

SEPTEMBER 2022

# FORGING A SUSTAINABLE WORLD







### ACTING FOR THE CLIMATE

VINCI operates in sectors that contribute significantly to climate change, as transport and construction account for 48% of greenhouse gas emissions each year. Moreover, these sectors are acutely exposed to the risks arising from climate change. That is why the Group is taking action to limit the future consequences of climate change by setting an ambitious target to cut its direct and indirect emissions and taking action to achieve it throughout its value chain.



### OPTIMISING RESOURCES THANKS TO THE CIRCULAR ECONOMY

Given the growing scarcity of natural resources, VINCI intends to limit its impact by moving towards a circular economy. This includes improving our design and production processes, reducing the volume of virgin raw materials extracted, implementing efficient techniques, adopting effective behaviour patterns, as well as reusing and recycling.



### PRESERVING NATURAL ENVIRONMENTS

As natural environments are affected by the projects in which we are involved, we ensure our design, construction and operations processes focus heavily on protecting them. Throughout the project life cycle, the Group's entities strive to have as little impact as possible on natural environments, as well as to develop solutions to conserve fresh water resources and restore ecological balance.

#### Before you start reading...

This document presents VINCI Group's environmental ambition for 2030 and explains how we plan to put it into practice. It will give you an understanding of what we are doing every day to improve our environmental footprint, whether you want just the headlines or all the details.

#### Only have a few minutes?

Go straight to page 38 for a brief overview of VINCI's environmental ambitions and actions.



#### Have a bit more time?

Go to pages 9-10, 23-24 and 31-32, and read about how VINCI is reducing the impact of its activities on the planet.



#### Want to know more?

Read the whole document! Learn about our objectives, commitments, actions and achievements and everything we are doing for the environment.

IN A NUT-SHELL P. 38

# THE ENVIRONMENT, A STRATEGIC PRIORITY



Responding to the climate emergency, VINCI is acting faster to reduce its impact, transform its businesses and create innovative solutions. The Group aims to play an active role in the ecological transition of living environments, infrastructure and mobility systems.



This energy runs through every level in the Group, bringing on board employees, clients, users and suppliers. VINCI's integrated design-build-operate approach helps reduce environmental impact at each stage in a project's life cycle.

Conscious of the responsibilities it must live up to when carrying out its operations in construction and energy, as well as its capacity to make a positive contribution to this transition, VINCI has set itself a new environmental ambition for 2030, focused on three main areas:

- Acting for the climate
- Optimising resources thanks to the circular economy
- Preserving natural environments

To achieve this ambition, VINCI mobilises its teams and innovation potential to rapidly transform its businesses and create environmental value – both in the projects on which it works for its clients and the services it provides to users and partners of its infrastructure.







### LIMITING THE FUTURE CONSEQUENCES OF CLIMATE CHANGE

OUR AMBITION FOR 2050: NET ZERO GREENHOUSE GAS EMISSIONS VINCI operates in sectors that contribute significantly to climate change, as transport and construction account for 48% of greenhouse gas emissions each year. Moreover, these sectors are acutely exposed to the risks arising from climate change. That is why the Group has set an ambitious target to cut its direct and indirect emissions and is taking action to achieve it throughout its value chain.

This means optimising our energy consumption, switching to renewable sources

on a massive scale, thinking again about the way we design projects, and thereby making our buildings and infrastructure more resilient, clean and energy efficient. It also means inventing new services and solutions that transform mobility, housing and lifestyles, so that our customers can shrink their carbon footprints too.

In this way, VINCI plays its part in the collective effort to achieve carbon neutrality, which is vital in limiting the rise in global temperatures.

### A STRATEGY OF CONTINUOUS IMPROVEMENT





VINCI mobilises its teams and innovation potential to reduce the impact of its own activities as well as the carbon footprint and climate exposure of the projects it undertakes and manages for clients and local authorities. VINCI is reassessing all its production and operating processes and equipment. The action plans currently being rolled out at Group level and within each business line, together with indicators to measure progress and unite employees, stakeholders and the users of buildings and infrastructure managed by VINCI in reducing both direct and indirect emissions simultaneously.

In addition, it has set up a working group within Leonard, the Group's innovation and foresight platform, bringing together experts in all its fields to progressively factor climate resilience into its proposals, projects, structures and solutions.

# OUR COMMITMENTS

According to the Science Based Targets initiative (SBTi), the commitments made by the Group put it on a trajectory to maintain temperature rises "well below 2°C", in accordance with the Paris Climate Agreement, which intends to limit global warming to less than 2°C by the end of the century.

#### **DIRECT EMISSIONS**

The Group aims to reduce its direct emissions (Scopes 1 and 2) by 40% by 2030 (compared with 2018). For concessions, the target is a 50% reduction over the same period.



\* Compared with 2018 levels

#### DIRECT GREENHOUSE GAS EMISSIONS BY SOURCE

estimated at a total of 2.3m tCO2 eq. in 2021



#### ACTIONS TAKEN



#### **Industrial activities**

• Optimising energy efficiency and replacing high greenhouse gas emitting energy sources with natural or renewable gas.



### Worksite machinery and heavy vehicles

 Replacing the fleet of worksite machinery, company cars, utility vehicles and heavy goods vehicles with more energy-efficient models, including electric, hybrid, hydrogen- or biogas-powered utility vehicles, and electric cars with lower greenhouse gas emissions.

- Encouraging employees to reduce their own consumption, with carsharing platforms, training in eco-driving and incentives to switch to active travel.
- Teaming up with worksite machinery manufacturers and leasing companies to test innovative low-carbon systems in real-life conditions.

#### **Buildings and worksite facilities**

- Auditing energy efficiency of buildings and stepping up thermal renovation, temperature regulation, and eco-design.
- Using more worksite facilities meeting high energy efficiency standards.

### Renewable energy

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 Increasing the use of renewable energies (25% of electricity consumed in 2021), especially by installing photovoltaic power plants to generate power for use on site.

