

# Annual report 2022

Build  
together,  
live together







## LOUIS VICAT DEMYSTIFIED ARTIFICIAL CEMENT IN 1817

Through the research and experiments he conducted while working on the construction of a bridge in Souillac, in south-west France, Louis Vicat, a young graduate of France's prestigious Polytechnique and Ponts et Chaussées engineering schools, unveiled the secrets of artificial cement in 1817. This discovery, for which Louis Vicat chose not to file a patent, was the starting point for the prodigious development of cement. In 1853, Joseph Vicat, a Polytechnique engineer like his father, Louis, fired clayey limestone he believed to be suitable for manufacturing artificial cement. The results proved him right, and he built a cement plant in Genevrey de Vif, in France's Alpine region.

## THE LONG HISTORY OF THE VICAT GROUP HAD BEGUN.

### CONTENTS ▼

#### Group business and strategy

##### P. 02 - 10

[Interview with the Chairman  
& CEO](#)

[Vicat throughout the world](#)

[Business model](#)

[Governance & shareholding](#)

[Indicators](#)

#### Performance per geographical area

##### P. 11 - 27

[France](#)

[West Africa](#)

[Rest of Europe](#)

[Mediterranean](#)

[Americas/  
USA](#)

[Asia](#)

[Americas/  
Brazil](#)

#### CSR ambitions

##### P. 28 - 40

[Climate](#)

[Hydrogen &  
Low-carbon  
transportation](#)

[Biodiversity](#)

[Circular  
economy](#)

[Human  
resources](#)

[Product  
innovation](#)

[Sponsorship](#)

[Process  
innovation](#)

[Foundation](#)

**3 MAIN  
BUSINESSES**  
**CEMENT  
CONCRETE  
AGGREGATE**

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**3.642**  
**BILLION EUROS  
IN SALES**  
**2/3 OF WHICH WAS  
GENERATED OUTSIDE  
FRANCE**

---

**12 COUNTRIES**

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**NEARLY 9,900  
EMPLOYEES**

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Vicat is a French company founded 170 years ago in the footsteps of Louis Vicat. Today, across 12 countries, the Group lays out a top-class offering of bio-based and mineral construction materials, along with services that meet the needs of the construction trades. Wherever it has cement plants, aggregate quarries, and concrete batching plants, Vicat strives to produce locally and in so doing develop employment and the local economy. For some years now, under its commitment to ecological transition, the Group has been reducing the carbon impact of all its businesses and putting the virtues of circular economy into practice. The family-run company cultivates a relationship of confidence with customers, partners, and employees on a daily basis.

“As industrial manufacturers, we are moved not just by the duties imposed on us regarding ecological transition but also by our own sense of responsibility.”

Guy SIDOS  
Chairman & CEO

**After a lengthy health crisis, 2022 did not turn out to be all easy going. How did the Group overcome the difficulties arising out of the war in Europe and the resulting worldwide disturbance to energy markets and the economy?**

We have indeed been living through some exceptional events in recent years, such as the health crisis, war in Europe and in sub-Saharan Africa, climate change, disturbance of energy markets, societal issues, and high inflation. These major changes affect our daily lives, the way we think, the way we live together, consume, work, travel, and build. But they also highlight the resilience of the Group and its business model. Our industrial policy based on energy efficiency, cost reduction, and reduction of our environmental footprint is particularly well suited to facing the challenge. The Group's employees are active contributors to this resilience, for we are more than just a collection of people, we are a family of committed personalities that is essential for sustaining industry and jobs in the communities where we work. More agile, human, and sure of its rock-solid foundations than ever, the Group is set to brave the future.

**Pursuing in the footsteps of Louis Vicat, what are the Group's strong points for today and tomorrow?**

Our strengths are our determination and our imagination! We are developing innovations for decarbonizing our products and industrial processes, making the most of circular economy and preserving natural resources and biodiversity. This tradition of innovation is the launch pad for becoming net-zero carbon throughout our value chain by 2050. Our priorities are to reduce the clinker content of our cements and defossilize our industrial processes, targeting 100% defossilization in Europe and 50% across all our facilities by 2030. It's an ambitious undertaking that will require the participation of our entire workforce.



**“Its innovative skills and community focus place Vicat in an enviable position as an industrial concern committed to circularity and decarbonization of its activities.”**

### **What were the main investments in 2022?**

At the cost of substantial investment, we have continued to modernize our industrial resources and enhance our energy and environmental performance. In Turkey, at the Baştaş Çimento cement plant, a new electric-power generation system based on recovery of the waste heat of our kilns has been installed. In Senegal, a new line capable of producing 6,500 tons of clinker per day is being built at the Sococim Industries site.

In the United States, at our Ragland plant in Alabama, the new cement kiln which will eventually be using 100% alternative fuels will double the plant's output. Important innovation projects harnessing the potential of hydrogen are taking shape. Vicat has become Haffner Energy's strategic partner for developing a module capable of producing Hypergas, a renewable synthetic gas that is rich in green hydrogen, and biochar, a form of charcoal made from biomass. Under a public-private partnership deal, Vicat has taken a shareholding in Genvia, a company specializing in the manufacture of high-temperature electrolyzers employing virtuous, resilient technology. The first demonstrator is expected to be in operation in 2024, followed by an electrolyzer megafactory. And in conjunction with Hynamics, a subsidiary of energy provider the EDF group, we are working on an integrated solution called Hynovi for capturing CO<sub>2</sub> and producing low-carbon methanol in what will be France's very first venture into the low-carbon methanol sector. It is in line with the French government's objectives regarding decarbonization and energy independence, for which synthetic fuels are one of the principal means of making progress.

By combining our alternative-fuels policy with innovations such as these, we are achieving massive decarbonization of our activities while being less exposed to fluctuations in energy costs.

**When it comes to carbon neutrality, Vicat takes action with respect to more than just cement manufacture. Your policy for development of low-carbon products is also gaining ground.**

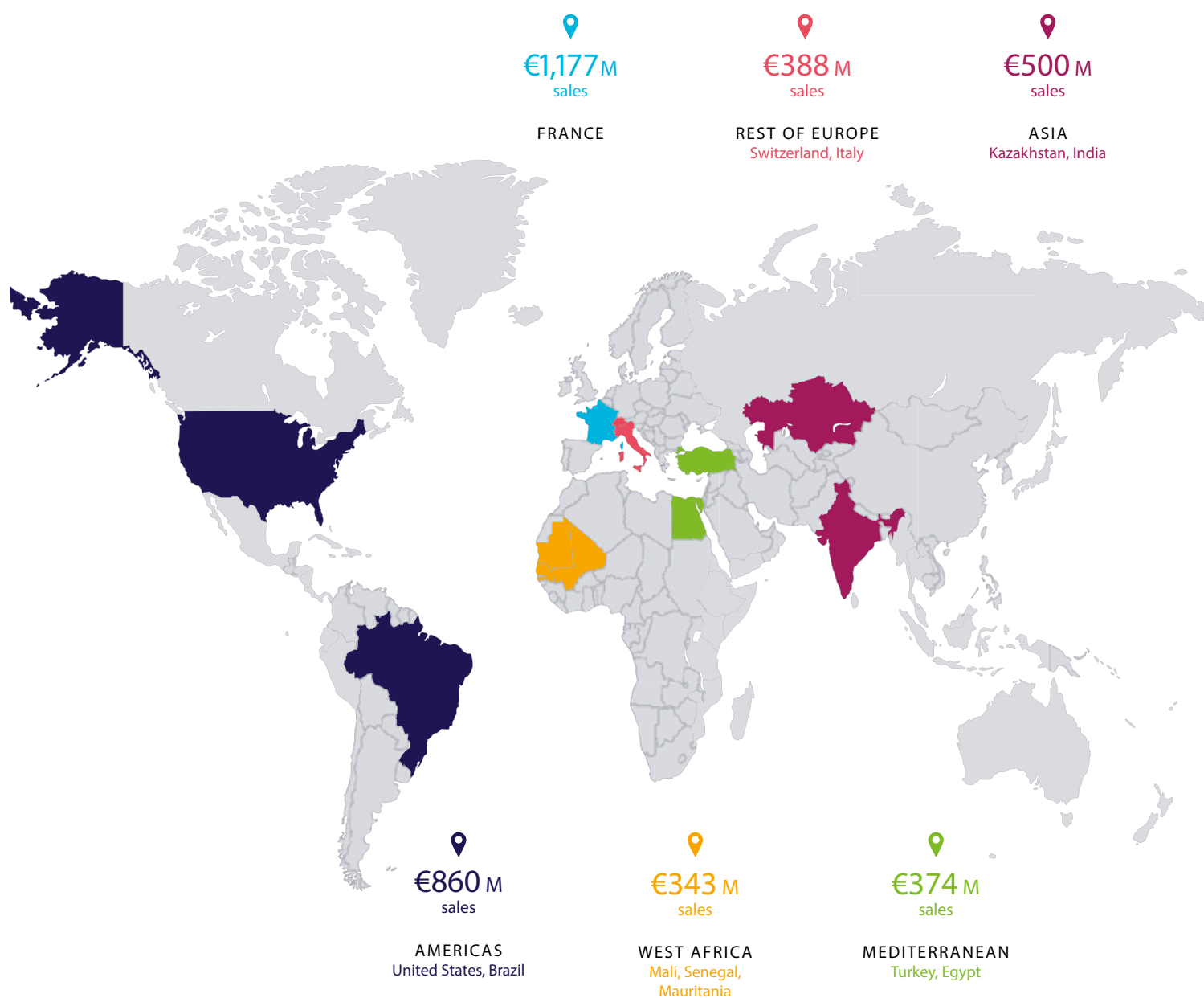
Yes, our new carbon-negative binder, CARAT, can be used to make very-low-carbon concrete which, while it performs just as well as concrete made with conventional cement, has a carbon footprint per cubic meter of concrete close to 90% lower as a result of a reduced clinker content and being rich in bio-based material. This binder is proving its worth at a large scale on some of our customers' projects. Our R&D teams have also developed Lithosys for concrete 3D printing, a process that reduces by half the amount of material required for a given application. Other examples are composite solutions that use concrete in conjunction with hemp or wood.

I would add that as industrial manufacturers, we are moved not just by the duties imposed on us regarding ecological transition but also by our own sense of social and societal responsibility.

Like Louis Vicat, who pursued his goal doggedly for many years, we are convinced that success based on building together for living together is built in the long term. Our pragmatic approach to taking on risks combines with our constant resolve to invest durably in what makes us different and has built our success, that is to say our workforce, our facilities, and the ecosystems in which we operate.

