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No bottlenecks in Bordeaux

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Land, sea and air share a single aim

In the year 2000, the transportation flow in western Europe will be in the order of 5,000 billion traveler-kilometers for passenger traffic and 1,800 billion metric ton-kilometers for goods. The annual growth in road transport will be 4%, which will be faster than sea, river and rail transport, all expected to increase by 1% per year. North America, Asia, Russia and Central Europe are all also expected to see considerable expansion in road traffic.

Yet, in spite of such inexorably growing demand and the regular rise of over 2% in the number of vehicles constructed worldwide (50 million per year), we are confronted with a constant fall in public investment in road systems, as a simple result of major change affecting the structure of public spending.
Between 1975 and 1995, Europe has cut its overall investment in the transport sector by 20%, but the collapse in investment in road infrastructures during the same twenty-year period has been 50% in constant values.

The efficiency of urban and inter-urban transport is entirely dependent on the concept of inter-modality. No railroad network, no goods terminal, no port, no airport can hope to function properly in the absence of a suitable road network. Until such time as a more equitable balance is struck in these investments, growing bottlenecks will inevitably curb any improvements in economic productivity, and, in fact, this situation is only likely to worsen.

This is why it is important to stop creating conflicts between the various modes of transport, and start promoting intermodal systems, at the heart of which are roads.

The intermodal approach has been adopted in a deliberate and rational manner in the United States, Southeast Asia and Japan.

Are we incapable of developing a simple thought which, building on the very principle of intermodality, would ineluctably bring together, in an unprecedented way as regards the universe of transport, the public and private sectors, whether with regard to research, engineering, construction, finances and maintenance of road infrastructures?

In our industry, all around the world, the chief tendency which is gradually coming to the fore is based on the principle of subsidiarity, the State only becoming involved in areas where the private sector does not have the capacity to take appropriate action.

So let us all follow the road forward!
From the Ivory Coast to the United States, from Hungary to Djibouti... visits to job-sites, snapshots of work in progress, reports on finished projects. Colas expertise around the world.

**Cutting down the noise**

BRS, a subsidiary of Somaro, won a 14 million French franc contract from the Haut-Rhin roads and equipment department for anti-noise protection on the Saint Amarin detour of the RN 66 highway, near Mulhouse in eastern France.

The site lasted six months. BRS worked alongside Colas Est during the sub-base phase, installing a noise wall using the Somaphone process, which combines acoustic barriers with a guard rail-type base. The use of the slip form technique for the reinforced concrete flange and wall saved time and ensured execution of the highest quality.

The Saint Amarin detour is the first phase of a program aiming to open up the Thur valley.

**IVORY COAST**

**A wholesale food market opens in Bouaké**

A brand-new wholesale market was recently opened in Bouaké, the Ivory Coast's second largest city and the leading center for wholesale trade in food products. The 14 hectare (35 acre) site was provided by the State, and it consists of 20,000 m² (215,000 sq. ft) of warehouses and 3,000 m² (33,000 sq. ft) of office space.

Designed to accommodate 450 wholesalers and 2,000 retailers – to say nothing of nearly 500,000 tons of products – the immense project required one and a half years of works performed by a grouping made up of Colas, Bouygues and Setao. A special Colas office was set up for the duration of the jobsite, which included major earthworks, sewerage systems and road construction.

The new market is expected to reduce the cost of food distribution in the Ivory Coast. It will also encourage both consumption and production, leading to a lower level of food importation.
Parking space for 20 long-haul planes

After five months of preliminary studies, Colas Côte d’Ivoire has been at work since January on a project to rehabilitate aircraft parking zones at the Félix Houphouët-Boigny international airport at Abidjan. This jobsite forms part of a program to fully renovate the airport, the first of a series of major works planned in the Ivory Coast, including a motorway, a tollbridge and a bus station. The heavy investment on the airport project is being funded by AERIA, the airport operating company, with aid from two international finance organizations, the French Development Fund and the International Investment Bank.

The first phase of the aircraft parking zones project consisted in planing a surface of 10,000 m² (for which a Wirgen 1000 planing machine was borrowed from Colas Midi-Méditerranée), laying 7,000 m³ of sand concrete and 20,000 metric tons of asphalt mix. A special kerosene-resistant surface, tested at airports in Lomé (Togo) and Ouagadougou (Burkina Faso), has been employed.

Normal air traffic has been maintained during the day, and as a result the Colas teams, under the supervision of Jérôme Bellemín, have been obliged to apply the most stringent safety procedures.

