

# THE **AGILITY** EFFECT

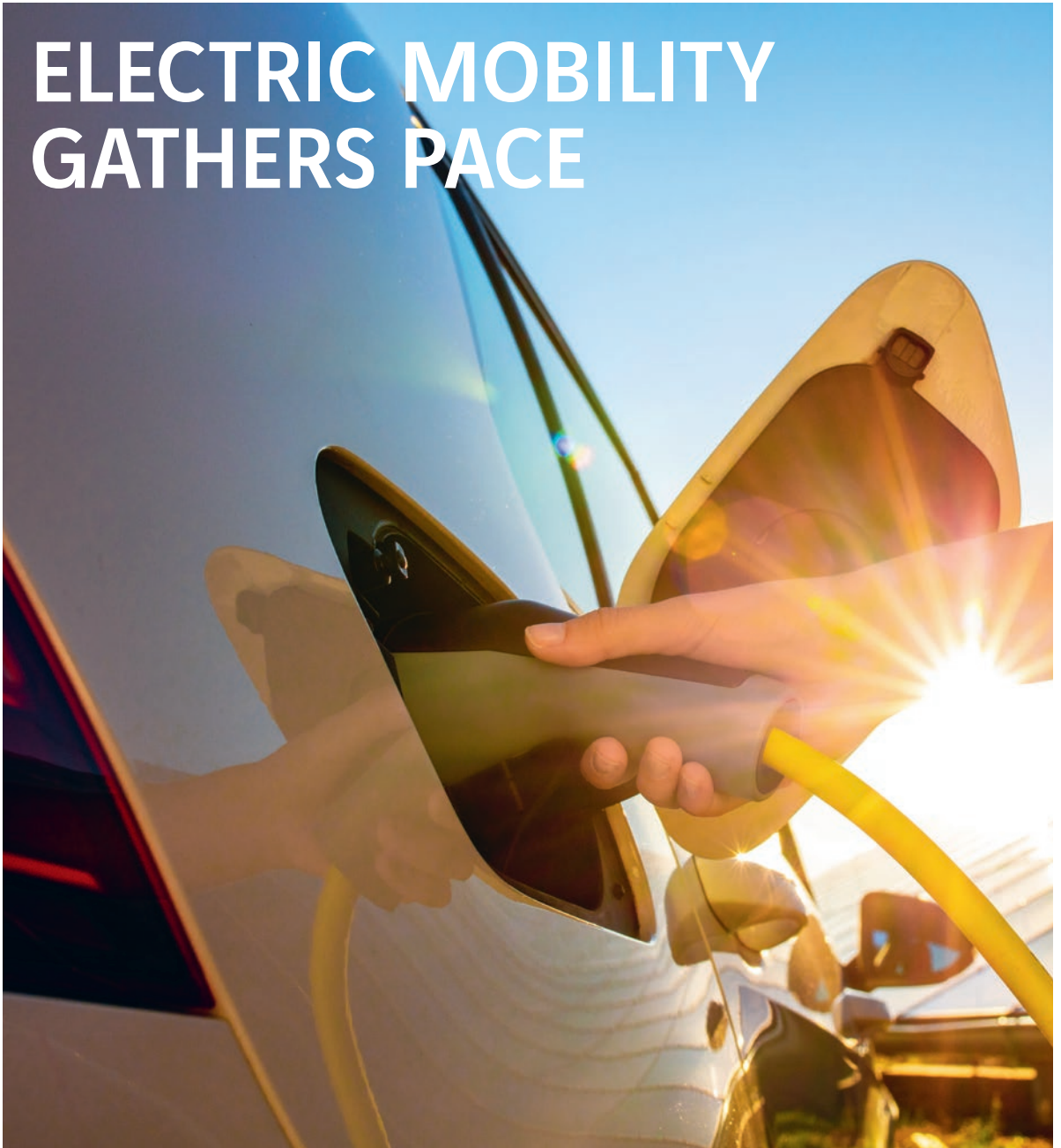
MAGAZINE

**SWEDEN  
DISRUPTS ENERGY  
MARKET**

**AGILITY LEADER  
INVESTING FOR A  
SUSTAINABLE WORLD**

**MICHELIN MAN'S  
WINNING CRM PRO  
FORMULA**

## ELECTRIC MOBILITY GATHERS PACE



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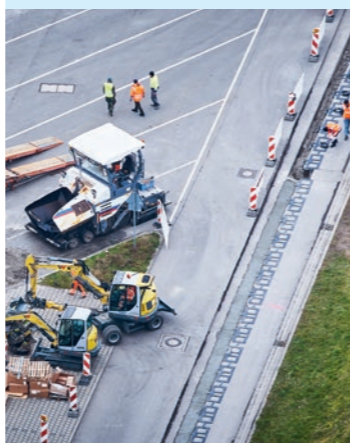
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## EDITORIAL

With a climate emergency upon us, decarbonising our economies and, more generally, our lifestyles has become a widely shared priority. Mobility, whether professional or private, collective or individual, is central to this global issue. Indeed, the transport sector accounts for a third of greenhouse gas emissions. Today, technological innovation, changing behaviours and political will are aligned in establishing electric mobility as a key response to this issue.

We have a long-standing record of building and operating energy and transport infrastructure in regions and cities. Turn to the special report of this issue of The Agility Effect to read up about the solutions being implemented by VINCI Energies business units to roll out electric mobility and speed up the transition to a zero-carbon world.

I also invite you to find out about Olivier Mathiot, managing director of 2050, a new impact investment fund, and co-founder of PriceMinister.

This new issue of the magazine tells how our business units support our clients and work to promote their energy and digital choices, whatever their business.

I hope you find it interesting.

Hervé Adam

Deputy Managing Director  
and General Manager of VINCI Energies France



## AGILITY **PICTURE**

# EUROPE'S MAJOR OFFSHORE WIND PROJECTS

With 800 billion euros of investment over the next 30 years, the European Commission is taking offshore wind farms to the next level. The aim is to increase production capacity from this energy source from the current 12 GW to 60 GW by 2030 and 300 GW by 2050. And this ambition from Brussels will give rise to many extremely large projects. Projects in which Omexom Renewable Energies Offshore GmbH, the new business unit created from VINCI Energies' purchase of the German company EWE Offshore Service & Solutions, plans to play the leading roles.

# SWEDEN DISRUPTS ENERGY MARKET

**The Swedish market is one of the world's most advanced when it comes to energy transition. Its ambitious policy notably includes "prosumption", in which each consumer also becomes a producer.**

By 2030, almost a third of the energy consumed in the European Union will have to come from renewable sources, in line with the targets set in 2018. Sweden is a pioneer in this area. "In 2018, the share of renewable energies in electricity production was 54.6% in Sweden (mainly 39% hydro, 11% wind). This performance, high compared to the average for European countries, can however be compared with the situation in other Scandinavian countries such as Finland (47%), Denmark (69%) and Norway (95%)", emphasizes Philippe Guérin, Managing Director at Omexom (Infratek) in Sweden. "But it is the Swedish ambition that is notable with its objectives of 65% renewable energy in total final consumption by 2030 and an ambitious 100% by 2040. The country has even committed to ban the use of fossil fuels for transport by 2030", he adds. Sweden applies this proactive

program even in the design of buildings, which it increasingly turns into "prosumers". "The concept of 'prosumer' is a neologism coined in 1980 by the futurist Alvin Toffler which sees an individual or entity as both a producer and consumer of energy. Due to technological advances

**"The line between production and consumption is becoming increasingly blurred."**

that make direct user involvement possible, the line between production and consumption activities is increasingly blurred", explains Philippe Guérin.

## **The advantages of local production**

In the field of renewable energies, prosumers are households or organizations which have the capacity to produce surplus

energy (photovoltaic panels, wind turbines, biomass, etc.) allowing to supply a national or local distribution network and, at other times, consume the energy from this network for their own needs.

"Heating in Sweden is also a key element in the country's energy system. In recent decades, as taxes on fuel oil have increased, power companies across the country have turned to renewables, such as biomass, to power local district heating plants. Today, there are around 500 district heating systems across the country, from large cities to small villages, which provide heat to homes and businesses," notes Philippe Guérin. "The big advantage is that since it is a local production, there is less transportation impact and less load on the network, particularly important in Stockholm area".

