GENERAL PRESENTATION OF THE GROUP

- Lafarge in brief
- A strategy for sustainable growth and innovation
  Strategic priorities
  Operational priorities

UNDERSTANDING THE GROUP’S ACTIVITIES

- Cement
  The cement manufacturing process
  Cement – a material vital for growth
  A universal, economical and everyday material
  Two major environmental challenges
- Aggregates & Concrete
  What is an aggregate?
  What is concrete?
  Concrete – a multi-faceted material
- Gypsum
  Plasterboard manufacturing
  Significant innovation potential

VALUES FOR SUSTAINABLE LEADERSHIP

- A company with long-term commitment
- A partnership vision of sustainable development
  A multi-site approach
  Working together
- Challenges and commitments
  “Sustainable Development Ambitions 2012”

APPENDIX

- Glossary
General presentation of the Group
Lafarge is the world leader in building materials, with top-ranking positions in all of its businesses: Cement, Aggregates & Concrete and Gypsum. The Group now has 78,000 employees in 78 countries.

Lafarge posted sales of 15.9 billion euros and net income of 736 million euros in 2009.

The Group is listed on the Euronext Paris stock exchange.

In 2009 and for the fifth year in a row, Lafarge was listed in the 'Global 100 Most Sustainable Corporations in the World'. With the world's leading building materials research facility, Lafarge places innovation at the heart of its priorities, working for sustainable construction and architectural creativity.

**Cement**
World leader
€9,477 million in sales
46,468 employees
160 production sites
Present in 48 countries
Lines of cement, hydraulic binders and lime for construction, renovation and public works

**Aggregates & Concrete**
No. 2 & No. 3 worldwide
€5,064 million in sales
23,552 employees
1,773 production sites
Present in 36 countries
Lines of aggregates, ready-mix concrete products, asphalt and paving for engineering structures, roads and buildings

**Gypsum**
No. 3 worldwide
€1,334 million in sales
7,974 employees
89 production sites
Present in 30 countries
Plasterboard systems and gypsum-based interior solutions for new construction and renovation

**Key Figures**

<table>
<thead>
<tr>
<th></th>
<th>12/31/2008</th>
<th>12/31/2009</th>
<th>Change</th>
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<tbody>
<tr>
<td>Sales</td>
<td>19,033</td>
<td>15,844</td>
<td>-17%</td>
</tr>
<tr>
<td>Current Operating Income</td>
<td>3,542</td>
<td>2,477</td>
<td>-30%</td>
</tr>
<tr>
<td>Net Income</td>
<td>1,598</td>
<td>736</td>
<td>-54%</td>
</tr>
<tr>
<td>Earnings per share</td>
<td>€7.19</td>
<td>€2.77</td>
<td>-61%</td>
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### Lafarge Key Dates