When the works are completed, the Abidjan airport will rank with the world’s leading international platforms, with capacity for twenty long-haul planes. This jobsite is likely to be followed by contracts for rehabilitating the airport’s parking lots and landing strips.

There’s something very fishy going on...

The Saint-Pourçain-sur-Sioule office and Miro SA (Colas Sud-Ouest) recently completed an unusual type of construction – creating a channel through the footing of the Régemortes bridge at Moulins, in the bed of the Allier river. This new “waterway” has been designed specially for migrating fish and required 4,000 m³ of cut and fill, 4,600 m³ of rip-rap and 150 m³ of concrete.
When a road becomes a highway

Three Colas centers – Screg Sud-Ouest's Toulouse office, Screg Grands Travaux and Colas Midi-Méditerranée's Portet-sur-Garonne office – have joined forces on raising a 20 kilometer (13 mile) stretch of road, the RN 117 between the towns of Muret and Carbonne, southwest of Toulouse, to motorway standards. The project forms part of a program to link up motorways between Toulouse and Bayonne, on the Atlantic coast, due for completion next year.

The highway is subject to very heavy traffic, so one of the main problems of the jobsite is the management of lane closures. To minimize congestion, the teams rotate their work over four separate 5 km stretches. The work zones are protected by German-made mobile safety barriers, which can be mounted and dismounted by hand very quickly in an emergency. The current works are already preparing for converting the entire stretch to a six-lane highway. To preserve the environment as much as possible, the curtain of trees along the central median is being retained. In addition, concrete gutters and catchment basins allow water to be collected and treated, so preserving the Montaigu mineral water source, which is situated close to the motorway.

The FRF 70 million project, three-quarters of which is shared equally between Screg and Colas, is slated for completion in January 1998, after ten months of work. The road base asphalt mix and semi-coarse asphaltic concrete required for the road are being manufactured from alluvial materials obtained from the plane of the Garonne River.

TSM 17 and TSM 21 drum mixing plants, belonging respectively to Screg Sud-Ouest and Colas Midi-Méditerranée, are in use on the jobsite, making it possible to cope with the different formulas and phases. When the project is complete, 600,000 metric tons of aggregates, 400,000 metric tons of coarse gravel and 200,000 metric tons of asphalt mix will have been laid.
Hard work before vacation time

Two-and-a-half months before the start of the annual migration which brings millions of vacationers along the A 7 motorway through southeastern France to the Mediterranean coast, the Lyon center (Colas Rhône-Alpes) was hard at work from 10 at night to 6 in the morning on a stretch of road either side of the Vienne toll-booth, not far from Lyon. This stretch takes 5,000 vehicles per hour during normal rush hours, but at vacation time the numbers are almost incalculable.

After a phase of planing the existing asphalt concrete, the team laid Colgrill over an area of 35,000 m², followed by high modulus asphalt concrete. The wearing course consisted of 600,000 m² of Ruflex-type asphalt concrete.

One feature of the jobsite was the visibility given by luminous hot-air balloons attached to all the site machines. The 30 million French franc contract, shared between Colas and CBC, was awarded by motorway operator Société des Auto-routes du Sud de la France.

Major road link for Colas Benin

After twenty months of work, the second stretch of the Parakou-Djougou RN1 link in Benin was inaugurated in September by the Benin Minister of Transport and Public Works. This new 70 km (44 mile) long southwestern stretch has been financed by the European Development Fund and is located at the center of the country between the city of Djougou and the Atacora mountains. It is one of the last elements in the road link transportation system intended to open up the landlocked country of Burkina Faso, with a road to the sea to the southeast. The jobsite, managed by Christophe Javelas, involved 400 workers and consisted of excavating 740,000 m³ of earth, laying 276,000 m³ of pavement course and 537,000 m² of triple surface dressing.
East of Nevers
It may still be too early to say if the French Formula One Grand Prix will continue to be run on the Magny-Cours circuit at Nevers after the 1998 season, but the local authorities are getting ready for the eventuality. The Nevers office (Colas Sud-Ouest) put in the lowest bid to build a by-pass around the town. The contract involves construction of 18 km of motorway-grade road that will skirt the town to the east, providing access to the major departmental roadways. The jobsite commenced during the spring of this year and work should be completed in time for next season’s Formula One Grand Prix race. In addition to improving the infrastructure for this major event, the work is part of the project to upgrade the RN 7 to four lanes and a future A 77 link to the A 6 motorway. “In opening up the Nièvre region, this motorway is going to have an impact on the local economy,” states Bernard Dziadkowski, head of the Colas Nevers office. To ensure the contract runs smoothly, teams of Colas personnel from various Colas Sud Ouest offices have been based in Nevers. By the end of the year-long jobsite, 270,000 metric tons of as-dug gravel, and 400,000 metric tons of asphalt will have been implemented on the motorway stretch.

