

BUILDING

BETTER

CITIES



LAFARGE
Building better cities™

PROFILE

A top-ranking player in the cement, aggregates and concrete industries, we contribute to the construction of cities around the world. Our innovative solutions provide cities with more housing and make them more compact, more durable, more beautiful and better connected. With the world's leading building materials research facility, we place innovation at the heart of our priorities, in order to contribute to more sustainable construction and better serve architectural creativity.

With annual sales of €15.2 billion, operating in 62 countries and employing 64,000 people, Lafarge is a world leader in building materials.

CONTENTS

| | | | |
|--|----|---|----|
| EDITORIAL • | 04 | CHALLENGES • | 22 |
| by Bruno Lafont | | Key issues for cities | |
| STRENGTHS • | 06 | AMBITION • | 26 |
| A geographical portfolio that will generate growth | | Building better cities | |
| STRATEGIC LEVERS • | 10 | SOLUTIONS • | 28 |
| How innovation drives growth | | Providing cities with more housing and making them more compact, more durable, better connected, more beautiful | |
| How performance drives competitiveness | | | |
| Putting people at the heart of our transformation | | | |
| A commitment to sustainable development | | ACTIVITIES • | 56 |



EDITORIAL BY BRUNO LAFONT

• Chairman and Chief Executive Officer •



**“OUR AMBITION IS
TO SUPPORT URBAN CHANGE
SO THAT WE CAN HELP
BUILD BETTER CITIES.”**

The world is changing, at a faster pace than ever before in the history of humanity. To anticipate and keep up with these changes, we have set in motion a process of considerable transformation.

We have structured our organization by country, to ensure that we are as close as possible to our markets and our customers. We have stepped up our focus on innovation, so that our status is less that of a manufacturer of materials but rather a provider of solutions for construction. Our costs have been reduced to enable us to be increasingly more competitive.

Today, we are about to open a new chapter in our history. We have announced the project to create LafargeHolcim, with the objective to build the most advanced building materials group. The project, which is subject to consultation with the social partners and to the approval of competition authorities, is expected to be completed during the first half of 2015. It is a merger of equals, between two groups who share the same values and standards of

professionalism and performance, while also benefiting from very complementary geographic portfolios.

It is a high value-added creation project for our customers, our shareholders, our teams and our local communities. LafargeHolcim will build on a strong industrial network. By combining their forces, the two groups will offer the best products, solutions and services in cement, aggregates and concrete. With a global, diversified and balanced geographical presence, LafargeHolcim will benefit from both accelerating demand in growing markets and the economic recovery in developed countries.

With the merger, our combined know-how will enable us to become more innovative, more competitive and faster off the mark to meet the extraordinary challenge of global urbanization – there will be 2 billion new city-dwellers by 2050! By then, nearly 70% of the world’s population will live in towns and cities, which is twice as many as in 1970. Towns and cities – whether small, medium or large, northern or southern – are at the heart of our society’s challenges. The challenges are

not only quantitative. They also require new responses from higher-performance products of increased sophistication. So we have to be at the heart of cities, to refuse to consider the drawbacks of urban development as inevitable and support urban change by giving it a more human face.

What is our ambition?

To play a part in the construction of towns and cities that offer decent housing for all, cities that are more durable, more connected, more compact and more beautiful.

What is our mission?

Devoting all our experience, all our know-how and all our enthusiasm to achieve this superb ambition.

And what makes us proud?

That’s simple: helping build better cities. ◀

**“CREATE LAFARGEHOLCIM, THE MOST
ADVANCED BUILDING MATERIALS GROUP.”**

A GEOGRAPHICAL PORTFOLIO THAT WILL GENERATE GROWTH

• Strategy •

We are present in 62 countries, we have refocused on our core businesses and we have made our organization more efficient. Today we have all the strengths needed to pursue our development.

AN INTERNATIONAL GROUP WITH WELL-BALANCED POSITIONS

The vigorous international expansion that we undertook between 2006 and 2011 has enabled us to develop a well-balanced, high-quality geographic portfolio, strongly weighted to emerging markets.

We are therefore well positioned to seize opportunities for growth. Today, 72% of our business is situated outside Europe, with strong positions in emerging markets in Asia, South America, Central and Eastern Europe, Africa and the Middle East. In almost ten years, the share of our sales in these countries has grown from 32% in 2005 to 58% in 2013. None of these countries accounts

for more than 5% of our sales, which results in a very balanced breakdown of our sales.

REFOCUSING ON OUR CORE BUSINESSES

In parallel, we have decided to refocus on our core businesses: cement, aggregates and concrete. These three businesses will enable us to speed up our rate of growth because they represent high potential for development and significant prospects of synergies.

AN ORGANIZATION CLOSER TO OUR MARKETS

We have also introduced a new country-based organization. More agile, faster acting and more focused on markets and customers, this organization makes us more efficient. It relies on two levers for growth: innovation and performance.

STRONGLY WEIGHTED TO EMERGING COUNTRIES, OUR GEOGRAPHIC PORTFOLIO ENABLES US TO SEIZE ALL OPPORTUNITIES FOR GROWTH.

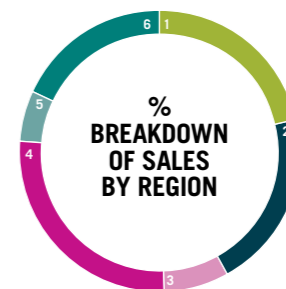
KEY FIGURES 2013



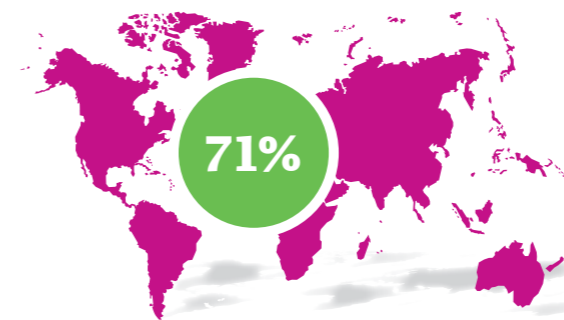
BREAKDOWN OF SALES



| Business | % |
|--------------------------|-------|
| 1. Cement | 63.5% |
| 2. Aggregates & Concrete | 35.9% |
| 3. Others | 0.6% |



| Region | % |
|-------------------------------|-------|
| 1. Western Europe | 21.4% |
| 2. North America | 20.6% |
| 3. Central and Eastern Europe | 7.5% |
| 4. Middle East and Africa | 26.9% |
| 5. Latin America | 5.7% |
| 6. Asia | 17.9% |



SHARE OF SALES OUTSIDE EUROPE

€601m



NET INCOME GROUP SHARE

62

countries

64,000

employees

15,198

million euros of sales

1,636

production sites

62

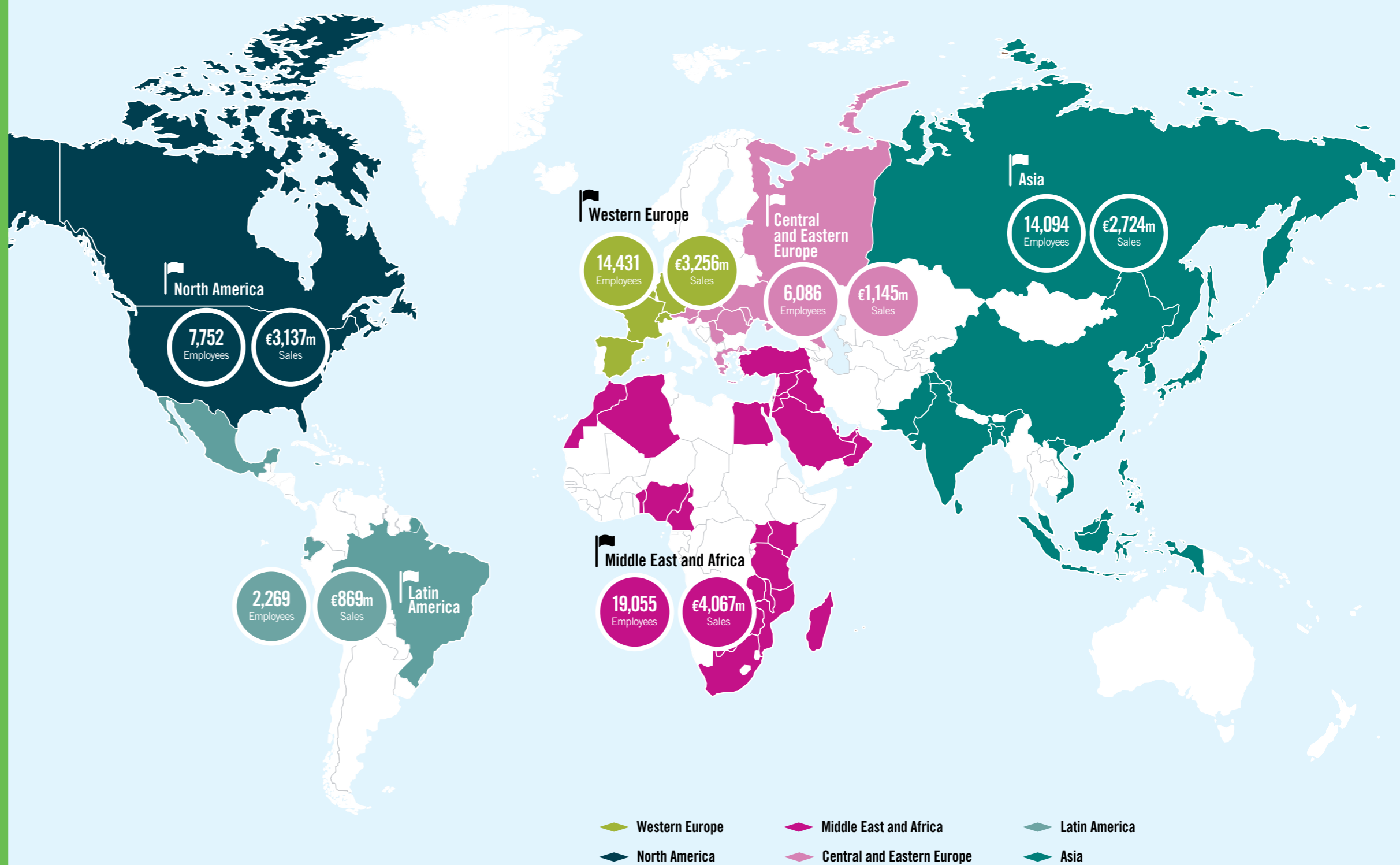
COUNTRIES



| | |
|-------------------------------|-------|
| 1. Western Europe | 22.7% |
| 2. North America | 12.2% |
| 3. Central and Eastern Europe | 9.6% |
| 4. Middle East and Africa | 29.8% |
| 5. Latin America | 3.6% |
| 6. Asia | 22.1% |



| | |
|--------------------------|-------|
| 1. Cement | 59.6% |
| 2. Aggregates & Concrete | 39.3% |
| 3. Others | 1.1% |



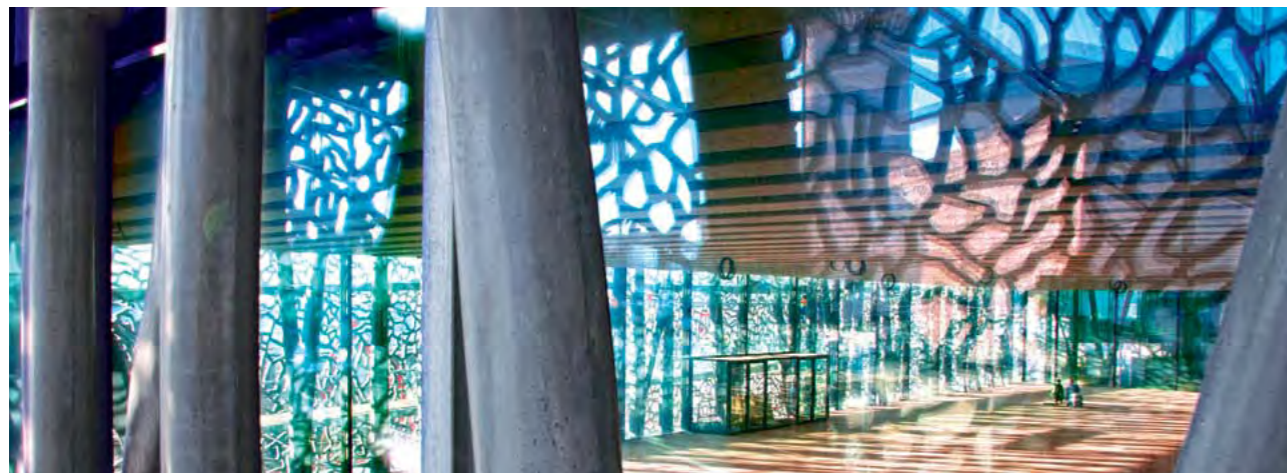
Map of Lafarge locations worldwide as at December 31, 2013 (plants and sales offices)

**FOUR
STRATEGIC
GROWTH LEVERS**



HOW INNOVATION DRIVES GROWTH

LEVER 1



INNOVATION

140

new product launches
in cement and concrete by our
countries in 2013

A contribution of

€450m

of EBITDA to the 2012-2015
strategic plan, which will be achieved
by the end of 2014

Innovation is at the heart of our strategy, driving our development.

