with regulatory requirements. The materials will be reused in a variety of construction projects. As Remea's biocentre is by the Seine, the waste was carried by river, dividing the carbon impact by four compared to transport by road.

[#greenisgreat](#)

Construction of a logistics and business park, Trélazé, France

— The teams at Menard reinforced the soil at an abandoned slate quarry in north-west France using dynamic compaction, one of the techniques with the smallest carbon footprints. This approach divided the CO₂ cost by four – including the emissions from transporting crews, equipment and materials – compared to using inclusions.

#makingyourdayeasier #greenisgreat

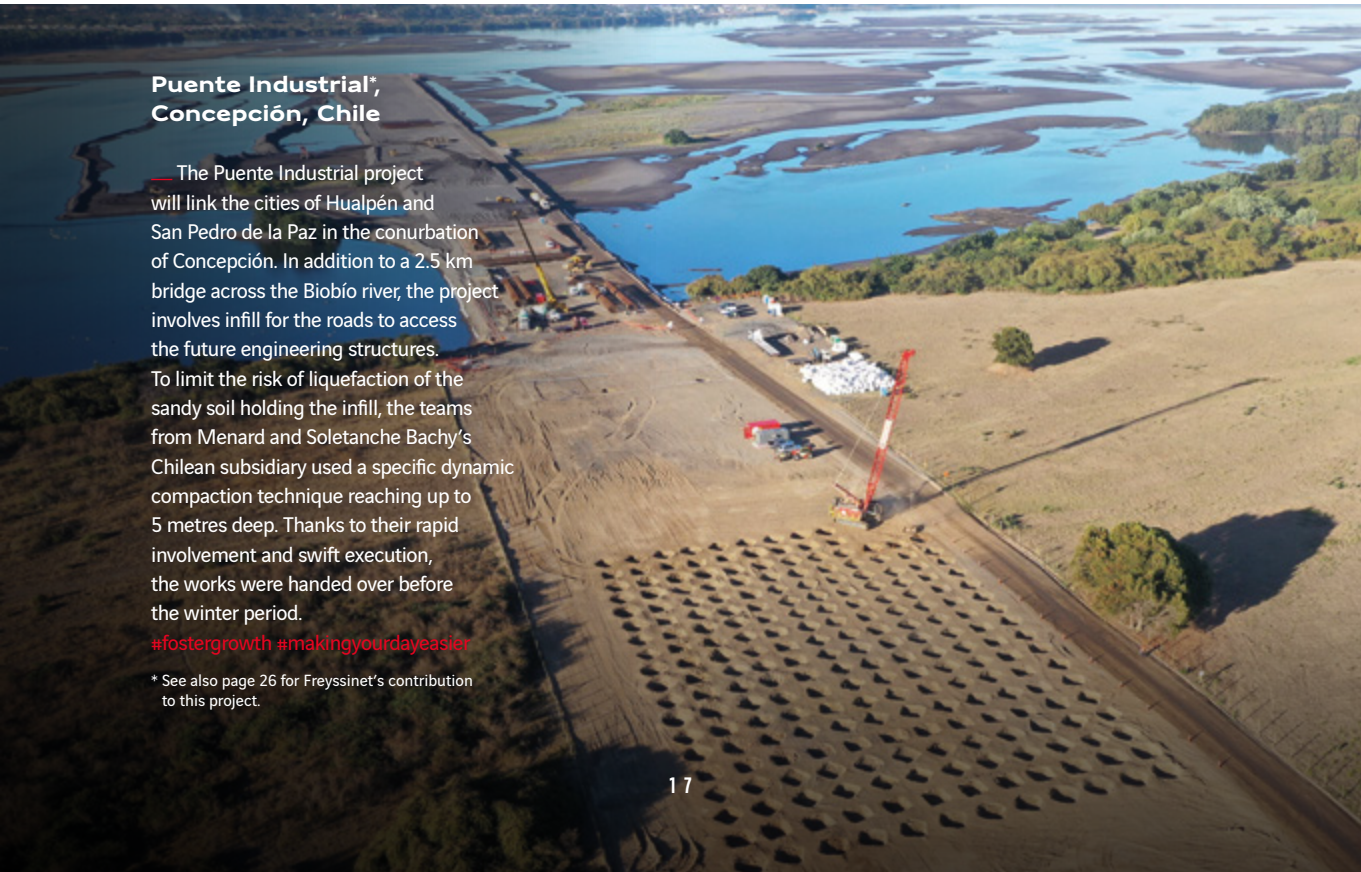


Puente Industrial*, Concepción, Chile

— The Puente Industrial project will link the cities of Hualpén and San Pedro de la Paz in the conurbation of Concepción. In addition to a 2.5 km bridge across the Biobío river, the project involves infill for the roads to access the future engineering structures. To limit the risk of liquefaction of the sandy soil holding the infill, the teams from Menard and Soletanche Bachy's Chilean subsidiary used a specific dynamic compaction technique reaching up to 5 metres deep. Thanks to their rapid involvement and swift execution, the works were handed over before the winter period.

#fostergrowth #makingyourdayeasier

* See also page 26 for Freyssinet's contribution to this project.



Squamish Oceanfront Development, Canada

— The teams from Menard Canada took part in the substantial soil improvement works in Squamish, near Newport beach. These included sinking stone columns up to 20 metres deep and using dynamic compaction techniques to increase ground density. Once the works are completed, the area will feature a public beach, several walkways and a venue for a variety of events.

