En route

Colas in South Africa
site-seeing
06 > From Thailand to Hungary via the Comoros Islands, the United States and France… a rapid trip around the world to see the Group’s jobsites, work in progress and finished projects.

in the picture
60 > Conferences, tours, award ceremonies, culture… Some images of the Group’s events, in France and around the world.

en route
22 > Colas in South Africa.
30 > The Colas Rail Catenary Systems Profit Center.

itineraries
36 > They all do their jobs with enthusiasm and have decided to share their daily routine and projects with us.

crossroads
46 > Organization, human resources, new solutions, products & techniques, production sites… A look at recent months of Group life.

horizons
70 > Elisabeth Couturier: “Contemporary art draws up a whole new set of rules.”
72 > The road through the eyes of… Claude Lelouch: “Roads are a perfect metaphor for life.”

sponsorship
74 > Akram Khan: DESH, back to his roots.
76 > Colas Foundation: “20 years on the Road to Art”.
78 > Colas Foundation: LiFang.

Cover photo: aerial view of Chapman’s Peak Drive, Cape Town, South Africa.
Tribute to Bruno Chambon,
CEO Screg Ile-de-France Normandie, 2003 to 2012

Entrepreneurial, Pioneering & Innovative, Responsible: throughout his long career with the Group, Bruno Chambon was each of these.

From the day he joined Screg to his very last day as CEO of Screg Ile-de-France Normandie, Bruno championed the values of the Group.

A born entrepreneur, Bruno went about his job with passion and a keen sense of mission. He had a tremendous ability to listen to his customers, an innate spirit of constructive sharing with his partners and an extraordinary capacity to mobilize his people. He was always able to channel collective intelligence and seize development opportunities.

Innovation came naturally to him and his pioneering talent was reflected in many of the successes he enjoyed throughout his career: the launch of energy efficient Compomac cold mix in western France, the first tramway projects in Grenoble and Orleans, and a public-private partnership contract for the upgrading and maintenance of roads and public lighting in Le Plessis-Robinson, the first contract of its type in France, secured just over a year ago.

As a responsible leader, Bruno truly made people central to his management style. His primary aim was to foster his teams’ development. Two principles governed the relations he had with his staff: respect and candor. It is hardly surprising that his colleagues felt such affection towards him.

A man of conviction, open-minded, loyal and generous, Bruno had a strong sense of friendship, belonging and fraternity. He thrived on social interaction and his communicative, boisterous laugh will be remembered by all. His optimism was unwavering and he never betrayed the slightest anxiety about the future.

Speaking for myself and on behalf of the Group, I wanted to express my deepest gratitude to Bruno. His personality and his accomplishments will forever remain deeply embedded in our memory.

Hervé Le Bouc
Despite a challenging economic environment, Colas held up well in 2012.

The Group posted revenue at 13 billion euros (44% of which was recorded outside of France), a 5% increase from 2011. The majority of growth comes from international operations, where progress was recorded in every region, exception made for central Europe.

Net profit attributable to the Group remained solid at 302 million euros, albeit down 10% from the previous year due to a loss generated by the Sales of refined oil products sector and a difficult year in the United States. The return to the breakeven point in central Europe and the good performance recorded by the Roads business in Canada, France, Asia, Australia as well as by the Railway sector are reasons to be satisfied.

Work-on-hand was still high at the end of December, with orders up by 4% compared to the end of 2011. Group companies won a number of contracts around the globe, including significant commercial successes, such as the Nîmes-Montpellier high-speed rail bypass in France, the road upgrading and maintenance contract in central London and the Algiers subway extension. This high level of work-on-hand is a positive factor heading into 2013.

Nevertheless, vigilance, prudence and reactivity need to remain the order of the day. There is still much uncertainty concerning the global economy. Against this backdrop, Colas is set to reap the benefits of many projects – either underway or due for completion – in France, the long-term federal infrastructure plan in the United States, a Canadian market that continues to thrive, positive outlooks in Asia and Australia and new rail opportunities in international markets. But low growth in the majority of economies, combined with the urgent need to reduce public debt, should lead to a cut in public spending.

Given this climate, we have to improve our competitiveness. In recent years we have successfully implemented a number of measures along these lines and shall continue to do so. For example, new action plans have been put in place concerning the Sales of refined products sector as well as in the United States. In France, the new organization rolled out for the Roads business will pave the way for the future in the best possible conditions.

Thanks to M Road and cLeanergie, Colas is also set to make progress in the fields of management and energy savings, in line with its corporate values: Entrepreneurial, Pioneering & Innovative, Responsible.

At the start of 2013, I launched the Group’s new safety campaign. The success of this campaign is of paramount importance. Each of us, from the CEOs to skilled workers, must play an active daily role in ensuring that Colas achieves its goal of zero accidents.

So despite all the obstacles, Colas remains on course, serving the needs generated by global mobility, urban development and environmental challenges.
A new town springs up

GTOI, a Group company on Reunion Island, is currently working on a pioneering construction project at the gateway to Saint-Denis, a 70-hectare site that will accommodate 208 social housing units. Launched in February 2012, the “Les portes de Beauséjour” project involves an initial phase of 98 housing units (two buildings), that will possibly be followed by another 110 units (three buildings). Seventy skilled workers have been mobilized for the structural works of the first phase, operating alongside 120 workers responsible for the electrical and plumbing networks. The buildings are due to be delivered at the end of March 2013. Ultimately, people living in the Beauséjour mixed development zone will have access to a range of local services, shops and schools and priority will be given to soft transport modes (walking, cycling, etc).
The City of Paris has launched a vast redevelopment project designed to reclaim the historic, picturesque river banks along the Seine. Last summer, teams from Colas Ile-de-France Normandie carried out work on the right bank to transform the quai des Tuileries expressway into an urban boulevard stretching for 800 meters, between the place de la Concorde and the pont Royal. Work on the left bank was launched in the fall.
Loon-Plage, near Dunkirk in northern France, is the site of one of the biggest industrial projects currently underway in the country: the construction of a methane terminal. Launched at the start of 2012, the work involves the construction of rock sea walls together with the platforms that will serve the future terminal. The facility will boast three storage tanks with a capacity of 190,000 m³ to contain the liquefied natural gas arriving by ship. During the initial phase of the work, Colas Nord-Picardie’s Lille-Dunkerque profit center constructed a first 1.7-km rip-rap sea wall. Some 100,000 m³ of sand was cleared away, 90,000 m² of geotextile membrane was laid and 90,000 tons of rip-rap brought in. The environmental constraints were considerable during this phase and the work had to be carried out according to a strict timetable taking into account bird migration patterns. The second outer sea wall was constructed using sand asphalt mix, with teams having to apply 18,000 tons of mix on a 25 % gradient! Quite a feat, made possible thanks to the use of a paver specially designed for the job. The terminal is due to be up and running by the end of 2015.
Route 43: opening up the highlands

Dirt tracks that become impassable in the rainy season? In the central highlands of Madagascar, 150 km west of the capital, Antananarivo, teams from Colas Madagascar are upgrading a 52-km stretch of Route 43 between Soavinandriana and Faratsiho. The aim is to open up the fertile mountain region of Itasy. Work is due to be completed in June 2013.
The Toulouse sector of the Spac Travaux Régionaux Sud-Ouest profit center worked alongside teams from Spac’s Major Projects Division to lay an 11-km section of pipeline and build two new switching substations near the town of Montauban on behalf of TIGF, a natural gas underground storage and transport company in southwest France.

The purpose of the project was to secure gas supplies for the Aveyron region by doubling an existing 11-kilometer section of pipeline. Up to ninety people worked on the project, which was completed in December. Road works and main networks were handled by Colas Sud-Ouest’s Montauban profit center. Despite a tight schedule, the completed project was delivered on time.

Colas’ Thai subsidiary, Thai Slurry Seal (TSS), has carried out runway renovation work at Bangkok’s Suvarnabhumi Airport. Damaged surfaces had to be planed down prior to the application of 50,000 tons of asphalt mix, including 12,000 tons of kerosene-resistant mix. Lighting and marking operations were also carried out. Despite the fact that the project took place during the rainy season, work was completed nine days ahead of schedule.
Last summer, Highway A6 was given a new lease on life thanks to three projects carried out by Île-de-France teams in the Paris region. A 3-km section of the route south of the capital, between the towns of Villabé and Courcouronnes, was renovated in both directions to replace the existing, seriously damaged, fifty-year-old concrete slabs. The slabs – each 25 to 30 cm thick – were broken up before making way for a new, more silent road surface. As a result, the road is more comfortable to drive on, safer and quieter. Between 80 and 100 employees spent two months working four nights a week on the project. Resurfacing work was also carried out on a second 3-km section of the same highway, heading out of Paris in the Val-de-Marne area. And finally, between Evry and Fontainebleau, a little further south, a third project was carried out with Aximum teams. On the agenda this time: landscaping the median, upgrading the steel guardrails to bring them into line with current standards and temporary and permanent road markings.
A River runs through it

In Sunbury, Pennsylvania, teams from HRI have completed a redevelopment project on the banks of the Susquehanna, the longest river on the East Coast. The work took two years to complete and included the construction of a pier, a quay, a paved pedestrian walkway and an amphitheater.