Drawing on market needs to design new solutions and responding to the specific issues that surround us, we create value for our customers and growth for our businesses.

INNOVATIVE OFFERS FOR LOCAL NEEDS

Delivering greater added value to our customers means offering them innovative solutions by addressing, and even anticipating, their needs. We do this by getting as close as possible to our markets. Take the residential sector, for instance, which is looking for fast and inexpensive solu-

tions in order to develop housing in cities. We have developed solid, accessible and affordable materials that will make it possible to construct quality homes at a reasonable price. In Malawi, the construction of clay brick houses has an impact on deforestation, because the firing process used to manufacture the bricks consumes large amounts of wood. We have devised an alternative solution: Durabric. This new cement binder is mixed with earth and/or sand to produce soil-stabilized blocks without firing. This solution can easily be replicated in other countries: two billion people around the world live in mud houses.

OUR DEVELOPMENT LABORATORIES DRAW ON LOCAL BUILDING TRADITIONS TO CREATE INNOVATIVE PRODUCTS THAT CAN THEN BE DEVELOPED ELSEWHERE.

Meanwhile, public authorities and developers want to build towers that are taller and taller or bridges that are as delicate as they are solid. We create specific construction solutions to produce parts of structures that architects can incorporate right from the initial design phase of their projects. We invent materials that combine technical feats with attractive appearance and high strength, such as our ultra-high performance concrete, Ductal®, chosen for projects as varied as the renovation of the Pulaski Skyway in New York, the construction of the MuCEM in Marseille, France or the Pérez Miami Art Museum in the United States.

DEVELOPMENT LABORATORIES AT THE HEART OF OUR MARKETS

Because each of the countries in which we do business has to confront its own set of challengers and possesses its own specific building traditions, we have created local development laboratories, which act as bridgeheads for our traditional Research and Development Center, located at L'Isle d'Abeau, near Lyon, France.

Their purpose is to understand specific local needs and conditions as a basis for developing innovative products. So in India, for instance, we deliver slow-setting concrete in bags down the narrow alley-

ways of the slums to enable residents to improve their homes. This is a solution that could be extended to other countries.

SOLUTIONS THAT MAKE OUR PRODUCTS AVAILABLE TO EVERYONE

In practically every market, there is a growing demand for specialty and ready-to-use products, such as aggregates in bags, cement in small plastic bags, masonry cements, mortars in buckets, etc. This trend is linked to the development of self-build observed in the residential building sector. We multiplied our initiatives in this market in 2013 in almost every country, in order to find – or create – the most suitable distribution circuits for our products.

In mature countries, this strategy mostly entails the creation of special partnerships with leading retailers to ensure that our products are more present and to raise our profile. In Nigeria and China, strategic distributors have been identified and selected to improve coverage of the country or of particular markets. In Tanzania and Zambia, a network of containers has been put in place to enable us to develop cement distribution in rural regions. ▶



DISTRIBUTION

BATISTORE: THE FIRST SALES OUTLET IN ALGERIA

In Algeria, the first Batistore branch opened its doors in July 2013. Directly managed by Lafarge, this is the pilot for a future chain of stores intended to expand mostly through franchising. Roughly one hundred outlets should have opened by 2016. The idea is to distribute Lafarge products and related articles to the general public and to craftsmen in a country where demand is strong but distribution channels are inadequate. The initiative is inspired by the Mawadis chain of stores launched in Morocco over two years ago.

HOW PERFORMANCE DRIVES COMPETITIVENESS

LEVER 2



PERFORMANCE

13 to 15

million tonnes of additional cement production in existing plants by 2015.

COST REDUCTIONS

A contribution of
€1.3 billion

of EBITDA to the 2012-2015 strategic plan, which will be achieved by the end of 2014

We are constantly improving our competitiveness by taking action to increase the value of our products and services, reduce our costs, optimize our supply chain and boost the productivity of our plants.

Producing more cheaply but with the same level of quality and producing more thanks to increasingly reliable plants are two key levers for our competitiveness: they enabled us to generate €1.5 billion of savings between 2006 and 2012. In 2013 alone, we reduced our costs by €450 million. This

achievement has enabled us to fulfill our cost reduction program, which had forecast €1.3 billion of additional savings between 2012 and 2015, a year ahead of schedule.

PRODUCING MORE CHEAPLY

Our energy costs constitute around one third of our expenditure, and so they offer considerable potential for progress. They have led us to be innovative in how we use alternative fuels: we now burn tires, waste industrial oils, biomass and agricultural waste, and the list grows longer each year. We are pioneers in the use of these recycled fuels, as well as in sorting

OUR PERFORMANCE IS GAUGED BY OUR CAPACITY TO INCREASE OUR PRODUCTION WITHOUT COMPROMISING PRODUCT QUALITY.

and processing household waste so that we can turn it into fuel for our kilns. We have signed a number of agreements with city councils. In some countries, we have gone as far as building our own power plants combined with installations that recover the heat generated by the cement manufacturing process.

Another innovation to result from our research into energy performance is the modification of the composition of certain cements to enable them to be produced with less energy. By reducing the amount of clinker – the component of cement that requires the most energy to produce – with industrial by-products, we considerably reduce our energy needs.

PRODUCING MORE

We also gauge our performance in terms of our capacity to increase production without additional investment and, of course, with no loss of quality. Thanks to our experience of maintaining cement plants, we have been able to develop operating models through which all our plants are committed to a program of continuous improvement, aiming to achieve excellence. Our target is to raise production by between 13 and 15 million tonnes from 2012 to 2015, with minimal investment.

PERFORMANCE AT EVERY STAGE

Our determination to find new performance drivers is found at every level of both the production and distribution chains. Whenever new facilities are built, we focus on minimizing the time taken for construction and for the build-up to full production capacity. In 2013, we launched a plan to make our supply chain more professional, something which is vital for our performance and for ensuring that we can deliver added value to our customers. And lastly, we pay particular attention to procurement. We have expanded our sourcing platform in China, with a new team responsible for supplying our plants with high-quality equipment and replacement parts at the lowest possible price. ➔



LOGISTICS

HOW THE SUPPLY CHAIN CREATES VALUE

Optimizing inbound and outbound flows and delivery rotations, avoiding empty return trips, avoiding waits during loading and breaks in supply caused by a lack of trucks, improving the management of transport providers by incorporating performance clauses into their contracts, ensuring that road safety standards are respected: when managed properly, the supply chain plays a key part in reducing costs and gives us a competitive advantage for increasingly demanding customers. To achieve excellence, we have designed a business model including the introduction of transport planning and management software and performance indicators.

PUTTING PEOPLE AT THE HEART OF OUR TRANSFORMATION

LEVER 3



PEOPLE

1,400

salespeople trained in new sales methods and tools

35%

of senior management posts held by women by 2020

A key element in our success, our human resources support the Group's transformation.

Through our commitment to diversity and our career development policy, we have made our men and women our finest asset.

SUPPORTING THE GROUP'S TRANSFORMATION

Our human resources have been reorganized to boost innovation and performance as strategic levers and to support the changes we are undergoing. If we are to understand more clearly the needs of our different markets, sell

better and innovate more, we require new skills and, in some cases, new profiles. We expanded our R&D and marketing teams in 2013, bringing in new skills combining technical knowledge and market experience. These employees will help us market innovative products, and by operating in a network they will enable us to improve the transfer of knowledge and technologies between countries.

Our sales teams are an essential link in our value chain, and they are trained in the most efficient sales practices to enable them to fine-tune their response to our customers' requests.

AS AN INTERNATIONAL GROUP, LAFARGE BELIEVES THAT ALL KINDS OF DIVERSITY SPEED UP CHANGE AND ARE A SOURCE OF PERFORMANCE, CREATIVITY AND INNOVATION.

The constant upskilling of our employees is not confined to the marketing and sales functions; it is also occurring at the heart of our industrial functions. Because we believe we can only increase our competitiveness by relying on efficient and committed teams in our plants, we have put a number of development programs in place for our managers and key operational posts.

BENEFITING FROM OUR DIFFERENCES

As an international Group, we also believe that all kinds of diversity speed up change and are a source of performance, creativity and innovation. This is why we are working proactively to achieve the target of having 35% of senior management posts held by women by 2020. We also endeavor to promote people of varied profiles, from a range of different nationalities, socio-professional categories and training backgrounds.

AN AMBITIOUS APPROACH TO HEALTH AND SAFETY

Providing a safe and healthy working environment for our employees and contractors is an absolute priority shared by everyone in the Group. It is based on a few key principles: risk management on a daily basis, accountability from each employee for his or her safety, and

exemplary behavior throughout our organization. Year by year, we continue to make progress towards our target of "zero accidents" and our goal is to be acknowledged as one of the safest companies. In 2013, we recorded our best ever performance, with a lost-time injury frequency rate of 0.49.

It may be less easy to measure well-being at work, but it is no less essential a factor in our cohesiveness and our success. In 2013, we held numerous discussions with trade unions and employee representatives all around the world to put in place an ambitious corporate social responsibility policy. ➔



TRAINING

SPEEDING UP DEVELOPMENT PROGRAMS

Launched late in 2013 by Lafarge University, the "Make it Yours" program is intended to speed up the rollout of skill development programs – both technical and behavioral – for employees who are in contact with customers. It addresses not only the sales force, but also production teams. The aim is to learn how to present innovative solutions, to sell them well, and then to produce them at a competitive cost. After evaluating each person's skills, an individual development plan defines the training modules, opportunities for learning on the job, e-learning and coaching they require. Following the program, a qualification is awarded that attests to the skills acquired.

A COMMITMENT TO SUSTAINABLE DEVELOPMENT

LEVER 4



SUSTAINABLE DEVELOPMENT

26%
reduction in CO₂ emissions per tonne of cement produced in 2013 compared to 1990

37%
of countries have a job creation plan or an education program

Our ambition of building better cities entails not only improving the quality of life of city-dwellers, but also creating value for everyone. Our growth and competitiveness are inextricably linked to the quality of living conditions in the places where we operate, and there can be no sustainable economic development without the preservation of our living environment and our planet.

A LONG-STANDING COMMITMENT

Our commitment to promoting sustainable development goes back many years. In 2001, we targeted a 20% reduction in our

carbon emissions per tonne of cement by 2010, and reached our goal a year ahead of schedule. In 2007, we launched our Ambitions 2012 program, enabling us to improve our sustainable development practices. In 2012, we launched a second program, Ambitions 2020, which is the most comprehensive and far-reaching program in our sector. It covers all the dimensions of sustainable development, considering them as a whole, through three priority areas of action.

BUILDING COMMUNITIES

We are committed to supporting the social and economic development of the coun-

WE ARE CONVINCED THAT THERE CAN BE NO ECONOMIC DEVELOPMENT IF WE DO NOT TAKE CARE OF OUR ENVIRONMENT.

tries in which we operate. One example of this is in Bangladesh, where, working with a local NGO, we have enabled 25,000 people living in 40 villages to have access to health services, and organized training in the installation of solar panels, leading to the creation of jobs. To go still further, we encourage our employees to contribute their own expertise when local projects are set up. We have set a target of providing one million hours of voluntary work each year by 2020.