[#makingyourdayeasier](#) [#fostergrowth](#)



Sydney Gateway*, Australia

— This is the country’s biggest project of the year. Menard’s teams in Sydney are tapping into their full range of expertise and knack for innovation on the Sydney Gateway, a road interchange near the airport. In all, they installed 10,000 controlled modulus columns (CMCs) using five drilling machines. As the construction site is on a busy flight path, the crews used machinery with custom-designed low masts. The interchange is set to open to traffic in 2024.

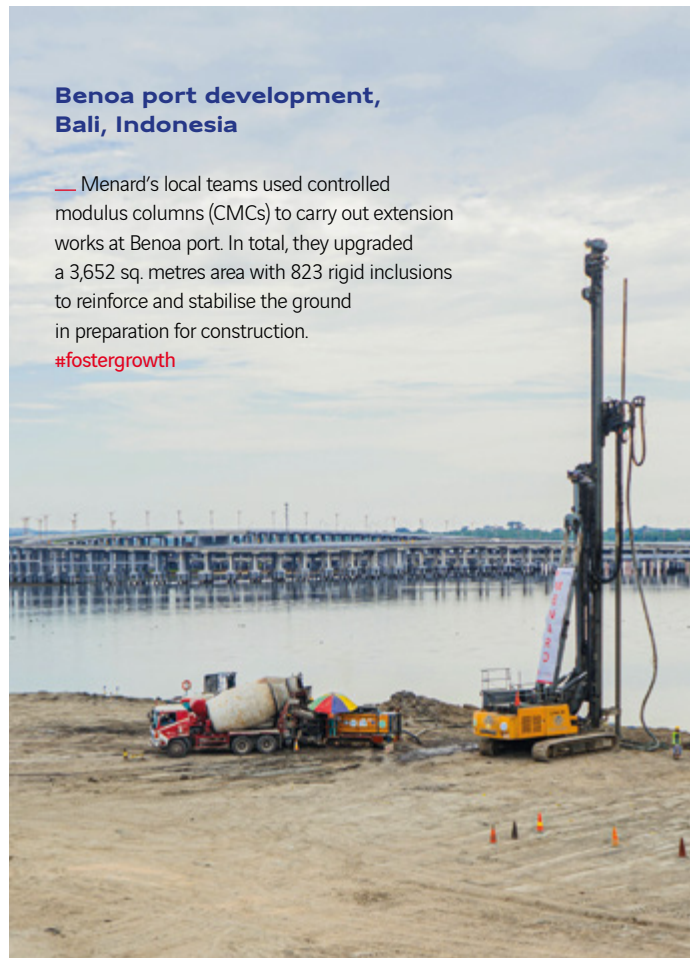
#fostergrowth #makingourdayeasier

* See also page 21 for Terre Armée’s contribution to this project.

Benoa port development, Bali, Indonesia

— Menard’s local teams used controlled modulus columns (CMCs) to carry out extension works at Benoa port. In total, they upgraded a 3,652 sq. metres area with 823 rigid inclusions to reinforce and stabilise the ground in preparation for construction.

#fostergrowth



Geotechnical characterisation and seismic cone penetration testing, Chile

— ConeTec’s teams in northern Chile carried out a full geotechnical survey of a settling pond and dam, in preparation for the site’s shutdown. ConeTec had also worked on the dam in 2001. The 2022 works campaign lasted three months and involved conducting seismic cone penetration tests up to 120 metres deep, installing piezometers to monitor interstitial pressure under the dam and producing geophysical profiles covering a 6,000-metre-long stretch.

#greenisgreat



TERRE ARMÉE

Terre Armée creates and develops retaining, crossing and protective solutions, leveraging its unparalleled expertise in reinforced backfill and soil-structure interaction. Its techniques have applications in a variety of fields such as roads and motorways, rail, industry, the environment or water engineering.

848

employees

€261

million revenue



TERRE ARMÉE

El Mauro dam, Chile

— Constructora Cosapi Chile is carrying out works to increase El Mauro dam's storage capacity. On this project, the teams from Tierra Armada Chile are taking part in building a new road including 1,300 sq. metres of walls up to 7 metres high using TerraPlus® technology and GeoStrap® reinforcements. The design addresses the prospect of flooding (the level of residue is expected to reach overflow point, 970 metres above sea level, in 2035) with a geomembrane that is being added to the front of the wall (facing upstream) to avoid infiltration when residue volumes increase.

[#accesspower](#)





Sydney Gateway*, Australia

— The considerable congestion between Sydney airport and Port Botany will soon be a distant memory thanks to the Sydney Gateway, a massive interchange under construction near the airport. Reinforced Earth Australia designed and supplied some 15,000 sq. metres of purpose-engineered Terre Armée® retaining walls for the interchange’s access ramps and abutments. The interchange will open to traffic in 2024.

#fostergrowth #makingourdayeasier

* See also page 19 for Menard’s contribution to this project.

Kicking Horse Canyon highway, Canada

— The Trans-Canada Highway, which opened to traffic in 1962, is a very busy thoroughfare linking 10 provinces across the country. The stretch through Kicking Horse Canyon is one of the most rugged on the route and authorities have started an extensive works programme to turn it into a state-of-the-art four-lane motorway. During the last phase – the trickiest on account of the topography –, Reinforced Earth Canada designed and supplied 9,000 sq. metres of Terre Armée® retaining walls for 6 structures towering up to 12 metres high. Works will be completed in 2024.

