En route

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Cover photo: Delarix Regia Flamboyant trees and sugar cane fields, near Sainte-Suzanne, Reunion Island.
Colas held its own in 2015.

This is quite an achievement given the significant challenges it faced, in particular in France as well as in other parts of the world, with the global economic context that remained on a downward trend.

Our good country mix, the diversity and quality of our businesses, our capacity to adapt and respond and our continuous transformation strategy all combined to help us deliver a good year.

Progress in international and French overseas units and headway in Railways offset a greater part of the slump in Mainland France. North America, central Europe and Asia performed particularly well, as did Colas Rail, while the Roads subsidiaries in Mainland France managed to cushion the impact of a major slump in the market. Production and sales of refined products recorded heavy losses, which, given the long-term trend in the oil market, has led us to decide to sell or halt activity at SRD (Société de la Raffinerie de Dunkerque).

We continued working on our major projects around the world: the new coastal road on Reunion Island, Highway 63 in Alberta, Canada, Motorways M85, M86 and R2 in central Europe, the Nîmes-Montpellier high-speed rail bypass in France, along with the metro projects in Kuala Lumpur, Malaysia and Santiago, Chile. And we also launched new projects relating to contracts secured in 2015: highway upgrading on America’s East Coast, long-term highway maintenance contracts in the United Kingdom, the Cairo metro extension project in Egypt. Around 80,000 smaller projects were also carried out over the course of the year, these representing the bedrock of Colas’ business.

Colas was also in the spotlight with the launch of the Wattway solar road, which won a Climate Solutions Award at the COP21 conference, held in Paris in December. After five years of research, Wattway now enters a new phase, with application sites on all five continents, which will provide further feedback from full-scale projects.

By continuing to innovate, to increase our international network, to reinforce our Railways business and to improve our operational profitability, Colas will continue to move forward.
From Slovakia to Ivory Coast via the USA, Morocco and France… a rapid trip around the world to see the Group’s jobsites, work in progress and finished projects.

Founded in 1766, during the reign of Louis XV, the Alfort National Veterinary School (ENVA) is one of Europe’s leading teaching institutions. Located on a 12-hectare site in the Parisian suburb of Maisons-Alfort, the school hosts 800 students and 140 teaching staff. Teams from Colas Ile-de-France Normandie arrived on the site, steeped in history and still fully operational, to carry out a comprehensive makeover program: resurfacing (paving and stabilized sand) of the private parking lot, equine hospital stables, the equestrian center and the access roads to the new hospital and museum, where Pasteur conducted his research into rabies. Surrounded by statues, the teams also worked on the school’s soccer stadium, used for student tournaments, as well as the various networks and outside facilities for the new headquarters and infectious diseases platform of the French Agency for Food, Environmental and Occupational Health & Safety (Anses), located within the ENVA site. A skillfully crafted operation designed to restore this jewel of national heritage to its former glory.
Colas’ Slovakian company, ISK, is building the Bánovce nad Bebravou bypass, in the center of the country, some 150 km from the capital, Bratislava. The design-build contract involves the creation of a 9.5-km section of the R2 expressway and 13 engineering structures, as well as upgrading of the main networks. The project forms part of the country’s national infrastructure modernization program. During the earthworks (800,000 m³), ISK’s teams had to overcome a number of geotechnical challenges: unstable ground (clay loam soil) meant that specific treatment was necessary to achieve the required load-bearing capacity, as well as reinforcement work, including the installation of ballasted columns. Following landslips, the infrastructure’s design had to be modified and retaining walls were built. Begun in March 2014, the project has so far mobilized more than 400 employees, with work due to be completed by the end of May 2016.
To reduce traffic noise, teams from Aximum Lyon installed three noise barriers on Highway A41 close to the village of Saint-Félix, located in the Haute-Savoie region of eastern France, between the towns of Annecy and Chambéry. These 4 m-high wood concrete noise barriers with anti-graffiti coating were put up over a distance of 650 meters, along the roadside, on reinforced concrete strip foundations and vibro-driven piles sitting at a depth of 8 meters. Colas Rhône-Alpes Auvergne’s Annecy profit center was responsible for roads and services. Saint-Félix residents alongside this particularly noisy section of Highway A41 should now be able to live in peace…

The Colclair® appeal

Back in October, teams from Colas Suisse spent two days laying 720 m² of visually-appealing Colclair® mix in Zurich, Switzerland.
In October 2015, Ivory Coast’s President, Alassane Ouattara, officially opened the Béoumi bridge, some hundred kilometers north of the country’s capital, Yamoussoukro. The 244 m-long bridge spanning the Bandama river was built by Colas Africa in just 20 months. Eagerly awaited for more than 40 years, the structure will improve access to and from the city of Béoumi and contribute to the economic development of the country’s central regions. The previous bridge had been demolished back in 1972, at the time of the construction of the Kossou dam. A total of 260 people worked to install pre-stressed beams using a launcher on six supporting columns and two abutments. The project also includes the refurbishment of 32 kilometers of unpaved road between Béoumi and Kounahiri and the construction of 27 hydraulic structures as well as a 45 m-long bridge across the Kan river, linking Béoumi to Bodokro.
Savannah: redevelopment

The port of Savannah, in Georgia, USA, is enjoying significant growth. In 2015, more than 3 million containers transited its docks, up 17% on the previous year. To support the expansion of the fourth busiest port in the United States, the Georgia Port Authority awarded a redevelopment contract to R.B. Baker (subsidiary of Reeves Construction Company). On the 22-hectare site, close to 10 hectares will be earmarked for the storage of 15,000 containers. Two secure access roads for trucks will also be built. In total, the project represents more than 38,000 m³ of excavated materials, 100,000 tons of aggregates and 40,000 tons of asphalt concrete. Launched in April 2015, the work will significantly increase freight capacity at the port of Savannah.

Successful takeoff

To allow flights to resume at the Auxerre-Branches airfield, temporarily closed for safety reasons, teams from Colas Est's Yonne profit center carried out modernization work on the runway, taxiway and apron. The project involved the application of 27,000 m² of fiberglass geogrids to reinforce the surfaces, 6,700 tons of asphalt mix containing 30% RAP, 6,800 tons of airfield asphalt and 1,700 tons of Colnak®, a highly hydrocarbon-resistant product.
Highway A660 gets a makeover!

Colas Sud-Ouest teams carried out resurfacing work on a 10-km section of the Highway A660 between Mios and Biganos, near the Arcachon basin in southwestern France. The Floirac profit center made light work of the project, with logistical support provided by the Agen and Saint-Astier profit centers. An asphalt mix containing 20% RAP was used for the base course. For the wearing course, they opted for a very thin asphalt concrete overlay with enhanced skid resistance: Rugoflex®.
Over recent decades, high water levels have increased relentlessly in the region of Bereg (northeast of the country), upstream of the Tisza, one of the tributaries of the Danube river. Flood defense investments directly affect some 20 municipalities and also protect a further 150 towns and villages, representing almost 250,000 residents across an area of 3,000 km². As part of this investment program, a consortium including a Colas subsidiary in Hungary, Colas Alterra, carried out work on the Bereg detention reservoir. The reservoir has a storage capacity of 58 million m³ of water, allowing peak water levels on the Tisza river to be reduced by between 50 and 80 cm. The project primarily concerned the construction of the dyke at the southern end of the reservoir, as well as the inflow and water retention structures. The company also carried out work to re-route pipelines. Launched in June 2014, the project was completed at the end of September 2015.