**GUY SIDOS,**  
Chairman & CEO

# Vicat throughout the world



	Employees	Cement plants	Batching plants	Aggregate quarries	Milling plants
AMERICAS	2,254	3	58	2	
FRANCE	3,321	5	156	45	2
REST OF EUROPE	742	1	18	17	1
WEST AFRICA	963	1	1	2	2
MEDITERRANEAN	1,402	3	39	5	
ASIA	1,230	3		1	





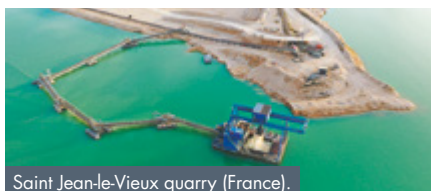
Quarry of the Tschanner (Switzerland).



Papers from Papeteries de Vizille (France).



Lithosys solution – 3D printing.



Saint Jean-le-Vieux quarry (France).



Ragland cement plant, Alabama (United States).



Vernon concrete batching plant, California (United States).



Port Edouard Herriot concrete plant in Lyon (France).



Konya cement plant (Turkey).



## CEMENT

Cement, a highly popular and unrivaled construction material, is used principally to make concrete. Vicat manufactures a wide range of artificial cements, together with a natural quick-setting cement (Prompt), to meet the needs of all those involved in construction.



## CONCRETE

Be it decorative, self-consolidating, pervious, or bio-based, for 3D printing, roads, complex architecture, bridges or tunnels, and everything in between, Vicat has a thorough offering of ready-mixed concrete to meet the specific needs of any project and every imperative relating to environmental, quality, and safety concerns.



## AGGREGATE

Whether virgin or recycled, aggregate is a raw material for sustainable construction. It is vital for making concrete and road pavements.



## OTHER PRODUCTS & SERVICES

In some countries Vicat also has complementary businesses that generate value-added for its customers. These include transport, paper production, construction chemicals and finishing products for the construction industry in France, and the manufacture of bags in both France and India.

## MEGATRENDS

## POPULATION GROWTH

## Our resources

### INDUSTRIAL HERITAGE

- Modern, constantly-evolving high-performance industrial facilities close to their markets. **16** cement plants throughout the world, **272** concrete-batching plants, **72** aggregate quarries
- Self-generation of **140** GWh of renewable electric energy
- **7** subsidiaries devoted to circular economy (Altola, Alternative, Bioval, CIRCULère, Çözüm, Terenvie, Vito Recycling).

### NATURAL CAPITAL

- Extensive mineral rights guaranteeing access to reserves for the long term
- Rich, diversified landholding respectful of biodiversity and ecosystems: forests, wetlands, nature reserves.

### HUMAN CAPITAL

- Occupational health and safety an essential priority  
Goal: **Zero accidents**.
- 9,912 committed, passionate employees sharing company values in **12** countries. **90%** of employees on open-term contracts
- High-quality social dialog based on mutual respect
- **100%** gender pay equity (see corporate website vicat.com)
- Goal: **100%** of personnel aware of energy-transition issues
- Close to **100%** of general-management positions occupied by local nationals in the **12** countries where we work.

### SOCIETAL CAPITAL

- Constant dialog of trust with stakeholders (populations, institutional partners, customers, scientific and technical bodies, local communities, not-for-profits, etc.)
- Territorial identity in each of the **12** countries where we work
- **2** corporate foundations: Fondation Louis Vicat and Fondation Sococim (Senegal)
- Supplier relations focused on top-rate, responsible, local suppliers (**65%** of purchases made in the economies where we work)
- Committed to social inclusion.

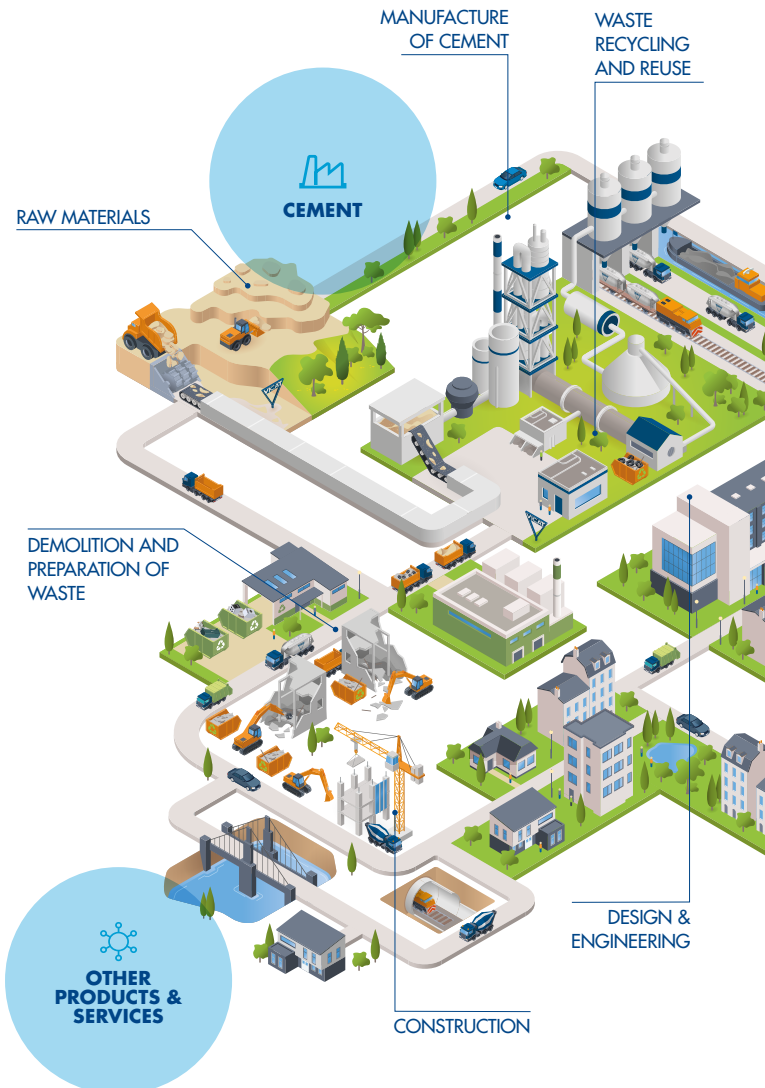
### ECONOMIC AND FINANCIAL CAPITAL

- Enduring family-based majority shareholding
- Geographically diversified generation of cash flow (**64%** in developed countries, **36%** in emerging markets)
- Financial solidity – high equity (**€2.8 billion**) – controlled, diversified debt (5-year average maturity).

### INTELLECTUAL CAPITAL

- Artificial cement invented by Louis Vicat in 1817
- Recognized know-how and technical excellence in the Cement, Ready-Mixed Concrete, and Aggregate businesses
- **100%** of top management trained in ethics and compliance
- Innovation: modern R&D center focused on product and process innovation (**100** engineers and technicians).

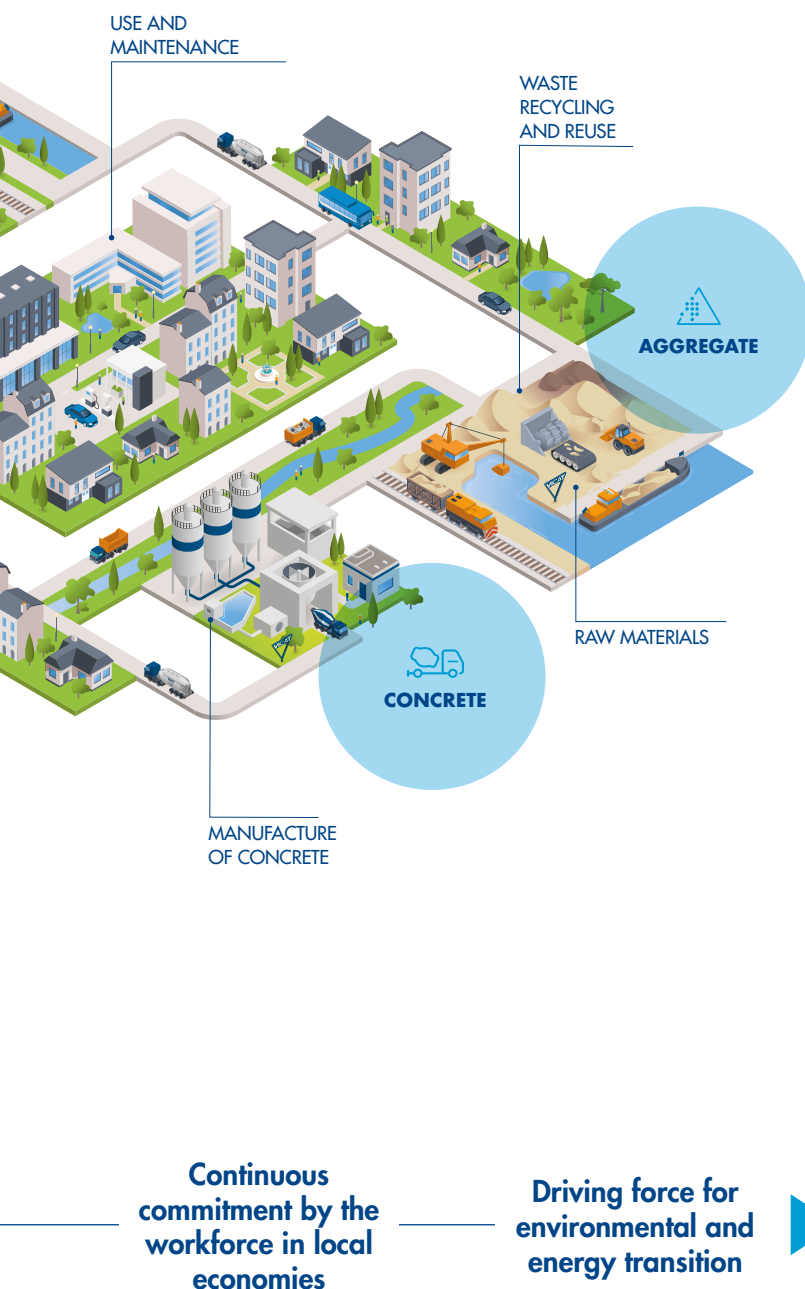
## Our activities



## Our strategic focuses

Role as a cement  
manufacturer serving  
our customers





## Our value creation

### PEOPLE

- Safety culture: constant reduction in the accident-severity index (down **8.3%**) and accident-frequency index (down **17.1%**)
- **100%** of employees have received safety training.
- Constant increase in the number of hours of training (**21.2 h** / person, up **3%** on 2021)
- Constant increase in the number of women employees, across all socio-economic categories (**11.8%** women)
- More than **90%** of direct jobs are under **open-term contracts**
- **Zero tolerance** policy as regards discrimination, sexual and moral harassment, and sexist behavior
- **100%** of businesses engaged in supporting local communities in 2021
- **600** suppliers adhere to our Supplier Conduct Code (respect of human rights, safety, prohibition of child labor, respect of labor law, etc.).
- Louis Vicat / Sococim foundations: support for actions in favor of education, handicap awareness, culture, heritage, and entrepreneurship.

