After forty sketches
Paris, 2005

Carlos Narino

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ROUTES
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site-seeing

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or Colas, 2005 will go down as one of our more remarkable years. Revenue and profit will both enjoy substantial increases.

At the start of this new year, I feel justly proud when I consider the amount of work that has been accomplished within the Group.

In every line of business, in all four corners of the world, the men and women of Colas have all contributed to this year's performance. With such great enthusiasm, it is they who have lifted the company to new heights. I would like to warmly congratulate them!

Above and beyond the figures for the year 2005, our feeling of pride grows even stronger if we take a step back and look at the progress we have been making for over a decade in the areas of quality, safety and business ethics.

Yet another success is the spectacular leap in technical know-how made by the Group, which thanks to our research and development teams and their talent for innovation, is contributing to improved environmental conservation.

Lastly, the major training and recruitment drives that have been deployed in anticipation of further Group development and demographic evolution should be acknowledged, even though they need to be further amplified.

Thus is the route along which the vision of the Colas road takes shape – gradually and with humility, a road that is exemplary, harmonious, confident, a source of economic and cultural exchange, one that is working constantly to further the cause of people and freedom.

For now, it is our job to ensure that in 2006 the Group continues to progress in every area and in all of its businesses, just as it has in 2005.

I take this opportunity to wish you and your loved ones an excellent New Year in 2006.
Highway 302, which runs through the town of Illarsaz in the Swiss canton of Valais, traverses beautiful scenery, which was, however, somewhat marred by the poor state of the road. Last September teams from the Colas Swiss subsidiary Sarer, based in Crissier, began work. In just 10 days, Highway 302 had been given a facelift and the landscape looked magnificent. Work for a total amount of €600,000 included, among other items, application of 5,000 metric tons of asphalt mix. In addition, part of the infrastructure was recycled and stabilized with the Ecorecycleur treatment unit brought in by Colas Est. The use of this environmentally-friendly technique was highly satisfactory to the customer.

From the United States to New Caledonia via France and Thailand…
a rapid trip around the world in words and pictures to see Colas jobsites, work in progress and finished projects.
Vegecol is perfectly suited for avenues and paths in parks and gardens as can be seen from a contract carried out by Colas IDF/N in Paris’ famous Luxembourg Gardens. In comparison with the stabilized sand frequently used for this type of application, Vegecol has the advantage of being more stable during the winter months and less dusty during summer, better able to resist occasional traffic, more durable and less expensive. In the Paris area, a number of avenues in the Bois de Boulogne and the Bois de Vincennes parks have also been treated.
Gilles Villeneuve Circuit: Sintra in pole position!

The Gilles Villeneuve racing circuit, located on île-Notre-Dame in Montreal, every year plays host to the Canadian Formula 1 Grand Prix. The event is eagerly awaited by Sintra Inc., which for the fourth consecutive year has won a contract to totally refurbish the wearing course of the 4,361-meter race track. The Sintra teams had a month to carry out the work. The completion date was actually bettered, as the work was completed four days in advance of the schedule despite the somewhat difficult weather conditions caused by the seasonal thaw. Of course, Sintra had put in place major resources to satisfy the requirements of the FIA in terms of both schedule and surface quality. Large teams were deployed and production plant doubled. The surface is the same as that traditionally used on highways for sections with heavy traffic. It delivers resistance to wear, abrasion and polishing to a degree higher than that normally required for a Formula 1 circuit. Praised by both drivers and constructors alike for its evenness, the top-notch surface saw McLaren’s Kimi Räikkönen take the chequered flag.
Safety first as Spac lays pipelines for Total

Spac Grands Travaux and Suburbaine Port-de-Bouc grouped with contractor DLE to lay six pipelines between the Provence/La Mède refinery, located near the Etang de Berre lake and the Total storage facility at Lavera. A few figures give an idea of the scale of the contract: 43.5 km of tubes, 80,000 cum. of excavations, 45,000 cum. of sand for the cut-and-fill, 100,000 25-kg sandbags to stabilize the pipelines on steep ground and 72 km of cables and casings. To carry out the trenches (with their exceptionally large 7-meter width) and extract 90,000 cum. of limestone, the teams used trenching machines, excavators fitted with hydraulic rock-breakers and a rock-miner. As the work took place in a forested area, an industrial zone and around the port of Marseille, a particularly stringent safety plan was rolled out. A safety committee was set up which met on a monthly basis, dysfunctions were monitored from day-to-day and firefighters were stationed on the high-risk areas of the site. To eliminate any risk of wild fire, welding operations were suspended during the summer.
With its low-temperature Néophalte® Basse Température mastic asphalt, the Smac Châteaufort agency won a contract to restore a parking garage in a French Post Office sorting center in Paris. This process made it possible to eliminate the emission of fumes normally associated with mastic asphalt application, a great advantage in a confined space. The low-temperature mastic asphalt was perfectly suited to the condition of the old concrete structure, which had poor surface cohesion. It also made it possible to meet customer requirements in terms of scheduling, reliability and surface durability. Teams applied the product over three levels of the parking garage (8,900 sq.m.), without having to worry about installing smoke evacuation equipment even though the building was fully occupied. The French Post Office and its employees appreciated the convenience delivered by low-temperature Néophalte® Basse Température, as did the Smac teams!

Only nine days were required by the Colas Nord-Picardie Somme/Aisne agency to apply 130,000 sq.m. of surface treatment to several local roads in the Somme department. Some 15 employees were on the job for this campaign which required the use of two sprayers (one of which was fitted with special Colfibre equipment), seven trucks fitted with chip spreaders and three pneumatic rollers. The Colfibre equipment could not be extended or...
adjusted laterally so spraying sequences for the bands had to be thought out beforehand and then rigorously adhered to during application. Thanks to major preparatory work carried out upstream which fully involved the technical and design service of Colas Nord-Picardie along with the competence and motivation of the skilled workers who applied the chip seal, the Colfibre campaign was a resounding success.

FRANCE  All together on the Toulouse-Blagnac runway

The Toulouse agencies of the three regional road subsidiaries of the Group took turns on the airport at Toulouse-Blagnac, where they successfully completed three different projects. Colas Midi-Méditerranée restored the wearing course of runway number two using five finishers working in parallel to apply 30-meter wide bands – as wide as the runway itself – in a single pass. Sacer Atlantique rebuilt and reinforced runway number 1 under very exacting site delineation conditions. Two marshals directed vehicle traffic on the runway on which air traffic had been maintained. In addition, together with the contractor, Malet, Screg Sud-Ouest constructed an asphalt shoulder on the Whisky taxiway to facilitate Airbus A380 maneuvers – with the old grass embankment there was a risk that the reverse-thrust jets of the giant aircraft might "vacuum" up gravel.
SES has carried out a major contract on the A 7 and A 46 motorways involving 510 sq.m. of direction signs, 56 prisms (managed by the Mercure software developed by SES) and two double gantries of 34 and 38 meters respectively which each contain 11 metric tons of aluminum! This constitutes a first for SES, which had to perform a dry-run assembly at its Tours facility before giving manufacturing approval for the gantries.
Working on an airport requires compliance with elementary rules of safety, something that the Sacer teams from the Pau agency are now very familiar with. Carried out in a grouping together with two other partners and over a period of little more than three months, the contract for the Pau airport taxiway turned out to be particularly instructive in this respect. In addition to application of a 45,000 sq.m. wearing course, work included excavations, drainage and the electrical networks required to power the lights along the taxiway. Because air traffic was maintained, the teams, after training from the Civil Aviation service, had to comply strictly with safety rules, particularly concerning the distances that had to be kept from the landing strip. Special training was also given to the employees in charge of maintaining radio contact with the control tower. After a relocated threshold had been put in place with the help of air traffic control, a high point of the contract was the link up of the new taxiway with the existing landing strip.
The growth of the Moroccan road signs market and increasing numbers of urban improvement projects have led Colas Morocco to set up a new company, Urbis Signalétique. With a plant for manufacturing signs and two road marking machines, Urbis Signalétique offers Colas Morocco subsidiaries consultancy, propositions and expertise in the areas of road equipment and urban techniques. For example, the company has surfaced the Forbes Square in Tangier using StreetPrint® technology, and applied the daytime-visible markings of the Tétouan and Essaouira airports. Since its start-up, Urbis Signalétique has manufactured and sold over 2,000 signs, laid over 10,000 sq.m. of StreetPrint®, applied 17,000 sq.m. of airport markings and almost 40,000 meters of road markings on highways.

