

Universeine Urban space recycling on a big scale



CONTENTS No. 92

DECEMBER 2022

CORPORATE & UNIT NEWS

- 3 VINCI Highways blazes its trail
- 8 ETF on track for sustainability

PROJECTS & CUSTOMERS

- 16 UNIVERSEINE
Urban recycling on a big scale
- 22 GOING LOW CARBON
VINCI Energies crunches the numbers for its customers

PEOPLE & INGENUITY

- 25 WASTE MARKETPLACE
The success story of a Leonard intrapreneur

COMMUNITY & RESPONSIBILITY

- 28 A practical guide to respecting human rights

16



22



8



28



12 IN PICTURES
32 GUEST
LAURENT MOREL

ESPRIT VINCI

The VINCI Group magazine

Communications department:
1973 boulevard de La Défense
CS 10268, 92757 Nanterre Cedex
Tel.: 33 (0)1 57 98 61 00

Website: www.vinci.com

Director of publication:
Pierre Duprat

Editor in Chief:
Estelle Piercourt

Deputy editor:
Pierre Salanne

Coordination:
Noémie Vallon

Contributors to this issue:
Olivier Baumann, Nicolas Bège, Florian Maire, François Salanne and Pierre Salanne.

Production: EPCOKA

Photoengraving: Panchro

Printing: HandiPRINT

Photos: Laurent Desmoulins; Philippe Guignard / Air-Images-Contreforts
Production: Kreation; Guillaume Leblanc; Jean-Philippe Moulet; Micheal Ritter; François Vigouroux; VINCI and subsidiary photo libraries, DR.

Contact:
estelle.piercourt@vinci.com

Circulation:
17,000 copies of the French version and 5,000 copies of the English version.

Distribution:
Julien Bozzi, julien.bozzi@vinci.com.

This magazine is printed on paper manufactured in compliance with PEFC standards - ISSN 1626-9993



VINCI Highways blazes its trail

The VINCI Concessions division in charge of operating motorways outside France is gaining ground: it is landing new projects, increasing its stake in existing concessions and bolstering its expertise in advanced toll technologies. It is also pushing ahead with its long-term strategy by rolling out its model as an integrating operator, and teaming up with the Group's construction companies, in particular in Central Europe.

A

definite symbol of success: despite the health crisis, VINCI Highways has had several wins in recent months, speeding up its international expansion and strengthening a network that spans more than 4,000 km of motorways, bridges, tunnels and urban roads in 16 countries. Three of its new operations stem from its deep, long-standing roots in European Union countries or regions, and it won them all on account of its solid track record.

The one entailing the largest investment – about €600 million – involves completing the D4 motorway in the Czech Republic, between Přebram in Central Bohemia and Písek in South Bohemia. This 32 km stretch of motorway will be built from scratch, while upgrading 16 km of an existing road into a two-lane dual carriageway. This is the first motorway public-private partnership (PPP) in the Czech Republic. And while it is also VINCI Highways' first step in the country, the 50-50 consortium with investment company Meridiam that it leads was able to rely on the previous success of the PR1BINA expressway in neighbouring Slovakia. Another reason is that the Group's construction companies are already very active in both countries: VINCI Construction CS (formerly Eurovia CS), which built the expressway in Slovakia alongside VINCI Highways 10 years ago, will be building the D4. Over the past decade, the company has become one of the key players in the country's transport infrastructure construction sector, and employs more than 3,000 people there. The financing was completed only four months after the consortium was selected as the preferred bidder, and the D4 was named Europe PPP Deal of the Year at the 2021 PFI (Project Finance International) Awards. The works, which meet stringent environmental standards (see box on page 6), are under way.

Concession and construction companies also joined forces on the B247 motorway project – the first federal road in Germany to be delivered through a PPP – awarded in July 2021. This 22 km motorway between the cities of Mühlhausen and Bad Langensalza will improve mobility in the north of Thuringia by facilitating access to the



Nicolas Notebaert

CHIEF EXECUTIVE OFFICER,
VINCI CONCESSIONS

“Our ongoing international expansion shows that our long-term model – based on investment and innovation to enhance the traveller's experience and advance ecological transformation – inspires confidence. This is our priority and lines up with the VINCI Group's environmental ambition. The health crisis did not slow us down: it temporarily disrupted travel and is now encouraging us to move even faster to protect mobility, which is an essential good for humankind, while respecting the planet.”



regional motorway network. The contract will run for 30 years and the associated investment will amount to approximately €500 million, including around €350 million for the construction phase. Here too, speed was of the essence: after VINCI Highways was named preferred bidder in July 2021, the financing was completed in a record two months and preparatory works began in the first quarter of 2022. And once again, the concession and construction companies moved forward together, building on the experience they had gathered while working on four other German motorway PPPs over the past 15 years (A4, A5, A9 and A7-2). VINCI Highways now operates a 212 km network of motorways in Germany, making it the country's leading private motorway concession company. Eurovia GmbH (VINCI Construction) has solid roots in its domestic market, is generating almost €1 billion in revenue and will carry out the works over

four years, recycling up to 30% of the asphalt and 100% of the concrete on the existing section.

The third recent contract awarded to VINCI Highways – this time in Greece – is also the result of the Group's long-term strategy. It already held the concession for the 201 km Athens–Corinth–Patras motorway, through Olympia Odos, and in 2021 signed a rider to the agreement with Greek authorities to lengthen the infrastructure with a new 75 km section to Pyrgos, in the west of the Peloponnese peninsula. This new section will be integrated into the existing concession, which will be extended until 2044.

The reason behind this success is the quality of the services on this infrastructure. Olympia Odos won six Mobility Awards in 2021, including Motorway of the Year. The concession company also won an award for its kilometre-based payment →



In Greece, concession company Olympia Odos is extending the Athens–Corinth–Patras motorway by 75 km to Pyrgos.



Belen Marcos,

EXECUTIVE VICE-PRESIDENT OF VINCI CONCESSIONS AND PRESIDENT OF VINCI HIGHWAYS

“Cementing our model as a full-service operator”



Belen Marcos holds a degree from the Polytechnic University of Valencia and has had an international career, principally in North America (at Ferrovial and Cintra). She moved to VINCI Concessions in September 2020.

How are VINCI Highways’ markets organised?

We work on three main kinds of projects. The first ones are concessions where we assume the risk relating to traffic. We finance, design, build and operate the infrastructure, and charge tolls. These concessions account for roughly half of our portfolio. The principal examples here are our motorways and roads in Greece, Colombia and Peru. They are the projects that involve the largest investment and the ones that create the most value, because we deploy our full concession management model and our returns are directly linked to the infrastructure’s performance. This is where our biggest development prospects will be in coming years. On the second kind of projects, we manage operations ourselves but the concession granting authority pays us “rent” pegged to infrastructure availability, not traffic. The main examples here

are our motorways in Germany, the D4 in the Czech Republic, the Regina Bypass in Canada and the East End Crossing in the United States. This is the most common type of PPP worldwide. So it’s another significant development avenue for us. In both cases, we create value for the Group by working in synergy with our partner construction companies when they already have subsidiaries in the country, or we enlist their Major Projects teams to work with us. The third kind of operations we work on are service contracts – especially the ones involving free-flow tolling developed by our specialist subsidiary TollPlus.

Precisely, what do you stand to gain from holding 100% of TollPlus’s share capital, and what opportunities is that move opening up for VINCI Highways?

Free-flow systems are gaining ground around the world. They are actually the standard for toll motorways in the United States, where TollPlus makes more than three-quarters of its revenue. Managing these systems entirely in-house will make our bids more coherent and more competitive. Beyond setting up and operating the tolling back office, this expertise is opening the door to providing more services around mobility, which will leverage growing data flows to optimise the user experience. Combining our areas of expertise as concession operators with these technologies is also opening up new growth prospects, while cementing our model as a full-service infrastructure and mobility operator.

What geographies are you looking at in your growth strategy?

We are mostly aiming for two large geographies where we are already active. One is Europe, especially Central and Eastern Europe, where we expect to see more PPPs and where we can rely on our existing networks and on synergies with our colleagues at construction companies. The other is the Americas. The United States has an ongoing need to modernise its infrastructure, especially in urban areas, which are often very congested. And people there accept tolls more easily than in other countries, which is good news for PPP projects. We are also looking at Latin America, around our operations in Colombia and Peru. We are particularly interested in Brazil, which has considerable need for infrastructure, and the fact that VINCI Airports is growing there can open the door to motorway and road concessions.

D4

Synergies between concession and construction companies in the Czech Republic



and works teams, it was possible to use BIM (Building Information Modelling) and a common data environment (CDE) for the first time on a road construction project in the country. Creating a “digital twin” for the entire motorway will not only simplify decisions regarding operations and shed light on possible complexities in construction processes: it will also simplify maintenance and operation in the future as every component in the infrastructure, all the way down to road signs and safety barriers, has been modelled.

The close collaboration between these two partners also opened the door to setting ambitious environmental objectives: “We plan to reuse 60% of the milled asphalt layers on the project itself, and to reuse approximately 900,000 tonnes of residue from mining activities in the region,” Thomas Wegner continues.

“This will reduce transport requirements by approximately 35 million tonne-km and save 2,000 tonnes of CO₂. In preparation for the operation phase, Via Salis’s operations buildings will be equipped with solar panels and there will be eight 150 kWh charging stations for electric vehicles on either side of the motorway. The next step could be setting up a solar farm along the road to feed green energy into the local grid.”

Via Salis took over operations on the existing sections on 1 July 2021, and construction of the new sections is ramping up: “Work is under way on the entire stretch, with a view to handing over the project at the end of 2024. Construction work is also starting on the bridge structures,” Pavel Jirousek says.



Thomas Wegner
CHIEF TECHNICAL OFFICER,
VIA SALIS



Pavel Jirousek
REGIONAL DIRECTOR FOR
CENTRAL BOHEMIA,
VINCI CONSTRUCTION CS,
AND HEAD OF THE DIVIA
STAVEBNÍ CONSORTIUM

“VINCI Construction’s presence in the country, with its technical resources and its experience with the local administration, is a strong advantage.”

“We pool our technical expertise with VINCI Highways to get the best result possible.”



But, more than anything else, it comes from cooperation: we pool our technical expertise and our people to get the best result possible.” And the project is big: it involves building or renovating 48 km of motorway, an unprecedented challenge in the Czech Republic, while most of VINCI Construction’s local subsidiaries are active in the DIVIA stavební consortium, including the materials production plants at Eurovia CS, Stavby mostů, Eurovia Asfalt, Freyssinet CS, Prefa Pro, OK Třebestovice, Průmstav and Vialab CZ. Thanks to close cooperation between programme management

“**W**ith our construction partners, we organised very strong cooperation from the moment we started the bid process,” says Thomas Wegner, Chief Technical Officer at Via Salis, the company holding the concession for the D4 in the Czech Republic, the new link in VINCI Highways’ network in Central Europe. He continues, “The teams developed solutions together, implementing the lessons learnt from other projects, to take into account the effect of various working methods on health and safety and impacts on the environment during future construction and operation. Currently, having finalised almost a year of construction, the project is proceeding according to plan and meeting the expected quality standards. VINCI Construction’s presence in the country, with its technical resources and its experience with the local administration, is obviously a strong advantage.”