### CREATION OF ECONOMIC VALUE BY STAKEHOLDERS

- Customers: **€3.6 billion** (2022 sales)
- Employees: **€500-million** payroll
- Suppliers: **€2.5 billion** paid to suppliers (Group scope, including energy)
- Shareholders: **€74 million** paid out to shareholders
- Debt holders: **€30-million** debt burden
- States: **€110 million** paid to national governments (direct and indirect taxes). More than **€700 million** of sales tax (VAT, etc.) collected
- Investment for future growth: **€400 million** (including decarbonization projects).

### PLANET

- Biodiversity: **74%** of facilities have restoration plans
- **3.9** million metric tons of materials recycled, reused or repurposed
- **420,000** metric tons of CO<sub>2</sub> emissions prevented (at constant cement volume)
- Fuel substitution rate: rise from **26.2%** in 2021 to **28.1%** in 2022 across the Group (equivalent to not burning **860,000** metric tons of coal), **66.0%** in Europe
- Clinker content: reduction from **78.9%** in 2021 to **77.5%** in 2022
- CDP ranking: **A-**
- **64** projects involving decarbonization; **€85 million** for funding the projects
- **5%** of electrical energy consumed is obtained through renewable self-generation (hydro, photovoltaic, waste heat).
- High-quality, **100%** sustainable, standards-compliant product and service offering for decarbonizing the value chain.

# Governance and shareholding

## Board of Governors

### Operational executives

**Guy Sidos**, Chairman & CEO

**Didier Petetin**, Joint COO, senior executive in charge of business in France (excluding Paper)

**Lukas Epple**, Joint COO, Strategy officer, senior executive in charge of business in France

### Senior executive vice presidents

**Éric Bourdon**, Industry & Innovation officer, Chief climate officer

**Philippe Chiorra**, Chief legal officer

**Éric Holard**, Country director, United States

**Hugues Chomel**, Chief financial officer

**Christophe Béranger**, Human resources officer



#### Audit committee

Rémy Weber, Chairman  
Xavier Chalandon  
Éléonore Sidos



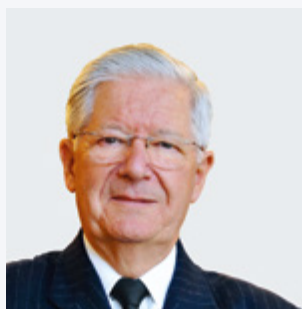
#### Compensation committee

Xavier Chalandon, Chairman  
Rémy Weber  
Bruno Salmon



#### CSR committee

Sophie Sidos, Chairwoman  
Bruno Salmon  
Sophie Fégueux



**Jacques Merceron-Vicat**



**Guy Sidos**



**Caroline Ginon**



**Xavier Chalandon**



**Louis Merceron-Vicat**



**Hugues Metz**





**Sophie Féguéux**



**Rémy Weber**



**Emmanuelle Salles**



**Bruno Salmon**



**Sophie Sidos**



**Éléonore Sidos**



## Share capital

As of December 31, 2022, the company's share capital amounted to €179,600,000, consisting of 44,900,000 shares with par value of €4 each.

**63.3%**  
**FAMILY**  
**SHAREHOLDERS**

**35.3%**  
**PUBLIC**

(INCLUDING 1.34% EMPLOYEES)

## AUDITORS

KPMG Audit  
Wolff & Associés SAS

# Indicators



## CEMENT

**16** cement plants  
**5** milling plants  
**27** million tons sold



## CONCRETE

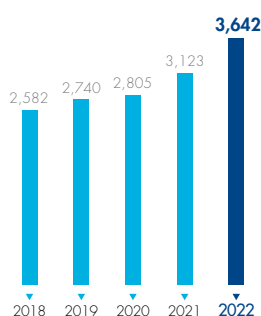
**272** batching plants  
**10** million cubic meters sold



## AGGREGATE

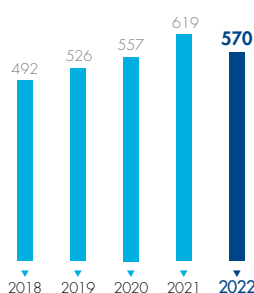
**72** aggregate quarries  
**25** million tons sold

### Consolidated revenue (in millions of euros)



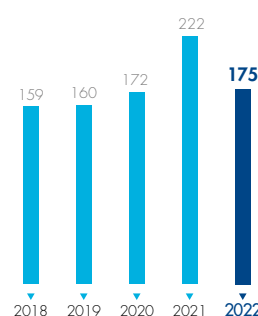
Consolidated revenue for 2022 amounted to €3,642 million, up +16.6% on a reported basis and up +19.7% at constant scope and exchange rates compared with 2021.

### EBITDA<sup>(1)(2)</sup> (in millions of euros)



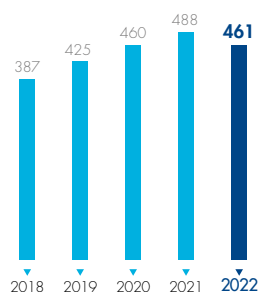
At €570 million, the Group's consolidated EBITDA was down -7.9% relative to 2021 and down -5.9% at constant scope and exchange rates.

### Consolidated net income<sup>(2)</sup> (in millions of euros)



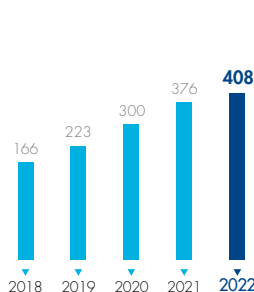
Consolidated net income amounted to €175 million, down -21.0%, and down -28.0% at constant scope and exchange rates.

### Cash flow from operations <sup>(2)</sup> (in millions of euros)



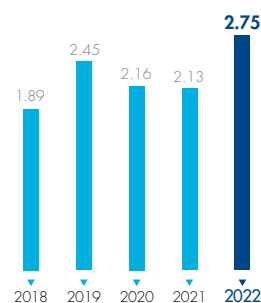
Operating cash flow amounted to €461 million, generating free cash flow before strategic investments of €210 million in 2022.

### Net industrial investments disbursed (in millions of euros)



Net industrial investment disbursed amounted to €408 million in 2022.

### Net debt/EBITDA<sup>(2)</sup>



Leverage<sup>(3)</sup> is 2.75 times EBITDA at December 31, 2022.

(1) EBITDA (Earnings Before Interest, Tax, Depreciation and Amortization) is calculated as the sum of operating revenue, cost of goods sold, payroll expenses, taxes and duties and other ordinary income and expenses on ongoing business.

(2) The figures for 2018 have been restated in accordance with IFRS 16.

(3) Gearing is a financial ratio used to determine ability to repay debt. It is the ratio of net debt to EBITDA.



A photograph of a large industrial facility, likely a refinery or chemical plant. The image features several tall, cylindrical storage tanks and a complex network of steel scaffolding, pipes, and ladders. A large, white, corrugated pipe runs diagonally across the foreground. The sky is bright blue with scattered white clouds. The text "PERFORMANCE PER GEOGRAPHICAL AREA" is overlaid in white, serif capital letters in the upper center of the image.

# PERFORMANCE PER GEOGRAPHICAL AREA





# A challenging year

After a good start to the year in 2022, **the construction sector** was gradually afflicted by the effects of inflation—particularly rising interest rates—, while the drop in the number of new residential and public-works project startups was partially compensated by activity in the private non-residential sector.

## Didier PETETIN

Joint COO,  
senior executive in charge  
of business in France  
(excluding Paper)

“Against the backdrop of high inflation, in France Vicat demonstrated its resilience, through the constant commitment of its workforce and the strength of its business model built around a solid offering at both the national and local levels. New organizational arrangements were made in 2022, with division into two business units—a Materials unit (cement, ready-mixed concrete, aggregate, and finishing products for the building industry) and a Services unit (transportation, major works, concrete pumping, waste and materials management, applied innovation, and concrete and aggregate testing labs)—in order to provide better-targeted responses to customer requirements. The DECA low-carbon offering was filled out by adding the new CARAT very-low-carbon binder which has already been used on new projects such as the 2024 Paris Olympics Athletes’ Village and property developer Léon Grosse’s new regional headquarters for the Lyons area. Investment is ongoing for an activated-clay production unit at the Xeuilley cement plant which will enable us to offer customers a cement with a reduced carbon footprint.”

## 2022 TRENDS



### CEMENT

In line with market demand, Group sales volumes dropped slightly in France in 2022. Substitution of fossil fuels progressed further at cement plants, slightly attenuating the strong hike in energy costs. The price rises implemented did not succeed in fully compensating higher costs.

**5**  
CEMENT  
PLANTS



### CONCRETE & AGGREGATE

Accounting for change in scope, ready-mixed concrete sales remained in line with the evolution of the market, while aggregate sales were hit by the slowdown in public works.

**156**  
BATCHING  
PLANTS

**45**  
AGGREGATE  
QUARRIES



### OTHER PRODUCTS & SERVICES

#### Papeteries de Vizille:

Sales volumes rose in the Paper business, particularly due to the success of Book papers and exports, and remained stable in the Bag sector.

#### Transportation and Major Works:

The Transportation business grew steadily across all sectors in 2022 while the Major Works division suffered from the consequences of the slowdown in major projects.

#### Construction chemicals:

VPI's sales rose, largely as a result of the vitality of the Building sector.

## Lithosys

### Concrete 3D printing

The Lithosys offering covers not just the manufacture of 3D-printed concrete products as bespoke one-offs or in short production runs, but also the design and marketing of customized production units and supply of inks. A robotic arm with a print head fitted with an extrusion nozzle deposits concrete layer upon layer. The machine developed by Vicat can be installed in a workshop, and subsequently on construction sites. This technology speeds up production, allows greater creativity, improves safety on jobsites, and not only consumes 50 to 70% less concrete but also minimizes waste, which is a major issue in the construction business.



