1948 - Paris-Orly Airport

The first regular post-war flight from New York landed in Orly in 1946. The airfield went on to become a hub for air traffic between Europe and America and the "long-haul" base for Air France. As air traffic increased, the site modernised. Société routière Colas (SRC) was involved in the construction.
Born in 1940 and a graduate of the Ecole Spéciale des Travaux Publics Engineering School, Alain Dupont began his career as a project engineer at Screg. He then became Chairman and CEO of Screg Ile-de-France in 1978. In 1983, Alain Dupont was appointed Deputy Managing Director of Colas and, in 1985, Chief Executive Officer, then in 1987, Chairman and Chief Executive Officer. He served until October 2007, when Hervé Le Bouc succeeded him.

Over a span of 24 years, Alain Dupont built a Group that became a world leader in the construction and maintenance of transport infrastructure. He was also dedicated to serving the industry as a whole, holding the positions of President, Vice-President and Board Member in a number of organizations.

TRIBUTE TO
ALAIN DUPONT

Alain Dupont, Chairman and CEO of Colas from 1987 to 2007, passed away on July 7, 2019. He was an extraordinary manager who made Colas a world leader and fashioned the Group’s spirit by encouraging teams to build roads with a human face, anchored in reality on the field, social, innovative and environmentally-friendly roads, open to art and the world of ideas.
GROWTH
The core of Alain Dupont’s strategy was a strong external growth policy. In France, the Group acquired the Sacer and Screg road companies, and in the railway sector, Seco-Rail and Spie Rail. Under his watch, the Group’s growth accelerated around the world: in North America, in central European countries, in Northern Europe, and in Asia.

At the same time, an industrial strategy is rolled out with the acquisition of a number of production sites (quarries, etc.).

INNOVATION
Alain Dupont gave priority to innovation in Research and Development, particularly in safety, environmental preservation, and noise control, with the creation of the Campus for Science and Techniques (inaugurated in 1996 – pictured above), the world’s premier research center dedicated to roads, which boosted the Group to the leading position in this area as well.

HUMAN
Alain Dupont drove a strong-willed and dynamic social policy, marked in particular by the priority given to safety, internal promotion, the creation of Colas universities, and special attention to the social protection of skilled workers. Specific actions were rolled out for developing countries. In the early 1990s, Alain Dupont embarked on a cultural patronage endeavor through the Colas Foundation, dedicated to contemporary painting.

“Roads have a strong symbolic dimension: they are vectors of freedom, of exchange...
Without roads, there is no culture, no economy, no life...
Throughout my career, I was always aware of the symbolic force of roads, of the dreams they embody, and I always spoke of their positive impact to my teams.”

Alain Dupont, in October 2007

Alain Dupont with Colas’ 2006 Skilled Workers Guild.
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Wattway
You took over as CEO back in May. What was your reaction when Hervé Le Bouc told you he was going to advise the Board to appoint you to the role?

F. G: It was initially a surprise, although I was, of course, aware it was a possibility when the time came for Hervé Le Bouc to retire. I then felt both humbled, with respect to the task and responsibilities I was being asked to take on, and full of enthusiasm because there are so many positive actions for me to oversee across our Group. Colas is healthy; it is growing and the philosophy within the Group sets it apart. But its full potential has yet to be realized. Following my appointment, the transition was a seamless process, only lasting a few months. A rare occurrence that is worth underlining. I expressed my gratitude to Hervé Le Bouc for this.

You began by touring sites and businesses that were not within your remit when you were at the helm of the International Division (DGI). What conclusions did you draw from these visits and the meetings you had?

F. G: The things that strike me each time I tour Colas are the strength of our teams and the shared spirit that links all of the Group’s geographic zones and businesses, despite their huge diversity. From the Kinguélé quarry in Gabon, to a road construction site in Wyoming, an urban, railway or airport project in France, or a bitumen storage plant in Australia, this unity in diversity can be very clearly felt. I may be used to it, but it never ceases to fascinate me. My tour of North America and our Rail business also helped me gain a better understanding of both. There is real growth potential in the United States, both geographically and in terms of the extension of our bitumen model. We are still some way short of the position we should be there.
Quite the contrary. The strategy will remain on track, but it will evolve as the world itself changes. In terms of geographic development, the primary – though not exclusive – focus will be on Europe, in stable countries such as Germany or Scandinavian countries, on the United States, in urban areas, and on Latin America, where we are going to pursue our expansion through acquisitions and organic growth.

More generally, we will be further developing our activities across our geographic zones and markets, wherever such development is possible and relevant.

Another development priority concerns our businesses. The rail sector has considerable potential. I also have high hopes for Spac’s water and energy transport businesses. And, of course, the development of the bitumen business around the world is essential.

To finance our investments and growth, be it organic or through acquisitions, we must not only improve our profitability, but also our capacity to generate cash flow. To do so, we need to optimize our investments and pay close attention to our working capital requirements.

In what areas in particular do you want to see improvements across the Group?

F. G: Safety and ethics are essential. They are imposed upon us, from outside and in. They are not a choice but a necessity. Where safety is concerned, we are making some progress but it’s not enough. To get to where we need to be, safety really does have to be an integral part of

“IThe new organization’s objective is, while remaining agile, to add to the cross-functional dimension to work better and more effectively together.”

INTERVIEW

In Canada, following the acquisition of Miller McAsphalt, we enjoy complete market coverage and have become established as a leading bitumen player. The Rail business also presents significant growth potential, driven by global railway infrastructure requirements. Furthermore, Colas Rail is recovering well thanks to the outstanding efforts of its teams.

I have thus been vindicated in my firm belief that Colas’ model is highly resilient, as we have seen in the past. Similarly, my perception of a group of extraordinary diversity in terms of geographic zones and businesses, boasting a human bedrock founded on a unique culture and philosophy, has been reaffirmed.

On October 1, you presented the new organizational structure that will be operational from January 1, 2020. What is the vision underpinning it?

F. G: The Group’s new organizational structure, along with the reorganization of operations in France presented shortly afterwards, lead us in the same direction. They are hinged around the idea that the historic model, built on a strong local presence, entrepreneurship and individual responsibility, must be preserved at all costs, but with an added cross-functional dimension, whereby silos are removed so that we work better and more effectively together. The objective is to remain agile, with direct relationships, and with cross-cutting business lines developed across all geographic zones. It is not about all-out centralization.

The organizational structure will thus continue to be based on small units, but these units will now be more open to the Group rather than closed in on themselves. Younger generations, in particular, are seeking to be part of something “bigger”.

Are the Group’s development strategy and priorities going to shift or are you intending to steer a similar course? Where do you believe the Group’s growth opportunities lie?

F. G: I myself was actively involved in the strategy implemented when Hervé Le Bouc led the Group. There is no question of any radical departure.
needs. It is up to us to make the most of them. But we must be vigilant. The fact is we usually operate in small markets in which our competitive advantages are relatively limited and costs may be higher. So it is important to remain alert. We need to focus more on promoting our know-how, our capacity to innovate – particularly through the use of digital technology – and the power of our Group. Our lead in the field of ethics will also turn into a competitive advantage.

We also need to move upmarket, by developing design-build, advice to customers and global solutions, from project outset all the way through to maintenance. Colas Projects was created for this very purpose.

Three of our strengths represent considerable advantages. Our network of local profit centers, provided that this network is “enhanced” by cross-functionality. Our human and financial capacities, generated by the sheer size of our Group. And our technical expertise in the field of transport infrastructures, in the broadest sense of the term, which makes us an industry reference.

What one of Colas’ distinctive features are you personally most attached to?

F. G: Its corporate culture. It is extremely strong, placing people at its heart.

Colas’ originality lies in the fact that it has retained the values of a small company despite becoming a major group, with a global revenue of almost €14 billion.

This attachment to people, the way in which they are always incorporated into the decision-making process, is quite unique for a group of this size. And Colas’ employees return the sentiment! Compared to our peers, their attachment to the brand is reflected in greater loyalty to the company.

And your concluding remarks?

F. G: I would like to thank everyone in the Colas Group across the world for all their hard work and commitment. Let me tell them how happy and excited I am about writing the next chapter in the story of Colas. For now, I would like to wish them a very happy New Year.
SITE-SEEING

Drawing on its collective global expertise and its considerable innovation capacity, Colas offers its customers across the five continents a range of infrastructure solutions that address current and future responsible mobility requirements. Site-seeing at the ends of the earth and elsewhere.
Haines Highway, southeast Alaska.
EN ROUTE

ALASKA: EXTREME ENVIRONMENTS

In the space of twenty years, Colaska has established itself as a major transport infrastructure construction and maintenance player in Alaska and the state’s biggest producer of bitumen emulsions and aggregates. Colas’ North American subsidiary carries out projects in the most extreme conditions. Let’s head north...

