BESIX Construction

COO Jan Van Steirteghem looks back on BESIX Construction's performance in 2024, with strategic projects enhancing the portfolio and financial stability. Key achievements include large infrastructure projects in core markets, as well as high-profile developments in the Middle East and Australia. These accomplishments reflect BESIX Construction's continued commitment to growth, operational stability, and long-term value creation.

With a clear focus on quality, a fair risk-reward balance, and strategic growth, BESIX Construction is well-positioned to navigate the opportunities and challenges of 2025, strengthening its position as a leader in the engineering and construction industry.

Jan Van Steirteghem
COO of BESIX Construction

How did BESIX Construction perform financially in 2024?

BESIX Construction showed significant improvement compared to the three previous years. We successfully addressed past issues, allowing us to move forward with a clean slate and a renewed focus on our goals. Our order book has almost doubled, and the risk-reward balance on new projects has improved across all business units. This is thanks to a strategic focus on quality over quantity. We have become increasingly selective in project choices, prioritising contracts that ensure fair risk distribution and profitability in line with our unique added value. This cautious yet strategic approach strengthened negotiations and led to a healthier business environment.

What were the main achievements in your core European markets?

In 2024, we benefitted from significant government investments in infrastructure. In Belgium, we are notably involved in two major projects, the Ghent Ring Road transformation and the Oosterweel link – one of the largest infrastructure and urban planning projects ever undertaken in Europe. In the Netherlands, we are finalising the new A16 motorway project which includes a 100% energy-neutral tunnel, and last year we have secured the contract for the Krammer locks complex. In France, President Emmanuel Macron honoured us by officially inaugurating the Saint-Denis Pleyel station, which was delivered in time for the Paris Olympics. All of these projects reflect BESIX Construction's ongoing commitment to modernising infrastructure and supporting sustainable development across Europe.

Last year, we were also able to showcase our industrial expertise on a wide variety of projects which are taking place in pioneering and demanding environments. These include a green hydrogen production facility, a decarbonised cement production plant, a biopharmaceutical manufacturing complex, a state-of-the-art facility designed to significantly boost space manufacturing capacity in Europe, as well as several data centres.

How did the projects in your other markets contribute to BESIX Construction's success and growth in 2024?

In the Middle East, we have strengthened our position with high-profile projects like the North Field Expansion in Qatar, the Zayed City Schools in the UAE, and key projects in Saudi Arabia, including the Aramco Stadium. In Australia, BESIX Watpac turned around its performance after three challenging years, with notable projects in public healthcare, transport, and industrial construction, including the Shellharbour Hospital and the Deep Maintenance and Modification Facility for the Australian Air Force. Our projects on other international markets have proven more challenging, allowing us to gain valuable insights into risk management and profitability.

What are BESIX Construction's strategic priorities for 2025?

BESIX Construction should continue to reap the benefits from its positioning as preferred delivery partner, especially for fast track and/or high quality industrial infrastructures such as data centres and green production facilities.

We will focus on maintaining a strong and stable order book, ensuring fair risk-reward balance in contract selection, and delivering long-term value to our clients. We can only achieve this if we nurture a strong company culture for all our employees. By diversifying our project portfolio, refining contract strategies, and leveraging expertise, we aim to protect our profitability while sustaining a healthy balance sheet.

BESIX CONSTRUCTION

Designs and builds assets in a large variety of expertise areas, such as marine works, infrastructure, industry, buildings, environment, and leisure.

Market review and performance

Navigating a changing market with a sound strategy

The past year brought significant shifts in the construction industry, with a more balanced risk-reward dynamic benefiting both contractors and clients. This was particularly true for BESIX Construction, as it has seen the positive impact of its renewed focus on risk, which has become a crucial strategic driver since the COVID-19 pandemic and the start of the war in Ukraine. The geopolitical context was – and still is – volatile but its impact was less disruptive in 2024 than in previous years.

As market trends evolved, BESIX Construction reinforces its strategy of contract selectivity — choosing only those projects that aligned with its long-term vision and offer sustainable value. Prioritising quality over quantity ensured that its business remained resilient amid economic uncertainties while continuing to grow in key markets.

The positive impact of public infrastructure contracts

A key highlight of 2024 was the surge in public infrastructure investments, particularly in **Belgium and the Netherlands**. Large-scale mobility and transport projects took centre stage, demonstrating governments' commitment to modernising and reducing the energy consumption of key infrastructure – especially those which were built in the 1960s and 1970s. These initiatives aligned well with BESIX's expertise, allowing it to play a leading role in projects that will have a lasting impact on communities.

A prominent example of this is the transformation of the ring road R4 West and East between Ghent and the port of Ghent (Belgium). BESIX contributes to this public-private partnership, which encompasses the design, construction, financing and maintenance for 30 years, as part of the BRAVO4 consortium. The works for this significant project have been kicked off at the end of May last year. In June, BESIX delivered the Saint-Denis Pleyel station (France), right in time for the Olympic Games. The station is part of the Grand Paris Express and will handle 250,000 passengers a day. In **Australia**, BESIX Watpac celebrated the grand opening of the Kangaroo Point Bridge in Brisbane at the end of 2024. With a length of around 460 metres, this bridge provides a world-class landmark linking the city centre and the Kangaroo Point peninsula.

Saint-Denis Pleyel station (Paris, France)

Decarbonised cement production facility for the GO4ZERO project (Mons, Belgium)

Oosterweel (Antwerp, Belgium)

In 2024, BESIX and several subsidiaries were actively involved in the Oosterweel project, one of the largest infrastructure and urban planning projects ever undertaken in Europe. Together with their joint venture partners, they are working on this project via three separate contracts. The works, which include project engineering and construction, started in 2020 and will last ten years.

Strong performance across core regions

The performance in Europe in 2024 reflected both the opportunities and challenges of a dynamic global landscape.

- The business in **Belgium** experienced a strong year, with growth in both size and profitability. The government's investment in major infrastructure projects, particularly in transport and mobility, created an environment conducive to expansion. Additionally, BESIX's expertise in data centre construction positioned it favourably in a rapidly growing sector – no less than three projects in this field should be delivered in 2025. In addition to the above-mentioned Oosterweel and R4 West and East, main projects in Belgium include: the renovation of the Beveren Tunnel (Antwerp), a green hydrogen production facility for the Hyoffwind consortium (Zeebrugge), the rehabilitation of the Lambermont Viaduct (Verviers), a decarbonised cement production facility as part of the GO4ZERO project (Mons), and Aerospacelab's Megafactory (Charleroi), a state-of-the-art facility designed to significantly boost space manufacturing capacity in Europe.
- In **the Netherlands**, after years of navigating a challenging market, BESIX Construction's decision to focus on a select number of high-value projects with reliable clients are starting to pay off. In March 2024, BESIX Nederland delivered Mediavaert, DPG Media's new office building, despite the adverse impact of price increases on this project. The state-of-the-art building was inaugurated by King Willem-Alexander in October. With more than 44,000 m², it is one of the largest hybrid-timber office buildings in the world. In May, BESIX (as part of the ZEEKR joint venture) also secured the contract for the renovation of the Krammer locks complex, which is scheduled to be completed in 2028.
- In **France**, although the main highlight was the delivery of the Saint-Denis Pleyel station, the BESIX teams have also delivered Deloitte's new University EMEA at the start of the year. This facility comprises a main building housing a large multifunctional room, 36 seminar rooms, 25 multi-purpose rooms, a restaurant, and 265 bedrooms. BESIX France is also building the 180-metre high Triangle, the first Parisian skyscraper of the 21st century.