CARAT: construction of the regional headquarters of property developer Léon Grosse, near Lyons (France).

For **16 m<sup>3</sup>** of Class-2 DECA concrete, the emissions saving comes to 1 metric ton of CO<sub>2</sub>, or the equivalent of a Paris–New York flight (one way).

**+92%**, Sales of DECA concrete were 92% higher in 2022 than in 2021.

LE BAS CARBONE PAR VICAT

## DECA

### Low-carbon range for sustainable construction

The Group has developed its low-carbon-concrete range, DECA, to meet the growing needs felt by everyone in construction to reduce the carbon footprint of what they build. DECA covers all applications, from general-purpose concrete, floor-slab concrete, wall concrete, self-consolidating and self-leveling concrete to fair-face concrete and exterior decorative concrete. The DECA range is certified 'sourced in France' (*Origine France Garantie*), which guarantees that the greater part of the unit production cost (per cubic meter) of ready-mixed DECA concrete is generated in France and that every stage in its transformation occurs there.



## SATM

### On track for Lyons–Turin

The new Lyons–Turin railroad link is a 67-km cross-border project between Saint Jean de Maurienne in France and Suse in Italy. It calls for construction of a 57.5-km twin-tube tunnel, known as the Mont Cenis Base Tunnel, with one track in each direction. The Lyon Torino CO8 consortium made up of engineering contractors Implenia, NGE, Itinera, and Rizzani de Eccher has brought in SATM Grands Travaux to work on Package 2,3 and 5A. The batching plants set up for the project will supply all the concretes necessary, starting with fiber-reinforced shotcrete for temporary lining, followed by mixes for the final lining.

**60 m<sup>3</sup>/h** The production capacity of each of the batching plants provided. Both are manned in 8-hour shifts and operate around the clock, 24/7.

## Services Unit

### Complementary and virtuous range of services

The Services Unit that came into being on January 1, 2022, brings together under a single management structure all the Group's service providers in France: SATM Transport (logistics and major works), Delta Pompage (concrete pumping services), Sigma Béton (concrete testing laboratory and training center), CIRCULère (waste repurposing and waste-to-energy streams, circular economy), and Synergie (innovative solutions). Each of these entities will be involved at different points along the value chain, from design to applied innovation and logistics traffic. The Services Unit provides backup for the Materials side of the Group's business, i.e. Cement, Aggregate, Ready-Mixed Concrete, and VPI, although most of its services are provided for third parties outside the Group—proof, were it needed, of recognized expertise.





## SWITZERLAND

# Contrasting business in different sectors

Driven by major projects, **the public-works and civil-engineering sectors** made sufficient ground to offset end-of-year dips in the residential and commercial sectors as the effects of inflation kicked in.

**Lukas EPPLE**  
Joint COO,  
Strategy Manager,  
Country Director  
Switzerland

“Despite a decline in business due to general economic factors, Vigier’s strategic leverage meant it was able to offer construction materials with a low carbon footprint while at the same time maintaining the impeccable and dynamic quality of its service.”

## 2022 TRENDS



### CEMENT

On a declining cement market, Group business slowed down in 2022. Prices were raised to compensate the high rise in energy costs. The carbon footprint of Vigier cement continued to decrease, largely as a result of a further reduction in its clinker content.



### CONCRETE & AGGREGATE

With a drop in demand, concrete and aggregate sales volumes fell back during the year. While it was possible to raise concrete selling prices, a more competitive environment kept the pressure on aggregate prices. Work continued at the new gravel pit in Flumenthal which is due to open in 2023.



### OTHER PRODUCTS & SERVICES

The railroad sector kept right on track as Swiss Rail maintenance work intensified.

**1**  
CEMENT  
PLANT

**17**  
AGGREGATE  
QUARRIES

**18**  
BATCHING  
PLANTS



## Vigier hits 150

Vigier celebrated the 150<sup>th</sup> anniversary of its founding at its Rondchâtel facility. Representatives of public authorities, customers, and Vigier agents and personnel were numerous in accepting Vigier’s invitations to join in celebrating the sesquicentennial fittingly at three simple, downbeat commemorative events.



## Vigier Rail

In 2022, Vigier Rail commissioned a photovoltaic installation that will cover about a fourth of the annual electricity consumption of its railroad-tie production plant.

## Grimsel

At the Grimsel Pass, in the Bernese Alps, hydropower company Kraftwerke Oberhasli AG is replacing the approximately 90-year-old Spittallamm dam with a spectacular new structure using Vigier cement. Vigier is thus contributing to long-term production of sustainable electricity by harnessing the hydro power of Lake Grimsel.



## New deep-freeze warehouse

for Bell Suisse SA

Construction of a new deep-freeze warehouse started in Oensingen, northern Switzerland, in January 2022, under the Bell food group's 'Opera' investment program. The new 80-meter-long, 32-meter-wide, 30-meter-high building comprises zones for delivery of goods, preparation of orders, logistics, palletization, and thawing, along with offices and an ultramodern carton freezer.



## ITALY

# Strong rise in business

## 2022 TRENDS



### CEMENT

### 1 MILLING PLANT

There was firm expansion in the construction business in 2022 as a result, in part, of a national recovery plan for the sector. During this time, the Group's sales volumes shot up and prices rose. In March, at the KlimaHouse green-construction trade fair in Bolzano, we presented the insulating wall block made of natural cement and rice husks for which the builder we are partnering, Ferrari BK, is awaiting the last certifications before marketing can begin. The project brings together Vicat, with its Prompt natural quick-setting cement, RiceHouse, a startup working to reuse rice waste in construction, and Ferrari BK, a manufacturer of concrete blocks.

## New products

### Reduced clinker content

The new sulfate-resistant (as per Italian standard UNI 9156/2015) CEM IV A (P-V) 42.5 R pozzolanic cement will be marketed in the last quarter of 2023. Cimenti Centro Sud (CCS) achieved a reduction in the clinker content by incorporating pozzolana and additives.

## Benchmark

### with cement additive enhancers

Industrial-scale benchmark with different cement additives from different manufacturers, inscribed within the broader scope of a clinker-content reduction project.



# New kiln built in Alabama

**Éric Holard**  
Country Director,  
United States

“2022 saw Vicat make another operational step forward in the United States with the startup of the new kiln line in Alabama. By using the very latest technologies, it will increase our cement offering in the Southeast of the United States, where business is very brisk, and will help decarbonize our products. Eventually, we will be able to stop using fossil fuels entirely. In California, the adoption of a new cement, IL, means we can offer customers products with a lower carbon content. Business in the construction sector remains solid across the country, being boosted by a range of federal and state measures for supporting the construction and infrastructure sector. As a result, we can look forward to some promising years ahead.”



## 2022 TRENDS



### CEMENT

Construction expenditure continued to rise in all sectors—residential, commercial, public—in 2022, as state support measures were kept at constant levels, despite a slowdown towards the end of the year resulting from rising interest rates. The Group's sales volumes were affected temporarily in 2022 by the start and ramping up of the new 5,000-ton-per-day kiln line in Alabama which came into full-time operation in the third quarter. Selling prices progressed in 2022.



### CONCRETE

The concrete business dampened both in the Southeast, where the startup of the new kiln had an effect, and in California, but the slide was compensated by a policy for increasing selling prices. 'Greening' of the fleet of mixer trucks in California continued apace.

## 2

**CEMENT PLANTS**

## 45

**BATCHING PLANTS**

## Ragland

**Production capacity doubles**

The largest investment at Vicat today—around US\$300 million—is the addition of a kiln line at the Ragland cement plant, in Alabama, which makes it possible to produce an extra 5,000 tons of clinker per day. This additional capacity effectively doubles the plant's production possibilities, the aim being to meet the growth expected on the market in the southeastern United States. Spencer Weitman, President of National Cement Company of Alabama, Inc., said “Our ambition is to follow the trend, take advantage of the strong upturn in construction projects, and fulfill the needs of our customers. It is a strong desire of the Group to grow in the very dynamic region of the southeastern United States”. Benefiting from the latest technologies available, the new facility will quickly achieve a 60% fossil-fuel substitution rate, the objective being to ultimately reach 100% with a majority of biomass fuels.



# National Ready Mixed Concrete Company

National Ready Mixed is rapidly increasing its use of National Cement's new 1L Portland limestone cement. Starting in mid-2022, National launched a campaign for utilizing the 1L cement by quoting and submitting it for all mix-design proposals for new projects. Currently National is supplying five Caltrans (California Department of Transportation) projects with 1L cement, in addition to numerous residential, commercial, and public-works projects.

## I-5 roadway rehabilitation project, North Los Angeles County

This project involves 25.4 kilometers of the I-5 freeway near the city of Santa Clara. It requires over 76,000 m<sup>3</sup> of concrete.

## Highway 101 Pilgrimage to Valley Circle overcrossings

National Ready Mixed delivered over 24,500 m<sup>3</sup> of concrete for this project which primarily consisted in installing a new barrier rail in the center median of the 101 freeway in North Los Angeles County.

## 1-5/I-55 freeway widening in Tustin Santa Ana

The project requires over 43,500 m<sup>3</sup> of concrete, which National is supplying from its Irvine plant in Orange County. National has so far delivered nearly 4,000 m<sup>3</sup> of 1L-cement mixes for this project.

## 1-5 Lake Hughes-Castaic roadway and embankment reconstruction

National has delivered over 1,680 m<sup>3</sup> of the 3,823 m<sup>3</sup> of 1L-cement mixes required. The project will be completed in 2024.

## 101 Highway bridge in Agoura Hills

The project consists of a wildlife crossing over US-101. Such crossings provide safe, sustainable passage for wildlife across roads, thereby reducing vehicle/wildlife interaction and consequently reducing wildlife mortality. They also enhance the exchange of genetic material to ensure survival of species. National will supply approximately 3,500 m<sup>3</sup> of 1L-cement mixes.

## Tap Alamo Apartments, Simi Valley, California

For this 4-story, 278-unit mixed-use residential development with a podium-style parking garage, National Ready Mixed delivered over 11,800 m<sup>3</sup> of 1L-cement mixes.