At the confluence of the Rhône and the Saône

Said to resemble a floating crystal cloud, the Musée des Confluences natural history museum is now an integral part of the landscape in Lyon. Smac was responsible for the façades and waterproofing of this unusual construction “dedicated to science and societies” employing a complete envelope system designed and developed by the Major Projects Division’s design office.
A key strategic route in the Greater Paris region, the Puteaux bridge is used by 50,000 motorists every day. As a result of the wear and tear caused by this heavy traffic, the structure was in need of extensive renovation. Teams from three Colas subsidiaries carried out the work last summer over a period of 40 days. Colas Île-de-France Normandie’s Gennevilliers profit center was responsible for demolishing the superstructures down to the concrete and replacing the expansion joints. Teams from Smac Étanchéité Île-de-France were in charge of waterproofing the tunnels and the deck. An Excelpont GC-type bituminous membrane was laid over a re-profiling layer applied by Colas Île-de-France Normandie. A bituminous waterproofing membrane with a mastic asphalt top coat (Baryphalte Bridge process) was applied to the sidewalks and service galleries. Teams from Colas Île-de-France Normandie then restored the bridge to its original appearance. Last but not least, Aximum installed the temporary signage and traffic lights. Despite the complexity involved in the timing of simultaneous operations, the various teams worked together efficiently, leading to the bridge being reopened to traffic two days ahead of schedule.
Colas Belgium constructed two test tracks at the Ford Lommel Proving Ground, in the north of the country. The facility, one of the biggest of its type in Europe, offers Ford, as well as other motor manufacturers such as Toyota and Hyundai, more than 80 km of track to test their car models. The teams built the Vehicle Dynamics Area, 120,000 m² of track, as well as the 900-m access road. The facility was designed to observe vehicle behavior on corners, at high speeds during collision avoidance manoeuvres, etc. Teams also worked on an area dedicated to Driver Assistance Technology, used to test the capacities of new-generation vehicles. In total, the project required 42,000 tons of asphalt concrete, using a mix design developed in partnership with a specialist German track design consultancy. The 40 or so employees mobilized for the project had a number of challenges to contend with, including the adaptation of the asphalt plant to accommodate the new formulation and tight deadlines (from mid-July to early November).
MOROCCO

Smac in Tangier

A famous soft drink manufacturer chose Tangier as the location for a new bottling plant. Smac’s Moroccan company, Sofima, was responsible for waterproofing the new building and applying the cladding. The design, construction and installation of roof lighting were handled by Skydôme, a subsidiary of Axter (Smac) specializing in the manufacture and marketing of skylights and smoke extractors, in the event of a fire. Triangular in shape, the skylights required several months of preliminary design work, the development of innovative technical solutions and constant dialogue with the customer and the architect. And Skydôme’s teams faced yet another challenge: the manufacture of smoke ventilation sky lights, specially developed by the company’s design office with a view to their transportation to Tangier.

FRANCE

Rivesaltes memorial site

Located in the Languedoc-Roussillon region of southern France, the former Rivesaltes internment camp has been completely renovated, transforming it into a place of remembrance. Teams from Colas Midi-Méditerranée’s Perpignan profit center applied 11,000 m² of the visually-appealing Colclair® in a double course surface dressing with Bituclair® synthetic binder emulsion.
120,000 m² of warehousing facilities, 700 jobs created over the next five years. Teams from Colas Nord-Picardie are working on the construction of this major hub for a children’s clothing chain, located at the Actiparc business park, near Arras in northern France. Forty employees from the Lens profit center have been busy since September, working on earthworks and soil treatment and drainage operations. The project represents 110,000 m³ of cut and fill, 85,000 m² of soil treatment – 50,000 m² for the building – 3 km of drainage and 5,000 tons of asphalt mix. Despite particularly tight deadlines, the project is advancing ahead of the initial delivery schedule.

FRANCE: Arras:
an XXL platform

FRANCE: Colas Rail at Montparnasse station

In 2017, trains operating on the new Brittany-Pays de la Loire and South Europe Atlantic high-speed rail routes will begin leaving from Paris’ Montparnasse station. Preparation work, launched in 2014 and set to continue through to the end of 2016, has seen Colas Rail teams conducting civil engineering operations and upgrading catenary systems. The work is taking place in three-hour blocks at night and concerns a 6-km section of track.
As part of the Flanders Pipeline Project, teams from Spac’s major projects pipeline division installed 22 kilometers of pipeline between France and Belgium for GRTgaz, one of Europe’s leading transporters of natural gas. The work was carried out in several phases and mobilized some 160 employees. With the appropriate safety measures in place (locating existing networks, drainage of parcels by GRTgaz, etc.), an access way for machinery was established along the route: 25,000 five-meter-wide thick wooden planks were laid over a reinforced geotextile membrane to prevent rutting, subsidence and soil mixing. The tubes forming the pipeline were welded on the surface, then lifted and laid in the pre-excavated trench, secured with a dewatering system. Filling operations were then carried out and completed on schedule. The pipeline, brought into service last November, links the Dunkirk methane terminal to Zeebrugge, transporting up to 8 billion cubic meters of gas per year from France to Belgium.
Following 18 months of work, Colas Centre-Ouest delivered the Ozans business park project, in the Indre region of central France. Tasked with developing a 41-hectare site, teams from the Châteauroux profit center were responsible for 250,000 m³ of cut and fill, 43,000 m³ of retention ponds, 7,600 m² of filtration ponds, 12 km of trenches and 36,000 m² of soil treatment. To meet the standards of the “Green Project” charter with a view to obtaining High Environmental Quality (HEQ) certification for the project, employees implemented a number of initiatives on the site: the recycling of all excavated materials; optimized waste collection; the creation of a dedicated materials delivery platform; the creation of a storage area for machinery with waterproof tarpaulin sheets to prevent oil and fuel leaks. Launched in 2007 by the city of Châteauroux, the site is set to become a one-of-a-kind business park in terms of its size (508 ha), international reach and HEQ development certification.
High-altitude sports

A new biathlon track was opened at the start of September 2015, in the heart of the Chartreuse regional park, near Grenoble, in the French Alps. During the summer, teams from Colas Rhône-Alpes Auvergne’s Colombe profit center built a shooting range with room for 30 shooters, a 1,100-m roller ski track and a 150-m penalty loop for missed targets.
In Saint-Grégoire, to the north of Rennes in western France, the new head office of the Banque populaire de l'Ouest (BPO) combines innovative architecture with environmental protection. A technical achievement made possible thanks, in part, to teams from Smac’s Rennes profit center who created the landscaped roof for this HEQ-certified (High Environmental Quality) building. The solution chosen was a Green pre-cultivated semi-intensive vegetation system, requiring no maintenance and preventing water infiltration in the event of heavy rainfall. It took teams just two weeks to cover the entire 4,500 m² of roof, quite a feat. The teams also created a granite slab esplanade. The BPO building is now the perfect showcase for Smac’s expertise.

Sogetra renews Grand-Bourg

On the island of Marie-Galante, one of the busiest thoroughfares of the town of Grand-Bourg, the avenue du Dr Marcel Etzol, has been given a complete makeover by teams from Sogetra, Colas’ subsidiary in Guadeloupe. The project included road works, hook up to water mains, and the installation of fire hydrants.