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1833</td>
<td>Lafarge founded in France</td>
</tr>
<tr>
<td>1864</td>
<td>The Group signs its first major international contract for the supply of 110,000 tons of lime for the construction of the Suez Canal</td>
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<tr>
<td>1887</td>
<td>Lafarge opens its first central research laboratory at Le Teil in the south of France</td>
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<tr>
<td>1956</td>
<td>Lafarge builds its first North American cement plant at Richmond in Canada</td>
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<tr>
<td>1990</td>
<td>Creation of Lafarge Research Centre (LCR) near Lyon, the world’s largest building materials research facility</td>
</tr>
<tr>
<td>1994</td>
<td>Lafarge enters the Chinese market</td>
</tr>
<tr>
<td>1997</td>
<td>Acquisition of Redland, strengthening the Group’s position in aggregates and concrete and allowing it to enter the roofing market</td>
</tr>
<tr>
<td>2000</td>
<td>Signature of a voluntary environmental conservation partnership agreement with WWF</td>
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<tr>
<td>2001</td>
<td>Acquisition of Blue Circle, making Lafarge the world’s leading cement producer</td>
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<tr>
<td>2005</td>
<td>Renewal of partnership with WWF International</td>
</tr>
<tr>
<td>2006</td>
<td>Buyout of minority stake in Lafarge North America</td>
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<td></td>
<td>Announcement of strategic plan “Excellence 2008” to ensure sustainable world leadership</td>
</tr>
<tr>
<td></td>
<td>Announcement of sale of Roofing business to PAI</td>
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<tr>
<td>2007</td>
<td>Bruno Lafont is appointed Chairman and CEO</td>
</tr>
<tr>
<td></td>
<td>Acquisition of Orascom Cement, marking an acceleration in the Group’s strategy for Cement in emerging markets and reinforcing its presence in the Middle East and Mediterranean Basin</td>
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### Key events 2008 – 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>2008</td>
<td>Lafarge exceeds most of its Excellence 2008 objectives a year early</td>
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<tr>
<td>May</td>
<td>The Group acquires L&amp;T Concrete to become the leader in the Indian Ready-mix concrete market</td>
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<td></td>
<td>Earthquake in Sichuan Province, China, damages two of Lafarge’s cement plants. Lafarge helps with relief efforts and donates 1.5 M€</td>
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<td>June</td>
<td>Launch of the 1st “Health and Safety Month”, in the 2200 Lafarge sites all around the world, to create awareness on safety at work issues with employees</td>
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<tr>
<td>November</td>
<td>Lafarge announces the divestment of its Cement and Aggregates &amp; Concrete activities in Italy</td>
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<td>2009</td>
<td>Announcement of the plan for strengthening the financial structure including a capital increase of € 1.5 billion with preferential subscription rights</td>
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<td>April</td>
<td>The Group inaugurates the largest cement plant in Iraq, in Bazian (Kurdistan)</td>
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<td></td>
<td>Lafarge and WWF International renew their partnership</td>
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<td>May</td>
<td>The Group announces the divestment of its Cement, Concrete and Aggregates activities in Turkey</td>
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<td></td>
<td>Lafarge inaugurates a new production line in its Otavalo cement plant, Ecuador</td>
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<tr>
<td>June</td>
<td>The Group renews its partnership with CARE on health issues, economic and social development of communities around its sites</td>
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<tr>
<td>July</td>
<td>Lafarge announces the divestment of its Cement and Aggregates &amp; Concrete activities in Chile</td>
</tr>
<tr>
<td>2010</td>
<td>The Group disposes of its 17.28% stake in Cimpor to Votorantim, in exchange of cement assets and doubles its presence in Brazil</td>
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<tr>
<td>May</td>
<td>Lafarge and STRABAG created a common company in Central Europe</td>
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</table>
Lafarge is the world leader in building materials in terms of sales. The Group sells and produces cement, aggregates, ready-mix concrete, plasterboard and other related products. These products are used around the world to construct or renovate public works as well as commercial and residential buildings. Lafarge is the world leader in the cement market, the second largest producer in the aggregates market and the third largest global producer of ready-mix concrete and plasterboard.

The company's operational activities began in France in about 1833, when Auguste Pavin de Lafarge founded a limestone mining business. Lafarge went on to become the largest French producer of cement, particularly as a result of acquisitions at the end of the 1930s.

The Group's first international expansion took place in 1864, when Lafarge supplied the limestone required to construct the Suez Canal. Its international growth continued in the 20th century with new operations in North Africa, the United Kingdom, then Brazil and Canada. Through the acquisition of General Portland Inc. in 1981, the Group became one of the leading cement manufacturers in North America, where its business is now operated by Lafarge North America Inc., which has been fully owned since 2006.

In 1998, with the acquisition of Redland, followed by the acquisition of cement manufacturer Blue Circle in 2001 and Orascom Cement in January 2008, the Group gradually developed its leadership status and a unique position in the Middle East and Africa. The acquisition of Orascom marked a decisive stage in the Group's Cement strategy and accelerated its growth strategy in emerging markets.

The Group has established solid positions in emerging markets by combining acquisitions and organic growth. Nearly 65% of Lafarge employees work in emerging countries (Asia, Africa, Central and Eastern Europe, the Mediterranean, Middle East and Latin America). In 2009, Lafarge's activities in these countries represented 51.6% of its turnover and 78% of its operating profit.

Lafarge acquired its global leadership position by conducting its business according to the fundamental values which have marked its operating principles for over 30 years: integrity, responsibility, ethics, safety and courage. These principles guide the Group's actions and transform environmental and social challenges into key performance levers.

A partner of engineers, contractors, construction companies and architects, the Group draws on its significant capacity for innovation to create new materials with completely new mechanical, functional and aesthetic performances and contributes to research into the construction of the future. By encouraging the emergence of construction methods which respect the planet and carrying out its activities in a way which is respectful of the environment, people and cultures, Lafarge ensures its business adopts a responsible approach to promote a responsible world.
TWO STRATEGIC PRIORITIES PROMOTING GROWTH

➤ Pursuing growth in cement in emerging markets

Despite the current uncertainty surrounding the economic and financial outlook, global demand for cement grew by nearly 7% in 2009, supported in particular by the dynamism of the Chinese market. Of the two billion tons of cement produced each year, 80% is consumed in emerging countries, where demographic and economic growth and housing and infrastructure needs are powerful levers. China alone produces and consumes 50% of global demand.