ALASKA, LAND OF THE MIDNIGHT SUN
“Land of the Midnight Sun”, “The Last Frontier” or “The Great Land”: Alaska goes by many names. “Bigger than France, Germany, the UK and Italy combined, this vast territory makes up one fifth of the total landmass of the United States. It boasts 47,000 km of coastline, more than 3,000 rivers, 3 million lakes and 100,000 glaciers”, says Jon Fuglestad, President of Colaska. The people who live there, separated from the rest of the USA by Canada, are attached to this immense land and have developed a deep-rooted solidarity to help them cope with the long, freezing winters. Bought from Russia in 1867, Alaska immediately set about developing its industries. Today, the raw material, oil and gas, fishing and timber sectors are the most dynamic, drawing in a number of foreign-owned companies.

COLASKA, AN ACQUISITION STRATEGY
Colas, already present in neighboring Canadian states, first entered Alaska in 1999, when it took over South East Construction (SECON) based in the capital, Juneau. The company soon made further acquisitions, including Quality Asphalt Paving (QAP) in 2000, Exclusive Paving in 2004 and Emulsion Products in 2005. In 2018, a new milestone was reached: Colaska bought Southeast Road Builders (SERB) in order to strengthen its position...
in the southeastern region of the State, develop new synergies within the subsidiary and secure new markets in Haines and on Prince of Wales Island. “Our network is extremely dense, coupled with the fact that QAP, Exclusive Paving, SECON and SERB operate on the basis of a vertical integration model”, explains Jon Fuglestad. Each company has its own facilities and equipment: crushers, bitumen emulsion plants and concrete plants. As a result, teams are able to operate throughout the State. Colaska’s main customers include the Alaska Department of Transportation (earthworks and road construction and maintenance), mining companies (construction of access roads) and the Defense Department (construction of airfield infrastructures and missile defense sites). “Colaska is one of Alaska’s leading producers of aggregates, asphalt mixes, polymer modified bitumens and concrete, and is a major road construction and maintenance player in the state. The subsidiary has numerous references to its name”, underlines Jon Fuglestad.

**COLASKA’S CHALLENGES**

Colaska faces numerous challenges, both logistical – specific problems in terms of obtaining raw material supplies – and technical. For example, teams are regularly called upon to transport materials by barge to remote sites with no access to the road network. These types of operations can

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 CSR* FOCUS

**ACTIONS FOR BIODIVERSITY**

In Juneau, southeast Alaska, SECON has several gravel pits along the Lemon Creek River. The company has created a habitat for salmon, trout and related species of fish, and pools enabling them to swim upstream. Result: improved conditions for young fish, which also benefit eagles, bears and otters.

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* Corporate Social Responsibility.
“The main difficulty has been dealing with the cold and wet, despite the fact that 2019 has been one of the hottest ever recorded in Alaska. We’ve had some serious forest fires. Fire prevention measures have entailed traffic restrictions.”

Another example is in North Pole, southeast of Fairbanks, where Colaska is installing 55 kilometers of pre-insulated water pipes of varying dimensions and carrying out modernization and extension work on the existing water treatment plant. Launched in January 2018, the work has been carried out during the winter sometimes take 24 days, as is the case between the Aleutian Islands and the Bering Sea as far as Norton Sound. But Colaska also has to contend with climate-related constraints. “We have a short working window, generally from April to mid-October. Some operations are carried out during the winter if necessary, such as the construction of ice roads or the excavation of materials from frozen river beds and lakes for later use in the spring,” explains Jon Fuglestad. Todd Porter, General Manager of QAP has had to overcome just such challenges for the Parks Highway (in central Alaska) and Haines Highway (in southeast Alaska) projects.

Colaska is determined to protect ecologically sensitive zones. Gravel pits, in particular, fall into this category. They host a broad variety of local animal species. For example, the gravel pit in Kiana (“where three rivers meet”), in the northeast of the state, is home to numerous bird (mallard duck, eagle, kingfisher), fish (coho salmon, cutthroat trout) and mammal (river otter) species. Colaska implements measures to allow this fauna to live naturally on these sites.
EMPLOYEES are hired by Colaska during the high season, including 187 women, i.e., 22% of the workforce.

COMPANIES have been acquired by Colaska since its creation in 1999:
- QAP
- SECON
- Exclusive Paving
- Emulsion Products
- University Redi-Mix
- AGGPRO
- SERB

AIRPORTS, out of a total of 300 in the state, have been built by Colaska. The Colas company regularly secures runway rehabilitation contracts, as it did again this year at Anchorage airport.

GRAVEL PITS are directly operated by Colaska. River bed gravel pits regenerate after each flood.

SPECIES are protected in Alaska. None of them are present on a Colaska site.

OF AUTHORIZED RESERVES of aggregates are owned by Colaska.

Data as of December 2018.
Alaska boasts over 3,000 rivers, 3,000,000 lakes and 100,000 glaciers.
to enable teams to install the pipelines in wet zones and areas where the high water table was still frozen. The teams managed to prevent thawing of the permafrost and at the same time stop it drying out. The project is set to be completed by the end of 2019. In parallel, Colaska is conducting a number of other major projects all over the state: road resurfacing work on the Glenn Highway (southern Alaska); runway rehabilitation at Anchorage Airport, etc.

OUTLOOK FOR THE FUTURE

The State of Alaska has launched some ambitious projects for the future development of natural gas, including the construction of an 800-km gas pipeline and a new port. Potential long-term mining opportunities to extract copper, gold, silver and rare metals are currently being investigated.

“If the permits are awarded, there will be access roads to build for the mining projects”, believes Jon Fuglestad. In addition, the idea – first touted fifty years ago – for a railroad linking Alaska to Canada via the Yukon is once again on the table. Resources, including iron ore and oil, currently shipped by boat, would be transported more quickly with this new railway. If this project materializes in the near future, Colaska could play a key role.

SOME BACKGROUND INFORMATION...

Transport in Alaska

Alaska’s extreme weather conditions and transport distances pose significant challenges. In days gone by, the Amerindians and Inuits used sleds in the winter and canoes for the rest of the year. Today, planes and seaplanes are used to connect villages to bigger hubs. There are two international airports, in Fairbanks and Anchorage, which in turn provide links into local airfields.

Anchorage airport is the sixth biggest in the world and the fourth in the USA for freight traffic. The road network, not as dense as it is in the rest of the United States, is primarily concentrated along the coast.

Finally, railways were developed in the 19th century to transport gold prospectors. Today, the network is used to carry both freight and passengers.
3 Flagship Projects

Road and highway work, runway rehabilitation...
Colaska performs a variety of projects. Spotlight on three major contracts, under way or recently completed, located in different regions of Alaska.

**Parks Highway**

Construction of passing lanes
QAP’s teams are building passing lanes along the Parks Highway, near Mount Denali in central Alaska. The work includes drainage, levelling, planing and asphalt mix operations, as well as signs and road marking.

**Raw Materials**
300,000 tons of aggregates

**Cost**
$11.9 million i.e., €10.7 million

**Employees**
50

**Delivery**
June 2020

**Glenn Highway**

Rehabilitation of a four-lane highway
QAP rebuilt the Glenn Highway, a four-lane route linking South Inner Springer Loop to West Arctic Avenue, near Palmer, in southern Alaska. On the agenda for this project: the addition of traffic lanes, turning lanes and frontage roads, as well as signs and lighting.

**Raw Materials**
900,000 tons of aggregates

**Cost**
$36.6 million, i.e., €33 million

**Employees**
50

**Delivery**
October 2019
HAINES HIGHWAY

Highway safety upgrade

SECON rehabilitated a 20-km section of the Haines Highway in southeast Alaska. Work involved upgrading the route to comply with safety standards by widening the traffic lanes and shoulders and realigning tight bends.

RAW MATERIALS
70,000 tons of asphalt mixes

COST
$39.8 million, i.e., €36 million

EMPLOYEES
60

DELIVERY
October 2019

ROGER SCHNABEL, Regional Manager

“Haines Highway is the only road out of town. The repaving work went without a hitch, aided by the good weather. I had a multidisciplinary team with me from the call for bids phase of the project, so I was familiar with every aspect from the outset.”

STEVE STICHLER, Haines Highway project manager

“For this highway project, I assigned each team a very specific task. Surveying, excavation and blasting operations, as well as compliance with environmental standards and the restoration of fish habitat... Everything was done simultaneously.”
AROUND THE WORLD
IN PICTURES

Every year, Colas carries out tens of thousands of transport infrastructure construction and maintenance projects across all five continents of the world: roads, highways, runways, streets and urban development, dedicated public transport routes, etc. These solutions aim to address a variety of responsible mobility issues, including road safety, traffic flow, environmental protection, road management and cost control. From Canada to Thailand, via Gabon, France, Ireland and Morocco... a rapid trip around the world to see the Group’s work and projects.

UK
Three contracts with Network Rail

Colas Rail Ltd has signed three contracts with Network Rail* in the UK. The first of these contracts concerns the Southern Rails Systems Alliance and relates to the delivery of rail systems works including track renewal, signaling, electrification and civil engineering in southern England. The second contract relates to signaling and telecoms infrastructures for the western region. Thirdly, Network Rail has awarded Colas Rail Ltd lots 1 and 5 of a rail freight and seasonal services contract. These new contracts will play a key role in improving the network’s performance and reliability for users and freight.

