

ROUTES^{#49}

SPRING - SUMMER / 2023



WE OPEN THE WAY

FREEZE-FRAME

OUR PEOPLE HAVE TALENT!

As part of the Bouygues Picture, a global photo competition open to all employees in the Bouygues Group, Luc Bally, a paver driver at Colas, won the jury's prize for his stunning photograph capturing a road in Alsace, France, among over 2,000 submissions from across the world.



**LEARN MORE
ABOUT
LUC BALLY
PASSION**

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PANORAMA

Colas' mission is to design, build and maintain sustainable transport infrastructure from our local roots, around the world. Connecting communities and fostering exchanges is the Group's action.

In **Morocco**, we meet up with employees from the Colas companies working together in full synergy to bring emblematic projects to fruition. We then embark on a journey to Helsinki (Finland), Nouméa (New Caledonia), Singapore, Niagara Falls (Canada) and other destinations around the world, where Colas teams are winning new contracts, working on projects and handing over completed infrastructure.

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FOCUS

Capitalizing on industrial activities, in particular quarries and bitumen, in a way that is responsible and sustainable, is part of Colas' development strategy.

Here, we are focusing on one of Colas' three main lines of business: **Materials**. The Group boasts significant operations in the production, sale, and recycling of materials: aggregates, ready-mix concrete, precast concrete. Over the years, Colas has built strong positions by expanding its portfolio of quarries and recycling platforms. Committed to preserving biodiversity, promoting the acceptability of its sites, and developing recycling, Colas aims to consolidate its status as a leading industrial player.

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WIDE ANGLE

Colas was born from a disruptive innovation and has continuously cultivated a pioneering spirit that enables it to anticipate and provide solutions to the major challenges of today and tomorrow. The Group's ambition is to be the global leader in innovative, sustainable mobility solutions.

Now let's zoom in on the **Technical** sector, whose expertise plays a vital role in supporting the activities and commitments of the Group. Colas' continuous development of innovative products and solutions, from our laboratories to our construction sites, is driving the emergence of new approaches that tackle environmental challenges and more. By reimagining transport infrastructure, Colas is actively exploring pathways towards more sustainable, responsible mobility.

EDITORIAL



FRÉDÉRIC GARDÈS,
Chairman & CEO, Colas

2023: A MILESTONE IN THE TRANSFORMATION OF COLAS

"In recent months, the economic environment has demonstrated signs of stability, following an uncertain, volatile 2022. While inflation continues to remain high, it has become less volatile. Additionally, energy prices have experienced a slight decline and are fluctuating less. We remain vigilant, nevertheless.

Above and beyond the more favorable backdrop, 2023 is poised to be a pivotal year, marking an important milestone on the path of Colas' transformation. The strategic action plans that were set in motion several years ago will finally come to fruition. A prime example is the Bitumen sector, where the delivery of two ships this spring will enable Continental Bitumen to expand its capacity in the Europe, Africa, and Middle East region. Meanwhile, McAsphalt in North America will receive a new bitumen tanker. Another priority is the Materials division, which is expected to benefit

significantly from the creation of Keystone, starting this year. The transformation of Colas is also driven by advancements achieved through our corporate social responsibility project called ACT. This initiative is the result of a genuine, consistent approach aligned with our core values, and it has garnered strong commitment from teams across all our geographies. With the Group's new carbon footprint calculation methodology, we have gained the capability to initiate measures to reduce our greenhouse gas emissions with enhanced accuracy and relevance. We are also eagerly anticipating the roll out of new, innovative low carbon solutions.

In 2023, as in every year, the exceptional talents within our organization remain at the core of Colas' success. They help drive our transformation, achieve record-breaking order backlogs, and bolster our remarkable potential for growth."



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IN VIDEO](#)



**APPOINTMENT:
VALÉRIE AGATHON**

Valérie Agathon was appointed Vice President, Administration, Finance, and Strategy of the Colas Group on February 21, reporting directly to the Chairman & CEO. She also sits on the Strategic Committee and the Executive Committee.



“I am deeply committed to the success of the Colas Group and its thousands of dedicated employees worldwide who all contribute invaluable to Colas’ achievements on construction projects, quarries, asphalt plants, emulsion plants, bitumen terminals, and in support functions.”

VALÉRIE AGATHON,
Vice President, Administration,
Finance, and Strategy



**CONTINENTAL BITUMEN:
DELIVERY OF THE FIRST
OF 3 SHIPS!**

To strengthen its foothold throughout the bitumen value chain, Colas is acquiring three latest-generation bitumen tankers. The first has just been delivered and the second is due to arrive in August to serve the network of terminals operated by its subsidiary Continental Bitumen (Europe, Africa, Middle East). Designed and operated by Colas, they are powered by liquefied natural gas (LNG). A third bitumen tanker of similar design will also be delivered this year to McAsphalt, a Canadian subsidiary of the Group.



COLAS TEAM CUP 2023

The Colas Team Cup 2023 saw the convergence of 230 qualifiers from around the globe, gathering in Marrakech, Morocco for the thrilling two-day world finals. With determination and fair play as the core principles, this 3rd edition of the sports and talent competition was proudly sponsored by renowned elite British athlete Paula Radcliffe. In order to offset the 602 tons of CO₂ equivalent emitted during the event, an official reforestation project, certified by the Ministry of Ecological Transition, is currently underway on a former agricultural site located in eastern France.



**A LOOK
BACK ON THE
CTC FINALS**

**“Faster, stronger,
and above all, together!
That’s the spirit of the
Colas Team Cup.
Personally, I feel very
strongly about this event,
a perfect reflection of our
values: caring, sharing and
daring. The World Finals
of the 3rd CTC gave
me the opportunity to meet
Colas people from all
over the world outside
the usual work environment.
See you in two years
for the next CTC!”**

FRÉDÉRIC GARDÈS,
Chairman & CEO, Colas



VIGILANCE, EVERY STEP OF THE WAY

Consolidating a Safety culture remains a paramount commitment for Colas. Throughout the year, events are held to mobilize its 58,000 employees and to foster adherence to the lifesaving rules. A noteworthy occasion in this regard is the upcoming 10th annual Safety Week, scheduled from June 12 to 16, which will address the critical issue of collision risks. Additionally, the occasional “Stop for Life” safety shutdown serves as a significant moment dedicated to safety, during which all activities within the Colas Group come to a halt.

An aerial photograph of a desert landscape. A wide, paved road curves through the sandy terrain. Several orange construction vehicles, including trucks and excavators, are visible on the road. The surrounding area is arid with sparse green bushes and small trees. In the distance, there are some small, simple buildings. The sky is clear and bright.

Colas' mission is to design, build and maintain sustainable transport infrastructure from our local roots, around the world. Connecting communities and fostering exchanges is the Group's action. In Morocco, we meet up with employees from the Colas companies working together in full synergy to bring emblematic projects to fruition. We then embark on a journey to Helsinki (Finland), Nouméa (New Caledonia), Singapore, Niagara Falls (Canada) and other destinations around the world, where Colas teams are winning new contracts, working on projects and handing over completed infrastructure.

PANORAMA

MOROCCO CLOSE TIES



The Group has been present in Morocco for nearly 100 years, a century peppered with flagship projects, which have firmly established Colas as one of the country's leading players in the construction sector. Backed by its road and railway subsidiaries and its booming industrial activities, Colas is more than ever a genuine partner in the development of communities across Morocco. This report takes us on a tour of the country's landscapes, from city to desert.

C

olas and Morocco go back a long way together. "The Group has built up a relationship of trust with contracting parties to become a reference in the Moroccan market", explains Pierre-Gilles Douriez, North/Central/West Africa zone director. How? Through pivotal projects contributing to the development of the country's major towns and cities. For nearly a century, Colas has helped drive Moroccan mobility, constructing the country's highways, expressways, ports, airports, and even its first high-speed rail link. It all started in Casablanca, in the 1930s and the city is still home to Colas' Head Office for the zone today. The multiple projects conducted in the country's economic capital are a permanent showcase for the full range of the Group's expertise. For example, in 2022, Colas Rail secured two contracts for the future Lines T3 and T4 of the Casablanca tramway. Here, Colas is simply picking up where it left off, since the Group has been involved in all the country's tramway projects, including the first two lines in Casablanca.

Expert teams

Casa-Port Railway station, the nerve center of the city. One of the terminuses of the future Line T3 of the tramway is taking shape, with Colas Rail teams operating in a dense urban environment. Launched in 2021, rail construction work is nearly complete. The teams, led by site supervisor Youssef Belhaou, are completing the finishing work, before the concrete lining is applied, an operation scheduled for that very evening. Fifteen skiller workers, welders and surveyors are hard at work.

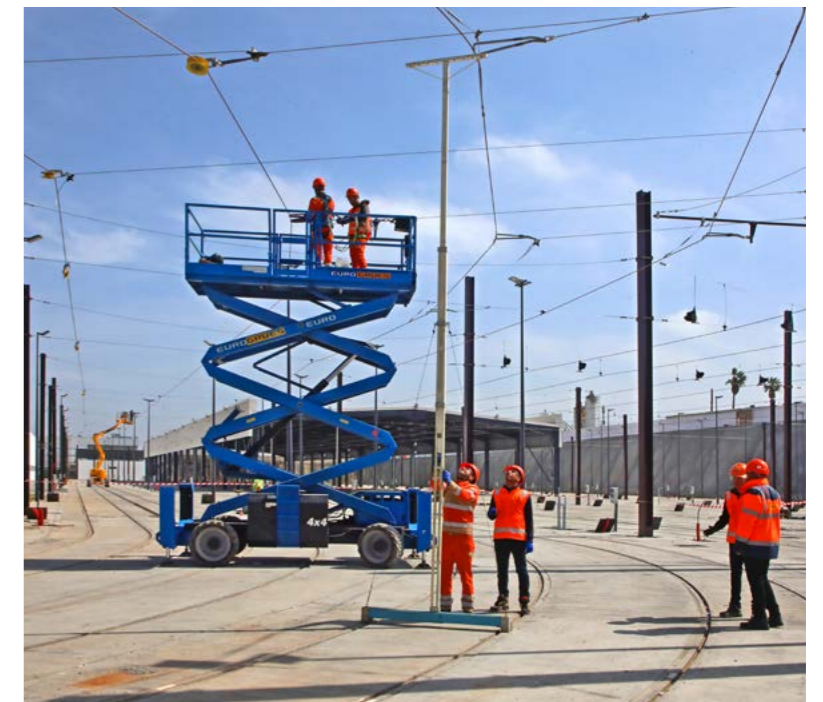
Colas is a reference in the Moroccan market.