BUILDING SUSTAINABLY

Meeting the challenges of urbanization is at the heart of our ambition. To do this, we seek solutions that will provide a better quality of life while still conserving resources. Aether® cement with a lower carbon footprint, Thermedia® structural insulating concrete and Hydromedia™ pervious concrete are just some of our high value-added innovations for contractors and for our end customers. Promoting sustainable construction also means endeavoring to ensure that all city-dwellers have a roof over their heads: our target is to help provide access to decent housing for two million people by 2020. To do this, we have developed innovative building solutions and we take part in finance schemes intended for low income populations.

BUILDING THE CIRCULAR ECONOMY

The third pillar of our program, building a circular economy, means responsible industrial development. In the first place, this entails conserving our planet's limited raw materials by reusing resources: our target is to reach a level of 30% of alternative fuels by 2015 and 50% by 2020. As well as reducing our environmental footprint, this policy enables us to generate economic activity that is beneficial for local economies and also helps to improve the competitiveness of our plants.

We are working on reducing our carbon emissions, and we have put in place biodiversity preservation plans in our quarries and the areas surrounding our plants. We have also launched a worldwide program to introduce more sustainable water management, particularly in critical water basins. ➔



GLOBAL FORUMS

COMMITMENT AT THE HIGHEST LEVEL

The success of our actions to promote sustainable development owes much to the commitment at the highest level shown by our Chairman and Chief Executive Officer in national, European and worldwide organizations. Co-chair of the Energy Efficiency in Building (EEB) initiative run by the World Business Council for Sustainable Development (WBCSD) since 2006, he joined the WBCSD Executive Committee in 2013. He chairs the Energy and Climate Change group of the European Round Table of Industrialists (ERT). In France, he took up his position as president of the Sustainable Development Commission of the Medef in January 2014.

**HELPING
TO MEET THE
CHALLENGES OF
URBANIZATION**



1

ISSUES

The cities of the 21st century will see a rapid increase in their populations. This situation means meeting significant new challenges, in developing countries as well as in mature regions: improving the living conditions of city-dwellers, making sure they have access to decent housing as well as to energy and raw materials without depleting resources. Society must rethink the development of its cities.

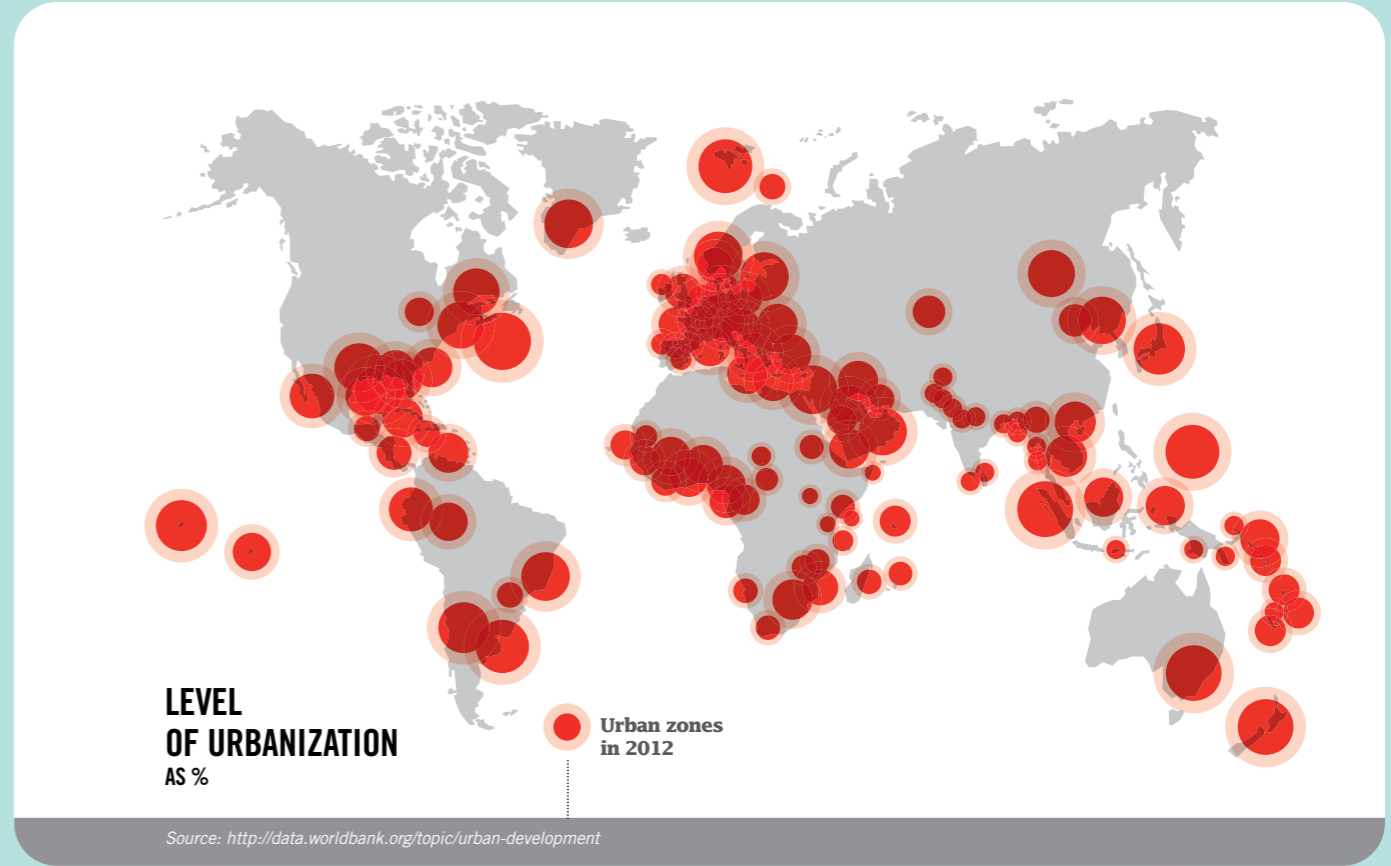


SOURCES

World Urbanization Prospects: the 2011 Revision, United Nations Department of Economic and Social Affairs, 2011 - *World Population Prospects: the 2012 Revision*, United Nations Department of Economic and Social Affairs, 2013 - *Palmarès 2014 des plus grandes villes du monde*, www.populationdata.net - Proceedings of the 6th World Congress of the International Union of Public Transport, Geneva, March 2013 - www.pcet-ademe.fr/domaines-actions/batiments/contexte-et-enjeux - *La production d'électricité dans le monde : perspectives générales (2013 édition)*, www.energies-renouvelables.org - www.eaufrance.fr, Observer et évaluer - Chiffres clés

01 POPULATION GROWTH

By 2050, the planet's population will reach 9.6 billion. This demographic explosion will affect cities most of all: they will need to accommodate roughly two billion new city-dwellers in the next five decades.



02 NEW URBAN LANDSCAPE

To make room for new city-dwellers, a new urban fabric will develop and the landscape of cities will evolve into new forms. The number of average-size cities of between 100,000 and 500,000 inhabitants will increase. Megacities of more than 10 million inhabitants will rise from 23 today to around 40 in 2025. By then, 50% of the world's population will live in cities of more than 500,000 inhabitants.

Urbanization rate
 From 30% in 1950 and over 50% since 2007, this will rise in 2050 to around **70%**

DEVELOPMENT OF MEGACITIES

in millions of inhabitants



+50% more journeys in cities by 2025 compared to 2005

03 RESOURCES & ENVIRONMENT

Fuel poverty, energy waste and insalubrious conditions... Both in developing countries and in western cities, providing reasonable access to vital resources (water, energy) will be a key challenge. In the battle against climate change, cities of the future will have to limit their energy consumption and their greenhouse gas emissions.

DEVELOPMENT OF ENERGY

18% of carbon emissions in France are due to the construction sector

65% of the energy consumption of a building is due to heating

21% of worldwide electricity production is generated by renewable energy

1.44 billion m³ of annual water consumption in France is for domestic use (24% of total consumption)



BUILDING BETTER CITIES

Making urbanization a success is the challenge of this century. And it is also our ambition. We support the metamorphosis of cities and contribute solutions which play their part in providing cities with more housing, and making them more compact, more durable, more beautiful and better connected.



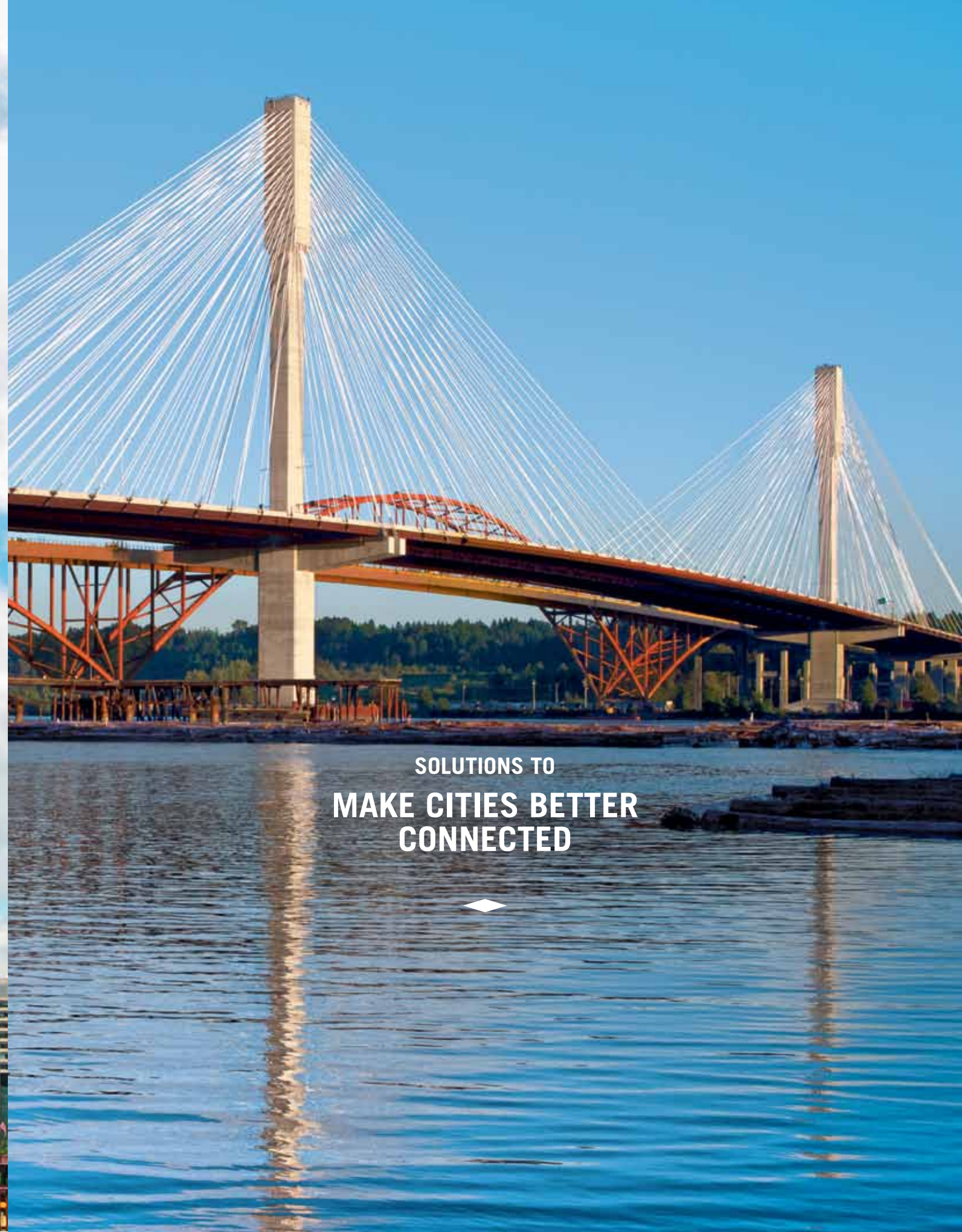
SOLUTIONS TO
GIVE CITIES MORE
HOUSING



SOLUTIONS TO
MAKE CITIES MORE
COMPACT



SOLUTIONS TO
MAKE CITIES BETTER
CONNECTED



SOLUTIONS TO
MAKE CITIES MORE
DURABLE



SOLUTIONS TO
MAKE CITIES MORE
BEAUTIFUL



3

SOLUTIONS

To achieve our ambition of helping to build better cities, our innovations seek to improve city-dwellers' quality of life. We develop high value-added products, we devise new building systems in partnership with players all along the construction chain, and we create solutions and services that will help to meet the enormous challenges of cities.

