

Corporate Report

2014

**Bouygues
Construction**

Review 2014

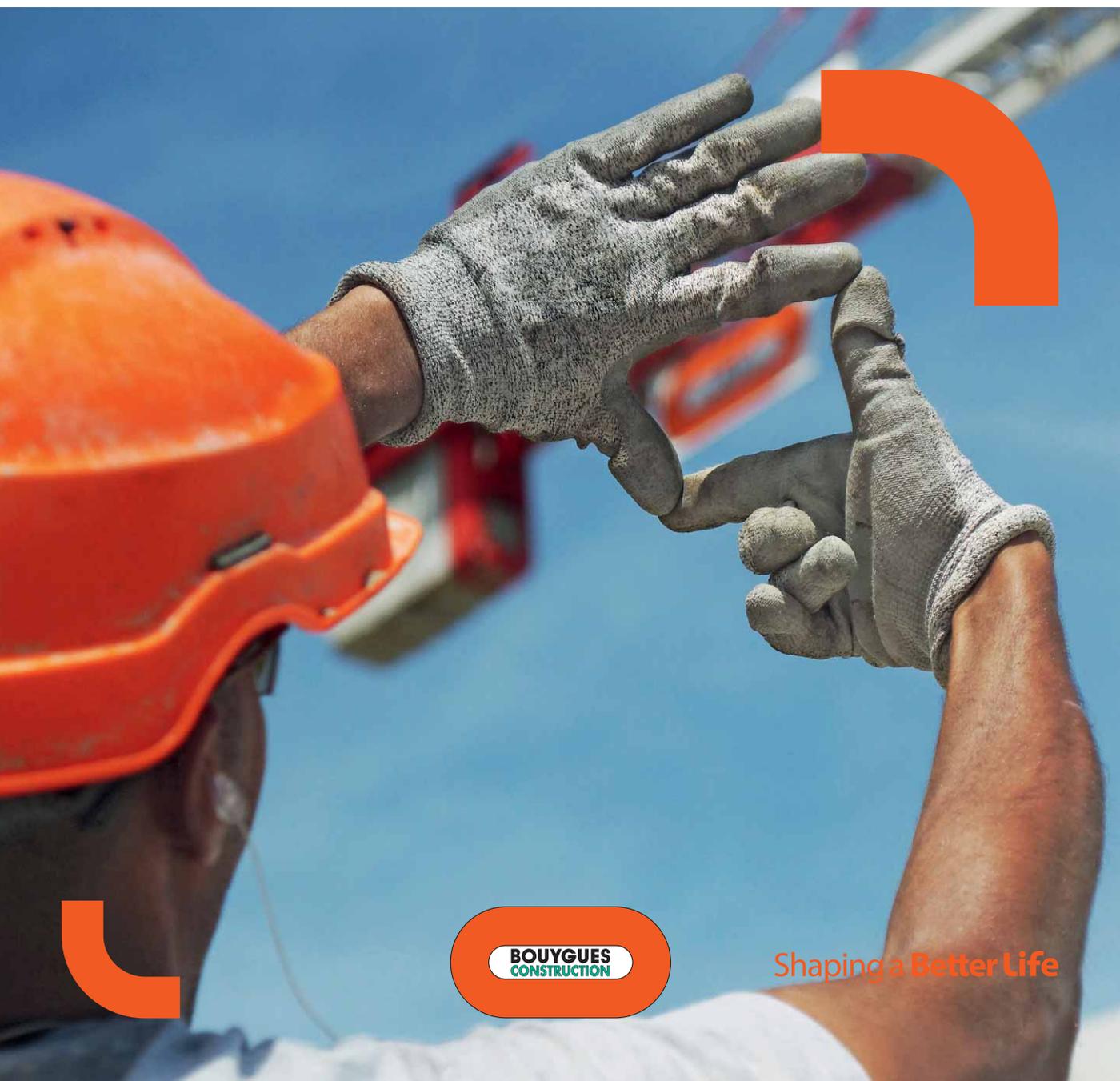
A powerful and successful strategy based on innovation for the benefit of our customers.

Vision 2015

Philippe Bonnavé,
Chairman and Chief Executive Officer.

Special report: Sustainable innovation

How to stand out in a competitive environment? Innovation.



**BOUYGUES
CONSTRUCTION**

Shaping a Better Life

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More lively, more efficient, more connected, sustainable neighbourhoods are a laboratory for the city of tomorrow.



The Telemach robot



SPOTLIGHT ON INNOVATION

AT BOUYGUES CONSTRUCTION, OUR AMBITION IS TO MAKE THE LIVING SPACES WE DESIGN, BUILD AND OPERATE MEET THE EXPECTATIONS OF OUR CUSTOMERS AND USERS BETTER AND BETTER. HOW ARE WE GOING TO ACHIEVE THIS AMBITION? BY PUTTING INNOVATION AT THE HEART OF OUR MODEL. OPEN INNOVATION, NURTURED BY DIALOGUE WITH OUR STAKEHOLDERS. SUSTAINABLE INNOVATION, FOCUSED ON MEETING THE ECONOMIC, SOCIAL AND ENVIRONMENTAL CHALLENGES OF TODAY AND TOMORROW. THIS REVIEW OF THE PAST YEAR AND OF OUR FUTURE OUTLOOK WILL SHOW YOU HOW SUSTAINABLE INNOVATION SHAPES OUR GROUP. WE HOPE YOU ENJOY READING IT.



Wide angle

Stade Vélodrome, Marseille

Following three years of works involving more than 900 employees, the Stade Vélodrome football stadium has raised its capacity from 60,000 to 67,000 places. The undulating shape of the new roof follows the form of the stands thanks to a 6,000 tonne sculptural frame which provides spectators with great acoustic comfort and protects them from rain and wind. The stadium has reduced its energy and water

consumption because it is supplied with warm water heated by a nearby water treatment plant thanks to a thermal loop, while three wind turbines power the rainwater recovery pumps that provide water for the toilets and for watering the pitch. Bouygues Energies & Services will be responsible for hard facilities management, including maintenance and major repairs, until 2045.







TEL: 02-234-1414
MAHA
NAKHON

Wide angle

MahaNakhon Tower

In the heart of the Bangkok business district, Bouygues-Thai is building the city's tallest skyscraper – a height of 314 metres – on behalf of Pace Development Corporation and Industrial Buildings Corporation. Giving the impression that it is circled by a band of pixels, like a digital image disintegrating, it constitutes a major feat for Bouygues Bâtiment

International. Teams from the Group's subsidiary VSL contributed their expertise for the post-tensioning techniques used for the foundations of the tower. The Group used digital modelling for this project to simplify the collaboration between the various contractors involved and to guarantee a "zero defect" deliverable.



Wide angle

Miami Port Tunnel

This tunnel provides a second means of access to the Port of Miami, essential in order to ensure its further growth and to relieve road congestion in the city centre caused by freight traffic passing through it as it transports containers unloaded at the port. The 1.2-kilometre twin-tube undersea tunnel constitutes the Group's first major civil works contract

in the United States. Apart from its scale, it posed a technical challenge: in view of the risk of porous coral present in the ground crumbling under the teeth of the tunnel boring machine, two methods of drilling have been used, including the Water Control Process, which consists in injecting into the coral a mortar specially developed to ensure stability.

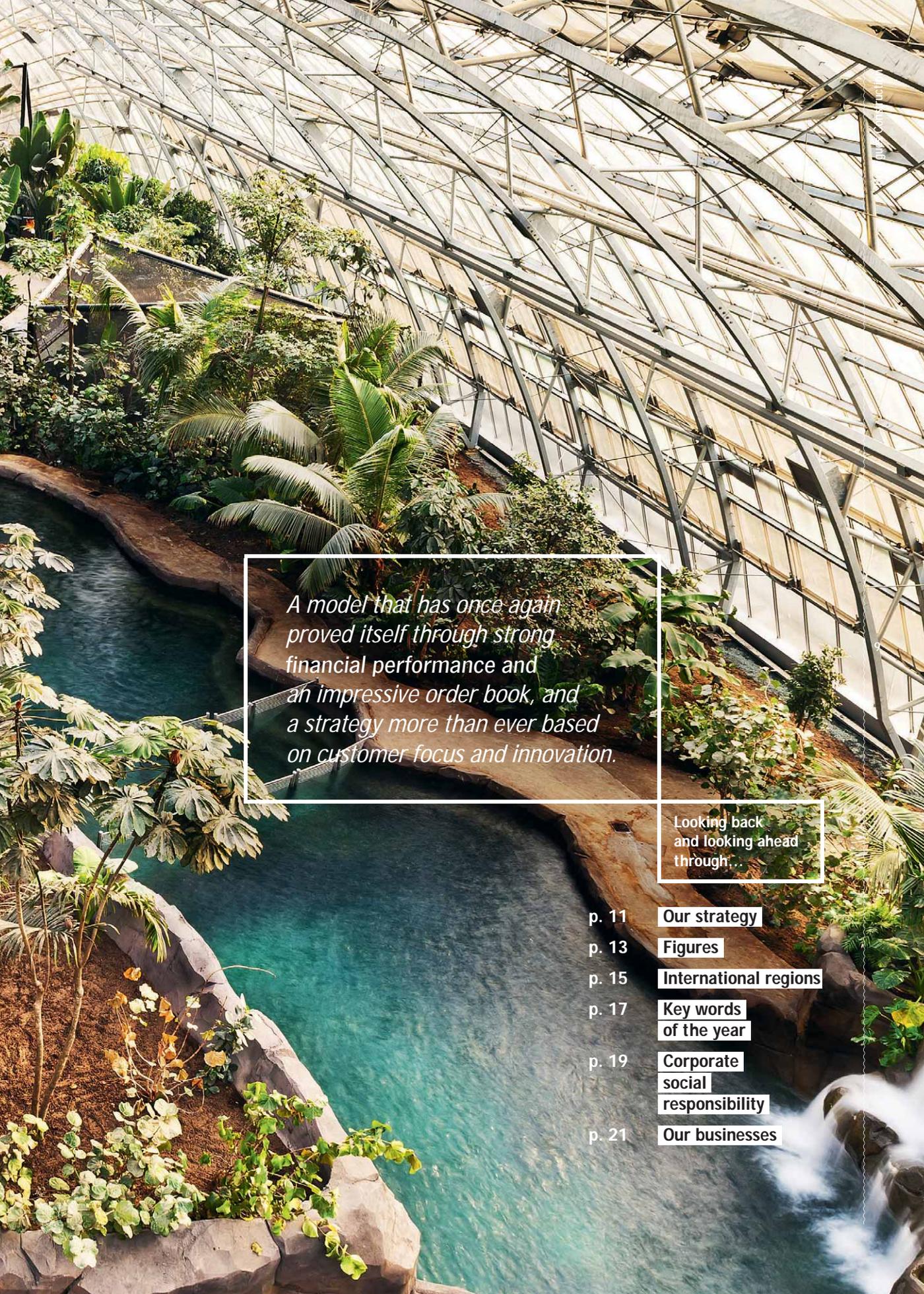






Review 2014

8



A model that has once again proved itself through strong financial performance and an impressive order book, and a strategy more than ever based on customer focus and innovation.

Looking back and looking ahead through...

- p. 11 **Our strategy**
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Portfolio 2014

University of Bordeaux 1

Bouygues Construction was chosen for the first contract covering design, construction and maintenance as part of the Operation Campus initiative. Carried out with the university in session, the project revolved around the construction of four new buildings and the renovation of twelve buildings dating from the 1960s, along with maintenance for 27 years. One of the solutions implemented to reduce energy consumption and achieve the standard required for low-consumption renovation is a bioclimatic concept with innovative use of glass facades.



