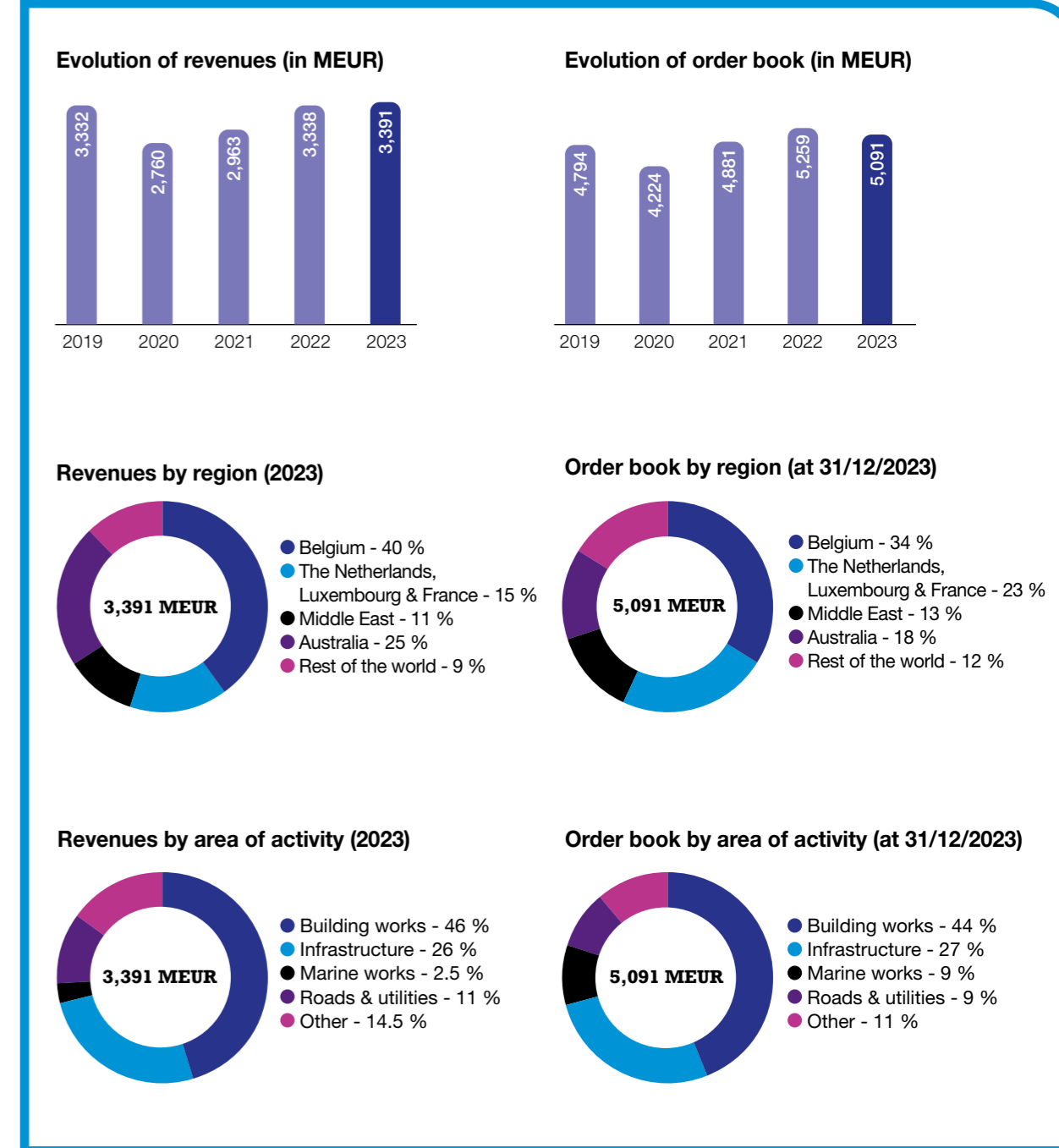
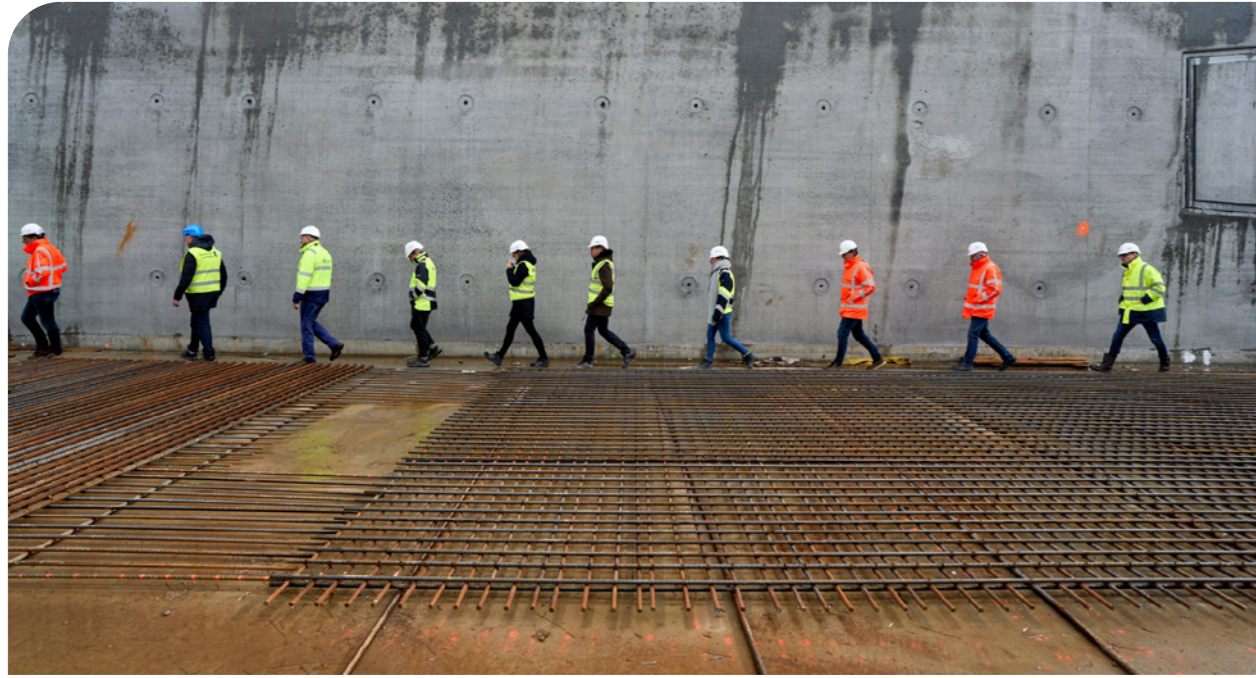




Key Figures 2023





Consolidated Key Figures 2023

Income statement (in MEUR)	2019	2020	2021	2022	2023
Revenue	3,332	2,760	2,963	3,338	3,391
Adjusted EBITDA	123	75	130	129	117
Net income	42	-10	27	40	18
(adjusted) EBITDA margin	3.7 %	2.7 %	4.4 %	3.9 %	3.5 %
Operating profit margin	1.4 %	0.0 %	1.4 %	1.7 %	1.3 %
Total assets	2,888	2,830	3,222	3,452	3,397
Total equity	701	625	686	786	763
Net cash position ¹	141	57.5	64.9	-60.9	-7.5
Net cash position ²	278	163	218.4	187.6	174.3
Cash flow from operating activities	118	-49	10	-123	174
Solvency ratio	24.2 %	22.0 %	21.2 %	22.8 %	22.5 %
Order book	4,794	4,224	4,881	5,259	5,091

1. Excluding IFRS16 and PPPS non-recourse financing

2. Excluding IFRS16, non-recourse and real estate debt



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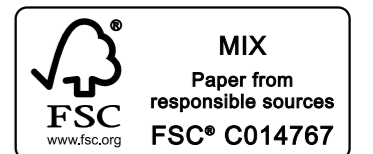


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01

BESIX at a glance

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Message from the Executive Vice-Chairman and the CEO



Dear Readers,

The past year, 2023, unfolded amidst a backdrop of significant global challenges. Geopolitical strife and economic upheavals, marked by persistent inflation and escalating interest rates, tested the resilience of economies worldwide, including ours. Amid these trials, however, we witnessed extraordinary unity and generosity within our communities, rallying to support those impacted by natural calamities and conflicts, and sharing a collective ambition towards sustainability.

The unusual confluence of economic pressures has made its mark on our operations. The contracting sector, where we play a significant role, faced tight profit margins, impacting our financial outcomes.

Yet, these challenges have underscored the value of our diversified business model. Our investments in public-private partnerships, particularly in the Middle East, and our ventures in real estate, as well as infrastructure and utilities in Western Europe, have shown resilience, continuing to deliver positive performance despite adverse conditions.

Over 115 years, BESIX Group has weathered numerous storms to stand stronger. This period is no exception. Our rich history has shaped us into a diversified conglomerate, with contracting at its heart, bolstered by a variety of auxiliary businesses.

As we look towards the future, 2024 presents both opportunities and challenges. With significant projects in the pipeline and an order book at €5.1 billion, we are geared for growth. Yet, we remain mindful of the need for strategic adaptability in response to economic pressures.

At this crossroads, we face upcoming challenges with a steadfast belief in our collective capability to overcome them. The Board's confidence in our executive team, including the welcome addition of a new Secretary-General and a COO for Construction, underscores our trust in their ability to steer us through these times.

I extend my gratitude to the entire executive team for their unwavering commitment and leadership over the past year. Their efforts, supported by the Board's guidance, have been crucial in addressing the complex landscape we find ourselves in.

My heartfelt thanks to all our employees for their dedication and hard work over the past year. Their collective efforts and resilience are the bedrock of our confidence and pride in what lies ahead. To all our clients who have entrusted us with their projects, we thank you and eagerly anticipate the opportunities and achievements the next year will bring.

Looking forward to the year ahead together,

Johan Beerlandt
Executive Vice-Chairman BESIX Group

Johan Beerlandt
Executive Vice-Chairman

Pierre Sironval
CEO

Dear Readers,

As we look back on 2023, it's evident that the year brought its set of challenges, testing the resilience and flexibility of our industry. Writing to you now, I'm proud to announce that BESIX Group has once again proven its resilience and strategic wisdom, ending the year with commendable results.

This year was fraught with obstacles, including relentless inflation and skyrocketing costs for materials and energy, all against the backdrop of worldwide uncertainty. Despite these challenges, our collective efforts have made a significant impact. A heartfelt thanks goes out to our dedicated team of 10,000 employees, whose commitment and entrepreneurial mindset have been instrumental during these uncertain times. Their hard work has played a pivotal role in supporting our clients and enriching communities by delivering critical infrastructure and spaces - schools, hospitals, railways, bridges, and much more - as detailed in this report.

Our impressive sales figure of €3.39 billion, one of the highest in the last twenty years, speaks volumes about our strength in executing top-quality projects that resonate with our clients' visions.

Although we observed a decrease in net profit, it doesn't detract from our company's strength or our ability to maintain operations amidst economic shifts. Our robust order book, worth €5.1 billion, slightly below last year's €5.2 billion, continues to reflect the trust our clients have in us.

Focusing on quality over quantity has been a fruitful strategy, as evidenced by our contracting gross profit margin increase last year, marking a significant enhancement in our operational profitability - a remarkable feat in a sector known for narrow margins.

Our diversified approach has again proved invaluable, providing stability in our wide range of activities despite fluctuating market conditions.

In 2023, we've also deepened our commitment to ESG principles, taking significant steps forward in our sustainability journey. For the first time, this report is combined with our previously separate ESG Report as you can discover further on.

Moving forward, we will selectively engage in projects that meet our risk and profit expectations, focusing on sectors where we have demonstrated excellence and continuing to invest in our core areas—real estate, concessions, and specialised engineering and construction activities—while remaining adaptable to market dynamics. We're also venturing into new areas closely tied to our expertise, especially those related to combating climate change, leveraging our capabilities to make a meaningful impact.

Our commitment to delivering outstanding projects while navigating the evolving industry landscape remains steadfast. Our legacy is built on foresight, and in 2024, we renew our dedication to forging a sustainable future.

I invite you to explore this report, hoping it provides both inspiration and insight into our journey and achievements.

Pierre Sironval
CEO BESIX Group

Company Profile

A global multidisciplinary player, with 110+ years of experience

BESIX Group is a leading Belgian industrial group operating in the **construction, real estate development and concessions sectors**. Founded in 1909, it has grown steadily over the years. A global multi-service group, BESIX is able to take on projects of all sizes and complexity and draws its strength from its entrepreneurial roots.

BESIX, its largest subsidiary, offers services in the different stages of construction projects, with branches in Europe, Africa, and America. BESIX Group's subsidiaries and affiliates also include Six Construct in the Middle East, BESIX Watpac in Australia, as well as regional and specialist contractors in the Benelux including Jacques Delens, Vanhout, Lux TP, Wust, Socogetra, Franki Foundations, BESIX Infra, BESIX Environment, and BESIX Unitec.

The group stands out by having its **in-house Engineering department**, a distinctive feature in the industry, which is home to state-of-the-art expertise in structural engineering, geotechnical engineering, methods & planning, BIM, parametric design, sustainability, concrete technology, and façade. Thanks to its value engineering capabilities, BESIX is able to improve project design and adapt implementation processes

so as to limit construction costs, reduce risks, increase the lifespan of projects, and optimise their functional objectives. Significantly, sustainability engineers develop advanced solutions to improve the environmental performance of the assets they design, in a way that minimises carbon footprint throughout the assets' life cycle.

To reduce its risk exposure, BESIX has been diversifying its activities on a geographical and sectoral level, through organic growth, acquisitions, or shareholdings. The group's expansion in the Middle East, where it has built an impressive portfolio over the last 60 years, and more recently in Africa and Australia, illustrates the success of this strategy. Through its many projects and initiatives, BESIX is constantly seeking to consolidate its purpose: **"To excel in creating sustainable solutions for a better world."**



The group in 5 key dates

1909

Founding of the Société Belge des Bétons (SBB), which undertakes prestigious construction projects

1966

Founding of subsidiary Six Construct to take charge of major projects in the Middle East

2004

Management buy-out, SBB nowadays known as BESIX Group

2010

Inauguration of the Burj Khalifa in Dubai (UAE), the world's tallest tower, built by Six Construct

2023

BESIX Group embraces innovation and diversification with strategic investment in PropTech start-ups

Key figures 2023



112
nationalities

10,000
persons employed

€3.39 billion
2023 turnover

€5.1 billion
2023 order book

“
BESIX Group
is present
in 26+ countries on
5 continents
”

Milestones 2023

January

17-01 BESIX receives the Top Employer certificate for the fourth consecutive time (Belgium).



21-01 The project Atlantis The Royal is festively inaugurated. The 400,000 m² ultra-luxurious resort comprises a hotel with 795 rooms and suites, and 231 serviced apartments (UAE).



25-01 The sustainable smart office building ICÔNE is inaugurated after 2.5 years of construction. This new icon in Belval is a development of BESIX RED and was built by LuxTP and BESIX (Grand Duchy of Luxembourg).



31-01 BESIX receives the permit for the Portonave project in the port of Navegantes. The project includes an upgrade of the existing port infrastructure (Brazil).

February

08-02 BESIX Nederland reaches the highest point of DPG Media Nederland's new headquarters 'Mediavaert' in Amsterdam (The Netherlands).



14-02 BESIX and BESIX Environment successfully test a tower crane on green hydrogen at the BESIX Equipment Department's site in Sint-Pieters-Leeuw (Belgium).



18-02 The plinth, including the level one slab and core walls of the Abu Dhabi Guggenheim Museum is complete. The steel structure of the first gallery is completed as well (UAE).



March

16-03 Sluishuis in Amsterdam (The Netherlands) and the Deloitte University near Paris (France) both win a MIPIM Award 2023, respectively in the category 'Best Residential Project' and 'Best Alternative Project'. Subsidiary Vanhout's Collegium in Zottegem (Belgium) is among the finalists as well.



27-03 BESIX receives the availability certificate for the new 78,000 m² master building for the Antwerp Local Police Force. A 25-year maintenance period follows (Belgium).



30-03 The new headquarters of subsidiary Socogetra, built by subsidiary Wust, are inaugurated in Marche-en-Famenne, in time for its 75th birthday (Belgium).



April

24-04 The consortium De Groene Boog pours the last concrete batch for the energy-neutral Rottemeren Tunnel, which is part of the A16 highway project in Rotterdam (The Netherlands).



28-04 The BESIX Group Global Safety Time Out takes place with a focus on the BE SAFE Principles, on all BESIX sites around the world. More than 21,500 employees of BESIX and sub-contractors participate.



May

04-05 The Zayed City Schools project is awarded the Social Infrastructure Deal of the Year 2022 for the Middle East & Africa region at the IJGlobal Awards (UAE).

11-05 The ground-breaking ceremony takes place at the Nordhavn Tunnel project in Copenhagen, officially marking the start of construction (Denmark).

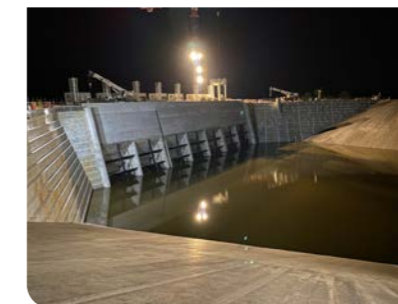


15-05 BESIX Watpac delivers Australian Catholic University's new Saint Teresa of Kolkata building on Fitzroy's campus in Melbourne (Australia).



22-05 BESIX Europe and entities in Belgium successfully retain Level 5 certification in the annual CO₂ Performance Ladder audit (Belgium).

31-05 At the Nachtigal hydroelectric project, water flows for the first time along the 3.3-km-long and 14-metre-deep inlet canal as part of the first sealing tests (Cameroon).



June

07-06 In Dubai, the Shindagha Corridor is reopened to traffic further to the completion of works on two flyover bridges (with six lanes in each direction), a one-lane ramp, and a two-lane tunnel (UAE).



09-06 Subsidiary LuxTP and BESIX Environment inaugurate two wastewater treatment installations in Putscheid and Nachtmanderscheid (Grand Duchy of Luxembourg).

09-06 The project team on Triangle removes the last horizontal strut elements of the foundation works of the tower, paving the way for the vertical construction of the tower itself (France).

09-06 BESIX successfully completes the process of assessing the certification of its Building Information Modelling (BIM) methodology according to the standards ISO 19650 and PAS 1192 and is awarded the Kitemark™ Certificate.

10-06 As part of the works on State Road 318 in Valfabbrica, BESIX colleagues reach the 500-metre mark in the excavation of the 1,545-metre-long Casacastalda tunnel (Italy).

11-06 BESIX and BESIX Infra teams place the second and final bridge section over the Brussels Ring Road in Zaventem (Belgium).



20-06 BESIX and its partner Hitachi Zosen Inova announce the successful ignition of the first fire at the Dubai Waste-to-Energy project, and welcome HH Sheikh Hamdan Bin Mohammed Bin Rashid Al Maktoum, Crown Prince of Dubai (UAE).



20-06 BESIX Watpac celebrates the successful lift of the first major steel structure for the Te Kaha Stadium in Christchurch (New Zealand).

July

13-07 The Guggenheim Museum reaches a remarkable safety milestone of 10 million man-hours without Lost Time Incident, while the Zayed National Museum achieved 15 million man-hours a few weeks earlier (UAE).



17-07 The Abidjan Exhibition Centre is inaugurated in the presence of Ivorian officials (Ivory Coast).



19-07 BESIX Group introduces BESIX Technology, a new business venture strengthening its diversification efforts through investment in PropTech startups and VC funds.

21-07 Subsidiary LuxTP celebrates its 50th anniversary (Grand Duchy of Luxembourg).



28-07 BESIX Middle East is awarded the prestigious Gold Impact Seal by the National CSR Fund, for its alignment with the principles of sustainable impact, environmental, social, and governance impact, and the UN Sustainable Development Goals.

30-07 The Huccorgne Viaduct, located on the E42/A15 motorway between Liège and Namur, fully reopens to traffic after undergoing a remarkable transformation (Belgium).

August

29-08 Subsidiary Vanhout delivers a new state-of-the-art wooden cycling track in Heusden-Zolder (Belgium).



September

06-09 BESIX Infra acquires the first all-electric roller in Belgium. This groundbreaking machine sets itself apart from its counterparts with its unique features and environmental benefits (Belgium).

07-09 The Dubai Uptown Tower built by BESIX Middle East is delivered and its hotel welcomes the first guests (UAE).

08-09 The new Royers Lock pumping station near the Port House of Antwerp is officially inaugurated. It was built in a one-stop shop by BESIX, BESIX Unitec, BESIX Environment, and BESIX Infra (Belgium).



12-09 The first two elements of the new Scheldt tunnel of the Oosterweel project, out of a total of eight, are completed. Built in a dry dock in Zeebrugge, once finished, they will all be towed to Antwerp, where they will be submerged and installed, and the dock will be flooded (Belgium).



21-09 The global BESIX CleanUp Day takes place for the fifth time. No less than 11 tonnes of waste are collected by more than 6,000 participants in 44 locations on four continents, making their neighbourhoods a cleaner and safer place.



26-09 The Vistula Spit project, a collaboration between BESIX and NDI Group, is awarded the prestigious 'Best Construction Award 2022' in Poland, recognising BESIX's exceptional achievement in the construction of a new strategic shipping channel in the Gulf of Gdansk (Poland).



October

05-10 The New South Wales team of BESIX Watpac moves their regional office into the magnificent Poly Centre. In November, the stunning 25-storey commercial tower receives the award for Best Commercial Building at the Master Builders Association of NSW State Awards (Australia).



13-10 BESIX Infra lays the first pipe in geopolymer concrete, with a significantly lower CO₂ footprint compared to conventional concrete, at sewage works in Duffel (Belgium).



23-10 BESIX Watpac welcomes Her Royal Highness Princess Astrid of Belgium to the Barangaroo metro station project in Sydney (Australia).



November

08-11 Subsidiary Wust inaugurates the renovated swimming pool in Spa, that meets the latest energy standards thanks to its enhanced insulation, along with photovoltaic and solar panels (Belgium).

20-11 The Zayed City Schools PPP project team celebrates a significant milestone of completing 3 million man-hours of work without any lost-time injuries (UAE).



25-11 The last giant crane is removed on the Zayed National Museum project (UAE).



30-11 The 180-tonne pyramidion is hoisted on top of the masthead of the Kangaroo Point Green Bridge, making this the tallest bridge in Brisbane (Australia).



December

01-12 Belgian Prime Minister De Croo visits BESIX's Waste-to-Energy facility in Dubai. His visit underlines his belief in the synergy between climate ambitions and the industrial sector (UAE).



07-12 BuildUp CEO Hélène de Troostembergh wins the Young Construction Personality of the Year award and BuildUp wins the silver award in the Climate Future Solution category, recognising its offsite sustainably produced panels for the energetic renovation of façades and roofs (Belgium).

07-12 As the third year of construction comes to a close, the BERERIX joint venture - involving BESIX, Rizzani de Eccher, and SIA RERE BÜVE - successfully installs the first arch for the roof structure of the Rail Baltica Central Station in Riga, visually marking the highest point of the station at almost 30 metres (Latvia).



14/12 BESIX Group, through BESIX Unitec, successfully completes the acquisition of TFC S.A. and ACB S.A. (TFC Group). The TFC Group is an established player in the utilities market in Wallonia. They now operate under the name of BESIX Reditec and BESIX Soltec (Belgium).

02

Creating the highest value for all stakeholders

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BESIX Strategy

Meeting tomorrow's challenges

Purpose

Excel in creating sustainable solutions for a better world.

Mission

Thrive as a sustainable and highly integrated full-service provider, with construction at its heart, by offering its clients, in the various markets it operates, value-adding and pioneering solutions and by excelling in delivery, thanks to all group capabilities and trusted partnerships.

Strategic framework

BESIX is a people-first organisation that values unity, improved governance, and a lean organisational structure. As a contractor at heart, BESIX has successfully diversified in the past into exciting new ventures such as Real Estate, Concessions, Operations & Maintenance - and continues to do so. With a focus on sustainability and innovation, the group is always on the lookout for new diversifications that align with its core competencies.

Strengths

Committed staff members

At BESIX, employees are more than just a team – they are a community of passionate professionals united by a strong culture of excellence. With a deep sense of commitment, responsibility, and an insatiable appetite for challenge, BESIX employees deliver exceptional results for their customers, both as a team and as individuals. What sets BESIX teams apart is their unwavering entrepreneurial vibe, which drives everything they do. From start to finish, they put their heart and soul into every project, ensuring that clients receive the very best.

In-house engineering

The BESIX in-house design office is what sets the group apart from the competition. The in-house office leverages its technical expertise, vast experience, and innovative solutions to support clients in developing and executing their most complex infrastructure and sustainable projects. The in-house design office is committed to offering global solutions with exceptional added value from the initial tendering phase to the planning phase and project completion. Its experts work tirelessly to deliver results that exceed expectations, deliver true value to clients, and build a sustainable future.

One-stop shop over the value chain

BESIX is a full-fledged services company that operates on the whole value chain. While construction is still its core business, the group's investments in concessions and start-ups, real estate, and specialised activities have grown steadily. BESIX can rely on a vast and diversified expertise to take on projects from financing to design and construction to long-term maintenance. Through leveraging this diversified expertise, business lines are able to offer bespoke one-stop shop solutions that are tailored to meet the unique needs of their clients, while also remaining their primary point of contact throughout the entire process.

A targeted and sustainable international presence

Since 1909, BESIX Group has opted for a deliberate and sustainable strategy with a focus on establishing a strong international presence on five continents, in addition to its already extensive coverage in Belgium. By pursuing opportunities that align with its risk management requirements, the company is able to diversify its operations while maintaining a long-term perspective in these various geographical areas.

Corporate values

Values are essential to guide the behaviours and decisions of employees within BESIX Group. Here are the corporate values that the group promotes and prioritises.

Unity

This value underscores the significance of cultivating a sense of unity and cooperation among all employees. It urges colleagues to collaborate towards a common objective, supporting each other in reaching that goal. By fostering an inclusive culture and mutual respect, employees are encouraged to embrace unity and work together for shared success.

Passion

This value ignites a drive for employees to dare and accomplish great, sometimes unprecedented, feats. It nurtures an environment of enthusiasm and commitment, motivating staff members to take pride in their work and pursue excellence in all endeavours. Additionally, it cultivates inspiration and motivation, propelling innovation and progress within the group.

Respect

With over 86 nationalities and a diverse workforce, BESIX Group values and respects the contributions of each individual. This core value emphasises the importance of acting with integrity and professionalism consistently, showcasing a strong commitment to ethical conduct and responsible business practices.

Co-creation

BESIX Group boasts colleagues with exceptional expertise in their respective fields. By sharing and combining this knowledge, remarkable solutions are devised for clients' projects, as evidenced by BESIX's global accomplishments. This value encourages a culture of collaboration, illustrating that, in terms of expertise, one plus one amounts to much more than two!

Excellence

BESIX's success stems from its teams' expertise and their unwavering pursuit of quality, performance, and client satisfaction. Cultivating and transferring this level of excellence is the essence of interpersonal connections within the group. It serves as the foundation for intergenerational unity and a prerequisite for nurturing and developing talent.

Behaviours

BESIX Group has identified six behaviours that are intrinsically linked to its corporate culture and therefore expected of each of its employees.

Be Inclusive

Inclusion is a core principle, intrinsically tied to the value of respect. It guarantees fairness, equal opportunities, and an open-minded approach towards all colleagues, regardless of their backgrounds, beliefs, or lifestyles.

Eagerness

BESIX's long-term success in its industry and beyond hinges on its eagerness to seek innovative ways of increasing efficiency and embracing new ventures and business opportunities.

Take Ownership

Employees are empowered to take action, encouraged to assume responsibility, and utilise their talents to their full potential. This is directly connected to the entrepreneurial spirit that underpins BESIX's century-long spirit.

Trust

In line with its entrepreneurial nature, the group's business units and entities maintain a high degree of autonomy and employees enjoy substantial empowerment. Trust is a fundamental aspect of BESIX's operations, acting as an extension of respect and achievable through well-defined expectations and objectives.

Engaged Teams

Every BESIX employee is part of a team, with clear shared and individual objectives, and has opportunities to grow according to their potential and personal motivations. Training, progression, and internal mobility are available to all and highly encouraged.

Resolve Together

United by a strong entrepreneurial spirit, BESIX's team members are known for their unwavering commitment to providing solutions, utilising the remarkable internal resources at their disposal. Both collectively and individually, they draw upon their successes and learn from setbacks, harnessing these experiences to achieve outstanding outcomes for their clients.



Main ESG Risks and Opportunities

BESIX Group recognises the importance of addressing ESG factors and has identified key risks and opportunities affecting its global operations. The group addresses how some of the major short and long-term risks might affect the construction industry and how BESIX Group responds to these risks.

Environment

Risk

The construction industry plays a major role in global greenhouse gas emissions, including CO₂. Climate change brings major risks to both the world and construction, with severe weather, water scarcity, rising sea levels and global temperatures, natural disasters, and floods impacting safety, infrastructure resilience, and construction processes.

Opportunity

BESIX Group recognises the importance of tackling environmental risks head-on and actively devises solutions like eco-friendly building materials, waste-to-energy and green hydrogen plants, and timber construction. From project inception, the group offers sustainable design and construction services. Furthermore, the growing occurrence and impact of extreme weather events due to climate change present new opportunities for the group to utilise its extensive expertise in construction, adaptation, and infrastructure maintenance. This expertise will be essential for projects coping with rising sea levels and increased weather extremes. There's a rising demand for sustainable construction, retrofitting, and

renovation services, with new sustainable construction standards making these services even more vital in meeting evolving needs and generating new revenue streams

[+ Read more on p. 22.](#)

Finance and supply chain management

Risk

The construction industry grapples with challenges stemming from rising interest rates, inflation, and disruptions in global supply chains. Recent interest rate hikes by central banks aimed at curbing inflation have adversely affected this sector, particularly those heavily reliant on borrowing. Higher lending costs have led to project delays or cancellations. Moreover, events such as the war in Ukraine and several geopolitical tensions around the globe and disturbances in energy markets have caused transportation disruptions and driven up material prices, resulting in cost increases for companies like BESIX Group. The escalating tensions between the US and China further exacerbate the strain on the global supply chain.

Opportunity

In response to these challenges, companies must adapt and mitigate risks wherever possible. The diversification of supply chains and the usage of price indexation mechanisms are strategies that BESIX employs to limit the impact of these issues.

Digital transformation

Risk

Digitalisation presents numerous advantages, like streamlining processes and boosting productivity. However, it also introduces challenges, particularly in cybersecurity. Like any organisation, BESIX is exposed to cyber threats such as data breaches, hacking, and ransomware attacks. To counter these risks, the group implements various measures, including compulsory staff training, fortified infrastructure, and strengthened access controls to information systems. BESIX's proactive stance on cybersecurity helps minimise the chances of financial losses, reputational harm, and legal ramifications stemming from cybercrime.



Opportunity

BESIX Group has been at the forefront of embracing digitalisation, making Building Information Modelling (BIM) a standard requirement for many of its construction projects. Beyond BIM, the company implements various other technologies such as material passports, smart buildings, further enhancing data management, and tools that streamline design, construction and maintenance processes. BESIX also leverages on the collection of data across multiple tools through interfaces to enhance comprehensive dashboarding, thereby supporting better decision-making and reducing errors. Additionally, BESIX is delving into the potential application of Generative Artificial Intelligence across several business processes, aiming to enhance efficiency and convenience.

[+ Read more on p. 24.](#)

Social

Risk

The global construction industry is a key job provider, but it encounters notable social challenges, potentially affecting its ESG performance. These challenges include safety, diversity, inclusion, worker welfare, and human rights. The shortage of engineers and technical experts is a pressing issue, prompting the need for solutions. Aging workforce concerns also spur innovation in skills development and staff retention. Construction companies acknowledge the significance of local communities, striving to reduce environmental impact and build community support through collaboration.

Opportunity

To tackle this, BESIX Group has implemented various strategies for a sustainable future. This includes investing in training programmes, offering career opportunities, internal mobility, projects aligned with engineers' expectations, and a respectful and caring work environment that promotes harmony, development, and excellence. BESIX prioritises the health and safety of its employees, enforcing strict safety protocols, delivering high-quality training, and providing appropriate protective equipment. The group also fosters local businesses and economies through procurement and employment practices, engages in community development initiatives, and contributes to social infrastructure like affordable housing, community centres, and schools. Furthermore, the group engages in public-private partnerships that can spearhead the development of senior living communities, schools, healthcare facilities, and other infrastructure projects tailored to society's demographic and social evolution.

[+ Read more on p. 40.](#)

Governance

Risk

Corruption and unethical business practices present a major risk to a company's governance, potentially resulting in legal consequences, harm to reputation, and erosion of trust among stakeholders. These issues include labour, environmental, conflict of interest, and safety concerns, among others.

Opportunity

BESIX Group is deeply committed to upholding governance and ethics, safeguarding its reputation and relationships with stakeholders against corruption and unethical practices. Recognising the repercussions of non-compliance with laws and regulations, all BESIX employees adhere to a Code of Conduct emphasising integrity, transparency, and respect for human rights. Regular audits on subcontractors and suppliers ensure adherence to these standards, with a focus on sustainable procurement practices. BESIX Group introduced a Whistleblowing Procedure based on the EU Whistleblower Directive, providing safe reporting channels to its staff and collaborating organisations who have access to information or data, become aware of serious wrongdoing or irregularity, and decide to report these to the company's attention.

Moreover, BESIX Group actively engages with local communities and prioritises sustainable sourcing, selecting suppliers that align with its values and sustainability commitment. By transparently reporting its sustainability performance in line with international guidelines such as the Sustainable Development Goals (SDGs), ISO26000, or the Global Reporting Index (GRI), BESIX Group cultivates trust with stakeholders and establishes itself as a responsible and ethical construction company.

Conclusion

The company addresses the global risks described above at various levels, from the Board of Directors and the Executive Committee to several specific management levels in the company.

Besides these global risks, BESIX systematically manages specific risks in projects throughout their life cycle, as outlined in the online Sustainability and ESG Appendix.

In 2023, the group conducted a 'Double Materiality Assessment' to address ESG risks and opportunities. This process has allowed for the identification of potential risks and opportunities that will shape the group's sustainability and ESG strategic roadmap. For more information on the assessment, please refer to p. 18.

Focusing on Stakeholder Expectations with a Double Materiality Assessment

Committed to understanding its environmental, social, and governance (ESG) influence across its operations, BESIX fosters an open and ongoing dialogue with a diverse range of stakeholders. Employees, clients, business partners, suppliers, NGOs, communities and regulators all have a voice - and their concerns are documented and addressed in the group's sustainability strategy.

Regular meetings, surveys, and conferences cultivate transparency and collaboration. BESIX actively participates in industry associations to share best practices and stay informed on evolving ESG expectations. Key takeaways are then incorporated into the group's ESG framework.

By tailoring engagement to each stakeholder group, BESIX ensures a two-way communication channel, ultimately driving continuous improvement in ESG performance. The measurable outcomes of these initiatives will be demonstrably linked to BESIX's sustainability goals in future reports, in line with the EU's Corporate Sustainability Reporting Directive.

Double Materiality Assessment in practice

BESIX is updating the way it reports on these ESG issues. This new approach is in line with the European Corporate Sustainability Reporting Directive (CSRD).

The CSRD requires European companies to report comprehensively on their environmental, social, and governance (ESG) performance. This increased transparency enables stakeholders to assess a company's true impact on the environment and society.

Double materiality: defining what matters

To identify the most relevant ESG priorities for BESIX and its stakeholders, a 'Double Materiality Assessment' (DMA) was conducted in line with the CSRD and ESRS (European Sustainability Reporting Standards) guidelines. This assessment considers two key perspectives: how BESIX's activities affect the environment and society, including both positive and negative, potential, and actual impacts ("impact materiality"); and how ESG issues such as climate change affect BESIX's financial health, including risks such as stricter regulations, and opportunities such as developing sustainable products ("financial materiality").

The DMA covered BESIX's own operations (Real Estate, Construction, BESIX Invest) across its entire value chain (upstream and downstream, from the sourcing of materials to the construction and maintenance of buildings). In addition, internal and industry information as well as the UN Sustainable Development Goals (SDGs) and the Sustainability Accounting Standards Board (SASB) – an industry-specific ESG metrics standard – were reviewed to create a comprehensive list of potential ESG material topics.



Transparency and dialogue are cornerstones of BESIX's approach. An external expert facilitated the Double Materiality Assessment, which involved extensive stakeholder engagement. This included analysing internal documents, conducting an employee survey, and holding consultations with internal and external key stakeholders.

13 sustainability priorities

This rigorous process identified 13 material topics deemed most material to BESIX. These topics are significant because they look at both the positive and negative impacts BESIX's activities have on the environment, society, and the economy. They also consider potential risks and opportunities for BESIX related to sustainability.

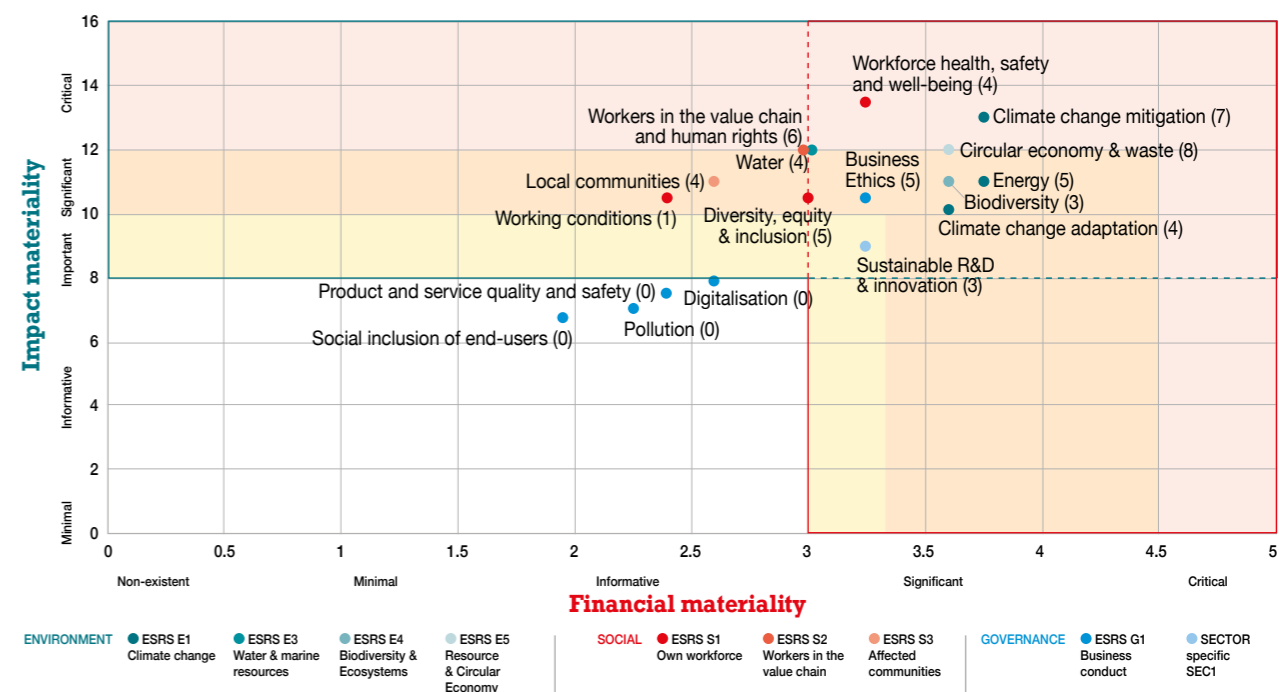
The 'double materiality matrix' below visually represents the impact and financial materiality of each topic. This matrix is crucial for prioritising efforts and developing a clear sustainability strategy.

