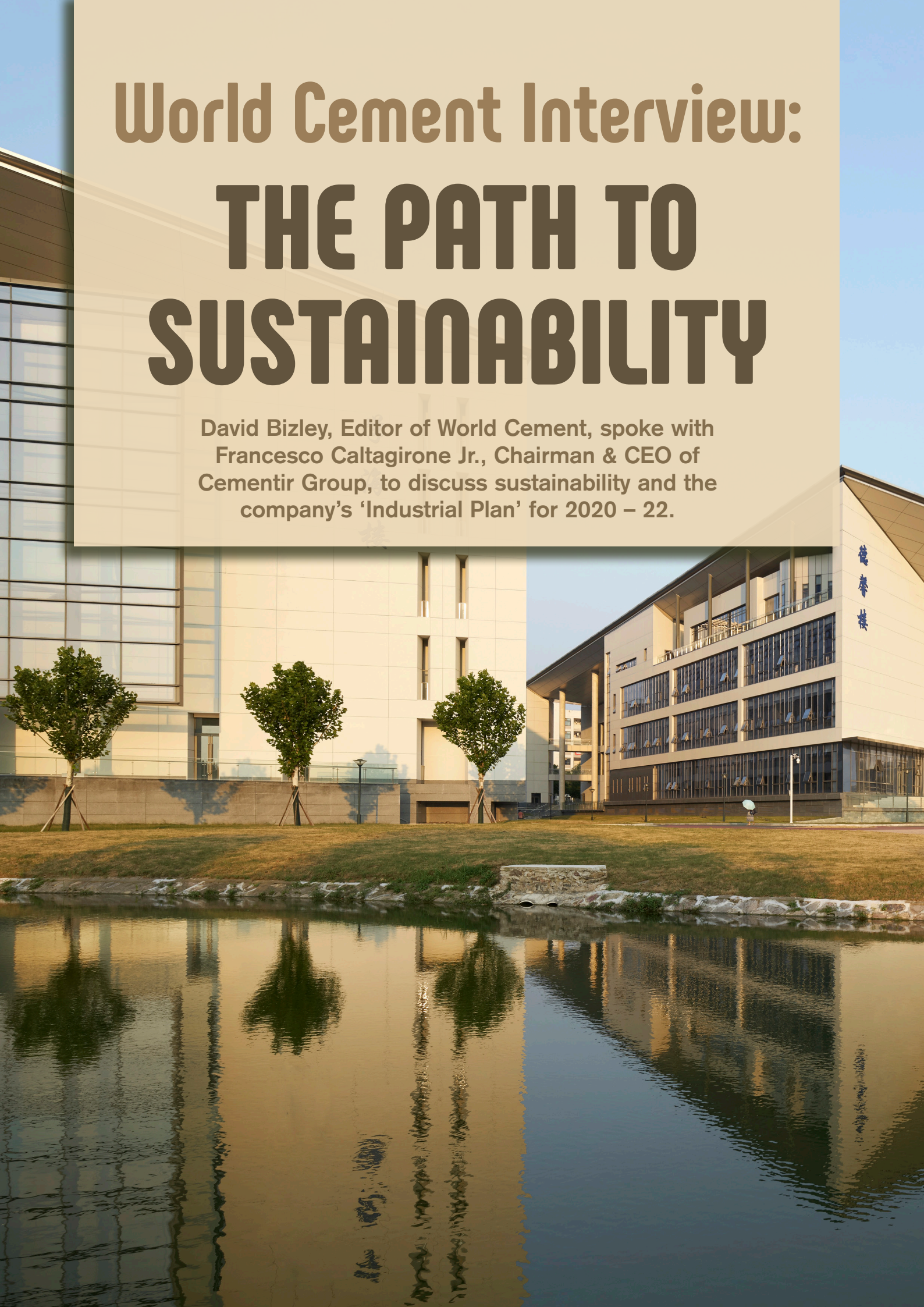


World Cement Interview: **THE PATH TO SUSTAINABILITY**

David Bizley, Editor of World Cement, spoke with Francesco Caltagirone Jr., Chairman & CEO of Cementir Group, to discuss sustainability and the company's 'Industrial Plan' for 2020 – 22.



World Cement (WCT): Cementir Group has announced its 'Industrial Plan' for 2020 – 2022. Can you tell us more about this plan? What are its key objectives?