They have been with Colas for around ten years, building up experience on major projects, such as the Rabat-Salé tramway and the high-speed rail link between Kenitra and Tangiers, along the way. "By building reliable transport infrastructure, we can proudly say that we are helping make life better for many communities," says Youssef. Further south, as part of the second contract, the electrification of Lines T3 and T4 is underway. On a mobile platform, two harnessed and qualified employees are hard at work. On each of the 1,000 masts along the route,



CASABLANCA TRAMWAY

Colas Rail Morocco secured the overhead contact line contract for the Casablanca tramway.



>>> they check the position of the arms and the overhead line, and conduct stagger operations to make sure that the line has several points of contact with the pantograph. In total, the teams are installing 30.5 kilometers of overhead contact line and building 21 electrical substations.

A variety of challenges

This flagship project for North Africa's most densely populated city is like many others carried out by Colas in Morocco. Over the years, the Group has delivered numerous large-scale projects that have built the reputation of its local companies. In a highly fragmented Moroccan market - there are currently more than 1,200 construction companies in the country - GTR (Grands Travaux Routiers, the road subsidiary) is still the leader, thanks primarily to its long-standing foothold. Its five profit centers covering the entire country handle contracts with a variety of challenges. For example, in Khouribga, around one hundred kilometers from Casablanca, GTR has

just delivered a vehicle testing center. Car-makers can use the facility to test their prototypes and carry out performance tests. As Youssef Benihia, project manager, explains, "With the arrival of several vehicle manufacturers, Morocco is becoming an automotive industry hub. Building the first testing center of this caliber in Africa is yet another opportunity for GTR to promote its technical prowess." With 30 km of track of various types, 18 different test modules, a speed circuit, a flat area, a dry and wet braking zone, etc., the Khouribga mobility and automotive center is a real showcase for Colas expertise. An exceptional project on a 400-hectare site, which GTR secured thanks primarily to BIM (Building Information Modeling). The teams led by Khalid Sbaï, GTR's BIM manager and BIM officer for Colas in Morocco, produced a model of the tracks at the call for bids phase. "By modeling the terrain, we were able to get a clear idea about the constraints and specific characteristics we were dealing with",

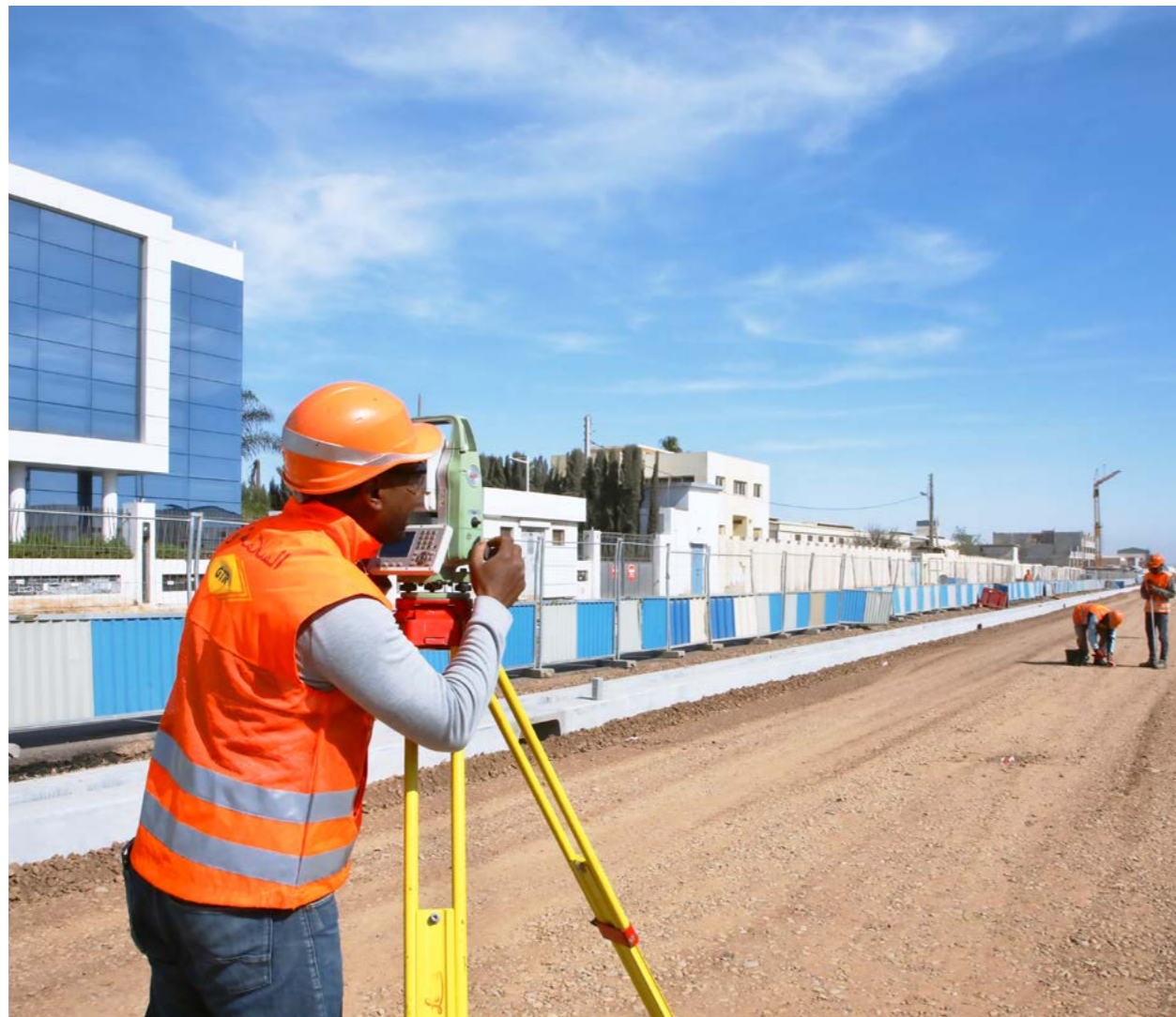


< **BATTERY OF TESTS**
At the Khouribga center, a module is available to test vehicle behavior on inclines of up to 32%.



ALL YOU NEED TO KNOW ABOUT THE PROJECT

> **NEW MOBILITY SOLUTIONS IN AGADIR**
The first Bus Rapid Transit line, built by GTR, is set to transform the beach resort.



explains Khalid. "From this first version, we designed and optimized the project, simulated the various phases of the work and operating methods and were able to convince the customer." Once the contract was secured, the BIM model became the reference for works teams, who consulted it every day to guarantee a high level of precision, through every phase of the project. With this project, GTR had another significant advantage: cutting-edge expertise in terms of the mixes applied, manufactured on site and specifically formulated using local materials. As Maad Mabrouk, head of the Rabat profit center, sums up: "This project is a perfect illustration of synergies in action at Colas: we drew on local skills and took advantage of the Group's global network and experience on other projects of this type. Not forgetting the expertise of the laboratory, which was crucial."

Innovation: a driving force

At the Casablanca Central Laboratory (LCC), Morocco's technical teams support the works centers and develop innovative products. The noise-reducing asphalt used on the acoustic track at the Khouribga testing center is one of some thirty reference products to have been

"By building reliable transport infrastructure, we can proudly say that we are helping make life better for many communities."

YOUSSEF BELHAOU,
Site Supervisor

THE STRENGTH OF BIM

BIM models guaranteed a high level of precision, through every phase of the Khouribga testing center project.



>>>

“Innovative products and processes are crucial to set us apart from our competitors.”

BOUCHAIB SAFIR,
Technical Director, Morocco



designed at the laboratory since 1992. “Innovative products and processes are crucial to set us apart from our competitors”, explains Morocco’s Technical Director, Bouchaib Safir. “We develop solutions adapted to a climate or to specific resources, which improve user and operator safety. And since 2020, in line with Colas’ roadmap, we have been focusing on low-carbon products.” A flagship for research in Morocco, the LCC is a modern, efficient and sustainable facility, just like all of Colas’ sites throughout the country. As in the construction sector, competition is fierce in industries. Colas in Morocco, backed by 3 quarries, 3 bitumen depots and 3 emulsion plants, must constantly innovate and reinvent itself in order to keep up with the arrival of new players. A momentum that has paid off: between 2014 and 2022, Colas’ industrial activity in Morocco grew by almost 300% in terms of sales. A stone’s throw from the LCC and the Casablanca works profit center is the Bled Solb advanced emulsion plant. Commissioned in 2017, it is entirely automated. Human intervention is minimal, reducing risks and ensuring constant product quality. It has 6S certification, as does the Mohammedia bitumen storage plant, located at the port some ten kilometers away. With a 20% market share, Colas is the second largest operator in the Moroccan bitumen market. “A tanker is going to deliver bitumen in three days’ time, so we started to heat the pipeline this morning”, explains Mohammed El Ouadi,

manager of Colas’ three bitumen storage plants in Morocco. The Mohammedia storage plant is the only one in the country to be directly connected to the port quay by pipeline. “Thanks to the pipeline, we are able to transfer a full load (4,500 metric tons) to our tanks in 18 hours, compared to 72 hours by tanker truck.” Around twelve bitumen tankers serve the storage plant every year. The stored bitumen is then distributed internally and to external customers. A fully-loaded GTR tanker truck is leaving the depot as we speak, having been remotely loaded from the control cabin in just nine minutes.