The results of the 'double materiality matrix' were presented to and validated by BESIX's ESG Board and Executive Committee. This ensures alignment between sustainability priorities and overall business strategy and governance practices. The results were also presented to the key stakeholders who had been consulted.

The Double Materiality Assessment exercise marks a significant milestone on the path to full CSRD compliance by fiscal year 2025. This comprehensive approach to sustainability reporting underscores BESIX's commitment to continuous improvement and creating a positive impact for all its stakeholders and society.

BESIX Group's double materiality matrix

An ESG topic becomes material for BESIX Group if it is material from a financial perspective and/or an impact perspective. The boundaries for impact and financial materiality are highlighted in the matrix. Only the bottom-left quadrant contains non-material topics indicated in a grey font. The number of material IROs per ESG topic are defined between brackets next to each topic.



Value Creation Model

Macro trends

The world in which BESIX operates and the construction industry are undergoing profound changes, influencing business models.

Environmental emergency

Driven by environmental regulations and consumer demands, the construction industry is increasingly adopting green technologies and sustainable materials to balance ecological concerns with long-term efficiency.

Technological evolution

Construction 4.0 revolutionises efficiency and safety through the adoption of technologies like BIM, AI, and IoT, becoming essential for competitive edge and value realisation.

Urbanisation and smart Cities

The rise of smart cities demands innovative solutions for sustainable urban development, enhancing infrastructure and public services for growing populations.

Supply chain disruption and material innovation

Faced with global supply chain disruptions, the industry is prioritising resilience through local sourcing and the innovation of sustainable materials.

Stakeholders



Clients, partners, subcontractors, and suppliers



Institutions and regulatory bodies



Employees, future hires, academics, and students



Investors, shareholders, and financial institutions



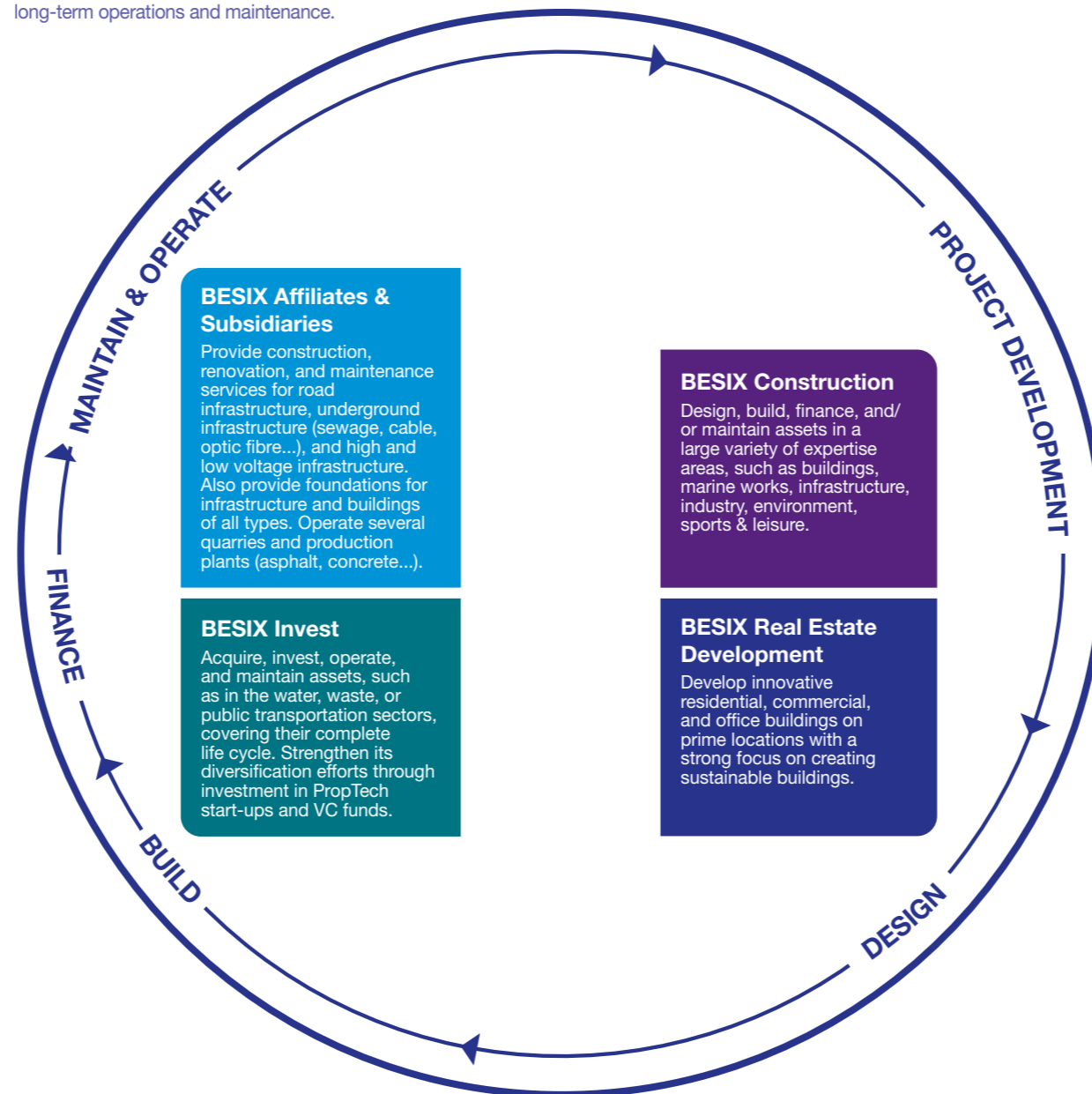
Social partners, unions, and employee representatives



Environmental and societal actors, NGOs, federations, and think tanks

A dedicated partner, from construction to concessions

Always highly regarded as a valued construction partner, BESIX Group has become a full-fledged services company that operates on the whole value chain. While construction is still its core business, the group's Concessions & Assets, Real Estate Development, and Specialised activities have been growing steadily. BESIX Group can rely on a vast and diversified expertise to take on projects from financing to design and construction to long-term operations and maintenance.



Resources

Human and intellectual capital

- 10,382 employees
- BESIX Academy devoted to internal training
- 100 % of staff members have access to training

Industrial capital

- More than 1,000 project sites in 26+ countries
- Several industrial sites (steel and rebar workshops, quarries, asphalt and ready-mix concrete plants, bitumen production plants)
- €300 million worth of equipment and machinery to cater to complex marine and infrastructure works

Real estate capital

- Portfolio of €4.3 billion in market value
- Totalling 950,000 m² under development

Procurement capital

- €2+ billion procured annually at Group level
- 22,000 active vendors across the globe
- 80+ frame agreements with vendors
- Procurement Sustainability Ambition built around 3 pillars: Planet, People, Prosperity

Financial capital

- Stable shareholding structure based on a historical reference shareholder base

Social & environmental capital

- Leading the way in certification and labels
- Level 5 on the CO₂ ladder for BESIX Europe and 11 affiliates or subsidiaries
- EcoVadis Silver Medal
- ISO 9001:2015, ISO 14001:2015, ISO 19650-2: 2018 and ISO 45001: 2018
- IOSH Managing Safety and Working Safely Licence
- International Framework Agreement on Fair Labour Standards

Value creation

Human and intellectual value

- More than 1,300 recruitments in 2023
- Top Employer in Belgium for 5th year in a row in 2024

Read more on pp. 40 - 55.

Environmentally responsible projects

- BESIX's sustainability experts accompany the design, procurement, and execution of assets to achieve certification levels such as BREEAM, LEED, Passive Buildings, etc.
- BESIX has delivered one of the largest hybrid-timber office buildings in the world in The Netherlands
- BESIX is progressively electrifying its corporate and equipment fleet in Europe

Read more on pp. 34 - 39.

Financial contribution

- €3,391 million of revenues
- €18 million of net result
- €5,091 million in order book

Read more on pp. 144 - 150.

Innovation

- 7 ongoing partnerships with start-ups in current PropTech portfolio
- Will secure participation in a European PropTech VC fund by the summer of 2023
- Several academic partnerships with leading universities

Read more on pp. 28 - 31.

BESIX Foundation

- 390 solidarity projects funded since the creation of the foundation in 2009
- 20,000+ volunteers involved since the creation of the foundation
- Projects mainly funded in Belgium and Africa
- Projects funded around construction, education, and environment

Read more on pp. 52 - 55.

Value Engineering

Leading expertise for a client-focused strategy

BESIX Engineering is the dedicated design arm of BESIX, enabling the company to deliver bespoke solutions and project optimisations directly to its clients while ensuring agility within its business operations. The exceptional service quality provided by BESIX Engineering is powered by a team of more than 150 skilled engineers located in Brussels, Dubai, and Brisbane, each an expert in their domain. Young engineers joining the company often start in this hub of expertise, where a structural mentorship programme ensures they are well-prepared and inspired before transitioning to on-site roles in Design & Build projects. Through the years, the innovative efforts of the BESIX Engineering team have enabled BESIX to design and build premier port terminals, state-of-the-art civil infrastructures, and intricate skyscrapers.

Distinct competitive advantage

Having a design office embedded within a construction firm is a unique benefit in the industry, significantly enhancing the value BESIX offers its clients. “The Engineering division within our group is pivotal to both our and our clients’ successes,” says Fabian Boucher, Director of BESIX Engineering. “Early collaboration with clients is immensely beneficial; the sooner we engage in the design process, the greater our ability to optimise and add value. This is why we prioritise Early Contractor Involvement (ECI) projects, which facilitate early collaboration. This approach ensures seamless integration and collaboration between the client and our project design and construction units, yielding benefits in cost efficiency, risk mitigation, construction methodology selection, and planning.”

“Lately, our design office has become instrumental in reducing the carbon footprint of our ventures, offering even greater optimisation possibilities”, adds Fabian Boucher. “The continuous exchange of insights between our Design and Construction departments over time empowers us to meet and exceed the diverse, sophisticated demands of our clients, enabling us to craft distinctive structures and, occasionally, push the frontiers of what’s possible in construction engineering.”

BESIX Engineering on Oosterweel Link (Belgium)

The Oosterweel Link project, developed by Lantis for the Flemish government, is one of the largest infrastructure and urban planning projects ever undertaken in Belgium. It aims at completing the Antwerp ring road to improve traffic flow and reduce congestion in the region. BESIX is involved in several parts of this special project.

An immersed tunnel

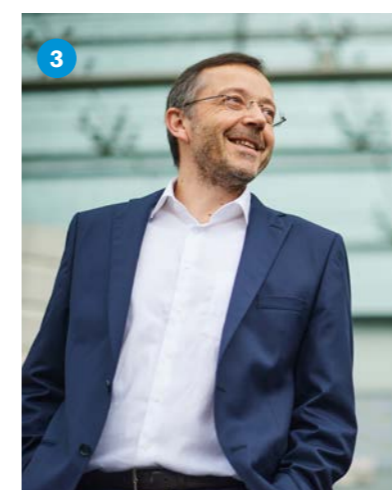
One of the endeavours of BESIX Engineering was to design the future Scheldt Tunnel. The tunnel has a total length of 1,800 metres and is currently being built using the ‘immersed tube’ method. This involves building eight tunnel elements of about 60,000 tonnes each in the Zeebrugge inner port. Once built, the eight elements will be towed afloat to Antwerp via the North Sea and the Western Scheldt. There, they will be sunk one after the other in a previously dredged sinker trench in the Scheldt. This technique, in which gravity and the buoyant force of water constantly compete, is one of the most ingenious construction methods in concrete and marine engineering.

The immersed tunnel is the crown jewel from an engineering point of view. Transporting and sinking the tunnel elements via the Scheldt is a feat. It’s also a special project where BESIX has a pioneering role in geotechnics and BIM in the design of the tunnel elements, the construction dock, the Scheldt dykes, the sinker trench, and so on.

A stacked tunnel - and much more

BESIX Engineering is also involved on the Right Bank of the river, with comprehensive works to upgrade the Royers lock area. This part of the project involves the design and construction of a new bridge, new viaduct, and new underground stacked tunnel infrastructure. Unique in this project is the combination of different construction techniques coming together. Just about every possible technique is used: freezing grounds, making diaphragm walls, building according to the Stross method,... And all this, in a fairly urbanised area, with limited space and the presence of obstacles such as the pre-metro tubes!

“In large and complex projects, we always position ourselves as the ideal partner, combining engineering knowledge with practical experience and thus giving the customer complete



peace of mind”, explains Fabian Boucher. “This really stands out in something like the Oosterweel Link, where the client really values the expertise we bring to the table. Of course, unexpected challenges may arise, but our deep understanding of both construction engineering and field operations enables us to respond swiftly. Such adaptability is invaluable, particularly in projects characterised by their significant complexity and magnitude like this one.”

“In the Oosterweel project, our BESIX Engineering team has remarkably led the entire design process across multiple design offices. We have been able to seamlessly transition from conceptual design directly to detailed design, bypassing the basic design phase entirely. This efficient approach, facilitated by our extensive experience, significantly accelerated the project timeline”, he concludes.

Instrumental in reducing construction’s carbon footprint

At the heart of BESIX’s design office, the Sustainability team focuses on developing innovative solutions to enhance the environmental efficiency of construction projects, notably in

the Benelux and the Middle East, where BESIX has pioneered circular construction and energy-neutral infrastructure. “Our sustainability experts play a key role in achieving solid environmental certifications for the assets they design, by considering CO₂ emissions as a crucial design factor, aiming to minimise the carbon footprint of the asset from inception to completion. This includes adopting materials with low embodied carbon, boosting energy efficiency, and incorporating renewable energy, with an eye on logistics to diminish overall carbon emissions”, explains Fabian Boucher.

Additionally, BESIX Engineering is actively participating in R&D efforts, in collaboration with academic entities and suppliers, to mitigate the environmental impact of concrete through the development of ‘green concrete’. This innovative material, incorporating recycled content and alternative binders like fly ash, is part of BESIX’s strategy to explore and apply low-impact concrete solutions, ensuring both environmental benefits and material durability.

For an in-depth review of how BESIX supports its clients in the decarbonisation journey, refer to the article on the next pages.

1. 2. Scheldt Tunnel dry dock, Zeebrugge (Belgium)
3. Fabian Boucher, Director Engineering BESIX Group
4. Oosterweel Link, Antwerp (Belgium)

Engineering Sustainable Value across the Value Chain

How BESIX supports its clients in the decarbonisation journey

The construction industry has long been known for its significant impact on the environment, but in recent years it has also been recognised for its potential to help mitigate that impact. This brings both challenges and opportunities for the sector to embrace more sustainable practices. BESIX Group recognises the importance of being a driving force in the transition towards sustainability, in accordance with the UN Sustainable Development Goals, the European Green Deal, and EU taxonomy.

Through close collaboration with clients, designers, and suppliers, the group rethinks how construction projects are executed to support clients in meeting new regulations on sustainability and green construction. The goal is to help clients and the industry as a whole to achieve their sustainability objectives, including net-zero emissions and circularity.

Additionally, the group is dedicated to guiding clients who need advice and assistance in making their projects more sustainable both in the short and the long term, **across the entire value chain:**

1. Design | Early Contractor Involvement (ECI)

By integrating BESIX's expertise and insights during the project's design phase, an ECI approach between BESIX and its client facilitates a collaborative approach to identifying innovative construction methods, sustainable materials, and efficiency improvements. This early partnership with the client allows for the optimisation of design solutions, minimisation of environmental impact, and efficient resource utilisation, all of which contribute to reducing waste and energy consumption. Furthermore, ECI supports the anticipation and mitigation of potential sustainability challenges, enabling more accurate budgeting and scheduling. Ultimately, this collaborative early-stage involvement leads to the delivery of more sustainable projects, offering better long-term value for both the client and the wider community.



2. Design | Life Cycle Analysis

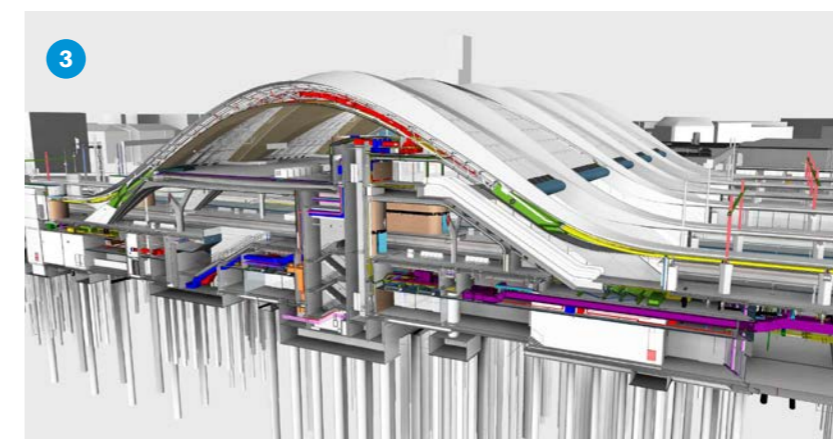
BESIX's sustainability experts are equipped to participate to relevant Life Cycle Analysis (LCA) for the client. This includes evaluating the environmental impact of materials and products throughout the life cycle of the client's assets they design and build. Also, the level of carbon dioxide emissions is systematically considered as a critical factor in the design process. Armed with this expertise, BESIX's sustainability engineers contribute to the design of projects that can achieve high environmental certifications and labels for their clients, such as BREEAM, LEED, HQE, Passive Buildings, Eco-construction, Cradle-to-Cradle, and Zero-Energy projects.



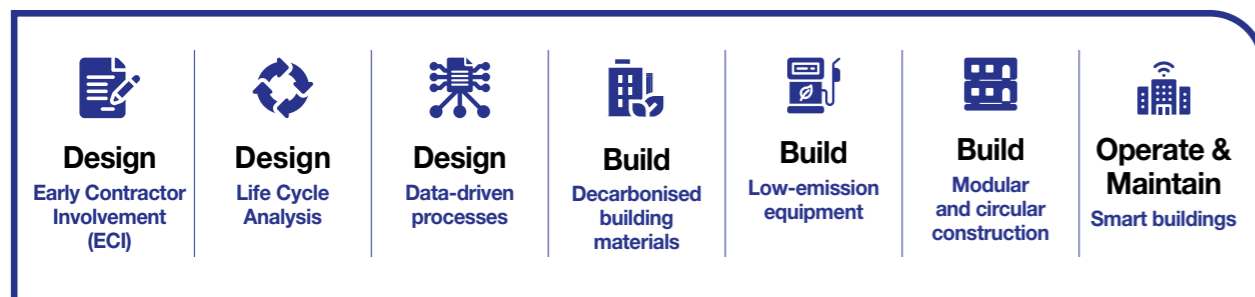
3. Design | Data-driven processes

Data-driven decision-making significantly enhances a project's sustainability and value for money. By harnessing technologies like BIM, parametric design, automation, and robotics, BESIX experts can analyse vast amounts of data in real-time to make informed choices together with the client about materials, design, and construction methods that optimise energy efficiency, reduce waste, and minimise environmental impact. Additionally, these data-driven processes are foundational for efficiently exploring various sustainability scenarios - comparing the impacts of using concrete versus steel, concrete versus wood, or alternative compositions of these materials. This analytical capability forms the basis for the ESG KPIs in the construction sector, allowing for a nuanced assessment of sustainability outcomes and the alignment of project execution with broader environmental goals.

For example, BIM, as both a centralised and shared information management tool, enables the virtual and collaborative construction of a project in a 3D environment before physical work begins, identifying potential issues early and allowing for adjustments that save time, reduce costs, and enhance sustainability. Parametric design uses algorithmic thinking to generate more efficient designs that adapt to environmental conditions, improving building performance and reducing resource consumption. Together, these data-driven approaches ensure that projects are not only more sustainable but also more cost-effective, by streamlining processes, reducing errors, and enabling more precise planning and execution - again a win-win for both the client and BESIX.



1. Renewal and widening of the A27 highway (The Netherlands), a collaborative contract with the Dutch Road Authority
2. Data centre (Belgium), for which an LCA baseline calculation has been performed and various reduction strategies have been proposed
3. Ultra-precise BIM model for the Rail Baltica Central Station (Latvia)



4. Build | Decarbonised building materials

Together with the Procurement experts, the BESIX Engineering team systematically proposes a thoughtful selection of low-impact materials to support the dual goals of sustainability and economic efficiency, making it a smart choice for forward-thinking construction projects.

Materials like timber, when sourced responsibly, serve as a renewable resource that stores carbon dioxide, thus reducing the overall carbon footprint of a project. Concrete, with additives like fly ash or slag, can significantly reduce the embodied carbon associated with traditional concrete mixes, while still providing the durability and strength required. Similarly, steel, especially when recycled, offers a high strength-to-weight ratio, facilitating more efficient designs and reducing the quantity of material needed. Utilising these materials not only minimises environmental impact through reduced emissions and resource consumption but also can lead to cost savings through more efficient use of resources and longer life-cycle performance.

Collaboration between BESIX, its Engineering department, suppliers, and clients is paramount in the journey to shift to decarbonised materials, as you can read in the text box below.

Sustainable procurement

In 2023, the BESIX Group Procurement Department launched the first BESIX Suppliers' Sustainability Forum, engaging around 40 key suppliers associated with significant Scope 3 greenhouse gas emissions, specifically in cement, concrete, and steel. This forum served as a platform to share BESIX's commitments to ESG and sustainability, alongside the group's procurement vision and goals.

"The Suppliers' Sustainability Forum marked the beginning of our renewed efforts to reevaluate and seek competitive, alternative solutions for high CO₂ emission materials. At Procurement, our goal is to convert regulatory constraints into business opportunities through close collaboration with our key suppliers. We are committed to addressing climate change by developing sustainable practices and co-creating solutions that are sustainable at mutually acceptable prices. Sustainability will increasingly become a key factor in our selection process, alongside traditional criteria such as quality, cost, delivery, and service." Sylvain Sainton, Chief Procurement Officer BESIX Group.

5. Build | Low-emission equipment

For a couple of years, BESIX has been integrating equipment such as electric vehicles for transportation and logistics,

which significantly reduces greenhouse gas emissions associated with fossil fuels, enhancing the project's environmental profile. Additionally, deploying renewable energy sources, like solar panels, for on-site power generation not only diminishes reliance on non-renewable energy but can also lead to substantial cost savings over time. These sustainable technologies contribute to a cleaner construction site, minimise the carbon footprint of the building process, and align with BESIX's and the client's global sustainability targets.

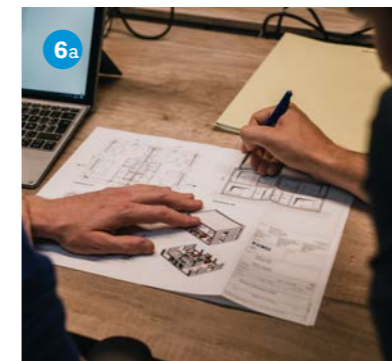
6. Build | Modular and circular construction

In its start-ups' portfolio, BESIX is supporting PropTech companies active both in modular and circular construction. Modular construction involves prefabricating components in a controlled factory setting before assembling them on-site. This method not only reduces waste and material use through precise manufacturing but also shortens construction timelines, leading to considerable cost savings and a reduction in the project's environmental impact. Circular construction, on the other hand, emphasises the reuse and recycling of materials and components throughout the life cycle of a building. By designing for disassembly and future reuse, circular construction minimises waste, extends the life of materials, and reduces the demand for new resources. Thanks to this expertise, BESIX can promote to its clients alternatives with a more efficient use of materials and energy, contributing to a lower carbon footprint and enhanced project value through reduced operational and life-cycle costs.

7. Operate & Maintain | Smart buildings

BESIX regularly integrates smart technologies into its clients' asset design and operation as this forward-thinking approach maximises both economic and environmental performance. Thanks to its expertise in smart buildings and smart services, BESIX harnesses the power of advanced technology and IoT to optimise an asset's performance, significantly improving sustainability and value for money. These intelligent systems can monitor and control a wide range of environmental variables - from lighting and heating to air quality and energy use - ensuring operations are as efficient as possible. By analysing data collected in real-time, smart buildings can adapt to the needs of occupants and the external environment, leading to substantial energy savings, reduced operational costs, and a lower carbon footprint.

Jabba is a good example of a groundbreaking smart energy management system that makes buildings smarter: Jabba leverages artificial intelligence to optimise household energy use in response to the fluctuating dynamics of electricity demand and renewable energy supplies. Partnering with aug-e, one of the start-ups in BESIX's PropTech portfolio, to enhance the functionality of home batteries, Jabba has transformed its platform to offer a community-based interface that consolidates customer interactions and provides advanced services like peak shaving and smart control. This innovative platform enables users to manage energy costs effectively through intelligent buying and selling of power, supporting the broader transition to sustainable energy use.



4. 41,000 tonnes of green steel will be used in the Port of Neom (Saudi Arabia)
5. Electric truck equipped with self-loading crane and hook-lift, used for road infrastructure projects (The Netherlands)
- 6a. Modular homes built by CIRCL in less than 6 weeks (Belgium)
- 6b. BuildUp prefabricates components off-site before assembling them on-site for retrofitting (France)
7. Smart energy management systems are used to optimise energy use in response to fluctuating dynamics of electricity demand and renewable energy supplies
8. Jan Van Steirteghem, COO BESIX Construction

“Our team of in-house experts collaborates with clients to identify areas where sustainability can be improved and offer innovative solutions that are both practical and effective. By incorporating green building practices into construction projects, our clients can benefit from increased asset value, improved risk management and control, and lower operating costs. We encourage our clients to join us in our commitment to sustainability and to collaborate with our team of experts to implement concrete solutions at the earliest stage of a project's design concept. The most value is created at the very beginning of a project life cycle.”

Jan Van Steirteghem, COO BESIX Construction

BESIX Technology's strategic blueprint for sustainable growth

BESIX Technology represents a pivotal arm of BESIX Group, dedicated to expanding the company's revenue streams through strategic diversification. In 2023, under the leadership of Thomas Vandenberg, BESIX Technology has strengthened its journey to secure stable, recurring, and sustainable income sources. This vision is brought to life through a focused engagement with PropTech start-ups, marking a significant stride towards innovating and diversifying income.

The essence of BESIX Technology's approach lies in its investment strategy, both direct and indirect, in burgeoning technology companies within the property sector. By investing in two specialised Venture Capital funds, Rise PropTech (Brussels) and PropTech1 Ventures (Berlin and London), BESIX Technology entrusts these funds to scout and support start-ups with the potential for high growth. This initiative transcends traditional property bounds, extending into sports facilities, infrastructure, and industrial plants, and intersecting with FinTech, ConTech, and Smart Real Estate, among others.

BESIX's investment philosophy differs from that of traditional financial investors. Unlike the latter, who seek rapid returns through short-term exits, BESIX Technology is geared towards long-term value creation, aiming to earn from dividends rather than quick share sales. This long-term perspective underpins BESIX's direct investments in start-ups, emphasising strategic, enduring partnerships over immediate financial gains.

In recent years, BESIX Technology has directly invested in seven start-ups, including BuildUp, aug-e, Neanex, CIRCL, Conneqtr, Square Sense, and Litobox. These investments showcase BESIX's commitment to innovation across various sectors, from off-site construction and energy management to digital contracting and asset information management.

Supporting these start-ups goes beyond providing funding and projects. BESIX Technology plays an active role in shaping these companies' strategic direction, offering guidance through board membership, sharing commercial contacts, and providing support services in legal, insurance, ICT, or HR. Furthermore, the transfer of talent from BESIX to these start-ups facilitates smoother integration and collaboration within the group's ecosystem.

This commitment to nurturing PropTech start-ups underscores BESIX Technology's dedication to a diversified future, where innovation and strategic investment converge to create sustainable, diversified revenue streams.



BuildUp Offsite construction



BuildUp is a sustainable construction company that is changing the way buildings are built and retrofitted. With their offsite construction process, they build high-quality, energy-efficient buildings faster and more sustainably than traditional methods.

BuildUp's offsite methods also allow them to produce and install new, energy-efficient components to retrofit existing houses, turning older buildings into more sustainable ones quickly and efficiently.

BuildUp has transformed 160 energy-dwelling buildings into zero-energy housing, providing them with offsite-produced façade panels and roofs in Wattrelos (France).

buildupoffsite.com



Neanex Information management



Neanex is a data management company that helps large asset owners, engineers, and construction companies to be in control of information about their critical assets at all times.

They do this by providing expertise in asset information management and by bringing the worlds of systems engineering, BIM, design, construction, and asset management closer together.

With Neanex, asset owners have a central source of information which different users and software applications can tap into, to have a single source of truth over the asset life cycle.

Their asset twin platform 'fundamend' has been recognised and qualified as a key innovator by the Innovation radar of the European Union. Their solution is used to support information management and control on the Oosterweel Link, one of the largest infrastructure projects in Belgium.

neanex.com



aug·e Energy management



aug·e is a smart energy management software company that helps businesses and individuals save energy, reduce costs, and improve sustainability.

They do this by providing a software platform that collects and predicts energy production, consumption, and prices. Then, they use these data to steer energetical assets like electrical vehicle charging stations and batteries and hereby reduce energy costs.

aug·e's platform can be used to manage buildings, renewable energy systems, and electric vehicles.

As of the end of 2023, aug·e already operates 1,000 batteries and EV charging points in Belgium, totalling more than 1 MW. The new platform delivered in 2023 is fully scalable and ready for the coming growth.

aug-e.io



Square Sense Asset management



Square Sense is an AI-native asset management software provider focused on transforming the office and residential real-estate ecosystem.

Utilising real-time data, such as occupancy, energy usage, and tenant comfort, the company generates insights for asset managers, operators, and developers, contributing to more effective decision-making for real-estate stakeholders.

Through its scalable data platform and data asset management team, Square Sense aims to lower energy consumption costs, boost financial and environmental performance in real-estate portfolios, and increase tenant satisfaction.

The company offers measurable value, helping define smart building strategies, obtaining certification, and providing easy-to-use business recommendations.

square-sense.com

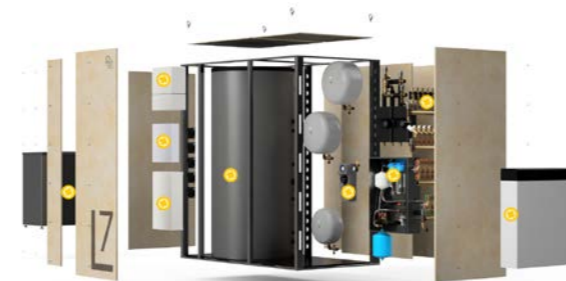
LITO Compact HVAC & energy as a service



LITO is a company that develops and builds innovative modular HVAC systems for homes and other buildings. Their compact products encompass all necessary HVAC components, such as heat pump, buffer tank, and battery pack, to improve efficiency whilst saving valuable space. All this in... just one box.

In the centre of Antwerp (Belgium), eighteen apartments were converted into zero-energy homes in less than one day, via the placement of 4 LITO boxes on the roof, hosting heat pumps, solar panels, and all required connections.

lito.be



Conneqtr On-site information management



Conneqtr has developed a digital platform for all stakeholders active in the construction process, from contractors to suppliers to subcontractors, to better communicate and collaborate.

Conneqtr aims for standardised and paperless processes to reduce the administrative burden of site managers and enable advanced business insights.

Its solution Zen ensures social compliancy, safety, and access control, while Smooth digitalises the entire delivery process from order to invoice. In less than 2 years, Conneqtr has given 'peace of mind' to more than 2,500 users, has set up partnerships around access control and ERP, has been endorsed by diverse sector federations, and has gained the trust of leading construction companies like BESIX.

conneqtr.com



CIRCL Circular Design & Build

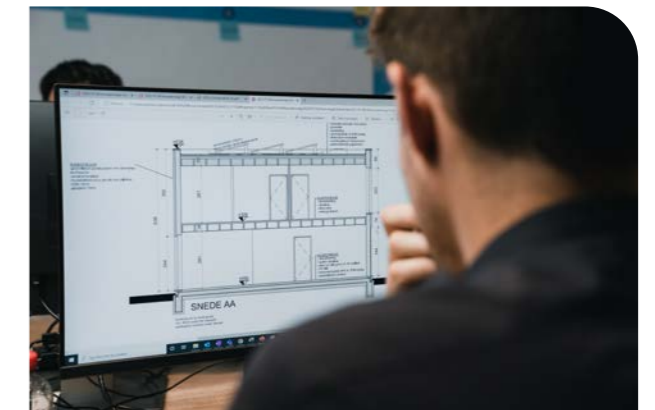


CIRCL designs and builds circular homes. It has developed a sustainable building concept that defines a new balance between standardisation and flexibility. All parts of the CIRCL home are optimised for efficient production by its partners. Yet, they can be flexibly adapted to create fully tailor-made homes, for new houses on an empty plot as well as demolition-reconstruction projects.

CIRCL's software automates design and pricing, providing very quickly an optimised design with a guaranteed maximum price for the clients. CIRCL homes can be modified over time to meet the changing needs of their residents in all stages of life.

In 2023, CIRCL has built 2 model houses in Diest (Belgium).

circl.be



03

Sustainability & ESG

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Commitment to Sustainability & ESG

Global frameworks and focused action

BESIX prioritises Environmental, Social, and Governance (ESG) principles. Established international frameworks, like the UN Global Compact’s Ten Principles, guide its responsible business conduct in human rights, labour, environment, and anti-corruption.

As a result of the comprehensive double materiality assessment BESIX carried out in 2023, 13 sustainability material topics have been identified as most relevant to BESIX’s business and stakeholders. These 13 material topics are linked to the UN SDGs, creating a clear roadmap for impactful action. BESIX adopted the SDGs in 2017, demonstrating its commitment to the UN Agenda 2030. The group decided to focus on the 10 SDGs on which it can have the most impact. Based on the double materiality assessment and various employee workshops on the SDGs conducted in 2023, the group expanded its focus on the Sustainable Development Goals (SDGs) by integrating SDG 3: Good Health and Well-being. Furthermore, SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action) have been prioritised based on their alignment with the group’s core activities and their potential to deliver added value. More information can be found in the online Sustainability & ESG Appendix (Objectives).

Consequently, BESIX has committed to several ambitious sustainability initiatives. The group is actively supporting the transition to a low-carbon society and encouraging a circular economy, for example by developing and promoting energy-efficient solutions. The well-being of its employees remains a priority, as evidenced by its focus on promoting a safe and healthy working environment. To attract and retain top talent, it strives to be an employer of choice. Beyond internal operations, the group promotes partnerships with NGOs to support local social and economic development. A robust Code of Conduct supports all its activities, guaranteeing ethical and sustainable practices.

A comprehensive reference to the group’s performance related to the Sustainable Development Goals (SDGs) can be found in the Objectives table in the online Sustainability & ESG Appendix.

Key material topics resulting from the double materiality assessment	SDGs on which BESIX can have the most impact
ENVIRONMENT	
Climate mitigation & adaptation	11, 13
Water	6
Energy	13
Biodiversity	6, 11
Circular economy & waste	11, 12
Sustainable R&D & innovation	9, 11, 12, 13
SOCIAL	
Workforce health, safety, and well-being	3, 4, 8
Workers in the value chain and human rights	3, 4, 8, 16
Local communities	4, 6, 8, 17
Working conditions	4, 8, 16
Diversity, equity & inclusion	4, 5, 11
GOVERNANCE	
Business ethics	4, 16

11 core SDGs for BESIX Group:



3 Lead SDGs directly linked to the group’s activities:



Sustainability & ESG Strategy

Demonstrating its commitment to sustainability, BESIX operates with a focus on minimising negative environmental and social impacts while maximising positive ones for all stakeholders - clients, employees, and communities. The group engages with stakeholders, providing clear information on its sustainability efforts. Furthermore, it integrates sustainability principles throughout all its business processes.

True to its noble purpose of excelling in creating sustainable solutions for a better world, BESIX has integrated ESG into its processes and standards. The group actively listens to its stakeholders’ expectations and identifies areas where it can create positive opportunities at the business, environmental, and social levels.

The roadmap is linked to the Sustainable Development Goals (SDGs) and illustrates BESIX’s ESG approach. Divided into four engagements and eight commitments, it reflects the group’s dedication to ethical business practices, human rights, working conditions, and environmental preservation.

Refining the approach: Double materiality and the 2024 Sustainability & ESG Roadmap

To further refine its approach, BESIX conducted a “double materiality” analysis in 2023. This exercise identified the impact of business and finance on climate change and society compared to what can be addressed. The resulting insights will be integrated into the group’s 2024 Sustainability & ESG Roadmap - a critical step towards compliance with the upcoming Corporate Sustainability Reporting Directive (CSRD) by 2026.

Leadership, integration, and employee engagement

The Board of Directors and the Executive Committee actively support the Sustainability & ESG strategy, ensuring its integration into core business activities. Senior managers in each entity collaborate with their teams to implement the strategy in their daily tasks. Employee support is crucial, and the group strives to involve everyone in the SDGs to boost participation in the sustainable agenda.

The Sustainability & ESG Strategy remains centered on the Business Unit Contracting, given its significance, accounting for over 90 % of the group’s turnover. BESIX is increasingly responding to the growing ESG requirements of co-investors and lenders in the real-estate development sector as well as in concessions and asset management.



Achieving ESG objectives

BESIX Group meticulously sets the framework and ambitions for achieving its sustainability objectives. Each company within the group is then invited to subscribe to specific sustainability and ESG objectives that align with their specific operations. The group fosters a bottom-up approach across its entities, empowering them to determine specific objectives for each discipline covered by the selected SDGs. This collaborative effort ensures comprehensive sustainability actions throughout the organisation. To ensure transparency and accountability, the group publishes a Progress Report every year, both in the UN Global Compact and in its annual Activity & ESG Report. This report provides an introspective look at the group's sustainability performance.