Francesco Caltagirone (FC): The key objectives of the Industrial Plan are:

- ▶ To align the company on an ambitious path towards growth, innovation and sustainability.
- ▶ To increase revenues by roughly 7% compared to 2020; to reach an EBITDA (earnings before interest, tax, depreciation and amortisation) of more than €300 million, and also to increase the EBITDA margin from 20% to 23%.
- ▶ And, in terms of net debt, to end 2022 in a positive financial position.

To sum up what has happened to Cementir Group over the last couple of years: we sold our Italian assets in 2018 (to HeidelbergCement for €315 million) and repositioned ourselves in Belgium and the United States as a supplier of white cement.

WCT: Cementir Group has set an ambitious CO₂ reduction policy in place. What steps will the company be taking to meet this target?

FC: An important aspect of the Industrial Plan is that we have put another €100 million of investment on the table for use towards the reduction of CO₂ emissions with a target to cut them by 30% per ton of cement produced in 2030.

We are targeting several key investments to achieve this:

- ▶ In Denmark, we plan to increase the reach of our district heating service from 25 000 families to nearly 50 000 families – doubling its scale. We will also begin supplying 8 MW of energy from a wind-farm; this will allow us to reach a target of 80% of electricity coming from sustainable sources.
- ▶ Then if we look at Compagnie des Ciments Belges (CCB) in Belgium, we are in the process of revamping one of our two kilns. The target is to reach alternative fuels usage of 80% compared to the 40% we see today. The other important thing is that we will transition from using two kilns to just one.





Francesco Caltagirone Jr., Chairman & CEO of Cementir Group.

- ▶ In Turkey, we are going to invest in waste heat recovery systems and lowering the usage of electricity supplied by external sources.

The reason we are now trying to achieve a greener path is not just because cement is being taxed on emissions like other industries, such as steel and glass, but because we feel that there is a growing level of awareness around sustainability in the areas where we operate, particularly in Scandinavia. I think this awareness will help the industry achieve the next steps towards sustainability.

It's a worldwide problem; not just a cement, steel or automotive problem. I think that, together, we need to try to set and achieve ambitious goals. In some sectors, such as cement, there is no single proven solution for capping emissions; we have instead several companies trying to find the best solution on their own. A question this industry needs to ask is: Why are we going in scattered way to find the solution instead of joining forces? The challenge facing the industry is too large for any single company to come up with a complete solution.

We find ourselves in a unique position as a group because one of our business units is in Scandinavia where environmental issues are of high importance to politicians and business. Whilst it puts pressure on us, it also offers a big advantage to Cementir Group when compared to other players in the sector.

WCT: On the topic of sustainability, the Industrial Plan also highlights the development of new products and cement types, some of which can result in reduced CO₂ emissions. Can you tell us more about them?

FC: With regard to sustainability, the idea is to bring Cementir Group to the next stage and a state-of-the-art

level in terms of both process and products in an industry that is often labelled as a big polluter. This reputation is an issue that the industry often faces when communicating with external stakeholders.

In terms of products, we have a significant asset on our hands, which is the result of many years of research and development by the Group's laboratory in Aalborg. This technology, branded **FUTURECEM™**, exploits the synergy between clinker, calcined clay and limestone. Calcined clay has been known about for many years; the novelty of this patented technology is in the chemistry and the way it changes how these three elements react together. Ultimately, it allows for a durable concrete with a lower clinker content (up to 30% less – within the current standards applicable to cement, but potentially even higher replacement levels will be seen) to be produced, resulting in CO₂ emissions being cut by 25 – 30% compared to conventional products. The additional green benefit is that the majority of raw materials that end up being used, limestone and clay, are those that are most widely available

This technology will increase awareness of sustainable solutions in the marketplace and will raise the profile of Cementir's product portfolio. It has also been featured by both CEMBUREAU and the International Energy Agency (IEA).

We are investing in **FUTURECEM** to develop new binders. Over the last couple of years, Cementir Group has invested time and resources in a Group global innovation engine called Aalborg InWhite Solutions™. The first idea behind this initiative is to develop new premixes, starting with the ones based on white cement, which is a key strategic product for Cementir Group as the world's leading player.

Two products based on **FUTURECEM** technology have been successfully launched through this programme already: Aalborg Extreme™ and Aalborg Excel™, developed for what we call 'Ultra-High-Performance Concrete (UHPC)', which can be used for both structural and aesthetic roles. A third product, Aalborg Explore™, is also under development for 3D-printing applications.