#### **INDIRECT EMISSIONS**

## REDUCE INDIRECT EMISSIONS BY 200/0 BY 2030\*

\* Compared with 2019 levels

#### **SCOPE 3 EMISSIONS**

estimated at approximately 41m tCO2 eq. in 2021



- PURCHASED MATERIALS
- OTHER PURCHASES (OF WHICH TRANSPORT)
- SUBCONTRACTING, WORKS CONTRACTS
- OTHER UPSTREAM IMPACTS
- CONCESSIONS TRAFFIC
- ENERGY FACILITIES
- OTHER DOWNSTREAM IMPACTS

#### **CLIMATE RESILIENT PROJECTS AND STRUCTURES**

Global warming and especially extreme climate events represent a physical threat to VINCI's structures and projects.

Climate resilience forms an integral part of our project risk assessment process and ensures the regions in which we operate are better equipped to withstand climate change.

#### **ACTIONS TAKEN**

#### Supply chain

• Embarking on an improvement drive with strategic suppliers and subcontractors.

Gradually mainstreaming low-carbon concretes on all VINCI Construction and VINCI Autoroutes worksites.

2030 target for VINCI Construction: 90% low-carbon concrete

#### **Customer solutions**

- Applying environmental solutions that help our customers reduce their carbon footprint: sustainable construction, energy efficiency, sustainable mobility.
- Developing products, services and expertise in renewable energies to contribute fully to the energy transition and improve the energy mix of the future.
- Encouraging users to switch to low-carbon options on motorways (expanding electric vehicle charging capacity, carsharing facilities, multimodal hubs and express bus services) and in airports (adjusting airport tax charges based on aircraft carbon emissions and contributing to developing sustainable biofuel and hydrogen systems).



#### Eco-design

- Developing tools to quantify the carbon impact of projects during the bidding phase in order to propose low-carbon alternatives.
- Implementing low-carbon strategies in engineering (e.g. VINCI Construction's Environment in Design approach).
- Deploying an approach to systematically use low-carbon materials when project owner, for example by halving average carbon emissions on each VINCI Autoroutes projects by 2030.

MAKING OUR STRUCTURES AND OPERATIONS MORE RESILIENT TO CLIMATE CHANGE

### ACTIONS AND ACHIEVEMENTS



#### Low-carbon motorways: tangible measures to reduce CO<sub>2</sub> emissions

In France, motorway travel accounts for 95% of transport-related CO<sub>2</sub> emissions. VINCI Autoroutes' low-carbon motorway project aims to help cut these emissions by working with regional partners to develop infrastructure, equipment and services that encourage the use of cleaner vehicles (electric, hydrogen and biogas vehicle charging stations, etc.), shared solutions to motivate people to shift away from driving alone (carsharing car parks, express bus services with reserved lanes, and more) and interconnected transport services (multimodal car parks).

In 2022, five low-carbon motorway conventions had already been signed in France with Région Sud, Tours Métropole, Auvergne-Rhône-Alpes, Communauté Pays Basque & Syndicat des mobilités and Nouvelle-Aquitaine. Moreover, nearly half the VINCI Autoroutes fleet of light intervention vehicles were converted to electric in 2022. By 2030, 85% of the fleet will be electric, while the remaining 15% will run on rechargeable hybrid or biofuel.

#### INCREASING THE NUMBER OF ELECTRIC CHARGING POINTS

To help accelerate the shift to eco-mobility and reduce greenhouse gas emissions from road travel, VINCI Autoroutes is leading the rollout of e-vehicle charging infrastructure on motorways. With over one hundred service areas equipped with charging stations in 2022 (i.e. more than 60% of service areas), the VINCI Autoroutes network is the most widely equipped in France. All service areas across the network will be fitted with electric charging stations by 2023.

As well as fitting its network with e-charging stations, VINCI Autoroutes is developing connected services that give travellers "seamless" access to charging units. Its Ulys app allows over 5.2 million subscribers to geolocate more than 62,000 electric vehicle charging points all over France and will offer remote payment so they can recharge at any type of charging unit.

#### **ENCOURAGING CARSHARING**

VINCI Autoroutes has a special subscription for motorway users - the Ulys carsharing option in partnership with BlaBlaCar - as well as dedicated parking facilities at motorway entrances and exits on its network (43 car parks in service providing 3,577 spaces in 2022). The network capacity will double over the coming years as a result of the French government's Motorway Investment Plan, under which VINCI Autoroutes will invest €16 million to create around 40 additional car parks. Cutting-edge infrastructure, like the Longvilliers multimodal car park, located 45 km south-west of Paris, allow users to combine carsharing services with other mobility solutions such as the motorway express bus service. Residents in the regions through which the network passes thereby have access to a full range of low carbon travel solutions.

5 LOW-CARBON MOTORWAY CONVENTIONS SIGNED IN FRANCE WITH LCOAL AUTHORITIES AND ORGANISATIONS.

43 CARSHARE CAR PARKS IN SERVICE PROVIDING 3577

**3,5**// SPACES IN 2022.

OF SERVICE AREAS WILL BE FITTED WITH ELECTRIC CHARGING STATIONS BY 2023.



### AirPact: solutions to decarbonise air travel

VINCI Airports, the first airport operator to take action to protect the environment, rolled out AirPact in 2015. The environmental policy is designed to set an example, reducing its own  $CO_2$  emissions and help cut air travel emissions, which accounted for 2.8% of global emissions in 2019. AirPact consists of a series of tangible solutions that will immediately start to limit the impact of airports, airlines and passengers, and has already helped **reduce the network's carbon footprint by 28%** between 2018 and 2021.

- Powering airports and aircraft on the ground with renewable energy: the network's airports produce and consume their own solar power with photovoltaic panels generating more than 35 MWp installed in 2022, including 22 MWp for its own use, and offer airlines clean energy solutions for their aircraft on the ground.
- **Emissions-based landing charges:** in 2021, VINCI Airports became the first airport operator to apply emissions-based landing charges to airlines using its airports in France encouraging them to renew their fleets with lower-emission aircraft.
- Sustainable biofuels: in April 2021, VINCI Airports became the first French airport operator to offer users sustainable biofuel at Clermont-Ferrand airport. They have since also been made available in London Gatwick, Lyon-Saint Exupéry and Lisbon. Emissionsbased landing charges will encourage airlines to use these sustainable biofuels.