BESIX adheres to the highest and most relevant standards to ensure the sustainability of its operations. These standards include ISO 26000, the Code Buysse III concerning CSR for Belgian non-listed companies, and the Global Reporting Initiative (GRI) Standards.

Looking into the future, the group is actively preparing for compliance with the upcoming EU Corporate Sustainability Reporting Directive (CSRD) in 2026. This preparation includes adopting the ESRS reporting framework for the 2025 fiscal year.

Tackling the climate change is a top priority

BESIX engages its value chain in the promotion of environmental responsibility through awareness, action, investment, and collaboration. As a demonstration of its commitment, its European business unit and dedicated entities have achieved the highest level (Level 5) on the CO₂ performance ladder and have set ambitious targets: carbon neutrality for both direct (Scope 1) and indirect (Scope 2) emissions by 2050, with an interim reduction target of 40 % based on turnover by 2030 (with 2019 as baseline). An Energy & GHG policy and continuous improvement programmes guide these efforts. The group's expertise in energy-efficiency building systems, sustainable procurement, and engineering solutions is crucial for translating these ambitions into concrete achievements.

“**Combating climate change and prioritising human rights, fair labour, and inclusion are top priorities alongside ongoing activities and sustainability efforts.**”

Respecting human rights and fair labour

BESIX follows the principles outlined in the United Nations Declaration of Human Rights, International Labour Organisation agreements, and guidelines from the OECD. Protecting human rights, worker health, and safety are top priorities for BESIX. The group shows its strong commitment to these principles by actively following the International Framework Agreement on fair labour standards with the Building & Wood Workers' International (BWI) and supporting the International Labour Organisation's Declaration on Healthy and Safe Workplaces. The group fosters a positive and inclusive work environment, reinforced by its diversity & inclusion policy 2023, which ensures that these values are considered in all group decisions and implemented consistently across all businesses and locations.



BESIX Group's Sustainability & ESG Roadmap

World challenges

Climate change | Ageing society | Energy-efficiency building | Scarcity of affordable energy
Water scarcity | Lack of experts | Worker welfare

BESIX's selected sustainable development goals



BESIX Group's purpose

“Excel in creating sustainable solutions for a better world.”

BESIX Group's strategic framework

Central focus on people and united work approach with clear governance and lean organisation	Emphasis on general contracting at heart and expertise-focused approach	Further investments in current areas of diversification such as real estate, concessions, operations & maintenance	Pursuit of new diversification opportunities aligned with core competencies, prioritising innovation and sustainability
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Sustainable engagements > Key sustainable commitments

Business Engagement		Environmental Engagement		People Engagement		Societal Engagement	
Carrying out respectful & sustainable operations	Endorsing Codes of Conduct	Contributing to the transition towards a low-carbon society & encouraging circular economy	Encouraging sustainable solutions	Increasing people's safety & comfort	Growing as a preferred employer	Promoting local social & economic development	Being inclusive with authorities and NGOs

Environmental Management

Climate change and environmental degradation pose existential threats worldwide. In response to these challenges, BESIX remains committed to minimising its impact and, where possible, positively impacting the environment.

To uphold this commitment, the group policy mandates conducting activities in alignment with a third-party ISO14001-certified management system. In late 2023, Franki Foundations Belgium earned an ISO14001 certification, aligning with the commitment of other companies within the BESIX Construction Business Unit. Also in 2023, BESIX Watpac successfully renewed its ISO14001 certification.

In 2024 and 2025, following the findings of the Double Materiality Assessment conducted in 2023, BESIX will create specific environmental guidelines to enhance and reinforce the group's environmental dedication. These guidelines will establish the minimal requirements and provide direction to operational teams in carrying out their activities.

Additional details regarding BESIX's management of environmental aspects and impacts (such as air, water, soil, biodiversity, waste, etc.) and the actions undertaken in 2023 are available in the online Sustainability & ESG Appendix.



Actively contributing to the transition towards a low-carbon society

In 2023, BESIX successfully retained the highest level possible on the CO₂ Performance Ladder (level 5) it had been awarded the year before for its European Business Unit. At the same time, 12 BESIX companies were included in the certified CO₂ Performance Ladder Organisational Boundary¹.

Three ambitions

BESIX's Business Unit Europe and the other companies belonging to the CO₂ Performance Ladder Organisational Boundary commit to the following ambitions:

1. Become neutral for their own direct (Scope 1) and indirect (Scope 2) carbon emissions by no later than 2050. An intermediate reduction target of 40 % has been defined for Scope 1 & 2 emissions (related to turnover) by 2030 for the Organisational Boundary using the baseline year 2019. This ambition has been cascaded to every company of the Organisational Boundary by setting specific reduction targets per company.
2. Promote and be a leader in providing sustainable solutions to their partners and clients and, in doing so, help them achieve their own climate goals and targets.
3. Promote and incentivise the supply chain participants, particularly the building material producers with the greatest potential in this area, to reduce their carbon emissions (Scope 3 emissions) to become neutral by no later than 2050.

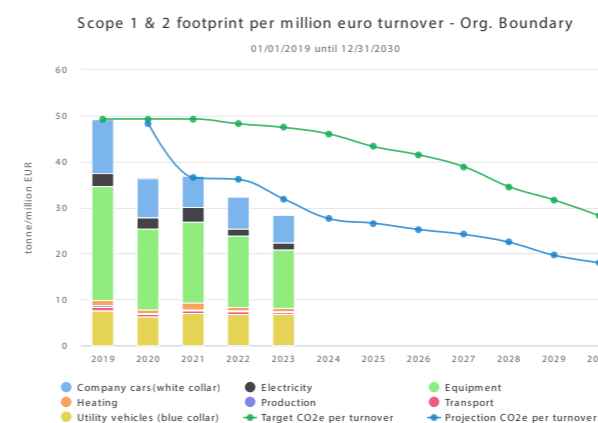
To achieve their goals, the companies belonging to the Organisational Boundary have defined an Energy & GHG Policy and implemented an Energy & GHG reduction programme.



CO₂ PERFORMANCE LADDER

Scope 1 & 2 – Focus on 3 axes

For the Organisational Boundary an overall Scope 1 and 2 intensity reduction target (per million euro turnover) of 40 % by the end of 2030 related to the baseline year 2019 has been set.



The Scope 1 and 2 reduction programme focuses on 3 axes:

1. Company fleet

The company aims to eliminate emissions from its fleet (including company-leased cars and utility vehicles) by 2032, with interim goals for the number of zero-emission vehicles by 2025 and 2028. To achieve these targets, BESIX reviewed its company leased car policy in 2021. Since mid-2023, all new company-leased cars have been fully electric. Additionally, a Sustainable Business Travel Policy was developed and came into effect in 2023. Last year, BESIX also acquired its first fully electric utility vehicle to assess feasibility under real-life on-site conditions.

2. Electricity

By the end of 2025, all electricity powering BESIX's offices, fixed production facilities, and projects where the group directly influences the energy contract will come from 100 % renewable sources. Framework agreements have been adjusted accordingly. Efforts to decrease energy consumption are also underway. BESIX Nederland's smart building office in Dordrecht has been certified as Paris-proof this year, and Socoetra, a BESIX subsidiary, has moved into their new BREEAM Excellent certified office building in Marche-en-Famenne, Belgium. In mid-2024, BESIX Infra and BESIX Unitec will relocate to their current office, which is undergoing renovations to become a low-energy building. Third-party energy audits were conducted at BESIX's Head Office in Brussels and at the recycling and ready-mix concrete batching plant of BESIX Infra in Bilzen, Belgium.

3. Plants and equipment

To cut down on emissions from construction sites and heavy equipment in the Netherlands, a basic sustainable construction site standard has been established and implemented. Additionally, BESIX is enhancing the eco-friendliness of its heavy-equipment fleet after acquiring its first all-electric 50-tonne telescopic crawler crane. Hydrogen-powered generators were tested in 2023 and two fully electric rotative telehandlers will be delivered in 2024.

BESIX and its joint venture partners initiated a pilot project focusing on electric equipment for the 'A16 De Groene Boog' project in Rotterdam (The Netherlands), supported financially by the Dutch Ministry of Infrastructure and Waterways. Over 20 pieces of heavy machinery were tested in this project. Additionally, over 7 million litres of hydrotreated vegetable oil, emitting 89 % less CO₂ compared to traditional fuels, were used on the same project, leading to a reduction of over 23,000 tonnes of CO₂.

Additional information regarding the progress and actions taken can be found in the online Sustainability & ESG Appendix. Biannual progress reports for the mentioned Organisational Boundary are available on the BESIX website:



Scope 3 initiatives

BESIX continues to take initiatives to reduce the environmental impact linked to the usage of ready-mix concrete, rebar, (structural) steel, and steel (sheet) piles. Design optimisation is applied whenever feasible, and the Engineering Department selects the most sustainable ready-mix concrete design for each project. Additionally, the first Supplier Sustainability Forum was held in September 2023, involving major suppliers of carbon-intensive construction materials such as steel or concrete.

BESIX is an active member of a workgroup initiated by the Belgian contractor association ADEB-VBA in September 2023, focusing on reducing emissions from ready-mix concrete and steel.

In partnership with clients, fellow construction companies, knowledge institutes, and universities, BESIX participates in innovative projects to reduce energy consumption and CO₂ emissions and promote circular practices both on its own construction sites and within the construction sector. Projects like 3D2BGreen, a two-year research project into 3D concrete printing, launched by BESIX with several partners among which Ghent University, and Smartincs, another research project on self-healing concrete, also in collaboration with Ghent University, exemplify this collaboration.

Additionally, as a member of the steering committee for the Belgian CO₂ Performance Ladder, BESIX is actively promoting sustainability in the Belgian construction industry.

¹ Organisational Boundary: BESIX BU Europe, BESIX Nederland, BESIX Environment, BESIX Infra, BESIX Infra Support, BESIX Unitec (including its subsidiaries BESIX Unitec Automation, BESIX Unitec Nederland, BESIX Connect and Appermont Gebroeders), and Franki Foundations (including its subsidiaries Franki Grondtechnieken BV and Atlas Foundations).

Social Commitment

The human factor: how a people-centred HR strategy drives business success

This is no secret: Getting and keeping top talent is what makes a company successful. So, how does a global player like BESIX Group, with its diverse cultures across continents, rise above the rest - especially when the economic environment is challenging? It's all about crafting a supportive and warm atmosphere where growth and success are within everyone's reach. BESIX Group puts a deliberate emphasis on encouraging personal development, opening doors to new opportunities, and offering a secure environment for trying new things and exchanging ideas. What's the end game? Developing a culture of empowerment that enables everyone in the group to meet the challenges of a financially, socially, and environmentally sustainable world. Meet some of BESIX's inspirational People leaders to see how they tackle this challenge.



Tell us more about the culture that is promoted at BESIX Group?

By Geert Aelbrecht, Chief People Officer and Group Sustainability & ESG Officer

"Let me share with you the heart and soul of our People departments' mission across the globe. At the core of our strategy lies a simple yet profound commitment: #WeCare. This mantra is not a slogan; it's the translation of our deep-rooted belief in the value of each individual within our group. Our aim is to cultivate a people-centred strategy that places well-being, growth, and satisfaction at the forefront of everything we do.

Being an employer of choice is paramount to us. It signifies more than just being a preferred place to work; it embodies our dedication to creating an environment that attracts and retains the best talent by offering respect, recognition, and opportunities to flourish. Our commitment to this goal is firm, as we all know that our success as a business is intrinsically linked to our employees' fulfilment.

Safety in the workplace is an area of utmost importance. We believe that every employee has the right to a safe and healthy work environment, free from harm or distress. Our pledge is to maintain and continually improve our safety standards, ensuring that our staff feels secure and protected every day they come to work.

Development opportunities for our employees also stand at the heart of our people strategy. We take pride in offering our staff members the tools, training, and support needed to achieve their professional aspirations.

In essence, our focus is clear: to develop and keep a supportive, safe, and stimulating workplace where every team member can thrive. Our employees' well-being, development, and safety are our top priorities because, at the end of the day, our people are our greatest asset. We can only be a successful company if everyone feels valued, supported, and inspired to achieve their best."

1,305
new hires in 2023

10,382
employees at 31.12.2023

44.18
years average age

112
nationalities in the Group

10.21
years average seniority



In early 2024, the Top Employer Institute awarded BESIX Group the certification as Belgian Top Employer for the fifth time in a row. Why is it important and what does it mean for your employees?

By Johan Melort, Regional People Director Europe

"We're thrilled as we celebrate our fifth consecutive year being honoured as a Belgian Top Employer by the Top Employer Institute. This recognition reflects our commitment to develop and keep an environment where our teams can thrive, grow, and feel genuinely included. It's a clear signal of the positive workplace culture we've cultivated, centred around respect, personal growth, and mutual support.

We have been audited on our HR and People practices and strategies, our dedication to maintaining high standards in talent development and workplace well-being, and also on our efforts to continuously improve. We have achieved an excellent score of 90.92 %, which is above the benchmark and the highest score we have reached so far. This significant progress is largely due to our inclusion and diversity initiatives over the past years, which are underpinned by strong company values and behaviours.

We see this certification not just as a shiny award to frame on the wall but as an encouragement to further our commitment to our employees' success. It's the result of BESIX's dedication to our values and our people, which are the cornerstone of our culture and operations across the globe.

What's more, being named a Top Employer reinforces our attractiveness as a workplace, helping us both draw in and retain the best talent. We understand that the well-being of our employees is directly linked to the success of our business, and this recognition celebrates the essence of who we are as a company.

Looking ahead, we're motivated to uphold this award and to further strengthen our employee value proposition. Our focus on inclusion, diversity, and equity will only intensify, aiming to set even higher benchmarks in these areas. As a Top Employer, we pledge to continue improving the workplace experience for all our employees, supporting their growth and development with us every step of the way."

What does BESIX offer its employees for their career and personal development?

By Axelle Vankleemput, Global Expert BESIX Academy

"We have many structural initiatives in place to develop and maintain a culture of learning, development, and care for our people. Here are three examples of programmes that we boosted in 2023 to ensure our colleagues have the resources to flourish in their careers.

The BESIX Development Academy (BDA) is our flagship training programme, designed for engineers and technical functions staff. It's a comprehensive training curriculum that covers a wide range of topics, including technical skills, soft skills, health & safety, and functional skills - and since 2023, company culture. Divided into three levels, the BDA is tailored to correspond to specific career stages, with the aim of providing employees with the skills they need to perform their job and upskill them throughout their careers.

Additionally, we're also proud to offer the BESIX Potential Academy (BPA), a programme designed to promote the young potentials within the BESIX Group. This programme, running for over ten years, brings together participants worldwide, chosen for their achievements and aspirations. They attend a one-week residential seminar, featuring business courses specifically developed in collaboration with Vlerick Business School and customised to the group's activities. Throughout the programme, participants work in teams on business cases, culminating in a presentation of their innovative ideas to a jury from BESIX Group. The 2023 edition of the programme highlighted a winning project named "LAIKA," a robotic dog designed for the autonomous digitisation of construction sites.

Furthermore, in 2023, we launched the Executive Leadership Training Programme in collaboration with the Solvay Brussels School. This online initiative is focused on enhancing leadership abilities among our senior managers. Over four years, the programme covers seven modules addressing the intricate challenges of today's and tomorrow's business world, underlining the significance of leadership in achieving organisational success.

These three programmes represent only a small fraction of our career development activities, but they reflect very well our dedication to empowering our employees, helping them meet their professional aspirations, and excel in their roles. They represent our investment in our colleagues' continuous improvement and skill development, which, in turn, contributes to our company's growth and success.

In addition to these structural programmes, we also offer a myriad of stand-alone training classes. An example of a new class introduced in 2023 is 'Managing Across Generations,' which reflects our recognition of the diverse generational dynamics within our workforce."

How would you say Diversity & Inclusion are concretely applied across BESIX Group?

By Emily Brooks, Group People Manager BESIX Watpac

"Let me illustrate our D&I mindset with some examples from our entity in Australia, BESIX Watpac. In 2023, we reinforced its commitment to creating a supportive, inclusive, and community-focused workplace environment, via various initiatives to ensure the well-being of our employees and contribute positively to society.

Because of the paramount importance of mental well-being, we reinforced the psychosocial safety framework and established the Mental Health and Well-Being Working Group. We also renewed our partnership with the Goanna Academy to support mental health awareness, particularly among Indigenous Australians, and actively participated in initiatives like the RU OK? Day ("Are you OK") and 'Movember', raising significant funds for mental health and suicide prevention.

On the diversity and inclusion front, we at BESIX Watpac pledged for a 25 % female workforce by 2025 and took steps to eliminate gender pay gaps. Initiatives such as Lean-in Workshops and the Cultivate Sponsorship Programme supported the professional growth of female employees. We also worked with the TaskABLE team to create work opportunities for people with disabilities.

Community engagement also remained a key focus in 2023, with the BESIX Watpac Community Fund supporting various initiatives related to health, education, and the environment. As the first founding partner of the Tradie Health Institute, we backed research into trade-related lung diseases. Furthermore, we also continued our reconciliation efforts, implementing a National Indigenous Participation Policy across projects, contributing to exceeding Indigenous participation targets, and significantly investing in Indigenous businesses."



The European Parliament has called for a legislative framework about the workers' right to disconnect in our digital age. Is this something you've discussed with your social partners as well?

By Gauthier Vanvyve, Industrial Relations Coordinator

"Here at BESIX Group, we have always been committed to our employees' well-being. For years, we have prioritised flexible work arrangements, fitness activities, medical support, and more. In 2023, we have addressed a topic that's become incredibly relevant in our always-on digital world: the right to disconnect. We have collaborated with our social partners to develop a clear understanding of this concept.

As a result, BESIX Group entered into a collective agreement with the European Works Council in 2023. Concretely, the 'right to disconnect' refers to our employees' freedom to disengage from work-related communications outside of their standard working hours, unless it is an emergency or a part of their job requirements, without any repercussions on our trust in them.

Work-related communications - whether they are emails, phone calls, or messages via text or WhatsApp - can sometimes be overwhelming. They can disrupt our work-life balance, particularly in a vast organisation like ours, with colleagues operating across different time zones. We recognise the significance of maintaining a healthy work-life balance and are committed to promoting this for all our team members. The right to disconnect aims to cultivate this balance, mitigating the negative impacts of work-related stress and burnout.

This being said, the right to disconnect is not an obligation. Our workplace has become increasingly flexible, largely due to practices like teleworking. As such, we permit our employees to connect at times that best suit their schedules and work styles. We are confident that our shared enthusiasm for our projects, coupled with our daily commitment, will strike the ideal balance.

To wrap up, it is important to underscore the value of time off. It is vital for maintaining a healthy work-life balance and can rejuvenate us, leaving us ready to embrace new challenges."

In 2023, BESIX introduced additional health care benefits for some of its staff. Can you elaborate?

By Laurence Debart, Global Reward Recognition Manager

"In 2023, we have taken significant strides to ensure our workforce and their families feel supported and cared for, in both their professional and personal lives. One of our latest initiatives includes the implementation of comprehensive ambulatory and dental insurance. This new benefit covers not only our employees but also their family members for ambulatory care, including optical and dental services, under favourable conditions. This is in addition to the hospitalisation insurance we already provide, which fully covers our employees and their families in the event of hospitalisation and serious illness, at no cost to them.

Furthermore, we recognise the importance of preventive care, which is why we offer a complete health check-up every two years for our employees over 45. In the unfortunate event of long-term illness, we ensure that a certain percentage of the employee's net salary is maintained, offering financial stability when it's most needed. And, as part of our commitment to preventive health measures, we offer a flu vaccine to all our employees every fall, helping to safeguard their health and well-being."



Enhancing employee health, safety, and well-being

Safe workplace

As part of its commitment, BESIX Group has established a goal of creating a safe work environment with ‘zero accidents and incidents’ for all employees, including subcontractors, regardless of their position. The group materialised its safety policies into a comprehensive safety culture strategy in 2018, consisting of four key pillars: developed leadership, commitment and participation, knowledge and awareness, accountability and responsibilities. In 2023, BESIX continued to prioritise the implementation of its Quality, Health, Safety, and Environment strategy, translating it into a Safety Pledge endorsed by senior management and deployed across all projects and sites. This demonstrates the group’s ongoing commitment to safety, both for its employees and for the wider community.

Safety Pledge

The Safety Pledge, originally endorsed in 2018 by BESIX Group’s top executives was reintroduced in 2023 across all BESIX construction sites with an updated design centred around BESIX Group’s four fundamental safety principles: BE SAFE, the Life Saving Rules, Management Safety Walks, and Subcontractor Engagement.

In 2023, BESIX Group’s senior executives and occupational health advisors came together to review the BESIX Group Safety Pledge and its fundamental safety principles, with the ambition to globally re-endorse the BESIX Group Safety Pledge in 2024. An official signature moment of the reviewed Safety Pledge took place at the group’s Annual Meeting in February 2024.

Transforming QHSE management from manual to digital & proactive with OASIS

In 2023, following a year of configuration work, OASIS, the new QHSE digital solution for BESIX Group site operations, business units, and group management, was launched globally. Fourteen modules were fully rolled out, involving numerous users and employees in managing QHSE risks in their daily activities.

OASIS includes an “action module” that fosters accountability by involving partners, subcontractors, and clients in efficient risk management, marking a significant advancement in supporting BESIX Group’s culture of excellence.

In addition to facilitating people’s engagement in risk management, the solution offers numerous automations that simplify day-to-day tasks for many users. It also meets ISO14001, 45001, and 9001 standards, proving to be a valuable tool for continuous improvement.

Moreover, OASIS features an enhancement module where users can propose improvements or request new functionalities. Dedicated OASIS support teams handle these requests. Further modules and functionalities are currently in development and are expected to be deployed in 2024.



BESIX 4 fundamental safety principles

1. BE SAFE

In 2023, the BE SAFE ambassador community expanded from 436 to 537 members. The BE SAFE principle, central to shaping BESIX’s safety culture, is supported by a programme involving volunteer workers and focused on observation, feedback, correction, improvement, reward, training, and coaching practices.

2. Life Saving Rules

The Life Saving Rules principle emphasises compliance, detection of deviations, correction, and continuous improvement in managing critical occupational health and safety risks on sites. In 2023, nearly 5,000 deviations from the BESIX Life Saving Rules were proactively detected and addressed on-site by individuals committed to improvement.

3. Management Safety Walks

Leadership and worker participation are exemplified during on-site Management Safety Walks, especially as senior executive management is involved. In 2023, a notable 3,124 Management Safety Walks were conducted across projects around the world, with BESIX senior executives participating in 477 of them.

4. Subcontractor Engagement

While BESIX can subcontract activities, it strives to collaborate closely with partners and subcontractors to enhance health and safety capabilities together, believing that cooperation leads to high performance. In 2023, a subcontractor engagement module was integrated into OASIS to improve mutual QHSE performance.



1



2

- 1. Safety Pledge signature ceremony
- 2. OASIS safety digital solution

Global Safety Time Out 2023

A tradition at BESIX since 2008, some 21,580 individuals took part in the 2023 Global Safety Time Out held on 28 April. This event provided an opportunity for BESIX employees, customers, partners, and subcontractors to discuss, debate, engage, and learn about occupational health and safety topics. Stress management and the BE SAFE principle were among the subjects featured in the 2023 sessions, but other topics were also addressed.

Institution of Occupational Safety & Health (IOSH) courses

Since 2019, BESIX has been a certified IOSH training provider. BESIX has customised the IOSH “Managing Safely” and “Working Safely” courses into in-house tailored programmes. These courses lay the groundwork for essential knowledge that BESIX expects all employees to have regarding managing occupational health and safety risks.

The BESIX IOSH “Managing Safely” and “Working Safely” courses cover all aspects of ISO14001, VCA, and the best health and safety practices using a blended approach: e-learning for theory supplemented by interactive workshop sessions.

In 2023, three new senior health and safety professionals joined the team of in-house IOSH trainers at BESIX. In 2024, BESIX aims to update both courses to align with recent evolutions in company management systems and references.

Injury rate

The injury rate at BESIX has varied across different business units, but overall, the total recordable illness and injury frequency rate remained stable in 2023 compared to 2022, with a value of 4.77. However, there was a worsening of the Lost Time Injury (LTI) frequency and severity rates in 2023.

Unfortunately, three fatal accidents occurred in 2023 at sites in Saudi Arabia, under the operation of a BESIX joint venture partner where BESIX had no direct operational control, in the Grand Duchy of Luxembourg, and Cameroon.

BESIX believes that strengthening its strategy and reinforcing its four fundamental safety principles, supported by OASIS, the newly designed digital solution, and backed by IOSH to enhance knowledge and skills in safely managing occupational health and safety risks, will lead to an improvement in the injury rate.

Health as a priority

BESIX Group has joined hands with Belgian trade unions and the Building and Woodworkers’ International (BWI) to advocate for the recognition of health and safety at work as a fundamental right by the International Labour Organisation (ILO). Management, along with representatives of the BESIX European Works Council and trade unions FGTB and CSC, have signed the Declaration on Healthy and Safe Workplaces. This action underscores the company’s dedication to the health and well-being of its employees and strengthens its initiatives to foster safer and healthier working environments.

Healthcare measures

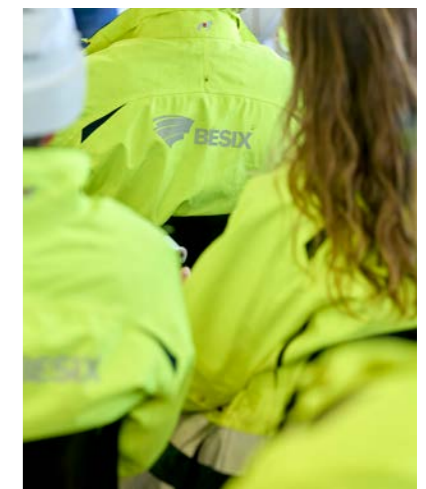
BESIX Group ensures the health and well-being of its employees by offering health insurance schemes compliant with local laws and regulations. The company conducts regular occupational health exams and provides free consultations for employees and workers. In addition to these mandatory measures, BESIX organises biennial medical check-ups for white-collar employees aged 46 and older, and annually for those aged 50 and above. The group also encourages preventive measures, including voluntary flu vaccination campaigns each year.

Ergonomics

The group prioritises the health and well-being of its employees, whether on-site or in the office. To promote good ergonomic practices, the group has developed toolkits to educate staff on these principles, regardless of their workplace location.

BESIX Group understands the significance of creating comfortable work environments, including elements such as natural light, a healthy atmosphere, and appropriate equipment. In office settings, employees are encouraged to maintain good posture while working at their screens. On-site, safety equipment tailored to specific tasks, proper postures to preserve muscle health, and breaks to avoid prolonged periods of work are all emphasised.

Additionally, the group promotes physical activity among its staff through the BESIX Fit programme, recognising that excessive sitting can have negative health effects.



Fair labour standards

BESIX Group strongly believes in everyone's right to dignity and respect. It is firmly committed to the human rights and well-being of all employees and workers employed by BESIX Group, regardless of age, disability, gender, marriage and civil partnership, pregnancy and maternity, race, religion, political opinions, or beliefs. This concerns the BESIX Group entities worldwide, as well as all its subcontractors and suppliers.

International Framework Agreement on fair labour standards (IFA)

Under the umbrella of the IFA agreement signed in 2017 between BESIX Group, its trade union representatives, and the Building and Woodworkers' International (BWI, an international federation of 351 trade unions from 127 countries, representing around 12 million workers), regular inspections of construction sites and living accommodations for blue-collar workers are regularly carried out by their representatives. In this context, BWI has free access to construction sites and migrant blue and white-collar housing, when they live in accommodations provided by the BESIX Group.

After visiting the United Arab Emirates, Qatar, Morocco, Latvia, and Ivory Coast in previous years, on July 4th, 2023, BWI representatives and Belgian trade union affiliates visited the Zayed National Museum project in Abu Dhabi (UAE). They provided a full day of training to the local workers' representatives, followed by a site and living facilities inspection. The delegation was satisfied with the welfare standards provided by BESIX to its workforce.

BESIX Group's internal policies

BESIX Group has implemented rigorous internal policies to uphold and advocate for the rights of migrant colleagues, often surpassing its legal obligations. These measures are obligatory across all branches and subsidiaries of the group. Examples of these measures include direct employment and payment by the group without intermediaries, comprehensive health insurance coverage, and hiring of migrant colleagues through reputable agencies without any associated fees or arrears. In addition, these colleagues retain their identity documents at all times, are provided with quality and comfortable accommodation that meets their religious needs, culturally appropriate menus, and the freedom to appoint representatives to communicate grievances or requests to the company. They also have access to information in a language they understand.

Achieving safety excellence

Safety at work is BESIX Group's number one priority on all its sites. This commitment extends to the Middle East, where the company boasts one of the region's top safety records. This achievement mirrors the high safety standards maintained across BESIX Group's global sites, including those in Europe. Many of these sites consistently achieve several million working hours without any accidents causing work incapacity. Noteworthy instances include the Guggenheim Museum team reaching 10 million man-hours without a Lost Time Incident (LTI) in June 2023, the Zayed National Museum team achieving 15 million hours without LTI, and the Zayed City Schools PPP project team recording 3 million man-hours without any LTI incident in November of the same year (UAE).



BESIX Foundation Right2Learn

Launched in 2011, Right2Learn is a unique educational programme initiated by BESIX Foundation, through which it teaches basic English classes to its blue-collar workers. The English classes are delivered in collaboration with a local non-profit organisation.

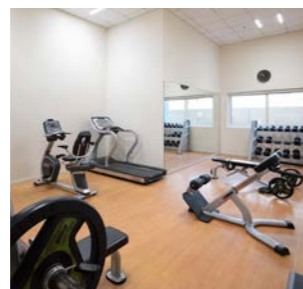
In 2023, BESIX conducted two English class cycles over two semesters. 60 blue-collar workers attended and successfully passed the exam. The students completed a total of 1,600 hours of training.

The Right2Learn programme, which also includes computer classes, is a unique way to support the workers' personal and professional development.

Adjusting work for warmer seasons

Working hours are adjusted based on seasonal conditions. For instance, in the United Arab Emirates, work is suspended between 12:30pm and 3:00pm from 15 June to 15 September due to high temperatures. BESIX Group sometimes extends this practice, particularly during periods of excessive humidity and temperatures. Moreover, employees on site are equipped with high-quality gear and have access to cool, well-ventilated areas for breaks, drinking water, and refreshing towels.





Subcontractor monitoring and compliance

BESIX Group does not only focus on its own practices, but the group also requires its subcontractors and manpower suppliers to provide documentation demonstrating that they meet high standards in various areas, including living conditions and recruitment processes.

BESIX Group requires them to sign a code of conduct which obliges them to respect the group's standards and allows audits to be carried out in their facilities. When breaches are found, the priority is to help them improve and to find solutions. In the event of unwillingness or blatant breach of standards on behalf of subcontractors, a range of provisions, which local laws allow, provide for financial penalties or even outright termination of the contract.

In 2023, client-appointed auditors conducted 42 audits on BESIX Middle East's offices and living facilities in the UAE and Qatar. Subsequently, BESIX Middle East conducted 89 audits on subcontractors. The Guggenheim Museum, the Zayed National Museum in Abu Dhabi, and the Lusail Towers in Qatar demonstrated the company's commitment to achieving the highest welfare standards.

The systematic screening and guidance provided by the company's Welfare team has resulted in significant improvements welcomed by both subcontractor management teams, as well as their workforce.

Permanent social dialogue with workers' representatives

BESIX Middle East initiated its own Workers Welfare Committee. The committee is composed of seven worker representatives, elected by their colleagues for two years. It constitutes a permanent body with direct access to the BESIX Middle East Welfare team and People department. This allows any grievance to be raised and reviewed without delay. Quarterly meetings are also held with management during which all topics and issues can be raised and discussed in full transparency.

This approach ensures that the voice of its workers reaches the appropriate person, through the right channel, and encourages them to be actively involved in the decision-making of worker welfare topics. Any issues raised are addressed on time and reviewed with the representatives at each meeting to agree on the resolution of each item.

Gold Impact Seal recognition

In July 2023, BESIX Middle East was awarded the prestigious Gold Impact Seal by the National CSR Fund, for its alignment with the principles of sustainable impact, ESG (Environmental, Social, and Governance), and SDGs (Sustainable Development Goals).

The Impact Seal is the official federal certification that certifies, measures, and rewards entities in the UAE with leading sustainable impact practices aligned with environmental, societal, and governance criteria, the UN Sustainable Development Goals, and national priorities. The Gold Impact Seal specifically underscores BESIX's comprehensive CSR and Sustainability direction and the dedication of resources for CSR and Sustainability activities in the UAE.



BESIX Foundation: Building a better world together

Thanks to the dedication of BESIX employees, 2023 was a standout year for charity and community engagement. They actively joined sponsored events for projects financed by the BESIX Foundation, participated in a Solidarity Day, or contributed to the Foundation's own initiatives. Their involvement made a significant impact!

The celebration of BESIX Foundation's 15th anniversary at the beginning of 2024 was no doubt a highlight for BESIX Group's private foundation which was set up in 2009 to celebrate the company's 100th anniversary. Education, Construction, and Environment are the pillars of BESIX Foundation's mission.



For the past 15 years, the BESIX Foundation has exemplified the remarkable commitment of our group and staff to societal causes. I am continually inspired by our colleagues' enthusiastic participation - it's been a 15-year miracle!

Looking ahead to 2024, we aim to amplify our impact, furthering our commitment to education, environmental stewardship, and sustainable construction.

We strongly encourage our team members to continue as active ambassadors of the BESIX Foundation, proudly contributing to a cleaner, more sustainable world.

Frédéric de Schrevel, BESIX Foundation Chairman

BESIX Group is committed to creating a safer and greener planet and building a better place to live in. The aim is to go beyond legal obligations in the social, environmental, and economic domains. The BESIX Foundation, along with its volunteers, plays a significant role in advancing this mission focusing on three pillars: education, construction, and environmental initiatives.

During the foundation's 15 years of existence, some 20,000 BESIX volunteers participated in one or several projects organised by the foundation in places where the BESIX Group is active. In 2023, across all BESIX Foundation projects, BESIX volunteers spent no less than 8,003 hours helping people, equivalent to 1,000 working days.

Financial support to social and charity associations

One of the foundation's actions is to support charities by giving them financial support so they can achieve their goals. Since its creation, the foundation has financed 390 projects for a total budget of more than €6 million, among which Eco-plast in Ivory Coast, Via Don Bosco in Cameroon, Mansil in the UAE, or Face For Children in Egypt. In 2023, 32 projects benefited from the foundation's financial support. These included associations working with the most disadvantaged, such as supporting the integration of people with disabilities. All these projects helped more than 3,500 people, both in Belgium and abroad.

Solidarity days

For the past 13 years, BESIX Foundation volunteers have been helping the 'Opération Thermos Operatie', an association preparing and serving hot meals to the homeless in Brussels every evening during colder months. For the past 12 years, a sister association has been doing the same in Liège. In 2023, more than 200 volunteers organised 17 evenings in either Brussels or Liège, serving 2,500 meals from the beginning of November to the end of April.



Every time I participate in Opération Thermos, I see joy all around - both among our team and the people we help. It's like all the worries just disappear. Everyone can make a difference!

Jonas Meuris, BIM Coordinator BESIX Engineering



BESIX Foundation's 'home-made' projects

BESIX CleanUp Day

The BESIX CleanUp Day is an initiative organised by the foundation, together with the group's Health & Safety teams, where BESIX volunteers roll up their sleeves and collect waste around their sites and offices. The 5th BESIX CleanUp Day was a real success, with 6,195 volunteers participating, almost double the turnout of last year! They picked up trash in 44 locations, on four continents. Together, they collected more than eleven tonnes of waste to make their community surroundings cleaner and safer.



KiddyBuild

'KiddyBuild on-site', one of the foundation's flagship home-made projects, invites children of primary schools exercising positive discrimination on a field trip to a construction site, where they learn about the various trades required to get a building off the ground. In 2023, four sites in Belgium opened their doors to 6 classes totalling 134 youngsters.

The 'KiddyBuild at school' programme, a spin-off of the KiddyBuild on-site programme, was boosted in 2023. It involves BESIX volunteers visiting classrooms for a morning to introduce school children to the ins and outs of the construction world. The sessions are centred around a BESIX-patented board game, 'Construction Heroes'. This 'home-made' game made its debut in the game world in 2020 and provides a fun and innovative introduction to the construction sector to help attract youngsters to the business. Sixteen sessions were organised with 425 children in 2023, including one in Ivory Coast.

Thanks to a campaign organised in 2023 to recruit KiddyBuild ambassadors amongst colleagues, the foundation received over 50 applications. This means that the project will expand significantly in 2024, primarily in Belgium, but also internationally.



Right2Learn

This is a programme in which volunteers provide computer courses to workers living far from home, enabling them to communicate with their loved ones digitally to exchange e-mails, photos, or even call for free. They also organise English lessons. So far, some 1,200 workers have been able to benefit from this programme in Georgia and the Middle East.



We had a lot of fun with the KiddyBuild sessions we held with 80 residents of the NGO CAVOEQUIVA in September 2023. It was an opportunity for us to introduce them to our construction profession in an atmosphere of joy, cheerfulness, and sharing.

Joël Kouadio, Technical Office Engineer,
BESIX International



Skill-based sponsorship

De Gemeenschap

This organisation is a youth centre located in Sint-Niklaas, Belgium. Established by volunteers, it has experienced significant growth since its inception 10 years ago. Due to the increasing number of young people participating in their activities, they recently acquired a building to accommodate them. They aimed to outfit the building with photovoltaic panels, and like many other projects, the association received support from BESIX's purchasing department to secure the most favourable conditions possible.



I'm delighted and proud to have supported all the associations that benefit from the foundation's assistance. It was heartening to see our suppliers share this cause and collaborate by offering competitive prices and excellent service. As we enter 2024, let's maintain the same determination, positivity, and enthusiasm in our efforts to help others.

Láid Mebarek, Lead Buyer, BESIX Procurement

Jobo Academy

This new project, initiated in 2023, seeks to help women transition to the 'formal economy' in Ivory Coast. The BESIX Foundation funded the first group of seven women to join this initiative, providing personalised training and mentoring. It's a promising effort to empower women in the workforce.

Armen Te Kort

This association offers vital assistance to underprivileged families. Through a "buddy" system, they tackle various challenges by leveraging their network, resulting in remarkable effectiveness and impact. In 2020, the association launched a new project in Antwerp, Belgium, to combat school dropout among disadvantaged youth. By 2023, 500 students have already benefited from this programme, with its momentum steadily increasing. Recognising its significance, the BESIX Foundation has pledged ongoing support. So far, two BESIX volunteers have been supporting students throughout their secondary school journey, spanning six years.



Lazare

This project focuses on reintegrating homeless individuals through shared accommodation with active young volunteers. Since 2018, 40 homeless people in Brussels have already been helped, with 85 % successfully transitioning to independent living and 60 % having returned to activity thanks to this programme. The foundation has supported the project by facilitating the creation of a third shared accommodation with 12 bedrooms.



