BESIX Group

ACTIVITY REPORT 2015

BEYOND THE BUILD

Enterprises are most successful when they are able to offer a unique added value to their clients. Every single one of our clients has a story to tell about how they experience(d) working with BESIX. This activity report tells both their and our tale and provides you with six client insights that demonstrate our continuous quest to go beyond the build.

EXCLUSIVE REQUEST
FOR BURNT WOODEN FACADE
Kanaal, Wijnegem, Belgium

THE KANAAL SITE
VERVOORDT R.E.
BELGIUM

HANZE TERMINAL
PORT OF ZEEBRUGGE
BELGIUM

NEHERKADE
MUNICIPALITY OF THE HAGUE
THE NETHERLANDS

EDF LAB
EDF
FRANCE

WWTP RUWAIS
ABU DHABI
SEWERAGE SERVICES COMPANY
UAE

FOUR SEASONS HOTEL BAHRAIN BAY
SIGNATURE HOTELS MANAGEMENT
COMPANY S.P.C.
BAHRAIN

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BESIX IN 2015

CONSOLIDATED KEY FIGURES 2015

RETURN ON EQUITY
0.7%

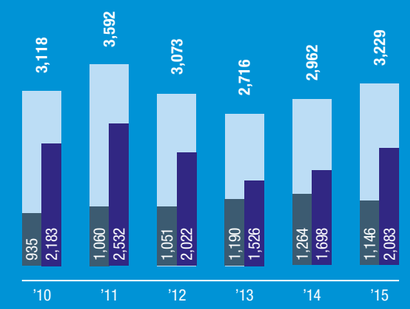
SOLVENCY RATIO
24.4%

NET CASH POSITION
26.4
in EUR million

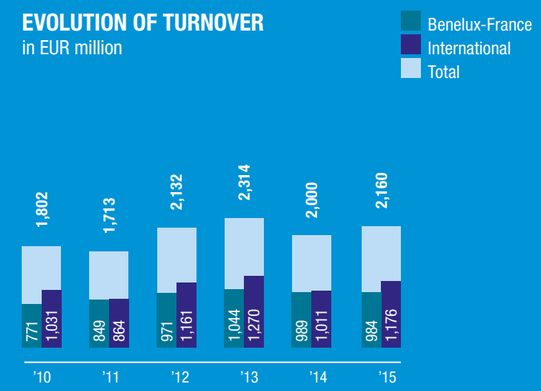
TOP-LINE GROWTH
8.0%

IN EUR MILLION	2010	2011	2012	2013	2014	2015
P&L ACCOUNT						
Turnover	1,802.5	1,712.8	2,132.0	2,314.4	2,000.5	**2,159.7**
EBITDA	142.8	137.4	130.9	121.9	102.7	**46.1**
EBITDA margin (%)	7.9%	8.0%	6.1%	5.3%	5.1%	**2.1%**
EBIT	88.9	95.2	83.4	78.5	65.1	**0.4**
EBIT margin (%)	4.9%	5.6%	3.9%	3.4%	3.3%	**0.0%**
Earnings before taxes	89.5	100.5	100.5	95.6	79.3	**15.4**
Consolidated profit	83.1	91.3	92.0	83.4	62.9	**3.8**
Net result margin (%)	4.6%	5.3%	4.3%	3.6%	3.1%	**0.2%**
Cash flow	158.9	139.4	111.7	124.1	84.6	**75.8**
Cash flow margin (%)	8.8%	8.1%	5.2%	5.4%	4.2%	**3.1%**
BALANCE SHEET						
Equity	373.6	431.6	450.0	499.7	527.3	**518.3**
Net cash position	388.8	348.7	301.6	194.3	160.6	**26.4**
Solvency ratio	22.0%	25.3%	27.1%	27.5%	26.4%	**24.4%**
Liquidity ratio	1.24	1.26	1.31	1.43	1.43	**1.40**
Return on equity	26.7%	24.4%	21.3%	18.5%	12.6%	**0.7%**
ORDER BOOK (31 DEC)	3,118	3,592	3,073	2,716	2,962	**3,229**

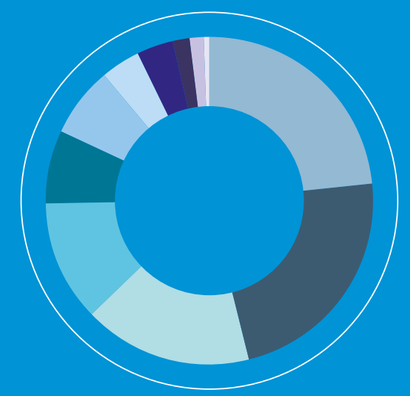
EVOLUTION OF ORDER BOOK
in EUR million



EVOLUTION OF TURNOVER
in EUR million

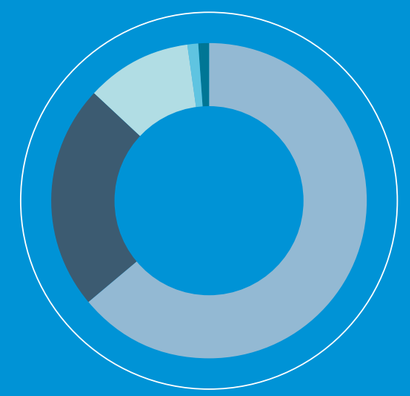


ORDER BOOK BY REGION
in %



- **23.5%** Belgium
- **22.8%** UAE
- **16.5%** Qatar
- **12.0%** The Netherlands - GD Luxembourg - France
- **7.3%** Saudi Arabia
- **6.9%** North Africa
- **3.9%** Bahrain
- **3.5%** Switzerland
- **1.8%** Eastern Europe
- **1.4%** Central Africa
- **0.4%** Asia

ORDER BOOK BY SECTOR
in %



- **64.0%** Buildings
- **23.1%** Civil works
- **10.9%** Marine works
- **1.1%** Environment
- **0.9%** Foundations

JOHAN BEERLANDT
Chief Executive Officer
BESIX Group

Chief Executive's review

A CHALLENGING YEAR BEHIND US, A YEAR OF TRANSITION AHEAD

2015 was marked by an overall steady growth in revenues hampered by operational losses in 2 countries

2016 promises to be a substantially better year with a record order book of about €3.2 billion

2015, a challenging year

BESIX as a Group performed well last year, with a year-on-year growth in revenues of 8%, up to €2,160 million. Our contracting division recorded a strong performance on our home market, most notably in Belgium and the Netherlands. In France we could further strengthen our local footprint albeit results suffered from significant losses on the EDF Saclay project. Despite on-going pressure on oil prices we witnessed a rebound in the Middle East, especially in the UAE, Qatar and Oman. Poland and West-Africa were among the good performers as well.

Working conditions were however far less favorable in Saudi Arabia and Egypt where we recorded major losses, amounting to €70 million, on the Jazan harbor, Grand Egyptian Museum and the Mall of Egypt. These unfortunate events held back the net overall result for our Group to €3.8 million.

Our diversification strategy pays off: our financial position remains solid

The regional entities within our Group further improved their performance with a significant profitability increase. Vanhout and Franki Foundations contributed particularly well as they developed new business lines. BESIX RED also posted record results, benefiting from an attractive pipeline of real estate projects. The profitability of Concessions & Assets increased likewise, driven mostly by the Middle East concessions. All this confirms that our diversification strategy is paying off.

Our Group's financial position remains very strong with a positive net treasury position and a solvency ratio of 24.4%. Cash flows were however negatively impacted by an increase in net working capital requirements during the year and a decrease in advances received from clients.

2015, a rewarding year

2015 was another year in which we were able to deliver premium quality projects. I invite you to read the client stories we have compiled on the projects we completed this year and which are testimony to the passion and expertise of our people.

For many of our projects the client was able to benefit from the synergies across our Group's companies and competencies. The building of the 4th Lanaye lock, for example, was a joint effort between BESIX, Sanotec, Franki Foundations and Wust. Another example is the Belgian pavilion for the World Expo in Milan, which was built by BESIX and Vanhout.

In Antwerp (Belgium), we finished the Kanaal Project and Parktoren, which won the Architizer A+ award.

In the Netherlands, the Neeltje Jans Radartoren received the 'Betonprijs 2015' in the category 'Constructive Design'. Further abroad the Yas Mall in Abu Dhabi was elected 'Best International Shopping Center'. In Equatorial Guinea we delivered the Oyala Bridge and in Australia we successfully completed the Material Offloading facility in Wheatstone.

I am also particularly proud that we could further improve our safety record in the course of 2015. It is the result of hard work and continuous focus by all our teams out in the field. Bringing those numbers further down will remain at the top of our agenda.

In addition, we have further strengthened our commitment to corporate sustainability by joining the United Nations Global Compact Ten Principles in order to confirm our adherence to their values in terms of human rights, work conditions, environment and business practices.

2016, a year of transition

Clearly, 2016 will be a year of reflection and transition for our company. The challenges our industry is facing are huge following the shift from 'Build' to 'Design and Build', changed geopolitics, increased complexity of projects and risk exposure, as well as rapid PPP growth. All this requires us to push the envelope: to stay alert, increase our efficiency, and look for new markets and businesses. The operational issues we had to address throughout the year, prompted us to install the Dare Change program, which will be rolled-out in 2016 and beyond. This initiative aims to improve our internal business processes, in particular our risk, performance and knowledge management.

In order to align our capabilities with the ever-changing market, we will also make additional investments to promote innovation within our company.

2016 will also be the year in which part of our executive committee, who took the reins of the company with the management buy-out in 2004, will gradually pass on the torch to the younger generations. A first step was made in July by nominating Jean Polet and Pierre Sironval as new members of the Group's Strategic and Executive Committee. Carlo Schreurs was appointed Chief Development Officer and became a member of BESIX Board of Directors.

Tripling ambitions

It is our ambition to continue our organic growth, extend our regional footprint and diversify our business further in order to make the Group even more multidisciplinary than it is today. To this end, we have formulated the Triple 3 Strategy: by 2022 we aspire to exceed €3 billion revenues through 3 income streams generated for one third in Europe, one third in the international market and one third from recurring revenues, with a net result exceeding 3% on turnover. A third strategic goal is to add at least 3 new business ventures next to the services we already provide today. Our innovation program will help us reach this goal.

From a regional perspective, we will need to build a third 'home market' next to Benelux-France and the Middle East. Africa offers the potential to become our 'third continent', while the UK and Canada are also interesting markets to explore further. We are also committed to continue our support to the growth of Watpac, the Australian construction services company in which we currently hold a participation of 26.8%.

Favorable outlook

In the last quarter of 2015, BESIX was able to secure several new projects, most notably in the Middle East, where BESIX and Six Construct celebrated 50 years of presence earlier that year.

In Qatar, we won the contract for building additional aircraft stands for the Hamad International Airport of Doha and we also received the green light for a new key venue for the FIFA World Cup 2022 in addition to the on-going renovation works for the Khalifa stadium. Moreover, we have been awarded the contract for building the Royal Atlantis Resort and Residences on Jumairah Palm Island (Dubai).

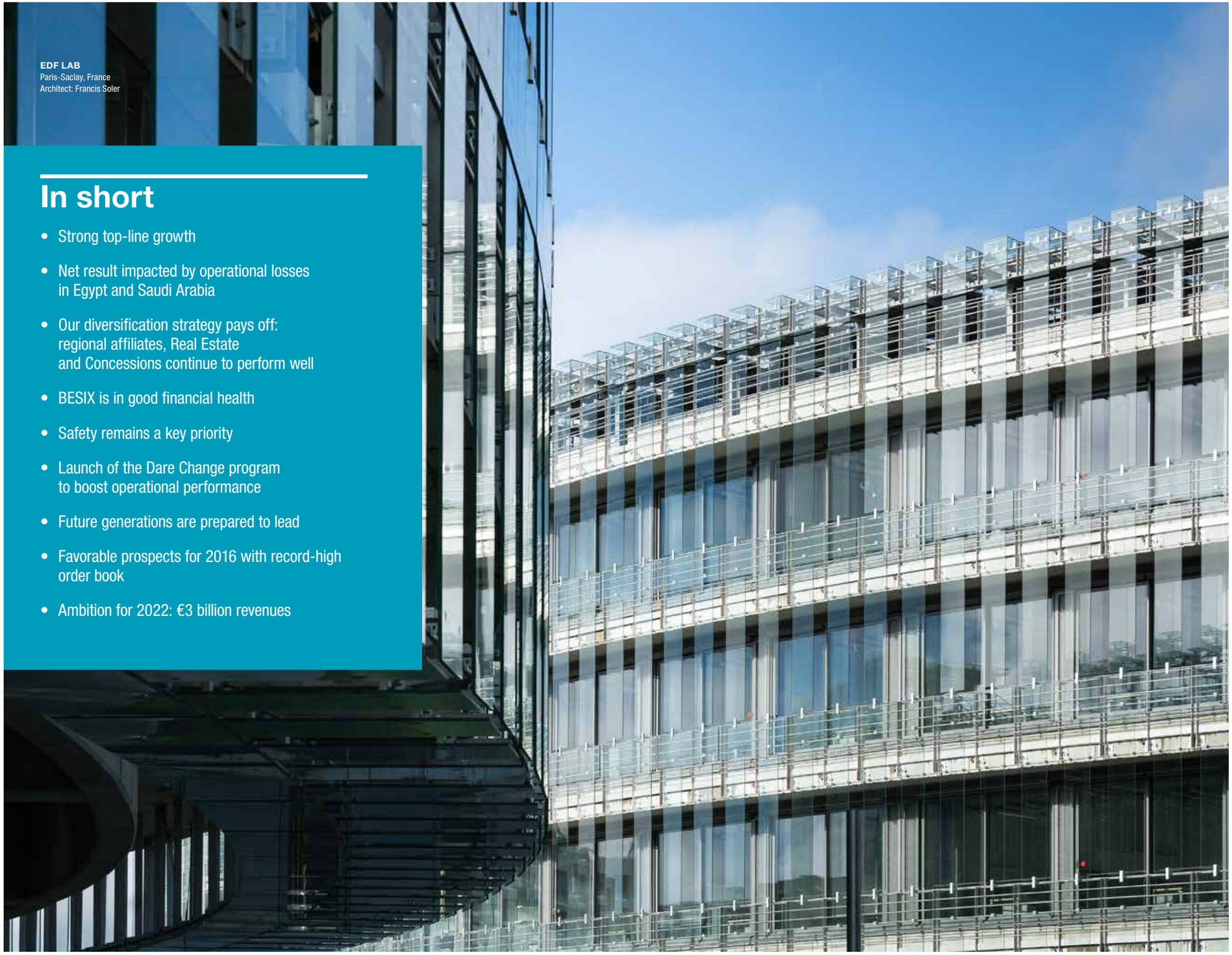
In Europe we won multiple major contracts before the year-end as well. BESIX Nederland signed a contract for the 'Traverse Dieren' project, a 600-meter long underpass near Arnhem. Through the 'Sas van Vreeswijk' consortium we are also taking the lead in a PPP project for the Beatrix lock complex commissioned by Rijkswaterstaat. Still in the Netherlands, and together with Sanotec, we were also granted the contract for the design, renovation and construction of the Den Bosch sewage treatment installation. Earlier in the year we were able to secure the contract for building a hospital (Clinique Saint-Jean L'Ermitage) on the site of Melun, France.

In Belgium, we won the contract for the Hanzeterminal in Zeebrugge, one of the last extensions of the inner port. Furthermore, we obtained the contracts and already started the works for a large building complex in Ghent and the Ijzerlaan project in Antwerp, one of the first projects of the long-awaited Oosterweel connection.

In addition, we were able to add the second phase of the residential building complex Lustica Bay in Montenegro and the Gotthard Residences in Andermatt, Switzerland to the order book.

With these favorable prospects and the set focus on improving our operational performance, I am confident that we can realize a turnaround in 2016 and remain the preferred partner for our clients after the hard landing we had to make in 2015.

I sincerely thank all our employees for their relentless engagement, trust and their enthusiasm to address the challenges ahead of us. They truly are the most important assets of our company.



EDF LAB
Paris-Saclay, France
Architect: Francis Soler

In short

- Strong top-line growth
- Net result impacted by operational losses in Egypt and Saudi Arabia
- Our diversification strategy pays off: regional affiliates, Real Estate and Concessions continue to perform well
- BESIX is in good financial health
- Safety remains a key priority
- Launch of the Dare Change program to boost operational performance
- Future generations are prepared to lead
- Favorable prospects for 2016 with record-high order book
- Ambition for 2022: €3 billion revenues

CORPORATE

2015 AN AWARD-WINNING YEAR

2015 put another feather in the hard hat of BESIX Group. This year's many achievements, awards and distinctions lay a strong foundation for the future of the business, while acknowledging the Group's international reputation for innovation and excellence.

A YEAR OF DEDICATION

- BESIX Group closes 2015 with a **historically full order book** worth €3.2 billion, an 9% increase compared to last year.
- A **Chief Development Officer** is appointed to drive the Group's focus on innovative and sustainable business developments within the sector.
- To develop a winning strategy and prepare its companies for the challenges of the future, the Group calls for **new nominations for the Executive Committee**.
- In the second edition of the **CSR report 2012-2014**, BESIX Group takes stock of its international actions, achievements and objectives in the field of CSR.
- The Group launches its second worldwide **Engagement Survey**, canvassing the professional commitment and personal well-being of its teams. In a business sector that is notoriously fast-paced and demanding, **more than 40% of employees is fully engaged**.

4TH LOCK OF LANAYE
Lanaye, Belgium

A YEAR FOR CELEBRATION

- **Six Construct** celebrates its **50th anniversary in the Middle East**. A Belgian economic mission, led by **HRH Princess Astrid**, visits Qatar and the UAE and is present to mark the occasion.
- The **4th lock of Lanaye** is inaugurated by **His Majesty King Philippe** on 13 November 2015. The new state-of-the-art lock is an important gateway in the European network of waterways and a fulcrum for inland shipping.
- BESIX celebrates **40 years** of achievements in **Sharjah** on 6 December 2015.

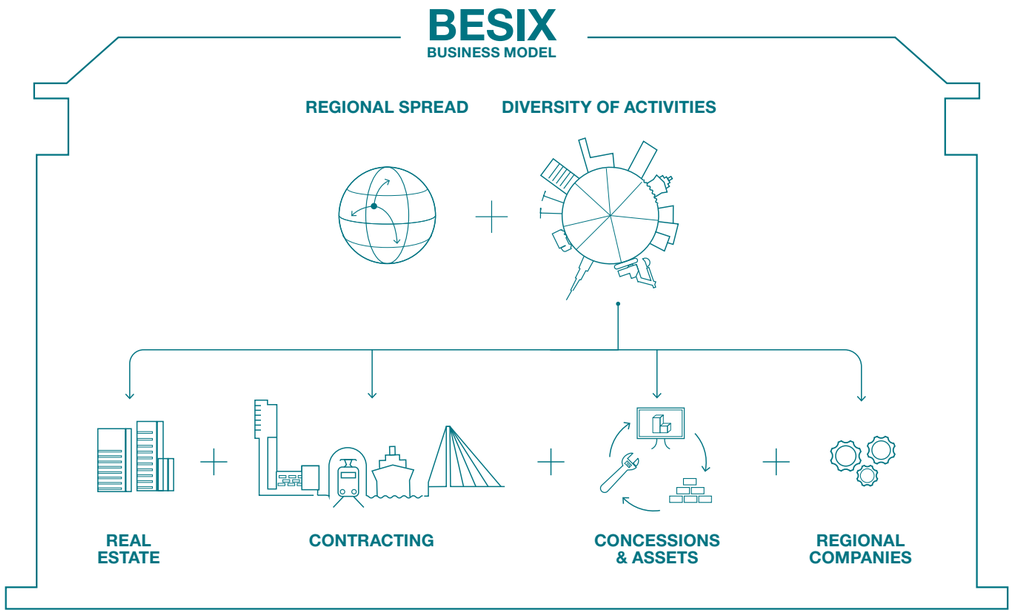
A YEAR OF AWARDS

- The **Yas Mall** wins the award for **'Best International Shopping Center'** at the 2015 Global RLI Awards in Dubai, and is voted the **'Best Retail/Mixed-Use Project 2015'** in the ENR Global Best Projects Awards Program.
- The **Park Tower** in Antwerp picks up the prestigious **Architizer A+ Award** in the category 'Residential – Multi-Unit Housing – High-Rise (16+ floors)'. The NY-based firm's annual awards celebrate the most stirring and effective architecture in the world.
- The **Belgian Pavilion** at the Milan Expo receives a special distinction in the category **'Design and Materials'** for its innovative use of renewable energy systems. The pavilion, built by BESIX and Vanhout, also gets an honorable mention in the category **'Best Exhibit'** in Exhibitor Magazine.
- The **Neeltje Jans Radar Tower** wins the Dutch **Betonprijs 2015** for Constructive Design.

A YEAR OF RECOGNITION

- The Ministry of Labour of the UAE awards a **special prize to Six Construct** for its **excellent relationship management**, acknowledging the enduring ties and mutual respect that exist between these long-time partners.
- The British Standards Institution audits the customer services of the **Ajman Wastewater Plant** and gives a score of 82.9% according to the International Standard for Service Excellence (TISSSE2012). This high mark showcases the care and commitment BESIX and its partners have shown towards their clients. In Abu Dhabi, the laboratories of the Group's wastewater operations are awarded a **Certificate of Excellence in Testing Efficiency** in an independent and international laboratory comparison.
- Every year, the **Aedificas Foundation awards** a special prize to 4 distinguished projects by organizations that have turned their social convictions into real actions. In 2014, Jacques Delens and Wust both received a €5,000 check for their work with non-profit associations Les Fauteuils Volants and Racynes. In 2015, Cobelba-BESIX won the prize for **Le Perron de L'Ilon**, a reintegration program in the catering trade.

AEDIFICAS FOUNDATION AWARDS



Thanks to its rich expertise and in-house knowledge, the BESIX Group is always ready to come up with high-quality and cost-efficient construction, concessions & assets and real estate solutions for its clients.

The company's diversification strategy serves to mitigate risk exposure and ensure balanced revenue streams.

CORPORATE GOVERNANCE

BESIX GROUP FOLLOWS THE BELGIAN RECOMMENDATIONS ON CORPORATE GOVERNANCE FOR UNLISTED COMPANIES

BESIX Group has protocols and structures in place to ensure good governance within its companies and within the organization as a whole, safeguarding the way in which it conducts its affairs and manages its resources. They are explained in our Group CSR report 2012-2014 that can be consulted on our website. The Board of Directors, assisted by various advisory committees, plays a leading role in outlining and monitoring the implementation of corporate governance guidelines, supporting the Chief Executive Officer and Management in the day-to-day operational activities and financial control of the Group and its entities. It also defends the interests of the Group, especially in the event of a crisis or conflict. The Board of Directors is comprised of three external directors including the Chairman, a balanced configuration that ensures authority, expertise and independence. Decisions are taken in unison after ample deliberation and consultation and the functioning of the Board is regularly reviewed.

A number of advisory committees have been organized within the Board of Directors to reflect the Group's organization and operations. These committees of experts prepare the topics to be discussed at board meetings and formulate opinions and recommendations:

- The **Audit Committee** supervises the consolidated financial statements, the interim financial reports and the statutory annual report. It works closely with upper Management and with the company auditor. The committee also monitors the internal control system, the main risks associated with the activities of the Group and its affiliates, and the integrity of Group management.

- The **Remuneration & Nominations Committee** evaluates the performance of senior managers and oversees HR policy in the Group and its various subsidiaries.

- The **Executive & Strategic Committee** focuses on the vision, mission and strategic objectives of the Group. Taking decisions in the best interest of the Group, its companies and employees, the committee oversees the business activities that are defined and driven by Management, the Board of Directors and the Chief Executive Officer.

BOARD OF DIRECTORS

Baron Jean Stéphenne

Johan Beerlandt

Nassef Sawiris

Osama Bishai

Carlo Schreurs

Knight Luc Vandewalle

Baron Philippe Vlerick

Philippe Quoilin

Mark Littel

BOARD OF DIRECTORS AND COMMITTEES

SITUATION AS PER APRIL, 2016

Board of Directors

Baron Jean Stéphenne [1]	Chairman
Johan Beerlandt [2]	Vice-Chairman, Chief Executive Officer
Nassef Sawiris	Vice-Chairman
Knight Luc Vandewalle	Director
Baron Philippe Vlerick	Director
Philippe Quoilin [3]	Director
Osama Bishai	Director
Carlo Schreurs	Director
Mark Littel	Director

End of mandates: June 2016

Audit Committee
Knight Luc Vandewalle (Chairman)
Baron Philippe Vlerick
Mark Littel

Remuneration and Nominations Committee
Baron Jean Stéphenne [1] (Chairman)
Johan Beerlandt [2]
Nassef Sawiris

Executive and Strategic Committee

Johan Beerlandt [2]	Chairman, Chief Executive Officer
Nassef Sawiris	Vice-Chairman
Philippe Quoilin [3]	Chief Operating Officer (Contracting)
Michel Moser	Chief Financial Officer
Geert Aelbrecht [4]	Group Human Resources & Communication Director
Frédéric de Schrevel [5]	Secretary General - General Counsel
Philippe Dessoy	General Manager - Business Development
Yves Dawans	General Manager - Engineering & Operational Support
Jean Polet	General Manager - Business Unit Europe
Pierre Sironval	General Manager - Business Unit Middle East
	Managing Director Six Construct

[1] Permanent representative of Innosté SA
[2] Permanent representative of Bevafin SPRL
[3] Permanent representative of Philippe Quoilin SPRL
[4] Permanent representative of Gacco SPRL
[5] Permanent representative of Arthepa SPRL

GROUP STRUCTURE

	CONTRACTING		CONCESSIONS & ASSETS	REAL ESTATE DEVELOPMENT
	CONSTRUCTION	REGIONAL COMPANIES		
BELGIUM	BESIX	Cobelba	BESIX Park (75%)	BESIX RED
	BESIX Vlaanderen	Franki Foundations	Courtyard by Marriott Brussels (50%)	BESIX RED Properties
	West Construct	Jacques Delens	R4 Maintenance (25%)	
	BESIX Wallonia	Sud Construct		
		Socogetra		
		Quarries & Industries		
		Vanhout		
		HBS		
		Isofoam		
		Vanhout Facilities		
		Vanhout Projects		
		Wust		
THE NETHERLANDS	BESIX Nederland	Franki Foundations	Coentunnel (18%)	
			Keersluis Limmel (66%)	
			Keersluis Limmel Maintenance (50%)	
GD LUXEMBOURG	BESIX Luxembourg	Lux TP	BESIX Global RE (100%)	BESIX RED Luxembourg
		Wust Luxembourg		
FRANCE	BESIX France	Atlas Fondations		BESIX RED France
UNITED KINGDOM		Franki Foundations UK		
SWITZERLAND	BESIX Switzerland		Gottard Residences (49%)	

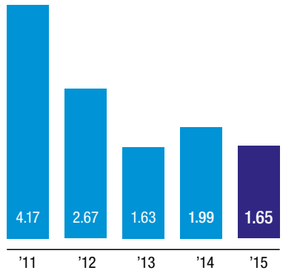
	CONTRACTING INTERNATIONAL	CONCESSIONS & ASSETS
	CONSTRUCTION	
AFRICA	BESIX Morocco	
	BESIX Egypt	
	BESIX Cameroon	
	BESIX Equatorial Guinea	
MIDDLE EAST	BESIX UAE	Abu Dhabi WWTP (20%)
	BESIX Saudi Arabia	Ajman Sewerage (40%)
	Franki Foundations	
	Six Construct Sharjah LLC UAE (99.9%)	Cofely-BESIX FM (50%)
	Six Construct Qatar	COFELY-BESIX Mannai Qatar (25%)
	Six Construct Bahrain	Moalajah (50%)
	Six Construct Oman	Safi (75%)
	Six Construct Saudi Arabia	VEBES O&M (50%)
	MSX Saudi Arabia (50%)	
	United Readymix (49%)	
	Belhasa Six Construct LLC UAE (49%)	
	Six Construct Abu Dhabi LLC UAE (49%)	
REST OF THE WORLD	BESIX Italy	Stadio Alassio Parking (50%)
	BESIX Azerbaijan	Sheraton Poznan (29%)
	BESIX Australia	
	BESIX Poland	
	BESIX Montenegro	
	BESIX Sri Lanka	

QHSE

A CORE COMMITMENT

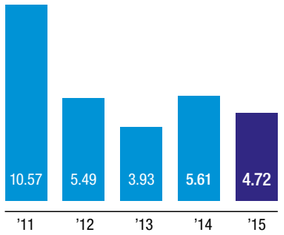
In these economically challenging times, it is more important than ever to put QHSE front and center. By striving to 'get it right the first time', minimizing our environmental impact and providing safe working conditions, BESIX manages to deliver world-class QHSE performances while significantly improving its efficiency.

BESIX EMPLOYEES
LOST TIME INJURY FREQUENCY RATE (LTI FR)[1]



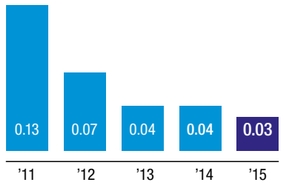
[1] Number of occupational Fatalities + Injuries resulting in loss of minimum one workday, day of the incident not included * 1,000,000 / Hours worked.

BESIX EMPLOYEES
TOTAL RECORDABLE INJURY & ILLNESS FREQUENCY RATE (TRII FR)[2]



[2] Number of occupational Fatalities + Lost Time Injury cases + Restricted Work cases + Medical Treatment cases * 1,000,000 / Hours worked.

BESIX EMPLOYEES
SEVERITY RATE (SR)[3]



[3] Number of days lost from LTI * 1,000 / Hours worked.

HEALTH AND SAFETY PROGRAM

Accident figures

After a small hick-up in 2014, accident statistics have resumed their downward trend again, the result of a lot of hard work and a continuous focus on safety by all our teams in the field. Minimizing these numbers has always been a top priority for the Group.

Fall prevention campaign

In the summer of 2015, BESIX evaluated the quality of the fall protection measures in place on all its project sites in Belgium and the Netherlands. The objective? To correct hazardous conditions, share best practices and remind the importance of on-site risk management to all project managers involved. The campaign was a great success and will be repeated in other countries in 2016.

Safety management: BESIX Walkabouts

The management walkabouts to audit project sites and assess their safety are a BESIX initiative that was launched in 2014, which was successfully continued this year. Management went above and beyond the annual objective of 6 walkabouts, illustrating its strong commitment to health and safety.

Safety and Environmental Time Out 2015

The 2015 Safety and Environmental Time Out Session focused on the individual QHSE responsibility of each and every BESIX employee. The campaign 'My impact on Health, Safety and Environment' bundled 10 Life Saving Rules. The 7th edition of the initiative was supported by a campaign video that helped spread the safety message across the world. On 25 November 2015 more than 25,000 international staff members and subcontractors engaged in an interactive reflection exercise, exchanging ideas about safety on and off site.

QHSE goals for 2016

- **Goal no. 1: Zero incidents.** How? By letting an international working group formulate the necessary steps to reach this target. An international delegation of managers will challenge the proposals.
- **Goal no. 2: Harmonization of key QHSE-related aspects and their implementation.** How? By organizing a Group-wide synergy workshop with 7 working groups that will propose solutions and challenge each other.
- **Goal no. 3: Start reviewing our Integrated Management system.** How? By making our IMs compliant with ISO 9001:2015, ISO 14001:2015 and the CO_2-Performance Ladder v3.0.
- **Goal no. 4: Further improve QHSE awareness.** How? By investing in QHSE training for both staff members and subcontractors.