- Forest carbon sinks: at Lyon-Saint Exupéry and Lyon Bron airports, a local reforestation programme is being rolled out to absorb all residual emissions.
- **Green hydrogen:** with the first hydrogenpowered aircraft due in the 2030s, VINCI Airports is preparing to transform its airports into green hydrogen hubs that can meet the needs of the entire ecosystem.

Exemplary airports: VINCI Airports is the first international airport consortium to have all its platforms enter the Airports Council International's voluntary Airport Carbon Accreditation programme to reduce greenhouse gas emissions. Lyon-Saint Exupéry and London Gatwick airports have now both obtained Level 3+ certification, while nine airports in Portugal and three airports in Kansai have already achieved ACA level 4, one of the programme's top levels. Furthermore, Guanacaste airport in Costa Rica has been recognised as carbon neutral by the non-profit organisation Earth University. In Brazil, Salvador Bahia airport was recognised as "Brazil's most sustainable aerodrome in 2019" by Brazil's National Civil Aviation Agency (ANAC).

The next step is to achieve net zero emissions by 2030 at our airports in Europe and by 2050 throughout the rest of the world. 28% LESS EMISSIONS BETWEEN 2018 AND 2021 THANKS TO AIRPACT.



LESS CO<sub>2</sub> EMISSIONS FROM ASPHALT PRODUCTION AT THE SAINTE-SUZANNE-ET-CHAMMES PLANT.

IN THE SUMMER, POWER ROAD® CAPTURES THE SUN'S ENERGY TO HEAT NEARBY INFRASTRUCTURE.



#### Reducing the carbon footprint of roads, from the production plant to the user

#### A LOW-CARBON ASPHALT PLANT

Eurovia's (VINCI Construction) asphalt mixing plant at Sainte-Suzanne-et-Chammes in western France was completely modernised and equipped with its own solar power plant in 2020. It uses the cutting-edge techniques to reduce its carbon footprint, including covering material inventories to reduce humidity, using more efficient modern worksite machinery, switching to natural gas instead of heavy fuel oil, installing electrically heated asphalt binder tanks, and using more asphalt aggregate (up to 50% instead of 30% in the old plant). As a result, it has cut its asphalt production  $CO_2$  emissions by 40%.

#### POWER ROAD<sup>®</sup>, A ROAD THAT CAPTURES, STORES AND REDISTRIBUTES ENERGY

Power Road® works like a heat exchanger. Throughout the year, and especially in the summer, the road captures the sun's thermal energy so it may be either transferred to nearby buildings and infrastructure (e.g. to heat swimming pools or provide hot water for office buildings), or stored in geothermal wells before being reused in the winter to heat buildings or remove snow and ice from roads, thus avoiding the need for vast quantities of salt.

### INDUCTIVE ROADS TO RECHARGE ELECTRIC VEHICLES

In Sweden and Germany, Eurovia (VINCI Construction) and VINCI Energies are developing the world's first inductive charging roads. The idea is to enable electric vehicles to recharge through a sensor located under the chassis that communicates with an electric coil embedded in the road surface.

VINCI Autoroutes and Eurovia are also trialling "Charge as you Drive" technology on the A10 motorway to test wireless induction or rail charging in real-world conditions.

Induction enables all vehicles to recharge while moving or stationary, and could therefore significantly boost the growth of electricpowered travel while making electric vehicles suitable for long-distance travel.

#### **OPTIMISING USERS' ROUTES**

AddHelix by Axians (VINCI Energies) is a digital solution that helps logistics companies find the greenest and shortest routes for their deliveries, enabling them to cut their emissions by 20% on average. For example, thanks to Addhelix, an Austrian client saved 12 million kilometres in one year, avoiding 6,000 tonnes of  $CO_2$  emissions.



#### Championing sustainable construction with a new range of low-carbon concretes

VINCI Construction launched its Exegy® low-carbon concrete range in September 2020, setting new industry standards by introducing formulations that reduce  $CO_2$  emissions by up to 60% compared with traditional concretes while displaying equivalent – if not even superior – strength and resistance properties for a similar cost. VINCI Construction intends to work with all industry players to significantly develop the use of these concretes in structures of all kinds, both buildings and infrastructure. It has committed to introducing the widespread use of low-carbon concretes in its own projects over the next decade.

### CONSIDERING THE IMPACTS OF CLIMATE CHANGE FROM THE DESIGN STAGE

Resallience is a design office that adapts projects, infrastructure and their uses to climate change. It was founded as part of an intrapreneur scheme at Leonard, the VINCI Group's foresight and innovation platform.



#### Building performance: turning problems into opportunities

VINCI Facilities, a subsidiary of VINCI Energies, develops facilities management solutions that optimise building management, boost energy efficiency and improve the working conditions of end users. Facility management also involves providing companies and public institutions with support and advice to help them manage their energy consumption.

#### **A POSITIVE ENERGY SCHOOL**

Under a public-private partnership, VINCI Facilities manages operations in the Realschule Poing School in Germany, for which it has designed and deployed high-efficiency energy solutions. Photovoltaic panels, wooden cladding, triple-glazed windows and dual flow ventilation have turned the school into a positive energy building as the facility now produces more renewable energy than it uses. The energy produced and not used by the building is then fed into the public grid, for use by the municipality. 900% LOW-CARBON CONCRETES BY 2030.

THE REALSCHULE POING SCHOOL BUILDING MANAGED BY VINCI FACILITIES IN GERMANY IS NOW A POSITIVE ENERGY BUILDING. 600% LESS CO2 EMISSIONS ON THE ATHENS-PATRAS MOTORWAY WITH THE NEW LED LIGHTING SYSTEM.

ACTEMIUM WORKS WITH THE PS2E (PARIS-SACLAY EFFICACITÉ ÉNERGÉTIQUE) RESEARCH INSTITUTE.