## **A double challenge**

Sweden has in fact taken advantage of the new opportunities offered by technological advances with solar panel new generations and wind farm systems, more local energy production, increasing potential for energy storage, less energy





loss, inverters capable of managing irregular production flows and of course the development of smart grids. "The generalization of prosumers with hundreds of thousands of potential energy sources poses a real challenge in terms of integration and energy storage", notes Philippe Guérin for whom smart grids are part of a larger whole, which includes also smart cities (optimised public lighting, clean mobility, etc.). Sweden is also ahead in this area. This is evidenced by the case of Hyllie, a district of Malmö conceived in 2010 as a "smart city of the future" and developed in collaboration with the water and waste management supplier of the district of Hyllie and the energy supplier E.ON. "Today, the district draws all its energy from biogas, biomass, solar energy, waste and wind produced locally. The entire system works thanks to an intelligent

network that adapts in real time to weather conditions, in relation to sunshine and wind," explains Philippe Guérin.

### **Omexom: an innovator in energy transition**

In the field, in Sweden and wherever Omexom is present, the VINCI Energies brand specializing in electrical energy infrastructures is making a contribution to the building of the energy transition. This is particularly the case in a market such as Sweden where prosumers, direct clients of Omexom customers, the Distribution Network Operators, are increasingly numerous and diverse. "We are therefore developing a wide range of expertise, whether for connecting renewable energy production to the grid, electric mobility, energy

efficiency etc.", suggests Philippe Guérin.

In 2020, Omexom connected Sweden's largest solar park and several wind farms to the grid. In the south of the country, Omexom carries out projects where traditional public lighting continues to be replaced by LED technology. "In Stockholm and in the south, we are also developing our "electric vehicle charging" activities.

In addition, we are preparing to offer solutions around energy storage and Power to X solutions for our customers", underlines Philippe Guérin.

The brand can count on its capacity for innovation notably through its new innovation center in Stockholm, The Hive. "As part of our global network, we are also increasingly taking advantage of many innovative solutions from around the world. This allows us to be an agent of change in this market".

Energy transition,  
digital transformation, more on  
[theagilityeffect.com](https://theagilityeffect.com)



# PRECISION AGRICULTURE WITH IOT AND AI

**By combining the internet of things with artificial intelligence, an Axians business unit in Belgium has developed an application designed to optimise agricultural yields, efficiency during harvesting, food traceability and the fuel consumption of farming machinery.**

At harvest time, every minute counts. Given the cost of agricultural machinery downtime, large operations run their combine harvesters at full capacity from dawn to dusk. Coordination between drivers is therefore essential to optimise the harvesting process while reducing fuel consumption.

With this in mind, Axians Business Applications (VINCI Energies) in Belgium has designed in cocreation with CNHi a solution that makes use of IoT sensors and an artificial intelligence model, just as in an industrial process. Known as the Harvest Coordination App, this multi-OS (iOS and Android) and multilingual mobile application acts as a real-time dashboard for farmers. Drivers can communicate via instant messaging, view the hopper fill level and see the time remaining until completion of the field.

This cutting-edge tool offers additional indicators such as the moisture of the crop, yield per square metre and grain quality (nutritional values). The driver also receives a safety alert when someone is close to their vehicle.

## AI trained with thousands of images

Once the combine harvester has covered the first few metres, the AI activates. The algorithm counts the grains left on the ground based on a photo taken from the swath behind the vehicle. It has been trained with thousands of hand-labelled images of grain in a supervised machine learning approach.

The results of this grain loss calculator are then fed into the Harvest Coordination App. The driver can accept or reject the result which is also used to improve the AI model. The application is connected to the combine harvester's CAN (Controller Area Network) data bus – a feature widely used in industry – and obtains useful metadata such as information about the vehicle and the quality of the crop being harvested. As Roel Vermeersch, business unit manager of Axians Business

## The Harvest Coordination App works like a real-time dashboard for farmers.

Applications, explains, "The driver is also given advice, for example to drive more slowly or adjust the combine harvester's settings." Using vehicle geolocation and spatial modelling of the field,

the application traces all information about the crop and the activities linked to the location in the field increasing the level of the granularity in food traceability.

## Advantages for the farmers and the contractors

This solution is developed for the farm machinery manufacturer CNH Industrial. Annie Van Landuyt, manager of the Agri Minon farming business, has trialled it and highlights two main advantages. The first is the coordination

between the harvester and its hopper. The second concerns the automatically generated report. When a field is completed, she can immediately see the quality and tonnage of the harvest, and the percentage of grains lost. A farmer can then ensure optimal storage, taking the moisture content and quality of the crop into account. CNHi also benefits, by improving predictive maintenance on their farming machinery, pending the arrival in ten or fifteen years of self-driving vehicles able to synchronise themselves with limited human intervention.



# SUCCESS FOR ACTEMIUM H&F IN HYDROGEN RACE

**For the third consecutive year, students from Stralsund University in Germany have won one of the biggest mobility efficiency competitions with a car powered by a hydrogen fuel cell system.**

The electric car prepared by students from Germany's Stralsund University of Applied Sciences with the support of Actemium has taken first place for the third year in a row in the Shell Eco-Marathon, one of the biggest mobility efficiency competitions in the world, in the prototype/hydrogen category. The team also won the European race in 2019 at the Brooklands track to the south-west of London. The eco-marathon challenges participants not to be the first to cross the finish line but to complete a 15km circuit within a given time using the least amount of energy possible. The hydrogen-powered vehicle was designed by ThaiGer-H2-Racing Team, the Stralsund

university team, using a particularly efficient fuel cell system and an ultra-lightweight structure. "Let me give you two figures that demonstrate the students' performance," says Clemens Blankenberg from Actemium H&F, the VINCI Energies business unit supporting the German university: "Over the three wins in 2017, 2018 and 2019, the car used an average of 1,082km/m<sup>3</sup> of hydrogen. For an internal combustion engine, this sort of energy performance equates to a distance travelled of 3,295km per litre of petrol."

## Advantage of work-study programmes

Two members of the ThaiGer-H2-Racing Team are students completing work-study programmes at Actemium H&F. Clemens Blankenberg himself studied at Stralsund University before joining the business unit. Such programmes offer advantages both for the business and

the students: they provide students with practical work experience through an internship, and they give the company an ongoing connection with the latest academic research. "Actemium has been supporting the ThaiGer-H2-Racing Team for a year now in order to benefit from input from the students, who gain professional experience during their studies at Stralsund University," points out Blankenberg. Completing an internship at Actemium H&F while studying at the technical university is a way to combine theory and in-depth practical experience. Outside of their study time, students work and prepare their Bachelor's thesis at Actemium H&F.

## Green hydrogen

"The tests being performed on hydrogen as an energy vector are of interest to the whole industry," confirms Blankenberg, who had the opportunity when working with the ThaiGer-H2-Racing Team to



discuss the technology with other companies involved in fuel cells, especially hydrogen systems. "Electric vehicles that run on traditional batteries are well suited to urban areas," he notes, "but using hydrogen means you can cover far greater distances. As an energy vector, you're looking at range equivalent to that of internal combustion engine cars. Moreover, the time required to fill up a hydrogen tank is short:

**"Actemium has been supporting the ThaiGer-H2-Racing Team for a year now, benefitting from student input."**

around 10 minutes will do." Other promising applications are currently at the development and testing stage in the railway and maritime sectors. "However," warns the Actemium H&F expert, "hydrogen can only be a credible alternative as far as sustainable development is concerned if it is produced from renewable energy sources such as wind, solar and hydro." This is what is known as green hydrogen.

# LIGHT: THE DEFINING QUALITY OF LA DÉFENSE

**To strengthen the identity and urban integration of Europe's premier business district, Paris La Défense decided to update the 12 footbridges that connect the main platform to neighbouring districts. This was an unusual project, due to the age of the structures, the complexity of the site and the diverse range of companies involved.**

Use light to unify the different spaces of a compartmentalised urban site; create a reassuring and attractive lighting environment for the 250,000 workers and residents who pass daily through Europe's largest business district; renovate the structures in compliance with the various local standards (AFNOR, ISO, UTE, PRM, etc.): these were the three main criteria in the design brief for the "12 Passerelles" project initiated by Paris La Défense in late 2017.