QUALITY MANAGEMENT

ISO 9001

2015 saw the renewal of the BESIX S.A. ISO 9001 quality management system certificate. The recertification now includes BESIX Australia Pty Ltd., BESIX Cameroun SARL, BESIX G.E. SA and BESIX Azerbaijan LLC.

Document Management & Control

In light of the full review of our Integrated Management system, all QHSE-related procedures were optimized in 2015. Special attention was given to the evaluation of Group suppliers and subcontractors to improve collaboration between the different departments.

Fine-tuning our Toolbox Talks

This year, a 'Train the Trainer' module was developed to ensure that our project managers and supervisors are able to lead the Toolbox Talks in an inspiring fashion. By using more pictures and playful teaching methods, we aim to make these sessions as interactive and as interesting as possible.

Innovative QHSE solutions

– **QHSE Online** | To further strengthen our QHSE policy, we plan to launch our own digital QHSE platform. The website, which will be available through the company portal, aims to promote the sharing of best practices and useful documents. By using metadata, users will be able to quickly find the information they are looking for.

– **E-learning module** | BESIX sets great store by continuous improvement and organizational learning. 2015 marked the launch of a first QHSE e-learning module, addressing the 10 Life Saving Rules of BESIX. The visual approach of the 2D-animated module allows every trainee to follow the training in their own time and eliminates all language barriers.

– **There's an app for that** | To streamline construction site inspections and provisional acceptance, the Group decided to start using a dedicated app for tablets and mobile phones. Its advantages? It's faster, smarter and easier. Users can now fill in all the necessary information online, add digital photos and easily forward the result to various contacts.

ENVIRONMENTAL PERFORMANCE

Product Safety Cards

We pride ourselves in providing safe working conditions for all BESIX employees and we encourage them to develop QHSE awareness on a daily basis. The Product Safety Cards are data sheets that provide essential safety information for people working with hazardous substances. The cards are made available on the Group intranet for all employees and were developed in-house.

E-PRT

After an extensive testing period in 2014, BESIX implemented a Performance Rating Tool (PRT) for annual environmental inspections. The e-PRT follows the successful introduction of the similar support tool for the quarterly Health & Safety inspections.

Sustainable mobility

To encourage green commuting, we organized a 3-week test of e-bikes at the headquarters. In total, 23 participants traveled 1,508 km, saving 310 kg of CO_2. This fantastic result bolsters our efforts and ambition to promote sustainable mobility.

Eliminating emissions

BESIX Nederland successfully passed its annual audit and held its position on the highest rung of the CO_2-Performance Ladder as a level 5-company. The branch managed to reduce its CO_2-emissions by 22.6% compared to 2009, a great achievement.

WERNER DE VOS
Corporate QHSE Manager, BESIX Group

"There is no such thing as a QHSE culture. It is an indistinguishable part of an entire company culture.

In everything we developed or wanted to change, we sought input from our colleagues in the field. This not only led to better results, but also created a greater buy-in."

HUMAN RESOURCES

DEVELOPING AN ENGAGED AND EMPOWERED TEAM

Our work is made possible by the talent and innovative thinking of our committed employees. BESIX invests strongly in developing their skills through targeted training. In 2015, our dedicated HR Department actively worked towards an improved performance culture by launching a number of new initiatives.

"By offering our people the opportunity to share their thoughts about their working environment anonymously, we have gathered measurable data.

Invaluable information that helps us create a stronger connection between the Group and its employees.

With a high global participation rate of 72.5%, this year's survey was a great success."

GEERT AELBRECHT
Group HR & Communication Director, BESIX Group

ENHANCING EMPLOYEE ENGAGEMENT

2015 was another successful year for the Human Resources team with the launch of new projects to empower our teams. The Group is grateful to be supported in its challenges by its dedicated staff members. Employee commitment is at the heart of business success. We want our people to feel motivated, appreciated and above all: glad to be part of the Group. To identify areas for improvement, BESIX has already conducted two Engagement Surveys in the past four years.

The BESIX Group is proud of its Performance (7.62) and Retention (7.70) ratios, which have both increased since 2012. 90% of the survey participants reported that they have great job satisfaction. 84% stated that they have a high engagement and high commitment to the organization. Furthermore the numbers for Engagement, Well-being, Satisfaction and Attractiveness have also increased, but we aim to set clear objectives to further improve in the field of Well-being.

CORPORATE KNOWLEDGE MANAGEMENT

Strong corporate knowledge management stimulates innovation and operational excellence. Two significant projects were initiated in 2015 and will be launched in 2016 to support our staff members: a new Performance & Career Management Process, with the People Coaching Application, and an e-learning tool called 'BE PRO'.

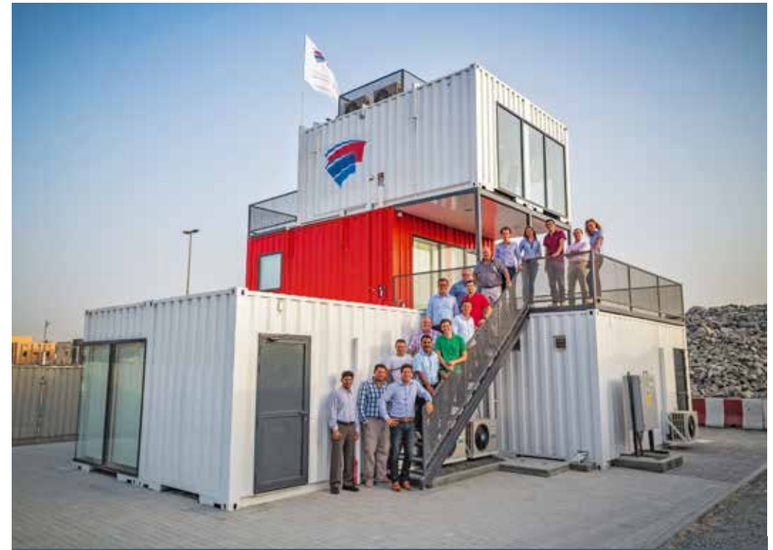
In 2015, BESIX and Six Construct launched a new Performance and Career Management Process. The objective is to empower employees' continued process of coaching, objective setting and competence increase. By maximizing employee potential, the Group not only enables its people, but also strengthens its competitive advantage. A win-win strategy for company success.

Excellence in project management equals excellence in project performance. BESIX Experience in Project Roll Out (BE PRO) is a custom e-learning tool to expand project managers' horizons. The goal? Enhancing our employees' skills and stimulating personal development. Supported by video animations, links to information on the intranet and IMS, BE PRO offers an accessible learning environment that is open to all employees, at all times.

The platform will create and foster a community of trust, support and togetherness that can realize our projects around the world.

EMPOWERING TALENT

The HR team continues to organize the BESIX Potential academy (BPA). This academy selects coworkers that reach a Triple A-level year after year, under different supervisors and on different projects across the world. The Group offers custom business school programs for these young and mid-career potentials. During a business seminar, participants get the opportunity to discuss ideas, develop strategies and present a project to the BESIX Group Executive Committee. In 2015, 24 colleagues from all Group entities took part in the BPA 1 seminar at Vlerick Business School and another 24 colleagues participated in the BPA 2 seminar at Solvay Brussels School. A unique opportunity for networking, communication and idea sharing. And with innovative results!

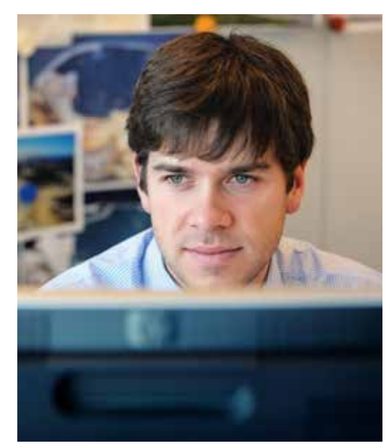


The CuBe

BESIX iD, one of the 2014 BESIX Potential Academy 1 groups, devised a creative method to promote BESIX and its achievements to all stakeholders. The result? CuBe, a multi-purpose facility for internal staff meetings and business site visits. A place to interact, connect and share the BESIX experience. Approved by the Executive Committee, BESIX launched the first CuBe in 2015. Another outcome of the Group's dedicated talent management strategy!

BENOIT MEULEWAETER
Design Project Manager, Six Construct

"Since its opening, the CuBe on the Dubai Canal project has been used for weekly site meetings with our partners. The reactions to the CuBe were unanimously positive. Visitors love the display of BESIX's worldwide achievements and the inside information on the Dubai Canal Project. This feedback helped us to further improve the concept. Early 2016, we hope to open a second CuBe along the Al Rayyan road project in Qatar and a third one on the iconic Royal Atlantis site."



ENGINEERING

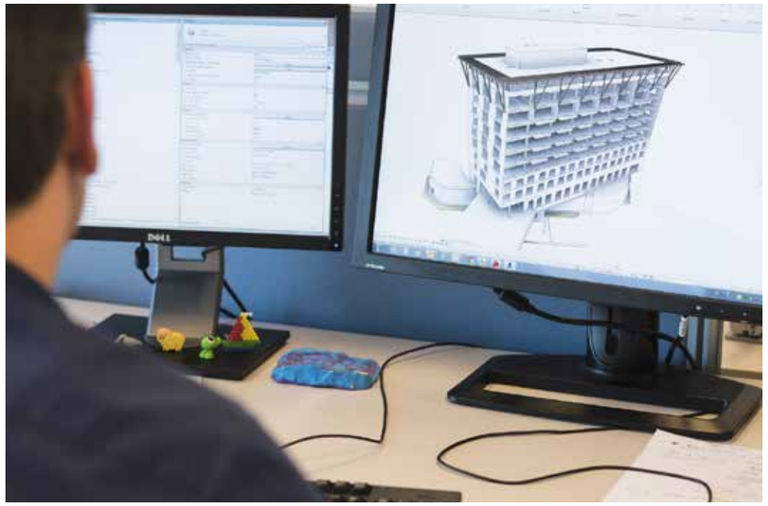
BUILT TO DESIGN, DESIGNED TO BUILD

Every year, BESIX has to adapt to increasingly demanding client requirements and is asked to master ever-greater challenges: unique architecture, technical complexity, demanding logistics and performance requirements, and exceedingly tight construction deadlines. The expertise and commitment of our Engineering Department continue to play a pivotal role in carrying our projects through and delivering excellence on all levels.

"Design is no longer just about dimensioning structures and verifying their integrity. More and more, design is moving towards Integral Design Management, in which every construction is virtually built and fully coordinated well before the first concrete is poured.

The close collaboration between the design and execution teams enables BESIX to keep failure costs at a minimum and deliver first-class projects on time and within budget."

JAN VAN STEIRTEGHEM
Director Engineering Department BESIX



ALL-EMBRACING SOLUTIONS

In 2015, the BESIX Engineering Department, consisting of over 155 engineers and technicians based in Brussels and Dubai, was involved in 160 projects and 90 tenders for a total of 220,000 hours of engineering. Each section of the department contributed to finding innovative and low-risk solutions to complex tenders and Design & Build projects.

- The **Buildings** Section took on, amongst other projects, the Sail Tower (Kingdom of Saudi Arabia), the Belgian Pavilion at the Expo in Milan (Italy) and Gotthard Residences in Andermatt (Switzerland).

- The **Civil Works** Section was responsible for the two cable-stayed bridges in Oyala (Equatorial Guinea), a quay wall in Douala (Cameroon), the port extension in Gdansk (Poland), the civil works in Parkstad (The Netherlands), a bicycle bridge in Antwerp (Belgium), a new floodgate in Limmel (The Netherlands) and four sewage treatments plants in Monaragala (Sri Lanka), 's Hertogenbosch (The Netherlands), Ajman (UAE) and Doha (Qatar).

- The **Marine** Section completed the design of the VLCC Jetty in the port of Fujairah (UAE), continued the design of the Jazan Marine Terminal (Kingdom of Saudi Arabia) and started the design of an LNG Jetty in Bahrain, in addition to supporting numerous international tenders for jetties, breakwaters and quay walls.

The realization of these projects would not have been possible without the invaluable expertise and support of the in-house Geotechnical Department.

The BESIX Engineering Department is also a key player in the tender phase. When preparing their bid, the teams can always rely on the know-how and creativity of the Group's in-house engineering resources to deliver innovative solutions. The department proved its value in the design of several locks in The Netherlands and the successful tender for the FFR Grand Stade de Rugby in Paris (France).

Innovation Platform

On 14 and 15 April 2015, BESIX hosted the 23rd Innovation Platform. Thirteen experts in Building Information Modeling from nine European countries and the USA gathered in a non-competitive atmosphere to exchange ideas on innovation in the construction industry, with a special focus on BIM in infrastructure and project development.

The renovation of the Velsertunnel (BESIX Nederland) was presented as one of the pilot projects that combined Systems Engineering and BIM.

ENGINEERING, A TEAM EFFORT

The Engineering Department counts 17 different nationalities in its team of 149 colleagues and 8 trainees. Proud of its excellent working atmosphere, the team is living proof of the strength of diversity. Conscious of the challenging and ever-changing environment in the business, the Department organized a two-day strategic brainstorming session out of which 10 practical objectives were defined to further improve the quality and the professionalism of the services.

Thinking for tomorrow

Integral Design Management is key to the reduction of failure costs in the construction industry. It will be necessary to make everybody in the production chain aware of its importance by highlighting the tight integration between all levels and trades (Structural / Architecture / MEP / ...).

Modern tools such as BIM and Systems Engineering will be essential to this process.

SUSTAINABLE DESIGN

The BESIX Engineering Department prides itself on its continuous quest for new methodologies. BESIX's broad innovation perspective put into practice:

- The new rugby stadium of the FFR was awarded to the Group thanks to an optimized concrete mix design with a reduced carbon footprint.
- The tender design for the Beatrix lock demonstrates the sustainability gains using the Dutch Sustainable Building Evaluation system DuboCalc.
- For the Andermatt Gotthard Residences project and many others, the Department uses BIM tools to improve design coordination, boost construction efficiency and reduce waste.

CSR

INVESTING IN TOMORROW, TODAY

Last year, the BESIX Group published its second CSR Report 2012-2014. The Group analyzed its impact in light of the main challenges facing the world today (climate change, urbanization and need for renewable energy) to monitor the progress we have made so far according to our CSR standards and objectives.

"We value the opinion of our partners, and we will always work to do right by them.

Such is our engagement towards others and to ourselves. At BESIX, CSR is not a final destination, it is an on-going journey of commitment and self-realization."

FRÉDÉRIC DE SCHREVEL
General Counsel, CSR Officer, BESIX Group.

Sustainability is a firmly embedded concept at BESIX: it pervades our day-to-day operations and business values. If in the West we participate in the continued growth of our business and society, we want to help developing countries achieve a better and more comfortable life in a way that is respectful of their culture and the environment.

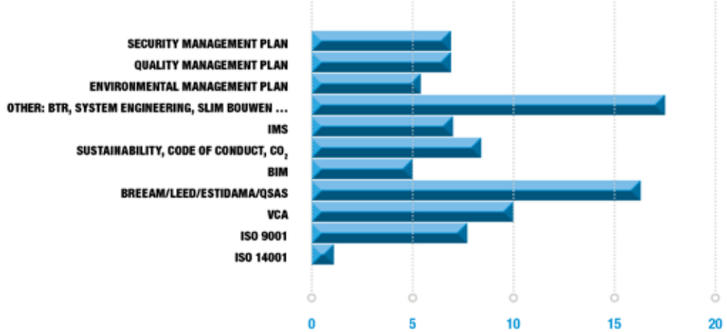
2015 was a year of consolidation in which the Group took steps to bring to fruition the key actions formulated in our CSR report. We intend to develop these action points for the long term and incorporate them in our activities around the globe.

HEALTHY SUPPLY CHAIN

To achieve a more sustainable supply chain, the Group developed its own Code of Conduct for Sustainable and Responsible Procurement.

97% of our colleagues involved in the procurement chain ('Buyers') and 51% of the targeted subcontractors, suppliers and service providers ('Providers') signed the Code, confirming that they will comply with it. In the next years, BESIX intends to implement a Sustainable Purchasing action plan, with a strong focus on collaborations with the social economy sector. The Group remains very active in the field of diversity on the work floor and asked its subcontractors to assist in the introduction of integration initiatives, while advising them on how best to pursue social inclusion on site.

Increase of CSR-topics in prequalification files
from 2011 to 2014 (in %)



Statistics from BESIX SA and Six Construct Prequalification Departments.

SUSTAINABLE CONSTRUCTION

To meet the environmental challenges of the 21st century, we continue to increase and strengthen our technical expertise in sustainable construction.

Our sustainable construction department is on a continuous quest for novel methodologies that will drive the construction industry forward, devising innovative low-energy building solutions and implementing the recycling of raw materials and the cutting of waste and emissions.

We follow the GRI Index guidelines to realize our CSR Reports.

COMMITTED TO CSR

We challenge our people to be innovative. To support them in this effort, we invest strongly in employee training and professional development. Well-being at work is a must for us, as well as for our stakeholders who are directly or indirectly linked to our projects in progress. The Group pays attention to questions or feedback that are related to the professional and personal well-being of its employees and teams, and invites everyone to participate in a shared perspective on CSR.

Through the BESIX Foundation, the Group also encourages employee volunteerism. In 2015, 347 colleagues offered to help out during 18 solidarity days. A remarkable result that illustrates our people's dedication to their job and to building a better world.

Discover more about the Group's various CSR initiatives throughout this report.

GLOBAL COMPACT

The Group is fully aware that CSR is a never-ending story: therefore, in 2016, building on the achievements and realizations of 2015, we intend to push ourselves even further. That is why we joined the Ten Principles Global Compact initiative of the United Nations. The principles concern human rights, work conditions, environment and business practices. We are continually seeking ways to further improve our performances and give expression and substance to our devotion to CSR.

UN GLOBAL COMPACT

BESIX FOUNDATION

THE REWARD OF GIVING BACK

"BESIX Foundation realized numerous beautiful projects over the last 7 years. New projects secure the future of our Foundation.

All this is built on enthusiasm and volunteering. I would like to thank our 2,000 volunteers and welcome the younger generation. Together we shape a sustainable future."

FRÉDÉRIC DE SCHREVEL
General Counsel, CSR Officer, BESIX Group.

7 YEARS OF SOLIDARITY WITH 166 PROJECTS SUPPORTED AND 29,000 BENEFICIARIES

Through its Foundation, BESIX wants to give something back to the community and make a positive impact on the world. Despite the difficult economic climate, the Group devoted its full efforts to making 2015 another successful year for the Foundation, investing its time and resources in charitable causes at home and abroad.

BESIX Foundation

supports numerous charitable projects in the field of education, construction and environment. When launching the Foundation in 2009, our aim was to help the communities that have become a second home to us, and to involve our employees in this support. In 2015, 60% of the supported projects were based on proposals submitted by BESIX employees.

in 2015

22
new projects

347
volunteers

18
Solidarity Days

€379,211
committed

SOLIDARITY FIRST

2015 has been another great year for the Foundation: 347 volunteers demonstrated their passion and dedication supporting different charities during 18 Solidarity Days. Parallel to its enduring commitments to various non-profit organizations, we want to strengthen KiddyBuild and Right 2 Learn in 2016, two tailor-made projects initiated by BESIX Foundation. Both were extremely successful: a rewarding result for the whole team!

ALICE TILLEUL
Civil engineer, BESIX

"The initial goal of Right 2 Learn was to improve workers' e-communication skills, facilitating the communication with their loved ones back home. But now, four years on, Right 2 Learn has become so much more than that: it's a program that is changing lives."

Right 2 learn

3 LOCATIONS, 11 SESSIONS, 143 PARTICIPANTS

Right 2 Learn, which has been helping expat workers to improve their IT skills since 2011, is a program that focuses on education and communication.

In addition to organising regular IT classes, the Foundation also set up local internet cafés that enable workers to communicate with their families free of charge.

But Right 2 Learn is also a career booster: in 2015, having taken several IT courses, two Abu Dhabi workers felt ready for a new professional challenge and went on to become Assistant Document Control and Assistant Administration respectively, a great achievement!

KiddyBuild

3 DAYS, 5 SCHOOLS, 12 CLASSES, 188 CHILDREN

After a successful partnership with 'Toekomst Atelier de l'Avenir', BESIX Foundation decided to launch its own project in 2014: KiddyBuild. The program introduces children from underprivileged areas in Brussels, aged 10 to 14, to different careers in the construction industry during a 1-day guided tour of BESIX sites.

KiddyBuild proved to be immensely popular in 2015, both with schools and our colleagues. In 2016, we plan to welcome an even greater number of participants. The success of the program inspired us to think about opening up the initiative to adolescents and teachers as well.

SASKIA CLAES
Project Manager Jacques Delens

"KiddyBuild is a wonderful initiative. The construction industry offers employment opportunities for everyone, regardless of their education level or social background.

The project has enabled us to galvanize the classes and teach them about the trade in a fun and interactive way.

KiddyBuild shows kids from all levels of society that there is a job out there waiting for them, something they can be passionate about. It makes my day to know that our teams in the field are showing these kids it's OK to dream."

VOLUNTEERING THE BESIX SKILLS

In 2015, the Foundation sponsored 9 professional patronage programs, non-profits that focus on work, reschooling and reintegration, whilst lending the BESIX know-how and expertise to charitable building projects on the international stage.

Local and international projects supported by the Foundation are available on its website.

PAUL KINGET
Retired employee Jacques Delens, still active at BESIX Foundation.

"I take great pride and pleasure in volunteering for Poverello. Building shelters for the homeless reminds me of my career as Technical Director with Jacques Delens."

BESIX

AROUND THE WORLD

21

Countries in which BESIX is currently active

Countries where BESIX has been active

EXPERTISE

WHEATSTONE
Australia

Expertise and Markets

"Although challenges of globalization impacted our activities this year, we kept our objective to shape our client's ambitions and managed to make our projects real market benchmarks. Our multiservice approach and flexible expertise made all the difference for our clients in 2015.

Our order book 2016 shows future potential to rebound successfully in the coming years."

PHILIPPE QUOILIN
Chief Operating Officer BESIX

BESIX BENELUX -FRANCE

Polyvalence with a sense of quality

IN 2015, THE BESIX TEAMS IN THE BENELUX AND FRANCE SHOWED THEIR KNOW-HOW AND VERSATILITY IN A WIDE RANGE OF PROJECTS AND DEVELOPMENTS, DELIVERING FIRST-RATE RESULTS AND A STEADY TURNOVER.

BRUXSEL DOCKS
Brussels, Belgium
Architect: Art & Build

BEATRIX LOCK
Nieuwegein, The Netherlands

"Despite the challenging economical context in the Benelux and France, our teams not only kept the activity at a relatively high level, they also managed to secure a healthy pipeline of new projects.

Our teams' value-added service when realizing complex and challenging projects is very much appreciated by our clients, a level of operational performance we will strive to keep improving in 2016."

JEAN POLET
General Manager, Europe, BESIX

BESIX IN BELGIUM

CADIZ RESIDENCE
Antwerp, Belgium
Architect: JV META architectuurbureau bvba - Poponcini & Lootens ir. Architecten bvba

KOTVILLE PROJECT
Bruges, Belgium
Architect: B. & C. Coussée

BESIX WORKED ON MANY RESIDENTIAL DEVELOPMENTS THAT BLEND INNOVATIVE DESIGN WITH CONTEMPORARY LIFESTYLE CONCEPTS, OFFERING THE BEST IN ENERGY-EFFICIENCY, COMFORT AND SAFETY.

Cadiz Residence
| Buildings

The 6-storey, multifunctional Cadiz Building is synonymous with smarter living, striking the perfect balance between function and form. Located in Antwerp's historic (and hip) port district, the Cadiz concept offers residential and social housing (184 apartments), a luxury hotel, a healthcare center (127 rooms), a supermarket and various shops. The building will be delivered in spring 2016.

Kotville
| Buildings

In Sint-Michiels, near Bruges, BESIX is building 125 accommodations in a mixed development of upmarket studio apartments, traditional student rooms and common areas. The Kotville project will be ready mid-2016.

Dunant Gardens
| Buildings

This unique housing project has transformed the landmark CIAC garage in Ghent, while preserving the character of its famous facade. The build comprises 197 apartments including 52 units with assisted living. Construction began in Q3 of 2015.

Kanaal Wijnegem
| Buildings

Contracting for Vervoordt r.e., BESIX-Vanhout delivered the 30,000-m² mixed renovation/restoration project in Wijnegem, on the outskirts of Antwerp. The team transformed a protected industrial site on the Albert Canal into a mix of residential units, offices and commercial spaces, harmonizing the old and the new to create a truly inspiring concept of an 'outer city'.

OFFICE AND PARKING COMPLEX
Ostend, Belgium
Architect: Dietmar Feitchtinger Architects

TREBEL BUILDING
Brussels, Belgium
Architect: Jaspers-Eyers & Partners

TREBEL BUILDING
Brussels, Belgium
Architect: Jaspers-Eyers & Partners

21ST-CENTURY OFFICES HAVE TO BE MANY THINGS AT ONCE: MODERN AND COMFORTABLE, EASILY ACCESSIBLE, AND ENERGY-EFFICIENT.

Office and parking complex Ostend
| Buildings

In Ostend, BESIX is constructing a multi-functional building with large offices and 700 parking spaces, offering quick and easy access to the local tram and train. The project will be delivered in spring 2016.

TREBEL
| Buildings

BESIX and Jacques Delens are putting the finishing touches on a new office building for the European Parliament in Brussels. The project, which aspires to the BREEAM 'Excellent' certification, has 13 floors and three levels of underground parking. The TREBEL-building will be completed in early 2016.

Post X
| Buildings

Post X, conveniently located near the Berchem train station and the ring road, is a large-scale urban development project that offers an office and school program and retail opportunities. The five office buildings make up the first passive office location in Antwerp and will have room for more than 5,000 employees. The office complex will also have two underground parking levels for a total floor area of 49,000 m². The project is slated for delivery in 2017.

BRUXSEL DOCKS
Brussels, Belgium
Architect: Art & Build

BELGIUM NATIONAL RAILWAY COMPANY WORKSHOPS
Melle, Belgium
Architect: TUC RAIL

BRUXSEL DOCKS
Brussels, Belgium
Architect: Art & Build

MIVB-STIB maintenance center
| Industrial works

In Haren, BESIX redeveloped the existing building (16,000 m²) and constructed a new building (8,000 m²) for the public transport maintenance center of the Brussels Inter-communal Transport Company. The shop also has 2 on-site paint lines for buses, trams and metro carriages (3,200 m²) and qualifies for the BREEAM 'Good' certification. The project will be delivered in 2018.

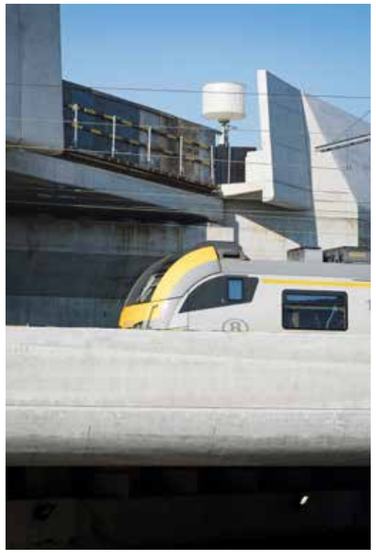
NMBS workshops
| Industrial works

BESIX is working on a multifunctional workshop and rail yard for the Belgian National Railway Company (NMBS) in Melle near Ghent, including the installation of the technical tools and equipment and 26 tracks. The works should be ready in mid-2017.

BESIX IS CONTRIBUTING ITS SERVICES AND EXPERTISE TO A RISING NUMBER OF COMMERCIAL DEVELOPMENTS IN BELGIUM, WHICH SIGNAL THE CROSS-COUNTRY TREND FOR INNOVATIVE, MULTIFUNCTIONAL SHOPPING MALLS.

Bruxsel Docks
| Buildings

This unique, 56,000 m² shopping and entertainment district in Brussels will include a retail and recreational area, craft workshops, an indoor leisure park, a brand-new 2,800-m² event center (for up to 1,500 people) and an original VIP cinema concept (7 theatres, 1,000 seats). The redeveloped brownfield site, located on the Brussels-Scheldt Canal, will become an entirely new neighborhood that is easily accessible from the airport.



MECHELEN RAILWAY BYPASS AND TANGENT
Mechelen, Belgium

VIADUCT OF HERSTAL
Herstal, Belgium

THROUGHOUT THE COUNTRY, TRANSPORT SYSTEMS ARE BEING REIMAGINED TO MEET THE NEEDS OF THE MODERN, DYNAMIC CITY AND ECONOMY. WITH ITS CIVIL, INDUSTRIAL AND MARINE ENGINEERING PROJECTS, BESIX IS PLAYING A VITAL PART IN SHAPING THE FLEXIBLE LOGISTICS AND SUSTAINABLE INFRASTRUCTURE OF THE FUTURE.

Mechelen Railway Bypass and Tangent
| Civil engineering

In the center of Mechelen, BESIX is building a total of 15 structures, including two bridges under the existing train lines, a tunnel under the Leuvense Vaart canal and a number of complex railway bridges. The station will also be completely renovated and the surrounding area enlarged to ensure the free flow of traffic. The project will put in place the last missing link in Belgium's HST (high speed train) network.

Viaduct of Herstal
| Civil engineering

Close to Liège, the team is rehabilitating and widening the intricate layout of the Herstal viaduct, which crosses the Albert Canal, the Chertal site and the river Meuse. The project will be finished in late 2016.

Hanze Terminal
| Marine works

In the inner port of Zeebrugge, BESIX is responsible for the Design & Build of a 370-m-long quay wall with a draft of 18.4 m. The quay wall will be put into operation in spring 2016.

FIFTH HARBOR DOCK
Antwerp, Belgium

4TH LANAYE LOCK
Lanaye, Belgium

KONS
Luxembourg City, Luxembourg
Architect: M3 Architectes

Fifth Harbor dock, Antwerp
| Marine works

This project includes the renovation and deepening of the northern quay wall of the industrial dock and the adjacent quay wall of the fifth dock of the international port of Antwerp to increase the entrance depth for container ships. The dock will be in service in early 2017.

4th Lanaye Lock
| Marine works

The massive 225 m x 25 m x 20 m lock, extending over a 14-m drop, is the largest civil engineering project carried out in Wallonia in the last ten years. The lock was opened for traffic in the summer of 2015.

LUXEMBOURG

Kons
| Buildings

Built in the heart of Luxembourg City to strict BREEAM specifications, the multipurpose Kons development offers 15,000 m² of office space (including the new headquarters of ING Luxembourg), 2,500 m² of retail space, 3,500 m² of housing and 235 parking spaces. The project will be ready by the end of 2016.

Interview

KANAAL, A NEW WAY OF LIVING

A unique collaboration

For three years, the JV BESIX-Vanhout has worked with Vervoordt r.e. on the Albert Canal between Wijnegem and Schilde, transforming an old industrial site into a new, mixed-use development. The project site brings to mind the contemporary trend of upcycling: a surprising marriage between the old and the new, converging on a new city in the country.

"There is a greater chance of encountering surprises during construction in renovation projects than in new building works. The standard top-down approach simply does not work when renovating historical buildings."