#fostergrowth #makingourdayeasier #careforall





Protection from landslides and avalanches, India

— An extensive road infrastructure programme is under way between Gagangar and Sonamarg, in Jammu And Kashmir, around the construction of the Z-Morh tunnel. On this programme, Terre Armée India was tasked with adding barriers to protect road users from landslides and avalanches, and delivered the full package – designing, supplying and installing them. This is Terre Armée’s first project of this kind in Asia and will provide much-needed protection for the road and people using it on their daily commutes.

[#makingyourdayeasier](#) [#careforall](#)



I-95 Corridor improvement, Philadelphia, United States

— The State of Pennsylvania has started rolling out a project to upgrade I-95 skirting Philadelphia. For it, the teams at The Reinforced Earth Company United States designed and supplied two T-Wall® retaining walls spanning 2,580 sq. metres in total, including one 15.5 metres high (the world’s tallest!). These walls are by the Betsy Ross bridge interchange and their architecture is a nod to the Star-Spangled Banner (Betsy Ross sewed the first United States flag).

[#makingyourdayeasier](#)

High-speed rail line, Turkey

— For the high-speed line under construction between Ankara and Istanbul, the teams from Reinforced Earth Turkey designed and built 7,200 sq. metres of Terre Armée® wing walls for 20 overpasses on the Bursa–Yenişehir section. Trains will start using the line in 2023.
#fostergrowth #makingyourdayeasier #greenisgreat



Landscaping, Genoa port, Italy

— This extensive landscaping structure under construction near Genoa's port involves creating an urban park along the southern bank of a canal in Pra'. The structure will mitigate noise from the port while providing the neighbourhood's people with a green area including a bicycle path and sports, relaxing and recreational facilities. A line of artificial dunes will shield the park from the bustle in the port. Terre Armée France was tasked with building these dunes and to do so designed and installed Terre Armée® reinforced soil slopes using the GS ArmaGreen® system.
#fostergrowth #makingyourdayeasier #greenisgreat



FREYSSINET

Freyssinet contributes to the construction and repair of structures on five continents through a network of 60 subsidiaries located close to its customers. From engineering to the implementation of technical solutions on site and the manufacture of products, Freyssinet supports each project with the same principles of excellence, innovation and sustainability. Its hallmark, sustainable technology, encompasses an unequalled range of civil engineering expertise enabling the company to build structures using less materials, protect them and maintain them. This expertise includes post-tensioning systems, cable systems, equipment and maintenance, construction methods, repair solutions, seismic protection and structural strengthening.

6,330

employees

€852

million revenue



FREYSSINET



Revamping the East River bridge, Reunion Island, France

— The East River bridge, a landmark in Sainte-Rose, opened in 1893, closed in 2016 for safety reasons, and is about to start its second life! Thanks to the teams from Freyssinet France (Sud-Est, GPCM and MTS), this footbridge will reopen to pedestrians and cyclists in 2023. They disassembled and replaced the steel deck and suspension system, and removed the asbestos from the structure.

[#fostergrowth](#) [#makingyourdayeasier](#)

Las Torres vehicle underpass, Mexico

— The teams at Freyssinet de México are involved in building an underpass that will ease congestion in a very busy area in Chimalhuacán, in the east of the State of Mexico. The structure will carry six traffic lanes (394 metres long) and two access roads (650 metres each). Freyssinet is producing and installing 296 prestressed piles, the support systems, the expansion joints and the entire superstructure. The retaining walls for the two access roads are made with Terre Armée®. The works will be completed in 2023.

[#fostergrowth](#) [#makingyourdayeasier](#)



West Gate Tunnel, Melbourne, Australia

— Freyssinet Australia and Freyssinet Grands Projets, in an alliance with CPBJH JV, have been entrusted with building a new 2 km viaduct over the Maribyrnong river, for the West Gate Tunnel project, in central Melbourne. When it is finished, this ambitious programme will ease congestion between the port and city centre. The team is fitting 91 segments from a purpose-built launching gantry, in charge of the deck post-tensioning system and setting up more than 220 bar-prestressed piles. The project began in 2018 and will end in 2023.

[#fostergrowth](#) [#makingyourdayeasier](#)

Puente Industrial*, Concepción, Chile

— Freyssinet’s teams in Chile are busy on the construction of the Puente Industrial, a 2.5 km bridge across the Biobío river, to link the cities of Hualpén and San Pedro de la Paz in the conurbation of Concepción, some 450 km south of Santiago. Freyssinet has equipped this bridge in an earthquake-prone area with IsoSism® LRB isolators engineered and manufactured by Freyssinet Products Company (FPC), a subsidiary that specialises in structural components. In all, it will fit the bridge with 784 isolators (770 with 650 mm diameters in the columns, 14 with 800 mm diameters in the abutments). The techniques that Freyssinet used considerably reduced the size of the bridge’s piles and optimised their foundations. It will also manufacture, supply and install IsoSism® SFX 700/320 high-expansion joints, which will effectively protect the structure in the event of an earthquake, reducing the cost of repairing any damage.