On the construction side, Pavel Jirousek, VINCI Construction CS’s Regional Director for Central Bohemia and head of the DIVIA stavební consortium, agrees that this project is “an excellent example of the efficacy that results from teaming up two best-in-class players – an international concession operator and investor and a leader in the local construction market. Our strength comes from our track record, including our experience on the first motorway PPP in Slovakia.



Above: the new PPP for the B247 motorway project in Germany was awarded to VINCI Highways in 2021.



VINCI Highways is a key player in free-flow toll systems in the United States, where they are the standard, via its subsidiary TollPlus.



→ system associated with the Olympia Pass tag, which calculates the actual distance travelled by vehicles and automatically reimburses any kilometres not travelled. It was also singled out for its initiatives to improve motorway safety (through awareness campaigns and technology) and its environmental management (installing LEDs in 17 tunnels). VINCI Highways' solid reputation in the country also stems from its experience operating the Rion-Antirion Bridge, a large piece of infrastructure that the Group built in the early noughties across the Gulf of Corinth, connecting the Peloponnese peninsula to the mainland. Almost 90% of Gefyra's customers say they are satisfied with the concession company's customer service in general and with its mobile app My Gefyra in particular.

The way VINCI Highways manages its existing concession portfolio also overlaps with its long-term strategy. Unlike pure-player investment companies, the Group's model as a global operator puts it in a position to finance, design and build infrastructure assets and then manage them for decades, so it quite naturally directs its focus to that kind of timescale. And, if it sees the sense in doing so, it buys its partner investors' stakes if they decide to divest them. This is how VINCI Highways recently acquired a controlling interest – by increasing its stake from 20% to 85% – in the company that holds the concession for the Confederation Bridge in Canada. This 12.9 km

bridge between Prince Edward Island and New Brunswick was built by the Group at the end of the 1990s under a concession agreement that expires in 2032. Likewise, in Portugal, it increased its stake to 49.5% when Atlantia decided to withdraw from Lusoponte, the company that manages the concession for the bridges over the Tagus River in Lisbon – including the 17 km Vasco da Gama Bridge – also built by the Group.

Along similar lines, VINCI Highways acquired a 30% stake in TollPlus Inc. (see box), which supplies technology solutions for mobility on motorways, in 2016, then bought the remaining 70% in the first half of 2022. With this transaction, VINCI Highways has become a top-tier player in electronic toll collection (ETC) and associated services. This is a fast-growing market, especially in the United States, where VINCI Highways intends to grow its position. So there are new development prospects opening up for the Group's motorway concession companies outside France.

A new motorway concession in Brazil

On 1 December 2022, VINCI Highways signed an agreement to acquire a 55% interest in Entrevias, the company that holds the concession for the 570 km of motorway crossing the state of São Paulo from north to south until 2047. The concession contract, which entails a traffic risk, covers operation and maintenance of all the infrastructure, and widening of a 210 km section south of the city of São Paulo. Works are under way and should be completed by end-2025. Some 30 million transactions were processed on this network in 2021. Financial closing is expected in 2023, once the conditions precedent are satisfied.

Richard Arce,

EXECUTIVE DIRECTOR OF VINCI HIGHWAYS ETC SOLUTIONS AND CHIEF OPERATIONS OFFICER OF TOLLPLUS

“Being the voice of the user journey”



Tell us briefly about TollPlus and what it does.

TollPlus is a technology provider that delivers solutions for the mobility ecosystem, including tolling, payment systems, customer relationship management and mobility-as-a-service applications. These are fields that require processing of high-volume transactions in real time and with the highest levels of accuracy. Our customers are transport agencies and private concession companies that collect electronic tolls from highway traffic. We focus on the all-electronic tolling (AET) market and, along with the technology, we provide the service to maintain and operate the solutions that we implement.

What new prospects has the full integration of TollPlus into VINCI Highways opened up?

We are now VINCI Highways' technical branch and can leverage our development capabilities to further drive its digital offerings. For example, we can provide the commercial back office and payment solutions for electric vehicle charging stations. TollPlus can also expand its footprint where VINCI Concessions has existing projects that require a technical element.

We have already started supporting other concessions in the network by doing technical assessments of their needs and proposing ideas to optimise their technological or customer service operations.

How do you see ETC services evolving over the coming years?

New technologies are always emerging. In the ETC market they will be focused on products that enhance the journey and user experience. This means more on-demand services, mobile-based options, and single-account platforms that help end users make informed travel choices. Users want roads that add value – whether in time, safety, quality, reliability, or convenience – the expectation being that, if they pay to use it, they should receive a benefit from it. TollPlus can be the “voice of the user journey” on PPPs, because that is our traditional area of operation and core expertise. Technical solutions such as ours, which ensure system security, will also add value in terms of anonymity and protecting personal/private information – which will become a primary concern as mobile technology becomes increasingly integrated or embedded.



ETF on track for sustainability

The crucial decarbonisation of mobility underpins the solid outlook for rail transport that is driving ETF's growth. Mainly based in France, where it is a long-standing partner of French rail operator SNCF for the renovation and maintenance of the national rail network, VINCI Construction's specialised entity is also banking on its international development and large integrated projects, working synergistically with other Group entities.

Since the beginning of 2022, ETF has been working with Mobility (VINCI Energies) on the equipment, track and catenary systems for the south-western sector of the future Line 15 South of the Grand Paris Express.



It is a well-known and recognised fact that of all modes of public transport, rail is the most efficient in terms of carbon footprint. According to the World Economic Forum, it accounts for 1% of the world's transport-related emissions, but for 7% of passengers transported and 8% of freight. At a time when the effects of global warming are becoming increasingly apparent, trains and other rail modes such as light rail and metros are seen as the transport of the future. This is excellent news for VINCI. ETF, the VINCI Construction entity specialising in the design, construction and maintenance of rail networks, is active across all segments of this market: track, catenary, signalling and rail safety work for national, urban and private rail networks. In addition to this diversity of business, it has a wide range of projects, from small daily short-cycle worksites to extensive new infrastructure projects, such as the Grand Paris Express metro lines, or major maintenance and renewal operations under multi-year contracts. "The complementary nature of our businesses and our contractual lead times provide the company with a robust foundation. It means we are in a position to present a solid balance sheet, with constantly increasing revenue and results," sums up Fabrice Guégan, CEO of ETF.

Although the company supports a wide range of public and private project owners, its main client is SNCF Réseau. The subsidiary of the French national railway operator accounts for 60 to 70% of its revenue. Given this fact, "maintaining a climate of partnership and trust with SNCF is essential," says Fabrice Guégan. "We are involved with them very early on, in particular to prepare high-impact operations" (see box opposite), adds James Douyère, General Manager in charge of ETF's regional and specialised activities. The bond of loyalty with this historic client is based on close relations: "Historically, our organisation was created to mirror that of the SNCF. We have a network of local agencies that manage maintenance contracts on a day-to-day basis. This very tight network sets us apart from our competitors and is now our strength," says James Douyère.

"Our in-depth work on local maintenance projects gives us the credibility we need to win larger projects, particularly those involving replacement,"



The race against the clock for "emergency operations"

Track renovation work is most often carried out at night to minimise disruptions to passengers: the railway right-of-way is opened in the evening after the last train has passed and must be returned to traffic the next day before the first train passes. Between the meticulous operations of closing and reopening the track, and the safe transport of equipment and work teams, the actual productive work time is limited to just a few hours. "When the countdown starts, we have to work very efficiently so that we are able to reopen to traffic on time and with the required quality," explains James Douyère. "We set up platforms where SNCF agents and ETF employees work together. Working closely with the customer in this way means we can react quickly to plan and carry out the work in the best possible manner."

says Olivier Jaboulay, General Manager of Major Projects. ETF has a strong presence in the market for 'fast-track' systems, such as rolling plants that regenerate track at industrial rates. Take for example, the recent commercial success in June 2022 when ETF signed a five-year contract with SNCF Réseau for the replacement of 675 km of railway on the national network. This means that an average of 135 km of rail will be replaced each year thanks to two specific ETF facilities: a 550 m long mobile factory train to replace rails and fasteners, and a new 432 m train to transport new rails and load old ones. The contract, which will begin in January 2024, is in addition to two others already underway. Since 2015, ETF has held the contract for the only high-speed works unit on the dense Ile-de-France network, and since 2018, for a batch of high-speed works units already active on the national network. ETF is now putting in place a structure to underpin its growth on this market with high visibility over time: "We are entering a consultation phase for the renewal of contracts for two fast-track work units on the national network," explains Olivier Jaboulay.

While maintaining a high level of activity on behalf of the SNCF is a major strategic focus, it is not the only one. "We want to expand in segments where there is also significant potential for growth, namely international business and major integrated projects," says Fabrice Guégan. The aim is to double the share of international business, from the current 15% of ETF's revenue. "To do this, we will rely in particular on the strong bases we have →



→ established in Germany, where we have two subsidiaries, and in Egypt, where we have been present for more than 30 years through the construction of various lines of the Cairo metro," (see box) explains Torsten Macko, ETF's Director of International Business. "But we are not limited to these two countries," adds Olivier Jaboulay. In the UK, we are positioning ourselves on the HS2 high-speed rail project, on which other VINCI Construction entities are already working: we have responded as part of a consortium for three track works packages and the catenary system works package. In Canada, ETF is targeting major projects such as the Quebec City light rail system (LRT), where Eurovia Quebec is active. For large integrated projects, "we are targeting complex operations such as Line 15 of the Grand Paris Express (see box on page 11), where we can leverage our organisational and innovative capabilities synergistically with other VINCI entities," adds Olivier Jaboulay. "In France, we are already preparing for the future Bordeaux-Toulouse and Montpellier-Perpignan high-speed lines."

Winning synergies on the Grand Paris Express

The current and future projects of the Grand Paris Express are a good illustration of ETF's ability to work synergistically with other VINCI entities. For example, for the railway equipment and works contract for Line 15 South (West), which includes 16.5 km of tunnels and is currently entering the operational phase, work on managing and integrating the synthesis studies is being carried out in close consultation with VINCI Energies' teams. "For future tenders for the Grand Paris Express, we plan to further strengthen our ties in order to optimise schedules and pool all system activities," says Olivier Jaboulay. ETF is also working in a consortium to build 14.4 km of tunnel track on Line 14 South.