The acquisition of Orascom Cement in January 2008 strengthened the Group’s positions in growth markets by introducing it to a new region, the Middle East, accelerating its entry into growth markets. This move marked a decisive stage in Lafarge’s growth strategy in Cement.

To continue to fully capture this growth, Lafarge is also continuing to develop new capacities. Between 2010 and 2011, 21 million tons of new capacity will be commissioned, including 14 million tons in 2010.

➤ Accelerating innovation

Innovation has been identified as one of the driving forces behind the Group’s strategy. This is demonstrated by:

- The launch of new products offering customers added value,
- Improvements in industrial procedures, notably a reduction in energy consumption and a reduction in the environmental impact of manufacturing materials.

Lafarge aims to develop products with greater value-added for its customers in order to best respond to their needs. Group researchers are therefore seeking to push back the technical limits of building materials to offer more durable, more aesthetic as well as more malleable materials. As a result of this increased focus on innovation, in 2009 the share of value-added concretes grew by 2.7% to account for 27% of sales.

In order to develop new products and construction solutions, Lafarge focuses resources on R&D and has established an optimized structure:

- More than 1,000 people work on the research and development of products and solutions
- 240 researchers and technicians of 12 nationalities work at the L’Isle d’Abeau research center near Lyon
- €150m is invested in R&D each year
- More than 50% of the R&D budget is dedicated to projects with a sustainable development dimension
OPERATIONAL PRIORITIES SUPPORTING SUSTAINABLE PERFORMANCE

➤ Ensuring employees’ health and safety

For Lafarge, its employees’ and subcontractors’ health and safety are an absolute priority, since they are the best demonstration of the Group’s values and are a vital prerequisite to operational excellence. The Group has two objectives:

- To achieve a “zero fatal accident” rate and a “zero work-related illness” rate
- To share the same standards and best practice all around the world

To put this commitment into practice, a roadmap was established to define safety policy and launched globally in September 2006. Since 2009, Health has been included in the Group’s priority. Since the end of 2005, Lafarge has significantly improved its health and safety performance, with more than half of its BUs having recorded no lost time incident for over a year.

➤ Increasing flexibility through structural reduction of costs.

Despite the major economic slowdown in developed countries in 2009, the Group’s excellent operational response generated a significantly higher free cash flow despite the sharp decline in volumes. Since 2006, the Group has worked on several cost reduction levers, particularly:

- the use of cement additions and alternative fuels
- standardization of maintenance procedures
- a cap on business expenses
- optimization of certain functions such as logistics and purchasing.

These measures, initiated in 2006, allowed the Group to achieve €850m of structural savings since then, including €200m in 2010.

➤ Pursuing the Group’s sustainable development commitments

By seeking to reduce the environmental footprint at every stage in products’ lifecycle and respecting local communities while also contributing to their economic and social development (see section on sustainable leadership p.17)
Understanding Lafarge’s activities
Cement is a hydraulic binder used in concretes and mortars.

Although the first cements were produced in Antiquity, the material relies on an extremely sophisticated industrial process. The cement we know today was discovered in the 19th century and is made up of four ingredients: limestone, silica, aluminum and iron ore, which is found in limestone and clay.

The cement manufacturing process

The cement manufacturing process involves extracting then baking limestone and clay, to produce clinker, which is then ground with gypsum into a fine powder.

STAGES IN CEMENT MANUFACTURING PROCESS

The raw materials, chiefly limestone and clay, are extracted from the quarry by blasting (1) then transferred to the crusher in a dumper (2).

The materials are crushed then transferred to the plant on a conveyor (3), for storage and homogenization.

The materials are ground very finely to produce raw meal (4), which is then preheated then baked in a kiln (5) at 1500°C, by means of a flame at 2000°C. It is then cooled by blown air.

The resulting clinker is ground with gypsum (6) to produce “pure cement”. Additives may then be added to obtain compound cements.

The finished cements are stored in silos ready for dispatch, in bulk or sacked form, to their destinations.
Cement is a vital part of construction, is part of everyday life and meets a fundamental need, namely the construction of housing and infrastructures in concrete. The world cement market today stands at two billion tonnes, and demand is growing at 5% to 7% per year. The construction materials market is boosted by population growth, booming infrastructure needs and the vibrant economies of emerging countries. Emerging markets account for some 80% of the world’s cement consumption.