Smac and the art of roof landscaping

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A winning combination on Highway A28

Several Colas Centre-Ouest profit centers joined forces to resurface a 31-km section of Highway A28 between Le Mans and Tours, in central France. The work, completed in just 17 days, involved the manufacture, transport and application of 50,000 tons of asphalt mix containing 20% RAP.
In Lyon, Colas Environnement carried out a clean-up project at a former industrial site. Because the project was located in a residential area, some specific measures needed to be taken. Part of the work was carried out using a containment tent, equipped with an air exchange and treatment system to manage the risk of pollutant emissions. Handling contaminated materials in a tent is subject to strict safety requirements and Colas Environnement had to draw on all its expertise to ensure the protection of its teams (appropriate respiratory PPE, pressurized excavators, pollutant detection beacons, specific procedures, etc.). Specific environmental monitoring was carried out throughout the operation (gas, water and dust analyses, etc.). Materials contaminated with halogenated VOCs were managed on site under a containment tent. Some 2,100 tons of materials were treated and backfilled.
Teams from Colas Rhône-Alpes Auvergne’s Passy profit center worked on Route 205 as part of a road upgrading contract awarded by ATMB (The Mont-Blanc Tunnel and Highways Company). The project was completed in three phases, in a particularly challenging mountain environment. Work began at the aire des Gravières rest stop, with two weeks spent on a range of operations, including earthworks, planing, road widening and resurfacing, covering a total area of 10,000 m². This was followed by three days beneath the Sainte-Marie viaduct, a particularly winding stretch of road. The final phase of the project saw teams moving on to the cliff-hugging descente des Égratz, for the final road resurfacing work. Here, dumpsters had to reverse for more than 2 kilometers to reach the pavers!
The new Route du Littoral coastal road project is under way. On the northwest coast, GTOI, a Colas subsidiary on Reunion Island, is constructing a 6,700-m section of causeway and an interchange. Below we report on the Group’s biggest ongoing project.
FROM LA GRANDE CHALOupe TO LA POSSESSION
On the northwest coast of Reunion Island, GTOI is building a 6.7-km section of causeway between La Grande Chaloupe and La Possession. The dike embankment is topped by a sea wall, protected by riprap, covered by a concrete block shell.
The sea is a little choppy with a light breeze. Fred K’Bidi’s mind is focused on the job at hand, at the controls of his lattice boom crane. Suspended from the crane, 60 meters above the ground, a 30-ton accropode block has to be maneuvered into position on the sea bed. With the joystick in hand and an eye on the control computers, Fred works confidently and expertly to position the block, guided by the GPS systems and divers. In total, 38,500 concrete blocks, acting as breakwaters, will form the Nouvelle Route du Littoral (NRL) coastal causeway.

Between land and sea

The existing coastal road between Saint-Denis and La Possession is sandwiched between an unstable and dangerous cliff and the ocean. Constantly exposed to two major risks – falling rocks and flooding in tropical storms – the infrastructure is regularly closed for costly repair and maintenance work (1 to 2 million euros per year). Following a long design and consultation process, the maritime solution emerged as the most viable option, based on a combined dike/viaduct infrastructure. The new coastal road project represents 19 individual contracts worth 1.66 billion euros, for the construction of a 5,400-m offshore viaduct, a 6,700-m section of causeway, a second viaduct (240 meters) and an interchange. GTOI, project leader of the consortium with SBTPC (subsidiary of Vinci in Reunion...
SOURCING THE MATERIALS

Once completed in 2020, 19 million tons of rock will have been used for the construction of the new coastal road. Andain basalt rocks from agricultural stone clearance operations are one of the sources.

Island), is building the causeway between La Grande Chaloupe and La Possession as well as an interchange in La Possession. The work, representing a total of 786 million euros, will be completed in 2020. For Stéphane Braban, project director, “the new coastal causeway project is highly technical, requires close monitoring and is particularly challenging in two major respects: the procurement of materials and environmental protection.”

Tracking down andain rocks

*The NRL is a “stone” project in an island of basalt. However,
ACCROPODE BLOCKS

Exceptional projects require exceptional solutions: 38,500 concrete blocks are currently being manufactured, destined for use in the construction of Reunion Island’s new coastal causeway road. Their function? To absorb and disperse the swell. Several types of artificial concrete blocks (“X blocks” and accropode blocks) will be used on the NRL project.

A world first
Colas subsidiary SCPR is responsible for supplying these concrete blocks, for which a dedicated plant was constructed in Le Port. This is a world first since, traditionally, accropode blocks are manufactured to order on an outdoor prefabrication site located close to the actual jobsite in question. Erected in just under eight months, the Verlaine plant is a cutting-edge facility with technical innovations designed to deliver concrete of the highest quality (high-performance concrete, self-consolidating, resistant to tropical storms, etc.).

Mass-produced accropode blocks
Accropode blocks for the NRL project come in four formats, ranging from 10 to 30 tons. In total, 105 molds have been designed, 36 of which can be placed on the carrousel. The filling process has also been optimized to enable an additional 14 molds to be filled (off the carrousel). The concrete is manufactured in a plant adjoining the production line and piped through. Throughout the manufacturing process and its journey, the concrete is cooled (30 to 40 tons of ice are required).

Environmental equilibrium
The “Cortomaltese” sails back and forth across choppy seas between La Possession and La Grande Chaloupe. On board, Marine is responsible for taking water samples to check the level of suspended particles present. “The NRL project is taking place within a highly sensitive environment”, emphasizes Thierry Delaunay, the consortium’s Environment Manager. “We took steps at a very early stage to...
LA POSSESSION INTERCHANGE
The new gateway to the town, the La Possession interchange involves the construction of three engineering structures and a 400-m section of dike.

DOROTHÉE MILON, NRL Quality Manager (GTOI)

Quality, a substantive role
Dorothée was hired by Colas Mayotte in 2006 as QSE manager responsible for setting up the quality management system for the Roads center. She joined the NRL project on Reunion Island at the start of 2014 as quality manager. “I’ve never been involved in a project on such a vast scale. Three entities are working side by side. Each has its own methods and the colleagues I’m liaising with come from a variety of backgrounds, each with their own experiences. We all have to adapt.” The project is also an opportunity for Dorothée to discover new professions such as civil engineering. “It’s important to go out into the field to help me understand the results of the site controls that land on my desk. Here I’m learning about the quality management system from the customer’s point of view. Paperwork is a vital part of my role: it has to be monitored, analyzed and sent through to the customer.” All in all, a substantive role for this keen long-distance and cross-country runner.
examine, monitor and mitigate the impacts of the project in terms of disturbing sea life (particularly mammals), destroying coral reefs, the stranding of sea birds and increasing the volume of suspended particles in the surrounding waters. For example, for the La Possession interchange, located near the Les Lataniers reef, a 300-m long filtration barrier has been installed. Connected buoys, positioned between the project site and the coral area for monitoring turbidity, are also being used to monitor water quality in real time. An underwater noise management system has also been set up to minimize the impact of the work on any mammals present. Prior to commencing operations, teams ensure the absence of mammals in the area (using microlights and a network of underwater sensors), before gradually increasing noise levels. In order to comply with the strict thresholds imposed, underwater noise barriers (bubble curtains) have been deployed. In addition, specific lighting measures have been implemented on the site to avoid disturbing young Barau’s petrels, a species endemic on Réunion Island. When they leave their cliff nests to reach the sea the birds have a tendency to fly into light sources. “Lighting on the site is turned off during the period when the birds are flying, from December to April”, explains Thierry Delaunay.

Réunion Island’s new coastal causeway will be brought into service in 2020.
Located 60 km north of Paris, in the Oise Region, the Troissereux bypass is taking shape. By the end of 2016, the new 7.2-km section of 4-lane road will provide safe and rapid access to Beauvais for users of Route 901. This is the first public-private partnership contract for Colas Nord-Picardie.

PPP: the Troissereux bypass

On this October morning, after a long, hot summer, a thick veil of fog hangs over Beauvais, slowing the already heavy traffic on Route 901. To the north lies the village of Troissereux, where more than 15,000 vehicles trundle through daily, including 1,400 heavy trucks. A large-scale project is now under way to relieve congestion and improve safety, carried out by a consortium led by Colas Nord-Picardie: the Troissereux bypass. The contract involves the construction of a 7.2-km section of 4-lane road, four engineering structures and a 275 m-long cut-and-cover tunnel. “This infrastructure is long overdue”, explains Christian de Bray, project manager. “In fact, the first plan for a bypass was considered as far back as 1980 but it wasn’t until January 2014 that a public-private partnership contract was signed between the Oise regional council and D3, a consortium bringing together Colas Nord-Picardie, DTP Terrassement and Bouygues TP Régions France (subsidiaries of Bouygues Construction), as well as HICL Infrastructure Company Limited [see diagram p.35].” The building consortium made up of Colas Nord-Picardie (leader, 34%), Bouygues TP Régions France (33%) and DTP Terrassement (33%), launched the work at the start of 2015.
Since 2014, Colas Nord-Picardie has been leading the PPP Troissereux bypass project, a 7.2-km section of four-lane road in the heart of the Beauvais area.
PAVEMENT STRUCTURE
A total of 100,000 tons of asphalt mix will be applied on the Troissereux bypass.