DICK VERVOORDT
Director Vervoordt r.e.

WALDO VANHENTENRIJK
Project Director, BESIX

DICK VERVOORDT
Directeur, Vervoordt r.e.

BERT LENAERTS
Business Development Manager, Vanhout

The Kanaal site, on the outskirts of Antwerp, strikes up a conversation between different styles and techniques. To highlight the diversity of the various buildings and the historicity of the site, Dick Vervoordt, Director of Vervoordt r.e., decided to work with three different architectural practices (Stéphane Beel, Bogdan-Van Broeck and Coussée-Goris). **Dick Vervoordt** sheds some more light on this bold decision:

"I was afraid that consulting only one architect would stifle the project. Kanaal is a mixed-use development, creating a new neighborhood that is characterized by social contacts between different groups. Multiple visions enhance the dynamics of that diverse community."

Vervoordt was looking for the right contractor for this (varied) job, and found BESIX and Vanhout. The partnership paid dividends, according to **Dick Vervoordt**:

"Remodeling is always a balancing act. The process is extremely demanding: for us, for the architects and for the contractor. Luckily, BESIX-Vanhout was no stranger to unpredictable and challenging projects. They proved to be a skilled communicator and excelled in flexibility, going after smart solutions and always consulting all parties involved. We knew we were in safe hands."

A technical tour de force

This being in part a renovation project, flexibility was of the essence for all parties involved. **Dick Vervoordt**, Director Vervoordt r.e.: "There is a greater chance of encountering surprises during construction in renovation projects than in new building works. The standard top-down approach simply does not work when renovating historical buildings."

The design of the Silos, for example, was completely adjusted to the possibility of installing a swimming pool on the top floor, approximately 50 m above the ground. A complex challenge, that demanded the JV's engineers and building teams to bring their every talent and skill into play.

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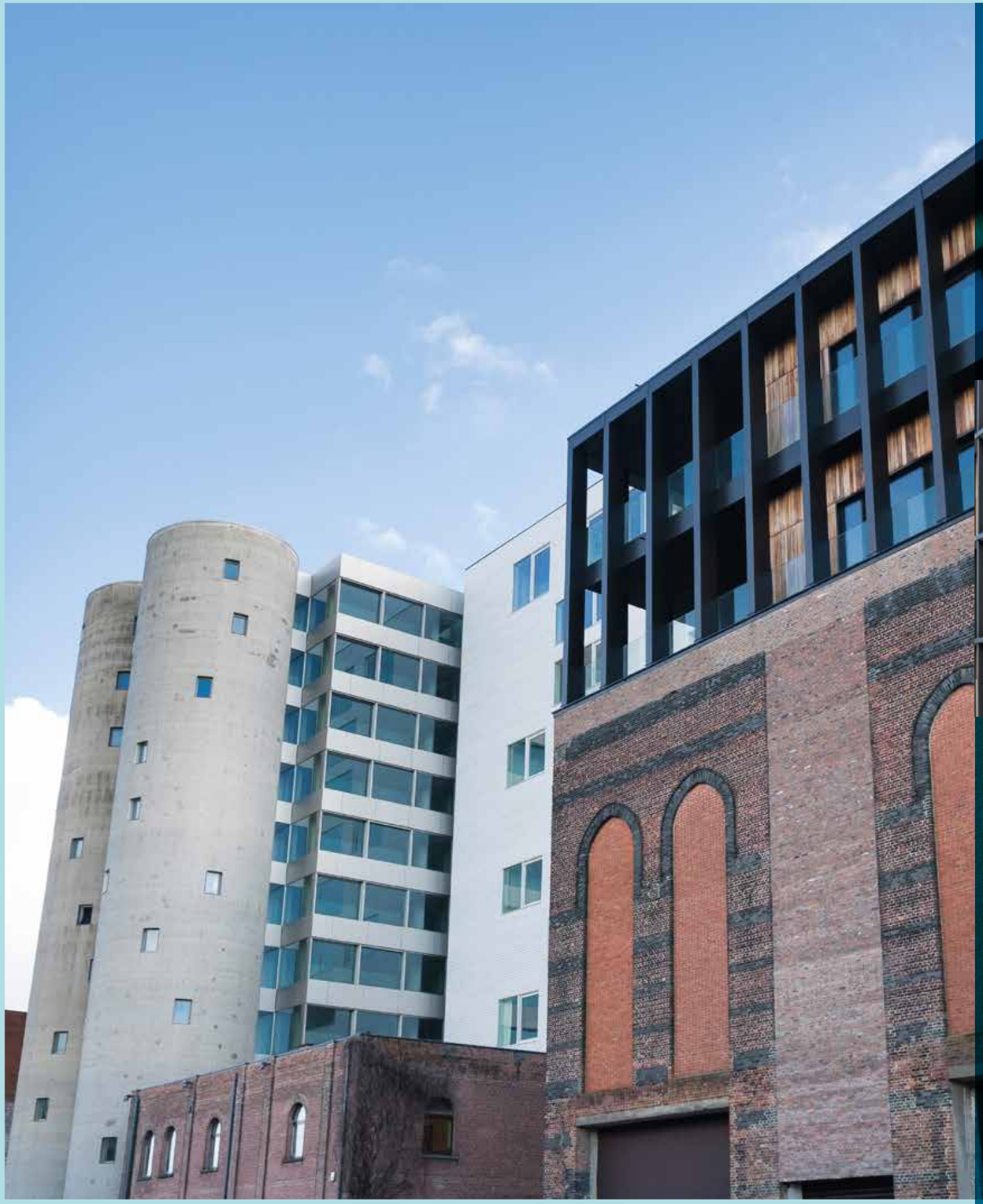


"The project was completed on time and within budget, despite the high degrees of technical complexity. Our client was keen on delivering excellence to the buyers and we strived to deliver just that."

WALDO VANHENTENRIJK
Project Director at BESIX

KANAAL
WIJNEGEM, BELGIUM

Key data
- Mixed-use development of more than 30,000 m²
- 10 shops, 20 offices and 98 appartements between 105 and 420 m²
- Construction of new buildings and renovation works: 11 buildings in total
- JV BESIX-Vanhout together with BESIX entities Cobelba and Isofoam
- Architects: Stéphane Beel, Bogdan-Van Broeck and Coussée-Goris
- www.kanaal.be

Build
JV BESIX-Vanhout

Period
2012-2015

"

The Cubes, the apartment blocks that make up the beating heart of the development, have an elegant loggia with an indoor terrace and a huge 25-m² window that opens up onto the vibrant Kanaal neighborhood.

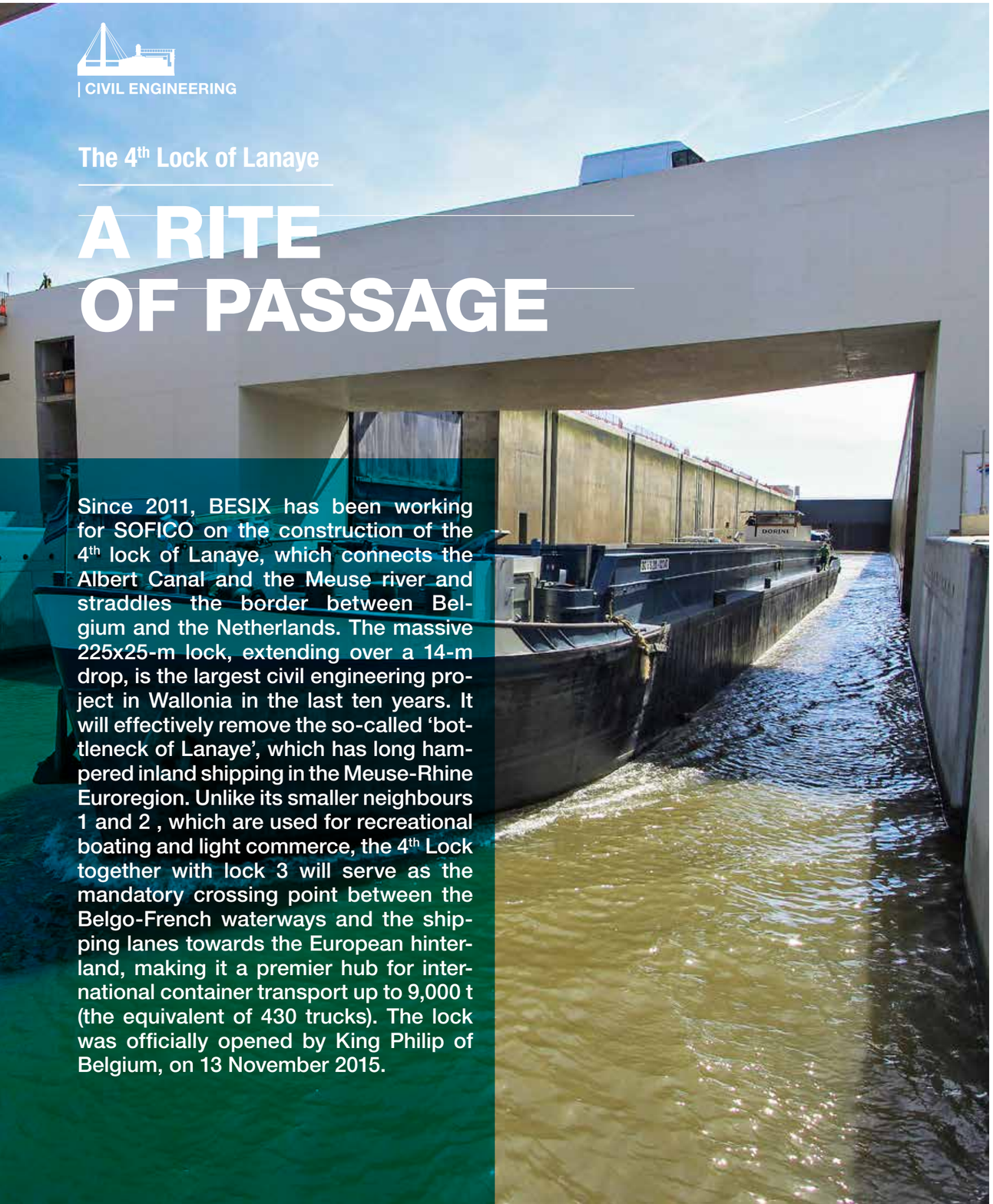
Waldo Vanhentenrijk, Project Director at BESIX, explains: "The loggia's steel windows were the first of its kind. We managed to find an innovative, tailor-made solution, with excellent wind and water performance.

Thanks to our vast network of qualified, global suppliers, moreover, we managed to find the right supplier for the client's every wish. BESIX is all about problem solving. When our teams face difficulties during the construction phase, they always think in terms of opportunities and solutions. We always finish what we started. It is part of our Group identity."

Quality of life

The project aims to create a self-sufficient hub, where residences and businesses go hand in hand. The different living and working units are complemented with several supporting facilities, offering a ready-made solution to Antwerp's mobility issues.

Dick Vervoordt knows that in today's market, renovation and sustainability have become virtually synonymous: "The way I see it, renovating existing buildings is sustainable development at its best. And by having all basic facilities on-site, we not only improve the environmental quality of the site, but also the inhabitants' quality of life."



| CIVIL ENGINEERING

The 4th Lock of Lanaye

A RITE OF PASSAGE

Since 2011, BESIX has been working for SOFICO on the construction of the 4th lock of Lanaye, which connects the Albert Canal and the Meuse river and straddles the border between Belgium and the Netherlands. The massive 225x25-m lock, extending over a 14-m drop, is the largest civil engineering project in Wallonia in the last ten years. It will effectively remove the so-called 'bottleneck of Lanaye', which has long hampered inland shipping in the Meuse-Rhine Euroregion. Unlike its smaller neighbours 1 and 2 , which are used for recreational boating and light commerce, the 4th Lock together with lock 3 will serve as the mandatory crossing point between the Belgo-French waterways and the shipping lanes towards the European hinterland, making it a premier hub for international container transport up to 9,000 t (the equivalent of 430 trucks). The lock was officially opened by King Philip of Belgium, on 13 November 2015.

THE WORKS

The lock is made up of a reinforced raft and 3-m-thick concrete walls and impressive lateral aqueducts (with 7 x 5 m sections). In addition to the necessary demolition, piling and redevelopment works around the site, BESIX built a pumping station and a hydroelectric plant, a 200-m bridge across the channel, a control center, and several kilometers of quay walls and roads.

AN INSPIRED IDEA

The team installed a batching plant on-site and sourced cement from a nearby supplier to reduce the project's footprint. "The most inspired feat of CSR, however, was the carefully informed decision to extract Meuse river gravel from the mountainous excavation works (1.3 million m³) and re-use it as the aggregate primer for the concrete of the lock. This required a logistical tour de force (fine-tuning the phasing and backfill operations, and so on), but the team pulled it off and poured no less than 200,000 cubic meters of concrete with recycled gravel. This brainstorm saved 55,000 tons of CO_2!" Jean-François Rijs, Project Manager BESIX

GOING WITH THE FLOW

BESIX was also able to mitigate the project's considerable impact on the on-going flow of traffic on the water and the surrounding roads. The biggest challenge, however, was posed by the installation of the new (eye-catching) bridge across the channel, without interfering with the building activities in the lock. In January 2013, the 1,000-ton metal structure was installed and two mobile formworks were provided for the pouring of the concrete deck. Afterwards the necessary infrastructure was put in place in order to commission this new bridge for Christmas 2013, while maintaining the construction activity below for another 2 years of work.

A NATURE-FRIENDLY PROJECT

The project sits in the middle of a protected Natura 2000 area, and its local fauna (from birds to mussels) and flora (rare orchids and seasonally felled trees) had to be approached with extreme caution. Not only did BESIX adhere to the strict environmental regulations, it also created new spawning grounds and natural banks along the village of Lanaye to offset the project's impact on the local fauna and flora.

THE 4TH LOCK OF LANAYE
LANAYE, BELGIUM

Fast Facts
- Lock of 225 m x 25 m x 20 m
- New lock allows the circulation of convoys of 9,000 ton instead of the current 2,000 ton

Client
SOFICO

Build
BESIX

Period
2011 – 2015

"For almost 5 years, several hundreds of workers and engineers called Lanaye their home. They included different subcontractors, many nationalities and countless specialized skills. Planning and orchestrating a project this big is never easy. But we made it happen, and everyone can be proud of the achievement."

PATRICK DELPERDANGE
Senior Operations Manager
BESIX Wallonia

EXTENDING THE HANZE TERMINAL

A partnership rooted in trust

The first BESIX project in the Port of Zeebrugge dates back to nearly 70 years ago, when BESIX repaired war damage to the breakwater. Since then, our company has been active in the many expansions at the port on a continuous basis.

Today the deep-sea port of Zeebrugge has grown into a global leader for the import and export of new vehicles, and a major hub for the supply of natural gas in Europe. Winning a major contract for the transfer of liquid gas from Siberia, and noticing an increase in car shipping, Zeebrugge urgently needed to expand the capacity of the inner port in the spring of 2015. BESIX was promptly contracted to extend the quay wall at the Hanze terminal.

"The flexibility with which the numerous delays were handled by both parties is an illustration of the trust built up between us and BESIX in recent years"

JOACHIM COENS
Managing Director Port of Zeebrugge

KAREL VERMEERSCH
Deputy General Manager BESIX Flanders & Brussels

JOACHIM COENS
Managing Director Port of Zeebrugge

Flexibility when the need is great

The tender for the construction of the quay wall had already been awarded to BESIX in 2011. Since there was no immediate commercial demand, the Port requested an extension several times. "The flexibility with which this was handled by both parties is an illustration of the trust built up between us and BESIX in recent years," explains **Joachim Coens, Managing Director Port of Zeebrugge**. The Port had previously called upon BESIX to build two quay walls, one in the Albert II dock and one in the OCHZ (Container Handling Zeebrugge) terminal.

Joachim Coens: "When we finally placed the order in August of last year, two conditions were clear: the quay wall had to be operational for the terminal operator (International Car Operators, ICO) in the spring of 2017 and it had to be executed within a strict budget. The contract also required a construction identical to the existing quay wall, with a minimum depth of 15 meters, allowing container vessels to dock easily."

Unexpected circumstances raise doubts about meeting criteria

In order to assess the risks of the project, BESIX carried out a ground study where the new quay wall would be constructed. The findings showed that an identical construction would be impossible: thicker and deeper sheet piling than initially forecast was needed, with more reinforcement and longer MV piles. This would substantially increase the cost of the project, and the budget came under pressure. Meanwhile, there were also legislative changes concerning drainage techniques: to implement the project according to the requested parameters, a permit application had to be submitted to the province, meaning that the project would inevitably be delayed. In order to comply with the client's two basic criteria BESIX clearly needed to find a creative solution …

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OCHZ QUAY
Zeebruges, Belgium

Thanks to BESIX's expertise in close collaboration with our technical department, we were able to transform a problem into an opportunity. BESIX offered us a solution to meet all the parameters: technical, budgetary and with respect to timing."

JOACHIM COENS
Managing Director Port of Zeebrugge

HANZE TERMINAL ZEEBRUGGE
DESIGN & BUILD: BESIX

Period
Autumn 2015 - Spring 2017

A long tradition of collaboration

1945-1946	Repair of war damage to breakwater – rebuilding of superstructure pier
1962-1970	Western peninsula: construction of a 1,700-m quay wall
1973	Harbor expansion: building of quay walls, access to the sea lock
1974	Inlet dock in the future inner port
1976	Building of the sea lock
1977	The military dock
1983	Second military dock and boat lift
2009-2013	Building of the southern quay wall at the Albert II dock
2011-2014	Extension of the quay wall at the OCHZ container terminal
2015-2017	Extension of the quay wall at the Hanze terminal

"

Total solution thanks to extensive know-how in marine works

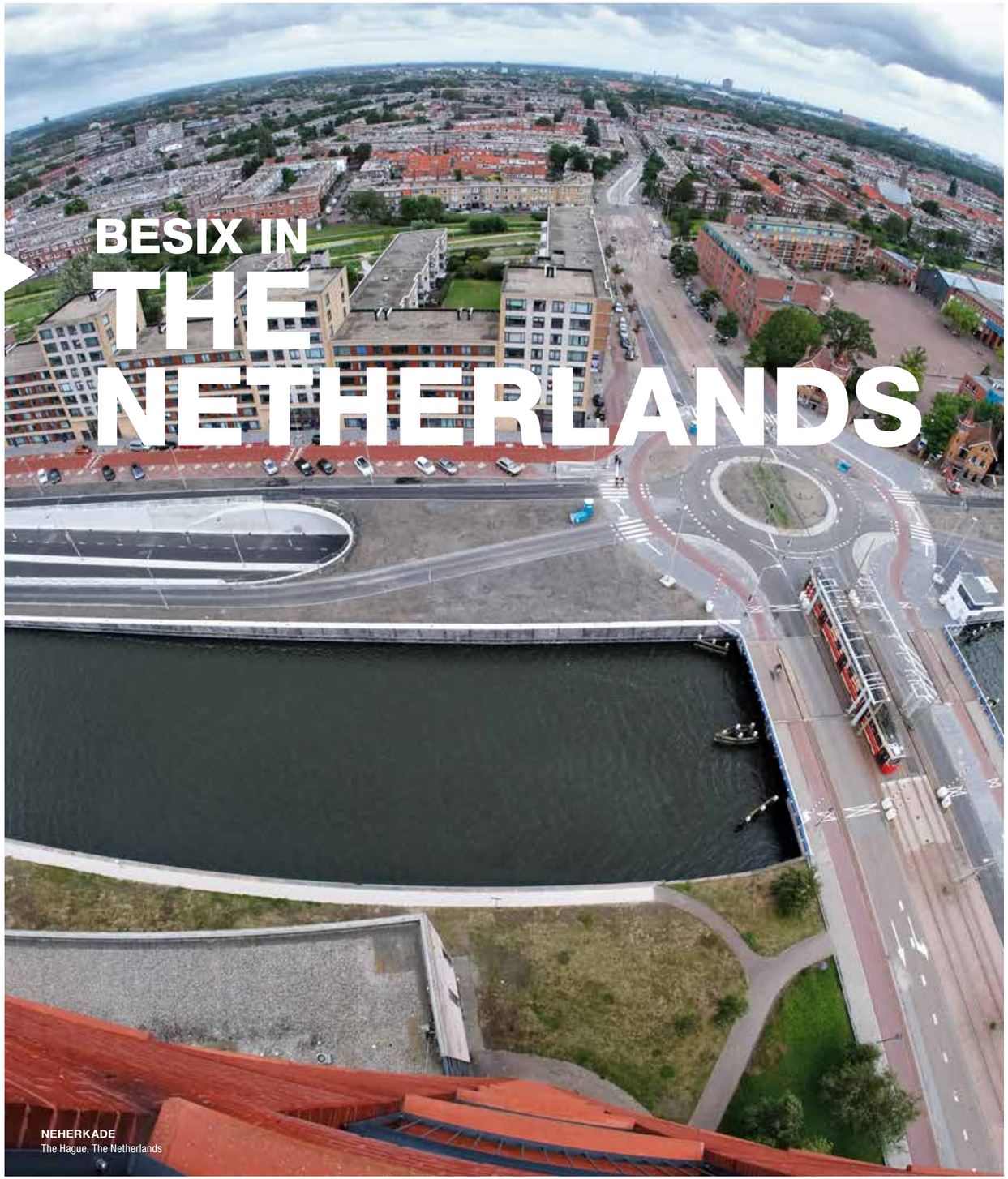
The changed context caused the original 'Build' project to evolve into a 'Design & Build' project. The BESIX in-house Engineering Department went to work and developed 4 variants, each with the required depth of 15 meters. In the end, we opted for the design where the concrete diaphragm wall was replaced by a 'combi-wall', which addressed the main drawbacks of the original plan. The choice for the combi-wall took advantage of low steel prices, thus keeping the budget under control and eliminating the need for a permit. Because no additional investments were needed for the extra depth and thickness of the wall, the length of the quay wall (initially set at 370 m) could even be further extended to 600 meters, making it even more future-proof.

Joachim Coens: "We are pleased to be working with a contractor with an extensive track record and expertise in the field of hydraulic engineering works. Thanks to the expertise of BESIX in close collaboration with our technical department, we were able to transform a problem into an opportunity. The solution offered by BESIX enabled us to meet all the parameters: technical, budgetary as well as with respect to timing."

The quay wall will first be used as a break bulk facility for the Yamal-LNG project, and then be equipped as a car terminal, operated by International Car Operators.

The groundbreaking ceremony took place on 7 October in the presence of Johan Beerlandt, CEO of BESIX Group.

BESIX IN THE NETHERLANDS



NEHERKADE
The Hague, The Netherlands

IN THE DUTCH MARKET, BESIX NEDERLAND CONTINUES TO BUILD A MIX OF EXCITING AND INVENTIVE PROJECTS IN DIFFERENT SECTORS AND INDUSTRIES. ENERGY-EFFICIENT CONSTRUCTION REMAINS A TOP PRIORITY FOR THE COMPANY, WHICH IS ON THE 5TH RUNG OF THE CO_2 PERFORMANCE LADDER [1], THE HIGHEST LEVEL OF CERTIFICATION IN THE INDUSTRY.

Tilburg station and pedestrian and bicycle tunnel

| Civil engineering

In Tilburg, BESIX Nederland is working on the extension and renovation of the central station, installing a new access tunnel to the entrance hall and platforms above. The works will be completed in mid-2016.

OVT Terminal Utrecht

| Civil engineering

End of 2016, the penultimate phase of the new multimodal public transport terminal (200,000 commuters and travellers per day) of Utrecht's central station will be opened to the public.

Ring Road Parkstad

| Civil engineering

This Design & Build project on the outer circular of Parkstad Limburg involves a 26-km-long stretch of motorway, 35 bridges and 12 km of noise barriers, which will greatly improve mobility in the region. The works are scheduled to end during spring 2018.

Neherkade Tunnel

| Civil engineering

The new 160-m-long, 4-lane-wide underpass along the Neherkade in The Hague was constructed to improve traffic flow, road safety and air quality. The tunnel has been in service since Q2 of 2015.

OVT TERMINAL
Utrecht, The Netherlands
Architect: Benthem Crouwel Architects, Movares

TILBURG STATION
Tilburg, The Netherlands
Architect: Cepezed

TILBURG STATION
Tilburg, The Netherlands
Architect: Cepezed

[1] The Foundation for Climate Friendly Procurement and Business

KIS PROJECT
The Netherlands

LAMMERMARKT CAR PARK
Leiden, The Netherlands
Architect: JHK Architecten

LAMMERMARKT CAR PARK
Leiden, The Netherlands
Architect: JHK Architecten

Lammermarkt car park
| Civil engineering

In the city center of Leiden, BESIX is building a state-of-the-art circular parking garage with 525 parking berths and a total depth of 22 m (the deepest in the Netherlands). The opening of the car park is scheduled for 2017.

Garenmarkt car park
| Civil engineering

Also in Leiden, upon completion of the Lammermarkt parking, BESIX will start to work on a new oval-shaped, five-level underground car park for 425 cars. The Garenmarkt car park will be ready in 2020.

Velser Tunnel
| Civil engineering

This Design & Build project for Rijkswaterstaat consists of the large-scale renovation of the electromechanical installations and civil constructions of the Velsertunnel on the A22 motorway and includes a 7-year maintenance contract (starting in 2017).

Radar Tower Neeltje Jans
| Civil engineering

Design & Build project of a 115-m radar tower, Europe's highest. The project won the Betonprijs award in the category 'constructive design'. Delivered in september 2015.

KIS project
| Marine works

Working for Mourik, BESIX and Franki Foundations are designing and reinforcing a 10-km stretch of dike on the river Lek along the villages of Kinderdijk, Nieuw Lekkerland, Streefkerk and Groot-Ammers, near Rotterdam. The works will be finished by the end of 2017.

LIMMEL FLOOD BARRIER
Limmel, The Netherlands

WASTEWATER TREATMENT PLANTS
Putte and Ossendrecht, The Netherlands

WASTEWATER TREATMENT PLANTS
Putte and Ossendrecht, The Netherlands

Limmel flood barrier
| Marine works

This Design & Build of a 50-m-wide flood barrier and fixed bridge on the Juliana canal in Limmel, near Maastricht, is the first PPP-project of its kind. A joint 30-year maintenance contract (DBFM) is also included. The works will be completed in early 2018.

Beatrix lock, Nieuwegein (near Utrecht)
| Marine works

Public Private Partnership project for the construction and maintenance of the new 3rd lock and the two existing locks during 27 years. End of works in 2019.

Putte and Ossendrecht WWTP
| Civil engineering | Water technology

Expansion and renovation of two existing wastewater treatment plants. Delivered end 2015.

Den Bosch WWTP
| Civil engineering | Water technology

BESIX Nederland is expanding and renovating the wastewater treatment plant of Den Bosch and making it completely energy-neutral. It will process its own and external sludge including biogas production and treatment for steam, electricity production and fueling up trucks.

Dieren crossing
| Civil engineering

BESIX has won the tender for the project end of this year which includes a 600 meter long underpass, a cycle tunnel, and running the provincial road and the railway line parallel to each other to the west side of Dieren. An additional bridge will also span the Apeldoorn Canal.

Interview

REDEVELOPMENT OF THE NEHERKADE IN THE HAGUE

Smart design ensures smooth execution

Two years was the time it took to redevelop the Neherkade, an important link in the road network of The Hague, the Netherlands. Growing road traffic plus the desire to increase public transport made it necessary to rebuild the Neherkade. This included building a 160-meter, 4-lane underpass to separate car traffic from tram traffic on the very busy Leeghwaterplein road.

The Neherkade itself was widened and given more lanes, which required shifting the embankment by about 7 meters. In short, a major amount of work and one of the largest infrastructure projects The Hague has seen in many years.

"BESIX-Dura Vermeer scored best in terms of our three basic criteria of accessibility, minimal environmental pollution and sustainability."

TOM DE BRUIJN
The Hague alderman

TOM DE BRUIJN
The Hague alderman

BOUDEWIJN BARTHOLOMEEUSEN
BESIX Project Manager

Freedom of design paves the way for optimal execution

For the redevelopment of the Neherkade, the city fathers did not impose any particular design on the contractor. This allowed us to develop our own design, taking maximal account of the implementation methodology.

The Hague alderman Tom De Bruijn: "The tender document provided for a seven-week closure of the road. Through a clever phasing and construction methodology the BESIX-Dura Vermeer consortium ended up closing the road to traffic during two weekends only. This was part of the reason why BESIX-Dura Vermeer scored best in terms of our three basic criteria of accessibility, minimal environmental pollution and sustainability."

Our approach? In order to significantly shorten the construction period of the underpass segment at the tram crossing site, the first 40 x 20-meter section was built at a construction site next to the intersection. Within just one day, the 2,400-ton tunnel basin was laid in place. **Pieter Birnage, Project Manager for The Hague**: "The installation of the tunnel basin was spectacular. Thanks to the specific methods used, the underpass and tramline could be realized in less than seven weeks and without any nuisance for car traffic."

Double celebration in The Hague

Nuisance reduction and execution time were not the only areas where expectations were exceeded. The project remained on budget from start to finish, all in accordance with the agreements made. "Cause for double celebration" says **The Hague alderman De Bruijn**, also in charge of finance: "For this type of project to be completed within the agreed timeframe is the exception rather than the rule. When a site runs over time, local residents get irritated, and other worksites in the city are delayed. Our municipality made a handsome profit out of the implementation going so smoothly and car traffic continuing to flow for nearly the entire duration of the works."