FRANCE

Paving the way for wind turbines

Enercon GmbH, Germany’s leading wind turbine manufacturer, has opted to locate its future concrete wind mast production plant in Longueil-Sainte-Marie, in the Oise to the north of Paris. Teams from Colas Nord-Picardie’s Compiègne profit center built the 144,000-m² platform required to accommodate the plant. One of the biggest obstacles during the project was the unstable ground, because the site is located on a filled-in former gravel pit. Dynamic compaction was employed to consolidate the 50,000 m² of earth to ensure the ground could support 20,000 tons of fill. Skilled workers from SNB (Société Nouvelle Brosset) were also brought in to lay the concrete paving. Using a special machine, up to 600 m² of concrete paving stones were laid each day.
Silence in the Bay of Angels

In Nice, the famous promenade des Anglais is getting a makeover. Colas Midi-Méditerranée’s Nice profit center is carrying out renovation work on a 4-km section of roadway. The project is designed to reduce noise pollution for the benefit of residents, reinforce the road surface of the slow lane used by buses and lay a brand new wearing course for the Tour de France bike race due to pass through the city in July 2013. A total area of 70,000 m² has been resurfaced using Rugosoft®, a noise-reducing asphalt mix generating a fivefold reduction in traffic noise. The night teams applied 15,000 tons of 3E® environmentally-friendly, energy-efficient warm mixes.
The Hungarian subsidiary Colas Út. was awarded a contract to build a 15-km road running along the southern edge of Lake Balaton. With its lakeside and spa resorts, Lake Balaton is a vacation favorite among Hungarians and also attracts large numbers of foreign tourists. The project was broken down into two phases. Teams began by resurfacing a 5.6-km section between the towns of Tab and Lulla. The next phase involved the construction of a new 9.6-km section between Lulla and the town of Balatonendred. One of the distinctive features of the project was the use of cold mix. The new road links the M7 Highway to Lake Balaton and should contribute to the area’s economic growth and boost tourism. It also showcases the expertise of Colas companies in Hungary.
Thirty years after it was first brought into service, the viaduct is being refurbished, the main objective being to enhance its resistance to temperature fluctuations. The contracting client Autoroutes et Tunnel du Mont Blanc (ATMB) asked Smac’s Annecy profit center to carry out the necessary waterproofing work. The Baryphalte® Pont process, designed by Smac, was employed for the resurfacing phase. This consists of a pre-fabricated Baryprene® 30 A bitumen membrane, produced by Axter, and a layer of low temperature mastic asphalt. The technique is particularly suitable for superstructures and major civil engineering structures such as bridges, etc. Since the process is highly mechanized, it took the Annecy profit center just five days to renovate some 11,000 m² of the northern end of the deck, in a single 7-meter wide pass. The southern end will be delivered in August 2013.

High service bus routes in Metz

Over the past 18 months, work has been ongoing to create two high service bus routes – 17 km of reserved lanes – in Metz, in north eastern France. Teams from Colas Est are building a 6-km section linking the Pompidou Center to the boulevard de la Solidarité. Aximum and Smac are also actively involved in the project.
Colas Ltd has carried out resurfacing work on the main runway and two taxiways at London’s Gatwick Airport. To avoid any flight disruption at the UK’s second biggest airport, the teams worked night shifts, from 10:30 p.m. to 4 a.m. They used 56,000 tons of asphalt mix to cover the 3,350 meters of runway and taxiway. For the project, Colas Ltd invested in a brand new mobile asphalt plant with a capacity of 300 tons per hour, a tool that will also come in handy for future airport projects. Some 23,000 m² of crack-resistant GlasGrid® was used on the taxiways. This reinforcement grid system exploits the qualities of fiberglass and has proved to be particularly effective when applied to surfaces subject to heavy use such as airport runways. Thanks to its substantial experience in the airport sector, Colas Ltd delivered the project on time and to the complete satisfaction of the client.
Colas Sud-Ouest scaling the heights

It took 250 roundtrip helicopter flights for a Colas Sud-Ouest team to transport the materials required to complete a project at the cirque de Gavarnie, in the Pyrenees mountains. The work involved the construction of a purification plant and a water catchment facility to supply the Brèche de Roland refuge, located at an altitude of 2,600 meters. The unit was covered in stones to make sure it blends seamlessly into the landscape. And to remove any evidence of the team’s presence at this Unesco World Heritage Site, every single stone was put back where it had been found!
Having been absent from the Comoros for ten years, Colas returned to the archipelago to carry out three separate road projects on three islands simultaneously. Launched in April last year, work to resurface the ring road around the capital, Moroni (Grande Comore), was completed in December. A few kilometers to the south, on the island of Mohéli, teams resurfaced a 9-km section of road between Miringoni and Ouallah. Finally, on the island of Anjouan, a 17-km section of road linking the Ouani airport to Hombo was also renovated.
As part of the Vicoin Viaduct rehabilitation project on the A81 highway near Laval, in the Mayenne area of western France, Aximum’s Basse-Normandie-Anjou profit center carried out work to replace heavy duty guardrails running along a 1,200 meter section of road. Teams had to work to a tight deadline, installing more than 65 meters of barrier per day. The viaduct is 35 meters above ground level and temporary railings were set up to ensure the safety of employees, who also wore harnesses. Safety is taken extremely seriously at Aximum.

Aalborg Airport: two runways renovated

Last summer, teams from Colas Danmark carried out work to renovate two runways at Aalborg military and civilian airport in Jutland. Some 100 employees worked using eight pavers and sixteen compactors to resurface the airport’s main runway, which is 2,360 meters long and 46 meters wide.
Located close to the Calgary, Alberta International Airport, a new intermodal railroad logistics platform, occupying an area of 690 acres, has been built by teams from Standard General Inc.-Calgary, a subsidiary of ColasCanada. This was no ordinary construction project and the figures speak for themselves: 2.3 million m$^3$ of earthworks, 750,000 tons of aggregates, 120,000 m$^2$ of resurfacing work carried out and 24 km of track laid. The project was delivered to the client, Canadian National Railway, on schedule in time to be brought into service at the start of 2013.

Along the Swiss border

Colas Rhône-Alpes Auvergne’s Bonneville profit center carried out the recent road works for the municipality of Vétroz-Monthoux, just next to the Swiss border. The work involved the use of asphalt mixes on Route d’Hauteville and Route des Hutins.
MOROCCO

A tramway named Casablanca

Casablanca’s very first tram line was opened on December 12 in the presence of King Mohammed VI of Morocco and a French delegation led by the Prime Minister, Jean-Marc Ayrault. The 31-km line runs from Casablanca’s eastern districts to the southwest, via the city center. Colas Rail and the Group’s Moroccan road subsidiaries worked on the second phase of the project, a 9-km section of the line. The work involved civil engineering, rail laying, platform surfacing and the creation of three stations in the city center. A total of 250 employees were mobilized for the project.
Colas has operated in South Africa since 2000, focusing primarily on the industrial manufacture of bitumen emulsions and modified bitumen. In 2012, Colas South Africa acquired a 50% stake in Dust-A-Side, a major South African dust-control and haul road maintenance specialist serving the mining sector. Here we report on Colas’ activities, taking in the cities of Cape Town, Durban, Pretoria and Johannesburg.
Renovated in 2012, the emulsion and modified bitumen plants in Chamdor near Johannesburg each have a production capacity of 30 tons per hour and are entirely automated.
Our first port of call is Cape Town, known as South-Africa’s Mother City. Located in the west of the country, some fifty kilometers from the Cape of Good Hope, tourists flock to the city to admire its architecture and stunning scenery. Colas South Africa’s head office has been based here for the past twelve years. “Colas South Africa was created in 2000 following the take-over of Murray & Roberts’ binders business*, explains Thierry Madelon, Manager of Colas South Africa. “Today, our activities range from the import, storage, marketing and transformation of bitumen to the application of microsurfacing and slurry seals.” The Group’s flagship in the southern part of the African continent, Colas South Africa also acts as a supplier to the Group’s other entities operating in Zambia and Namibia. The subsidiary employs 300 people and since it was established twelve years ago it has built up a solid reputation on the back of its industrial expertise.

A vast territory

An air of excitement prevails at the site of Chamdor’s recently renovated emulsion and modified bitumen plants near Johannesburg. “Entirely modernized in 2012, the plants each have a production capacity of 30 tons per hour and are automated throughout*, explains Herman Groenewald, Site Manager. Here, a truck is leaving the plant to head for the Kruger National Park, some 500 kilometers away. Every year, Colas South Africa supplies microsurfacing for use on the park’s roadways. This is a park that occupies an area of 20,000 km² and is home to the largest wildlife reserve in South Africa. “Due to the geography of the country – it is twice the size of France – it isn’t unusual for our teams based in Cape Town to make deliveries 700 kilometers away, while those in Durban think nothing of travelling 2,000 kilometers north to Namibia…,” observes Thierry Madelon. Colas South Africa operates throughout the territory, and beyond, via three profit centers based in Cape Town, Johannesburg and Durban. The subsidiary also has three emulsion plants, four modified bitumen plants and three bitumen storage facilities. In 2012, the subsidiary produced...
> 60,000 tons of emulsion and 42,000 tons of modified bitumen. In addition, Colas South Africa’s teams have a fleet of thirty spreaders and ten microsurfacing machines.