**Project Name:** Beaudry Tower  
**Volume:** 57,850 m<sup>3</sup>  
**Contractor:** Webcor

National Ready Mixed delivered 57,850 m<sup>3</sup> of concrete for the 64-story, 785-unit Beaudry high-rise tower in downtown Los Angeles. The project featured a continuous 7,263-m<sup>3</sup> mat-foundation pour requiring a delivery rate of 535 m<sup>3</sup> per hour from three of National's plants.



**Project Name:** 8<sup>th</sup> & Figueroa  
**Volume:** 36,950 m<sup>3</sup>  
**Contractor:** J.T. Wimsatt

8<sup>th</sup> & Figueroa is a new 42-story, 438-unit, luxury residential tower developed by Mitsui Fudosan America in the heart of downtown Los Angeles. National Ready Mixed delivered 36,950 m<sup>3</sup> of concrete out of National's Vernon megaplant to complete the project.

## Walker mobile plant

For a mobile project for Martin Concrete Construction that began in August, 2022, Walker Concrete is to supply 84,000 m<sup>3</sup> of ready-mix over a 12-month period, using seven on-site mixers. Slab pours average 840 m<sup>3</sup> each at 110 m<sup>3</sup>/hour. The project requires over 30,000 tons of cement.





# Strong demand for construction materials

**Yves Keller**  
Regional Director,  
Latin America

“Despite heavy rains and unfavorable financial conditions, Ciplan weathered the storm on the Brazilian market thanks to the excellence of its workforce and products and to the quality of its industrial resources. The offering of low-carbon construction products continues to expand.”

## Safety



Throughout 2022 Ciplan developed several training actions for enhancing employee safety. Everyone was made aware of the importance of the issue and the company's safety culture was thus advanced.

## 2022 TRENDS



### CEMENT

Unfavorable weather and the rise in interest rates penalized demand for construction materials. Despite the circumstances, Ciplan's sales were stable, and there was even appreciable growth in the mortar segment. Selling prices were raised. Decarbonization of the cement business continued, largely as a result of appreciable growth in the use of non-fossil fuels and substitution of clinker with other materials.



### CONCRETE & AGGREGATE

Concrete and aggregate sales rose throughout the year, partly as a result of Ciplan's involvement in major infrastructure and urban-development projects. Prices were raised in both segments.

**1**  
**CEMENT**  
**PLANT**

**13**  
**BATCHING**  
**PLANTS**

**2**  
**AGGREGATE**  
**QUARRIES**

## Health



Employee-focused actions were carried out in 2022 to increase wellbeing and instill a sense of belonging.

- Ophthalmology campaign: 240 appointments
- Oral health campaign: 130 appointments
- Vaccination campaign: 655 employees and partners vaccinated
- Cardiology campaign: 30 appointments.

## Building our future

When it comes to roads and urban paving, sustainable economic solutions are being sought to improve traffic quality and reduce costs. For this purpose, studies have been carried out on technologies that result in direct and indirect benefits for the development of a type of pavement that can produce the desired results in the short term and over the long term. Thus, rigid pavement is being used increasingly for highways and in cities in Brazil. Rigid paving is made possible through good engineering practices and is supported by the experience on projects that have proved to be entirely successful.

The Brazilian Portland Cement Association (ABCP) has carried out several campaigns and training sessions for construction companies, highway concessionaires, concrete companies, government agencies, etc. to demonstrate the environmental and economic benefits of rigid pavement, such as:

- up to 20% fuel savings for heavy trucks;
- braking distances reduced by 40%;
- absence of the sort of deformations that are typical of asphalt pavements;
- proven temperature reduction by reducing heat-island effects;
- greater durability (>25 years) and lower maintenance costs;
- greater luminosity for cities, thus reducing lighting costs by up to 30%.

Brasilia, the capital of Brazil, developed by one of the world's most respected architects, Oscar Niemeyer, was built from 1956 to 1960 as a modern architectural project using reinforced concrete with sinuous lines that seem to defy the laws of physics. Ciplan's concrete and other products are part of the construction and history of the city. Ciplan (founded 54 years ago) continues to help in Brasilia's growth, as well as in new environmental transformation

by introducing more ecological and sustainable products and through its involvement in the construction of new concrete highways and streets.

In addition to the economic and environmental benefits of concrete pavement listed above, it should be noted that use of a more ecological type of cement developed by Ciplan—which has a lower clinker content by using calcined clay and other additions—reduces CO<sub>2</sub> emissions without any loss in productivity or competitive edge.

Ciplan believes that there are great opportunities for the future and thus supports the Brazilian Portland Cement Association in changing cement standards with compositions that are more consistent with those applied in Europe and other parts of the world.

"As more than simply a construction-materials company, we are working to guarantee a better future for coming generations, with more-ecological, more-sustainable products that prioritize safety and respect for all stakeholders", says Sérgio Bautz, CEO of Ciplan.

## Training and Development



The number of training hours in 2022 rose beyond the 2021 figure. Every employee received more than 25 hours of training on subjects related to Ciplan's needs.

## Anniversary

### 54 years

In 2022 Ciplan celebrated its 54 years of existence with an event for all employees in Brasilia's treasured urban park, Parque da Cidade. The occasion included a running competition (to encourage physical activity), raffles, food, and lots of fun for employees and their families.







**Hugues  
Delort-Laval**  
Zone Director,  
West Africa

“The subregion had a year of economic contrasts, with a downturn in growth in Senegal and an upswing in Mauritania and Mali. The ongoing political crisis in Mali led to an embargo lasting several months. The Group is continuing to invest in the region and to confirm its presence with, for example, the construction of a new clinker production line in Senegal which will come into service in 2024. Benefiting from the most-advanced technologies, it will not only reduce production costs but also significantly advance the Group’s strategy for lowering greenhouse-gas emissions, as has been confirmed by the ‘green’ label granted for the funding obtained from the IFC, the private-sector arm of the World Bank.”

## SENEGAL

# Construction starts on largest kiln line in West Africa

## 2022 TRENDS



### CEMENT

Though expenditure in the construction sector continued to increase, the inflationary shock flattened the rate of growth. The sector benefited from the continuation of major government-backed infrastructure and urban-development works. While the domestic sales of Group subsidiary Sococim Industries remained sound, export sales were knocked back for several months by the closure of the border with Mali. The embargo was lifted in the middle of the year, however. Selling prices were raised. Construction of a new clinker production line got under way. It is scheduled for completion in 2024. This new kiln, the largest in West Africa, will have annual production capacity of 7 million metric tons.



### AGGREGATE

Despite delays to certain major government-sponsored projects, Group subsidiary Gécamines had a good year in terms of sales volumes, with strong growth across its entire range of products.

# 1

### CEMENT PLANT

# 2

### AGGREGATE QUARRIES



New clinker production line under construction.



## United Nations House

In Diamniadio (30 km southeast of Dakar).  
Opened in 2022.

**Gécamines participation: 150,000 metric tons of aggregate.** Construction time: 36 months.  
Contractor: Wietec



## Aboulaye Wade Stadium

In Diamniadio (30 km southeast of Dakar). Opened in 2022. Most modern stadium in West Africa.

**Gécamines participation: 270,000 metric tons of aggregate.** Construction time: 17 months.  
Contractor: Summa.



## Dakar-Diamniadio regional express line

First section. Came into service in 2022.  
38 km of track. Serves the new town of Diamniadio.  
Extension to Blaise Diagne International Airport in progress. Construction time: 24 months.  
Track construction: Eiffage consortium.

### MALI

## First year for new milling plant

### 2022 TRENDS



CEMENT

1

MILLING  
PLANT

The embargo imposed by ECOWAS (Economic Community of West African States) from January to July 2022 restricted the country's economic activity which slowed down significantly, including in the construction sector. By raising selling prices it was possible to compensate partly for the drop in sales volumes.

### MAURITANIA

## Market growth

### 2022 TRENDS



CEMENT

1

BATCHING  
PLANT

1

MILLING  
PLANT

Consistent with the country's economic growth, demand for cement grew in 2022, and the Group subsidiary not only saw its sales volume rise but was also able to raise its prices.



**Gianfranco  
TANTARDINI**  
Zone Director,  
Mediterranean

“Egypt and Turkey, which were already hard hit by difficult macroeconomic conditions, suffered further in 2022 from the inflationary effects of the Ukrainian crisis. Despite the difficult circumstances, our personnel fought on doggedly, relying on sales policies closely adapted to customer requirements and on optimization of industrial resources.”

## TURKEY

# Business resilience despite hyperinflation

## WHR system

In 2023 the Bastas Cimento plant will complete the installation of a waste-heat-recovery system generating net electric power of around 11 MWh, enough to substitute for approximately 50% of its yearly electricity consumption from the national grid. The Bastas Cimento plant also increased its in-house tire-shredding capacity in order to meet higher substitution rates for the precalciner and main burner.

## 2022 TRENDS



### CEMENT

Demand for construction materials slumped as a result of the difficult economic situation, and this had a negative effect on the Group's sales volumes in Turkey. High rises in selling prices did, however, compensate for the hyperinflation observed for several months. Operational priorities turned to increasing the use of substitute fuels and the start of construction of a new system for producing electricity on-site by recovering waste heat.



### CONCRETE & AGGREGATE

The Concrete business, like the Cement business, suffered from the negative effects of the economic crisis. Increasing selling prices helped reduce the impact, however. The Aggregate business, for its part, succeeded in attracting new orders, with the result that sales volumes were up on 2021.

**2**  
**CEMENT  
PLANTS**

**39**  
**BATCHING  
PLANTS**

**5**  
**AGGREGATE  
QUARRIES**





## EGYPT

## Business recovery in progress

### 2022 TRENDS



#### CEMENT

Cement consumption has been rising for two years as the Egyptian government continues its major-works policy. The Group's sales volumes increased as a result of both exports and the launch of new products, particularly low-carbon materials. Selling prices also rose.

## New Ismailia City

New Ismailia City, an extension of the current city of Ismailia, is located 72 km inland from the Mediterranean, on the East Bank of the Suez Canal, in the heart of the Suez Canal Corridor Development Project. The first phase of the new housing project in New Ismailia involves the construction of 35,000 apartments. The second phase will increase this to 57,054 apartments in addition to government offices, a general office for the Governorate, a headquarters for the Security Directorate, beach clubs, and a park area. New Ismailia City will cover an area of 9 square kilometers along 11.3 km of the canal. In addition to the apartments, there will be 373 standalone villas, 620 semidetached villas, health and social-service facilities, and a sports club for the armed forces.