* Private-owned national rail operator.
FRANCE
Orly, a responsible project

Re-building the runway at France’s second biggest airport is not an everyday occurrence… The renovation and upgrading of runway 3 at Paris-Orly airport, built soon after the WWII and extended in 1959, had become essential. Colas Île-de-France Normandie secured the contract for the project, as part of a consortium with Colas Projects, Spie batignolles valérien, JDC Airports and Cegelec. Between July and December 2019, teams pulled off a technical, logistical and environmental feat. With an average of 33 million passengers per year and 627 flights per day, deadlines were tight. At the height of operations, 700 people were working on site, alongside more than 150 machines and heavy trucks. As part of a circular economy approach, the concrete removed from the former runway was recycled in situ and either re-used for the new runway or sent out for use on other sites in the Paris area.

200,000 tons of concrete recycled in situ, i.e.,
nearly 13,000 truck trips avoided (to evacuate cut and supply aggregates)
IRELAND

A third lane for the M7

Forty kilometers southwest of Dublin in Ireland, Colas is widening the M7 motorway and constructing a bypass around the town of Sallins. The M7 – one of the country’s busiest routes – is used by 78,000 vehicles daily. The creation of a third lane in both directions over a 13-km section, along with an interchange and the installation of safety and signaling equipment should help to make traffic smoother and safer on the motorway. Priority was to keep traffic moving safely during construction. Three companies – Colas Projects, Colas UK and SIAC (in which Colas acquired a 36% stake in 2014) – are performing the €64-million contract. Some of the five new bridges on the bypass that the joint venture is building cross over the River Liffey, a river teeming with salmon. Otters and badgers also live in this natural habitat. To preserve resources, the backfill for the viaducts is brought from worksites in Dublin. Nothing is wasted!
Team spirit

Back in March, teams from Colas Sud-Ouest and Aximum, Colas’ safety and signaling company, completed runway renovation work at Biarritz-Pays Basque airport. The project involved planing the old surface and applying 38,000 tons of asphalt mix. The slot gutters, aeronautical lighting systems and drainage network were also upgraded. A race against the clock won thanks to synergy between the Group’s various local profit centers.

FRANCE

Bus Rapid Transit in Normandy

Between January 2018 and April 2019, teams from Colas Île-de-France Normandie’s Rouen and Val de Reuil profit centers, in partnership with Colas’ safety and signaling subsidiary Aximum, were mobilized in Rouen, Normandy for a BRT (bus rapid transit) project. Commissioned in May, line 4 reinforces the existing TEOR (Transport Est-Ouest Rouennais or Rouen East-West Transport) network to offer users fast, safe service.
FRANCE

Lyon Metro: an inconspicuous project

Perrier TP Terrassement (Colas Rhône-Alpes Auvergne) is working alongside Sytral (joint transport association for the Rhône region and Greater Lyon) to extend line B of the metro between the towns of Oullins and Saint-Genis-Laval. Teams are responsible for the construction of the launching shaft for the tunnel boring machine, the earthworks for the new Oullins Centre station and the creation of platforms to process materials and remove the cut from the tunnel. The specific feature of this project is its proximity to downtown Oullins and a hospital. This means noise and dust need to be kept to a minimum, with noise sensors, restricted working hours and the use of truck tarps. Work is set to last until 2021.

GABON

Road rehabilitation in Libreville

Colas Gabon is currently involved in a number of road projects in Libreville aimed at improving traffic conditions in the capital city. Some 120 roads, covering a total distance of 86 km, are being rehabilitated. The work includes the upgrading or creation of drainage systems (culverts, gutters, ducts, etc.) as well as the partial or total renewal of road surfaces. A major undertaking that has mobilized some 100 machines and more than 200 employees.
THAILAND

Route 206 expands

In February 2019, Thanomwongse (TWS), a Colas company in Thailand, started work to rehabilitate route 206 in Phimai. Located 300 km northeast of Bangkok, in Nakhon Ratchasima province, the city of Phimai is known for its historic relics, including Prasat Hin Phimai, one of the country’s largest Khmer temples. Teams are widening and reinforcing the existing pavement on a 30-km section, turning it into a four-lane road. 400,000 m³ of cut/fill, 230,000 m³ of cement-treated materials, 175,000 metric tons of asphalt mixes will be required. 100,000 m³ of concrete pavement, as well as five bridges (two of which will be 100 meters long) and five footbridges will also be built. For this project, TWS has mobilized more than 300 employees and most of its equipment fleet, including a cold-recycling plant and an asphalt plant equipped with a system for incorporating asphalt products obtained from planing operations on the existing pavement. In total, 25,000 tons of reclaimed asphalt pavement (RAP) will be incorporated into the mixes to the tune of 20%; a first for TWS.

25,000 tons of reclaimed asphalt pavement (20% RAP content in new mixes)

30 months of work for a delivery scheduled for mid-2021
FRANCE
Improving traffic flow on the A10 highway

A consortium bringing together Colas Projects (leader), Colas Centre-Ouest, Aximum (Colas’ safety and signaling subsidiary) and Bouygues Travaux Publics Régions France (a Bouygues Construction company) has signed a contract with Cofiroute concerning the widening of the A10 highway in the Touraine area of central France worth a total of €150 million (Colas’ share: €95 million). The contract relates to the widening of a 25-km section of the A10 highway to 6 lanes between the towns of Véginé and Sainte-Maure-de-Touraine. Operations include earthworks, the modification of engineering structures (reconstruction of overpasses and widening of underpasses), restoration of junctions, road surfaces, drainage, equipment and signaling. This project will improve traffic flow and also contribute to regional development.

2019
work launched in July

2023
Scheduled project delivery
FRANCE

A new gas depot in Corsica

Spac, as consortium leader, signed a major turnkey contract with Engie for the engineering, construction and commissioning of the new Loretto gas depot, near Ajaccio, in Corsica. The project will replace the existing storage facilities, particularly the two aerial butane spheres, each with a capacity of 2,500 m³. The new facilities will lead to a significant reduction in risks. In addition, thanks to a comprehensive landscape survey and an environmentally-friendly design, the facilities will blend more comfortably into their surroundings. The study phases began in January 2018 and work is scheduled to be completed by the summer of 2021.

MOROCCO

Upgrading of Route 1

In southern Morocco, Route 1 is being upgraded to an expressway between Tiznit and Laâyoune. The major project will see 555 km of road turned into a 4-lane highway. The objective is to improve traffic flow, service level and safety and facilitate the transport of goods along this Trans-African route linking Morocco to Senegal. GTR, a Colas company in Morocco, was awarded the contract to build two sections, of 22 km and 47 km respectively. Work began in March 2018 and will be completed in June 2022.
The A7 highway gets a makeover

Since the end of 2018, teams from Colas Belgium have been working round the clock to rehabilitate a section of the A7 highway, between Saint-Denis and Jemappes (Hainaut province, Wallonia). Following preparatory operations including the creation of refuge areas and passing sections for police vehicles, the main work got under way at the end of the winter. On the agenda: the complete reconstruction of the supporting structure and repaving of a 5-km section of highway, along with the renovation of numerous engineering structures on the section. A large-capacity slip form machine was used for concrete surfacing operations: a first in Europe. The completed project is set to be delivered at the end of 2019.

30,000 m³ of concrete produced in the mobile plant

2 sections of noise-reducing wall to be renovated
FRANCE
Port of Calais extension
Since 2015, Colas Nord-Est has been working as part of a consortium led by Bouygues Travaux Publics on the city of Calais’ new port development project. The extension, due to be delivered in 2021, will enable the port to absorb the expected 40% increase in cross-Channel traffic. On the agenda for Colas’ teams: the construction of platforms, dockside development, upgrading of the existing ring road outside the port providing a link to the A16 highway, installation of networks (high voltage, drinking and waste water pipes, rainwater pipes, gas pipelines), lighting and dynamic signaling, working with partner Bouygues Energies & Services for the energy aspects. The consortium has committed to allocating 7% of the hours worked to job integration.

700,000 m² of platforms
320,000 tons of mixes applied
FRANCE

Like a house of cards

On June 20, Premys, a Colas company specializing in demolition, carried out vérinage operations, a technique that does not use explosives, on three 15-storey apartment building that had become unfit for habitation, in the Résidences district of Belfort in eastern France. The patented vérinage technique consists in toppling the upper floors using hydraulic jacks, thereby crushing the lower floors, which minimizes the disruption associated with mechanical demolition as well as the time required to complete the operation. Protected by a safety perimeter, hundreds of local residents were able to watch the final phase of the demolition. The operation, initiated by real-estate management company Territoire Habitat, is part of an urban redevelopment project funded by the French National Urban Renovation Agency (ANRU).
REUNION ISLAND

Bridging the gap with BIM*

By the second half of 2020, a new bridge will be spanning the Les Galets river, between Le Port and Saint-Paul, on Reunion Island. GTOI, Colas’ Reunion Island subsidiary, is part of the consortium carrying out a range of operations associated with the project: civil engineering, earthworks, roads and main networks. Designed to withstand cyclones and once-a-century floods, the 400 m-long bridge incorporates pedestrian and cycle paths. The aim is to relieve traffic congestion on Route 1, one of the island’s major roads. For this project, BIM* models, which were presented as part of the initial bid, made it possible to validate the structural design, as well as to prepare and perform the earthworks, including diverting the river, machine traffic, phasing, blue prints, etc.