Mohammed VI Tower (Rabat, Morocco)

Significant momentum gained in the Middle East and Australia

In the **Middle East**, BESIX strengthened its presence in high-profile infrastructure projects, including marine, sports, and leisure developments, showcasing its ability to manage complex, high-value projects in a competitive landscape. In **Qatar**, BESIX delivered the North Field Expansion last year: four berths which will increase Qatar's LNG capacity by 33 million tonnes per annum. In the **United Arab Emirate**s, the BESIX-Plenary consortium delivered the Zayed City Schools (Abu Dhabi). These three modern school campuses accommodating 5,360 students were part of a contract which includes financing, design, procurement, construction, commissioning, and an extensive 20-year period of operations and maintenance. Finally, BESIX is actively involved in two major projects in **Saudi Arabia**: the prestigious Aramco Stadium, which will be completed in time for the 2027 Asian Football Confederation Cup, and the transformation of the Port of NEOM, on the Red Sea coast.

In **Australia**, BESIX Watpac achieved a remarkable turnaround in 2024 after three challenging years, driven by strong, balanced relationships with their clients, strengthened ties with key Tier 1 subcontractors, the integration of design and works preparation, and the quality and dedication of the delivery teams. Moreover, the business has been positively impacted by significant investments in public healthcare infrastructure. No less than five projects in this field were ongoing or have been delivered in 2024, and one new contract was signed – for the new Shellharbour Hospital. Queensland emerged as a key hub for investment, with large-scale projects reshaping transport and urban infrastructure. BESIX Watpac's presence in industrial construction across New South Wales, South Australia, and Victoria also expanded, positioning the company as a trusted partner in the sector. This was notably illustrated by the new contract for the construction of the Deep Maintenance and Modification Facility (DMMF) as an extension of the Royal Australian Air Force (RAAF) Edinburgh Base. In **New Zealan**d, BESIX Watpac has made significant progress on the world-class One New Zealand Stadium for the Christchurch City Council. In February 2025, the final modules of the steel superstructure were installed using the largest crawler crane in the country.

One New Zealand Stadium (Christchurch)

International projects: lessons in risk and reward

In addition to BESIX Construction's core markets, its activities **in Africa (Tanzania, Egypt, Cameroon, Gabon, Ivory Coast and Morocco) and the Americas (Brazil and Canada)** provided valuable insights into risk management and profitability.

In **Tanzania** (Tanga Jetty) and **Brazil** (improvement of the existing port infrastructure in Navegantes), BESIX delivered substantial added value, albeit not without challenges. While the projects have recorded remarkable progress in execution, margin pressures underscored the need for sharper risk management and contract structuring to ensure an acceptable balance between risk and reward in similar markets moving forward.

Conversely, in **Gabon** BESIX achieved the financial close for the construction of seven strategic bridges in Libreville last year. This significant infrastructure initiative is bringing substantial economic and developmental benefits to the country. One of the bridges has already been delivered in December. BESIX also performed well in **Morocco**, on the Mohammed VI Tower project in Rabat.

In the last quarter of 2024, BESIX delivered a large-scale project for **LNG Canada** (encompassing a full marine works package for a loading platform integrated in a quay wall). Innovative solutions were implemented to adapt to extreme conditions and the outbreak of the COVID-19 pandemic.

Tanga Jetty (Tanzania)

Transformation of the Port of NEOM (Saudi Arabia)

Outlook for 2025: a year of stability and strategic focus

Looking ahead to 2025, the strategic priorities of BESIX Construction remain clear:

- **Maintaining a strong and stable order book**. While market conditions fluctuate, this approach ensured it entered the new year with a full pipeline of high-quality projects.
- **Ensuring a fair risk-reward balance.** The experience of 2024 reaffirmed the importance of selecting contracts that distribute risks equitably, in the interest of both the client and the contractor.
- **Delivering long-term value to clients** while maintaining a healthy balance sheet. This means continuing to diversify the project portfolio, refining contract negotiation strategies, and leveraging expertise to drive profitability.

Projects which will be delivered this year, include: BNP Paribas Fortis' 'The Hive' building and RTBF's new head office (Belgium), the tunnels and viaduct in Valfabbrica (Italy), A16: De Groene Boog (the Netherlands), Tanga Jetty (Tanzania), the improvement and expansion of the Port of NEOM (Saudi Arabia), as well as several data centres in Belgium and Australia.

Infrastructure

KANGAROO POINT BRIDGE

Works wrap up on iconic bridge

> **It's been an incredibly rewarding experience being part of and learning from everyone – it's given me the launching pad I need to be able to look for more work in the future.**
>
> **Xavier Farrell,**
> BESIX Watpac Apprentice

The construction of the pedestrian Kangaroo Point Bridge for Brisbane City Council was completed in late 2024. This elegant single-mast cable-stayed bridge spans approximately 460 meters, making it one of the longest cable-stay bridges in the world. With two unique riverside dining spots, the bridge serves as an important connection to Brisbane's Central Business District and a must-visit destination for both tourists and residents – especially in the lead up to the Brisbane 2032 Olympic and Paralympic Games.

Tim Lyne, National Workforce Manager (left) and Xavier Farrell, Apprentice (right)

BUILDING AN ICON

The Kangaroo Point Bridge project redefined the boundaries of heavy lift engineering, exemplifying collaboration and innovation as the foundation to the successful delivery of a highly complex project. The pinnacle of this project was erecting the mast, capped off with the installation of the 180-tonne mast head. To ensure the heaviest lift of the project was executed safely and seamlessly, the project team worked closely with BESIX Watpac's in-house engineering team to ensure the optimal heavy lifting solution was identified. Collectively the M2480D tower crane, which is the largest lifting capacity tower crane in the world, was selected as the best option.