Developing talent

Maria Jemmal, an equipment technician, is extremely familiar with this type of machine. First introduced to GTR’s central workshop during an end-of-studies internship, she is now qualified to become team leader of the heavy truck workshop. “I deal with preventive and corrective maintenance and any repairs than need to be done. I’m also responsible for coordinating the drivers and mechanics, and checking regulatory documents for the bitumen fleet”, she says. “The central workshop is like a school: there are always new machines to discover and new breakdowns to fix! You learn something new every day.” Supporting Maria is Mohamed Jouhari, Assistant Workshop Manager. His 32 years’ experience combined with his team spirit help ensure knowledge is passed on within the central workshop.



RAPID TRANSFER

The Mohammedia storage plant is the only one in the country to be directly connected to the port quay by pipeline. Thanks to the pipeline, it is possible to transfer the bitumen to the tanks in 18 hours, compared to 72 hours by tanker truck.



RENEWABLE ENERGIES

Colas modeled, designed and developed the Taza windfarm. With its 27 turbines, the site will produce 87 MW of power.

“For me, it’s important to support the younger generations by sharing best practices and my expertise with them. We work with operations; a project’s success depends on what we do here!” With 140 employees distributed between the Casablanca central workshop and the centers, the Equipment Performance Department represents more than 10% of employees and plays an active role in the success of Moroccan projects. Its fleet, with more than 500 machines and production operations, is one of the Group’s biggest. “From the roll-out of 6S certification, through to the optimization of equipment usage rates, via reconditioning to increase the lifespan of machines, there is a genuine culture of continuous improvement in our workshops”, points out Remi Perrin, Equipment Director. Supporting operations and working closely with the LCC, the Technical Department is also proactive in seeking ways to improve the Group’s performance.

The nomadic experience

A similar set-up can be found at the Agadir profit center. Colas’ most southerly site in Morocco also boasts a workshop and a bitumen storage plant. And there’s a good reason for this: the profit center, which

operates across close to 70% of the country’s area, needs to be autonomous. “Used to remote projects, teams are sometimes sent to work more than 1,600 km from Agadir. Mobile plants and crushers then need to take over from fixed facilities and the three quarries Colas operates in the country”, explains Alain Bourdois, GTR Director. Capable of mobilizing significant human and equipment resources in a variety of environments, GTR has also made this “nomadism” its strength. Whether it’s in the middle of the Sahara Desert or in the heart of a major urban center, Colas is always more than ready to take up the challenge. The Taza windfarm, the Agadir (see page 14) and Casablanca BRTs and the Tan Tan expressway are all perfect illustrations of the increasing diversity of the work carried out by the Group’s teams. At a time when renewable energies are becoming increasingly important and climate change is transforming usages, Colas proposes solutions to its customers that address their societal and environmental challenges. Efficient facilities, high-performance equipment, innovative products, qualified and experienced teams: Colas holds all the cards to continue to connect Moroccan communities. ♦

A FIRST BUS RAPID TRANSIT LINE FOR AGADIR



In the heart of Morocco's largest beach resort, GTR is responsible for batch 3 of the first bus rapid transit (BRT) line. Operating in an extremely dense urban environment and in record time, teams are constructing the longest section: 6.5 km and 13 stations, along eight broad avenues. GTR is responsible for everything, from facade to facade: the central lane, sidewalks, side roads, networks, urban landscaping, cycle path, etc.



< SARRAH BELCAID,
Project Engineer

"In this highly commercial urban zone, dialogue with residents and businesses is crucial to ensuring the acceptability of the work. The "Hello Travaux" app and good communication on the part of our teams ensured we maintained an excellent relationship with local residents and our customer."



3 QUESTIONS FOR SARRAH BELCAID, PROJECT ENGINEER

OMAR ECHEBRAOUI, >
Site Supervisor, GTR

"The city of Agadir has a development vision for 2025. And the BRT is part of this vision. We are extremely proud to be contributing to the city's transformation and taking up the challenges involved in this type of project. Having previously worked on the route 4025 widening project and the Rabat tramway, this is a new experience."



ONE SAFETY FOR ALL



One Safety is an initiative that aims to promote autonomy in understanding risks and adopting safe behaviors. The goal is to halve the number of accidents and reduce the number of fatal accidents to zero. This initiative demands a change in behavior on the part of managers. Communication is essential. "Morocco is one of the pilot countries for the roll-out of the One Safety initiative. Coaches were trained at the end of 2022 and are now operational. Concrete results are already being seen on the ground and in monitoring indicators. Safety is our absolute priority", underlines Mohamed Amine Barmaki, Health and Safety Manager at Colas Rail Morocco.



FOCUS ON ONE SAFETY COACHES

NEW GLENDALE INTERCHANGE — CANADA



A BRILLIANT DESIGN



In Ontario, a new diverging diamond interchange has been built by teams from Miller Paving Ltd, a Colas company in Canada. This is the first example of its type in the province, with only two others in the whole country. The traffic lanes cross each other thanks to an ingenious system of traffic lights and marking. The structure also incorporates a separate green lane, protected from cars. Public information meetings were held to support the acceptability of the project and explain the relevance of the new interchange that will now be connected to the Queen Elizabeth Way, a major highway that runs along the border between Ontario and Quebec. Journey times should be reduced for motorists in a zone that is currently heavily congested due to its proximity to the US border and Niagara Falls.

BUKIT PANJANG LRT — SINGAPORE



COLAS RAIL ON TRACK IN SINGAPORE

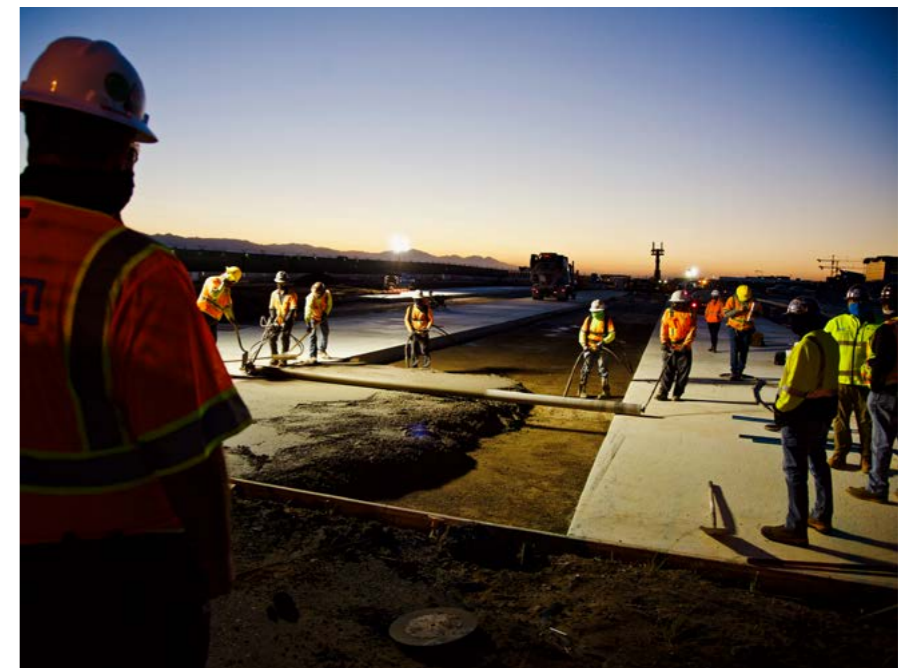
Work to replace the power supply systems for the Bukit Panjang LRT line is making headway. Two thirds of the equipment has already been replaced by Colas Rail crews, who have had to contend with live traffic (tighter scheduling, strict risk management) and obsolete systems requiring extensive upstream preparatory work. The project, a first for Colas Rail in Singapore, has been awarded the TopSite label — the construction sector's first CSR label created by Bouygues Construction — for its various CSR initiatives.

ROADWORK IN LOS ANGELES — USA

RACING TOWARDS THE 2028 OLYMPIC GAMES!



In Los Angeles, Sully-Miller - a California-based Colas company - is working flat out to get ready for the Olympic Games, due to be held in the city in 2028. The city is investing heavily to develop the infrastructures required for the event. For example, as well as renovating a 14-km section of expressway 15, Colas teams have been involved in the city's waterfront redevelopment. They have also been working at L.A. airport since 2018, extending a taxiway and relocating a bus parking area.