* Building Information Modeling.

CANADA

Wind and frost-proof marking

Lafrentz, one of Colas’ Canadian companies, is carrying out marking operations on the road network in British Columbia as part of a five-year contract. Nine teams are mobilized across the area, which is subject to heavy traffic and extreme weather conditions. In this wet region, where the use of water-based paint is sometimes not possible, new products and techniques are being tested. For example, in 2019 thermoplastic road marking paint was applied on the Coquihalla highway, whose surface is severely tested by the use of snow chains.
Augmented reality on the Rennes metro

By the end of 2020, line B of the Rennes metro will be up and running between Saint-Jacques-Gaîté (in the northeast) and Cesson-Viasilva (in the southwest). Colas Rail is responsible for supplying and laying the slab track and walkways, along with the central guide rail and power rail.

The studies, installation and trials of the air conditioning and ventilation systems in six of the underground stations took place between mid-2018 and mid-2019 ... using augmented reality! BIM (Building Information Modeling) holograms were created. This innovative, original method enables teams to inspect the structure rapidly and interact with the model’s objects. For a standard station, the inspection time has been reduced ten-fold, falling from thirty hours to three hours. It should be noted that Aximum’s teams are working alongside Colas Rail on parts of the project, particularly the walkways.

13.7 KM of line, including 2.4 km over a viaduct
15 stations served
ITINERARIES

The men and women at Colas share a set of values and a corporate culture. All of them are at the heart of the Group’s challenges and HR news.
HERVÉ LE BOUC

From October 2007 to May 2019, Hervé Le Bouc was Chairman and Chief Executive Officer of Colas, contributing to the transformation and continued development of the Group. Flashback to the 12 years during which he was at the head of Colas.

After graduating with a degree in engineering from the Ecole Spéciale des Travaux Publics, Hervé Le Bouc began his career at Screg in 1977 as a Project Engineer. Afterwards he went through different positions and rose to the highest levels of responsibility at Bouygues Offshore and Saur (former Bouygues subsidiaries). In 2007, he was appointed Chairman and Chief Executive Officer of Colas, and served until May 2019.

“The challenge I’m most proud of is to have engraved safety and ethics in the forefront of Colas.”

Hervé Le Bouc, in May 2019
1 2019 / Paris-Orly Airport
Hervé Le Bouc visiting construction site of runway 3 at Paris-Orly Airport, France.

2 2013 / Safety
Launching “Safety Attitude”, the Group’s new Safety communication campaign.

3 2018 / Diversity
Hervé Le Bouc concludes the last session of the Female Leadership course aimed at women in the Colas Group, as part of the gender equality program.

4 2018 / Prism
Inaugurating the new Colas head office, located in the 15th arrondissement of Paris. Designed by architect Christian de Portzamparc, this positive energy building symbolizes the dynamics of the Group’s transformation.

5 2018 / International external growth
2018 was a record year for Colas in terms of external growth. Colas finalized its biggest acquisition ever: Miller McAsphalt, a major player in road construction in Ontario and in bitumen distribution across Canada. For the first time since the Group’s creation, more than half of its business was conducted outside France.

6 2018 / Team spirit
Final draw for the Colas Team Cup, with Jean-Pierre Papin, former French soccer international and sponsor of Colas Group’s first in-house international sports challenge.

7 2015 / Disruptive innovation
Launch of Wattway, the world’s first photovoltaic road surfacing solution, designed by the Campus for Science and Techniques (CST) in partnership with INES (French National Solar Energy Institute).

8 2017 / Skilled Workers Guild
For the third time, a woman joined Colas’ Skilled Workers Guild.

9 2008 / Colas on Stage
Following the Colas Foundation, dedicated to painting, Hervé Le Bouc extended Colas’ patronage activities to music and dance by creating Colas on Stage. Pictured above, Desh, original creation from choreographer Akram Khan.
Secure the site, remove asbestos, conduct dismantling operations and carry out pollution cleanup at the former SRD refinery in Dunkirk: that’s the roadmap followed by Séverine Rouget, Manager of MCD (Management Conseil Dépollution), a Colas Environnement subsidiary.

“The goal is to have the site fully cleared by 2021 to allow its industrial redevelopment”, she explains. The refinery is currently the biggest asbestos removal and demolition project in France. “Managing this project is a huge commitment, but I’m thriving on the challenge”, underlines Séverine. This geological engineering graduate gained her experience on the ground and from periods spent working in design and consultancy offices in the environmental sector. Passionate about her subject, she readily admits to being “a Project Manager both at work and at home! Whether building a passive house or organizing a family bike ride”. Her day-to-day remit? Organize, plan and coordinate a project that involves the mobilization of employees from more than 60 subcontractors. A responsibility she never loses sight of: “No two days are the same, except for one area: constant vigilance when it comes to anything to do with safety. And compromise is not an option!”

Managing projects round the clock

Séverine Rouget
MCD (Management Conseil Dépollution)
Manager
Colas Environnement
FRANCE

THE SRD PROJECT IN FIGURES

- A 90-hectare site commissioned 90 years ago.
- Some 180 people at the height of the project.
- 40,000 metric tons of steel to be dismantled, i.e., the equivalent of 5 Eiffel towers.
All-round manager

Throughout his career at Sully-Miller, one of Colas’ US companies, Scott Bottomley has remained true to his two guiding principles: never make false promises and do all you can to satisfy the customer. Having joined the company nearly forty-two years ago as a site watchman, Scott now oversees some forty employees, without always knowing what “challenges and opportunities the day will bring”. On July 6, for example, his weekend was cut short by a call from the Department of Transportation in Ridgecrest, northeast Los Angeles, an earthquake with a magnitude of 6.4 on the Richter scale had damaged several miles of roads. “In temperatures of 37°C, I had to get together all the equipment and coordinate and mobilize the teams. As asphalt specialists, our Blue Diamond Materials teams were on the front line.” Scott Bottomley’s multifaceted experience, constantly underpinned by a sense of service, stands him in good stead when it comes to being reactive. “Our customers are key to both our successes and failures”, he says. “So we look after them.”

AND IF HIS JOB WAS...

- A style of music? “Jazz, full of improvisation.”
- A drink? “A protein shake, which feeds the mind.”
- An engine? “Hybrid, flexible and capable of adapting.”
Team player

Over the course of a career spanning twenty-three years, thirteen of which spent at Colas, Sébastien Irialour has worked in Reunion Island, French Guiana, Mauritius, central Africa, southern Africa and east Africa. Now based in Senegal in his role as Deputy Technical Manager for Central Africa and West Africa, he is the “technical go-to man” for countries where Colas operates. His remit includes examining technical solutions for calls for bids, providing technical support to projects and industries, control, laboratory management and team supervision. “We also develop our products and techniques working closely with the Campus for Science and Techniques, based at Magny-les-Hameaux, at all times”, explains this rugby fan, who fosters team spirit day-to-day.

In Senegal, bitumen emulsions and the first cold mixes were recently developed, tested and manufactured by Colas. “It isn’t the norm here yet. Bitumen emulsion and its derivatives represent real progress and open up new opportunities”, concludes Sébastien.

Sébastien Irialour
Deputy Technical Manager
Central Africa and West Africa
SENEGAL

HIS MOTTO

“Alone I go faster; together we go further.”
Talent hunter

If Margit Révész’ were to find a magic lamp with a genie inside, she knows exactly what she would wish for: the ability to be everywhere at once. To manage some one thousand employees, remember their birthdays, enjoy lunch with her team, etc. Initially hired as a payroll administrator, the young Hungarian has spent the last ten years working as Human Resources Manager. A key role in the life of Colas, where attracting talented new people is just as important as retaining them. Encouraged by her own managers, this born-altruist is constantly seeking inventive ways to make her job even more creative. “I enjoy listening to people and helping them any way I can. I encourage my colleagues to do the same.” Accordingly, Margit has led a mini-revolution inside the subsidiary: a makeover for job vacancies (“the advert begins with a poem”), the production of a bilingual film (“very popular with applicants”), recruitment out in the country, organization of welcome ceremonies, etc. All driven by the same recurring theme: harmony!

Her Inspirations

- Steve Jobs: “People who are crazy enough to believe they can change the world are the ones that do it.”
- Her motivated and passionate team.
- Her 14-year old son and her husband, for whom “nothing is ever impossible”.