**MOROCCO**

**Urbis Signalétique**

shows the way

The Place du Pâtis in Montargis is an excellent showcase for the expertise of the Colas Centre-Ouest Meunier agency. Its teams have surfaced the road, laid curbs and paving, landscaped gardens and have scrupulously respected the architect’s design. Among other things, this called for perfect alignment between the black granite strips used as decorative pattern for the white
The delicate task required a surveyor to work alongside the site supervisor. This €3.5 million contract won an accolade in the national "Reporter Travaux Publics" operation organized by the French national public works federation, the FNTP.

The Place du Pâtis in Montargis will be fondly remembered by the Meunier teams, who in 2006 will celebrate the company’s 100th anniversary!

FRANCE Modular road surface for the Saint-Exupéry freight platform

In less than three weeks, the Lyon agency of Sacer Sud-Est completed a freight storage platform of 235,000 square meters at the Lyon Saint-Exupéry airport. Sacer Sud-Est was awarded the contract on the basis of a modular road surface technical alternative. The surface makes it possible to subsequently strengthen the roadway depending on the amount of traffic and the conditions of use. 5,000 metric tons of untreated 0/31.5 aggregates and 4,500 metric tons of high modulus asphalt concrete were applied. Aggregates were provided by the Perrier quarry at Saint-Exupéry and the asphalt by the Mions plant. The various layers making up the roadway were carried out using laser-guided graders. Asphalt mix application required the use of finishers working alongside. Barely one month after work was completed, the storage platform was receiving crates of Beaujolais Nouveau ready to be shipped to the four corners of the world!
Caltrans runs maintenance contracts for Californian highways and is very interested in all noise-reduction techniques. It has specifically sought out solutions among processes in use in Europe. Colas Inc. and its subsidiary, Sully-Miller, made a presentation of Colsoft in the form of a test site last May to demonstrate the noise-reducing properties of the surfacing. The Sully-Miller laboratory worked on the mix design to make it compatible with both local aggregates and the rubber powder from old tires used in the state of California. Helped by the high number of cars, and thus the high number of tires to be recycled, this technique is in widespread use in the United States for the modification of asphalt. Colas’ Campus for Science and Techniques tested the powder to ensure its compliance with Colsoft. In one day 500 tons were applied on a stretch of Los Angeles highway. The results were conclusive: a reduction in noise levels of roughly 4 dB(A) over traditional surfacing was registered. The successful trial is expected to attract many other Californian customers.
Colas New Caledonia has won a contract for the structural work and main services of the Ducos center, consisting of an eleven-storey office building and fourteen commercial properties at street level. The working drawings for the reinforced concrete were produced by the engineering offices of GTOI in Reunion Island. To ensure handover would be on schedule, numerous prefabricated elements were used and a certain number of construction techniques simplified.

NEW CALEDONIA

The Ducos Center: on schedule!
Since May, residents of Auguste-Chollat Street in Lyon have been able to sleep quietly again. The French national railway company, SNCF, concerned about the level of noise generated by rail traffic, contracted to BRS (Somaro) and RTS (Seco-Rail) for the construction of a noise-reducing barrier along the rail line that borders the road. The barrier, 150 m long and 5 m high, is composed of concrete panels covered on the railway side with a sound-absorbent cladding made of grooved woodcrete. The panels are mounted on galvanized, thermo-lacquered rails placed 4 m apart and secured by plates to reinforced-concrete pillars set on two rows of micro-piles. RTS was required to drill 110 holes, install 900 m of reinforcement and inject 40,000 liters of slurry. BRS was in charge of excavation, metal reinforcements, pouring the pillars and assembling the screen. The woodcrete panels, each of which weighed 4 metric tons, were hoisted in place using a 35-metric ton mobile crane. The site, which was subject to delays arising from both the urban environment and rail traffic, took four months to complete.
A good performance from Colas Centre-Ouest on Highway A 10 at Châtellerault where 15 kilometers of road were surfaced with asphalt mix made with a high percentage (40% to 50%) of recycled asphalt pavement (RAP). Working under the supervision of the Châtellerault profit center, a number of teams got together to complete the project. The mixes were designed by the LTR laboratory, which also provided support during the site work. Surface planing was carried out by Erco and the asphalt concrete was manufactured by a mobile plant from Colas Nord-Picardie whose production capacity for 50% RAP is 300 metric tons/hour. The special Colflex binder products were produced by the Tours plant and the various emulsions used, by Poitou Emulsions. Asphalt concrete application teams were sent in by Colas profit centers from Fontenay-le-Comte, Vhiers, Tours and Châtellerault. Road paints and safety barriers were applied and installed by teams from Vialis and Somaro.
The town of Chamonix can now boast a truly beautiful square. The 4,000 sq.m. surface area of the Mont-Blanc square, which links the center of the town to the ski slopes and is home to the open-air market, was recently renovated by the Colas Bonneville profit center. Teams from the Passy sector constructed a traffic circle and installed removable street furniture made of exotic timber on top of an underground parking lot. They also applied a combined surface alternating Vosges granite slabs and sand-blasted asphalt concrete using white gravel. The contracts, worth over €2 million, required twelve people for one full year. Teams had to deal with tough weather conditions, damage caused by snowplows, and traffic that had to rapidly be restored on the traffic circle. But in the end, it was all worthwhile!
For the first time in France, the Pardak® 90 system was used on a mastic asphalt waterproofing contract worked by Novasphalte. Smac, which markets the system under licence in France, covered 23,000 sq.m. of a roof-top parking lot at the Domus shopping center (entirely dedicated to products for the home) near Rosny-sous-Bois, in the west of Paris. Pardak® 90 is a highly stable surface that meets the most demanding specifications – in this case light truck traffic on a waterproof surface which delivers excellent heat insulation.

**The Domus roof in Pardak® 90**

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The challenge was a simple one - restoring the beauty of the fort of Monflanquin, a well-known tourist attraction in Gascony, before the tourist season began. Teams from the Agen Screg Sud-Ouest profit center accomplished the feat in less than three months. The project called for both restoration of the central square and the outer road; a full program for the teams who were extremely sensitive to both the beauty of the surroundings and the problems arising from the confined spaces involved. The success of the contract was highly dependent on the quality of working relationships with the subcontractors, strict compliance with schedules and the ability to keep up friendly contact with neighborhood shop-keepers whose businesses were partially affected by the construction work. Application of 5,000 sq.m. of 0/10 asphalt mix and 3,500 sq.m. of deactivated concrete took place without too much nuisance for residents, mainly due to good control of safety and traffic in the narrow streets of Monflanquin.

FRANCE

Back to beauty

DENMARK

On track with Copenhagen’s metro!

The third phase of the construction of the Copenhagen Metro is well under way. Launched last spring, the phase of structural work for this new five-kilometer section linking the center of the city to the airport should normally be completed at the end of 2005. Four new stations and a variety of structures are currently being constructed. The link-up with the existing network will begin in 2006.
The Thai subsidiary Thai Slurry Seal Co. Ltd has constructed roads around the school in the village of Baan Nam Khem, 760 km south of Bangkok. The school was completely destroyed by the tsunami on December 26, 2004. Three French companies, Bouygues Thailand, Carrefour and EDF, decided to rebuild it. Thai Slurry Seal Co. Ltd coordinated the work with Bouygues Thailand, the main contractor for the reconstruction. The company chose a local subcontractor to carry out the work. Other Group subsidiaries made contributions, such as the Thai Crushing Plant quarry at Krabi, which donated the aggregates, and Surat Bitumen (Tipco Asphalt), which did the same for the bitumen. By May, the start of the school term, the first building was handed over. Today the entire school is operational. The site was officially inaugurated on October 26 in the presence of her Royal Highness Princess Maha Chakri Sirindhorn, daughter of His Majesty King Bhumibol Adulyadej.
en route
With activities ranging from new construction to the renovation of buildings, from road infrastructures to the development of industrial zones and from civil engineering to electrification, GTOI (Géants Travaux de l'Océan Indien), which numbers more than 1,300 employees, is a powerful player in the economic development of Reunion Island.
A NEW BRIDGE
GTDI teams are hard at work in the region of the Hermitage ravine, where they are building a bridge for the Tamarind Road.
With its strong demographic development and mountainous landscape, the French overseas department of Reunion Island numbers more than 300,000 passenger cars in addition to tractors, trucks, bicycles, etc., all of which rub fenders on the same lanes. At peak hours, it takes almost three hours to travel the barely ninety kilometer stretch along the coast separating the north from the south of the island.