## New Administrative Capital

The New Administrative Capital, which is planned to be the country's new capital city, is a new urban development in Egypt's Cairo Governorate that has been under construction since 2015. While it is seen as a major project for economic development, it is just part of a larger initiative known as Egypt Vision 2030.

The new city is to be located 45 kilometers east of Cairo, just outside the Second Greater Cairo Ring Road, in a largely undeveloped area half way to the seaport city of Suez. According to the plan, the city will become the new administrative and financial capital of Egypt, housing the main government departments and ministries and foreign embassies. It will cover a total area of 700 square kilometers and have a population of 6.5 million, though it is estimated that this figure could rise to 7 million.

Officially, a major reason for undertaking the project is to relieve congestion in Cairo, which is already one of the world's most crowded cities, as the population of Greater Cairo is expected to double in the next few decades.



## International University

### King Salman

King Salman International University is a new national smart university in the heart of Sinai. It consists of three campuses in Ras Sedr, El Tor, and Sharm El Sheikh.



**Pietro CALA**  
Zone Director,  
Asia

“Business in India continued to be driven by the country’s infrastructure requirements. Our positions on the markets of southern India and Maharashtra, strengthened by the recent opening of our distribution terminals, are ideal for benefiting from the vitality of the construction sector. Our business in Kazakhstan was more highly exposed to the economic and logistics setbacks of the Russia–Ukraine crisis. In spite of this, our level of business remained sound, benefiting as it does from recent, highly efficient production resources.”

## INDIA

# Steady business

## 2022 TRENDS



### CEMENT

With the construction sector being largely driven by work on public infrastructure projects and in the industrial sector, cement consumption increased steadily throughout 2022. This favorable background meant Group subsidiaries were able to count on flourishing business and higher selling prices. Special efforts were made to develop cements with a reduced carbon footprint. A new distribution terminal was opened in Tamil Nadu to extend the Group’s market catchment area in southern India.



### AGGREGATE

Aggregate sales volumes in and around Bangalore rose in 2022, as did sales of bags marketed by our subsidiary Bharathi Polymers.

# 3

### CEMENT PLANTS

# 1

### AGGREGATE QUARRY

## Fully Automated State-of-Art logistics setup

### Inauguration in India

In October, 2022, Bharathi Cement opened its 0.75 MTPA bulk cement terminal in Coimbatore, in the state of Tamil Nadu, southeast India. The facility will serve the beckoning markets of Tamil Nadu and Kerala. It was officially opened by Vicat group Chairman and CEO Guy Sidos, in the presence of Anoop Kumar Saxena, CEO of Vicat India. Bharathi Cement is the first company in India to transport bulk cement in containers. Trains run from the company’s integrated cement plant to the Coimbatore terminal, a fully-automated packing and distribution facility with capacity of 0.75 million tons per annum (MTPA) that is manned by 16 employees.



Logistics processes at the Coimbatore terminal were digitized from the first day of operation. The result is comprehensive vehicle and container tracking, with optimization and digital collaboration between logistics and transporter, auto-invoicing, vendor collaboration, en-route tracking and proof of delivery, and end-to-end container tracking.

## Kiln capacity increase

**Raising Kalburgi kiln capacity from 7,500 to 8,200 tons per day**

The Kalburgi cement kiln supplied by FLS and commissioned towards the end of 2012 has rated capacity of 6,500 tons per day. Various in-house modifications raised kiln output to a stable 7,700 TPD by 2018. Further major modifications completed in June-July 2022 increased its capacity to 8,200 TPD within a record shutdown time of just 30 days.



## Low-carbon cement

**Launch of Bharathi's new Quickcem blended cement**

In October, 2022, as part of the Vicat group's low-carbon roadmap aimed at reducing its carbon footprint, Bharathi Cement launched Quickcem, a superior-quality new-generation green cement replacing ordinary Portland cement for the precasting and hollow-block segment. Two states in southern India are concerned immediately: Tamil Nadu and Kerala. The cement is manufactured using the best limestone available in southern India, one with optimum fineness and low alkali, chloride, and magnesia contents to ensure greater durability for concrete structures. Since it acquires high compressive strength early, Quickcem allows shuttering to be struck sooner and reduces cement consumption. The new product



is packed in BOPP (biaxially oriented polypropylene) bags for dust-free delivery to customers.

## Top 3 consumers of Vicat brand in Mumbai,

**one of the top cement-consumption markets in India**

### B.G. SHIRKE CONSTRUCTION TECHNOLOGY

B.G. Shirke Construction Technology is a more-than-\$360-million group with millions of square meters of construction to its record, encompassing mass housing projects, administrative facilities, airports, bridges, roads, overpasses, monuments, entertainment malls, and industrial complexes.

### GODREJ AND BOYCE

Godrej's Tuff ready-mixed concrete is a high-quality product concrete for which state-of-the-art technology is used to deliver customized materials suitable for the most challenging structures. Manufactured under stringent conditions, using automated processes, ready-mixed concrete, with its superior quality control and innovation, improves the durability of structures. Thorough checks on raw materials yield immense technical and commercial benefits for users.

### SKYWAY RMC PLANTS

With its 42 years of experience in supplying aggregate, the Skyway group has emerged as one of the leading manufacturers and suppliers of ready-mixed concrete to renowned builders and contractors in the Mumbai metropolitan region.







## KAZAKHSTAN

# High-performance industrial plant

## PRIZE

### Altyn sapa

The best Kazakhstani product 2022

**Cement:** Altyn Sapa award is a country wide competition-exhibition of "The Best Goods of Kazakhstan".

#### Objectives of the competition:

- Competition between legal and private entities, aimed at improving the quality of domestic products.
- Contribute for local content development in the Kazakhstan market with exceptional and quality products.
- Establishing the background and presenting results of modern management and quality control methods based on domestic and international standards.
- Involvement of industrial companies for solving quality problems and continuous improvement.
- Up to date ideas of quality requirements for Kazakh market.

Prize awarded to Jambyl Cement for 2022.

## 2022 TRENDS



### CEMENT

On a market in general recession in 2022 as a result of adverse macroeconomic conditions and temporary logistics holdups, the Group suffered a decline in business. Selling prices picked up, however. A new cement with a lower carbon content has been launched. The plant's utilization rate remained very high.

### 1 CEMENT PLANT



## PARTNERSHIPS

### Nursat Temir

The company demonstrates consistently high rates of sales of cement in wholesale and retail plus high quality concrete production in Almaty. Jambyl Cement Production Company is one of its most reliable partners.

#### Production:

The company is having its own ASAR brand for packed cement and strong reputation in concrete.

#### Supplies:

Nursat represents itself as a manufacturer, cement trader and supplier of all types of concrete.

Modern equipment «ELBA» (Germany), which allows to produce products with the highest international quality standards, are managed by highly qualified specialists with extensive experience in the industry.

#### Production:

Concrete with grades from M 250 – M 450 and higher.



### Terminal Astana JAMBYL-Center Beton

#### Astana city

Terminal Astana CB is one of the terminals of Jambyl Cement Production Company LLP, which is located on the base of the partner Center Beton Company. Cement is sold packed in 50 kg bags, Big Bags and bulk. This terminal has modern equipment for packing that facilitates delivery for client's need in Astana market. This year was marked by introduction of a new cement type - CEM II 42.5 - for constantly growing client needs and lower carbon footprint.

## Center Beton Company

Center Beton Company is a major supplier of Kazakhstan construction industry and specifically in Astana. Sales can be divided into two main categories: ready-mixed concrete of all grades and a wide range of high-quality cement. Center Beton Company (CBC) has been present on the Kazakhstan market since 1997 and has gone through a long way till becoming one of the first concrete producers in Astana, along with leading production companies, in the market. In 2020 CBC launched a new fourth stage of its production plant by installing new equipment from German manufacturer "LIEBHERR". At this significant moment, within the framework of the development of the Kazakh program "Economy of simple things", the mayor of Astana, A.S. Kulginov, visited the premises where local authorities and CBC management discussed the issues of building affordable housing in Astana.

### Astana city - Construction with CBC full involvement

Residential complexes, theaters, swimming pools, ice palaces and many other facilities built with CBC direct participation, moreover construction of the LRT (Light Railway Train – connecting airport to city center) was also started with 65% from CBC production base. Currently, the biggest hospital in Astana is being built from CBC concrete production. Here below is a short description of several construction projects:

#### Monaco Residence Astana

Is an ultra-modern complex located in a prestigious area of the capital. Location: Monaco Residence Nur- Sultan is located in a prestigious area of Astana.

#### Dara Residence

The residential complex Dara Residence is an example of futurism, the features of which are thoughtfulness in details, stylish color and technical solutions, environmental friendliness and integration of the building into the environment. When finishing the facades, a combination of various high-quality materials and stained-glass windows were used, which give the buildings a unique look.







# CSR AMBITIONS





## **CLIMATE**

P. 30

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## **BIODIVERSITY**

P. 31

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## **CIRCULAR ECONOMY**

P. 32

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## **PRODUCT INNOVATION**

P. 33

---

## **PROCESS INNOVATION**

P. 34

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## **HYDROGEN & LOW-CARBON TRANSPORTATION**

P. 35

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## **HUMAN RESOURCES**

P. 36

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## **SPONSORSHIP**

P. 38

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## **FOUNDATION**

P. 40



# A climate plan for carbon neutrality throughout the value chain

**It is imperative for there to be transition toward a more sustainable world, given the major climate and energy disruptions the planet has to face. With respect to this, Vicat's responsibility as an industrial operator is to minimize the carbon footprint of all its activities and to preserve natural resources by developing circular economy.**

Vicat's top priorities for reducing the CO<sub>2</sub> footprint of its activities are to replace fossil fuels, to improve the energy efficiency of its operations, to develop decarbonized transportation, and to produce renewable and low-carbon energies. Defossilization of processes goes hand in hand with an innovation strategy for reducing the clinker content of cement and concrete. This issue is fundamental for the future of the industry. It mobilizes substantial human and technical resources in a wide and varied range of fields throughout the Group.

## FIVE MAIN GOALS FOR 2030

- 1 Reduce carbon emissions to 497 kg CO<sub>2</sub> net/metric ton cement eq. at Group level and to 430 kg CO<sub>2</sub> net/metric ton cement eq. across businesses in Europe.
- 2 Reach a 50% fuel-substitution level, with 100% in artificial-cement plants in Europe.
- 3 Lower the clinker content of cement to 69%.
- 4 Reach a low-carbon electricity content of 40% of total electricity consumption, with half through self-generation.
- 5 Get a CCU/CCS (carbon capture and usage/storage) project running by 2030.