ETF is expanding its range of businesses, particularly in the areas of signalling and railway safety, in order to master all the aspects of railway worksites. SNCF is delegating to companies in this sector an increasing number of safety functions that it used to perform itself, such as de-energising catenaries and track, or accompanying work trains, explains James Douyère. "For years, we have been investing in these activities, so much so that we are now the only company in the sector to have all the qualifications required to ensure the safety of work sites."

Considerable growth is also expected to come from local authorities. "Many regional cities installed light rail networks in the 1990s and 2000s. This infrastructure is now ageing and the regeneration market is expected to show strong growth, which is another great opportunity for us," explains James Douyère. ETF is also looking to strengthen its position in the market for plug-in terminal installations (PTIs) for industrial companies and para-public structures, such as large sea ports. "Currently, this market accounts



ETF is part of a consortium building 14.4 km of tunnel track for Line 14 South of the Grand Paris Express.

for 10 to 12% of our business, but the launch of design-and-build contracts and the government's renewed commitment to growing rail freight point to strong future growth," says Fabrice Guégan.

It is clear that ETF has access to many areas of growth. All are based on the company's environmental responsibility. ETF is setting in motion the means to achieve its target of reducing its direct greenhouse gas emissions by 40% by 2030, in line with the Group's commitments. "Our first priority is to reduce the fuel consumption of our machines," explains Xavier Gauvrit, ETF's Technical Director. "But there are other levers on our roadmap, in particular the recovery of materials." One of the major research and development projects aims, for example, to increase the rate of in situ reuse of ballast during track renewal projects, which currently stands at 30%. "Detailed diagnosis and prediction of the state of wear of ballast should soon allow us to increase this recycling rate quite considerably." Finally, in terms of human resources, while recruitment is under pressure, ETF is taking several steps to improve the company's attractiveness and retain its employees. These include increasing operator skills - through the ETF Academy, an internal training centre created in 2018 - and rolling out a strong safety culture. The company has set itself the target of "zero serious accidents" by 2025.



Focus on Germany and Egypt

Among ETF's international locations, in addition to Chile, Poland, Belgium and Luxembourg, where the company is active, two are particularly promising: Germany and Egypt. Both countries are focusing squarely on their rail networks. Germany has chosen to invest massively in the renewal of its railway infrastructure, devoting almost €10 billion annually until 2029," explains Torsten Macko, ETF's Director of International Business. "We will position ourselves in this market through our subsidiaries THG and AGT, acquired in 2017 and 2021 respectively, while taking advantage of the synergies we will be able to create with Eurovia GmbH, which has a strong historical presence in the country." Significant markets are also emerging in Egypt. First, for the Cairo metro. ETF, which has had an almost continuous presence on this permanent worksite for thirty years (see photos above), as has VINCI Construction's Major Projects



Division, is preparing to respond to a call for tenders for the construction of Line 6, a €2 billion project financed by France. "The Egyptian government is also expected to launch contracts in the near future for the construction of high-speed rail lines, freight lines between the country's major ports and urban rail networks," says Selim Mzah, ETF's Director for Africa, the Middle East and Poland. "In all, we have a scope of nine major tenders with confirmed financing. To respond to them, we will join forces with our historical partners and make use of the synergies within the Group."



ETF in figures

3,000 employees worldwide

2021 revenue: €540 million

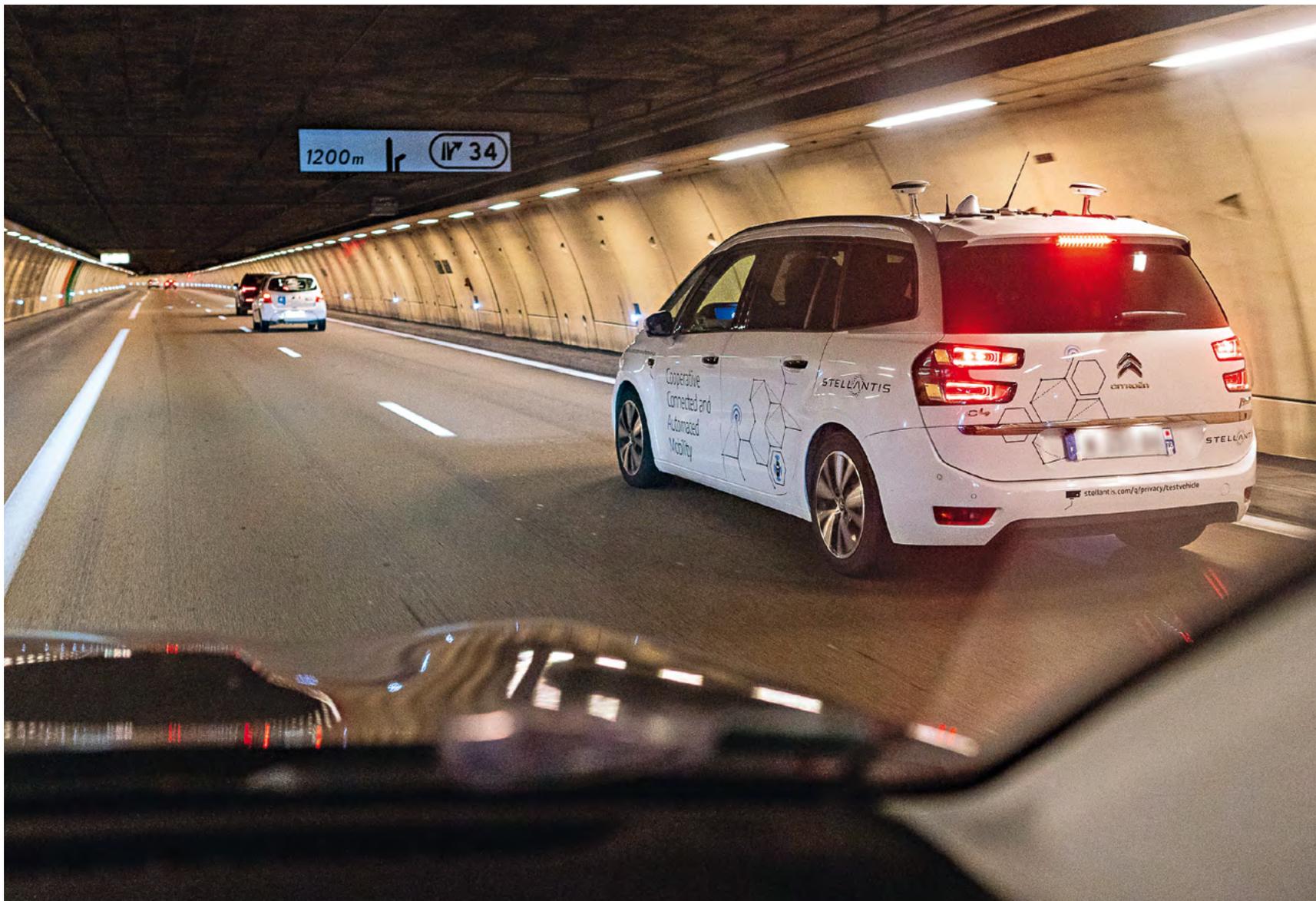
Order book in October 2022: €709 million

New equipment value: €475 million

4% of total payroll devoted to safety training.

|||||||

IN PICTURES



A UNIQUE INNOVATION LABORATORY AT THE GATES OF PARIS

On 20 September, the A86 Duplex (VINCI Autoroutes) opened the gate to an autonomous connected vehicle from Stellantis for experiments in real traffic conditions. The trial illustrated two new functions: the detection and transmission in real time by the infrastructure of dynamic incidents, and the transmission of localised notifications in the tunnel. Faced with situations such as a vehicle stopped on the hard shoulder in a bend, or a pedestrian appearing and then disappearing, the vehicle was able to anticipate these incidents and adapt its movement. Open to car manufacturers and equipment suppliers, the A86 Duplex provides an opportunity to develop on-board systems through real-time communication with the infrastructure.





“SHE’S AN ASTRONAUT”

Thirty-five teenagers from different parts of Colombia visited the NASA Space Center in Houston, USA, as part of the “She’s an Astronaut” programme developed by the She Is Foundation, which is supported by the VINCI Foundation in Colombia. The girls prepared for their trip by attending weekly classes over a five-month period. According to Osiris Moore, the head of the VINCI Foundation in Colombia, “Our work revolves around helping local communities to enjoy a better quality of life. We firmly believe that education can change lives. We helped make these Colombian girls’ dream of visiting the NASA Space Center – a faraway and inaccessible facility – a reality.”





IN PICTURES



THE RECOVERY GATHERS PACE AT VINCI AIRPORTS

The recovery in VINCI Airports' passenger traffic, particularly marked in Europe, South America and the Caribbean, gathered pace in the third quarter of 2022 for most of the network's airports. Traffic rose to 81% of 2019 levels in the first nine months of the year, excluding the Asian airports. The third quarter also saw two new development operations, with acquisition of a 29.9% stake in OMA, the Mexican concession company in charge of 13 airports in the north and centre of the country, and signature in Cape Verde of a 40-year concession contract for the archipelago's seven airports.





ALL ACTIVE IN THE ENVIRONMENTAL TRANSITION

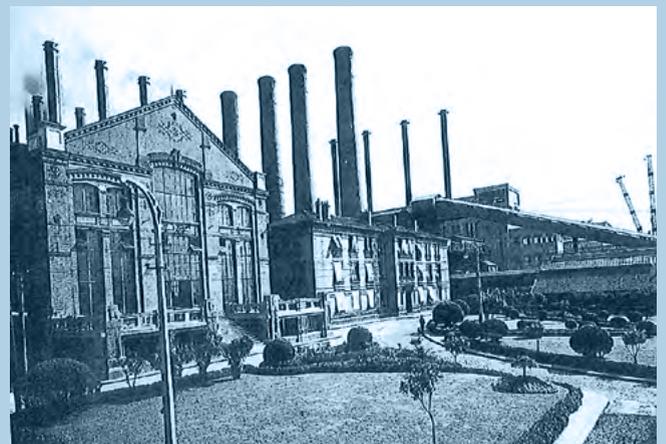
VINCI's third Environment Day on 22 September gave all our employees the opportunity to take part in a wide array of awareness-raising and experience-sharing initiatives around the environmental transition, with particular emphasis on applying the best practices and solutions highlighted at the Environment Awards. These initiatives – collaborative games, workshops, 15-minute environment sessions, talks and demonstrations on our sites, etc. – are designed to encourage continued mobilisation of frontline teams. Also at the event, the Group announced the upcoming implementation of an energy conservation plan that complements its long-term commitment to reducing the environmental footprint of its activities.



Universeine Urban space recycling on a big scale

Universeine will be part of the village housing the athletes competing in Paris in 2024. Then it will become a large mixed-use neighbourhood that shows the way for environmentally-friendly city planning. The project also showcases VINCI Immobilier's strategy for urban space recycling, combined with VINCI Construction's and VINCI Energies' expertise in low-carbon buildings, energy efficiency and the circular economy.

The original Halle Maxwell, built in the early 20th century to house a power station.