In order to meet demand, the Regional Council of Reunion Island took the decision to build an upland route to be called the “Tamarind Road”. This new link aims at relieving traffic congestion between Saint-Paul and L’Etang-Salé-les-Bains. Thirty-four kilometers of road, six EESCN (earthworks, engineering structures, communications networks) contracts and eighteen SSW (special structural works) contracts, three viaducts, three exceptional structures, two cut and cover tunnels, an underground tunnel - all in all, a grand total of €850 million will be invested here in what is being called “the building contract of the century”. The regional authority is financing the project to the tune of €475 million, with the balance coming from European funds. In 2004, some €150 million was released for land acquisitions, feasibility studies and the launch of this titanic building site. At the end of the second half of 2005, bids were awarded for a total of €477 million.

The road will be handed over along its entire length in 2009.

GTOI, the leading Reunion Island construction and public works business, clearly had to be present on this project. Creation, innovation, audacity: these three key words ensured it of an active role in the Tamarind Road contract.

Partnerships with other companies

GTOI joined with other companies to carry out the project. Partners since 2001 mainly on civil engineering and structural work contracts (Salazie river water transfer project, deviation of the Saline river), GTOI strengthened its collaboration with Demathieu and Bard on the Tamarind Road project. Together, they performed the SSW 1 contract (Hermitage, Bras-Hermitage and Cocâtre ravines), EESCN 7 (Bras Grand-Ravine and Tamarind Road)

A BRIEF HISTORY

GTOI got off to a start in the 1950s when it was known as GTE (Les Grands Travaux de l’Est). In those days it was based in mainland France. In 1954, GTE took part in building the first road along the coast on Reunion Island, linking Saint-Denis to the west of the island, built at the foot of spectacular cliffs. In 1980, GTE merged with LTPOI, a subsidiary of a Colas company LTPC, and became GTOI. A year previously, LTPOI had acquired the business of a Reunion Island company called Segafom. Today GTOI operates via two different poles:

• the Building agency and its profit centers;
• the Public Works agency which consists of the Routes Nord and Routes Sud profit centers, the civil engineering and electrification sectors and the new Tamarind Road project.

GTOI

Saint-Denis, Saint-Pierre, Saint-Leu, L’Etang-Salé-les-Bains, Tamarind Road, Existing 4-lane roads, Saint-Paul, Routes

GTOI

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GTOI
Petite-Ravine) and the Savane viaducts (Fleurimont, Petit Bras-Canon and Bras Boucan-Canon ravines). For the large excavation sites (EESCNs), GTOI tendered in partnership with SBTPC (Vinci group), which has been established in Reunion Island for forty years. This grouping, which to date has been allocated three EESCN contracts (Plateau-Caillou EESCN last August and EESCNs 3 and 4 between Saint-Leu and LEtang-Salé in October), strengthened the participation of local companies in the development of the island’s infrastructures. “In all,” resumes Inouk Moncorgé, Tamarind Road project manager at GTOI, “nearly 150 employees in 2005 and 300 in 2006 have been or will be deployed on the west coast of Reunion Island. In addition, Colas will invest nearly €10 million in new equipment.”

Improvements that are building Reunion Island

The Tamarind Road contract is a chance for GTOI to once again display its innovative technology and creative competence. Such assets have long been appreciated on Reunion Island where the company has worked on many public works structures. The Building agency carries out very diversified operations. “It is necessary to permanently adapt to the market by carrying out highly technical operations, such as the hospital of Bellepierre in Saint-Denis, the mental health facilities of Saint-Benoît and Saint-Paul, the Saint-André and Saint-Louis power plants, as well as contracting for far smaller building sites, like fast-food establishments,” explains Jean-Pierre Pons, agency manager. GTOI is also launching out in a “new” business: rehabilitation of occupied sites. The contract in question consists of renovating inhabited public housing. In the Saint-Denis Camélia and Chaudron districts, teams are working on-site. They are endeavoring as much as possible not to get in the way of the families who live...
Concrete loggias are being grafted onto the existing façades, internal partitions are being modified and the sanitary installations totally refurbished. The project will provide a fresh start for the occupants of these residences, which had not received any maintenance work for years.

The Public Works agency covers all contracts relating to roads, main services and pipeworks, civil engineering, and electrification. In particular, it has carried out the Gillot EESCN contract as part of the project for the eastern link-up of the southern boulevard of Saint-Denis and the Pierrefonds Airport refurbishment project in the south of the island. But the agency also deals with many main service contracts involving elimination of insalubrious dwellings and other works in collaboration with the Building agency on all-trades operations.

"Two-thirds of our customer base is made up of..."
FLYING HIGH
A sports site for GTOI in Saint-Denis: the Champ-Fleuri cycling and skating stadium.
Today, Colas is firmly established on the island. “We are in all the construction trade and very closely focused on the market. This is what is unusual about the Colas Group and what makes our companies strong,” explains Christophe Da Poian, general manager of GTOI and president of Colas Réunion Industries. He also acknowledges the work carried out by the engineering services, which every morning help ensure safety on some 100 building sites. GTOI has now been part of the Group for twenty-five years. With all its collaborators and its very many building site references, it is considered by Reunion Island decision-makers as a company to be reckoned with.

**Creation of Colas Réunion Industries**

2005 saw the birth of Colas Réunion Industries. Headed by Jérôme Bellemin, this entity groups together all the industry-oriented companies: SCPR, leading Reunion supplier of aggregates and blocks, Sud Concassage and STMC (aggregates), Sobex Précontrainte (prestressed beams and primary slabs for the construction industry) and GTOI Préfabrication (main services, prefabrication).

**Jose Labourasse**

For the last 23 years, José Labourasse has been employed at SCPR. Today, he is the most senior block salesman. Originally hired by Maurice Tomi, who founded the company, as a pallet stacker, he then began to sell aggregates. He knows all the company's 80 product references on the tips of his fingers, from slabs to beams and of course, the American block. He is also in charge of scheduling trucks for product deliveries. José is very attached to the people he has forged his career with. “What I like best is personal contact,” he explains with an apparently ever-present smile. “I wouldn't change companies for anything in the world.”

**Didier Hoarau**

At 34, Didier Hoarau is an electro-mechanical supervisor at GTOI. Aided by his teams, he manages a fleet of 50 machines (turret cranes, concrete mixers, generators, etc.). He keeps a close eye on them from their installation on jobsites to their return to the workshop. GTOI is his first company and he has been working there for 14 years. “I have major responsibilities, I like what I do and I learn something new every day,” he explains. Didier believes that he has made personal progress. His job requires clear-thinking and a cool head, both qualities he possesses. The Tamarind Road project represents an extra volume of work for him but it also adds “a dash of spice” and, according to him, is helping to optimize his teams’ potential.

**Rodolphe Boyer**

At 24, Rodolphe Boyer is a construction site supervisor. He has worked at GTOI for the last three years. This is his first job but he had already had a number of internships in the company when he was a student. At the end of his training he was hired as a quality coordinator. Then he applied for the job of site supervisor – and his application was successful. “It is exactly what I wanted to do,” he says enthusiastically. GTOI rapidly gave Rodolphe responsibility. His role is to ensure that everything is ready for site start-up and continuation of work. This includes designating suppliers, establishing precise production rates with the methods and engineering offices and checking availability of equipment. “I like this work a lot,” says Rodolphe. “I want to succeed, and above all I am empowered.”

**Routes** No. 18 - January 2006
The new Paris tram system is right on track

The new Paris tramline in the south of the city, currently under construction, is no ordinary contract. Located on the southern section of the Paris inner beltway, commonly called the Boulevard of the Marshals (the street names pay tribute to a series of Napoleonic marshals), it is a major economic and political challenge for the City of Paris and the entire Paris region and has received much media scrutiny. "For the last two years people have been talking about nothing else," laughs Freddy Cahart, profit center manager at Colas Île-de-France/Normandie and director of the site. "It is a very big operation, which happens not to contain any major technical difficulties, but which is made up of a large number of small sites."

The Group won two sections of the third sector of the Tramway Marnêaux Sud (TMS), in the 13th district of Paris. The operation has a two-year budget of €25 million (excluding granite, supplied by the City of Paris), which is the equivalent of the sales of an entire profit center for the period. It comprises two parallel contracts, with two contracting authorities (the RATP Paris transport authority for the station platforms and the City of Paris for the environment) and two main contractors. Work is taking place over a 3 km-long section with around 200 km of cable casing to be installed. The entire project must be handed over within 27 months at the most.

In order to carry out this extraordinary contract, the Group has set up a dedicated organization. An agency has been specially created to manage the site, with operational headquarters installed near the Charlety...
A SPECIAL AGENCY

In order to carry out this extraordinary project, an agency has been specially created. Its operational headquarters are installed near the Charlety Stadium.
Stadium. Working there are teams from Colas Île-de-France/Normandie, Screg Île-de-France/Normandie and its subsidiary Viamark (for the signs and signals and mastic asphalt), Sacer Paris Nord-Est (for the infrastructures) and Smac (for mastic asphalt), a total of some 100 skilled workers, five site supervisors, administrative employees and a 7-man engineering office. Another feature of the organization, albeit anecdotal, is the fleet of bicycles available to the personnel in order to get around the site!