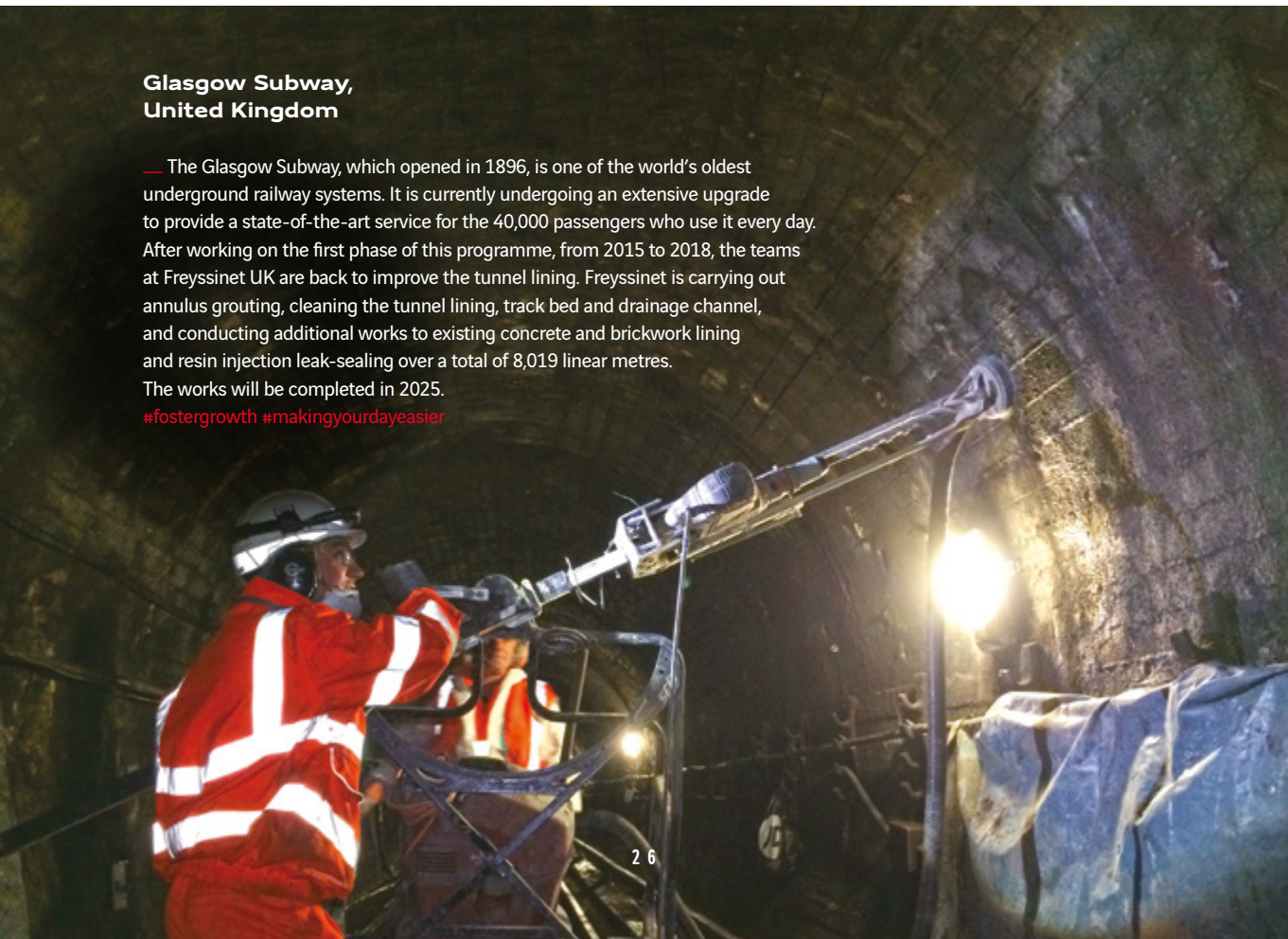
[#fostergrowth](#) [#makingyourdayeasier](#) [#greenisgreat](#) [#careforall](#)

* See also page 17 for Menard’s contribution to this project.

Glasgow Subway, United Kingdom

— The Glasgow Subway, which opened in 1896, is one of the world’s oldest underground railway systems. It is currently undergoing an extensive upgrade to provide a state-of-the-art service for the 40,000 passengers who use it every day. After working on the first phase of this programme, from 2015 to 2018, the teams at Freyssinet UK are back to improve the tunnel lining. Freyssinet is carrying out annulus grouting, cleaning the tunnel lining, track bed and drainage channel, and conducting additional works to existing concrete and brickwork lining and resin injection leak-sealing over a total of 8,019 linear metres. The works will be completed in 2025.

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Foot and cycle bridge, Irča Vas, Slovenia

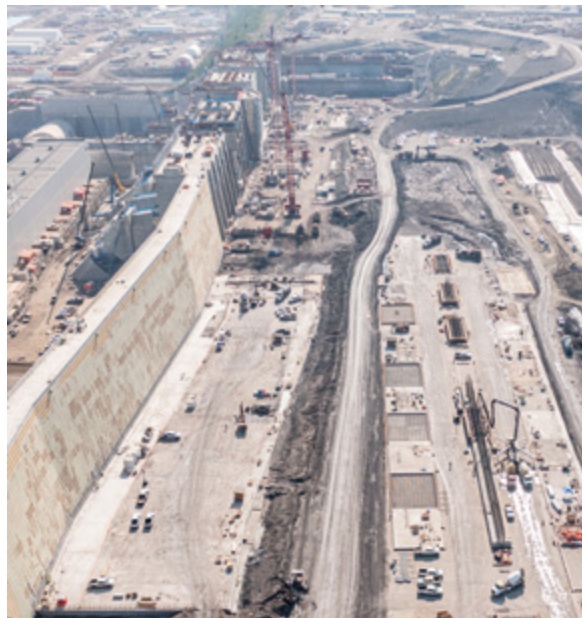
— Among many other upgrades, the municipality of Novo Mesto decided to have a foot and cycle bridge built over the Krka river. It is 120 metres long, 4 metres wide and made up of 46 prefabricated elements on 4 load-bearing cables. Freyssinet Adria designed and delivered this project, which won an award for blending harmoniously into the natural surroundings. It was handed over in November 2022 and has delighted countless users since then!