The project arose from deliberations on how to renovate the pedestrian footbridges linking the main

platform to the three neighbouring districts of Nanterre, Courbevoie and Puteaux.

These structures are each very different, built in different eras with no architectural consistency. The project is worth around €10 million in total, with works expected to take three years.

## Multi-partner

This large-scale project brings together a wide range of stakeholders. Project management is based on a grouping of several specialist companies, including lead architect Dietmar Feichtinger Architectes, engineering firm Ingérop and design firm Arcora for the economic framework; and Wonderfulight for the lighting design. Implementation is divided among six companies handling different batches, including Citeos (VINCI Energies) to install the lighting.

"In addition to their technical refurbishment and restoration, our objective is to give these structures back an urban function, using lighting to give them a group

identity," explains Nicolas Hérault, business unit manager of Citeos Grands Projets.

To create this identity, the design firm Wonderfulight chose to set up a light path using a mix of linear and individual graphic elements in red and white. In total, almost 750 metres of light strips will be recessed into the floor surfaces, with more than 450 LED spotlights integrated into the handrails. Illuminated glass screens and panels portraying the urban landscape will also be installed. Lastly, gobo projectors will be installed under the footbridges, projecting strips of light onto the underside of each structure that will be visible from the main roads.

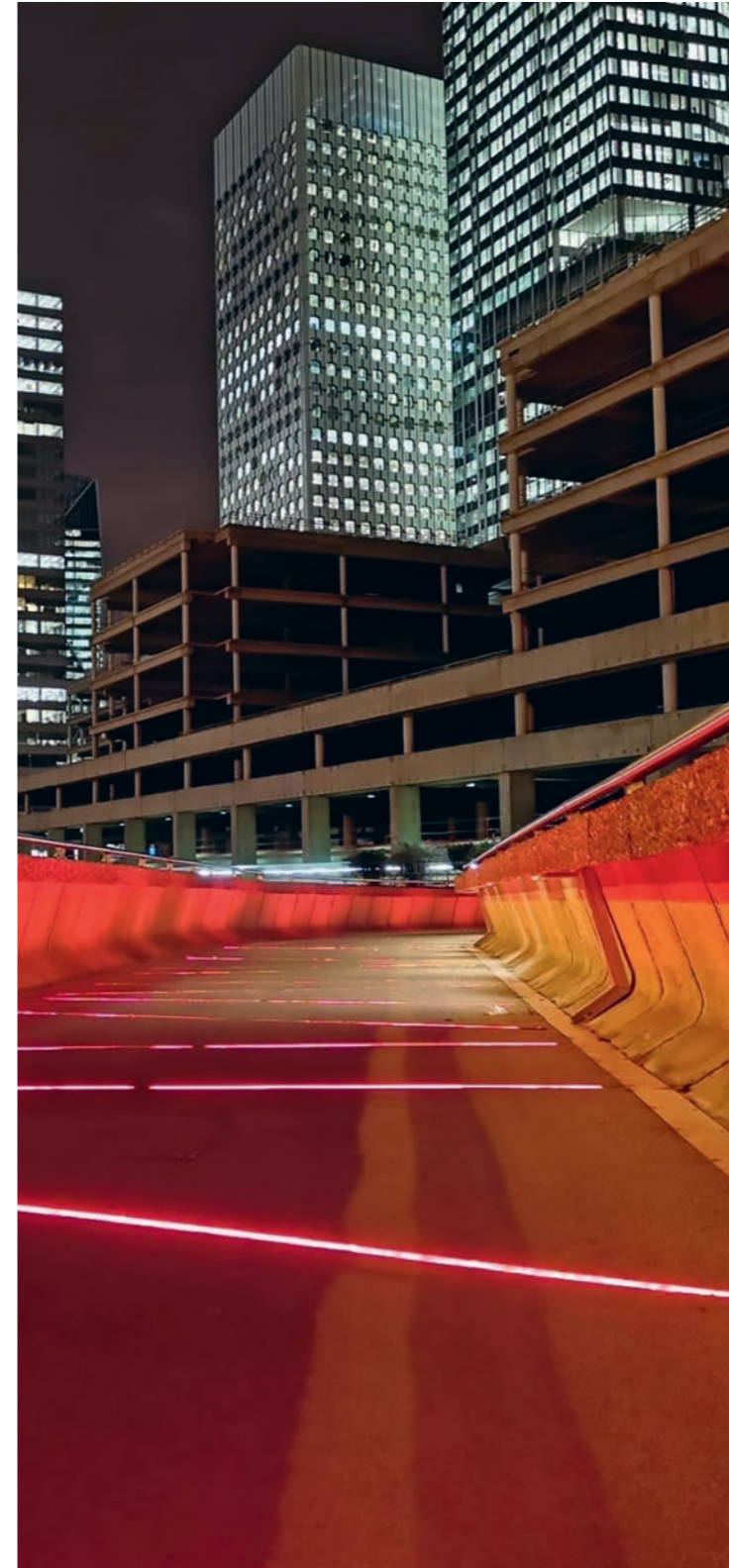
## Demanding requirements

"This project has a large architectural component, with extremely demanding requirements both technically and organisationally," explains Laurane Dorn, who is managing the project for Citeos Grands Projets. The "12 Passerelles" project presents the VINCI Energies business unit with

a number of challenges. Working on existing infrastructure, often dilapidated, on an occupied site frequented by thousands of people, in a multi-level urban environment, required ingenuity and adaptability from the teams. The structural work and fine metalwork involved in the meticulous installation of bespoke lighting equipment required close coordination

**"Giving these structures back an urban function, using lighting to give them a group identity."**

between the different contractors. "Our expertise in managing complex projects enabled us to tightly monitor these interactions, without which the project could not have been completed," says Laurane Dorn. Adding to the complexity was the requirement to complete the project in three years. Due to the restrictions imposed by the occupied site and the technical complexity of the operations, the schedule had to be reassessed regularly. The works teams were constantly adapting to the discontinuous and simultaneous nature of their tasks. At the end of December 2020, four of these footbridges – Triangle, Jean Moulin, Louis Blanc and Orme – were reopened to pedestrians. The remainder will follow in 2021.





# AT THE HEART OF A NEXT-GENERATION SMART BUILDING IN AMSTERDAM

**The sustainable, hyper-connected Edge Stadium office building in Amsterdam will open its doors in late 2022. The Netherlands' first building to obtain two stars in the Ready2Services certification, its technical facilities are the work of Bosman Bedrijven (VINCI Energies).**

For the last seven years, the Dutch firm Edge Technologies has been developing a new concept for some of the world's smartest and most sustainable office buildings: The Edge. The company's next foray to the cutting edge of "Real Estate 4.0" will be "Edge Stadium" in the Netherlands. Located close to the Amsterdam Olympic Stadium, this 29,000-square-metre building, to be handed over in November 2022, will be BREEAM Excellent and WELL Core & Shell Gold certified. It will also be the Netherlands' first building to obtain two stars in the Ready2Services (R2S) certification. This label recognises the best

"smart buildings" – those that incorporate the most advanced smart connectivity techniques. For this project, as on six previous projects managed by Edge Technologies, the Dutch systems integration and facility management specialist Bosman Bedrijven is responsible for the technical facilities.

**The Edge Stadium will be the Netherlands' first building to obtain two stars in the Ready2Services certification.**

VINCI Energies subsidiary Bosman Bedrijven's assignment is to install all Edge Stadium's intelligent systems.

"This will allow monitoring of the whole building and all its facilities, inside and out. It will also be possible to adjust all the building parameters to minimise energy consumption as far as possible," explains Joost van der Wouden, Project Manager at Bosman Bedrijven. In practice, each of the building's users will be able to adjust the temperature and lighting for whichever room they are in, to optimise their workspace for maximum well-being, all from an app on their smartphone.

## Triple service

This service to users, based on geolocation, navigation and dynamic information display

systems, and the real-time management of shared resources (conference rooms, video conferencing, parking, co-working spaces, etc.), is just one of the three types of services offered by the system Bosman Bedrijven is installing in Edge Stadium.