SUSTAINABLE OUTCOMES

Not only will the bridge contribute to a more sustainable city by facilitating bicycle and pedestrian access to the city, but significant emissions reductions were also achieved throughout construction. Around 4,086 tonnes of carbon dioxide equivalent (tCO_2e) were saved through sustainable procurement and materials selection. The emission reductions achieved are the equivalent of 888 cars off the road. High-quality steel with 17% recycled content from local manufacturers was used, saving 3,339 tCO_2e, and low carbon concrete was sourced saving 744 tCO e. Additionally, the team utilised the Brisbane River for transporting large bridge segments, reducing local traffic impact, and further cutting emissions.

SECURING THE FUTURE OF CONSTRUCTION

Through the project, local students and early career professionals were given the opportunity to gain valuable experience delivering a major piece of public infrastructure. BESIX Watpac, in partnership with local subcontractors and the government, successfully jump-started the careers of many apprentices, providing them with the support they needed to succeed on the project and in their long-term careers. This collaboration underscores the importance of the construction industry working alongside the training and education sectors to ensure a skilled workforce capable of meeting the demands of the next decade's projects. Additionally, BESIX Watpac continues to forge career pathways through its Graduate and Early Career Programme, a two-year initiative designed to enhance the technical and business capabilities of emerging professionals.

Project details

Location
Brisbane, Australia

Client
Brisbane City Council

Contract type
Design and Build

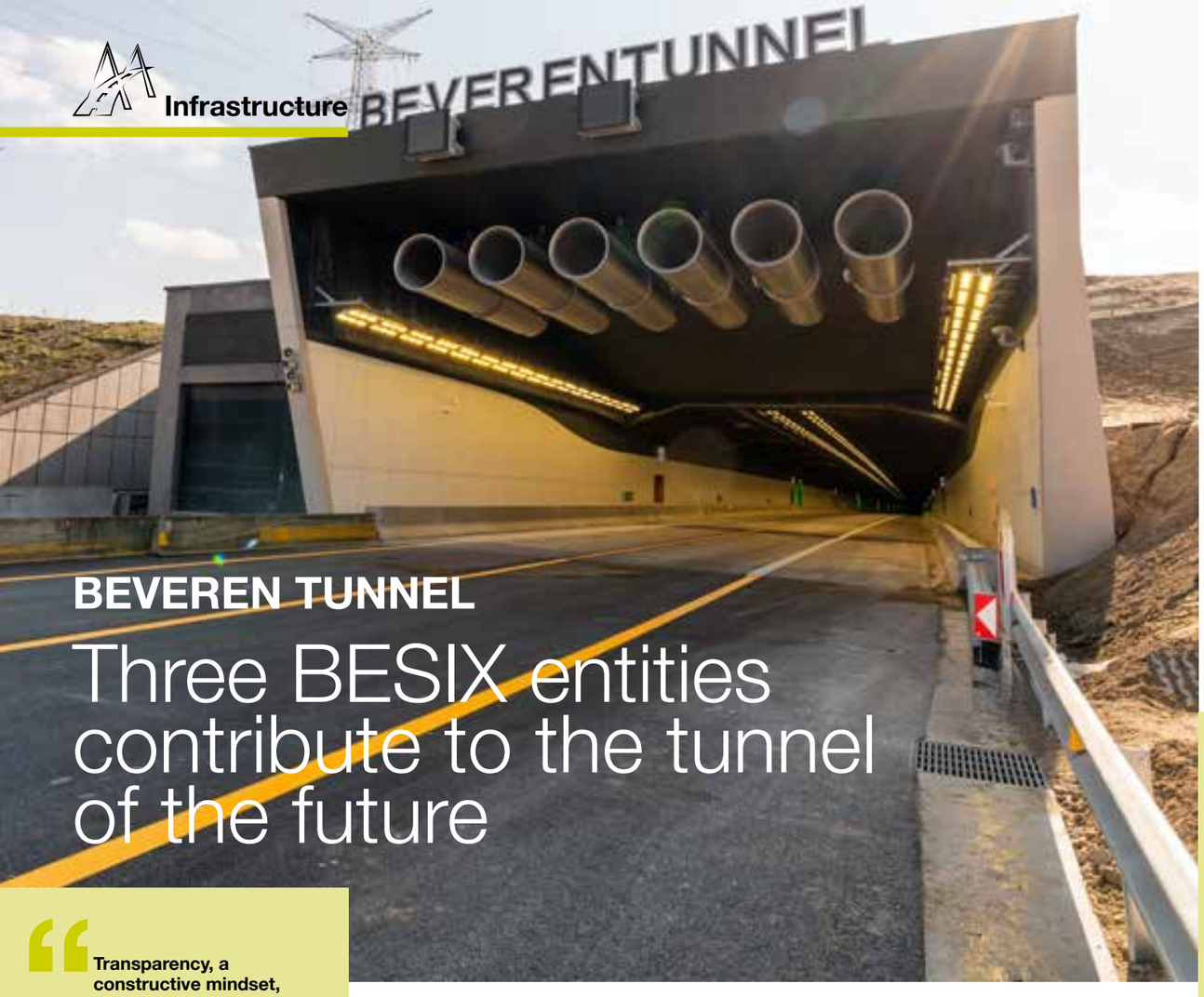
Connect Brisbane Consortium
Rizzani de Eccher, WSP, Dissing + Weitling, ASPECT Studios, RWDI, F-POV, UAP, Right Angle Studio, Blaklash

Architect
Blight Rayner

Construction period
2021 - 2024

180 tonne
mast head – the heaviest lift on the project

460 metre
long cable-stayed bridge



Infrastructure

BEVEREN TUNNEL

Three BESIX entities contribute to the tunnel of the future

Transparency, a constructive mindset, and a best-for-project attitude define the TM Bever team. Everyone approaches challenges with a problem-solving mentality, which drives our progress and ensures we stay on track to deliver the tunnel this year.

Koen De Mey,
BESIX Unitec,
Project Director
at TM Bever

After being in service for nearly 35 years, the Beveren Tunnel in the port of Antwerp (Belgium) is undergoing a major renovation. The tunnel is being modernised to meet growing traffic demands and stringent European safety and sustainability standards. The Flemish Agency for Roads and Traffic (AWV) entrusted the TM Bever consortium with this vital project, in which three BESIX entities – BESIX, BESIX Infra and BESIX Unitec – are playing a central role.

EXTENSIVE STRUCTURAL AND TECHNICAL IMPROVEMENTS

The Beveren Tunnel is a crucial economic artery in the Antwerp port area, with up to 4.75 million vehicles passing through it annually. Given the increasing traffic volume and the latest European road safety, technology and sustainability requirements, an extensive overhaul was needed to secure the tunnel's future viability.

The works include replacing the road surface and lighting, modernising the tunnel entrances, installing a new ventilation system and upgrading emergency evacuation routes. Furthermore, the service buildings are being renovated and the tunnel equipped with all necessary technologies to meet the recent European safety and sustainability standards. Within the consortium, BESIX is responsible for the civil works, BESIX Infra for the road works and BESIX Unitec for the electromechanical works.