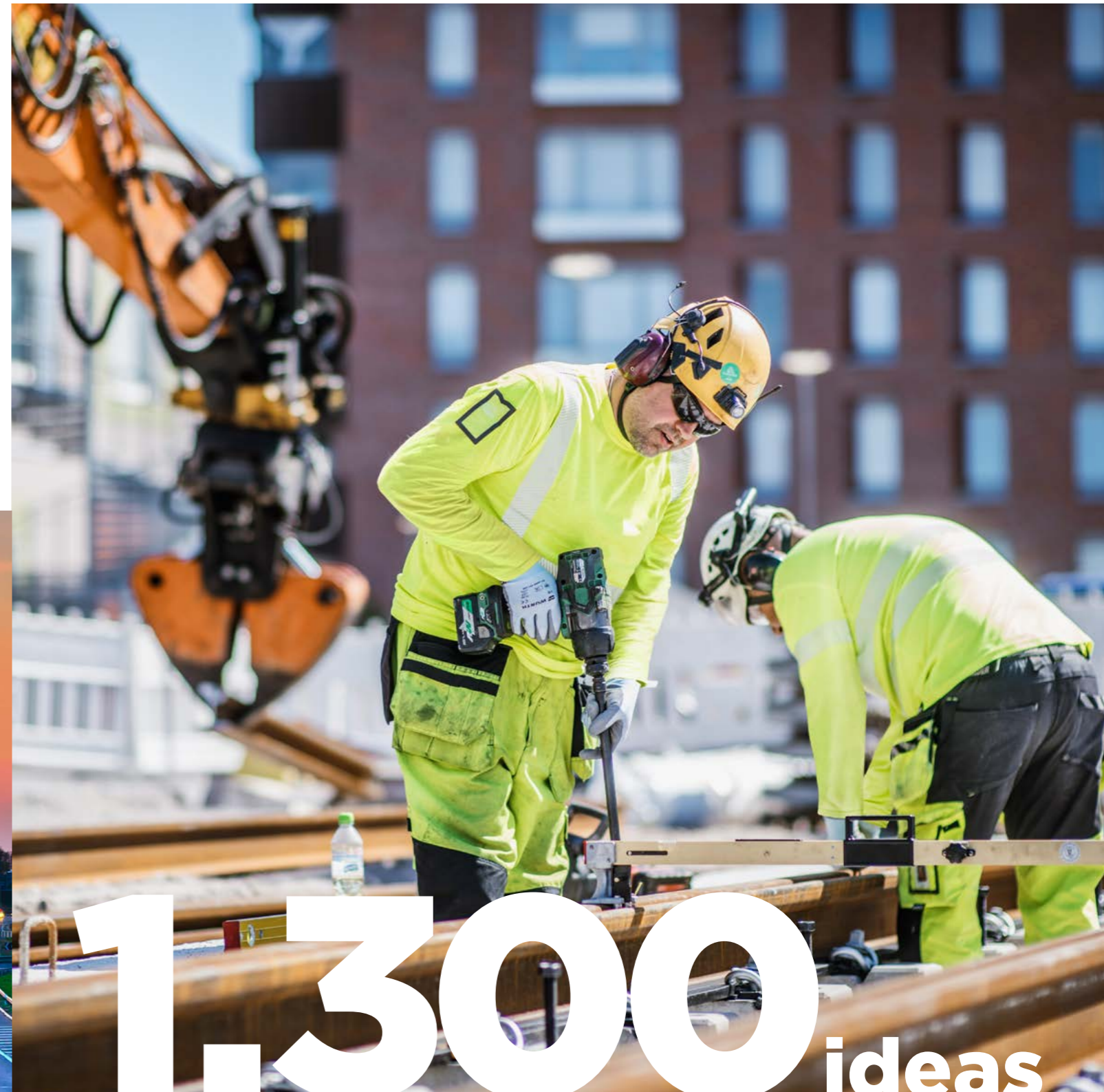
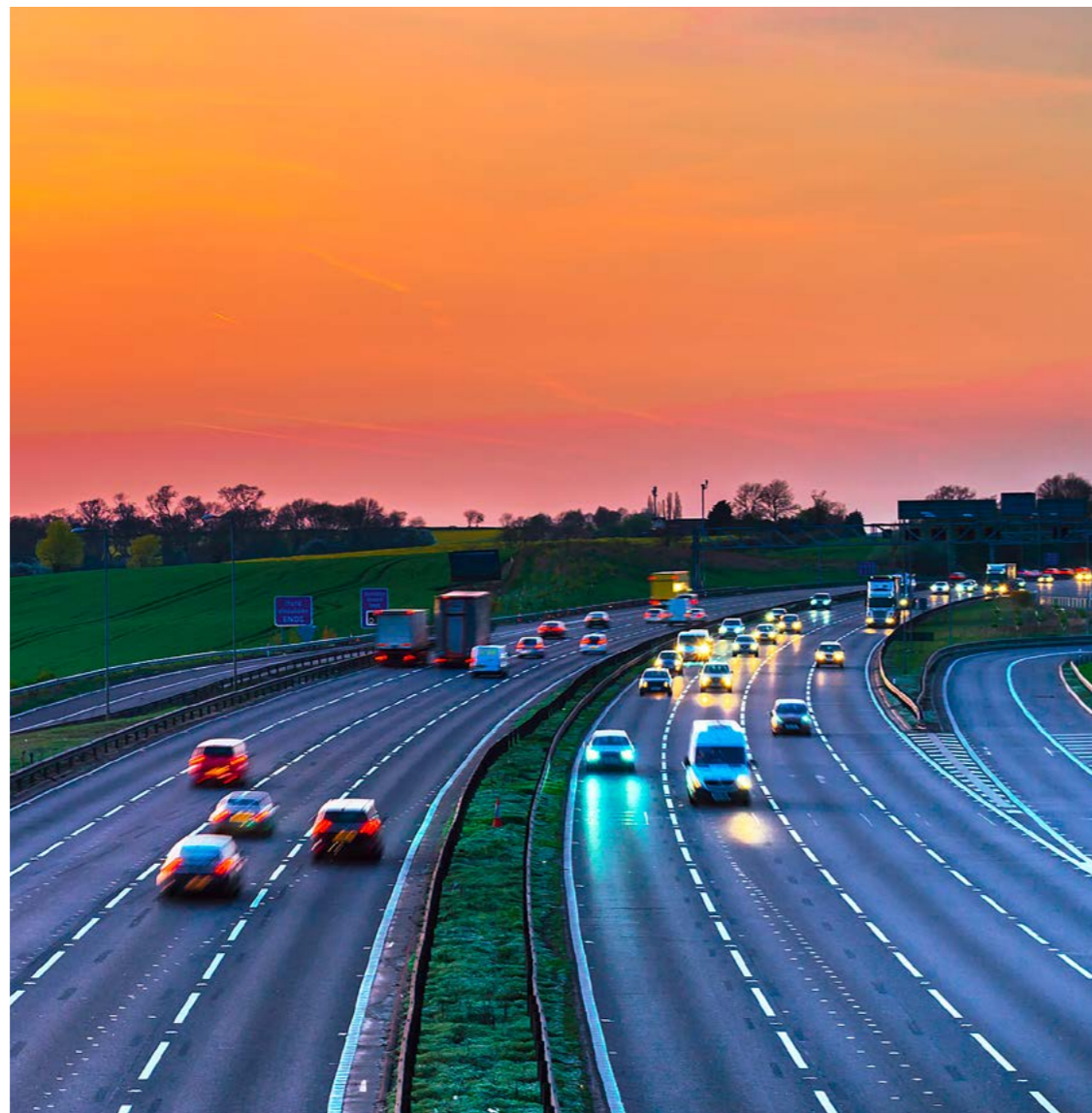


BRIDGES AND ROADS

In northwest Hungary, Colas is connecting communities. Teams are currently working on the construction of a 36-km section of rapid expressway linking the region of Győr to the M1 motorway. In addition, Colas is building a total of six bridges that straddle the four-lane road.

ANAIS GOES LIVE IN THE WEST MIDLANDS

Colas Ltd is set to roll out ANAIS across the 3,760 km of motorways and main roads in the West Midlands known as Area 9, as part of a long-term maintenance and response contract signed with National Highways. This digital service draws on real-time data to deliver optimized preventive road asset management. In practice, by analyzing data using ANAIS, Colas Ltd and Mobility by Colas will be able to propose response recommendations in areas where potential hazards have been detected.



A PROLIFIC COLLABORATIVE PLATFORM



EN ROUTE ACROSS FINLAND

In Helsinki, the project to build the new line 13 of the city's tramway is on track! More than 400 Destia employees are working on the project, which will provide a soft transport service to the fast-growing neighborhood of Kalasatama. One of the distinctive features of this consortium-led project is a dedicated collaborative platform, designed to give employees the chance to submit their own ideas for CSR and innovation initiatives. Every suggestion is examined with a view to their potential application, for either this project or others. Employees can also take a look at the ideas submitted and check on their progress. An initiative that encourages sharing and daring!



PROTECTING COASTLINE IN NOUMÉA

In New Caledonia, work to rehabilitate the Anse Vata coastal area is making good progress. The project, which is underway in the bay at the southern tip of the Nouméa peninsula, has two objectives. The first is to enhance the Roger-Laroque Promenade to encourage active mobility. To achieve this, a cycle path and a wide pedestrian walkway will be created, and the existing four-lane road will be reduced to two lanes. The second objective is to carry out soil stabilization work to prevent coastal erosion. In 2021, Tropical Depression Lucas caused the coastline to retreat by 7 to 10 meters in some places. One year into the project, more than 400 meters of shoreline have been stabilized, dozens of trees planted, and more than 5,000 meters of curb installed. It will take another year to complete the project, which is vital in the effort to stem the rising waterlines.



DISCOVER PICTURES OF THE PROJECT



FACILITATING LOCAL DIALOGUE

As part of the project to extend line 3 of the Marseille tramway system, Farid Bechar, Site Supervisor, underlines the vital role played by the mediator. With a perfect grasp on the project's schedule, the mediator attends meetings with shopkeepers and local residents, addressing any questions or concerns they may have. Active engagement with local communities is essential to foster better acceptance of the work, which is carried out by a consortium including Colas Projects and Colas France.



READ THE INTERVIEW WITH FARID, MEDIATOR



CONNECTING PEOPLE

In the small town of Hughenden, Queensland in northeast Australia, Colas teams worked to seal and line-mark the runway at the local airport. Crumb rubber bitumen containing recycled end-of-life tires was used in the asphalt mix. Located in a very rural area, the maintenance project is vital for the region and its inhabitants.