### Improving the energy efficiency of public lighting

According to Ademe, the French Environment and Energy Management Agency, public lighting accounts for 41% of the electricity consumed by local governments\*. But it can also represent a genuine source of savings, which is why Citeos (VINCI Energies) helps over 3,000 municipalities improve their energy performance. For example, in Cergy-Pontoise, just outside Paris, it has committed to reducing the city's energy consumption by 47% over 18 years by renovating 80% of the existing lighting equipment and installing 7,000 LED lights, which are more energy-efficient. Similarly, Citeos helped the city of Canberra in Australia cut its energy consumption by about 45%.

#### **RENEWING TUNNEL LIGHTING**

In Greece, where VINCI Highways holds the concession for the Athens-Patras motorway (201 km), a new LED lighting system was installed in the tunnels, reducing CO<sub>2</sub> emissions for tunnel operations by 60%. Similar initiatives have been launched across the Group's motorway networks in France and other countries. VINCI Autoroutes will have replaced 41,000 lights in its public lighting systems by 2024.



### Optimising energy consumption in industry

Industrial processes account for two-thirds of the energy consumed by manufacturing plants. To help its clients cut their energy consumption, Actemium (VINCI Energies) has developed a comprehensive energy audit service. Actemium looks at the entire production system - from raw material input to product output - calculates the minimum energy requirement and compares this figure with the actual amount consumed by the site. It then draws up an action plan to cut energy consumption to a minimum. To develop advanced energy audit methodologies, Actemium works with the PS2E (Paris-Saclay Efficacité Énergétique) research institute, which brings together organisations from both the public and private sectors.

\* Source: Ademe.

# LOW-CA**RBON** HYDROGEN, THE KEY LINK IN THE ENERGY TRANSITION





### All the Group's business lines - construction, energy and concessions -

**have a part to play,** structure offers, engage in strategic partnerships and take part in trials. At the same time, VINCI has invested in one of the largest clean hydrogen investment fund and a think tank set up by Leonard, the Group's the innovation and foresight platform, considers the opportunities created by this new "green gold".



### LOW-CARBON HYDROGEN FROM PRODUCTION TO USE



#### Production

VINCI Construction decided to gather its expertise in design-build projects for clean hydrogen production plants under a single brand, Hyfinity, delivering turnkey projects to its clients, which include energy producers and major manufacturers.

VINCI is a partner to and shareholder in Genvia, a company set up in 2021 by the French Alternative Energies and Atomic Energy Commission (CEA) and Schlumberger to upscale the highly promising high temperature electrolysis (HTE) technology. The first 300 kW demonstrators are expected to be operational as early as 2022, before stepping up to gigafactory stage in 2025.

VINCI was one of the 30 groups involved in launching HyDeal Ambition in 2021, which serves to prepare Europe's future clean hydrogen industry that will produce energy at the same cost as fossil fuel to ultimately replace them.

### Storage, transport and distribution

Group subsidiaries, including Geostock, offer manufacturing groups, energy companies and states solutions to store clean hydrogen energy. Currently, one quarter of fossil energy produced is kept in permanent storage, in particular to maintain strategic national reserves. It will therefore soon become possible to store hydrogen in reservoirs, caves or wells.

#### **Uses**

Harnessing its position as an integrator, combining understanding of industrial processes with expertise in major fluid and electricity networks, VINCI Energies is ideally placed to support industries through their energy transition. Hydrogen will serve to decarbonise industries by reducing their  $CO_2$  emissions.

The upcoming arrival of hydrogen-powered heavy goods vehicles on the roads brings with it the additional challenge of refuelling these vehicles at service stations. VINCI Autoroutes is working to bring green hydrogen distribution stations to motorway service stations, in particular in the south west, where two service stations could be fitted with renewable hydrogen distribution stations in 2023 and 2024.

The aeronautics industry is also looking to hydrogen to reduce its carbon footprint. Many trials are currently underway across VINCI Airports' infrastructure. For example, the teams at Lyon-Saint Exupéry airport, in partnership with Airbus and Air Liquide, are installing clean hydrogen facilities, initially in a gaseous state, with daily capacity of 2 tonnes to fuel the airport's heavy goods vehicles on the runway and roads by 2025. The second phase will use liquid hydrogen to refuel aircraft by 2035. In Japan, three hydrogen stations are already operating at the Kansai airports, one of which powers the forklift trucks used to move cargo. In Chile, the teams are studying the installation of a gaseous hydrogen station to serve the future needs of the airport and wider region.

#### Finance

Proof of its commitment to make hydrogen a serious and sustainable alternative to fossil energy, VINCI joined forces with Air Liquide and TotalEnergies to launch the world's largest private clean hydrogen investment fund in October 2021. Managing a total of  $\in$ 2 billion of funds (including  $\in$ 100 million invested by each of the founding members), the fund aims to generate  $\in$ 20 billion in investments in manufacturing and mobility by 2028. E2 billion FUNDS MANAGED BY THE WORLD'S LARGEST CLEAN HYDROGEN INVESTMENT FUND, CO-FOUNDED

BY VINCI.

# OPTIV RESOURC ТН THE CIRC

# SING ES ULAR ONOMY

### RETHINKING THE WAY WE CONSUME, PRODUCE AND MANAGE OUR RESOURCES

VINCI IS MOVING TOWARDS A CIRCULAR ECONOMY. VINCI intends to limit the impact of its activities by moving towards a circular economy. Doing this entails rethinking our supply chain to reduce the extraction of virgin raw materials, consume mainly reused or recycled products and sustainable materials, and significantly reduce the waste we produce. This means bringing all our suppliers, clients and partners together to find the best ways to reduce the use of virgin raw materials, and reuse the waste we inevitably generate as a resource for our own or other activities – with a focus on encouraging local solutions. For example, we offer clients recycled materials made with waste generated by our own activities.

### A STRATEGY OF CONTINUOUS IMPROVEMENT



VINCI believes committing to a circular economy approach means revising all its current procedures. The key challenge is to limit our footprint by reducing the volume of virgin raw materials extracted, implementing efficient techniques, adopting effective behaviour patterns, as well as reusing and recycling.

Focusing on our sourcing means improving our waste management, especially by developing innovative solutions to reduce and recover both our own and our clients' waste.

# OUR COMMITMENTS

VINCI aims to apply a circular economy approach to all its activities.

#### Improve waste sorting and recovery

VINCI is taking action to reduce the amount of waste generated by its construction activities and its concession users and to systematically recover it.