At Lazare, we don't build walls, we break down social barriers! This project allows us to experience ordinary things together in an extraordinary way!

Priscille de Truchis, Budget Controller, Jacques Delens

+ Check out this video for more information:



04

110 years of global expertise

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Areas of Expertise

Thanks to its expertise and in-house engineering know-how, BESIX is always ready to come up with high-quality and cost-efficient solutions across its many activities.

BESIX Invest

BESIX Invest devises tailor-made solutions covering the complete asset life cycle, such as in the waste, water, or infrastructure sectors. With its broad experience in European and Middle Eastern Public Private Partnerships, BESIX recognises that each project, client, and community has a unique set of challenges and takes pride in being able to form collaborative partnerships to deliver on their

aspirations. Together with its client partners and applying a range of financing options, BESIX devises a pragmatic approach to achieve a shared interest over the complete asset life cycle. More recently, BESIX Invest has also strengthened its diversification efforts through investment in PropTech start-ups and VC funds.

BESIX Construction

Buildings

From world-famous skyscrapers to low-impact housing developments, BESIX's impressive track record speaks for its professionalism and mastery. Today, BESIX continues to design, develop, and deliver fully integrated buildings and real-estate properties with unique architecture, cutting-edge technology and performance, complex logistical and environmental requirements, and extreme construction deadlines. BESIX is especially known for its sound experience in carrying out sophisticated large-scale projects, such as high-rise buildings, hotels, hospitals, schools, shopping malls...

Infrastructure

BESIX takes on the most challenging and large-scale civil construction plans for both public and private clients. Building on its engineering skills and its powerful implementation resources, BESIX constructs or renovates complex public works such as tunnels, bridges, roads (from motorways to interchanges), railways, locks, and dams. BESIX also provides maintenance services for these infrastructures through long-term public-private partnerships.

Marine Works

The market for modern port infrastructure is one of the most dynamic in which BESIX operates. Benefitting from its in-house engineers' know-how, BESIX carries out projects mostly on a Design & Build basis, and owns and operates its specialised marine construction equipment. This comprehensive design and equipment approach yields considerable cost savings. BESIX executes coastal marine works all around the world: breakwaters, jetties, quay walls, locks, marinas, water intakes, shore protection, and refurbishment.

Industry

In the niche market of industrial structures, BESIX designs and builds data, logistic and handling centres, warehouses, and processing plants, as well as infrastructure for power providers.

Sports & Leisure

BESIX builds places that turn people into participants. World-class football stadiums, multipurpose arenas, theme parks, and swimming pools are some of the iconic examples of outstanding infrastructure for entertainment and sporting events BESIX has built over the years, over the continents.

BESIX Real Estate Development

BESIX RED has proven itself a responsible player in revitalising cities and acquiring prime locations across Benelux, France, and Portugal. It covers three lines of activities: Offices, Residential, and Retail & Services. In addition to its 30 years of experience, BESIX RED relies on a team of great talents, whether it be architects, engineers, or

entrepreneurs. They serve the specific interests of clients with high-performance developments: maximising convenience of occupancy and optimisation of environmental, economic, and technical factors.

BESIX Subsidiaries & Affiliates

Environment

BESIX has established itself as a key player in environmental contracting. BESIX provides innovative and tailor-made integrated solutions for today's growing water and waste challenges, and energy needs. It includes the design, engineering, execution, start-up, and commissioning of wastewater and potable water treatment plants, pumping stations and hydroelectric installations, treatment capacity upgrades, sludge drying and valorisation (digestion, biogas re-use...), and the polishing of treated effluent to near potable water standards (ultrafiltration, reverse osmosis...). BESIX also focuses on the creation of by-products from waste, such as biogas, biofuel, biosolids, heat recovery... Recoverable resources and energy optimisation are a must in times of rapid demographic changes and a global transition to green energy.

Infrastructure

Several affiliates owned by BESIX Group are also active in the field of infrastructure, particularly in the Benelux. This is the case of BESIX Infra in Belgium and in the Netherlands, and Socoetra in Belgium, both figuring among their region's leading roadwork companies. They specialise in the construction, renovation, and maintenance services of roads, tunnels, bridges, and railways.

Utilities

The group is active in the utility sector, both through BESIX and through some of its specialised entities such as BESIX Unitec in Belgium. This field comprises a variety of competencies, such as the laying of underground infrastructure, including sewage, cable, optic fibre, and duct networks. In the field of technical installations, the group offers services for the construction of high and low-voltage infrastructures. Several entities also offer specific expertise in the railway sector, including signalling systems.

Foundations

From deep foundations to retaining walls, BESIX provides foundations for infrastructures and buildings of all types, including the most demanding ones such as skyscrapers. BESIX Group's subsidiary Franki Foundations is itself specialised in deep foundation techniques and is a European leader in this field.

Construction Materials

Several entities in the group represent a vertical integration that is extremely valuable for the quality and reliability of their work. Several entities in Belgium and the Netherlands, such as BESIX Infra or Socoetra, have aggregates quarries, asphalt plants, and asphalt binder production units. In Belgium, several group entities also have facilities to produce prefabricated concrete elements, rebar, and formwork. The group also has ready-mix concrete plants and recycled products, notably in Belgium and the Middle East.

Buildings

Saint-Denis Pleyel: a major station of the Grand Paris Express

Saint-Denis Pleyel station, which is currently under construction in northern Paris by Société des Grands Projets, is part of the new Grand Paris Express metro. The station, designed by renowned architect Kengo Kuma, will be the largest out of the 68 new stops of the Grand Paris Express. It will interconnect lines 14, 15, 16, and 17 and is expected to handle 250,000 passengers a day. Saint-Denis Pleyel is an essential component of the network that will provide better service to the Great Metropolitan region around the French capital.

With the Paris 2024 Olympic Games approaching, Line 14 will be incredibly important as it will serve the main Olympic venues, transporting sports fans to the Athletes' Village, Olympic Aquatics Centre, Stade de France, and the Orly Airport. This means there is a clear deadline. The station must be finished in time for the Olympic Games this summer.

Scope of works

The €115 million contract BESIX France signed with Société des Grands Projets encompasses all architectural and technical trades (including façades and MEP works), as well as all external works of the Esplanade of the station. Saint-Denis Pleyel covers a total area of 34,000 m² spread across nine levels, four of which are underground, extending down to 28 metres below ground. Also included in the contract are four separate access structures with shafts, to ensure passenger safety in case of emergencies, ventilation, and smoke extraction of the tunnels.

"The contract we won in 2019 to develop the station is the result of the high-quality work our Engineering Department and Business Development teams have done throughout the tender process. This involved coming up with cutting-edge solutions to optimise the project in line with the client's objectives," says René Jordens, Commercial Manager BESIX France. BESIX Group takes particular pride in building the iconic Saint-Denis Pleyel station. "Winning this public-sector tender against the backdrop of the Grand Paris underlines that BESIX has firm foundations and demonstrates our technical capacity in France", adds Andres Penalzoza, Director BESIX France.

A marathon with a challenging deadline

Construction work on the station began in mid-2020, with delivery scheduled for June 2024. BESIX's involvement in the project started with no less than 10 months of coordination ('synthèse') with both civil engineering works and tunnel equipment works (rails, catenary, etc.) already done by the co-contractors. Between 2018 and 2022, the underground

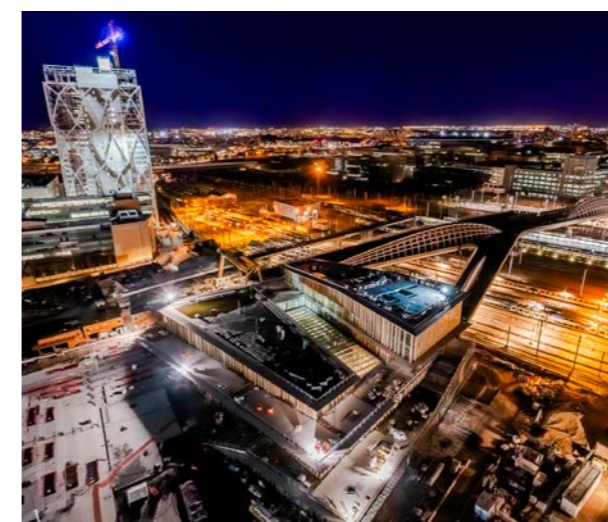
volume of the station was excavated, and the walls and levels were built to a depth of -28 metres. In 2023, it was time for the above-ground part of the station to materialise. By mid-2023, the structure reached its highest point, 35 metres, and has been gradually clad in glass and wood façades.

The biggest challenge was the logistics and coordination with co-contractors directly managed by Société des Grands Projets, including metro wagon systems and other systems related to the operation of the station (ticketing, passenger information, WiFi and SSI systems, etc.). "Another significant challenge we faced was the vast number of change orders received right up until the final days before the station's hand-over to the authorities. Despite the tight timeline, we successfully implemented all necessary adaptations in time, ensuring we met the authorities' expectations for the Olympic Games", says Marta Sagui, Head of the Technical Office of the project.

"During a critical phase of the project, we initiated an aggressive acceleration to overcome hurdles, notably those arising from substantial change orders, successfully recouping more than a year's worth of delay. This strategic push involved ramping up our resources, optimising our workflows, and deepening our collaboration with all partners and co-contractors. We not only caught up to our original timeline but also enhanced the project's efficiency and productivity, ensuring we remained on track for the scheduled completion", says Carlo Scheurs.

In July 2023, the first train drove through the station on the tracks of the extended line 14. From this point onwards, a series of tests have been carried out to check the infrastructure. Since February 2024, more than 500 trains have passed through the station each day for testing purposes.

"Every project we undertake is a part of BESIX's DNA. It is when faced with the most complex challenges, such as the construction of this station to a tight deadline, that we demonstrate the greatest creativity and flexibility. Since the start, we have been striving to excel as engineers and to coordinate the many people involved in the project to ensure the station opens on time", says Jean Di Paolo, BESIX Construction Manager for the Saint-Denis Pleyel project.



Project details

Saint-Denis Pleyel Station

Location Saint-Denis, France	Engineer Egis
Category Infrastructure, Buildings	Contract type Build
Client Société des Grands Projets	Construction period 2020 - 2024
Architect Kengo Kuma	Contract value €115 million

Care at the core

"At BESIX, we prioritise safety above all, which is why we conduct regular management safety walks across every one of our projects, including the Saint-Denis Pleyel project", explains Paul Callebaut, Project Director. These safety walks are more than routine checks. They are a vital practice through which leadership and workforce collaboration come to life, embodying the spirit of ISO 45001 standards for occupational health and safety management.

Driss El Ouazzani, QHSE Manager for BESIX France explains "Just like with our safety walks, we pride ourselves in our BE SAFE programme, which achieves safety through behaviour and positive reinforcement. This programme is not just about following rules; it is about creating a safety mindset that permeates every level of our operations. At the Saint-Denis Pleyel project, we are proud to have more than 30 dedicated BE SAFE ambassadors championing this cause."

More about the Grand Paris Express

The Grand Paris Express is an ambitious public transport project underway in the Île-de-France region, encompassing Paris and its surrounding areas. It represents one of the largest infrastructure projects in Europe and is aimed at transforming the urban mobility landscape of the Paris metropolitan area. The project includes the construction of four new automatic metro lines (15, 16, 17, and 18) and the extension of existing lines (11 and 14). These new lines form a network designed to connect suburban areas directly, bypassing the city centre, to alleviate congestion on existing lines and improve connectivity.

Over 60 new stations are being constructed, designed by a range of renowned architects. The new lines will add approximately 200 kilometres of tracks to the Paris metro network. The Grand Paris Express is being built in phases, with the first new lines expected to open in the mid-2020s and full completion slated for the 2030s.



I saw the station take shape before my eyes, thanks to the remarkable commitment of the Société des Grands Projets teams and numerous partners, such as BESIX. Their investment is palpable in bringing into service the largest station of the Grand Paris Express. This is an exceptionally complex project, the completion of which will have a profound and lasting impact on the daily lives of the people of Ile-de-France. I would like to thank BESIX for its successful involvement!"

Bernard Cathelain, Board Member Société des Grands Projets

Buildings

BESIX's Guggenheim Abu Dhabi: A pioneering achievement in the world of art and construction

BESIX-Six Construct is proud to be at the forefront of creating the Guggenheim Abu Dhabi (GAD). This monumental museum, designed by renowned architect Frank Gehry, will not only transform the cultural landscape of the United Arab Emirates but also showcase BESIX-Six Construct's expertise in delivering complex and innovative construction projects. Set to be unveiled in 2025, GAD will take its place as the newest and largest among the illustrious family of Guggenheim museums worldwide.

The project

The Guggenheim Abu Dhabi, a partnership between the Guggenheim Foundation and the Abu Dhabi government, will span over almost 30,000 m², making it the largest Guggenheim Museum in the world. The project's design combines cutting-edge aesthetics with traditional Arabic elements, reflecting the rich heritage and cultural diversity of the region.

BESIX-Six Construct has worked closely with the Guggenheim Foundation and local stakeholders to ensure that the GAD serves as a platform for Middle Eastern and North African artists, and their unique cultural expressions.

BESIX-Six Construct has prioritised environmental sustainability throughout the GAD project, implementing energy-efficient technologies and eco-friendly building materials to minimise the museum's environmental impact.

The role

As the main contractor for the GAD project, BESIX-Six Construct has taken on the ambitious challenge of turning Gehry's visionary design into a reality. Our team of expert engineers and project managers has worked closely with Gehry and other stakeholders to ensure that the museum's construction meets the highest standards in terms of engineering and sustainability, as well as design.

Project details

Guggenheim Abu Dhabi

Location

Saadiyat Island, United Arab Emirates

Client

Department of Culture and Tourism - Abu Dhabi

External partner

Trojan General Contracting LLC

Construction period

2021 - 2025

Contract type

Design & Build

Architect

Frank Gehry



BESIX-Six Construct stands at the forefront of innovation and construction excellence as we embark on the remarkable journey of bringing the Guggenheim Abu Dhabi to life. This architectural masterpiece underscores our unwavering commitment to delivering complex projects.

Jean-Pol Bouharmont



The significance of GAD

The Guggenheim Abu Dhabi will play a pivotal role in establishing Abu Dhabi as a global centre for arts and culture. BESIX-Six Construct is proud to contribute to this vision, by constructing a museum that will not only attract international tourists and art enthusiasts, but also promote local artists and foster creativity within the community. Furthermore, GAD's environmentally friendly design will serve as a benchmark for future construction projects in the region.

Excellence in progress

The BESIX-Six Construct team has faced various challenges during the design and construction of the Guggenheim Abu Dhabi, including the proper integration of state-of-the-art technologies and traditional Arabic design elements into the final form. Successfully tackling these challenges required close collaboration and innovative problem-solving.

As the Guggenheim Abu Dhabi nears completion, BESIX-Six Construct is proud of its role in constructing this iconic museum that will have a lasting impact on the city's cultural scene. With its pioneering design, vast art collection, and environmentally sustainable characteristics, GAD will stand as a testament to BESIX's expertise and dedication to excellence in the world of construction.

Championing sustainable practices

BESIX-Six Construct fully recognises the importance of sustainable construction practices. For example, GAD aligns with Estidama Pearl 3 sustainability rating requirements and includes the following targeted features:

- A 23.7 % reduction in building energy consumption beyond the baseline building consumption

- An impressive 88.5 % reduction in total potable water consumption versus the baseline building consumption
- A significant 70 % of timber used sourced from managed renewable sources
- An impressive 90 % post-consumer recycled composition across all reinforcing steel
- A commendable 75 % diversion of construction waste from landfill



The Guggenheim Abu Dhabi represents the union of art, culture, and sustainable construction on a grand scale. BESIX-Six Construct's relentless pursuit of excellence and our harmonious collaboration with all stakeholders have allowed us to create a museum that will not only inspire global audiences but also elevate Abu Dhabi's stature as a vibrant hub for the arts.

Abderrazak Nalouti

Buildings

F Tower: a rising star in Abidjan

At the initiative of the Ivorian Ministry of Construction, Housing, and Urban Development, in partnership with PFO Construction, the project's developer, BESIX is actively involved in erecting the 74-storey F Tower in Abidjan, Ivory Coast. Responsible for both structural works and site management, BESIX ensures seamless execution. The scope of structural works entrusted to BESIX involved design and BIM elements. Additionally, BESIX oversees other project contract packages, including planning and coordinating concrete works and managing overall logistical support, such as crane installation.

Steady progress: achieving two-thirds of the height milestone

Work started in July 2021 with structural work based on existing foundations. The BESIX team has progressed to level 47 with the tower's core, while floor construction has reached level 40. Encouraging progress indicates that structural work is slated for completion of the core by the end of 2024, with the tower soaring to a height of 333 metres across 74 levels. Overall, the tower will stand at 421 metres, including the spire.

Unique challenges

The structural aspects of the project present several unique challenges, notably the variation in design and construction methodology required for each level. This complexity also arises from the use of pre-tensioned high-resistance concrete beams throughout the structure. To meet these exacting standards, a dedicated concrete plant has been established near the site, tailored specifically to the project's needs, surpassing the conventional practices in the region.

Impressive execution methods

The core of the tower, a square section of 20 metres per side rising to 333 metres in height, houses around twenty elevators and two stairwells. It is constructed using a self-climbing formwork consisting of 31 platforms operating in 2 phases of concrete pouring.

The floors have variable geometry on all levels and are built by connecting to the core. These slabs are constructed in four successive quadrants advancing in a 'rising helix' pattern. Each column on every floor has a unique inclination and direction, with rapid and practical implementation made possible by custom-made 'corner pieces' meticulously designed using 3D models.

Wind and fall protection, consisting of 19 self-hoisting segments, each 10-metre high, encircles the floors under construction and is designed to adapt to the variable geometry of the different levels.

Pre-stressed prefabricated beams and prefabricated walkways (a kind of balcony at the edge of the slab) of varying lengths optimise execution cycles.

Several material lifts enable the formwork elements of the slabs to circulate in a closed circuit without having to return to the ground between each quadrant.

Project details

F Tower

Location

Abidjan, Ivory Coast

Client

Ivorian Ministry of Construction, Housing, and Urban Development

Partner

PFO Construction

Architect

Pierre Fakhoury

Contract type

Build

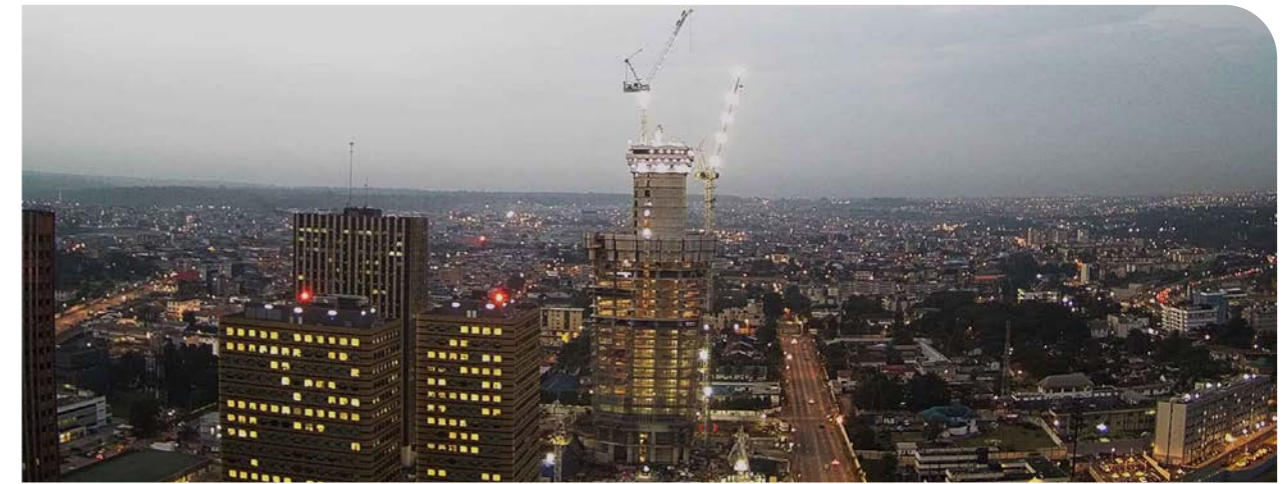
Construction period

2021 - 2024

67,000 m³
of concrete poured

103,000 m²
of floors

8,732 tonnes
of structural steel



Regarding lifting operations, two luffing cranes supply the construction fronts. The first, supported on the ground, is located on the side of the tower, and is telescoped by adding mast elements as the floors to which it is attached are constructed. The second is suspended by 2 frames fixed to the walls at the top of the core at a height of only 19 metres. It always overlooks the core by regular hoisting every five levels using a specific hydraulic jack.

A strong Ivorian team

In executing the project, BESIX Group has proudly enlisted a predominantly Ivorian team, with a significant representation of women. "We stand as a formidable team, greatly valuing the local workforce. It's worth noting that some of our most skilled workers are women," remarks Michaël Eeckhout, Area Manager BESIX West Africa, Ivory Coast, with a smile. "Their meticulous focus on detail proves invaluable for the exacting work ahead."

High-rise expertise

Over the years, BESIX has forged recognised expertise in the design and construction of high-rise buildings. The group's name is associated with those of the Burj Khalifa, Emirates Hotel, ADNOC or Dubai Uptown Towers in the United Arab Emirates, the Aspire and the Qipco Towers in Doha (Qatar), the Four Seasons Hotel in the Kingdom of Bahrain, the Mohamed VI Tower in Morocco, the Dexia and Carpe Diem towers in Paris, and the Montevideo, New Orleans, Maas, and Terraced Towers in Rotterdam.

BESIX's expertise in skyscrapers extends beyond traditional building practices, encompassing specialised fields like dynamic behaviour, building motion control, high-performance materials, soil structure interaction, thermal regulation of concrete, solar radiation, and wind dynamics. With extensive experience and in-house capabilities, BESIX adeptly tackles the challenges inherent in these areas, relying on sophisticated engineering calculations, analysis, and advanced project management. The construction of the new high-rise in Abidjan serves as further evidence of BESIX's prowess in executing technically intricate projects.

Situated in the heart of the Plateau district, the F Tower, designed by Pierre Fakhoury, serves as a prominent landmark in the Ivorian capital's administrative district. Together with the La Mé drinking water plant, the Palais des Expositions, and the Abobo tunnel, the F Tower is the fourth project associating PFO Construction and BESIX in Ivory Coast.



BESIX is immensely proud to contribute to the construction of the F Tower. Partnering with PFO Construction, the premier construction company in Ivory Coast, has been instrumental in ensuring top-notch quality. BESIX's forte lies in executing highly intricate projects across various domains, from buildings to ports, terminals, and environmental infrastructure. This capability is attributed to the expertise cultivated within its internal Engineering department, as well as the extensive experience garnered over the past 115 years, notably across Europe, Africa, the Middle East, and Australia.

Michaël Eeckhout, Area Manager BESIX West Africa

Buildings

Complex, state-of-the-art STEM building for North Queensland

Situated amidst the landscapes of tropical North Queensland, the Engineering and Innovation Place (EIP) at the James Cook University (JCU) Bebegu Yumba Campus has been delivered as a leading-edge building for STEM disciplines. Spanning four stories and covering an impressive area of 10,033 m², this facility has been meticulously crafted to serve as a hub of innovation, fostering collaboration and learning amongst students, industry partners, and researchers.

The interdisciplinary teaching and learning spaces include:

- Advanced Manufacturing Studio
- Computational Digital Studio
- Collaborative Digital Studio
- Shared Wet / Dry Laboratory
- Shared Research Laboratory
- Multi-Modal Studio Peer-to-Peer Learning / Student Hub
- Structures Laboratory
- Garage Innovation Space
- Observation Studio



I commend the way the BESIX Watpac team has come together and collaborated with the client and consultancy team to resolve multiple challenges. This building is an iconic structure and one we can all be proud of at BESIX Watpac.

Glen Watson, BESIX Watpac Northern Area Manager

Trusted delivery partner

BESIX Watpac recently wrapped up work on its third project at the JCU Bebegu Yumba Campus, marking another milestone in its collaboration with the university. The EIP now stands proudly alongside other major buildings constructed by BESIX Watpac: the Australian Tropical Science & Innovation Precinct (ATSIP) and the Australian Institute of Tropical Health & Medicine (AITHM) Translational Research Facility (TRI). The company has also completed the Ideas Lab for JCU in Cairns and was recently awarded stage 2 managing contractor status for the JCU Cairns Tropical Enterprise Centre (CTEC) – the fifth project with their long-term client. With a client-contractor relationship spanning 15 years, BESIX Watpac's collaborative approach was instrumental in successfully delivering the highly complex EIP building.

Project details

James Cook University Engineering and Innovation Place

Location

Townsville, Queensland, Australia

Timeline

2021 - 2024

Client

James Cook University

Architect

KIRK

Contract type

Build

Complexity

A remarkable building unlike any other that BESIX Watpac has delivered in the region, almost every aspect is bespoke. The building features challenging design elements and multiple teams have worked together seamlessly to bring the finished product to life, faithfully realising the vision of project architect, KIRK.

Features include a sizable overhang to the front corners of the building and an expansive atrium showcasing an internal steel cantilevered stairwell and extraordinary timber-lined oculus that welcomes natural light. Timber features prominently in both the interior and exterior of the design, which also incorporates glass and zinc finishes into the façade.

The building has several important features engineered to withstand the extreme environmental conditions of the region. This includes a façade that is impact-resistant to wind-borne debris. The entire building, including fit-out and services, is built to stringent EDCII earthquake standards. Building to these requirements meant the team carried out exhaustive performance tests on almost every individual component of the exterior skin. The building envelope is also tightly sealed to protect against heat and humidity, with the team having drawn on their expertise to develop the best methodology for insulating this intricate structure.



Sustainable solutions

Social

The project is a shining example of BESIX Watpac leading the way in creating opportunities for Indigenous participation, local engagement, and providing pathways for the next generation of construction professionals.

BESIX Watpac is committed to building meaningful and sustainable opportunities for Australia's First Nations people. To achieve this, the company embeds systems and practices within its projects to engage with the Indigenous workforce and businesses. At the outset of the project, a goal of achieving 3 % Indigenous participation was established. Through a collaborative relationship with our subcontractors, steering committee, and JCU, combined with a highly committed team, BESIX Watpac not only exceeded this target but achieved close to 5 % Indigenous participation.

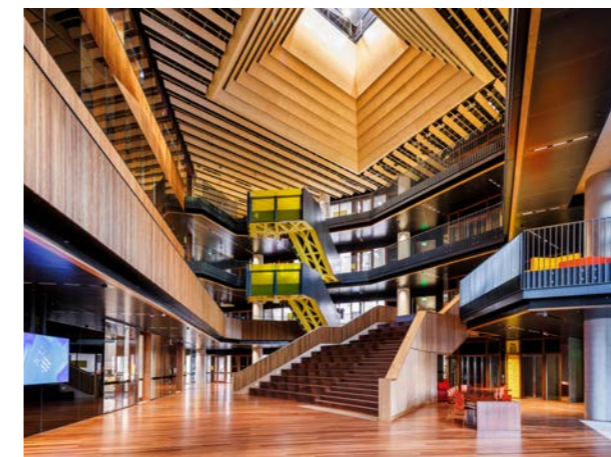
BESIX Watpac also worked closely with JCU, industry bodies, and local schools to provide education and employment pathways, and frequently engaged with the University's engineering students to elevate their learning.

Environment

The building is targeting the international LEED Gold rating and is designed to maximise passive cooling by leveraging low-energy active systems. Building a large-scale institutional facility that heavily utilises passive cooling is a benchmark for a tropically located building.

The central atrium will operate in a mixed-mode environmental setting controlled by a Building Management System (BMS). This will provide it with the ability to run as an air-conditioned space during hot and humid conditions and also as a naturally ventilated space during cooler seasons with lower humidity.

Given the educational setting, the sustainability strategies are straight-forward and not reliant on expensive or specialised, technically-driven systems. The aim was to demonstrate to students that sustainable design is about innovation and should work in harmony with the natural environment.



Huccorgne Viaduct: the rehabilitation of a major axis in Wallonia

The Huccorgne viaduct, located on the E42/E25 motorway between Liège and Namur, is a crucial part of the E42 motorway, linking the west and east of the Walloon region, across Belgium. With a total length of 547 metres and a height of 60 metres, the viaduct features two separate decks, each for one direction of traffic, and carries 60,000 vehicles daily. The comprehensive rehabilitation project was carried out by BESIX and its partner, on behalf of SOFICO and the Service Public de Wallonie Mobilité & Infrastructures, the entities responsible for the road network infrastructure in the Walloon Region. The rehabilitation has substantially been completed and the motorway fully reopened on Sunday 30 July 2023, slightly ahead of schedule, offering three lanes in both directions.

Rehabilitation in two parts

Originally built in the 1960s, the Huccorgne viaduct was in need of a comprehensive makeover. The works included a complete rehabilitation of the entire structure, including the replacement of the beams, the deck, and the support structure. New waterproofing, surfacing, and sound walls were also installed. This challenging renovation project has been the region's largest infrastructure project in recent years.

The rehabilitation started in August 2021 with preparatory works. In January 2022, renovation works began on the bridge supporting the lanes in the direction of Namur-Liège. This first half of the viaduct was completed and inaugurated by the Walloon authorities in July 2022. The opening of the lanes to traffic allowed the second part of the works to begin, in the direction of Liège-Namur.

Precise planning

Ensuring uninterrupted traffic was of utmost importance, as 60,000 vehicles cross the viaduct every day, making it a major challenge to minimise traffic disruption. In order to do so, BESIX's teams adhered to an extremely strict plan to keep two lanes open in each direction throughout the entire project. This was possible thanks to meticulous planning, communication, and collaboration among all partners.

"The project was extremely well-prepared, and there was excellent communication and collaboration with our client SOFICO and partners", says Jean-François Deswijnsen, Operations Manager Wallonia-Luxembourg. "This is essential for large infrastructure projects like this, where timing is tight and unforeseen challenges are inevitable. I would like to thank our partners, subcontractors, and suppliers for their contributions to the success of this project. We are proud to say that we even finished slightly ahead of schedule", he adds.

Heavy lifting

Another challenge was the removal and replacement of 36 concrete beams on both sides of the viaduct. With each beam measuring 30 metres long and weighing 60 tonnes, this manoeuvre was visually spectacular. The crane had to lift the beams up to 60 metres high, adding to the complexity of the manoeuvre.

This was a particularly impressive operation that, despite some windy weather, remained on schedule. "On windy days, the wind was monitored every hour to determine if it was safe to lift the beams. If the wind was too strong, work was postponed until the evening or night, so that the schedule could be maintained," states Jean-François Deswijnsen. Despite the challenges, the placement of the new beams was completed right on schedule in less than a month.

Safety and sustainability

The completion of the Huccorgne viaduct rehabilitation project is a major milestone for the road network in the Walloon Region. The project has significantly improved the safety and durability of the viaduct, and it will ensure that it continues to serve the travelling public for many years to come.

Project details

Huccorgne Viaduct

Location

E42/E25 motorway Liège-Namur, Belgium

Client

SOFICO & Service Public de Wallonie Mobilité & Infrastructures

Partner

Galère

Contract type

Build

Construction period

2021 - 2023

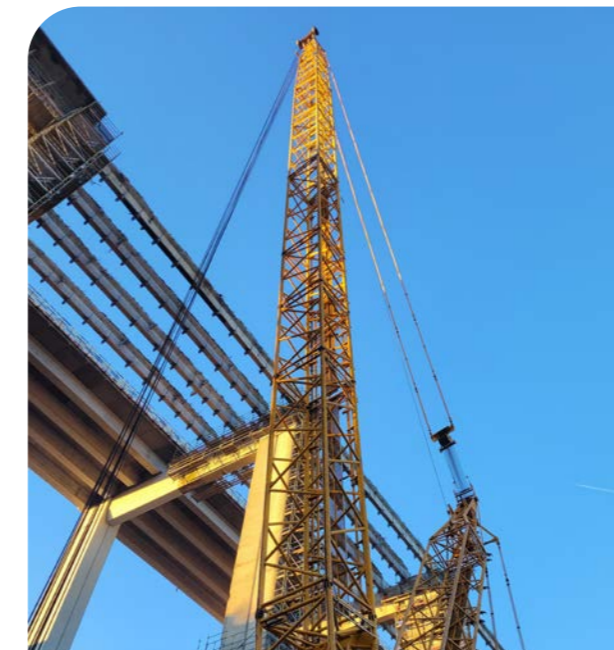
Contract value

€23 million



Planning and organisation were essential in this project, as traffic had to be maintained at all times. We proposed a plan that would minimise traffic disruption.

Jean-François Deswijnsen, Operations Manager Wallonia-Luxembourg



Abobo Tunnel: improving accessibility and traffic in Abidjan

The Abobo Tunnel project, situated in the bustling city of Abidjan in Ivory Coast, symbolises how strategic infrastructure development can enhance urban mobility and accessibility. Officially inaugurated on January 10, 2024, this project is a part of the larger Abobo Town Hall roundabout initiative, designed to improve traffic flow in this major residential and commercial area inhabited by over one million people.

Improving traffic and safety

Under the initiative of PFO Construction and representing the Ivorian Ministry of Public Works and Road Maintenance, BESIX Ivory Coast was awarded the contract in September 2021 for the project management and execution of this critical infrastructure. The works began in March 2022 and, demonstrating the commitment and efficiency of BESIX's teams, were completed by June 2023, ahead of schedule.

The project involved the construction of a 560-metre-long infrastructure that includes the Abobo Tunnel, the roundabout, and access ramps. The tunnel itself stretches 210 metres and, along with the ramps, accommodates the A1 national road which now passes beneath the roundabout with three lanes in each direction. This key route links the districts of Abobo, facilitating smoother connections to the East and North-East of the country.



The construction of the Abobo tunnel confirms our strong presence in Ivory Coast and the quality of our partnership with PFO Construction. The Abobo site allows us to introduce one of BESIX's other major areas of expertise, infrastructure, to Ivory Coast. And we are particularly proud to participate, under the aegis of PFO Construction, in the realisation of this first-class project for the benefit of Abidjan and the country.

Philippe Dessoy, General Manager Business Development at BESIX Group.

Cut-and-cover

The construction of the Abobo Tunnel utilised the 'cut-and-cover' method. This technique involves excavating a large trench, constructing the structure within it, and then covering it. Specifically, the project required the excavation of 130,000 m³ of earth, the placement of 2,200 tonnes of reinforcement, and the pouring of 20,000 m³ of structural concrete. To ensure the tunnel's durability against weathering and leaks, a waterproofing membrane was meticulously applied over the concrete cover slab, following a thorough cleaning to remove all impurities and secure optimal adhesion. The tunnel is also equipped with state-of-the-art operational facilities, including a gravity system for efficient drainage of rainwater, ensuring that it remains functional under all weather conditions.

Project details

Abobo Tunnel

Location

Abidjan, Ivory Coast

Client

PFO Construction on behalf of the Ministry of Public Roads and Road Maintenance of Ivory Coast

Contract type

Build

Construction period

2022 - 2023

Contract value

€17.132 million

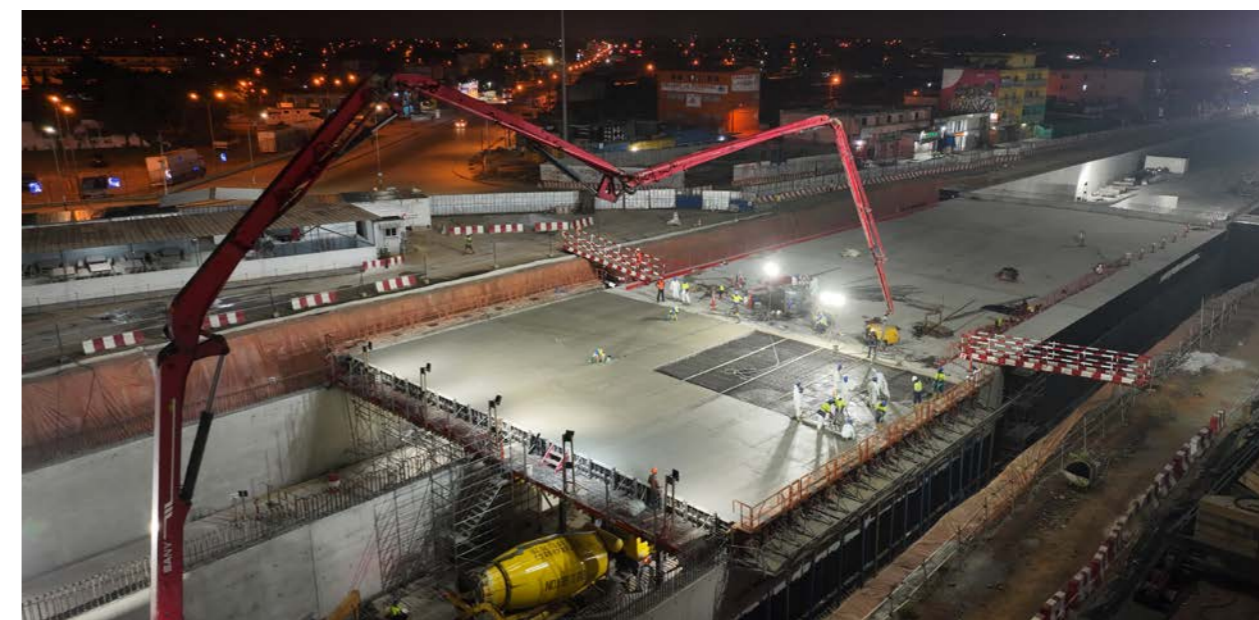
Strong partnership

In past years, BESIX has participated in four significant projects in Ivory Coast.

- In 2021, BESIX successfully delivered the largest drinking water treatment plant in the Abidjan region, located in La Mé, serving the greater Abidjan area.
- The same year, BESIX started works on the F Tower, designed by architect Pierre Fakhoury, located in the heart of Abidjan and the sixth tower of the city's Administrative City. BESIX is in charge of the project management, as well as the execution of the structural works. The project is a partnership with PFO Construction, supported by the Ivorian Ministry of Construction, Housing and Urban Planning.
- The Abidjan Exhibition Centre, also designed by architect Pierre Fakhoury, was inaugurated in 2023. BESIX was in charge of carrying out the structure, concrete shell, and the installation of the roof and its cladding. The complex has a multi-purpose area surface of 12,000 m² and the flexibility to extend through modular spaces. It has a capacity of 11,000 people, offering seating for 5,000 people. The exhibition centre officially opened its doors in July 2023 and will host trade fairs, cultural and sporting events, and international conferences. It will also help boost business tourism thanks to its conference centre.
- The Abobo Tunnel completes the circle. As the longest tunnel in Ivory Coast, its delivery marks a significant milestone in the region's ongoing development and commitment to improving the safety of the countless commuters navigating this vital junction daily.