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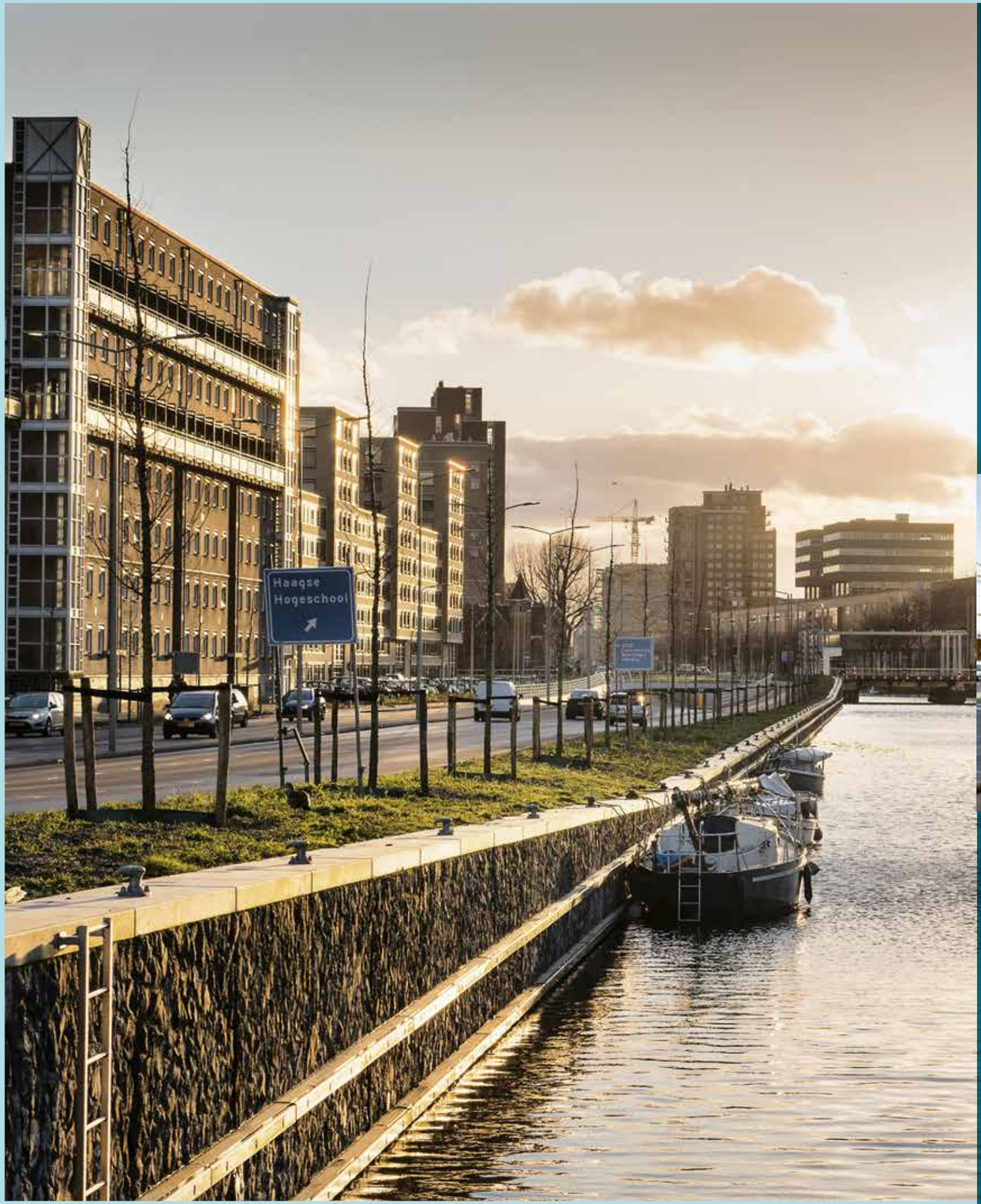

"The installation of the tunnel basin was spectacular. Thanks to the specific methods used, the underpass and tramline could be realized in less than seven weeks and without any nuisance for car traffic."

PIETER BIRNAGE
Project Manager for The Hague

REDEVELOPMENT NEHERKADE ROAD
THE HAGUE, THE NETHERLANDS

Key data
- 160-m long tunnel
- 4-lane underpass to improve traffic flow, road safety and air quality
- 1-km long quay wall
- 400-m long cofferdam
- 2,400-ton tunnel section

Design & Build
JV BESIX- Dura Vermeer

Period
2014 – 2015

"

Durable concrete

In addition to better-flowing traffic, a further concern of the redevelopment was improving air quality and road safety. BESIX gave its own interpretation to the client's sustainability criterion by opting for a blast furnace cement mixture that requires no cooling and is therefore less energy-intensive. Following the cradle-to-cradle principle, the granules in the poured concrete were partially replaced with recycled concrete. Sheet piling, asphalt and excavated soil were also recycled.

A challenging assignment

Widening a road at a busy traffic junction with three tram lines and building an underpass for crossing traffic is quite a challenge in itself. The nearby housing and an existing bridge near the construction site, along with the scarcity of traffic diversion routes caused additional complications. A number of unforeseen circumstances added an element of excitement, like when, during the excavation works, the site team came across underground quay structures, causing additional delay. **Pieter Birnage, Project Manager for The Hague**: "For this type of contract, it is essential to work in a relationship of openness and trust. All issues were resolved within the project team, not a single problem escalated."

BESIX Project Manager Boudewijn Bartholomeeusen: "An integrated contract form like this is particularly stimulating, because as a contractor you can use a maximum of expertise to deliver added value to the client. We take over the risk for the client, whenever we are able to control and carry it. For example, we proposed soilmix walls, enabling us to work without vibration and greatly limiting secondary damage in comparison with conventional sheet piling."

On 20 April 2015, the first cars drove through the underpass.

| CIVIL ENGINEERING

Radar tower Neeltje Jans

A BEACON PROJECT IN ZEELAND

Neeltje Jans, an artificial island in the Oosterschelde, is home to Deltapark, a leisure park showcasing the history and operation of the Delta Works, the greatest engineering feat in Dutch history. Since September 2015, the tiny islet has a new attraction: a fully operational, 115-m radar tower, boasting a record range of 40 km.

STANDING GUARD OVER THE SCHELDT

On a mole jutting 1.5 km out into the sea near the Oosterschelde storm surge barrier in Zeeland, the slim silhouette of the Neeltje Jans radar tower is a welcome sight for the many ships using these busy shipping lanes. The tower, the latest addition to the Belgian-Dutch chain of radars in the region, is able to observe and track shipping movements at a distance of up to 40 km.

RIGIDITY IS A MUST

The concrete tower, which was built with climbing formwork, has a particularly high structural rigidity and ensures a stable radar image, making needle-like Neeltje strong enough to brave the elements for the next 100 years.

Excessive wind speeds up to 250 km/h around the head of the tower were measured on a 1/75 scale model during a wind tunnel study. Turbulence would result in a complete shutdown of the radar system and reduce its life expectancy. The radar is consequently positioned in a nonturbulent area, at nine meters above top of roof.

Using a 3D BIM-model, the traditional preliminary design and the final design phase are blended. This allows us to detect and solve design issues at an early stage: a significant added value for a slender construction with important technical installations.

PATRIEK DEPUYDT
Senior Project Manager Engineering, Civil Works, BESIX

"The antenna is the crucial part of a radar system and must remain operational under all environmental conditions. To limit deviations of the radar signals, extremely strict requirements were applied to the design in terms of angular displacement and torsion.

That is why we have paid particular attention to the rigidity of this slim tower. Vertical post-tensioned cables equipped this slim tower until mid-height. The concrete mix C53 / 65 is specially designed to ensure an increased modulus of elasticity and a functional design life of 100 years."

RADAR TOWER NEELTJE JANS
OOSTERSCHELDE, THE NETHERLANDS

Fast Facts
- 115-m-high tower
- 3.5 m concrete is poured in a climbing form at each stage
- Record range of 40 km

Design & Build
BESIX

Client
Rijkswaterstaat

Architect
Quist Wintermans Architecten

Period
April 2014 – September 2015

Betonprijs 2015

In 2015, the Neeltje Jans radar tower was awarded the 'Betonprijs' in the category 'Constructive Design'. This prestigious biennial award is sponsored by the Dutch Association for Concrete Construction and celebrates projects in which concrete is applied in a special or innovative way.

BESIX IN FRANCE

EDF LAB
Paris-Saclay, France
Architect: Francis Soler Architecte

IN FRANCE, BESIX CONTINUES ITS WORK ON FLAGSHIP DESIGN & BUILD PROJECTS.

Melun Hospital
| Buildings

This 56,000-m² project in Melun, near Paris, is carried out by BESIX and its partners. BESIX brings to the job its experience as a turnkey builder with international expertise, AIA its design expertise in the healthcare sector, and Nord-France its local knowledge in general construction. The ultimate goal is to deliver an ultra-modern hospital on a 20 hectare wooded site. The medical center will be completed in 2018, opening simultaneously with the 'L'Ermitage Saint-Jean' clinic.

EDF Lab
| Buildings

On the Paris-Saclay campus, BESIX, in consortium, finished the four circular buildings with central patios (120,000 m²) of the brand-new R&D center for EDF (Electricité de France). The project is both eye-catching and eco-friendly, obtaining the HQE [1] certificate, the BREEAM [2] 'Excellent' certificate and the BBC label.

FFR Grand Stade
| Sports & leisure

BESIX will be responsible for the design, construction and maintenance of a new 82,000-seat stadium for the French Rugby Federation. The arena, one of the largest in Europe, will be built in Ris-Orangis (Paris) and will have the latest multifunctional facilities, along with a retractable roof and a removable lawn. The total surface of the build represents more than 200,000 m², plus a whopping 47 km of seating. The works are scheduled to start in 2018.

L' Ermitage Saint-Jean Clinic
| Buildings

Next to the Marc Jacquet Hospital Center at Melun, BESIX (in partnership) will build a modern private clinic that will open in 2018. The Clinic is a private project, independent of the Marc Jacquet public procurement site.

HQE [1] and BREEAM [2] standards in green building:
[1] Haute Qualité Environnementale (= High Environmental Quality)
[2] Building Research Establishment's Environmental Assessment Method

FFR GRAND STADE
Ris-orangis, France
Architect: Populous & Ateliers 2/3/4

MELUN HOSPITAL
Melun, France
Architect: Architectes Ingénieurs Associés (AIA)

L'ERMITAGE SAINT-JEAN CLINIC
Melun, France
Architect: SANAE - ARTELIA

Interview

EDF LAB SACLAY

France's premier science campus

Three years of hard work are drawing to a close on the Saclay plateau. BESIX, as part of the SBX consortium, is putting the finishing touches to EDF's Research and Development Center on an 8-hectare ultramodern campus, 25 km south of Paris.

This flagship project, which started in the fall of 2013, is part of the Paris-Saclay Campus, one of the excellence initiatives selected for the 'Campus' operation launched in 2008 by France's Ministry of Research. The EDF Lab Paris-Saclay opens its gates on this unique site, which accounts for nearly 20% of all research in France, on March 2016.

"The quality of the insulation, the use of geothermal energy and heat pumps, as well as the recovery of heat from the computer system, photovoltaic panels and rainwater collection help to reduce energy consumption significantly."

JEAN-PAUL CHABARD
Director of the Saclay Project France Partnerships EDF Lab

ANDRES PENALOZA
Director, BESIX France

JEAN-PAUL CHABARD
Director of the Saclay Project France Partnerships at EDF Lab

Cranes make way for planes

Rising up out of the ground are four circular buildings, the largest of them dedicated to researchers' workstations. Next to this real estate ensemble, built by the SBX grouping for EDF's R&D division, a second project will host the EDF Training Campus.

"Our teams built this real estate project with a total surface area of 52,000 m² and nearly 1,400 workstations for EDF's Research and Development Division. The site also includes a conference center, a 550-seat auditorium and an underground car park. A specific feature of the site is its proximity to Orly airport. The height of the buildings, along with the cranes used to erect them, is therefore limited to three levels, and the upper part of one of the four buildings had to be completed without a crane. The limitation imposed on lifting apparatus required considerable implementation flexibility by the BESIX teams." **Andres Penaloza, Director, BESIX France.**

Collaborative working approach

EDF wanted buildings designed to encourage a synergy between research teams. These are grouped on three levels in the largest, circular building, so as to promote both horizontal and vertical mobility and interaction.

"This site represents a new approach to research. Interaction with academic laboratories is encouraged by geographical proximity but also by the fact that two of the EDF Lab buildings are in an open area which is easily accessible to academic researchers. In this way, innovations born in the Campus laboratories will be transferred faster to the EDF businesses. This is what this new site is all about," says **Jean-Paul Chabard, Director of the Saclay Project France Partnerships at EDF Lab**.

Complex execution in the service of innovation

Designed by architect Francis Soler, the buildings feature complex façades providing high levels of natural lighting. "The buildings in fact have two façades in order to preserve the glass appearance of the outer façade. The second, outside façade, hangs on the railings of the building and appears diffuse. This technique allows in natural light while preserving the building's acoustics and sensation of floating in air," notes **Laurent Janssen, Project Manager, BESIX**.

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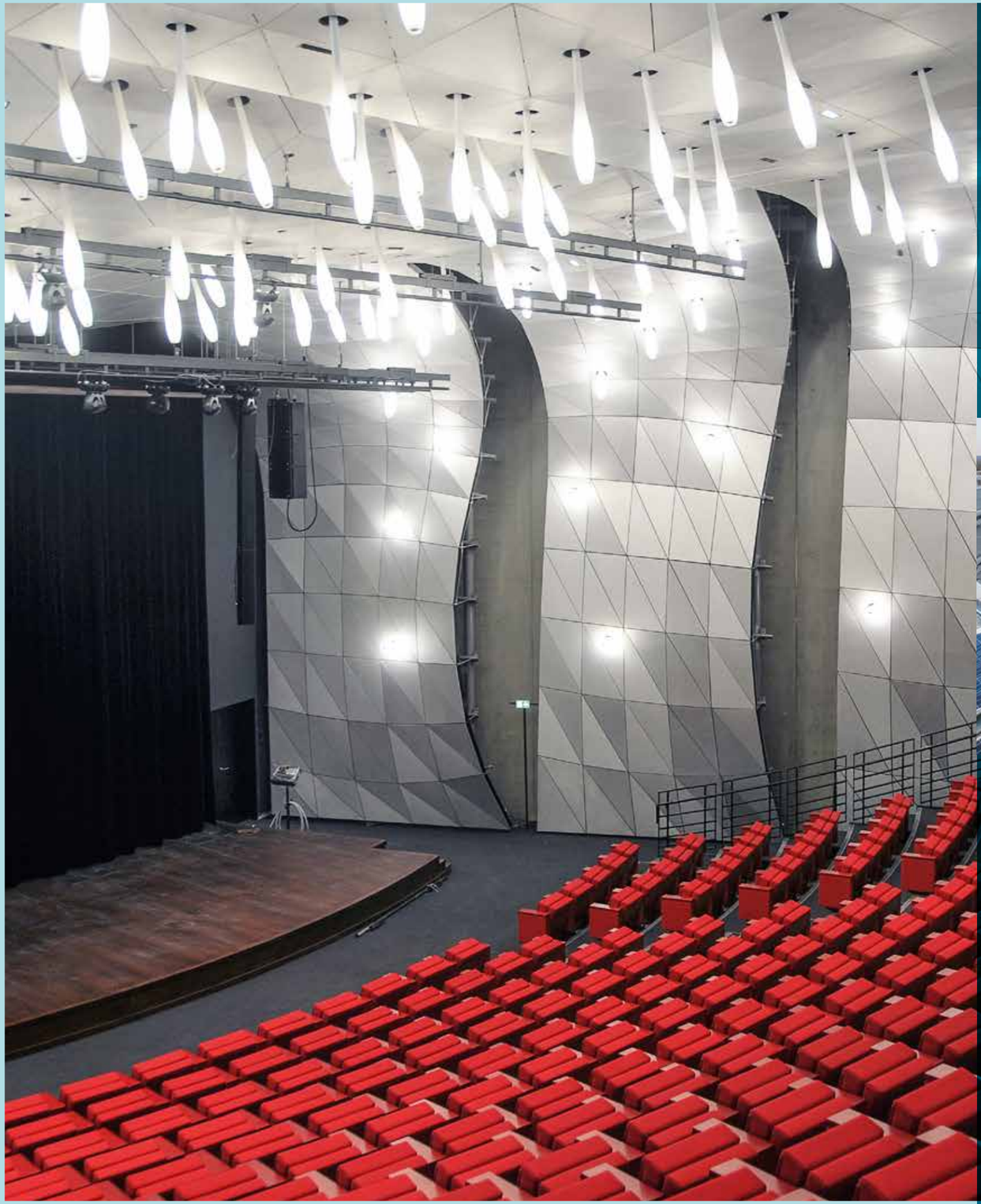


"Our teams built this real estate project with a total surface area of 52,000 m² and nearly 1,400 workstations for EDF's Research and Development Division."

ANDRES PENALOZA
Director, BESIX France

EDF LAB
PARIS-SACLAY, FRANCE

Key data
- Client: EDF (Immobilière du Plateau)
- SCGPM - BESIX joint venture (50/50) within the SBX grouping
- 20% of all French research now gathered in one place, the Paris-Saclay Campus.
- 3,200 m² of photovoltaic solar panels provide almost 500 kWp of power and an estimated annual production of 450 MWh.

Architect
Francis Soler Architecte, France

Period
2013-2015

Each building has its own particular building complexities. "The façade of the testing hall continues with a separate glass layer, carrying the EDF logo lit up with LEDs. In the forums the ceilings hang from above, like a suspension bridge. Avoiding the need for columns in the reception atriums provides an open and very welcoming space."

BESIX used its international experience with large buildings for casting large-sized concrete elements, a production process less commonly found in Europe.

Energy eco-efficiency

EDF is dedicating its new center to researching the challenges of energy transition. As such, the architectural ensemble is intended to showcase energy eco-efficiency, with a High Environmental Quality approach and aiming for HQE[1] and BREEAM[2] Excellent certification, as well as the BBC label, which is an unusual step for a French site.

At construction level, a system of active tiles was chosen in order to use the thermal mass of the concrete to heat or cool the buildings. "This system, which requires a rare degree of precision, is being used for the first time in the largest building in operation in France. On top of that, the quality of the insulation, the use of geothermal energy and heat pumps, as well as the recovery of heat from the computer system, photovoltaic panels and rainwater collection, also help to reduce energy consumption significantly," **Jean-Paul Chabard** adds.

Local dynamism

As early as 2012, information meetings were held between BESIX France and Atout PLIE Essonne on using the site to bring unemployed people into the labor market ('insertion'), with the goal of 66,953 hours' insertion. BESIX France advised its subcontractors on introducing initiatives in this context and on improving on-site performance.

"Right from the beginning of the project and before starting construction works, we asked what we could do in terms of insertion. In the end, 39 insertion workers were employed on the Saclay site, among them young people under 36 years looking for new qualifications, long-term job seekers and RSA (earned income supplement) recipients. We also used ESATs (sheltered workshops) for part of the office supplies.", says **Andres Penaloza.**

[1] Haute Qualité Environnementale (= High Environmental Quality)
[2] Building Research Establishment's Environmental Assessment Method

BESIX INTERNATIONAL

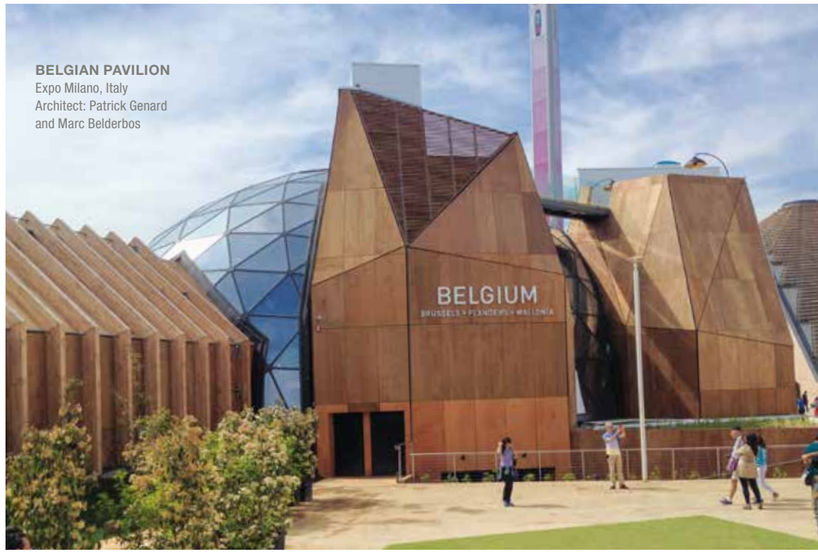
An upscale market

THE RECENT SLOW-DOWN IN THE TRADITIONAL CONSTRUCTION SECTOR PRESENTED AN OPPORTUNITY FOR BESIX GROUP TO ADDRESS THE NON-TRADITIONAL INFRASTRUCTURE IN A GROWING NUMBER OF COUNTRIES THAT ARE LOOKING FOR ADDED VALUE AND EXPERTISE. THE GROUP RETURNED TO POLAND AND CAMEROON, WHERE IT REKINDLED OLD BUSINESS RELATIONSHIPS, AND IT MADE NEW INROADS INTO SWITZERLAND AND SRI LANKA, DEVELOPING LANDMARK PROJECTS THROUGH ENGINEERING AND DESIGN.

"Faced with a rapidly changing market, we hold course by taking and retaining full control of the international mega-projects we are known for. That means managing the whole process in-house, from A to Z, if possible. As such, we are better equipped to deal with market fluctuations and to manage the risks that may occur during construction. Strong teamwork, practical planning and open relationships with partners, subcontractors and clients allow us to deliver a state-of-the-art service."

JULES JANSSEN
Deputy COO, Contracting, BESIX

WHEATSTONE PROJECT
Australia



BELGIAN PAVILION
Expo Milano, Italy
Architect: Patrick Genard and Marc Belderbos

ITALY

Belgian pavilion - Expo Milano 2015
| Buildings

The BESIX-Vanhout consortium completed the eye-catching Belgian Pavilion for the Milan World Expo, which has since welcomed more than 20 million visitors. The Pavilion, celebrating urban technology and biodiversity, received a special award for its design and for its building materials as well as an honorable mention in the 'Best Exhibit' category.

SWITZERLAND

Gotthard Residences
| Buildings

Andermatt Swiss Alps (ASA) is currently developing an extensive luxury resort in the heart of the Saint-Gotthard Massif that will include six hotels, some 500 apartments, 25 chalets, a convention center, a large indoor swimming pool and an 18-hole golf course. BESIX started construction on one of the 4-star hotels in the complex in October 2015. Before the winter of 2016, the team aims to complete the civil works, the façades and the windproof and waterproof shell.

GOTTHARD RESIDENCES
Andermatt, Switzerland
Architect: Germann & Achermann

EGYPT

EGYPT CONTINUES TO MAKE HUGE EFFORTS TO BRING BACK STABILITY AND ECONOMIC GROWTH AFTER SOME YEARS OF TURMOIL SINCE THE REVOLUTION OF JANUARY 2011. SECURITY FORCES ARE DEPLOYED ALL OVER THE COUNTRY AND AREAS WITH SECURITY CONCERNS DUE TO TERROR THREAT ARE WELL-DEFINED. WHILE RESPECTING THESE EXCLUSION ZONES, LIFE IN CAIRO AND IN MOST OF THE HISTORICAL AND RED SEA TOURIST AREAS IS COMING BACK TO NORMAL. THIS IS GOOD NEWS FOR BOTH OUR ACTIVE PROJECTS WHICH NO LONGER SUFFER THE EARLIER ENCOUNTERED DISTURBANCES AND RESTRICTIONS.

Grand Egyptian Museum

| Buildings

At the end of January, the authorities have assigned the Engineering Authority of the Egyptian Armed Forces (EAEAF) to lead the Project team of the Employer (State Council of Antiquities, SCA) as to revitalize the project management, enhance decision-making and evaluate value engineering. Their job is also to find an agreement on the running cost, from the end of the original contract duration until the newly set completion date of 18 May 2018, and to find a modus vivendi about the compensation for the effect of the +/- 50 % devaluation of the Japanese Yen, which covers 65% of the Contract Sum and made the Contract economically unviable.

One of the elements that caused the Project to slow down since July 2015 has also been addressed in the meanwhile: besides the Government's commitment to provide a funding to be spread over the country's budgets of 2016 and 2017, a principle agreement was reached with the Japanese Government for an additional loan to be formalized in the coming 8-10 months. Outstanding and long overdue payments have also been settled mid-March 2016.

In light of the above and with the promise to immediately start with amicable discussions to settle outstanding disputes, the BOJV [1] agreed to remobilize and support the targeted 18 May 2018 Completion Date. The assignment of two major provisional sums and the timely finish of the Sierpinski façade and exhibition fit-out and casework remain crucial to achieve timely completion.

[1] JV BESIX-Orascom

Mall of Egypt

| Sports & leisure

At the end of 2015, the BOJV negotiated an extension of time until 31 July 2016 with a target bonus system for achieving milestones which are critical to the Employers' tenants. So far, the BOJV complied with the milestones of December and February.

Nevertheless the pressure on the project teams is tremendous and recent developments on restrictions of foreign currency movements and changed custom regulations did not facilitate the progress. With approximately 7.500 laborers and staff onsite and a growing number of subcontractors and tenants arriving, policing the site activities will be a next major challenge for the BOJV staff and management.

Whereas the works on the huge Ski facility, the 21-cinema-room complex, the self-performed electromechanical works and the vast external works are progressing well, the main challenge remains the completion of the public areas in the shopping mall with complex ceiling structures and finishes. These shall from now on be performed in parallel with the arrival of the 380 tenant's own subcontractors and labor.

Due to ongoing new instructions for variations and having set the Mall opening date at 28 September 2016, the Client allows the BOJV to complete testing and commissioning in the non-public places until November 2016.

PIER 51
Duala, Cameroon

CAMEROON

Pier 51

| Marine works

In 2015, BESIX returned to Cameroon to work on Quay 51 in the port of Douala, the country's main hub for gas imports. The 165-m landing in the estuary of the river Wouri connects to Quay 52, which was refurbished by BESIX in 2011. The first carrier docked in April 2015 and the works will be completed in the summer of 2016.

EQUATORIAL GUINEA

Bridge 8

| Civil works

Bridge 8 is another key part in the ambitious redevelopment of Oyala, the future capital of Equatorial Guinea, a site where BESIX built three other bridges, including the eye-catching, cable-stayed Bridge 6.

The latest addition to the bridge club, which will be ready in August 2016, is erected on more than 240 micro-piles. The foundation works were completed in July 2015: the foundations, pylons and deck account for 4,400 m³ of concrete and 860 tons of steel.

| MARINE WORKS

Gdansk Deep Container Terminal, Poland

3 MILLION TEU CAPACITY INCREASE

ON THE SHORES OF THE BALTIC SEA, IN THE INTERNATIONAL PORT OF GDANSK, BESIX AND NDI ARE BUILDING A 656-M QUAY AND SOME 25 HA OF PLATFORMS. THIS DESIGN & BUILD PROJECT REQUIRES SIGNIFICANT SOIL IMPROVEMENT AND PAVING WORKS, AS WELL AS THE CONSTRUCTION OF TECHNICAL UTILITIES AND ANCILLARY BUILDINGS.

The extension of the DCT terminal will increase the annual capacity and turnaround by more than 3 million TEU. The Terminal will be operational after the summer of 2016.

The works started in January 2015. The major targets were duly completed before the winter: earthworks, soil improvement, piling works, combi-wall installation and piping works (electricity and sanitary).

Remaining works for the first project sectional completion dates in March and April 2016 are ongoing with a specific thoughtfulness on the following critical activities: workshop completion, concreting works (quay wall), pavement, electrical cables & equipment, dredging & anti scour protection, cathodic protection & quay wall equipment.

Notwithstanding the extremely tight schedule and the challenging sectional completions, BESIX plans to deliver the project at the end of August 2016.

| CIVIL ENGINEERING

Monaragala-Buttala Integrated Water Supply, Sri Lanka

HIGH-QUALITY DRINKING WATER FOR OVER 60,000 PEOPLE

THE PROJECT WAS SIGNED ON 8 APRIL 2014 BUT OFFICIALLY STARTED ON 30 DECEMBER 2014 TO ESTABLISH AN ADVANCED WATER SUPPLY NETWORK IN THE SOUTHEAST REGION OF SRI LANKA.

THE GOAL? DELIVERING HIGH-QUALITY DRINKING WATER TO MORE THAN 60,000 PEOPLE.

The BESIX team is active on 12 different sites in a project area of 300 km². This large-scale Design and Build contract in southeast Sri Lanka entails the construction of two river water intakes, a water treatment plant and a water tower, three ground reservoirs, an office and housing complex, and an extended transmission (30 km) and distribution network (70 km).

Progress started to increase in March 2015, when the first concrete was poured on Kumbukkana WTP. After that, the BESIX site team gradually started activities on all sites. The main challenges were deep excavations for Intake sites, which had to be managed throughout the rainy season. By the end of 2015, all civil construction sites had reached at least 50%, and some sites (Horombuwa Ground Reservoir and Buttala Ground Reservoir) were close to completion. Good progress was achieved as well on Transmission Mains, with Distribution Mains left as a big challenge for 2016. The project, which will deliver safe drinking water to the local communities, is scheduled to finish in June 2017.

| CIVIL ENGINEERING

Malabo cliffs, Equatorial Guinea

CRADLING THE PUNTA CHRISTINA CLIFFS

The northern part of the island of Bioko, the Punta Cristina, is separated from the sea by steep cliffs. These cliffs, on the far-flung volcanic island off the west coast of Africa, in Equatorial Guinea, are extremely prone to erosion and collapse. To ward off the threat of potentially devastating landslides and protect the hotels and houses perched on the cliffs, BESIX was asked to reinforce the precipice with anchored retaining walls, supported by ample quantities of backfill.

"It was the professionalism and transparency of both contractor and consultant that led to the strong collaboration between our team and BESIX. The degree of perfection achieved in the cliff protection works is astonishing. To the Client's great satisfaction, the project is set to be delivered seven months ahead of schedule."

SIMONE FRIONI
General Manager, TEAM Equatorial Guinea S.A.

MALABO CLIFFS
EQUATORIAL GUINEA

Wall
602 m / 3.6-9.7 m / 2,800 m² (nailed)

Volumes
5,200 m³ (structural concrete)
11,500 m³ (excavation works)
58,000 m³ (backfill)

Anchors
up to 18 m

BESIX, A MAINSTAY IN EQUATORIAL GUINEA

BESIX went straight to work: designing a tailor-made L-shaped retaining wall, carefully excavating the site, and pouring and nailing/anchoring in place the necessary reinforcements. Initially, the BESIX teams had 21 months to complete the job. They will do it in less than 15, once more demonstrating why the company has been a fixture in the local construction business for more than 10 years. The success of this latest project has encouraged BESIX to diversify its portfolio in Equatorial Guinea and bolster its reputation as the go-to contractor for prestige projects.

SAFETY AND COMMUNITY

The project's QHSE record is outstanding: after several audits and safety training sessions (in collaboration with the FORHOM Institute), and more than 300,000 hours on the job, the team recorded zero accidents. In keeping with its commitments and corporate policy, BESIX EG also made a point of hiring as many local workers and staff as possible. Management organized specialized training and coaching programs to improve the expertise of the local crews and build up their confidence: knowledge and skills that will last them a lifetime.

JOEL SILVA
HSE Manager for Malabo projects, BESIX

MARCO BERRIOS
Construction Manager, BESIX

"We managed to convey the BESIX mentality to our workers when it comes to safety and were able to showcase the benefits of hiring local labor. Keen to contribute to the project, they allowed us to rely less heavily on workers brought in from overseas. We are really proud of our team, who showed real commitment, and our efforts were also recognized by the client."

| MARINE WORKS

The Wheatstone Project, Australia

OUTSTANDING WORK IN CHALLENGING CONDITIONS

At the end of 2011, partners BESIX and Thiess (BEST JV) won the contract to develop pivotal marine infrastructure for the Chevron-operated LNG Wheatstone Project near Onslow in Western Australia. The works comprise the design, procurement and construction of the operation's material offloading facility (MOF) with two quays and a 1-km-long rock-and-concrete breakwater that will protect the harbor and tug berths. In 2015, both developments were successfully delivered to the client.

THE WHEATSTONE PROJECT
AUSTRALIA

Fast Facts
- Quay walls
- 5,000-ton combi-wall piles
- The difference in levels: from +2.70 m quay level to a water depth of -9.2 m

Client
Chevron Australia Pty Ltd

Main contractor
Bechtel WA Pty Ltd

Design & Build
BESIX Thiess Joint Venture

Period
2011 – 2015

"The paleo-channel was pondered by the client as a very high risk to the global project. Our ability to pro-actively work with them towards finding design solutions and our cost-effective mitigation has been recognized at all levels of their organization. BESIX's safety culture associated with our performance and reliability has made it one of most trusted subcontractors on site"

FABIAN BOUCHER
Operations Manager, BESIX

AHEAD OF THE CURVE

When faced with a full-on build and unforgiving climate in a remote coastal location, co-ordination is key. Combining their know-how and expertise in marine projects, the design and construction teams came up with practical, flexible and exceedingly safe solutions that yielded optimal results. BESIX adopted a 'slow start' approach, combining meticulous, hands-on planning with an unwavering dedication to first-rate execution. This 'steady as she goes' strategy paid off and saw the teams pass all contractual milestones without a single hiccup, completing the project **three months ahead of schedule** – no mean feat!