Construction and services

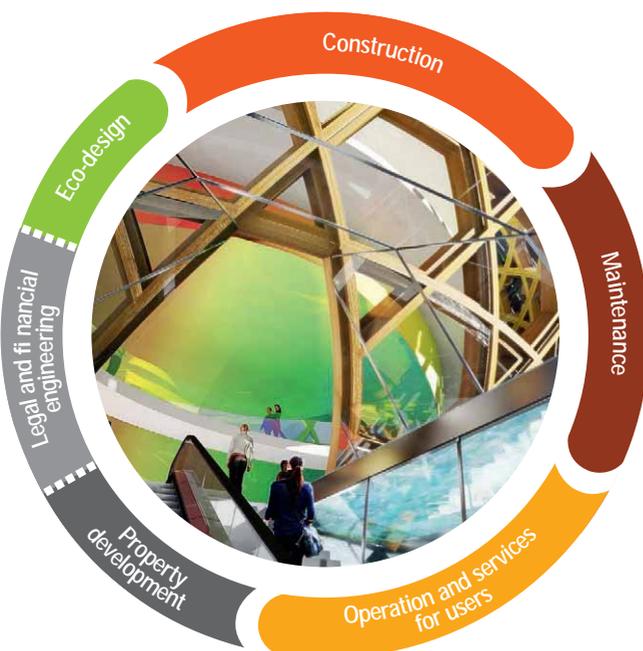
As a global player in construction and services, Bouygues Construction designs, builds and operates high-performance, energy-efficient buildings and structures which improve the quality of people's living and working environments.

From property development to services for end users, we meet each of our customers' specific needs by ensuring that every operation we carry out is seen in terms of the totality of a building or structure's lifecycle.

Always keen to spot emerging trends, we innovate alongside partners whose expertise complements our own and we increasingly make connections with our stakeholders to create the solutions that will become the standard practices of tomorrow.

And because the construction process plays a large part in creating the future, we have a long-term commitment to helping our customers shape a better life.

Skills throughout the entire value chain of construction



Bouygues Construction supports its customers both upstream and downstream of the construction process and plans its services in terms of the entire lifecycle of a building or structure.

The Group uses eco-design to limit the environmental impact of its projects and to anticipate changes in uses. Thanks to the expertise of its legal and financial engineering teams, it can guarantee its customers that the projects they set up will be highly efficient.

During construction, Bouygues Construction practises an innovative collaborative approach and leads a permanent process of dialogue with all its stakeholders.

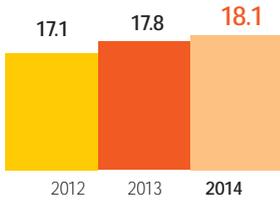
During operation and maintenance, it offers a wide range of value-added services and commits itself long term to high levels of performance, particularly with respect to energy. ■

Portfolio 2014

Hong Kong - Zhuhai - Macao

Bouygues Construction is responsible for building a 9.4-kilometre stretch of the 42-kilometre bridge that will carry a three-lane dual carriageway across the sea, linking Hong Kong and the cities of Zhuhai and Macao, when it opens in 2016. The journey time between the two islands will be divided by five, which will help support growth in economic development and tourism in this region, one of the most thriving in China.

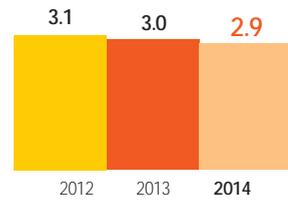




Order book
(in billions of euros)

The order book stands at €18.1 billion. Business for 2015 acquired in late 2014 amounts to €8.7 billion. ■

53,500
employees

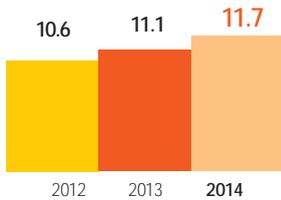


Net cash position
(in billions of euros)

In spite of more difficult conditions, particularly in France, Bouygues Construction's financial structure remained very sound, with a cash surplus of €2.9 billion. ■

€11.7bn

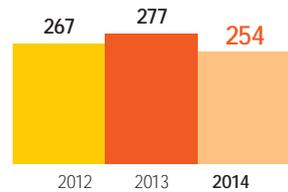
of which 49% international sales



Sales
(in billions of euros)

Sales rose by 6% to €11.7 billion. A slight 1% fall in France was offset by a sharp rise in international sales of 13% by comparison with 2013. ■

€18.1bn
order book



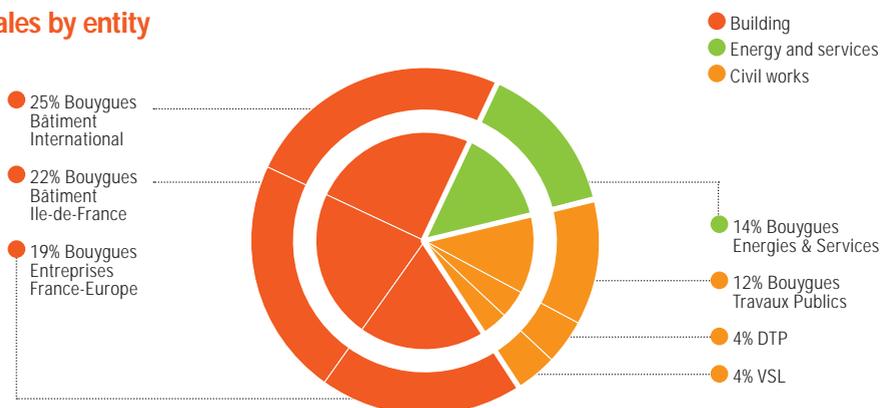
Net profit
(in millions of euros)

Current operating profit stood at €335 million, down by €102 million compared to 2013. Net profit att. to the Group totalled €254 million. The net margin of 2.2% was 0.3% lower than in 2013. ■

50%

of R&D budget devoted to sustainable construction

Breakdown of sales by entity



The Concessions division recorded revenues of €583 million in 2014. ■

Portfolio 2014

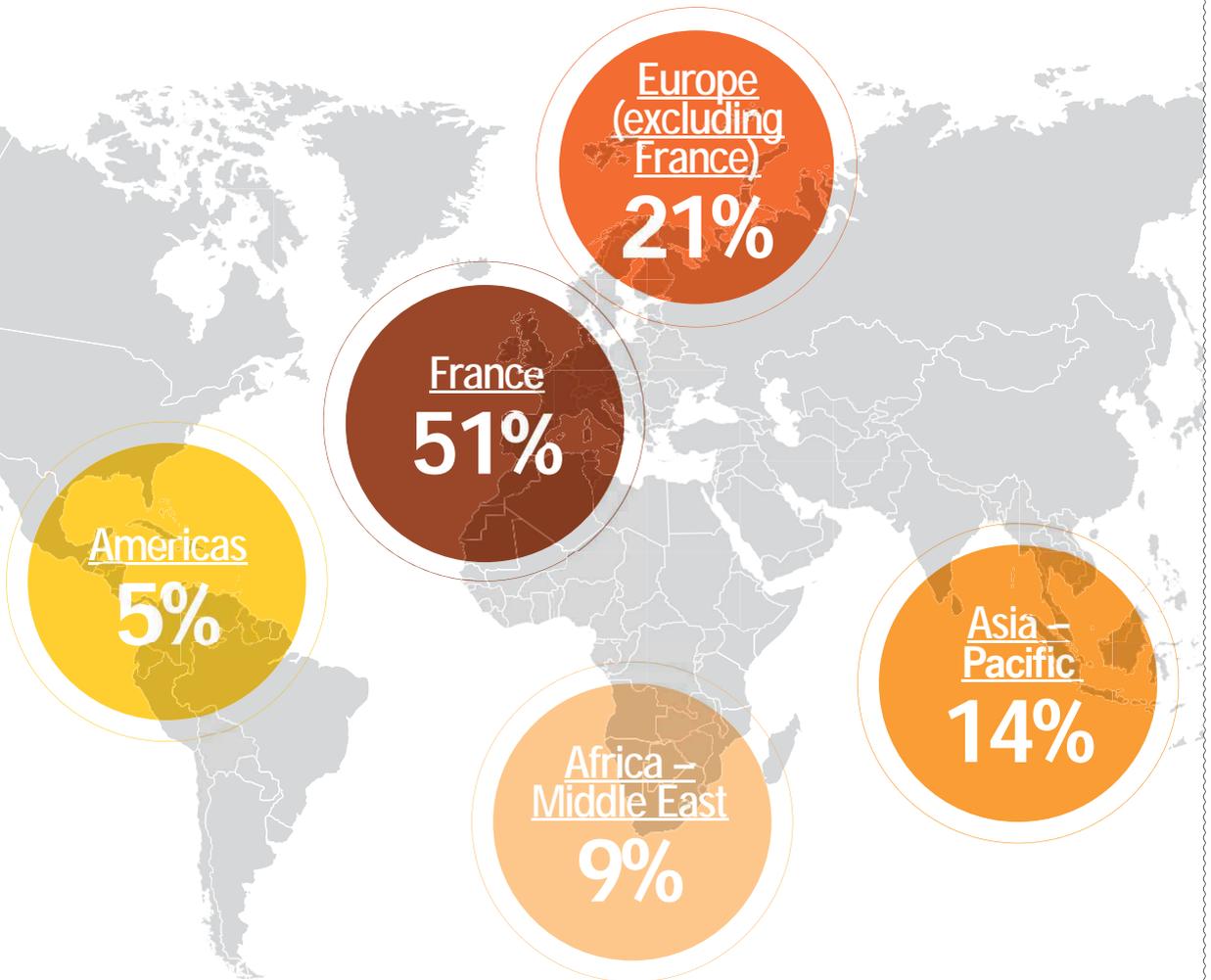
M Central

This property development and construction operation is regenerating the town centre of Monthey, Switzerland, bringing between 500 and 600 new residents, a shopping centre and 1,300 m² of office space. The complex incorporates a remote heating system that relies on a waste incineration plant. Surplus heat generated by domestic waste provides heat for approximately 4,000 homes in the town.



International growth

In 2014, Bouygues Construction generated 49% of its sales outside France (as against 46% in 2013), of which 21% was in Europe (excluding France). ■



Portfolio 2014

Housing in Bezons

Attractive design combines with high energy efficiency in 29 social housing units in Bezons, in the north-west suburbs of Paris: zinc facades are covered in terracotta cladding to conceal external thermal insulation, the living rooms are primarily south- and west-facing, and a roof covered with vegetation incorporates solar panels installed to produce hot water. The complex opens onto a private garden intended to encourage social contact and friendship.





Challenge for students

The 18th Bouygues Construction Challenge saw 12 teams of students competing to devise a global offer for a neighbourhood. The competition was won by Team 9, whose prize-winning project, Eco'herence, was designed to encourage good citizenship. ■



Eco-neighbourhoods

Showing the rise of sustainable construction at the level of blocks and neighbourhoods, three new eco-neighbourhood projects have enriched the Group's know-how in 2014: Hallsville Quarter, London, and the University of Hertfordshire in the United Kingdom and the Les Noës eco-village in Val-de-Reuil, France. As a leading player in urban redevelopment, Bouygues Construction has launched LinkCity, a customised offer of sustainable and connected neighbourhoods that provides support for local authorities at every stage of their projects, from coordinating the various stakeholders to ensuring that commitments are respected over the long term. ■

Canada

The Group continues with its international expansion in all parts of the construction value chain. In 2014, Bouygues Energies & Services acquired a majority stake in Plan Group, a Canadian company specialising in HVAC engineering and network infrastructure. ■

Campus Innovation



In order to showcase its know-how, its collaborations with a wide variety of players and the ecosystems made available to its customers, Bouygues Construction organised its first Campus Innovation, on October 6 and 7, 2014. The event was attended by 450 customers and partners, who saw for themselves innovations introduced by the Group and its partners in all of its businesses. ■

889
projects
submitted to the
Innovation competition
by employees in 2014



Partnerships

Through the partnerships it forms, Bouygues Construction surrounds itself with experts who can help it to differentiate its offer. This open policy allows it to design competitive, innovative and sustainable solutions. The second suppliers convention, held in November 2014, was an opportunity to talk about prospects for co-developing projects, like the variable water flow air-conditioning system jointly developed with LG. ■

What does BIM stand for?