**First bulk bitumen imports**

In November 2011, Tasco 1, a bitumen tanker operated by Tipco, Colas’ Thai subsidiary, entered the port of Durban. This was a big day for Colas South Africa since the tanker was carrying the first ever bulk bitumen shipment to be imported into the country. “That year, there was a bitumen shortage in South Africa triggered by a period of high demand from September to April”, explains Thierry Madelon. “The country’s production capacity couldn’t keep pace with the increased demand. The combined efforts of Tipco, the Bitumen Department at the head office in Boulogne, France, the Technical Department and International General Management meant that Colas was able to come up with a solution.” Boosted by the success, Colas South Africa carried out a similar bulk import operation a few months later, this time in Cape Town.

**The mining sector**


---

**PETER MUNZHELELE, Machine Operator (Colas South Africa)**

A pleasure to be at the wheel

On this particular December day, Peter has a smile on his face. He is celebrating his 60th birthday and, to cap it all, he is at the controls of “his” truck, a brand new six-meter wide spreader. Six years ago, Peter Munzhelele joined Colas South Africa as a machine operator. “It’s a real pleasure to get up in the morning and go to work, especially with ultra-modern equipment like this”, enthuses Peter. Always keen to climb back into his truck, he makes one or two final adjustments and sets off again to make a delivery to a job site.
a 50% stake in this South African dust control and haul road management specialist operating in the mining sector. Established in 1976, Dust-A-Side developed a process based on the stabilization of haul roads using bitumen emulsion to control dust. The company works exclusively for mining sector customers and serves around fifty mining sites (open-cast or underground), mainly located in South Africa, Namibia, Zambia, Botswana, Chile and Australia. “Colas already supplied bitumen emulsions to Dust-A-Side in Australia and Zambia”, explains Thierry Madelon. The acquisition of a 50% stake in the company fits squarely with Colas’ strategy of developing a global offer aimed at mining infrastructures (see article on page 53).

A recognized process
Dust-A-Side teams are kept busy at the site of the Steenkool Spruit coal mine, in Mpumalanga province. For the past three years, they have been responsible for maintaining the site’s 400,000 m² of permanent haul roads. The bitumen emulsion used in the application process is produced at the Bethal plant, located 150 kilometers from Johannesburg. Teams begin by profiling the road using a grader. The surface is then prepared and scarified to make sure the bitumen emulsion can be correctly mixed in. Once the product has been applied, the surface is leveled and compacted.

“Dust control is a major issue for the mining sector”, explains Nico van den Berg, Contracts Manager for Dust-A-Side in the Mpumalanga region. “In addition to safety problems associated with poor visibility, dust damages vehicle filters, engines and tires. The process we have developed makes it possible to improve site safety and increase the life-
span of equipment.” And there are other advantages: maintenance operations carried out by Dust-A-Side do not hinder the day-to-day activities at the mine and trucks using the recently maintained roads complete the compaction process. Finally, “our product ensures road surface impermeability thereby preventing ground pollution”, concludes Nico. The company’s expertise has been recognized by the mining industry for nearly thirty years, with Dust-A-Side now the world leader in permanent mining road maintenance.

A resounding success

“Thanks to Dust-A-Side’s experience, Colas is well placed to develop its expertise in the mining sector”, underlines Thierry Madelon. “This new business also means we are able to ride out fluctuations in the South African road sector.” As for Dust-A-Side, Johan Geyser, the company’s General Manager for Global Operations, had this to say: “Colas brings us technical support, a quality product and a secure supply of bitumen”. A winning partnership all round. And if proof of this were needed, several joint ventures are already being developed between the Group’s other entities around the globe and Dust-A-Side, in countries including the United States, Morocco, Indonesia and New Caledonia. “Dust-A-Side imposes the very highest safety standards”, adds Thierry Madelon. “Since 2008 the company has recorded more than 4,400,000 man hours without an accident. Safety is crucial when working in the mining sector and is integral to the corporate culture at Dust-A-Side.”

**COLAS SOUTH AFRICA**

- 300 employees
- 3 profit centers (Cape Town, Johannesburg and Durban)
- 3 emulsion plants
- 4 modified bitumen plants
- 60,000 tons of emulsion produced in 2012
- 42,000 tons of modified bitumen produced in 2012
- 3 bitumen storage plants
- 30 spreaders
- 10 microsurfacing machines

**ACQUISITION**

- 50% Colas South Africa acquired a 50% stake in Dust-A-Side in 2012.
- Established in 1976, Dust-A-Side developed a process based on the stabilization of haul roads using bitumen emulsion to control dust. The company works exclusively for mining sector customers and serves around fifty mining sites mainly located in South Africa, Namibia, Zambia, Botswana, Chile and Australia.
ON THE KRUGERSDORP ROAD
The microsurfacing on this road near Johannesburg was supplied by Colas South Africa.
Colas Rail’s Catenary Systems profit center specializes in the design, installation and maintenance of electric traction systems (catenary systems and overhead contact lines). Welcome to the world of railway electrification, from high-speed lines to regional lines via tramways and the Paris urban express train network.

The Colas Rail Catenary Systems Profit Center

Based in Cergy-Pontoise, in the suburbs of Paris, Colas Rail’s Catenary Systems profit center is active throughout France with three works centers in Trappes, Lyon and Toulouse and four design offices. This decentralized structure means teams are mobile and operate right across the country. The profit center is also active outside France, having recently completed a project in Morocco, for example.

Catenary projects can last from just one day to several years and are extremely varied: they might involve the electrification of new (for instance the LGV East Europe high-speed railroad) or existing lines, the renewal of aging equipment (for instance, the RER A urban express network in Paris) or the installation of overhead contact lines (OCL) for tramways (for example, Brest, Le Mans, Paris, etc.). “Infrastructure renewal represents our core business. These projects take place primarily in and around Paris”, emphasizes Denis Blondel, Colas Rail’s Catenary Systems profit center manager. What are the specific features of this business? “The catenary business is complicated and demanding”, he continues. “We often have to start entirely from scratch when carrying out technical studies. Our construction teams mostly intervene only at the end of the project or in urban environments.” Rigor and precision are the order of the day.
In April 2007, the TGV smashed the rail speed record (574.8 km/h), on a section of the LGV East Europe railroad built by Colas Rail. The 122 km of overhead lines required were installed by its Catenary Systems profit center.
Before the tramway was brought into service, Colas Rail teams made the final adjustments to the overhead contact line (OCL).
Thousands of hours in the design office

The Cergy-Pontoise Catenary Systems design office has spent over a year – 21,000 hours so far – painstakingly finalizing the assembly manuals required to launch modernization work on the Sillon Alpin Sud (SAS) railroad. The contract, secured as part of a consortium in December 2011, includes the electrification (25 kV 50 Hz) of the 80-km section of track running between Valence and Moirans in south-eastern France. Ten of the forty or so employees based at the Ile-de-France design office are working on the project, with some of the design work subcontracted out to the Lyon office. The first step in the process involves field reconnaissance. “This crucial phase consists in collecting site data and identifying specific features of the line: bridges, viaducts, track-side buildings and grade crossings,” explains Michel Dubois, project design manager. “We analyze the track route, whether there are any zones exposed to the wind, etc. In other words, we look at everything that has an impact on the positioning and installation of the overhead line.” Using the data collected, blueprints for the entire installation process are drawn up: staking, assembly manuals, etc. Produced by design offices, often following thousands of hours of work (as is the case for the Sillon Alpin Sud project), these documents specify the exact positioning of pylons and material as well as the exact quantities to be used. The teams can then begin the actual work on site. Some 2,500 pylons, 150 km of supporting cables and 140 km of contact wires will be needed for the electrification of the Sillon Alpin Sud rail track. The work, launched at the start of January 2013, should be completed by the end of January 2014. “This is a great reference for the profit center,” underlines Christian de Vimal, contract manager. “Once electrified, the line will be able to handle high-speed trains.”

Precision and safety

35 km of overhead lines at a tension of exactly 1.2 tons. No more and no less and identical along the entire route of the...
Brest tramway. The overhead contact line (OCL) was erected using an overhead drum wagon and a rail truck. Slowly, the platform is raised to reach the brackets fixed to the pylons, 6.2 meters above ground level. On board, two technicians position the cable by hand while the drum wagon reverses letting out the wire as it goes. The operation is carried out at a constant speed and in regular sections of between 1 and 1.6 km. Adjustments begin once the overhead contact line is in place. “The procedures for assembling and adjusting overhead lines are coordinated by all the members of the construction team – driver, overhead line technicians, etc. – and have been developed and fine-tuned over many years”, points out Denis Blondel. Overhead line projects can involve up to fifteen people. And safety is always a primary concern: working at height, electrical risks, road traffic management, employee and passenger safety. In order to secure and facilitate overhead line installations and enhance their quality, Colas Rail has developed a number of specific tools: choosing the exact loca-
tion of support structures via GPS, the use of a swivel grip, a specific drum wagon for pulling the supporting cable and contact wire, etc.

Inaugurated in June 2012, the Brest tramway joins a long list of tramway references for the profit center: Bordeaux, Le Mans, Strasbourg, T1, T2, T3, T7 in Paris, Angers, Valenciennes, Charleroi, Clermont-Ferrand, Besançon, etc. “The success of these projects depends on rigor, precision and organizational efficiency”, concludes Denis Blondel. “But, above all, experience and preparation are crucial. There is no place for improvisation when it comes to installing overhead lines!”