The system's second component will allow energy management across the entire building, thanks to a system that monitors, records and tracks energy consumption trends in real time. The third service is connected with the actual building management (multi-technical operation; maintenance management; security alerts; configuration of comfort, well-being and health parameters, etc.). Lastly, Bosman Bedrijven brings

further added value to this project through its teams' certification-related expertise.

"On this type of brief, we handle all the project management and engineering ourselves," says Joost van der Wouden, "But we do turn to specialist providers for each type of facility (HVAC, water, electrical systems, fire safety system, etc.)."

For Edge Stadium, the VINCI Energies subsidiary had 11 subcontractors and 13 certifications to manage. "All of that requires a huge communication and coordination effort on our part. But the big advantage for our customers is that they have us as a single point of contact."



# AUTOMATED UNDERGROUND SYSTEM, FOLLOW THE (WAVE) GUIDE

**In order to convert a traditional public transport line into an automated system, Axians Italia has developed an innovative solution based on a metal waveguide for the digital communications system of a British underground.**

One of the oldest underground systems in the world, comprising a circular, approximately 10-km long line, surrounds the centre of a major British city and serves 15 stations. Not having been upgraded since the 1970s, it launched a large-scale modernisation programme in 2017 aimed at becoming an automated public transport service.

“The challenge is to modernise all the communication systems of a live site in an extremely limited space,” says Giuseppe Martino, public & enterprise provisioning manager at VINCI Energies business unit Axians Italia Center South, a DCS (Digital Cellular System) specialist which works on numerous international projects. Built in different soil types (clay, sand and granite), the underground’s two tunnels



have a diameter of no more than 3.35m and are composed primarily of concrete and steel.

## Innovative solution

In order to meet the client’s requirements while taking into account these physical constraints, Axians Italia has developed an innovative solution for the site’s DCS based on a metal waveguide, a structure that guides electromagnetic waves by restricting the transmission of energy.

Built on a wireless data communication system operating

in the 5GHz frequency band, the technology carries signals without the use of traditional antennas. This innovative and reliable solution has been approved by CNIT (Consorzio nazionale interuniversitario per le telecomunicazioni – Italy’s national inter-university consortium for telecommunications), which brings together 37 public Italian universities and their research, innovation and training activities in information and communication technologies.

“Our teams are responsible for all the project phases from design,

testing and commissioning through to assembly in Italy of telecoms cabinets comprising passive (data and power supply cables) and active infrastructure (electronic equipment) for the DCS and MSN (multi-service network),” explains Giuseppe Martino who emphasises that extensive coordination work is required on an ongoing basis with the various businesses involved in the project.

**“The challenge is to modernise all the communication systems of a live site in an extremely limited space.”**

## Service optimisation

The solution proposed by Axians Italia fulfils the requirements for packet loss (units of data), latency (transmission delay) and jitter (variation within the latency) during cell transfer at a certain speed (around 80km/s) and in a confined underground environment.

Currently in its final stages, the modernisation of this telecommunications infrastructure should optimise services for underground users not only by significantly improving the control and operation aspect of the site, but also by strengthening safety systems and delivering more information and higher quality services.



AGILITY **LEADER**

PERFORMANCE

# OLIVIER MATHIOT, INVESTING FOR A SUSTAINABLE WORLD

**Appointed managing director of 2050, a new impact investment fund, in March 2021, the co-founder of PriceMinister has his sights firmly set on changing the world, starting with the way in which it is financed. It's an exercise in leadership.**

What do smart devices, carbon emissions in businesses and ethical flowers all have in common? The answer is: an investment fund called 2050. Wethings, Sweep and Fleurs d'ici are the first three projects with a strong social and environmental impact to be supported by this new investment vehicle founded in late 2020 by Marie Ekeland and now headed by Olivier Mathiot. "Current generations are searching for meaning, and 2050 is in keeping with that mood. What can you do with money? You can simply keep on making more of it or you can

earn while factoring in the societal and environmental impacts of your business. That's what 2050 is all about," explains Mathiot, co-founder of PriceMinister and vice-chairman of France Digitale, through which he met Marie Ekeland, co-initiator of the French tech association. Mathiot is convinced that, from a financial point of view, "fertile" investment is a winning formula: "it's a promise that meets the expectations of consumers and employees alike." This venture capital specialist, who has supported dozens of start-



ups over the past 12 or so years, has the task of getting 2050 up and running, since the fund plans to invest as much as €1 billion in the next 5 to 6 years. "This project is an opportunity for me to embark on a new entrepreneurial adventure – one that is in line with my conscience. If we want to improve the world, we can start by improving the way in which we finance it," reveals Mathiot who values collective intelligence and transdisciplinarity above all else in his work as an investor.

#### Agility as a guiding principle

"When you invest in agriculture or electric bikes, you have to immerse yourself in the topic," a form of agility that he has always sought in the projects he backs. "For me, this agility – which is key to the success of the project – depends on one overriding factor: people. What I mean by that is the adaptability of the teams involved, their listening skills, their ambition and their willingness to disrupt practices in the market they are entering." Agility is something that Olivier Mathiot has applied throughout his personal and professional life. Brought up in a family of engineers (his father is a graduate of École Polytechnique and his brother

**"Current generations are searching for meaning, and 2050 is in keeping with that mood."**

studied at Arts et Métiers – both engineering schools – and his sister is an agricultural engineer), this model pupil left his home town of Grenoble to follow a "more general course" at HEC business school. "I've always been torn between the business world, economic reality and a more creative universe. I thought HEC would give me a broad range of options," he says. In fact, he began his career in advertising. He loved the experience, "even if the late 90s was no longer the period of advertising legend Jacques Séguéla's flamboyant campaigns! But it was good training for me; I had fun and met people with very different backgrounds."

#### Influencing public debate

However, in 2001 when his cousin Pierre Kosciusko-Morizet showed him his business plan, he jumped right on it and offered to become his partner and marketing director.

This was to be the start of the PriceMinister adventure. "It was an opportunity to be independent, to no longer support other people's decisions." Agility was required here too: "Each year was different, you had to adapt as the company evolved." Ten years later when PriceMinister was acquired by Rakuten, Mathiot continued in the business and signed: "We kept some form of independence from the Japanese head office." But in 2017, PriceMinister had to make way for Rakuten. "It was the end of an era, and I left. Looking back, it was a wonderful personal experience and I'm proud of having created a brand that innovated in its market." Another thing that sticks in his mind from this entrepreneurial period and from his years as a business angel is that raising capital is often synonymous with crises: "The business changes size, new people come on the scene, management has to be reinvented. It can be complicated. Business tends to slow..." It was at times such as these that his leadership skills came to light.

Today, the former spokesperson for the "Pigeon" movement in 2012, which opposed tax changes relating to business acquisitions, and author of a book entitled "La gauche a mal à son entreprise" (Plon, 2013) intends to continue influencing public debate by "hacking the next presidential campaign through France Digitale." He says: "It is time to press the reset button, but at the moment I don't really see any blueprints for society that are doing that." Mathiot also likes to escape to the world of fiction... A film enthusiast, he plans to devote more time to writing about business, "which provides as much scope for fiction as you could wish for." Indeed, he already has a script for a television series on start-ups under his belt which he has presented to AB group.



With technological innovation, changing uses and the necessary political will all coalescing, the future of electric mobility looks promising. With the thermal-engine vehicle's disappearance edging closer every day, the brakes slowing the electric vehicle's emergence as a product to transform usage are gradually being removed.

From production and assembly lines to charging infrastructure, electric mobility requires a multitude of new technological solutions. Some are already emerging: electric induction roads in Sweden and Germany, the rollout of the Eborn network of electric vehicle charging stations in France, the proliferation of battery factories in Belgium and Germany, and so on.

With help from government support plans, the industries concerned are committing to a mid-to-long-term transition to zero carbon. The story of low-carbon mobility has only just begun.

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Eborn plugs into **Easy Charge** in France, p. 28...  
Construction industry, a **pioneer of electric mobility**, p. 30...