Margit Révész
Human Resources Manager
Colas Hungaria Zrt
HUNGARY
Marie Vannieuwenhuyse has travelled and worked all over the world. "I love meeting people and I’m not afraid of stepping outside my comfort zone: it’s always extremely rewarding," she explains. Marie, who joined Colas Rail in January 2019, is Deputy Manager, railways and catenaries of the line 15 South – East sector of the Grand Paris metro project. "This is an exceptional project!" she enthuses. The Grand Paris metro addresses mobility and ecology objectives: the project is set to change the lives of people living in the Greater Paris region! As far as Colas Rail is concerned, work will begin in January 2020. "At the moment, we’re in the preparatory phase", specifies Marie. "We have to conduct the studies, define processes and identify the challenges and risks associated with the project, particularly in terms of safety.” Having notched up a wealth of experience working in the transport and aviation sectors, Marie appreciates the high degree of autonomy that comes with her role. “Colas Rail cultivates an entrepreneurial spirit, combined with the strength of being part of a bigger group, underpinned by a philosophy of people management: that’s the ideal formula as far as I’m concerned!” she concludes.
Traffic controller

In the Part-Dieu district of Lyon, some fifty or so projects are either ongoing or due to be rolled out between now and 2023. Buildings, schools, shopping malls, public spaces… over an area covering 177 hectares a radical transformation is under way, requiring careful organization. Erwann Moreau has played an active role, overseeing the development of Reguly, a work site logistics control tool designed by Mobility by Colas.

“Reguly is used to coordinate the project’s public and private contractors, and thus meet several objectives: ensure the right materials are delivered to the right places, rationalize and optimize truck loads, and keep traffic disruption to a minimum”, he explains. “Controlling traffic across an entire district is a first for me!”

Head of the design department in the Rhône area, Erwann spent several months on partial secondment from his usual job to devote himself to the project. “A great opportunity for me to learn lots of new skills. The subject, contacts, environment, project-mode approach: it was all completely different from anything I had done before”, says Erwann. “I found the experience rewarding and motivating!”

SYNERGIES AT WORK

- Mobility by Colas: design and global integration of the tool.
- Colas Rhône-Alpes Auvergne: trucks parking service area creation and maintenance.
- Aximum: marking out of routes, access system creation and maintenance.
Romuald joined Colas as a laborer in 2001, before being appointed asphalt mix job superintendent. He loved his job because he enjoys being out on the road working as part of a team. In 2012, he suffered a slipped disc and was off work for seven months. Shortly after returning to work, he had a serious fall. As a result, occupational health banned him from lifting heavy weights and driving. “I couldn’t work out on site anymore”, he recalls. “It was hard to take because I still felt able to work.”

When the Lille profit center opened a new warehouse, Romuald then got the chance to retrain and take on a new role, as warehouseman. Every day, he takes orders from site foremen, prepares the equipment requested (tools, signs, barriers, portable electric equipment, etc.) and hands it over to teams in the morning before they head out to the sites. He had no problems acquiring the knowledge required for his new role. And his workstation was adapted to allow him to carry out his tasks easily. “What I find hardest is seeing my colleagues setting off for the site every morning. We were always a close-knit team.”

Five years on, Romuald remains close to them. He spends a lot of time designing and tracking down quality material and equipment: special gloves to protect against vibrations, electric wheelbarrows to transport heavy loads… Romuald’s priority now is to provide safety advice and training. “I tell everyone we are here to work and go home again in one piece. We only have one life and there is nothing more precious!”

Romuald Tyffers, Warehouseman, Lille Profit Center, Colas Nord-Est, France

DIVERSITY/DISABILITY
ADAPTING THE WORKPLACE

Working life can be compatible with a health problem, even serious. Feedback from France, where thanks to the mechanism for disabled worker status recognition, along with support from the Human Resources departments, the Group’s employees can continue in their existing job or discover a new one.
Marie-Paule has always loved her job in human resources, especially recruitment, that she has been heading for several years. When, a year ago, she began to experience unexplained tiredness, a racing heartbeat, and drowsiness at the wheel, she was worried because it was difficult to always bring the same energy and enthusiasm to a day’s work. Her doctor diagnosed severe sleep apnea. After a period of sick leave, Marie-Paule was able to benefit from flexible hours, working from home temporarily. While her treatment was being adjusted, her doctor advised her to seek disabled worker status recognition (in French RQTH). “I was then able to work more comfortably, with less time in commutes. By going through an official process with my employer, I chose to be transparent with my management to avoid any misunderstandings,” explains Marie-Paule. The RQTH process can be quite complicated. So it is important to ask HR managers for help in submitting the paperwork. “Human resource teams are there to support employees. In partnership with occupational health services, they can come together to think of ways to adapt job positions and workstations, as well as help guide employees towards retraining options,” explains Marie-Paule.

“Having a disabled worker status is not a handicap.”
SAFETY

A NEW PERSPECTIVE

Colas’ France General Management has launched One Safety. The aim of the initiative is to halve the number of accidents by 2022. A new support method, developed with Dupont de Nemours, world leader in workplace health and safety, has been tested throughout 2019 at several pilot sites in the central western region of France. We get some feedback before a national roll-out.

DOMINIQUE THOMAS,
PROFIT CENTER MANAGER,
ANGERS, COLAS CENTRE-OUEST,
FRANCE

“One Safety is not just another safety campaign!” reports Dominique Thomas, Profit Center Manager in Angers. A promoter* of the initiative, he and five of his colleagues attended a training course as well as several observation sessions with a safety coach. “Selecting the right people as promoters is crucial”, he emphasizes. “The success of the initiative depends on their commitment.” A mobilization that has paid off: “There was a before and after. Before, information was provided on a top-down basis and there were very formal safety inspection visits by management. In the space of a few months, we have learned how to talk about safety more openly.” Without sanctions, but with clear long and short-term results. “In workshops we defined 10 actions to be implemented with immediate effect: concrete results were visible very quickly, giving greater credibility to the initiative in the eyes of employees on the ground”, observes Dominique Thomas. The steering committee set up within the profit center will continue to rally promoters and other profit center members around safety issues beyond the test phase. “The task now is to get all those who haven’t been trained on board”, explains Dominique Thomas. “We’re on the right track!”

* “Promoters” play a key role in One Safety. They are employees identified to be trained, in order to become security ambassadors internally.
Bocar Welé, who joined the company more than twelve years ago, feels that for a long time safety was simply “a set of instructions.” The launch of the One Safety initiative at his profit center at the beginning of 2019 marked a turning point. He took part in several training sessions held on various jobsites. Bocar particularly appreciated the discussions that followed observation sessions. “We were asked to give our opinions and question ourselves”, he says. “In the heat of the moment, you don’t always realize the risks you’re taking; by discussing issues you become more aware… and you can find solutions together.” Throughout the day, every hazardous situation detected is logged on a table displayed in the works base. “Every morning before starting work, the team meets to assess risks and find solutions”, explains Bocar. According to this skilled worker, the team now regularly discusses “safety-related issues… and many more! It’s really useful to talk and come up with ideas together. We have a closer-knit team now”, he concludes.

In the space of a few months, we have learned how to talk about safety more openly.
DIVERSITY

Girls on the Move with Colas Morocco

Colas is a partner of the Elles Bougent association, which works to promote gender equality in scientific and technical sectors. Three years ago, Elles Bougent began broadening its scope to the international stage. Colas Morocco, for example, took part in Girls on the Move Week. Five of the subsidiary’s employees went out to meet female students studying for a national construction industry qualification, hoping to encourage young women to consider a career in what remain largely male-dominated scientific sectors.

FRANCIS BOUYGUES CORPORATE FOUNDATION

Students supported by Colas employees

In October, the Francis Bouygues Corporate Foundation hosted the 100 students selected for its 15th intake, along with their mentors. Today, 153 Colas employees are working with the Foundation. Created in 2005 to promote equal opportunities, the Francis Bouygues Foundation supports deserving and motivated high school graduates who do not have the support needed to move into higher education. The students chosen are accompanied throughout their studies by a mentor, a Bouygues Group employee. Mentors offer moral support, advice and help students find internships when the time comes.

To find out more: fondationfrancisbouygues.com
QUALITY OF LIFE AT WORK
Support to the caregivers

Since the signing of its Quality of Life at Work agreement in France, Colas has implemented a number of measures aimed at making day-to-day life easier for its employees. They can access support to help them in their roles as caregivers. More than 30,000 employees have access to these services within the framework of the agreement. Last November, Colas won the Quality of Life at Work award at the “Victoires des Leaders du Capital Humain” ceremony, highlighting its approach to assist parents and caregivers.

ETHICS/COMPLIANCE
A Group-wide communication campaign

In a first for the Colas Group, a poster campaign covering issues related to ethics and compliance was launched on September 19 across all the subsidiaries. Alongside the campaign, a compendium of rules and application procedures has been made available to employees around the world, via the Group’s intranet portal.

THE STAKES
“Ethics are more and more the cornerstone of an environment in which corporate social responsibility is growing in importance.”
Emmanuel Rollin, the Group’s Chief Legal and Compliance Officer

COLASSHARE
The Group’s digitalization: all aboard!

The ColasShare platform was launched in September. The objective to enable employees to pool their professional experience and expertise. The platform is organized on the basis of dedicated communities, specific to each field. Each community includes a library, feedback, a directory of experts and a chat room. Available in the 15 languages spoken within the Group, ColasShare represents a unique opportunity for employees from every country to interact!
Go to https://colas4.sharepoint.com/sites/Colas-Share

> 8 MILLION
people in France are “caregivers” for a dependent loved one (elderly, disabled, sick, etc.).
Back in June, Colas held the 7th edition of its Safety Week initiative, covering all of the Group’s 800 operating units and 2,000 material production and recycling sites on the five continents. This new edition was dedicated to the theme of noise.