On the north side of the tunnel, a solar panel park will supply renewable energy and a new water treatment plant will process 3.6 million litres of groundwater daily. Lastly, collected rainwater will also be used to irrigate the surrounding protected orchids, enhancing local biodiversity.

Works commenced in July 2024 and progress has been significant. Despite a tight schedule and complex technical coordination, the first phase – covering the direction towards Ghent – was completed in March 2025. The second phase – focusing on the direction towards the Netherlands – is underway and set for completion in the second half of the year.

BESIX Group's capabilities as a global, multidisciplinary leader are evident in this project. Despite the complexities and multiple design changes, the team has taken a determined approach, making collaboration and transparency a reality.

Pieter Bernaert,
Project Manager at
the Flemish Agency
for Roads and Traffic

BESIX'S MULTIDISCIPLINARY EXPERTISE CREATES ADDED VALUE

The client acknowledges the team's achievements, commending its determined approach despite early challenges and numerous modifications to the original design. A temporary joint venture was established, integral planning optimised through LEAN sessions, and a comprehensive testing of the tunnel installations is being implemented.

Furthermore, BESIX Group's multidisciplinary expertise is providing essential added value, addressing the client's needs and contributing to the project's success. Its ability to manage complex large-scale projects, solve technical challenges with highly skilled specialists, and leverage its in-house engineering department, BESIX Engineering, proved instrumental.

With a collaborative approach and strong technical capabilities, BESIX and its partners are on track to deliver a future-proof Beveren Tunnel, enhancing the safety and durability of Antwerp's mobility for years to come.

Project details

Location
Kallo, Belgium

Client
Flemish Agency for
Roads and Traffic
(Agentschap Wegen en Verkeer)

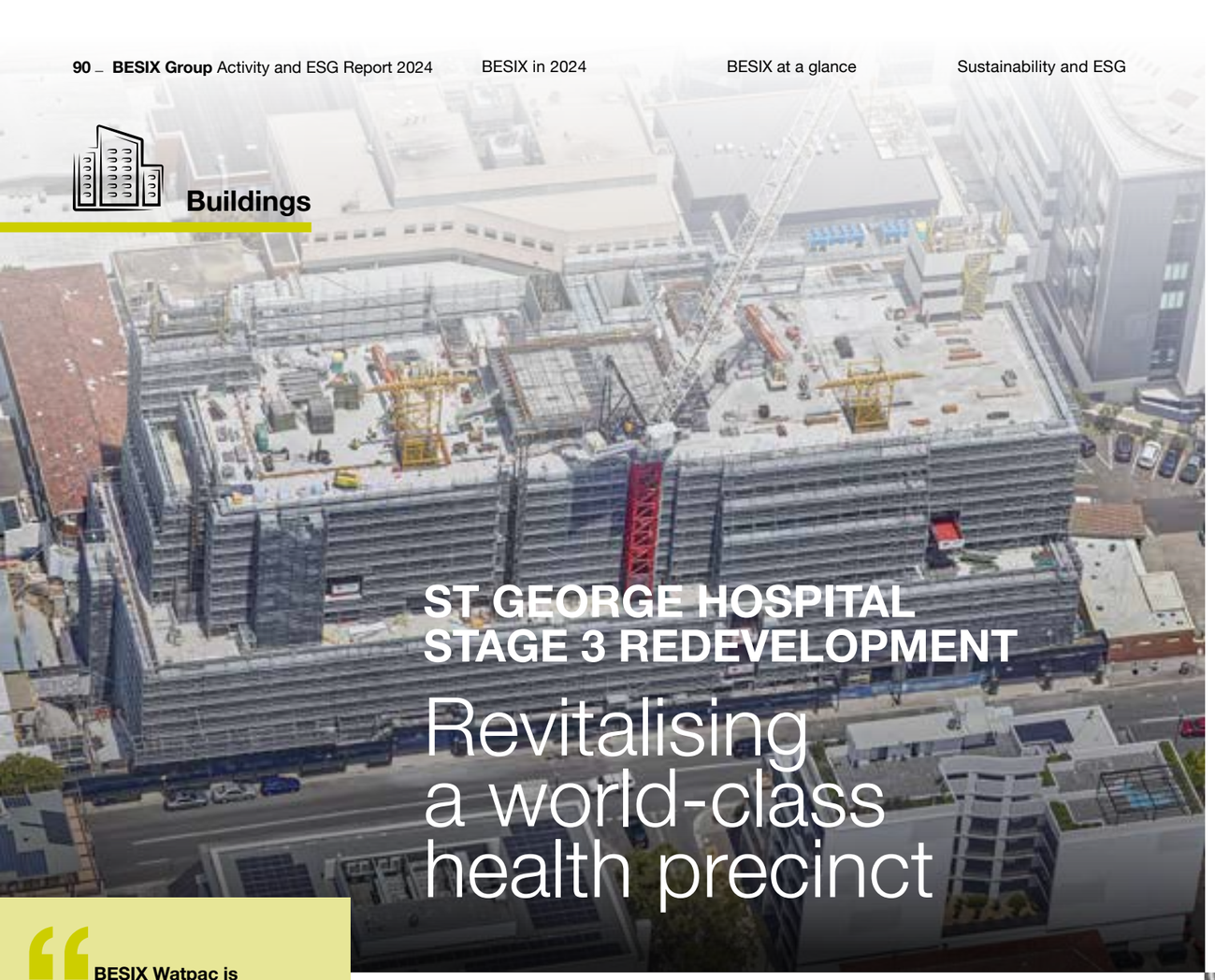
Contract type
Build

External partners
Stadsbader, Stadsbader
Contractors and Equans

Construction period
2024 - 2025

1,070 metres
long

Two tubes
of 14.5 metres wide
and 5 metres high



Buildings

ST GEORGE HOSPITAL STAGE 3 REDEVELOPMENT

Revitalising a world-class health precinct

BESIX Watpac is committed to working with our people to progress their careers as well as rewarding their dedication and excellence – this project has allowed the team to grow as professionals in their field, and the results speak for themselves.

Giovanni Polimeni,
BESIX Watpac
General Manager
New South Wales

The St George Hospital Stage 3 Redevelopment is a AUD 411 million world-class Ambulatory Care Precinct. The facility will bring together a range of ambulatory and out-patient services that will not only provide the St George and Sutherland community with access to new, state-of-the-art facilities, but also enhance patient outcomes by improving collaboration between multidisciplinary teams.