# THE 4 CHALLENGES AROUND ELECTRIC MOBILITY

**Manufacturers and public authorities are taking steps to support electric mobility, with many challenges still to be met in terms of supply infrastructure, storage and environmental impact. But this technological and industrial revolution will need to go hand in hand with a shift in practices.**

The car can no longer be reduced to a means of personal mobility. Today, the focus is on mobility solutions. And that changes everything, first and foremost for the automotive industry's value chain and the ecosystem around it. In fact, nearly 200 years after its invention, electric mobility is just starting to take off. It was only 15 or so years ago that electric cars, in the face of environmental concerns relating to global warming, seemed to have become "the" solution. While only 8 countries recorded a market share of 5% or more in 2019 for sales of electric and plug-in hybrid vehicles, 13 countries – all European – exceeded the 10% mark in 2020. France was among these, ranking 11th in the world with a market share of 11.3%. Electric cars are

doing well, but they're not alone in doing so. Scooters, electric bikes, hoverboards, buses, trucks, boats and even planes are offering or working on electric motors.

## 1. State involvement

Manufacturers are not the only ones putting in work. Governments too are taking action. In December 2018, the French and German Economy Ministers made a commitment to improve the industrial capabilities of their respective countries in terms of battery cell production and the installation of charging infrastructure. In the same vein, the European

Commission is supporting a project by the European Battery Alliance (EBA) that involves 14 member states and 42 businesses. The €2.9 billion project is expected to unlock three times its worth in private investments. Furthermore, in its sustainable and smart mobility strategy, the European Union has set itself the objective of having 30 million electric cars in operation by 2030. In France, an entire section of the post-Covid recovery plan is devoted to electric mobility. This involves three aspects: first, supporting demand through grants to help people buy electric vehicles (EVs); second, delivering investment

aid to transform the automotive sector; and third, upskilling employees to support the expansion of the sector. As for China, it has extended its subsidy system for purchasing EVs until 2022. The Chinese government also intends to tighten up laws on investments and car manufacturing in such a way that by 2025, one in five cars sold will be electric, compared with 5% today. In the US, the new president, Joe Biden, has decided to allocate \$174 billion to the EV sector to fund industrial projects focusing on car assembly and battery production.



Peter Altmaier, German Minister for Economic Affairs and Energy, Bruno Le Maire, French Minister for the Economy, and Maros Sefcovic Vice President of the European Commission.

Paris, 2 May 2019.

## 2. The charging point challenge

These efforts are all the more vital given that the new low-carbon vehicle sectors face numerous challenges. The first involves the rollout of infrastructure, particularly EV charging stations. According to the European Alternative Fuels Observatory (EAFO), the total number of public charge points in Europe currently

stands at just 225,000. However, the European Commission is working towards a target of 3 million charging points and 1,000 hydrogen stations across the European Union by 2029, and an intermediate target of 1 million chargers by 2024. These figures are considerably higher than on the other side of the Atlantic, where the US is “only” aiming for half a million

charging points by 2030, compared with 100,000 today. It lags far behind China, which already had more than 1.3 million chargers midway through 2020, over 550,000 of which were public. France, which currently has 30,000 public charging points, expects the figure to reach 100,000 by the end of 2021. One of the pioneering countries in the field is European: Norway.

The car can no longer be reduced to a means of personal mobility. Today, the focus is on mobility solutions.

Always at the cutting edge of developments, its capital Oslo, which has more than 3,000 chargers for a population of less than 700,000, joined forces in 2020 with car manufacturer Jaguar Land Rover to offer a wireless charging network for powering the city's electric taxis.

## 3. The race to optimise batteries

The other main challenge concerns electric batteries. At present, the most efficient technology uses lithium-ion. As processes become standardised in the next two to three years, batteries of the same size will be four times more powerful.

It's a field in which Elon Musk's company Tesla has big ambitions. With his latest-generation product, the 4680 battery cell, the Tesla boss hopes to reduce cost per kilowatt-hour by half while at the same time increasing range by 54%. To achieve this, the billionaire is



relying on his existing gigafactories in Nevada, New York and Shanghai and a new one in Berlin, which is due to be inaugurated in the autumn of 2021 and which will produce battery systems, drive units and vehicles, including the latest addition to the brand, Model Y. The problem is that the electricity generated to power an electric battery or produce hydrogen for a fuel cell (another promising avenue for electric mobility) is not always low carbon. It's still often produced by coal and gas-fired plants. However, “green” initiatives

are emerging. Lhyfe, a company based in Nantes in western France, has developed a site to mass produce hydrogen by electrolysis using wind power as of 2021.

## 4. Shift in practices driven by digital technology

But this technological and industrial revolution will be nothing without a shift in practices, involving digital solutions in particular. The expansion of the electric mobility market will be

accompanied by the creation of data platforms, applications and a whole ecosystem. That's because electric vehicles, too, are connected. And as such, they become the focus of attention for many providers of products and services that are beyond the scope of the traditional automotive industry. Car manufacturers, telecoms network operators, insurance companies, financial institutions, software and hardware suppliers, and public bodies are now having to work together on digital platforms.



ENERGY

ACCELERATION

# EBORN PLUGS INTO EASY CHARGE IN FRANCE

**A VINCI Autoroutes-VINCI Energies joint venture has been managing France's largest network of charging points for electric vehicles since August 2020.**

Set up in 2015, the eborn interdepartmental electric charging network currently brings together 11 energy authorities in south-eastern France. With 1,200 charge points spread throughout the regions of Auvergne-Rhône-Alpes and Provence-Alpes-Côte d'Azur, the network provides homeowners, businesses and local authorities with a single charging service for electric vehicles and plug-in hybrids. In August 2020, a consortium comprising Easy Charge, a VINCI Autoroutes-VINCI Energies joint business unit, and investment fund FMET (Fonds de modernisation écologique des transports) was awarded an 8-year concession contract to manage and expand the eborn network. "We're responsible for funding new infrastructure and for operating,

maintaining and managing the network," says Eric Mendels, manager of the Easy Charge Lyon business unit.

**"We are committed to responding to faulty charging points that are used regularly within 24 hours."**

#### **Less than 30km away**

Eborn is the largest network of this kind in France in terms of the number of charging points. Around 100 of its chargers provide power at 50kW, delivering 100km of range in less than 30 minutes. With facilities both in urban and rural areas, including the mountains

and even ski resorts, the network ensures users are always within 30km of a charging point. "Thanks to the eborn badge, our subscribers not only benefit from preferential rates but they can also use almost all the other charging networks in France like Belib' and Ionity," points out Mendels. The advantage of Easy Charge is that it handles not just the design and construction but also the operation and maintenance of the network by drawing on the expertise of all VINCI Group business units, including Eurovia, VINCI Autoroutes and VINCI Energies. "This wide range of skills makes us the sole partner for the 11 departmental energy authorities heading up eborn," states the Easy Charge Lyon manager.

#### **100 additional charging points by 2022**

Mendels stresses how crucial the commercial know-how of



VINCI Autoroutes is, of which he himself is a former employee, in managing B2C subscribers. With some 3,000 subscribers to its name, eborn has developed various services, such as the option to pre-book chargers (for 30 minutes), start charging via the smartphone app or use a system to suggest a location for a new charging point, for example.

"As soon as three people request that a charger be installed in the same area," he explains, "we start a feasibility study to see if it would be appropriate to set up a new facility locally." As far as servicing is concerned, maintenance is of course key. "We are committed to responding to faulty charging points within 72 hours, and 24 hours for

chargers that are used regularly," states the business unit manager. The company is also committed to responding within two hours to clients whose cable is stuck in the charging point, "which fortunately doesn't happen very often!" says Mendels whose company plans to invest €3 million in installing 100 additional charging stations by 2022.

# CONSTRUCTION INDUSTRY, A PIONEER OF ELECTRIC MOBILITY

**The VINCI Group is testing and developing wireless charging technology under pilot schemes taking place in Germany. The electric road, a smart system for charging electric vehicles, is an innovation that could hit our roads within 5 to 10 years.**

The European Union's Sustainable and smart mobility strategy, a report published in December 2020, expects there to be 30 million electric vehicles (EVs) in operation in Europe by 2030. And Boston Consulting Group (BCG) estimates in a study entitled The Electric Car Tipping Point that EVs will have seized a third of the market in terms of global sales by 2025 and over half of it (51%) by 2030. Suffice to say that electric mobility is no longer a figment of the imagination or even a far-off goal. For the promise to become a reality, rollout now depends on three major issues: battery production, the charging process and range.