ITINERARIES

1 UK, Colas UK
2 France, Colas Midi-Méditerranée
3 Australia, Colas Australia
4 Madagascar, Colas Madagascar
5 France, Colas Nord-Est
6 Canada, E Construction
The 2019 edition of Safety Week focused on the dangers of noise and the importance of wearing hearing protection, which is compulsory at all times on the Group’s work sites (jobsites, quarries, plants). The objective was to remind all employees that noise levels above 80 dB(A) are dangerous, that they are harmful to the body and that the resulting hearing loss is irreversible. Safety Week 2019 was supported by a variety of tools, including a poster campaign, quizzes allowing employees to test their knowledge and a film, available on Colas’ You Tube channel. An awareness-raising leaflet has also been printed to present the effects of noise on the body (tinnitus, hearing loss, dizziness, cardiovascular problems, sleeping problems, stress, etc.) as well as offer advice and good practices to tackle eight common misconceptions (“Our sites aren’t that noisy”, “Noise is only dangerous because of its intensity”, “You only become deaf with age”, etc.).
IN THE PICTURE

1. **COLAS TEAM CUP**
The qualifying stages of the Colas Team Cup were in full swing between April and November! Colas’ second international sports challenge hinges around two disciplines: 5-a-side soccer and running. The international finals will be held in Paris on March 3 and 4, 2020.

2. **TOUR DE FRANCE DAYS**
Gérardmer, in the Vosges mountains of northeastern France, hosted an event for ‘Tour de France’ graduate program employees in June. A chance to relax and share experiences for these young graduates following a 16-month induction program within Colas’ French companies.

3. **TOP MANAGEMENT DAYS**
Back in March, the Top Management Days conference in Budapest, Hungary brought together 170 key managers from Colas companies in Europe. The target of this conference, the first of its type, was to share strategy and objectives and, above all, give the zone’s managers an opportunity to meet each other. Frédéric Gardès – Managing Director, International at that time – intervened to present strategic projects, One Colas and Route 22.
From October 9 to 11, the CST* organized Campus Inside, its 2nd open house event. Some 700 visitors (customers, partners, students, employees, etc.) were able to gain an insight into the R&D activities carried out by Colas to develop solutions designed to support more responsible mobility.

*Colas’ Campus for Science and Techniques, located in Magny-les-Hameaux, near Paris.

The #MyJobStory campaign continues on social media! The concept behind this innovative communication initiative: funny, quirky and sometimes unbelievable anecdotes, as told by employees from all backgrounds. An authentic, offbeat campaign involving every Colas company around the globe aimed at highlighting the Group’s businesses.

To mark Colas’ 90th anniversary, employees from around the world took part in the production of a musical clip. “Sunny” symbolizes the diversity, complicity and pride felt by those working at Colas, while also reflecting the reality of life on the ground. It was awarded the silver Dolphin at the prestigious Cannes Corporate Media & TV Awards ceremony in 2019.
We all have a story to share
#MyJobStory
CROSSROADS

In a world in which mobility needs are constantly increasing and evolving, Colas is pursuing its international development strategy and harnessing all its know-how and innovation capacity.
Aerial view of Santiago, Chile.
INTERNATIONAL

COLAS IN SOUTH AMERICA

Colas is increasingly active west of the Andes. In Chile, where Colas Rail has been present since 2013, the development of the metro and rail network offers opportunities over the next 20 years, while the road business is growing thanks to a recent acquisition. Meanwhile, in Peru, Colas is contributing to the construction of mining infrastructures. Analysis.

A REGION WITH HIGH POTENTIAL

The Perumin mining convention, held every two years since 1943, brings together Peru’s leading players from the sector. At this year’s event, held in September, all the talk was about one exceptional project: Quellaveco. Mining operator Anglo American has invested more than 3 billion dollars in a copper mine – with an operational potential of 40 years – at this site, located 1,200 km south of Lima. Colas is already actively involved in the project via Colvias, a company recently created with a view to developing road activities in Peru. “Colvias teams specialize in mining infrastructures”, explains Jean-Baptiste Guénet, Colas’ South America Manager. “Employees at the Quellaveco site are working at an altitude of close to 4,000 meters, in an arid environment and with high UV levels. So individual protection and safety are major considerations.” Mining activities also herald promising growth opportunities for Colas in Peru, but also in Chile. Mining is a fast-growing sector in Chile, where the Group has already been present for eight years via Dust-A-Side, a company specializing in dust control. And further opportunities abound in the region. Last summer, for example, Colas acquired Asfalcura, a company specializing in road construction, with a particular focus on asphalt mix production and application. The Group’s core business has thus been reinforced. “Colas targets economically mature South American countries, concentrating on markets where competition is healthy and transparent”, underlines Jean-Baptiste Guénet.
## IN BRIEF

### CHILE

#### ROAD WORKS AND BITUMEN PRODUCTS

**#SUBSIDIARIES**
Asfalcura, a company specializing in road construction and in asphalt mix production and application. Created in 2005, the company was acquired by Colas in 2019. It should be noted that the company also has a 33.33% stake in Oil Malal, which specializes in the import, conversion, and distribution of bitumen products.

**#20 PROJECTS PER YEAR**

#### RAIL

**#SUBSIDIARIES**
Colas Rail and OFC (Obras Ferroviarias de Chile, jointly owned (50%) with ETF, a subsidiary of Eurovia).

**#ONGOING PROJECTS**

For the Santiago metro:
- extension of the track and 3rd rail of line 2 extension and new depot (2018-2022);
- extension of the track and catenary system for the line 3 extension (2017-2022);
- track and 3rd rail maintenance on lines 1, 2, 4, 5 (launched in December 2016 for a period of 7 years);
- track and catenary system maintenance on lines 3 and 6 (launched in November 2017 for a period of 20 years);
- extension of line 2 and new depot, high-voltage batch (2019-2022);
- replacement of a double junction on line 2 (Ovalle station) (2019-2020).

For EFE*: supply and replacement of 150 sets of points on the main network (2018-2021).

* Empresa de los Ferrocarriles del Estado, the national rail operator.

**#TOTAL WORKFORCE**

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### PERU

**#SUBSIDIARY**
Colvias, created in July 2019 to carry out mainly mining infrastructure projects on behalf of international mining operators as well as short and medium-term road maintenance contracts.

**#ONGOING PROJECT**

Building road infrastructure at the Quellaveco copper mine site, for Anglo American.

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“In South America, Colas has a targeted development approach, focusing on projects where competition is healthy, prioritizing the mining sector.”

Jean-Baptiste Guénet, Colas’ South America Manager

FROM THE SUMMITS OF THE ANDES TO THE SANTIAGO METRO

Colas’ first foray into South America was in Venezuela. Colas Rail’s adventure in the rail sector, initiated thirty years ago, is backed by solid references – notably the construction and extension of the metro network in Caracas (four lines) and in Los Teques (two lines). However, the current economic and political turmoil in the country limits opportunities at present.

Despite this, the rail sector remains dynamic on the continent, driven, once again, by Chile. “We’re going to start extension work on line 2 of the Santiago metro. Alongside EFE [Empresa de los Ferrocarriles del Estado, the national rail operator], we’re going to supply and install 150 sets of points for the main network, for lines already in service”, announces Régis Roche, Colas Rail’s South America Manager. These large-scale projects require dedicated logistics. “We’re bringing over machines used on a major project in Morocco, as well as motorized electric rail-mounted gantry cranes. These gantries, designed to lift and transport equipment, are capable of advancing automatically, saving valuable time. The EFE project is the first in Chile to make use of them”, explains Luc Rodriguez, Colas Rail’s Sales Manager for South America.

And it doesn’t finish there: in Santiago, plans have already been drawn up to construct metro lines 7, 8 and 9. The first calls for bids will be launched in 2020 for commissioning in 2025. “There are currently very few countries building three metro lines in the space of just five years”, underlines Régis Roche. There are also a number of private initiatives to create a high-speed rail link between Santiago and Valparaiso, a new line out to Santiago airport, etc. All potential opportunities for Colas Rail, in a country “that is one of the most organized, with an efficient network and considerable needs, and where projects are delivered on time”, concludes Luc Rodriguez.
At the Quellaveco mining site, in Peru, safety and societal responsibility are key considerations for Colvias’ teams working on the road infrastructure. Mining company Anglo American, which is building what will eventually be one of the world’s biggest copper mines, hires locally and requires its workforce to comply with strictest GHSE standards.

Executed within the framework of a 20-year design, construction and maintenance contract secured in 2016, new metro lines 3 and 6 reinforce the underground network, which serves most districts throughout Santiago in Chile. At its peak, more than 1,000 employees have been mobilized for the project.
FROM LEFT TO RIGHT:

1. NATHALIE BERCHADSKY,
   Digital Factory Manager
2. PHILIPPE TOUBLANT,
   Data Factory Manager
3. PASCAL GUENOT,
   Project Management Support Manager
4. STÉPHANE ANDRIEUX,
   Digital Technology and Data Manager
Digital and data: a factory tour

THE STARTING POINT
In 2019, Speig (Société parisienne d’études, d’informatique et de gestion) became Colas Digital Solutions. The name change heralds a significant shift: from IT management service provider to comprehensive support service meeting all Colas’ digital requirements.