SAFETY FIRST

Safety-in-design was the linchpin of the entire project. The BESIX engineers went out of their way to minimize the potentially more hazardous work over open water and came up with ad hoc solutions to control the risks inherent to large-scale marine works. In keeping with its stringent environmental responsibilities the Pilbara Coast as is home to unique flora, as well as abundant marine wildlife. Moreover, the crews also managed to mitigate the impact on the surroundings, implementing sustainable solutions at every turn. As a result, the 26-month project successfully passed all audits and maintained an outstanding safety record. No environmental incidents were recorded, and the teams completed more than 900,000 man hours with no lost-time injuries, finishing on a high note with an impressive Total Recordable Incident Frequency Rate of 0.12.

BUILT TO LAST

The area is a frequent landing stage for tropical storms, so both the Material Offloading Facility and the breakwater were built to stand the test of time: the constructions are guaranteed to last at least 50 years, including insurance against storm surges (2 m), extreme waves (4.5 m), and seismic upsets. The breakwater comes equipped with 2nd gen, naturally-interlocking ACCROPODE blocks, which make up the 12,500-piece construction that protects it from the elements.

SMART SOLUTIONS: A CASE IN POINT

In a high-stakes and often unpredictable environment, you have to roll with the punches. So when engineers came upon a large paleochannel beneath the footprint of the breakwater, posing a serious risk to the stability and durability of the construction, it was all hands on deck. Thinking outside the box, and not cutting any corners, the team masterminded a cutting-edge combination of stone columns and partial soil replacement techniques to solve the problem in a timely and cost-effective way. While stone columns are frequently installed on-shore, this is the first time they have been successfully applied off-shore in Australia.

OWN MARINE EQUIPMENT

The right tool for the right job

SINCE THE ACQUISITION OF ITS FIRST SELF-ELEVATING PLATFORM IN 1998, BESIX HAS CONTINUED TO INCREASE AND MODERNIZE ITS MARINE CONSTRUCTION EQUIPMENT FLEET IN ORDER TO BEST SUIT THE REQUIREMENTS OF ITS COASTAL MARINE PROJECTS.

TANGER MED II
Morocco

WHEATSTONE
Australia

VLCC JETTY
Fujairah, UAE

The overall fleet is now composed of two 1,100-ton capacity self-elevating platforms fitted with 250-ton cranes, two backhoe dredgers, 17 Nos. tugs, multicats and workboats and more than 20 crane and transport barges.

The fleet is based in and deployed from the marine base situated in Ajman, UAE, that offers all the required facilities, including a slipway, to properly maintain, repair, prepare and mobilize the vessels.

Thanks to its know-how, its in-house engineering department and the variety of its fleet, BESIX is able to offer its clients tailor-made solutions for the construction of coastal marine facilities such as (un)loading jetties, breakwaters, quay walls or subsea pipelines.

BESIX is active on several marine projects in Poland (DCT container terminal in Gdansk), in UAE (VLCC1 jetty project in Fujairah) and the Water Canal Project in Dubai), in Qatar (Salwa Resort in Doha), in the Netherlands (Keersluis in Limmel) and in Belgium (Lock of Lanaye and the Fifth Harbor Dock in Antwerp).

During the overall project process, from the tender to the delivery stage, constructability is the main driving factor to insure to the client a safe, cost-effective, environment-friendly and timely project solution with a high-quality standard.

BESIX has always considered the coastal marine projects as one of its core businesses and intends to continue to be one of the key players in this very demanding market.

WATER ACTIVITIES

An industry frontrunner

BESIX GROUP IS ACTIVE IN THE WATER SECTOR IN ITS LOCAL MARKET AND ABROAD THROUGH ITS SPECIALIZED BESIX SANOTEC DEPARTMENT AND SEVERAL GROUP ENTITIES SUCH AS SOCOGETRA, WEST CONSTRUCT, VANHOUT, AND WUST IN BELGIUM, AND SIX CONSTRUCT IN THE MIDDLE EAST. THE TEAM CONTINUES TO IMPLEMENT ITS 'ONE-STOP SHOP' BUSINESS PHILOSOPHY, DESIGNING INNOVATIVE, CUTTING-EDGE SOLUTIONS AND INTEGRATING APPROPRIATE TECHNOLOGIES FROM VARIOUS SPECIALIST VENDORS TO RESIDENTIAL, MUNICIPAL, AND INDUSTRIAL SECTORS.

WWTP
Den Bosch, The Netherlands

"We believe that innovative and highly efficient processes need to be in place to ensure clean and safe water supply and disposal. We are upfront whilst globally and locally, municipal, industrial, agricultural and potable water pollution, along with climate change, continue to be key issues."

ADRIEN THEUNISSEN
Senior Manager, BESIX Sanotec

The full suite of services on offer include the design, engineering, execution, start-up and commissioning of wastewater treatment plants (WWTPs), treatment capacity upgrades (MBR, MBBR etc.), sludge drying and valorization (digestion, biogas re-use, etc.) and the polishing of treated effluent to near potable water standards (ultrafiltration, reverse osmosis, etc.), pumping stations and hydroelectric installations, and the installation and maintenance of underground pipes and sewage disposal systems (collectors, gravity pipes or pressure, PVC distribution networks, cast iron pipes, and so on). The activities range from small-scale installations to large water treatment plants and concessions, capable of processing up to 1.5 million EH.

BESIX Sanotec integrates green energy production into its projects. In 2015, the company signed a contract for the use of a hydroelectric power plant in the 4th Lock of Lanaye and a rehabilitation and extension waste water treatment plant in Den Bosch. BESIX Sanotec focuses on the creation of byproducts such as biogas, biofuel, biosolids, heat recovery and recycled water. Recoverable resources and energy optimization are a must in times of rapid demographic changes and a global transition to green energy.

WWTP
Putte, The Netherlands

LANAYE LOCKS
Lanaye, Belgium

WWTP
Ossendrecht, The Netherlands

BENELUX

- Reconstruction of the **Putte** (4,185 EH) and **Ossendrecht** (6,760 EH) WWTPs in partnership with BESIX Nederland
- Extension and refurbishment of the eco-friendly WWTP (340,000 EH) in **Den Bosch** (the Netherlands) in partnership with BESIX Nederland. The plant will use sewage as biomass to produce electricity through the process of sludge digestion, making it the first 'Zero Energy' WWTP in the Netherlands
- Design and Build of the hydroelectric pumping and turbine station in **Lanaye** (2.3 MW and 8,000 m³/h) where BESIX and Wust realized the civil and building scope
- Construction of the wastewater treatment plants of **Godarville** and **Henuyères** (3,000 EH each)
- Build of the municipal waste water treatment plant of **Wasmuel** in partnership with Socogetra
- New water production center in **Eeklo**, built by West Construct
- Biological treatment plant in **Signeulx** (3,100 EH), a municipality of Musson, and a new water treatment plant (1,200 EH) and stormwater basin in **Chiny**, both built by Socogetra

INTERNATIONAL

- Design & Build of the **Monaragala** & **Buttala** Integrated Water Supply Project (Sri Lanka), providing drinkable water to a community of more than 60,000 people. The main site, a water treatment plant, is located in Kumbukkana; two intakes are located in Okkampitiya and Buttala; and water reservoirs in Buttala (450 m³), in Horombuwa (650 m³) and in Weliyaya (225 m³). A water tower is realized in Madulla (225 m³). The sites are connected by six transmission mains in HDPE/DI pipes, as well as by an extensive distribution network in PVC. The project totals 12 construction sites in a project area of 300 km². The whole project will be in service mid-2017.

"Essential services in Monaragala such as safe drinking water still need to be implemented. Our mission is to ensure this critical high-quality drinking water supply to the local community, especially in an environment which calls for better sanitary conditions for the social development and security of education of the young population."

PAUL CALLEBAUT
Resident Manager Sri Lanka BESIX Sanotec

MONARAGALA INTEGRATED WATER SUPPLY
Monaragala, Sri Lanka

AL WATHBA
SEWAGE TREATMENT PLANT
Al Wathba, UAE

AJMAN WWTP
Ajman, UAE

AL WATHBA
SEWAGE TREATMENT PLANT
Al Wathba, UAE

MIDDLE EAST

FACED WITH THE IMMEDIATE ECONOMIC CONSEQUENCE OF THE DOWNTURN IN THE OIL INDUSTRY, MANY GCC COUNTRIES WERE FORCED TO RETHINK AND RE-EVALUATE THEIR WATER PROJECTS. THE DROPPING OIL PRICES, HOWEVER, HAVE NOT AFFECTED THE GROWING NEED FOR CLEAN AND USABLE WATER. IN THIS CHALLENGING MARKET, BESIX GROUP RETAINS ITS FOCUS ON THE CONSOLIDATION OF KEY CLIENTS – MOST NOTABLY THE GOVERNMENTAL MUNICIPALITIES IN THE GCC COUNTRIES – WHILE LOOKING TO DIVERSIFY ITS PORTFOLIO AND BRANCH OUT FROM THE MORE CONVENTIONAL PROJECTS (WTTPS) INTO WATER-RELATED PROJECTS FOR THE OIL & GAS INDUSTRY, PROCESSING INDUSTRIAL EFFLUENT.

– Pumping station (35,000 m³/day) for the iconic **Dubai Water Canal** project

– **Al Sajaa** WWTP (60,000 m³/day) in Sharjah: The plant uses Sequencing Badge Reactor technology (SBR) to yield an exceptionally high-grade effluent that is stored in huge lagoons in the middle of the Sharjah desert, providing – quite literally – a source for the future creation of wetlands. Into operation in October 2015.

– The sewage treatment plant in **Doha's Industrial Area** (Qatar) (60,000 m³/day) and the extended plant of **Ajman** have a combined output of 70,000 m³/day. With mobilization on these D&B projects now complete, and the civil works, engineering and procurement of the plants' high-tech equipment in full swing, the teams are ready to tackle the next phase of these decidedly forward-thinking water facilities.

AL SAJA'A TANKER DISCHARGE FACILITY
& SEWAGE TREATMENT WORKS
Sharjah, UAE

18 million m³ per year
commissioned

46 million m³ per year
under construction

– The **treatment plant in Qatar**, for instance, combines Sequencing Badge Reactors, tertiary treatment by Ultrafiltration, and disinfection by ultraviolet light that can compete with the most advanced water treatment facilities in the world.

– In **Abu Dhabi**, the mechanical and electrical works on the deep-well pumping station PS 8 continued at pace. Once completed, this 35-m-deep pumping station and its 4 mega-pumps will take care of 120,000 m³ of raw sewage per day. The pumps are one of a kind as they are driven by single, 11-m-long shafts clad in carbon fibre technology that is usually reserved for modern aircraft and supercars.

– Concession ownership and operation of the WWTPs in **Allahamah** (130,000 m³/day) and **Al Wathba** (300,000 m³/day) in Abu Dhabi

The 4 large water projects BESIX concluded in the Middle East in 2015/2016 will reduce the need for expensive, energy-intensive and environmentally-unfriendly desalinated water with no less than 42 million m³ per year!

RACHID GHAMRAOUI
General Manager, Middle East BESIX Sanotec

"Our engineers start every project with the same credo in mind: maximizing the reuse of water. In the GCC, BESIX Group proposes sustainable innovation, using low-impact and high-tech technologies to treat and recycle waste water for various industries and applications. This commitment provides paid jobs and clean water to local communities and businesses, while substantially reducing the carbon and environmental footprint of water production methods in the Middle East."

Interview

RUWAIS SEWAGE TREATMENT PLANT

Water activities in the desert

2015 saw the successful completion of the sewage treatment plant in Ruwais (15,000 m³/day), in the western region of Abu Dhabi. This lump sum turnkey project was executed by BESIX Sanotec on a Design & Build basis. The project processes waste water in the middle of the desert, without a sea or lake to discharge the treated water in, through the implementation of premium and highly efficient technologies producing high-quality water for irrigation.

"BESIX Sanotec has an excellent reputation within our organization. The company has the integrated multidisciplinary expertise we need and we like their direct approach. They never get bogged down in discussions or details, they get the job done, whatever the challenges are."

MOHAMMED ABU BAKER OBAID
Projects Team Leader
for Abu Dhabi Sewerage Services Company

RACHID GHAMRAOUI
General Manager Middle East of BESIX Sanotec

MOHAMMED ABU BAKER OBAID
Projects Team Leader
for Abu Dhabi Sewerage Services Company

Off-the-beaten-track solutions

The Ruwais sewage treatment plant went online in September 2015. Before that, there was almost nothing, explains **Rachid Ghamraoui, General Manager Middle East of BESIX Sanotec**: "We had to venture off the beaten track into no-man's-land for this project, setting up shop in an arid patch of remote desert located 2 and a half hours drive outside Abu Dhabi, only accessible by a 5-km dirt road. Sanotec had to build site accommodations from scratch for its staff and the vendors, and improve the access roads to the site."

Building in a remote desert environment requires a unique strategy. That is why the Client opted for Sanotec's one-stop shop solution, which combined proven know-how with maximum efficiency. "We wanted to keep every aspect of the project, from the Process Design to the Civil and Mechanical and Electrical Works as well as the final Testing & Commissioning, under 'one roof' and in sync with the logistical challenges we were facing," explains **Mohammed Abu Baker Obaid, Projects Team Leader for Abu Dhabi Sewerage Services Company**. "Sanotec has an excellent reputation within our organization. The company has the integrated multidisciplinary expertise we need and we like their direct, 'person to person' approach. They never get bogged down in discussions or details, they get the job done, whatever the challenges are."

A robust operation

Initially, the raw sewage will arrive on site in large tanker trucks, but underground sewer lines are being accommodated. The water is processed in the plant, stored and then pumped over a distance of 10 km to the surrounding forests of Al-Maydour, Al Raqeeb and Barqat, where it is used as irrigation water to fight back the encroaching sands. Through the various phases of the Design & Build process, Sanotec had to comply with strict rules and regulations in the field of Health & Safety, Reliability & Redundancy, Oder & Noise, Life Cycle costs, etc. The teams of **Rachid Ghamraoui, General Manager Middle East of BESIX Sanotec**, had their work cut out:

"The supply of sewage via tankers poses risks with respect to the variability of the quality of the raw sewage and possible toxic discharges, accidental or not, which could have a detrimental effect on the biological treatment.

››

"Producing high-quality water in a remote area in the middle of the desert, with almost no environmental impact… This is truly a unique project."

MOHAMMED ABU BAKER OBAID
Projects Team Leader
for Abu Dhabi Sewerage Services Company

RUWAIS WASTEWATER TREATMENT PLANT
ABU DHABI, UAE

Key data
- 15,000 m³/d WTP
- 23 buildings or process structures
- 3.2 km access road

Client
Abu Dhabi Sewerage Services Company

Design & Build
BESIX

Period
2013-2015

"

With this in mind, Sanotec's team focused on the key features of the treatment facilities: adequately sized and aerated buffer tanks, field monitoring instrumentation, low loaded & flexible biological treatment process, robust tertiary treatment with disc filtration to keep the suspended solids and turbidity in check, fully equipped on-site laboratory facilities, etc.

To meet the stringent odor emission standards, we put in place a hypermodern two-stage biological/ carbon odor control unit that treats the off-gasses. The result? Odor-free facilities, lower operation costs and environmental impact, higher energy efficiency, and water of an incredibly high quality... a new oasis in the desert."

A new era

The wastewater treatment plant in Ruwais serves an equivalent population of 68,000 people. The quality of the treated effluent is suitable for irrigation of the nearby farms in Ruwais and the plant was designed to boost its capacity to 30,000 m³/day in the future. The state-of-the-art and feature-rich systems of the plant, like the fine bubble aeration system that uses variable frequency drives reducing the dispersion of aerosols while optimizing energy consumption, are on the cutting edge of the industry and can compete with world-class installations in similar unforgiving climes. The Client was impressed: "Producing high-quality water in a remote area in the middle of the desert, from tankered raw sewage, with almost no environmental impact despite the harsh conditions in this part of the world… This is truly a unique project."

SIX CONSTRUCT

IN THE UNITED ARAB EMIRATES AND QATAR, COMMERCIAL CONSTRUCTION IS SURFING ON THE SURGE OF INVESTMENT IN THE BUILD-UP TO THE 2020 WORLD EXPO AND THE 2022 WORLD CUP, WITH THE RETAIL AND HOSPITALITY SECTORS ROLLING OUT LARGE-SCALE DEVELOPMENTS. ANOTHER BUOYANT MARKET IS THE ENTERTAINMENT INDUSTRY: IN 2015, SIX CONSTRUCT WORKED ON VARIOUS THEME PARKS AND SUPER-MALLS, INCLUDING HUB ZERO, FERRARI WORLD AND YAS THEME PARK. THIS MOMENTUM IS SUSTAINED BY THE LOCAL GOVERNMENTS' INCREASED FOCUS ON ECONOMIC DIVERSIFICATION AND PUBLIC INFRASTRUCTURE PROJECTS, SUCH AS THE DUBAI CANAL.

ADNOC TOWER
Abu Dhabi, UAE
Architect: Hellmuth, Obata & Kassabaum

"Now as it was then, Six Construct believes in the business cornerstones of integrity, quality, safety and timely delivery. Six Construct always ensures that its vision and values are in line with those of the GCC region, building an enduring framework of excellence that has allowed the company to be a market leader for more than 50 years."

PIERRE SIRONVAL
Managing Director, Six Construct

THE GREEN PLANET BIO-DOME
Dubai, UAE

24 projects
in full swing

Celebrating
50 years
in the region

Part of Sharjah's growth and achievements for **40 years**

First mover in the Gulf
In addition to working on more than 20 projects in the region, Six Construct also had cause for celebration: 2015 signalled the 50th anniversary of its arrival in the Gulf, which began with the Abu Dhabi Corniche project in 1965. In the half century since, the company saw and contributed to the phenomenal growth and development of the UAE, whose famous skylines boast more than a few BESIX Group buildings. Six Construct also celebrated its 40th year in Sharjah, where it constructed the national cement factory in '75. In those four decades, the company has worked on more than 30 projects in the emirate, and it continues to develop its PPP-activities and Design & Build portfolio.

50
1965-2015
Middle East

SIX CONSTRUCT IN THE UAE

THE GREEN PLANET BIO-DOME
Dubai, UAE

EXPANSION OF FERRARI WORLD
Yas Island, Abu Dhabi, UAE

NEW CONTRACTS

Yas Theme Park
| Sports & Leisure

Six Construct landed one of the biggest Design and Build contracts of 2015: the Yas theme park on Yas Island, which also drew an investment from Miral Asset Management. Six Construct is responsible for the development of the theme park, the retail areas, restaurants, offices, behind-the-scenes installations and external works.

Ajman Sewage Treatment Plant Expansion
| Water

Finalizing the contract in Q2 of 2015, Six Construct were entrusted to carry out the engineering, procurement and construction for the expansion of ASPCL's existing waste water treatment plant in Ajman Al Jurf Industrial area. The new plant is set to increase the treatment capacity by 40,000 m^3/day to bring the overall treatment capacity to 120,000 m^3/day.

Palm Deira Access Bridge
| Civil Engineering

Six Construct will build a large in-situ box girder bridge (8,000 m^2) that will connect the mouth of Dubai creek to Palm Deira, the world-famous artificial archipelago. The project also includes the access ramp and related excavation & dredging works.

Nareel Island
| Marine

Nareel Island is an upmarket real estate project by Aldar Properties. The artificial island is located off Al Bateen in Abu Dhabi and provides its residents with a luxury living experience. In addition to the residential plots, the private island boasts a swimming lagoon, a club house, various landscaped parks and private beaches, and driveways. Six Construct is involved in the dredging, excavation and reclamation works, the design and construction of vertical quay walls, and the top-up of the existing beach.

ADNOC HEADQUARTERS
Abu Dhabi, UAE
Architect: Hellmuth, Obata & Kassabaum

AL MARYAH ISLAND BRIDGES
Abu Dhabi, UAE

ONGOING PROJECTS

ADNOC Headquarters
| Building

Abu Dhabi's National Oil Company will move to a 342-m-high tower with offices, a podium and atrium, and an underground parking block, located on a landmark site. The tower not only has a strikingly dynamic design, but will also qualify for a LEED Gold status.

Al Maryah Island Bridges
| Civil Engineering

These new bridges, awarded to Six Construct, form the central nervous system of Al Maryah Island sustainable transport network. The bridges also play a vital role in Abu Dhabi's upcoming plans for a light railway system, combined with metro and water taxi services. The project will be completed in Q1 of 2016.

Hub Zero
| Sports & Leisure

Six Construct was awarded the Design and Build contract for this massive arcade and theme park which offers cutting-edge gaming experiences, featuring the biggest franchises and most exciting innovations in the business. Included in the layout is a 4D cinema, interactive Dark Rides, a 3D immersive tunnel, racing and karting simulators, a rollercoaster, laser tag games and more.

Ruwais Sewage Treatment Plant
| Water Business

In Ruwais, Six Construct is building a WWTP for the Abu Dhabi Sewerage Services Company (ADSSC). The facility has the latest in water treatment technology, including installations for pretreatment, biological treatment and tertiary treatment of water, odor control systems, chemical dosing and disinfection systems, and sludge treatment facilities. The plant will have the capacity for a Population Equivalent of 68,000.

DUBAI CANAL
Dubai, UAE

HUB ZERO
Dubai, UAE

Legoland Theme Park
| Sports & Leisure

Six Construct will build Legoland Dubai, the first franchise in the Middle East and the seventh worldwide. The park, located in Jebel Ali, will feature rides and attractions, F&B outlets and retail stores, a potential onsite Lego themed hotel, and a water park. A future expansion is also on the cards. The project is due in Q2 of 2016.

Dubai Canal
| Civil Engineering

Working with the Road Transport Authority (RTA), Six Construct is working on phase 3 of the Dubai Canal, which links Dubai Creek to the Arabian Gulf, extending from the Sheikh Zayed Road, crossing Al Safa Park and Jumeirah 2, and terminating near the southern end of Jumeirah Beach Park. Six Construct will be in charge of building the canal, the footbridges and the marine transit stations along the way. The project will be finished in Q4 of 2016.

THE GREEN PLANET BIO-DOME
Dubai, UAE

AL ZORAH RESORT
Ajman, UAE

The Green Planet
| Sports & Leisure

Six Construct was awarded the Design and Build contract for this development. The beautifully designed and truly unique Green Planet Bio-dome in Dubai is an indoor ecosystem that replicates the natural habitat of the world's tropical rainforests with more than 3,000 species of exotic plants, birds, fish, amphibians and animals on show, giving visitors a fun and educational experience. The project is part of Dubai's City Walk expansion. The project is expected to be completed by Q1 of 2016.

Al Zorah Resort
| Buildings

Located on a picture-perfect beach, and offering world-class amenities, Al Zorah is Ajman's premium tourist and lifestyle destination. The development includes a series of hotels, villas, wellness and spa centers, a golf club and on-site marinas. Six Construct is working on the first 5-star resort, which will be operated by Oberoi Hotels & Resorts. The project will be delivered in 2016.

| MARINE WORKS

VLCC Jetty, Fujairah

A WORLD-CLASS TERMINAL

THE PORT OF FUJAIRAH IS THE ONLY MULTI-PURPOSE PORT ON THE EASTERN SEABOARD OF THE UNITED ARAB EMIRATES, APPROXIMATELY 70 NAUTICAL MILES FROM THE STRAITS OF HORMUZ.

IN 2015, SIX CONSTRUCT AND ITS PARTNER FINALIZED A JETTY FOR OVERSIZED CONTAINER SHIPS DELIVERING BULK OIL CARGOES (VLCC OR VERY LARGE CRUDE CARRIER). THE PROJECT INCLUDED THE CIVIL WORKS AND THE INSTALLATION OF EQUIPMENT FOR THE MARITIME STRUCTURES AS WELL AS THE TOPSIDE WORKS, CONNECTING WITH THE MATRIX MANIFOLD 2 PIPELINE.

A well-oiled machine
During construction, the project team relied on the support from the in-house Design department and a specialized workshop that enabled everyone on site to tackle challenges quickly and efficiently. Extensive pile testing, which prefaced the works, yielded encouraging results with regards to the envisioned design and methodology. The foundations of the jetty allowed the Group to showcase its latest piece of high-tech equipment: the self-elevating platform Rima, rigged with a brand-new piling frame, was put into operation on site.

After 18 months the works were successfully concluded, giving the Port of Fujairah a world-class oil terminal that is sure to cause a stir in the Gulf of Oman.

A winning approach
"Working in a marine environment is a challenge in itself, especially when driving 65-m piles in 26-m-deep water. So we concentrated on choosing the right techniques that would complement the design without compromising the tight deadline. This meant driving the piles instead of drilling them, fabricating our precast elements in accordance with the lifting constraints, and connecting the concrete line to the actual breakwater to minimize the use of off-shore in-situ concrete. Thanks to the determination and flexibility of our teams, the project was a great success!"
Michael Eeckhout, Project Manager, Six Construct

| BUILDINGS

ADNOC tower, Abu Dhabi

WHEN VISION BECOMES REALITY

PERCHED ON A PRIME PIECE OF REAL ESTATE BETWEEN THE ARABIAN GULF AND THE BUSTLING URBAN CENTER OF ABU DHABI, THE NEW BUILDING OF THE NATIONAL OIL COMPANY (ADNOC) IS TRULY A SIGHT TO BEHOLD. THE DYNAMIC TOWER NOT ONLY OFFERS STUPENDOUS VIEWS AND AN EXCLUSIVE WORKPLACE FOR THE 4,000+ ADNOC EMPLOYEES AND SERVICE PROVIDERS… IT IS ALSO BRIMMING WITH TECHNICAL INNOVATIONS AND DESIGN FLOURISHES, COURTESY OF SIX CONSTRUCT.

Not just another brick in the wall
The external stone-clad wall of the ADNOC tower sets a world record: it is a staggering 342 meters tall and consists of 44,000 m² of Bethel White granite. The innovative arch design, based on a ventilated rain screen concept, uses the large honeycomb panels to great aesthetic and practical effect. Six Construct used its expertise in engineering optimal solutions to maximize the tower's performance across all levels.

A wealth of materials
Underneath that monumental archway, the building is equipped with reinforced concrete cores, a 65-story monolithic glass box, ample office spaces (137,000 m²), 24 elevators and beautifully finished interiors.

Project Manager Luis Monteiro explains: "Six Construct was able to turn a visionary inspiration into a reality. The elegant color scheme, the blend of high-quality materials and finishes (natural stone, walnut panels, glass, leather, …) and the pervading atmosphere of comfort and luxury make this a fitting abode for the rulers of the oil business and their partners."

| SPORTS & LEISURE

Ferrari World, Abu Dhabi

SIX CONSTRUCT RETURNS TO FERRARI WORLD

IN AUGUST 2014, SIX CONSTRUCT WON THE CONTRACT FOR THE EXPANSION OF FERRARI WORLD ABU DHABI. THE TEAM WILL DEVELOP NEW RIDES AND ATTRACTIONS AND ADAPT SOME OF THE EXISTING INFRASTRUCTURE TO THE LATEST THEMES AND ADDITIONS. THE 86,000-M² AMUSEMENT PARK IS LOCATED ON YAS ISLAND AND RANKS AS ONE OF THE PREMIER TOURIST ATTRACTIONS IN THE MIDDLE EAST. THE EXPANSION WILL INCREASE THE PARK'S CAPACITY BY AN ESTIMATED 40%.

A new cabinet of wonders
There is something for everyone to enjoy… and for Six Construct to build. Some highlights: Flying Aces, a new high-speed roller-coaster with 2 main supports of the equally impressive 60-m lift track; Benno Great Race, a new interactive dark ride featuring immersive special effects and light shows; Vortex, another thrilling racer, which will get a bigger and better funnel, and Main Street, a charming, Italian-styled street in the heart of the amusement park.

Behind the scenes
To visitors, Ferrari World is all about fast and furious fun, and enjoying a relaxing day out with family and friends. But behind the scenes, where our teams work to deliver these special treats, things can get more tense altogether:

- Limited working hours, as the park stays in operation throughout the works
- Close coordination with client, vendors, stakeholders, and ground personnel
- Innovative, hands-on design and execution, tailored to the theme and very specific aspects of the various rides and attractions

SIX CONSTRUCT IN QATAR

AL WAKRAH STADIUM
Doha, Qatar

NEW DOHA INTERNATIONAL AIRPORT
Doha, Qatar
Architect: Hellmuth, Obata & Kassabaum

NEW CONTRACTS

Al Wakrah Stadium
| Sports & Leisure

Located 20 km south of Doha, Six Construct was presented with the opportunity to construct the Al Wakrah stadium, in preparation for the FIFA 2022 World Cup. Six Construct is responsible for the design and main construction of the stadium, which consists of 40,777 seats and a car park; the masterplan including a community market and retail area; and training pitches. The project is expected to be completed by 2018.

Qatar Airways Apron
| Civil Engineering

Having previously worked on Doha's Hamad International Airport, Six Construct has seized another opportunity in the aviation industry. For Qatar Airways, the company will design and build aircraft parking stands, focusing on concrete and flexible paving solutions for the taxiways.

AL RAYYAN ROAD
Doha, Qatar

GABBRO TERMINAL EXPANSION PROJECT
Doha, Qatar

SALWA BEACH RESORT
Doha, Qatar

ONGOING PROJECTS

Doha Expressway for Ashghal
| Roads

Six Construct is building a section of the new Doha Expressway for the Public Works Authority of Qatar. The expressway program will provide vital transportation links across Qatar, connecting key cities, towns and villages with high quality national freeways and urban arterial routes. The works started in the first half of 2015 and will be completed by Q1 of 2017.

Gabbro Terminal Expansion Project
| Civil Engineering

Working under an EPC contract for the Qatar Primary Materials Company (QPMC), Six Construct is expanding the Gabbro Terminal in the Port of Mesaieed. The new terminal will handle 30 million tons of aggregate, which will significantly reduce the need for large-vehicle traffic in the area.

Salwa Beach Resort
| Marine Works

Located on the southern Coast of Qatar, close to the border with Saudi Arabia, Salwa Beach will be the biggest resort in the region, and one of its most luxurious. Six Construct is building the marina of the resort, carrying out the dredging works (basin, access channel and beaches) and the construction of the harbor (54 boats), including breakwaters, quay walls, a boat ramp, pontoons and navigation aids. The property development is expected to be delivered by Q1 of 2016.