SYNERGIES
Aximum, responsible for safety and signaling, will carry out road maintenance operations for a period of 22 years.
An agricultural region

The first six months were spent on earthworks and drainage, before moving on to the engineering structures and base course, which were completed at the end of the year. “The Troissereux bypass presents a number of challenges”, explains Christian de Bray. “Land is one of the biggest issues, since the road crosses a number of individual farms. The project has produced a substantial volume of excavated materials (300,000 m³) and, in the absence of storage facilities, negotiations were opened with land owners and farmers. “A solid knowledge of the local fabric is invaluable”, points out Christian de Bray. “The project is being closely monitored by the Oise regional council, as well as by residents and farmers.” Due to the reduced right-of-way, materials are transported to the site along the “route” itself rather than via the surrounding local roads. Strict traffic regulations (speed restrictions, for example) have been implemented on the site to ensure light vehicles, heavy trucks and machinery can operate together safely.

Protected species

The second major challenge facing the project teams is the construction of a cut-and-cover tunnel and its impact on protected species. The tunnel separates two protected areas, a Natura 2000 zone and an area of protected forest. “The cut-and-cover tunnel solution was the preferred option, rather than a viaduct”, specifies Christian de Bray, “since it
means the area can be returned to woodland and the ecological corridor used by an endangered species of bat can be protected.”

To verify the activities of the bats during the work and prior to reforestation, three monitoring campaigns (thermal imaging cameras and sound detection) were carried out to record their ultrasounds. A colony monitoring program was also conducted to count bat numbers entering and leaving the château de Troissereux, where the animals have taken up residence. Back in June, a cable with polystyrene balls placed at two-meter intervals was erected to guide the bats by reflecting their ultrasounds. “This acoustic beacon system, erected in the space of two weeks by the project’s QSE manager, has proved light and stable over time. It has caused quite a stir in scientific circles in France and received an award from the IDRRIM (French Institute for Roads, Streets and Mobility Infrastructure) in November 2015.”

In 2016, teams will complete the cut-and-cover tunnel, carry out the surfacing work and install the safety systems and road signs. The completed bypass is set to be open to traffic from mid-November. Thereafter and for the next twenty-two years, Aximum will be responsible for maintenance operations and monitoring the cut-and-cover tunnel, round the clock, seven days a week.

ROMAIN LEFEBVRE, asphalt foreman with Colas Nord-Picardie

“Building experience”
Romain joined the Troissereux bypass project in September 2015 and immediately put his highway project experience to good use. Now aged 38, he joined Colas Nord-Picardie’s Sreg Ham profit center 11 years ago. “The conditions are exactly the same”, he explains. “Preparation is the key to success, both in terms of work scheduling and personnel scheduling. You have to be able to anticipate and adapt. When you commit to supplying 3,000 tons of asphalt mix on a given day, you have to honor that commitment!” So every evening, a debriefing session is held to make any necessary organizational adjustments. “This type of project requires closer management and a more sophisticated control system than in a profit center. You have to manage parallel activities, several teams operating alongside one another… But you build even more experience doing so!”
TROISSEREUX BYPASS PUBLIC-PRIVATE PARTNERSHIP (PPP)

Colas managed and led the call for bids phase on behalf of the consortium.

INTEGRATED CONSORTIUM:
- Colas Nord-Picardie (road surfaces, networks)
- DTP (earthworks)
- BYTP RF (civil engineering)

Specific features:
- pooled resources, shared risks and profits

D3
made up of Colas Nord-Picardie, DTP Terrassement and Bouygues TP Régions France (Bouygues Construction subsidiaries), and HICL (investor)

OISE LOCAL COUNCIL

sign a partnership contract for the financing, design, construction and maintenance of the infrastructure

contracts out operation, maintenance and upgrading work, for a period of 22 years from the date of delivery

hands over design-build aspects

AXIMUM
Specific feature: in addition to traditional maintenance operations, Aximum will be responsible for monitoring the cut-and-cover tunnel round the clock, 7 days a week.

ZOOM-IN ON FINANCING
- During the construction phase: the project is financed by own funds (8%) provided by D3 shareholders and by bank loan (92%).
- During the operation phase: The Oise local council pays D3 a rent, which will be used to reimburse the bank loan, pay a dividend to D3 shareholders and maintain the infrastructure.
Environment managers, asphalt mix trainers, equipment department managers, design engineers… They all do their jobs with enthusiasm and have decided to share their daily routine and projects with us.

From a very young age, Kurt Wilkie had always wanted to be a cowboy! Today that dream is a reality because he’s now responsible for a herd of 40 cattle and several horses at his ranch in Alberta. “Thanks to Colas, I’ve achieved personal fulfilment and enjoyed some great professional opportunities along the way”, he enthuses. Having joined Alberta Highway Services in 1996 as a foreman, Kurt now manages the team responsible for maintaining almost 4,000 km of highways across central Alberta. “I’ve been incredibly lucky because my managers believed in me. I did a lot of my training out in the field but I also attended internal training programs, particularly phases 1 and 2 of Colas University.” Depending on the time of year, between 85 and 120 people work under him. Between snow clearing operations in the winter and road maintenance in the summer, the jobs to be done are numerous and varied. “I’m always looking for ways of being more efficient and to maximize safety for employees and the motorists who travel the highway system”, he concludes.
Contributing to the boom in the Hungarian construction sector is a source of tremendous satisfaction for Sándor Tóth. Having graduated from Miklós Ybl Technical College as a civil engineer in 2001, Sándor already had three years’ experience in the construction business. From roads and services site manager for a Hungarian company, he moved on to discover pipelines and road construction. Experiences that proved invaluable when he was hired by Colas in 2004 as a site manager. In 2013, Colas Út secured a number of major contracts and decided to establish a department dedicated to managing these large-scale projects. Sándor was up for the challenge and was appointed project manager. The role is predominantly one of coordination, be it in terms of supervising individual project managers under him or establishing and maintaining links with the various consortium companies. Sándor is also responsible for bitumen sales in central and eastern regions of the country. Particularly proud of the work accomplished by his teams, he is keen to underline the importance of internal control procedures, which allow him to manage his activity without risks or unpleasant surprises.
“Communication is crucial on jobsites.”

Marie Franceschi
Works Engineer
Colas Île-de-France Normandie France

When she was a student at the Ensam Engineering School, Marie wanted to work in the building sector. To reconcile this objective with her love of travel, she went out to Hong Kong as an intern for a façades design office. On her return to France, she decided to specialize in business creation, convinced that she would learn the skills required to help manage a jobsite. A second internship as a specialist engineering services site supervisor confirmed her resolve to work out in the field. She joined Colas Île-de-France Normandie’s (IDFN) civil engineering profit center in June 2015. Her first job and already her first major challenge at the age of just 25: she was sent out to work on the Forum des Halles redevelopment project (civil engineering, demolition, roads and services) in the heart of Paris, being carried out by Colas IDFN and Picheta. Between managing spending, coordinating subcontractors, ordering materials and daily site visits, Marie is on a fast-track apprenticeship. “Good daily communication with the site manager is crucial to identify the team’s needs and make sure everyone can do their jobs as effectively as possible.”