[#makingyourdayeasier](#)

Hydroelectric generation station, Canada

— A huge power production project is under way on the Peace River, in the north-east of the province of British Columbia. It encompasses construction of a dam and generation station that will provide 1,100 MW of capacity and about 5,100 GWh of energy a year. The teams from Carpi supplied and fitted the watertight lining system for the canal connecting the new dam to the station. The tailor-made lining is made up of several Sibelon® membranes and was approved for the project following comprehensive full-scale testing by independent European laboratories.

[#accesspower](#) [#makingyourdayeasier](#)



NUVIA

Nuvia uses its world-class nuclear expertise to assist industry customers throughout the life cycle of their highly sensitive and regulated facilities, in a variety of sectors including nuclear, defence, healthcare and the environment. It provides its customers with full support services, engineering and the products required to design, construct, operate and dismantle their industrial facilities. It works side by side with them ensuring the highest safety and performance standards to help to build a safer, cleaner and more sustainable world.

2,585
employees

€335
million revenue



Drinking-water monitoring, Qatar

— Nuvia has manufactured, delivered and installed SAFEWATER drinking-water monitoring systems in various areas across Qatar. SAFEWATER provides fast and precise online supervision of potential drinking water contamination by beta or gamma radioactive substances. It can operate continuously with no human intervention: if measured beta or gamma radiations exceed critical limits the system issues a visual warning and automatically notifies the relevant authorities.

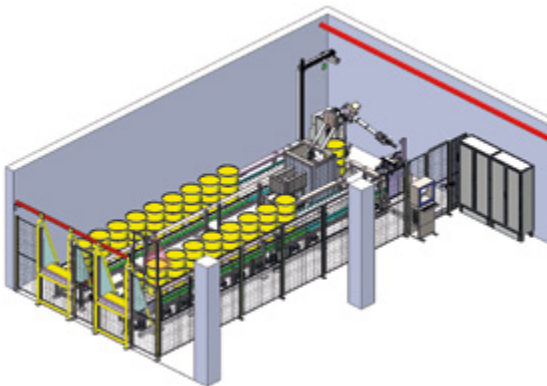
[#careforall](#) [#greenisgreat](#)



TR 2/4 condenser retubing, Dampierre, France

— As part of the maintenance programme under way on the air cooling circuits at the Centre Nucléaire de Production d'Électricité (CNPE) in Dampierre, south-west of Paris, Nuvia Structure descaled the exchangers where water evaporates during the cooling process. The teams also custom-engineered several handling systems (monorails, conveyors, movable floors). This large project enlisted civil and mechanical engineering skills, and included an environmentally friendly process that avoided the need to replace several hundred thousand kilos of PVC tubes.

#greenisgreat #accesspower



Waste characterisation, Doel power plant, Belgium

— Nuvia's Czech subsidiary was awarded a substantial contract at Doel, an active nuclear power plant, which involves automating radiological screening of treated and untreated nuclear waste in various types of drums. All mechanical handling and measurement processes are fully automatic and staff only supervise the operation. This made-to-measure solution taps into Nuvia's full set of skills and experience in nuclear measurement and automation technology.

#greenisgreat #accesspower

Developing a new range of hyperbaric works, France

— Nuvia Support, in association with VINCI Construction Maritime et Fluvial, has been active at several nuclear plants carrying out underwater decontamination works in pools storing nuclear fuels. Its customer especially appreciates its technical knowledge and swift response, and with this new venture Nuvia is solidifying its expertise in underwater works and its position among the leaders in this market.

#greenisgreat #careforall #accesspower



Reactor dismantling, Ringhals nuclear power plant, Sweden

— As part of the programme to dismantle two reactors at the Ringhals plant, Nuvia is helping to disassemble large components on the primary loop (excluding the reactor vessel in the plant's restricted-access area). To fulfil this landmark contract, Nuvia will enlist teams specialised in various fields including demolition and dismantling project management, waste management, radioprotection and radioactivity measurement.