Khalifa Stadium
| Sports & Leisure

In preparation for the 2022 World Cup, Six Construct is driving the renovation and expansion of the Khalifa International Stadium in Doha, which will have 60,800 seats, an outdoor cooling system and a museum. The project is scheduled for completion in Q1 of 2017.

| BUILDINGS

Doha Exhibition and Convention Center, Qatar

A MEETING BETWEEN FUNCTION AND FORM

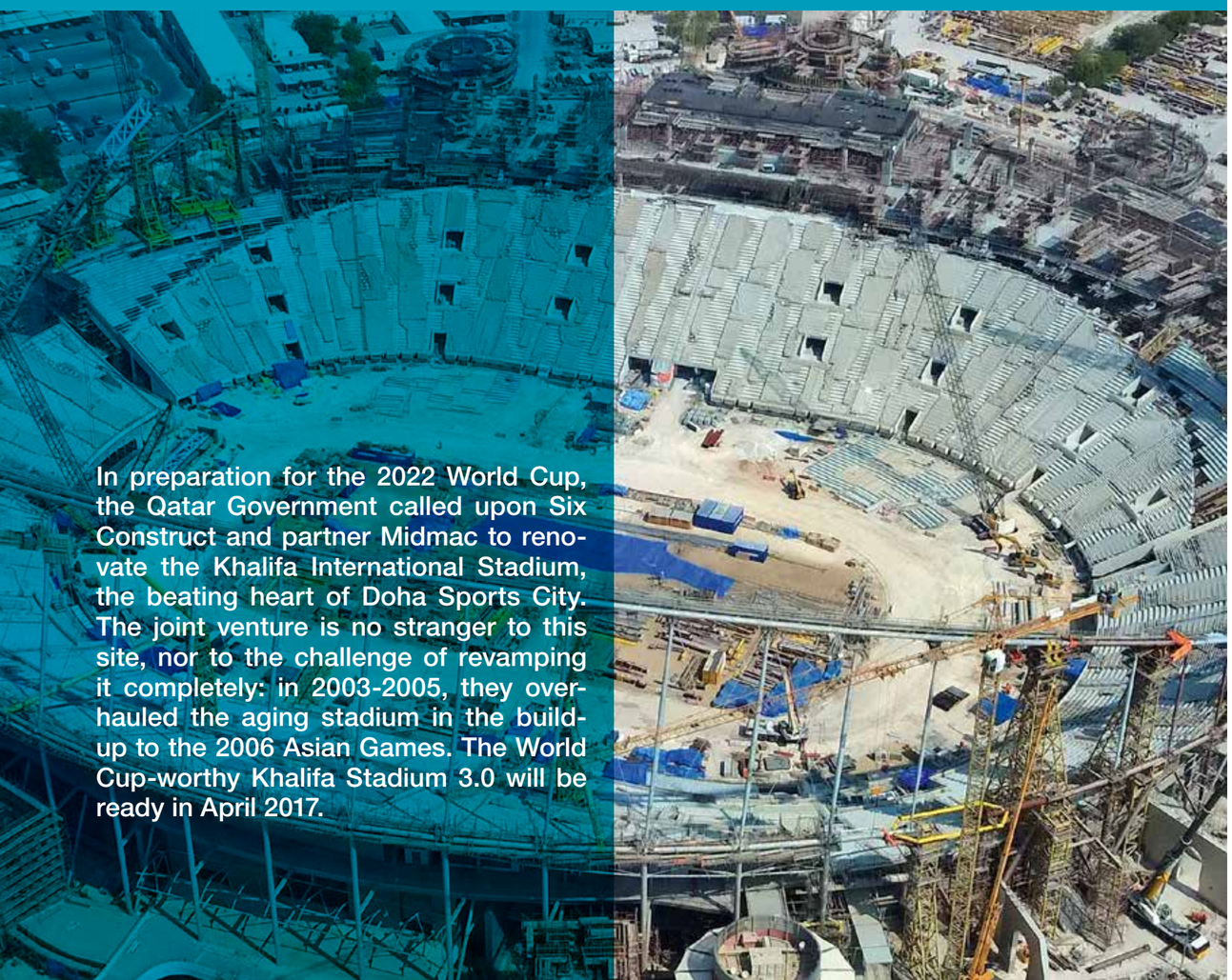
THE NEW DOHA EXHIBITION AND CONVENTION CENTER, WHICH OPENED ITS DOORS IN 2015, IS THE JEWEL IN THE CROWN OF THE RAPIDLY EXPANDING DISTRICT OF WEST BAY. THE BUILDING CONSISTS OF FIVE SPACIOUS EXHIBITION HALLS, ELEGANT CONFERENCE ROOMS, AND A STATE-OF-THE-ART MEETING CENTER, WHICH WILL BE USED TO HOST PRESTIGIOUS EXHIBITIONS AND EVENTS. SIX CONSTRUCT QATAR AND ITS PARTNER WERE RESPONSIBLE FOR THE CONCRETE BASEMENT, PARTS OF THE SUPERSTRUCTURE, THE ELECTRO-MECHANICAL AND FINISHING WORKS, AND THE BUILDING'S IMPRESSIVE ROOF AND FAÇADE.

Blades of glory
The stand-out feature of the new convention center is its 20.5-m high, floating blade roof. The elegant interplay of cable trusses (with a free span of 96 m) and tapered columns, evenly distributed within a 1,728- m^2 bay and illuminated by aluminum and metal cladding, gives the building its beautiful, free-flowing design and works particularly well with the stark, all-glass façade that is supported by 180-m-long cables.

| SPORTS & LEISURE

The Khalifa stadium

KICK-STARTING THE KHALIFA STADIUM



In preparation for the 2022 World Cup, the Qatar Government called upon Six Construct and partner Midmac to renovate the Khalifa International Stadium, the beating heart of Doha Sports City. The joint venture is no stranger to this site, nor to the challenge of revamping it completely: in 2003-2005, they overhauled the aging stadium in the build-up to the 2006 Asian Games. The World Cup-worthy Khalifa Stadium 3.0 will be ready in April 2017.

THE RENOVATION WORKS

The 40-year-old arena, standing in the shadow of the Aspire Tower in the Al Waab District, will be brought up to FIFA specs: the grounds will be extended to accommodate an additional 11,000+ spectators, a development that also includes technical floors, concourse areas and bleachers, as well as new access ramps. The football fans will be shaded by an impressive 360-degree membrane roof, while the players on the pitch will greatly appreciate the new state-of-the-art air-conditioning system the stadium will be fitted with. In addition to upgrading the 52,000-capacity stadium, the joint venture will build a museum and exhibition spaces dedicated to the stadium's illustrious namesake and the rich sporting history of Qatar.

AN IMPORTANT SAFETY MILESTONE

In spite of the tough deadlines and the complexity of the works, the Six Construct teams completed 3.7 million man hours without lost-time accident, an incredible achievement! Day after day, more than 3,200 people toil on site, but thanks to the stringent health and safety regulations and the great discipline and expertise of our teams, the works have continued injury-free – which gives credence to Six Construct and Midmac's compliance to the Q22 Workers Welfare Standards Edition 1, as approved by the Qatar 2022 Supreme Committee.

THE KHALIFA STADIUM
DOHA, QATAR

Fast Facts
- Total renovation of the Stadium and Museum
- Expanding the existing stadium to include 60,800 seats
- 44,000 m² roofing surface

Architects
Cox Richardson and PTW Architects

Joint Venture
JV Six Construct - Midmac

Period
2014 - 2017

BIANCA PINTENS
Technical Manager, Six Construct

"The main challenge of the Khalifa Stadium renovation project was the complex dialogue between the existing structure and the new insertions. I am based in the project site office and regularly attend site walkabouts. During these inspections, I try to confer with as many people as possible. The owner's representatives, the client, subcontractors or architects: they all have a different take on the project.

Although the work is very demanding, it is also immensely rewarding – especially seeing a project through to completion, including a successful handover to the client. There is so much to be learnt on megaprojects like this, in a relatively short period of time. I have been awfully fortunate to be surrounded by an abundance of skilled and knowledgeable colleagues."

ERIC CHANTRAINE
HSE Manager International, BESIX

"The Khalifa Stadium, renovated prior to the 2006 Asian Games, has been a symbol of Qatar's innovative architecture for years. Safety and respect, two core values at BESIX, form an integral part of the client's criteria for approval. We have taken on an integrated approach to safety, securing the implementation and maintenance of safety procedures on all sites.

How? By sharing our safety vision on site. We involve everyone: management, workers and subcontractors.

Together, we create a solid safety culture. This proactive approach, combined with excellent communication, has led us through 3.7 million work hours with a zero incident record."

| CIVIL ENGINEERING

Gabbro Terminal Expansion, Qatar

FROM CARGO HOLD TO CONCRETE PLANT

If you want to host a World Cup, like Qatar in 2022, you need first-rate infrastructure. If you want to build first-rate infrastructure, you need asphalt and concrete, and lots of it. If you want to make large volumes of asphalt and concrete, you need a steady supply of aggregates, such as gabbro. And if you're going to process imported gabbro, you need high-capacity terminals that are up to the task.

Enter Six Construct and partner FLSmidth, who are working on an ambitious expansion project that will effectively double the capacity of the Qatar Primary Materials Company's Gabbro terminal in the port of Messaieed. By replacing the current operation system (4,000 daily rotations) with a state-of-the-art conveyor system, the terminal's annual turnover will be boosted to an impressive 30 million tons.

STREAMLINING THE SUPPLY CHAIN

The aggregates arrive in Qatar by ship, usually from neighboring Oman and the Emirates. In port, cranes offload the payload and drop it unto a conveyor belt that feeds the rail-operated mobile stackers in the stockyard, which distribute the continuous supply of gabbro over twelve, 22-m-high stockpiles. Finally, the gabbro is loaded into trucks that transport it to the country's various processing plants. To support this new, streamlined supply chain, Six Construct is also building the auxiliary infrastructure, such as substations and weighbridges, and installing the electromechanical equipment.

SOLID SOIL IMPROVEMENT

The stockyard is located near the shoreline. Due to a compressible layer a few meters below ground level, extensive soil improvement works were required to guarantee the stability of the very high standards of the stacker foundation. The understanding of the behavior of the young marine deposits along the shoreline was key to the analysis of the stacker rail foundation. The ground behavior indicated a continued time-dependent settlement behavior, which was extrapolated over several years. This required innovative solutions:

GABBRO TERMINAL EXPANSION
MESSAIEED, QATAR

Fast Facts
- Construction of a Bulk Material Stockyard
- 4-lane conveyor system
- 22-m-high stockpiles

Joint Venture
Six Construct - FLSmidth Wadgassen GmbH

Period
2013 – 2016

Safety first

The project site is located in an area operated by Qatar Petroleum and had to comply with the Oil and Gas Industry's strict health and safety standards. Thanks to thorough research, the implementation of on-site tools and safety briefings (so-called 'work packs') and a comprehensive permit system, the project was able to clock 5 million man hours without lost time incident.

GUILLAUME BRACQ,
Engineer on Qatar Gabbro Terminal Project (QGT), Six Construct

"In the early days of the project, we carried out the first soil tests and earthworks. As a young technical engineer, I was assigned to the technical office. I had to deal with project management, coordinate with partners and stakeholders, and procure the men and materials. I visited the site almost every day, working with the foremen and site engineers, seeing everything progress according to a plan I had been actively involved in.

It was a great experience. The biggest challenge was the coordination between the different parties involved. It was a constant back and forth between our office, the design departments in Brussels and Dubai, the local authorities, our partner, and the subcontractors, which needed our guidance day in and day out."

CHRISTOPHE BAUDUIN
Technical Director
BESIX

"The initial foundation solution for the stackers consisted of stone columns with a diameter of 1 meter. These vertical foundation elements find their bearing capacity and stiffness by the lateral confinement exerted by the surrounding soil. However, the test embankment loads indicated that these elements would continue to develop over time, despite the quite significant reduction of the total settlement. This made them incompatible with the operational criteria of the stacker. Thinking on our feet, we decided to execute the stackers' rail foundation by large diameter bored piles, specifically designed to withstand the load of the stackers and the horizontal pressure exerted in the ground by the stockpiles located along the rail track."

BESIX IN SAUDI ARABIA

THE SAIL TOWER
Jeddah, Saudi Arabia
Architect: Perkins and Will

ALTHOUGH SAUDI ARABIA'S ECONOMIC OUTLOOK REMAINS POSITIVE, THE RAPIDLY DECLINING OIL PRICE DISRUPTED THE LOCAL MARKET IN 2015. NEVERTHELESS, BESIX KSA STAYS ACTIVE IN THIS WORLD REGION, BRINGING ITS EXPERTISE IN ORDER TO PARTICIPATE IN THE FUTURE ECONOMIC DIVERSIFICATION OF THIS COUNTRY, WHICH ATTEMPTS TO MOVE AWAY FROM ITS CURRENT RELIANCE ON OIL WITH NEW BUSINESS ACTIVITIES.

MARINE TERMINAL
Jazan, Saudi Arabia

The Sail Tower, Jeddah
| Buildings

The 5-star, 67-storey, 265-m 'The Sail Tower' Hotel and Residences in Jeddah (likely to be operated by the Shangri-La Group) boasts 242 rooms and 122 service apartments, a spa and fitness, conference and function rooms, a host of restaurants and lounges, an open pool, and a ballroom that accommodates more than 500 people. The sophisticated design, replete with LED-lighting and balcony sails, gives the tower a sweeping and ethereal quality that earned it its nickname 'the Sail Tower'. In 2016, BESIX and its partner Alsaad will carry out the MEP works on the building, developing innovative BIM-models to produce some 2,000 specialized shop drawings.

Marine Terminal, Jazan
| Marine Works

On the Red Sea coast, as part of the development of the Jazan Economic City in the south-west of Saudi Arabia, Six Construct was called in for the marine works of the Aramco's Refinery and Terminal. Included in this EPC civil marine project are three tanker berths (including one for sulphur), mooring and berthing dolphins, a subsea pipeline (9 km), a water intake and pumping station, and assorted works.

King Abdullah Sports City, Jeddah
| Sports & Leisure

BESIX built the impressive 60,000-seat KASC stadium in a record time of 18 months. The arena is flanked by a mosque, a large car park, ancillary buildings and training pitches. BESIX is now carrying out a 3-year Operations & Maintenance contract of the facilities.

"BESIX KSA will sail through challenging times in 2016. In spite of the unstable environment BESIX KSA is operating in, its aim is to maintain the company's current direction, hoping to turn tough times into long-term opportunities."

CEDRIC BARBIER
General Manager, BESIX KSA

SIX CONSTRUCT IN BAHRAIN & OMAN

FOUR SEASONS BAHRAIN BAY
Bahrain Bay, Bahrain
Architect: Skidmore, Owings & Merrill

MAJIS SEAWATER INTAKE AND PUMPING STATION
Sohar, Oman

NEW CONTRACT

Bahrain LNG
| Marine works

Close to the Muharraq Sewage Treatment Plant, Six Construct will develop Bahrain's new LNG Import Terminal to help meet the Kingdom's increasing demand for gas to fuel its industrial and urban development. Six Construct is responsible for the Design and Build nature of this project.

COMPLETED PROJECT

Four Seasons Bahrain Bay
| Buildings

The magnificent Four Seasons Bahrain Bay Hotel opened its doors in early 2015, an eye-catching addition to the already iconic skyline of Bahrain Bay. The Bahrain Tourism & Exhibitions Authority has recognized the hotel's new standard of excellence with six hospitality awards.

ONGOING PROJECT

Majis Seawater Intake and Pumping Station
| Marine Works

Six Construct is building a new seawater intake, pumping station and outfall structures for Majis Industrial Services in the port of Sohar in northern Oman. The project is slated for completion in Q1 of 2016.

Interview

THE FOUR SEASONS BAHRAIN BAY

A hymn to visionary design

Standing 202 m tall on a reclaimed 12-acre islet in Bahrain Bay, commanding awe-inspiring views of the Manama skyline and the Arabian Sea, and brimming with luxury amenities and architectural innovation, the Four Seasons Hotel Bahrain Bay is the latest and greatest addition to the Kingdom of Bahrain's flourishing hospitality industry, and a shiny beacon of contemporary design.

"I am proud to give tours to various hotel managers working within Four Seasons or with other companies in the hospitality sector. Their reactions during the tour speak volumes: many are amazed by the property and the level of quality of the finishing. The hotel sets a standard that far exceeds what is being provided nowadays."

GREG PIRKLE
General Manager, Four Seasons Hotel Bahrain Bay

GREG PIRKLE
General Manager, Four Seasons Hotel Bahrain Bay

A heart-stirring hotel

Making up the hotel's whopping 54,000 m² are its 216 rooms, 55 luxury suites, and 1 presidential and 1 royal suite, public spaces, a business center and event facilities (including 2 ballrooms), service and support areas, and five-star amenities, including 5 pools, a spa and fitness, Michelin-starred restaurants, bars, and much, much more.

Bold design without and within

The iconic hotel, which opened its doors in March 2015, was designed by the prestigious firm SOM. It is anchored by a towering central element that is bookended by two structural piers, supporting the stack of glass-walled, multi-component floors. The guestrooms celebrate the striking views of the surroundings through floor-to-ceiling glazing on two sides, playing on the ever-changing light and creating a truly monumental atmosphere.

The hotel's top-tier experience: above and beyond the multi-level podiums, guests can enjoy the fine dining and breathtaking views of the lofty Skypod Restaurant and Lounge, located in the penthouse-level of the hotel. **Greg Pirkle, General Manager, Four Seasons Hotel Bahrain Bay:** "It is a superior product and has more resounding features than any other hotel I've been part of. This tower definitely makes a statement in the GCC region. Having its own private island makes this stand-alone structure unique in terms of security. From the 12-meter-high lobby, to the proper utilization of the rooms to the sophisticated look of the Sky Bridge on the very top, this development cannot be compared to projects in other countries, not even in Dubai!"

»

"A lot of work and detail went into the construction, design and landscaping of this show-stopping project, blending stark innovation with more traditional elements and creating something truly unique in the process."

YVES DE RUE
Project Manager, Six Construct

FOUR SEASONS HOTEL BAHRAIN BAY
BAHRAIN BAY, BAHRAIN

Client
Signature Hotels Management

Key data
- 54,000 m² 5-star hotel
- 202-m-high construction
- 2 underground storeys
- 48 storeys above ground

Design & Build
BESIX

Architect
Skidmore, Owings & Merril

Period
2011 - 2015

»

Four Seasons, four challenges

COORDINATION: orchestrating the various elements of the project in an efficient and timely fashion, while striving to meet the incredible high standards of the Client. **Greg Pirkle**: "Four Seasons Hotel Bahrain Bay is the fourth opening I've attended for the company and I must say that the attitude and technical expertise provided by Six Construct's project managers and staff have been the best I've ever encountered in the trade. They always took my opinion into consideration when making decisions; they were extremely friendly and flexible and never arrogant. I've formed great relations with Yves and Phil. I'm honored to be part of this hotel and to have worked with a great team such as Six Construct."

QUALITY CONTROL: making sure every technical aspect of the building is up to scratch and in keeping with the hotel's trend-setting design. **Guillaume Cornille, Technical Office Engineer, Six Construct** explains: "We had to produce deliverables with a team of draughtsmen and BBS engineers, procure and manage materials, ensure all systems were well-implemented, establish relationships with Engineer/Client, award and manage subcontractors, start construction on site, coordinate and follow up with the site in case of issues/difficulties, etc. The challenge was to monitor each of the above steps simultaneously in order to avoid works getting delayed."

LOGISTICS: sourcing 20,000 m² of marble from Italy, Germany and Greece in 6 months after the defaulting marble subcontractor had been removed from site. **Yves De Rue, Project Manager, Six Construct**: "In keeping with the Four Seasons brand values, we went beyond five stars. The structure itself is extraordinary. And the finishing touches are equally impressive: throughout, we used premium materials such as marble, tropical hardwoods, and even bronze for the beautiful porte-cochere…"

PRESTIGE: making our joint mark of excellence in a landmark project that will transform the heart (and history) of Bahrain. **Greg Pirkle**: "We currently have 3 iconic towers in Bahrain: the World Trade Center, the Bahrain Financial Harbor and now, the Four Seasons Hotel Bahrain Bay. I think having more architecturally distinguished buildings will help propel Bahrain onto the global stage, bolster its tourism industry, and allow even more investments into the country. The Four Seasons Hotel Bahrain Bay definitely has local people talking about its design and the hotel has received attention on a global scale as well."

SIX CONSTRUCT | BAHRAIN & OMAN

| INDUSTRIAL WORKS

Sohar Pumping Station

SOHAR, OMAN'S INDUSTRIAL HUB

The project, constructed adjacent to the first seawater intake pumping station, nearly doubles the cooling water supply capacity of Majis Industrial Services at the port of Sohar. On integration of the first and second seawater intake pumping station and return system, the system boasts a combined pumping capacity of 734,000 m³/h, which is on par with some of the largest cooling water intake and pumping systems currently operational in the Middle East.

SOHAR PUMPING STATION
SOHAR, OMAN

Client
Majis Industrial Services S.A.O.C.
(Sultanate of Oman)

Fast Facts
- Reinforced concrete structure of 32,000 m³
- Combined pumping capacity of 734,000 m³/h
- 11 screens, 25 pump chambers

Period
2014 – 2015

This Design and Build project is constructed to meet the growing demand for cooling water from industrial tenants at the Port of Sohar. In late 2013, Client Majis Industrial Services awarded Six Construct in JV (50-50) the contract for the design and build of a Seawater Pumping Station including an Electro-chlorination Plant, Substation, ancillary buildings and external works in Sohar (Oman).

In June 2014, the Client decided to increase the capacity of the pumping station from 320,000 m³/h to 400,000 m³/h and extended the pumping station to accommodate 11 screens and 25 pump chambers without modifying the delivery milestones of the project. A variation and acceleration plan was mutually agreed upon and the excavation works started in July 2014.

TEMPORARY WORKS

The temporary works required for the Pumping Station included the installation of a cofferdam, a deep well dewatering system, and an open excavation (180,000 m³) up to -7.50 m CD. The reinforced concrete structure of 32,000 m³ comprises a raft, external and internal 11-m-high walls as well as a roof. All surfaces will be finished with epoxy coatings. The MEP works include 11 traveling screens and bar screens, stop log and guide frames and a cathodic protection for the equipment.

It was BESIX's systematic process of optimization, excellent problem-solving skills and technical know-how that ultimately led to project success.

CURRENT STATUS

Having succeeded in solving all technical issues encountered at the time of excavation and related to the dewatering system, the raft works started mid-September 2014. The internal and external walls were completed end of March 2015. The main part of the roof was designed with precast elements to accelerate the construction and was completed early June 2015.

KEY TO SUCCESS

This challenging project could not have been realized without the close coordination between the construction team and the technical office, and BESIX's systematic process of optimization.

All building works are completed and the pumping station was successfully delivered early December 2015.

STIJN D'HOORE
Construction Manager, Six Construct

"When I joined the project in February 2014, I went to Oman with a very small team to begin the startup phase. The first technical challenges on site were related to geotechnics. The combination of sand, clay and sand-rock layers caused problems during sheet piling, excavation and dewatering works. We had to use all experience available in the company to face these challenges, and particularly to get the last 50 cm of the excavation dry. We found a solution combining French drains, well point and deep well dewatering. By adding an extra layer of gravel on top, we succeeded in getting the last 10 cm dry. We started the concrete works in October 2014.

The target was clear: before 1 June 2015, 95% of the concrete structures were to be completed. In order to succeed, every single one of us had to give 110%.

The key to our success? Rigorous planning, innovative thinking and great team mentality."

Regional Companies

Better Together for Comprehensive Solutions

THE REAL STRENGTH OF BESIX GROUP IS THE SYNERGY THAT EXISTS BETWEEN ITS REGIONAL COMPANIES, WHO ARE ACTIVE BOTH ON THE DOMESTIC MARKET AND ON THE INTERNATIONAL STAGE. WORKING SHOULDER TO SHOULDER, AND GROWING FROM STRENGTH TO STRENGTH, BESIX GROUP COMPANIES HAVE FOCUSED THEIR ATTENTION ON BUOYANT MARKETS THAT DEMAND SPECIAL SKILLS AND KNOW-HOW THAT MAY NOT BE READILY AVAILABLE TO THEM.

CADIZ RESIDENTIAL BUILDING
Antwerp, Belgium
Architect: JV Meta architectuurbureau & Poponcini & Lootens

Jacques Delens

HECTOLITRE
Brussels, Belgium
Architect: R^2D^2 Architecture

ABATTOIRS
Anderlecht, Belgium

MEDICAL IMAGING CENTER
Brussels, Belgium
Architect: Bureau d'Architecture Emile Verhaegen (BAEV)

BOULET-CHARTREUX
Brussels, Belgium
Architect: Atelier Quatr'a

Operating mainly in Brussels and in Wallonia, Entreprises Jacques Delens (EJD) and its subsidiary Sud Construct have specialized in construction and renovation works since 1967. For 4 years, the company has been active on the residential housing market and delivered some 30 units in 2015. Thanks to its expertise, EJD can manage unusual projects, which require specific planning, and technical challenges such as the passive kindergarten 'Hectolitre' in the center of Brussels.

Although its order book evolved positively in 2015 (increase of 17% compared to 2014), Entreprises Jacques Delens expects a lower profitability due to the difficult economic climate and the aggressive competition in the region of Brussels. The company is actively looking for new private players or research centers which can help EJD to find new innovative and sustainable solutions that respect the environment and are profitable for all parties involved.

Preparing for the future
The department for sustainable development already monitors twenty EJD project sites. The company, however, intends to go even further by conducting a new subsidized research and by launching an internal study about energy performance in buildings. Both studies will allow EJD to improve its construction process and to avoid making mistakes on site that could negatively impact the building's energy performance. The company will also continue to focus on small promotional projects with a contemporary architecture and a positive environmental impact.

Key Projects 2015

15 new construction sites opened and 15 sites finished in 2015, amongst them:

- Kindergartens 'Hectolitre' and 'Rouppe' (Brussels)
- Renovation of the law firm Linklaters (Brussels)
- Expansion of the industrial site 'Abattoirs' (Anderlecht)
- Construction of 2 apartment buildings 'Sancerre' & 'Nuits Saint-Georges' (Limal)
- Boulet-Charteux residential project (Brussels)

"In spite of an extremely difficult economical context, Sud Construct successfully finished several important projects in 2015. By stepping up its promotional efforts and significantly increasing its production, Entreprises Jacques Delens has managed to respect its budgetary engagements."

DAMIEN MAGERAT
Managing Director, Entreprises Jacques Delens

Corporate Social Responsibility
Entreprises Jacques Delens is also working on an ambitious environmental plan, which aims to guide the company towards more sustainable development and which will help EJD to obtain the three star Eco-Dynamique label of the Brussels Region. In collaboration with 10 European partners, EJD is working on a 3-year European research project which is destined to help reach Europe's 20-20-20 goals. The project aims to develop a new tool to control air and wind-tight building envelopes.

MUSÉE DE LA BOVERIE
Liège, Belgium
Architect of the extansion: Rudy Ricciotti
© Marc Verpoorten

MRS LA PLAINE
Droixhe, Belgium

SRI
Ciney, Belgium

Wust

As a general contractor operating in all areas of construction, Wust is present in Wallonia, Brussels and the Grand Duchy of Luxembourg. Building on more than 80 years of experience, the company takes on projects of different scales: buildings, industrial and retail complexes, renovation and rehabilitation, civil and environmental works. In Wallonia and the Grand Duchy of Luxembourg, Wust is also active in real estate development.

Production in 2015 at Wust was lower than had been hoped for. The low level of public investment penalized the construction sector in 2015, with no improvement in sight. A slight recovery of confidence in the private sector kept the company's business at a nonetheless satisfactory level.

This rebound in private markets is visible mainly in the industrial, services and retail sectors, while residential activity is declining.

After representing a preponderant share of Wust's business for three years in a row, public procurement turnover has fallen to below that of private markets.

The sharpest fall comes from work for local authorities. Other public sector categories have declined too, but to a lesser extent.

At the end of 2015, Wust acquired SDW, a carpentry business located in Alleur (Belgium). Wust aims to further develop the activities of this company, which has a proven track record of top-notch tailored interior designs. Wust started expanding its offi-ces on the Plénesses site and at the end of 2016, the company will be able to move from its office in Malmedy to this site. From then on, all of its activities will be gathered on one location.

Key Projects 2015

- Loriers (Hannut): Construction of a nursing home with 73 beds and 21 residential services (JV: 50/50)
- Ol Fosse d'Outh (Houffalize): Transformation of a holiday center (85 rooms, a bar, a cafeteria)
- Musée de la Boverie (Liège): Renovation of the Museum of Modern and Contemporary Art and of the building nearby used for nautical sports. The goal? Transforming these buildings into a great location for the musée de la Boverie (JV: 50/50)
- MRS La Plaine (Droixhe): Construction of a nursing home (JV: 50/50)
- Coteau Sainte-Barbe (Jambes): Construction of a building containing 68 apartments on behalf of BESIX RED (JV: 50/50)
- Delhez Bois (Amblève): Construction of a cogeneration plant
- SRI (Ciney): Construction of a fire station
- Albatros (Balmoral): Construction of a building containing 15 apartments

"Although 2016 will be a difficult year due to the decrease in public and private tenders, Wust aims to increase its turnover by 10%. The company also plans to integrate its new subsidiary, SDW, and to make its business development a success. This acquisition shows Wust's determination to diversify in other interesting niches."

DIDIER HANS
Managing Director, Wust

Corporate Social Responsibility
Wust significantly improved its safety performance in 2015 and reduced its environmental impact by moving its headquarters to a new low-energy building. The company also supports different non-profit projects via BESIX Foundation and other social economy organizations like APEM-T21, La Ruche Chapelloise and ASBL Fonds André GILLES.

KANAAL
Wijnegem, Belgium
Architect: Stéphane Beel, Bogdan-Van Broeck and Coussée-Goris

IOK
Geel, Belgium
Architect: Hub & Archiles

CADIZ KATTENDIJK
Antwerp, Belgium
Architect: Meta Architectenbureau and Polo Architects

SWIMMING POOL WEZENBERG
Antwerp, Belgium
Architect: Bladt ir & Verstraeten arch

Vanhout

Based in Geel, Vanhout operates as a contractor in commercial, healthcare and residential construction, sports and leisure facilities, industrial and environmental projects. Renowned as a real group, it offers multiple services: Vanhout Facilities (facility management), Vanhout Projects (project development), Botec (stability engineering), Vadutec (sustainable techniques), HBS (interior finishing) and Isofoam (PUR insulation foam works).

In terms of turnover and profit, 2015 was again a very successful year for Vanhout. The largest part of Vanhout's 2015 turnover was generated by 'building team' projects. Some were PPP projects, for which the focus increasingly lies on creative financing techniques. Moreover, the growing importance of sustainability and 'life cycle-thinking' makes the projects more complex.

In its own region, Vanhout won "The Kempenaar": a prestigious award for companies that lead by example as sustainable value-driven companies.

Thanks to a number of new developments in 2015, Vanhout Facilities is now ready to do the follow-up and maintenance of every project Vanhout delivers. The company is actively participating in subsidized projects like Vlisog (a Flemish initiative to systematize the maintenance of buildings).

Innovation as a motto
Vanhout continued to work with WINST working groups (Working groups Innovation and Strategy), with a main focus on optimizing customer service, external communication, internal processes and company culture. Another Vanhout objective is to look for new developments in construction, maintenance, modular construction, care facilities, affordable housing, operational streamlining, etc.

Key Projects 2015

- Design & Build of the Belgian pavilion for Expo Milano 2015
- Civil works for Exxon Mobil in Antwerp
- Extension and renovation of psychiatric institutes OPZ and MPI in Geel
- Construction of more than 1,000 apartments for residential real estate developers (a.o. BESIX RED)
- 5 swimming pools: S&R Bruges, S&R Hasselt, Wezenberg Antwerp, Louis Nameche Sint-Jans-Molenbeek and the British School of Brussels (BREEAM Excellent)
- Vanhout Projects: prospecting for real estate development and commercialization of a.o. the Meadow Project (Herent)
- HBS: renovation and interior design of shops (Esprit, COS, & Other Stories, H&M, etc.) and offices (Cofinimmo, CM, Allianz, etc.)