A site at the heart of urban life

“Traffic is one of the major obstacles of this site, located in the middle of a very dense urban environment,” explains Freddy Cahart. “Every morning, teams place the cones to direct traffic around what is almost a slalom course between the different areas where there are ongoing operations. It is actually a huge job. We also are involved in dealing with the local residents and shopkeepers whose businesses have inevitably been hit by the works. We try to reduce disruption to an absolute minimum. For the most part, it is working out.”

On this project nothing is left to chance; we have rolled out resources, in terms of people and plant, and the necessary skills. Doubtless this is one of the key reasons for the success of the contract to date.”

Begun in September 2004 and with completion scheduled for September 2006, the project is now at the halfway mark, according to schedule. There is...
no margin for maneuver, but the work is right on time.

Detailed preparation

The smooth running of the work is based to a large extent on careful preparation. "As we were selected for the credibility of our technical submission, we have set up the structure we described. We stated in advance everything that we were going to do and we have done everything we said we would do. Everything was prepared in minute detail during the bid. We didn’t wait for the order to come down from the start-up unit in order to ask the right questions. On this project nothing is left to chance; we have rolled out resources, in terms of people and plant, and the necessary skills. Doubtless this is one of the key reasons for the success of the contract to date."

Respecting all the commitments made covers all levels, including that of the environment – a major concern for the City of Paris. Work carried out close to trees requires special care, as does work on the sidewalks, performed with recycled materials.

The road forward

In itself, the contract is not technically difficult to execute. It involves surfacing sidewalks, excavation, concrete curbs, installing casing and civil engineering. The equipment used is also conventional – backhoes, trucks, small loaders, traditional finishers and compactors. The difficulties come from the large number of phases to be deployed, management of the impact on traffic and daily life in the areas affected, organization of numerous coordination meetings, and the very large number of players (the EDF power utility, telecoms, water company, etc.) who can all deploy at the same place and the same time. "Not to mention what we find under the sidewalks!" adds Freddy Cahart. "Existing networks, others that are not inventoried, areas that are sometimes inaccessible – and yet we have to keep on advancing, day after day!"

The pressure is kept up on a daily basis. The contractors whose job is to lay the tram lines as the work progresses are hard on the heels of the Colas teams working on new sections – rather like when the railroad was built in the United States in the nineteenth century!

On high alert

Apart from the pressure of the schedules, the project requires constant supervision. "The teams cannot afford the least slip-up, whether caused by them or anybody else," remarks Freddy Cahart. Being responsive and thinking ahead is vital: "City of Paris regulations are particularly complex and require extremely lengthy administrative lead times; we have to remember to apply at least three months in advance for the permissions required to begin work on a new stretch."

High levels of supervision for everything to do with safety also have to be continuously maintained. "With a hundred people spread out over three kilometers, under continual traffic and with the risks inherent to any urban site – all this means a lot of work for our quality and safety manager!"

Despite the constant pressure and numerous restrictions, Freddy Cahart remains cheerful. "Everything is going well, mainly as a result of the excellent

A CLOSER LOOK

PROFILE OF A TRAMLINE

The first section of the TMS tramline between the Garigliano Bridge in the southwest of Paris and the Porte d’Ivry in the southeast will be finished in 2006. Traffic of 100,000 passengers per working day is forecast. Stretching over a distance of 7.9 km, the line will have 17 stations spaced an average of 450 m apart. The TMS system will be made up of 45 meter-long cars, 2.65 meters wide, with a capacity of 300 passengers, 75 seated. The average speed will be 20 kph and journey time along the total length 24 minutes. Work has been financed for a total of €215 million, provided by the Île-de-France region (38%), the French state (24%), the City of Paris (23%) and the RATP transport authority (15%). Added to this is €53 million for the rolling stock (RATP) and €44 million for urban renewal projects (City of Paris).
SYNERGY BETWEEN TEAMS

Teams are working side-by-side to apply a total of 30,000 metric tons of asphalt to the entire length of the tramline section.
relationship that we have on the site with all of
the participants, supervisors and other teams work-
ing here. The system is now fully functional.” He
also knows that he can count on his two deputies,
Lionel Lavemhe from Sacer Paris Nord-Est (for the
City of Paris portion of the contract) and Luc Gaillard
from Scret Ile-de-France/ Normandie (for the RATP
tram station platforms), the engineering office led
by Gilles Piaud from Sacer Paris Nord-Est, along
with all of his motivated and competent teams, “who,”
says Freddy Cahart, “have up to now proved that
they truly deserve our trust. For some of the younger
ones this is their first major project. It is not an easy
task to keep them under constant pressure and the
minute a section is finished say to them, that’s fine,
but the rails will be coming in ten days on the next
section.” You know what, you may find this hard to
believe, but they are ready to go again, brimming
with enthusiasm!”

Spac and Seco-Rail were also involved in the TMS project. The first
moved the underground networks in 2004 and the second laid the
access rails to the workshops.

THOMAS BAROIN
A WONDERFUL ADVENTURE
A site engineer since August 2004
at the Sylvain Joyeux agency (Colas
Ile-de-France/ Normandie) in
northern Paris, Thomas Baroin, 23,
is not ashamed to admit he was
daunted when he was asked to work
as a site supervisor of the TMS
teams. “A change of role, a highly
urban, gigantic site – I was afraid I
might not be able to cope,” he
acknowledges. But his fears soon
evaporated. “Here we try to help
each other out. There is a continual,
very constructive and highly enrich-
ing dialogue. Every day I learn new
techniques, management, organiza-
tion – it’s a wonderful experience!
We are all 100% committed to the
project and every day, meter after
meter, we have the satisfaction of
seeing the results of our work. The
organization is complex, the stakes
are high and a rigorous approach is
vital – there are thousands of minor
details to be taken care of – but I am
so lucky to be here! It’s a wonderful
adventure that will leave me with
great memories.”
Itterra, Debmut and Egut, subsidiaries of Colas Hungaria, successfully completed the extension of the M3 motorway link between Budapest and Ukraine in 2004. Shortly after, Colas Hungaria was put in charge of half of the construction work on phases 2 and 3 of the M5 motorway south-east of Budapest, leading to the Serbian border. Today, the southern section of phase 2 (between km 140 and km 159), begun in May 2004, is almost completed. As for the northern section of phase 3 (from km 159 to km 165), begun in May 2005, it should be handed over at the end of March 2006. Excavation and roadway construction work is being carried out by Debmut, Egut and Hoffmann, the bridges by Alterra and crushed aggregate is being supplied by Colas Eszakko. On this site, as for the M3 motorway, all the Colas Hungaria entities are working side by side with the same aim: compliance with quality standards.

Meeting the concession operator’s requirements
The progressive application of European standards in Hungary has required the implementation of new bituminous asphalt mix techniques. In doing this, Colas’ drive for innovation and competitiveness on a Hungarian road construction market known for its conservatism has played a decisive role. Colas Hungaria was keen to use the M5 project to steal a march on the competition by obtaining approval for the new techniques to be used.
The Hungarian authorities having granted approval certificates for the Colbase, Betoflex and Ruflex processes, these techniques were used on the M5 motorway for both phase 1 reinforcement and phase 2 construction.
For the technical manager of Colas Hungaria, road building is a profession and above all a passion. Zoltan Puchard joined Colas Hungaria in October 2004 and thanks to his competence and technical knowledge, he has become a highly-valued employee for the Group as it continues its development throughout central Europe. A member of the Hungarian national accreditation committee for road construction laboratories, he sees the country’s motorway network as a strong vector for development of the new bituminous asphalt techniques in central Europe. “We must take advantage of the progressive application of European standards to make the new techniques widespread,” he says. Although techniques and science are his main concern, Zoltan is also a field worker who has “bitumen in the blood!” As he explains, “the need to maintain a high level of safety and longevity means that we have to research surfaces that offer extremely high performance in these areas. Working for a group like Colas has made it possible for me to develop know-how throughout Europe by bringing innovative bituminous products to market.”

According to the terms of the concession contract that binds our customer to the M5 concession operator AKA, a private company, the customer will only be paid by the Hungarian government if certain technical criteria (involving evenness and rutting) and levels of quality and user comfort are met, explains Norbert Moussart, who represents Colas on the management committee of the Travaux M5 consortium (which consists of Strabag, Bouygues TF and Colas). “When the toll-gates were removed and there was a vast increase in heavy truck traffic, it was vital for the concession operator to strengthen the existing phase 1 roadway and make rapid modifications to the structural design of phases 2 and 3.”