#greenisgreat #careforall





Geotechnical mapping, Saudi Arabia

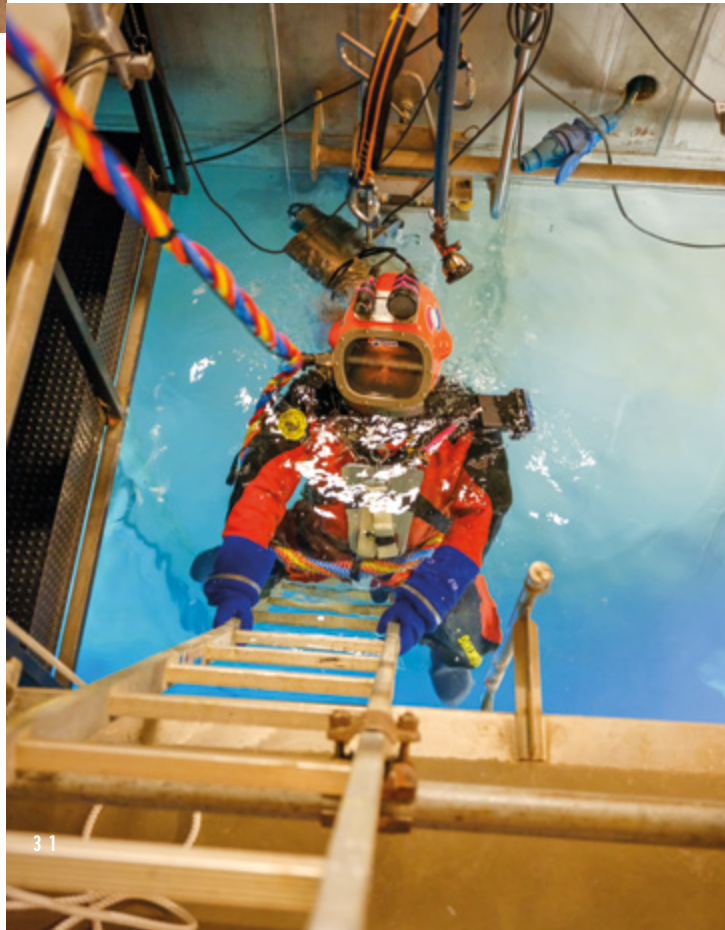
— Nuvia Dynamics and Sixense Helimap carried out geotechnical investigations in a mountainous area to the east of the Gulf of Aqaba. On this project, Nuvia Dynamics gathered electromagnetic and magnetic data using NuTEM™, a helicopter-borne electromagnetic system that can probe up to 400 metres deep. The teams will be back in the area in 2023 to supply other data for a project on the Gulf of Aqaba’s coast. This is a new application for the NuTEM™ system, which was originally designed to explore underground ore formations.

#fostergrowth

Nuclear Technical Support Provider (NTSP), United Kingdom

— Nuvia UK and three other suppliers were recently included among the British Ministry of Defence’s Nuclear Technical Support Providers. The seven-year agreement (which may be extended for three years on expiry) covers technical assistance and expert services for several organisations including the Defence Infrastructure Organisation, Submarine Delivery Agency and Defence Nuclear Organisation.

#greenisgreat #careforall



SIXENSE

Sixense supports its customers throughout the life cycle of their facilities. It monitors the condition and behaviour of structures and infrastructure, makes construction and operation safer, and optimises maintenance. Its activities are organised around four areas of expertise: engineering, monitoring, software and process digitalisation, and existing asset digitalisation.

770

employees

€95

million revenue



SIXENSE

Tsing Ma Bridge, China

— Sixense is providing structural health monitoring and acoustic monitoring services on this structure in Hong Kong, to detect any failures in the strands within the main stays between the Ma Wan Tower and Ma Wan Saddle. It has set up dozens of acoustic sensors and kilometres of wiring to precisely supervise this section of the bridge.

[#careforall](#)



Avrieux shafts, Euralpin Lyon-Turin tunnel (works package 5), France

— Sixense Monitoring is setting up the instrumentation and supervision system for the shafts, galleries and caverns on this project by the security station in Modane (supplying a variety of sensors plus the monitoring platform). Sixense Mapping digitalised the geological surveys of 1,600 rock faces with its Pika.beMap solution.

#careforall



Wind farm acoustic impact assessments and measurements at commissioning, CNR, France

— CNR (Compagnie Nationale du Rhône) selected Sixense Engineering and three other specialists to conduct acoustic impact assessments and measure sound levels at commissioning around several wind farms in France from 2022 to 2026. In awarding this contract, this key player in France's onshore wind market is reiterating its long-standing trust in Sixense Engineering and the top-level expertise, fast response, and best-in-class human and material resources it provides on each of its assessments for customers.

#careforall #accesspower



Inventorying bridges for Cerema, the national risk, environment, mobility and development assessment centre, France

— Bridges in more than 28,000 communities France-wide are being assessed under the country's 2020–2022 stimulus plan. The goal is to list and conduct preliminary surveys on the engineering structures in the towns and cities that are eligible for State aid and have agreed to be included in this campaign run by the assessment centre. The information they gather will be used to compile an inventory of these structures throughout France and identify the ones in most need of repair. Sixense was involved in 5 (the maximum allowed) of the 13 campaigns in 2022 in Auvergne-Rhône-Alpes, Hauts-de-France, Occitanie, Pays de la Loire and Provence-Alpes-Côte d'Azur.

[#careforall](#) [#makingyourdayeasier](#)



Climate resilience, IFC-World Bank

— Resilience entered into a framework agreement with the IFC-World Bank to work on the latter's Global Platform for Resilience Infrastructures in Small Islands and Small States, which models impacts arising from climate change to tackle them from technical, social and economic standpoints, in the Dominican Republic, Barbados, the Philippines and other countries.

[#greenisgreat](#)

Beyond Asset, Indiana, United States

— Sixense reached an agreement with the Indiana Department of Transportation to implement Beyond Asset, the company's asset management system. Sixense will maintain the system for at least four years and the project covers all the bridges in the State. It will be used by some 1,200 people managing 19,000 bridges, 9,000 culverts, 5 tunnels and several thousand ancillary structures.