#### **ACTIONS TAKEN**



#### **Reducing waste at source**

Implementing plans to manage waste materials at worksites.
Rolling out programmes to phase out single-use plastic

products at some entities in partnership with retail brands.

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#### Recovery • Improving waste sorting.

Systematically recovering waste (including targets by geographic area at some entities).



### OVER 500/0 OF VINCI IMMOBILIER'S REVENUE GENERATED



### Promote construction techniques and materials that economise on natural resources

As raw materials sourcing is a central issue, we use eco-design approaches to projects and give precedence to reused or recycled materials.

#### **ACTIONS TAKEN**



#### Eco-design

- Using smaller amounts of resources in construction by eco-designing projects and reducing waste at source.

· Filing patents on eco-designed products.



#### Supply chain

- Favouring the use of secondary, recycled or reused materials in each major supply chain (aggregates, steel, inert materials, biomass, etc.).
- Encouraging the use of reusable or recycled materials when serving as
  programme manager on concessions.

### Expand the offer of recycled materials to limit extraction of virgin materials

Some of our business activities involve producing materials (quarrying, in particular). Their principal goal is to develop more alternatives to raw materials, i.e. offer recycled materials and expand their recycling capacity.

#### **ACTIONS TAKEN**



#### Recycling

• Increasing the number of permanent sites able to take in and process recycled materials.



#### Development

• Promoting our choice of recycled materials.



### ACTIONS AND ACHIEVEMENTS



#### "Zero waste to landfill" airports

100% OF WASTE RECOVERED AT SALVADOR BAHIA AIRPORT.

SALVADOR BAHIA NAMED BRAZIL'S MOST SUSTAINABLE AERODROME BY NATIONAL CIVIL AVIATION AGENCY.

12 MILLION TONNES OF RECYCLED CONSTRUCTION MATERIALS PRODUCED THROUGHOUT THE WORLD IN 2021, OF WHICH 8.5 MILLION TONNES IN FRANCE. After VINCI Airports took over the concession for Salvador Bahia airport in January 2018, it became the first Brazilian airport to set itself the target to recover all its waste. The airport's large-scale environmental regualification programme included creating a new sorting centre with an optimised waste management system. All the airport's waste was recovered in 2020, compared with 1% before VINCI Airports became the concession holder. The programme also focused on creating a plant to treat all the airport's wastewater and recycle it in toilets, green areas and airport air-conditioning. Salvador Bahia was recognised as "Brazil's most sustainable aerodrome" by Brazil's National Civil Aviation Agency and also received several international awards, including "ACI-LAC Green Airport Recognition".



Aggregate recycling and recovery with Granulat+

In France, annual aggregate requirements amount to 560 Mt. With 130 Granulat+ sites across France, Eurovia (VINCI Construction) offers a range of alternative construction materials. The idea is to use fewer quarried materials by recycling inert worksite waste. Eurovia, which combines this activity with its quarry business, has become France's leader in recycled construction materials with an annual production of 8.5 Mt.



### Recovering waste from service stations

VINCI Autoroutes aims to recover 100% of operational waste from the service stations it owns and manages by 2025, transforming it into energy or matter. Indeed, 60% of operational waster will be transformed into matter.

VINCI Autoroutes will help to recover customer waste in special bins, collecting 80% of packaging and 90% of glass waste at the service stations it owns and manages.



#### Fully recycled roads

Eurovia (VINCI Construction) has developed an innovative very-high-percentage recycled road renovation process using a specific mobile continuous asphalt plant designed in partnership with Marini-Ermont. After completing a 1 km test section of the world's first fully recycled road on the VINCI Autoroutes motorway network in France in 2018, Eurovia applied the process to road sections in three French departments (Charente, Charente-Maritime and Vienne) and on the A89 motorway. It was able to increase the aggregate recycling rate to 70% by reusing planed material as a new road surface layer directly on-site.



### Blastfurnace slag to replace cement

To produce its Exegy<sup>®</sup> low-carbon concrete, VINCI Construction replaces clinker – the main component in traditional cement and largest source of greenhouse gas emissions – with alternative binders made from blastfurnace slag. Ground slag, a by-product from the manufacture of iron, is recovered in this way. VINCI Construction also teamed up with specialist Ecocem to develop an innovative solution that activates the ground slag increasing the clinker replacement rate to nearly 100%. Exegy<sup>®</sup> is a way of recycling blastfurnace slag in concrete that still offers the same technical properties as traditional concrete, and notably the same degree of resistance. It was used, for example, to construct l'archipel, VINCI Group's new head office – the first time it was used for the structural elements of a building in France. At the same time, VINCI Construction is conducting a research and development programme into the suitability of other alternative mineral binders.



# Digital solutions and optimised worksite waste management

Incubated and accelerated by Leonard, the Group's innovation and foresight platform, Waste Marketplace is a digital solution that facilitates management of waste from worksites, operations and industry, and improves its recycling and traceability at the best possible cost. In four clicks on the application, a works supervisor on site can order a waste removal lorry. The app's algorithm chooses the best solution for each type of waste from among a network of partners, resulting in a recycling rate of more than 80%. The system automatically generates a report at each stage and guarantees absolute traceability. Waste Marketplace has already rolled out its solution across more than 1.000 sites since it was set up in 2018 and is seeking to rapidly diversify its client base and business lines



80% WASTE MARKETPLACE ACHIEVES A RECYCLING RATE OF MORE THAN 80%.



#### Reusing worksite materials

The construction sector is moving towards a circular economy with the 3R concept of "reduce, reuse and recycle". La Ressourcerie du BTP is a concrete example of the circular economy model. The marketplace, which was developed at the Group's innovation and foresight platform, Leonard, aims to promote the reuse of materials from finishing works and offer employment opportunities to people on integration programmes. In 2023, La Ressourcerie du BTP will develop its engineering operations at the tender and works stage and will strive to structure the reuse sector.

Alongside this platform, the R.used initiative aims to develop an app that will list materials and equipment that remain unused at the end of projects, as well as the needs of ongoing and upcoming projects. the value of the materials deposited and automatically assigns "green credits" for each bottle deposited. The amount can be consulted directly on the mobile application and can then be used as a means of payment for the various services on offer, such as subscriptions to Lima's expressways or parking in the Real Plaza car parks in the Peruvian capital.