Strongly supported by the Magny-les-Hameaux Campus for Science and Techniques, Colas acted as technical adviser to AKA for the mix design of the structures and choice of the type of asphalts to be applied. During phase 1, following a campaign of in-place trials during the summer of 2004, a decision was made to apply a structure of 10 cm of Colbase and 4 cm of Ruflex on the most worn sections. On phases 2 and 3, both the base course and wearing course initially chosen were replaced by Betoflex and Ruflex. Close cooperation between AKA and the technical department of Colas Hungaria meant that it was possible to modify specifications for the work and upgrade it to include performance requirements for the asphalt mixes (complex modulus, rutting and fatigue). This was a first for Hungary!

As early as February 2005, approval certificates for the Colbase, Betoflex and Ruflex processes were granted by the Hungarian authorities. As a result, application of the special processes was able to commence in Spring 2005, both for the phase 1...
reinforcement project and the phase 2 new construction work.

**Synergies that made the difference**

For production of the special asphalt concrete, particular care was taken with selection of the bitumen. Modified bitumen that is used as a binder in Betoflex and Ruflex was obtained from a Colflex master batch, produced by Colas CZ at Jihlava in the Czech Republic and then diluted by Egut at its Gyongyos plant. The polyethylene incorporated into the Betoflex was purchased in France from a supplier that the Group already worked with. For the first 2005 campaign, the 15/30 hard bitumen required to produce Colbase, which is difficult to find in central Europe, was obtained from Czech and German refineries. In order to bring down costs, Colas Hungaria is currently looking into procuring or producing...
A LARGE-SCALE CONTRACT
At the height of the work, over 800 people including subcontractors were working on this innovative contract whose highly specialized aspect required cutting-edge technology.
NEW PROCESSES

THE CONQUEST OF HUNGARY

The trust shown by AKA combined with the synergies of the Group technical departments meant that it was possible to develop new technical processes in Hungary in record time – from the approval stage to application. “Our subsidiaries are now convinced that they have got a head start for the future,” explains Norbert Moussart. Accordingly, Egut has recently specified and applied a Colbase/Ruflex complex on the Bajcsy Zsilinszky Avenue, one of the main roads in Budapest. In addition, the Hungarian Ministry of Transport has set up a committee, of which Zoltan Puchard (see page 38) is an active member, whose task is to find ways of incorporating asphalt mix performance criteria into all road building specifications.

> these materials locally. Not only have synergies in central Europe performed very well, they are also working far beyond its borders. For example, for application of asphalt mix, the technical support of the Campus for Science and Techniques and the International East Division combined with the experience of the Polish subsidiaries which have been using these processes for several years was extremely valuable.

Today, the innovative and prestigious M5 contract has not yet been completed. The teams are still at work but at the height of the contract, they totaled some eight hundred people including subcontractors!

*Colas holds a 75% stake in AKA.*
They are site equipment operators, surveyors, project engineers and foremen... They all do their jobs with enthusiasm and have decided to share their daily routine and their projects with us.

Christian Chassagnol's life is spent according to the seasons – summer on the site and winter on the slopes! "I studied sports in college and this enabled me to be both a ski instructor and mountain guide in the winter then to work on construction contracts during the summer," he says. He joined Colas at Albertville in the Alps in 1980, with a surveyor's qualification and then further honed his road construction skills. Each year at the beginning of May, he takes off his skis and after a two-week break returns to the construction site. The rhythm suits him perfectly. "Having two jobs means you're never bored. I am really happy to get back to the Colas teams in the spring and just as enthusiastic to put my skis on again as soon as the snow falls." Christian finds two things in common with these apparently very different professions – self-sufficiency and passion – and a single constant, the mountains. The main priority for this man with a passion for the peaks is he has to be able to see the mountains every day.

“Two professions but a single passion – mountains”

CHRISTIAN CHASSAGNOL,
SITE SUPERVISOR AND SKI INSTRUCTOR
FRANCE
“The Paris tramline is quite an order!”

FREDDY CAHART, PROFIT CENTER MANAGER, FRANCE

A graduate of the Insa engineering school, Freddy Cahart joined Colas in June 1995 as a site engineer in Caen, Normandy. From 2000 to 2004, he was head of operations in the west of Paris. In June 2004, he was appointed profit center manager. This was an offer he could not refuse, particularly as the profit center in question was no less than the one created specially for the Paris tramline project! “An extraordinary challenge and an amazing adventure,” he says. “The pressure is very high, not only for technical reasons, but above all because of the conditions under which we are working – the schedule and the urban environment. The political, environmental and media issues are really just as important as the technical part. We’re not used to dealing with this sort of thing! But I have no regrets at all. It is well worthwhile to have such an experience! I have been very lucky – I was in the right place at the right time and they trusted in me.” Would he take on a project of the same scale tomorrow if the chance arose? “You have to give other people a chance as well,” he smiles. “And the business contacts that you get in an agency context are something I rather miss. I like meeting new people and going out every day hunting for new business. Here we’ve already won the contract, and what a contract it is! There’s no margin for error.”
Just a few months from retirement and Pierre-Henri Gaube can certainly say that he has seen the world! "I have learned everything that I know in the field," he says. After seven years spent restoring historical monuments and carving stone, he went to Nigeria in 1974 to take part in the construction of homes as part of the Nigeria Festival of Art. This first venture into African territory changed his career. Six years later he joined Colas and became a real globe-trotter. "I started with Algeria, then Somalia. Next I went to Cameroon for the construction of the Bank of Central African States, to the north of Nigeria for an oil production plant and then to Haiti for the Port-au-Prince drainage contract, Djibouti for the Grand Bara sand barrier project, Mauritius for main services and Madagascar for the construction of the French Lycée in Antananarivo." His list of contracts is a long one. They have all left him with unforgettable memories. "I will particularly remember digging wells for the refugees in Ethiopia and in Djibouti on the Somali frontier," he says. For the last four years, Pierre-Henri Gaube has been in Mayotte. He is completing his last project. In April 2006 he will return to the French Basque country. "My experiences all over the world have given me a lot. You don't come back the same!"
**Paris Beach – a contract with a difference**

**BENYOILES ZITOUNI,**
**EQUIPMENT OPERATOR**
**FRANCE**

In his 30 years at Colas, Benyoiles Zitouni had never taken part in anything like it - installing a beach in the center of Paris! Last July, tons of sand brought in on semi-trailers were poured onto the embankments of the Seine River. The job of the Colas team was to spread out the sand in an even, 25 - 30 cm layer. Three excavators were required to perform the task. "We worked in round-the-clock shifts over 36 hours, day and night," says Benyoiles. "There were many other contractors working on the site and we had to be 'fitted-in' between other work. The schedule was very tight and there was no question of getting behind - Paris Beach had to be up and running on time!" Since the summer, Benyoiles has gone back to more traditional projects. "At the moment I'm working on construction of bus corridors and bike paths in the south of Paris. It's a very big contract with all of the problems that come with working in urban surroundings - noise, traffic, pedestrians, etc. But I like working in the open air, come wind, rain or snow."
An experience that is already rich and varied

JEAN-MICHEL LE BACQUER, WORKSHOP SUPERVISOR, FRANCE

"How do you want your career to develop?" When Jean-Michel Le Bacqu er was asked this question by his supervisor, he replied, "I want your job!" - a good indication of the ambitions of this 24-year-old. His already richly filled career path shows his determination to go far. With a high-school diploma specializing in public works, Jean-Michel joined the Colas Rennes profit center as an apprentice in 1999. He used the opportunity to acquire skills in diesel technology and electronics while getting a qualification as a heavy truck mechanic as an independent candidate. In September 2001, he was hired as a mechanic at the Georges quarries, in western France. "They say that quarries are the best school for mechanics," laughs Jean-Michel. "Absolutely right! I learned about a whole sector of industry, and I found it really exciting." A new challenge came in July 2004, when the young man was put in charge of the fleet of machines at Georges TP. "My job consists in repairing all the regular site equipment such as pavers and graders, as well as supervising the maintenance work on automobiles and trucks that we outsource." He puts everything into his work... and it is the same thing when it comes to his pastimes - mountain bike free riding and body-boarding! Jean-Michel lives life to the full.

"An experience that is already rich and varied"
“I need to be available, but I’m a lot more autonomous.”