Itineraries No. 36 – April 2016
Always on the look-out for new challenges

XAVIER SAUTUREAU
EQUIPMENT MANAGER
COLAS NEW CALEDONIA
FRANCE

Xavier Sautreau and his wife and children have been living in New Caledonia for a little over a year now. He had been considering the possibility of working outside of Mainland France for some time. “This really is a career move but it’s also something the family wanted to do. My wife and I were keen to offer our children the opportunity to discover something different. So I put in a request for mobility.” When he was offered the post of equipment manager in Nouméa, he didn’t need to think twice. From a farming family, he has always loved machines. His engineering studies at the Arts et Métiers engineering school stoked his interest in construction machinery. In September 2005, he was hired by Colas Centre-Ouest to work in its Equipment division. “My responsibilities with Colas New Caledonia are very similar”, explains Xavier Sautreau. “The aim is to provide operators with the equipment they need, making sure it’s fit for purpose and complies with legislation. But here, I have new challenges to deal with too: from supervising a multicultural team to managing specific construction equipment on building projects and a spare parts store 22,000 km from Mainland France!”

ROUTES No. 36 – April 2016
Jean Renard is 28 and his career has been somewhat unconventional. After high school, he spent two years as a laborer in the HVAC engineering sector before going back to school in marketing, while at the same time working as an apprentice in the family construction company. Then came 3 years of business school, including a six-month placement in Sweden, and a year’s apprenticeship at Renault’s technical center in Paris. For Jean, the construction sector was the place to be. In 2012, he joined Colas Rhône-Alpes Auvergne, gaining administrative experience throughout the region and discovering the world of profit center accounting. In October 2014, Jean was offered the opportunity for international mobility within the Group and five months later he was on the plane to Gabon. There, he worked as an assistant to the administrative and financial manager, with a team of 20 people. His job involved administrative and financial management, setting up the Group’s accounting software, budgets, litigation, etc. And with the recent signing of a major contract for repairing a 7-km section of Route 1 in Libreville, he added another string to his bow: project administration and accounting. “My time in Gabon has helped me grow personally and professionally. Working abroad teaches you a lot. It’s a veritable treasure trove of experiences.”
A thirst for innovation

CÉLINE CONRARD
DESIGN ENGINEER
COLAS RAIL
FRANCE

A graduate of the ParisTech engineering school, Céline Conrard spent two years studying in Lille, in northern France, before specializing in the development of composite and plastic parts. What sets her apart? An unquenchable thirst for innovation! So much so that when she was looking for her first job, her watchwords were innovation, versatility and curiosity. Which led her to an ad for a vacancy with Colas Rail. In September 2013, Céline joined the research and innovation department of Colas’ rail subsidiary, in Maisons-Laffitte, outside Paris, where she worked on R&D programs and acted as a support for profit center projects. “I arrived during the development phase of Oscar 2.0, the smart hard hat. The first hard hats are available in profit centers. The Innovation department is supporting the roll out with a QSE officer.” This initiative, aimed specifically at skilled workers, is designed to transmit the values portrayed by Oscar 2.0 and help employees learn to use its features. “What is so stimulating about my job is the sheer diversity of the issues I deal with: connected objects for infrastructure, rolling stock as well as jobsite equipment, diagnostic tools, etc.”

"A thirst for innovation"
Fabien Krawiec has four passions in life: soccer, hunting, pétanque – he’s the Aquitaine regional champion – and his job. Following various temporary contracts with Aximum, Fabien was hired as a road equipment specialist in November 2012. Based in the Gironde region of southwestern France, his job takes him all over the country.

Guided by his team supervisors, he learned the tricks of the trade on the job and soon developed a high degree of autonomy. Although he’s now completely versatile, his favorite job is still operating machinery on-site. “I love going to work in the morning”, he confides. “This job brings lots of diversity and real team spirit. We all give each other a hand when required. Trenches are my specialty. I love being at the controls of a mini-excavator.” Last year he was given the Losanges d’or award in recognition of his adaptability, enthusiasm and dynamism. Aged just 28, he is the youngest of the 2015 winners. “This award is in recognition of a job well done”, he believes. “I’m delighted with it and it encourages me to continue to forge ahead in the same way.”
“I’ve had the opportunity to reinvent myself.”

CHARLIE STEWART
ASPHALT MIX TRAINER
REEVES CONSTRUCTION COMPANY
USA

Charlie Stewart’s love for his job took him to Reeves Construction Company. After a course in mechanics at the South Georgia Technical College, he went on to do basic training with the US National Guard. In 1977, he joined Reeves Construction Company as a mechanic. He then worked as a workshop manager and technical supervisor before being appointed asphalt mix trainer. For the past eight years, he has been teaching asphalt mix application techniques to employees across the company’s network in Georgia and South Carolina. His very hands-on approach draws on his experience in the field, as well as the skills and expertise of all the trainees. “I love the daily challenges and meeting new people. My love of the job hasn’t waned, even after all these years”, he explains.

“Colas encourages its employees to develop and provides opportunities to those who want to reinvent themselves. I’ve had this opportunity and I feel very lucky.”
My job is as fascinating as it is varied.

DOMIEN REYNDERS
PROJECT MANAGER
COLAS BELGIUM
BELGIUM

Domien Reynders, site supervisor with VBG, a subsidiary of Colas Belgium, was born to work in the construction business. “My father and grandfather both spent their entire careers in construction. I’ve followed the family tradition”, he explains with a smile. Having studied electromechanics and construction, he joined VBG in June 2005 as deputy site supervisor. A few years later, now a manager, he was in charge of his very first major project: the construction of an industrial zone in Lommel, in northern Belgium, including the creation of 10 km of roads, the laying of 15 km of pipelines, etc. Today, Domien Reynders is in charge of five road construction projects. “Colas has provided me with some great career development opportunities. My job is as fascinating as it is varied and I’m lucky to be working with some extremely talented people.” The best part about his role? “The variety of jobs to be done, the scale of the projects and the equipment used to carry them out.”

ROUTES No. 36 – April 2016
The environment begins in the field

ANNE-LAURE LEVENT
ENVIRONMENT SUPERVISOR
COLAS SA
FRANCE

The unique aspect of her job? “To find the right balance between protecting the environment and carrying out the company’s business, you need to go out into the field.” Anne-Laure Levent first discovered Colas Nord-Picardie when she was working as a project manager with an environmental consultancy following an asphalt plant authorization request. At the time, the subsidiary’s environment supervisor, having been transferred to the south, was looking for someone to replace him. Anne-Laure jumped at the chance, joining Colas at the beginning of 2009. She was soon getting to grips with issues in a range of fields, including project waste management, the environmental component of the call for bids process, biodiversity and water issues. In 2012, she was transferred to central Europe, starting in Budapest before moving on to Vienna. “I’ve spent a lot of time explaining the Group’s policy concerning environmental management, field audits, biodiversity and local dialogue. Over time my remit has expanded to dealing with industrial site and jobsite safety in the zone’s countries. With 14 Environment and Safety officers from eight different countries, I had to establish a common vocabulary to be able to share good practices.” An invaluable experience that, at the start of 2015, led her to being appointed Environment Supervisor, based in the Environment Department at the Group’s head office in Paris.
Wattway, the solar road by Colas

INNOVATION. In mid-October 2015, Colas lifted the veil on the Wattway solar road, the fruit of five years of research led by teams from Colas’ Campus for Science and Techniques (CST), in partnership with the French National Solar Energy Institute (INES). The first photovoltaic surfacing in the world gives the road a new functionality: the production of clean renewable energy. Here we put the spotlight on a ground-breaking technological innovation.
How do Wattway panels work?

Wattway panels are made up of photovoltaic cells embedded in a multi-layer substrate composed of resins and polymers. These cells collect solar energy via a very thin film of polycrystalline silicon that enables the production of electricity. Connected to a lateral module on the underside of the panels containing the electrical safety components, the panels can be used on any road around the world and will withstand all types of traffic, including heavy trucks.

How are Wattway panels laid?