A joint motorway project for the birds
Somaro and SES worked side-by-side on a 36 km (22 mile) stretch of the “motorway of the birds” — alias the A 837 — between Saintes and Rochefort, in southwestern France. Somaro Centre-Ouest-Atlantique supplied road markings and metal safety barriers. The median was surfaced with two layers of green Decoralt emulsion, a water-based product, manufactured by Somaro subsidiary Indasco. Its high level of visibility enhances road safety, while helping to integrate the motorway into the environment. SES provided traffic signs for the entire stretch, designing, producing and erecting 20 gantry signs, 25 tourist information panels (over 2,000 sq. feet), nearly 20,000 square feet of directional signs, 700 police signs, a variable message panel and 8 speed detection alarms.

The contracts, worth 16 million French francs (over $2.5 million), were awarded by Société des Autoroutes du Sud de la France.

Colclair adds color to the roads of the Bouches-du-Rhône
Since the early part of this year, the Marseille, Vitrolles and Martigues offices of Colas Midi-Méditerranée have laid almost 150,000 m² of Colclair in the Bouches-du-Rhône department. Lying behind this program is the desire of the department council to create colored shoulders on busy trunk roads, which are not only more visible but have equivalent rolling qualities to the road itself.

The Colclair is applied on widths varying from 80 centimeters to 1.5 meters, with a special paver. It is being produced with white sand and silicon and limestone aggregates from the Gard by the Gignac plant, with an independent line for storing and weighing the light synthetic binder.
Hungary for success!

After a halt in construction that lasted from December to March, during the severe weather of the winter months, the Hungarian M5 motorway site, commenced in the summer of 1996, has been handed over, 45 days ahead of the scheduled date.

The contract called for the construction of 17 km of four-lane motorway, three interchanges and hook-ups to local roads. Additional work was carried out on surface drainage and earthworks for the emergency access network.

To ensure successful completion of the 100 million French franc site, the Central Europe department called upon all its resources and mobilized skills throughout its Hungarian subsidiaries. Egut, a road construction company, had the biggest share (FRF 70m) of the contract and performed the road work. Alterra, a pipeworks company, performed the drainage work and emergency network earthworks. Pestkő, a quarry operator, supplied and transported by rail all the aggregates used in asphalt production, representing nearly 600,000 metric tons of as-dug or stabilized gravel and 200,000 metric tons of asphalt mix.

In addition, Colas strengthened the supply capacity of its subsidiaries by bringing in the Colas Est mobile stabilization plant, which was brought by waterborne transportation up the Moselle, Rhine, Main and Danube rivers. A mobile asphalt plant was rented from Scree and Sacer teams were assigned to work on the mix designs. Synergy was the recipe for success in Hungary!
New York goes on the metric standard

Barrett Paving Materials has been awarded a New York Department of Transportation contract to rehabilitate six miles of the I-81 Interstate highway. The two-by-three lane highway runs north of the city of Syracuse, in New York State. Robert Doucet, Barrett Paving Materials northeast division manager, explains: "The project involves 200,000 metric tons of paving mix. An initial 80 millimeter base will be paved, and another 120 millimeters then added." At first sight, perhaps, there is nothing particularly revolutionary in this... except for the fact that all of the quantities for the jobsite are no longer reckoned in US tons, pounds, feet or inches – the State of New York has officially adopted the metric standard!

The site, started last June, is scheduled for completion in November 1998, providing the NYDOT authorizes the Barrett Paving teams to work night shifts. "Before we can lay the new surface, we have to rubblize existing slabs, and there are undercuts to be excavated. It will be critical to have a night plan," explains Robert Doucet.

He is also waiting on another NYDOT decision involving approval of the equipment to be used for rubblizing the old pavement. The machines have eight 45 cm wide hammers which hit the ground every six meters, in a piano-like motion. They operate at a rate less than the forty hits per second of ordinary machines, but they gain time because they only require a single pass and the next phase of work can begin in their wake.