Digital models and the information they contain – known as BIM (Building Information Modelling) – are crucial in the transition to increasingly industrial building methods. Bouygues Construction has already launched more than ten R&D projects on these topics, and has implemented them both in France (Paris Philharmonic Hall, Amiens University Hospital) and abroad (Abidjan Bridge, Singapore Sports Hub). In 2014, a major step was taken with the launch of the B In Motion corporate project, which is based on three pillars: across-the-board introduction of collaborative working methods, industrialisation of our production processes and extensive use of digital resources in all Group businesses. ■



Portfolio 2014

SBK Line in Kuala Lumpur

The SBK Line, which will be 51 kilometres long (including 80% of elevated lines), will come into service late in 2016. It will serve 1.2 million inhabitants in Greater Kuala Lumpur, easing traffic congestion and shortening journey times. VSL, a subsidiary of Bouygues Construction operating in Malaysia, is responsible for the structural assembly of 24 kilometres of bridges for the line, which runs through the city from north to south.



Actitudes

A continuous and measured policy with

4 priorities

1 ENVIRONMENT AND SUSTAINABLE CONSTRUCTION

Reinventing the city

WWF France and Bouygues Construction have signed a partnership agreement in order to carry out collaborative research on the challenges of sustainable cities. This forms part of WWF's Reinventing the City initiative, which seeks to bring together businesses and local authorities to work on new urban lifestyles. ■



"In view of the need to limit our environmental footprint, this collaboration will enable us to develop authentic demonstrators of sustainable neighbourhoods."

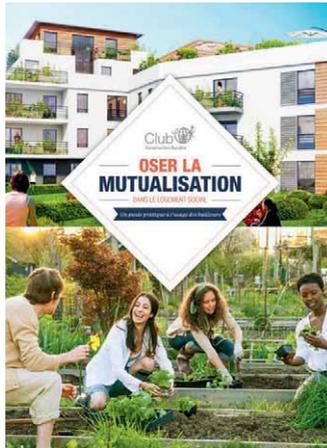
Philippe Germa, CEO, WWF France

2 CUSTOMERS AND PARTNERS FOR A SUSTAINABLE PROJECT

Pooling and sharing

The Sustainable Construction Club carried out a research project with a team of social landlords, architects, sociologists and community representatives on the topic of pooling and sharing. A handbook for social landlords was published. It presents six types of pooling in the form of practical information sheets with concrete illustrations. ■

www.clubconstructiondurable.org



3 LOCAL COMMITMENT AND COMMUNITY AID

Bouygues Construction loosens its tie

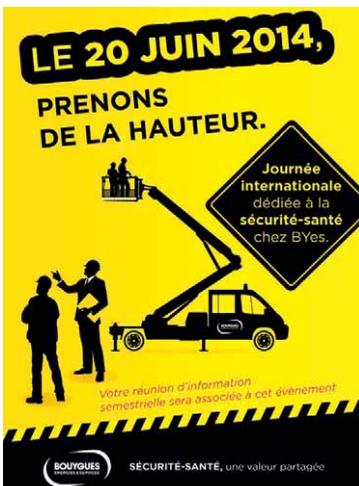
La Cravate Solidaire is a charity supported by the Terre Plurielle, the Group's corporate foundation. It brought its collection bins to Challenger, the Group's Head Office, for a week so that employees could donate men's and women's business clothes (suits, shoes, etc.) that can be used to help students and the long-term unemployed take advantage of employment opportunities. Over 260 kg of clothing was collected! ■

www.terreplurielle.com

4 RESPECT AND DEVELOPMENT OF EMPLOYEES

The "zero accident" target

Organised by Bouygues Energies & Services, an international day dedicated to safety and the Safesite challenge motivate all the subsidiary's teams, encourage people to share good practices and reward the sites with the best safety records. These symbolic actions help establish safety as a fact of life in day-to-day management, and a matter of reflex for everyone. ■



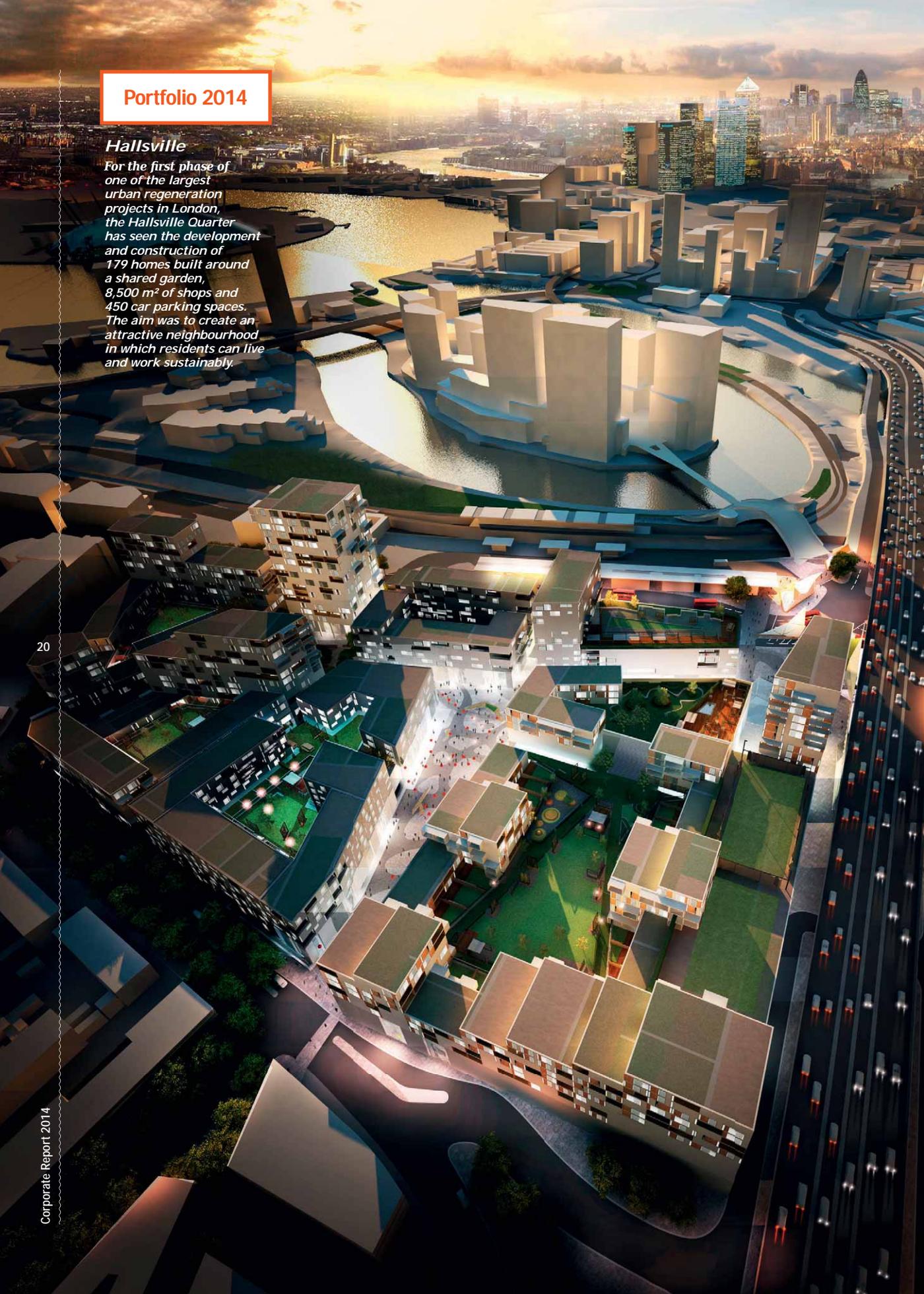
325

partnership agreements throughout the world in support of integration, education and health.

Portfolio 2014

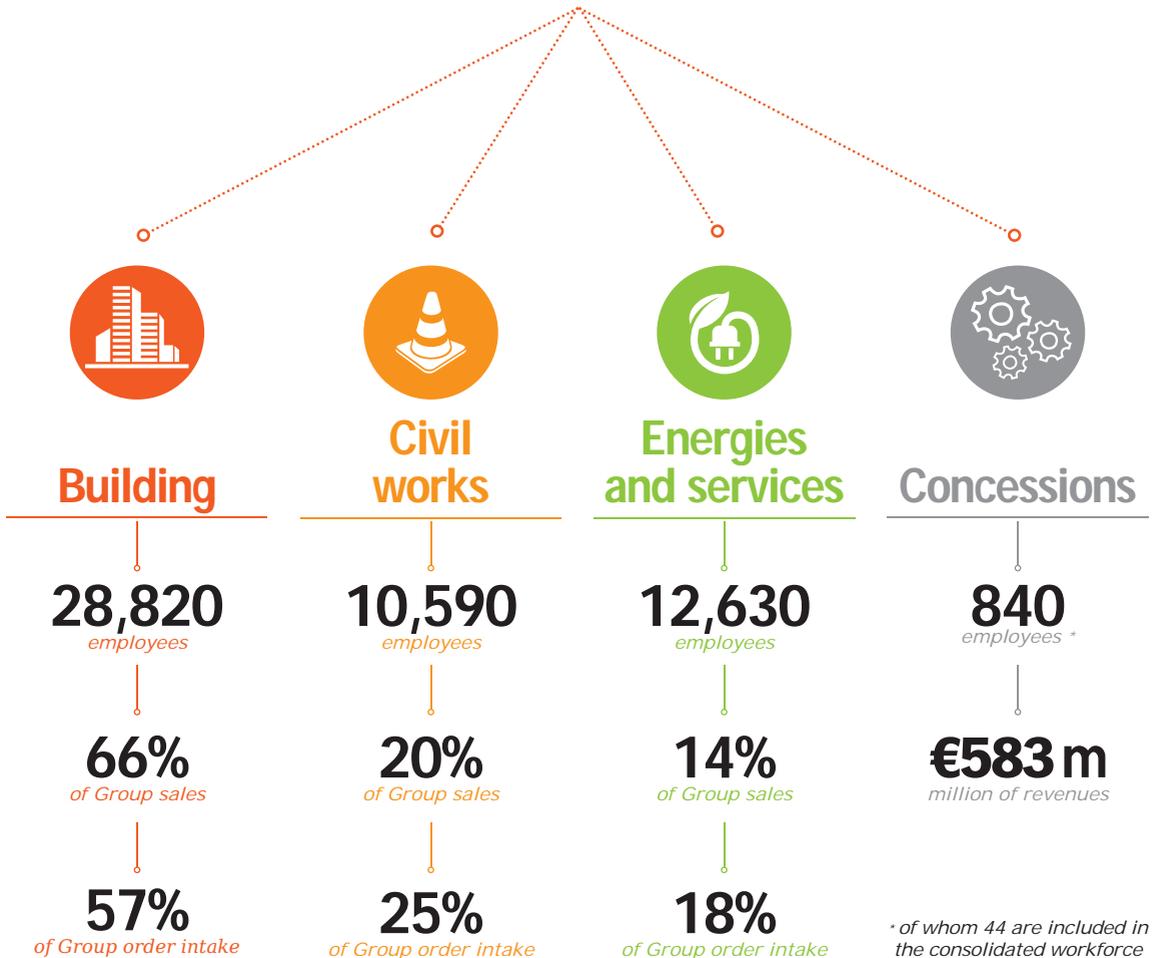
Hallsville

For the first phase of one of the largest urban regeneration projects in London, the Hallsville Quarter has seen the development and construction of 179 homes built around a shared garden, 8,500 m² of shops and 450 car parking spaces. The aim was to create an attractive neighbourhood in which residents can live and work sustainably.



High value-added expertise

Through its various businesses, Bouygues Construction is involved in an extremely wide variety of projects: public and private buildings, eco-neighbourhoods, transport infrastructures and energy and communication networks. This complementary expertise fosters synergies in a high added-value full-service approach in which innovation and long-term support for customers have pride of place.