"In 2016, the Vanhout Group aims to consolidate its position on the market, with special attention to the development, construction and maintenance of projects in the healthcare industry. The Group will also focus on public-private collaboration contracts. Next to a fair price, quality, organizational structure and partnerships are important criteria when it comes to these type of contracts."

JEF LEMBRECHTS
Managing Director, Vanhout

Corporate Social Responsibility
- The solar panels and wind turbine on Vanhout's sites produce a plethora of green energy.
- Vanhout provides logistics, management or financial support to a number of (non-profit) organisations (e.g. the Special Olympics) and projects through the BESIX Foundation.

SECOND TRACK ON LUXEMBOURG-SANDWEILER RAILWAY

For more than 40 years, Lux TP has realized construction and restoration projects on different scales. Operating in the Grand Duchy of Luxembourg and Belgium, often in synergy with its Belgian sister companies, the company is responsible for a variety of projects, including building construction, civil works, parking facilities, water treatment plants, railway works and outdoor landscaping.

Client satisfaction and respect are essential values in the company. The Lux TP team members are dedicated to delivering all projects on time, within budget, and with respect for QHSE.

After a difficult stretch, Lux TP is back on track to great results. With a turnover of €45 million, the company's biggest goal is to maintain this growth trajectory in the following years. The future looks promising: standing at €70.2 million, the 2016 order book showed a 17% increase compared to two years ago.

With the acquisition of new high-tech equipment like a vacuum truck and a road-rail excavator, Lux TP is now able to meet the specific needs emerging in the local market.

Key Projects 2015

- 'Pont Adolphe' (bridge), Luxembourg City: renovation works within the strict confines of UNESCO world heritage guidelines
- 'Gare Pont Rouge - Funiculaire', Luxembourg City: the challenge is to build, in two and a half years, Luxembourg's first funicular, linking the valley of Pfafenthal (old town) and the new Kirchberg business district, thus decreasing traffic in the town center
- 'City Gate' building, Luxembourg City
- KONS Gallery, together with BESIX RED, Luxembourg City: future ING headquarters with 14,600 m² of office space, a 2,400-m² retail area and 3,500 m² of residential property

PONT ADOLPHE (BRIDGE),
Luxembourg, GD Luxembourg

"The business market in the Grand Duchy of Luxemburg remains limited. As tenders vary from one year to the next, we will pursue our strategy of flexibility and diversification."

ALAIN DOSTERT
Managing Director, Lux TP

Corporate Social Responsibility
Lux TP will receive its new ISO 14001 and ISO 18001 certifications. Combined with its ISO 9001 certification this demonstrates that the company's integrated management system covers the total package: health, quality, safety and environment.

AQUILIS OFFICES
Namur, Belgium
Architect: DDS Partner

Cobelba

The company has been active in the construction business since 1994. It specializes in the extension and conversion of buildings, working in a variety of sectors in the Walloon region.

In parallel to its contracting business, Cobelba has been developing its property development activities for 5 years, carefully choosing innovative real estate projects with added value. When developing properties, the company adheres to land-use planning policies and urban development guidelines. The company's main objective is to maintain its position as a leading industry player in the Province of Namur (Belgium), combining first-rate architecture and a high quality of life in a modern and pleasant environment.

Cobelba also operates its own metal construction workshop (1,200 m²) which represents a great asset for the company, specifically for its work on industrial buildings. It regularly produces metal structures for projects of other BESIX companies.

In 2015, a year of transition, Cobelba turned over €34 million. The company delivered high-profile real estate projects, such as the 'Jardins de Baseilles' Eco-district in Erpent, 'Les Tilleuls' in Andenne and 'Les Terrasses de l'Ecluse' in Jambes. The contracting activities, which were quite weak during the first quarter, gained new momentum in the second quarter.

Key Projects 2015

- Colruyt shopping complex in Jambes: 9,500-m² project delivered two months ahead of schedule. The concept combines different store brands of the Colruyt Group
- Schools of Hachy and Weyler
- Sports and cultural center, Harnoncourt
- 'Les Tilleuls' Eco-district, real estate project in Andenne: 95 dwellings with 15 commercial units on the ground floor (offices, a library and a bank). The project places great emphasis on green spaces and will incorporate a new (paved and landscaped) public square and planted areas
- 'Les Terrasses de l'Ecluse', real estate project in Jambes: 75 apartments and service flats in a mixed development (office & retail) on the banks of the Meuse river
- Aquilis, real estate project in Namur: 5,600-m² office building, with BREEAM 'Very Good' certification, for Atradius, an important private employer in the region

LES TERRASSES DE L'ECLUSE
Jambes, Belgium
Architect: BURO5

"Cobelba's goal is to maintain its strong position in the region of Namur and to realize a turnover of approximately €40 million in 2016. In the province of Luxembourg, Cobelba will step up its game in the private sector."

JEAN-LOUIS HENRY
Managing Director, Cobelba

Corporate Social Responsibility
Sustainable development is fully integrated in the company's daily operations and real estate projects. When developing properties, Cobelba aims to create sustainable neighborhoods that integrate important social (e.g. accessibility, proximity of shops, meeting spaces), environmental (e.g. green roofs, low-energy buildings, water recuperation) and economic features.

Socogetra

E411
Wellin – Rochefort, Belgium

E411
Wellin – Rochefort, Belgium

RAILWAY SITE
Courrières (Namur), Belgium

NEW WORKSHOP
Marloie (Marche-en-Famenne), Belgium

Founded in 1948, Socogetra is an essential Belgian player in road construction and civil engineering. The company also operates in water treatment and environmental project management. Socogetra produces high-quality road-building and construction materials through its subsidiaries Famenne Enrobés and E3F (asphalt), Emubel (bituminous road binders), GNB (concrete) and Vialines (road marking). Socogetra's quarries, Les Limites (Rochefort) and CGR (La Roche-en-Ardennes), supply raw materials to its asphalt and concrete plants in Belgium and the Grand Duchy of Luxembourg.

The newly certified SCC**[1] company opened its new workshop in Marloie (built by Wust). This workshop will become a real asset for Socogetra. Another highlight was the acquisition of Bagetra (Mons), which rejoined Socogetra's network of subsidiaries, offering Socogetra the chance to expand its civil engineering and industrial construction activities in Hainaut.

[1] SHE Checklist Contractors

Key Projects 2015

- Replacement of the bridge in Courcelles for Infrabel
- Civil engineering works and replacement of the catenaries over a distance of 22 km on the railway line 162 between Habay and Stockem
- Rectification of the curb in Courrières and construction of the railway crossing on line 162
- Rehabilitation of the E411 motorway between Wellin and Rochefort: the mobilization of its equipment park and the proximity of its subsidiaries (Carrières Des Limites and the asphalt plant of Famenne Enrobés) gave Socogetra the edge. The company was able to finish this project one month ahead of schedule (5 months instead of 6)

"Thanks to the diversification of its activities and the strength of its subsidiaries, Socogetra is confident it will be able to face the current economic climate and the very aggressive competitive context in the business."

OLIVIER GRANDJEAN
General Manager, Socogetra

Corporate Social Responsibility
In 2016, Socogetra aims to further improve its waste management performance on its sites.

Aware that its activities have a real impact on the environment, the company wants to invest in the reuse of raw material during construction. For the rehabilitation of the E411 motorway between Wellin and Rochefort (17,000 t), reinforced concrete is demolished and then recycled for the dense dry concrete foundation.

BULK MATERIAL STOCKYARD
Qatar

LAMMERMARKT PARKING
Leiden, The Netherlands
Architect: JHK Architecten

STEVIN PROJECT
Eeklo, Belgium

RIVE GAUCHE
Charleroi, Belgium

Franki Foundations

Franki Foundations is internationally renowned as the expert in deep foundation techniques, soil improvement and earthworks, offering total solutions in foundations and geo-engineering. The company has been active for more than 105 years and the Franki pile has become a hallmark of solid foundations around the world. Acting as a general contractor and operating a large fleet of specialized piling rigs, Franki Foundations operates worldwide through its subsidiaries in Benelux-France, UK, UAE and Qatar.

In 2013, the company created BE Wind, a joint venture with West Construct. Offering a practical answer to climate challenges, BE Wind focuses on the installation of foundations for wind farms.

Although it operates in a very competitive market, Franki Foundations concluded 2015 with more than 40% growth. Firstly, in the Benelux, in the field of complex foundation projects with high demands in terms of design, quality and safety (e.g. petrochemicals). But Franki Foundations also prospers in the market as a general coordinator of complex foundation projects where a total excavation was delivered as a whole (e.g. several shopping centers in Belgium). With the opening of new offices in London and Paris, the company is expanding its operations into neighboring countries.

Thanks to an expansion of the internal design office, complex projects are now studied in-house right from the design phase.

The company invested more than €7 million in new equipment and hired more than 60 employees.

Key Projects 2015

- Belgium: a lot of complex foundation projects in various sectors - shopping centers (Rive Gauche in Charleroi, Docks Bruxsel in Brussels), petrochemical plants (Exxon, Total, etc.), wind turbines, HT power pylons, etc.
- France: 2 large-scale projects (Bagneux and Klock) in Paris for the new subway Le Grand Paris
- The Netherlands: 'Spoorzone Delft' project, dike reinforcement in Groot-Ammers, new parking lot in Leiden
- UK: Foundations for a multi-storey car park in Bournemouth (Exeter Road)
- Qatar: foundations for the new Gabbro terminal in Mesaieed and the renovation of the foundations for the Khalifa Stadium in Doha for the World Cup 2022

"2015 was the year in which we finally reaped the rewards of many years of hard work. Franki Foundations will continue to focus on complex all-in foundation projects. With new offices in the UK (London) and France (Paris) and by exporting its traditional 'Franki' foundation techniques to these markets, the company aims to grow its business in both countries and beyond."

WIM CLAESEN
General Manager, Franki Foundations

Corporate Social Responsibility
Franki Foundations participates in diverse working groups (safety, contracts and environment) in the European Federation of Foundation Contractors (EFFC). In order to reduce its carbon footprint, the company promotes the use of the Carbon Calculator for its foundation projects. Moreover, BE Wind promotes sustainable energy by executing wind turbine foundation projects. The environmental impact of a product is a key factor for the company when making purchasing decisions.

OLD DOCKS
Ghent, Belgium

West Construct

WEST CONSTRUCT IS ACTIVE IN A WIDE RANGE OF INDUSTRIAL, CIVIL AND MARINE ENGINEERING PROJECTS IN FLANDERS (BELGIUM). FOUNDED IN 1920, THE COMPANY USES ITS EXTENSIVE EXPERIENCE TO PROVIDE INNOVATIVE SOLUTIONS, FAVORABLY IMPACTING THE COST AND TIMING OF PROJECTS. THEIR FLAGSHIP POLICY? ESTABLISHING EXCELLENT COMMUNICATION WITH THE CLIENT DURING CONSTRUCTION PHASE.

With comfortable turnover figures (€25 million), West Construct has grown exponentially in the last few years. Through BE Wind, with its partner Franki Foundations, West Construct has become a key player in the installation of foundations for wind farms. BE Wind's latest projects produced a significant revenue growth for West Construct. Marine engineering projects like the Albert Canal widening between Nevele and Deinze, and a similar project in Merksem, also add to the company's well-filled order book.

Presence in Flanders ports

Currently, some 42 million tons of goods are transported in and out of the port of Zeebruges every year. For the port to grow further, additional rail capacity is essential. An important link in this new railway infrastructure is the marshalling yard under construction at Zwankendamme. In 2014, West Construct undertook the first phase of the project in the form of an arch bridge over the new railway line.

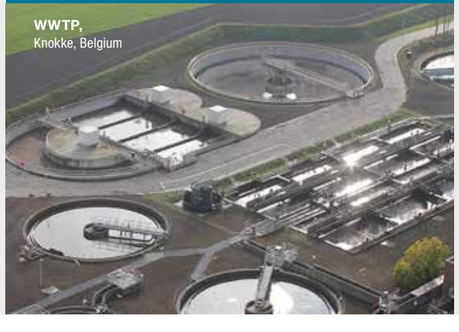
In August 2015 it commenced the second phase: relocating of the two main tracks to the west. The project includes measures to minimize noise pollution and maintain the visual quality of the neighbourhood, in the form of acoustic embankments that match the character of the polder villages, while a series of buffer basins, ponds and ditches serve to avoid flooding. West Construct is also applying the most modern rail-laying techniques to prevent additional noise pollution.

In 2015 West Construct was also present in the port of Antwerp, where its expert construction team stabilized and renovated 260 linear meters of quay walling in the Americadok in record time, enabling the land behind to be speedily released to concession holders.

Key Projects 2015

BE Wind, a joint venture with Franki Foundations, built the two largest wind turbine projects in Belgium: Greensky (Gingelom, 7 foundations) and Wind @ Stroom (Antwerp, 15 foundations). BE Wind was also active in Wuustwezel, Ghent and Sterpenich.

- Stevin Project (in collaboration with Franki Foundations): concrete for the foundation of the power pylons
- Seine-Scheldt Project: bank protection (6 km)
- Old docks in Ghent: new quay wall
- Albert Canal (Merksem): widening
- Zwankendamme: relocation of the main railway
- 'De Watergroep': construction of a new water production facility in Eeklo



WWTP,
Knokke, Belgium

BE WIND, WIND TURBINES,
Belgium

"West Construct's goals for 2016 are to consolidate its growth and to expand its activities on the private market. The company also wishes to develop the synergies with other BESIX Group entities."

STÉPHANE PIETERS
General Manager, West Construct

Corporate Social Responsibility

West Construct puts a lot of effort into providing its employees with a safe work environment and strongly invests in energy-saving measures. To create a shared CSR vision within the company, West Construct discusses HSE key points with its employees and subcontractors during educational toolbox meetings and participates in the Group's annual Safety and Environmental Time Out.

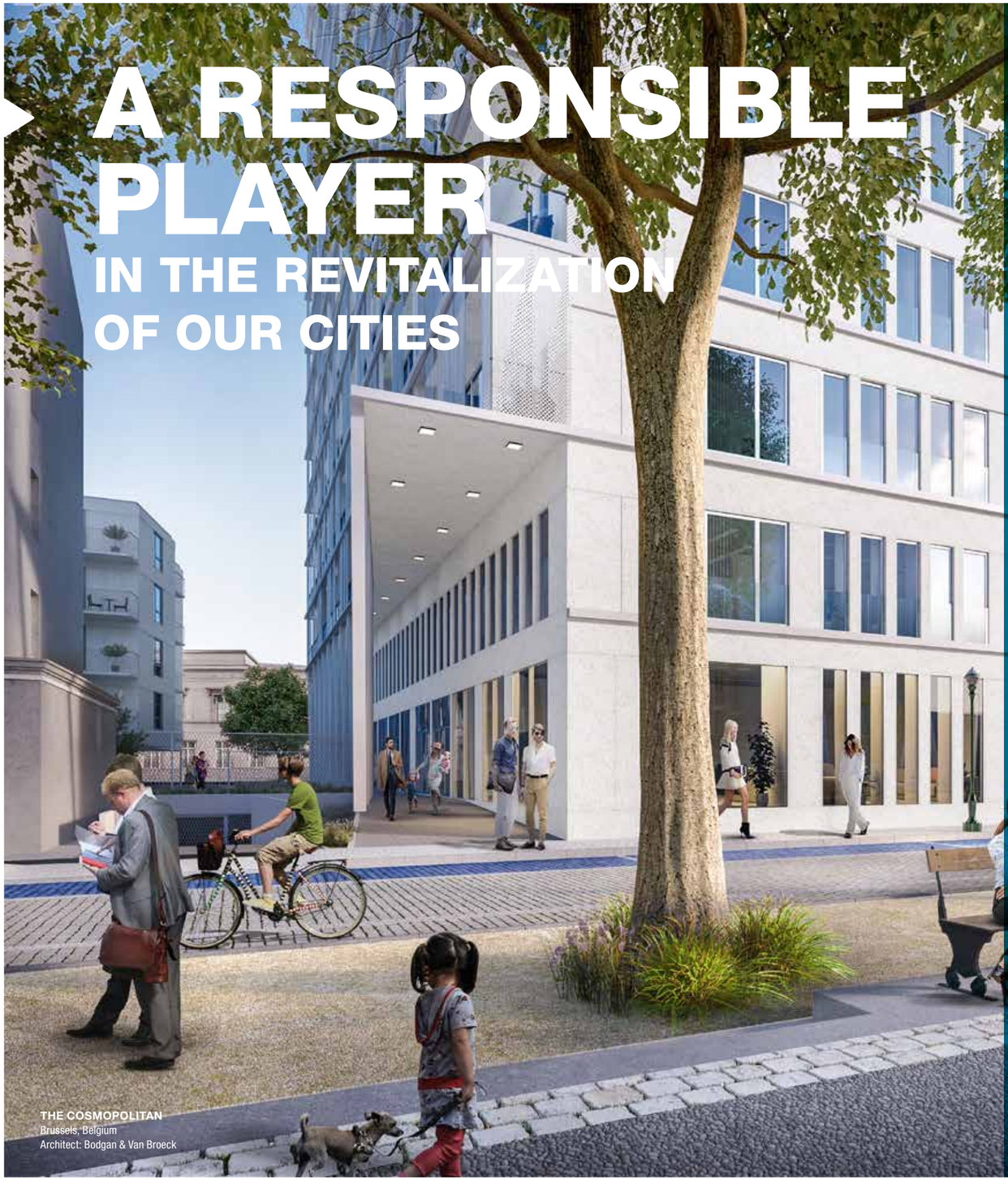
The company made the necessary investments to optimize its CSR and HQSE. On its project sites, West Construct pulls out all the stops to reduce waste and noise pollution from the very start of the project. By introducing a green car policy, the company has also taken its first steps to reduce CO_2-emissions.

Real Estate Development

SOHO
Luxembourg City, Luxembourg
Architect: Moreno and M3

A RESPONSIBLE PLAYER

IN THE REVITALIZATION OF OUR CITIES



THE COSMOPOLITAN
Brussels, Belgium
Architect: Bodgan & Van Broeck

"In 2016, BESIX RED intends to pursue its strategy of developing its Luxembourg activities, both residential and office. In Belgium, the focus will remain on residential buildings, with new permit applications and the launch of several new construction sites."

GABRIEL UZGEN
Managing Director, BESIX RED

DUNANT GARDENS
Ghent, Belgium
Architect: John Bontinck - Tony Fretton

THE 2015 REAL ESTATE MARKET BEHAVED VERY MUCH AS EXPECTED. THE LUXEMBOURG MARKET INDEED TURNED OUT TO BE THE GROWTH ENGINE, WITH A STRONG DYNAMIC IN BOTH RESIDENTIAL AND OFFICE MARKETS.

IN BELGIUM THE SITUATION PROVED MUCH MORE MIXED. THE OFFICE MARKET CONTRACTED AGAIN, WITH ACTIVITY LIMITED TO A FEW OPERATIONS IN THE HEART OF BRUSSELS AND ITS EUROPEAN DISTRICT. RESIDENTIAL ACTIVITY, ON THE OTHER HAND, STAYED BUOYANT WITH A WELCOME NUMBER OF INVESTOR-BUYERS, MAINLY IN BRUSSELS AND GHENT.

LESKOO
Oudenaarde, Belgium
Architect: BUROII & ARCHI + I

THE COSMOPOLITAN
Brussels, Belgium
Architect: Bodgan & Van Broeck

CANAL DISTRICT
Brussels, Belgium
Architect: Axent'-Architectes Associés

MAIN ACTIVITIES IN 2015

Luxembourg remains on course. In 2015 BESIX RED continued its strategy of expanding in the Grand Duchy of Luxembourg. Together with our partners, we celebrated the laying of the first stone of the new ING LUXEMBOURG bank headquarters. Selling of phase one of the SOHO residential project was launched. We consolidated our presence in the country by strengthening our teams, thus enabling us to acquire a new office project, at the Place de la Gare in Luxembourg City, and to bid for other attractive developments. Finally, we seized the opportunity to completely change our 'City Gate project' by joining hands with the owner of the neighboring property. Jointly, we developed a project that was much more ambitious than the sum of our previous projects on site, enabling us to successfully respond to a major food group searching for a new global headquarters.

In Belgium, other than the multifunctional EUROPEA project (NEO 1), the redevelopment of the Heysel plateau (planning permission applied for this year), our activity was limited to the residential sector, where we managed to pass the mark of 300 units sold.

In Brussels City, the marketing of the CANAL DISTRICT project is an overwhelming success with more than 50% of the units sold off-plan. Despite strong competition in the Val d'Or district, sales of units in the Ensor and Delvaux residential blocks in Woluwe-Saint-Lambert did not disappoint: over 90% of the apartments have already found buyers for delivery beginning early this year. Permit applications were also submitted for the SOUVERAIN 191 project in Auderghem and the LES PROMENADES D'UCCLE project. In Brussels City, building permission was sought and obtained on the Quai aux Pierres de Taille. This is THE COSMOPOLITAN, a major project to convert offices into housing (a specific example of BESIX RED's new strategy), with 25 units already sold since the end of 2015. Work on the site will begin in 2016. At Woluwe-Saint-Lambert, we have acquired, in partnership, a former gas storage site in the Konkel district, for which a permit application has been submitted. This development will take place in two phases.

In Flanders, marketing of the DUNANT GARDENS project in Ghent was launched. The fact that over 50% of these first apartments were already sold off-plan confirms the high potential of this location. At the same time, in Oudenaarde, marketing of LESKOO 2 continues successfully, and a few months after delivery in early 2016, three-quarters of the apartments are already sold. For the MEADOW project in Herent, which we are undertaking in partnership, we have obtained the first planning permits and have sold all the single-family house plots on the site.

Finally, in Wallonia, we have commenced the building work and marketing of our COTEAU SAINT-BARBE residence at Jambes. Phase two of the COPARTY project in Nivelles is proving a resounding success, with 90% of the units sold at the end of the structural work. This led us to introduce a system for expressing interest in phase 3, even before obtaining the building permit late in 2015.

In addition to these locations where BESIX RED is solidly positioned, we have our sights lined up on France and Warsaw (Poland) for prime location properties.

Corporate Social Responsibility
Few human activities have a larger impact on society and stronger environmental footprint than building. Nevertheless, BESIX RED makes sure it meets the challenges of tomorrow's society. Given the high population pressure in our regions, sociological changes (one-person households, single-parent households, separated or reconstituted families, ageing population), and environmental and climate issues, BESIX is looking to bring to market buildings that best respond to these new requirements. This is expressed in particular in new housing typologies adapted to the new family patterns, meeting their occupants' needs in a manner consistent with advanced environmental standards and performance. BESIX RED builds places where one can live and live well. Our projects are not only directed at their new users, but also seek to integrate into the urban and social fabric as harmoniously as possible, offering added value to all neighbors. Alongside the political and administrative authorities, and in consultation with other stakeholders (residents, associations, etc.), BESIX RED wants to be an active player in urban renewal in the hearts of our cities.

Concessions & Assets

AJMAN SEWERAGE
Ajman, UAE

ASSURED SERVICE
IN A CHANGING MARKET

"Our mission is to establish lasting relationships with our clients and partners by exceeding their expectations and gaining their trust through exceptional performance. We are willing to constantly rethink solutions whilst integrating the concerns of clients and driving the latest technologies and concepts."

STEVEN DE BIE
Head of Concessions & Assets, BESIX Group

AJMAN WASTE WATER TREATMENT PLANT
Ajman, UAE

COENTUNNEL
Amsterdam, the Netherlands

THE CONCESSIONS & ASSETS BUSINESS UNIT REMAINS COMPETITIVE IN A CONSTRUCTION BUSINESS THAT HAS FACED RAPIDLY SHIFTING TRENDS. OFFERING A WIDE AND MULTIDISCIPLINARY RANGE OF SERVICES WHILST TAKING FULL ADVANTAGE OF THE KNOW-HOW, SUPPORT AND LEVERAGE OF THE GROUP, CONCESSIONS & ASSETS HAS SEIZED MANY LOCAL AND INTERNATIONAL OPPORTUNITIES TO DRIVE ITS BUSINESS FORWARD. ACTIVELY INNOVATING ALONG THE ENTIRE VALUE CHAIN (DESIGN, BUILD, FINANCE, OPERATE AND MAINTAIN), THE BUSINESS UNIT CONTINUES TO MAKE ITS MARK IN THE PUBLIC AND PRIVATE SECTORS, JOINING THE BESIX BRAND NAME TO LARGE PROJECTS.

BESIX ADOPTS AN INTEGRATED APPROACH THAT IS DESIGNED TO OFFER ONE-STOP AND TAILOR-MADE SOLUTIONS TO ITS CLIENTS. THANKS TO ITS INTERNATIONAL EXPERIENCE AND TRUSTED KNOW-HOW, BESIX IS ABLE TO COVER EVERY BASE OF A PROJECT, WORKING CLOSELY WITH ITS PARTNERS. THIS STRATEGY HAS ALLOWED US TO EXCEED EXPECTATIONS AND GAIN THE TRUST AND RESPECT OF HIGH-PROFILE CLIENTS, WHO APPRECIATE THE INNOVATION, QUALITY AND FLEXIBILITY ASSOCIATED WITH OUR WORK.

KEERSLUIS
Limmel, the Netherlands

CONCESSIONS AND PUBLIC-PRIVATE PARTNERSHIPS

BENELUX-FRANCE

In the home markets, the BU has demonstrated its added value in a growing number of PPP-contracts.

Belgium

– The recently completed cable-stayed bridge that is part of the South R4 PPP-project on the outskirts of Ghent, is maintained by R4 Maintenance, in which BESIX has a 25% share. The bridge, spanning the Tijarm between Zwijnaarde and Merelbeke, is one of the previously missing links in the city's ring road, drastically improving regional mobility on all levels (commuter traffic, public transport, pedestrians and bikes). The contract is for 30 years.

The Netherlands

– Since 2013, the BU oversees the operation of the second Coentunnel, located in Amsterdam. Holding an 18% stake in the project's Coentunnel Company, BESIX Group will be co-responsible for the financing and maintenance of the infrastructure until 2037. Every day, more than 10,000 cars pass through the tunnel, which has become a vital part of the city's traffic network. 2015 also saw the completion of the extension of the first Coentunnel, whose capacity was doubled, decongesting Amsterdam's western circular heading north.

– In Limmel, the Keersluis Limmel Company (66% BESIX) obtained the Commencement Certificate for the eponymous floodgate, and the teams are ready to start work on what is the world's first DBFM hydraulic engineering project. BESIX is funding and building the project and will maintain the new floodgate for a period of 30 years.

COENTUNNEL
Amsterdam, the Netherlands

Expansion of the Princess Beatrix lock

The Princess Beatrix lock, the largest inland navigation lock in the Netherlands, will be renovated and expanded after 77 years of service. BESIX led the Consortium Sas van Vreeswijk, which was awarded the contract for the design and construction of the 3rd chamber of the lock complex and the widening of the Lekkanaal, working for frequent client Rijkswaterstaat. Sas van Vreeswijk will also manage the financial operations and the maintenance of the entire lock complex and the canal for the coming 30 years. The works will start in the autumn of 2016 and will be completed by 2019.

RIJKSWATERSTAAT

"We entrusted the design, construction and the long-term maintenance of the new Beatrix lock to a consortium led by BESIX. During the tender phase, BESIX showed itself a transparent, proactive and constructive partner, a company that is not afraid to share the risks.

Their expertise in concrete and marine works made for an ambitious and robust bid with real added value. Instead of single roller doors we got double roller doors, which increases lock capacity and ensures its operation."

AJMAN SEWERAGE
Ajman, UAE

MIDDLE EAST

The Group reaffirmed its focus on one of its core businesses in the region: extensive environmental and industrial utility projects, a burgeoning sector in which BESIX has long played a pioneering role. BESIX is confident it will continue to provide high-quality and sustainable solutions to the private and public sectors of its GCC partners, capitalizing on those countries' high ambitions in the field of environmental innovation and world-class infrastructure.

Having completed the design and building phase, Concessions & Assets continues the operation and maintenance of the following projects:

- The 80,000 m³/day-Ajman sewage treatment plant is connected with more than 100,000 properties and serves a population of 375,000 in the Emirate of Ajman (UAE). The concession runs until 2034. The operator (50% BESIX) also provides customer support and billing and collection services. It expanded its O&M services to the Northern Emirate of Ras Al Khaimah.

HH SHEIKH RASHID BIN HUMAID AL NUAIMI

"I'm very pleased to see the Ajman Sewerage project celebrating its 10th birthday. Ajman Sewerage is a strategic asset for the Emirate and it delivers invaluable services to the people of Ajman.

I am grateful that BESIX and the shareholders have given their everything to make this project a success. I look forward to tackling the many challenges ahead, introducing new policies, further extending the reuse of water in its broadest sense, and testing new technologies.

There are exciting times ahead of us and I hope to be able to count on the invaluable support of the BESIX management and board of directors."

AJMAN SEWERAGE
Ajman, UAE

- Independent sewage treatment plant (ISTP2) concession (430,000 m³/day spread over 2 plants) in the Emirate of Abu Dhabi (UAE) for a period of 25 year (50% BESIX participation). This is the largest asset in the Concessions portfolio.

- Dubai Sports City sewage concession (25,000 m³/day) treats sewage from the prestigious real estate development as well as outside septage tankers. It provides 100% commercial reuse of the high-quality effluent for irrigation of residential areas and a premier golf course.

- SAFI is the first plant in the region that brings the concept of commercialized water reuse into full practice. Every day, more than 6,000 m³ of polished water is sold to the industries of Ajman (cooling water, ready-mix applications, etc.). The company received a number of international awards for its pioneering work.

For 2016, we expect that budget constraints by public entities in the Middle East will lead to new opportunities. The Business Unit in the Middle East is looking at new projects in the field of water treatment and re-use, wastewater operations as well as waste handling and valorization.

Corporate Social Responsibility
In Ajman, the project team working on the local sewerage treatment plant set up a Community Care Foundation, which has organized many CSR-inspired events (clean ups, open days, etc.). The SAFI-company, meanwhile, continues to promote sustainable water solutions in a region where groundwater extraction and energy-consuming desalination plants pose a real threat to long-term water security.

30%
of all UAE wastewater is currently treated by BESIX-led consortia

73 boreholes
closed in Ajman in 2015 to substitute environmentally-unfriendly groundwater extraction techniques with treated and recycled effluent, (re)used in the local industry

BESIX PARK
Antwerp, Belgium

BESIX PARK

10%
increase in manpower

14%
increase in revenue

36%
increase in profit

BESIX PARK JOINED BESIX GROUP IN 2010. SINCE THEN, THE NUMBER OF CAR PARKS AND CITIES IN ITS MANAGEMENT PORTFOLIO HAS DOUBLED: BESIX PARK CURRENTLY OVERSEES MORE THAN 44,000 PARKING SPACES IN OVER 40 CITIES IN BELGIUM AND THE NETHERLANDS.

2015 was marked with a significant increase in on-street parking activity. The growth in turnover for off-street parking spaces, however, was less marked and there was a similarly modest rise in the number of cities outsourcing their parking management, which is in tune with the more mature and increasingly competitive aspects of the market.