Builders of a symbol

At the beginning of 2023, the Prime Minister of Ivory Coast, Patrick Achi, honoured the Abidjan Exhibition Centre with his visit, together with several ministers of his government. They witnessed the commitment of BESIX's teams, whom they called the 'builders of a symbol'. They also underlined the remarkable quality of the construction.



BESIX gearing up to deliver the Nachtigal Hydropower Plant

In a remote stretch of Cameroonian rainforest along the Sanaga River, about 65 km from the capital Yaoundé, BESIX spearheads the civil works for the Nachtigal Hydropower Plant. The project, being constructed in collaboration with partners NGE Contracting (France) and SGTM (Morocco), is one of the most significant public-private partnerships in Africa. The driving force behind the development, Nachtigal Hydropower Company, comprises EDF, the International Finance Corporation, Stoa Infrastructure and Energy, Africa 50, and the Government of Cameroon, all of whom have provided funding for the project. The hydropower plant encompasses two roller compacted concrete dams of 1.3 km and 0.5 km, a 3.3-km-long and 14-metre-deep artificial canal, and a powerhouse with seven 60 MW turbines to generate power. The Nachtigal hydroelectric project will cover an impressive 30 % of Cameroon's energy needs, with a production capacity of 420 MW.



Project details

Nachtigal Hydropower Plant

Client

Nachtigal Hydro Power Company (NHPC)

Location

Nachtigal, Cameroon

Contract type

Design & Build

Construction period

2018 - 2025



An atypical project site

The project site being located in the rainforest presented unique environmental and logistical challenges. To house all site staff, a new and well-equipped village was built, which included an electricity distribution network, a water treatment plant, and sewerage installations. As the upstream to downstream site is seven kilometres long, a comprehensive network of roads was also created. Due to the site's remoteness, BESIX and its partners decided to lower dependency on external transport by installing a crusher plant which produces aggregates for concrete production and asphalt production for the waterproofing of the canal. The vast majority of the crusher plant's raw materials came from on-site mining activities. In addition to the crusher plant, the site team also installed three concrete batching plants, two asphalt plants, a cut and bend workshop, and a carpentry on site. In addition to saving both time and money, this independence proved extremely valuable during the COVID-19 pandemic.

2023, a pivotal year for BESIX on site

With over 80 % of the civil works finished by the end of 2022, 2023 was a pivotal year for the Nachtigal Hydropower Plant, filled with crucial milestones. At the end of May, water flowed for the first time along the 3.3-km-long and 14-metre-deep inlet canal as part of the first sealing tests. These successful tests were required to check the construction and coating for any leaks, and to confirm the function of the asphalt and concrete connection along the canal. In mid-July, a commemorative ceremony was held to officially mark the start of the impoundment of the reservoir in the presence of the Minister of Water and Energy, Gaston Eloundou Essomba,

and representatives of local and traditional authorities, main actors of the energy sector, NHPC, and the consortium partners. The impoundment involved filling the dam for the first time to create the water reservoir that will supply the plant. With this step, the entire project reached 87 % completion. A few weeks later, the plant's labyrinth spillway, which has a capacity of over 6,000 m³/s, was successfully put into service for the first time. Its essential purpose is to safely evacuate excess water in the event of flooding. By the end of 2023, the inlet canal was ready to be filled again, this time permanently after the tests earlier in the year. The canal transports the water from the reservoir to the plant for energy production. Alongside these important milestones for BESIX, the other partners on site also completed vital steps, including finalising the installation of the seven penstocks, completing the main dam, and preparing the instream flow turbine plant for operation.

Final stages

As the project moves into its final stages, the site teams have begun to dismantle installations and return certain areas of the site to their natural state. To help the rainforest thrive once more, indigenous trees and plants are being re-planted. Finishing works include the last concrete works on the small powerhouse and turbines, and on an administrative building. The electromechanical works on the upstream side are also nearly finished. Once all finishing works have been completed, there is only one final step to go: finalising the testing and commissioning of the various components of the project. BESIX and its partners expect to deliver the project fully by early 2025.



The Oxagon project: developing port infrastructure



Project details

Port of NEOM

Location
Saudi Arabia

Client
NEOM

External partners
Modern Building Leaders (MBL), Boskalis

Construction period
2023 - ongoing

Contract type
Design & Build

Total value
€741 million



This monumental endeavour in modernising and expanding port infrastructure is poised to set new industry standards and leave behind a transformative legacy.

Bruno Mendiaux, Project Director

In the heart of remote yet strategically vital maritime routes around the Suez Canal, the Red Sea, and the Persian Gulf, lies the Oxagon project - an ambitious endeavour that exemplifies BESIX-Six Construct's unwavering commitment to excellence in marine construction. Focused on modernising and expanding port infrastructure, the Oxagon project is set to play a pivotal role in facilitating the transportation of goods by large and medium-sized container ships, feeder ships, and bulk carriers in the region. The completion target for this monumental project is set for March 2025.

Defining the project scope, confronting challenges, and assembling the right team

The Oxagon project is a comprehensive transformation of the port that involves several key goals. These include deepening the access channel for larger vessels, expanding the harbour basin, constructing various quay walls for different purposes, demolishing, and upgrading existing facilities, installing port equipment and infrastructure, and setting up rails for gantry cranes.

However, building quay walls in this project comes with significant challenges. The varying soil conditions, ranging from extremely hard ground to soft soil, require specialised approaches in different areas. The project's scale and equipment requirements demand careful planning and execution. Employing an adequate number of skilled professionals is crucial for effective project management. Additionally, operating in a remote location presents logistical complexities in sourcing materials, although BESIX-Six Construct anticipates improvements in this area soon.

Collaboration stands as the linchpin for Oxagon project's success. BESIX's primary focus lies in carefully selecting and deploying the right individuals to ensure seamless teamwork. With approximately one thousand professionals engaged in the joint venture during peak periods, its paramount objective continues to be cultivating a unified team spirit.

Innovative construction methods

Central to the success of the Oxagon project is the construction method employed by BESIX-Six Construct: the use of sheet piles combined with H-beams (known as King Piles) to form a robust combi wall. Sheet piles are sections of sheet materials with interlocking edges, driven into the ground to provide earth retention and excavation support, and King Piles are rolled H-beams with embedded interlocking clutches and form the structural core of the combi wall. In the case of the Oxagon project, King Piles measuring approximately 1.44 metres by 35 metres play a pivotal role in creating stable quay walls.

However, the unique challenge faced by BESIX-Six Construct is the diverse soil composition across the project site. While some areas feature extremely hard ground, others consist of soft soil requiring advanced geotechnical engineering by our in-house design office. To tackle this, BESIX-Six Construct's approach involves replacing the existing soil with sturdier material in specific locations. This flexible method allows for the successful installation of between 75 to 100 metres of combi wall per month.

Pioneering sustainable practices

The Oxagon project underscores BESIX-Six Construct's commitment to sustainability. The company employs sheet piles manufactured using green energy, significantly reducing CO₂ emissions. This environmentally friendly approach aligns with the client's priority of executing the project in the most sustainable way possible.

A noteworthy detail is that a total of 41,000 tons of 'green' steel, produced by a Luxembourg-based company, will be utilised in the project. This choice reflects a conscious decision by the client to prioritise environmental friendliness, even at a higher cost.

Moreover, BESIX-Six Construct shall process, and incorporate in the works, approximately half a million rocks that are a by-product of NEOM's blasting works, to reduce the carbon footprint of the project by re-using normally leftover material.

Committed to diversity, inclusion, and worker welfare

"At BESIX-Six Construct, we prioritise diversity, inclusion, and worker welfare. This commitment is evident in projects like Oxagon, where our diverse team hails from various countries - Egypt, South Africa, Romania, India, Pakistan, Sudan, the Philippines, and more.

Our focus on worker welfare includes ensuring a safe working environment, fair compensation, and strict adherence to labour laws and regulations, reflecting our dedication to the well-being and dignity of every individual on our team", explains Geert Aelbrecht, Chief People Officer at BESIX Group.



Transforming Portonave's port infrastructure in Brazil

In August 2022, Portonave awarded BESIX and Empresa Construtora Brasil (ECB), part of Mota Engil, the EPC contract to enhance its port infrastructure within the Port of Navegantes, Brazil. The project involves constructing a new quay wall in the same location as the existing structure, whilst maintaining port operations. To achieve this, a two-phase approach has been adopted. Construction commenced in January 2024, following an extensive period of Early Contractor Involvement and thorough preparations.

Located in the city of Navegantes in southern Brazil, Portonave stands as Brazil's first privately owned port terminal. The site is owned by Terminal Investment Limited (TIL), one of the world's largest container terminal operators. The upgrade aims to accommodate larger vessels, and therefore enhance the port's container capacity. While the current infrastructure lets ships of up to 350 metres in length carrying 11,000 six-metre containers dock, the optimisation will accommodate ships of up to 24,000 containers and 400 m length.

Continuous operations and optimised design

To ensure uninterrupted port operations whilst the capacity expansion project was underway, the partners proposed a sequential approach to the client. By dividing construction activities into two distinct phases, each corresponding to one half of the terminal, this approach allows construction activities to proceed seamlessly while maintaining continuous port functionality.

The permanent works at the port commenced in early 2024 with rockfill, which entailed stabilising the walls to allow the demolition of existing structures and construction of the new infrastructure. Subsequently, deep foundation works, with foundations reaching 60 metres in the ground, will begin. To facilitate part of these complex works, BESIX has called in the help of its deep foundations specialist Franki Foundations, which has been playing an instrumental role in providing the necessary equipment and expertise.

Prior to the permanent works, BESIX, ECB, and Portonave adopted an Early Contractor Involvement approach extensively. During this period, they worked collaboratively to identify the most effective technical solutions, hone the design, and develop methods to optimise project cost and estimate prices through an open-book collaboration.

A majority Brazilian workforce

For the execution of the project, BESIX Group committed to a largely Brazilian team. With 90 % of the site staff being Brazilian, Portuguese is the predominant language on-site. Given that some of the expats working on the project do not speak Portuguese, various initiatives, such as Portuguese classes, have been adopted to foster effective communication. These initiatives have proven successful thus far, and language disparities are not perceived as barriers on-site. "We're a strong team, merging effectively. It's definitely something we take pride in," concludes Quentin Michel, BESIX Group's Project Manager at Portonave.

The project for Portonave signifies BESIX Group's inaugural venture into the Brazilian market. This entry was facilitated by the company's intrinsic openness and flexibility, coupled with the collaboration with ECB, providing valuable local insights. Additionally, the Early Contractor Involvement approach was beneficial, as it allowed BESIX Group to learn about the country ahead of time and prepare for the project meticulously.

In 2023, activities in Brazil primarily encompassed site mobilisation and installation, preparing the site for the permanent works, which commenced early 2024. Throughout 2024, efforts will continue to focus on the project's first phase, including demolition of the older infrastructure, and construction of the new quay wall. Final delivery of the project is planned for 2026.



Although our colleagues from Franki Foundations usually don't work outside Europe, their contribution here is most valuable. This collaboration between experts exemplifies the strength of co-creation within BESIX Group.

Quentin Michel, BESIX Project Manager

Project details

Portonave

Location

Navegantes, Brazil

Client

Portonave - a subsidiary of Terminal Investment Limited (TIL Group)

Partner

Empresa Construtora Brasil

Contract type

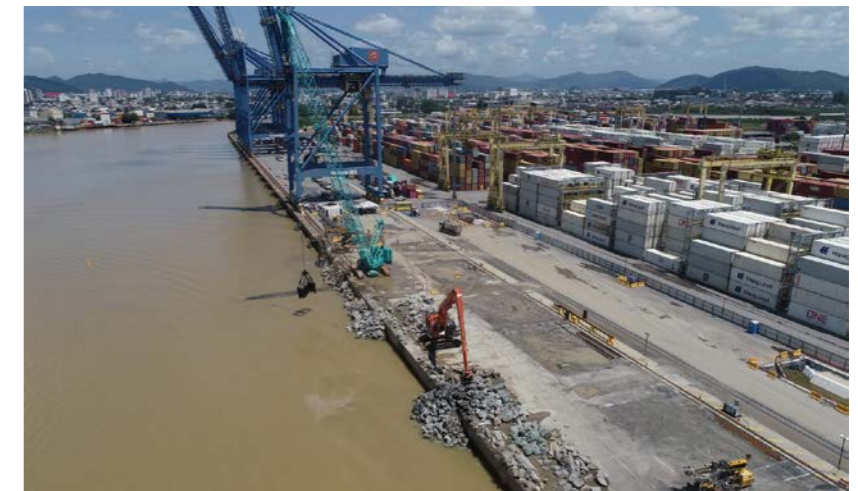
Engineering, Procurement, and Construction (EPC)

Construction period

2023 - 2026

Contract value

€167 million



The Early Contractor Involvement approach enabled us to thoroughly explore all aspects of the project in advance and to refine the project scope with the client, assess resources, address, and mitigate risks, and apply value engineering. Thanks to the ECI approach, we were able to present a strong, competitive solution to the client."

Jean-Baptiste de Ghellinck, General Manager, BESIX International

Industry & Logistics

Armoured Fighting Vehicle Facility Programme LAND 400

Construction has concluded on a state-of-the-art defence infrastructure facility aimed at supporting, sustaining, and training Australian Army personnel in the operation of the next generation of Armoured Fighting Vehicles. This project also marks an extension of BESIX Watpac's involvement in the LAND 400 programme.

BESIX Watpac was granted the project contract in 2021. The facility features newly built and upgraded maintenance and simulation facilities located at Adelaide's Edinburgh Defence Precinct in South Australia.

This endeavour follows the successful completion of the Military Vehicle Centre of Excellence: a large-scale industrial facility commissioned by Rheinmetall Defence Australia in 2020 responsible for producing the BOXER CRVs.

The BOXER Combat Reconnaissance Vehicle (CRV) fleet represents a significant advancement in reconnaissance capabilities, intended to replace the aging Australian Light Armoured Vehicle, which has served for nearly 3 decades. The CRV, built on the Rheinmetall Boxer platform, offers enhanced size and capabilities compared to its predecessor.

Project overview

The project consisted of three main components: maintenance facilities, a simulation centre, and site works.

Maintenance facilities

The JLU-S Vehicle Workshop includes 16 vehicle maintenance bays, grit blasting and wash bay, engine/hydraulic room for petrol oils and lubricants, working accommodation, and amenities for workshop staff.

AFV Simulation Centre

The AFV Simulation Centre is a two-storey facility comprising classrooms, a lecture theatre, and offices for Field Service Representatives, along with workspaces and amenities.

Site works

Site works involved the creation of vehicle hardstands for parking and temporary storage of vehicles under repair, as well as circulation areas. Additionally, there were 12 trickle charging stations, a new HV kiosk, car park, and a central energy plant.

Innovative modular construction methodology delivers significant programme savings

A groundbreaking modular construction method was employed to expedite the construction of the Simulation Centre. This involved building the structural steel plant platforms on the ground, allowing for the installation of mechanical and hydraulic services on the platforms before lifting them into position. This approach not only saved time completing the project in just 60 days with a total of six 25-tonne lifts, but also improved efficiency and safety by eliminating the need for rooftop installations.

Strong defence and secure facilities capabilities

BESIX Watpac has a robust and long-standing partnership with Defence dating back to 1995. Over the past decade alone, they have delivered more than AU\$1 billion in Defence capital facilities and infrastructure throughout Australia.

Project details

Armoured Fighting Vehicle Facility Programme LAND 400

Location

Adelaide, Australia

Client

Government of Australia - Department of Defence

External partners

AECOM, Aurecon

Role

Head Contractor

Contract type

Build

Construction

2021 - 2023



Our team tackled various challenges to provide innovative project solutions, including redesigning duct pathways to accommodate seismic bracing, optimising roof beams and sheets to improve buildability and provide installation efficiencies, and adjusting cable tray locations to meet seismic and logistic constraints.

Richard Stead, BESIX Watpac National Defence Manager

Industry & Logistics

Expertise in collaboration: the success story behind the PALLAS reactor

A SPECIAL PROJECT IN THE PETTEN DUNES

Since the 1960s, the Petten Dunes in North Holland have been home to a nuclear reactor dedicated to researching and producing medical isotopes. However, the High Flux Reactor (HFR) at this site is now 60 years old, posing a risk of shutdown that could disrupt medical treatment for thousands of patients. To address this, PALLAS has initiated the construction of a new reactor in Petten, ensuring a reliable supply of medical isotopes for the 30,000 patients who depend on them every day.

The excavation work for the construction of the PALLAS reactor building has been underway since early 2023. Collaborative efforts between two sister companies, Franki Grondtechnieken, and BESIX Netherlands, are expected to complete this phase by the end of 2024, paving the way for the next phase: the reactor's actual construction. The reactor is designed to be so robust that it remains intact even under the most extreme conditions. This necessitates high-quality standards throughout the construction process. Each aspect of the construction undergoes thorough preparation and multiple checks to ensure compliance with all specified standards and requirements, highlighting the importance of effective coordination and cooperation.

Integrated cooperation

Effective collaboration is like a successful marriage: it requires commitment, good communication, and occasional constructive conflict to last. Working with diverse teams and partners presents its challenges, emphasising the importance of prioritising collective goals over individual preferences. The close partnership between BESIX Nederland and Franki Grondtechnieken on the PALLAS project exemplifies this collaborative spirit.

From the project's inception, the two sister companies have collaborated closely. "It is quite unique that we have established a cohesive team right from the start, with the right colleagues in the right roles, to execute the work in an integrated manner," says Jan Leen van der Vlies, Director of Execution at Franki Grondtechnieken. The combined knowledge and expertise of BESIX Netherlands (in project management and concrete work) and Franki Grondtechnieken (with their specific understanding of complex foundation techniques) were shared early on, complementing each other seamlessly. "Building a reactor is a relatively new endeavour for everyone involved, and projects of this scale have not been undertaken in the Netherlands before. This necessitates continuous coordination and cooperation to ensure success. We rely heavily on each other's expertise," explains Robbert Brand, Manager of Industry, Energy & Water at BESIX. The project holds special significance for all involved, as the work is conducted in an extraordinary environment, demanding meticulous attention to quality and safety.

Project details

PALLAS Reactor

Location

Petten, The Netherlands

Client

PALLAS

Partners

BESIX Nederland and Franki Grondtechnieken

Contract type

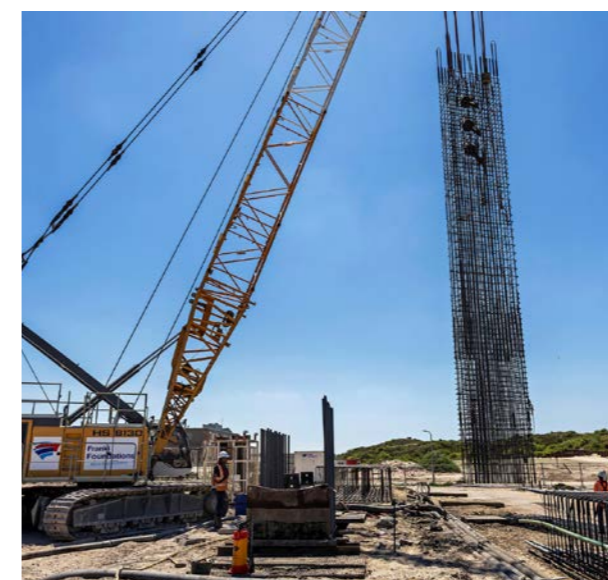
Design & Build

Construction period

2023 - 2024

Contract value

€33 million



Foundation for good project results

"Open dialogue and effective decision-making between PALLAS, BESIX Nederland, Franki Grondtechnieken, and the subcontractors are crucial for project success. Regular discussions to reflect on collaboration and communication patterns allowed for greater connection, trust, and mutual understanding to be built, laying the groundwork for a successful project outcome", Jan Leen and Robbert explain.

Sietsche Eppinga, Construction Director PALLAS: "BESIX Nederland has been a reliable partner, with whom we have maintained open communication since the project's inception. Their expertise will be invaluable as we proceed with the construction of the new PALLAS reactor. Time is truly of the essence for us to ensure that in the future, patients can count on nuclear medicine from Petten."

The building excavation in numbers

- 30 diaphragm wall panels (each 7.5 metre wide, 1.5 metre thick and 35 metre deep) with 1,500 tonnes of reinforcement steel
- 12,000 m³ of concrete
- 50,000 m³ of soil excavated from the site
- Depth of building excavation: 22 metres
- Area of building excavation: 52 x 50 metres
- 164 stem anchors with lengths of 50-65 metres
- 380 screw injection piles with lengths of 33.5 metres (applied from a pontoon with a water depth of 20 metres)
- 3,750 m³ of underwater concrete
- Bearing slab with a thickness of 1.5 metres; total 3,000 m³

Industry & Logistics

Axis Alexandria: a carbon-neutral industrial development delivered in South Sydney

Axis Alexandria is a multi-level industrial facility consisting of nine units ranging from 1,000 to 7,000 m² and a 36-metre-wide shared hardstand for vehicles. Requiring significant design engineering and incorporation of advanced technologies, each unit includes a light-duty car park for each office, heavy-duty hardstands, and composite structure multi-level warehouse, with a two-storey office and solar power.



It sits on a prime 1.69-hectare brownfield site in south Sydney and is the first multi-storey facility of its kind in Australia, for Australia's largest industrial owner and developer, Goodman.

Innovative sustainability

Regenerating the brownfield site, innovation, and sustainability were at the forefront of the design process. Envisioned in collaboration with architects FJC Studio (formerly FJMT Studio), Axis Alexandria sets new benchmarks for sustainability with a 410 kW PV solar array directly benefitting the customers occupying the building. It features water harvesting, electric vehicle charging, diverse drought-resistant landscaping, smart meters to help manage electricity consumption, and LED lighting and daylight harvesting to reduce energy use by 60-80%. It's targeting 5-Star Green Star Design and As-Built v1.3.

Reducing environmental footprint

Early in the design phase of Axis Alexandria's development, the project team identified recycled steel as a key material that could be incorporated into the industrial facility's construction. BESIX Watpac's partnership with a trusted supplier played a pivotal role in the successful execution of this initiative.

Together, the teams navigated the complexities of sourcing and repurposing recycled steel, ensuring it met stringent quality standards. Throughout delivery, over 1,500 tonnes of 80% recycled steel was incorporated into the main structure of the project. This saw significant cost efficiencies and displayed BESIX Watpac's dedication to closing the material loop and achieving a more circular construction model.

Indigenous outcomes key to project success

Axis Alexandria is committed to achieving positive social outcomes. The project engaged seven indigenous businesses including surveyors, craneage, plant and equipment hire, signage, and scaffolding. The total spend related directly to Indigenous businesses amounted to AU\$1.3 million (€790,000), meeting the project target of 3% of the original contract value. Project commencement was marked with a Welcome to Country ceremony by the Metropolitan Local Aboriginal Land Council to acknowledge the traditional owners of the land.

Unique site restrictions create innovative delivery methodology

Site restrictions for the project include a 6 metre proximity limit from the building to the site perimeter and a transgrid easement running through it adding complexity to the construction process. To overcome the challenge, an innovative methodology of building the warehouse from the inside-out was employed. Crane lifts were carefully planned and executed to lift materials over the steel structure from the inside-out and into position, remaining at all times below Sydney Airport's capped ceiling height restriction (RL47.5).

Aesthetic and amenities focus on environmental well-being

Goodman's Axis Alexandria is a prominent facility balancing raw industrial style with a refined premium aesthetic. The development focuses on environmental well-being, featuring superior air ventilation, natural light penetration, and the use of sustainable materials.

Best-in-class amenities will help deliver a more productive and enjoyable working day for the building's occupants, with the expansive green spaces of Sydney Park enhancing the focus on well-being.

Project details

Axis Alexandria

Location

Sydney, Australia

Client

Goodman

External partners

FJC Studio – Architect (formerly FJMT Studio), SBA Architects, Costin Roe Consulting Engineers

Contract type

Design & Build

Construction period

2021 - 2023

Contract value

AU\$45 million (€27 million)

16,081 m²

multi-level industrial warehouse and office development



Pioneering renewable hydrogen production in Belgium

BESIX, BESIX Environment, and John Cockerill Hydrogen Belgium have signed an Engineering, Procurement, and Construction (EPC) contract with client Virya Energy (generation and sale of renewable energy, Colruyt Group), to design and build a power-to-gas facility that can convert renewable electricity (from the offshore wind parks in Zeebrugge) into green hydrogen, named Hyoffwind. Green hydrogen is not only a crucial building block for a renewable energy economy, Hyoffwind will also contribute to the flexibility and balance of the energy system by providing an effective solution for the increased variability created by renewable electricity production.

Why hydrogen?

Hydrogen holds promise as an energy source for a multitude of applications, like mobility (for example, to power fuel cell vehicles without CO₂ emissions), industry (replacing fossil fuels in hard-to-abate industries), or even storage if reconverted into electricity. However, hydrogen is not found in its pure state, and requires a production process, either by thermochemical processes or electrolysis. The latter separates oxygen and hydrogen atoms by passing an electric current through water. When the electricity used in this process comes from green sources, the obtained hydrogen is green. However, while promising for the energy transition, hydrogen remains relatively expensive. For green hydrogen to become competitive, the price of green electricity must continue to fall, electrolyzers become more cost-effective, and economies of scale allow production costs to be reduced. Thankfully, the constraints linked to the use of fossil fuels, such as the carbon tax, indicate that hydrogen will be adopted more and more. This is why BESIX Group is very interested in becoming a pioneer in facilitating its production process.

A well-thought-out project

Hyoffwind has been in the pipeline since 2019. Following the outcome of the feasibility study carried out with the support of the Federal Energy Transition Fund, a tender process was started involving multiple parties. At the end of this tender process, John Cockerill Hydrogen Belgium, BESIX, and BESIX Environment were selected as partners for the design and construction of the facility. Hyoffwind will have an initial capacity of 25 MW, with the possibility for future expansion.

Zeebrugge, located on the Belgian coast and home to one of the biggest ports of Belgium, is the perfect location for the project because of the presence of many established industrial actors, who could become future consumers of the produced green hydrogen. Additionally, Zeebrugge is connected to wider European networks, which is promising for future developments in the Belgian renewable hydrogen market.

Renewed public support

This project is co-funded by the European Union (NextGenerationEU) and the Flemish government (VLAIO). This funding merges and replaces two earlier grants allocated to Virya Energy and Hyoffwind Infrastructure, and further highlights the region's support for the project. With this project and the allocated subsidies, Jo Brouns, Flemish minister of Economy, Innovation, Work, Social Economy, and Agriculture, supports the general development of a hydrogen value chain in Flanders and Belgium.

All set for a successful collaboration

BESIX and BESIX Environment are proud to be pioneering the green hydrogen market in Belgium with this project. Both companies look forward to gaining more experience as an expert in this domain which will certainly help BESIX Group support even more developers, also outside of Belgium. Previous successful collaborations between BESIX and BESIX Environment have proven that the group is the perfect partner for Virya Energy to carry out this EPC contract efficiently and at optimal cost. John Cockerill's expertise in the production of electrolyzers on the Belgian market is the perfect addition to this pioneering triumvirate.

All that is needed now for the consortium to begin the first phase of the works is the granting of the Environmental Impact Permit and the final investment decision. Obtaining these milestones would set Hyoffwind on track to produce the first hydrogen molecules in Zeebrugge in 2026.



Hyoffwind is at the forefront of Europe's green hydrogen initiatives. We are extremely proud to contribute to this leading project by offering BESIX's construction experience in handling complex industrial projects, and BESIX Environment's electromechanical expertise in designing, executing, and commissioning the plant. The collaboration between our teams, alongside John Cockerill and Virya, in developing solutions, promises to set this project as a benchmark in our collective journey towards decarbonising our economies.

Adrien Theunissen, Senior Manager BESIX Environment



Project details

Hyoffwind

Location

Zeebrugge, Belgium

Client

Virya Energy (Colruyt Group)

Partners

BESIX, BESIX Environment, John Cockerill Hydrogen Belgium

Contract type

EPC

Construction period

2024 - 2026

GMHBA Stadium at Kardinia Park: Stage 5 Redevelopment

The Kardinia Park Stage 5 Redevelopment has increased the GMHBA stadium's capacity to 40,000, further cementing its status as Australia's largest-capacity sporting and entertainment venue in regional cities.



With the new northern grandstand (known as the Joel Selwood Stand) now complete, remaining components of the redevelopment – the entry plaza (named Djilang Plaza), the Geelong Sports Museum, unisex changing rooms, event spaces, a regional cricket hub, and the addition of operational areas such as media facilities and a crowd management centre – are on track for completion in the first quarter of 2024. The redevelopment enables GMHBA stadium to become a truly multipurpose venue.

A roof above: engineering marvel unveiled

A standout feature of the new stand is its impressive roof structure, which extends 30 metres over the seating bowl and covers 75 % of the stand's area. Comprising 17 roof modules, each boasts a fully clad truss spanning 43 metres in length and 10 metres in width, capable of bearing more than 50 tonnes in weight.

Each roof module underwent comprehensive pre-assembly, incorporating structural steel elements, cladding, PV panels, AV systems, lighting, and stormwater drainage. Pre-assembly took place within the Kardinia Park Precinct at two satellite sites around the existing stadium, utilising purpose-built assembly jigs. This approach effectively eliminated the risk associated with completing work at heights and resulted in no lost time injuries during pre-assembly and installation.

Innovative design and construction strategies

BESIX Watpac's commitment to excellence extends to innovative design and construction strategies. Close collaboration with stakeholders ensured meticulously coordinated design and documentation, as well as compliance with authority and regulatory requirements. The implementation of alternative building precast and roof module structural systems optimised construction programmes and minimised day-to-day running and maintenance costs.



Community-centric commitment

BESIX Watpac is committed to the communities in which it operates. The GMHBA project successfully achieved its goal of allocating a minimum of 1 % of procurement to Indigenous-owned companies. It was also committed to purchasing goods and services from social enterprises, fostering partnerships with local organisations such as GROW, the Geelong Chamber of Commerce, Kinaway, and Social Traders, underscoring its dedication to local engagement. Additionally, BESIX Watpac sponsored the local Geelong Women's Cricket club, providing a pathway into construction for two young cadets.

Community enrichment beyond construction

BESIX Watpac's commitment extends beyond construction, injecting AU\$56,000 (approximately €34,000) into the Geelong community. The BESIX Watpac Community Fund has supported over eight organisations, including Geelong Mums, GenU, Ladder, and the Koori Aspirations and Career Day. Staff members also actively participated in charitable drives, showcasing a holistic approach to community engagement.

Project details

GMHBA Stadium

Location

Geelong, Australia

Client

Kardinia Park Stadium Trust

Contract type

Design & Build

Construction period

2021 - 2024

Contract value

AU\$142 million
(approx. €86 million)



Delivering the Antwerp Police Force's new HQ

A GAME-CHANGER AND BESIX'S LARGEST PPP BUILDING PROJECT TO DATE

In 2023, BESIX was proud to deliver the cutting-edge headquarters of the Police of Antwerp to its clients AG Vespa and the City of Antwerp, as well as its future occupants, the Antwerp Police Force. The building, one of its kind in Europe, boasts specific and remarkable features tailored to the needs of its occupants and their unique day-to-day activities. Notably, sustainability was a key focus throughout, earning the project multiple certifications. For BESIX Group, successfully delivering the biggest PPP-building project ever in its portfolio to the satisfaction of all parties involved marks a significant venture into diversified projects, further solidifying its expertise in PPPs.

Evolution from contracting to full DBFM responsibility

BESIX's role in the new headquarters for the Antwerp Police Force has evolved over the years from purely contracting to assuming a leading role in a Design, Build, Finance, and Maintain (DBFM) structure. In July 2020, BESIX Group acquired 100 % of shares in the project company from its prior owner, transforming what was 'just' a Build contract into the biggest PPP-building project ever in its portfolio of concessions. After signing an amended DBFM agreement with the City of Antwerp, rescheduling the Engineering, Procurement, Construction (EPC) contract, and reaching a new financial close for long-term debt funding to the project with three major Belgian banks, construction works resumed at the site of the Antwerp Local Police Tower in October 2020, following a year-long hiatus.

Centrally located

The building, situated on the former site of the Antwerp postal sorting centre right next to the Borsbeeksebrug, between the Singel and the Antwerp ring road, is easily accessible for all types of transport and also centrally located. It consists of two towers with ten above-ground floors, connected by a central core of four floors. A large part of the building features an impressive glass façade, offering not only plenty of daylight but also a spectacular view of the city of Antwerp. In addition to the atrium, which serves as the beating heart of the building destined to be a meeting place for its occupants, and featuring a glass roof and a communal catering area, the HQ also offers specific spaces suited to the needs of the Antwerp Police.

Project details

New Headquarters for the Antwerp Police Force

Location

Antwerp, Belgium

Client

AG Vespa, City of Antwerp, Antwerp Police Force

Architect

Jaspers-Eyers, Beel Architects

Contract type

DBFM

Construction period

2018 - 2023 (incl. interruption in 2019 - 2020)

Total surface

78,000 m²



Not your average office building

The two towers of the building are designated for offices and sports, respectively. The office tower contains a museum space dedicated to the heritage of the police force, as well as a state-of-the-art control centre from which the majority of the police force's interventions are managed. This command centre, unique of its kind in Europe, is considered to be the building's centrepiece.

Drivers on the Antwerp ring road might be surprised to see an open space in the building. This is actually an exercise area, designed to simulate the actual conditions in which the police force works, enabling them to perform under pressure. In addition, the building features a shooting range, two gyms, a large exercise area which can accommodate even vehicles, as well as short-term holding cells.

Strict output specifications and certifications

These specific spaces, which didn't allow for much standardisation nor repetition in the design and construction phases, along with the strict output specifications of the building, posed numerous challenges for the construction teams of BESIX. Given its purpose, safety was of the utmost importance, as was acoustic isolation. In addition, due to the timing of the project, BESIX had to navigate both the Covid-19 crisis and the scarcity of construction materials, exacerbated by the inflation following the Russian invasion of Ukraine. Despite these hurdles, BESIX was able to deliver the project on time.

Furthermore, specifics such as thermal and acoustic isolations, solar panels, technological innovation, a roof herb garden, and exceptional attention to the livability of the building, led to the project being awarded both the BREEAM-label Very Good as well as the WELL Building Standard certification.

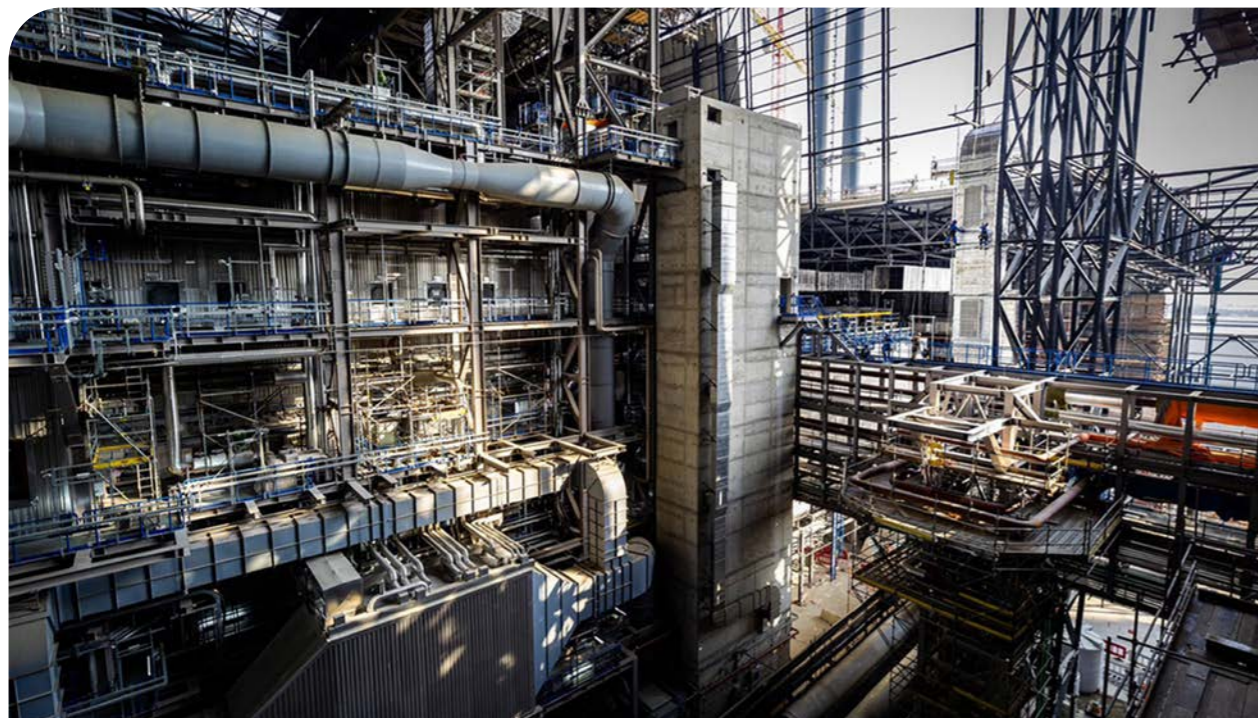
Collaboration

BESIX and all of its partners and stakeholders in this DBFM project are proud to reflect on the collaborative teamwork that led to the successful delivery of these new headquarters for the Antwerp Police Force. Together, they embraced the PPP spirit, fostering a culture of teamwork and mutual success. Upon delivery of the project in May 2023, the maintenance period of 25 years, during which BESIX Group remains the 100 % shareholder in the project company, has commenced.



Shou'alah: O&M excellence fuels Dubai's Waste-to-Energy plant

In the heart of Dubai, a remarkable transformation is taking place at one of the largest 'Energy from Waste' plants in the world. This transformation is powered by Shou'alah, a joint venture between BESIX-Six Construct and Hitachi Zosen Inova. Shou'alah plays a pivotal role in the operation and maintenance (O&M) of the Dubai Waste-to-Energy facility, revolutionising waste management while contributing significantly to Dubai's sustainability goals, and the broader UAE vision for a greener future.



A triad of engagement

BESIX is actively engaged in the Dubai Waste-to-Energy project across three key domains: investment, construction, and operations. As the lead investor and Engineering, Procurement, and Construction (EPC) contractor for the Dubai Waste-to-Energy project, BESIX played a crucial role in the project's initiation and construction phase, ensuring the successful development and commissioning of this world-leading facility. Once completed, Shou'alah, the O&M provider (partly owned by BESIX), will provide operation and maintenance services for an impressive 35 years.

Shou'alah: enabling sustainability

Shou'alah represents a dynamic partnership with a clear mission: to ensure the safe, efficient, and reliable operation of the Dubai Waste-to-Energy facility. With an impressive capability to handle 1.9 million tonnes of waste annually, this facility will produce 220 MW of electricity, thereby providing power to approximately 135,000 households in the region.