Past, present and future of cement

The Egyptians were the first to use hydraulic binder in their constructions, around 2600 BC. The Romans then improved the formulation by using a volcanic material from Pozzuoli (a town near Naples), an ingredient that is still called pozzolan to this day. However, it was only in the early 19th century that cement as we know it today was formulated by Louis Vicat, who worked on the hydraulic properties of mixtures of lime and volcanic ash. Vicat was the first to determine the exact proportions of limestone and silica needed to obtain a mixture which, after baking at a given temperature and subsequent grinding, would produce a hydraulic binder — cement—capable of being manufactured at industrial scale. The real take-off for the cement industry came with the emergence of new processes during the industrial revolution in the 19th century, which accelerated its production processes.

Cement has continued to evolve, into an increasingly technical product, particularly as a result of various Lafarge innovations, such as:
- In 1908, alumina cement, made from limestone and bauxite, a tougher cement that also withstands high temperatures.
- In 1932, the development of white cement, using kaolin instead of clay, for a better aesthetic appearance than grey cement.
- In 2006, Lafarge launched its Sensium range of technical cements, i.e. easy-to-use, dust-free cements that afford faster setting and greater strength in mortars and concretes.

A universal, economical and everyday material

The Cement Business produces ranges of cement, hydraulic bonding agents and limestone for construction and renovation. The cement business is historically the oldest activity carried out by Lafarge, which benefits from nearly 170 years of expertise in this field.

The Group has long pursued a growth policy with respect to its cement production capacities, particularly in high-growth countries. Developments in recent years have increased the Group’s performance by making it possible to construct faster and more professionally.

The business of a cement manufacturer means being deeply involved in the local social and economic fabric. It is a major long-term investment.

Two major environmental challenges

Cement production does have an environmental impact:
- Cement production consumes non-renewable natural resources: limestone and clay, the raw materials; and fuel, usually fossil fuels (coal, coke, etc.) for firing them.
- Cement production generates CO$_2$ during the high-temperature kilning process, partly because of the chemical reaction undergone by the raw materials in the kiln, and partly owing to the combustion of fossil fuels for heating the kiln.
Lafarge has developed the use of alternative fuels, in order to preserve non-renewable fossil fuels while at the same time providing a local waste disposal solution. For instance, through combustion in its kilns, the Cement Business recovers local industrial and household waste, including used tires. Each type of waste sent for recovery is subject to checks and a rigorous acceptance procedure. The very high temperature of the kiln (2000°C) and the combustion time ensure that waste is totally eliminated. The reliability of this procedure has been confirmed by the French Environment and Energy Control Agency (ADEME).

Used tires are a very good example of smart recovery: Lafarge has been burning them as a replacement for traditional fossil fuels since the early 1990s. At the moment in France, energy recovery from tires in cement plants disposes of 40% of all used tires, whether shredded or whole. As an example, in spring 2009 the Port-La-Nouvelle plants transformed its 5 millionth tire into fuel in two years. The plant, located in the Aude department, sets records in the field of alternative fuels, with two-thirds of its needs covered by waste recovery. At a national level, the Cement Business in France meets nearly a third of its fuel needs using alternative fuels.
WHAT ARE AGGREGATES?

Aggregates are small mineral rock fragments typically in the form of sand, pebbles or gravel. Their origin may be natural (obtained from sea, river or earth) or artificial (as with recycled demolition materials). Aggregates are needed for making concrete, and are also used as bedding materials for roadway, embankment and building construction. Aggregates properties will vary with the local extraction geology, and not all granulates will be suitable for making concrete; this will depend on their physical and chemical composition.

WHAT IS CONCRETE?

Concrete, fondly referred to as “liquid stone”, because of its strength and durability, is a mixture of cement (typically 10% to 15%), water and aggregates (sand and gravel). It is the second most used material in the world today, after water itself. As well as these basic ingredients, concrete may also include additives lending it special properties. There are some 500 different concrete formulations in use today.

Concrete is very often used in conjunction with steel, as reinforced concrete, a material that combines compression and traction strength.

Ready-mix concrete is made at a concrete plant for direct delivery to the construction site by mixer lorry. It is produced to demand, because this is very much a fresh product; once the ingredients have been mixed, it will only be usable for four hours or so. Once poured into the formwork, concrete has a setting time of around twelve hours; the exact time varies with the formulation. Once fully set, the formwork can be removed.

Lafarge has worldwide coverage, with some 1,200 concrete plants in all, and undertakes to supply a product of constant quality despite differences in the composition of locally available raw materials, a factor that raises an additional challenge.
A MULTI-FACETED MATERIAL

Concrete has changed considerably over the years. What used to be considered as little more than a rough mix of simple ingredients is now appreciated as an eminently modern material capable of addressing demanding environmental requirements, as well as achieving daring architectural exploits.