As far as charging and range is concerned, an innovation that has undergone testing over the last few years is opening up promising

prospects: the wireless electric road. Sweden paved the way back in 2019 by building the world's first wireless charging road on the island of Gotland. Using this technical solution, a vehicle can be powered without wires thanks to a sensor located on its underbody which "communicates" with electric coils embedded in the road surface. The charging process takes place between transmitter pads in the road and receiver pads in the vehicle by establishing a magnetic field and using it to transfer power.

### Testing at advanced stage in Germany

In-road dynamic wireless charging for EVs is therefore no longer an illusion. Following on from Sweden,

Germany is at an advanced stage of testing in the field. In April 2021, a 100m-long road section equipped with the charging technology was inaugurated in a bus station in Karlsruhe as part of a pilot scheme led by energy company EnBW (Energie Baden-Württemberg). And a second project has been under way since January that involves installing the system on another 100m stretch of road, this time in Cologne, on the initiative of BAST (Bundesanstalt für Straßenwesen/Federal Highway Research Institute).

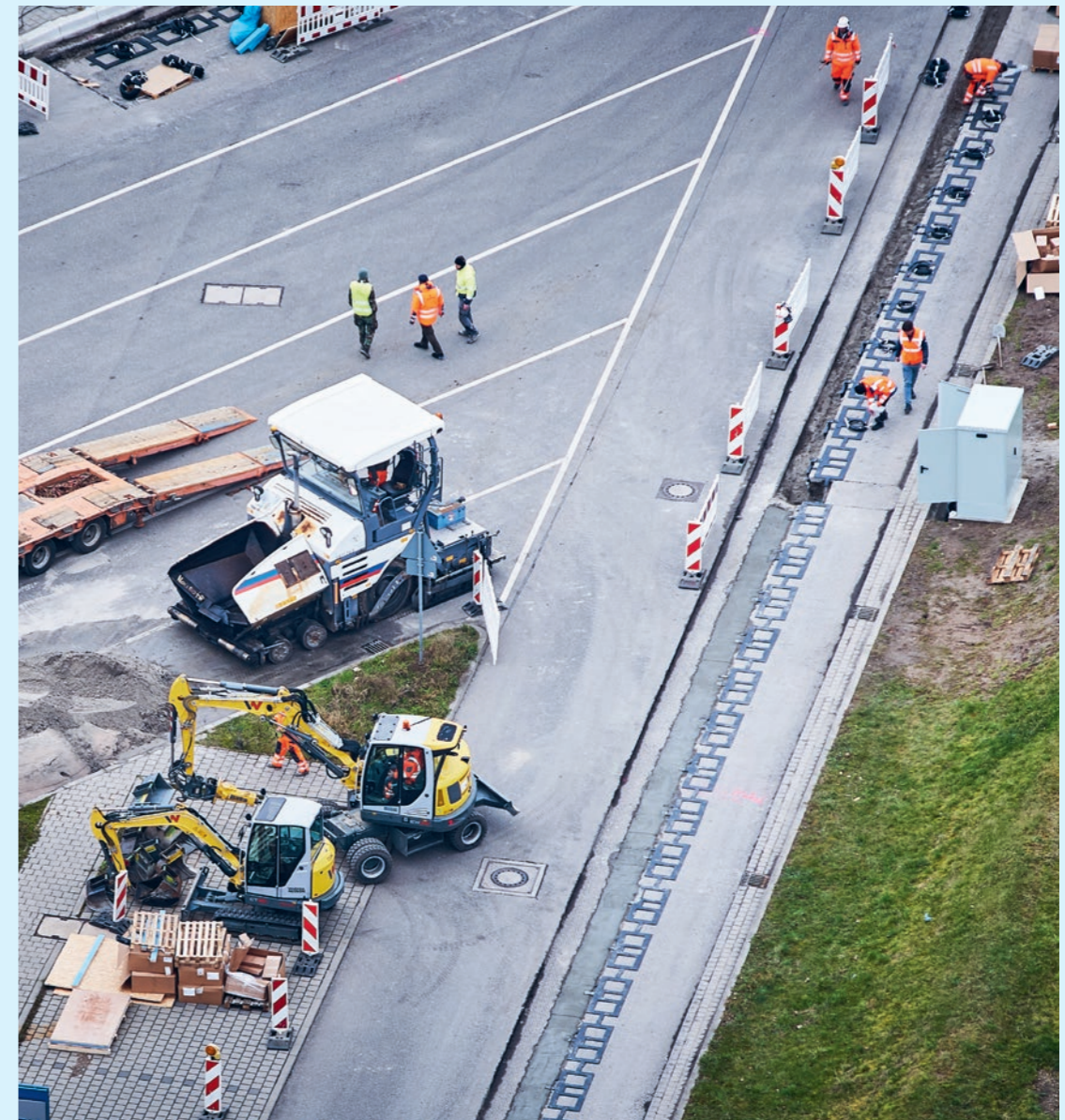
### Three VINCI entities involved

The construction industry is thus becoming a pioneer of electric mobility. In this particular case, it was a VINCI Group solution that

was selected in Germany for the two projects. The goal is to build fully functional roads that enable EVs to be charged wirelessly while on the move. The technology reduces battery size and consumption, increases range and shortens time spent at charging points. With this wireless charging system, which is compatible with all vehicle types

and all road categories, several hundreds of metres of equipment can be installed in a single night. Furthermore, a billing unit is connected to each receiving pad in vehicles to track how much electricity is captured. Three VINCI Group subsidiaries, Omexom, Axians and Eurovia, two of which belong to VINCI Energies, are involved in these pilot schemes in partnership with the Technical

University of Braunschweig, Volkswagen and ElectReon, the Israeli start-up behind the charging technology. "Omexom is responsible for installing the power supply management unit and internet connection. Axians is handling the IT security for the integrated payment system in the vehicle receivers. And Eurovia and its subsidiary VIA IMC are planning





and building the system as a whole and ensuring its stability,” explains Dirk Ebersbach, VIA IMC manager.

“The system operates in off mode, which means that it is only activated and generates an electromagnetic field when a vehicle drives over the pads.”

#### A tried and tested system

The main challenge has been to deliver system reliability. “We had to make sure that all the electronics embedded in the road don’t deteriorate over time or with adverse weather conditions.

To do that, we performed numerous asphalt quality tests and opted for small trenches to bury the cables so as to limit the pressure on the electronic systems,” points out Ebersbach. As regards the health impact of the radiation from the electrical systems, the VIA IMC manager provides reassurance that: “The system operates in off mode, which means that it is only activated and generates an electromagnetic field when a vehicle drives over the pads, lasting a few microseconds.” All that remains is for a business model to be found that ensures the economic viability of the system. Will investment be provided by the public sector, the private sector or a combination of solutions? All this has yet to be resolved. But for Ebersbach, one thing is certain: wireless road charging will be a reality for us all within 5 to 10 years.

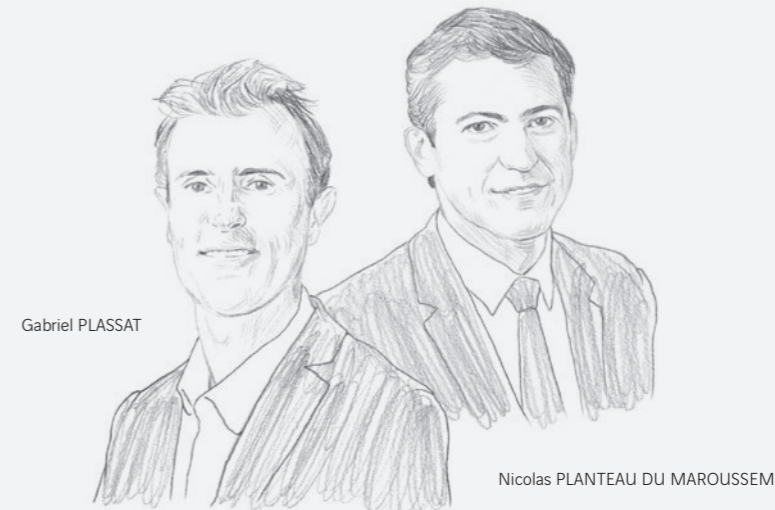


## ABOUT AGILITY

ENERGY

ACCELERATION

# WHAT CAN BE DONE TO ACCELERATE LOW-CARBON MOBILITY?



Gabriel PLASSAT

Nicolas PLANTEAU DU MAROUSSEM

**The transport sector accounts for a large share of greenhouse gas emissions. With climate change an urgent priority, what levers can be pulled to bring new travel modes, particularly electric ones, to a mass market?**