COLAS' 15TH ANNIVERSARY IN AUSTRALIA



» **HIGHWAY WIDENING**

In the Indre-et-Loire region of central France, Colas is widening a 24-kilometer section of the A10 highway to six lanes between the towns of Veigné and Sainte-Maure-de-Touraine. The busy highway will remain open to traffic during the work, which will mobilize a crew of up to 250 workers at a time. Colas France, Aximum, Colas Projects and Bouygues TP are part of the consortium formed for this complex project on behalf of Vinci Autoroutes, the highway operator.



MEET LÉA, WHO WORKED ON THIS PROJECT

POINTE-À-PITRE AIRPORT REHABILITATION — GUADELOUPE

SYNERGY & TEAMWORK »»»

In the Caribbean, two Colas companies are working in synergy on the Pointe-à-Pitre airport project. Employees from Grands Travaux France have traveled from mainland France to share their expertise with teams from local subsidiary Sogetra on this major project. The work includes the refurbishment of the main taxiway and the reinforcement of the apron for large aircraft. Working around the clock, the work has to be meticulously planned to accommodate air traffic.



»»» **RAP PICKS UP THE PACE**

In December 2022, Colas Denmark was awarded a contract to refurbish the wearing course on the E45 highway over a 5 km section between Ustrup and Skovby in southern Jutland. The teams will be using asphalt mixes that meet the local authority's requirements, including a mix design with reclaimed asphalt pavement as well as properties that reduce noise, tire/road friction and vehicle fuel consumption.



16 km

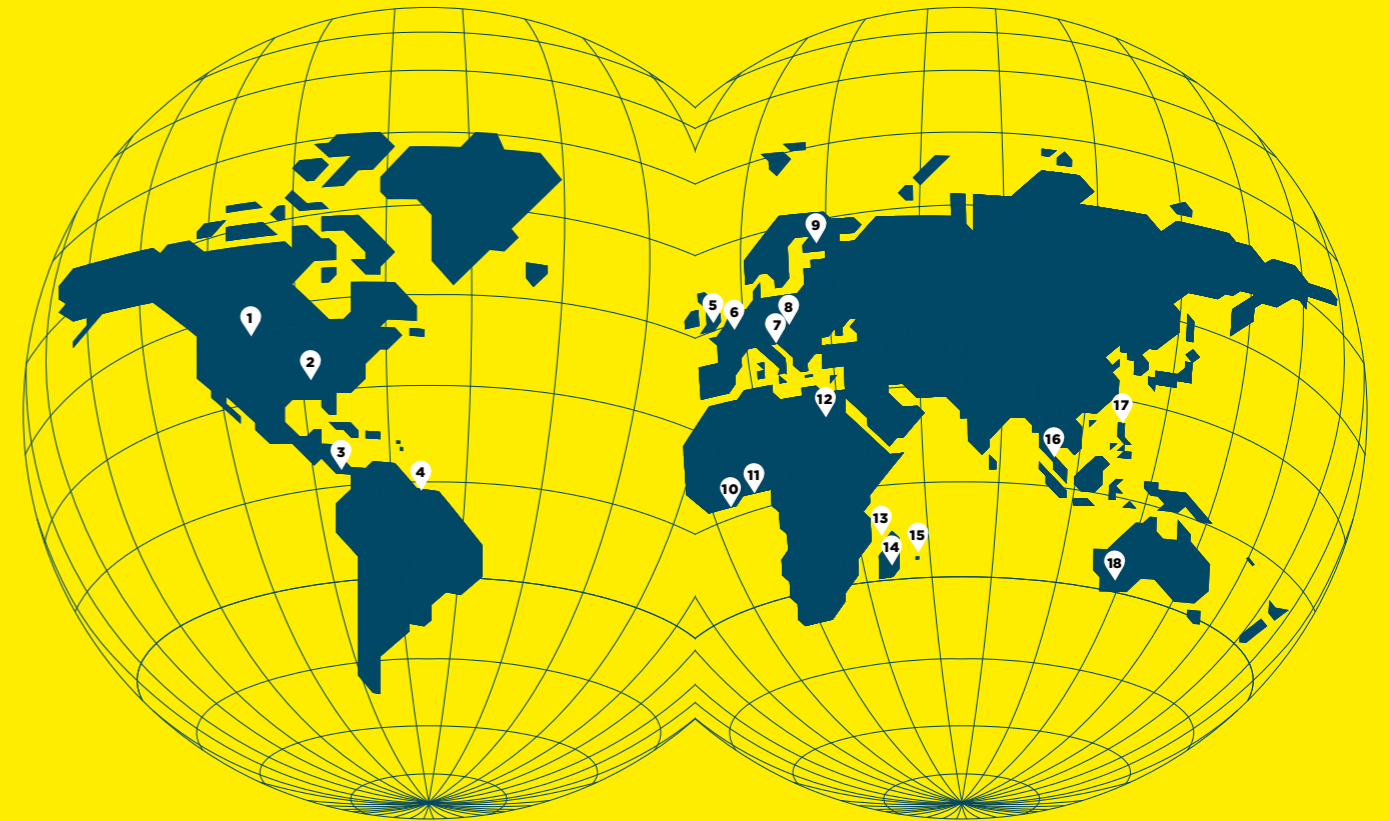
CYCLING ALONG THE LAKESHORE

Teams from Colas France have built 16 km of bike paths along the eastern shore of Lake Annecy in the French Alps. Cyclists can now go full circle around the stunning lake.



[SEE THE FINISHED PROJECT](#)

Snapshot of Colas projects around the world



- 1 CANADA**
Rehabilitation of Highway 40 in Alberta.
- 2 USA**
Repaving Highway 181 in Arkansas.
- 3 PANAMA**
Line 3 of the Panama City metro.
- 4 FRENCH GUIANA**
Cayenne BRT.
- 5 UK**
Eight-year road and motorway maintenance and response contract for Area 9, in the Midlands.
- 6 FRANCE**
Line 15 South-East sector of the Grand Paris metro project.
- 7 CROATIA**
Construction of a section of the A11 motorway.
- 8 CZECH REPUBLIC**
BMW's Future Mobility Development Center near Sokolov.
- 9 FINLAND**
Road maintenance contract in Kittilä.
- 10 CÔTE D'IVOIRE**
Line 1 of the Abidjan metro.
- 11 BENIN**
Ouèdo-Tori road upgrade.
- 12 EGYPT**
Line 4 of the Cairo metro.
- 13 MAYOTTE**
Mamoudzou Caribou BRT.
- 14 MADAGASCAR**
Rehabilitation of Route RN13.
- 15 REUNION ISLAND**
Construction of the Pierrefonds Energy Recovery Unit.
- 16 THAILAND**
Construction of runway 3 at Bangkok international airport.
- 17 PHILIPPINES**
New Manila metro line.
- 18 AUSTRALIA**
Spray Seal project in Western Australia.



[LEARN MORE ABOUT THESE PROJECTS](#)



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FOCUS



MATERIALS A NEW ERA

Colas is an increasingly visible force in the construction materials sector. The Group has been operating quarries and gravel pits all over the world for decades. Today, third-party sales in the Materials business account for 21% of the Group's revenue and Colas is well placed to harness the full potential of this industrial activity.

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hen Colas began operating its first quarries back in the 1960s, the objective was a straightforward one: to guarantee the availability and quality of supplies. Pressures had begun to be felt in the aggregates market, an essential resource for road construction and maintenance projects. So Colas decided to expand into the quarry business. Gradually, the production of materials grew to become one of the company's three main businesses. This growth was partly driven by its own supply needs and partly by sales to third parties. Sixty years on, in 2022, a new chapter began for the Materials business, with the launch of Keystone, the Colas Rocks and Recycling Division, which includes the Group's activities in aggregates, concrete and recycling. "The name Keystone was a collective choice to affirm a strategic positioning", explains Christophe Da-Poian, Keystone Director. The activity is driven by a simple observation: the Materials business, like the Group's Roads and Railway activities, represents an activity in its own right for Colas, which can and must exist independently of construction. With 73% of volumes sold to third parties in 2021, "the Group reached a new milestone. Today, the business is known and recognized. The idea at Colas that materials are exclusively reserved for its own jobsites has been put to rest once and for all", explains Christophe Da-Poian. The business has been scaled up, with a new ambition for 2030: to make Colas

“We aim to position Colas as a major player in the sale and production of virgin and recycled aggregates in targeted zones.”

CHRISTOPHE DA-POÏAN,
Keystone Director

a major player in the sale and production of virgin and recycled aggregates in targeted development zones.

Keystone

The new era for Materials is just beginning. The strategic review process launched several years ago has identified a number of potentially profitable improvement levers. Between a matrix organization, local development plans and the up-skilling of employees, etc., the business is being radically transformed to optimize the way it operates and its results. Strategic reviews are conducted to gain



Orienting the Materials business towards third-party sales is a real cultural change.

>>> a clearer understanding of current market conditions and Colas' position around the globe, as Laurent Lallemand, Keystone's Performance Director, explains: "With this inventory, we're making sure that we're present in the markets we believe are growing, before developing appropriate commercial strategies." By improving its industrial and commercial performance, Colas, long considered a road builder producing aggregates only for its own projects, should be able to establish itself as a major operator in the sector, acting as a pure player.

A network of learner experts
Orienting the Materials business towards third-party sales is a real cultural change.