€85<sub>M</sub>

**THE COST OF  
DECARBONIZATION  
PROJECTS IN 2022.**

## A- RATING

The Vicat group's position as a leader in the combat against climate change has been confirmed, despite harsher CDP\* criteria.



Concrete is an irreplaceable construction product, and the only one capable, in terms of both quantity and cost, **of sustainably meeting the needs of a world population that is growing day by day.**

The United Nations estimates that Earth's population will reach more than 10 billion by 2050. Close to 75% of people will live in urban environments. It is therefore predicted that demand for concrete will be high in the decades ahead. Vicat must prepare the way for this by decarbonizing its activities and formulating its products differently, in accordance with the changing regulations, standards, and taxes that will be adopted throughout the world.

The Climate Plan broken down country by country calls on mature technologies, of course, but also on major technical and product innovations. It serves to make the Group modify its production resources, its organization, and its products. While continuing to ensure its profitability and sustainability, the Group will be investing an average of €80 million per year in innovation and improvement projects for increasing decarbonization up until 2030, apart from exceptional projects.

\*CDP is an international rating organization that, by encouraging companies to disclose information relating to climate issues, encourages them to reduce their emissions.

# Preserving natural balances and biodiversity at facilities

Vicat puts all its available energy into preserving natural balances at its facilities. **To meet the objectives of the United Nations' COP15 biodiversity conference, the Group has stepped up its actions for preserving biodiversity.** The Group has for many years been preserving biodiversity at its quarry sites. This has involved actions for reducing the impacts its activities have on the environment, particularly during the active quarrying phase.

**20,745** | **THE NUMBER OF TREES PLANTED AT GROUP SITES IN 2022.**

**Diminishing air quality and the growing scarcity of water resources resulting from climate change stand out among the major economic and health issues with which the world is faced.** And they rank high on the list of the Group's concerns.

Availability of water is an issue of world significance with respect to health, food, and combating inequalities. As a responsible manufacturer, Vicat takes care to preserve this essential resource. Extraction is adjusted precisely to actual requirements and the status of local resources, with extra care being taken in areas experiencing water stress such as India, Senegal, Egypt, Turkey, and California.

The Group strives to avoid any conflict over water use by recording its withdrawals and discharge so that checks ordered by the regulatory bodies can be carried out. Through a program of continuous improvement of its manufacturing processes, the Group ensures that water resources and discharges are managed sustainably.



Crépieux nature reserve (France).

**74%**  
The proportion of Group quarries with restoration plans.

## Preservation of air quality

The Group is particularly devoted to reducing its atmospheric emissions, and ensures the strictest compliance with the threshold emissions values specified by regulations. Vicat also places the greatest importance on keeping its industrial resources in a perfect state of cleanliness and in optimum working condition, wherever it works. Its industrial-performance policy encourages preventive and predictive operational maintenance and regular investment in the best available techniques for air filtration and treatment.

## PROMOTING THE DEVELOPMENT OF RENEWABLE ENERGIES

The Group is aiming for 40% of its electric power consumption to be from renewable sources in 2030. In addition to purchasing low-carbon nuclear and hydro electricity, it produces its own power from solar farms it has had built near its facilities.

In Switzerland, subsidiary Vigier produced 35.5 GWh of hydroelectric power and purchases low-carbon hydroelectric power.

India  
**19.5** MW<sub>p</sub>  
Senegal  
**6.9** MW<sub>p</sub>  
France  
**700** MWh/year



# The circular economy at the heart of the regions

**Vicat promotes circular economy and short supply chains in the areas where it works. Using raw materials derived from recycling and using local waste to fire cement kilns creates both value and jobs in the communities around its plants.** For some years now, the Group has been using waste in its manufacturing processes. This endeavor is based on three main factors: using excavated spoil from soil decontamination projects, recycling materials derived from deconstruction, and replacing fossil fuels with alternative fuels such as end-of-life tires and solid recovered fuel (SRF).

## SIX ENTITIES AT THE SERVICE FOR THE CIRCULAR ECONOMY

### 1 Bioval

Born of a partnership with Serfim Recyclage, Bioval ensures a sustained supply of alternative fuels for Vicat's Montalieu-Vercieu and Saint-Égrève cement plants in eastern France.

### 2 Çözüm

In Turkey, Vicat subsidiary Çözüm collects 90,000 tons of local industrial waste every year and prepares it for firing the Group's cement kilns in the Anatolia region.

### 3 Terenvie

Terenvie is a center for processing and upcycling non-inert soil just outside Lyons that repurposes 70% of construction and engineering waste. It receives, sorts, and treats contaminated soil won from local earthmoving and excavation works.

### 4 ALTèreNATIVE

Vicat and Paprec are to start operating a jointly-owned plant producing SRF in 2023. It will be the largest operation of its kind in France.

### 5 VITO Recycling

Vigier, a Swiss subsidiary of the Vicat group, and local contractor Toggenburger have created VITO Recycling to build and operate a plant for processing mineral construction waste, contaminated soils, road-gulley sludge and borehole cuttings.

### 6 Altola

Altola is a Swiss subsidiary of Vicat specialized in the collection, recycling, and elimination of special and hazardous waste, which it processes and puts back on the market as recyclable materials.

## SUBSTITUTION PERFORMANCE

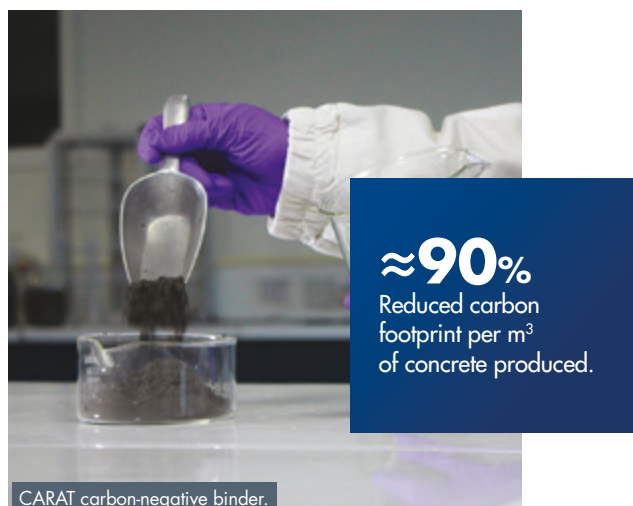
**28.1%** | **ALTERNATIVE-FUEL USAGE ACROSS THE GROUP**

**66.0%** | **ALTERNATIVE-FUEL USAGE IN THE EUROPE ZONE**

Vicat's target in Europe for 2030 is to totally eliminate use of fossil fuels in the manufacture of cement by **using 100% alternative fuel derived from local waste**. Two plants have already met this target.

# Product innovation for ambitious projects

The drive for innovation that has been in the Group's blood for over two hundred years is brought to bear on ambitious projects for formulating low-carbon cements and, at the same time, providing customers with more readily available, increasingly high-performance products. One of the ways forward is to reduce the amount of clinker they contain. Vicat has set itself the goal of lowering the clinker content of its cements to 69% by 2030. Reducing clinker content is important; since it is the main ingredient in cement, there is a strong correlation between the carbon footprint of cement and the amount of clinker it contains. Produced by firing limestone and clay at high temperatures, clinker is what gives cement its strength but is also its main source of CO<sub>2</sub> emissions. The Group has teams focused on this point, working to develop new cements emitting less CO<sub>2</sub> but providing equivalent levels of performance.



## CARAT

The DECA range of low-carbon products was expanded in 2022 with the addition of the first carbon-negative binder, Carat. This unprecedented cement manufactured at the Montalieu-Vercieu plant in eastern France has all the properties and applications of conventional cement but reduces **the carbon footprint of every cubic meter of concrete made with it by close to 90%.**

## LITHOSYS

After four years of development, Vicat launched its global range of concrete 3D printing services and products under the brand name Lithosys. Located in Chambéry, in France's Alpine region, the concrete 3D printing unit speeds up production **allows greater creativity, improves safety on jobsites, and not only consumes 50 to 70% less concrete but also minimizes waste.**

## ARGILOR

Argilor, a cement based on thermally activated clay combining clinker, clay, and limestone, will be produced at the Xeuilley plant in France as of 2024. The project selected under the French government's *Plan de Relance* recovery plan will **reduce the plant's CO<sub>2</sub> emissions by 48,500 tons per year, for the same cement output;** this represents a drop of roughly 16%.



# Concrete innovations for capturing, storing, and using CO<sub>2</sub>

For the research it carries out into the capture, storage and use of CO<sub>2</sub>, Vicat has joined forces with institutional and industrial partners facing the same issues.

## CIMENTALGUE

The CimentAlgue project demonstrates the possible symbiosis between the manufacture of cement and the production of different strains of microalgae, including spirulina (*arthrospira platensis*).

**Location:**

Montalieu-Vercieu cement plant, eastern France.

**Partners:**

AlgoSource Technologies, the University of Nantes' GEPEA laboratory specializing in environmental and agro-industry process engineering, and Total Energies.

## CATCH 4CLIMATE

Through their joint venture Cl4C, Vicat and three other European cement manufacturers (Buzzi, Heidelberg Cement, and Schwenk) are building a pre-industrial-scale demonstrator of second-generation oxyfuel technology.

**Location:**

Schwenk's cement plant in Mergelstetten, Germany.

## CARBRECO CI

Using the CarbReco CI system developed by British company Carbon8 Systems, Vicat is making beneficial use of chlorine dust, a by-product of the cement manufacturing process; the dust is converted into aggregate that can be used to make concrete.

**Location:**

Montalieu-Vercieu plant, France.

## FASTCARB

France's government-sponsored FastCarb project studies means of storing CO<sub>2</sub> in recycled-concrete aggregate from demolition projects.

**Location:**

Créchy cement plant, central France.

**64**

projects involving decarbonization of the value chain:

- **25** France & Europe
- **13** Americas
- **13** Mediterranean
- **6** Africa
- **7** Asia





# Hydrogen

Vicat is multiplying the number of projects making use of hydrogen to produce e-fuels and for transportation, as a substitute for fossil fuels.

## HAFFNER

Having taken a shareholding in Haffner Energy, Vicat will use Hynoca technology, a highly-yield process for transforming agricultural and forest biomass (wood residues, straw, grain dust, corn cobs, etc.) into green hydrogen while at the same time sequestering CO<sub>2</sub> in the saleable biochar resulting from thermolysis of the biomass.