#### Smart waste management

Optimised waste management involves streamlining waste transport. Axians (VINCI Energies) helps its clients optimise waste collection. In the Netherlands, for example, sensors placed in the containers alert waste managers when they are full so they can optimise vehicle sizes and collection routes.



#### Encouraging motorists in Lima, Peru to recycle their plastic waste

Pex, the Peruvian automatic toll collection subsidiary of VINCI Highways, enables its users to pay for toll and parking services in Lima by recycling plastic bottles. Drivers can deposit plastic bottles in a recycling robot which, using artificial intelligence, evaluates

LA RESSOURCERIE IS A MARKETPLACE THAT ENCOURAGES AND FACILITATES THE REUSE OF MATERIALS.





### ADAPTING OUR ACTIVITIES TO CURRENT AND FUTURE ECOLOGICAL CHALLENGES

PROTECTING NATURAL ENVIRONMENTS PLAYS A KEY ROLE IN OUR DESIGN, CONSTRUCTION AND OPERATIONS PROCESSES. As natural environments are directly or indirectly affected by our operations, we ensure our design, construction and operations processes focus heavily on protecting them. Throughout the project life cycles, we strive to have as little impact as possible on natural environments. This means our activities must set an example, as well as provide and implement solutions that avoid, reduce and, where necessary, offset our impact. VINCI innovates, develops and rolls out solutions that address environmental challenges, such as water management (water treatment plants and processes) as well as ecological restoration and transparency (reconfiguring stream and river channels, wildlife crossings, etc.).

We are very aware of how important these issues are and work with meticulous external local experts to offer appropriate and effective solutions on our projects. We are determined to expand these solutions and develop the expertise of our teams across the design, construction and operations phases, so we can offer ever-more targeted and robust solutions.

### A STRATEGY OF CONTINUOUS IMPROVEMENT



VINCI aims to reduce its impact on natural environments by aligning its businesses on long-term ecological challenges. The Group is accelerating the rollout of its ecological engineering expertise across all its businesses to ensure they consider biodiversity and natural environments in all their operations and projects of any size. Protecting natural environments requires in particular a considerable reduction in land take. As a national property developer, the Group, via its subsidiary VINCI Immobilier, demonstrates its intention to do its bit in this effort by going over and above regulatory requirements.

Governance, the sharing of best practices, and partnerships with ecological institutions and organisations are being improved to contribute to the Group's progress. As part of some projects undertaken for their clients, its companies are also developing comprehensive ecological engineering solutions and alternative versions that are better for natural environments.

# **OUR COMMITMENTS**

VINCI is committed to preserving water resources and aiming to achieve no net loss of biodiversity.

#### Achieve zero net land take by 2030

This commitment applies to all property development operations undertaken by VINCI Immobilier, both in the residential and commercial market.

As we understand urban development that relies on land take strategies is unacceptable from an environmental point of view, it is important to develop a new approach that harnesses land already taken, focusing primarily on urban recycling operations.

VINCI Immobilier will thereby become the first national property developer to achieve zero net land take, 20 years ahead of the 2050 target set by the French climate and environmental resilience law adopted in July 2021.

#### **ACTIONS TAKEN**



#### Achieve zero net land take

 For all VINCI Immobilier projects concerned, offset land take by reversing the process of equivalent surface area elsewhere in France.



#### **Urban recycling**

• Generate over 50% of VINCI Immobilier's revenue through urban recycling projects by 2030.

 Urban recycling involves harnessing brownfield land and/or unused or obsolete buildings for new builds and renovations.

# 2030 TARGET FOR VINCI IMMOBILIER: ZZERO NET LAND TAKE

### Aiming to achieve zero net loss of biodiversity

Initiatives are adapted to local environmental issues and the duration of the project on both worksites and long-term sites operated and managed by our companies.

VINCI is also one of the first companies to join the act4nature international alliance which aims to integrate the issue of biodiversity in all activities and at every level. It is committed to improving knowledge and disseminating best practices regarding the protection of biodiversity, training and raising awareness among employees, developing new solutions and strengthening partnerships.

#### 2030 TARGET FOR VINCI CONCESSIONS:

# HALVE THE QUANTITY OF WATER CONSUMED PER UNIT OF TRAFFIC

#### Optimise water consumption, especially in water-stressed regions

VINCI's businesses need water and can have direct or indirect impacts on natural environments. We need to go over and above merely preventing water pollution and optimise consumption.

#### **ACTIONS TAKEN**



#### Water consumption

Collecting reliable data to measure water purchased and extracted.



#### Guidelines

• Sharing best practices in each business.



#### Recycling

• Promoting water reuse and other solutions to reduce consumption.

#### Prevent pollution and incidents by systematically implementing an environmental management plan in all our business lines

Rolling out local environmental management plans means defining environmental management indicators, setting up environmental governance and designating persons in charge of environmental management to assess and limit the impact of our activities on the flora and fauna of the region concerned.

We also develop business-specific awareness and training tools.

#### ACTIONS TAKEN



#### Zero use of phytosanitary products

- Employing alternatives to phytosanitary products, such as mechanical and thermal weed control and grazing animals.



#### Action plans, tools and measures

- Rolling out the biodiversity roadmap associated with the commitments to act4nature international.

- Employing an in-house strategy and tools to factor in biodiversity at the Group's worksites and infrastructure.



#### Offsets and green works

- Developing nature-based solutions to fight climate change or flood risk, especially through ecological engineering.
- Voluntary or regulatory offsetting projects: based on the context, methods for measuring biodiversity losses and gains, and indicators to monitor change over time.



(EXCLUDING CONTRACTURAL OR REGULATORY REQUIREMENTS)

### ACTIONS AND ACHIEVEMENTS



THE "AVOID, REDUCE, OFFSET" APPROACH ESTABLISHES THE PRINCIPLE OF "NO NET LOSS" OF BIODIVERSITY.