CELEBRATING TOPPING OUT

In late 2024, the team celebrated completion of the external structure – attended by the New South Wales Premier and BESIX Watpac CEO Mark Baker. In keeping with construction tradition, an Australian native Blueberry Ash tree was lifted onto the roof of the new building. It will be planted in the forecourt of the new building upon project completion. Once complete, the nine-storey building will consolidate community and outpatient care services under one roof. The redevelopment includes:

- Outpatient, ambulatory, and integrated care services;
- Pathology collection;
- A new day rehabilitation unit;
- Increased sub-acute and rehabilitation inpatient beds;
- Sub-acute aged care unit;
- Behavioural support unit;
- Rehabilitation cognitive transition unit;
- Palliative care;
- Medical imaging department;
- Co-located basement car parking.

CULTIVATING THE NEXT GENERATION OF BUILDERS

BESIX Watpac aims to develop future talent in the industry across its projects. Providing a platform for early career construction workers to gain valuable experience is an important step in ensuring the construction industry can thrive well into the future. On the St Geroge Hospital Stage 3 Redevelopment project, BESIX Watpac partnered with Infrastructure NSW to host construction trainees in various roles – the New South Wales Infrastructure Trainee Programme. This initiative aims to provide trainees with real-world construction experiences, align with government workforce development initiatives, and build future talent pipelines for the construction industry.

By joining this trainee programme, the team fostered a learning culture across all levels of the organisation, offering young professionals opportunities to grow within the industry. Not only did the trainees benefit in gaining an invaluable learning experience and an opportunity to explore and hone new skills, this has also encouraged the entire team to adopt a mindset of continuous learning.

An example of how the programme is assisting early career workers to build life-long skills is Savannah, a construction trainee on the project. Savannah has built confidence with public speaking, by presenting her learnings of the past week in team meetings. Breaking out of her comfort zone has both made this activity less intimidating and given her confidence to further develop this skill.

The project has also generated opportunities for increased female participation, currently employing over 15% female workforce. More broadly, women in the industry have been encouraged to expand their learning through industry-led site tours such as through the National Association of Women in Construction.

Savannah Vrkic, Construction Trainee (left) and Aurelie Bolle, Project Manager (right)

From left to right: Mark Baker, CEO of BESIX Watpac; Leisa Rathborne, Executive Director, Northern Region, Health Infrastructure; Chris Minns, New South Wales Premier; Steve Kamper, New South Wales State Member for Rockdale, Minister for Small Business, Minister for Lands and Property, Minister for Multiculturalism, and Minister for Sport; and Ange Karooz, General Manager, St George Hospital.

Project details

Location
Sydney, Australia

Client
Health Infrastructure

Contract type
Design and Build

Architect
Jacobs

Construction period
2023 – 2026

15%
female participation

750
jobs created throughout construction

0 Lost Time Incidents
413,770 hours worked

Buildings

POST

A new architectural icon in the heart of Rotterdam

A once-in-a-lifetime project that will leave an indelible mark on the Rotterdam skyline.

Matteo Calovi,
Project Manager at
Rizzani de Eccher

The transformation of the historic post office in Rotterdam into a multifunctional complex shows a perfect balance between heritage preservation and modern design. POST, an ambitious project by BESIX Nederland and Rizzani de Eccher, was designed by New York-based architecture firm ODA in collaboration with Braaksma and Roos, on behalf of Omnam Investment Group.

FROM HERITAGE TO MODERN MASTERPIECE

POST embodies top-level redevelopment. The historic post office, a national monument that is almost a century old and survived bombing during World War II, is being transformed into a five-star boutique hotel with 238 luxury rooms. The additional residential tower block will house 305 flats, of which 102 are for sale and 203 will be rented out. The upper floors will offer exclusive penthouses with generous ceilings and terraces.

INNOVATIVE DESIGN AND TECHNICAL HIGHLIGHTS

At 155 metres tall, POST's tower will be a new landmark in the city, with the original post office's façade remaining the focal point at street level. This creates a striking contrast which aims to retain the grandeur of the old while making the tower a symbol of Rotterdam's future.

The design of the façade, an engineering feat of stature, consists of bespoke staggered arches and vertical columns of glass fibre-reinforced concrete placed around the building like a second skin. These elements reflect the round shapes of the post office's iconic central hall and are combined with an energy-efficient aluminium curtain wall.

The façade of POST's tower is an architectural statement and an engineering feat.

Barthold Roosendaal,
Project Director at
BESIX Nederland

Sandwiched between the Stadstimmerhuis, Rotterdam City Hall and the Post Office, the construction site poses great challenges for the builders. For the realisation of the tower, the non-monumental rear wing of the post office was carefully demolished, with particular attention to preserving the historic character of the monument. Another special feature is that the plinth on the Rodezand side will be restored to its former glory by using donor material released during the demolition of the rear wing. When finished, visitors will be able to walk from Coolsingel through the monument and tower to Rodezand and vice versa, adding to the accessibility and appeal of the complex.

CONSTRUCTION CHALLENGES

Part of the wooden pile foundation was removed in a vibration-free manner with the particular challenge of keeping the subsurface waterproofing layer intact. The new tower rests on 60-metre-deep steel tubular piles, installed using low-vibration methods and filled with concrete and rebar, many of which are placed at a slight bracing angle.

The tower itself is supported by a heavy concrete table structure. During the curing of the concrete in the solid table legs, cooling was applied to control heat generation. The core of the tower, with stairwells, lift shafts and stability walls, climbs up using a hydraulic climbing formwork.

The engineering and assembly of the double facade are particularly challenging. The staggered and indented construction makes almost every detail unique, which demands a lot from designers and builders. The logistics and assembly of the façade require very precise planning and execution.

A NEW EYE-CATCHER FOR ROTTERDAM

POST will further enrich the city's skyline. The project is a model of how historical and modern architecture can go hand in hand. The revival of the post office not only strengthens Rotterdam's image, but also offers a unique destination where heritage, housing and hospitality come together.

Project details

Location
Rotterdam, the Netherlands

Client
Omnam Investment Group

Contract type
Engineering and Build

Partner
Rizzani de Eccher

Architect
ODA

Construction period
2022 - 2026

155 metres
height

14,000 m²
GFRC elements

26,000 m²
aluminium/glass panels

Façade

Buildings

GENESIS

BESIX delivers state-of-the-art biomanufacturing facility for UCB in Belgium

In Braine-l'Alleud, Belgium, BESIX has successfully delivered the structural and façade works for Project Genesis, a greenfield manufacturing facility developed by global biopharmaceutical company UCB. Designed to support the development and production of gene therapies, the 17,000 m² facility will play a key role in UCB's ambition to expand its footprint in this field.

> **It is in complex environments like these that BESIX's professionalism and expertise are most evident.**
>
> **Alexandre Duthoit,**
> Project Manager at BESIX

The complex comprises cutting-edge laboratories (including process development and quality control labs), advanced production units, warehousing, and collaborative office spaces. Its architecture and layout were conceived to support scientific innovation while ensuring strict compliance with regulatory and operational requirements.