At the heart of this sustainable marvel is a complex process that commences with the delivery of municipal solid waste stored in a bunker. A highly skilled crane team meticulously feeds the waste onto the reciprocating grate, and the plant's fully integrated control system ensures stable and efficient operation.

As the waste is incinerated, it generates flue gas which undergoes treatment with state-of-the-art technology to optimise combustion with minimal emissions of pollutants such as CO, NOx, and VOC. This aligns directly with the sustainability objectives of Dubai and the UAE. Simultaneously, the steam produced powers a turbine, efficiently generating energy that can be fed back into the grid.

Sustainable operations for a greener future

While the Dubai Waste-to-Energy facility itself stands as an architectural marvel, Shou'alah serves as its operational backbone. Equipped with industry-leading experience, expertise, and know-how, Shou'alah's specialised team is pivotal in guaranteeing the facility's seamless performance. This team undergoes rigorous training and development by both joint venture partners, emphasising the highest standards of operational excellence, aimed at ensuring the plant's availability and service while adhering to stringent environmental standards and safety protocols.

Transitioning for long-term success

BESIX, as the EPC contractor, plays a crucial role in ensuring Shou'alah's ongoing success. They will actively participate for one year following the Commercial Operation Date (COD) to facilitate Shou'alah's transition into full O&M management. During this Defects Liability Period, they will establish KPIs and address any remaining issues.

Subsequently, Shou'alah will assume a range of responsibilities critical to the operation of the Dubai Waste-to-Energy facility. These encompass daily operational oversight, equipment maintenance, strict adherence to safety and environmental regulations, continuous monitoring of key performance indicators, energy optimisation, and waste stream quality management. Their commitment to minimising emissions, efficient supply chain management, staff training, quality control, data analysis, and environmental impact tracking is complemented by community engagement, research and development, and emergency response preparedness.

Shou'alah truly represents a partnership shaping the future of waste management in the region, helping Dubai and the UAE realise their vision of a greener and more sustainable tomorrow.



Shou'alah's exceptional team, combined with BESIX's proven O&M success in various projects, creates an ideal foundation for success in managing the Dubai Waste-to-Energy facility. Their collective expertise and experience ensure the facility's operational excellence, environmental compliance, and long-term effectiveness in supporting Dubai's sustainability goals.

Eric Tranchant, Head of O&M, BESIX Middle East



State-of-the-art sewage sludge treatment plant will recover energy from the wastewater of 4 million citizens in Flanders

Water treatment company Aquafin is to build a sewage sludge processing installation on the ArcelorMittal site in the port of Ghent, to be operational by 2027. Both companies will utilise the green energy produced to further reduce their CO₂ impacts. Aquafin is also planning the large-scale recovery of phosphorus which is used in fertiliser, among other things. The contract for the design, construction, and financing of the installation, and maintenance until 2046, has been awarded to the BESIX-Indaver consortium.



Project details

Mono-treatment plant for sludge derived from urban wastewater treatment

Location
Ghent, Belgium

Client
Aquafin

Partner
Indaver (50/50)

Contract type
DBFMO

EPC
2023 - 2026

O&M
20 years

Contract value
€150 million

Maximum recovery of energy and materials

The purpose of the installation is to process the biomass that remains after the purification of domestic wastewater. This biomass, created by the growth of the purifying micro-organisms, contains a wealth of energy and raw materials. The new treatment plant in Ghent should be operational by 2027, and will make additional use of the biomass delivered to it. As this is a mono-processor, the sludge will not be diluted with other substances, enabling efficient maximum recovery of energy and raw materials.

Partnership

Using a European tender procedure with competition-oriented dialogue, Aquafin hunted for a partner for the design, construction, financing, and maintenance of the mono-processor. The Design, Build, Finance, Maintain & Operate (DBFMO) contract was awarded to the BESIX-Indaver consortium, which set up the Special Purpose Vehicle 'FOSTER' for this purpose.

Indaver and BESIX are two international, respected, and value-driven industrial partners on the Belgian market. Each has already successfully completed numerous large-scale industrial projects in their respective specialist fields, in both Belgium and abroad. A key shared priority is the creation of added value for the customer and society by putting first their care for people, safety, and the environment. To make a success of this sludge mono-processor project, the two firms are purposefully and skilfully combining their largely complementary knowledge and experience.

Pierre Sironval, CEO of BESIX Group: "BESIX is particularly proud to have been selected for the design, construction, financing, operations, and long-term maintenance of this state-of-the-art mono-combustion sludge treatment plant. The installation is exemplary in terms of circularity and net environmental impact. BESIX has built up a global portfolio of different industrial projects of similar or greater size that take advantage of the diversity of expertise available in the group: project financing, design, engineering, environmental considerations, construction, operations, and maintenance. We look forward to developing the project together with our partner Indaver, a top player in many different types of waste processing installations."

On the ArcelorMittal site

The location of the new installation has been determined for some time. ArcelorMittal is granting Aquafin a building within the existing site, and will purchase 100 % of the steam produced by the sludge processor. For the steel company, this is an additional green energy source for their internal steam network, further reducing the use of fossil fuels. The direct uptake of the entire steam production, combined with the focus on raw material recovery, makes this installation an exemplar illustration of circularity and environmental responsibility within Europe.

Sustainable recovery of phosphorus

In a follow-up phase, Aquafin is planning to commence full-scale phosphorus recovery, representing some 3,000 tonnes of pure phosphorus a year. By opting for mono-processing, phosphorus can be recovered more efficiently from biomass. Phosphorus is an essential building block for life and is also a basic component in mineral fertilisers for agriculture and horticulture. Phosphate ores are, however, a finite resource, with only limited supplies naturally present in Europe. Phosphorus finds its way into domestic wastewater via food, it is from here that Aquafin will resourcefully recover it with the new sludge processor.

The sludge mono-processor will carry out the end treatment of two-thirds of all Flemish sludge from domestic wastewater. The project aligns seamlessly with Aquafin's ambition to cease using fossil fuels by 2030, and to evolve towards climate-neutral business operations in the long term.

Next steps

In 2023, efforts were focused on designing the project and securing the environmental permit. The application was officially deemed complete and acceptable by the authorities in the latter half of the year. Detailed engineering work is scheduled for 2024, preparing for the commencement of construction. This is anticipated to begin towards the end of 2024, with operation initiating in 2027.

BESIX is incredibly proud to be involved in this outstanding PPP project in which we can present our extensive expertise in project finance, design, engineering, environmental processes, construction, operations, and maintenance.

Tom Neyrinck, General Manager BESIX Invest

Unveiling ICÔNE: where vision meets reality

With its inauguration in Belval in January 2023 and keys handed over to Société Générale Luxembourg as tenant and AG Real Estate as acquirer in the first quarter of 2023, ICÔNE stands as a testament to visionary design and operational excellence.

Developed by BESIX RED and envisioned by renowned architects Foster + Partners and local partner Beiler François Fritsch, ICÔNE is not just an office building; it's a distinctive 18,830 m² workspace meticulously crafted to redefine the traditional office experience. With a design philosophy that permeates from the interior outwards, ICÔNE is a reflection of the changing dynamics of work, seamlessly integrating the New Way of Working and stringent environmental standards, earning it the BREEAM Excellent rating. This iconic development is now home to Société Générale Luxembourg, leasing its entirety, and is proudly owned by investor AG Real Estate.

Project details

ICÔNE

Location

Belval, Grand Duchy of Luxembourg

Area

18,830 m² of Gross Leasable Area (17,373 m² of office space and 1,457 m² of retail & restaurant space, plus 680 m² of archives and 237 parking spaces)

Client-occupant

Société Générale Luxembourg

Acquirer

AG Real Estate

Contractors

BESIX GROUP (BESIX and LUX TP)

Architects

Foster + Partners and Beiler François Fritsch

Certification

BREEAM 'Excellent' Building

Delivery

23 February 2023

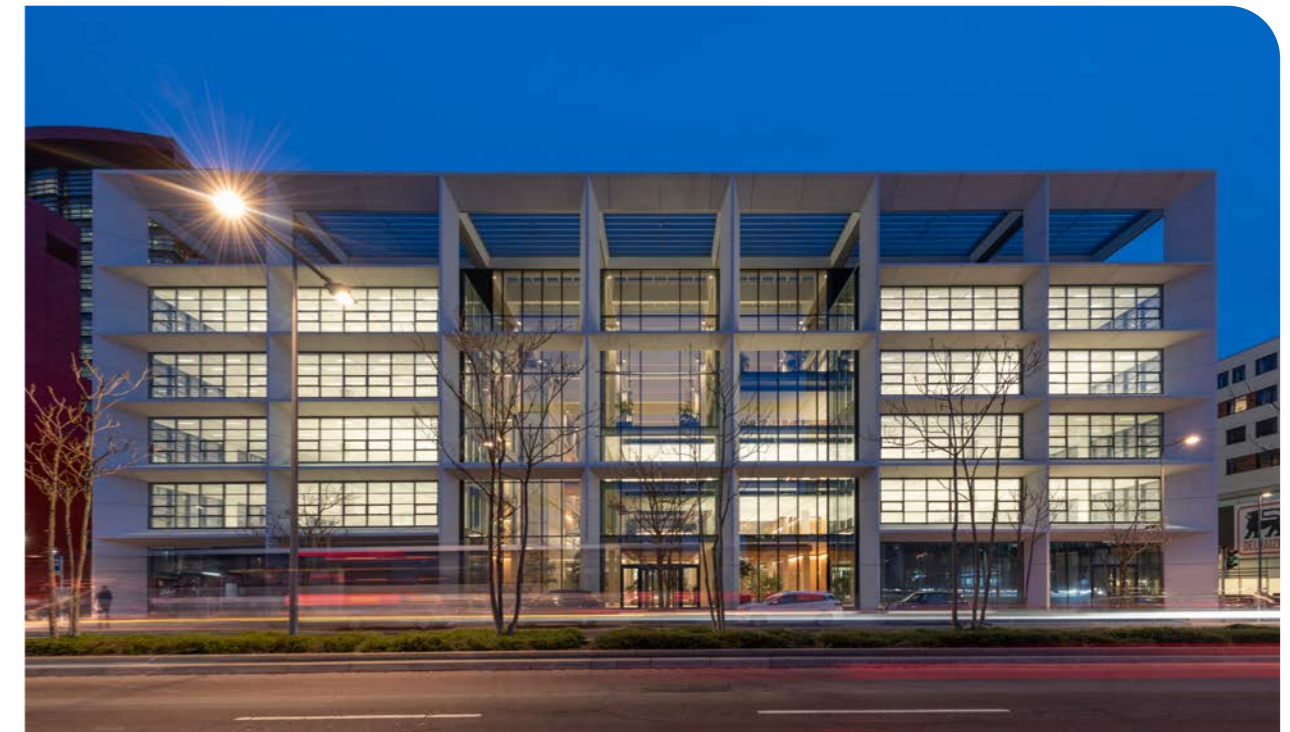
ICÔNE: redefining the office experience

In a significant achievement, ICÔNE, BESIX RED's pioneering and sustainable project, was delivered to Société Générale on February 23, 2023, following nearly three years of construction. Covering 18,830 m², this distinctive building is not just a conventional office space. It embodies forward-thinking, innovative concepts, prioritising the well-being of its occupants. Conceived in 2018 prior to the disruptions of COVID-19, with a focus on the evolving nature of workspaces, the design anticipated a shift in work dynamics. The outcome is an architecturally innovative and sustainable space that offers a distinctive and future-ready work experience.

"In witnessing ICÔNE come to life, we celebrated a significant milestone in the recognition of our expertise and commitment in the Luxembourg market. It underscores the competitive position of BESIX RED Luxembourg, showcasing our capacity to deliver ambitious, attractive, and strategically located developments," says Geoffroy Bertrand, Country Director BESIX RED Luxembourg.

Forward thinking architecture and sustainable approach

ICÔNE's architectural brilliance, a collaborative work by Foster + Partners and Beiler François Fritsch, redefines the Belval skyline. Its distinctive wings envelop a central atrium, a vibrant hub promoting creativity and connectivity. The structurally glazed and environmentally conscious façade features green loggias, showcasing the flawless integration of nature and infrastructure. More than a mere building, ICÔNE stands as a 'smart building,' proactively anticipating and adapting to evolving needs of occupants and prioritising their well-being. Awarded the prestigious BREEAM Excellent rating, ICÔNE pioneers sustainability through energy efficiency, eco-friendly materials, and a harmonious fusion of nature into the urban fabric and industrial heritage of Belval. The inclusion of openable windows, a sedum green roof, and carefully designed green spaces attests to ICÔNE's commitment to a unique work experience.



Success with investors, occupants, and international recognition

ICÔNE's success is evident in its ability to attract prestigious tenants and international investors before completion. Société Générale Luxembourg committed to the entire building with a 15-year lease in 2021, showcasing ICÔNE's appeal and alignment with modern workspace trends. AG Insurance, represented by AG Real Estate, also recognised the building's potential, leading to the acquisition of 100 % of the shares of B-9 S.A., the company owning ICÔNE, in early 2022. This transaction reflects the confidence of renowned investors in ICÔNE's economic viability, solidifying its standing as a sought-after and financially robust asset.

Gabriel Uzgen, CEO BESIX RED, comments: "When reality surpasses the design of a project, a developer might claim that a project has been successful. If, on top of that, all ESG-elements have been pushed to their greatest extremes and correspond to the current needs of the real estate market, it's a double success. The fact that ICÔNE meets the expectations

of a well-established investor like AG Real Estate and is in line with the demands of a tenant like Société Générale Luxembourg demonstrates that ICÔNE is a reference in terms of post-covid work experience".

"By joining forces with a renowned architect like Foster + Partners and leveraging on the in-house multidisciplinary expertise of BESIX for the construction of ICÔNE, we were able to turn our vision into reality", he concludes.

ICÔNE's success has been recognised with prestigious awards, including the 'Best Office Building' at the LuxReal & Paperjam+Delano Business Club Real Estate Awards 2023. The development also received a 5-star award as the 'Best Office Development Luxembourg' in the 2023-2024 European Property Awards.

ICÔNE is not just a building; it's an enduring legacy of innovation, sustainability, and success.

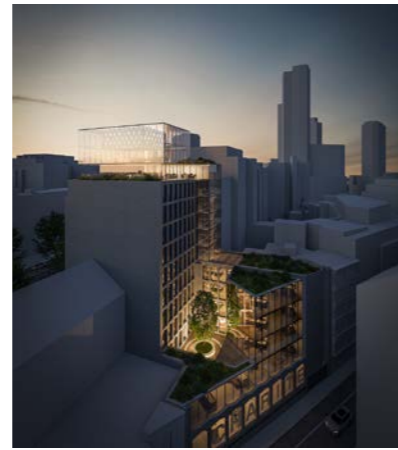
Real Estate

Transforming the past, sustaining the future: BESIX RED's ESG commitment to renovation and sustainability

In the dynamic landscape of real estate, BESIX RED stands as a responsible and ambitious actor committed to shaping a sustainable and innovative future through its developments.

Gabriel Uzgen, CEO of BESIX RED, says: "In alignment with our ESG strategy, we are constantly progressing on our journey towards renovation. With Lighthouse and Anthea, we have extended the Cosmopolitan's legacy in Brussels, demonstrating our dedication to developing properties that have a minimal environmental impact. By doing so, we aim to benefit the planet, the local community, and, of course, our clients."

This article explores two transformative projects in Brussels: Lighthouse and Anthea.



LIGHTHOUSE: PRESERVING THE PAST, ILLUMINATING THE FUTURE

Situated on Avenue des Arts in Brussels' Central Business District, Lighthouse is being transformed from an outdated office building into a modern workspace that prioritises environmental and well-being standards.

A renovation integrating architectural legacy and subtle modernisation

Lighthouse was originally built in 1962 by architects Jean and André Polak, the same renowned architects who designed the Atomium for Expo 58. Lighthouse's renaissance, led by BESIX RED and B2Ai architects, maintains and magnifies the remarkable façade designed by the Polak brothers. The addition of a transparent glass dome rooftop ensures high visibility and a unique identity for the future occupants. The building's interior is designed to encourage collaboration, with open floor plans, meeting areas, and green outdoor spaces to enhance the occupants' well-being.

The low carbon footprint of the building, kept under 300 kgCO₂/m², is achieved through the preservation of the 1960s structure. The concrete structure is carefully conserved and adapted, which includes opening plateaus and reinforcing the structure to meet the load-bearing requirements of the dome.

Preserving architectural elements is at the core of Lighthouse's renovation. An ongoing pre-demolition audit is in progress, proposing recycling measures in accordance with the project's programme, a critical step in achieving BREEAM Outstanding certification. Despite challenges, the iconic helical staircase is partially reused, with a focus on preserving its architectural significance. In addition, some elements, such as RF doors and guardrails, are conserved and meticulously restored, maintaining the historical fabric of Lighthouse.

Engaging with circular experts for second-hand construction materials is also a strategic initiative under analysis.

Concrete steps to sustainability

Lighthouse prioritises the well-being of its future occupants, incorporating innovative features to enhance sustainability and connectivity. A planted patio, accessible from the first floor and adorned with a notable species of ash tree (*Fraxinus Ornus*), along with accessible terraces at levels 1, 2, 5, 10, and 11, contribute to a vibrant environment that encourages biodiversity and offers occupants a pleasant green outdoor space at the heart of the city.

Fossil-free heating, facilitated by heat pumps and integrating 193 m² of photovoltaic panels, will enable Lighthouse to be a very low-energy building with an EPB Label level A.

The use of efficient techniques and rainwater recovery via a 50 m³ tank for sanitary facilities highlights Lighthouse's commitment to optimise water consumption.

Lighthouse is adopting cutting-edge connectivity and building monitoring technologies, in particular Square Sense technology, to achieve high levels of SmartScore and WiredScore certifications. These technologies optimise energy usage, resource management, and overall operational efficiency, marking a significant leap forward in creating a state-of-the-art and more sustainable office experience.

"With Lighthouse, we are revitalising an outdated office building to create an inspiring workspace, that prioritises sustainability and occupant comfort. It's not just a landmark; it's a demonstration of renovation's transformative power, with goals of achieving very high levels of BREEAM and WELL certifications", concludes Raphaël Legendre, Country Director Belgium, BESIX RED.

Project details

Lighthouse

Project type

Offices

Location

Avenue des Arts 14, Brussels, Belgium

Total area

5,513 m² over 11 floors

Parking

20 parking spaces

Architect

B2Ai architects

Expected delivery

Q4 2026

Certifications

BREEAM Outstanding, WELL Platinum

Project structure

BESIX RED (100 %)

Real Estate

ANTHEA: A SUSTAINABLE URBAN METAMORPHOSIS

Anthea, named after the goddess of flowers, gardens and trust, undergoes the transformation of an office building into a primarily residential development. The project features 48 high-end apartments and 385 m² of office space, located on Boulevard du Souverain 360 in Brussels and facing the majestic Val Duchesse domain.

Architectural evolution through a deconstruction approach

Guided by BESIX RED and Urban Platform, Anthea embarks on a deliberately crafted architectural metamorphosis.

Based on a meticulous deconstruction approach, the project prioritises maintaining core structures for the existing edifice's robustness, implementing targeted demolitions with stability in mind. Once the structure is laid bare, the project will be reconstructed primarily using elements from dry construction methods, such as wooden façade panels, new structures, and partitions. Additionally, reclaimed façade elements will be utilised for ground floor cladding and landscape design.

"This deliberate preservation and reuse of existing elements serves as a tangible homage to the building's history. Our commitment to historical continuity remains strong, even without specific heritage protection measures", explains Raphaël Legendre, Country Director Belgium, BESIX RED.

The choice of natural stone for the façade further strengthens this connection, echoing existing elements in materiality and tone, paying indirect tribute to the building's past. Additionally, the project proposes a conversion of the existing technical floor into a residential space.

The renovation of façades and upper levels aims to improve insulation efficiency, resulting in significant reductions in heating energy consumption. The introduction of terraces represents a deliberate architectural choice to alter the building's vertical orientation with a view to create a more unified and horizontally extended structure. The strategic placement of façades follows a calculated oblique arrangement, serving practical purposes such as framing scenic views, minimising visual impact on neighbouring structures, and contributing to an enhanced overall horizontal aesthetic.

Sustainability and well-being at its core

The apartments at Anthea, averaging 110 m², feature plenty of natural light in spacious living areas, large bedrooms, and well-equipped kitchens. Anthea comprises 3 studios, 42 apartments, and 3 penthouses, each with a terrace or garden, and some offering beautiful views of Val Duchesse's greenery.

Anthea's apartments all achieve an EPB A energy classification. Solar panels on the rooftop contribute significantly to renewable energy utilisation and reduce the project's carbon footprint.

Architecturally, Anthea prioritises energy efficiency through high-quality insulation, reducing heating requirements. This pragmatic approach aligns with environmental goals while offering economic benefits to residents.

The sustainability focus extends to Anthea's terrace design, intelligently addressing overheating concerns and negating the need for air conditioning.

In terms of water conservation, Anthea incorporates rainwater harvesting, efficiently repurposing it for common areas and outdoor taps. The project also provides charging stations for electric bikes and cars, promoting eco-friendly transportation alternatives.

Transitioning from concrete to green

The metamorphosis of Anthea involves replacing the concrete ground level with a Boulevard-side garden featuring distinct sections, a landscape trench for rainwater storage, and indigenous shrubs and hedges along property boundaries.

Emphasising green and outdoor spaces, each apartment at Anthea offers balconies or private gardens.

Guided by strong landscaping principles, efforts focus on preserving open soil areas, ensuring permeability, and incorporating indigenous species to enhance biodiversity. The sustainable reuse of prefabricated concrete elements, particularly for flooring, adds an eco-conscious dimension.



Project details

Anthea

Project type
Residential

Location
Boulevard du Souverain 360,
1160 Brussels, Belgium

Total area
6,389 m²

Number of apartments
48

Office space
385 m²

Parking
51 parking spaces, 117 bicycle
bays (including cargo bikes)

Architect
URBAN PLATFORM

Expected delivery
Q1 2026

Project structure
BESIX RED (100 %)

Conclusion

BESIX RED's commitment to renovation and sustainability, inspired by past successes like The Cosmopolitan, finds new expression in transformative projects like Lighthouse and Anthea. These endeavours not only breathe new life into outdated structures but also pave the way for a future where buildings seamlessly integrate with the environment, promoting well-being and reducing our ecological footprint.

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BESIX Construction

Europe

The construction industry in Europe is facing significant challenges. The ongoing effects of the pandemic are evident, and the price increases caused by the conflict in Ukraine are making a notable impact. Yet, challenges are meant to be tackled directly! BESIX in Europe is greeting this 'new reality' with resilience and optimism, identifying potential and opportunities in the face of adversity, as demonstrated by the following accomplishments.

Achievements 2023

In **Belgium**, the year 2023 saw the culmination of several projects, showcasing BESIX's resilience and adaptability on its home turf. Among these achievements, the new Antwerp Local Police headquarters were successfully completed and delivered, including a comprehensive 25-year maintenance period. Additionally, BESIX celebrated the completion of the Spent Fuel Storage Facility for the Tihange nuclear power plant. Moreover, BESIX, BESIX Infra, and BESIX Unitec successfully completed the new pumping station at Royers lock, in the Port of Antwerp. Other notable infrastructure projects completed in 2023 include the rehabilitation of the viaduct in Huccorgne and the road traffic tunnel near Kortrijk station. Progress was also made in rail infrastructure, with significant projects completed in Diepenbeek and Antwerp. These included the construction of three bridges and a tunnel to replace level crossings, as well as the comprehensive renovation of the Kennedy railway tunnel.

2023 witnessed significant developments on major projects in Belgium. The Oosterweel project, Belgium's largest infrastructure and urban development initiative, saw steady progress with the construction of the first tunnel elements in Zeebrugge's dry dock. Advancements were also made in the areas of housing development, such as Liv-De Molens in Deinze, and in infrastructure renewal projects like the Henneau bridge across the Brussels Ring Road and the Toots Thielemans subway station in Brussels. Moreover, the construction of the new headquarters for the national French-language television channel RTBF highlighted BESIX's active involvement in various important sectors in Belgium.

Furthermore, 2023 proved to be a pivotal year for BESIX in Belgium, marked by the acquisition of new contracts across diverse domains, notably within renovation, industrial, and infrastructure, showcasing the company's versatility and strategic focus. These new contracts include projects such as the renovation and construction of a new campus and retail spaces for the higher education school Karel De Grote and developer Meir Corner in Antwerp, the renovation of the 60,100 m² office building 'The Hive' in the centre of Brussels for client BNP Paribas Fortis, and the design and construction of a data centre for developer KevlinX.

In parallel to this, the imminent achievement of financial close on several projects underscores BESIX's commitment to the future. The BESIX-Indaver consortium is poised to finalise financial closure in 2024 for the design, construction, financing, and maintenance of a sewage sludge processing facility in the Port of Ghent. Similarly, the BRAVO-4 consortium, comprising BESIX, Stadsbader, EPICo, Rebel, and the Belgian Infrastructure Fund (I4B), has made significant progress in the R4 project on the Ghent Ring Road. This comprehensive contract, covering the design, building, finance, and maintenance of the site, is expected to reach financial and contractual closure before the summer of 2024. Additionally, in collaboration with John Cockerill Hydrogen Belgium for the client Virya, BESIX, and BESIX Environment have made substantial strides ahead in the design of the Hyoffwind project. This project involves the design and construction of a green hydrogen production facility in Zeebrugge, marking another step forward in sustainable development.

In **the Grand Duchy of Luxembourg**, BESIX and its affiliate LuxTP successfully completed the impressive ICÔNE office building in Belval, covering an 18,000 m² state-of-the-art area, designed by Foster + Partners. Additionally, the company secured a contract to build the new headquarters for the Luxembourg Red Cross, further establishing its presence in the region.

In **France**, BESIX and its partner Dalkia Smart Building completed the Deloitte University EMEA campus, a vast and sprawling 135,000 m² project located on the outskirts of Paris. Progress also continued on Triangle, with the pouring of the raft marking the start of structural, mechanical, electrical, plumbing (MEP), and façade works. The scope of BESIX's involvement in the tower expanded, leading to additional fit-out orders. Moreover, preparations for the Saint-Denis Pleyel station, integral to the Grand Paris Express public transport initiative, intensified in anticipation of the upcoming Paris Olympic Games.

In **the Netherlands**, the completion of Mediavaert, one of the world's largest hybrid-timber office buildings, was achieved in 2023 and delivered to client DPG Media at the beginning of 2024. The water treatment installation project in Culemborg was also successfully completed. Concurrently, BESIX secured two significant infrastructure projects in 2023: the variable maintenance of road infrastructure and civil structures in the province of Limburg, in collaboration with BESIX Infra Nederland, and the renewal and widening of the A27 highway between Houten and Everdingen.

2023 also witnessed steady progress on several projects in the Netherlands. Within the A16 project in Rotterdam, the energy-neutral Rottmeren tunnel is nearing completion, while the viaduct over the Terbregseplein is undergoing steady development. At the POST site in Rotterdam, after finishing the complex foundations, the team commenced structural



1. Deloitte EMEA University, Paris (France)
2. ICÔNE, Belval (Grand Duchy of Luxembourg)
3. Royers Lock, Antwerp (Belgium)
4. Liv-De Molens, Deinze (Belgium)
5. Oosterweel Link Scheldt Tunnel, Antwerp (Belgium)
6. Karel de Grote Hogeschool, Antwerp (Belgium)

works, significantly progressing in the shaping of the tower that will transform Rotterdam's skyline. Significant advancements were also made on the navigation control centre in The Hague and the PALLAS isotope reactor project in Petten. Additionally, preparatory works commenced for the reconstruction of the De Nieuwe Meer intersection in Amsterdam.

Meanwhile, in **Italy**, substantial progress was made on the Valfabbrica State Road 318 infrastructure project in 2023, with consistent excavation efforts underway on both the Picchiarella and Casa Castalda tunnels. In November 2023, the BESIX-Donati partnership successfully secured a contract to construct a new 3.3 km section of road, including two tunnels and a viaduct in Ancona.

Outlook 2024

Looking ahead, BESIX Europe remains committed to operational excellence, aiming for profitable growth across all of its projects and focusing on Early Contractor Involvement (ECI) projects. The aim is to enhance collaboration and alignment on clients' objectives to ensure that each project delivery is as efficient, timely, sustainable, and cost-effective as possible. Similarly, BESIX will continue to prioritise tendering for complex, value-added design and build projects, leveraging its in-house engineering expertise as much as possible.

In 2024, **Belgium** is expected to see a continued influx of large public infrastructure works, including the Brussels ring

road upgrade and ongoing works on the Antwerp ring, alongside initiatives aimed at energy transition. In Belgium, BESIX will therefore intensify its focus on infrastructure and industrial projects, particularly those linked to sustainable energy. This strategy is driven by the desire to support clients through their energy transition efforts, addressing the ESG requirements of the European Green Deal and CSRD regulation.

In **France**, BESIX is concentrating on marine and civil works, with key projects such as the Havre port infrastructure and the Seine Nord canal. The company is also exploring design and build projects for public clients, aiming to fully apply its knowledge and expertise in the completion of complex projects.

Following a few challenging years, in the **Netherlands**, BESIX anticipates a resurgence of positive outcomes and perspectives, despite grappling with a demanding real estate market. The company is focusing on projects on which it can deliver significant added value, with concerted efforts being made towards infrastructure, industrial projects, and complex buildings. Examples of this include the renovation of the Krammer locks and the modernisation of motorway infrastructure including the A15 (project ViA15) and A59 (project GOL).

In **Italy**, BESIX continues its strategic focus on medium-sized infrastructure projects, in partnership with its long-standing collaborator, Donati. This commitment reflects BESIX's strategy to leverage its expertise and make significant contributions to the Italian infrastructure landscape.



1. Saint-Denis Pleyel Station, Paris (France)



2. A16 De Groene Boog, Rotterdam (The Netherlands)



3. The Vescovi Viaduct at State Road 318, Valfabbrica (Italy)



4. Red Cross new HQ, Luxembourg City (Grand Duchy of Luxembourg)

5. Port of Neom, Oxagon City (Saudi Arabia)

Middle East

Since 1965, BESIX has been a prominent player in the Middle East's construction sector, specialising in marine, infrastructure, and environmental projects. The company is also renowned for its expertise in high-rise construction, innovative waste-to-energy projects, port development, and dynamic public-private partnerships, establishing itself as a pioneering leader within the industry.

Market & positioning

Despite global economic uncertainties, the Middle East is currently experiencing favourable economic conditions, leading to significant government investments in infrastructure. The construction market has demonstrated remarkable resilience, overcoming obstacles presented by the pandemic, inflation, and geopolitics. These challenges have also tested contractors, suppliers, and engineering firms, which had to adapt to rapidly changing conditions. Major investments in infrastructure, education, and healthcare in the UAE and Saudi Arabia generate optimism and competition among industry players. Within the GCC, the BESIX brand is well recognised and widely appreciated as a trusted project partner and tier 1 engineering contractor.

As a pioneer in sustainable construction and complex infrastructure projects, BESIX is committed to sustainability, environmental responsibility, and the adoption of digital solutions to enhance safety and efficiency. The company's collaborative relationship with clients ensures that ambitious visions become tangible realities.

Achievements 2023

In 2023, BESIX Middle East secured a SAR3 billion (€732 million) contract for the transformation of Duba Port into the Port of Neom, setting a precedent as the first European contractor to win a design and build lump sum contract with NEOM. The Dubai Waste-to-Energy facility was inaugurated by the Crown Prince of Dubai, following a successful first fire in June 2023. This facility is a cornerstone in reducing landfill usage, generating clean energy, and aligning with the UAE's Vision 2030.

The 81-storey Dubai Uptown Tower, featuring a hotel, residences, and offices, was completed, setting new standards for sustainability and innovation in high-rise construction, enhanced by state-of-the-art digital solutions. The greatly anticipated Atlantis The Royal luxury resort, the latest iconic addition to Dubai's skyline, was unveiled to the public and encompasses six towers, a magnificent podium, 795 rooms and suites, and 231 serviced apartments. At the Guggenheim Museum Abu Dhabi, in an impressive span of just 12 months, the base build phase, the construction of four distinctive buildings, and the erecting of 20,500 tonnes of steel structures were completed. At the Zayed National Museum, substantial progress was achieved with the successful completion of the steel structure for the wings, complemented by the sealing of the glass-reinforced concrete of the pods, which will contain the heart of the museum: its main galleries. Additionally, all main tower cranes were removed, facilitating smoother construction operations. Glass installation began on the wings, and the coastal area of the Timeline Garden was completed.

The BESIX Middle East team made significant strides in fostering a safety-first culture through various initiatives. It launched the IOSH Managing Safely programme and engaged over 9,000 participants in the Global Safety Time Out: a designated day each year when teams hold a "time out" moment to reflect, learn, and talk about safety. It also introduced the OASIS digital platform for QHSE management and emphasised the importance of Life Saving Rules. These efforts, coupled with increased subcontractor engagement and improved communications around lessons learned, demonstrate BESIX's commitment and dedication to achieving zero fatalities and promoting a proactive safety environment.

Furthermore, BESIX Middle East's recognition through the receipt of the Impact Seal - Gold Tier 2022 from the National CSR Fund, highlights its commitment to sustainability, environmental responsibility, social governance, and alignment with the UN Sustainable Development Goals (SDGs) and national priorities. Moreover, BESIX's participation in COP 28 in December 2023 highlights its leadership role in guiding the construction industry towards a more sustainable future. During COP 28, BESIX signed a Memorandum of Understanding (MoU) with the Dubai Municipality, marking a significant milestone in its mission to contribute to sustainable development, environmental stewardship, and the energy transition. This formal agreement of high-level cooperation between BESIX, HZI (Hitachi Zosen Inova) and Dubai Municipality will promote effective collaboration, aligning perfectly with the company's commitment to innovation and sustainability.

BESIX Middle East also conducted regular meetings between worker representatives and leadership and continued its collaboration with Building and Woodworkers' International (BWI), further demonstrating its commitment to worker welfare.

Outlook 2024

Alongside BESIX Middle East's strategic focus on marine, civil infrastructure, and complex projects, the company remains deeply committed to fostering innovation and sustainability within the construction sector. It strives to lead by example, showcasing how responsible construction practices can positively impact the environment, empower workforces, and enrich communities. Through its unwavering pursuit of excellence, BESIX Middle East aims to inspire and establish new benchmarks for the entire industry.



International

Despite a challenging international environment due to the continuous price increase of materials, transport and logistics problems, and worldwide geopolitical instability, BESIX International continues to solidify its position as a key EPC Contractor for complex projects in its core sectors: marine, infrastructure, and high-rise buildings.

With a steadfast focus on customer satisfaction, BESIX International is actively engaged in projects across Europe, America, and Africa, spanning thirteen projects in twelve different countries. In Europe, BESIX is currently working in three countries: Denmark, Latvia, and the coastal region of Montenegro for the Luštica resort development expansion. In the Americas, BESIX has a presence in Brazil and Canada. In Africa, BESIX is involved in construction activities in Ivory Coast, Tanzania, Cameroon, and Morocco.

Achievements 2023

Throughout 2023, BESIX successfully delivered three significant projects across **Africa**. Firstly, in Ivory Coast, BESIX efficiently completed the Parc des Expositions in Abidjan, fully meeting the expectations of PFO Construction, a prominent construction firm in the region. Having been awarded the contract for the design, manufacture, transport, and installation, BESIX crafted a remarkable 12,000 m² three-dimensional structure and impressive roof cladding for this exhibition centre. Additionally, BESIX finalised the tunnel beneath the roundabout of the Abobo city hall, meeting the client's requirements seamlessly. In Egypt, a monumental milestone was reached with the completion certificates of the Grand Egyptian Museum in Cairo, Egypt, marking the culmination of over a decade of dedicated work. Scheduled for an official inauguration in 2024, this achievement serves as a testament to BESIX's unwavering commitment to excellence in construction.

Across Africa, BESIX is actively engaged in two prestigious high-rise tower projects: the Mohamed VI Tower, in Rabat, Morocco, where the finishing works have progressed well, and the Tour F in Abidjan (Ivory Coast), which has now reached a height of 150 metres.



1. Zayed National Museum, Abu Dhabi (United Arab Emirates)
2. Nordhavn Tunnel, Copenhagen (Denmark)
3. Mohammed VI Tower, Rabat (Morocco)
4. Kangaroo Point Green Bridge, Brisbane (Australia)

On the Nachtigal hydropower dam and plant project, the client NHPC (along with EDF and the government of Cameroon as major shareholders) is expecting to deliver the first megawatt to the Cameroon energy grid in the first quarter of 2024. Finally, in 2023 progress was made in Gabon regarding the financing of a contract where BESIX, in partnership with Matière, will construct metallic bridges and flyovers.

In **Europe**, the initial phase of the new Rail Baltica Riga Central station in Latvia was completed, including the construction of the concourse, while the installation of the roof structure arches, which will be a defining feature of the new station, is currently underway. New stages are now in their start-up phase and the building reached its highest point in February 2024. Progress was also made on the Nordhavn tunnel project in Denmark, with a ground-breaking milestone achieved in May - the construction of the working platform, and installation of sheet-piling for the construction pit.

In the **Americas**, alongside the ongoing Portonave quay wall improvement project in Brazil, where operations are progressing as planned, BESIX is finalising Berth 2 of the Canada LNG Project in Kitimat, British Columbia, Canada.

Outlook 2024

The business unit's strategy focuses on nurturing long-term partnerships with key industry players, including container terminal operators, energy majors and dominant EPC contractors. By engaging early in complex projects, the company aims to develop mutually beneficial approaches. This strategy has already yielded positive results on several major marine projects.

Finally, BESIX International places emphasis on projects offering sustainable solutions, such as hydropower plants, water treatment facilities, and environmentally friendly transport infrastructure. In this vein, several projects, along with their corresponding financing plans, are currently under evaluation.

With these opportunities in mind, the Business Unit International is confident and optimistic about its future prospects, anticipating the maintenance of a steady turnover and margin in the forthcoming years.

Australia

Achievements 2023

In 2023 BESIX Watpac celebrated four decades of award-winning local construction and the successful delivery of projects totalling over AU\$ 25 billion (€15 billion) since its establishment in 1983. Welcoming Her Royal Highness Princess (HRH) Astrid of Belgium to the Sydney Metro Barangaroo Station project was another significant celebration and highlight.

Throughout the Australian and New Zealand construction industries, challenges persisted in line with global market trends. In Australia, the demand for major public infrastructure increased by 4 % to a total of AU\$230 billion (€139 billion) over five years. Despite government efforts to streamline projects, demand continued to outweigh supply and labour resources.