BENOÎT LEMERCIER, Project Manager (Colas Rail’s Catenary Systems profit center, Trappes)

Learning the catenary business
Benoît Lemercier’s immersion in catenary systems at Colas Rail began in 2009. Hired as an assistant site supervisor following a six-month engineering internship, his first projects were on the Paris tramways. Then, at the end of 2010, he headed to Brest and the city’s tramway construction project, as project manager. He was responsible for resource planning and supervising the project teams. “For a youngster like me it was a great adventure, full of challenges. My experience on the Brest tram project helped me develop independance that I was then able to take forward to the Le Mans tramway project.”

And what about future projects? “Why not high speed rail or maybe a 1,500 volt line for the RER express subway in Paris?”

CASABLANCA (MOROCCO)
For the Casa-Port station renovation project, teams from Colas Rail’s Catenary Systems profit center are responsible for the technical design and installing the overhead lines.
Managers, site foremen, machine operators...
They all do their jobs with enthusiasm and have decided to share their daily routine and projects with us.

At 66, Francis Azzolini is a very satisfied man as he nears the end of an exciting career spanning fifty years. It all started back in 1962, the year he joined Colas Madagascar as a mechanic based in Antananarivo. His father worked there too, as a workshop manager. Driven by a thirst for knowledge, Francis began taking an interest in the construction side of the business. In 1974 he was appointed foreman and his responsibilities took him beyond Madagascar, to Mayotte and the Comoros Islands. In 2005, he was made sector manager for Madagascar and the Indian Ocean. “Colas put its trust in me. I consider myself very fortunate to have enjoyed such a fantastic career without any formal qualifications behind me. Colas Madagascar is a big company that offers its employees the technical and financial resources they need to succeed and operate in the best possible conditions.” Francis, who pilots a private plane in his spare time, is now bracing himself for a big change in his life: retirement in June 2014. “After an extraordinary career, I will need every day of the next year to prepare myself.”
I was born to work in construction

ISABELLE COUSTY
MACHINE OPERATOR AND MEMBER OF THE SKILLED WORKERS GUILD COLAS SUD-OUEST FRANCE

As far back as she can remember Isabelle Cousty always wanted to work in construction. Her passion for heavy site machinery stems from watching her father at work at the family business. Determined to work outdoors, she decided to go after her dream, qualifying as a machine operator. She also obtained a license as a heavy and ultra-heavy truck driver. In 2000, she joined Macovi – which became part of Colas Sud-Ouest in 2004 – as a machine operator. Mini-excavators, crawler excavators, earthworks or finishing, it’s all the same to Isabelle who thrives on the sheer variety her job throws at her. “You have to assert yourself in this male-dominated environment”, she confides. “It didn’t take me long to do so. In fact, I’ve even become my team’s mascot!” In 2012, she became a member of the Skilled Worker’s Guild, an accolade she is more than happy to add to her status as French power-lifting champion. Her competitive spirit has certainly served her well both in competition and out on the job sites.
The Group encourages inter-company mobility

ERIC BLANC
SECTOR MANAGER
WATERPROOFING
SMAC
FRANCE

After fourteen years of building roads at Colas, Eric Blanc joined Smac in January. The door to a new business – Waterproofing – and a new subsidiary opened for him thanks to internal mobility. To support his wife in her career, Eric wanted to move to the center of France. Sector manager with Colas Ile-de-France Normandie’s Paris Nord profit center since 2009, he told his manager as well as the HR manager about his plans. Having secured the backing of his managers in January 2012, Eric had a meeting with the Group’s Mobility department a few weeks later. And so began the “mobility” process: his profile caught the eye of several profit center managers at Colas Centre-Ouest and the first contacts were made. The search was then broadened to include the Group’s other businesses. Unfamiliar with waterproofing, Eric Blanc grabbed the opportunity to join Smac’s Châteauroux profit center, where his solid experience in commercial relations and management proved to be real assets. “Colas encouraged me all the way with my internal mobility project. Smac’s employees have given me a warm welcome and are more than willing to help out with the technical aspects specific to the job. There are numerous gateways to be explored between subsidiaries: Colas is one big happy family!”
PATRICIA TURPIN
PAYROLL AND ADMINISTRATION
COLAS NORD-PICARDIE
FRANCE

How would she sum up forty years spent working for the same company? Patricia Turpin has no hesitation: trust. The trust placed in her by her managers and the trust built up with colleagues throughout her career. Patricia joined Sreg Nord-Picardie in 1974 as a secretary. Armed with her accountancy qualification, she was promoted to the role of administrative officer before being appointed profit center accountant. She became a supervisor in the HR department in 2004. Today, she is responsible for all administrative procedures (managing contracts, training programs, pay, etc.) concerning the 260 employees working across four entities. “I know what I need to get done in the morning because there are deadlines to meet… but something unexpected almost always crops up during the day! Colleagues can come and see me for advice at any time… and my schedule goes right out of the window. But I don’t mind… it shows people trust me. I’m retiring in a few months time and I’d like to wish everyone well for the future.” All that remains for Patricia to do is pass on the tricks of the trade to her successor before turning her attentions to her grandson… and why not the 1,800 people living in her town!
Etienne Grondin has always had a sense of adventure and a love of open spaces. It was this passion that took him to French Guiana and the village of Maripasoula – a three-day journey inland from the coast by canoe – to carry out a student internship. “I was overseeing the construction of a water tower. Logistics are a major challenge in such isolated locations, with parts sometimes taking several weeks to arrive on site!” Back in France, he trained in the Aisne region in the north of the country, qualifying as a site supervisor before returning to French Guiana. It was at that point that he joined the Group and helped create a profit center specializing in pipelines. Seven years later, Etienne joined Spac’s Dunkirk profit center to take over from a colleague who was retiring. With the new job came new challenges: PVC underground pipes and steel pipelines are now his daily bread and butter. “Working overseas is a great learning experience. I’ve met a lot of people and come across many different cultures. It has all made me a much more rounded person. To be successful you have to be adaptable and overcome your shyness. You can learn things anywhere in the world at any age!”
"I always strive to go the extra mile."

TRACY KHUA
DIRECTOR
HIGHWAY RESOURCES PTE LTD
SINGAPORE

Since 2007, Tracy Khua has been Director of Highway Resources Pte Ltd, an Asian subsidiary specializing in bitumen transport. Based in Singapore, she travels to Indonesia, Vietnam, Thailand and Australia to oversee the subsidiary’s activities. "I'm often the only woman in what is an extremely male-dominated environment. But it doesn't matter who you are, success is the result of personal investment, hard work and a determination to meet objectives." And Tracy speaks from experience, having worked in the maritime transport sector – particularly oil – since 1986. She joined Highway Resources Pte Ltd in 1997 as Financial Director, a post she held for ten years. "My job is anything but routine," she enthuses. "Our bitumen tankers never stop and I have to be permanently available, including evenings and vacations. I'm learning all the time and consolidating my expertise." With a constant eye on market trends, this outstanding negotiator is perfectly adept at using her networks to secure long-term contracts with refineries. At 47, Tracy is proud of the trust placed in her by the Group: "I always go the extra mile to prove them right!"
René Wehrlen had his first experience of tower demolition in Mulhouse back in June 1997. A six-storey social housing apartment block was reduced to a pile of rubble in just a few seconds, with not an ounce of explosive in sight and a minimal safety perimeter. Sixteen years later, René, workshop foreman with Ferrari Demolition (Colas Ile-de-France Normandie) in Wittelsheim (eastern France), joined the team specializing in “vérinage”, a patented hydraulic jacking demolition process used in France. “The process consists of installing hydraulic jacks on one floor of the building. Their exact location and capacity are defined following a detailed structural and thrust survey conducted beforehand”, he explains. “A single thrust - oblique or horizontal - applied to one of the floor’s columns is enough to cause the building to collapse under its own weight.” Passionate about his job, he has kept two large files detailing his exploits to date: 42 demolitions using the “vérinage” technique, a record! Yet rather than boasting about his success, René Wehrlen simply derives immense satisfaction from delivering a professional service. “In this job there is no room for doubt”, he says. “The preparation phase is crucial. We must never cut corners or take anything for granted.”
It’s all in the planning

FABRICE LORBEL SUPERINTENDENT SOGETRA GUADELOUPE

With his father a builder and an uncle in construction, it’s hardly surprising that Fabrice Lorbel ended up in the same business. In 2000, he joined the Guadeloupe-based subsidiary Sogetra as team supervisor. Now superintendent, he is currently overseeing three construction projects: an 18,000-m² logistics platform, a housing development in Besson and a residential building in Convenance. His role is to work closely with the site supervisor to define a schedule and then implement it, delegating specific tasks to each member of the team. “I’ve always enjoyed managing and organizing. I was class president at school”, chuckles Fabrice. “And I’ve helped run several local sports clubs and other associations for a number of years. I plan everything well in advance to meet the goals set.” He thrives on this strategic approach and has one goal in mind: to continue to rise up through the ranks with Sogetra, “since there are few companies like it on the island”. Either that or move on to one of Colas’ other subsidiaries. And what about doing a little IT training to become site supervisor? “Why not! The important thing for me is to excel, whatever I do.”