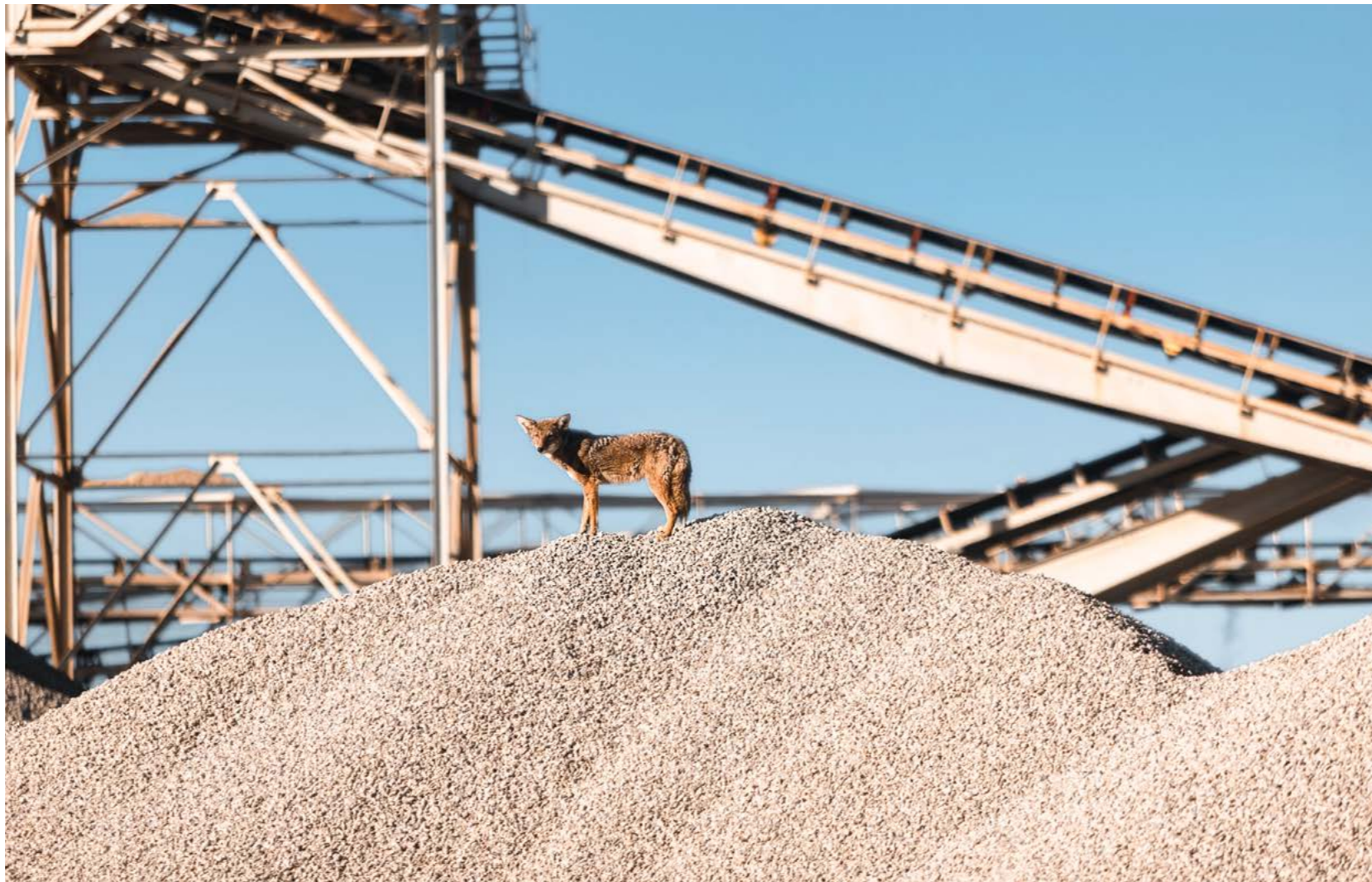
It is therefore vital to support Keystone's 4,000 employees. "Sharing our ambition, team engagement, management support and training are priorities for Human Resources. In order to achieve our goals, it is absolutely essential that our employees are on board," explains Caroline Marx, Keystone's Human Resources Director. "The challenge is twofold for materials leaders, who must both lead their teams through this continuous change process and embrace the changes themselves," says Kelly Cotton, VP Human Resources at Colas Canada, who supports the teams. Kelly and her counterpart at Colas USA, Jeff Koenig, have developed a change management program that is delivered



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BUSINESS IN ITS OWN RIGHT
Matrix organization, local development plans, up-skilling employees... the sector is undergoing profound transformation to optimize its operations and results.

SUSTAINABLE SITES

By 2030, all sites must implement an action in favor of biodiversity, with the objective of preserving the wildlife and flora that inhabit the quarries and gravel pits.
>



through the Keystone Academy. Launched in 2021, the Academy is an extension of the Operational Excellence program and is a customized, ongoing training course. It is designed to build a solid network of materials professionals, reinforcing a common set of core competencies and best practices. The Academy also sets up working groups. The Res'o'Mat and Phosphore project teams also contribute their expertise, focusing on key areas such as production, marketing, recruitment and CSR. "It has become second nature to us to say that there is probably a Colas site somewhere in the world that has faced the same problem as us and might be able to help," says Médéric d'Aubert, Profit Center Manager in Brittany, France. "The internal network of Keystone experts is a source of enrichment and creates a strong sense of belonging to the business."

Sites deeply rooted in their local markets

Acceptability of quarry sites is one of the areas under joint consideration. The Médéric working group has proposed numerous ways to bolster acceptability of quarries, including the strengthening of real estate teams, dialogue training for employees and increased participation in strategic institutions. One of the specific aspects of this business is the relationship

>>>



[LEARN MORE ABOUT KEYSTONE](#)

RESTORING THE LAND IN AN OLD QUARRY

Since its closure in 2021, the Wilcza Gora quarry in Poland is being rehabilitated. The site is being transformed into a leisure destination for the local community and tourists.



Colas' quarries and gravel pits, which are in operation for decades, must fit harmoniously into their surroundings.



between quarries and local communities. Colas' quarries and gravel pits, which often operate for decades (some for more than a century), must fit harmoniously into their surroundings. For this to be possible, a relationship of trust must be nurtured with local residents and authorities. But it is also important to ensure that the land the facilities occupy is managed responsibly to protect biodiversity. "Our goal is to have 100% of our sites implementing a biodiversity initiative by 2030," says Anne-Laure Levent, Environment Director at Colas. Initiatives in place at the Group's 500 active aggregate production sites include reptile nesting boxes, wildlife refuges, hundreds of beehives, mixed hedges, etc. Many of these initiatives are designed to protect the flora and fauna that inhabit the quarries and to raise

awareness among visitors. "These actions only make sense if they are in line with local contexts and needs, and they help restore the natural environment," adds Anne-Laure Levent.

The circular economy

Another Colas sustainable development challenge is to conserve natural resources by recycling materials. The Group already reuses construction waste. Keystone is reinforcing this trend by making the reuse of recycled materials one of its development priorities. In France, the launch of the Valormat and Ecotri platforms should enable Colas to increase the production of recycled materials by 50% by 2026. In Canada, a similar network is being



KEYSTONE: A HEAVYWEIGHT INDUSTRY



Aggregates account for more than half of Keystone's income, in addition to other materials such as ready-mix concrete, prefab concrete, recycled materials and inert materials.

EXTRACTING > AGGREGATES

Aggregates are the second most widely used raw material, after water. Through its international network of approximately 500 quarries and gravel pits, Colas produced 98 million metric tons in 2022.



CONCRETE PRODUCTION

The Group operates 166 concrete plants producing a total of 2.7 million m³ of ready-to-use concrete in 2022. Colas' prefabrication plants also produce concrete blocks, floors, beams for the construction sector, curbs, blocks and customized prefabricated elements.



RECOVERY AND RECYCLING

The Group recovers and recycles waste and materials from deconstruction activities, as well as from other construction professionals and other industries, to offer a range of recycled materials to its own crews or to third parties. Colas is one of the world's leading recyclers, all sectors and materials combined, operating more than 400 recycling facilities worldwide.



“Recycling, reducing transport, and promoting environmentally-friendly behaviors... Colas is acting like a major sustainable player.”

JOHN ANTHOINE,
Materials Director, Canada



^ **AN ENVIRONMENTAL CHALLENGE**

Recycling and reusing inert construction waste is one of the activities at Keystone sites.



PRESERVING WILDLIFE AT COLAS SITES IN HUNGARY



set up in partnership with a specialized company. In addition to saving natural resources, protecting the environment and reducing carbon emissions, recycling is also a way to provide a local source of supply, thereby reducing transportation needs. This global approach, in line with the Group's CSR commitments, is another of Keystone's ambitions. "By reinforcing our green approach to the way we do things, we are taking materials to a new level, we are acting like a major sustainable player," summarized John Anthoine,

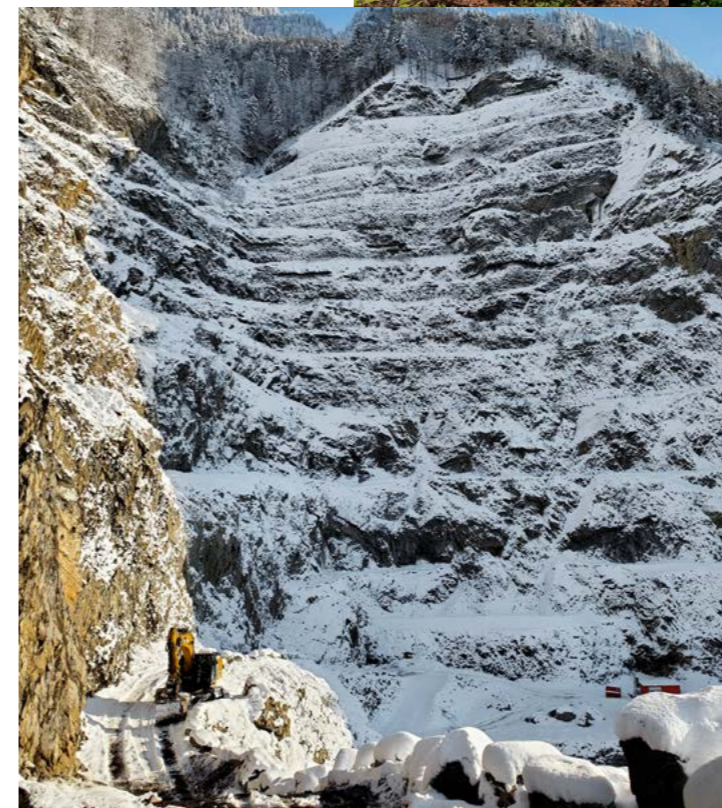
Director of Materials Canada, at the first Keystone conference in March 2023. "The entire business is committed to the development and implementation of Keystone's future," commented Christophe Da-Poian. There are many more chapters to come for Materials at Colas. ♦

QUARRIES: BEHIND THE SCENE



Colas quarries are unique places. With these 3 examples, discover what is going on at the Group's extraction sites.