Building



Bouygues Bâtiment Ile-de-France

The Bouygues Construction subsidiary in the Paris region offers comprehensive know-how for new build and renovation projects in four primary areas of expertise: public facilities, private commercial structures, housing and industrial civil engineering. Thanks to its market-focused organisation (public and private sectors) and range of expertise, it can provide each of its customers with tailored and effective solutions, whatever the scale and complexity of their projects. ■

€2,614 m
of sales

Completed projects

- Molitor swimming pool complex in Paris (photo)
- Esplanade de l'Europe residential development in Montmorency

Current projects

- Paris law courts
- Renovation of the Ritz Hotel in Paris

Contracts

- Renovation of Bercy Arena in Paris
- Property development, Boulevard Ornano in Paris

Bouygues Entreprises France-Europe

Bouygues Entreprises France-Europe consists of building subsidiaries operating in France (excluding the Paris region) and in the adjacent countries of Western Europe. Well established locally, and enjoying support from skills and synergies available throughout the Group, the companies belonging to Entreprises France-Europe design, finance and carry out the most innovative projects for their customers. ■



€2,202 m
of sales

Completed projects

- Zölly residential tower in Zurich, Switzerland (photo)
- Amiens university hospital, France

Current projects

- Secondary schools in the Loiret *département*, France
- Erlenmatt eco-neighbourhood in Basle, Switzerland

Contracts

- Lyons Saint-Exupéry airport
- Prado shopping centre in Marseilles



Bouygues Bâtiment International

Since 1972, Bouygues Bâtiment International has been creating buildings and structures with a powerful local identity. The company is present on every continent through a network of local subsidiaries that call on a wide range of expertise at Group level. Its strengths reside in technical and commercial innovation, managing complex projects, risk management, and acknowledged leadership in sustainable construction. ■

€2,887 m
of sales

Completed projects

- Ardmore Park residential complex in Singapore (photo)
- Sports Hub complex in Singapore

Current projects

- Zagreb airport, Croatia
- Brickell City Centre property development in Miami, United States

Contracts

- Ridge Hospital in Accra, Ghana
- Czech Institute of Informatics, Robotics and Cybernetics in Prague



Civil Works



Bouygues Travaux Publics

In France and in many other countries, Bouygues Travaux Publics constructs tunnels and carries out underground works and complex civil engineering projects, particularly in the fields of energy and the environment, as well as road, port and rail infrastructures. A specialist in managing large-scale projects, it focuses its development on technically demanding operations, backed up by a proactive R&D policy. ■

€1,447 m
of sales

Completed projects

- Cairo metro, Egypt (photo)
- Covering of the tracks at Austerlitz station in Paris

Current projects

- Chernobyl confinement shelter, Ukraine
- LNG tanks at Dunkirk, France

Contracts

- Shatin to Central Link tunnel in Hong Kong
- Coastal Highway viaduct on Reunion Island

DTP

A global player in complex redevelopment projects, linear infrastructures and open-cast mining, DTP offers a diversified range of skills applied to a variety of highly technical projects, from small-scale local earthworks sites to overall management of large-scale projects. The company conducts an ambitious sustainable development policy, particularly with regard to its methods, its offer and the optimisation of its equipment. ■



€496 m
of sales

Completed projects

- Upgrading of the A71 motorway, France
- Figuil-Magada highway, Cameroon (photo)

Current projects

- Nîmes-Montpellier rail bypass, France
- Kibali gold mines, Democratic Republic of Congo

Contracts

- Route Kinkala-Mindouli highway, Republic of the Congo
- Troissereux bypass, Picardy, France



VSL

One of the world leaders, VSL designs and produces innovative solutions for the construction of concrete structures incorporating post-tensioning systems. Supported by an ambitious R&D policy, the company operates on high added-value markets, such as cable-stay bridges, heavy lifting, large engineering structures, urban transport viaducts, confinement shelters, LNG tanks and ground improvement techniques. VSL is also developing technological activities, such as monitoring, protecting and repairing structures. ■

€401 m
of sales

Completed projects

- Marina Bay Footbridge in Singapore
- Oyala Bridge 7 in Equatorial Guinea (photo)

Current projects

- Forth Bridge in Edinburgh, Scotland
- SBK Line in Kuala Lumpur, Malaysia

Contracts

- New Orbital Highway contract 3, Qatar
- PTT LNG tanks in Thailand



Energies and services

Bouygues Energies & Services

An expert in energy efficiency and services, Bouygues Energies & Services designs, installs and maintains energy and communications infrastructures. It provides tailored and sustainable services that enable its customers to both manage their energy consumption and ensure a good quality of life for users. ■



€1,677 m
of sales

Operations launched

- Paris Zoological Park
- Alstom sites in France, Italy and the United Kingdom

Projects in progress

- Broadband networks, Oise *département*, France
- Asset and property management for Great Swiss Stores (53 buildings and supermarkets)

Contracts

- Electrical and HVAC engineering of the Airbus Helicopters plant at Le Bourget, France
- High-voltage power line for Vale, Mozambique



Concessions



Concessions division

The Concessions division manages and operates the concession companies in which Bouygues Construction has an interest. Operating both in France and a number of other countries, it is involved in managing a variety of infrastructure projects that facilitate the transportation of goods and people (motorways, bridges, tunnels, railways, buses, tramways, etc.) or provide amenities for leisure activities (stadiums, etc.). ■

€583 m
of receipts

Highlights

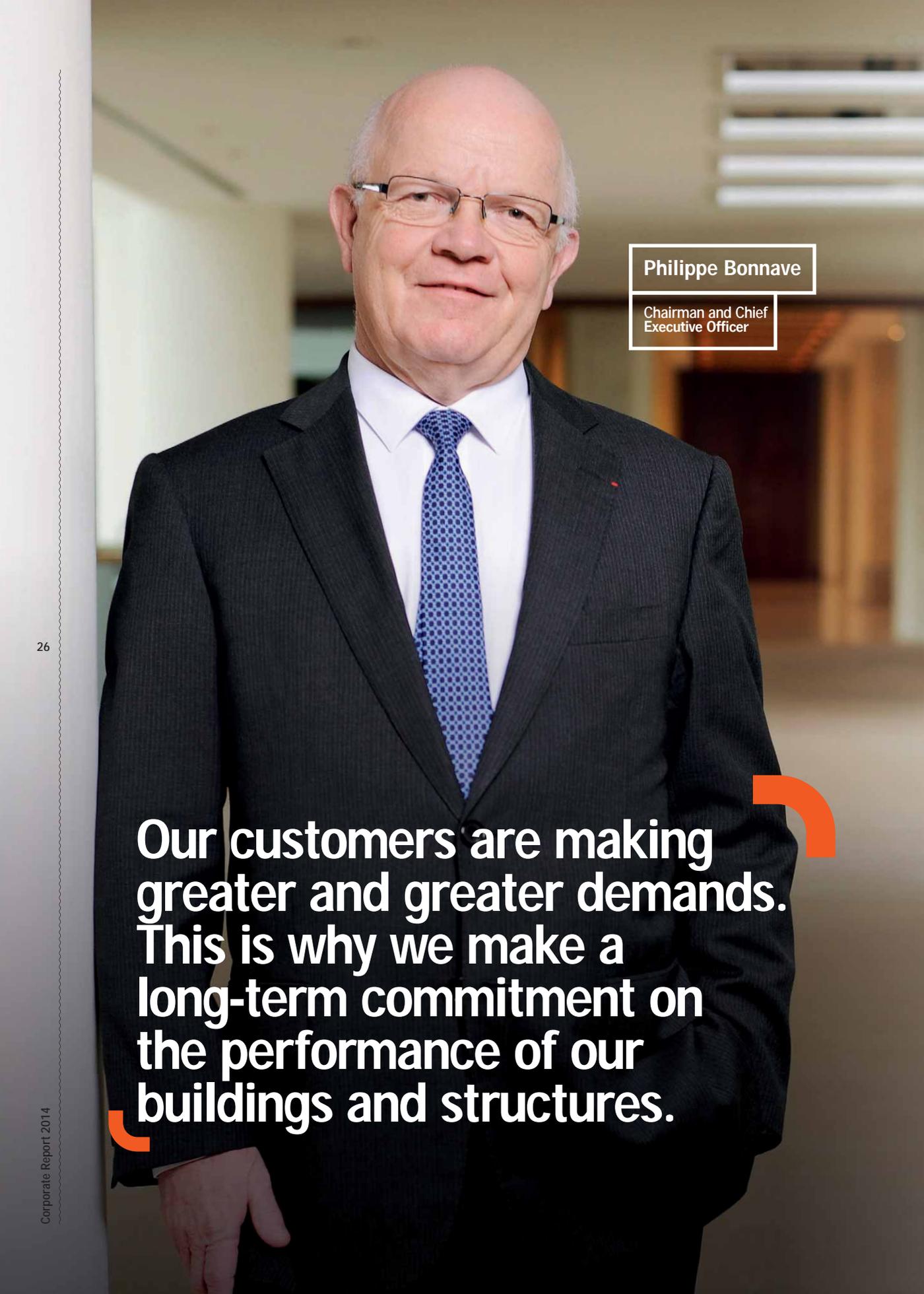
- Opening of the Port of Miami tunnel, the Stade Vélodrome football stadium in Marseilles and the Henri Konan Bédié Bridge in Abidjan, Ivory Coast
- Increase in traffic on the A28 and A41 motorways in France, the Tyne Tunnel in the U.K., the Gautrain rail link in South Africa and Busan port in South Korea
- Closing of contracts for the Troissereux and Vichy bypasses

Portfolio 2014

Is there life on Mars?

Following the completion of Mars Yard, a high-tech facility that recreates the surface of the Red Planet for test simulations, Bouygues Energies & Services is now performing the turnkey design and build of a controlled environment facility for the ExoMars research programme. It will be used by the European Space Agency and Airbus Defence and Space to assemble the rover robot that will take off for Mars in 2018 to look for signs of life.



A portrait of Philippe Bonnavé, an older man with glasses, wearing a dark pinstriped suit, a white shirt, and a blue patterned tie. He is standing in a modern office environment with blurred background elements like a window and ceiling lights. Two white-bordered boxes are overlaid on the right side of the image, containing his name and title. A large orange graphic element, resembling a stylized 'C' or a bracket, is positioned behind the main text block at the bottom.

Philippe Bonnavé

Chairman and Chief
Executive Officer

Our customers are making greater and greater demands. This is why we make a long-term commitment on the performance of our buildings and structures.

How do you assess 2014, which was a year of contrasts, and what are your expectations for 2015?

The Group had a solid year. We had a sustained sales performance, with an order intake of €11.6 billion and some fine successes, such as the Shatin to Central Link tunnel in Hong Kong, the City of Music in Boulogne-Billancourt, the Coastal Highway viaduct on Reunion Island and Ridge Hospital in Ghana. Our sales rose to €11.7 billion, a slight fall of 1% in business in France being substantially offset by our dynamic international sales, which improved by 13%. Our order book, which reached the very high level of €18.1 billion at year-end 2014, which gives us a good sense of future operations. In 2015, the economic and competitive environment remains difficult, particularly in France. We are going to press ahead with our international development and continue to adapt our organisation to the economic climate in order to maintain our competitiveness. Our performance should remain solid.

More than half of the orders that have been booked are outside France.

What are the consequences of this?

France remains our number one market, but it is true that the majority of the orders we have booked are international. One of our priorities is to implement a global strategy that will transform us from a French company with international business to a company that is resolutely turned to the international market, with strong local subsidiaries. In particular, this means creating shared resource centres in the countries where we are established on a long-term basis. In parallel, we are appointing managers at the level of countries or wider geographical regions (in Africa, for instance), who will have the role of representing Bouygues Construction and its various businesses, acting as a single point of contact for our customers and partners. The aim is to establish greater proximity with our customers and to encourage commercial synergies between our businesses. More generally, we have an international strategy that is based on two pillars: first of all, our longstanding operations, which represent a high volume of business that we have to cultivate in such places as Switzerland, the United Kingdom, Hong Kong, Singapore, Thailand, Spain and Morocco; and secondly, more recent operations, which offer excellent prospects for future development, such as in Canada or Australia. In parallel, we are positioning ourselves – albeit very selectively – for



opportunistic contracts in the context of complex projects in which it is technical challenges that make the difference, and on which we can deliver very strong added value in view of our experience.

In spite of the uncertain economic environment, what lines of development do you want to promote?