#### 130 STRUCTURES ENABLE WILDLIFE TO CROSS THE WESTERN STRASBOURG

**BYPASS** 

### 358,000 m<sup>2</sup>

OF BROWNFIELD LAND ACQUIRED BY VINCI IMMOBILIER FOR RECOVERSION PROJECTS.

### Infrastructure that preserves natural environments

### PROTECTING BIODIVERSITY ON THE WESTERN STRASBOURG BYPASS

The western Strasbourg bypass project (24 km) included a biodiversity and natural habitat conservation programme of unprecedented scope, itself the result of three years of preparatory research. The motorway encourages ecological transparency with 130 structures, or the equivalent of about one wildlife crossing every 200 metres. Many of the crossings are traditional structures, such as the green bridges, viaducts and cut-andcover tunnels. But others are more innovative, including the overpasses designed specifically for the European hamster, equipped with anti-predator systems, and the "bioducts" (crossings for small wildlife in the ledge along the gutter of road restoration works). The project also includes a breeding programme in conditions of partial freedom that will reintroduce 1,030 European hamsters into their natural habitat by 2023. The project itself involves a land area of 278 hectares, but the unprecedented ecological compensation measures cover 1,315 hectares, including 1,000 hectares where vegetation will be planted to create a favourable habitat for the European hamster. The land was earmarked for these measures before the works started and the measures will be implemented gradually as the work progresses.

#### **RECONVERTING 50 BROWNFIELD SITES**

In 2019, VINCI Immobilier partnered with Brownfields to acquire around 50 brownfield sites owned by Engie and located all throughout France. Some of this land used to be occupied by industrial facilities, including gas plants. In total, the land represents a total surface area of 358,000 m<sup>2</sup> that will be rehabilitated and reconverted into property and landscape developments. They will see nearly 2,300 homes (across 23 brownfield sites) being built by 2024. VINCI Immobilier is thereby helping to achieve the zero net land take target and inject fresh momentum into small towns.

#### UNIVERSEINE, THE FUTURE SUSTAINABLE NEIGHTBORHOOD AT THE HEART OF THE ATHLETES' VILLAGE

Built in Saint-Denis, north of Paris, on former brownfield land spanning 6.4 hectares, Universeine was designed to accommodate the athletes competing in the many sporting events of 2024. The project is composed of four islands, 6,000 beds and 33,000 m<sup>2</sup> of service and commercial space. Fully reversible, these buildings will be converted in 2025 into housing and offices to create a new, modern, environmentally friendly and sustainable mixed-used development. Harnessing VINCI Immobilier's expertise in urban recycling, the project was designed to meet the climate challenges of today and tomorrow.

The main concern was to minimise the carbon footprint of buildings, adapt to climate change and preserve biodiversity.

This comprehensive approach makes Universeine one of the first examples of a city of tomorrow that is sustainable and energy efficient.

#### RESTORING THE NATURAL ENVIRONMENT ALONG THE LGV SEA HIGH-SPEED RAILWAY LINE

The LISEA Biodiversity Foundation, created by the concession company of the South Europe Atlantic high-speed rail line (VINCI Concessions), provides long-term support to species conservation and restoration projects to protect natural habitats along the rail line in the French departments it passes through. Its actions supplement LISEA's contractual commitments regarding environmental protection and come in addition to the regulatory compensation measures for 350 sites representing a total of 3,800 hectares. For example LISEA Biodiversity supports a programme by the French Bird Protection League (LPO) designed to save the European mink - the Charente basin is home to one of the continent's last wild populations.



#### **Timber construction**

Arbonis (VINCI Construction), which specialises in timber constructions - using wood with a positive carbon footprint sourced from sustainably managed forests - helps meet environmental performance objectives. The company designs and constructs all types of timber buildings and facilities, applying the latest technologies and methods. It is most notably taking part in the Treed It sustainable city demonstrator in Marne-la-Vallée, east of Paris, which includes the construction of an 11-floor, 37-metre-high tower with a wooden framework. It has also developed the modular ARBO 3D process, which boasts prefabricated elements, rapid on-site installation, great architectural flexibility and cost control, and is well-suited to the construction of buildings like schools and student accommodation.



### Restoring ecological connectivity

VINCI Construction applies its ecological engineering expertise to build structures designed to maintain or restore ecological connectivity, renaturalise natural habitats, and use and manage plant species. Equo Vivo, for example, is responsible for the hydromorphological restoration of the Yvette River in the Haute Vallée de Chevreuse Regional Natural Park. It is giving the river a more natural profile with new structures that also help hold back flood water.





#### Virtuous airports

VINCI Airports reduced the use of pesticides by 82% between 2018 and 2021 and is well on the way to eliminating the use of phytosanitary products in all its airports. It has also teamed up with the French national beekeepers' association (Unaf) to protect and monitor pollinators. It also formed several other partnerships to protect biodiversity across its network. They most notably include ANA's work in Portugal with CERVAS (Centre for Ecology, Recovery and Monitoring of Wildlife) and RIAS (Wildlife Rehabilitation and Research Centre of Ria Formosa) or in London Gatwick airport (Gatwick Greenspace Partnership and Sussex Biodiversity Records Centre) whose management of biodiversity was recognised by the Wildlife Trust's Biodiversity Benchmark Award.

80%

OF TIMBER USED BY WOOD CONSTRUCTION SUBSIDIARIES WAS FROM PEFC- OR FSC-CERTIFIED SUSTAINABLE FORESTS IN 2021. More recently, Grenoble Alpes Isère airport signed an agreement with the French Bird Protection League (LPO) so it could identify and highlight biodiversity issues related to its operations by regularly monitoring the bird species in its area.



A partnership between Eurovia (VINCI Construction) and PatriNat to create a national heritage centre of expertise and data

Founded in 2012, the partnership between Eurovia (VINCI Construction) and Patrinat – a collaborative research and education entity focusing on natural heritage under the aegis of three organisations (the French Office for Biodiversity, the French Natural History Museum and the French National Centre for Scientific Research) – is pioneering for the industry and has helped expand scientific knowledge of biodiversity. It has:

- Developed scientific solutions and methods to assess the impacts of the company's activities on biodiversity, such as the Ecological Quality Indicator (IQE) and a toolbox for assessing biodiversity around linear infrastructure (OEIL) used by planners and quarry operators.
- Centralised and analysed Eurovia's existing data on flora and fauna to populate national databases.
- Implemented action plans to reduce the environmental footprint of quarries.