KINGUÉLÉ > QUARRY - GABON
Located about 100 km from Gabon's capital, Libreville, the Kinguélé quarry is quite remote. Most of the employees and their families are housed on site. The facility includes a medical center, a school and all the necessary amenities. The women of the village are trained in beekeeping, which provides them with a small income, and biodiversity awareness initiatives are implemented.



^ **ARVEL QUARRY - SWITZERLAND**
Founded in 1905, Carrières d'Arvel S.A. joined Colas in 1974. Today, substantial investments have been made to convert the quarry to underground mining. This new method reduces environmental impacts such as noise, dust and land clearing. At the end of the mining process, the void will be filled with inert materials.



^ **PLATTSBURGH QUARRY - USA**
With the help of community groups, teams from Upstone Materials created a pollinator garden at the Plattsburgh quarry in upstate New York. Native wildflowers, both annuals and perennials, were planted: New England aster, rudbeckia, milkweed, coreopsis and cosmos. This combination provides pollen, nectar and shelter for hundreds of different species, including Monarch butterflies and native bees.

Rock solid teams

People are at the heart of the strategic transformation of the Materials business at Colas. The division is committed to reinventing itself through initiatives such as recruitment, training, and community development. Currently, Keystone comprises 4,000 materials experts hailing from diverse professions and backgrounds.



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CASSANDRA CARIOU,
 Loader Driver, France
 “My job is a challenge, every day, where I’m always looking for the right balance between quality, speed and precision. At the Cast quarry, we work hard to make our customers happy. You need to be extremely accurate when you load materials into trucks to get the right weight, quantity, and a good distribution of the load in the dumper.”



>
NABIL HERARI,
 Production Technician,
 Sintra - Canada
 “As soon as I graduated, I did a tour of France with Colas, as a Materials engineer. I knew an international group could give me some great opportunities for a mobile career. When it was time for me to “settle down somewhere”, I expressed an interest in Canada. I soon came to the attention of the Canadian Keystone network and I was lucky enough to secure a position in Quebec.”



>
ALMA CORTEZ,
 Sales Manager,
 United Rock Products
 & Blue Diamond Materials
 (Sully-Miller) - USA
 “As a sales rep, I have always dealt primarily with aggregates but it’s rewarding to feel that materials are being scaled up across the Colas Group. I’m really enthusiastic about Keystone’s future and I’m keen to find out what we’re going to offer, particularly when it comes to recycling.”



^
ZAKARIA RAJI,
 QHSE Manager Industries & Equipment, Morocco
 “I’m responsible for ensuring compliance with the Group’s health and safety standards. Although working environments are all different, in industries and out on jobsites, our role as preventers is to collect and analyze feedback from the ground thanks to the shared experience of our counterparts.”

“Diversity makes us stronger. It is a valuable asset for Keystone.”

CAROLINE MARX,
 Human Resources Director,
 Keystone



Colas was born from a disruptive innovation and has continuously cultivated a pioneering spirit that enables it to anticipate and provide solutions to the major challenges of today and tomorrow. The Group's ambition is to be the global leader in innovative, sustainable mobility solutions. Now let's zoom in on the Technical sector, whose expertise plays a vital role in supporting the activities and commitments of the Group. Colas' continuous development of innovative products and solutions, from our laboratories to our construction sites, is driving the emergence of new approaches that tackle environmental challenges and more. By reimagining transport infrastructure, Colas is actively exploring pathways towards more sustainable, responsible mobility.

WIDE ANGLE

TECHNICAL DEPARTMENT THE DNA OF COLAS

An extensive network of experts, laboratories and research centers work together to design, develop and roll out the Group's products and techniques. Their goal? To support Colas' ambition to be the world leader in innovative, sustainable mobility solutions.

//// WITH:



▼
STÉPHANIE MINNEBOIS,
Group Techniques,
Research &
Development
Director



▼
CÉDRIC LEROUX,
Director,
Colas Core Center



▼
MARTIN OLE KOORSGARD,
Senior R&D Manager,
Colas Denmark



▼
XAVIER GUYOT,
Technical Director,
Asia-Pacific



▼
JOZEF JURKO,
Expert Geotechnical
Engineer for the
Central Europe zone



▼
NICOLAI DRONIUC,
Colas Geotechnical
Technical Director

E

ver since Colas was founded in 1922 to market **Cold Asphalt emulsion** - a breakthrough innovation that revolutionized road construction techniques - science and technical expertise

have been ingrained in the Group's DNA. A century later, Colas is one of the world's leading transport infrastructure and maintenance companies. "This means that the Group demands high standards of technical excellence and anticipates market changes," says Stéphanie Minnebois, Group Techniques, Research & Development Director. We play a key role on both fronts." The Technical Department's 2025 roadmap was created to guide the work of its 1,700 employees around the world. "We have a wide range of expertise," points out Stéphanie Minnebois. "Our teams work in a variety of different environments, including formulation and testing for the Group's industries, R&D labs and technical experts in the field and at headquarters who support the operating units at every stage of a project."

A core force for innovation

At Colas, R&D has a name: Core (for COLas REsearch). "In an ever-changing world,

Our research is aimed at finding solutions for more responsible, sustainable mobility.

Colas must constantly innovate and drive mobility research forward", explains Cédric Leroux, Director of the Core Center, the Group's R&D facility based in France. "Our research is aimed at finding solutions for more responsible, sustainable mobility and is in line with the Group's corporate CSR project known as ACT (Act and Commit Together), which formalizes the company's eight corporate social responsibility



>>> commitments." The challenge? Meeting the expectations of customers, employees, partners, investors, users, and society at large.

Techniques & CSR, a close connection

There are many proven solutions to reduce the environmental impact of Colas products and improve the energy efficiency of industrial facilities, from using bio-based materials, to lowering manufacturing and application temperatures and incorporating recycled materials, to name just a few. Vegecol is one of Colas' iconic innovations that is helping to revolutionize road construction techniques. This light-colored mix formulated with a plant-based binder is symbolic of the Group's low-carbon strategy. The concept of mixes with bio-based binders has gained momentum over the years: to date, 16 experimental projects have been carried out on the Vegecol range with a view to commercial launch. This bio-based product line, developed by replacing part of the bitumen with an ingredient of plant origin, has a carbon footprint that is at least 30% lower than a traditional mix, while offering the same performance.

"To develop a solution like Vegecol, we have to carry out a great number of tests in a variety of environments to measure and improve product performance," says Cédric Leroux. "The entire Technical network plays an important role in the Group's Research & Development activities." Around the Core Center, which is at the heart of the organization, people within the Technical Department work to ensure product quality and foster research initiatives. Martin Ole Koorsgard participated in Vegecol trials in Denmark:



Around the Core Center, which is at the heart of the organization, people within the Technical Department work to ensure product quality and foster research initiatives.



FROM THE LAB TO THE ROAD

The Core Center, the world's first privately run R&D center in the road sector, provides technical support and high-level expertise to Colas companies. In collaboration with the Group's regional laboratories in all the geographical zones where Colas operates, the Core Center's 70 employees ensure the transition from concept to creation and development, and from experimentation to practical deployment of products, techniques and infrastructure solutions in the field of responsible, sustainable mobility.



VIRTUAL VISIT OF THE CORE CENTER



TECHNIQUES, RESEARCH & DEVELOPMENT

Complementary, expert teams dedicated to serving Colas' businesses.



- **The Core Center**, located in Magny-les-Hameaux, is the Group's Research & Development hub.

- **Central specialist technical departments** share their expertise with Core Center teams and local entities in a variety of fields: materials, geotechnical engineering, road design, etc.

- **Cross-functional support teams** provide support to central and local teams: environmental evaluations, support for the technical promotion of products and solutions, technical intelligence, etc.

- **Local technical teams** ensure the day-to-day quality and performance of Colas solutions and foster development of products and techniques.

>
**EXPERIMENTS
WITHOUT
BORDERS**

A total of 16 trial projects are currently underway around the world for the Vegeroad range of bio-based binder surface mixes. Here, in the Jutland region of Denmark.



>>> "We used Vegeroad on a country road, applying it to one third of a section we were repaving," explains the Senior R&D Manager. "The results were conclusive, as were those of my colleagues who carried out similar tests in Iceland and Ireland. We are committed to this type of solution, which we will continue to develop and perfect in the near future."

A wide range of missions

Developing, perfecting, controlling, challenging, in addition to supporting R&D, teams in the local technical networks have a variety of tasks. "Technical engineers have to go out into the field, because upstream advice and on-site control are essential to ensure quality on our projects," underlines Stéphanie Minnebois. "Our department plays a key role in the Group's success from the moment we win a new contract." In line with its environmental commitments, Colas develops bids based on eco-alternatives, i.e. alternative solutions to those requested by the customer in the initial call for bids. The aim is to save materials, reduce energy consumption and lower greenhouse gas emissions compared to the initial technical solution. "As technical experts, we are on the front line," explains Xavier Guyot,



**HOW IS A ROAD MADE?
THE ANSWER IS ON TIKTOK**

Technical Director for the Asia-Pacific region. "It's up to us to be proactive in seizing opportunities and managing risks." Among these eco-alternative products is cold micro asphalt, a direct descendant of Cold Asphalt, manufactured at ambient temperature. Designed for road maintenance, cold micro asphalt extends the lifespan of road surfaces. "In Asia, the technique was first introduced in Thailand by Tipco Asphalt, and then enhanced by the Group's expertise and experience, particularly in Europe," recounts Xavier Guyot. "It was later deployed in the region with

the support of teams from France, Ireland, and England, who trained their Indian, Australian, and New Caledonian counterparts. Today, the Group's local subsidiaries are the leaders in this technique."