ROUTES No. 30 – April 2013
GERHARD RINK
PROJECT MANAGER
COLAS LTD
UNITED KINGDOM

Gerhard Rink is a true European. Originally from Germany, “Gerd” works in the United Kingdom and goes home to Spain on weekends to spend time with his now-retired English wife. “I went straight into military service from school. I then decided to stay in the army to study engineering and it was there that I began my career. After twelve years, I returned to civilian life and held a variety of jobs in the civil engineering and construction sector, giving me the opportunity to travel in Italy, Spain, Austria, Switzerland and Germany. In 2006, my wife, who I met in Spain, was posted back to the United Kingdom. I followed her over in 2007, joining Colas Ltd.” Gerhard soon rose up through the ranks, becoming project manager in 2011. He is responsible for budgets, managing operations, ensuring employee safety and assessing risks and specific construction methods as part of the bidding process.

In March 2012, Colas Ltd handed Gerhard the first ever Values Award in recognition of the initiative and dedication he showed when standing in for a seriously ill colleague at a moment’s notice. A well-deserved honor!
For the love of the product

NOEL MACE
SITE SUPERVISOR
SMAC
FRANCE

In 1988, Noël Macé joined Smac’s Nantes profit center, in north-western France. For him, it was “love at first sight!” He worked for five years applying mastic asphalt before being promoted to the role of site supervisor. He spends his days drawing up work schedules, supervising teams, ordering asphalt, checking its quality and taking delivery of concrete supports. Noël also has regular dealings with the town’s technical services. Deeply passionate about “his” product, he has just one thing on his mind: promoting the use of mastic asphalt throughout the region. “Smooth or granulated, white or red, hard-wearing and easy to work… the possibilities are endless with mastic asphalt. It can be used on sidewalks, roads, industrial flooring, parking lots, ship decks, shed floors, etc.” When Nantes University consulted Noël regarding the choice of product to be used for the floor of one of its buildings, he had no hesitation: “The customer was seeking an ivory finish; I immediately recommended Ascolor®, a combination of translucent bitumen and pigmented aggregates.”
Colas’ Roads business in France has been organized into seven regional subsidiaries under the single Colas brand. Up and running as of January 1, 2013, the new structure marks a major turning point for the Group’s Roads division in the country. The previous structure, based on sixteen subsidiaries and three networks – Colas, Sacer and Screg – in place for more than fifteen years, is a thing of the past. Interview with Thierry Genestar, Managing Director, Roads France.

What were the reasons behind the decision to roll out the new organization?
Thierry Genestar: Our previous structure reflected the Group’s history. Sacer joined us in 1992, followed by Screg in 1996. At the time, the issue of bringing the networks together was discussed and it has been raised many times since over the past fifteen years. In a growth market, an organizational structure hinged around three competing networks proved highly relevant and effective. Over the past four years, however, market volume has fallen by between 4% and 5% per year. To anticipate and adapt to evolving market conditions, we need to be flexible and reactive. Yet with the previous structure, solidarity between brands and the optimization of industrial and material resources were being hampered by the complexity and unwieldy nature of the

“The new organization for our Roads business in France aims to give new impetus and make us more competitive.”
legal, social and administrative implications of having separate legal entities. There was an urgent need to simplify the structures, to make them more efficient and transparent.

**Is this a revolution or evolution for the Group?**

**T. G:** Both! Reducing sixteen regional subsidiaries and three brands to seven regional subsidiaries operating under a single brand name is a revolution as far as the teams are concerned. It requires a complete shift in culture for the men and women who were attached to their brands, some of which had been around for more than a hundred years. And it is also revolutionary in that the new organization has been designed for the long haul, giving the Group new impetus and making it more competitive for many years to come.

And yet the new “era” that lies before us is part of a continuum: over the past fifteen years we have actually been working towards the harmonization and optimization of the organization. So, for example, from time to time we’ve merged sub-subsidiaries with regional subsidiaries, exchanged territories between regional subsidiaries of the same brand and even sold businesses between subsidiaries of different brands. We’ve also set up joint regional companies to operate quarries and brought together the majority of our emulsion and asphalt mix businesses. And from 2005 onwards, we set up joint regional head offices covering the three brands, with pooled support services.

**Can you tell us about the new organization in more detail? Does it have an impact on the various profit centers?**

**T. G:** The Roads division is now structured around seven regional Colas subsidiaries, not forgetting of course Colas Major Projects. On January 1, 2013, the six Screg subsidiaries and three Sacer subsidiaries were brought under the brand name Colas. Each Colas subsidiary is managed by two people, a CEO and a Deputy Managing Director, who, in turn, are supported by regional managers. The streamlining of our legal and operational organization in no way calls into question the decentralized nature of our network operations, flexibility and reactivity remaining paramount. The individual profit centers continue to form the pillars of our organization. They are our roots, our core business.

**Will the product portfolio be rationalized? How will the new organization affect customers?**

**T. G:** Harmonizing our product portfolio is one of our important projects in 2013. The objective is to maintain a broad catalogue and exploit every technique and product to the full in order to meet the needs of all our customers. The only change our customers will notice is the fact that the Group will now be proposing a single solution for each contract rather than as many as three previously.

**What are you expecting of this new organization?**

**T. G:** The organization will be more effective and transparent for all concerned. In particular, it will help us to optimize material and industrial resources, making them more powerful and efficient. We will be more reactive and flexible and better placed to adjust to evolving market. Our position as market leader in France will be strengthened for the long term.
“Safety is a number one priority at Colas. Protecting the lives and the physical well-being of employees, neighbors, and users, on the job site and on the road, is what counts most for us. It is our main concern.”

This was the video message delivered on January 22 by Hervé Le Bouc as he launched the Group’s 2013 safety campaign. A variety of supports will be used throughout the year, including posters, newsletters, intranet and Internet messages, videos, etc.

Renewed impetus

For more than twenty years now, the Group has implemented a proactive prevention policy, supported on the ground by safety managers and safety officers. The policy is underpinned by a range of tools: awareness and training initiatives focusing on safety in general, as well as safe driving, toolbox safety talks, safety days, job site audits, equipment improvements, experience sharing, inter-entity safety challenges, etc. “Recently, we were beginning to feel that we’d reached a plateau in terms of results”, analyzes Hugues Decoudun, Colas’ Occupational

The Group’s 2013 safety campaign, launched in January by Hervé Le Bouc, is designed to give renewed impetus to the prevention policy by raising awareness among all the Group’s employees, from CEOs to skilled workers.
Prevention, Health and Work Environment Manager. “So we decided to break with the past and give renewed impetus to all the initiatives already in place, with a target of zero accidents once again.”

**Being the benchmark in the field**

To provide added momentum for the Group’s safety policy, the decision was made to conduct another awareness-raising initiative aimed at all Colas’ employees around the world. “Our ambition as a company is to be a reference, especially in Safety,” continues Hervé Le Bouc. “To do so, Safety has to be more than a priority; it has to become a habit. And in turn this habit must become a value, not just a subject of conversation, but a value we feel deep down inside ourselves, that governs our behavior, at all times, no matter where we are, a cornerstone of our corporate culture, a value for which there can be no compromises.”

**The Safety Attitude**

The entire campaign is underpinned by the motto “Safety Attitude”. The principle is hinged around two convictions: firstly, the need to involve each and every employee and, secondly, a fundamental change in everyone’s behavior in the work place. “First, I’m convinced that the best way to promote safety at Colas is to get everyone involved: me, you, all of us together”, adds Hervé Le Bouc. “Safety is a collective effort. Each employee must work tirelessly at all times to ensure everyone’s safety.”

All the Group’s employees without exception need to be exemplary, from the CEO to regional directors, branch managers, site supervisors, foremen and skilled workers. In order to get everyone thinking about their own role when it comes to safety, mirror posters have been sent out to all entities. “The risks associated with our activities have been clearly identified… as have the means to deal with them! Yet the human factor remains decisive: these mirror posters encourage all of us to think about the fundamental role played by our actions on job sites and on the road in terms of safety, both for ourselves and others”, explains Jean-Yves Bignon, Risk and Insurance Manager.

**Redefined tools**

The tools used to support the prevention policy have also been re-examined from every angle. For example, in order to establish a genuine safety culture in all entities and on all job sites, every workplace accident will now be analyzed at management level. Safety training programs for managers will be systematic and safety briefings will be overhauled. Other initiatives relate to the sharing of best practices with respect to health and safety at work, the implementation of inter-entity cross audits, monthly safety indicators, etc. Where road safety is concerned, the focus will be on the four main dangers at the wheel – alcohol and drugs, speed, phones and fatigue – as well as the benefits of eco-driving.

**Towards “zero accidents”**

“Safety must be a core Group value”, concludes Hervé Le Bouc. “We need to get back on track to “zero accidents” and feel the pride that comes with being a reference company, one that protects the most precious asset of all: life.”
The Group’s interns are invited to produce a short film about their experiences inside the company, as part of an original challenge, dubbed “THE Stagiaire”.