Rehabilitation work will preserve its industrial architecture and aura, and turn it into a symbol of the neighbourhood's revival.



The metamorphosis under way in this industrial brownfield skirting the River Seine in Saint-Denis, north of Paris, is a symbol of something much greater. The building, which originally housed a power station that in days gone by supplied electricity to the city's nascent metro, is now an emblem of 20th century industrial heritage, and will soon be part of a radically revamped neighbourhood. It will provide temporary lodgings for athletes in 2024 then become a permanent residential, office and retail complex.

VINCI Immobilier is leading this extensive urban redevelopment project, Universeine. It encompasses two of the five sectors (A and B) of the village being built for SOLIDEO, the French Olympic delivery authority. Two of the other sectors (D and E) are in neighbouring Saint-Ouen-sur-Seine and the third is just across the river on Île-Saint-Denis. Universeine is a perfect example of the property development guidelines that VINCI Immobilier follows today. "The city has been sprawling over natural areas or farmland for a century. That model is no longer sustainable, because sealing soil worsens climate disruptions and biodiversity

loss," says its chairman, Olivier de la Roussière. He continues, "So we decided to be the first French property developer to aim for no net land take in 2030, 20 years ahead of the deadline set by the 2021 Climat et Résilience law." To fulfil its pledge, VINCI Immobilier will unseal as much land as it seals overall and plans to generate more than 50% of its revenue through urban space recycling projects by the end of this decade.

Universeine is this principle in practice on a 6.4-hectare industrial brownfield. "When you seal soil, it stops fulfilling its essential roles – filtering water, feeding trees and crops that capture CO₂, regulating temperature and preserving biodiversity," adds Diego Harari, VINCI Immobilier's director of sustainable development and innovation. "Instead, we now look for buildings that are well past the point of obsolescence, run down or on polluted land, and demolish and rebuild them or refurbish them into new property meeting the highest energy efficiency and carbon emissions standards."

An excellent springboard

This project is being carried out in coordination with SOLIDEO, Saint-Denis city council and the Plaine Commune conurbation, and the buildings are designed to be used in two successive configurations. First, in 2024, they will provide temporary accommodation for some 6,000 athletes and their attendants. Then they will be converted and merge into a sustainable, inclusive mixed-used neighbourhood spanning over 146,000 sq. metres of built areas – 78,600 sq. metres of family and student housing, 63,000 sq. metres of offices and amenities (including a day care centre and a medical centre) and →

After housing some 6,000 athletes and their attendants in 2024, the buildings will be repurposed into a 146,000 sq. metre mixed-use complex. The 200 metre long and 20 metre wide Halle Maxwell will be converted into an office building.





VINCI Energies' central role in reuse

Three VINCI Energies companies – Lefort Francheteau Reals, Phibor Vital and Saga Neo Smart – are working alongside VINCI Construction on the Universeine construction and rehabilitation projects. Most of their work in 2022 revolved around reusing materials. Lefort Francheteau Valorium is looking into adapting the systems planned for the offices for use in the athletes' lodgings. The systems, in this case, will be disassembled then used in ventilation circuits in the offices. Phibor Entreprises has teamed up with

La Ressourcerie du BTP to source the cable trays that will be reused on the project. As different standards apply to residential and office buildings, the electrical cabinets used during the first phase will be removed and sold, principally through Reyuz, a mobile platform designed and developed in-house by VINCI Energies to market second-hand technical supplies. The power supply networks are made with 100% recyclable materials. Lastly, Saga Neo Smart will reuse the fire extinguishers in one of the buildings once they are upgraded and refurbished.



Julie Bosch,
PROJECT DIRECTOR,
VINCI IMMOBILIER

“We are completely on track to meet the goals that the customer, SOLIDEO, set in its specs, which aim extremely high on the environment front and show what the city of the future will look like.”



rehabilitation. This involves unsealing soil, once VINCI Immobilier has remediated it alongside Navarra TS (VINCI Construction), then creating green spaces with fast-growing plants on it. A biodiversity corridor connecting to the Seine's natural areas was one of the factors used to determine the layout of the neighbourhood and the size of the buildings. This corridor is being built over several layers (natural gardens, planted terraces, treetops, gabion-basket walls, etc.). It will not only bring wildlife from the river's ecosystem back into the urban fabric: it will also create “urban oases”, which will improve resilience to global warming by providing cool areas for people living nearby.

Low-carbon construction and circular economy

The two guidelines that VINCI Immobilier and VINCI Construction are following on the office complexes, in other words, are their repurposing and high environmental standards. They will for example repurpose block B1 for the legacy phase, by converting it into a 46,000 sq. metre campus for 2,500 Interior Ministry staff. The block around Halle Maxwell and Pavillon Copernic will include two new buildings, spanning 32,000 sq. metres in total, to house athletes during the games. “The whole challenge for us was to draw up plans that conform to both residential and office building code requirements, so that the conversion goes as smoothly as possible when the time comes,” says Sébastien Carminati, a project director at VINCI Construction. He continues, “For example, we built in the vertical smoke-extraction ducts that are mandatory in office buildings. That way, we can connect all the horizontal ducts that we need in the athletes' flats to the vertical ducts, then dismantle the horizontal ducts without any heavy construction work when it's time to turn the flats into offices.” Regarding the requirements relating to the circular economy, the finishings from the temporary phase will be removed, gathered and reused on other construction projects. These resources will feed into the local social and solidarity economy. Furthermore, VINCI Construction will set aside 180,000 hours of work for people on professional integration paths during the conversion phase (out of the 350,000 hours that VINCI Immobilier has allocated to integration paths for the entire project).



Sébastien Carminati,
PROJECT DIRECTOR,
VINCI CONSTRUCTION

“The whole challenge was to draw up plans that conform to both residential and office building code requirements, so that the conversion goes as smoothly as possible when the time comes.”



The second block (B2) is a building combining ultra-low-carbon concrete, timber and metal, and a compelling example of the ambitious environmental goals that the Group's builders have set and their ability to reach those goals through innovation. “The initial plan was to pour 30 cu. metres of Exegy® ultra-low-carbon concrete as an experiment. But SOLIDEO's innovation and ecology fund gave VINCI Immobilier and us a grant to build all the floors with it – the full 17,870 cu. metres!” adds the project director. “The two Exegy® ultra-low-carbon solutions we are using generate 70 to 90 kg of CO₂ equivalent per cu. metre. Standard concrete generates 250 to 300 kg. We are saving 3,825 tonnes of CO₂ equivalent.” The concrete beams and slabs were made with Exegy® very-low-carbon concrete, as well as timber posts and beams made by Arbonis and fitted by Bateg crews. The wooden facings have wooden and aluminium frames and cladding. This mixed construction method meets high performance standards and earned the E+C- (Energy 2 and Carbon 2) label.

Rehabilitating while preserving architectural hallmarks

For VINCI Immobilier, urban space recycling also involves renovating or rehabilitating existing buildings whenever

→ 5,000 sq. metres of shops and cultural venues. The total includes 21,000 sq. metres completed and handed over in the late 2010s and 125,000 sq. metres under construction. Some of the ground-level space is earmarked for charities and non-profits (a community café, resource centre, neighbourhood media and games library, etc.), to include everyone regardless of social background or disability. This will be during the legacy phase, which starts in 2025.

VINCI Immobilier has divided this development project, which complements the buildings it has already handed over, into four city blocks and five works packages. The first three works packages involve building more than 1,000 residential units and were entrusted to Spie Batignolles, Bouygues Construction and Paris-Ouest Construction. The other two works packages, encompassing three new office buildings and two heritage buildings – Halle Maxwell and Pavillon Copernic – have been entrusted to a consortium. The consortium's lead contractor, Bateg, is handling the new buildings. It has teamed up with Dumez Ile de France on the rehabilitation project and with Arbonis, a specialist in engineered glue-laminated timber. The three companies are VINCI Construction subsidiaries, and are working with Lefort Francheteau Reals, Phibor Vital and Saga Neo Smart, three VINCI Energies subsidiaries.

“One of the big challenges was factoring in the repurposing from the start. We had to file dual planning applications, so we had to design all the buildings in both configurations as soon as we started sketching. We are also completely on track to meet the goals that SOLIDEO set in its specs, which aim extremely high on the environment front and show what the city of the future will look like,” points out Julie Bosch, a project director at VINCI Immobilier. Using timber, low-carbon- and ultra-low-carbon concrete on these projects will cut carbon emissions by 40% compared to using conventional concrete. These projects are also reusing materials. Then, 75% of the materials used during the temporary phase (for example prefabricated bathrooms, partitions and carpets) will be reused or recycled. The project's environmental aims also include land



possible. The property developer asked Dumez Île-de-France (VINCI Construction) to rehabilitate Universeine's heritage buildings – Pavillon Copernic and the landmark 220 metre long and 20 metre wide Halle Maxwell. To convert the latter into an office building, the contractor added a two-level metal frame, after reinforcing the foundations, following extensive engineering work. "We emphasised the industrial feel by keeping the roof frame and the beams that held the old travelling crane, because we wanted to keep a trace of this building's past," says Raphaël Rivasi, a works manager at Dumez Île-de-France. Some of the materials were salvaged from the demolition and reused, including 4,500 sq. metres of tiles that were powdered and mixed with earth to make embankments and road beds. The bulk of the rehabilitation work involved recreating Halle Maxwell's original façade. "From January to October 2022, several dozen partners painstakingly sculpted the stones and bricks, replaced the most damaged ones, and refurbished the metal lintels to restore the 6,000 sq. metre façade's stunning appearance. This type of work on heritage buildings is very much what we do," adds the works manager. The crews are doing something similar on Pavillon Copernic's façades: preserving and restoring them, while adapting them to meet fire-safety and accessibility standards.

Viewers worldwide will eventually be able to see these architectural hallmarks in a neighbourhood showing the way forward for sustainable urban planning.

Cool Ground, an innovative process to lower temperatures in urban heat islands

Emulithe, a VINCI Construction subsidiary that specialises in utilities, worked on two projects near Universeine. Firstly, it remediated the soil for works package 2, in Saint-Ouen-sur-Seine. In partnership with the EJL branch in Livry-Gargan and Flan Terrassement (two VINCI Construction subsidiaries), it removed about 200,000 tonnes of contaminated soil, including 50,000 tonnes containing hydrocarbons, which were sent to Group processing facilities, from 2020 to 2022. Emulithe and Sol'id, another VINCI Construction subsidiary, trucked 93% of the soil to the port of Saint-Denis, where it was loaded onto barges and transported by river in order to lower carbon emissions (exceeding SOLIDEO's requirement of 90%). Emulithe also ventured beyond its original area of expertise, leading the installation of Cool Ground, a system to lower temperatures in

urban heat islands, on rue Ampere, the main road connecting all the programme's sectors. "The process involves building a tank under the road to collect some of the rainwater. Then, when the weather is hot, the system sprays the water through the road's porous surface to humidify and cool the air," explains Nicolas Denys de Bonnaventure, a branch manager at Emulithe. He adds, "Studies show that it can lower the temperature of the air by up to 7 degrees." The system also includes a separate rainwater recovery circuit to water the nearby potted plants, which also help to regulate temperature. Emulithe was selected through a competitive dialogue run by SOLIDEO, along with the five other partner companies working on the project: ESITC Caen (an engineering school), Vertuo (a startup), which will supply the urban plantation units, Alkern, which will supply the road surface made from scallop shells, Seureca (Veolia's consulting engineering division), which will supply the automation and rainwater distribution systems and Agence Parisienne du Climat.