THE ORGANIZATION
To support the Group’s digital transformation, the IT Department started by transforming itself. Roles were redefined and expertise was divided between two new units: a digital factory, which centralizes the roll-out of new technologies and new usages, and a data factory, which houses new data-related know-how. Although they have separate roadmaps, these expertise hubs share a common mission: to support the Group’s innovations and business transformations with a view to value creation.

THE DELIVERABLES
In its first year, the digital factory has already delivered and rolled out several projects, including MyColas, the Group’s employee portal, and the HelloTravaux application, aimed at the general public. The team has also worked with the Sustainable Development and Innovation department to help develop its digital offers (Park’In Saclay, Wattway, Flowell, Anais). As for the data factory, it has launched a number of projects related to the collection, structuring, cleaning, backup and presentation of data, expertise that has already been applied in practice to optimize transport logistics in France.

THE PHILOSOPHY
“Fewer silos, more pizza! Project teams are ‘pizza teams’. In other words, all participants in a particular project are involved from the outset and at every stage. Business line, development, operations, etc. Team members each bring their own ‘ingredient’, directly and without management intervention.”

STÉPHANE ANDRIEUX,
Digital Technology and Data Manager
ANALYSIS
AN ONLINE MOBILITY SERVICES PLATFORM

PARK’IN
SAKLAY

AN EASY-TO-USE SERVICE

With the app and online services platform, users are informed about parking availability, are guided to a parking space that suits their requirements and can pay online. An incentive program aimed at changing behavior encourages parking in a dedicated structure (parking lot) rather than on the street. In the future, additional mobility services will be incorporated: public transport, bicycles, carpools, etc. All this will be made possible via Moov’Hub, an online mobility services platform.

750 PARKING SPACES AVAILABLE IN THE STREET AND SHARED PARKING lots IN 2019
Officially launched on September 17, 2019, Park’In Saclay is a web-application aimed at making parking easier and contributing to the appeal and development of the Paris-Saclay campus, near Paris. Park’In Saclay, which is hinged around the Moov’Hub platform developed by Mobility by Colas, is the first MaaS (Mobility as a Service)* solution dedicated to parking.

* With MaaS, the notion of transport is evolving towards a service approach, merging the means of transport with its performance for the user (comfort, efficiency, flow, safety).

**FIRST MAAS DEDICATED TO PARKING**

This is a genuine digital platform making it possible to decompartmentalize mobility and parking services, and address the challenges of MaaS resulting from France’s new mobility law.

**AN OBSERVATORY SUPPORTING LOCAL AUTHORITIES**

Via its parking observatory, Park’In Saclay provides local authorities with tools for monitoring mobility-related usages on the Paris-Saclay campus, controlling street parking and measuring service performance.

**PROJECT PLAYERS**

The development and operation of Park’In Saclay are managed by a consortium of companies led by Mobility by Colas and including ParkingMap, Zenpark, Opendatasoft and Nokia, in partnership with the Paris-Saclay planning and development authority. Aximum and Colas Digital Solutions bring their expertise to this project.

FIND OUT MORE:

- mobility.by.colas.com/parkinsaclay.fr
- @parkinsaclay
Launched in 2018, One Colas is the Group’s strategic project developed around the notion of collective intelligence. It sets out the development and working priorities for all the Group’s businesses and companies out to 2022.

In order to build One Colas, an evaluation of the Group’s strengths and paths for progress as well as an analysis of evolving market conditions were carried out. Colas has access to long-term growth markets throughout the world. The Group is a leader in most of its markets, but competition is very fierce and entry barriers are low. Mobility infrastructure construction and, above all, maintenance needs are constantly increasing and evolving, reflecting the major trends in society. There are a number of potential areas for improvement available to Colas, particularly in terms of the internationalization of its culture and the development of collective intelligence.

COLLECTIVE INTELLIGENCE
For Colas, the idea is to work better together, to continue to break down silos within organizations and to exploit the strength of the Group, while preserving its local roots.

OBJECTIVES
“The One Colas project concerns each and every one of us. The idea is to share better and work better together. This philosophy is in line with the drive to foster of cross-functionality that is at the heart of our strategy and our new organizational structure.”

Frédéric Gardès, CEO Colas

FAVORABLE UNDERLYING TRENDS
• Demographic growth and expanding urban development
• Upgrading of infrastructures in developed countries
• Lack of infrastructure in emerging countries
• Increase in environmental requirements and constraints
• Transition to a service economy
• Digital revolution

9 PROJECTS
One Colas defined nine projects, each with a designated sponsor and project leader. These projects fit squarely with the Group’s strategic priorities: to promote industrial activities (bitumen and quarries); to expand the range of products and services (business development, major projects, smart mobility); to pursue targeted international development and accelerate the digital transformation.
FOCUS ON...
THREE ONE COLAS PROJECTS

**FOCUS ON BITUMEN**

**Sponsor:** Louis Gabanna  
**Project leader:** Jacques Pastor

In an increasingly global bitumen market, Colas must take full advantage of its position as market leader.

**KEY FIGURES**
- Colas is the world’s No. 1 bitumen buyer
- 69 bitumen terminals representing a total capacity of > 1 million metric tons
- 9 bitumen tankers, 2 barges, 200 transport wagons
- Numerous distribution and storage depots
- Presence throughout the entire value chain

**A NEW CROSS-FUNCTIONAL ORGANIZATIONAL STRUCTURE**
- Secure supplies
- Reinforce bitumen products purchasing, transport, conversion and sales

**FOCUS ON QUARRIES**

**Sponsor:** Thierry Méline  
**Project leader:** Christophe Da-Poïan

Quarries are a major asset for the Group. Our principal aim, therefore, is to exploit to the full this asset base, the fruit of the Group’s history and its various acquisitions.

**KEY FIGURES**
- Colas is the world’s 5th biggest quarry operator and the 2nd quarry operator in France
- 450 active sites
- 100 million metric tons of aggregates sold
- Quarries employ 4,000 people

**5 MAIN PRIORITIES**
- Optimize the site portfolio
- Improve operating performance
- Increase sales volume
- Develop new activities
- Establish the quarry specialists segment

**FOCUS ON RESPONSIBILITY**

**Sponsor:** Éric Haentjens  
**Project leader:** Henri Molleron

One Colas Responsibility project is aimed at redefining a sustainable development policy and rolling it out across the Group’s companies. One Colas Responsibility is a collaborative program, perfectly aligned with the Group’s business strategy and business model.

**5 THEMES IDENTIFIED**
- Governance and markets
- Human capital
- Environment
- Business ethics
- Products and solutions

**ONLINE CONSULTATION PLATFORMS**
accessible to employees and external stakeholders (customers, suppliers, residents, etc.) to collect their feedback relating to the overhaul of Colas CSR policy
HORIZONS

Colas operates in a global economic, technological, environmental and social context marked by profound changes. Routes invites you to discover new horizons.
TRENDS

MOBILITY AROUND THE GLOBE

CANADA

Google City, the city of the future?

In eastern Toronto, the Quayside waterfront development has caused a buzz. Sidewalk Labs (SWL), a subsidiary of Alphabet, Google’s parent company, is planning a “smart district” on a five-hectare site, managed by digital data. The arrival of one of the digital giants in the world of urban development and public space management marks a historic turning point that is causing quite a stir among traditional players.

What does Google City look like?
The energy-efficient buildings are constructed from timber and mobility is hinged around public transport. Underground robots distribute packages and manage waste. Urban furniture is interchangeable, the road surfaces heat up, sidewalks are non-existent...

In June, Colas signed an agreement with SWL to trial Flowell, its dynamic light-emitting marking solution that modulates the use of urban space between vehicles and pedestrians.

AUTONOMOUS SHUTTLES

The future of public transport for some, pointless for others...

In France, autonomous shuttles – driverless mini-buses – are the subject of much debate. Why are they criticized? The compulsory presence of an attendant on board, their slow speed... And yet, they represent an alternative to the car to cover the “last mile”. Being tested in several cities, we haven’t heard the last of them.

2020
Autonomous taxis will be available in 10 major cities
E-scooters are polluters!

Electric scooters, an eco-friendly transport solution? Perhaps not. Already widely criticized by pedestrians and motorists irritated by inconsiderate practices, these scooters may actually be more polluting than first thought. A study carried out by researchers at North Carolina State University reveals that the average global warming impact of electric scooters is 202 g of GHG per passenger and per mile travelled. 50% of this comes from materials and manufacturing (rare metals for the lithium batteries and aluminum frame), 43% from the impact of collection and distribution of the final product (from China to the consumer) and 4.7% from the impact of recharging them. And all for an estimated lifetime of 28.8 days...

170 million bicycles were sold worldwide in 2018

MOBILITY “The road infrastructure today can no longer operate alone. We need to adopt an ecosystem approach in order to be a prime mover when it comes to addressing the new challenges before us.”