Each year, Colas hosts more than 2,000 student interns at its various sites in France and around the world. In 2012, the Group decided to give them a voice via “THE Stagiaire”, the first corporate film festival of its type. Their task was to produce a short film highlighting their day-to-day experiences inside the company. Users of websites such as www.thestagiaire-lefilm.fr, Facebook, Twitter and YouTube then vote for the best videos from a selection shortlisted by a jury made up of employees as well as movie and communication industry players. The five prizewinners each won a trip to one of the cult movie cities: Hollywood, Cannes, Berlin, Venice or Salt Lake City (p. 62). “Our aim is to make the Group more attractive to students in terms of image and creativity”, explains Cédric Mendes, head of recruitment at the Colas head office. ‘THE Stagiaire’ will now be an annual feature in the Colas calendar.” So how successful was the first one? According to a survey conducted by meilleures-entreprises.com, at the end of January 2013, Colas was ranked second among companies employing more than 5,000 people in terms of making its interns happy!
In early December 2012, Colas signed a three-year partnership agreement with the ESTP Engineering School in Paris. Two months before that, the Group signed a similar three-year agreement with the Mines Douai Engineering School, which chose Hervé Le Bouc as its sponsor for the class of 2015. Three further partnership agreements have also been secured with HEI, Mines d’Alès and INSA Lyon Engineering Schools. On the agenda: job site tours, technical lectures, corporate breakfasts focusing on specific professions, participation in company forums, etc. These partnerships illustrate Colas’ determination to implement a dynamic and targeted policy towards selected schools with a view to recruiting young talent. Following an analysis of employees recruited over the last ten years on the basis of three criteria (number of graduates recruited from each school, loyalty of new recruits, speed of career progression), ten target schools were identified by Colas with a view to forging partnerships. Such initiatives are ideal platforms for introducing students to construction sector job opportunities, meeting students and ultimately offering internships, the fast track to a career with the Group.
Thanks to WIZ, Colas’ new corporate social network, employees identified on the Group’s network will now be able to share their knowledge and experiences online.

Are there any employees out there seeking or wishing to give sound advice? Or maybe discuss documents and ideas concerning a joint project? In the spring, employees identified on the Group’s network will be able to share knowledge and experiences thanks to WIZ, Colas’ corporate social network. Users will each have a profile they can tailor using a system of key words: for example, employees will be able to specify the projects they are working on (or have worked on), their areas of expertise and issues they would be willing to be consulted about, etc. The more comprehensive the profile, the more beneficial the exchanges will be. “Communities” will replace the majority of existing collaborative spaces. WIZ users will be able to post documents, news, photo albums, etc. They will also be able to “follow” people of their choice and read their posts directly on their walls. They will receive suggestions concerning “communities” and colleagues and questions may be submitted to them. Finally, WIZ will provide access to a directory of the Group’s employees around the world.

Colas corporate social network: **WIZ is linking us**
The new Colas Mining, Oil & Gas-Services solution means Colas can now share its expertise in the construction and maintenance of the infrastructures required to operate mining sites.

New global offer: Colas Mining, Oil & Gas-Services

Supported by its expertise in the mining sector and its global network of local business units, the Group has launched a new solution called Colas Mining, Oil & Gas-Services. This global offering targets all mining, oil and gas industry players and covers every phase of a mining project, from the point at which a site is created, right through to its closure, i.e. construction and maintenance of the required road and airport infrastructures. Should they wish, customers also have access to a wealth of additional services in terms of civil engineering, buildings, waterproofing (for instance, Coletanche® membrane for retention tanks or landfill sites) and environmental protection (for example, Dust-A-Side, see article p.22). To develop this new range, a technical and commercial structure has been set up to support the Group’s entities. Made up of mining sector specialists, the structure is responsible for identifying projects at an upstream stage, supporting entities through the bidding process and monitoring the Health, Safety and Environment aspects of projects.
Manufactured and applied at lower temperatures than traditional mixes, EcoMat® warm mix used by the Group's North American companies generates energy savings and cuts fume emissions by between 80 and 85%.

Launched in 2008 in North America by Colas Solutions Inc., the EcoMat® warm mix range generates energy savings and significantly cuts fume emissions during the application process. In the manufacturing phase, the temperature required for traditional mixes is around 150°C. With the EcoMat® range this falls to 120°C due to injection into the binder of a very small quantity of pressurized water to create foam bitumen. It is this reduced manufacturing temperature that generates the energy savings. The 80 to 85% reduction in fumes released also improves working conditions for the teams applying the product on sites. In addition, the product’s enhanced workability means that it is quicker to apply. The other advantage is that it is more compatible with RAP* used in the composition of road surfacing solutions. In 2012, EcoMat® accounted for 26% of mixes used by the Group’s companies in the United States and 17% in Canada.

* Reclaimed Asphalt Pavement.
The first trials of foam bitumen warm mix asphalt with basalt aggregates in France were conducted at Colas Rhône-Alpes Auvergne’s new asphalt plant in Pardines. In November last year, a technique based on foam bitumen warm mix with basalt aggregates was tested in trials conducted in Pardines, in the Puy-de-Dôme region of central France, where Colas Rhône-Alpes Auvergne has a new asphalt plant. Already used in the United States and Canada with EcoMat® (read article p.54), the process had never previously been trialed with basalt-type aggregates. “These aggregates are particularly porous and we wanted to observe their behavior in contact with the foam bitumen”, explains François Chaignon, Technical Manager, Roads France. Three days of testing took place with and without RAP, for wearing courses and base courses. Difficult to conduct in the lab setting, the tests required the Colas’ Campus for Science and Techniques’ (CST) mobile laboratory. “The results matched our expectations for both manual and mechanical applications”, continues François Chaignon. “A summary report of the results will be finalized during the first quarter of 2013. The report should contribute to the development of foam bitumen warm mix in France.”
Colbifibre® is a new process designed for the treatment of worn and cracked road surfaces. This cold technique is quick to apply and allows roads to be re-opened to traffic just 30 minutes after work has been completed. Designed and developed by Colas Nord-Picardie’s Technical division, Colbifibre® is a new process aimed at road surfaces that have suffered significant wear and tear. Combining a fiber-filled surface dressing (Colfibre®) and fiber-filled microsurfacing, the technique is ideally suited to the requirements of numerous contracting clients. Budget constraints mean that roads that carry moderate or little traffic do not automatically qualify for preventive maintenance. “Colbifibre® compensates for maintenance delays and revives worn and cracked road surfaces, restoring them to the required level of service without the need for heavy intervention. Moreover, the associated cost is much reduced”, explains Christophe Priez, Colas Nord-Picardie’s Technical Manager. “And since it’s a cold process, the technique improves the carbon footprint of sites. It can be applied quickly and roads are re-opened to traffic just thirty minutes after work has been completed.” There are a number of other advantages, too: the process guarantees impermeability and reinforces skid resistance, while ensuring driver comfort and noise reduction. Colbifibre® was an award winner at the Sétra (Service for Technical Studies on Roads and Highways) Road Innovation competition in 2012.
To reduce traffic noise coming from the freeway that circles the City of Paris, Nanosoft® and Rugosoft® noise-reducing mixes are being tested on a 200-meter section.

Silent testing on the Paris ring road

Some 100,000 Parisians live alongside the 35-km long freeway that circles the French capital. To reduce traffic noise associated with the infrastructure, the City of Paris has joined forces with Bruitparif* to conduct an experiment near the Porte de Vincennes exit. The trial began back in June of last year, when Colas Ile-de-France Normandie treated a 200-meter section of the ring road in both directions with noise-reducing asphalt mix. Rugosoft® was used on the inner ring road while Nanosoft® was applied on the outer ring road. Thanks to the products’ particularly fine particle size – 0/6 mm and 0/4 mm respectively – the amount of noise generated by contact with vehicle tires is reduced. The readings taken by Bruitparif in September were conclusive, demonstrating a 9 decibel reduction on the median and a 5 decibel reduction next to the surrounding buildings. The initial results matched expectations. Further readings taken in February and followed by another set in June 2013 will test the long-term effectiveness of this new generation of noise-reducing mixes.

* Ile-de-France region Noise Observatory.
Designed by Colas Rail, this gantry makes it possible to lay six grass beds at a time during “green track” construction on tramway projects.

Colas Rail: innovative gantry for “green track”

For the first time ever, Colas Rail has used a new technique for creating a “green track” (sown with grass) on the future Besançon tramway project*. In this process, the track lies on top of pre-fabricated concrete beds, which will subsequently be filled with a 45-cm layer of topsoil rather than the traditional 12 cm layer. Colas Rail designed and had a specific gantry built with a capacity of 9 tons, enabling the teams to lay six grass beds at once, dramatically reducing the time necessary to complete the task. Fitted with eight guide wheels, the robot is controlled remotely and does not require anyone onboard. “The solution meets the needs of contracting clients and operators seeking to speed up and secure operations. Colas Rail may re-use this gantry for the Valenciennes tramway extension project due to begin in the second half of 2013”, says Patrick Montel, Colas Rail’s Urban Rail Track profit center.

*Colas Est teams are also involved in the project, due for completion in October 2013.
Colas’ Moroccan subsidiary has built a brand new bitumen terminal that boasts a storage capacity of 9,000 tons in the port of Mohammmedia, near Casablanca.