A green material

Concrete is an environmentally-friendly material by virtue of several intrinsic qualities:
- It is a natural product produced by extraction and transformation of natural resources having a good long-term availability.
- It can be recycled almost infinitely, in the form of rubble fill for example.
- Unlike some other materials, it has a small carbon footprint (around 100 kg of CO₂ per tonne of concrete).
- It is a safe material, chemically inert, which means zero emissions, and resistant to fire.
- When used properly, it is exceptionally durable.

Analysis of a building’s lifecycle reveals that concrete is the ideal material for sustainable construction. Recyclable, extremely resilient and with unsurpassed thermal inertia qualities, concrete has now established itself as a material ideally suited to the future and to sustainable construction.

FOCUS ON... SUSTAINABLE CONSTRUCTION

Sustainable construction draws directly on the main principles of sustainable development. It involves limiting buildings’ impact while ensuring that they are of a higher quality in terms of aesthetics, durability and resilience. Sustainable construction takes into account a building’s whole lifecycle and aims to reduce the impact of each stage, from the choice of initial materials to the demolition phase. It includes sustainable use of natural resources, reducing the disturbance caused by worksites, better thermal and acoustic insulation of buildings, the construction of positive-energy buildings, control of structures’ weathering and the recycling of materials and structures.

Because 83% of construction-related greenhouse gases are emitted during the building occupancy phase, Lafarge works under various partnership arrangements on sustainable construction solutions that seek to minimize the environmental and human impact of buildings. This work has several focuses:
- Integration of renewable energy sources
- Use of recyclable materials in construction
- Improvements to thermal inertia

A high-tech material

Concrete is hardly a new material: even the ancient Romans used it. But interest in actual concrete composition only really began in the 19th century. Then the early years of the 21st century saw an unprecedented revolution in concrete, with the emergence of genuinely scientific, rather than empirical, studies. Insights from highly sophisticated techniques (such as nuclear magnetic resonance imaging, and electron microscopy) would enable engineers to develop a better-structured material, with considerably enhanced properties.

Its experience has given Lafarge a unique expertise in the properties of concrete. Its capacity to innovate, by creating new concretes with completely new characteristics, is accompanied by the close attention it pays to its customers’ expectations. It is bringing concrete into a new era and responding to the very latest architectural requirements. A pioneer of innovation and research in relation to building materials, the Group offers a wide variety of products, ranging from traditional concretes to ultra-high performance concretes.
A material which serves architectural prowess

Reliable Low carbon footprint Hi-Tech
Exemplary durability 100% recyclable Mineral
High performance Fibre-charged Sophisticated
Energy-saving Sophisticated Everyday Fluid Natural
Comfortable Innovative Unique Available
Non-pollutant Fast Lightweight Flexible Inexpensive
Solid Evolution Lasting Thermal inertia Modular
Productivity Multiplicity Inventive Everyday
Optimized Maintenance-free Ecological
Simplicity Efficient Universal Unparalleled
Versatile Heterogeneous Essential Tailor-made
Plaster is a material made from gypsum, either of natural origin (sedimentary rock extracted from underground or open-cast quarries then crushed and ground) or synthetic (recycled from industrial waste), and baked at 150°C.

Plaster is mostly used in the form of board, though Lafarge also makes other plaster-based products, such as panels and pastes.

**PLASTERBOARD MANUFACTURING**

Plasterboard takes the form of a thin layer of plaster sandwiched between two sheets of card.

The plaster is mixed with water, plus various solid and liquid additives, into a homogenous paste, in a mixer. Two continuous sheets of card are unreeled simultaneously, one under the mixer and one over. The plaster paste is spread on the lower sheet, and the edges of the upper sheet are then bonded over the pre-folded edges of the lower sheet.

The sandwich is then rolled, between two rollers. Once the plaster has set, the boards are cut to the required length, and stored ready for delivery to construction sites.
SUBSTANTIAL INNOVATION POTENTIAL

Lafarge’s Technical Development Centre in Avignon specializes in plaster R&D. It liaises closely with marketing and production teams, and practises skills transfer across all the countries where Lafarge operates, with the aims of enhancing plaster properties and developing new products.

At the Technical Development Centre, research focuses particularly on:
- Improvements to production processes, with a view to cost reduction
- Optimization of plasterboard properties (aesthetics, mechanical strength, soundproofing)
- Reduction in the proportion of non-renewable natural resources used in plaster, with a view to improving environmental performance
- Development of solutions addressing customers’ needs as closely as possible

PLASTER, AN ULTRA-ECOLOGICAL, 100% RECYCLABLE MATERIAL

Gypsum adapts easily to all the design and finish specifications of internal architecture projects. Thermal insulation, soundproofing, safety, ease of use, aesthetic flexibility and easy recycling – all qualities that the Group is striving to advance even further.