Guillaume Malochet, Chairman of the Routes de France Foresight Committee

TOMORROW, THE ELECTRIC ROAD?
To replace fossil energy in the transport sector, Sweden is setting its sights on the electric road.
In 2020, Elonroad is testing a road in Lund that allows vehicles to recharge on the move thanks to the presence of a conductive rail on the road surface. The technology does not require any major construction. Other advantages: it increases the range of electric vehicles and operates with batteries that consume fewer natural resources.
Numerous research centers have emerged around the world to test autonomous vehicles prior to their roll-out on roads. These full-scale experimental sites recreate road sections to test complex traffic conditions typically encountered. Some of these even construct the surrounding urban environment to better incorporate these variables within the vision of the various vehicle sensors. The most well-known fake towns around the world are Mcity and GoMentum in the USA, and K-City in Korea. But France has gotten in on the act too. Two centers have just been opened, including Transpolis. This research and experimentation center occupying an 80-hectare site was inaugurated back in July in Saint-Maurice-de-Rémens, in the Ain area of eastern France.

Colas is one of the site’s shareholders. To validate solutions developed by Colas’ Campus for Science and Techniques, the Group’s engineers will be able to use the site to carry out reliability tests and behavioral studies in real conditions.

Boeing, Airbus, Terrafugia, Uber, Lilium, Toyota, Volocopter...

A number of manufacturers are in a race to produce the first flying car. The year 2023 seems to be their target for the first commercial flights of vehicles that will take off and land vertically. It has to be said that this is set to be a growth market (rising from $1 billion in 2025 to $32 billion in 2035) and flying cars could be a solution to relieve city traffic congestion. But a number of challenges remain: the weight resulting from the number of batteries required and legislation that needs to be defined to ensure the safety of users and residents under the flight path. What sort of roll-out can we expect? It would appear that this is likely to be a niche market targeting wealthy customers...

3 MILLION vehicles sold around the world in 2018 were electric
On September 9, Colas Circle welcomed Jean-Pierre Raffarin, French Prime Minister from 2002 to 2005 and honorary Member of Parliament. Committed to promoting French-Chinese cooperation, he was invited to talk about the position of France and Europe with respect to China and the USA. We take a look back at a highly informative conference.

“We would all benefit from getting to know China better.”

Jean-Pierre Raffarin, former French Prime Minister (2002-2005)

China is one of your pet subjects. Why?
Jean-Pierre Raffarin: I’m not a sinologist. However, I’ve been visiting China for nearly fifty years now, and I see myself as an experienced observer of that part of the world. And what I’ve noticed is that today, China lies at the heart of a number of issues – economic, political and many more. That’s why I believe it is more important than ever for a major company to study the country. I’m absolutely convinced that we would all benefit from getting to know China better.

In your view, what is China’s position in the world today?
J.-P. R.: China and the United States are the two major forces structuring
long-term international relations. In terms of trade, it can even be said that these two giants are at war with each other. The Chinese are convinced that they are ultimately going to beat the Americans. Personally, I think that’s quite likely when you consider that two thirds of science and technology graduates in the USA are of Asian origin, and mainly Chinese. Meanwhile, China appears to be ready to make a number of concessions to the United States. So we can expect that there will be progress at times, followed by pauses... a “stop and go” dynamic that will set the tempo for world trade.

What role can Europe play in this context?
J.-P. R.: Europe is caught in the middle between the two battling world powers. Victory for either comes with its own disadvantages: China’s values and those of the United States are far-removed from our own. The only constructive option for Europe is therefore to assert itself as a third power, to seek independence and balance. France, in particular has a serious role to play in finding mutually beneficial avenues for cooperation with China.

So is the Silk Road open again?
J.-P. R.: The history of the Silk Road has fed our collective imagination. And yet President Xi Jinping surprised everyone when he launched the BRI project (see opposite), which can be seen as the 21st century Silk Road. The underlying aim of this initiative is to turn the major market represented by Europe, Asia and Africa into a community of interests. The West’s old practices of imposing its supremacy and favoring one region over another (urban areas to the detriment of the countryside, for example), are no longer the order of the day. What China is driving is a global rebalancing process. It is up to us to demand reciprocity in our exchanges.

What lessons can Colas draw from this?
J.-P. R.: As far as I am aware, China is the first global market in which everything is intelligence-focused, where innovation is the priority. It is undeniably an asset that the country would recognize in a pioneering company like Colas. It’s true that Chinese competition may appear tough in emerging markets, such as Africa. But Colas is ahead of the field in terms of technology and is well placed, moreover, to exploit its long-standing relations and experience in these regions: this difference really sets the company apart.

“China lies at the heart of a number of issues – economic, political and many more.”

BIOGRAPHY

Born in 1948, Jean-Pierre Raffarin is a French politician. He is chairman of France’s Foresight and Innovation Foundation, a think tank with a particular focus on economic relations with China. In January 2018, Jean-Pierre Raffarin was appointed special representative of the French Ministry of Foreign Affairs to China. In September 2019, he was awarded the Friendship medal by China’s current president, Xi Jinping.

THE SILK ROAD

Yesterday... A former network of trade routes between Asia and Europe, the Silk Road linked the city of Chang’an, in China, to Antioch, in medieval Syria. It derives its name from the lucrative trade in silk carried out along its length. The oldest known traces of the network date back to 2000 BC. The Silk Road was gradually abandoned from the 15th century.

... Tomorrow. The new Silk Road (Belt and Road Initiative, or BRI) refers to sea routes and railway links between China and Europe, transiting 68 countries, including France. The Chinese government launched the project in the fall of 2013.

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BIO
Born in 1987, Dorian Cohen lives and works in Paris. His background is in urban development engineering, but he is now a full-time artist. Selected by the Colas Foundation in 2018, he was nominated for the Sciences Po Award for contemporary art in 2019.

How did you tackle the Colas Foundation commission?
Dorian Cohen: I am honored to have been selected by the Foundation, joining so many big names from the world of contemporary art. And I had an affinity with the theme requested: I have always drawn inspiration from public spaces and the road, even when not working on...
a specific commission! For the Colas Foundation, I produced a work as part of a series I started back in 2015, called “Départ en vacances” or “Going on vacation”. It is a candid interpretation of the theme of the road. My painting is figurative and realist – I actually worked from photographs.

What does the road mean to you?
D. C.: For me, the road conjures up the idea of departing, of leaving behind the daily routine. I see it as a form of liberation. It has been a source of inspiration for a number of years. When I left the engineering business to become an artist, the road was one of my first subjects. It’s probably not that obvious when you first look at it, but the painting I did for the Colas Foundation actually conceals an autobiographical element. You will find symbols associated with summertime: blue sky, the glaring light of July, lush vegetation. The highway landscape is etched in my memory of summer vacations. There is no avoiding the highway to get away from Paris. It’s a rite of passage, a ritual you need to go through to reach your destination! Through the rear window of the car you see these infrastructures going by and shaping the landscape, like sculptures out of nowhere.

How does this painting fit in with your other work?
D. C.: The series follows a chronological evolution. Gradually, landscapes give way to a touch of anxiety, of strangeness. While infrastructures mold the landscape at the start, nature becomes more hostile later on. The series as a whole illustrates a tension between nature and hardscape shaped by man. It’s a duality I am continuing to explore today, but focusing more on the city than the road.

To find out more:
discover the works of Dorian Cohen on www.dorian-cohen.com
Launched in 2015, Wattway is the world’s first photovoltaic road surfacing solution! Patented following five years of research conducted by Colas, global leader in roads, and the INES, France’s National Solar Energy Institute, this French innovation combines road building techniques with photovoltaic energy production.
THIS PAVING PRETTY.
IT'S NOT PAVING, RUSSELL. APPARENTLY THEY'RE PHOTOVOLTAIC PANELS.
PHOTOVOLTAIC, MAURICE.

IF YOU SAY SO. BASICALLY, THEY TURN SOLAR ENERGY INTO ELECTRICITY.
OH YES, OK. I SAW THAT ON THE NEWS, THEY'VE WON A PRIZE, HAVEN'T THEY?

YES, THE SOLAR IMPULSE LAB, WHICH MAKES ECO-FRIENDLY SOLUTIONS.
THAT'S RIGHT, THEY PRODUCE RENEWABLE ENERGY. THAT'S WHAT I WAS SAYING.
BUT WHERE DOES THE ELECTRICITY GO?

IT POWERS ROADSIDE EQUIPMENT.

FAMILY A BIT OF PEACE.

I'D LIKE THAT FOR YOU.
And now for the Wattway Pack solution

At the end of 2019, a new Wattway solution was launched in France. The Wattway Pack consists of between 3 and 12 photovoltaic panels along with a battery system, which can be used to power roadside equipment. A turnkey, ready-to-use and autonomous solution, it can be rapidly rolled out in soft mobility zones and fits harmoniously into both urban and rural environments.
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1948 - Paris-Orly Airport

The first regular post-war flight from New York landed in Orly in 1946. The airfield went on to become a hub for air traffic between Europe and America and the "long-haul" base for Air France. As air traffic increased, the site modernised. Société routière Colas (SRC) was involved in the construction.