In this demanding environment, BESIX Watpac showcased remarkable resilience, prioritising the completion of ongoing projects while securing new contracts.

In Queensland, work commenced on the Gold Coast University Hospital's new Secure Mental Health Rehabilitation Unit. Additionally, three Early Contractor Involvement (ECI) contracts were also secured with Queensland Health for hospital redevelopments in Mackay, Ipswich, and Townsville.

The new Mental Health Facility at Ipswich Hospital and the James Cook University Engineering and Innovation Place – a highly complex building in North Queensland, both reached completion.

The world's largest lifting capacity tower crane arrived at Kangaroo Point Green Bridge and successfully installed the 95-metre-tall mast centerpiece, making this the tallest bridge in Brisbane. In New Zealand, BESIX Watpac's collaborative contractual model proved successful, with the emergence of the concrete structure of Te Kaha Multi-Use Arena in Christchurch.



The New South Wales (NSW) team delivered and later relocated their head office to the Poly Centr – a prestigious 25-storey commercial tower in the heart of Sydney's Circular Quay precinct. Close by, the Taronga Zoo and Double Bay Wharf Upgrades were completed with ongoing ferry terminal projects secured.

The contract signing for the third stage of the St George Hospital Redevelopment in Sydney formalised BESIX Watpac's seventh project with Health Infrastructure NSW. The underground station works were completed at Barangaroo Station and Goodman's carbon-neutral industrial facility in South Sydney also reached fruition.

In Victoria, CSL Seqirus' AU\$ 800 million (€484 million) innovative vaccine and anti-venom manufacturing facility celebrated a major 'top out' milestone and works progressed on the Garden Drive Microsoft Data Centre, a two-level 'hyper-scale' data centre. Doors opened at the new Saint Teresa of Kolkata building on the Australian Catholic University's Fitzroy campus and other noteworthy completions included the Taranakan Street affordable housing project.

Further South, the iconic GPO Hotel Marriott project in Adelaide remains on track for completion in the first half of 2024, while construction began on the Eastwood Private Hospital project.

With its continued focus on excellence, the company's unwavering commitment to quality was recognised with twelve industry awards for successful project delivery throughout the country. This included Jubilee Place – BESIX Watpac's headquarters – being named Project of the Year by Master Builders in Brisbane.

The company advanced its sustainability efforts through the development of its Sustainability Strategy 2.0, focusing on a baseline assessment, developing net zero targets, and strengthening the organisation's diversity and community commitments.

Outlook 2024

Looking ahead, BESIX Watpac has a robust portfolio with numerous projects underway across key sectors such as health and science, secure facilities, industrial buildings, stadiums and venues, and infrastructure. The company continues to strategically position itself for upcoming projects, including preparations for the 2032 Brisbane Olympic Games. It remains committed to upholding its reputation as a trusted quality contractor, known for delivering complex projects with success and efficiency. BESIX Watpac continues to actively explore opportunities for diversification that align with the organisation's core construction activities, aiming to bolster its position for long-term future success.

BESIX Invest

Achievements 2023

In **Europe**, the focus of tendering activity in 2023 remained primarily on Belgium, due to the absence of significant civil, infrastructure, marine, or building tenders in neighbouring countries. The portfolio of projects in the operational phase expanded from four (Coen Tunnel, Limmel Flood Barrier, Beatrix Lock, and A6 Almere highway) to five, following the successful completion of the new Antwerp Local Police headquarters building project. BESIX owns all shares in the special-purpose vehicle of the latter project and served as the sole EPC contractor for this iconic building, situated alongside the ever-busy Antwerp ring road. The Operations & Maintenance period for this project will extend until 2047. Progress on the construction of the A16 'De Groene Boog' highway project in Rotterdam is well underway, while the ViA 15 'Gelre-Groen' highway project eagerly awaits the final ruling of the Dutch Council of State, following prolonged debates on nitrogen regulation, which have delayed the project's start and financial close in recent years.

After being awarded preferred bidder status, along with its partners, for the major R4WO ring road project in Ghent in mid-2021, the final obstacles were successfully overcome in 2023 regarding permit acquisition and reaching a final agreement with the client on price indexation. The project is on track to reach contract close before the end of the first quarter of 2024, with construction set to commence soon thereafter. This significant road infrastructure PPP project, the largest ever in Belgium, will involve multiple entities within BESIX Group (i.e., BESIX, BESIX Infra, BESIX Unitec, BESIX Invest) throughout its exceptionally long construction (7 years) and Operations & Maintenance periods (30 years).

Further progress was made in the design, engineering, and permit application process for the sewage sludge processing installation DBFMO project awarded to the consortium BESIX-INDAVER by Flemish water treatment company Aquafin in the port of Ghent in 2022. This marks BESIX's first environmental PPP project in Europe, with a duration of 20 years after construction. The facility will process the biomass remaining after the purification of domestic wastewater by Aquafin's many sewage treatment plants across Flanders and will be exemplary in its circularity and net environmental impact.

BESIX is awaiting the outcome in early 2024 of two civil works and road infrastructure tenders which received a significant investment of time and effort throughout 2023. One tender involves the complete renovation and subsequent long-term

maintenance of over 40 existing land and waterway bridges scattered across Flanders. The second project aims to transform an existing high-density dual carriage crossing on the A12 Antwerp-Brussels motorway, notorious for numerous traffic accidents, into a state-of-the-art traffic interchange. Special attention will be given not only to motorised vehicles, but also to the many daily cyclists and pedestrian users through purpose-built underpasses and walkways.

In the **Middle East**, BESIX and EPC partner Hitachi Zosen Inova are maintaining excellent progress on the Warsan Waste-to-Energy project in Dubai; a \$1.2 billion (€1.12 billion) endeavour. Set to be fully operational by the summer of 2024, the project will have the capacity to process 1.9 million tonnes of municipal waste annually and generate 200 MW of electricity. Meanwhile, in Abu Dhabi, BESIX, in collaboration with the Australian infrastructure fund Plenary Group, is seeing timely advancement in delivering the Zayed City Schools PPP project by their local EPC contractor, as scheduled. This pioneering initiative marks the UAE's first public-private partnership in the field of school infrastructure, paving the way for future private sector participation in the development of the country's social infrastructure. The project was awarded by the Abu Dhabi Investment Office (ADIO), in collaboration with the Abu Dhabi Department of Education and Knowledge (ADEK). With an anticipated opening date at the start of the 2024-2025 school year, the project encompasses three new state-of-the-art school campuses in Zayed City, Abu Dhabi, with a total capacity of 5,360 students. As well as these impressive



1. Aquafin Sludge Treatment Plant, Ghent (Belgium)
2. Zayed City Schools, Abu Dhabi (United Arab Emirates)
3. Waste-to-Energy Plant, Dubai (United Arab Emirates)



1. New Local Police Headquarters, Antwerp (Belgium)

projects, BESIX continued to actively pursue further PPP projects, primarily based in Abu Dhabi, but also in other parts of the region beyond the UAE.

Regarding hospitality assets in Belgium, Poland, and Switzerland, where BESIX acts as a co-developer and investor, 2023 saw a return to pre-Covid-19 occupancy levels and financial performance. Significant strides were made towards divesting BESIX stakes held in two hotels in Belgium, with closings expected during the first half of 2024, pending satisfactory fulfillment of pre-agreed conditions with the prospective buyers.

Activity profile

BESIX Invest specialises in creating and offering customised solutions for infrastructural, environmental, and building projects, catering to various project life cycles and delivery models, such as Public-Private Partnerships, DBFM (Design, Build, Finance, Maintain), and BOOT (Build, Own, Operate, Transfer) projects.

With a focus on aligning completely with its clients' visions and expectations, BESIX Invest provides tailored technical, commercial, and financing schemes to meet their long-term needs, ultimately optimising the total life cycle cost of assets.

In BESIX's domestic markets across Europe, the Middle East, and Australia, there is more demand than ever for comprehensive services beyond just asset provision, including Design, Build, Finance, Operate, and Maintain projects. Clients increasingly favour paying for services rather than just assets. Leveraging its international network of trusted advisors, tier-1 project finance lending banks, and a diversified asset portfolio, BESIX Invest can arrange competitive packages encompassing construction, long-term maintenance, and optimised financing. By bringing together financial and industrial parties and aiming for the lowest total cost over a project's economic lifetime, BESIX Invest delivers solicited added value by offering a broad multidisciplinary range of solutions along the entire value chain. Where appropriate, the company may also be able to inject its own capital in order to finance initial investments.

Supported by a skilled team based in Brussels, Dubai, and with an emerging presence in Brisbane, BESIX Invest complements the BESIX Group's robust engineering, design, and planning capabilities. The group's strong financial position enables it to pursue substantial equity stakes in project financing, and maintain a significant presence in joint ventures responsible for EPC (Engineering, Procurement, and

Construction) and O&M (Operation & Maintenance) works. With expertise spanning various sectors, from buildings to infrastructure, to civil works, road surfacing and environmental projects, BESIX offers a comprehensive suite of solutions. Its global presence allows participation in PPP tenders not only in its three home markets (Benelux-France, GCC countries, and Australia), but also in other countries where Public-Private Partnerships are recognised as a truly viable value-for-money proposition for the longer term.

Following the reinforcement of its team in 2022 and 2023 with new external hires, bringing extensive expertise in renewable energy markets and projects such as solar, onshore wind, offshore wind, and green hydrogen, BESIX Invest embarked upon bilateral development initiatives. These included participation in public tenders, focusing primarily on solar rooftop PV and floating solar PV projects. BESIX Invest also aimed to engage as a co-developer and, potentially, as a co-contractor too for the larger ventures.

Outlook 2024

In Belgium, besides bringing recently awarded projects to financial close, BESIX Invest will continue to actively pursue and respond to public tenders for buildings, civil works, infrastructure, and renewable energy projects. The team is already deeply engaged in preparing new proposals for several upcoming projects. Moreover, further growth is expected in Belgium and several other European countries in the field of solar PV projects with long-term PPAs (Power Purchasing Agreements).

In the Middle East, an increase in tenders is expected across sectors such as waste-to-energy, healthcare, student housing, and potentially public transport. The GCC market is projected to remain highly active, with a growing number and variety of Design, Build, Finance, Maintain, and Operate (DBFMO) projects. This expansion includes sectors beyond power, desalination, and wastewater treatment. The Dubai-based tender teams will continue to actively monitor opportunities in neighbouring Saudi Arabia's booming DBFMO market, pursuing projects with the appropriate local partners and potential returns on equity.

Furthermore, BESIX Invest will continue to support BESIX Watpac with its diversification efforts throughout Australia. This support includes not only maintaining a key role as a contractor, as already successfully done in the past, but also exploring opportunities to participate as a co-investor and developer.

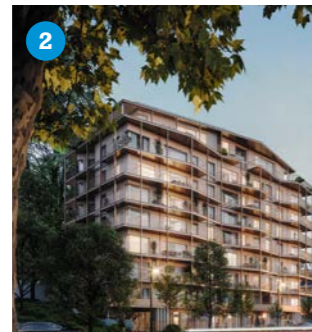
BESIX Real Estate Development

BESIX RED stays afloat amidst 2023 challenges, thanks to solid teamwork and expertise

Despite enduring unprecedented challenges in the real estate market throughout 2023, BESIX Real Estate Development achieved a commendable turnover of €112.3 million, driven by the transactions of the office projects ICÔNE in Luxembourg (18,800 m²), WellBe in Lisbon (27,600 m²) and successful residential units' sales across Belgium and Portugal (for a total of 83 units totalling more than 9,000 m²).

BESIX RED's contribution to the Group's net result amounts to €10 million.

“Our tenacity amidst global geopolitical turmoil and a challenging macroeconomic landscape is a testimony of the unwavering dedication and unity of our team. I would like to thank every member of the BESIX RED team for their commitment, passion and collaboration during these testing times. Our team's cohesion and expertise remain invaluable”, says Gabriel Uzgen, CEO BESIX RED.



Highlights 2023

In 2023, BESIX RED achieved notable milestones across Europe, including:

ESG Commitments

BESIX RED is strengthening its ESG commitments and has crafted a comprehensive ESG strategy supported by ambitious and tangible Key Performance Indicators (KPIs). The company conducted an extensive audit to assess its ESG practices and objectives thoroughly. Furthermore, BESIX RED is on track to publish its first ESG report by mid-2024. Additionally, the company has intensified its preparations to comply with the Corporate Sustainability Reporting Directive and European Taxonomy.



Belgium: obtaining permits in Brussels and Wallonia

Navigating through the bureaucratic challenges and prolonged administrative processes prevalent in the current Belgian landscape, BESIX RED has achieved significant milestones by obtaining urban planning authorisations for multiple projects. Among these, the two transformative projects **Anthea** and **Lighthouse** stand out, as both projects obtained urban planning authorisations in record time, less than a year.

Both projects align with BESIX RED's commitment to Environmental, Social, and Governance (ESG) principles.

Anthea, a residential conversion of an office building, offers 48 high-end apartments and 385 m² of office space, positioned on Boulevard du Souverain 360 in Brussels with scenic views over the Val Duchesse estate. Commercialisation efforts for Anthea are set for success in 2024, with plans to commence in March.

Lighthouse, situated in the Central Business District of Brussels, is a modern office development spanning 5,600 m², aimed at revitalising outdated office spaces into a sustainable and state-of-the-art workspace. Lighthouse targets the BREEAM 'Outstanding' and WELL Platinum certifications.

Gabriel Uzgen says: “Aligned with our ESG strategy, our renovation journey continues to progress. Lighthouse and Anthea extend The Cosmopolitan's legacy in Brussels, highlighting our dedication to creating developments with minimal environmental impact - benefitting the planet, the local community, and our clients.”

Still in Brussels, **Les Promenades d'Uccle's** fourth phase, featuring 58 apartments and 12 houses, has secured all permits and is scheduled to start construction in Summer 2024. This residential development, co-developed with partner Matexi, is creating a new district on the Engeland Plateau in Uccle (Brussels), bordering a Natura 2000 site.

Collaborating with partner Thomas & Piron Bâtiment, BESIX RED also secured the building permit for the first phase of the **Green Station** project in Gembloux, comprising 144 apartments. With construction set to begin in the spring of 2024, Green Station represents a substantial residential development spanning 56,890 m² across four phases. This ambitious project emphasises sustainability and soft mobility, offering varied apartment typologies and fostering an inter-generational community in a newly developed neighbourhood, bolstered by its proximity to the train station.

Moreover, in Louvain-la-Neuve, the same two developers secured the permit for plots 710 and 711, totalling 51 residential units at **Esprit Courbevoie**. Sales are expected to start in Q1 2024, with construction works in Q2. Esprit Courbevoie is a 59,600 m² new district in the heart of Louvain-la-Neuve serving as a junction between the train station and other existing neighbourhoods.

In total, the granting of these permits represents nearly 6,000 m² of office space and over 70,000 m² of residential, equivalent to 453 units.

1. Gabriel Uzgen, Managing Director BESIX RED
2. Anthea, Brussels (Belgium)
3. WellBe, Lisbon (Portugal)

Grand Duchy of Luxembourg

In Luxembourg, the company has delivered the **ICÔNE** project to its occupants, Société Générale Luxembourg and investor AG Real Estate. ICÔNE has received two international awards: Best Office Building at the Luxreal-Paperjam Awards and Best Office Building at the International Property Awards.

The Netherlands

In Amsterdam, **Sluishuis**, a 39,500 m² zero-energy residential building situated on the IJ-lake, earned international acclaim by winning the MIPIM Award for 'Best Residential Project' in March 2023 in Cannes. As of the end of 2023, only one residential unit remained available for sale. Furthermore, all sloop spots at Sluishuis have been sold, with only one berth for a houseboat remaining unreserved. Additionally, a lease has been secured for the commercial space, which will house a sport and fitness business.

France

After obtaining the building permit to develop **PURE** in the Lille metropolitan area in 2022, the team has made progress in launching the consultation for construction. Works are expected to commence in Q3 2024. Designed by the renowned architect Coldefy and the local landscape architect LAND, PURE will encompass 8,000 m² of modern offices centred on the well-being of users. It is designed to obtain the BREEAM 'Excellent' and WELL certifications.

Portugal

In June 2023, BESIX RED entered into a partnership with developer Atenor and acquired a 50 % stake in the **WellBe** project, a cutting-edge office development in Parque das Nações, establishing a new standard in Lisbon for sustainability and user experience. In December, the project company signed a Memorandum of Understanding (MoU) pertaining to the sale of the building to Caixa Geral de Depósitos, Portugal's largest bank.

“In the current context, the office market is facing challenges, with investors adopting a cautious wait and see approach. However, this significant transaction underscores that well-located projects with robust ESG standards and a focus on well-being can attract major corporations seeking offices aligned with their ESG priorities,” adds Gabriel Uzgen.

Still in Lisbon, the building permit for **DUUO**, our first residential development in the country, has been secured, and construction of the first phase commenced in March 2023. At the end of the year, nearly 60 % of the project's first phase was already sold or reserved.

Developed in collaboration with the investment holding company Compagnie Du Bois Sauvage and designed by the Portuguese architectural firm Nuno Leónidas Arquitectos, DUUO is a high-end residential concept spanning 34,000 m² with 280 apartments over two condominiums, situated in the popular “Avenidas Novas” district in Lisbon.

Commercial and operational results

In 2023, BESIX RED's turnover was driven by the transactions of ICÔNE with AG Real Estate in Luxembourg and WellBe in Portugal. It was also supported by the sale of 83 residential units (Les Promenades d'Uccle in Brussels, Esprit Courbevoie in Louvain-la-Neuve, Meadow in Herent and DUUO in Lisbon).

In 2023, BESIX RED delivered the following project:

- Esprit Courbevoie (Louvain-la-Neuve) : Plots 705b, 706 and 708 (25,000 m² residential) and plot 707 (8,500 m² offices) were successfully delivered. This 8,500 m² building was delivered to Befimmo, and is leased to Silversquare, a Befimmo affiliate specialised in co-working, and to N-SIDE, an innovative consulting company in advanced analysis software.

Developments in progress include:

- Viridis (Brussels): Viridis totalises 17,500 m² of build-to-rent apartments and commercial premises in the up-and-coming Reyers district. The construction site is progressing and the half-way completion milestone was reached in May 2023. The delivery is expected in June 2024. In May 2024, BESIX RED will take care of renting the retail and residential units for investor PATRIZIA.
- Les Promenades d'Uccle (Brussels): The construction progress of the third phase of this residential project has passed the 50 % mark, and is almost sold out, with only six apartments and nine houses left.
- Le Côté Verre (Namur): The permit for Le Côté Verre, a mixed-use project covering 44,400 m² at Quartier Léopold, adjacent to Namur railway station, was introduced in December. This development integrates multiple functionalities, promising a comprehensive living, working, dining, shopping, and leisure experience while contributing to the vibrant city centre. Embracing circular business models, Le Côté Verre aims for BREEAM Excellent certification and WELL Platinum accreditation.
- Lecocq (Namur): In December 2023, the permit was also submitted for the Lecocq project, located on the site of the former military hospital in Salzinnes. The project involves the renovation of 13 houses and the construction of 55 residential apartments, along with a multipurpose room in a green environment.

- Meadow (Herent): The fourth and last phase of this residential project in the village of Herent, near Leuven, comprises 40 apartments. Commercialisation started in September 2023 and on 31 December 2023, 11 units were sold. Construction works started in November 2023 and the preliminary delivery is expected for Q4 2025.

BESIX RED has also made progress in the development of significant projects such as:

- Belgium: Gelatines in Hasselt, O'Vert in Ghent, the second phase of So Stockel, Molière, and Matisse 16 in Brussels.
- Luxembourg: Faiencerie and Walferdange.
- The Netherlands: Kijkduin.
- Portugal: Parque Oriente.

Outlook & strategy 2024 - 2026

BESIX RED boasts a solid and diversified pipeline, representing over €4.3 billion in expected sales value and encompassing more than 956,000 m² (including partnerships).

The company has made strategic decisions to position itself favourably for the years ahead and will continue to focus on its operational excellence, on prioritising the advancement of projects within its existing portfolio, on an ongoing portfolio arbitrage, ESG commitments, and robust risk appraisal approach.

“As we step into 2024, we do so cautiously amidst an uncertain environment. Factors such as delays in obtaining permits, high construction costs, and the prevailing ‘wait and see’ attitude from institutional and private investors are expected to impact our results in the years ahead. However, our industry operates cyclically, with periods of prosperity and challenges. With a solid foundation in place and the support of a strong team, we are well-equipped to navigate these fluctuations and are prepared to rebound when market conditions improve. Furthermore, we remain open to seizing new opportunities as they arise,” concludes Gabriel Uzgen.



1. DUUO, Lisbon (Portugal)
2. Lighthouse, Brussels (Belgium)
3. Green Station, Gembloux (Belgium)
4. Le Côté Verre, Namur (Belgium)

Diversification

Flamant

Flamant creates inspiring interior collections that turn every house into a welcoming home. From furniture and decorative items to textiles, wallpaper, and its own range of Flamant paint. With seven company-run stores in Belgium and France, a wide network of partner stores on every continent and an easily accessible online shop, Flamant offers its products across the world.

Anthea Project, Brussels (Belgium)

- Interior design and installation of a model apartment
- Supply and installation of 48 fully equipped kitchens with MODULNOVA
- Customisation of all kitchens with the future owners of the apartments



Mohammed VI Tower, Rabat (Morocco)

- Supply and installation of all Furniture, Fixtures, and Equipment items for the two most impressive levels of the tower, including but not limited to, the lobby entrance, ballroom, loges, boardroom, family restaurant and terrace, according to the drawings and specifications from Pierre-Yves Rochon Studio.



DUUO Project, Lisbon (Portugal)

- Interior design and installation of a model apartment
- Supply and installation of 140 fully equipped kitchens by MODULNOVA
- 13 different kitchen types
- Customisation of all kitchens with the future owners of the apartments
- Complete interior design for the penthouses



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06

Regional & Specialised Entities in Europe

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Founded in Brussels in 1967, Jacques Delens is a general construction and property development company, with operations concentrated in the Brussels region and Walloon Brabant. For over 50 years, it has specialised in the construction, renovation, and modernisation of buildings of all types and sizes, some of which are deeply rooted in the country's collective memory. Jacques Delens operates within both the public and private markets, working on projects including care units, offices, schools, and urban housing.

For Jacques Delens, 2023 was a year of stabilisation for the company, following the positive signs already shown since 2021 and the confirmation of good results in 2022. Jacques Delens has adapted to a changing market, both in terms of the nature of the work involved and the caution shown by potential investors following the exceptional rise in construction costs in recent years.

Jacques Delens focuses on major renovation of buildings, mainly public ones, for housing or services, in order to meet the requirements of energy performance, circularity, and the shortage of available space.

The company's prosperity was enjoyed by both customers and partners, the best ambassadors of the company's values. The quality of Jacques Delens' services and the efficiency of each and every staff member allow the company to look forward to the long-term future with confidence.

The projects that lie ahead will undoubtedly require ingenuity and excellence, both of which are firmly part of the company's DNA.

Projects signed in 2023

Jeu de Balle

Brussels (Belgium)

Renovation work on several buildings in the centre of Brussels. This project is part of the capital's climate plan, which aims to achieve carbon neutrality by 2050. The programme involves the large-scale renovation and insulation of social housing in various districts of the capital, thanks to investments by the City of Brussels and the Social Housing Department of the Brussels-Capital Region.

Général Jacques

Brussels (Belgium)

Circular renovation of former gendarmerie accommodation into 61 social housing units, with maximum re-use of existing materials. Carrying out this ambitious project on one of Brussels' busiest traffic arteries required particularly rigorous organisation.

Triomphe 160

Brussels (Belgium)

Construction of a building housing community facilities and a crèche for the municipality of Auderghem.

Framework contract for the European Parliament

Brussels (Belgium)

Framework contract for a number of works of varying nature and scope to be carried out throughout the 130,000 m² of offices occupied by the European Parliament. All the projects will take 4 years to complete.



Flagship project

New sports hall in Evere

Location

Evere, Brussels (Belgium)

Client

Beliris

Construction period

August 2023 - February 2025

Project value

€7.3 million

Description

The project involves the partial renovation of the existing building and the construction of a multi-sports hall. The new hall is designed to accommodate a variety of activities, including handball, volleyball, basketball, hockey, badminton, and mini-soccer. It will also be equipped with a grandstand that can seat up to 100 people. As an extension to the existing infrastructure of the sports complex, the new building will include a multi-purpose hall, new changing rooms and sanitary facilities, and administrative and technical premises. It will also feature a cafeteria, a community kitchen, and a terrace overlooking the outdoor sports fields. This renovation and construction project pays particular attention to acoustics and energy performance, including airtightness and rainwater management.

1. Framework contract European Parliament, Brussels (Belgium)

2. New sports hall in Evere, Brussels (Belgium)

3. Général Jacques circular renovation, Brussels (Belgium)



For more than 40 years, LuxTP has been carrying out construction projects of all sizes for its clients in the Grand Duchy of Luxembourg, Belgium, and France. Its success is the result of the exemplary commitment of its more than 300 loyal employees who excel in the supervision of their clients' projects.

LuxTP pursued its diversification and flexibility strategy in 2023, focusing on buildings, engineering structures, roads, and railway projects including platforms and equipment, but also steel structures as well as cladding, and equipment for wastewater treatment plants.

Despite the difficult situation caused by the war in Ukraine, LuxTP managed to achieve its targets in terms of both deadlines and quality, to the full satisfaction of its clients.

Projects signed in 2023

Centre Hospitalier de Luxembourg Strassen (Grand Duchy of Luxembourg)

In a consortium with CBL, Galère Lux, and Giorgetti, LuxTP will carry out the structural works of the new building of the Centre Hospitalier de Luxembourg, the largest hospital in the city.

Howald railway station

Howald (Grand Duchy of Luxembourg)

In a consortium with Giorgetti and Tralux, LuxTP will build the second platform of the Howald station and will be responsible for the redevelopment of the Luxembourg sorting yard and the R1 track of the storage and maintenance centre, for CFL, the Luxembourg national railway company.

Luxembourg Red Cross

Howald (Grand Duchy of Luxembourg)

In collaboration with Compagnie Luxembourgeoise d'Entreprises and BESIX, LuxTP is building the new infrastructure for the Luxembourg Red Cross, the 'Maison de la Croix-Rouge'. This project, developed by IKO Real Estate, is scheduled for completion in 2026.

Flagship project

CHRIPLAN office building

Location

Howald (Grand Duchy of Luxembourg)

Construction period

2020 - 2023

Project value

€11 million

Description

Construction of an office building comprising four underground floors, a ground floor, and three upper floors, with a total surface area of approximately 9,000 m². The building is structured around an atrium clad in specific acoustic panels, and covered by a glass roof with electrochromic glazing. The building will also have 77 parking spaces, two of which are parking spaces for persons with reduced mobility.

A total surface area
of approximately

9,000 m²



1. Centre Hospitalier de Luxembourg, Strassen (Grand Duchy of Luxembourg)
2. CHRIPLAN office building, Howald (Grand Duchy of Luxembourg)
3. Luxembourg Red Cross, Howald (Grand Duchy of Luxembourg)



Vanhout is a multidisciplinary construction group that excels in creating sustainable solutions for a better world. Its goal is to create living spaces in which people can work and then come home to relax. The various companies and construction teams undertake a broad range of construction and development projects, including offices, industrial and public buildings, residential projects, schools, healthcare infrastructure, and swimming pools.

Vanhout's adjusted strategy is bearing fruit in 2023. This is the result of a sustained effort to embed operational excellence and cost efficiency in the processes. Commercially, the strategy focusing on value-efficient projects was also consistently maintained. More effort was put into the industrial market, the care sector, and energy-efficient renovation projects preferably in an 'Early Contractor Involvement' collaboration.

Highlights for Vanhout in 2023 were certainly first the completion of a production facility and warehouse for CAR-T cell therapy in Zwijnaarde, where a new innovative cancer treatment will be produced. Vanhout was then able to unpack a stunning renovation project in Antwerp, the 'Fierensblokken'. This iconic complex of brick modernism underwent a remarkable transformation. The icing on the cake was the realisation of a unique sports complex called 'Velodroom', in Heusden-Zolder, where world records will undoubtedly soon be broken on the Olympic wooden cycling track.

The CIRCL activity, with its digital, circular, and energy-efficient construction concept, was spun off and CIRCL has since become an independent company. The first circular homes were delivered and the order book for 2024 looks promising!

Vanhout also opened the doors of its projects on several occasions. For example, in May, the public could visit the AP Hogeschool project during the Open Sites Day in Antwerp. Similarly, in October, during the Open Companies Day, the new psychiatric hospitals project for Asster in Sint-Truiden opened its doors. In June, all suppliers were invited for an exclusive look behind the scenes at the 'Velodroom' in Heusden-Zolder.

Projects signed in 2023

Chevron Phillips Beringen (Belgium)

Vanhout is renovating and extending the control building for Chevron Phillips Chemical at their current production site in Beringen. A new technical building is being built simultaneously.

INEOS Olefin Belgium Antwerp (Belgium)

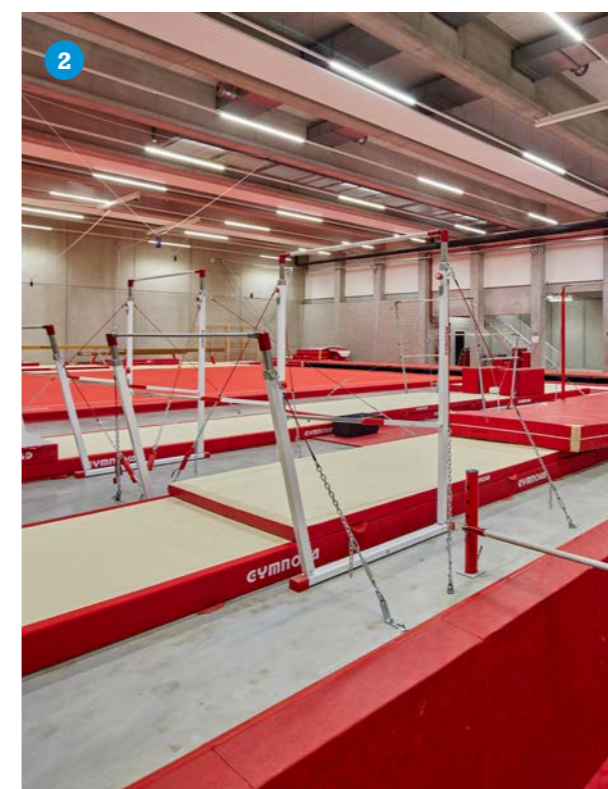
Vanhout is carrying out the civil works for Project ONE, which will be Europe's most sustainable ethane cracker.

von Karman Institute Sint-Genesius-Rode (Belgium)

100 years after BESIX built the first building for the Institute in the early 1920s, Vanhout will design and build a completely new office building.

TripleHelix SurePure NextGen district, Antwerp Port (Belgium)

Vanhout is building a new recycling plant where polyurethane foam, derived from discarded mattresses, car seats, and insulation panels, among others, will be processed. SurePure will operate on a fully circular basis and meet its own energy needs.



Flagship project

Sports complex Velodroom

Location

Heusden-Zolder (Belgium)

Client

Sportcomplex Vlaanderen/Heusden-Zolder vzw (Sport Vlaanderen, Heusden-Zolder municipality, vzw Cycling Friends, vzw Terlamen)

Construction period

December 2021 - July 2023

Project value

€24 million

Architects

B-Juxta architecten – dbv architecten

Description

This sports complex includes an Olympic wooden cycling track, 4 sports fields, a grandstand with 1,000 fixed seats but also meeting rooms, an exercise lab, a fitness centre, a top gymnasium, a medical centre, and catering facilities. This project was realised in a DBM formula. ComTIS Services, a subsidiary of Vanhout, will take care of the maintenance of the technical installations for 15 years.

15,000 m²

93 tonnes
of wood and 400,000 nails to build the wooden cycling track

300 tonnes
of steel for the roof structure



1. Von Karman Institute, Sint-Genesius-Rode (Belgium)
2. Sports complex Velodroom, Heusden-Zolder (Belgium)
3. TripleHelix SurePure, Antwerp Port (Belgium)



Wust is a general construction company operating in Wallonia and the Grand Duchy of Luxembourg. It builds residential complexes, office buildings, industrial units and commercial areas, education facilities, healthcare and care facilities, as well as sports and leisure facilities. It also undertakes renovation and restoration work and provides services to the industry. Its service offering is complemented by its subsidiaries and the real estate development department.

The pertinence of the strategies implemented was confirmed in 2023. The development of activities in western Wallonia, the positioning of Wust on large-scale projects, and the work in partnership with other contractors in an Early Contractor Involvement set-up are all elements that are proving promising. Despite a mixed geopolitical and economic climate, sales have returned to a level in line with expectations, and the order book is encouraging.

Major projects were completed in 2023, including Socoetra's head office in Marche-en-Famenne, a symbol of perfect collaboration between BESIX's Walloon entities, and the AXS complex in Namur. Among the company's more than 100 projects, the renovation and conversion of the La Louvière railway station into police offices, the revitalisation of the Rabelais site in Ixelles, the energy renovation of public buildings in Seraing, and the conversion of an office building into luxury flats in Luxembourg are continuing, alongside Wust development projects.

The outlook for the construction sector calls for a degree of caution. However, the order book means that Wust can look forward to 2024 with optimism. It includes several major projects, including the restoration of the Grand Théâtre de Verviers and two projects for the University of Mons. Coupled with the continued pursuit of development paths and the intensification of synergies with Cobelba, these will be major levers enabling Wust to reach its objectives.

Projects signed in 2023

Grand Théâtre de Verviers

Verviers (Belgium)

Client: City of Verviers

Architect: L'Escaut architectures

Stability Design Office: DELTA G.C.

MEP Design Office: Bureau d'études A+ Concept

Restoration and extension of the Grand Théâtre in Verviers, in collaboration with DENYS. The association will be responsible for carrying out lots 1 - General contracting and 5 - Restoration (class D24). The emblematic architecture will be preserved. An extension, as well as accessibility, safety, and acoustic improvements, will bring this 1892 building right up to date.

UMons Centre for Contemporary Eco-Technologies and New Materials

Mons (Belgium)

Client: UMons (University of Mons)

Architect : RESERVOIR A and ARTBUILD

Stability Design Office: Pirnay

MEP, PEB, and Smart Building Design Office: Poly-Tech Engineering, in collaboration with Coceptio

Design and construction of the new Centre for Contemporary Eco-Technologies and New Materials for UMons. The 7,300 m² DNSH (with reference to the Do No Significant Harm EU regulation) building will be constructed using a sustainability approach that complies with GRO (sustainable building benchmark) criteria and will exceed the 'quasi zero energy' requirements imposed by the Walloon Region with levels K19 and Ew29.

Îlot Saint Roch - Phase 2

Nivelles (Belgium)

Client: Îlot Saint-Roch SA

Architect: DDS & PARTNERS

Stability Design Office: Pirnay

MEP Design Office: Poly-Tech Engineering

Construction of the second phase of the Îlot Saint-Roch eco-neighbourhood project. The project, carried out in association with Thomas & Piron and Cobelba, comprises 10 residential buildings with 171 flats, offices, basement car parks, cellars, and bicycle storage.

Flagship project

Socoetra head office

Location

Marche-en-Famenne

Client

Socoetra

Architect

Plan9

Design office

Lemaire Ingénieurs

Construction period

April 2021 to April 2023

Project value

€7.5 million

Description

Socoetra's new head office is the result of an internal co-creation project at BESIX and is a good illustration of the skills available within the group. Construction was entrusted to Wust, with the support of ACMP, its subsidiary specialising in steel construction, and the BESIX Steel & Formworks entity. Socoetra took charge of the preliminary earthworks itself.

The criteria laid down by BREEAM certification were the guiding principle, from the initial sketches right through to the completion of the project. The technical elements, combined with a focus on employee well-being, resulted in the project being scored 'Excellent'. The site presented several challenges, including the nature of the soil, the glazed curtain wall, and the lake surrounding the building.

5,376 m²
floor area

923 m²
glazed façade, first floor



1. Grand Théâtre, Verviers (Belgium)
2. Socoetra head office, Marche-en-Famenne (Belgium)
3. UMons Centre for Contemporary Eco-Technologies and New Materials, Mons (Belgium)



As a contractor with strong expertise in road building, complex sewerage works, environmental remediation, and the construction of public spaces, BESIX Infra sits right at the top of the public and private infrastructure market in Belgium. The Bilzen and Burcht sites have their own concrete mixing and recycling facilities. BESIX Infra's subsidiaries Belasco and BESIX Infra Nederland have in-house asphalt production plants at Bilzen, Ghent, Puurs, and Roermond.

In 2023, BESIX Infra started or completed several road and sewerage projects such as in Kipdorp Antwerp (City of Antwerp, De Lijn, Water Link), on the N446 in Waasmunster, Hamme, and Dendermonde (AWV, Aquafin) and in the Spoorwegstraat and Crutzenstraat in Hasselt (Fluvius, Aquafin). These projects include several asphalt works, carried out by its subsidiary Belasco. One of the most special projects was the placing of slipform concrete along the new access roads of the Brussels Ring and Hector Henneau Avenue in Zaventem. These works were carried out using the Autopilot 3D system. Besides its main activity BESIX Infra started a new business line for smaller underground concrete structures. A storage-sedimentation wastewater basin was completed in Zoutleeuw (Aquafin), as well as concrete works for Arce-lorMittal in Ghent.

BESIX Infra continued to invest in innovative techniques and test modules with a view to sustainability in 2023. On the N446 between Dendermonde and Waasmunster, the company placed its first sulfur concrete tubes as a pilot project. These new pipes are 100 % circular and are produced with low CO₂ emissions. In Duffel, another pilot project was started with sewage pipes in geopolymer concrete. These Geoprime® pipes are produced with CO₂ emissions that, in terms of raw material use, are as much as 78 % lower than with conventional concrete.

Moreover, BESIX Infra is strongly committed to the training of its on-site personnel through the BESIX Infra Academy. Before commencing on-site duties, each worker undergoes a comprehensive 3-day professional training course. Additionally, they receive ongoing supervision from colleagues and a training officer during their on-site activities.

The 2023 highlight goes to the tallest wind turbine in Limburg, with a height of 234 metres, installed on the Bilzen site in May.

Projects signed in 2023

Collector Voeren phase 2

Voeren (Belgium)

BESIX Infra will carry out a major sewerage project for Aquafin in the Voeren region in the Belgian province of Limburg. This project will ensure that the wastewater network from Sint-Martens-Voeren and Sint-Pieters-Voeren is connected to the treatment plant in 's-Gravenvoeren. Two pumping stations will be constructed within this project.

Replacement of level crossings

Bilzen (Belgium)

Together with BESIX, this one-stop shop project is being carried out on behalf of TUC Rail. In Bilzen, seven level crossings are being replaced and the urban space is being redeveloped. Different types of level crossing replacements will be built such as a bridge, a bicycle tunnel, or a tunnel for all traffic.