Going low-carbon

VINCI Energies crunches the numbers for its customers

For VINCI Energies, shrinking the carbon footprint of its business activities essentially means reducing its customers' emissions. Its strategy today is focused on enabling them to achieve their own environmental and energy transition. VINCI Energies provides the services and tools to help them accurately measure their impact and, most important, opt for lower-emission solutions.



Pierre-Yves Dehaye,
MANAGING DIRECTOR,
VINCI FACILITIES SUD CENTRE-EST

"It's the way the world is going and the meaning of our business. We have genuine legitimacy in this area, and customers are looking for expertise to optimise their buildings' operation."



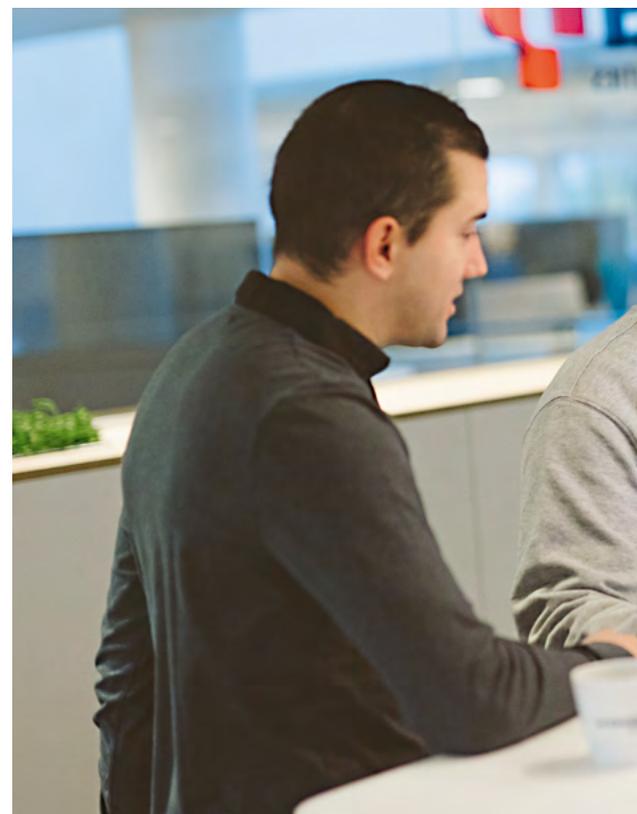
Group's environmental policy set the goal of reducing this footprint by 40% by 2030 (not taking future acquisitions into account). VINCI Energies has made this a priority and is closely monitoring its trajectory.

But the action to take is not as straightforward when it comes to Scope 3 emissions. These are generated indirectly, through the upstream activities of suppliers and subcontractors and the downstream use of goods and services by customers. Since a major part of what VINCI Energies does involves providing its customers with the equipment and installations they need to power their activities, its Scope 3 emissions are 25 times higher than Scopes 1 and 2 – an estimated eight million tonnes of CO₂ in 2019. This has not stopped VINCI Energies from setting ambitious targets here as well. On the contrary, it has pledged a 20% reduction in absolute emissions by 2030, excluding acquisitions, which translates into a nearly 35% reduction in intensity, defined as the quantity of CO₂ emitted for each euro of revenue. "Our Scope 3 approach is very ambitious," says Corinne Lanièce, general secretary of VINCI Energies. "First, because we have set an absolute reduction target, despite expecting strong organic growth. And second, because by choosing to calculate everything, both upstream and

T

he energy sector as a whole generates nearly half of the CO₂ emissions caused by humans across the globe. This fact has to be addressed head-on – especially when your business is called VINCI Energies and is positioned as a driver of the energy transition. The business line has therefore mapped out specific, quantified targets for reducing the carbon footprint of its activities, in line with the commitments made by the Group.

VINCI Energies has evaluated its annual impact for Scopes 1 and 2 – which cover the company's direct emissions as well as those generated by its energy consumption – at around 310,000 tonnes of CO₂. The main sources of these emissions are the fuel used to run its vehicle fleets and worksite machinery and the electricity used to power its buildings. The action plan initiated as part of the





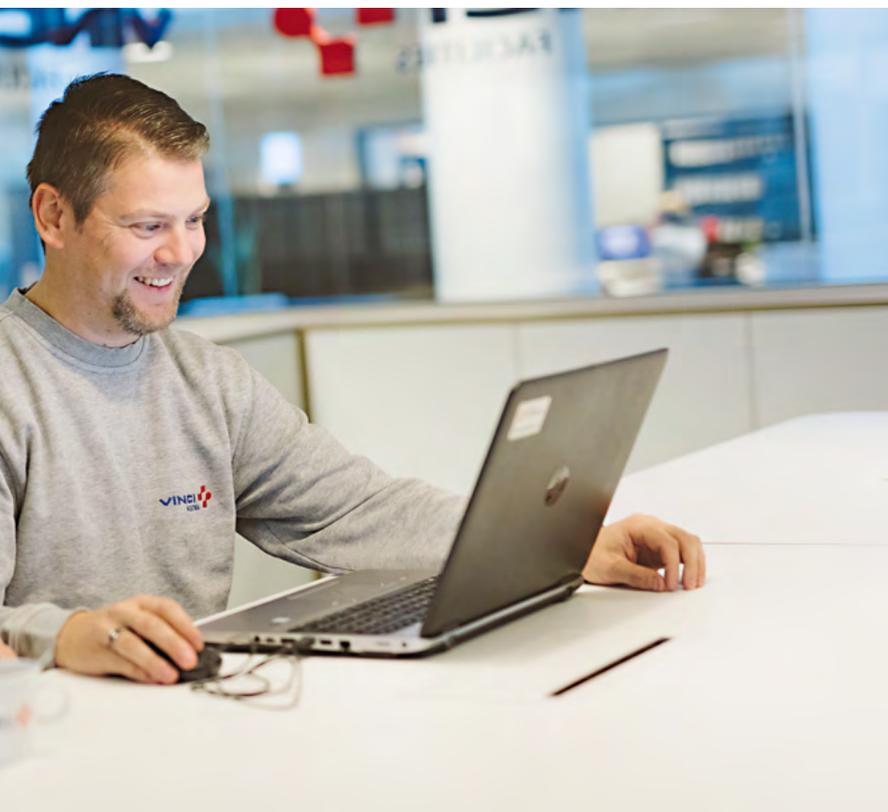
Everyone is pulling together to **radically** reshape our business activities and address this vital environmental challenge.

downstream, we are committing to reducing our indirect footprint through suppliers and customers alike, which means a huge effort on our part to support them."

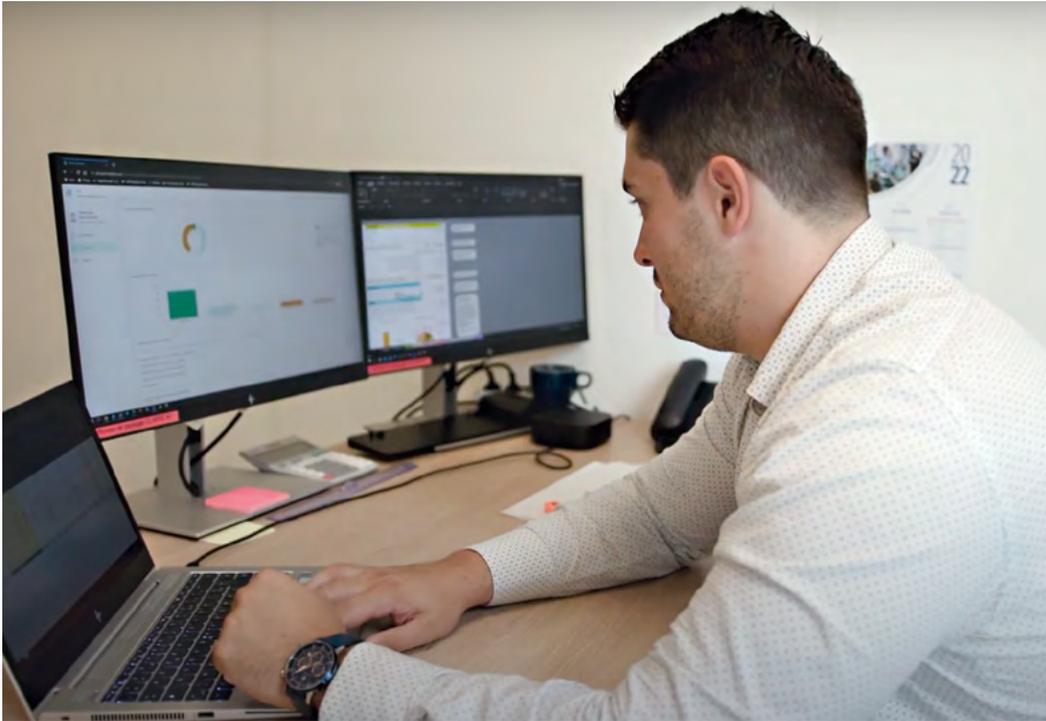
Herein lies a happy paradox: one of VINCI's biggest Scope 3 emissions-generating activities may also be one of the best positioned to help customers transform how they consume energy. As Corinne Lanièce explains, "Energy performance contracts have long been a core part of our business, providing customers with energy-efficient, and therefore lower-carbon, solutions. But today we are going even further with environmental performance contracts: we want to give customers the means to measure the carbon impact of their projects and discuss with them how they can diminish it."

This is only the start. From a sales perspective, price and technical performance are still the main factors considered by customers: more often than not, in deciding between two solutions of comparable technical quality, they will choose the cheaper price tag over the smaller carbon footprint. But environmental, social and regulatory pressures are mounting. And attitudes are changing fast. At VINCI Energies, we have not waited to take action: business unit managers and project managers are increasingly focused on their customers' carbon reduction goals and equipped with the practical tools needed to engage with them on this issue – even before the customer has begun looking for a solution.

Take Omexom (energy infrastructure) in Sweden, for example: as part of an in-house environmental challenge, it launched an application developed internally by the Omexom brand team, CarbonApp, which quickly displays the carbon footprint of the →



VINCI Energies' teams are increasingly focused on their customers' carbon reduction goals and equipped with the practical tools needed to engage with them on this issue, even before they have begun looking for a solution.