Bouygues Construction has to continue to present itself as an innovative company. Innovative, first and foremost, in terms of the entire value chain of construction, from design through to operation, so that it can support its customers over time. Over time means on a long-term basis, starting upstream, at the project definition stage, in which we must listen to our customers more carefully. But also innovative in terms of sustainable construction, allowing it to seize every opportunity for contracts created by the steadily growing need for buildings and infrastructures that consume less energy, are more environmentally-friendly and take still greater account of how our buildings and structures are used and change. So my priority is to develop a mindset that encourages innovation in all its forms, giving people the resources available and liberating energies. Technical innovation,





My priority is to develop a mindset that encourages innovation in all its forms.

such as digital models, which I'll come back to; commercial innovation with distinctive offers; and also managerial innovation with lean management and collaborative working to achieve greater smoothness and speed.

You have made health, safety and ethics three of your essential priorities.

What commitments are you making?

The health and the protection of our employees – and, indeed, all those who work on our construction sites – must be our very top priority. This commitment must determine the primary character of our DNA. Everywhere, for everyone, we must have a single target: zero accidents. This is a commitment that we owe to our site workers in the first place, but it's also a guarantee of efficiency, quality and customer satisfaction. In this respect, we need uniform international best practices and we need to go one stage further: beyond his or her own safety, each individual must also be concerned for other people's safety. The second basic value that I want to promote is that of maintaining an extremely high level of ethics in everything that we do, both internally and externally.

We must be beyond reproach in our managerial and commercial behaviour, but also in our dealings with our partners.

You have given the company a new operational organisation with two new operational divisions devoted to business: what will this change?

Our new organisation corresponds to industrial thinking. On the one hand, this consists in grouping together all our civil works businesses in a single operational division to enable us to offer increasingly coherent solutions to our customers throughout our range of businesses. On the other hand, we want to coordinate the strategies of Bouygues Bâtiment International and Bouygues Energies & Services to focus on common international development and momentum. This synergy has already proved itself in Hong Kong. In France, the transfer of the two Building divisions – in the Paris region and in the provinces – to my direct supervision is also intended to encourage synergies.

The aim of this new organisation is to bring consistency, cohesion, efficiency, agility and a clearer picture of our know-how for our customers and for all our stakeholders, but also to capitalise on good practices and to decompartmentalise our businesses.

You have said you want to bring Bouygues Construction into the digital era and the lean management era. What do these terms correspond to?

Many of our teams have already got involved spontaneously in digital modelling and we are going to coordinate these initiatives in a corporate project called B In Motion. The principle of digital models is what we call “building before building”, in other words virtual construction that precedes real-world construction, anticipating the phases of the construction process so we can raise the quality of buildings and structures by eliminating defects, misunderstandings between different trades, and so on. We are also looking at a radical change in our business model: upstream aspects of the construction value chain will gain in importance by comparison with downstream aspects. We need an organisation that will allow us to feed the digital model, with exhaustive databases functioning as libraries identifying our solutions. This will require decompartmentalisation in our teams, a capacity



Working with digital models forces us to greater industrialisation of our methods, processes and procedures.



for collaborative working and a different managerial model. Working with digital models forces us to greater industrialisation of our methods, processes and procedures. Practices inspired by the world of industry – starting with standardisation and lean management – open remarkable prospects to us for reinventing our businesses.

How do you see the future of Bouygues Construction?

With confidence. 53,500 people constitute an extraordinary human force. Throughout the world, our teams are enthusiastic, committed and passionate about their businesses. This energy and force give us a tremendous boost in continuing to listen to and understand the expectations expressed by our customers in all parts of the world, as we work alongside them to meet the construction challenges of today, the 21st century. ■



Governance

Bouygues Construction's organisation model aims to create favourable conditions for its development and for decompartmentalisation within the Group. It is built around our principal businesses, which cooperate and deliver synergies,

and around shared resource centres, our support functions, which work in the interest of all its businesses. Alongside Philippe Bonnavé, Chairman and Chief Executive Officer, there is an Executive Committee that is responsible

for defining, implementing and controlling Group policies. A General Management Committee meets regularly to encourage collaboration, sharing resources and leveraging know-how and innovations. ■

Board of Directors (as at 03/03/2015)

>> **Philippe Bonnavé**, Chairman and Chief Executive Officer of Bouygues Construction

>> **Pascal Grangé**, Deputy Chief Executive Officer of Bouygues Construction

>> **Olivier Bouygues**, Director

>> **Jean-François Guillemain**, Director

>> **Gilles Zancanaro**, Director

>> Bouygues represented by **Philippe Marien**, Director

Executive Committee



Philippe Bonnavé
Chairman and CEO of Bouygues Construction



Olivier-Marie Racine
Deputy CEO with responsibility for Bouygues Bâtiment International and Bouygues Energies & Services



Jean-Philippe Trin
Deputy CEO, with responsibility for Bouygues Travaux Publics, DTP and VSL



Pascal Grangé
Deputy CEO with responsibility for strategy and finance, information systems, concessions and strategic reflection on property development



Jean-Marc Kiviatkowski
Executive Vice President with responsibility for legal affairs, insurance, auditing, internal control and compliance



Jean-Manuel Soussan
Executive Vice President with responsibility for human resources and policy on corporate and social responsibility

General Management Committee

(in addition to members of the Executive Committee)



Pascal Minault
CEO, Bouygues
Entreprises France-
Europe



Bernard Mounier
CEO, Bouygues
Bâtiment Ile-de-France



Daniel Rigout
CEO, Bouygues Bâtiment
International



Philippe Amequin
CEO, Bouygues Travaux
Publics



Christian Gazaignes
CEO of the Civil Works
division for Asia, Oceania
and the Middle East



**Jean-Christophe
Perraud**
CEO, Bouygues Energies
& Services



Madani Sow
Deputy CEO, Bouygues
Bâtiment International



Cyril Ferrand
Deputy CEO, Bouygues
Energies & Services



Charles Paradis
CEO, Concessions
division



Olivier Montfort
Company Secretary,
Bouygues Construction



**Philippe
Van de Maele**
Innovation and
Sustainable Development
Director, Bouygues
Construction



Frank Le Guillou
Purchasing Director,
Bouygues Construction



Damien Rebourg
Communications Director,
Bouygues Construction

One Group, eight subsidiaries





Special report Sustainable innovation

32

To differentiate ourselves in an increasingly competitive environment, we have to innovate. Innovate everywhere: in Europe and throughout the world. Innovate in all technological areas, of course, but also in processes and in management. And innovate with everyone: not only employees, but also customers, suppliers and the users of our buildings and structures! The digital revolution is proving to be remarkably good for speeding up innovation.

Four approaches to innovation

- p. 34 **If sustainable innovation were a neighbourhood...**
- p. 36 **Design, build, operate... behind the scenes at our projects**
- p. 43 **Focus on ten flagship solutions**
- p. 50 **Encounters: What will you be doing in five years' time?**

If sustainable innovation were a neighbourhood...

More lively, more efficient, more connected, neighbourhoods are a laboratory for the sustainable city of tomorrow. Designed as ecosystems, they develop synergies between a range of functions, such as living, working, creating and travelling. Take a tour around LinkCity, our sustainable neighbourhood offer.

The Customer Focus Office

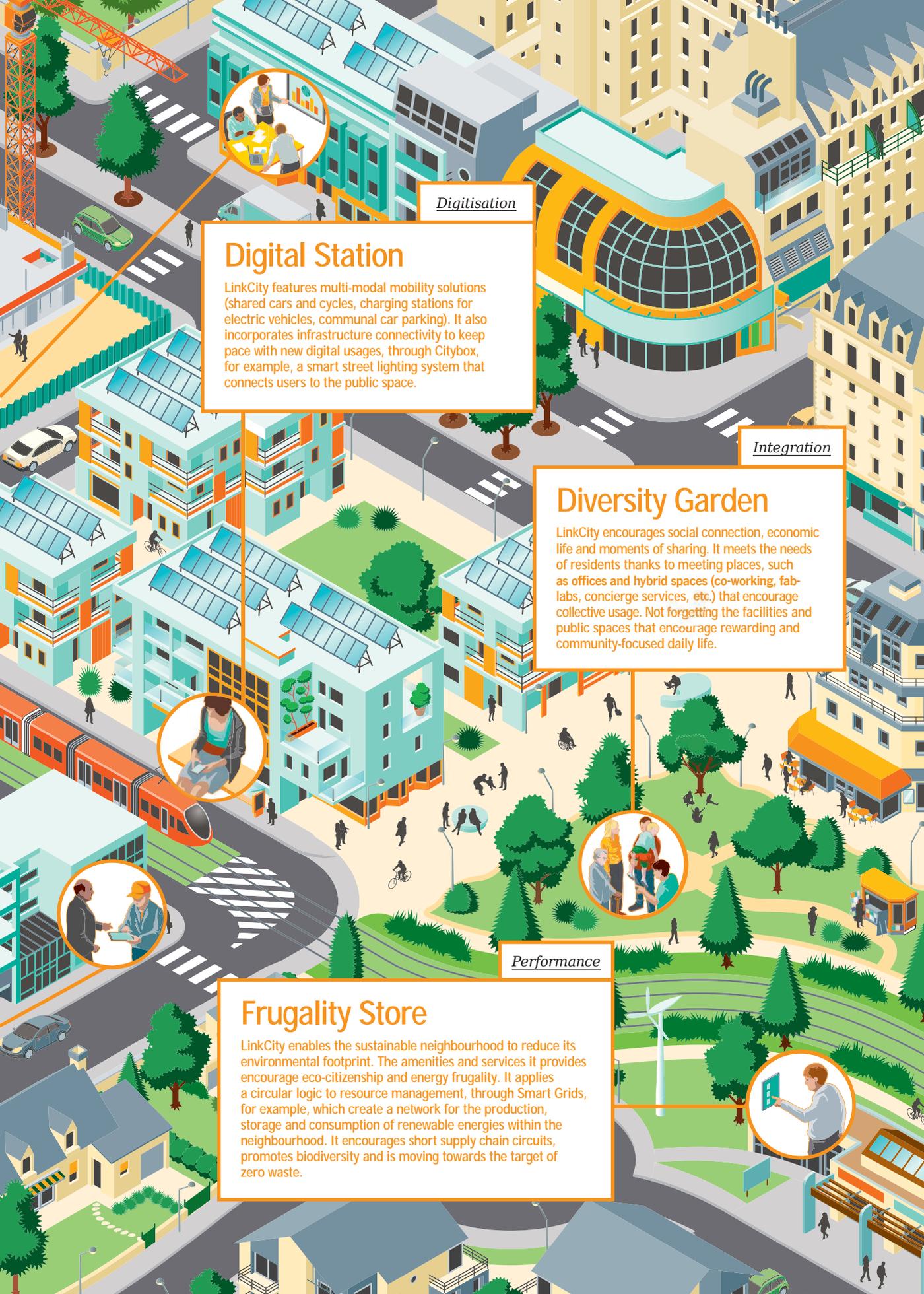
Whether understanding our customers' vital concerns, ensuring that performance commitments are met sustainably or coordinating relations with stakeholders, LinkCity calls on Bouygues Construction's wide-ranging expertise to support its customers at each and every step of their neighbourhood project.

Support

360° offer

Partnership Lane

With LinkCity, Bouygues Construction develops multiple synergies between its various construction and service specialities, as well as the skills of its partners. It applies this approach systematically from the design phase through to operation, and provides an integrated vision of the neighbourhood that combines social connection, environmental performance and connected services to achieve a better quality of life for the end user.



Digitisation

Digital Station

LinkCity features multi-modal mobility solutions (shared cars and cycles, charging stations for electric vehicles, communal car parking). It also incorporates infrastructure connectivity to keep pace with new digital usages, through Citybox, for example, a smart street lighting system that connects users to the public space.

Integration

Diversity Garden

LinkCity encourages social connection, economic life and moments of sharing. It meets the needs of residents thanks to meeting places, such as offices and hybrid spaces (co-working, fab-labs, concierge services, etc.) that encourage collective usage. Not forgetting the facilities and public spaces that encourage rewarding and community-focused daily life.