Lafarge has set itself the objective of reducing the proportion of non-renewable raw materials used in making its products. Progress here is especially marked in the manufacture of plasterboard, since substitute materials have replaced more than 50% of the natural gypsum previously used. The main substitute material is desulphogypsum, a synthetic gypsum made by desulphurizing the fumes from coal-fired power stations. As well as replacing a non-renewable natural resource, this pure, consistent raw material is an excellent example of industrial waste utilization. As a result all of Lafarge’s production plants recycle their production waste directly back into their manufacturing processes.

Some plants practise other effective solutions to waste elimination problems, recycling waste paper, cardboard and other waste, which are transformed into fibres for use in the card that sandwiches the plaster in the plasterboard.

Plaster is appreciated for its properties of fire-resistance, sound and heat insulation, and humidity regulation. It is chiefly used in interior architecture, for partitions and ceilings in residential constructions.

Plaster consumption in different parts of the world varies considerably according two factors:
- Local construction methods. Demand for plasterboard is higher in the USA (which accounts for 50% of the world demand), Japan and Australia than in Western Europe, for example.
- Maturity of local housing market. Demand for plaster solutions is rising in emerging markets with rising GDP per capita. For example, in 2005 Lafarge invested to build the first plaster plant in Vietnam, where plaster solutions claim a market share of more than 20%.
Values for sustainable leadership
For several years, Lafarge has been proactively committed to sustainable development, a strategic approach to long-term value-creation which reflects the Group’s fundamental values: industrial expertise, performance, and respect for employees, local cultures and the environment. The aim is to make the Group, already a leader in its markets, no less exemplary in environmental protection, social responsibility and corporate governance.

Lafarge is the only company in the construction materials sector to appear on the list of the 100 Most Sustainable Corporations in the World.

1889
In 1889 and again in 1900, Lafarge received medals at the Paris Exposition for its social achievements.

1899
A convent of the Little Sisters of the Assumption founded at the Teil factory to help families and care for the sick

1900
Workers’ housing development, Cité Blanche, built at the Teil plant

1930
First quarry rehabilitation project, in Draveil (France) – it has since become a protected site.

1971
First publication of the consolidated financial statements

1977
The Principles of Action are drawn up to define Lafarge’s vision of leadership and its commitments to all of its stakeholders.

1971
Use of industrial waste as fuel in order to reduce CO₂ emissions begins.

1982
World Business Council for Sustainable Development co-founded

1995
Publication of the Group’s Environmental Policy

1992
First international employee share ownership programme launched

1999
Lafarge co-founded the CSI (Cement Sustainability Initiative) within the WBCSD; it now includes 18 cement companies, proof of its sector-wide approach.

1995
Workers’ housing development, Cité Blanche, built at the Teil plant

2000
Lafarge and Care sign a partnership to combine their efforts in the fight against HIV/AIDS for employees and their families, especially in Sub-Saharan Africa

2000
First publication of the consolidated financial statements

2001
Worldwide partnership agreement signed with Habitat for Humanity, an international NGO which works to make property ownership a reality for needy families around the world.

2005
A Clean Development Mechanism recorded at the Tétouan factory, which gets 50% of its energy from wind turbines.

2006
The Principles of Action are drawn up to define Lafarge’s vision of leadership and its commitments to all of its stakeholders.

2001
First international employee share ownership programme launched

2001
Partnership with the WWF signed; it aims to exchange points of view and expertise and to undertake concrete actions in favour of environmental protection and biodiversity.

2003
Publication of the Group’s Environmental Policy

2007
“2012 Sustainable Development Goals” launched. It sets out Lafarge’s main ideas and precise objectives for sustainable development.

2007
Presentation of Hypergreen, a design for an eco-friendly tower developed in partnership with the architect Jacques Ferrier
A MULTI-LOCAL APPROACH

Lafarge believes that the success of its responsible growth does not depend solely on its ability to satisfy its customers, employees and shareholders. The keys to its success also include the Group’s actions towards the communities which host its sites. This philosophy is put into practice in the field on a daily basis by making decisions in cooperation with all of the stakeholders and by seeking excellence through an expertise which unites industrial efficiency and value creation with respect for people and cultures, protection of the environment and economy in the use of natural resources.

Because each of the Group’s activities is first and foremost a local activity, Lafarge has adopted an approach which is not global but multi-local. The Group thereby encourages dynamic action in this field and forms international and local partnerships which aim to share expertise and experience across borders so that everyone can profit from each site’s best practices.