→ equipment being presented to the customer. As one of the people behind the project, Kristoffer Ekman, explains, “Our idea was to create a streamlined tool to systematically present two options to customers: a ‘standard’ solution that exactly meets the required specifications, alongside another solution that demonstrates what could be achieved by changing a few parameters to lessen the environmental impact: What if we replaced diesel with biodiesel? Traditional concrete with a low-carbon alternative? Lead-acid batteries with a lithium version? And so on.”

CarbonApp was launched last spring for use with electrical substations and is gradually being expanded. It is now available as an easy-to-use Web application, an improvement over the original spreadsheet format. Kristoffer Ekman has already tested the tool in real-life conditions with the energy company E.ON. “The customer’s feedback was excellent,” he says. “We are probably the first to have ever offered these sorts of calculations, enabling the customer to see us as serious about tackling climate change. Generally speaking, all our major customers are looking for this type of service. It may not yet be the deciding factor in calls for tenders, but it’s already boosting our competitiveness by defining us as innovators determined to act responsibly.”

This proactive approach is also well developed in France, at VINCI Facilities – the VINCI Energies brand dedicated to building management and operation. One of the brand’s business units now packages carbon footprint calculations with every solution it sells. “It’s the way the world is going and the meaning of our business,” says Pierre-Yves Dehaye, Managing Director, VINCI Facilities Sud

Scope 3 assessment: no simple task

To calculate its Scope 3 emissions, VINCI Energies examined all the goods and services it purchases. They make up a total of €7.5 billion per year, in 400 different procurement categories. Each category is assigned an emissions factor that is calculated using either supplier data or standard ratios provided by specialised organisations, such as Ademe, the environment and energy management agency, in France. Evaluating downstream emissions is even more complex, since it involves calculating the CO₂ emitted by our equipment and services over their life cycle, while accounting for wide variations in the energy mix from one country to another. As Corinne Lanièce points out, “these can only be estimates, which we are making more reliable and accurate every year. But already they provide us with enough information to identify areas for improvement.”

Using the P2C application to calculate the environmental impact of a maintenance contract.

Centre-Est. “We have genuine legitimacy in this area, and customers are looking for expertise to optimise their buildings’ operation. We provide them with monitoring tools, not just for equipment but also occupant services, so they can see their carbon emissions data – an essential step towards implementing improvement action plans.” Once again, this service has been made possible by a ground-breaking in-house innovation, an application called P2C (for Contract Carbon Profile). It can calculate the environmental impact of a maintenance contract, covering Scopes 1, 2 and 3, in less than five minutes. Thanks to its range of expertise, VINCI Facilities is particularly well positioned to engage with customers over the long term to improve their environmental impact even in areas other than energy, such as HVAC, water, waste, supply chains and mobility. “I am convinced that this will become our core business,” says Pierre-Yves Dehaye. “For now, our customers are still having trouble deciding between carbon impact and financial impact, but the situation is evolving. We can point them in the right direction, especially by showing how low-carbon solutions are often also the most economical once you consider the building’s whole life cycle. They need to realise that CO₂ emissions have a cost, that this cost will continue to rise in the coming years, and that soon every company will be accounting for carbon in their financial statements.”

In this context, VINCI Facilities is enhancing its P2C tool to include carbon management in its business reviews, in the same way as technical and financial indicators. Starting in 2023, Pierre-Yves Dehaye will also be asking all business unit managers and project managers at VINCI Facilities Sud Centre-Est to submit a “carbon budget” for each of their projects. At the same time, the brand is building up its expertise with a new in-house network of some 30 specialists, dubbed “carbonologists”, who meet regularly to share experiences, review customer feedback and explore obstacles and opportunities. And there are plenty of the latter: for example, a regulatory carbon assessment recently performed for a Thalès site in Aix-en-Provence and the first low-carbon performance contract, starting in 2022 with a company in the Nexity real estate group.

These initiatives show just how much importance is given to Scope 3 emissions across all of VINCI Energies’ business activities, at the crossroads of environmental and business challenges. “It’s a conversation that we need to start with each of our customers,” says Corinne Lanièce. “And we can only do this because our teams, especially our project managers, genuinely want to move forward on these issues.”

Waste Marketplace

The success story of a Leonard intrapreneur

The Waste Marketplace team around Jérôme de Tomasi.



The Waste Marketplace startup, created by Jérôme de Tomasi, is one of the stars in the Leonard constellation. In just a few years, it has won recognition as a benchmark player in the French market for construction and industrial site waste management, setting new standards for simplicity, performance and environmental excellence. After having expanded its customer base to include companies outside the Group, it is now looking at the international market.

Since 2017, VINCI has been stimulating and supporting the creativity of its employees through the Leonard Intrapreneurs programme, which gives innovative projects space to mature, identify new challenges and measure themselves against the reality of the markets before diving in at the deep end. The Waste Marketplace startup is one of these projects. Its history is inevitably bound up with that of its founder, Jérôme de Tomasi. The initial idea stemmed from his realisation, as former administrative and financial director at Suez, of the very complex issues – both financial and operational – involved in managing worksite waste.

Back then, he began thinking about a solution that would bring together logistics experts and waste specialists, but his reflection remained at the embryonic stage.

In 2014, he joined VINCI and started fleshing out his idea. The light-bulb moment came three years later with launch of the Group's intrapreneurship programme. Jérôme de Tomasi seized the opportunity, prepared his application and presented his project to the first Intrapreneurs selection committee in the summer of 2017. With the project chosen to enter a four-month, part-time incubation period, he embarked on two acceleration phases, drafted a formal Proof of Concept (PoC), and noted a definite interest for such a solution. During this intense period involving exchanges, meetings →

→ and iterations in the Leonard ecosystem, Waste Marketplace fine-tuned its model, opting for a segregation of the service by waste flows, to be managed by specialists for each material category. At the end of the acceleration phase, Jérôme de Tomasi was able to leave his original job and devote all his time to the startup: “The adventure is as much demanding and stimulating as it is destabilising, in the positive sense of the word! It gives you an adrenaline rush that I wasn’t able to find anywhere else,” he says today. The result: at end 2018, Waste Marketplace started working with VINCI Construction worksites in France.

The digital solution offer users a very attractive promise: digitalise, simplify, centralise and improve the management of construction and industrial site waste. Whereas this issue, as perceived on the sites themselves, is more often than not synonymous with legal, economic and organisational complexity or even cumbersome administrative procedures, Waste Marketplace covers the whole process, end to end. Using a specific algorithm, “the solution searches for the best local service provider for each waste flow, based on price and waste recovery rates,” explains Jérôme de Tomasi. “The customer can request an online estimate before receiving a customised offer, then set up



Jérôme de Tomasi,

CEO OF WASTE MARKETPLACE

“We are present in all the Group’s business sectors and although VINCI is still our main customer the share of outside players is gradually increasing - it accounts for around one-third of our activity today.”



positioning of the skips for intervention within 24 to 48 hours. It can also retrieve data on the traceability of its waste and display recovery rate dashboards in just a few clicks. The added value accrues to all users: for operational managers and buyers in terms of cost and time, for HSE (hygiene, safety and environment) managers thanks to data consolidation and reliability, and, lastly, for stakeholders in terms of reporting and transparency. The system facilitates the day-to-day work of the teams, raises everyone’s level of environmental awareness and simplifies the management process, particularly on multi-site or multi-worksites projects. The end result is higher waste recovery performance, which remains our priority goal.” In effect, Waste Marketplace posts a waste recovery rate of over 85%, all flows combined, whereas the average for the construction sector fluctuates between 50 and 60%, according to estimates.



The Waste Marketplace solution implemented on the Tour To-Lyon project in Lyon, built by VINCI Construction for VINCI Immobilier.

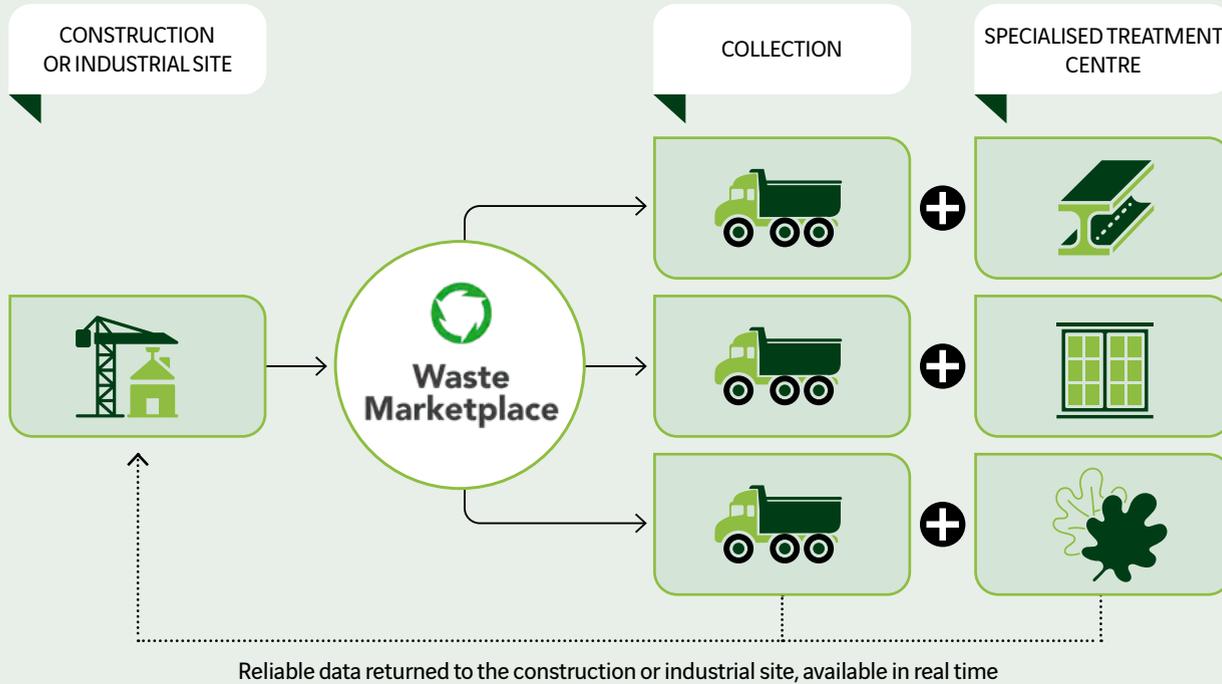
VINCI. “We are present in all the Group’s business sectors and although VINCI is still our main customer the share of outside players is gradually increasing - it accounts for around one-third of our activity today,” says Jérôme de Tomasi.