Performance

Frugality Store

LinkCity enables the sustainable neighbourhood to reduce its environmental footprint. The amenities and services it provides encourage eco-citizenship and energy frugality. It applies a circular logic to resource management, through Smart Grids, for example, which create a network for the production, storage and consumption of renewable energies within the neighbourhood. It encourages short supply chain circuits, promotes biodiversity and is moving towards the target of zero waste.

Design, build, operate... behind the scenes at our projects

36

*From design to operation, from commercial development to construction site, innovation forms part of every stage of our projects. It feeds all our areas of expertise: property development, legal and financial engineering, eco-design, construction, maintenance and services for users. **Find out more about our projects through the answers to five questions.***

Survey



Question 01

What aspirations do customers and users have?

Bouygues Construction projects include a phase in which we listen carefully to our stakeholders, allowing us to devise innovative and sustainable solutions.

We listen to our stakeholders through the Sustainable Construction Club, a forum for discussing current, strategic and forward-looking issues relating to sustainable construction with our customers and partners. We also listen at local level, upstream of projects. In Switzerland, Losinger Marazzi is very involved in a participative process for the

redevelopment of a neighbourhood in the town of Morges. The purpose has been to make it easier to inventory the views of residents and stakeholders and incorporate them into the specifications. The listening process extended during the construction phase and beyond. For the University of Bordeaux renovation project, DV Construction set up a dedicated website presenting the project and the phases of works, as well as a team which takes on board questions from users and passes them on to the construction site, which can adapt the schedule and employ specific measures to reduce nuisances. In the contract for Zagreb airport, stakeholders'

expectations were taken into account in an "Engagement Plan" running throughout the period of the contract, in both the construction and operation phases. The innovation and creativity of many other offers designed by the Group owe much to listening to users' views, from Bouygues Bâtiment Ile-de-France's Concept Résidentiel, a connected, modular building offering shared and pooled services, to DV Construction's intergenerational Amaza housing solution, designed with input from sociologists and occupational therapists. ■



A co-constructed lighting solution

Renault's Batilly plant in eastern France is committed to significantly reducing its environmental footprint. It commissioned a technical audit from Bouygues Energies & Services, which identified the need to review lighting at the facility. Through collaborative work in which all departments were involved, a solution was designed in which lighting only operates according to zones and times of work: this example of co-construction with Renault resulted in a made-to-measure contract including studies, consulting, work and maintenance, with a guarantee of savings over five years. ■



Question 02

What part will the project play in its region?

For Bouygues Construction, environmental protection and corporate social responsibility are central to its thinking, at every stage of its projects.

The Group has set up a dedicated Group-wide structure, Biositiv, to support its infrastructure projects. The formalisation of recommendations and the implementation of compensatory measures are systematically followed: they are defined according to an innovative method used for the first time for the Nîmes-Montpellier rail bypass, in which everything possible is being done to limit the impact of the route chosen on the ecosystems

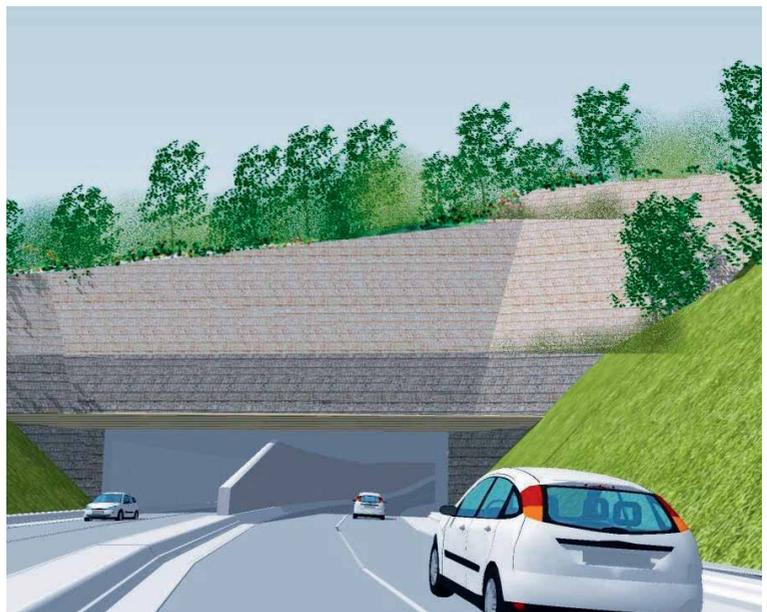
that it crosses, with measures taken to identify 126 protected species. For the construction of the Hong Kong-Zhuhai-Macao Bridge, the schedule was adjusted according to the calving season of the white dolphin, a protected species identified in the zone. The Group also promotes urban biodiversity, and several of its projects, from the City of Music in Boulogne-Billancourt to the Eikenött eco-neighbourhood in Switzerland, have been awarded the BiodiverCity label, an international evaluation system that assesses the ecological performance of buildings. In the context of the Sustainable Lighting Guidelines drawn up in conjunction with Noé Conservation, the impact of night light on the biological

cycles of birds, amphibians and mammals is taken into account by Bouygues Energies & Services in Valenciennes, for example. As far as professional integration is concerned, Bouygues Construction is no less committed to its social commitments, in particular through the implementation of the special conditions attached to many contracts for the integration of local workers and suppliers during both the construction and operation phases. A similar commitment can be found outside France, too: in Abidjan, for instance, a jobs forum was organised on the completion of construction of the Henri Konan Bédié Bridge to help former employees find new work. Around thirty local businesses in several different sectors took part. ■



A special detour for bats!

Traffic on the CD 901 highway in northern France is close to 17,000 vehicles per day, including 10% trucks, resulting in a very heavy flow for the small town of Troissereux, north of Beauvais. To reduce congestion, DTP, Bouygues Travaux Publics and Colas are constructing a 7.2-kilometre two-lane bypass. However, this is an environmentally sensitive area. In particular, the greater-eared bat, a protected species, is to be found. A 275-metre cut-and-cover tunnel has been constructed beneath a forest to maintain a passage for surface animals. Involved right from the tendering phase, Biositiv monitored the implementation of these biodiversity protection measures throughout the entire project. ■



Question 03

What partners do we work with?

Because disruptive innovations are often achieved through collective processes, the Group believes in open innovation and works with the best local companies.

The Group has opened out its innovation process in order to make its research efforts more effective, to propose solutions that will differentiate us, and to enable our customers to benefit. It is supporting the start-up DualSun, whose high-yield hybrid solar panels are equipping Challenger, its Head Office. The Group also encourages

co-development with its suppliers, an example being the Eco'nergy excavator developed with Manu Lorraine. Bouygues Construction also creates close relationships with the scientific, educational and academic communities, a link that led to the creation of the research chair in Sustainable Building and Innovation in partnership with the École des Ponts ParisTech, the École Centrale Paris and Supélec. Some players in the manufacturing industry work alongside Bouygues Construction in the quest for increasingly effective solutions. Lafarge has helped the Group with the design of insulating concretes, such as Thermedia 0.6. Meanwhile, Nissan and Renault are partners in the

ELSA project led by Bouygues Energies & Services with the support of the EU, which aims to launch a multi-energy storage and management system by 2018 that can be used by individual buildings, neighbourhoods or local distribution networks. In parallel, for the sake of helping to develop the regional socio-economic fabric, Bouygues Construction encourages the use of local subcontractors. For the Bordeaux city council offices, for example, local SMEs account for approximately 30% of construction costs, while for the construction of the Incity Tower in Lyons, 80% of subcontracted work is being handled by regional companies. ■



The first stadium to keep cool



Dragages Singapore and BYME, two subsidiaries of Bouygues Bâtiment International, joined forces with Delta Dore and Cryogel, two French SMEs, to provide thermal comfort for the 55,000 spectators sitting beneath the opening roof of the stadium in the Singapore Sports Hub complex. The original solution maintains a continuous 23° C airflow beneath every seat. Refrigeration is achieved by tanks filled with thousands of plastic ice balls which store the cold and discharge it into the chilled water circuit. Working in combination with the stadium's technical management system, the cooling system is constantly adjusted according to the actual utilisation of the stadium. ■

Question 04

How are costs and schedules kept under control?

For Bouygues Construction, keeping its commitments is fundamental, and BIM (Building Information Modelling) helps it do so in many ways.

The digital model has become the single document in which all the information required for construction is recorded.

It incorporates a planning tool that takes account of the time factor and covers the budgetary dimension by accurately estimating the production costs of each element. When modifications occur, the model is updated, which means that cost estimates and scheduling are instantly revised. Close collaboration with suppliers, who can input their offers and products into the digital model as of the design phase, is another driver for controlling costs and lead times. Construction methods are also developing towards greater

industrialisation and standardisation.

In Vaulx-en-Velin, near Lyons, the Adoma social housing complex has been built using the Inopac system, an approach to construction that incorporates a maximum of finished or semi-finished products: doorframes and doors, balconies, toilet and bathroom fittings and kitchen units were delivered to the site ready for installation. In Macao, new bedrooms forming part of an extension to the Crowne Plaza luxury hotel arrive at the site fully prefabricated, bathrooms included, saving six months on the construction phase.

In Lyons, the 39 storeys of the reinforced concrete structure of the Incity Tower were constructed using specific tools at the optimal rate of 4.3 days per floor. Following the structural works, the curtain walls of the facades made it possible to have the building watertight and airtight two months ahead of schedule. In Lille, for the apartment blocks in the Pentania development built

by Norpac, the choice of prefabricated timber facades installed during the structural works phase, along with the industrial process employed on the site, considerably reduced construction times. On-site prefabrication is a complementary approach that can reduce costs and time lost on transport. To construct the high-voltage power line between Boutre and Trans in Provence, the world's longest underground 225 kV line, Bouygues Energies & Services chose a supplier of sheathing capable of producing it on-site: a plant has been set up to manufacture the sheathing on the spot, making it possible to tailor production accurately according to needs. As a result, 87,525 kilometres of transport and 84 tonnes of CO₂ were avoided, there was a positive impact on site productivity of 5%, and site safety was improved. ■



The regeneration of Abidjan

The Henri Konan Bédié Bridge in Abidjan, Ivory Coast, was inaugurated as scheduled in December 2014. With 6.7 kilometres of roadway, a 21-gate toll plaza and an impressive interchange incorporating 16 decks on three levels, this is one of the largest infrastructure projects in West Africa. It was built in two years by Bouygues Travaux Publics, DTP and VSL, all subsidiaries of Bouygues Construction. In order to meet

the tight deadline, schedule the phases correctly, control costs and react to the many problems that arose on-site, the teams produced a complete digital model at the start of the execution phase, incorporating all the production data of the various specialist trades. The 3D representation made it possible to achieve the most optimal design and construction solutions through a series of iterations, targeting the best trade-off between quality, lead

times and price. The tool also greatly simplified many areas of interface management, such as dredging, erecting engineering structures and constructing a canal, a toll plaza, service areas and support walls. With this project, Bouygues Construction once again illustrated its ability to complete large and complex infrastructure projects on schedule. ■



Question 05

What performance is achieved over the long term?

Operating throughout the whole value chain, the Group focuses on the sustainability and performance of buildings and structures, applying a wide range of expertise, from legal and financial engineering to operation.