Isabelle Doby, age 34, had never really intended to become a surveyor. She just chose the profession by chance after her high-school diploma. She was hired by Colas in Montluçon in 1994, and the following year she was transferred to the engineering office at Bordeaux. Early last year she was appointed to the Saint-Astier profit center in western France, where she is the only surveyor. “They asked me to manage the engineering office of our subsidiary Héraut, situated nearby, at the same time.” Her daily work is divided between working in the field, where she performs topographical surveys, and the office, where she prepares quantity surveys that she passes on to the site managers who draw up the quotes. “I try to organize my work according to the degree of urgency,” admits Isabelle. “There’s no question of counting my hours! I have to be available, but the advantage is that I am completely autonomous.” Autonomy can be synonymous with solitude as working in teams with rod-carriers has been replaced by robotized laser levels. Happily, she can count on the support of the other teams she works closely with – site supervisors, site foremen, agency heads, etc. In this predominately masculine universe, Isabelle has always managed to find a place. Her dearest wish is to see the workforce of her engineering office increase.
Bernard and Tony Hoinville, Retiree and Estimator

France

Uncles, nephews and cousins — some days there are as many as six Hoinville working together on the Calvados road network in Normandy. Michel is a truck driver, Joël a skilled worker, Nicolas operates a finisher, Dominique a roller and Alain is a site foreman. And that’s just a few of the family members...

The Sceg Basse-Normandie agency at Giberville has no less than 10 Hoinville family members among its employees. A few years ago, if you counted the members of the Quenet family, who are related to them by marriage, as well, they totaled 25! The tradition was begun by Bernard in 1944. He joined the company as a driver and following numerous promotions, finally became an agency head. “First I hired my two brothers, then my children and my nephews and I trained them.

We were hot-mix asphalt specialists. But don’t think I was running a holiday camp. I fired anyone who wouldn’t work,” explains the sprightly octogenarian, who is now retired. The third generation, familiar with company culture through a childhood enlivened by company Christmas parties and site visits with Dad, followed their elders’ example. Tony Hoinville, who at 30 is the youngest member of the tribe, says: “No doubt we went into the business because we were..."
familiar with everyone and we knew what opportunities the Group could offer us even if we had no qualifications. After I turned 18, I worked for the company every summer and did all my student internships there. My cousins did the same thing. And it is where I began my professional career, starting as a temporary worker; it is hard to work with your family! "Not at all," says Bernard, "you just have to be fair." For the last three years, Tony has been "on assignment", 300 km away at an engineering office in Nantes. Happy to be a little more independent from his family, he nonetheless has very good memories of his beginnings at Giberville. "There was a good atmosphere there, it was fun. The fact that you’re not a stranger makes it easier to start with but we really do not see each other much outside of work, perhaps to restore the balance a bit."

The Group believes in recruiting local labor and has a number of "construction families" working for it. It is a trend that is even encouraged because of the numerous advantages – seriousness of job applicants, easier integration of new recruits. Will the fourth generation of the Hoinville family also be tempted to follow on? "My children will do as they wish. But if they want to enter the Colas Group, why not? In terms of career advancement, they couldn’t do better!" concludes Tony.
Coming from all of the regions of France and many different parts of the world, 350 human resources managers, agency managers and presidents of subsidiaries met with Colas senior management at the Paris Cité Internationale Universitaire on October 25, 2005, to talk about human resources issues within the Group. The first of its type, the Convention was hosted by two journalists, Eric Revel and Anette Burgdorf. The program included a series of roundtable discussions on recruitment, integration, training, management, health, mobility, motivation, management and internal promotion. The roundtables were illustrated by numerous personal accounts either on film or presented from the stage. Outside speakers who took part were Assia El Hannouni, who is visually handicapped and was the winner of four gold medals at the Athens Paralympic games, Professor Benoît de Bodman, President of Seco-Rail, answers Anette Burgdorf’s questions.
David Garvin from Harvard on video and Professor Franck Bournois from ESCP, who talked about management.

**Best practices all around**

It was a simple and efficient manner of prompting participants to reflect upon various issues and discover innovative best practices. There were fascinating discussions – “We are currently living in a period of profound mutation: the world is changing, minds are changing and companies are adapting. The men and women who work in HR departments must also modify their approach to the job. They have to go into the field and focus on three central problems: attractiveness of the Group, career development of employees, and employee motivation,” explained Group HR manager Hervé Garnier. He concluded: “The role of human resources is to support management in terms of Group values, encourage development of teams and build a framework in which employees can thrive and be valued.”

Alain Dupont concluded the convention by saying: “We must take care to endow human resources with the means they need to help employees contribute to Colas’ performance.”
The Noyon plant produces paints and cold coatings for road markings.

**Prosign: marking, guiding, protecting**

Olas has strengthened its expertise in the production and application of road paints through the acquisition in June of the Prosign group. Established in 1952, the company has four complementary businesses: road markings with Prosign and Fourlon, urban development with APM, safety equipment with Sodirel, and property improvement with Eurojoint. Prosign, which employs 250 people, has two production facilities and a plant for manufacturing application equipment. It is certified ISO 9001 and ISO 14001 for its production facilities and depots. Every year, over 12,000 metric tons of road marking material roll out of its plants: paints and cold coatings are manufactured in Noyon and thermoplastic coatings and prefabricated strips in Brétigny-sur-Orge, both not far from Paris. Application and installation of products is carried out by 80 work teams. The Prosign group’s mission of making roads safer forms part of its affirmative policy on environmental issues and its efforts to improve the health and safety of its employees, customers and users. It has already received several awards for its innovative products which comply with the most stringent environmental regulations and has recently obtained the NF-Environnement low eco-impact seal of approval for its road marking products.
Mac Acieroid has changed its corporate name and is now simply called Smac! It has modernized its corporate logo, keeping the Smac corporate red color as well as the steel semicircle that recalls the company’s steel business. It now also has a corporate slogan – “Willpower at work”. The changes form part of a wider-ranging program intended to give the company a new lease of life with a more dynamic image directed at both current and future employees, as well as customers.

Smac was established in 1884. For 120 years the Société des Mines de bitume et d’Asphalte du Centre, as it was known, has closely followed and often anticipated changes in its markets. In 1977 it merged with Ferem, whose range of steel products was marketed under the brand name Acieroid. As a result the company became known as Smac Acieroid. In the 1990s, the company created the Eurofacade brand for top-range facade treatments. Today the company’s most innovative techniques and processes are developed and known by the Eurofacade and Smac brand-names. In today’s world, customers are increasingly demanding service, responsiveness and competitiveness. Smac is modifying its image to meet these new expectations by emphasizing its dynamic network and capacity for innovation.
The Pollutec Internal Exhibition of Equipment, Technologies and Services for the Environment was held in Paris from November 29 through December 2, 2005. Over 1,500 environment industry professionals showed prevention and pollution treatment techniques. Colas, which has for many years been committed to a drive for conservation and environmental improvement, exhibited for the first time as a Group. Previously Coletanche, Pollution Service and Colas Environnement et Recyclage had their own exhibit space. This time, visitors could discover the Group-level offering in environmental techniques. Presented were Vegecol®, a binder of vegetable origin for roads and urban surfaces, Rugosoft®, a surface used for its noise-reducing properties, Tecflor®, a roof-planting system designed to help improve thermal insulation, Néophalte® Basse Température, a low-temperature mastic asphalt process delivering energy savings and a huge reduction of fumes and odors, and the fractal wall, a noise barrier developed with the Ecole Polytechnique engineering school. In terms of service offerings, the industrial waste Eco-Tri and Eco-Bois recycling services were presented as well as the decommissioning service Pollution Service. Pollutec was also a chance to showcase Prosign, which is redefining its range of road paints to make them more environmentally-friendly.
Colas Centre-Ouest wins **FNTP award**

Colas Centre-Ouest won 2nd prize in the Environment Competition organized in June by the French National Public Works Federation (FNTP). The competition honors project owners, contracting authorities and contractors who have made the greatest contribution to furthering the use of recycled materials and/or to recycling excess materials generated by public works or other industries. Of the 18 entries submitted to the FNTP, 14 came from road building companies, and Colas subsidiaries were responsible for seven of these. The project presented by Colas Centre-Ouest in conjunction with the Eure-et-Loir department concerned the management, reduction and elimination of construction site waste during maintenance works on local roads. Colas Centre-Ouest has focused on recycling end-of-life surface dressings, a process that consists of transforming these into resurfacing-grade products through milling and the addition of sand and emulsion, followed by re-application to the place where they were originally milled. The experiment carried out on Route 28 convinced the jury of the usefulness of this process for local authorities on low-density traffic networks and of the importance of the process on a market niche that is largely untapped. The close collaboration between owner and contractor was also highlighted.
Rugosoft wins the **Golden Decibel...**

Olas won the Golden Decibel trophy on June 23 for its noise-reducing road surface, Rugosoft, which cuts vehicle road noise by five. Since 1991, the Golden Decibel, an award presented by the French national council on noise, has rewarded the most innovative and effective initiatives carried out to combat noise. The competition, which is open to all European Union countries, is on the one hand for particularly successful anti-noise schemes carried out by municipalities, companies, associations or schools, and on the other, for products, technologies or achievements with outstanding noise-reducing performance. The award was presented by Nelly Olin, the French Minister for Ecology and Sustainable Development, to Michel Chappat, Group Research and Development Manager. Rugosoft is intended for the construction and renovation of all types of roadways. Through its noise-reduction qualities but also its skid-resistance and durability, it meets local residents’ needs for less noise, road users’ demands for safety and local councils’ expectations in terms of value for money. This is not Rugosoft’s first major success: in 2003, the surface won a prize from the International Road Federation (IRF).
Vegecol's on the road forward – Its contribution to sustainable development earned it the 2005 IRF Award.