Although the many long-term contracts provide ample security for the future, BESIX Park seeks to actively grow its business, focusing on parking concessions and management projects that can bring added value to all parties involved.

Since April 2015, BESIX Park is partnering with Inpublic, a newly formed Dutch company offering services for on- and off-street parking in the Netherlands. The Inpublic team consists of highly experienced parking professionals. The company took a jump-start with over 7,000 managed parking spaces in the first year.

BESIX PARK
Antwerp, Belgium

PIONEER IN OFF-STREET PARKING TECHNOLOGY

BESIX Park is a pioneer in off-street parking technology: most of its car parks are equipped with license plate recognition systems to ensure maximum comfort and safety. Similarly, it has implemented Parkmobile applications to allow registered users to enter and exit the car park without having to pass at the pay-on-foot stations, using the more practical payment method of monthly invoices instead.

Parkmobile is currently active in more than 20 cities in Belgium.

Keeping up with the latest in digital innovation, BESIX Park has installed Pay & Display machines in the city of Lier: drivers can use the touchscreen to punch in their license plate, and pay accordingly. In 2016, a series of tests will be conducted using automated technology to scan license plates.

Corporate Social Responsibility
BESIX Park invests in coaching to allow its people to cope with every situation. This involves role-playing games for parking attendants to deal with verbal aggression on the job, or first-aid training that brings added value to the attendants' on-street duties.

0 lost-time
incidents

15%
increase in manpower

20%
increase in turnover

COFELY BESIX FACILITIES MANAGEMENT

COFELY BESIX Facilities Management was formed in 2008 through a joint venture between BESIX and COFELY Services. It delivers a wide range of services including mechanical, electrical and fabric maintenance, cleaning and technical services, as well as various forms of energy management. It currently employs around 1,500 people across Qatar and the UAE.

In 2015, the UAE market significantly matured: the process of tendering has become more controlled, and the documentation required by clients more sophisticated. Despite these stricter rules and regulations, the sector continues to grow, a momentum that is fuelled by old and start-up projects alike. In Qatar, the market is showing tentative signs of recovery and development as new companies stake their claim, which highlights the current demand for novel skills and increasingly complex commercial challenges.

COFELY BESIX was awarded a number of new contracts in 2015, including:

- The first data center maintenance contracts in Dubai with The Gulf Data Hub, or an initial period of one year.
- A facility management contract to provide Mechanical, Electrical, Plumbing (MEP) and HVAC maintenance services to the Emirates Group Headquarters (Al Rashidiya), including all maintenance work associated with the day-to-day operation of the building, as well as Planned Preventative Maintenance (PPM) duties.
- A new contract with the Emirates Aviation University, located in Academic City Dubai, with PPM of all the HVAC and MEP equipment, including the day-to-day operation and monitoring of the Building Maintenance System (BMS) and lighting control systems, as well as masonry and carpentry services on the premises and inside the building.

COFELY BESIX aims to distinguish itself through its dedicated training center, its investments in meeting the latest technical standards (e.g. IEE 17th Edition accreditation), and providing Six Sigma training for its managers and supervisors. The core focus has always been on the staff and employees, who deliver the company's trademark care and attention to clients across the region.

Corporate Social Responsibility
COFELY BESIX aims to become an ESCO-accredited company under the Etihad scheme, which epitomizes the UAE's strategic goals to pursue a green and sustainable economy. An ESCO (energy services company) is dedicated to the provision of energy-efficient technologies and services.

INVESTMENTS IN THE HOTEL INDUSTRY

In Brussels, BESIX owns a 50% share in the Courtyard by Marriott Hotel, whose 191 rooms were completely renovated by Sud Construct. In Poland, the Group has a 29% stake in the Sheraton Hotel in Poznan. Work was also started on the Design & Build of the Gotthard Residences development in Andermatt, Switzerland. This project, a joint venture with developer Andermatt Swiss Alps, will be completed in 2018.

SHERATON POZNAN HOTEL
Poznan, Polen
Architect: Mat SP ZO O

COURTYARD BY MARRIOTT HOTEL
Brussels, Belgium
Architect: Jaspers & A+U

FINANCE

COMMENTS BY THE CFO

"Despite disappointing results driven mainly by losses related to a construction site in the Kingdom of Saudi Arabia, BESIX Group continues to benefit from a strong financial position, which will enable us to return to a growing path in the years to come".

MICHEL MOSER
Chief Financial Officer BESIX Group

Overview

While some businesses performed extremely well during the course of the year, this was not enough to offset the impact of losses on certain projects in the Kingdom of Saudi Arabia and in Egypt. There was a marked improvement in the profitability of the Regional Contractors, Concessions & Assets and BESIX RED, however Contracting posted negative results for the year. As a result, if the Group's turnover was up year-on-year, the Group's net results were significantly lower.

Revenues, earnings and returns

Revenues totaled €2.2 billion, up from €2.0 billion in the previous year, reflecting mostly higher revenues in the Middle East. Revenues by region were as follows: Belgium 34.3%, Netherlands-France-GD Luxembourg 11.3%, Africa 5.2%, Middle East 41.8%, Kingdom of Saudi Arabia 2.6% other countries 4.8%.

Total gross margin amounted to €147.4 million, representing 6.8% of total revenues, down from 7.5% in the previous year.

Earnings before interest and taxes (EBIT) reached €0.4 million, down from €65.1 million in 2014.

The Group's Contracting activities were impacted by losses totaling approximately €70 million being recorded on three projects in the Kingdom of Saudi Arabia (Jazan jetty) and Egypt (Mall of Egypt and Grand Egyptian Museum). This is due to major difficulties being faced on those sites with claims being raised without recognition in the income statement.

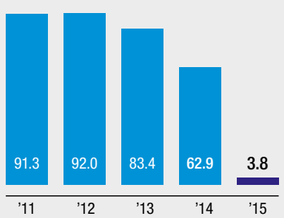
BESIX Group's accounting rules indeed require that in general additional income resulting from claims be reflected in the income statement only to the extent that an agreement has been reached with the client. Marine & Civil International and Australia both recorded strong results during 2015 while the profitability of the Middle East improved also significantly year-on-year. Finally, Europe was down compared with the previous year, reflecting some difficulties on a construction site in France.

The Regional Contractors achieved a record profitability during the year at €14.5 million despite a challenging market environment, partly driven by an increased focus on the private sector given the trend toward reduced public spending.

BESIX RED also had a record year in 2015 with net earnings at €10.2 million, reflecting a number of attractive ongoing projects. Additional (quasi-)equity has been made available by the Group to BESIX RED with a view to enabling it to pursue further growth opportunities in the next few years, with a continued focus on Belgium, France and Luxemburg.

Concessions & Assets continued to be very profitable in 2015, contributing to the results for €12.4 million. Total net earnings were down year-on-year as a significant non-recurring capital gain on the sale of a 15% interest in Ajman Sewerage was realized in 2014. Recurring profitability improved compared to the previous year.

EVOLUTION GROUP NET RESULTS
in EUR million



Consolidated net earnings totaled €3.8 million, compared to €62.9 million in 2014. This represents 0.2% of revenues.

Capital employed totaled €897 million at the end of the year and pre-tax return on capital employed (ROCE) was 2.2%.

The order book at the end of 2015 stood at €3,229 million, compared to €2,962 million the year before. The order book is well-balanced across the different segments. The increase in the consolidated order book during the course of the year was largely driven by an increase in the Middle East.

Financial costs and taxes

Net financial results amounted to €(3.5) million, compared to €(4.7) million in 2014. This evolution mainly reflects the impact of exchange differences and of a change in the fair value of certain financial instruments.

Total taxes decreased from €16.3 million to €11.2 million, reflecting the reduced profitability for the year. In line with the Group's conservative policy in this respect, deferred tax assets have generally not been recognized.

Cash flows

In 2015, BESIX Group has invested in tangible assets for a total amount of €44.4 million, a figure lower than in the previous year. This investment mainly relates to machinery and equipment used for the contracting activities. The decrease year-on-year mostly reflects the purchase of marine equipment for the Kingdom of Saudi Arabia in 2014. Net capital expenditures totaled €37.6 million, significantly below depreciation.

There was an increase in net working capital requirements during the year, which had a negative impact on cash flows. This increase was primarily driven by a decrease in net advances received in the Middle East and by an increase in trade receivables not offset by a corresponding increase in trade payables, also mainly in the Middle East. An increase in real estate held for sale, mostly driven by BESIX RED, contributed also to the increase in net working capital requirements during the year.

Net cash evolution

BESIX Group's consolidated net cash position (excluding the impact of real estate debt) amounted to €143.4 million, a healthy liquidity position despite a decrease of €106.6 million compared to last year. BESIX Group's consolidated net cash position (including the impact of real estate debt) was €26.4 million, down €134.2 million compared to last year. This decrease year-on-year reflects mainly the low profitability for the year, the increase in net working capital requirements (€148.2 million), the payment of the 2014 dividend (€35 million), as well as an additional investment in Watpac (€2.7 million), partially offset by reduced net capital expenditures.

Several new credit facilities totaling €115 million have been negotiated during the course of the year with 3 and 5 year tenors and on very attractive terms. Various new initiatives will be taken during the course of 2016 with a view to diversifying further the Group's sources of financing.

Balance sheet

Intangible assets (€13.6 million) mainly relate to quarrying permits and car park operating rights. BESIX Group has also invested in the development of an ERP system, the costs of which are capitalized and depreciated.

Property, plant and equipment increased to €205.6 million, up €6.5 million year-on-year, despite lower net capital expenditures during the year. This increase is mainly driven by a strengthening of the main Middle East currencies which are pegged to the US dollar.

Investment in associates increased by €13.7 million compared to 2014. This increase mainly reflects the improved operating results of a number of associated entities in the Middle East during the course of the year, combined with the impact of a higher US dollar, and the purchase of additional shares in Watpac (Australia) in which the company held 25.89% at the end of the year. Non-current receivables included guarantee retentions by clients for an amount of €53.7 million.

Other assets (€7.3 million) include guarantees and deposits paid in. The decrease compared to 2014 relates mostly to projects in Egypt.

Land acquired and real estate projects under development (recorded as real estate held for sale) amounted to €201.8 million, compared to €179.0 million as of December 2014. This increase reflects the successful development of the Group's real estate operations in Belgium and Luxembourg over the past few years.

Trade receivables include operating receivables as well as the portion of client retentions that are collectible in 2016. Driven partly by the higher turnover during the year, trade receivables increased from €734.3 million to €863.5 million, mainly in the Middle East, reflecting higher level of activities and a higher US dollar. As a result, there was an increase in days' sales outstanding (DSO) from 134 days in 2014 to 146 days in 2015. Client retentions amounted to €87.3 million as of December 2015.

The current ratio, showing the liquidity position of the BESIX Group, has remained stable at 1.40 in 2015.

Shareholders' equity amounted to €518.3 million as of December 2015, a decrease of €9.0 million compared to last year. The decrease in the shareholders equity compared to the previous year can be explained by the net profit for the year and the dividend payment (down from €50 million to €35 million), partly offset by translation differences resulting from a strengthening of the US dollar. The solvency ratio at the end of 2015 was at 24.4%.

Long-term and short-term provisions amounted to €128.8 million compared to €95.4 million as of December 2014. These provisions cover pension and employee benefits (€24.2 million), ten years' construction guarantees (€31.7 million), litigations (€5.7 million), termination losses (€53.5 million) and other provisions (€13.7 million). Long-term and short-term provisions totaled €84.2 million and €44.6 million, respectively. The increase in short-term provisions was mostly the result of provisions being taken in the context of extremely challenging construction sites, mostly in the Kingdom of Saudi Arabia and Egypt.

Long-term loans totalled €214.4 million, an increase of €39.8 million year-on-year. This increase mostly reflects increased borrowings by BESIX RED and by some of the Regional Entities. Short-term borrowings and bank overdrafts amounted to €25.4 million, up from €19.1 million in the previous year.

There was a decrease in trade payables to €644.4 million, mostly in the Middle East, Egypt, Belgium and The Netherlands. Advances received on contracts also decreased from €176.4 million to reach €137.3 million at the end of 2015. This decrease reflects reduced advances related to a number of major sites in the Middle East and Egypt. Billing in excess on construction contracts increased from €67.6 million to €126.7 million, a major increase on the previous year.

For more information, readers are invited to consult the full set of financial statements that has been filed with the National Bank of Belgium.

Appendices:

- Balance Sheet
- Income Statement
- Cash Flow Statement
- Statutory Auditor's Report
- Main Group Entities

CONSOLIDATED BALANCE SHEET

(in EUR '000)	31 Dec. 2015	31 Dec. 2014
ASSETS		
NON-CURRENT ASSETS	**386,816**	**362,342**
Intangible assets	13,559	16,368
Tangible assets	205,643	199,173
Investments in associates	82,896	69,242
Receivables	76,420	66,014
Other assets	7,295	10,764
Deferred income tax assets	1,003	781
CURRENT ASSETS	**1,741,533**	**1,636,754**
Inventories	41,540	40,805
Construction contracts in progress	86,071	72,620
Real estate held for sale	201,776	179,034
Trade receivables	863,506	734,257
Other receivables and other assets	282,438	255,724
Cash and cash equivalents	266,202	354,314
TOTAL ASSETS	**2,128,349**	**1,999,096**
EQUITY AND LIABILITIES		
EQUITY		
SHAREHOLDERS EQUITY	**518,280**	**527,329**
Share capital	32,000	32,000
Retained earnings	465,838	495,437
Hedge reserve	-21,341	-19,957
Translation differences	41,783	19,849
MINORITY INTEREST	**2,254**	**2,118**
TOTAL EQUITY	520,534	529,447
LIABILITIES		
NON-CURRENT LIABILITIES	**367,097**	**321,349**
Borrowings	214,401	174,650
Provisions	84,207	78,357
Other liabilities	47,339	44,747
Deferred income tax liabilities	21,150	23,595
CURRENT LIABILITIES	**1,240,718**	**1,148,300**
Borrowings and bank overdraft	25,452	19,066
Trade payables	644,404	649,424
Advances received on contracts	137,329	176,355
Billing in excess on construction contracts	126,703	67,626
Current income taxes payable	11,135	11,772
Provisions	44,601	17,084
Other liabilities	231,094	206,973
TOTAL EQUITY AND LIABILITIES	**2,128,349**	**1,999,096**

CONSOLIDATED INCOME STATEMENT

(in EUR '000)	31 Dec. 2015	31 Dec. 2014
CONSOLIDATED INCOME STATEMENT		
SALES	**2,159,660**	**2,000,489**
COST OF SALES	**2,012,267**	**-1,851,185**
of which depreciation	-38,386	-31,164
of which provisions	-30,258	14,949
GROSS PROFIT	**147,393**	**149,304**
GENERAL & ADMINISTRATIVE EXPENSES	**-148,433**	**-138,787**
of which depreciation	-7,248	-6,391
of which provisions	484	1,074
OTHER INCOME / EXPENSES	**1,466**	**54,594**
OPERATING PROFIT	**426**	**65,111**
Financial income	10,164	7,594
Financial charges	-13,690	-12,318
Results from associates	18,478	18,963
PROFIT (LOSS) BEFORE TAXES	**15,378**	**79,350**
INCOME TAXES EXPENSE	**-11,242**	**-16,314**
of which current taxes	-14,038	-13,736
of which deferred taxes	2,796	-2,578
CONSOLIDATED PROFIT / (LOSS)	**4,136**	**63,036**
Minority interest	-316	-139
GROUP CONSOLIDATED PROFIT / (LOSS)	**3,820**	**62,897**
EARNINGS PER SHARE - BASIC (in EUR)	**1.35**	**22.25**
EARNINGS PER SHARE - DILUTED (in EUR)	**1.35**	**22.25**
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME		
PROFIT FOR THE YEAR	**3,820**	**62,897**
OTHER COMPREHENSIVE INCOME		
Cash flow hedges	-2,980	-7,014
Fair market value available for sale	0	-2,104
Actuarial impact provision for employee benefits	1,597	-352
Currency translation differences	21,919	24,227
Other comprehensive income for the year, net of tax	**20,536**	**14,757**
ATTRIBUTABLE TO		
Owners of the parent	24,356	77.654
Minority interest	0	0
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	**24,356**	**77.654**

CONSOLIDATED CASH FLOW STATEMENT

(in EUR '000)	31 Dec. 2015	31 Dec. 2014
Operating result	426	65,111
Adjustments for:		
Depreciation	45,635	37,555
Result on disposal of (in)tangible assets	-3,263	-8,818
Result on disposal of other long term assets	0	6
Result on disposal of investment in associates	0	-12,793
Provisions	29,774	-16,023
Allowances	3,340	-33,204
Other	0	0
OPERATING CASH FLOW BEFORE CHANGES IN WORKING CAPITAL	**75.912**	**31,834**
Income taxes paid (net)	-12,832	-5,368
Changes in working capital	-148,202	28,320
CASH FLOW FROM OPERATING ACTIVITIES	**-85,122**	**54,786**
TRANSLATION DIFFERENCE CASH AND CASH EQUIVALENTS	**18,901**	**23,369**
Purchase of intangible assets	-855	-1,735
Purchase of tangible assets	-44,370	-64,749
Purchase of other long term assets	-129	0
Acquisition and capital increase / (decrease) investment in associates	-5,860	-3,714
Proceeds from sale of intangible assets	0	0
Proceeds from sale of tangible assets	7,594	16,807
Proceeds from sale of other long term assets	0	0
Proceeds from sale of investment in associates	61	19,412
Dividends received from investment in associates	12,889	6,618
(Acquisitions) / Disposal of subsidiaries – associated companies, net of cash	791	-6,337
NET CASH FROM INVESTING ACTIVITIES	**-29,879**	**-33,698**
CASH FLOW FROM FINANCING ACTIVITIES		
Proceeds / (repayments) of borrowings	44,848	-19,634
(Proceeds) / repayments of long term receivables	1,877	-4,453
Interest paid (net)	-3,537	-3,114
FMV - Cash and Cash equivalent	0	1,190
Change in consolidation methods	0	-6,097
Dividends paid to Group shareholders	-35,000	-50,000
Dividends paid to minority interests	-200	-340
NET CASH FROM FINANCING ACTIVITIES	**7,988**	**-82,448**
(DECREASE)/INCREASE IN CASH & CASH EQUIVALENTS	**-88,112**	**-37,991**
MOVEMENTS IN CASH & CASH EQUIVALENTS		
Cash at beginning of the year	354,314	392,305
(Decrease)/Increase	-88,112	-37,991
Cash at the end of the year	266,202	354,314

STATUTORY AUDITOR'S REPORT

STATUTORY AUDITOR'S REPORT TO THE GENERAL MEETING OF THE COMPANY BESIX GROUP SA FOR THE YEAR ENDED 31 DECEMBER 2015

As required by law, we report to you on the performance of our mandate of statutory auditor. This report includes our opinion on the consolidated financial statements, as well as the required additional statement. The consolidate financial statements comprise the consolidated statement of financial position as at 31 December 2015, and the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year ended 31 December 2015 and the explanatory notes.

Report on the consolidated financial statements – Unqualified opinion

We have audited the consolidated financial statements of the company BESIX Group SA for the year ended 31 December 2015, prepared in accordance with the International Financial Reporting Standards as adopted by the European Union, which show a consolidated statement of financial position total of 2.128.349 KEUR and a consolidated income statement showing a consolidated profit for the year of 4.136 KEUR.

Responsibility of the board of Directors for the preparation of the consolidated financial statements
The board of Directors is responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with the International Financial Reporting Standards, and for such internal control as the board of Directors determines is necessary to enable the preparation of annual accounts that are free from material misstatement, whether due to fraud or error.

Responsibility of the statutory auditor
Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing (ISAs). Those standards require that we comply with the ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the statutory auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the statutory auditor considers the company's internal control relevant to the preparation of consolidated financial statements that give a true and fair view, in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the board of Directors, as well as evaluating the overall presentation of the consolidated financial statements.

We have obtained from the board of Directors and company officials the explanations and information necessary for performing our audit.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Unqualified opinion
In our opinion, the consolidated financial statements of the company BESIX Group SA give a true and fair view of the group's equity and financial position as at 31 December 2015, and of its results and its cash flows for the year then ended, in accordance with the International Financial Reporting Standards as adopted by the European Union.

Other matters
With regard to the evolution of the result compared to prior year we refer to the explanations in the annual report.

Report on other legal and regulatory requirements

The board of Directors is responsible for the preparation and the content of the Director's report on the consolidated financial statements.

In the context of our mandate and in accordance with the Belgian standard which is complementary to the International Standards on Auditing (ISAs) as applicable in Belgium, our responsibility is to verify, in all material respects, compliance with certain legal and regulatory requirements. On this basis, we make the following additional statement, which do not modify the scope of our opinion on the consolidated financial statements:

– The Director's report the consolidated financial statements includes the information required by law, is consistent with the consolidated financial statements and is free from material inconsistencies with the information that we became aware of during the performance of our mandate.

Antwerp, April 20th 2016
Mazars Réviseurs d'Entreprises SCRL
Statutory Auditor

represented by

Anton Nuttens
Partner

MAIN GROUP ENTITIES

COUNTRY	COMPANY	ADDRESS	PHONE
HEADQUARTERS			
Belgium	BESIX Group NV/SA	Avenue des Communautés 100, 1200 Brussels	+32 (0)2 402 62 11

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COUNTRY	COMPANY / BRANCH	ADDRESS	PHONE	PARTICIPATION (IN %)
CONTRACTING				
CONSTRUCTION				
Belgium	BESIX NV/SA	Avenue des Communautés 100, 1200 Brussels	+32 (0)2 402 62 11	100%
	BESIX Vlaanderen	Rijvisschestraat 126, 2nd floor, 9052 Zwijnaarde	+32 (0)9 321 78 10	
	West Construct NV	Siemenslaan 13, 8020 Oostkamp	+32 (0)50 36 80 85	100%
The Netherlands	BESIX Nederland BV	Trondheim 22-24, 2993 LE Barendrecht	+31 (0)1 80 64 19 90	100%
France	BESIX France	Avenue Georges V 41, 75008 Paris	+33 (0)1 53 57 86 00	
Australia	BESIX Australia Pty. Ltd.	Level 8, 28 O'Connell Street Sydney NSW 2000	+61 2 9216 6500	100%
	Watpac Ltd.	Level 1, 12 Commercial Rd Newstead, Qld 4006 P.O. Box 2053 Fortitude Valley, Qld 4006 Brisbane		26%
Azerbaijan	BESIX LLC	Kazimzade Street 7, apt. 130, AZ–1100 Baku	+994 (0)50 331 16 91	100%
Egypt	BESIX NV/SA Egypt Branch	Corniche El Nil 97, Rod El Farag, Cairo	+20 (0)2 459 44 91	
Equatorial Guinea	BESIX NV/SA E.G. Branch	Punta Europa, Bioko Norte	+240 (0)26 74 10	
Cameroon	BESIX Cameroun	B.P. 3124, Douala	+237 (0)39 25 85	100%
Italy	BESIX NV/SA Italy Branch	Via Aurelia Antica 272, 00165 Rome	+39 (0)6 393 877 90	
Montenegro	BESIX NV/SA Montenegro Branch	Novo Naselje b.b., 85323 Rodovici, Tivat		
Morocco	B6SOMA SAS	Free trade zone of Ksar El Majaz Commune Anjra Tangier, 6107 Val Fleuri Tanger	+212 (0)5 39 94 94 8	50%
	BSTM SAS	Free trade zone of Ksar El Majaz Commune Anjra Tangier BP 12096, Val Fleuri Tanger	+212 (0)5 39 94 94 8	50%
Poland	BESIX NV/SA Poland Branch	ul. Staroscinska 1/18 02-516 Warsaw	+48 22 380 32 40	
Saudi Arabia	BESIX NV/SA Saudi Branch	Al Oula Building – 6th floor, King Fahd Road, P.O. Box 230044, 11321 Riyadh	+966 (0)1 207 96 91	
	Six Construct Ltd Saudi Branch	Hail Street, Rawda District P.O. Box 9291, 21413 Jeddah	+966 (0)2 664 2732	
	MSX - Al Muhaidib / Six Construct LLC	Novotel Business Park, P.O. Box 9492, 31463 Damman	+966 (0)1 857 52 52	50%
Sri Lanka	BESIX NV/SA Sri Lanka Branch	BESIX Sri Lanka Branch Level 26, East Tower, World Trade Center, Echelon Square Colombo 01	+94 (0)11 7 444 500	
Switzerland	BESIX NV/SA Switzerland Branch	Zweigniederlassung Schweiz, Zone Industrielle, Schächenwald, CH-6460 Altdorf	+41 (0)41 875 77 50	

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COUNTRY	COMPANY / BRANCH	ADDRESS	PHONE	PARTICIPATION (IN %)
Qatar	Six Construct Qatar Ltd	P.O. Box 22677, Doha	+974 (0)4 423 80 00	100%
	United Readymix WLL	P.O. Box 22677, Doha	+974 (0)4 44 90 70 16	49%
United Arab Emirates	Six Construct Ltd	P.O. Box 1472, Sharjah	+971 (0)4 509 22 22	100%
	Belhasa Six Construct LLC	P.O. Box 13055, Dubai	+971 (0)4 509 22 22	49%
	BESIX NV/SA Sharjah Branch	P.O. Box 1472, Sharjah	+971 (0)6 568 41 36	
REGIONAL COMPANIES				
Belgium	Bagetra SA	Rue Bauduin 46, 7080 Eugies	+32 (0)65 66 65 06	100%
	Carrière des Grés Réunies SA	Route de Cielle, 6980 La Roche	+32 (0)84 41 20 32	50%
	Carrière des Limites SA	Rue du Sourd d'Ave 1B, 5500 Rochefort	+32 (0)84 38 84 85	100%
	Cobelba SA	Parc Industriel, 5100 Naninne	+32 (0)81 41 14 21	100%
	Enrobés des 3 Frontières SA	Rue Joseph Calozet 11, 6870 Awenne	+32 (0)84 36 02 00	100%
	Entreprises Jacques Delens SA	Avenue du Col-Vert 1, 1170 Brussels	+32 (0)2 566 96 00	100%
	Famenne Enrobés SA	Rue Saint Isidore 101, 6900 Marche-en-Famenne	+32 (0)84 22 08 15	50%
	Franki Foundations SA/NV	Avenue Edgard Frankignoul 2, 1480 Saintes	+32 (0)2 391 46 46	100%
	G.N.B. Béton SA	Zoning Industriel 1, 6600 Bastogne	+32 (0)61 21 64 12	100%
	HBS NV	Lammerdries 12, 2440 Geel	+32 (0)14 25 17 01	100%
	Isofoam NV	Bleukenlaan 5, bus 1, 2300 Turnhout	+32 (0)14 88 24 73	60%
	Nouvelle Carrière de Bissot SA	Rue Nouvelle 73, 6810 Chiny	+32 (0)61 31 28 46	100%
	Socogetra SA	Rue Joseph Calozet 11B, 6870 Awenne	+32 (0)84 36 02 00	100%
	Sud Construct SA/NV	Avenue du Col-Vert 1, 1170 Brussels	+32 (0)2 788 54 00	100%
	Vanhout NV	Lammerdries 12, 2440 Geel	+32 (0)14 25 16 11	100%
	Vanhout Facilities NV	Lammerdries 12, 2440 Geel	+32 (0)14 25 16 11	100%
	Vanhout Projects NV	Lammerdries 12, 2440 Geel	+32 (0)14 25 16 11	100%
	ViaLines SA	Avenue Albert Ier 75, 4030 Grivegnée	+32 (0)4 343 11 15	50%
	Wust SA	Route de Falize 151, B-4960 Malmedy	+32 (0)80 79 27 11	100%
GD Luxembourg	Lux TP SA	B.P. 49, Zone industrielle, 5201 Sandweiler	+352 35 79 79	100%
	Wust Construction Luxembourg SARL	Op der Haart 19, L-9999 Wemperhardt	+352 28 55 181	100%
The Netherlands	Franki Grondtechnieken BV	Trondheim 8, 2993 LE Barendrecht	+31 (0)1 80 64 19 90	100%
France	Atlas Fondations	Rue Nicolas Appert 4, 59260 Lezennes	+33 (0)3 20 57 76 35	100%
	Atlas Fondations	Avenue George V 41, 75008 Paris	+33 (0)1 47 20 01 64	100%
United Kingdom	Franki Foundations UK	Wangfield Nurseries, Curdridge, Southampton, Hampshire S032 2DA	+44 (0)1489 79 76 00	100%
	Franki Foundations UK Ltd.	Centurion House London Road, Staines TW 18 4AX	+44 (0)1322 30 31 95	100%

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COUNTRY	COMPANY / BRANCH	ADDRESS	PHONE	PARTICIPATION (IN %)
REAL ESTATE DEVELOPMENT				
Belgium	BESIX RED SA/NV	Avenue des Communautés 100 1200 Brussels	+32 (0)2 402 64 87	100 %
	BESIX RED Properties SA	Avenue des Communautés 100 1200 Brussels	+32 (0)2 402 66 75	100%
GD Luxembourg	BESIX RED Luxembourg SA	Rue du fort Elisabeth 7, 1463 Luxembourg	+352 2951 29	100%
France	BESIX RED SA France Branch	Avenue George V, 41, 75008 Paris	+33 (0)1 53 57 86 00	
CONCESSIONS AND ASSETS				
Belgium	BESIX Park NV/SA	Millisstraat 33, 2018 Antwerp	+32 (0)3 235 54 55	75%
	Courtyard by Marriott Brussels SA/NV	Olympiadenlaan 6, 1140 Brussels	+32 (0)2 337 08 08	50%
	Europea Housing SA	Gemeenschappenlaan 100, 1200 Brussels	+32 (0)2 402 62 11	67%
	Mall of Europe SA	Gemeenschappenlaan 100, 1200 Brussels	+32 (0)2 402 62 11	13%
	R4 Zuid Gent Maintenance			21%
The Netherlands	Coentunnel Company BV	Meteorenweg 280, 1035 RN Amsterdam	+31 207 14 37 88	18%
	Keersluis Limmel Maintenance BV	Trondheim 22-24, 2993 LE Barendrecht		50%
United Arab Emirates	Al Wathba Veolia BESIX Waste Water Company pjsc	P.O. Box 28416, Abu Dhabi		20%
	Ajman Sewerage (Private) Company Limited	B-08 Ajman Free Zone, P.O. Box 4212, Ajman		40%
	Cofely-BESIX FM Ltd	P.O. Box 391055, Dubai	+971 (0) 4509 2440	50%
	COFELY BESIX MANNAI facility management	P.O. Box No. 24258 Doha, Qatar	+974 4407 6223	25%
	Moalajah FZC	P.O. Box 4739, Ajman	+971 (0)6 714 88 65	50%
	SAFI FZC	P.O. Box 8522, Ajman	+971 (0)6 742 99 10	55%
	VEBES O&M Ltd	Jebel Ali Freezone, Dubai		50%
Italy	Stadio Alassio Parking SCARL			50%
Poland	Sheraton Poznan SpzO	Bukowska 3/9, Poznan 60-809	+48 (61) 655 2000	29%
Switzerland	Hotel 4B Development AG	Gothardstrasse 12, 6460 Altdorf	+41 (0)41 875 77 50	49%

COLOPHON

Editing
BESIX Group Communication Department

Cover photography
EDF Lab | Paris-Saclay, France

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Stefan Vleugels

Design and production
www.linknv.be