In eco-design, the Group reasons in terms of global cost, chiefly using lifecycle analysis tools. The aim is to evaluate the environmental, social and financial impacts of an operation, right through to deconstruction, and also to consider future alterations and adaptations of buildings and structures at the design stage to simplify the process of adopting new uses. This global approach makes

it possible to make commitments on the energy performance not only of individual buildings, but also of entire neighbourhoods: in Switzerland, GreenCity was the first eco-neighbourhood to be awarded the 2000-Watt Site label, which takes account of the operational phases of buildings. In France, the high thermal performance of the Grand Carcouët residential complex in Nantes (20% higher than the BBC-Effinergie standard for low-consumption buildings), is linked to the concrete structure with insulating timber cladding, the solar carpet installed on the roof and a heat recovery system applied to grey water. A students' residence at Hertfordshire University in England is the first of its kind to target both BREEAM and True Zero Carbon labels. The same long-

term approach is taken for structures and infrastructures constructed by the Group when it is the concessionary company and is responsible for maintaining them in good condition. In the fields of cable-stay systems and post-tensioning, VSL has built its leadership on an R&D policy seeking to increase the sustainability of its solutions. Finally, through its subsidiary Bouygues Energies & Services, Bouygues Construction is responsible for providing facilities management, sometimes for more than thirty years, accompanied by a guarantee on energy performance. The Group has provided Total FM to King's College, London, for the past fifteen years. It has surveyed students and staff to audit the effectiveness of its services, with convincing results. ■



Bordeaux city council offices, a 20-year commitment on performance

A positive-energy building constructed by the Group, the Bordeaux city council offices are occupied by 850 city council employees, who previously worked at around 15 different addresses. Thanks to the insulation of the facade, to openings that cool the building and optimise natural light and the benefits of the sun in the winter, to 1,500 m² of photovoltaic panels, and to hot and cold geothermal technology, it produces more energy than it consumes! After carrying out the HVAC and electrical engineering works, Bouygues Energies & Services will be responsible for operating the building for twenty years. And because the use of a positive-energy building is different, the company supports the occupants by advising them on how to consume as little energy as possible. ■



Sustainable innovation

Ten solutions

*Innovation is a culture...
but also a solution*

**Focus on our flagship
innovations 2014/2015**

Products and services



01



*Seen
from
the sky*

Droning on and on...

Bouygues Energies & Services provides customers with civil drones (UAVs or Unmanned Aerial Vehicles) to help them take and analyse aerial photographs. Reliable and flexible, drones can take on missions ranging from facility inspections that avoid the need to halt operations to topographical studies. The advantages include considerably lower risk for humans and optimisation of the time required to take photos and the associated study costs. This was demonstrated in June 2014 during the inspection of the Sourdun photovoltaic power station, when it only took two hours to cover nine square kilometres of panels and detect the defective solar cells, compared with several days for a standard operation.

*A natural
and
economical
solution*

Alizé, a smart charge

To meet the needs of electric mobility, Bouygues Energies & Services has developed the Alizé charging station system for electric vehicles. A turn-key offer, Alizé covers all the phases of the project, from electrical design to operation and maintenance, respecting the standards in force and installations complying with the ZEReady label. It includes innovative user services (SMS when charging is complete, smartphone reservation and availability of stations, etc.). A solution that meets the needs of local authorities and companies, Alizé has been chosen by the Eure-et-Loir *département*, which plans to install a network of 95 charging stations by 2016, and the La Poste group (the French Post Office), which intends to expand its private network of recharging facilities.



*Dynamic
energy
management*

03

Natural remediation

DTP, a Group subsidiary that operates open-cast mines in Africa, uses the technique of lagooning to treat residual oils in water used to wash its site machines. The innovation involves growing endemic plants such as gamba grass on the polluted substrates and using their capacity to degrade the organic components of the oils. This economical and natural method of phytoremediation, already implemented at the Morila mine in Mali, avoids the need to work the earth to oxygenate it and speeds up biodegradation.

04

*"Tunnelling"
in reverse*

TDM, dismantling tunnels

With many of our cities getting so congested below ground, innovative methods are needed to make it easier for tunnel boring machines (TBMs) to operate. The Tunnel Dismantling Machine (TDM), which was jointly developed for an undersea tunnel project in Hong Kong by teams from Bouygues Travaux Publics and a partner, CSM Bessac, is intended for dismantling existing tunnels under difficult conditions. It uses the chassis of a traditional TBM, but works in the opposite way: it travels in reverse along an existing tunnel, removing the voissors along its path and then progressively pours concrete to maintain the solidity of the gallery. Homogenous ground is created as a result, in which a new tunnel can be bored.



46

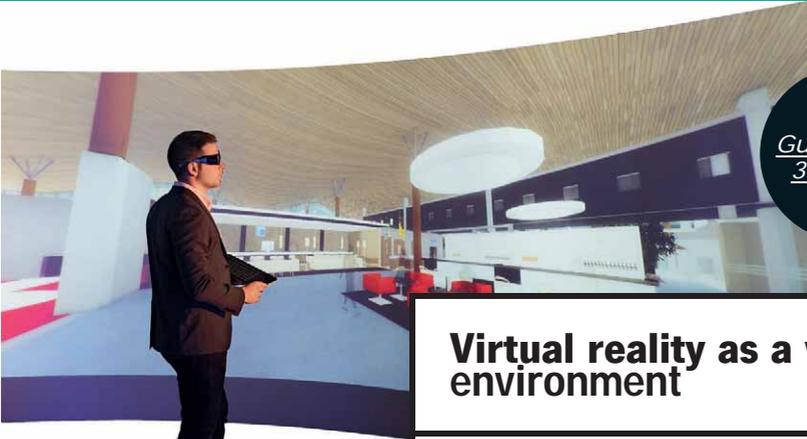
05

BegreenMap, putting certified buildings on the map

A Bouygues Bâtiment Ile-de-France innovation, BegreenMap is the first web application that positions certified commercial property and hotels in the Paris region on the same map. It is based on the databases of all the certification organisations in France (HQE, BREEAM, LEED, BBC). Providing advice for customers, the tool enables them to carry out environmental benchmarking of their assets and to define the environmental ambitions that the project should set in respect of the local property market. It's also a modern and enjoyable tool that illustrates Bouygues Bâtiment Ile-de-France's know-how. Each completed project is positioned on the map, accompanied by a detailed data sheet.



*Environmental
benchmarking*



*Guaranteed
3D vision*

Virtual reality as a working environment

An immersive 3D virtual reality room has been built at Challenger, the Group's head office. Users are able to immerse themselves completely in a project and to carry out a number of simulations of a building or structure that is yet to be constructed, under realistic conditions. Designed for the purpose of demonstration, the immersive facility, the only one of its kind, is based on 3D digital modelling. It is available to both internal and external populations, promoting collaboration and synergies in technical teams, during project reviews for instance, and helping to convince customers and partners in projects.

06

Eco'nergy, recovering energy

Recovering the hydraulic energy generated by lowering a mechanical excavator's boom is an idea jointly developed by DTP and its equipment supplier, Manu Lorraine. The energy is stored in batteries and then recovered when the driver raises the boom again. This process relieves the load on the pump motor and allows the machine's engine to be operated at lower revs. In addition, this feature improves the flexibility and speed of the boom's movement. Benefits include higher productivity, lower fuel consumption, longer service life for the components of the site machines and a general improvement in comfort for the driver.

07

*A smart site
machine*





The building block approach

The aims of a new modular building process developed with our industrial partner, Ossabois, are to reduce costs and delivery times without sacrificing quality and to rely on a renewable resource. The timber panels are prefabricated and fully finished off-site in a workshop, and are then transported and assembled on-site. The Loire-Atlantique *département* opted for this building system for a new secondary school in Clisson, for which works began in 2014: day after day, approximately 100 very large wooden panels are being transformed into classrooms. The same solution has also been chosen for the Djinn student residence in Le Bourget-du-Lac, in eastern France. It only took thirteen months to complete the operation, development included.

Child's play

48



Connected to the neighbourhood

Erlenapp is a free app, jointly developed by qipp (a spin-off of the Swiss Federal Institute of Technology in Zurich) and Losinger Marazzi, the Group's Swiss subsidiary. The app enables residents of the Erlenmatt West eco-neighbourhood in Basel, Switzerland, to access practical information on their homes, such as their water and energy consumption and details of community events in the neighbourhood, but also to create a social network to meet people, exchange services, etc. The app won an award in the Connected Home category at the Innovation World Cup 2015, organised during the Mobile World Congress in Barcelona.

Hand-held neighbourhood

10

Telemach, a robot for TBMs

An articulated robot that changes the cutting disks of tunnel boring machines (TBMs), Telemach reduces the need for human intervention in hazardous environments. There are approximately one hundred cutting disks weighing 350 kg each, and they need to be replaced regularly during the boring process. Jointly developed with Bouygues Energies & Services, this tool forms part of an innovation initiative launched by Bouygues Travaux Publics intended to make work less arduous and to improve the productivity of TBMs. The initiative won the Special Jury Award in the fifth Bouygues Construction Innovation Competition, held in October 2014.

*The boss
of TBMs*

What will you be doing in five years' time?

50

*Growing, expanding your skills, or even more...
Innovation feeds into all the Group's businesses
and inspires all its employees. Particularly as Bouygues
Construction encourages initiative and new ideas.
We meet some employees looking forward to the
future of construction and addressing the expectations
of customers.*



FRANCE

Émilie Palanque

Director
of Development
at Sodéarif

I won't be selling square metres but **services**

Our market and our products have changed. Owing to tighter budgets, slower decision-making and greater demand for value creation per square metre, customers are challenging us hard, whether they are private or public investors or users. What's the solution? Being even more selective about the quality of land, taking account of how the use of buildings evolves over time right from the design phase, the flexibility of spaces and the digital revolution, which puts data management at the heart of new ways of living, working, travelling and communicating.

We also have to be agile, sharing information better so that we can innovate more quickly, and manage to constantly reinvent our projects from design through to operation.

Yesterday

High quality residential and office buildings corresponding to a specific usage

Today

Modular, low-consumption buildings on high-potential sites to optimise value per square metre

Tomorrow

"Services" with respect to housing, diversifying uses and increasing the flexibility of spaces: reassignment of space is the way of the future



HONG KONG

Chun Cheong Yeung

Engineer at Dragages
Hong Kong

I will be **helping**
to make the **impossible possible**

I am proud to be taking part in the construction of the Tuen Mun-Chek Lap Kok undersea road tunnel in Hong Kong. It is being bored 50 metres beneath the sea, making it the world's deepest tunnel. It will link the Western New Territories and Lantau Island. I am in charge of the development, design and construction of the 132 kV power substations that provide the energy needed for the construction site. I am also involved in the development and assembly of the mega-size tunnel boring machines (TBMs). Having developed skills outside the scope of my function during a previous project, I have had the chance to work on the early stages of this mega-project. Safety is crucial, especially when working in the compressed-air environment associated with TBMs. So it is imperative that our innovations are conceived not only to enhance our efficiency, but also to raise our health and safety standards still further. This is one of the added values we bring to our market, and it's also my philosophy: making the impossible possible by constantly pushing back our limits.

Yesterday

An engineer involved in developing innovations at the testing phase

Today

Someone who eliminates complexity using the latest innovations, in a more integrated work environment

Tomorrow

An expert meeting the challenges of some of the world's most innovative projects



SWITZERLAND

Matthieu Meyer

Health and Safety
Manager at Losinger
Marazzi

My targets are **zero accidents** and **zero risks**

The construction industry is a high-risk sector prone to accidents. My role is to do everything possible to prevent physical injury to our own site workers, but also to our subcontractors and temporary workers. Following a phase during which our safety rules gained full acceptance, for the past two or three years we have been moving towards a genuine safety culture that is shared and implemented by everyone. Changes that have taken place in construction methods, site organisation, methods and equipment have greatly contributed to this. And we are going still further, with an initiative based on ergonomics which aims not only to reduce immediate risks, but also to delay risks relating to physically arduous work. What's my long-term ambition? Achieving zero risks so that the company can do away with my function!

Yesterday

Prescribe safety rules to be obeyed

Today

Establish a safety culture shared and implemented by everyone

Tomorrow

Make every employee a fully-fledged specialist in safety



MOROCCO
Saïd Zeroual
 Foreman
 at Bymaro

I will be **constructing** the buildings of the **future**

Since I started out as a mason, I have seen very significant changes in construction sites. Much greater importance is given to respecting safety instructions, and demands are higher than ever as far as the quality of work is concerned. Another requirement is the need to keep the site clean throughout the construction period. On a more personal level, I have noticed that as a foreman I'm asked more and more to suggest inventive solutions, to be proactive. This sort of involvement for construction site workers seems logical to me in the context of optimising costs and lead times. As for my future, I see it on construction sites in Morocco, but also in the whole of Africa, because today mobility is part of the profession.