... while Vegecol wins the 2005 IRF Award

At the Congress of the IRF (International Road Federation) held in June in Bangkok, Colas received the 2005 Award in the Research category for Vegecol. This category rewards companies whose products or processes contribute to significant progress in the road building industry through innovation. The Award made to Vegecol recognizes its contribution to sustainable development, particularly through the use of agri-resources. Vegecol, a patented binder developed by the Group’s Campus for Science and Techniques, is a 100% natural plant-based product. It is capable of remarkable technical performance: in particular, it is highly resistant to rutting and fatigue. Furthermore, thanks to lower manufacturing and application temperatures, it delivers energy savings and lower environmental impact, reducing greenhouse gas emissions. This revolutionary product also possesses major esthetic qualities: being transparent, it enhances the natural color of the aggregates employed without specific surface treatment, and can also be tinted in a wide range of colors. These properties make Vegecol an ideal surface for architectural and ornamental projects.
Excellent results for Colas in the 2005 Safety contest held by USIRF, the Union of French road industries organizations – the Group carried off eight out of a total of 16 awards, including three first prizes.

The competition rewarded companies that obtained good safety results. The companies are classified into seven categories and their performances measured in terms of the number of accidents recorded over the last five years. First prizes were won by Colas Rhône-Alpes in the “over 800 employees” category, the Sacer agency from Brest in the “50 to 200 employees” category and the Colas profit center in Montauban for the “under 50 employees” category. Sotraso, a subsidiary of Colas Sud-Ouest, won second prize in the “under 50 employees” category. Third prizes went to Colas Nord-Picardie for the “over 800 employees” category, to the Colas Sarrebourg profit center for the “50 to 200 employees” category and the Colas Tarbes profit center for the “under 50 employees” category. Finally, Screg Île-de-France/Normandie won the special prize in the “over 800 employees” category.

USIRF – Colas runs off with half the prizes
Today, 20% of Group employees are trained in first aid and receive regular “refresher courses”.

**First aid – priority to safety**

To help employees better manage safety in the workplace, first aid training sessions have been organized in the Group subsidiaries. They are intended for everyone – site supervisors, workers, equipment operators and administrative employees – and are on a voluntary basis. The aim is that on every location – jobsite, office, laboratory, company restaurant, etc. – there will always be at least one employee present who is capable of administering first aid in the event of an accident. The first training session takes place over two days. This is followed by an obligatory “refresher course” between six months and one year later to be followed in successive years by an annual one-day session. The first training session program covers a first-aid action plan (protect, examine, alert), administration of first aid and study of risks specific to each industry and company. Case studies are used to help better assimilate the ideas. To test their knowledge, employees work through accident simulation situations. This highly practical training tells people how to react when an accident cannot be avoided and helps them gain greater awareness of the consequences of an accident in the hope that this will change behavior. Currently, 20% of the workforce is trained and follows regular refresher courses. The Group’s target is set at 30% by 2008.
The second European University on Road Safety took place in Paris between July 4 and 7, where over 200 participants were able to exchange and compare their practices in this area. For the second time, Colas sponsored the event, which is of the greatest importance for the Group. It was the occasion for CEO Alain Dupont to sign the European Road Safety Charter in the presence of Dominique Ristori, Director, General Affairs and Resources Directorate, European Commission and Robert Trottein, Chief Executive of Laser Europe and organizer of the University.

This European-wide commitment testifies to the key importance given by the Group to road safety. As a leading player in the development, modernization and maintenance of the European road network, Colas unceasingly strives to improve safety on roads by the application of innovative and high-performance products and equipment. It also implements a major program to improve construction site signs and signals, lowering the inherent risks both for third-party road users and company employees. In addition, an affirmative road safety risk prevention policy has been in force internally for many years.

Highly encouraging results for France In 1997, the Group signed up to a French Road Safety Charter with the French inter-Ministry road safety delegation. Continued in 2001, and then renewed in 2004 with a partnership widened to include the...
Colas holds safe driving training sessions to improve awareness among the workforce.

National employees’ health insurance fund, the charter resulted in the application of a vigorous accident prevention system, with impressive results. For the period 1997-2004, the accident frequency rate has been halved, whereas the company vehicle fleet has increased by 50%. These are encouraging results that have incited the Group to extend its policy to other European countries where it operates.

Reduce third-party accidents by 25%

The aim of the European Charter is clear – by 2008 reduce by 25% the number of accidents involving third parties in the European subsidiaries (60 companies in 15 countries). A certain number of measures that have been proven successful in France and are currently applied in several European companies now concern all of the European subsidiaries. Among these: the establishment of a steering committee on road safety in each country, designation and training of road safety coordination units, joint evaluation and accident reduction reporting, “responsible driver” training sessions, awareness-raising and information programs, post-accident analysis and driving audits. The system is being put in place with regard to the road safety culture and specific regulations of each country.
SKILLED WORKERS ARE HONORED

Award ceremony in Paris in November for the best skilled workers in the Group.

COLAS WINS THE 2005 FIMBACTE FESTIVAL GRAND PRIX

The Group was awarded the Fimbacte Grand Prix for its animated movie The Life of a Rock at the festival of Construction and Environment Industry Players.
IN THE PICTURE

WELCOME TO PARIS BEACH...
In the framework of the “Paris Beach” program, teams from Colas Ile-de-France/Normandie built a sand volley-ball court in front of the Paris City Hall.
IN THE PICTURE

WORKSHOP MANAGERS’ CONVENTION (CONT)

As the close of the convention, Jacques Chardon (left), former Group Equipment Manager, wished the best of luck to his successor, Philippe Brissouneau (right).

In September, workshop managers met for their convention at Fès, in Morocco.
In July, Sébastien Bourdais, the racing driver sponsored by Colas, won the Edmonton Grand Prix in Canada on a circuit built by Standard General Inc.

Last November, André De Haan, professor at the Polytechnique engineering school in Mons, Régimont (left) and Jean-Christophe Duretz, general manager of Nanotech SAS (right), were invited by Michel Chappat, Group R&D Manager, to the Campus for Science and Techniques for a conference on nanotechnology.
IN THE PICTURE

THE SOUTH-WEST REGIONAL HEADQUARTERS...
The South-West Echangeur headquarters, designed by Michel Pétuaud-Létang, should be operational in the new year.

...AND THE ONE IN NANTES
Designed by Bruno Huerre, the Nantes Echangeur will be ready in March 2006.
NEW HEADQUARTERS FOR SPAC
The Spac headquarters building in Clichy has been entirely refurbished by architects Pierre Riboulet and Alexis Leduc.
MAYORS’ CONVENTION
Colas was flying its own colors during the last French Mayors’ Convention, where it showcased one of its flagship products, Vegecol.

VEGECOL BILLBOARD CAMPAIGN
Vegecol was on Paris area billboards in the Fall, and also featured on TV commercials as part of its advertising campaign.
ATTF SHOW
The Group’s three road construction brands were present at the ATTF French road construction engineers show held last October.

MAYORS’ CONVENTION (CONT.)
SES, the Group’s signs and signals specialist, also exhibited its know-how.
Catherine Wihtol de Wenden:
“Should we open the borders to economic migration?”

In September, the Cercle Colas was host to Catherine Wihtol de Wenden, director of research at the CNRS French national council for scientific research. A specialist in international migration, she considers that today, the dogma of closing borders needs to be looked at again.