WORKING TOGETHER

The Group’s policy is increasingly based on the development of a long-term dialogue and on building a true partnership with civil society. This has led to the creation of partnerships at both Group and local levels which illustrate Lafarge’s commitment to improving its social, environmental and economic performance. These partnerships are vital for Lafarge to be able to better understand stakeholders’ expectations and favour a climate of dialogue without which the Group would be unable to continue its activities.

Partnerships for sharing

Since the 2000s, Lafarge has turned to international NGOs known worldwide for their particular expertise in the field, by forming global partnerships with them which are then applied on the ground:

- In 2000, Lafarge established its initial partnership, which has since been renewed, with WWF. This partnership deals with climate change, biodiversity, sustainable construction and persistent pollution. It is currently being applied by Group units which fund local WWF projects.
- Lafarge and CARE, a leading humanitarian NGO, signed a partnership combining their work in the fight against HIV/AIDS in 2003. The programme is not just aimed at employees: their families and communities are also included. While priority has been given to Africa, the region most afflicted by the pandemic, Lafarge is committed to extending the programme to other developing countries affected by the spread of the disease in 2010.

Many initiatives, however, are the result of action in the field, alongside local communities. This has led to many local partnerships for highly specific activities in areas as diverse as education, economic development and infrastructures.
FOCUS ON... 10 YEARS OF PARTNERSHIP WITH WWF INTERNATIONAL

In March 2000, WWF International and Lafarge signed a worldwide partnership agreement. Lafarge was the first industrial group to join WWF’s Conservation Partner programme. Following on from the positive results and accomplishments they have already achieved, WWF International and Lafarge decided to extend their partnership in 2005, and again in 2009 for four years.

This partnership leads to real actions: priority areas have been chosen in cooperation with WWF International. The chosen priorities are climate change, biodiversity, sustainable construction, persistent pollution and water use. These indicators can be used to evaluate the progress made in protecting the environment and guarantee that Lafarge’s actions are transparent. They are audited by Lafarge’s Sustainable Development Report and most of them are evaluated by outside auditors every year. The first steps of the partnership include commitments in specific several areas. The renewed partnership between Lafarge and WWF International is part of an ongoing, long-term approach.

The stakeholder panel: a critical and enlightened look and the Sustainable Development Report

In 2003, Lafarge took the innovative step of creating a permanent stakeholder panel made up of labour union representatives, NGOs and architects. The 10 panel members are responsible for providing a critical look at Lafarge’s sustainable development plan and reporting practices, suggesting improvements and writing an annual opinion on the Group’s social responsibility policy. Their advice has led Lafarge to plan new ways of making progress, particularly on climate change and growth in emerging countries.

Working groups

As a leader in its industry, Lafarge also aims to serve as a mentor for other companies in the sector and to take part in best practice exchanges in order to form the broadest possible agreements. This goal is behind the WBCSD’s (World Business Council for Sustainable Development) Cement Sustainability Initiative (CSI), which Lafarge co-founded in 1999. The CSI now counts 23 member companies from industrialised and developing countries alike, which work together to create a common model of the sustainable development issues facing the cement industry.
Because the Group is conscious of the impact its activities have on the environment in terms of both the use of non-renewable natural resources and CO₂ emissions, Lafarge has set some priorities in key areas in which it must make a commitment to reducing its impact.

"2012 Sustainable Development Goals"

In May 2007, Lafarge took its commitment to sustainable development a step further by launching its "2012 Sustainable Development Goals." This roadmap, which is the result of an in-depth process of discussion and dialogue with stakeholders, made it possible to define the areas in which it has a real impact and themes where Lafarge can have a positive impact on the industry. This approach pointed to clear, measurable and ambitious goals in three areas:

- management, with objectives for security, relations with local communities, competitive best practices and customer satisfaction.
- equal opportunities and welfare, an area in which Lafarge has made commitments through its programmes on the fight against AIDS and malaria, and the goal of having more women in management roles.
- the environment, a constant concern which is now marked by commitments on reporting, biodiversity measurements, and reducing polluting emissions.

Today, the Group monitors its progress thanks to public and audited indicators, published in its sustainability report.

Examples of our actions:

- Fighting climate change

Because Lafarge cares about the future of our planet and because cement production naturally produces CO₂, the Group made a pioneering commitment to the fight against the build-up of greenhouse gases in the atmosphere, especially carbon dioxide.

In the framework of its partnership with the WWF, for 1990-2010 the Group has committed to:
- cut its absolute CO₂ emissions by 10% in industrialised countries
- reduce its net emissions by 20% per tonne of cement throughout the world.