Yesterday

A young mason anxious to do a good job

Today

A team leader, proud to be a member of the Atlas Guild

Tomorrow

An assistant site manager, with a wider range of skills

FRANCE

Éleonora Riva

Site supervisor
at Bouygues
Travaux Publics

I will be **building**
structures that will
make **life easier**

I supervise civil engineering works for the stations of the future east-west tram line in Nice. I'm in charge of roughly fifty people, and I handle relations with the customer and our partners. My profession has changed a lot. Discussions are increasingly dematerialised, there's a vast amount of information and it circulates very fast... but it is important to maintain face-to-face contact to create links. Hearing what customers have to say, understanding their needs and explaining the progress of the project are all fundamental. Other changes I've seen: greater attention given to safety, with procedures that are more rigorous and more formalised, more forward planning on future works to achieve better scheduling and costs, and the teams that I supervise are becoming increasingly multicultural.

Yesterday

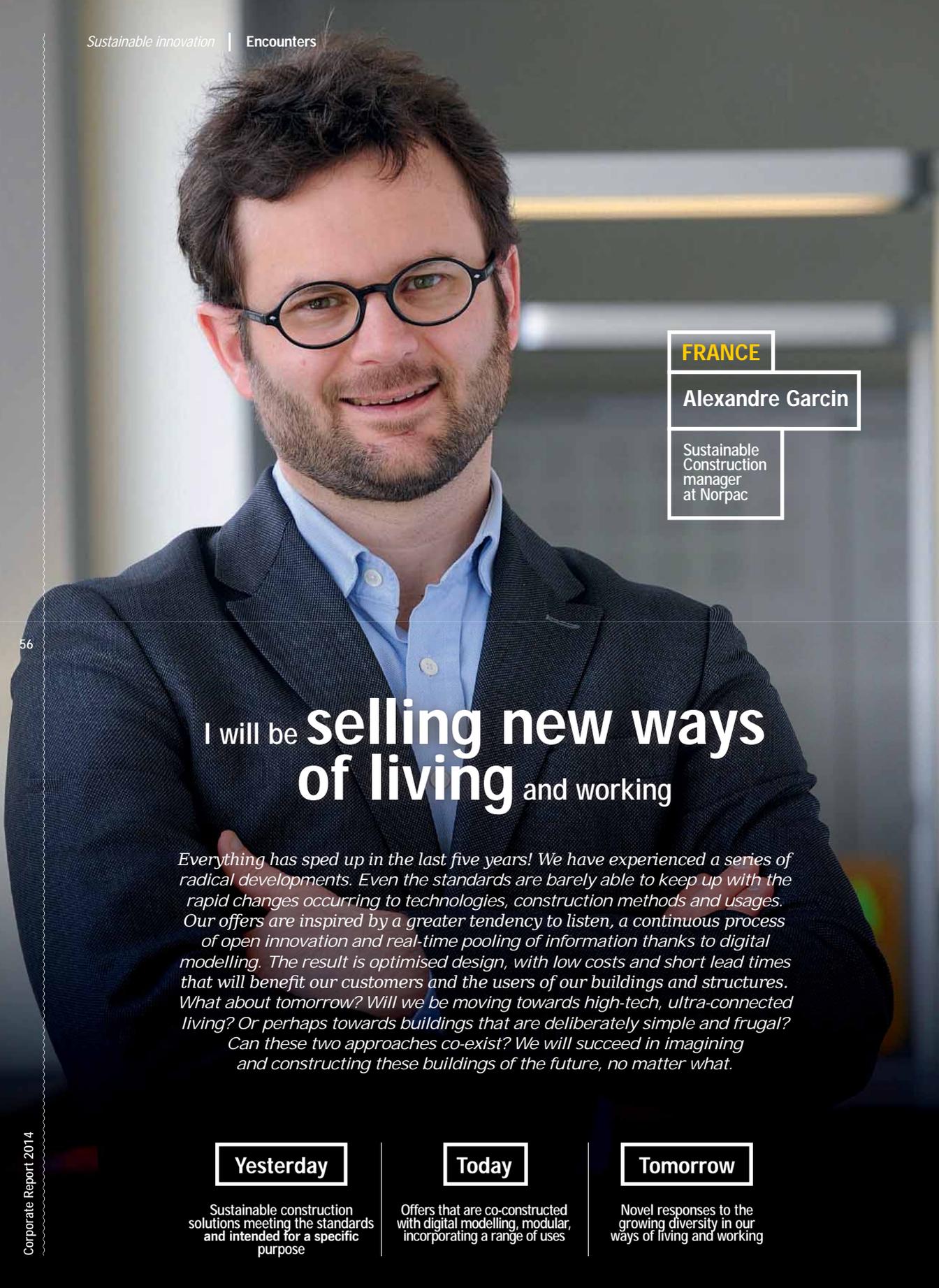
An occupation with a strong
local profile

Today

An itinerant occupation,
wherever projects are,
in France or elsewhere

Tomorrow

A public-facing role,
with projects that showcase
our know-how



FRANCE

Alexandre Garcin

Sustainable Construction manager at Norpac

56

I will be **selling new ways of living** and working

Everything has sped up in the last five years! We have experienced a series of radical developments. Even the standards are barely able to keep up with the rapid changes occurring to technologies, construction methods and usages. Our offers are inspired by a greater tendency to listen, a continuous process of open innovation and real-time pooling of information thanks to digital modelling. The result is optimised design, with low costs and short lead times that will benefit our customers and the users of our buildings and structures. What about tomorrow? Will we be moving towards high-tech, ultra-connected living? Or perhaps towards buildings that are deliberately simple and frugal? Can these two approaches co-exist? We will succeed in imagining and constructing these buildings of the future, no matter what.

Yesterday

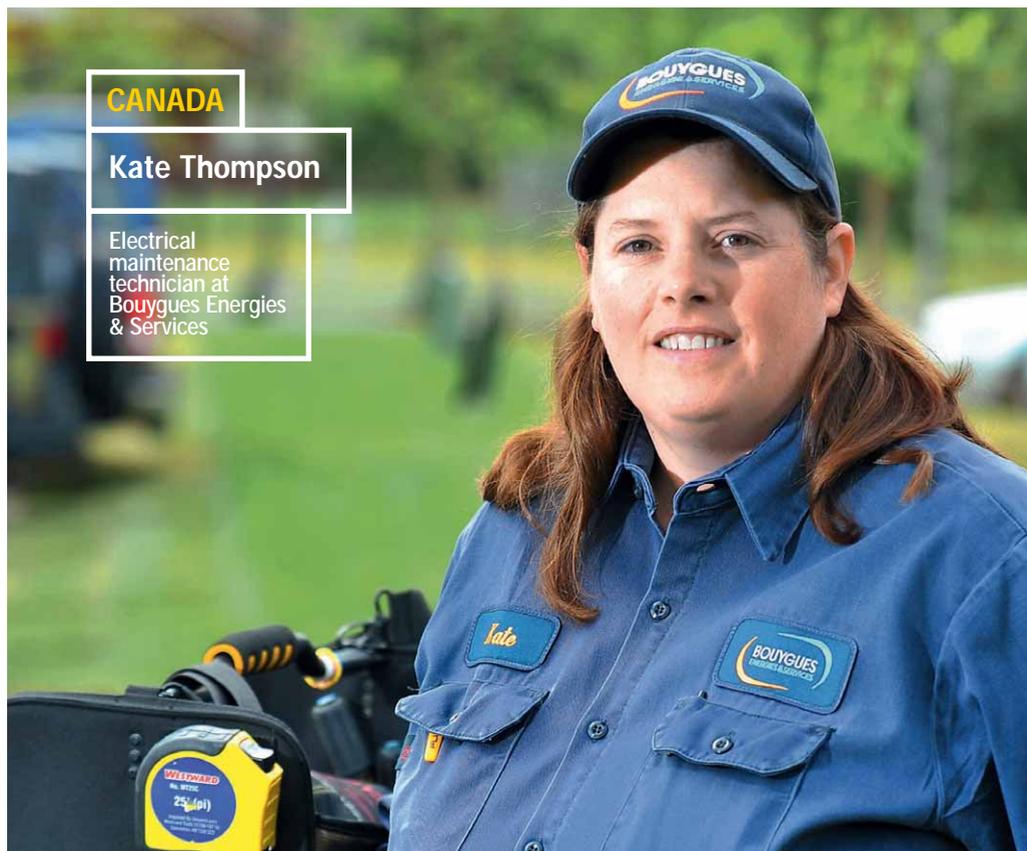
Sustainable construction solutions meeting the standards and intended for a specific purpose

Today

Offers that are co-constructed with digital modelling, modular, incorporating a range of uses

Tomorrow

Novel responses to the growing diversity in our ways of living and working



CANADA

Kate Thompson

Electrical
maintenance
technician at
Bouygues Energies
& Services

I will be an electrical technologist

I am responsible for the maintenance and repair of the electrical infrastructures at the Royal Canadian Mounted Police E division's headquarters in Surrey, British Columbia. This includes fire alarms, building automation, structured cabling and lighting controls.

Innovation is my main challenge because our equipment involves more and more integrated software. As maintenance teams, we have to perfect and constantly share our know-how and knowledge. Every day I need to combine my initial general set of skills with specific technical knowledge of the equipment I am repairing, using the tools and solutions made available by IT. The complexity and security restrictions on this site also mean more attention to safety awareness and challenge my ability to work as quickly and discreetly as possible in order to satisfy the customer.

Yesterday

I needed basic knowledge of electrical and manual tools

Today

I have to keep abreast of integrated software technologies on a daily basis

Tomorrow

Electricians will have to become more comfortable in using computers and software to maintain connected buildings



Wide angle

Modernisation all along the line in Lille

Carrying 165,000 passengers every day, Line 1 of the metro is the central nervous system of the Lille public transport network. To cope with increased levels of traffic, a project is underway to double the lengths of both the trains and the platforms. Norpac, a Bouygues Construction subsidiary, is performing works in nine of the line's 18 stations. A wide range of tasks – including

surfacing, false ceilings, lighting, ironwork, the creation of new entrances and improving accessibility – are being carried out without disruption to services. Some of the work is being done at night; work scheduled for the daytime is performed in totally sealed off zones and is subject to monitoring by measuring apparatus for noise and dust.





Wide angle

Marina Shopping Centre, Casablanca

Bymaro, Bouygues Construction's Moroccan subsidiary, is constructing the Marina Shopping Centre in Casablanca. Situated on the seafront, between the port and the Hassan II mosque, it is at the heart of the new Marina development, which intends to position the city among the region's great metropolises for business and tourism.

The project, scheduled for handover in 2016, has been developed on a site of over 40,000 m² and includes a hypermarket, shops, an entertainment zone, an esplanade and four office blocks. The actual shopping centre will consist of two storeys, each of them six metres tall, while the four office buildings will be six storeys high.



Wide angle

The Nîmes-Montpellier rail bypass

Bouygues Travaux Publics and DTP are two of the companies responsible for the Nîmes-Montpellier shared-track high-speed railway line. With a strong regional profile, the project will improve service quality for passengers with the development of regional trains and the high-speed offer. The performance of freight transport between Spain, France and Italy will also be optimised. The project aims to be exemplary with regard to local economic development and protection of the environment.

It has created jobs, especially for young people: 7% of hours worked are allocated to jobseekers under the terms of social integration measures. To help with the conservation of biodiversity, a specific procedure has been introduced to limit the impact on flora and fauna. In parallel, compensatory measures have been taken all along the route, such as maintaining alfalfa crops for the little bustard, a species of protected bird.





For more information:

- 01 **The financial report**
- 02 **The extra-financial report**
- 03 **The Terre Plurielle progress report**

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04 For further information or for more in-depth coverage of a topic, visit the bouygues-construction.com website and the Group's blog: blog.bouygues-construction.com



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N.B. With effect from June 1, 2015, Bouygues Construction has standardised the names of its regional building subsidiaries in France. In northern and eastern France, Norpac and Pertuy Construction have merged and become Bouygues Bâtiment Nord-Est. In the west, Quille Construction has now become Bouygues Bâtiment Grand Ouest. In central and south-western France, DV Construction is now named Bouygues Bâtiment Centre Sud-Ouest. In south-eastern France, GFC Construction will now be known as Bouygues Bâtiment Sud-Est. Finally, in the French Antilles and French Guiana, GTC Construction has become Bouygues Bâtiment Outre-Mer.

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