SCOPE OF WORK

The 'shell and core' contract awarded to BESIX included structural works, façade, watertightness, and implementation of sustainability measures, targeting BREEAM certification, through the integration of efficient energy systems and responsible water use.

Thanks to its experience in the construction of complex, high-tech facilities across sectors – including healthcare, industrial, and data infrastructure – BESIX was able to meet the unique technical and safety demands of the project.

SITE-SPECIFIC CHALLENGES

The project was delivered on a greenfield site with challenging ground conditions. With groundwater close to the surface and signs of water movement detected early, Franki Foundations, a BESIX Group subsidiary, was entrusted with the deep foundation works. These works were executed in parallel with the relocation of existing underground utilities, requiring a high level of planning and coordination.

Construction was carried out on UCB's closed, Seveso-graded, site, with extremely stringent safety rules, restricted access and strict logistical requirements. In addition, specific product constraints linked to UCB's operational environment required constant validation and, in some cases, sourcing of alternative materials. For example, polyurethane-based materials were not permitted and were replaced with approved alternatives such as mineral wool.

608 piles

8,600 m² precast walls

8,200 m² hollow core slabs

450 tonnes steel structure

Project details

Location
Braine-l'Alleud, Belgium

Client
UCB

Contract type
Build

Construction period:
2022 - 2024

SAFETY AND COMPLIANCE

The nature of the client's operations required full alignment with UCB's own safety and compliance standards. BESIX adapted to these requirements by working closely with UCB's teams throughout the construction phase. This collaboration helped ensure a safe and controlled worksite.

TEAM AND COLLABORATION

The collaboration between BESIX and UCB was characterized by open communication and a shared focus on project success. The constructive relationship between the parties contributed significantly to the smooth delivery of the works within a highly regulated and technical environment.

DELIVERY AND PHASING

The project was awarded to BESIX in February 2022. Provisional water- and airtight delivery was achieved by the end of 2023, giving way for special trades to move in. Final delivery of the shell and core happened in June 2024. In line with the client's priorities, BESIX implemented a phased delivery approach, giving UCB early access to priority zones.

OTHER REFERENCES

The Genesis building for UCB illustrates once more BESIX's expertise in the building of state-of-the-art facilities for the pharmaceutical sector. BESIX has several recent major pharmaceutical projects in its portfolio, as for example: the construction by affiliate Vanhout of a new production facility and warehouse for CAR T-cell therapy cancer treatment on behalf of a global pharmaceutical player in Zwijnaarde (Belgium) and the construction and commissioning of a new large scale vaccine and anti-venom manufacturing facility in Melbourne (Australia) on behalf of one of the world's largest influenza vaccine companies, by affiliate BESIX Watpac.

Marine works

NORTH FIELD EXPANSION

Powering the future: BESIX's role in Qatar's energy expansion

Qatar's ambition to solidify its position as a global energy leader has advanced with the North Field Expansion (QNF) project, located in Ras Laffan, the major industrial city and port known for its extensive liquefied natural gas (LNG) production facilities and oil refining operations. Drawing on its expertise in marine construction, BESIX successfully delivered four LNG berths, increasing Qatar's LNG capacity by 33 million tonnes per annum. With a commitment to innovation, safety, and sustainability, BESIX continues to deliver excellence in the most demanding environments.

4,000 m

Causeway: each berth has a 4,000-meter-long access platform

840

Berths: each berth was built with 840 precast blocks and in-situ concrete

90 metres

Flare stack: each berth has a 90-meter gas-burning structure installed on a BESIX-designed foundation

Project details

Location
Ras Laffan, Qatar

Client
Samsung C&T

Contract type
Engineering, Procurement and Construction (EPC)

External partner
Samsung C&T

Construction period
2021 - 2024

> **"Beyond the impressive technical accomplishments, this project highlights the critical role of collaboration, innovation, and resilience in overcoming challenges and achieving excellence.**
>
> **Benoit Vallée,**
> Project Manager,
> MIC Construct

BUILDING RESILIENT AND SUSTAINABLE HIGH-CAPACITY INFRASTRUCTURE

BESIX constructed each LNG berth using 840 precast concrete blocks, meticulously placed and reinforced with in-situ capping beams to ensure both durability and functionality. To further enhance the structures' resilience, BESIX engineered a specialised concrete mix that improved placement methods.

This ingenuity extended to the redesign of the causeways and the re-engineering of 200-tonne dolphin's foundation slabs into 105-tonne alternatives, streamlined operations, reduced costs, and optimised use of available resources.

ENSURING SAFETY IN HIGH-RISK MARINE CONSTRUCTION

Working within the active oil and gas facility at the Port of Ras Laffan brought significant challenges, demanding a sharpened focus on safety and precision. BESIX adapted its construction techniques to navigate this high-risk environment, turning obstacles into opportunities for growth and innovation. Enhanced supervision, targeted training, and the deployment of advanced equipment ensured smooth and secure operations despite the complexities.

Safety was a cornerstone of the project, with BESIX introducing innovative PPE and improved lifting systems tailored to the unique risks of marine construction. The use of self-standing casting frames relocated high-risk tasks to onshore settings, setting a new industry benchmark for safety practices.

UNITED FOR EXCELLENCE

The success of the project was driven by a dedicated team of 850 professionals at its peak, all unified by a commitment to excellence. Daily operations involved the meticulous coordination of crane operators, drivers, and engineers to transport and position 10,000 tons of materials—a feat of collaboration and precision. The team's resilience and camaraderie fostered a positive work environment, enabling seamless integration across stakeholders and smooth project execution.

Marine works

LNG CANADA

Innovative solutions in extreme conditions to deliver key marine infrastructure

In 2019, the BESIX-Vancouver Pile Driving joint venture was awarded the Berth Marine Structure contract on a marine terminal for Canada's largest LNG export facility, in Kitimat, a remote Canadian town located in British Columbia, near the Alaskan border. Despite the COVID-19 pandemic and harsh climate conditions, BESIX and its partner devised practical engineering solutions, all the while respecting the surrounding environment and local communities. The project was successfully delivered in Q4 2024.

> **Despite significant setbacks, we successfully moved forward thanks to the excellent collaboration with BESIX's Engineering department, who came up with practical solutions to face the challenges.**
>
> **Robbe Leenknecht,**
> Technical Lead Engineer at BESIX

IMPRESSIVE PROJECT SCOPE

This large-scale project for LNG Canada encompassed a full marine works package for a loading platform integrated in a quay wall. More specifically, the structures which had to be delivered included a 500-metre-long wharf, LNG loading platform, four berthing dolphins, four LNG berthing dolphins and six mooring dolphins, including one offshore, as well as navigational aids. BESIX also undertook design and value engineering in collaboration with the client and a local Engineer of Record, which involved six months of preparation in Vancouver.