The city is a place of life, a “big house” that we share with strangers. Provided that everyone can be accommodated. For newcomers who arrive in cities, just as for those who already live there, the priority is access to a decent, affordable and durable home.

◆ BUILDING HOUSING FOR ALL

Our materials are solid, widely available and reasonably priced; they offer solutions for building new homes and refurbishing existing ones. Our cement and concrete solutions adapt and vary according to local resources and building methods. We are also working on innovative processes and services for building faster and more cheaply. For example, we are working with construction companies that use “lost casing” solutions, which are quick and easy to install, allowing for substantial cost savings. Building programs using this technique are under way in several countries. In the French town of Bègles, we are working on a project that reinvents social housing, a concept of modular housing combining

SOLUTIONS TO GIVE CITIES MORE HOUSING



TRAINING FUTURE ARCHITECTS IN AFFORDABLE HOUSING

To raise future architects' awareness of issues surrounding affordable housing, we have devised a training program called Studio+. Inaugurated in December 2011 at the Paris-Belleville National School of Architecture in France, it was followed throughout the year by 100 architecture students in Paris, Mumbai, Bucharest and New York.

the advantages of a house with those of an apartment block!

◆ PROMOTING AFFORDABLE HOUSING

Housing for all is first and foremost a question of means. We offer solutions which enable populations with low purchasing power to be housed at low cost, particularly in developing countries. In Malawi, we offer an alternative solution to clay bricks, which are causing a deforestation problem in the country because firing the bricks consumes so much wood. Durabric is a binder which is used to produce stabilized blocks when mixed with raw earth, at low cost and without harming the environment. Another example of our contribution is the renovation of houses in slums. As concrete trucks cannot negotiate the narrow alleyways, we transport the concrete in bags. We also offer a microcredit program to the most underprivileged people to enable them to build, restore or extend their homes, at the same time providing them with advice and technical support. ◆

NIGERIA LOANS AND ADVICE FOR PEOPLE NEEDING A HOME

Over the last two years, we have put in place microcredit programs in partnership with banks and specialist organizations in order to help families with low purchasing power build, renovate or extend their homes. We have signed a partnership agreement with the French Development Agency for the provision of microfinance loans to support affordable housing in Africa. In Nigeria, the continent's most heavily populated country and the world's seventh most populous, the Agency has contributed €5 million to the largest local microfinance bank, Lapo (Lift Above Poverty Organization), our partner in the program. In addition to granting loans to enable people to purchase building materials, the program offers future homeowners advice from our technical advisors and authorized retailers to help them turn their projects into reality. Similar initiatives have already been successfully implemented in Indonesia, the Philippines and Zambia, while others are currently under preparation in Morocco, Bangladesh and Sri Lanka.



MALAWI A SOLUTION TO HELP PRESERVE THE ENVIRONMENT

In Malawi, the construction of brick houses has resulted in heavy consumption of wood used for firing the clay. Anxious to put a stop to deforestation, the country's authorities now discourage this technique. Lafarge has devised an alternative solution, a product called Durabric. Designed with the Group's Research Center, this new cement binder is mixed with earth and/or sand to produce soil-stabilized blocks without firing. The solution is reliable, economical and environmentally friendly. Lafarge supports its product offer with a range of services including soil analysis to optimize formulation, machine rental and training. This solution could easily be replicated in other countries: two billion people around the world live in mud houses.



INDIA HOUSING IN THE SLUMS

To improve the lives of slum-dwellers and enable them to build decent, solid and watertight homes, concrete is the best solution. But the first difficulty to overcome was delivering it through alleyways that are too narrow for trucks. We have found a solution: slow-setting concrete packaged in 15-liter bags and delivered by auto rickshaw. Launched in April 2012 in Dharavi, a Mumbai slum with more than a million inhabitants, this initiative has been extended to other Indian cities. Three ready-mix concrete plants have been built to supply an average of 500 bags per day. What is more, in view of the rarity of natural sand, the mortar is manufactured using sand derived from crushed rocks. So we are playing our part in the country's huge challenge of building 10 million proper homes every year until 2030, ensuring that some of the most deprived people are not left without a home.



FRANCE COMFORT FOR ALL

In the fall of 2012, the Ginko eco-district, on the shores of Bordeaux Lake, welcomed its first residents. It is a model development combining housing, shops and public amenities, designed so that everyone – whether owner-occupiers or tenants in social housing – can enjoy an optimal standard of living while reducing their environmental footprint. In the Jules Verne block, the first to be constructed, six traditionally built seven-story buildings (113 apartments) have been given particular attention in terms of insulation in order to reduce both energy costs and noise nuisance. The lower floors, employing a thermo-acoustic insulation material, and the intermediate floors, using acoustic insulation, were produced using Agilia®, our self-compacting concrete. As an active partner of the entire project, we will supply a total of over 16,600 m³ of concrete for construction of the bearing walls, columns and beams of the various buildings that will make up the Ginko eco-neighborhood. When it is completely finished in 2017, it will provide 2,150 homes for more than 5,000 residents.



CAMEROON A GOOD, FAST AND INEXPENSIVE JOB

Cameroon is facing very rapid growth of more than 10% per annum in its urban population. As things stand, around one million homes are needed just to cope with the most urgent needs of urban populations. Hence it is important to find solutions for building fast, well and inexpensively. In the capital, Yaoundé, the first phase of a construction project has been completed, consisting of 640 homes, using the “lost casing” technique (where the formwork remains incorporated in the walls after the concrete is poured). It is a quick and easy process, and is very economical. Working in partnership with the construction company, we will deliver the 40,000 m³ of concrete that are required thanks to our first concrete plant in Cameroon, installed on the construction site. A similar program has begun in Brazil, where there are also considerable needs. The country is roughly 85% urbanized, but it has a shortfall of some nine million homes. 26% of inhabitants live in slums, and half are not connected to a drainage network.



FRANCE JUST LIKE A HOUSE

Imagine an apartment with a garden that the inhabitants can organize however they like and can convert over time, as their needs or circumstances change. This is a project called Les Hauts-Plateaux, in which we are taking part alongside architect Christophe Hutin, property developer DomoFrance and the town council of Bègles, near Bordeaux. The homes are apartments – the originality of Les Hauts-Plateaux is that it's a vertical housing estate. Decks are stacked, divided into units of 100 m² to 120 m², including 50% living space and 50% garden, including 25% that can be converted, if necessary, into additional living space. Unprecedented in France, such a system helps combat the problem of urban sprawl while maintaining the benefits of a house (modularity, possible

expansion, individual garden). It encourages a social mix, with a particularly affordable price for first-time buyers, especially young families with children. The foundation stone was laid in September 2013. This innovative project would not have been possible without close upstream cooperation between all the players to create a structure made up of slabs and very long-span thin beams using special concretes – high-strength for the beams, impermeable for the slabs and pervious for the exterior floors.

“The model of stacked decks on which each owner can create his own home was developed more than 30 years ago in Berlin by the architect Frei Otto, but in France it is unknown and revolutionary. Christophe Hutin, the Bordeaux architect working with Lafarge, proposed this project to the Bègles town council. DomoFrance, the social landlord, agreed to finance the project. After two years of work by these four partners, the project is now coming to fruition. I would like to pay tribute to the courage, the desire, the risks taken and the motivation of all the players in the spirit of a ‘shared project’. Our aim now is to show that it can work and that it can be reproduced elsewhere.”

JEAN-ÉTIENNE SURLÈVE-BAZEILLE,
Vice-Mayor of Bègles in charge
of Urbanism and Town Planning

SOLUTIONS TO MAKE CITIES MORE COMPACT



All expanding cities run the risk of creating urban sprawl. An alternative that is better for the environment and for the well-being of city-dwellers consists of making cities denser while retaining open spaces. Proximity between home, work, amenities and services is essential for the quality of life in the city, and allows more mobility.

◆ ORGANIZED DENSIFICATION

Cities that are more compact preserve both the agricultural land needed to feed a growing population and the natural habitats where flora and fauna can thrive. The densification of cities necessitates reusing, sometimes reclaiming, abandoned areas by renovating existing buildings, raising their height, extending them and adding livable space to them. Densification must be carried out in a rational manner, with a balanced approach to space and a vertical approach to construction, whether adding two more stories



PARTNERING GREATER MOSCOW

The Group is involved in the Greater Moscow regeneration project alongside two French architects, Antoine Grumbach and Jean-Michel Wilmotte, who have been commissioned to design projects forming part of the development of the capital. Central to the project is the construction of new metro lines and a tramway, redevelopment of the banks of the Moskva River and the construction of new more environmentally friendly districts.



to a single-story structure or building very tall skyscrapers.

◆ CONCRETE SOLUTIONS

Our solutions play a part in making cities more compact. We are actively participating in vertical constructions which free up ground space. These buildings call upon every variety in our wide range of concretes: very high strength concrete for the foundations and the lower parts, lightweight concrete for the upper parts, and insulating concrete for the intervening stories. Our concrete solutions also offer very good resistance to earthquakes, deformation and fire, and give architects great liberty with regard to forms. For those working on urban development, we also provide experience and research capabilities for the construction, renovation and extension of buildings combining quality, longevity and cost-effectiveness... all of which are essential for creating harmonious neighborhoods. ◆



MOROCCO THE FIRST "ECO-CITY" IN NORTH AFRICA

The construction of Morocco's first eco-city is one of the country's biggest urban adventures: Zenata is being built on the outskirts of Casablanca, on the seafront. This project, which will only be fully completed in thirty years' time, aims to create a city of 300,000 inhabitants from scratch in full accordance with the ecological, economic and social principles of sustainable development: gardens, "soft" mobility with limited use of cars, energy efficiency, water resource management, durability of structures, a center for economic development (creation of 100,000 jobs) and industry, commerce and

healthcare, maintaining a social mix with the construction of 43,500 affordable homes for the middle class and the re-housing of 7,000 families currently living in slums. Thanks to our global positioning of "Building better cities" we have convinced the public authorities, the Zenata development company and the project engineering consultants to involve us in the project from the design stage. This is a unique opportunity for us not only to take advantage of our know-how, but also to develop it by designing solutions adapted to this extraordinary challenge of inventing the sustainable city of tomorrow.

"Among players on the Moroccan market, Lafarge is a pioneer in dealing with the challenges of sustainable development, devising building solutions and getting involved right from the design phase of the project. Along with its capacity for innovation and research, this is what convinced us to form this partnership with Lafarge, so that we can work together to build this improved city."

ZENATA DEVELOPMENT COMPANY



PHILIPPINES TOWERS FOR A FAST-GROWING METROPOLIS

In such a dense and fast-growing city as Manila, it is essential to factor in the economic, social and environmental impact of new constructions, while also striving to satisfy the growing need for office space. Built in the Makati financial center, the Zuellig Building is the first of a new generation of towers to focus on these concerns. An office building offering a high-quality environment, it is the first tower in the country to be awarded the American LEED (Leadership in Energy and Environmental Design) label. It was classed among the three Best Office and Business Developments in Asia by the jury at the MIPIM (*Marché International des Professionnels de l'Immobilier*) in 2012. To construct this 33-story skyscraper, the ready-mix concrete supplier, Decon, opted for one of our high-performance cements because of its consistency, the reliability of supply and our technical assistance.