The Group’s network of bitumen storage plants expanded in 2012 with the construction of a terminal in the port of Mohammmedia, near Casablanca. Work on the facility began in 2011 and took six months to complete. The plant comprises three electrically-heated tanks. It is in these tanks that bitumen is stored – the total storage capacity is 9,000 tons – at a temperature of 150°C. Bitumen is shipped into the port by tanker and is piped directly from the quayside to the tanks via a 275-meter pipeline. Three grades of bitumen are stored for use in a broad variety of environments.

The creation of this new terminal fits squarely with Colas Morocco’s strategy aimed at more effectively securing the supply of bitumen for use in its asphalt and emulsion plants. Since the facility was brought into service in June 2012, 4,500 tons of bitumen have been shipped in every month.
Conferences, tours, award ceremonies, culture... Some images of the Group’s events in France and around the world.

COLAS FOUNDATION EXHIBITION
In 2012, twenty new paintings on the theme of the Road were added to the Colas Foundation collection. They were unveiled at an exhibition entitled “20 years on the Road of Art” held at the Paris School of Fine Arts. Shown here: the artists selected in 2012.
A BLAZE OF COLOR!
Colas Hungaria organized a drawing competition for employees’ children allowing them to show off their creativity with road building as the chosen theme.

SCIENTIFIC MISSION IN MADAGASCAR
Colas Madagascar supported a team of scientists tasked with conducting the first complete survey of the Namoroka National Park. The researchers were taken to the site, in the northwest of the island, in the subsidiary’s 500-ton barge.
20th SKILLED WORKERS GUILD INTAKE

In November last year, the 74 new members of Colas' Skilled Workers Guild were received at head office in Boulogne by Philippe Decamin, Deputy Managing Director, Roads France.

“THE STAGIAIRE”: GOLDEN ROADS AWARDS

Five of the Group’s interns were singled out for awards by a jury of professionals and internet users for short films they had made for the “THE Stagiaire” festival organized by Colas.
FESTIVAL FIMBACTE: FOUR AWARDS
Colas won two gold awards at the 17th Fimbacte Festival, one for its recruitment campaign and one for the film on crushing risks. Two prizes were also awarded for “THE Stagiaire”.

2012 COMMUNICATION ET ENTREPRISE AWARD
“THE Stagiaire” won the intern category award at the 26th Communication et Entreprise awards ceremony, held in November. On right: Cédric Mendes, Head of Recruitment at Colas Head Office.
RESPONSIBLE CHEMISTRY
The French Society of Chemistry awarded Colas for its bioflux Vegelflux® designed by the Campus for Science and Techniques, in collaboration with Valagro. Among those present: Ségolène Royal, president of the Poitou-Charentes Region and former French presidential candidate.

SUSTAINABLE INTEGRATION
In July last year, Colas and the Adecco Insertion network signed a partnership agreement to more effectively address the social component of French public contracts and promote sustainable integration.
CLEAN, WELL ORGANIZED JOBSITES
The Mastic Asphalt unit at Colas Ile-de-France Normandie was awarded a prize by the City of Paris for its clean, well-organized jobsites, in the presence of Bruno Chambon, as acting President of the regional Greater Paris Area public works federation (see page 4).

“ON THE ROAD TO SCHOOL” IN THE USA
An agreement was signed with The Detroit Partnership in mid-December, as part of the Colas Life corporate solidarity program. Witnessing the event were John Krispin, Regional Manager of Barrett Industries, and volunteer students from the University of Michigan. The objective: to provide extra academic support for children from Detroit’s underprivileged districts.
The Société de la Raffinerie de Dunkerque has celebrated its 80th birthday. In 2012, the Dunkirk refinery operator took a significant step forward in terms of energy efficiency, adopting natural gas to power its furnaces.

VOCATIONAL QUALIFICATION CERTIFICATES
In December, sixteen of the Group’s employees received their vocational qualification certificates from Usirf, the French road industry association, in the presence of Hervé Le Bouc.
USIRF: ROAD SAFETY COMPETITION
In December, Usirf awarded Screg Ile-de-France Normandie (now Colas IDFN) first prize in the “Global prevention management” category of the 2012 road safety competition. Pictured left to right: Jean-Louis Marchand (Usirf), Patrick Meney and Joël Havard (Colas IDFN).

42nd WORLDSKILLS EVENT
Two young apprentices from Colas Sud-Ouest, Jérémie Lagarde and Thomas Boue, won the gold medal in the “Road Builders” category at the French national finals.
To mark its 20th anniversary, the Colas Foundation exhibited twenty emblematic paintings from its collection and its twenty most recent acquisitions at the Paris School of Fine Arts. Here: Speedy Graphito, "L’autoroute de la vie", 1998.
Colas Circle
Elisabeth Couturier
“Contemporary art draws up a whole new set of rules”

The road through the eyes of…
Claude Lelouch
“Roads are a perfect metaphor for life”

Colas on Stage
Akram Khan
DESH, back to his roots.

Colas Foundation
Paris School of Fine Arts
“20 years on the Road to Art”

LiFang
“A crossroads is a place where everything converges and everything is possible”
Enigmatic, indecipherable, impenetrable: contemporary art always manages to provoke a reaction. How can this art be defined? How can we come to grips with it? Why is it so disturbing? Elisabeth Couturier tried to provide answers to these and other questions at the Colas Circle organized in October 2012.

How can contemporary art be defined? 
Elisabeth Couturier: The term “contemporary art” is now part of everyday language. Often employed to denote a lack of understanding when faced with images and objects that upset visual codes, the term has almost become a brand, a label, a rag-bag of sorts. Contemporary art encompasses a wide body of works. These works are very different yet are the product of a similar mindset; one that invents practices, explores new territories and reinvents tried and tested formulas. It hasn’t sprung up out of thin air but is the result of research and experiments conducted by artists since the end of the 19th century. I should also add here that the art produced today isn’t necessarily “contemporary” if it doesn’t claim to have its roots in these innovations.

When did it first emerge? 
E. C.: Contemporary art emerged in the 1960s when artists began challenging existing practices, against a backdrop of revolution in 1968. Every time the world
around us changes, we ask questions about art, its function, its purpose, etc. Weary of the traditional art circuit – studio, gallery, museum – artists began by seeking to create works that were ephemeral and experimental, far-removed from the notions of museums and speculation. Hence it is amusing today when we see collectors and museums doing everything they can to get hold of these very works. It was during this period that body art, fine art photography and land art, among others, emerged. What was important was the idea behind the work rather than the finished work itself. The "concept" and "work in progress" were to become the two pillars of contemporary art. During the 1980s and 1990s, artists used new media and new materials including video, cinema and photography. They invented new ways of producing art (hybridization, recycling, transformation, etc.) and drew inspiration from other disciplines (dance, theater, fashion, social sciences, etc.). In the 2000s, globalization infiltrated the art world and promoted the emergence of contemporary art in China, Africa, India, etc. The Paris - Berlin - New York axis no longer exists. What we're witnessing is an unprecedented geographic expansion.

What does contemporary art look like?
E. C.: Everything and its opposite. Contemporary art is the king of metamorphosis and is presented in an infinite variety of forms. A modern-day contemporary art exhibition resembles an enormous bazaar: pyramids of screens, cardboard boxes, light bulb curtains, etc. It may also resemble a curious fashion store where a hat becomes a pullover and then a dress, or a zoo displaying strange animal species (tattooed pigs, a giant spider or a fox with a dog’s head). Alternatively we may be immersed in an urban space that has been revisited with advertisements, crushed cars, bronze trees, slogans, words, dates, upside-down portraits, a remake of a masterpiece from Hollywood, a man with a tomato for a head, etc. With each work, we can come across the expected, but above all… the unexpected! So we have to set aside our preconceptions and allow ourselves to be surprised, shocked and unsettled.

On that point, why do we find contemporary art so unsettling?
E. C.: Largely because it challenges traditional genres. Painting and sculpture are pushed aside by installations, assemblies, environments, multimedia art, video art, fine art photography, etc. The notions of beauty and harmony, of style, aesthetics and know-how no longer operate. Contemporary artists draw up a whole new set of rules. They seek any means of creating an image and let their imaginations run wild, particularly with new technologies and new inventions. And the other important point to note is this: with contemporary art, we become an integral part of the work, moving away from the status of passive observer to that of active player.

Can contemporary art really be defined as art?
E. C.: Yes. Despite its rebellious, experimental and provocative spirit, contemporary art is integral to art history. Let's take, for example, a work by Arnaud Labelle-Rojoux: a paper collage depicting two steaks on stems displayed in a vase, below which is written: “Still life with two raw steaks.” This work highlights the idea of art merging with life. The artist is playing with words and appearances. He is scoffing at artistic conventions and genres to redefine the role of art and the notion of beauty.

What's the point of it all?
E. C.: Contemporary art is about experiment and research. It is constantly surprising us. It teaches us cross-functionality and gives us the chance to share physical, sensorial and emotional experiences. We enter sensitive, unexplored, unsettling and troubling areas. The incredible diversity of forms, range of fields explored and ingenuity of proportions together with the humor, irony and word plays incorporated into contemporary art really get the gray matter working. Looking at contemporary art stimulates ideas.

How should we approach contemporary art?
E. C.: Understanding contemporary art is nothing to do with intelligence or level of education. It’s all about initiation. You need to have the keys and reference points required to explore these unfamiliar territories unfettered. The plethora of museums and art centers dedicated to contemporary art mean that it is now much easier for people to enjoy it.