Growth potential is real: in 2021 the startup’s revenue increased by a whopping 263% and future growth prospects are enormous. Indeed, the French industrial waste market alone is estimated at 1.5 billion euros, around 20 times more for Europe. As mentioned above, Waste Marketplace is now

In less than four years, Waste Marketplace has won recognition as a new benchmark in its sector and broadened its field of action beyond

eying the international market as its new playing field. The startup recently completed a €2 million fundraising round with the insurer SMABTP to support commercial development. Shortly afterwards, it was selected to join the Auvergne-Rhône-Alpes region Big Booster programme and will benefit from six months’ support to speed up its internationalisation. These recent successes can only boost the ambitions of the company and its founder: “Our goal is to sell our solution everywhere and to everyone!”

Waste Marketplace digitalises waste management



In figures

500 service provider partners across France

Revenue of €9 million in 2021

Average waste recovery rate above 85%

More than 100,000 tonnes of waste managed since creation of the application

Some 40 employees (workforce doubled between 2020 and 2022)

They use Waste Marketplace

“A detailed and expert understanding of our needs and flows”



“Waste management can be very time-consuming for our companies and can generate potential regulatory risks. For this reason and because we are keen to make progress in recovering and recycling

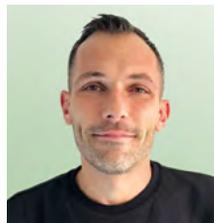
our waste, the decision to use Waste Marketplace was quickly and unanimously adopted by our three company heads. We have moved from a ‘manual’ system to an expert solution designed by someone ‘in the know.’

We also use Waste Marketplace to enrich our commercial offering. One of VINCI Facilities’ activities is helping customers manage their assets, with a focus on all the environmental and decarbonisation challenges: the solution fully meets these expectations.”

Matthieu Schmitt,

DIRECTOR EAST REGION, VINCI FACILITIES FRANCE (VINCI ENERGIES)

“It facilitates and accelerates the work of all its users”



“Altrad Coffrage & Étalement, which specialises in rental and sale of formwork products and equipment serving the construction & civil engineering industry, was looking for a better way to recover and recycle the

metal waste left onsite after completion of the project. With the Waste Marketplace solution, we gained key support for meeting our environmental challenges and improving operational management on our worksites. It facilitates and accelerates the work of all its users: operations managers, who benefit from a single point of entry and contact for handling their requests; management controllers, who have only one supplier to manage, and HQSE managers, who can retrieve up-to-date, consolidated data at any time for optimal environmental analysis.”

Mathieu Henry,

MANAGEMENT CONTROLLER, ALTRAD COFFRAGE & ÉTAIEMENT

“An intuitive solutions for A to Z waste management”



“Outsourcing the waste management process to Waste Marketplace delivers a significant gain for our worksites in terms of time and simplification. The solution covers all

requests from end to end,

gives us access to the best offers at the best price and recovery rates, all through an intuitive web-based or mobile platform. As of today, the average waste recovery rate on Citinéo worksites is up at 93%. Waste Marketplace also stands out for its contribution on the regulatory level. As the skips are removed and the containers adapted to the specific waste flow, the digital platform optimises sorting, improves recovery rates and guarantees traceability. The process is fast and automatic. Works supervisors check compliance and can then focus on production!”

Kevin Celle,

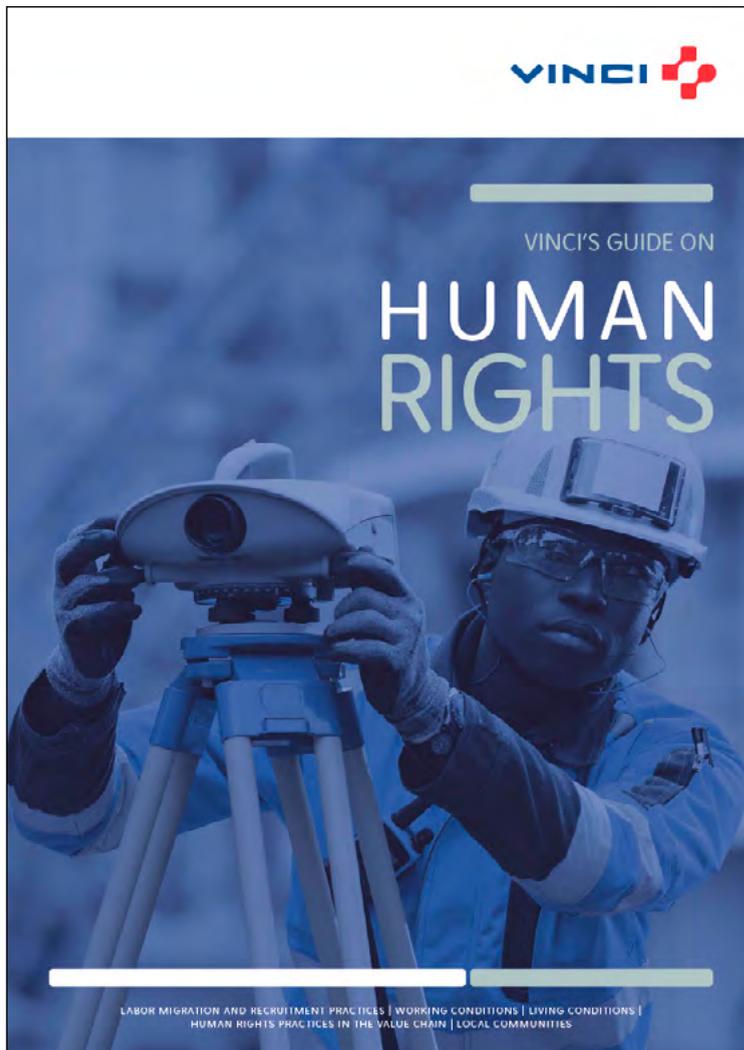
QUALITY & ENVIRONMENT MANAGER, CITINÉA (VINCI CONSTRUCTION, BUILDING FRANCE DIVISION, CENTRE-EAST DELEGATION)

A practical guide to respecting human rights

The Managing Human Rights platform, an operational extension of the VINCI Guide on Human Rights, enables each entity to assess its performance on this issue, identify points to monitor and build its action plan. How do the teams tackle this challenge, which is increasingly vital to the success of their projects? A few insights from three Group business lines.

D

oes my company check that workers do not have to pay any recruitment fees? That temporary workers and employees of subcontractors are not forced to work excessively long hours? Are there mechanisms in place to inform and consult local people and communities that may be impacted by our projects? These are just some of the 200 precise and concrete questions Group entities assessing their performance on the Managing Human Rights platform are asked to answer, with four possible responses from “no such practice” to “best practices”. At the end of the exercise – preferably collective – the entity has a comprehensive assessment of its human rights practices and can use it to build an appropriate action plan. Today available in its final version after a phase of experimentation in the field, the platform is a new brick of VINCI’s policy to respect human rights – the operational extension of the VINCI Guide on Human Rights published in 2017 and available in 24 languages, whose guiding principles apply to all the Group’s subsidiaries across the world. It is structured around the same five priorities: labour migration and recruitment practices; working conditions; living conditions; practices relating to human rights in the value chain; local communities. As Sarah Tesei, director of social responsibility in VINCI’s human resources department, explains, “We have already used the architecture and the first functionalities of this tool to carry out a whole series of audits on these issues in the Group’s subsidiaries, covering more than 70% of our workforce in countries identified as priority since 2018. Generally speaking, and not only in so-called ‘high-risk’ countries, human rights issues are becoming more important. It is now essential to be able to measure and track our performance in this field, with the aim of continuous improvement. The role of the platform is, quite precisely, to help each entity adopt this approach, which the holding company can also facilitate by assisting entities that require support to conduct their assessment and develop their action plan.”



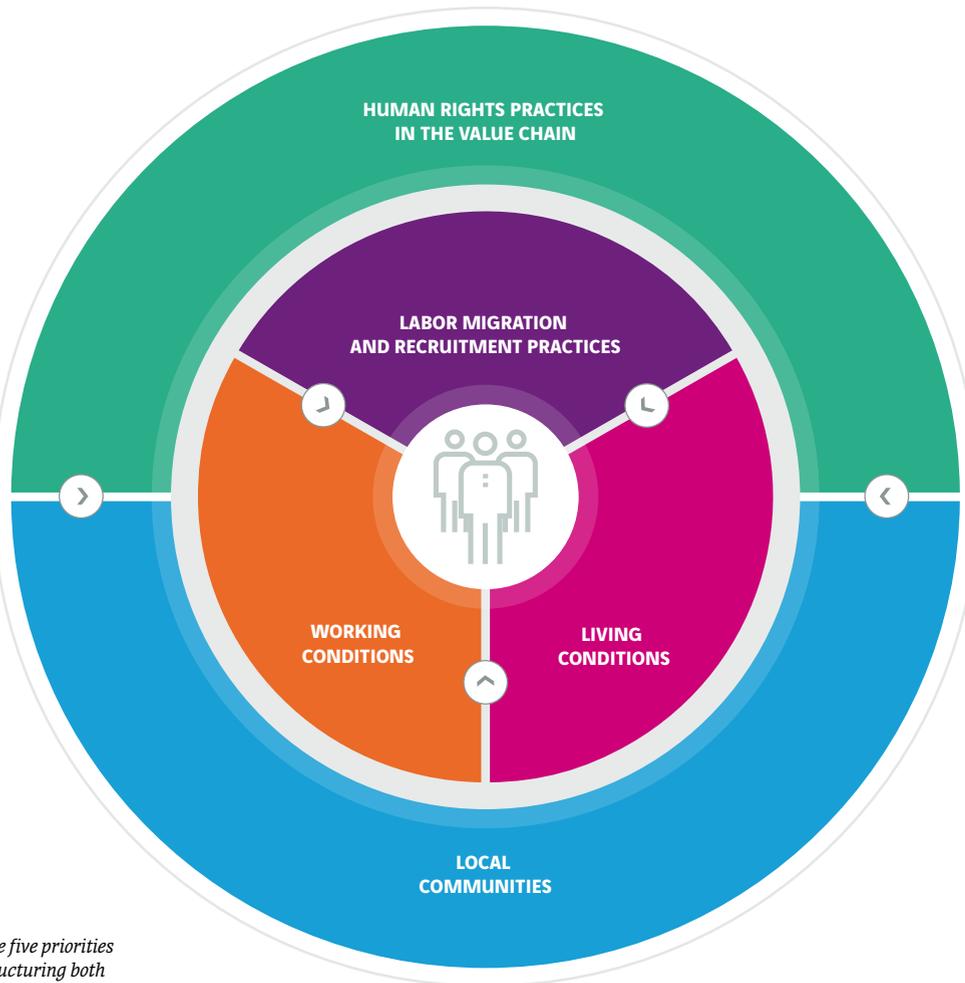
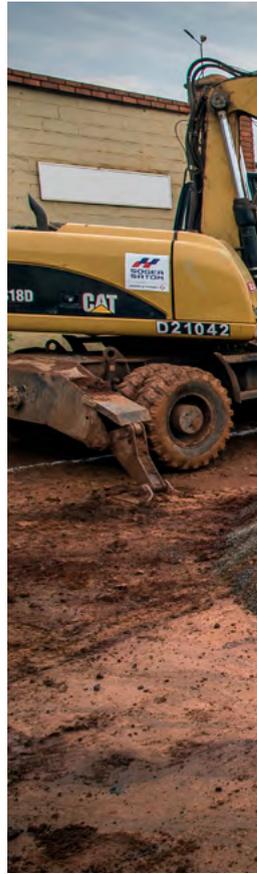
The VINCI Guide on Human Rights, available in 24 languages, sets out the guidelines applicable to all the Group's business lines and locations across the world.