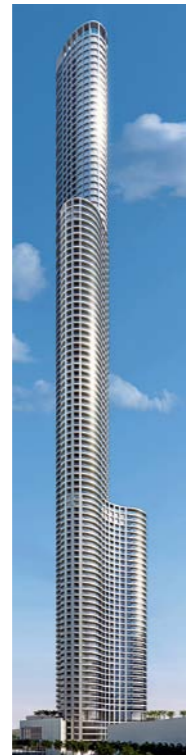
FRANCE AN URBAN METAMORPHOSIS IN MARSEILLE

Marseille, which was the European Capital of Culture in 2013, today presents a new face. The Euroméditerranée project, which is underway in the La Joliette district, not far from the Vieux-Port, is one of the showcases of the city's regeneration program. Combining offices, cultural facilities and housing, it features all the latest trends in urban design. Begun in 1995, the operation has the ambition of positioning Marseille – the second largest city in France with 1.5 million inhabitants – at the level of the great European metropolises and bringing its inhabitants closer to the former docks district, now abandoned. As a stakeholder in this vast project, we have supplied concrete for the new headquarters of the maritime transport company, CMA-CGM, an asymmetrical 145-meter tower with curved walls, designed by architect Zaha Hadid. Other towers are planned as part of the Quai d'Arenç redevelopment, including the H99 tower, designed by Jean-Baptiste Pietri.



INDIA THE TALLEST RESIDENTIAL SKYSCRAPER

The economic capital of India and a megalopolis of more than 20 million people, Mumbai is facing the problems of all major metropolises, such as the scarcity of building land, which is forcing many residents to live too far from their place of work. The solution is to build upwards. Appropriately enough for this enormous city, the Lodha World One tower, which will stand in the center of Mumbai in 2015, will be the world's tallest residential skyscraper. Designed by the I.M. Pei practice, it sets numerous new records. At 442 meters in height and with more than 300 apartments, it will use 800,000 m³ of a value-added concrete suggested at the start of the design phase by our engineers to improve the strength and durability of the structure.



CHINA LIGHTWEIGHT CONCRETE FOR RESIDENTIAL TOWERS

The population of the municipality of Chongqing is 32.8 million, yet only 4.9 million live in the urban zone. Chongqing, in the west of the country, is China's most sprawling city. In order to accommodate the rural population who are flooding into the center on a daily basis, substantial urban development projects are under way. Some 30 million m² of new housing will be completed by the end of 2014. Longfor, one of the leading property developers in China, has selected us to supply the ready-mix lightweight concrete (LWC) needed to build seven residential skyscrapers. The strength and thermal insulation properties of our LWC and its setting speed, along with the services provided by our teams, convinced Longfor to put their faith in us.



SOLUTIONS TO MAKE CITIES MORE DURABLE



Durable cities are those whose buildings and infrastructure resist the passage of time and play their part in preserving the environment.

◆ RESILIENCE TO TIME AND TO NATURAL DISASTERS

The foremost quality of concrete is its solidity: its performance stands the test of time, it requires no maintenance and it provides better resistance to catastrophes such as the Fukushima earthquake or Hurricane Katrina. Although cataclysms remain rare, we supply special concretes in high-risk areas formulated to withstand earthquakes, cyclones or corrosion, like those used for the Pérez Art Museum in Miami.

◆ PROTECTING THE ENVIRONMENT

Durable cities also protect the environment, conserve water and energy resources and contribute to the fight against climate change. The construction processes and materials employed have an impact on the environmental footprint and energy efficiency of



OUR COMMITMENTS FOR THE ENVIRONMENT
 Reducing our CO₂ emissions by 33% per tonne of cement by 2020*, using 50% of non-fossil fuels in our cement plants (including 30% biomass), manufacturing 15 million tonnes of aggregates from reused or recycled materials and incorporating them in 20% of our concrete production: these have been identified as our Ambitions for 2020.

** compared to our 1990 emission levels*



buildings and the quality of living of inhabitants. Starting out at the construction site phase, we have solutions that improve the application of our concretes. Agilia® is self-compacting, which means that it does not need to be vibrated. This results in better working conditions and considerable time-savings.

Building use is the main source of energy consumption. We have improved the naturally excellent thermal qualities of concrete by designing innovative building systems: Ductal®, the ultra-high performance concrete-based thermal breaker, and the Thermedia® range, which provides six times better insulation than a traditional concrete. We are improving safety for pedestrians and drivers, who can be spared flooded and slippery road surfaces thanks to Hydromedia™, our pervious concrete. We are also working on a prototype anti-pollution concrete, which is designed to reduce nitrogen dioxide fumes in closed spaces, such as tunnels. ▶



UNITED STATES STYLE AND RESISTANCE

The new Pérez Miami Art Museum (PMAM), which opened to the public in 2013, is part of a vast revitalization plan for the American city. The architecture practice led by Jacques Herzog and Pierre de Meuron chose the ultra high-performance concrete, Ductal®, to support the wide glass facades of the museum. Thanks to its exceptional strength, Ductal® has made it possible

to build thin, sinuous mullions leaving unobstructed views over the veranda while complying with the anti-hurricane standards in force in this tropical region. One key detail: the concrete used will resist corrosion and abrasion in the salt air climate, even though the museum is located right on Miami's Biscayne Bay waterfront.

"We are excited to work on a museum project in Miami, which is such a vibrant mix of cultures. The region's extraordinary role as an eminent international crossroads will inspire the programming and design of the new site, enabling the creation of a facility that is unique among the ever-expanding number of new museums worldwide."

JACQUES HERZOG, architect
 Source: www.swissinfo.ch,
 "Herzog & de Meuron conquièrent Miami"



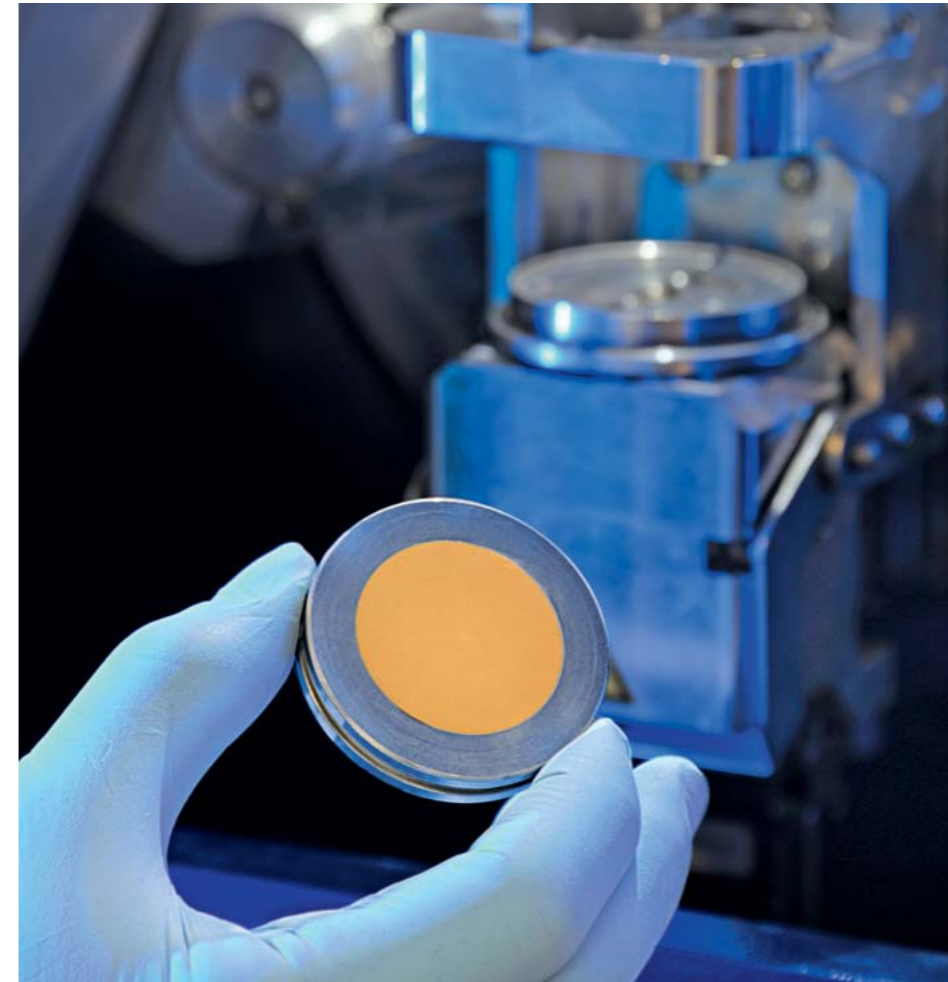
UNITED KINGDOM NET-ZERO ENERGY HOMES

Who has never dreamed of living in a nice house where it's never cold? Where gas and electricity bills are a thing of the past? For residents of Waterford, in the United Kingdom, this dream has now become reality. In collaboration with one of the leading British building contractors, our United Kingdom subsidiary has built net-zero energy houses. What's the secret? The use of the natural thermal inertia of concrete

with cubic volumes (the most energy-efficient shape), combined with solar panels to generate electricity. This project demonstrates the thermal insulation qualities of our concrete solutions and our know-how.

SOLIDIA REDUCING THE ENVIRONMENTAL FOOTPRINT OF CONCRETE

As part of our efforts to reduce our environmental footprint, we have signed a partnership agreement with Solidia Technologies, an American start-up that has developed a process that can reduce the carbon footprint of precast concrete by up to 70%. The process is innovative in two respects: the production of low-carbon cement in a traditional rotary kiln using the same raw materials as normal cement; and CO₂ capture in the manufacture of precast concrete using this cement. This is a process with great potential.



FRANCE INTRODUCING AETHER®, A NEW- GENERATION CEMENT

We have been committed for many years to the fight against climate change and have been working for some time on processes that drastically reduce greenhouse gas emissions during cement manufacture. With Aether® cement, we are launching a revolution: by reducing the amount of limestone in the raw mix and heating the kiln to a lower temperature, we can reduce CO₂ emissions by 25% to 30%. Industrial trials were successfully performed at the end of 2012 at the Group's plant in Le Teil, France, confirming the feasibility of full-scale production of Aether® cement. This project represents undeniable progress, and benefited from a second European grant in 2013 for the industrialization of the first Aether® cements.



UNITED STATES THE VIRTUOUS CIRCLE OF AN ALTERNATIVE FUEL

Among the benefits of our strategy of using alternative fuels, which represented 17% of the energy consumed by our cement kilns in 2013, are lower CO₂ emissions, recycling of waste and the conservation of natural resources. In the United States, for example, our cement plant in Whitehall, Pennsylvania, burns used tires as an alternative fuel in its kilns. These account for 30% of its energy resources. This virtuous and economical process avoids the tires being sent to landfill, where they take up space and generate pollution and health risks. Combustion at a very high temperature ensures the complete elimination of tires while producing cement.



FRANCE A POSITIVE-ENERGY FOOTBALL STADIUM

A centerpiece of social and sporting life in the city, the new Stade Océane, in Le Havre, is unique in France: it is the first that produces more energy than it consumes. Thanks to its 1,500 m² of photovoltaic panels, its rainwater recovery system for watering and sanitation, its thermal insulation and its system to regulate temperature and lighting based on occupancy, the Stade Océane's environmental impact is limited to the strict minimum. No sacrifice has been made as far as aesthetics are concerned, though.

We supplied a cement with very low carbon content (CEM V-type cement, half composed of fly ash produced by thermal power plants). As a result, the construction site's carbon emissions were reduced by 22%.

CANADA HIGH-QUALITY RECYCLED AGGREGATES

Obtained from the rubble of demolished buildings, recycled aggregates offer a double environmental benefit: they provide an outlet for the use of demolition waste while conserving natural raw materials. To promote this material, we have created aggneo™, a range of recycled aggregates that come with a guarantee of properties, supply and performance close to those of natural aggregates, thanks to quality controls at each step of the process. Launched in Canada in 2012, the aggneo™ range aroused interest in the province of Ontario, where it was used as the sub-base for the athletics track at the University of Guelph stadium.



ROMANIA CONCRETE FOR WIND TURBINES

Will Romania become the model for the European energy transition? The towns of Fantanele and Cogealac, in northeastern Romania, are preparing to play host to the largest onshore wind farm in Europe. 240 wind turbines spread over 1,100 hectares will generate around 600 MW of power, enough to supply 400,000 homes! We have been chosen to supply the high-strength concrete that will support the wind turbines. Since construction work was launched in 2008, we have already supplied more than 140,000 m³ of concrete, thanks to a mobile plant installed on the site.