Lafarge is using three CO₂ reduction levers in order to meet its goal:
- Improving energy efficiency and substituting raw materials
- Innovating for products and processes
- Capturing and confining carbon

The efforts which Lafarge has implemented in all of its plants across the world have produced a continuous decrease in the Group's CO₂ emissions since 1990. As of the end of 2009, net CO₂ emissions per tonne of cement had been reduced by 20.7%.

Fighting climate change also means working on more holistic solutions which make buildings as low in CO₂ as possible. For
As a part of its partnership with WWF, Lafarge has made a commitment to set up a worldwide biodiversity management system. In 2007, this led to the creation of a biodiversity management and evaluation system used in all of the Group’s quarries. Lafarge also works with other organisations and institutions to better deal with its environmental impact and to show its ability to use mineral resources responsibly.

**FOCUS ON…BIODIVERSITY IN QUARRIES**

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Appendix
Cement additive
Minerals known as “cement additives” are used in varying proportions for the last step of cement production. They make it possible to produce a range of cements with different properties. They can be of natural (e.g. limestone and volcanic rocks), sedimentary (pozzolan), or industrial origin. Industrial sources include the iron and steel industry (blast furnace slag), the electronic chip industry (silicone dust), or coal-fired power plants (fly ash). Using of these materials reduces CO₂ emissions.

Concrete
Concrete is a building material made by mixing water, aggregates and sand with a binding agent (usually cement) and, if necessary, with additives. Depending on the proportions of the ingredients used, the concrete produced may vary widely in terms of performance and appearance. It may be produced in a plant and brought to the construction site in a mixer truck or made on site. It is then poured into the formwork or a mould which gives it its final shape. The formwork or mould is removed after the setting time, which can vary.

Biomass
Biomass is all of the organic matter which can be used as a source of energy. It is the biodegradable part of products, residues and waste from agriculture and forestry and its related industries, and plant waste and residues from industries.

Fly ash
A product derived from coal combustion, found in the filters of thermal power plant chimneys, which has excellent hydrophilic qualities and can partially replace clinker as a cement additive. Fly ash is mostly made up of vitreous silica, aluminium, iron oxide and lime.

Cement
A hydraulic bonding agent obtained by cooking a mixture of limestone and clay at very high temperatures to form clinker, which is then ground and mixed with gypsum and sometimes other additives. It is the basic ingredient of concrete.

Clinker
The main ingredient of cement, it is a hard granulates material produced by cooking a mixture of roughly 80% limestone and 20% clay at very high temperatures.

Sustainable construction
Sustainable construction means limiting buildings’ impact on the environment while guaranteeing high quality in terms of aesthetics, durability and resistance. It deals with the entire building lifecycle, from the initial products to demolition and recycling.

Industrial waste
Industrial waste is the residue from a production, transformation or usage process. Waste from other industries may be used as alternative fuels or materials. This is part of the logic of industrial ecology, and saves fossil fuels and raw materials while serving the local community: Treating the waste would have been costly and have released CO₂.

Industrial Ecology
Industrial ecology is a new environmental management practice. It aims to better integrate environmental challenges like conserving natural resources and using natural raw materials into companies’ strategies. Industrial ecology is inspired by the almost cyclical operation of natural ecosystems. Nature has cycles of production, destruction and recycling; similarly, waste from certain industries can be used as raw materials or fuels for other industries.

Aggregates
Aggregates are small rock fragments (0.08 to 80 mm) of mineral origin. Aggregates come in different types: maritime, fluvial and terrestrial. They may be sand, gravel or crushed gravel.

Slag
A mixture of lime, aluminium and silica produced when iron ore fuses with coke in a blast furnace. Slag is recovered in fusion on top of the cast iron. Because it has hydraulic properties similar to those of clinker, it can be used as an additive in cement or concrete.

**Plasterboard**

Plasterboard panels are industrial building components. They are made in factories by locking a thin layer of gypsum and additives between two cardboard sheets to create thin panels. They are put in place with screws or adhesive mortar. The panels can also be nailed or screwed to wooden or metal frames to dress interior walls and partitions.

**Plaster**

Construction material made from a rock called gypsum, which is dehydrated by cooking and then ground. It can be used in the form of a paste or a board. When mixed with water, it forms a gel which sets in a few dozen minutes and hardens later.

**Pozzolan**

Pozzolan is named after Pozzuoli, a region near Naples, Italy, which is rich in volcanic ash. Natural pozzolan is a light siliceous mineral produced during basaltic volcanic eruptions. It contains silica, alumina and iron oxide (which gives it a red colour), as well as lime and magnesium oxide. Pozzolan is used as a cement additive. Artificial pozzolans with the same properties as natural pozzolans can be created by heating clays, basalts or schists.