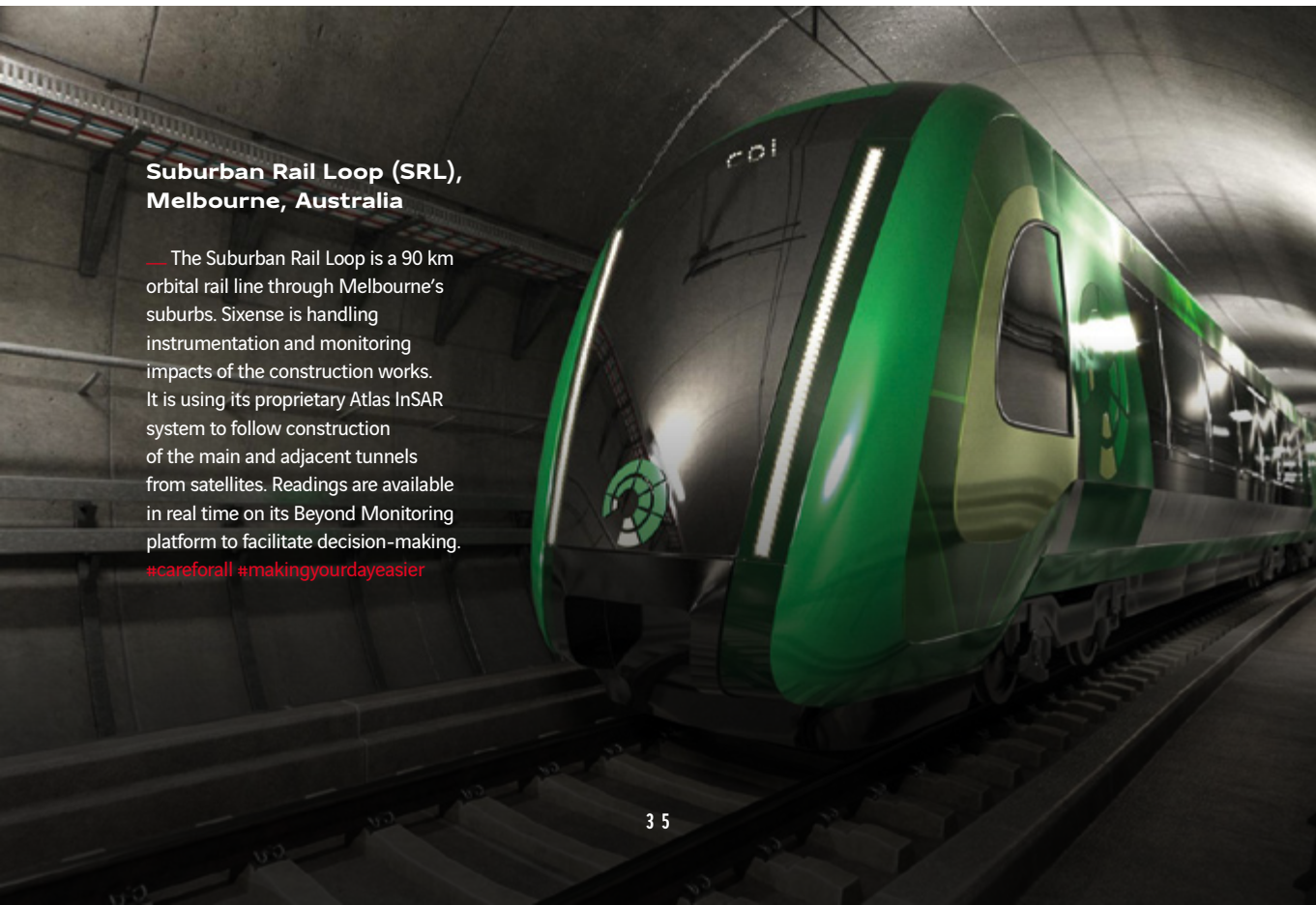
#careforall



Suburban Rail Loop (SRL), Melbourne, Australia

— The Suburban Rail Loop is a 90 km orbital rail line through Melbourne's suburbs. Sixense is handling instrumentation and monitoring impacts of the construction works. It is using its proprietary Atlas InSAR system to follow construction of the main and adjacent tunnels from satellites. Readings are available in real time on its Beyond Monitoring platform to facilitate decision-making.

#careforall #makingyourdayeasier



HEALTH, SAFETY AND PREVENTING RISKS

Working together for everyone's health and safety

Health and safety are founding values for us at Soletanche Freyssinet, and we are determined to include all our employees in our initiatives and programmes aimed at creating an environment that fosters both. We have also pledged to continuously improve our health and safety performance by fostering transparency, exemplarity and dialogue. These principles are the cornerstones of our shared culture.

Safety

Commitment and trust

At Soletanche Freyssinet, we believe that our people have the answers to our safety challenges. That is why we actively encourage them to get involved by welcoming new ideas, innovation and conversations with all employees – especially at worksites. We include everyone in reviewing rules and procedures, to make sure they remain relevant to the situations we encounter. We see trust as the foundation for relationships within our teams. Our goal is to talk openly about doubts and problems then find ways of dealing with them together. This is how we are moving forward on our journey to safety excellence.



3.6%
frequency rate

0.38%
severity rate

1.52%
of hours of training relating to QSE

ACTION FOCUS

The safety-culture highlight at Soletanche Freyssinet

Our Safety Day(s), which take place throughout Soletanche Freyssinet, provide a vital opportunity to talk about and enhance our safety culture and its three pillars, transparency, exemplarity and dialogue.

All our employees, as well as our partners and subcontractors, gather for Safety Day(s) at our worksites to take a closer look at and discuss specific topics during workshops, conferences and experiences.

Health and well-being

Protecting health and fostering well-being

Soletanche Freyssinet started rolling out the *Bâtissons Notre Santé* (“building our health”) campaign because we believe that paying special attention to health will not only improve our employees’ safety but also their overall well-being and quality of life. All of our companies are committed to protecting their employees’ physical health, limiting their work-related strain and promoting their all-round wellness by keeping an eye on their working conditions and mental health.