CHINA A PERVIOUS CONCRETE FOR THE EXHIBITION CENTER

Built in the heart of the new economic center of Chongqing, in Sichuan province, the Chongqing International Expo Center is the largest exhibition center in Western China. Situated between the Jialing and Yangtze Rivers, in a region with a humid subtropical climate, the complex faces multiple flooding risks. The architects chose our Hydromedia™ pervious concrete to pave the outdoor areas. A concrete slab is poured on a sub-base of coarse aggregates: the system acts as a "buffer" in heavy rain and is strong enough to withstand the weight of the trucks that will drive over it to install future exhibitions. With a color mixing pale gray and dark gray, Hydromedia™ blends in perfectly with the appearance of the complex and fully complies with the project's strict environmental specifications.





FRANCE IMPROVING ENERGY EFFICIENCY

More than three million French homes spend at least 10% of their revenue on energy, particularly to heat themselves properly. Improving the thermal insulation of buildings is the only reasonable way of combating this energy poverty. Launched in 2009 in partnership with Bouygues, our Thermedia® 0.6 concrete reduces energy loss in facades by 35%, thanks to a formulation that improves the insulation of concrete without affecting its structural performance. As part of a renovation project

in the town of Avrillé, northwestern France, 160 m³ of Thermedia® 0.6 concrete were used to build a three-story apartment block. In Perpignan, southwestern France, Thermedia® 0.6 was also chosen for an office building used by the city's Occupational Health service. The Thermedia® concrete range has expanded with the launch of Thermedia® 0.3, specially designed for facade walls. It offers insulation six times more effective than traditional concrete.

* Pelletier Report on energy poverty (January 2010)

CHINA LOW-COST INSULATION

China is the world's third largest economy and also one of its leading emitters of greenhouse gases. Improving the energy efficiency of the 10 million homes built there each year is therefore a priority. To meet this challenge, our development laboratory based in Chongqing developed a building system in 2012 that improves the thermal insulation of buildings. The cornerstone of the system is Wallmaster, with which it is possible to give houses better insulation thanks to autoclaved aerated concrete (AAC) blocks. Used in conjunction with lightweight concrete for flooring this solution offers thermal comfort without increasing building costs.

SOLUTIONS TO MAKE CITIES BETTER CONNECTED



All city-dwellers want their journeys to be easy, whether they are traveling within their city or their neighborhood, trying to get from one place to another quickly even at the other end of the city, going to work, taking public transport or getting out of the city completely, to go into the country or to another city. Urban growth requires transport systems that are capable of meeting the challenge of ensuring mobility both within and between cities, an essential factor for quality of life and economic vitality.

◆ LARGE-SCALE PROJECTS

Building materials and construction techniques have a key role to play in major transport infrastructure such as tram and metro lines, roads, bridges, tunnels, ports, stations and airports, because they require totally reliable guarantees with regard to solidity, durability and safety. The construction of a road calls for different aggregates – in



AN EXPRESSWAY ACROSS POLAND

Built as part of a renewal program for the Polish road network, the S8 expressway crosses the country from east to west. The leading Polish construction company, Budimex, chose us for this project because of our capacity to offer a complete range including concrete for bridges and roads, aggregates for stabilization, bulk cement and other services, all with a single project manager.

terms of quality, shape and grading – for each layer. This basic raw material is so important that since 2009 the Lafarge Research Center has dedicated a specific program to aggregates.

◆ SPECIFIC SOLUTIONS FOR UNIQUE STRUCTURES

As far as engineering structures are concerned (bridges, viaducts, tunnels), each one is unique and will require specially designed concrete solutions each time. A high level of logistics capabilities are crucial on these vast projects, where it is essential to be able to deliver special products in large quantities at regular intervals, if necessary on a 24/7 basis. ◆



EGYPT A THIRD METRO LINE IN CAIRO

Not only is Cairo the largest city in Africa, it is also the first one to possess a metro. But with 3.5 million passengers per day, the two existing lines were proving incapable of meeting the needs of this severely congested megacity of 15.5 million inhabitants. Construction of the 33-kilometer third line began in 2007, and it will continue in five phases until 2019. One end of the line will serve Heliopolis and the international airport, and the other popular districts lying west of the Nile. Two other metro lines are also due to be built as part of a vast program to relieve traffic congestion in Greater Cairo, which will be complete in 2022. The first phase of Line no.3, which came into service in 2012, includes five underground stations and runs from the city center to the east of Cairo. It required 560,000 m³ of high-strength concrete, impermeable concrete, filling concrete and filling mortar, all supplied by Lafarge.



CASABLANCA, MOROCCO THE TRAM TRANSFORMS THE CITY

Every day, 250,000 to 300,000 people use the tramway crossing Casablanca, opened in December 2012. The success has been on the scale of the needs of the city's 3.6 million inhabitants, who have in the past faced traffic congestion and a less than optimal bus service. The central portion of the line, the pedestrian areas and the junctions are surfaced with decorative paving produced with our Artevia® range of colored concretes, selected with the customer and then laid by contractors with Lafarge supervision. By ensuring continuous concrete deliveries for each type of utilization, our Moroccan subsidiary, involved in the project from the design of the tramway, contributed to the completion of the project in record time: 31 km constructed in thirty months. "We've never seen that before!" commented Pierre Mongin, CEO of the RATP, operator of the network.



RABAT, MOROCCO A BRIDGE LINKING CITY AND SUBURB

In the first place, it is a bridge to carry the road and tramway running between Rabat, the administrative capital of Morocco, and the dormitory town of Salé, on the other side of the Bou Regreg River. But it is also a roof covering a pedestrian walkway, turning this bridge into a public space where populations mix: "a social commitment between city and suburb," as architect Marc Mimram puts it. An urban link joining two parts of Morocco's largest city, the Hassan II bridge is an extraordinary piece of infrastructure, remarkable both for its delicate architecture and how well it blends into its environment. We supplied light-colored concrete for the project, for which the architect won the Aga Khan Award in 2013.

"At the site, in the light of the Bou Regreg valley, the client and I chose the best finish, the one that blends in the most harmoniously with the built environment of the site, the distant geographical horizon of the river, the soft light of the valley. This means that the bridge is anchored to the site; the pale color of the concrete brings the material to life, reacting to changes of light and angles of view."

MARC MIMRAM, architect



ALGERIA ALGIERS EXTENDS ITS METRO

No sooner had it completed the first section of its metro, inaugurated in 2011, than Algiers was already working on extending it. Three extensions are currently under construction: they will serve city-center districts such as the Casbah, part of Bab El Oued and the heavily populated outskirts of the city. By the end of 2016, Algiers will have 18 kilometers of operational metro lines (compared with 9.5 kilometers currently). Further extensions are currently under consideration, to take the service into the eastern, southern and western suburbs as well as to the airport. When they are brought into service, the Algiers metro will have 55 kilometers of lines. It will cover the whole of Greater Algiers by 2025. This massive project is part of a vast urban regeneration program which is intended to transform the physiognomy of the Algerian capital and the life of its inhabitants. We are supplying several high-quality concretes: sprayed concrete (some of it fiber-reinforced) to reinforce the excavation, filling concrete, concrete for the foundations and concrete for the vault, including Chronolia® fast-setting fluid concrete.



CANADA THE WORLD'S WIDEST BRIDGE

Situated on the Trans-Canada Highway, the Port Mann Bridge spans the Fraser River and connects the towns of Coquitlam and Surrey, near Vancouver, British Columbia. The British Columbia Ministry of Transportation decided to replace the original five-lane steel bridge, which had become totally saturated. The new Port Mann Bridge opened in 2012. At 2 kilometers, it is the second longest cable-stay bridge in North America, and at 65 meters it is the widest bridge in the world, with ten lanes of traffic – plus one for cyclists and pedestrians. It has double the traffic capacity of the previous bridge, enabling it to absorb 800,000 vehicles per week and put an end to the traffic jams that could sometimes cost drivers over an hour. We supplied the 180,000 m³ of concrete needed to construct the 2,300 precast parts of the deck in Chronolia®, the 300 structures that make up the piers, the abutment footings in Agilia® and the two horizontal 70-meter pylons supporting the main cables.



BRAZIL THE PORT OF RIO GETS A MAKEOVER

Rio de Janeiro is getting ready to host three major events: the FIFA World Cup, the 450th anniversary of the city in 2015 and the Olympic Games in 2016. So how could it not do something to restore its port to its former glory? While the economic growth of the city has seen countless homes and infrastructures built, the vast 50-hectare port zone had been left in a state of neglect. The “Porto Maravilha” project will see the complete regeneration of this neighborhood by 2015 with the construction of several thousand homes, tourist facilities, approximately 700 km of public transports networks, road improvements and new pedestrian walkways, and so on. We were contacted at the very start of this project in 2011, and have supplied 70% of the concrete required for this enormous construction site. For the renovation of the sidewalks, we supplied a concrete from our Artevia® decorative concrete range, imitating the traditional black and white mosaics of Portugal.



SAUDI ARABIA JEDDAH IS PREPARING FOR TAKE-OFF

Jeddah was once a small fishing village on the Red Sea, but today it has become the second largest city in Saudi Arabia, with a population of 5.1 million. This growth is due to the enormous projects carried out in the country, but most of all to its proximity to the two Holy Mosques of Mecca and Medina. So that it can continue to expand, the city has launched a project to extend its airport, which will raise its annual capacity from 12 to 80 million passengers in 2035, with additional space of approximately 12 million m². We are playing an active part in this vast project: in the first phase of construction works, we are supplying 125,000 tonnes of cement and cementitious additives, a single delivery service, and a dedicated technical team working from a mobile laboratory. We are already committed to the second phase, scheduled for completion in 2020.



UNITED STATES RENOVATING THE HISTORIC PULASKI SKYWAY

A historic structure built in 1932, the Pulaski Skyway is a bridge carrying a four-lane freeway over the Passaic and Hackensack rivers in New Jersey, linking Jersey City to Newark airport. The structure is used by an average of 74,000 drivers per day, but the New Jersey Department of Transportation has nonetheless declared it obsolete. Following discussions early on with the designers, we were asked to supply an innovative solution for the refurbishment of the bridge deck.

Our ultra-high performance concrete, Ductal®, was originally chosen for the joints between the precast panels, but its strength, durability and ease of application rapidly convinced both the contracting authority and the main contractor to choose it as a substitute for other non-cement materials in the deck. The current contract covers the first two lanes, and it should be followed by a second contract for the other two lanes, which are scheduled for completion in 2015.

SOLUTIONS TO MAKE CITIES MORE BEAUTIFUL



“The city is forever moving, transforming, metamorphosing. Nothing is more like a living being than this body of stone,” wrote the French art historian Michel Ragon. Cities embody the ideas of both yesterday and today; they bear witness to the past as well as to present-day vitality. And each generation makes its own contribution. Concrete is well placed to make cities more beautiful. It is no coincidence that it inspires so many architects: its technical performance combines with its great flexibility to make many audacious architectural tours de force possible.

Beauty is not the sole preserve of exceptional buildings. Combining its esthetic and utilitarian properties, concrete can transform a functional building like a hospital, an airport or a stadium by the uniqueness of its forms, the delicacy of its structures, and the variety of its textures. Concrete is also capable of being discreet yet effective when it is



CONCRETE AS A DECORATIVE PRODUCT

The Artevia® range of decorative concretes is used to embellish public buildings and spaces. In the United Kingdom, it was used to renovate the facade of the Cambridge University Botanic Garden. This concrete is able to satisfy all esthetic tastes and can also be used for the interior decoration of houses, such as in the villa of Saint-Fortunat, in southeastern France (see photo), designed by the architect Clement Vergely.

used in projects to restore the architectural heritage of cities.