Extremely thin (less than a centimeter thick), yet sturdy and highly skid-resistant — similar to traditional road surfaces —, Wattway panels are applied directly to the pavement, without any additional civil engineering work. The Wattway process uses the existing infrastructure: no need to tear up the existing road.

What uses for Wattway?

Currently, the technology can be used to power street lights, urban furniture, public buildings, homes, signs, etc. A one-kilometer section of road surfaced with Wattway panels can provide enough power for the street lights of a town of 5,000 inhabitants. Ultimately, Wattway may incorporate additional functions such as induction technologies, so that electric vehicles can charge while they are waiting at a red light, parked or even when moving; or dynamic marking.

What are the missions of the Wattway business unit?

To oversee its roll-out in France and around the world, a

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<td>&gt; Jean-Luc Gautier, manager of the CST’s Center for Expertise, came up with the concept of the solar road: “Roads spend 90% of their time simply looking up into the sky and when the sun shines they are exposed to its rays. It’s an ideal surface on which to develop energy applications.”</td>
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| **2010**   |
| > A first experiment was conducted using a model, which delivered extremely encouraging results and helped identify technological hurdles: for example, how is it possible to ensure fragile photovoltaic cells are sturdy enough to carry vehicles, including heavy trucks? |

| **2011**   |
| > Launch of the research program and formation of a project team. In the summer, a partnership was formed with the INES, leading to the creation of a joint laboratory. A “martyr road”, made up of flexible amorphous silicon panels, was built on the INES site in Chambéry. |

| **2013**   |
| > Installation of the first solar road demonstrator on an INES site access road. |

| **2014**   |
| > Due to problems in the photovoltaic market associated with plummeting prices driven by Chinese pressure, the team shifted its attention towards another technology, for which there was a ready supply, polycrystalline silicon. A second demonstrator was built at the INES site. |
2015

July: the photovoltaic road surfacing process, protected by two patents, was named Wattway.

August: François Hollande, the French President, visited the French National Solar Energy Institute (INES) and observed the first solar road demonstrator in action first hand.

September: construction of a demonstrator on the CST parking lot (Magny-les-Hameaux).

October: official launch of the Wattway solar road.

November: construction of a Wattway demonstrator at Le Bourget for COP21 (see box p.51).

December: installation of a new demonstrator at the CST.

2016

First application projects conducted.

Wattway, a building block for the Smart City

The Wattway photovoltaic road surfacing solution meets four Smart City criteria: mobility, economy, environmental protection, communication. The technology delivers clean, renewable energy to power networks and infrastructures, and contributes to the development of photovoltaic solutions in the energy mix of the towns and cities of the future.
The advantages of Wattway

Wattway uses existing land, a tremendous asset both in urban areas, where land is rare and expensive, and rural areas where, unlike photovoltaic farms, it does not compete with agricultural land or the natural landscapes. Moreover, by producing renewable energy locally, close to where it is used, Wattway promotes the circular economy.
> Wattway business unit has been established with the following missions:
- to ensure the technical development of the product in partnership with the CST and INES;
- to examine industrialization solutions for the manufacture of the panels, both internal and external;
- to finalize business models and design the market offer;
- to apply the technology in real conditions for the first time, working with the Colas network;
- to train the Group’s application teams to ensure a quality result.

How is Wattway being rolled out?
Wattway enters the development phase in 2016. Initially available for applications of between 20 and 100 m², the solution is being offered to public and private partners, in France and around the world, wishing to take part in the launch of this innovation within the context of the energy transition policy. The aim is to validate the process in real conditions for the field of use proposed by each of the partners.

WATTWAY AT THE COP21 SUMMIT
An official partner of COP21, the international climate summit held in Paris back in December, Colas presented the Wattway solar road using a 20-m² photovoltaic road demonstrator (photo above), set up at the site entrance. At a conference organized in COP21’s Galerie des Solutions, Colas was selected for a Climate Solutions Award for Wattway by a jury of resources and climate experts. Hervé Le Bouc, Colas’s CEO, was handed the award by Ségolène Royal, French Minister for Ecology, Sustainable Development and Energy.

For more information, go to
- http://www.wattwaybycolas.com
- contact@wattwaybycolas.com
COPERNIC: 2016, roll-out launch

COPERNIC, the project to overhaul Colas’ processes, management methods, administration and IT systems, enters the roll-out phase in 2016. “Following a long design phase, several tools are going to be set up in Colas’ profit centers during the course of 2016”, confirms Olivier Grévoz, project manager. “A kit will be made available to subsidiaries to support them through the entire organization and roll-out process. The kit will cover a number of aspects, including technical management, user training and manager accountability.”

Collaborative approach
A collaborative approach has been adopted to effectively take onboard the actual challenges faced by employees working out in the field. For example, regular meetings with nominated site supervisors were organized to help with the design process for several tools. “Key users” have also been consulted for the design of the ERP (enterprise resource planning) system. Some key users joined the COPERNIC team in 2015 to play a hands-on role in the design. A tool test phase was launched in several profit centers, prior to roll-out across all subsidiaries. Feedback from these pilot users served as the basis for incorporating improvements to address any problems identified. For some tools, employees from out in the field received training so that they, in turn, are now equipped to go back and train end users. At the same time, employees have been consulted about the impact of the program in order to measure the effects of future changes in terms of tools, management rules, organizations, responsibilities, etc.

The COPERNIC team
The launch of the roll-out phase has seen a reinforcement of the COPERNIC team. Around 50 people now work at the Group’s head office, in partnership with more than 50 others from the Speig IT subsidiary. Employees from around the world have also joined the team. A COPERNIC team, led by a project manager, has been set up in each subsidiary for closer liaison and to pave the way for the optimum roll-out of tools on the ground.
Designed as a collective improvement tool, the Colas Group internal perception survey was conducted between September and October 2015, among more than 42,000 employees in France and around the world.

From September 14 to October 2, 2015, Colas & You, the Group’s very first internal satisfaction survey, was conducted among Skilled Workers from all Group subsidiaries in France — who were asked to complete a paper questionnaire — along with managerial and supervisory staff in France as well as international managers, who were asked to complete an online questionnaire, available in French or English. An independent specialist firm (Inergie) collected and processed the completed questionnaires to ensure the total anonymity and neutrality of the process. Employees really embraced the survey, with almost 25,000 questionnaires returned, a high response rate and well above the industry average. The first survey results at Group level (see boxes p. 54-55) concern the way employees perceive the company, their jobs, managerial practices, safety and career development opportunities. Each subsidiary will be responsible for presenting and analyzing its own results, before drawing up targeted action plans. This survey will serve as a basis for measuring improvements obtained in the area of human resources management.
COLAS & YOU: LESSONS LEARNED
Hervé Le Bouc, CEO, Colas

“It was important to organize this internal satisfaction survey in order to help us build a coherent and transparent human resources strategy. We now have a clear vision of the way employees perceive the company, giving us a platform for the implementation of improvement measures. Firstly, the high response rate reflects the passion felt by Colas’ employees for the company. Secondly, more than 90% of employees - skilled workers as well as managerial and supervisory staff, in France and around the world - expressed their satisfaction at working for the Group and a sense of pride in belonging to the company. These are solid foundations from which we can forge ahead with further improvements. The two areas where progress needs to be made concern the sharing and dissemination of strategies on the one hand, and managerial practices on the other. We have to perform better in terms of providing information and explaining, to ensure that everyone understands the rationale behind the actions carried out. Similarly, there is a need for greater visibility with respect to career and mobility management, as well as exemplarity in everything we do. And although safety is perceived as a priority across the Group, greater recognition of exemplary behavior is clearly required in this area.”

RESPONSE RATE
A response rate of:

- 66% for Managerial and Supervisory staff
- 47% for Skilled Workers

An extremely high response rate for a 1st survey conducted in every Group company and business unit.