These developments also allow for CO₂ emissions reduction in the supply chain and transportation as precast items can be made more durable, thinner and lighter, allowing more items to be placed on a truck, for example. Additionally, as the finish of the final product is already complete, there is no need for painting or other finishing products to be used. It is not enough for these products to be developed sustainably, their final application must be sustainable too.

WCT: Could you tell us more about InWhite and what it aims to achieve?

FC: InWhite was first established three years ago as an initiative designed to do things: Firstly, to allow the Group to react to megatrends in building materials applications, and secondly to develop ways

to capitalise on Cementir's position as a leading global player in the white cement sector. When I say 'leading', I don't mean only in terms of production capacity, but also in the way we do business, our value proposition; we work very closely with our customers, are present in more than 20 countries worldwide, and we invest in logistics to better serve our customers.

The rationale was to combine the Group's knowledge and expertise with its R&D capabilities to develop innovative, sustainable products that meet the demands posed by new applications. It was under the umbrella of InWhite that various new products, some of which I mentioned previously, have been developed. These are mainly related to applications in speciality concrete, such as UHPC and Glass Fibre Reinforced Concrete (GFRC), but also 3D printing operations. Though still in its infancy, 3D printing is growing in importance, and we see significant potential for this technology in certain applications.

Additionally, we have also developed a form of magnetic concrete, which we see as a disruptive innovation, not only in the building materials sector, but in the automotive sector too. We are co-operating with a start-up in Germany to develop this product, which could be used as a novel way to charge electric vehicles wirelessly. Whilst the success of this product is not guaranteed at this point, it represents Cementir Group's focus on developing sustainable solutions.

I think these examples provide a good overview of the InWhite initiative's aims and objectives.

WCT: Another aspect of the Industrial Plan is the digitalisation of industrial processes. How will Cementir be carrying out this change?

FC: We have already begun to invest more than €15 million into this project. As you know, construction is traditionally a slow-moving sector and has perhaps been less innovative compared to other industries over the last 30 years.

Digitalisation presents both opportunities and challenges for a company operating in this sector. We have identified four main streams of opportunity:

- ▶ 1) Future-ready production: process optimisation, improved quarry operation and increased mill throughput.
- ▶ 2) Digitised maintenance processes: predictive maintenance, and even autonomous maintenance via automatic inspections.
- ▶ 3) Streamlined supply chains: upgraded transport management systems, streamlined physical inventories and the digitising of warehouse material movements.

And lastly, perhaps most importantly:

- ▶ 4) To engage with people and safety processes and to deploy AI boards to build a shared ownership of objectives.

The challenge is that many people working in this industry are not yet ready to embrace these kinds of improvements. So, on one side there is the financial cost involved in this kind of project, and on the other side, we need to convince a lot of people to work in a different way. Otherwise, it's like you've built a Ferrari but you don't have anyone to drive!

I think that there is a lot of space to promote digitalisation in cement, ready-mix and aggregates and this is just the start. Today, especially through 'Big Data' and wireless communications, you can receive data from your quarry or your plant – something that was nearly impossible 10 years ago, due to high costs and low efficiency. Today, such technologies are cost-effective and can enhance your process step-by-step, whilst also enhancing the skills of your personnel.

As part of this process, we have already invested significantly in training our personnel. Our objective is to ensure that they are provided with the same levels of training and the same technology, regardless of whether they are based in the US, for example, or an emerging market.

We regard these major developments not as being technology-driven, but rather as organisationally-driven. Much of the impetus behind the digitalisation process comes from efforts by management to change the way the company operates. We are not trying to re-invent the wheel in terms of tools and systems, rather it is the organisational shift that is the most challenging aspect of this change, but will also be the most rewarding when we succeed.

WCT: A great deal is said about the challenges faced by the cement sector – what would you say are the biggest opportunities on the horizon for Cementir Group?

FC: Cementir Group sees significant opportunity for growth, especially as we are focused on white cement. White cement is used mainly in dry mix products, which lower the labour intensity of construction operations – this gives us the opportunity to enhance the penetration of white cement around the world. Today white cement represents 1 – 2% of total cement use in each country, so there is significant opportunity for growth.

Another opportunity comes from our presence in Scandinavia where environmental matters and sustainability are highly prioritised. We have frequent meetings with governments in the region to discuss how to overcome these challenges together. Every country needs to follow this example and work closely with industry to find a solution. I think that political pressure will lead Europe to invest heavily in helping industries to meet the ambitious targets required for sustainable operations, and this is a huge opportunity for us. ■