◆ CUSTOMIZED CONCRETE FOR MORE AUDACIOUS ARCHITECTURAL FEATS

Our building solutions in concrete enable all sorts of possibilities. Our ultra-high performance concretes – “haute couture” concretes – combining ultra-high performance and exceptional strength with great slenderness, allow breathtakingly original designs such as the Peace Footbridge in Seoul, South Korea, designed by Rudy Ricciotti, with a deck only 3 cm thick. Our decorative concretes in the Artevia® range embellish buildings and public spaces with every conceivable color and texture. Our self-compacting and self-leveling concretes are responsible for many technical feats and esthetic success stories, offering a particularly smooth finish. All our solutions support outstanding architecture in its endeavor to make cities more beautiful. ◆





FRANCE THE MUCEM AT MARSEILLE, A MODEL OF ARCHITECTURAL AUDACITY

Marseille has a new attraction! At the entrance to the Vieux-Port stands the MuCEM (the Museum of Civilizations from Europe and the Mediterranean), with its latticework of sun-breaks like a gigantic mashrabiya. Known as a “vertical casbah” and a structure “built of stone, water and wind”, nobody can be indifferent to this 15,000 m² cube. We are particularly proud to have been involved in this extraordinary achievement by Rudy Ricciotti, one of the most innovative architects of his generation and a great enthusiast for ultra-high performance fiber-reinforced concrete. From the structures themselves to the 135 meter-long footbridge linking the museum to the Fort Saint-Jean, from the 820 meters of walkways

snaking around the museum to the lattice panels that envelope the southern and western facades and the roof, the MuCEM displays all the architectural and structural qualities of Ductal®, but on a previously unheard of scale. The 9-meter pre-stressed concrete columns represent a world first, as does the latticework, composed of roughly 400 panels. “Nothing in this structure is purely decorative,” comments Rudy Ricciotti. “Everything is structural, like the skeleton of a fish. We are moving towards the dematerialization of the concrete structure, which has become fragile, slender, sinewy, like a cross-section of coral rock.” This technical exploit has helped make Marseille a more beautiful city.

“I discovered Ductal® very early, some years ago. I was immediately struck by the intelligence of the material and I could see it had a real future. Innovations are always carried out across several scientific disciplines. Here, it's chemistry, solid-state physics and technology... and it's a thrilling adventure.”

RUDY RICCIOTTI, architect

FRANCE ART AND TECHNIQUE SUPPORT SPORT

An asymmetric undulating outer shell in three dimensions so that “the structure is suggested and the concrete shell contains the building, in the way skin contains a body”: that's how Rudy Ricciotti describes the exterior of the new Jean Bouin stadium, the temple of Parisian rugby. The 23,000 m² mesh, consisting of 3,560 self-supporting triangles in Ductal®, required three years of engineering work. The first construction of this type in the world, it constitutes a technical feat that will be appreciated by spectators, who will be protected from bad weather. The stadium is truly a work of art, its gracefulness contrasting with its imposing neighbor, the Parc des Princes stadium!



IRAQ SAVING THE ERBIL CITADEL

Built 8,000 years ago, Erbil is one of the world's oldest continuously inhabited cities. The capital of Iraqi Kurdistan, it has 1.5 million inhabitants. It is a city with a circular layout around a citadel, which is about to benefit from a rescue mission performed by local authorities and UNESCO. The aim is to make a tourist destination out of this extraordinary but ruined site that abounds in architectural remains of rare splendor, with vestiges of Sumerian, Persian, Babylonian, Assyrian, Greek and Arabic civilizations. The renovation will also enable the citadel to be populated once again. With the French Institute for the Near East in Iraq, we will finance the renovation of several houses inside the citadel. In addition to this financial contribution, we are supplying cement and contributing our expertise in reconstruction in view of the future classification of the citadel as a World Heritage Site.





FRANCE A LUMINOUS ROOF FOR THE WELEDA LABORATORIES

To keep pace with the growth of its business in France, Weleda, the Swiss pharmaceuticals group, has practically doubled the surface of its facilities in Huingue, Eastern France. A pioneer in homeopathy and organic cosmetics, Weleda wanted its installations to reflect the company's corporate image and values. It therefore chose a unique design based on lighting effects and curves. Architect Maryam Ashford-Brown, responsible for designing the administrative buildings and the main lobby, imagined an innovative roof in fire-resistant Ductal®. In order to achieve the harmony and transparency called for while meeting all the necessary criteria for environmental excellence, the roof has openings in it with an upper layer of low thermal conductivity glass, to reduce heat loss. The strength of Ductal® made it possible to design ridged openwork tiles that are very slender (6 centimeters) for spans of 12.75 meters and a total surface area of 285 m².



ALGERIA THE "EIGHTH WONDER" OF CONSTANTINE

The eighth bridge over the Oued Rhumel, the river crossing the plains and gorge of Constantine, the Trans-Rhumel Viaduct, also known as the Bridge of Independence, will open later this year. Indispensable for reducing traffic congestion between the center and outskirts of this city of around

a million inhabitants, it will stretch over a distance of 1,150 meters, with the principal viaduct measuring 749 meters. There will be four lanes for traffic plus a sidewalk for pedestrians. We supplied all the concrete for this renovation project, in particular the specialty concretes, both

sprayed or high-strength. Some modern, others historic, Constantine possesses numerous bridges that link together the various districts of the hill-bound city. The renovation of this structure is a key milestone in the program to modernize the city, which is already well advanced.



SPAIN BARAJAS AIRPORT, A WINDOW ON MADRID

Landing in Madrid at Terminal 4 of Barajas Airport is first and foremost a powerful esthetic experience. Not surprisingly, this elegant 1.2 kilometer long building, with a wave-shaped roof, gigantic brightly colored pillars and wide windows, designed by the celebrated British architect Richard Rogers, has won a number of international prizes. The terminal, which was inaugurated in 2006, doubled the capacity of Madrid Barajas from 35 million

to 70 million passengers per year, which makes it now one of the busiest airports in Europe and the main hub for traffic between Europe and South America. Madrid Barajas is also a small town, containing a large shopping center and leisure and business facilities. Everything is designed for the comfort of passengers. Including buildings, roads, tunnels and parking lots, construction was a permanent challenge lasting sixty months (from 1999 to 2003)

for our teams in Spain, who supplied cement, aggregates and some 675,000 m³ of concretes, manufactured by six mobile plants operating 24/7, in particular high-strength and self-compacting concretes for the hall pillars.



ACTIVITIES

Cement
Aggregates & Concrete





CEMENT

Manufacturing cement is historically our core business. We have been French number 1 since the 1930s, and today we stand proud as a world leader in building materials and in the cement market.

MANUFACTURING

Cement is manufactured from raw materials (calcium carbonate, silica, alumina, iron ore), mostly extracted from natural quarries. They are then crushed, ground, mixed and then fired dry in a rotary kiln at approximately 1,500°C to obtain clinker. When this is mixed with a little gypsum, cement is produced. In order to broaden our range of products and reduce our carbon emissions, we innovate by incorporating other ingredients in the manufacturing process (limestone, ground slag, pozzolan, fly ash).

INDUSTRY

The investment required for the production of cement being very high, the sector is capital-intensive. In the 1970s, there was a strong movement towards consolidation. As a result, we are today facing around ten truly international competitors, including Holcim (Switzerland), Italcementi and Buzzi (Italy), Cemex (Mexico), HeidelbergCement (Germany), Taiheiyo (Japan) and Camargo Corrêa and Votorantim (Brazil). Alongside these

IN FIGURES 2013

A world leader

56
countries

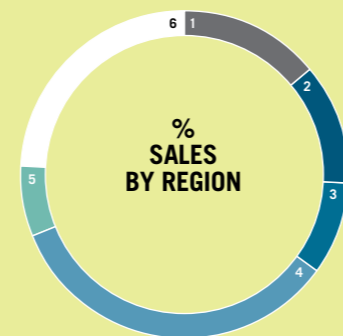
€9,657m
of sales

155
production sites

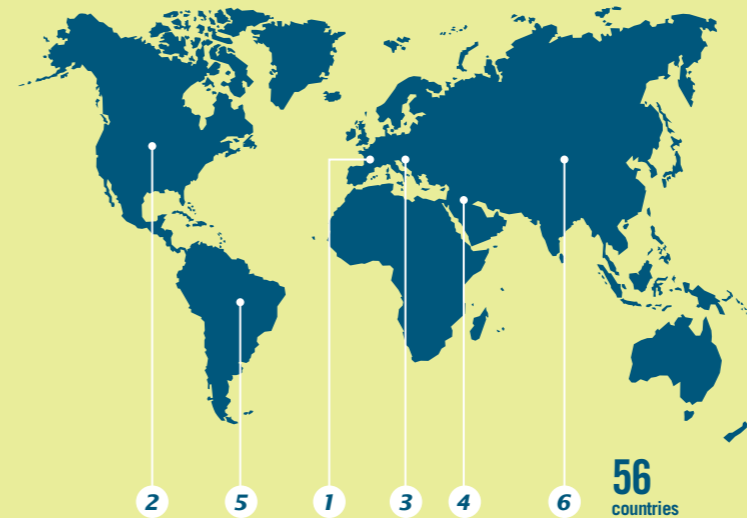
38,000
employees



GROWTH IN SALES
(in millions of euros)



| | |
|-------------------------------|-----|
| 1. Western Europe | 14% |
| 2. North America | 12% |
| 3. Central and Eastern Europe | 9% |
| 4. Middle East and Africa | 34% |
| 5. Latin America | 7% |
| 6. Asia | 24% |



BREAKDOWN OF OPERATIONS

| | | |
|---|--|--|
| 1 WESTERN EUROPE 6 countries | 3 CENTRAL AND EASTERN EUROPE 10 countries | 5 LATIN AMERICA 3 countries |
| 2 NORTH AMERICA 2 countries | 4 MIDDLE EAST AND AFRICA 22 countries | 6 ASIA 13 countries |

multinationals, a number of regional players take advantage of their proximity to production sites to establish themselves locally.

MARKETS

Emerging markets (Eastern Europe, Asia, Africa, Middle East, Latin America) currently account for 90% of the world market, North America and Europe sharing the remaining 10%. We have a significant presence in all of these markets.

CUSTOMERS, PRODUCTS AND SERVICES

We manufacture a wide range of cements and hydraulic binders from the most traditional to the most specialized, designed for specific environments or applications. These products are intended for all players in the construction and civil engineering sectors: building and construction companies, industries and the general public through retailers. We combine a number of services with these products: technical assistance, logistics (orders, deliveries), documentation, demonstrations, training, etc. The quality and reliability of our cements and our service offer constitute one of our main competitive advantages.



CEMENT



Manufacturing cement is historically our core business. We have been French number 1 since the 1930s, and today we stand proud as a world leader in building materials and in the cement market.

MANUFACTURING

Cement is manufactured from raw materials (calcium carbonate, silica, alumina, iron ore), mostly extracted from natural quarries. They are then crushed, ground, mixed and then fired dry in a rotary kiln at approximately 1,500°C to obtain clinker. When this is mixed with a little gypsum, cement is produced. In order to broaden our range of products and reduce our carbon emissions, we innovate by incorporating other ingredients in the manufacturing process (limestone, ground slag, pozzolan, fly ash).

INDUSTRY

The investment required for the production of cement being very high, the sector is capital-intensive. In the 1970s, there was a strong movement towards consolidation. As a result, we are today facing around ten truly international competitors, including Holcim (Switzerland), Italcementi and Buzzi (Italy), Cemex (Mexico), HeidelbergCement (Germany), Taiheiyo (Japan) and Camargo Corrêa and Votorantim (Brazil). Alongside these

IN FIGURES 2013

A world leader

56
countries

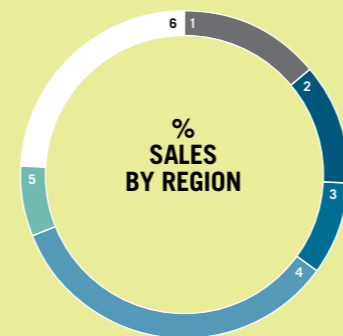
€9,657m
of sales

155
production sites

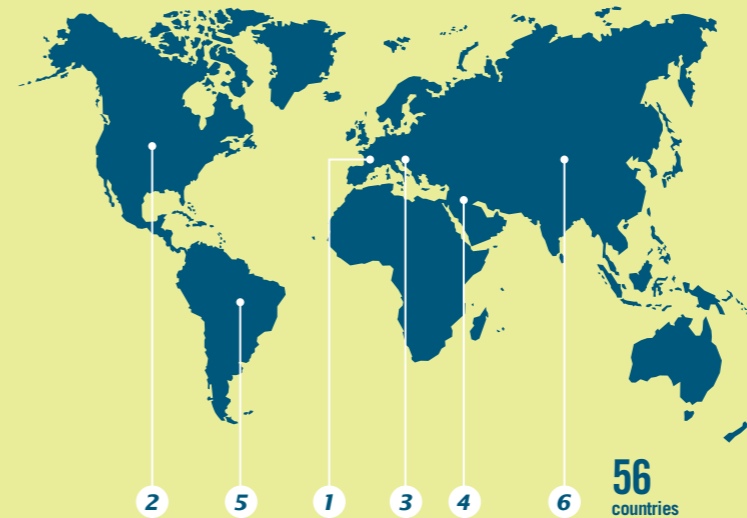
38,000
employees



GROWTH IN SALES
(in millions of euros)



| | |
|-------------------------------|-----|
| 1. Western Europe | 14% |
| 2. North America | 12% |
| 3. Central and Eastern Europe | 9% |
| 4. Middle East and Africa | 34% |
| 5. Latin America | 7% |
| 6. Asia | 24% |



BREAKDOWN OF OPERATIONS



multinationals, a number of regional players take advantage of their proximity to production sites to establish themselves locally.