ACTION FOCUS

We held seven training sessions for Health and Safety Leaders around the world in 2022.

These courses provide a different angle on the issues, based on empowering employees, building their decision-making skills and familiarising them with other human and organisational factors. This programme continues in 2023.



ENVIRONMENT AND ECOLOGICAL TRANSITION

The environment is at the centre of our business as well as our strategy to tackle the climate challenges. We know that we need to set an example, for our customers as much as future generations, particularly with regards to shrinking our operations' ecological impact. Soletanche Freyssinet's target is to reduce its CO₂ emissions by 40% by 2030.



Project Rescue Ocean challenge

In 2022, Soletanche Freyssinet employees worldwide partnered up with Project Rescue Ocean, a non-profit, to organise and take part in clean-ups in cities, forests and beaches.

Besides benefiting the environment, this challenge helped sharpen team members' awareness of the issues surrounding pollution and waste management. In total, they collected 34 tonnes of litter around the planet.

ACTION FOCUS

Thomas Blanchard and Pierre-Adrien Simon de Bessac (Soletanche Bachy) found a way of combining the Project Rescue Ocean campaign with their hobby, scuba diving. After learning more about the issues, they decided to pick up litter 40 metres underwater, off the coast of Cap Ferrat in the French Riviera.

ACTION FOCUS

We ran 11 Environmental Leader training sessions worldwide in 2022.

These courses include a variety of workshops and start conversations.

In all, 205 managers took part in them in France, the Middle East, Spain, Peru and the United States. This programme continues in 2023.



In-house training

We set up the Environmental Leader at Soletanche Freyssinet training course as part of the company's #greenisgreat pledge.

The goal is to equip our managers to meet their environmental targets. It lasts two days and provides an overview of all the available tools as well as opportunities to share best practices and discuss the issues.

Soletanche Freyssinet Environment Day

Our third Environment Day, on 22 September 2022, brought attention to several challenges and shone a spotlight on various planet-friendly initiatives. The topic in 2022 was the circular economy in general, and waste reduction and recovery in particular.



ETHICS AND COMPLIANCE

Working together
to respect business ethics



Soletanche Freyssinet is a trusted partner. In keeping with the attitudes that guide us in everything we do, all employees must remain vigilant and ensure they, the people around them and the people they supervise properly apply the code of conduct. Our uncompromising ethical standards apply to all our employees in all their business dealings with customers, partners and suppliers. We do more than comply with laws and regulations: we conduct business and make decisions based on the highest standards of integrity.

HUMAN RIGHTS

Working together to respect people's rights

At Soletanche Freyssinet, we respect the rights of our employees, partners, subcontractors and local communities everywhere we go. We encourage our employees to become involved in social outreach projects and we support initiatives that benefit local communities.



WORKING AT SOLETANCHE FREYSSINET

Soletanche Freyssinet brings together an unparalleled array of expertise in building, civil engineering and infrastructure the world over. Our 23,070 employees share the same vision: Build Better Together.





#Build

Because we share the same passion for building. Passion with purpose. For cities and for regions. Jobs at Soletanche Freyssinet are meaningful. They fix problems. And, here, everyone can be a builder. Build skills throughout your career. Using state-of-the-art techniques and technologies. Sharing what we know. Being who we are. Humility. Team spirit. Excellence. Entrepreneurship. Transparency.

#Better

Because “good” and even “great” aren’t enough. Management, here, is based on empowerment and trust. We want the people in charge at our worksites and plants to make decisions locally. In a company that is ever more inclusive and ever more committed to the environment and society.

#Together

Because people come first here. For our employees. Because we care about their success, their well-being and their safety more than anything else. Because we believe in teamwork. And solidarity. For our customers and for everyone else we work for. Because great projects invariably start with constructive conversations. It’s as simple as that. And it’s so much more than that. Thanks to women and men like you! Join us!



JOIN US

Build your career

Do you want to work on meaningful projects and sharpen your skills?

Build with purpose

Do you want to make people’s lives better and make a tangible difference?

Build and believe

Do you want to be part of a united team, where people trust each other, help each other and enjoy working together?



OUR TEAMS ARE PROUD TO DELIVER LASTING SOLUTIONS AND TO LIVE BY OUR ATTITUDES...



« HUMILITY »

To move forward, you need expertise in all kinds of areas. I'm not familiar with all the fields of expertise in the company: I try to be an expert in my job, in what I do. But nobody can do it all alone. »

Tarek,
Soletanche Freyssinet Holding



« TEAM SPIRIT »

We're fortunate to have highly skilled technical teams and it's always a real pleasure to look into a new project with them, and see how we can figure it out together. Whenever we have to deal with a new issue, we share it with the rest of the team to get their opinions and advice. »

Alexandre,
Freyssinet



«« **EXCELLENCE**

Build better means taking the time to understand your project properly, understand the issues around it, do everything you have to do to make sure it is as sound as it can be from a technical standpoint, acceptable from a social standpoint and depletes the planet's resources as little as possible. »»

Benoit,
Menard Canada



«« **TRANSPARENCY**

is essential in a group that is so keen on decentralisation. It is a *sine-qua-non* for entrepreneurship, which our companies value so much. »»

Farah,
Nuvia



«« **ENTREPRENEURSHIP**

Building means innovating, changing the world, creating for future generations. »»

Anna,
Soletanche Bachy



▶ Watch the video
Build Better Together

Build Better
Together

www.soletanchefreyssinet.com

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