At the start of the 21st century, what does the phenomenon of migration represent worldwide? Catherine Wihtol de Wenden: Over the last twenty years we have been seeing a speeding up of peoples’ mobility. Migratory pressure is not however massive. Today we estimate that there are around 200 million displaced persons (economic migrants, family migrants, refugees), around 3% of the world population. In addition, the phenomenon of migration concerns almost every region of the world whether it involves departure, transit or reception. In Africa and Latin America, interior movements of populations are not negligible - certain originating countries have become reception countries as a result of various crises. Europe, with 1.4 million legal entries a year, has become one of the major regions of immigration.
Have the causes of mobility changed?

C.W. de W.: Today, the “push” factors - in other words population and poverty - may often be less determinant than the “pull” factors. Media coverage, transfer of funds, reuniting families and the “human rights” image of wealthy countries constitute powerful factors of attraction that feed migratory imagination. The development of a transient economy in some countries also contributes to amplifying the phenomena. Beyond this, exchanges, even informal ones, play a vital role in speeding up mobility. Today there are almost no isolated regions left on the planet.

How can we best summarize the policies put in place in Europe to deal with migratory pressure?

C.W. de W.: Clearly, the efforts made by European countries since 1974 to control the influx of immigrants have resulted in failure. Policies of strengthening border controls do not constitute a barrier against illegal immigration. Similarly, subsidized repatriation and co-development operations also have their limits. It has now been established that closing borders does not prevent immigration, whether legal or illegal, from continuing. It even produces the opposite effect by speeding up reuniting of families, creating asylum application bottlenecks and swelling the number of illegal immigrants. Furthermore, a discrepancy has rapidly arisen between, on the one hand, stated public policy intended to reassure public opinion and characterized by toughness and, on the other, the reality of managing an influx of immigrants. The discrepancy comes to a great extent from the demographic and economic context – an ageing European population, shortage of manpower in certain sectors and segmentation of the job market.

Does this analysis lead you to support the opening of borders?

C.W. de W.: I believe it is time to give up the hypocritical and ineffectual dogma of closed borders. This does not necessarily mean that a total and immediate reopening of all of them is a good idea. However, we have to introduce greater flexibility into the European system and think about methods of opening up as part of the definition of a true Community policy on immigration. Removing restrictions on finding work and setting up a quota policy would at the same time satisfy the needs of the labor market, resolve the asylum seeker crisis and bring about dialogue between poor regions and wealthy regions, further down the road.

Do you believe that public opinion is ready to accept the opening of borders?

C.W. de W.: The main obstacle to the opening of borders, even on a selective basis, actually resides in the conviction, solidly held by public opinion, that Europe should not become a land of immigration. Europeans are fiercely attached to their advantageous system of welfare, reticent where Islam is concerned, worried about the difficulties of "living together". They are extremely cautious on the subject of immigration.

Wouldn’t there be a risk of massive immigration to Europe?

C.W. de W.: After 30 years of closed borders, it is established that a too-rigid system tends to increase migratory pressure and the settlement of immigrants in reception countries. Inversely, the right to move around encourages circulation of people and coming-and-going movements – what is known as pendular migration. The phenomena was visible during the 1990s after the fall of the Berlin Wall; the much-feared mass movement from the East to the West never happened. As it happens, opening the borders tends to encourage circulatory, rather than settlement, immigration.

Convincing politicians sounds almost impossible!

C.W. de W.: I agree the task is not a simple one as long as public opinion is so sensitive to the question of immigration. The notion of the right to migrate being recognized as a fundamental human right of “citizens of the world” is nonetheless starting to have some currency among international organizations. The debate on the method of reopening borders in Europe should grow in the years ahead. Politicians need to set up a dialog that is in tune with public reticence but under satisfactory conditions for both the labor market and human rights.
Patrick Légeron: “The psychology of change”

To Patrick Légeron, psychiatrist and specialist in corporate stress management, taking account of the emotions generated by change is becoming increasingly necessary for companies.

It is almost commonplace to say modern Western society is characterized by change. Surely change has always existed?

Patrick Légeron: Change has always been an integral part of man’s environment. However, what is relatively new – in this respect the 1970s were a turning point – is the sudden speeding up in the rhythm of change. Change has now become a constant process. Today change is the norm and stability is the exception. Going beyond this observation, it is important to understand the impact of the phenomenon on the human psyche.

At what levels is the human psyche affected by change?

P.L.: Firstly, change represents an overwhelming source of stress because it brings about a feeling of uncertainty and loss of control. Even when it is positive and involves events such as a marriage, the birth of a child or promotion at work, the organism has a stress response which is both physical, caused...
by the liberation of stress hormones from the suprarenal glands as well as psychological, with an upsurge of emotion. The stress level of an individual varies according to their evaluation of the threat and their capacity to deal with it; optimal stress stimulates and makes it possible to adapt to the situation, while “zero stress” and, inversely, “extreme stress” are counter-productive.

Do you mean that a certain level of stress is required for change?
P.L.: Yes, stress and change are intimately linked. On the one hand, stress inevitably accompanies change, and on the other it allows the individual to take the necessary action to deal with a new situation. Today, stress is even considered as one of the major functions of the human body, in the same way as breathing, digesting, reproducing, etc. are. What causes the problem in today’s world of work, is that stress generated by change is added to other stress factors, in particular the complexity of information and the levels of demand that are made on people. The human psyche is therefore heavily put to the test.

The change process is quite complex, at a psychological level. What are the stages that characterize it?
P.L.: To go from situation A to situation B, the psyche goes through a more or less rapid series of stages, depending on the individual and the circumstances. Take, for example, what happens when a smoker becomes a non-smoker. The change cycle involves five phases: the smoker must first of all possess information (smoking damages your health), then he has to agree with it, then he has to take the decision to change, make a real commitment to the change, and finally maintain the change. Similarly in a company, to successfully lead change a manager has to identify the stages being gone through by his teams so he can adapt his strategies to each of the stages. The basics of change come down to “know how to, want to, can do.”

“Resistance to change” is often given as a reason to explain the difficulty of introducing changes.
P.L.: The human being is profoundly ambivalent; we have a natural tendency to focus on the inconvenient side of change and the advantages of the previous situation. However, change makes it necessary to choose — what is known in psychology as “relin-

quishing.” The phase involving analysis and recognition of the benefits and drawbacks of each situation both old and new is necessary to help individuals going through change. This is particularly true in companies — when the change process is undertaken, the manager must aid his teams to resolve their ambivalence. In order to do this he has a tool, the decision-making scales, which makes it possible to weigh the “pros and cons” as well as the “before and after”.

How do you deal with the very strong emotional aspect of change?
P.L.: Too frequently, we forget that the human brain contains not just a rational component, the cortex, but also an emotional component, the limbic region. In a situation of change, strong call is made upon the limbic area. Emotions can constitute an obstacle to change, so for this reason it is vital to identify them, accept them, facilitate their expression, manage them and then be able to move on. It also supposes a considerable amount of “empathy”, unfortunately usually in much shorter supply than “apathy”.

Does the concept of “grieving” therefore also apply to the world of work?
P.L.: Faced with a threatening situation (death of a loved one, loss of a job), the individual develops an emotional process that has several stages: denial, anxiety, anger, depression, bargaining, acceptance. This is what is known as the “grieving process” and it is both natural and necessary. In business, when a change strategy is decided, the people also have to go through a “grieving process”. Blocking this process can compromise the change itself. At this stage, a manager has to develop the “emotional intelligence” necessary to support his teams. People should meditate on the teachings of the Stoic philosopher Epictetus, who lived in the first century AD. He pointed out: “It is not events that disturb the minds of men, but the view they take of them.”

INTERSECTIONS
In the work that you have painted for the Colas Foundation, the road is not the focal point of the landscape. I'm always seeking to express atmosphere and color rather than a precise shape. The road, although abstract, is absolutely vital – it is there as a link between heaven and earth. A simple patch of grey in the shadow, it gets gradually lighter and guides our view towards the light that is piercing through the center of the clouds. I feel good on this road. I'm in my favorite place, that of the passenger who looks at the sky, the landscape and the clouds. They are very big clouds but they're not threatening; they bring light rain that will no doubt be beneficial to the earth and behind them the sun will shine again.

The sky takes up a great deal of your paintings. In my paintings there is always more sky than earth. There is a lot of landscape, but there is always sky. It is a limitless space in which the artist, with no scale of comparison possible, is free to express whatever he or she wants. We all like to look upwards, to rise up and lose ourselves in the sky and the clouds to dream.

What has being selected by the Colas Foundation meant to you?
In personal terms it is a reward that is a prestigious honor. In terms of my work it is a form of public recognition that I value highly. In my own way I bring an extra light into the offices of the company, like a ray of sun that comes down from the sky I like the idea that my work is traveling around different sites and that it will be seen from different angles.
acknowledgements

Carlos Narino
After forty sketches
Paris, 2005