An international network of experts

Knowledge and expertise cross borders. The network helps spread scientific knowledge and tap into ideas and resources wherever they are, by connecting technicians working in different sectors, different business units and distant regions. "Sharing information



>
IN THE FIELD

Upstream advice and on-site controls are essential to ensure quality on the Group's projects.





The entire Colas Group benefits from the closer ties that now exist between technical staff around the world.

>>> and experience is crucial to building team work and collaboration within our international network of experts," says Stéphanie Minnebois. At Group level, cross-functional knowledge-sharing networks have been set up covering some fifteen technical topics. One example is the geotechnical network, led by Nicolai Droniuc, which held its second seminar last November.

The two-day event, which brought together geotechnical engineers from across the Group, included workshops, the exchange of best practices, and a visit to the Gustave Eiffel University geotechnical laboratory. It was an ideal opportunity to consolidate a network of experts who support Colas' technical and operational teams on a daily basis, helping them to manage risks more effectively and identify project opportunities.

Collective Intelligence

Jozef Jurko is the geotechnical expert for the Central Europe zone. He believes that a community of specialists has a crucial role to play: "Geotechnical engineering deals with construction techniques related to soil mechanics and behavior. There are very few specialists in this field within the Group, so it's very important to have the

opportunity to discuss and network with our colleagues from around the world." In recent years, a real network has been founded. "It was strengthened with the acquisition of Destia in Finland, which has a geotechnical design office with about twenty geotechnical engineers," he continues. "The result is information sharing, mutual learning and a sense of support throughout the community." A view shared

by Nicolai Droniuc: "The Group's experts face very similar problems, but they can also be very specific depending on the project, its location, etc. Making feedback systematic and consolidating cohesion between geotechnical engineers is obviously very helpful". The entire Colas Group benefits from the closer ties that now exist between technical staff around the world. ♦

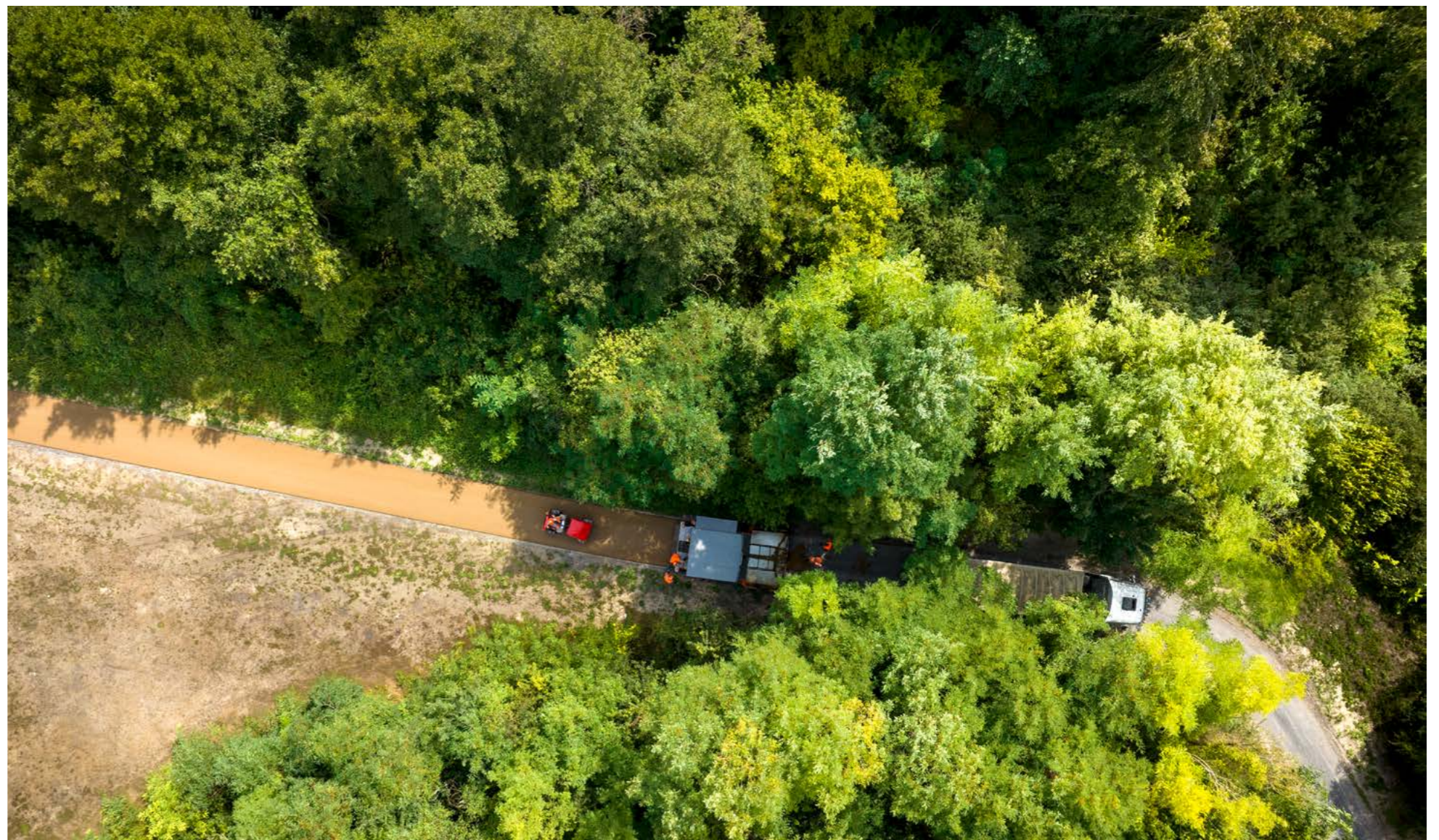
OPENING THE WAY

The technical sector contributes to exploring the paths of more sustainable mobility and aligns with Colas' corporate project called ACT (Act & Commit Together).

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**DISCOVER
RECYCOL**



The Road Labs

Created after a breakthrough innovation, the Colas Group has never ceased to innovate, with the support of its research laboratory and the collective expertise of the technical department. From 1922 to the present day, a look back at 100 years of innovation for mobility.

1922 Cold Asphalt

First ever bitumen emulsion, Cold Asphalt, gave its name to Colas. It is a groundbreaking innovation for road construction.

2003 Vegecol

Designed with a predominantly bio-sourced binder and manufactured at a lower temperature, Vegecol has a reduced carbon footprint compared to traditional light colored asphalt mix.



1970 Colflex

This range of SBS (styrene-butadiene-styrene) modified bitumen provides excellent resistance to traffic and aging. The goal: to cope with ever-increasing traffic and the problems associated with it.

2008 Colsoft

Road surfacing (formerly known as Nanosoft) that provides up to 7 decibels of acoustic gain compared to conventional mixes, which is equivalent to dividing the sound power by eight.

2015 Wattway

Wattway is the world's first trafficable photovoltaic road surface, making the roadway capable of producing clean, renewable power using solar energy.

2022 Infracare

Artificial intelligence that uses filmed images to detect defects in the pavement and helps create optimized work programs. A revolution in road surveying and maintenance.

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A FINAL WORD

Aggregates

Whether natural or recycled, there is no road without aggregates! Mixed with a binder, aggregates are the main ingredient in asphalt mixes used to pave roads. Colas is committed to conserving natural aggregate resources by using reclaimed asphalt pavement, in particular with in-place pavement recycling techniques.



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QUARRY

THE LIFE OF A



ACCEPTABILITY
To ensure that the quarrying operations align with social, economic, and environmental concerns, Colas teams actively engage in dialogue with local stakeholders. This consultation and collaboration process begins from the quarry's opening and continues through the final repurposing.

BIODIVERSITY
Measures are implemented throughout the quarrying process to preserve biodiversity and monitor the local flora and fauna aiming to enhance biodiversity.

PROCESSING
At the processing facilities, the raw material undergoes crushing, screening, and washing. The process transforms the raw material into aggregates.

EXTRACTION
To remove materials from the quarry, explosives are used to blast solid rock, while shovels, excavators, and dredges are employed for loose rock. Once extracted, the material is transported to processing plants.

RECYCLING
Demolition materials are reprocessed to obtain recycled aggregates. This practice contributes to the circular economy and preserves natural resources.

SALES AND TRANSPORT
The different types of aggregates, ranging from virgin to recycled, are stored on-site and sold by sales teams. They are then transported using trucks, trains, and ships to reach their intended destinations.

ACCEPTABILITY
To ensure that the quarrying operations align with social, economic, and environmental concerns, Colas teams actively engage in dialogue with local stakeholders. This consultation and collaboration process begins from the quarry's opening and continues through the final repurposing.

QUARRIES

A COLOR COLLECTION

Every deposit has its own colors.
Every quarry has its own landscape.



1. Dan (Benin) - 2. Calhoun (Canada) - 3. Bainville-sur-Madon (France) - 4. Wisches-Hersbach (France) - 5. Shawkah (United Arab Emirates) - 6. Plattsburgh (United States) - 7. CMR Granit (Côte d'Ivoire) - 8. Olive (United States) - 9. Tállya (Hungary) - 10. Pornainen (Finland) - 11. El Gara (Morocco) - 12. Warwick (Australia).