Sewerage works

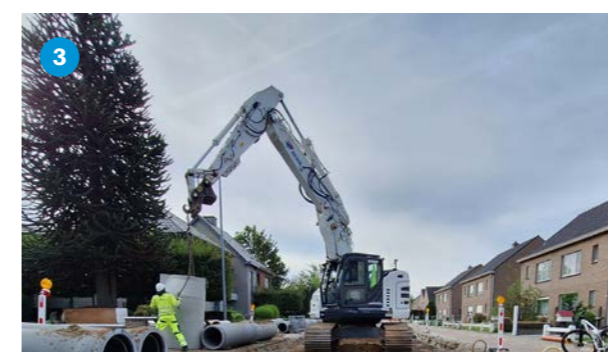
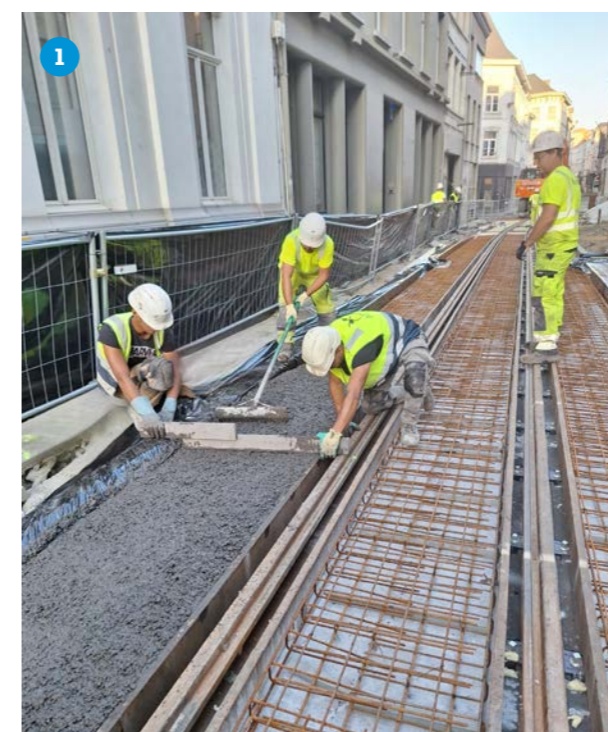
Sint-Gillis-Waas (Belgium)

BESIX Infra is carrying out sewerage works in Sint-Gillis-Waas as well as the reconstruction of the roads in the area. There will be separate sewers so that only rainwater will flow into the local stream. The clients are Aquafin, Riopact, and the municipality of Sint-Gillis-Waas.

Cogels-Osylei

Antwerp (Belgium)

This façade-to-façade road renovation with demolition of the existing tram tracks, pavements, and sewers in one of Antwerp's most beautiful architectural streets will be the challenge of 2024. For this site, BESIX Infra is forming a temporary partnership with Frateur - De Pourcq.



Flagship project

Reconstruction of sewerage in Antwerp city loop

Location

Antwerp, Kipdorp (Belgium)

Client

City of Antwerp, De Lijn, and Aquafin

Construction period

30 May 2023 – end 2025

Project value

€17.6 million (excl. VAT)

Description

The sewerage of the city loop in Antwerp is to be completely renewed. The works started in Kipdorp and will follow the rest of the city loop, in three phases. In collaboration with the City of Antwerp, transport company De Lijn, and sewer manager Aquafin, the sewerage works are being carried out by BESIX Infra. The narrow streets with high buildings and tram tracks make the work extra challenging, with BESIX Infra demonstrating all its in-house expertise. Attention is paid to safe cycle paths and comfortable pavements. For these works, BESIX Infra is also working with Amaril for communication on site, Tractebel as the engineering office, and Eveka for safety coordination.

3,396 metres
of new sewers in a narrow urban area (diameter 250 mm to 1,000 mm)

3,332 m²
in reinforced concrete poured on the spot and 1,236 m² with prefabricated rail modules

1. Reconstruction of sewerage in city loop, Antwerp (Belgium)

2. Collector, Voeren (Belgium)

3. Sewerage works, Sint-Gillis-Waas (Belgium)



Franki Foundations

Franki Foundations is present on more than 500 construction sites every year, in a variety of fields, including industry, energy, infrastructure, and real estate. From the preliminary study to the finishing touches, Franki Foundations offers complete, bespoke foundation solutions for every site where the firm operates. The company also boasts more than a century of experience, with its subsidiaries in France, the Netherlands, and the United Kingdom, as well as an in-house design office.

2023 was a year of strong activity in virtually all the Franki Foundations group's markets. After completing the NESTE project in Rotterdam, a large number of the company's piling machines headed for the port of Antwerp to work on the major INEOS project, in association with De Waal Solid Foundations. This spectacular project kept Franki Foundations busy all year.

In the Netherlands, Franki Grondtechnieken started work on the highly technical PALLAS nuclear medical reactor in Petten. The first phase of work consisted of a 1.5-metre-thick diaphragm wall at a depth of 35 metres. This phase will be followed by underwater excavation and concreting, and the construction of piles from pontoons in 2024.

2023 was also a good year for the subsidiary Franki Foundations UK, with, in particular, a major project for Amazon, which resulted in strong activity for both Franki UK and its subsidiary Martello.

In France, Franki Foundations completed its refocusing on the northern region, where a wind of change is blowing, notably with the desire of the French authorities to develop a cluster around factories linked to new technologies. In this context, Atlas Fondations embarked on a major project for the Verkor Gigafactory at the end of the year, symbolising its presence in the Hauts-de-France region.

The year 2023 also saw Franki Foundations' ISO 9001 re-certification, the confirmation of the VCA** certificate, and, above all, the award of ISO 14001 certification, signifying the company's commitment to ever-greater sustainability and resilience.

Projects signed in 2023

HLU La Poste (Post Office City Logistics Centre) Lezennes (France)

Atlas Fondations will build the foundations for the new 'Hôtel Logistique Urbain' of the French postal operator in Lezennes. This project will house a logistics activity covering 12,000 m² on the ground floor, as well as business units covering around 6,000 m² on the upper floors.

Hangar PepsiCo Veurne (Belgium)

Franki Foundations is returning to Veurne for its loyal customer PepsiCo, at the request of Willy Naessens. 2,400 Atlas and Omega piles will be installed under their new European tortilla chip storage centre.

Smulders offshore wind turbines Hoboken (Belgium)

Franki Foundations is participating in the third phase of a huge offshore wind turbine project. The concrete and injection techniques of BE Inject, a Franki Foundations subsidiary, are used to attach the work platforms to the wind turbine masts before they are installed at sea.

GBL6 Baudour (Belgium)

Franki Foundations is providing the entire foundations package of a new data centre in the Hainaut Province. It's the sixth time the customer renewed its confidence in Franki Foundations for the entire foundations works.



Flagship project

INEOS - Project ONE

Location

Antwerp (Belgium)

Construction period

March 2023 - March 2024

Description

In March 2023, Franki Foundations started an Omega, PCS, and bored pile project in the port of Antwerp, as part of the construction of an ethane cracker for INEOS.

This is a major project for Franki Foundations, not least because of its size, duration, and the number of machines and teams working on it. Together with partner De Waal Solid Foundations, more than 21,000 piles will be completed.

Not only is the scale of this project unprecedented, but it is also very special because Franki Foundations is working for four EPC contractors at the same time. At the peak of production, the site welcomed 14 machines and teams on-site, working on different projects, always with a strict eye on safety and quality.

21,000 piles

Omega screw piles,
augercast PCS piles,
and bored piles

14

machines in operation
at peak production



1. INEOS - Project ONE, Antwerp (Belgium)
2. Smulders offshore wind turbines, Hoboken (Belgium)



With almost 75 years of experience, the Socogetra Group occupies a key place among Belgium’s construction players. Socogetra has class 8 certification - the highest category in Belgium - enabling it to tender for and carry out contracts of any size. Socogetra’s operations are divided into four main activities: road works, railway works, civil engineering, and buildings. Through its subsidiaries, Socogetra owns a range of factories and entities producing construction and coating materials (Famenne Enrobés, Enrobage Stockem, Enrobés des Trois Frontières, Emubel, GNB Béton, and Vialines), as well as quarries (Carrière des Limites, Carrières de Grès Réunies, and the Châtillon sand quarry). Additionally, the Hainault-based subsidiary Bagetra rounds off these activities in civil engineering and industrial buildings.

In 2023, Socogetra confirmed its position as a key player in the construction sector, particularly in infrastructure works, railway works, and civil engineering.

Socogetra’s industrial activities have been buoyant in 2023, particularly in the quarrying sector at the ‘Carrière des Limites’, with its limestone production, and at the ‘Carrières de Grès Réunies’, with its sandstone deposit. Business levels in the third industrial sector, asphalt plants, slowed sharply in the first half of the year. Fortunately, the second half of the year enabled Socogetra to carry out renewal and maintenance operations on hydrocarbon surfacing in the province of Luxembourg, with a sustained level of activity and occupation of its teams.

Socogetra continued to operate in the rail sector for its long-standing customers TUC Rail and Infrabel, in the road sector mainly for the Public Service of Wallonia, and in civil engineering for both public and private players.

Socogetra has continued to pursue its policy of investment and diversification, in particular through the construction of a workshop in Frameries equipped with a pretensioning bench. This equipment aims to meet the various demands of its civil engineering sites for the supply of various prestressed concrete components. Socogetra will continue its industrial development in 2024 in its various areas of activity, whether in its quarries, asphalt plants, or concrete-related activities. Socogetra is determined to continue its development, both in terms of skills, to carry out ever more ambitious projects, and in terms of the performance and strategic positioning of its industrial facilities.

2023 was marked by the company’s 75th anniversary and its move to its new headquarters in Marche-en-Famenne. Socogetra is demonstrating its ongoing commitment to a policy of respect for the environment and its surroundings, with the new headquarters meeting the BREEAM standard of excellence.

Socogetra’s order book at the start of 2024 will enable it to maintain the same level of activity as in previous years. The company already has an order book for 2025 that corresponds to more than 50 % of its production.

Finally, Socogetra is implementing various CSR and ESG policies, to place even more emphasis on the well-being of its employees, taking into account environmental aspects and respecting good governance rules. Socogetra is therefore gearing up to meet the new non-financial reporting rules applicable from 2026 for the 2025 financial year.

Socogetra could not have achieved this level of performance without the total commitment of its employees and their unflinching professionalism.



Projects signed in 2023

Renewal of an overpass on the railway line 161 Schaerbeek-Namur

Court-Saint-Etienne (Belgium)

The structure of the new overpass above the railway line was completely recalculated and optimised by Socogetra’s in-house design office. The demolition, reconstruction, and roadworks, for an amount of €1.28 million, were carried out entirely by Socogetra’s workforce.

Removal of three level crossings on the railway line 125 Liège-Namur

Andenne-Seilles (Belgium)

The works, for an amount of €5.3 million, include the creation of new roadways, the construction of two underpasses equipped with stairs and ramps for disabled access, as well as an overpass. This project for the Belgian railway network management company Infrabel covers all of Socogetra’s activities in civil engineering, railway works, roads, and networks.

Recybois

Latour (Belgium)

Extension of the Groupe François plant, including the creation of a log storage area, a sorting and calibrating area, a new sawmill, and a cogeneration plant, as well as upgrading existing facilities and improving existing processes. This project is being carried out in collaboration with LuxTP for the civil engineering part. Socogetra is responsible for the development of this 10-hectare site, comprising the creation of roadways, a retention basin, banks, and drainage ditches, the installation of a sluice to cross a stream, and the creation of 5 km of trenches and utility installations (electricity, water, fibre optics, water, drainage).

Some key figures:

- More than 60,000 m³ of earthworks
- 32,000 tonnes of quarried and recycled gravel
- 20,000 m² of concrete slabs



1. Railway overpass, Court-Saint-Etienne (Belgium)
2. Recybois, Latour (Belgium)
3. Wastewater treatment plant, Trivières (Belgium)

Flagship project

Wastewater treatment plant in Trivières

Client
IDEA

Construction period
1 January 2023 - September 2024

Project value
For the joint-venture BESIX Environment-Socogetra: €16.07 million

Description
Extension of the Trivières wastewater treatment plant from 19,000 to 40,000 PE (Population Equivalent). The project involves the construction of a second treatment line, as well as a new stormwater treatment line and a new sludge treatment facility. All the design studies and drawings are being carried out in-house by Socogetra’s design office. BESIX Environment plans to commission the plant in September 2024, once the civil engineering work carried out by Socogetra has been completed. This project is the result of a fruitful collaboration between the two BESIX Group entities.

The plant comprises several key elements such as an inlet structure measuring 22.5 x 6.5 metres and 10.6 metres in depth, two stormwater basins with an 18-metre diameter, a biological basin measuring 91.8 x 19.4 metres and 5.45 metres in height, and a clarifier with a diameter of 35.6 metres and a depth of 4.25 metres.

3,300 m³
of concrete

345 tonnes
of reinforcing steel



BESIX Unitec is your technology partner in the infrastructure market: a key player in the design, construction, and maintenance of automated public infrastructure and networks. Clients can count on complete solutions, covering the entire life cycle of their installations, from initial concept and detailed engineering to implementation and finally long-term operation and maintenance.

In 2023, BESIX Unitec continued to build on the steps already taken in 2022. The merger between BESIX Unitec Automation (formerly Agidens Infra Automation) and BESIX Unitec has been fully rolled out. The Walloon market was also further expanded with national contracts from Elia and Proximus, among others, as well as contracts from Walloon clients such as Sofico and VOO. BESIX Unitec ended 2023 with a first step towards further expansion on the Walloon market with the acquisition of Groupe T.F.C. As a result, BESIX Unitec has welcomed the new subsidiaries BESIX Reditec and BESIX Soltec in 2024.

Safety remains a key value to which BESIX Unitec pays a great deal of attention. BESIX Unitec organised its winter training for employees, as always, and safety was one of the subjects covered. In 2023, BESIX Unitec also signed Infra-bel's Safety Charter to encourage proper behaviour during operations on the tracks.

Other highlights include the major conversion of the Barendrecht station in the Netherlands. For the official opening, more than 100 employees worked hard to get the nine tracks safely into service. In Belgium, the Fibre-ready and Fibre-to-the-home projects ensuring faster internet options for households and businesses also continued to expand in 2023. A POP booth was installed in the municipalities of Bonheiden and Sint-Katelijne-Waver in the Antwerp Province. Another notable project of 2023 was the Ooigem lock, which was reopened to shipping after extensive rebuilding: a fine piece of work by BESIX Unitec's panel builders.

Flagship project

New security system in the Kennedy railway tunnel

Location
Antwerp (Belgium)

Client
TUC Rail

Duration
3 years, started in September 2021

Project value
€30 million (inclusive maintenance)

Description
About 10 metres below the Scheldt, in Antwerp, is the Kennedy railway tunnel. This underpass connects the left and right banks of the city and both passenger and goods trains pass through it. The project is managed by a temporary partnership between BESIX Infra and BESIX Unitec. BESIX Unitec is installing a new security system, which will include a fire detection system, a ventilation system, and overhead monitoring systems. The project presents several challenges like working in a confined space, the time constraints (works are often done at weekends or nights), and the 50-year-old infrastructure and plans.

Length of underpass
1.7 km

96-month
maintenance contract

Projects signed in 2023

Fibre-ready infrastructure project
Mechelen (Belgium)

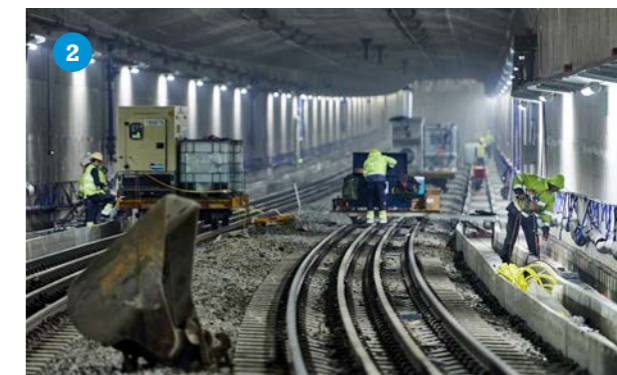
For 'Fiberklaar' (fibre-ready), BESIX Unitec will be working to provide the necessary connections in Mechelen. This project includes a combination of laying the necessary optic-fibre cable infrastructure in the street and carrying out the home connection to these new cables.

Electromechanical equipment and rebuilding of water reservoir
Lokeren (Belgium)

The water reservoir Lokeren 1 is being rebuilt for De Watergroep. A new booster system consisting of three pumps will be installed and the electromechanical equipment will be completely replaced.

Re-engineering of lift bridge II
Oudenaarde (Belgium)

As a subcontractor for Vameco BV, BESIX Unitec is working on renewing the electromechanical equipment of the lift bridge operated by De Vlaamse Waterweg. Among other things, the bridge needs to be prepared for remote automation. The cylinders will also be checked and renewed where necessary.

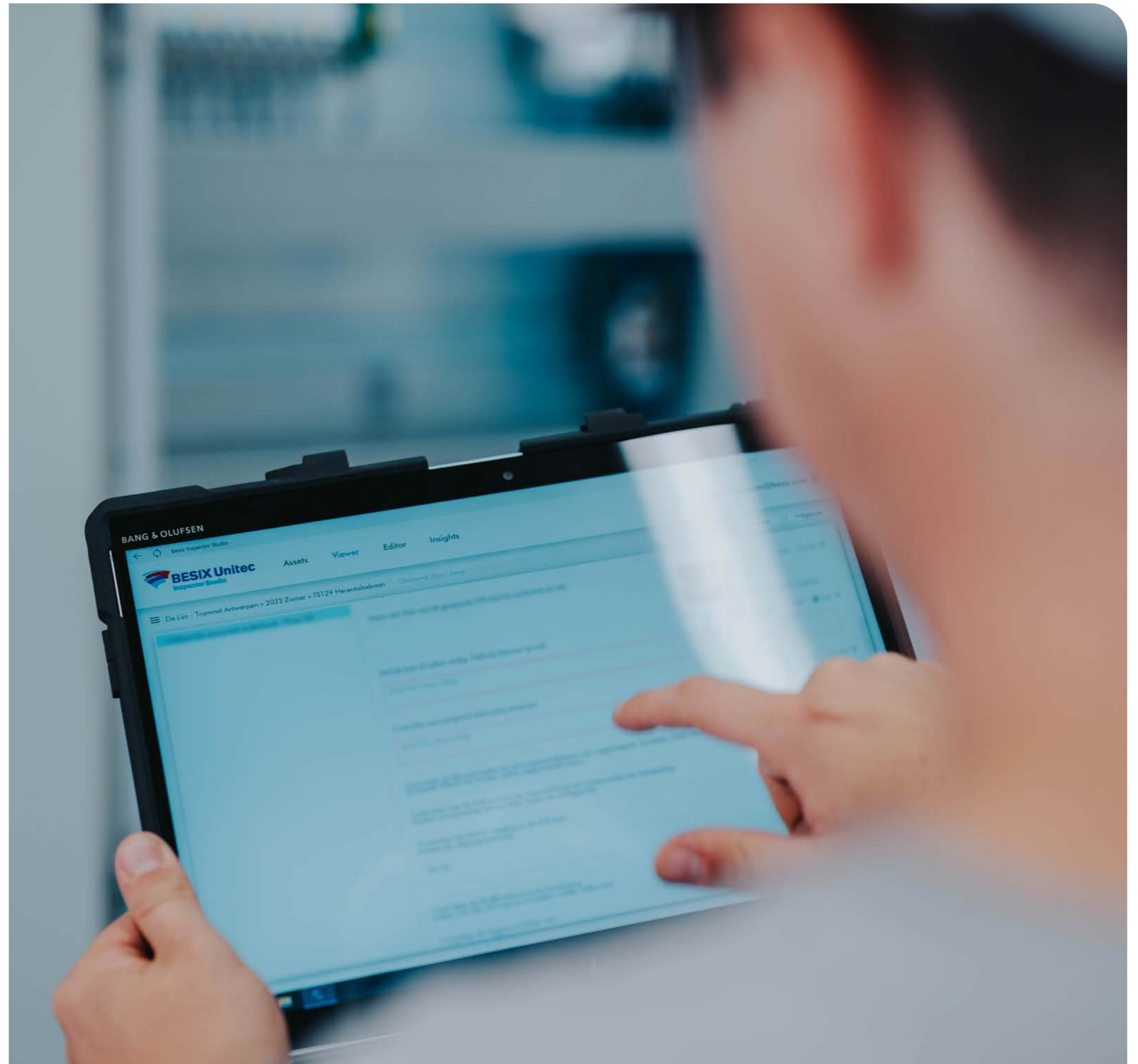


1. Electromechanical equipment and rebuilding of water reservoir, Lokeren (Belgium)
2. New security system in Kennedy railway tunnel, Antwerp (Belgium)
3. Fibre-ready infrastructure project, Mechelen (Belgium)

07

Corporate Governance & Structure

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Corporate Governance

BESIX follows the Belgian recommendations on Corporate Governance for unlisted companies ('Code Buysse III'). BESIX has structures and rules in place to ensure effective corporate governance, risk management and control both in each BESIX company and within the organisation as a whole. BESIX promotes a similar corporate approach within its subsidiaries and entities.

The Board of Directors, assisted by advisory committees, plays a leading role in outlining, monitoring, and controlling such structures and rules and in securing the day-to-day operational and financial management of the Group and its entities by the Chief Executive Officer and the senior management.

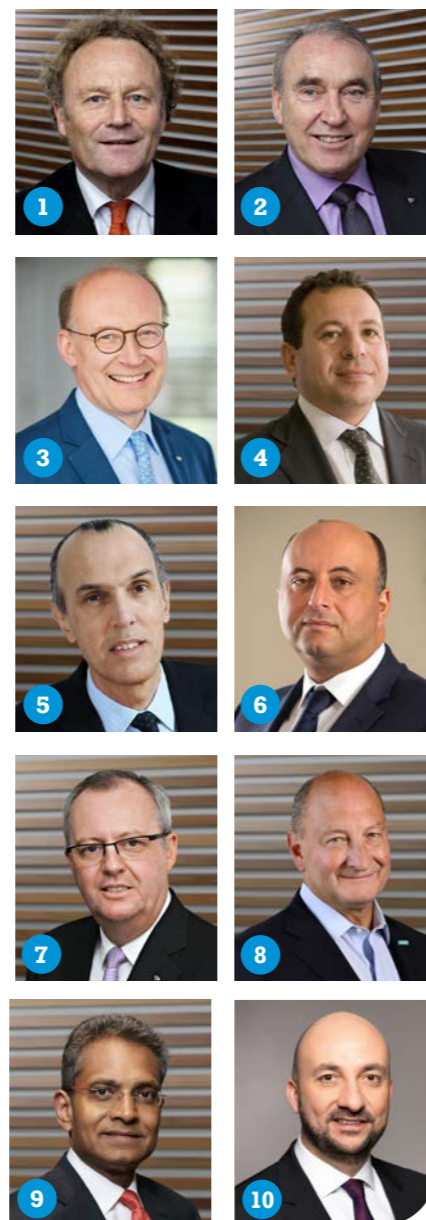
The Board includes four external directors, whereby a balanced configuration ensures authority, expertise, and independence, and the positions of Chairman and Chief Executive Officer are separated. Decisions are also taken after ample deliberation and consultation and the functioning of the Board is regularly reviewed, also in the light of the prevailing shareholders' arrangements.

A number of advisory committees are organised within the Board of Directors to prepare its deliberations and optimise its decision-making process. These committees prepare the topics discussed during the Board meetings, assess the effectiveness of the internal controls in place, and formulate opinions and recommendations:

- The Audit Committee supervises the setup of the statutory and consolidated financial statements, the interim financial reports, and the relations with the statutory auditor. It works closely with representatives of the senior management, monitors the internal control and risk management systems and the main risks associated with the activities of the Group and its entities, and operates in accordance with its charter;
- The Remuneration & Nominations Committee evaluates the performance of the senior management, oversees the HR policies of the Group and its entities, and pays specific attention to succession management;

The Board appoints the Strategic & Executive Committee, which focuses on the vision, mission, and strategic objectives of the Group and oversees the business activities and performance as well as the risk management and internal control and organisation, as implemented by the Chief Executive Officer and the senior management.

Board of Directors and Committees



Board of Directors

	Name	Position	End of term
1	Baron Philippe Vlerick	Chairman	2025
2	Johan Beerlandt ¹	Executive Vice-Chairman	2025
3	Frédéric de Schrevel ²	Director	2026
4	Osama Bishai	Director	2025
5	Jérôme Guiraud	Director	2025
6	Ihab Mehawed	Director	2025
7	Philippe Quoilin ³	Director	2025
8	Wouter De Geest	Independent Director	2024
9	Paddy Padmanathan	Independent Director	2026
10	Etienne Schneider ⁴	Independent Director	2026
	Baron Jean Stéphane ⁵	Honorary Chairman	
	Ridder Luc Vandewalle	Honorary Director	

Remuneration & Nominations Committee

Johan Beerlandt¹ (Chairman)
Osama Bishai
Baron Philippe Vlerick

Audit Committee

Wouter De Geest (Chairman)
Johan Beerlandt¹
Ihab Mehawed
Etienne Schneider⁴

1. Permanent representative of Bevafin srl
2. Permanent representative of Arthepa srl
3. Permanent representative of Philippe Quoilin srl
4. Permanent representative of Beta Aquarii sa
5. Permanent representative of Innosté sa



Strategic & Executive Committee

- 1 Mathieu Dechamps¹**
Deputy COO Construction
- 2 Patrick Baeten²**
Secretary General
- 3 Geert Aelbrecht³**
Chief People Officer & Group Sustainability & ESG Officer
- 4 Gabriel Uzgen⁴**
Managing Director BESIX Real Estate Development
- 5 Hans Beerlandt⁵**
Chief Financial Officer
- 6 Johan Beerlandt⁶**
Executive Vice-Chairman
- 7 Jean-Pol Bouharmont⁷**
Deputy COO Construction
- 8 Tom Neyrinck⁷**
General Manager BESIX Invest
- 9 Pierre Sironval⁸**
Chief Executive Officer
- 10 Jan Van Steirteghem⁹**
COO Construction
- 11 Jean Polet⁹**
General Manager Affiliates

1. Permanent representative of Athena International srl
 2. Permanent representative of Vinkenhoek bv
 3. Permanent representative of Gacco bv
 4. Permanent representative of B2B Group sa
 5. Permanent representative of Gabeli srl
 6. Permanent representative of Bevafin srl
 7. Permanent representative of JQTM bv
 8. Permanent representative of Althiel srl
 9. Permanent representative of Kyokan bv

Group Structure

Operating across five continents, BESIX encompasses many branches and legal entities, fully owned by the group. There are also some companies in which BESIX owns a minority or majority stake.

BESIX's branches were created as the Group diversified geographically. In most cases, the BESIX name goes in front of the country in which they are established. For example, BESIX Egypt is a branch integrated into the 'Business Unit (BU) International', just as BESIX Nederland and BESIX France belong to the 'BU Europe'.

Most of the legal entities are companies acquired by BESIX over the last few decades. They are the result of vertical integration and sectoral or geographic diversification. Although they are fully owned by BESIX, many of them have kept their original name or a direct reference to it. For example BESIX Watpac (Australia), Lux TP (Luxembourg) or Martello Piling (United Kingdom). Besides commercial considerations – vital for companies whose brand embodies their specific expertise – this reflects the policy of controlled autonomy embedded within the Group.

Not all BESIX companies necessarily fall within these two categories.

- Some companies were created by the Group itself: for example Six Construct, founded in 1966 to develop the Group's activities in the Middle East, or BESIX Real Estate Development established in 1988, to further the Group's real estate development business.
- Companies in which BESIX owns a stake also retain their identity. This applies to Flamant, for example.



BESIX CONSTRUCTION							
BELGIUM-LUXEMBOURG	BESIX	BESIX Belgium	BESIX Luxembourg				
EUROPE	BESIX	BESIX Denmark	BESIX France	BESIX Italy	BESIX Latvia	BESIX Montenegro	BESIX Netherlands
INTERNATIONAL	BESIX	BESIX Brazil	BESIX Canada	BESIX Cameroon	BESIX Egypt	BESIX Ivory Coast	BESIX Morocco
MIDDLE EAST	BESIX	Six Construct					
AUSTRALIA-NEW ZEALAND	BESIX Watpac						

BESIX SUBSIDIARIES & AFFILIATES								
REGIONAL CONTRACTORS	Jacques Delens	Corebat	Sud Construct					
	Lux TP	Mabilux						
	Vanhout	ComTIS Installations	ComTIS Services	ComTIS Energy	ComTIS Ventilation	Energie-concepten		
		HBS	Vanhout Bilzen	Vanhout Projects				
	Wust	ACMP	Cobelba	Wust Luxembourg				
SPECIALISED CONTRACTORS	BESIX Environment							
	BESIX Infra	Belasco	BESIX Infra Nederland					
	Franki Foundations	Atlas Fondations	Franki Foundations UK	Franki Foundations Belgium	Franki Grond-technieken	Able Piling	Martello Piling	
	Socogetra	Bagetra	Enrobage Stockem	Vialines	Industries	Quarries		
	BESIX Unitec	BESIX Unitec Automation	BESIX Connect	Appermont	Lucan	BESIX Unitec Nederland		

BESIX REAL ESTATE DEVELOPMENT	
EUROPE	BESIX RED

BESIX INVEST							
EUROPE	Coen Tunnel	Limmel Lock	Beatrix Lock	A6 Motorway	A16 Motorway	Via15 Motorway	POST X LPA
	R4WO Motorway	Aquafin STP					
MIDDLE EAST	ASPCL	Al Wathba	Qatra	Dubai WTE	RDF UAQ	Safi	ADIO Schools
	Moalajah	VEBES O&M	Naqa'a	Shua'alah O&M	United Ready Mix		
HOSPITALITY	Marriott Evere	Sheraton Poznan	H4B Andermatt	BESIX STAY			
BESIX TECHNOLOGY	aug-e	BuildUp	CIRCL	Conneqtr	LITO	Neanex	Square Sense

DIVERSIFICATION	
FLAMANT	
LN24	

Disclaimer: not all companies presented in this chart are wholly-owned by BESIX Group. Besides branches and subsidiaries, this chart also presents companies in which BESIX Group owns a substantial stake.

08

BESIX Finance

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Comments on the Financial Performance

BESIX Group improved its gross profit in 2023 despite a challenging context for real estate. The turnover reached an all-time high, with a stable order book of high quality. The group could again rely on its geographical diversification and variety of activities to display such resilience.

BESIX Group closed the year 2023 with a turnover of €3.39 billion, the highest in its history, and an increase of 1.6 % compared to the previous year.

BESIX Group generated an operating profit (adjusted EBITDA) of €117 million when considering associates' contribution.

The group's net result reached €18.1 million, lower than in 2022, due partially to increased G&A, increased financial charges, and increased income tax expenses.

The company ended the year 2023 with a high order book amounting to €5.09 billion, against €5.26 billion in 2022.

The order book shows a good diversification in terms of geography and activity. Belgium accounts for 34 % of orders, the Netherlands, France, and the Grand Duchy of Luxembourg for 23 %, Australia and New Zealand for 18 %, and the Middle East for 13 %, while the rest of the world counts for 12 %.

Building works still account for the largest portion of the order book with 44 %, similar to 2022, followed by Infrastructure at 27 %, Roads & Utilities at 9 % and Marine works at 9 %, up from 5 % in 2022.

The group's diversification strategy has once again proven its relevance: the public-private partnerships in the field of water and waste in the Middle East and the entities specialising in infrastructure and services to communities in western Europe have all achieved very good results, and further growth.

BESIX's real estate development activities faced a challenging environment of higher interest rates and lengthy permit deliveries but are still contributing positively to the group's net result.

The company reported a consolidated net cash position of €174 million (excluding IFRS16 and non-recourse financing) and shows a strong solvency ratio of 22.5 %, well above the industry average.

Performance by activity and business unit

BESIX Group Contracting

BESIX Group's Contracting business generated a revenue of €3.28 billion.

Contracting in Belgium, the Netherlands, France, and the Grand Duchy of Luxembourg together generated €1.9 billion in sales including the regional contractors and the specialised contractors (roads, utilities, piling, etc.).

Activities in Australia and New Zealand posted a revenue of €845 million in a highly competitive environment.

The Middle East contracting activities resulted in a turnover of €358 million mainly in the United Arab Emirates, but also in the Kingdom of Saudi Arabia. Contracting in the rest of the world accounted for €302 million of turnover, with Ivory Coast, Morocco, Denmark, and Egypt being the main contributors.

BESIX Real Estate Development

BESIX Real Estate Development closed 2023 with a return on equity of 6.4 %.

2023 was marked by the sale of the WellBe project in Lisbon (Portugal).

BESIX RED currently has more than 33 projects in development across 19 cities in 5 countries (Belgium, the Grand Duchy of Luxembourg, the Netherlands, France, and Portugal).

BESIX Invest

Through equity stakes in 15 BOOT projects (wastewater treatment plants, waste to energy plants, schools ...) and in a building material production company, Concessions & Assets was again a high contributor to the profitability of BESIX Group, despite the effect of a decreasing US dollar.

Balance sheet

At the end of 2023, the balance sheet totalled €3.4 billion. The total equity stands at a high level of €763 million. This means that the solvency ratio is at 22.5 %, above the industry average.

Net cash position

BESIX Group's consolidated net cash position amounted to €174 million at the end of 2023 (excluding IFRS 16 and non-recourse debt).

Auditor's report

The auditor Mazars Bedrijfsrevisoren - Réviseurs d'Entreprises has issued an unqualified opinion on the statutory and consolidated financial statements as of December 31, 2023.

Financial statements

The statutory and consolidated financial statements, together with the report of the board of directors and the audit report, will be filed with the Belgian National Bank as prescribed by governing law. Interested parties can obtain a copy of these documents upon request at the company's address.



Hans Beerlandt, Chief Financial Officer

Consolidated Balance Sheet

(in EUR '000)	31/12/2023	31/12/2022
ASSETS		
Non-current assets	821,327	800,904
Intangible assets	25,540	35,140
Goodwill	27,668	28,268
Property, plant and equipment	304,201	291,774
Investment in associates	131,281	137,339
Receivables	296,509	269,203
Other assets	15,065	16,752
Deferred tax assets	21,063	22,428
Current assets	2,575,573	2,651,134
Inventories	34,268	33,496
Construction contracts in progress	455,233	443,771
Real Estate held for sale	375,823	360,126
Trade receivables	744,616	859,497
Other receivables and other assets	476,847	444,149
Cash and cash equivalents	488,786	510,095
TOTAL ASSETS	3,396,900	3,452,038
EQUITY AND LIABILITIES		
Shareholders equity	760,490	783,055
Share capital	32,000	32,000
Retained earnings	684,258	686,111
Hedge reserves	12,763	21,949
Translation differences	31,469	42,995
Minority interest	2,382	2,623
EQUITY	762,872	785,678
LIABILITIES		
Non-current liabilities	609,201	709,078
Borrowings	483,924	578,654
Provisions	53,176	78,377
Other liabilities	55,813	34,427
Deferred tax liabilities	16,288	17,620
Current liabilities	2,024,827	1,957,282
Borrowings and bank overdraft	179,052	175,794
Trade payables	1,001,323	1,044,150
Advances received on contracts	239,140	268,185
Billing in excess on construction contracts	260,148	170,693
Income taxes payable	15,894	14,019
Short-term provisions	86,779	79,381
Other liabilities	242,491	205,060
TOTAL EQUITY AND LIABILITIES	3,396,900	3,452,038

Consolidated Income Statement

(in EUR '000)	2023	2022
Sales	3,391,401	3,338,744
Cost of sales	-3,156,078	-3,110,241
of which depreciation	-58,323	-60,248
of which provisions	33,371	-11,282
GROSS PROFIT	235,323	228,503
General & Administrative expenses	-220,278	-206,481
of which depreciation	-14,110	-13,191
of which provisions	-1,335	-1,383
Other income / expenses	7,002	7,286
OPERATING PROFIT	22,047	29,308
Financial income	32,622	15,449
Financial charges	-43,836	-20,305
Results from associates	22,720	26,374
PROFIT / (LOSS) BEFORE TAXES	33,553	50,826
Income taxes expense	-14,163	-9,966
of which current taxes	-15,695	-17,851
of which deferred taxes	1,532	7,885
CONSOLIDATED PROFIT / (LOSS)	19,390	40,860
Minority interest	-1,327	-569
GROUP CONSOLIDATED PROFIT / (LOSS)	18,063	40,291

Consolidated Cash Flow Statement

(in EUR '000)	2023	2022
Operating result	22,047	29,308
Adjustment for:		
- Depreciation	72,433	73,439
- Result on disposal of (in) tangible assets	-8,178	-9,546
- Result on disposal of other long-term assets	0	0
- Result on disposal of investment in associates	-2,693	-3
- Provisions	-32,036	12,665
- Allowances	2,268	1,707
OPERATING CASH FLOW BEFORE CHANGES IN WORKING CAPITAL	53,841	104,156
- Income taxes paid (net)	-13,467	-19,533
- Changes in working capital	133,860	-207,487
CASH FLOW FROM OPERATING ACTIVITIES	174,234	-122,864
TRANSLATION DIFFERENCE ON CASH & CASH EQUIVALENT	-18,980	-3,170
Purchase of intangible assets	-1,639	-1,178
Purchase of tangible assets	-80,948	-69,489
Purchase of other long-term assets	-174	-95
Acquis. & capital increase investm. in associates	-4,240	-4,901
Proceeds from sale of intangible assets	136	3
Proceeds from sale of tangible assets	15,939	18,300
Proceeds from sale of other long-term assets	-1	32
Proceeds from sale of investments in associates	963	92
Dividends received from investments in associates	31,983	29,949
Acquisitions/(disposals) of subsidiaries, net of cash	-4,574	0
NET CASH FROM INVESTING ACTIVITIES	-42,555	-27,287
Proceeds/(repayments) of borrowings	-91,296	119,486
Proceeds/(repayments) of long term receivables	-7,813	-6,870
Interest paid/received (net)	-14,240	-3,918
FMV - Cash and Cash equivalent	0	
Capital increase minority share	0	41
Dividends paid to Group shareholders	-20,000	-10,000
Dividends paid to minority interests	-659	-140
NET CASH FROM FINANCING ACTIVITIES	-134,008	98,599
(DECREASE)/INCREASE IN CASH & CASH EQUIVALENTS	-21,309	-54,722
MOVEMENTS IN CASH & CASH EQUIVALENTS		
Cash at beginning of the year	510,095	564,817
(Decrease)/Increase	-21,309	-54,722
Cash at the end of the year	488,786	510,095