DEALING WITH AN EVOLVING PANDEMIC FROM THE OUTSET

In February 2020, the team moved to the site, only to be hit with the COVID-19 pandemic shortly after. This significantly impacted the supply of piles from China, creating a delay of four months before the first ones could be installed. Travel restrictions and unpredictable health regulations also made it very difficult to send over cranes from the US, resulting in having to move loads from one truck to another at the US-Canadian border!

As anticipated, the situation had an impact on the construction team, whose members were staying in a camp at a remote site, some 10 km away from the small town of Kitimat and about 700 km north of Vancouver. The health protocol in Kitimat also required workers to remain on-site until April 2021, and arranging for BESIX supervisors to enter the country took longer than expected – including a two-week quarantine.

COME RAIN OR SHINE

Despite these significant setbacks, BESIX was one of the first contractors on-site, ready to move forward with the work. Due to the delays, some tasks initially scheduled for the summer had to be carried out during Kitimat's harsh winter conditions, known for cold wind, heavy rainfall and lots of snow. To ensure workers' well-being while maintaining progress, BESIX set up large heated sheds over the entire loading platform and dolphins, allowing them to continue with the concrete works through the challenging weather.

Meanwhile, the BESIX-Vancouver Pile Driving teams continued working on the other structures, including dolphins, 1,000 flexible concrete mattresses on the seabed 20 metres down for scour protection, electrical works on the quay wall, mooring devices, and the loading platform, a large concrete deck supported by more than 50 piles underneath.

15,000
environmental protection and animal welfare regulations

1,000
flexible concrete mattresses on the seabed 20 metres down

RESPECT FOR LOCAL COMMUNITIES AND THE ENVIRONMENT

The site, located near the Alaskan border, is home to a rich diversity of wildlife, including two species of bears, orcas, and gray whales. LNG Canada remains firmly committed to regulatory compliance, fulfilling its promises to Indigenous and local communities, and minimising environmental impacts. Over 15,000 environmental protection and animal welfare regulations were incorporated into the contract, all of which BESIX and its partner were required to uphold. Despite numerous challenges, unforeseen circumstances, and harsh weather conditions, the Berth Marine Structure was successfully delivered to the client by the end of 2024.

Project details

Location
Kitimat, Canada

Client
JGC Fluor Joint Venture (JFJV)

Contract type
Design and Build

External partner
Vancouver Pile Driving

Construction period
2019 - 2024

Industry

DATA CENTRES

Solid expertise at the service of global data security

© Google

As our online world becomes increasingly connected, complex and at times challenging, it is clear that robust digital infrastructure needs to be built to secure the vast quantities of data that we all produce and use every day. BESIX understands this evolving need, and has recently made a name for itself as a reliable, trusted expert for technically demanding data centre construction, at opposite ends of the globe.

“Our commitment to delivering technologically advanced infrastructure, as evidenced in previous and currently ongoing data centre projects, is reinforced by our collaborative approach with partners and clients and our reliance on the engineering, BIM and international project management experience of our teams.

Mark Beyst,
General Manager
BESIX
Belgium-Luxembourg

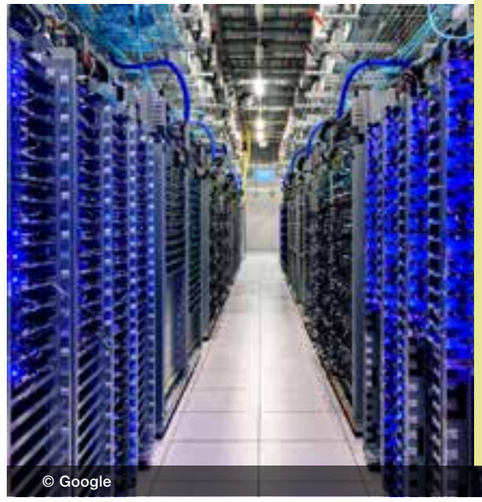
WHAT EXACTLY IS A DATA CENTRE?

Data centres are at the intersection of our global connectivity. These structures store, manage and process enormous quantities of data from across the globe. Security of the data stored is critical, given its sensitivity for individuals and businesses, and also the serious consequences of potential leaks. The recent breakthrough of AI has significantly increased the global demand for data centres, with a specific focus on strategic locations with reliable connectivity and a stable energy supply to meet these growing needs.

UNPARALLELED SKILLSET TARGETS NEW BUSINESS SEGMENT

With some 11,000 data centres spread around the world, internet user numbers more than doubling since 2010 and cloud computing and AI further increasing needs, data centre construction has become a viable strategic business segment for BESIX Group, who is viewed as a reliable, trusted contractor by its global clients. BESIX offers unparalleled quality and the know-how needed to comply with the stringent timelines and security requirements of these facilities. And because data centres often have to be built in short timeframes, often just a few months, the company’s flexibility presents a key – and highly sought-after – asset.

In addition, BESIX brings a broad spectrum of expertise in design, engineering, BIM and documentation to the table, backed by years of international experience. Agility, an entrepreneurial spirit where BESIX sees things through to the end, and the ability to strike a balance between governance and flexibility, all underpin its projects. An efficient sequencing of works ensures effective time management, and with the skills, resources and people it can tap into, BESIX guarantees delivery on time, regardless of the construction scale or the client’s strict conditions.



© Google

“Delivering next-gen data centres requires a high-performing team, adept at collaborating with critical stakeholders in a dynamic, secure, and live environment. Our teams have consistently demonstrated their expertise and are poised to meet the growing demand for data centres across Australia and New Zealand.

Mark Baker,
CEO of BESIX Watpac

INVOLVEMENT FROM THE OUTSET

BESIX actively promotes Early Contractor Involvement (ECI) as a key approach when working with clients on complex projects such as data centres. From the market analysis and early design phases, BESIX collaborates closely with all stakeholders to ensure a shared understanding of the project’s full scope, challenges, and opportunities. This proactive approach ensures that decisions are well-informed, risks are minimised, and the most relevant expertise is leveraged at every stage, from early on. Ultimately, ECI leads to smarter, more efficient, and sustainable project outcomes that benefit all parties involved.

GLOBAL CONNECTIONS

Since 2010, Australia has been home to next-gen data centres built by BESIX Watpac. The company has delivered data halls in a Sydney facility (New South Wales), constructed a four-level data centre equipped to store secure, sensitive data in Port Melbourne (Victoria), and designed and built a DCI data centre in Adelaide (South Australia). It is currently constructing a technically demanding ‘hyperscale’ data centre, again in Melbourne, including the installation and concurrent commissioning of colocation data halls.