**Claude Lelouch**

“Roads are a perfect metaphor for life”

The film *Un homme et une femme* (“A Man and a Woman”), winner of the 1966 Palme d’or award at the Cannes Film Festival, thrust Claude Lelouch into the movie spotlight. In his world, roads are omnipresent. The road is the link that unites, separates and then reunites his characters. Ten years later, for the movie *C’était un rendez-vous*, Claude Lelouch crossed Paris at 5 o’clock in the morning, traveling at top speed with a camera fixed to the front of his car filming nothing but…the road.

It didn’t take me long to realize that the road, and the car in particular, is where I love to be when I’m feeling both good and bad. It’s an incredible source of freedom and, above all, it’s where I do my best writing. Alone in my car, I’ve come to understand that it’s my favorite office. I’ve got a speech-controlled microphone. I can travel thousands of miles when I need to write. I get in my car and drive...
off without any specific destination in mind. Fate has always had a lot of imagination as far as I’m concerned and I let fate take me where it wants to take me. I can concentrate in my car. I have complete clarity of thought and it allows me to see others without being bothered by them. Behind the windshield, I go out for a stroll. I’m right there at the races.

I’m creative in my car. It was there that I wrote “A Man and a Woman”. I’d just done a movie that was a complete disaster and I was in total despair. I got into my car and drove off. I didn’t know where I was headed. I arrived in Deauville in the early hours and slept a little. And then, at 6 a.m., the sun woke me up and I saw a woman walking on the beach with her children. Fate, the ruler of my life. I wrote “Les Uns et les Autres” during a return trip to Rome. I’m creative in my car. When you write a story, you need four or five hours alone. It gives you a chance to see the images and hear the music in your head.

Traveling is what I love most after cinema. I love to stop anywhere without knowing where I’m going beforehand. It gives me a sense of freedom, of protection. Today’s rules mean it’s not nearly as comfortable. Before, I drove at my own pace, fast or slow depending on how I felt. It’s my favorite house, my favorite office. It’s where I hold seminars with myself. When I want to escape something I love to go off and leave fate to decide my destination. When I’m creating something fate decides everything. And fate has always proved a winner with me.

The car is a great place for actors to talk to each other. It’s easier to talk when you’re not looking at each other; you’re watching the road, you feel braver. You can say anything you like. It’s extraordinary the extent to which people say incredible, terrible things to each other in the car. There are car scenes in all my movies. It’s where break ups happen. Cars are perfect for break ups. You’ve got the excuse of watching the road. I use car scenes because it’s incredibly easy to talk in the car.

Movement is vital. Being at a standstill is death. My entire life revolves around movement.

The short film “C’était un rendez-vous” took me across Paris and remains one of the highlights of my career in terms of sensations. We took risks, I was in the shoes of a guy who is late and takes risks. There were no special effects, it wasn’t really cinema.

In the movie “Partir, revenir”, all the opening sequences take place on a road. I think of life as a journey or a race and I think this is true even for people who aren’t particularly competitive.

The road is a perfect metaphor for life. It’s when out on the road that I feel closest to myself.

Cars are like horses in Westerns. Travel is essential for someone like me who can’t sit still.

I also love all those places where you fill up with gas, where you see Rolls Royces sitting alongside old clunkers, the rich rubbing shoulders with the poor. There is an incredible democracy, a mixture. You’d never see these people in any other circumstances. These highway rest areas are extraordinarily convivial places where people meet. In the film “Crossed tracks”, a guy dumps his wife while he’s getting some gas. She goes to use the phone, he fills up and leaves. They are little villages. Anything can happen. They’re magical too. We enter them quickly and leave quickly. I love this environment where people come together, mix… nothing is planned. It’s quite a spectacle. Before GPS, we stopped to ask people the way en route and we met some incredible people.

Travel opens the door to adventure.
Sponsored by Colas, the British-Bangladeshi choreographer and dancer Akram Khan* returns to the stage with new production: DESH, which means “homeland” in Bengali.

*In July 2012, Akram Khan and his company took part in the opening ceremony of the London Olympics.
Arriving a lantern, Akram Khan enters stage alone.

For 80 minutes, the British-Bangladeshi choreographer and dancer explores his parents' homeland: Bangladesh. His new choreography, called DESH, is a back-to-roots story. This highly personal solo performance is designed to allow people to discover the various faces of a land and a nation that come to life in the body of one man seeking to find a balance in an unstable world. Combining traditional Indian (kathak) and contemporary dance, Akram Khan pirouettes, runs, climbs, flies through the air... actor and storyteller by turns. Hanging onto his story and movements, spectators dream to the rhythm of the legends, vibrate to the sounds of the street and events and even laugh at the dancer's tricks. A subtle marriage between wonder and reality.

A bridge between two worlds

After Vertical Road, DESH is the second choreography to be sponsored by Colas as part of its partnership with the Akram Khan's company. As Hervé Le Bouc reminds us, "we have been travelling the road together since 2008. First of all we had the time of mutual discovery and understanding. We needed to get off the well-beaten tracks traced by our professions. The desire for excellence, a forward-thinking focus, the humility, courage and capacity to go beyond the limits and confront the obstacles created by our bodies and matter, pride in what we have created, building strong, solid bridges between people. More than just another corporate sponsorship, this partnership is a genuine joint venture."

Communication vector

Presented for the first time in Leicester, England, in September 2011, DESH received the Olivier Award for Best New Dance Production 2012. For this piece, Akram Khan joined forces with Tim Yip, who won an Oscar for the movie Crouching Tiger Hidden Dragon, and Jocelyn Pook, who wrote the score for Stanley Kubrick's Eyes Wide Shut. A dozen or so performances were given at the Théâtre de la Ville in Paris at the end of 2012, followed by a world tour. "This form of sponsorship is an excellent internal and external communication vector", explains Hervé Le Bouc. "In addition to the interaction generated between the company and the artists, this partnership offers us an original corporate image that sets us apart, thereby helping to make the Group more attractive." In 2013, Colas will be sponsoring iTMOi ("In the Mind of Igor"), Akram Khan's new choreography.
The Colas Foundation celebrated its twentieth anniversary in 2012. To mark the occasion, twenty emblematic paintings from its collection and its twenty most recent acquisitions were exhibited at the Paris School of Fine Arts.
Two worlds come together. Last September, the Colas Foundation decided to do something a bit different to mark its anniversary. Twenty emblematic works from its collection were removed from the Group’s offices and reception areas, along with twenty further works acquired in 2012. Their destination was the Paris School of Fine Arts, in the heart of the city’s Saint-Germain-des-Prés district. Beneath the glass courtyard of the Palais des études, large yellow containers were used to showcase the works at an “ephemeral” exhibition. The Colas Foundation opted to bring its world into the elegant surroundings of the Beaux-Arts, turning this part of the school into something resembling a job site. The contrast was stark. Called “20 years on the Road to Art”, the exhibition was designed by Philippe Piguet, art critic and curator.

300 “Roads of the imagination”

On the basis of the principle of commissioned works, in the true tradition of sponsorship and on the theme of the road — reflecting the company’s core business — the Colas Foundation has brought together some three hundred works in the space of twenty years. Three hundred “Roads of the imaginary” produced by three hundred artists selected by a jury made up of Colas employees and art world players. “It seemed quite natural for a company established in 1929 on the basis of a patented invention relating to bitumen emulsion to decide to promote contemporary painting by putting together a collection on the theme of roads”, observes Philippe Piguet.

Professionalization and awareness

“The majority of the Foundation’s choices have proved to be extremely judicious over the course of time”, underlines Hervé Le Bouc. “In the collection we have some beautiful works commissioned from artists who were unknown at the time and who have since gone on to make a name for themselves. We wanted to mark the twentieth anniversary by holding an exhibition at the Paris School of Fine Arts. Expertise and professionalization will continue to govern our approach.” Series of lectures have been organized to raise awareness among the Group’s employees and help them better understand contemporary art. The idea is to pave the way for even greater links between art and roads!

> KEY FIGURES

20 years of collection

300 prize-winning artists

40 different nationalities
LiFang

“A crossroads is a place where everything converges and everything is possible”

What do you think about the principle of commissioned works and the road theme?

LiFang: It was my first commission and I have to admit that I first viewed the principle as a constraint. But in fact it was quite the reverse! All my works are oil paintings and I’m familiar with the theme of Roads. In 2006, I began a series of canvases entitled “Passersby”, depicting people walking in big cities like Paris, Shanghai and New York. And roads are always present: a sidewalk, signs or even just a section of roadway.

Why did you choose to paint a crossroads?

LiFang: This is a complex section of road, both physically and symbolically. A crossroads marks a point where several roads intersect and start. But it’s also a place where everything converges and everything is possible.

Where did you draw your inspiration from?

LiFang: Big cities inspire me. I observed many crossroads in Paris before choosing place de la Bastille. On May 1, a public holiday in France, I went there to immerse myself in the place. There weren’t any cars, but many passersby… everywhere I looked. Inspiration was easy to find that day because all the conditions were right: I was looking for matter, attitudes, lots of color… and I have to say that the Parisians that day in early May were particularly colorful!

Acknowledgements
LiFang
“Carrefour”
2012