Approaches based on the same principles are being deployed in all the Group's business lines. This is the case, for instance, at VINCI Energies International & Systems, which covers some 40 countries, primarily outside the European Union. Patrick Plein, HR director for the division, explains, "After being trained by Sarah Tesei's team to coordinate the approach ourselves, we launched a series of assessments by country, first in pilot mode in Morocco and Cameroon, then this year in Abu Dhabi, Bahrain, Benin and Brazil. We travelled to these countries to help the local teams make their initial diagnostic. It wasn't just about completing a questionnaire: the idea was to build awareness and bring together around the table all the people who might be concerned by human

It is now essential to be able to measure and track our performance in this field, with the aim of continuous improvement.

rights issues, from country heads to local operations managers. On completion of the diagnostic, we established the action plan with management, on the basis of the strengths and weaknesses observed, and we're planning to meet up again 18 months later to track implementation. We try to give real substance to the approach, to professionalise it, by reporting on initiatives that deserve to be shared on the scale of our division." What themes emerge from these diagnostics? "The challenges are very different from one country to the other," says Patrick Plein. "In Bahrain, they mostly revolve around recruitment processes and living conditions: out of 450 employees, we have 350 migrant workers, and we rented two buildings to be able to accommodate →



The five priorities structuring both the VINCI Guide on Human Rights and the Managing Human Rights platform.

“When we took over the concession for the Lima expressways, we focused heavily on the commitments of the VINCI Manifesto and especially on ethics,” says Laurent Cavois, director of VINCI Highways for Latin America. “Based on the VINCI Guide on Human Rights, and the assessment questionnaire that anticipated the current platform, we carried out an audit that led us to identify the informal economy - very widespread in the country - as the main risk, particularly in connection with our subcontracting chain. We eliminated a number of subcontractors that were not correctly declaring their employees; we introduced ad hoc clauses in all our contracts and led investigations on the ground to ensure that the people working on our worksites and our operations had a proper work contract and social security cover. All the Group’s recommendations were integrated in our processes. We delivered ethics and human rights training to our 600 Expressa employees but also to the people working for our subcontractors. For these issues, and also on the question of safety, our employees see clearly that we take care of them, that we’re concerned with their wellbeing. It’s a big change for them, and it’s a definite strength for attracting, retaining and motivating people.”

At VINCI Construction, the major projects division, which is active in some 60 countries across the world, has a particular interest in respecting human rights. The issue is addressed from the upstream phase of projects and integrated in the bid management process. “For both our customers and international backers, it has become a key criterion for launching a project - and our decision to set requirements that often go beyond the regulatory framework is a differentiating factor for us,” explains Patrick Kadri, chief executive officer of VINCI Construction in charge of major projects. While the division’s experience on the ground was initially used to draft the guidelines that apply to all VINCI’s business lines, the major projects teams now use the “Managing Human Rights” tool developed from these same principles. Hence, on top of the commitments made in the bid and project launch phase, 21 audits have already been carried out in the execution phase in 11 different countries, allowing each project to track the

→ them under good conditions. In Brazil, the worksites are often very isolated and we have to pay great attention to working and living conditions. We mostly opt for accommodation in the surrounding villages, which workers prefer to worksite base camps. In Benin, where we are carrying out big infrastructure projects, the main issue is the impact of our activities on local communities - we hire people to check the layout of the project and take care to preserve the environment. Our Benin customers, who see us acting on the ground, acknowledge and appreciate our initiatives, which they don’t see elsewhere.”

At VINCI Concessions, the example of Lima Expressa in Peru shows just how useful this assessment approach is when a Group entity moves into a new country and a new context.

Managing human rights: assess your practices and build an action plan



<https://managing-human-rights.vinci.net/en/>



A worksite in Africa. Our focus on local communities is a differentiating factor for Group companies, which act for the long term.

progress of its action plan, while also feeding a series of indicators put in place across the division and tracked on a monthly basis. On the Sambangalou hydraulic dam project in Senegal, for instance, where works have already commenced on site, the platform will make it possible to track respect of the commitments made by VINCI Construction. They include entrusting at least 30% of working hours to people recruited and trained locally – they will number around 1,000 at peak activity; building worksite base camps that meet high standards of comfort to accommodate the workers (a minimum of 24 sq metres for each four-person unit, no bunk beds); and, on completion of the works, donating worksite buildings to local schools after adapting them to suit their new purpose, and handing over the drinking water treatment plant installed for the project to the local population. “Our approach, like the structures themselves, is sustainable,” adds Patrick Kadri. “We seek at all times to behave in an exemplary manner, whether this means with respect to our workers, the environment or the services we provide to local communities. We are acting for the long term, in the interest of the local communities that welcome us, and this is what our customers and partners expect from a group like VINCI!”

VINCI denies the accusations made about working conditions on its worksites in Qatar.

On 9 November 2022, VINCI Construction Grands Projets was summoned to answer charges relating to a complaint dating back to 2015 concerning its projects in Qatar conducted by the QDVC company, in which VINCI Construction Grands Projets has a 49% stake. A first complaint filed in 2015 was dismissed in 2018.

Since 2015, VINCI has vigorously denied the allegations made against it concerning these projects. Contrary to these allegations, none of the projects awarded to QDVC has any connection to the 2022 Football World Cup in Qatar. These projects were entrusted to QDVC before the competition was awarded to Qatar and mainly related to transport infrastructure.

Since 2015 in France, the Group has cooperated with the judicial authorities by providing the most detailed information possible on its activities in Qatar. Throughout the intervening period, however, it has had no access either to the complaint or to the investigation file. In that respect, VINCI considers it extremely regrettable that despite the proceedings having commenced seven years ago, its subsidiary should face charges just before the start of the Football World Cup in Qatar, a highly charged period of media attention that could be unfavourable to a dispassionate consideration of the facts. VINCI will continue to cooperate with the courts, with the aim of showing that the allegations made against the Group are not justified.

VINCI reiterates its long-standing commitment not only to respect human rights but also to seek to improve the living and working conditions of all workers at its construction sites, across the world. The Group has demonstrated on many occasions and through concrete

actions to trade unions, associations, academics, journalists and investors, including on the ground in Doha, that respect for human rights and health and safety at work have been a priority for its teams since QDVC was formed in 2007. QDVC’s statistics in terms of safety are at least as good as those for the same activities in Europe, including the company’s subcontractors. Conscious of the complexity of the issues associated with Qatar, VINCI works in close collaboration with independent international organisations to prevent the risks of human rights abuses, and has been proactive in putting effective mechanisms in place to prevent breaches of workers’ rights and to promote and improve migrant workers’ living and working conditions. Details of these concrete actions can be found on the Group’s website.

Since it was formed, QDVC has recruited more than 11,000 employees, and, including joint-contractor and subcontractor partners, the company’s projects have involved more than 240,000 employees. In a comprehensive study by New York University in 2017, QDVC’s ethical recruitment practices were recognised as representing “the most responsible practice currently existing in the industry in Qatar.” These efforts have continued in the context of a partnership with the local office of the International Labour Organisation (ILO) to develop a migration corridor between Qatar and Bangladesh, with no recruitment fees for workers.

At the same time, QDVC has developed workers’ representation mechanisms and was the first Qatari company to organise free elections of migrant workers’ representatives.

Guest Laurent Morel

In connection with the big “urban recycling” operations such as Universeine, the cover piece of this issue, what does “zero sealing of soils” imply for construction companies? The question refers back to the first rule of low-carbon construction – sparing use of both energy and materials – and the need to rely more on the existing built heritage.



“**T**he goal of “zero sealing of soils” by 2050, set by the Climat et Resilience law passed in France in 2021, responds to the environmental concerns associated with the living world, farmland and the issue of water – but not only. It also reflects the crucial need to reduce the carbon footprint of buildings, which means opting for existing built heritage over urban sprawl. We are moving towards a paradigm in which we will have to rebuild – i.e. rehabilitate – much more than build.

We should note that buildings account for approximately one third of greenhouse gas emissions, 80% from the energy consumed over a building’s life and 20% from the materials and construction processes used. However, unlike other sectors such as agriculture, we already know how to reduce these emissions: we know how to reduce the energy consumption of buildings to almost zero, and we know how to design low-carbon buildings. To be sure, if we want to achieve the goal of zero-emission buildings in 2050, as provided for by climate strategies in France and Europe, we are setting the bar very high. What’s more, the challenge is both national and local, since the decision to

Laurent Morel is an associate of Carbone 4, a consultancy on energy and climate challenges. He is also a director of The Shift Project, a think-tank that advocates the shift to a post-carbon economy, and co-author of Le Plan de transformation de l'économie française (plan to transform the French economy) which proposes pragmatic solutions to decarbonise the economy by promoting resilience and employment. Laurent Morel is also chair of the IFPEB, the French institute for building performance.

proceed with building projects is made by elected officials and citizens, which encourages collective awareness of the need to build differently.

However, I believe this is an opportunity for the sector, especially for the French industry and building companies, which are among the world leaders. Thanks to its considerable engineering capacity and know-how, the sector has the resources it needs to bring about this revolution. Indeed, low-carbon construction gives pride of place to the engineer, since it is no longer enough to do what we’ve always done. We need to reflect and optimise – and optimising under constraint is exactly what engineers are good at. What the building industry achieved by maximizing the performance of concrete and steel throughout the 20th century, it will now achieve in a different paradigm, one that is radically different but requires no less intelligence and commitment to

excellence. So, we will need to work on less carbon-intensive materials, construction methods and designing buildings with an eye to their future transformation. Even more than today, we will have to increase our capacity for reuse, and even design new buildings as a function of existing materials – as we did in the past with stone and structural beams. In short, the less material we consume, the more grey matter we need and the more added value we create, and this is also true when it comes to efficient use of soils.

With the first constraint being the quantity of energy and materials consumed, we will have to carry out analyses site by site, district by district and city by city, and decide whether to rehabilitate existing buildings to improve their performance, or build new ones that will deliver ultra-high performance from the start. Here too, the engineer’s calculations will be decisive. More generally, between the mayor who makes the city-planning decisions, the architect, the builder, the investor, the user and the citizen, we will have to make collective decisions on questions we didn’t ask ourselves before. What this means is encouraging global reflection – and this is a very good thing – on how to manage and develop our built heritage as a function of the challenges we are all facing today.”