OVERALL SATISFACTION RATING
“Overall, I am satisfied working for Colas Group.”

- 92% positive opinions among Managerial and Supervisory staff
- 89% positive opinions among Skilled Workers

Globally positive responses and a high overall satisfaction level.

JOB SATISFACTION
“I enjoy my work.”

- 95% positive opinions among Managerial and Supervisory staff
- 95% positive opinions among Skilled Workers

A real desire to dedicate yourself to your work, indeed, for some, a genuine “passion for the job”.

ROUTES No. 36 – April 2016
**SENSE OF BELONGING TO THE COMPANY**

“I am proud to be working in the Colas Group.”

- 93% positive opinions among Managerial and Supervisory staff
- 87% positive opinions among Skilled Workers

A strong sense of belonging to the company and a shared pride to be working in the Colas Group.

**SAFETY**

“At my company, safety is a top priority.”

- 96% positive opinions among Managerial and Supervisory staff
- 93% positive opinions among Skilled Workers

A clear priority and resources dedicated to safety, but some behavior to be changed and the need to improve recognition of exemplary behavior.

**MANAGERIAL PRACTICES**

“My manager knows how to delegate/ trusts me.”

- 86% positive opinions among Managerial and Supervisory staff
- 87% positive opinions among Skilled Workers

A well appreciated human dimension (listening, trust, etc.), but a need for more feedback concerning work carried out and better information dissemination.

**PROFESSIONAL DEVELOPMENT OPPORTUNITIES**

“I have development opportunities in the company.”

- 49% positive opinions among Managerial and Supervisory staff
- 54% positive opinions among Skilled Workers

Little visibility regarding development opportunities and a lack of information about job vacancies.

**INFORMATION ABOUT COMPANY**

“I am informed about the company.”

- 36% of Managerial and Supervisory staff believe they are well informed about the strategy of the Colas Group
- 56% of Skilled Workers believe they are well informed about their subsidiary’s news

Information needs to improve regarding the company and the Group.

**VISION OF THE FUTURE**

“I have the feeling that the situation at my company/entity will improve.”

- 37% positive opinions among Managerial and Supervisory staff
- 29% positive opinions among Skilled Workers

A need for reassurance and clarification regarding strategic orientations.
Sustainable, solvent-free Axispot thermoplastic road marking paint was used for two highway projects.

Axispot is a hot-application (180 °C) thermoplastic road marking solution that offers a number of advantages. “Axispot is solvent-free and generates no waste thanks to the use of hot-melt bags. It has excellent performance characteristics, being highly visible at night and during rainy weather”, explains Jean-Christophe Dumas, Aximum’s sales manager for the Rhône-Alpes Auvergne region. “It’s also a sustainable product that comes with a three-year guarantee.” Two Axispot projects have been carried out on the AREA (Rhône-Alpes Highways Company) and ATMB (Mont-Blanc Tunnel and Highways Company) highways networks. “This marking product is primarily used in eastern France”, specifies Jean-Christophe Dumas. The entire workshop – team leader, three applicators and associated equipment (applicator truck, van) – travelled from Nancy to carry out the work. “We demonstrated to our customers that we are capable of mobilizing our resources nationally” concludes Jean-Christophe Dumas.
Trained by Colas Ltd, teams from Colas Nord-Picardie imported the slurry technique to France, where it has been renamed Colmat City.

Colmat City, shared expertise

Colas Ltd, Colas’ subsidiary in the United Kingdom, has successfully rolled out a low-cost cold slurry technique used to renovate sidewalks and paths. With this process, there is no need to remove the existing surface, resulting in less inconvenience to residents and reducing the amount of new materials required. Widely used in England, the technique was unknown in France until Colas Nord-Picardie’s Amiens profit center decided to call in its British colleagues for a sidewalk resurfacing project in a residential neighborhood in Cagny, in the Somme region of northern France. “A team from Colas Ltd travelled to France to train our employees”, explains Didier Dinouard, assistant head of operations. “We acquired the necessary equipment and went on to complete the project ourselves. The project was a perfect example of how expertise is shared within the Group!” Known in France as Colmat City, the technique is increasingly attracting the attention of local authorities. Colas Nord-Picardie has already carried out a number of other similar projects in Amiens and around the region.
Located in Issy-les-Moulineaux, on the edge of the 15th arrondissement of Paris, Colas’ future head office building will have Green Office® and High Environmental Quality certification.

In 2018, on the other side of the Seine River, in Issy-les-Moulineaux, Colas’ new head office building will stand proud in the skyline. Architect Christian de Portzamparc is designing the structure and will also manage the project. “Cut like a diamond with several prism faces, the bow-shaped building will resemble a fully stretched sail.” With a total surface area of 7,500 m² over eight floors, it has been designed to ensure the comfort and well-being of employees. For example, all work stations and meeting rooms will be flooded with daylight. Office spaces will also be organized to meet the needs of cross-functionality and facilitate collaborative work. It should be noted that a consultation process involving around 40 head office employees was launched to identify needs and gather ideas for the interior design of the building. The new head office will also boast excellent environmental and technological performance levels. This positive energy building* will have Green Office® and HEQ (High Environmental Quality) certification.

*Building that produces more energy than it consumes.
Launched at the end of 2015, the Group’s new website, colas.com, adapts to the consultation medium used: PC, smartphone, tablet, etc.

Colas.com: **brand new graphics**

**Six years after its previous makeover, the Group’s website was given a facelift at the end of 2015.** Thanks to the new streamlined design, completely different from the previous graphic charter, colas.com puts the Colas’ spotlight on projects and employees. “The website is the Group’s showcase. Its purpose is to inform and communicate, to promote our expertise and skills, raise our profile and portray a positive and dynamic image of Colas,” explains Aurélie Germany, new technologies communication head. The new website contains an Innovation section and social media have also been incorporated. Now, visitors have permanent access to Facebook, Twitter and Linkedin publications. In order to reinforce the Colas employer brand, more dynamic graphics have been created specifically for the Human Resources section and an “HR browser” has been integrated to allow users to consult vacancies. Finally, colas.com has been designed to adapt to the consultation medium used (PC, smartphone, tablet, etc.) for an optimized browsing experience.
Graduation ceremonies, awards, trade shows, exhibitions...
Some images of the Group’s events, in France and around the world.

**LENNGURU AT PORTE DORÉE**
In January, the Porte Dorée aquarium in Paris played host to the “Lennguru, a lost world” exhibition. In 2014, Colas had provided support for this scientific expedition to the Indonesian province of West Papua.
GOLDEN ROADS 2015
Following three successful years, Colas’ corporate film festival, “THE stagiaire”, has become Golden Roads. The innovation for 2015: interns and apprentices from all subsidiaries wishing to enter the competition were asked to produce a minute-long video showing why they wanted to take part. An internal jury then pre-selected six students to each produce a film lasting five minutes. Laure, an intern with GTOI in Reunion Island, and Geoffrey, an apprentice with Aximum Civil Engineering, were this year’s winners.

2015 FIMBACTE FESTIVAL: THREE AWARDS
At the 20th construction and environment sector’s Fimbacte festival, Colas won three awards: the festival Grand Prix as well as the Audiovisual Grand Prix for the film Solar Road, and the Gold Award in the Audiovisual category for the “Civil engineering and buildings activities” (corporate sector) film.
BEST YACHTING HOPE
2015
After their victory in the 2015 SB20 class World Championship, Émeric Michel (materials engineer with Colas Midi-Méditerranée) and his team won the French Yachting Federation’s Best Hope Award.
COLAS SPONSORS ESTP’S CLASS OF 2018
A long-standing partner of the ESTP engineering school and sponsors of the class of 2018, Colas invited engineering students to a sponsor’s evening at the Fairground Art Museum in Paris. Students got the chance to discover the Group and its history via an original exhibition of ten major Colas innovations that have revolutionized the construction sector.