## Responsible management of public motorway concessions

VINCI Autoroutes has cut the use of pesticides by 87% between 2018 and 2021. Moreover, 1,096 structures all across the network enable wildlife to cross over the motorways, and the VINCI Autoroutes Foundation has planned to set up a branch to finance biodiversity preservation projects. A partnership has also been signed with the French National Forestry Office (ONF) to restore 200 sites across the network, representing around 500 hectares, by 2030.



#### Optimising client water use

Axians (VINCI Energies) offers smart irrigation solutions. Using temperature and ground humidity sensors, as well as weather forecasts, Axians, helped the city of Florence in Italy reduce its water use by 30%.

IN UGANDA, SOGEA-SATOM PLANTED 18,000 TREES IN 2019 ON A PLOT BELONGING TO UGANDA'S WATER AUTHORITIES.

A PARTNERSHIP BETWEEN EUROVIA AND UMS PATRIMOINE NATUREL TO PRESERVE BIODIVERSITY.

# **WE BELIEVE** THE ENVIRONMENT **IS EVERYONE'S RESPONSIBILITY**



We believe that the environment is everyone's responsibility, and will achieve VINCI's environmental ambition, which is an integral part of our commitment to **all-round performance**, by fostering an environmental culture among our employees, collaborating closely with our subcontractors and suppliers, and developing environmental solutions for our customers.

The operational roll-out of the Group's environmental ambition stepped up a gear in 2021, driven in particular by the Environment Award. The Group also encouraged employees to get on board with the focus to pick up the pace of the environmental transformation of their business lines and services through the second annual Environment Day, held in September at all VINCI companies across the world, as well as training programmes deployed throughout the Group and its entities.

The VINCI companies also develop initiatives to raise awareness among its clients, such as the campaigns run each year by concession companies to encourage travellers to sort their waste on motorway service areas and at airports, and adopt generally environmentally friendly behaviour. Since environmental issues permeate all the Group's activities, the Finance department successfully issued its first evergreen bond in 2020.

And because our approach to protecting the planet is by its nature a collaborative one, we were the first company in France to give our shareholders a "say on climate" vote: 98.14% of voters approved VINCI's environmental strategy at our annual general meeting on 8 April 2021.

#### The VINCI Environment Award – highlighting and sharing best practice and environmental initiatives

In 2021, we launched the Environment Awards, a Group-wide contest open to all our employees. The award highlights real-life initiatives and best environmental practices applied by our teams on the ground, and helps to spread them across all our entities.

Over 2,500 ideas from 120 countries were submitted, attracting votes from 57,000 employees. Much more than a simple in-house competition, the VINCI Environment Award is a way for the Group to give its employees the tools they need to drive VINCI's environmental transformation.



### **SPOTLIGHT ON FOUR WINNING PROJECTS**



### Upscaling thermal insulation of facades with **Rehaskeen®**

An external thermal insulation solution, Rehaskeen®, that uses prefabricated segments to reduce construction delays by a factor of eight and upscale energy renovation. It offers an opportunity to complete thermal renovation projects more quickly in shared housing and office blocks, whether occupied or not.



#### **Reusing condensate** from air-conditioning systems

**Salvador Bahia airport in Brazil** recovers the condensed water from its air-conditioning systems. This water is stored in special reservoirs and is fed into the airport's cooling towers. Overall, each year 17,200 m<sup>3</sup> of water are recovered and reinjected into the circuit, which represents over 10% of the total water consumed by the airport.



#### Towards perpetual quarries

**In Tourville-la-Rivière,** there is a quarry that, rather than extracting virgin materials, retrieves sand and gravel from worksite rubble by reproducing the natural process of soil erosion. In 2020, 134,700 tonnes of inert materials were reprocessed by washing despite pandemic-related constraints. The recovery rate was 70.2%, which meant that 94,550 tonnes of these materials were suitable for use.



### **Eco-marker,** a spray can to cut waste

Eco-marker is a fully reusable spray can that reduces waste by eliminating disposable spray cans. This innovation helps to avoid creating over 60 tonnes of waste each year. Aware of the responsibilities that go with its operations as well as its ability to make a positive contribution to the environmental transition, VINCI has set itself a new, two-fold environmental ambition for 2030:

- Significantly reduce the direct impact of its activities.
- Help improve the footprint of its clients, users, suppliers and partners by developing shared solutions.

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### Acting for the climate

The Group is taking action to limit the consequences of climate change, by setting ambitious targets:

- Reduce direct greenhouse gas emissions (Scopes 1 and 2) by 40% by 2030, compared with 2018 levels.
- Reduce indirect emissions (Scope 3) by 20%, compared with 2019 levels.
- Make the Group's structures and activities more resilient to climate change.

#### Optimising resources thanks to the circular economy

VINCI intends to limit the impact of its activities by moving towards a circular economy. Above all, this means improving our design and production processes, reducing the volume of virgin raw materials extracted, as well as reusing and recycling.

- Promote construction techniques and materials that economise on natural resources.
- · Improve waste sorting and recovery.
- Expand the offer of recycled materials to limit the volume of virgin materials extracted.

### Preserving natural environments

Throughout the project life cycle, the Group's entities have a duty to have as little impact as possible on natural environments, as well as develop solutions to conserve fresh water resources and restore ecological balance.

- Optimise water consumption, especially in water-stressed regions.
- · Aim to achieve zero net loss of biodiversity.



#### About VINCI

VINCI is a global player in concessions, construction and energy, employing over 260,000 people in some 100 countries. We design, finance, build and operate infrastructure and facilities that help improve daily life and mobility for all. Because we believe in all-round performance, we are committed to operating in an environmentally and socially responsible manner. And because our projects are in the public interest, we consider that reaching out to all our stakeholders and engaging in dialogue with them is essential in the conduct of our business activities. VINCI's goal is to create long-term value for its customers, shareholders, employees, and partners, and for society at large.

www.vinci.com

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