**What is the role of the various stakeholders, citizens, businesses and communities? What lessons can be learned from the Covid-19 crisis? Nicolas Planteau du Maroussem, managing director of the Infrastructure IDF Nord Est pole at VINCI Energies France, and Gabriel Plassat, co-founder of the La Fabrique des Mobilités mobility lab, share their views.**

**What are the current barriers to the expansion of low-carbon mobility? Is it a problem of supply or demand? Infrastructure or services?**

**Nicolas PLANTEAU DU MAROUSSEM.** The answer depends on the area. In Greater Paris, for example, there's a fairly comprehensive supply of low-carbon mobility options, and public transport has seen significant and long-standing expansion (metro, tram system, electric buses, car-sharing, etc.). Indeed, the range of options is continuing to grow. But that's not necessarily the case in all metropolitan areas in France. So the "supply and demand" answer can't be the same. As far as electric mobility is concerned, the barrier remains psychological in relation to vehicle range. There is still some way to go on the supply side before

**"Many businesses are increasingly building staff awareness and giving thought to their mobility plan."**

Nicolas PLANTEAU DU MAROUSSEM

There is a lack of awareness of funding principles and of the cost of the various services. All of these issues will hamper the development of mobility and behavioural changes. The reality is that there is very little behavioural change in terms of mobility.



**Therefore, what key factors will drive the acceleration of low-carbon mobility?**

**G. P.** The Covid-19 episode, in particular, has led to a dramatic increase in the use of bikes in some communities. So some constraints turn out to be conducive to shifts in practices and behaviours. Electric mobility is a negative turned into a positive: by getting rid of the internal combustion engine, you attract new industrial players with substantial investment capacity. It's an opportunity to switch up the players and, as a result, the range of products and services.

Digital technology is of course another key factor that has changed practices. Today, phones serve as a mobility assistant and in some cases as a key providing access to vehicles that you don't need to buy but that you pay for on a per-use basis.

we have efficient infrastructures and services that will reassure users. New solutions in sustainable transport, car-sharing and micromobility must also be developed throughout communities. But importantly, people also need to be educated in order to drive change in behaviours and mindsets.

**Gabriel PLASSAT.** The problem tends to be tackled from the supply side and not enough from the demand side. When all is said and done, relatively little attention is paid to the mobility-related behaviours, needs and practices of citizens across all regions. So the answer is both "supply and demand" and both "infrastructure and services". However, there's another issue that deserves a mention, and that is funding. No one pays the price of their mobility!

**N. PDM.** More has to be done to show the efficiency of low-carbon mobility services like public transport, which is an efficient option. Environmental awareness is gathering pace. I note that many businesses are increasingly building staff awareness and giving thought to their mobility plan. All these things are likely to remove a number of barriers.



**There's a lot of talk about the energy mix. What would a good modal mix look like?**

**N. PDM.** There is a tendency to design our mobility services as if we were always setting off with the whole family in a full car on an 800km trip. But that's not an everyday scenario, far from it! It would make more sense to design our transport modes in relation to the journeys we make most frequently. And in the vast majority of cases, our most frequent journeys are fully compatible with walking, cycling, electric cars, public transport and many low-emission transport modes.

**G. P.** That's where MaaS (Mobility as a Service) comes into it. Here too, there are now very powerful players on the scene with a vested interest in people no longer having car keys in their pocket. They sell mobility by

the journey. At La Fabrique des Mobilités, we are working on a project called MOB, a mobility account that provides each individual with a platform for all of their mobility data and enables them to receive incentives based on their habits. It's a way of rewarding mobility practices rather than purchasing an object.

**"With the health crisis, we've had a taste of what I call minimum viable mobility."**

Gabriel PLASSAT

**Does the expansion of more sustainable forms of mobility necessarily entail a reduction in mobility?**

**G. P.** This is referred to as de-mobility in France. In fact, it's pretty much uncharted territory. And it's divisive from a "mobility means freedom" angle. But actually, what it often means is an hour of your time wasted in traffic jams. It's a question of the mix and having the option to select different types of mobility. However, there are no industrial players involved in de-mobility.

We're working on the idea at the lab. One example is setting up a network of service hubs in an area that would enable people to travel less far to access human and public services. The hubs could even be mobile and move around, depending on the day or on needs.

**N. PDM.** As regards the de-mobility concept, we need to be able to explain that it can make everyday life more pleasant. We're seeing the emergence, in large cities in particular, of ideas like the 15-minute city where residents can meet all their daily needs close by.

**What is the role of the various players, hauliers, businesses and citizens in reducing mobility?**

**G. P.** Testing mechanisms can be put into practice to contribute towards this. These might take the form of "mobility challenges", which involve trialling alternative

ways of travelling to work, for instance. The “Grand Paris Seine & Oise” urban community has tested a hub network. We’re looking to standardise these networks which should help reduce mobility and which will be easy to deploy.

**How can digital technology and more broadly the concept of the smart city accelerate this new form of diversified and sustainable mobility?**

**N. PDM.** As in many other sectors, digital technology is set to facilitate the implementation of all these new mobility solutions thanks to the real-time effect, applications and intermediation. We’re seeing it in cities, with new micromobility options, car-sharing, carpooling, transportation aggregators and Mobility as a Service.

We’re currently working on a tender for a local authority which wants to be carbon neutral. It is fully signed up to the idea of offering a complete mobility service that is as decarbonised as possible. And digital technology, in this respect, makes a vital contribution.

**“When all is said and done, relatively little attention is paid to the mobility-related behaviours, needs and practices of citizens across all regions.”**

Gabriel PLASSAT

**G. P.** Digital offers a way of doing things differently. But it also creates new problems such as data retention and confidentiality. Some private players have more data relating to mobility practices than the public players supposed to be handling mobility in their area... Control over this data must be rebalanced. With Covid-19, we’ve also seen that the concept of tracking and monitoring is both important and sensitive. So we have to look at how to use digital technology in a way that helps us make better decisions while at the same time respecting and protecting privacy.

**N. PDM.** Can I also mention the issue of cybersecurity: placing digital technology at the core of mobility can open up a potential gap for malicious organisations if things aren’t done properly.

**“Digital technology is set to facilitate the implementation of all these new mobility solutions.”**

Nicolas PLANTEAU DU MAROUSSEM

**Let’s talk about the impact of the health crisis. Will the rebalancing between the city and the countryside that has been under way for the past year also have an impact on the uptake of low-carbon mobility services?**

**G. P.** It’s difficult to predict in the long term. But what we’ve experienced is interesting as we’ve had a taste of what I call “minimum viable mobility”. What is the minimum that a region, municipality, neighbourhood or household needs in order to live? Look at individual activities first, then come up with mobility solutions. The role of the community is to bring services as close as possible to residents so as to discourage them from moving around as much as possible.

**N. PDM.** There may be positive impacts, but also more negative aspects. The dispersal model could be a problem in terms of the distance to be travelled to access services. And electric mobility is more suited to suburban or even rural environments. There are home charging solutions available in these areas, often in individual housing, and people living there travel enough kilometres for this transport mode to be advantageous in terms of emission reduction.

**G. P.** Sure, but we should bear in mind that there are households that don’t decide where they live or work and that are often highly dependent on cars. It’s better to know these households and help them in the transition.



# MAKE A DIFFERENCE WITH VINCI ENERGIES!

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INDUSTRY TRANSFORMATION

# MICHELIN MAN'S WINNING CRM PRO FORMULA

Vincent Belot, director of the Engage programme at Michelin, looks back at the steps taken by the Group over the past four years to introduce a unified solution designed to manage its B2B customer relationship policy.