## GENVIA

As a shareholder in Genvia, the Group will use a high-temperature electrolyzer to produce green hydrogen with reduced electricity consumption as a result of using waste heat from the cement kiln.

**Location:**  
Saint-Égrève, eastern France.

**Partners:**  
Schlumberger New Energy, France's Atomic and Alternative Energies Commission (CEA), Vinci, and the Occitanie regional authority.

## HYNOVI

The goal of the HyNoVi project is to capture a proportion of the CO<sub>2</sub> emitted by a cement plant and combine it with low-carbon hydrogen produced at the site to make e-methanol, a low-carbon synthetic fuel in great demand by the marine transportation and chemical sectors. The remaining CO<sub>2</sub> will be captured and stored deep in the ground.

**Location:**  
Montalieu-Vercieu cement plant, eastern France.

**Partners:**  
Hynamics (subsidiary of French power company EDF specializing in hydrogen production).

# Low-carbon transportation

As an active player in ecological transition, Vicat is engaged in sustainable transportation to attenuate the environmental impact of its fleets of cars, trucks, and other vehicles.

## OLÉO 100

In France, more than twenty of Vicat's facilities have switched to Oléo 100 (a brand of the Avril group), a biodiesel derived exclusively from rapeseed grown and processed in France, consuming two million liters of the fuel instead of the off-road diesel traditionally consumed by site plant.



Oxygène mixer truck, France.

## NATIONAL READY MIX

In Vernon, California, National Ready Mixed trucks run on compressed biogas obtained by methane capture at dairy farms in the region. As a result, a total of 41 cement trucks and 89 mixer trucks are making carbon-negative deliveries in downtown Los Angeles.



Vernon concrete batching plant, California (United States).

## LYNX

In Switzerland, the Group's subsidiary Vigier Ciment has been seeing big with Lynx, an electric quarry hauler weighing 58 metric tons running empty that uses regenerative braking to recharge its batteries as the laden vehicle travels downhill from the quarry to the cement plant.

## OXYGÈNE

Oxygène, the ecologically-responsible mixer truck, emits 96% less CO<sub>2</sub> than conventionally-powered vehicles. This is achieved by its Iveco engine running on biogas and a Cifa Energya hybrid mixer drum driven by an electric motor powered by lithium batteries.

# A Group with values and a strong corporate culture

Louis Vicat's humanistic values, which forged the Group's DNA and corporate culture, are embodied by its workforce every day and in each of the twelve countries where the company has facilities. The Vicat group relies on the continuous commitment, solidarity, and high level of performance of its employees.

**9,912**  
EMPLOYEES IN 2022

Safety culture is the Group's number-one priority. Its policies regarding diversity, inclusion, and the combat against discrimination of any kind run parallel with the development of skills and evolution in the jobs employees perform, and address the issues of ecological, redistributive, and digital transition.



**26.7%**  
fewer lost-time  
accidents across  
the group between  
2021 and 2022.

**100%**  
OF EMPLOYEES HAD AT  
LEAST ONE HEALTH & SAFETY  
TRAINING SESSION IN 2022.

## Occupational Safety & Health (OSH)

**safety culture and zero accidents**

Ensuring the health and safety of its employees and outside contractors working in its facilities is one of the Group's cardinal values. Driven by the Chairman and CEO, Guy Sidos, the Group's safety culture is an overshadowing influence in the minds of the workforce every day, one that compels them to attain the Zero Accidents objective. In 2022 the Group's accident-frequency rate (4.81) and accident-severity rate (0.22) fell to record lows. This reflects the commitment and constant efforts of the Group's management, workforce, and labor representatives in each country to make Zero Accidents a concrete reality.

**Through ongoing constructive dialog, the Vicat group maintains labor relations of the highest quality and guarantees its workforce a non-confrontational working environment.**

The Group's HR policy respects fundamental rights (human rights, the regulations of the International Labor Organization, and the associated Sustainable Development Goals) in the countries where it works.

# Policy regarding diversity, inclusion, and the combat against discrimination

**Long-term action for social inclusion ensures better performance and greater creativity.** The Vicat group's initiatives directed at inclusion issues include actions in favor of gender diversity, gender equality, and the combat against discrimination.

**MORE THAN 90%  
OF THE GROUP'S EMPLOYEES ARE ON  
OPEN-ENDED EMPLOYMENT CONTRACTS;  
THIS GUARANTEES STABILITY.**

**Gender equality is one of the fundamentals of the Group's performance and human-resources policy.**

Measures appropriate to the culture of each country are adopted to ensure that women can find employment and training and that they are treated equally in terms of pay and promotion.

The proportion of female employees in the Group is constantly rising; it stood at 11.8% in 2022.



## DID YOU KNOW?

In France, Vicat's workplace gender equality index was 92/100 in 2022. The countries where the proportion of women managers is close to or higher than 30% are Italy (50%), Kazakhstan (27.8%), and France (27.5%).

## INTERGENERATIONAL WORKFORCE POLICY ESSENTIAL FOR SUSTAINED PERFORMANCE

The junior and senior recruits in 2022 illustrate the Group's commitment to maintaining an intergenerational workforce. New recruits are given field training where they benefit directly from the skills and know-how of their more-experienced peers. New employees are recruited when retirements are planned and there are periods of overlap during which job shadowing can ensure the smooth transmission of know-how and people skills from one generation to another. The 2022 cooperative-education target of 5.5% for France was beaten, and rose to nearly 6.5% as a result of increasing numbers of trainees in industrial activities. The gender split was 40% female, 60% male. With backing from the Louis Vicat Foundation, the Group acts to support persons with disabilities through 4 key courses of action: raising awareness; recruiting; keeping people in employment; special adaptations for employees. Enterprising action plans for finding jobs for persons excluded from the employment market are carried out. They complement any existing public policies, and vary in accordance with needs in different places.



# Sponsorship

## A profusion of initiatives in the service of local communities

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**The Vicat group contributes actively to the vitality of the regions in which it works through its local, enduring employment opportunities and enterprising actions. In application of its patronage policy, special care is taken with respect to the most vulnerable in the shape of significant measures for improving health, education, social inclusion, redistribution, and preservation of heritage assets.**

In many areas, action is taken to raise awareness of ecological and redistributive transition issues, and support is provided for local economic and cultural fabric and sports. The Group's patronage policy is also backed by two corporate foundations: Fondation Louis Vicat in France and Fondation Sococim in Senegal.



**€5<sub>M</sub>** | **DONATIONS MADE  
BY THE GROUP IN 2022**

## Education

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Vicat takes steps every day to educate youngsters and to raise their awareness of the issues of ecological and redistributive transition. Thousands of young people have benefited from these programs, which have paid special attention to girls and young women. Backing policies carried out by local governments, the Group helps improve the quality of school infrastructures and facilities, important factors in academic achievement. Schools have also been given financial and material support. Merit-based financial assistance is also given to young people wishing to take their studies a step further. In addition, Vicat has established a number of partnerships with engineering and architectural schools and with universities, either to transfer its knowledge specific to its businesses or to develop joint research and innovation projects.

## Environment

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Management of the domestic waste of villages near Group cement plants is a major concern. In India, tons of dry waste have been put to good purpose in one of the plants, and wet waste is composted. In Senegal, with Fondation Sococim, the *Rufisque Marché Propre* program is developing an integrated waste-management system for the local street market.

## Inclusion

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In some places where the Group works, donations have helped fund the construction of centers caring for children with disabilities. Alongside specialist local associations, the Group helps improve the daily living conditions of persons with physical and mental disabilities.

## Health

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Especially for illnesses and disorders such as malaria, diabetes, leukemia, autism, and breast cancer, the Group supports a large number of initiatives throughout the world aimed at improving the availability of close-to-home care.

In countries where public health infrastructure is limited or simply not available, the Group sets up preventive healthcare programs, opens dispensaries, provides certain care free of charge, transports patients with the plant ambulance, at no charge, helps build public toilets, or donates money or medical equipment to local hospitals or telemedicine centers.

## Sport

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Vicat supports a large number of sports clubs in the areas where it works, with a special focus on women's sports.

### LOUIS VICAT FOUNDATION



### 2023: year of celebration

Louis Vicat Foundation is gearing up to celebrate a big event: the bicentennial of the opening of Louis Vicat Bridge in Souillac, in south-west France.

# Louis Vicat Foundation Committed to the most vulnerable people in our society and to our heritage

Since it was created, in France, in 2017, the Louis Vicat Foundation has multiplied its actions for promoting scientific culture, for highlighting and preserving cultural heritage, and for education and community outreach. Together with volunteer employees, its chairwoman, Sophie Sidos, carries out projects for the most vulnerable persons in our communities and supports architectural initiatives of heritage interest.

## Vicat Space at La Mache School (Lyons)

### Partner:

La Mache school (professional and technological training for engineering and construction, information technology, and new technologies).

### Project :

Support for extension and modernization of 4,700 m<sup>2</sup>, with creation a 70-room student residence, a fab lab, and a co-working space. Part of the new building will be officially named the Vicat Space in 2023.

## Cystic fibrosis in the spotlight

In 2022, Louis Vicat Foundation once again threw itself into the *Virades de l'Espoir* fundraising rally organized throughout France in support of cystic-fibrosis charity *Vaincre la Mucoviscidose*.

At some facilities, company employees manned workshops for molding items with Prompt natural quick-setting cement, while others hosted historical and cultural events to help raise funds.

## Promoting industrial careers for women

Together with not-for-profit *Sport dans la Ville*, the Louis Vicat Foundation takes part in the *L dans la Ville* program for assisting young women from disadvantaged city neighborhoods entering the job market. The Foundation is a partner in the *Industri'Elles* initiative for raising the interest of young women in scientific career paths and jobs in industry.

## Foundation on a high note

As a patron of the Isère Agency for the Advancement of Art and Culture, which organizes the annual Berlioz Music Festival, Louis Vicat Foundation gives its support to the scheme allowing schoolchildren to discover classical music by introducing them to some of the greatest symphonic works.

## Partner of Economic, Social and Environmental Council

As part of the European Heritage Days operation, Vicat employees manned a workshop for making moldings with Prompt natural quick-setting cement at the Palais d'Iéna building, the Paris headquarters of the Economic, Social and Environmental Council (CESE) consultative governmental assembly. The operation was supported by Louis Vicat Foundation which is involved in the restoration, preservation and modernization of the building also known as the Museum of Public Works.





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