MARKETS

Emerging markets (Eastern Europe, Asia, Africa, Middle East, Latin America) currently account for 90% of the world market, North America and Europe sharing the remaining 10%. We have a significant presence in all of these markets.

CUSTOMERS, PRODUCTS AND SERVICES

We manufacture a wide range of cements and hydraulic binders from the most traditional to the most specialized, designed for specific environments or applications. These products are intended for all players in the construction and civil engineering sectors: building and construction companies, industries and the general public through retailers. We combine a number of services with these products: technical assistance, logistics (orders, deliveries), documentation, demonstrations, training, etc. The quality and reliability of our cements and our service offer constitute one of our main competitive advantages.



AGGREGATES

Aggregates are a raw material for concrete, masonry and asphalt, and are used as a base material for road building, embankments and foundations.

MANUFACTURE

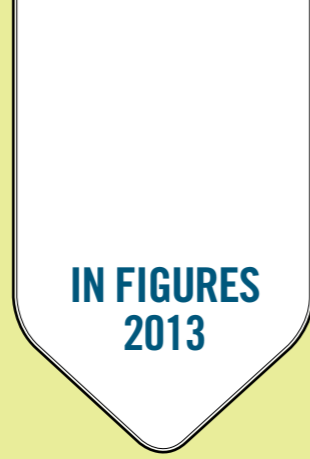
Aggregates are mainly extracted from rock by explosion and then crushed. They can also be obtained from sand and gravel extraction. They are then screened to obtain different calibers.

INDUSTRY AND MARKETS

Requiring heavy equipment and expensive installations and subject to environmental legislation restricting potential quarry sites, the aggregates sector is heavily consolidated. There are still many local players, but only a few multinationals operate extensively. Although our business is worldwide, it is mostly focused on Western Europe and North America.

CUSTOMERS, PRODUCTS AND SERVICES

There are tens of thousands of customers for aggregates. The biggest are producers of concrete and asphalt, manufacturers of precast products and building and construction contractors. Aggregates are differentiated by hardness and grading. We also market recycled aggregates.



world **No.2**
for aggregates

world **No.4**
for concrete



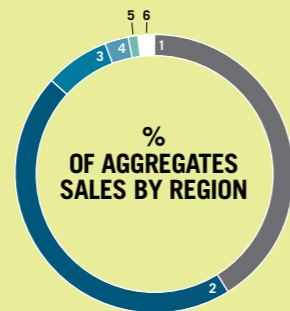
GROWTH IN SALES
(in millions of euros)

37
countries

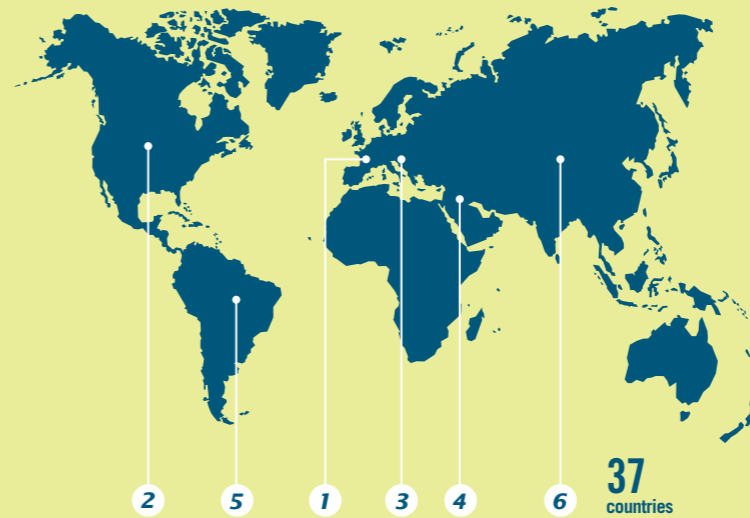
€5,451m
of sales

1,481
production sites

25,000
employees

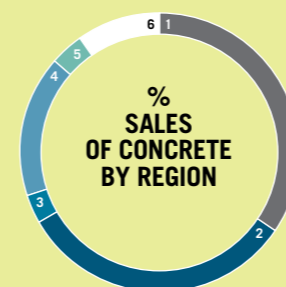


| | |
|-------------------------------|-------|
| 1. Western Europe | 41.1% |
| 2. North America | 45.7% |
| 3. Central and Eastern Europe | 7.5% |
| 4. Middle East and Africa | 2.9% |
| 5. Latin America | 1.0% |
| 6. Asia | 1.8% |



BREAKDOWN OF OPERATIONS

| | | |
|---|---|--|
| 1 WESTERN EUROPE 5 countries | 3 CENTRAL AND EASTERN EUROPE 6 countries | 5 LATIN AMERICA 3 countries |
| 2 NORTH AMERICA 2 countries | 4 MIDDLE EAST AND AFRICA 14 countries | 6 ASIA 7 countries |



| | |
|-------------------------------|-------|
| 1. Western Europe | 34.6% |
| 2. North America | 32.1% |
| 3. Central and Eastern Europe | 3.4% |
| 4. Middle East and Africa | 16.5% |
| 5. Latin America | 3.8% |
| 6. Asia | 9.6% |



CONCRETE

Ready-mix concrete is one of the main outlets for the cement and aggregates industries. We are the world's 4th largest producer, and we are differentiated by our capacity for innovation.

MANUFACTURE

Concrete is composed of a mixture of aggregates, cement, chemical admixtures and water. It is manufactured in fixed or mobile plants and delivered in concrete trucks with a rotating drum that ensures it remains homogenous.

INDUSTRY AND MARKETS

The ready-mix concrete industry is not capital-intensive and is highly decentralized. The market includes a large number of local players. Only large integrated groups producing cement and aggregates have gained an international dimension: Lafarge, Cemex, CRH, HeidelbergCement, Holcim, Italcementi. Lafarge's operations are chiefly located in Western Europe and North America, but they are also expanding in North Africa, the Middle East, Brazil, India and Malaysia.

CUSTOMERS, PRODUCTS AND SERVICES

Purchasers of ready-mix concrete mostly consist of construction and civil engineering contractors, whether large international groups or individual operators. In this very competitive market, we are differentiated by the quality and reliability of our production, our wide range and our innovative products: ultra high-performance, self-compacting and self-leveling, decorative, insulating, pervious, etc.

PHOTO CREDITS

Rights reserved Lafarge Media Library. Cover: AUBERTSTORCH - Getty / Thinkstock, Istock / Dreamstime / p.4: François Daburon / p.10-11: Lisa Ricciotti (photographer), Rudy Ricciotti (architect) / p.12: Lisa Ricciotti (photographer), Rudy Ricciotti (architect) / p.13: M. Kadri - CAPA Pictures / p.14: Ignus Gerber / p.15: Ignus Gerber / p.16: Erik Barros / p.17: M. Kadri - CAPA Pictures / p.18: G. Osodi - CAPA Pictures / p.19: Ignus Gerber / p.20-21: Ignus Gerber / p.23-24-25: Robert Hanson (illustrator) / p.26-27: Rea Photos / Portfolio, photo 1: J.-M. Giboux / CAPA Pictures / Portfolio, photo 2: KJC Photography K. Jack Clark - Transportation Investment Corporation / Portfolio, photo 3: Edouard François (architect) / Portfolio, photo 4: Rea Photos, Rudy Ricciotti (architect) / p.29: M. Kadri - CAPA Pictures / p.30: G. Osodi - CAPA Pictures / p.31: Billy Milimbo (architect/SSB Specialist) / p.31: Hemis / p.32: A. Barrière - CAPA Pictures / p.32: Nicolas Eyidi - ministère du Développement Urbain et de l'Habitat - Société Immobilière du Cameroun / p.33: Christophe Hutin (architect) / p.34: Getty Images / p.35: REICHEN et ROBERT & Associés - Société d'Aménagement de Zenata (SAZ) / p.36: William Coscolluela (architect), Agence Skidmore, Owings & Merrill / p.36: Courtesy of Lodha Group - Pei Cobb Freed & Partners (architect) / p.37: Pietri Architectes - Jean-Baptiste Pietri (architect) / p.37: Getty Images / p.37: Pierre-François Grosjean (photographer) - Zaha Hadid (architect) / p.39: Handel (architect) - designed by Herzog et de Meuron / p.40: Jerry Harrall (architect) / p.41: Yves Chanoit / p.42: Rea photos, SCAU architectes-KSS architects / p.43: Getty Images, Richard Rogers (architect) / p.43: Lei Li - Deloul (TDP) - BIAD / p.44: Gérald Morand-Grahame - 3AM Architecte / p.45: Mikolaj Katus / p.46: Yves Chanoit / p.47: Jacques Durst - Agence Marc Mimram - Marc Mimram (architect) / p.48: Djamel Eddine Khatib / p.48 : KJC Photography K. Jack Clark - Transportation Investment Corporation / p.49: Erik Barros / p.49: Al Arkan Industrial Supports Company (architecte) / p.50: J. Leynse - CAPA Pictures / p.51: Clément Vergely Architectes - Erick SAILLET (photographer) / p.52: Charles Plumey-Faye (photographer), Rudy Ricciotti (architect) / p.53: Rudy Ricciotti (architect) - Olivier Amsellem (photographer) / p.53: Getty Images / p.54: Maryam Ashford-Brown (architect), Ph Caron et J.-M. Labat (photographers) / p.54: M. Kadri - CAPA Pictures / p.55: Getty Images - Richard Rogers (architect).

LAFARGE

61, rue des Belles-Feuilles – BP 40
75782 Paris Cedex 16 – France
Tél.: + 33 1 44 34 11 11 - Fax: + 33 1 44 34 12 00
www.lafarge.com



Lafarge Corporate Communication Department
Translated by Nouvel Angle - Printed by Baugé - Design, production and writing: **Angle** (RALA013) -



CONSTRUIRE DES VILLES MEILLEURES

En 2050, 70% de la population mondiale vivra dans les villes. Lafarge et ses 64000 collaborateurs innovent en permanence pour relever ce défi. Nos solutions contribuent à la construction de villes plus accueillantes, plus compactes, plus durables, plus belles et mieux connectées, partout dans le monde. Acteur majeur des ciments, granulats et bétons pour la construction, le Groupe est présent dans 62 pays.



构建 美好城市

到2050年，世界城镇人口将达到70%，为应对由此带来的挑战，拉法基集团及其64,000名员工正在努力不断创新，为建设更多住房、更密集、更持久、更美丽以及更加四通八达的城市提供解决方案，为构建美好城市做贡献。作为全球水泥、骨料和混凝土行业的领先企业，拉法基集团的业务遍及62个国家。



BUILDING BETTER CITIES

By 2050, 70% of the world population will live in cities. Lafarge and its 64,000 employees are constantly innovating to meet this challenge. Our solutions contribute to the construction of better cities around the world; providing cities with more housing, and making them more compact, more durable, more beautiful and better connected. A major player in cement, aggregates and concrete for construction, the Group operates in 62 countries.



By 2050, 70% of the world population will live in cities. Lafarge and its 64,000 employees are constantly innovating to meet this challenge. Our solutions contribute to the construction of better cities around the world; providing cities with more housing, and making them more compact, more durable, more beautiful and better connected. A major player in cement, aggregates and concrete for construction, the Group operates in 62 countries.

LAFARGE
Building better cities™