## When was the Engage programme initiated and what were its initial goals?

**Vincent Belot.** In 2016, in the US, if Michelin dealers wanted to interact with the Group, they had two options: either pick up the phone or go through the 18 information systems of the various Michelin entities while remembering all 18 passwords. Likewise, if Michelin customer services wanted to obtain client data they had to use as many as 10 different in-house information systems. To remedy the situation, Michelin decided to prioritise customer centricity. This gave rise to the Engage programme, which was set up in 2017 for the company's B2B audience under the motto "Make it better to work at and with Michelin."

## How was it rolled out?

**V.B.** Engage was initiated in the US with the aim of improving customer relationship management (CRM). Its rollout would not have been possible without the direct support of the executive committee and the commitment of the number two at the time, Florent Menegaux, now CEO, who sponsored the programme. In three years, the 150 countries in which Michelin has operations have integrated Engage. As a result, we now have unified processes and solutions within a single system based on the Salesforce platform.

## What obstacles did Michelin have to overcome both

## internally and with its partners to introduce the programme?

**V.B.** We didn't experience any major problems with our clients or partners. Quite the opposite. The difficulties we encountered were more to do with the scope of the project. Disseminating this kind of programme in a global group like Michelin in such a short time frame requires changes in practices not only at local level but also within each business line. A number of factors contributed to the smooth implementation of the programme: priority was given by the executive committee to the project and to the resources allocated to it, regional sponsors were appointed to coordinate the rollout and manage change, and a local dedicated team was formed in addition to the core central team.



**Besides the scope and time constraints you mentioned, what other obstacles did you face?**

**V.B.** The core Engage team, which initially comprised 20 people, now has 150 Michelin members or partners. So it's also about supporting the rapid development of a set-up based in multiple locations. Another major obstacle was data. Unifying data from

**"Currently, 70,000 clients (100,000 by the end of 2021) have access to a single portal using a single account and a single password."**



18 different information systems to achieve a single repository of clients, products, contacts, etc. is no small task. We're talking about billions of combined data. Lastly, Engage has to be adapted to the company's other information systems which are also changing and transforming at the same time.

**Four years on, what tools or measures that have been put in place best illustrate the programme?**

**V.B.** The combination of our Product Screen and Smart Opportunities solutions is a prime example of Engage's effectiveness. Our sales people can identify new opportunities by comparing the sales of a given client with

those of other clients with the same profile in the market.

**Can you give us some figures that reflect the effectiveness of the Engage programme?**

**V.B.** First of all, as I mentioned, moving from 18 systems to a single information system was a real feat. Currently, 70,000 clients (100,000 by the end of 2021) have access to a single portal using a single account and a single password. Data quality improved from 20 to 50% in 2018, depending on the business activity, and subsequently to 90%. We've achieved our aim, which enables us to have a really effective CRM system. Let me give you some other figures. Claim processing

time has been reduced by a factor of three; the utilisation rate of training modules for Michelin products has increased by 40%; and thanks to better client data accessibility, our sales people have saved one hour of working time, on average, per day. Finally, we estimate the sums generated in 2019 by the Engage programme in the US at around \$150 million.

**How has this connected customer experience led to better synergy between the Group's various divisions and subsidiaries?**

**V.B.** Michelin has been committed for a number of years to diversifying beyond tyres. With this in mind, it has acquired several companies

including Camso [rubber tracks and solid tyres] and Sascar [truck fleet management software], each with its own IT solutions.

In order to supply their products to Michelin clients, we developed a solution in 2020 that allows Engage to communicate with these companies' systems. The outcome is that we can achieve cross-selling.

**Has digital technology enabled Michelin to bring its marketing campaigns back in-house?**

**V.B.** Yes, we've been able to bring some of them back in-house precisely thanks to all the work undertaken on data quality.

But this means developing marketing and digital skills internally, while taking into account varying needs across countries.

**What is the next step for Engage?**

**V.B.** What comes next is Artificial Intelligence. In fact, our Product Screen solution has already integrated AI, with the system making recommendations based on an analysis of clients' histories and needs.

This is done in the context of the market situation. We are now using new automated solutions to further improve the quality of data, which is central to the effectiveness of the system.

**What advice would you give a business embarking on a programme like Engage?**

**V.B.** The first thing would be to ensure strong governance both centrally and at regional and business line level. It's also essential to start working on data as early as possible in the process, even before the programme is launched. Remember too that people are what make the system work. So you have to very quickly set up a plan to facilitate the adoption of the programme by users. Lastly, agility is key to this type of approach. Think big but start small. It's important to quickly deliver value and thus generate interest, with in-house ambassadors promoting the programme.

# PROMOTING TANGIBLE, USEFUL RESPONSIBLE INNOVATION

**Too often used as a slogan, innovation must return to its original purpose – value creation – so that it acts as a catalyst for growth for our business units.**

There's a certain paradox when it comes to innovation. On the one hand, everyone agrees that innovation is more vital than ever: not innovating means dying in the short to medium term, no longer being competitive or able to stand out from the pack. But on the other hand, innovation strategies in businesses are revealing many limitations – innovation used as a slogan devoid of content or meaning, innovation for innovation's sake, cut off from reality – which can lead to disillusionment.

To solve this paradox, VINCI Energies has built its innovation strategy around three convictions:

1. For every innovation there must be a use case benefit.
2. Innovation must be meaningful, it must meet an objective.
3. Innovation is everyone's business, it starts in the field.

## Innovation that is tied to use case benefits

As far as innovation is concerned, the market is at least as important as technology. An innovative idea in itself has little value. It's about having the right idea, at the right time, for the right use case and the right market. Innovation is intrinsically linked

to the notion of use. In order for an idea to become an innovation, clients have to buy it. And for them to buy it, they have to benefit from it, whether from its performance, its ease of use or whether they can promote it to their own end-client.

Clients will buy into the idea all the more readily if they've been involved its design (through an open innovation process), with the key to success probably being to take small steps and implement a collaborative test & learn approach before broader deployment.

## Innovation that has meaning

An innovation is more likely to be successful if it supports a company's wider goals. And in fact, its value is increasingly linked to meaningful issues (ethics, sustainable consumption, CSR). It's clear that new carbon emission reduction goals set by businesses are unlocking creativity around innovation and giving a new lease of life to ideas which until now haven't "passed muster" purely through the application of financial criteria.

## Innovation that starts in the field

In order to develop useful, tangible ideas that add value and meaning, innovation cannot be left solely to R&D and innovation units or laboratories. At VINCI Energies, innovation is driven by a unique and decentralised organisational structure of 1,800 business units, which deal on a daily basis with

changes in their markets and in their clients' needs. These business units all have innovation in their DNA and are constantly innovating in the field.

The various in-country VINCI Energies innovation teams along with company brands and of course the Innovation Department help business units make the most of this potential by:

- giving them easy access to methods, processes and ecosystems (start-ups, partners, universities) to develop innovative ideas and translate them into projects.
- stimulating thinking based on technical and competitive intelligence.
- fostering the sharing of good practices and circulating information.
- pooling and disseminating useful innovations to as many people as possible.
- promoting innovations outside the company.



**Philippe CONUS,**  
Innovation Director  
VINCI Energies



## AGILITY **PICTURE**

# RESURGENCE OF WATERWAYS

The “all-truck” 1970s saw them eclipsed by the road and thermal combustion engine, but times change, and the climate emergency is making rivers and canals an attractive proposition once again. Take the Centre-Bourgogne waterways, which are striving to modernise with support with Enfrasy: the French waterways authorities have entrusted this VINCI Energies business unit with motorising the network’s locks and floodgates. This illustrates the public authorities’ ambition to return this low-carbon form of transport to the heart of transport policy.



## AGILITY **PROFILE**

# VINCI ENERGIES, ACCELERATOR OF ENERGY AND DIGITAL TRANSFORMATION

In a world undergoing constant change, VINCI Energies focuses on connections, performance, energy efficiency and data to fast-track the rollout of new technologies and support two major changes: digital transformation and the energy transition.

Keeping pace with market change, VINCI Energies integrates customised solutions to help its customers roll out technologies that serve a useful purpose and care for the planet, from design to implementation, operation and maintenance.

VINCI Energies' 1,800 agile and innovative business units build on their strong regional roots to boost the reliability, safety, sustainability and efficiency of buildings, factories, energy, transport and communication infrastructure, and information systems.

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