MINES DOUAI GRADUATION CEREMONY
In September, students from the École Mines Douai engineering school attended a graduation ceremony, in the presence of Thierry Genestar, Colas’ Vice-President. In 2012, the Group signed a three-year sponsorship contract with the engineering school, with the class of 2015 choosing Hervé Le Bouc as mentor.
The Colas Group presented its range of solutions in the field of transport systems and urban development at the conference, held in Lyon, France last October.

WORLD ROAD CONGRESS IN SEOUL
At the end of November, Colas presented its expertise at the 25th World Road Congress, held in Seoul (South Korea). The event brought together road and transport sector companies, as well as some 50 ministers from various countries. Featured in the presentation: the Wattway solar road, the Asian subsidiary Tipco Asphalt, custom solutions for airports and FiberMat® (a product that protects the road surface).
COLAS RAIL IN EGYPT

Present in Cairo for more than thirty years, Colas Rail secured a new contract concerning the energy and electrical/mechanical aspects of the Egyptian capital’s subway line 3 extension project. In particular, this batch includes the construction of 18 km of track and 15 stations.

COLAS FOUNDATION EXHIBITION

In 2015, fifteen new works on the theme of the road were added to the Colas Foundation collection. The exhibition was held on November 5 at the Boulogne head office, in the presence of winning artists.
Colas Circle
Loïck Peyron
“Management depends on communication, decency and respect.”

Colas Foundation
Johann Rivat
“Discovery of the world and oneself by a simple translation in space.”
ut on the water, whether alone or with a team, adaptation and anticipation are essential. Back in December, legendary French yachtsman Loïck Peyron spoke at the Colas Circle about his various experiences, from managing doubt to managing a race, both single-handed and as part of a team.

At sea you are permanently anticipating. How do you manage doubt when you’re outside your comfort zone, tired and alone?

Loïck Peyron: It’s a constant battle. As far as I’m concerned, certainty is what brings problems on a boat. You have to be open to discovery: experience and habit can be deceptive. Constant questioning and doubt fascinate me. In my last Route du Rhum race, at the age of 54, I was all alone onboard a 30-meter trimaran designed for a crew of 14 people. I had to anticipate every movement, every second to try and compensate for an obvious lack of muscle power and continue to make progress.

Your CV is pretty impressive but you’ve never won the Vendée Globe race. How do you deal with failure?

Legendary French Yachtsman Loïck Peyron was born in 1959. The son of a merchant navy captain, he is the middle brother of Bruno and Stéphane, themselves successful sailors.

He has won the Transat Jacques Vabre yacht race twice, the Barcelona yacht race once, the Clairefontaine Trophy eight times and the Single-Handed Trans-Atlantic race three times. In 2011, he began preparing for the 2013 America’s Cup with Energy Team and then with Artemis Racing. He is the holder of the Jules Verne Trophy, which he won in January 2012 onboard the Banque Populaire V Maxi trimaran.

On November 10, 2014, he won the Route du Rhum race, on the Banque Populaire VII trimaran in record time: 7 days, 15 hours, 8 minutes and 32 seconds.

Loïck Peyron, nicknamed “Mr Multihull” – was named Sailor of the Year in 2014 by the French Sailing Federation.

Loïck Peyron
“Management depends on communication, decency and respect”
L. P.: Be it a calculation error on the part of an engineer or a navigation error resulting in the mast coming off when leading the race, the fault is always mine. I’m in charge, everything is in my hands. I don’t have a problem when it comes to accepting responsibility. For me, it’s more about disappointment than failure. There are times when it is extremely frustrating to find yourself incapable of carrying on a race because of a breakdown, mechanical or otherwise. It’s disappointing, you’ve got time to brood. However, when you’re competing on equal terms, I accept defeat. I came second in the Vendée Globe race and I wouldn’t have it any other way for anything in the world. When you’re beaten fair and square, you accept and move on.

Today, you’re basically running an SME. How do you do it?
L. P.: Most companies are created around a product, a speciality or a patent. An SME starts out with one person, a man or a woman, and grows. The sailing world is no different. A skipper, a boat, races across the oceans of the world: those are the products. When I start a mini-transatlantic race, I don’t have personal or family finances to deal with. Instead, I have an adventure to sell. And the adventure is already a product with value. During my first Route du Rhum back in 1982, I was 22 years old and had a tiny trimaran. I didn’t come first, but I won the communication prize. I told my story, little anecdotes of things that happened onboard. Experience and communication are complementary in race management. You then have to know how to manage men and women, how to surround yourself with the right people. But what’s interesting about life as a singlehanded French yachtsman is the responsibility that goes with having a blank page of a project and taking it from its infancy right through to the finish line.

How do you manage a team of 14 people at sea for 45 days?
L. P.: We’re rarely simply parachuted into a crew. We know each other and each other’s strengths. It’s all done by a process of co-option. With the Jules Verne race, where I replaced the skipper at a moment’s notice, I got to know the crew out at sea. So I decided to concentrate on everything but “the wheel”. I worked with all the crew members who already had their responsibilities and specific posts. It all comes down to words, silences, communication, small details and, above all, respect.

How do you impose your leadership on a boat?
L. P.: By pushing my weight about! [Reader’s note: laughter] Experience comes into it, of course. But when you join an established crew, you come across some real characters. We’re all literally in the same boat, hence there’s no reason to think yourself any better or any worse than anyone else. I’m there to set the pace. My motto is “Fast but not furious”. The best drivers aren’t necessarily the ones who go fastest, rather the ones who know when and how to brake. But the best way to beat a record or win a race is still to finish it. So pace is crucial.

When are 14 of you on a boat, who has the final say?
L. P.: Decisions are usually collective because you have to take on board individual talents. Having said that, where there is disagreement, it is up to the skipper to take the final decision.

How do you manage communication onboard?
L. P.: On a multihull, stations are pretty spread out and there is a lot of background noise. In this situation, raising your voice raises stress levels. You have to find a way of making yourself understood. Signals are very effective. Secondly, you have to be able to analyze each other’s communication. It’s not always verbal, it’s often visual. It’s a question of posture, fatigue and mutual respect. Everyone has to make an effort to share, in the knowledge that they’re enjoying an exceptional experience.

Which do you prefer, racing with a crew or singlehanded?
L. P.: I like to do both. I often say that I specialize in doing it all. Solo racing is intellectually stimulating because you’re always having to anticipate and visualize. The same is true for a crew situation but it’s more complicated. You have more physical strength and brain cells available, but you have to manage them. Managing singlehanded is interesting, managing a crew is more complex.”
Why did you accept the commission from the Colas Foundation?

Johann Rivat: A commission comes with its own constraints and it’s never easy to work within them…but what matters in the end is your desire, determination and commitment. What’s more, the road is a vast theme. I didn’t feel restricted by it.

What does the road represent for you?

J. R.: A line on the horizon, where the sky meets the earth, or a vanishing point where all perspectives meet…The road symbolizes adventure and discovery. It is steeped in emotion and raises the question of man’s role within his environment. As Pascal said, “after all, what is man in nature? A nothing in relation to infinity, all in relation to nothing, a central point between nothing and all”. Man and his constructions are “almost nothings”, seeking to avoid disappearing, in the midst of a nature that is neither a creative space nor a place where he can frolic at will. It’s these “almost nothings” that intrigue me.

What were your sources of inspiration?

J. R.: When I first traveled to the western United States, I had a thirst for adventure. For this commission, I wanted to pursue the idea of the road as an extension of a street, as a platform for doing exactly as you wish and expressing your opinions freely. Literature also plays an increasingly important role in my work. Jack Kerouac’s On the Road, for example, and Jack London’s The Road. In it, he describes being on the road as a genuine way of life, where travelling becomes a religion and a way of being in the world.
Elke Daemmrich
"Autoportrait – on the road"
Colas Foundation 2015