In Belgium, too, BESIX is fast securing its spot as the go-to company for large data centre builds. Drawing on the expertise of some 30 engineers involved in the project, itself a major feat, and with works already well under way, the city of Mons will soon feature a 2-storey building of 30,000 m² comprising a data centre hall, electrical building, facility support areas and external areas. This new building is being erected in seven months with very high quality and safety standards, on the same site where BESIX participated to the construction of another data centre building back in 2022. BESIX has been trusted with the foundations and closed shell, while its specialised subsidiary Franki Foundations was tasked with driving the piles.

BESIX was also recently awarded the construction of a 30,000 m² hyperscale data centre in the Belgian province of Hainaut, due for completion in October 2025, as part of a joint venture with an external partner. BESIX is tasked with constructing the civil, structural and architectural envelope components, including roofing and cladding. The new facility will feature a multi-storey building including several key functional areas with extensive external features including trestles and underground utilities. This fast-track project has high security and quality standards, and demands a significant level of manpower to ensure its successful execution.

Finally, in Neder-Over-Heembeek, near Brussels, BESIX has joined forces with MEP provider Equans to design and construct a cutting-edge 40 MVA data centre, further evidence of the company’s solid reputation and drive to grow and evolve.

Sports and leisure

ONE NEW ZEALAND STADIUM AT TE KAHA

Fully covered arena rises above city skyline

One New Zealand Stadium at Te Kaha for Christchurch City Council represents the final anchor project in the revival of Christchurch after the 2011 earthquakes. This fully covered arena is designed to host major sporting events and international concerts, with a scalable seating capacity to ensure it also remains fit for purpose for smaller concerts, shows, and events. The stadium features 25,000 permanent seats and an additional 5,000 bump-in seats, with capacity to host up to 36,000 spectators for concerts.

30,000
seat stadium

160 tonnes
Heaviest lift (oculus module)

> **Our first project in New Zealand has been a remarkable journey, marked by strong relationships and successful partnerships with Christchurch City Council and our locally based delivery partners.**
>
> **Adrian Jones,**
> BESIX Watpac
> Project Director

A YEAR OF MILESTONES

Excellent progress has been made on this exciting new arena located in Christchurch since construction commenced in late 2022. Over the last 12 months, the stadium has truly begun to take shape, rising above the cityscape.

Several significant milestones were achieved in 2024. In May, the project reached the halfway point of construction, marking a significant achievement for everyone involved. In September, the team celebrated a momentous milestone having completed one million construction hours – a milestone that was achieved with an unwavering commitment to safety. This accomplishment reflects the dedication, planning, collaboration, and safety culture fostered throughout the project.

The project has remained on programme and is scheduled to open in April 2026. The project's success is attributed to the strong relationship BESIX Watpac has with Christchurch City Council and subcontractors. The collaborative approach adopted from the start of the project has continued through delivery, ensuring the project remains in an excellent position.

ROOF STRUCTURE STARTS TO TAKE SHAPE

The stadium will feature a fully enclosed roof constructed from structural steel, steel sheeting, and a clear material called Ethylene Tetrafluoroethylene (ETFE). The roof is supported by radial trusses, which are vertical steel columns standing around 37 metres tall, as well as cantilever and oculus trusses that stretch across the field of play. The combined span of the cantilever and oculus trusses once all are in place is 175 metres. Work on installing the oculus trusses commenced in late 2024 with each truss preassembled as a module on site before being lifted into place.

Roof and exterior cladding of the structure also began in late 2024. The façade features a pattern made up of 800 metres of steel sheeting in colours representing Canterbury's landscape – an artwork that has been developed by a local visual and graphic designer. The last of the sheets will be installed in the northern stand in mid-2025.

Project details

Location
Christchurch, New Zealand

Client
Christchurch City Council

Contract type
Design and Build

Construction period
2022 - 2026

Environment

DE GAVERS WATER PRODUCTION CENTRE

BESIX Environment and BESIX Unitec: a powerful partnership in water production

BESIX aims to leverage a comprehensive and integrated service proposition to deliver outstanding solutions through in-house expertise and experience. This is shining through in the renovation and expansion of the De Gavers water production centre ('Waterproductiecentrum') for De Watergroep, the largest water company in Flanders, Belgium. BESIX Environment and BESIX Unitec are joining forces to upgrade the facility and increase its capacity.

INCREASED WATER SUPPLY SERVING MORE COMMUNITIES

Originally built in 1995 in Harelbeke, Belgium, the 'Waterproductiecentrum De Gavers' required modernisation, including a thorough renovation and the expansion of the ultrafiltration technology to treat water. These efforts will ensure a reliable water supply for the cities of Waregem and Kortrijk, with the facility's nominal water treatment capacity rising from 32,000 m³/day to 50,000 m³/day.

De Watergroep entrusted BESIX Environment and BESIX Unitec with building new electromechanical systems and revising the existing ones. The works include installing electromechanical equipment for the ultrafiltration building, adding two active carbon filters to support the increased ultrafiltration capacity, and renovating the high-pressure pumps. Additionally, BESIX Unitec is delivering 40 electrical control panels, manufactured by its dedicated Workshop Automation department.

In 2024, significant progress was made towards the completion of the mechanical aspects in the ultrafiltration building and the revision of the pumps and valves serving drinking water to the city of Waregem. Meanwhile, works for the city of Kortrijk are advancing steadily. The project's complexity — particularly in piping and installations — has been effectively managed through the use of BIM and 3D modelling, proving highly valuable as in many other BESIX projects.

"Working together with BESIX Environment and leveraging their wide experience in similar projects in the Middle East creates real added value for both our client and us. It enhances our competitiveness in winning similar tenders, supporting our growth as a business.

Robbe D'Hoore,
Project Coordinator
Heat and Water Treatment
at BESIX Unitec

The project's most challenging phase will come this year, when the new installations are commissioned. To ensure uninterrupted water supply, a phased approach is being implemented, with each ultrafiltration line thoroughly tested before the next is put into service. Final completion is expected by late 2025.

LEVERAGING EXPERIENCE FOR SUCCESS

This project marks BESIX Unitec's largest undertaking in the field to date. With prior experience being a key requirement during the tender process, it capitalised on BESIX Environment's extensive experience in similar large-scale projects, in particular in the Middle East. By working together with BESIX Environment, BESIX Unitec was in a strong position to submit a competitive tender and eventually win this contract. BESIX Unitec is now in charge of the coordination of the project, with the help of BESIX Environment where needed. Furthermore, this partnership paved the way for future opportunities, enabling the companies to tender

Project details

Location
Harelbeke, Belgium

Client
De Watergroep

Contract type
Build

Construction period
2022 - 2025

50,000 m³
Increased capacity from 32,000 m³ of water treated per day to 50,000 m³

100
More than 100 new or revised pumps between 0.2 and 355 kW