Widening the Lausanne ring road

Already partially constructed during the 1960s for the Swiss National Exhibition held in Lausanne, the city's ring road had become heavily saturated by the mid-1980s. To avoid having to buy up yet further land for a new road, the Canton of Vaud opted to create a third lane in each direction by using the emergency shoulders and the central median. The contract was won by a group of three companies, including Sarer (Colas Suisse), which is responsible for the total renewal of the asphalt surfaces and watertightening, as well as refurbishment of all the bridges. The work began in April and will be finished during the month of September.

At the same time as carrying out work on the ring road widening program, the Vaud canton is also setting up a system of automatic salt spreading. This is a new snow-prevention technique which consists of spraying salt solution through jets built into the roadway every 15 meters, and is the first of its kind in Europe, according to the customer. The system will operate during heavy falls of snow, therefore reducing the use of snow-plows and preventing traffic jams from building up on a road that is continually under heavy traffic.
Simon takes credit for bank job
April 25 marked the grand opening of the Western Nebraska National Bank headquarters in downtown North Platte, NA. The three-story building, constructed by Simon Contractors, blends perfectly with its surroundings. The steel-frame construction is state-of-the-art. The main entry’s three-story glass tower and skylighted, 52 foot (16 m) high open atrium are light and airy, while the two vaults are well protected, with walls, floor and ceiling reinforced with over 45,000 pounds (25 metric tons) of steel.
Just two months before scheduled completion, building superintendent Kirk Nichols had to meet the problem of fitting out tenant space not originally planned for. By working overtime and swelling the construction team to sixty in the closing stages, the completion date was respected. Simon Contractors has long-standing connections which the bank. Prior to this contract, worth nearly $4.5 million, they had already performed a number of projects, involving much remodeling and building new facilities.

Screg Sud-Est lays compostyrene on the A 40 motorway
Building the Saint-Martin-du-Fresnes interchange and access roads, which came some years after construction of the A 40 motorway between Bourg-en-Bresse and Geneva was complete, gave rise to problems with the embankments. The embankment is situated in a marshy hollow and overloading the soil was out of the question, because this could have led to subsidence of the heavily used motorway.

The Oyonnax work center (Screg Sud-Est), subcontracting from an earthmoving company, put forward the idea of a lightweight embankment made of compostyrene. The expanded polystyrene blocks have a density of 20 kg/m³ and are one hundred times lighter than traditional materials. They are laid like building blocks and then covered with concrete slabs. Construction of the nine 8,000 m³ embankments was carried out in nine separate phases, between June 1996 and March 1997. Teams of six to twelve operatives, depending on the size of the embankment, laid almost 25,000 m³ of polystyrene, almost double the amount initially ordered, but still stayed on schedule.
Colas Djibouti in the sewers of Avenue 13
By the end of next winter, the 40 operatives working on the sewer drainage system jobsite below Avenue 13 in Djibouti will finally be able to emerge from their manholes. The work entails the replacement of an old drain with a new, modern sewer. The old drain carries some 3,000 m³ per day of waste water – half the city's output – down to the sea. Djibouti is at sea level, which means that any below-ground work is subject to constant flooding. Water, heavily laden with sewage, therefore has to be pumped out of the site as the work progresses. This has meant highly disagreeable and malodorous working conditions for the Colas Djibouti teams. The work is also difficult to execute as the sewer is being laid through an urban area where its path intersects at numerous points with other services such as drinking water pipelines, high voltage cables and even the railway.
All of these obstacles have made laying the conventional 2,300 meter sewer into a custom-designed jobsite.

Bridging Ol’ Man River
Work continues on the Bill Emerson Memorial Bridge across the Mississippi River at Cape Girardeau, Missouri. Delta Concrete Inc. and McDonald Company, both of Cape Girardeau, have formed a joint venture to supply the ready-mix concrete. After 11 piers were built on the Illinois side at the end of last year, work is now continuing on the Missouri side, consisting chiefly of the three main piers across the river’s channel. Continuous pours of 2,500 to 4,500 m³ each (2,700 to 5,000 cubic yards) have already been made. Pours of 650 to 750 m³ (700 to 800 cubic yards) will be made to construct the towers supporting the bridge itself. On April 10, the joint venture supplied 2,700 cubic yards for the footing on pier one, thought to be the largest continuous pour ever in the State, made over a period of 20 hours with two mobile pump trucks. Future pours located out in the river will require imaginative solutions to questions of time and distance. To meet the challenges of additional volumes to be delivered in shorter spans of time, Delta has converted its plant to supply fresh concrete. The new system allows for greater control of the process and results in a more completely mixed product.

Colas Privas and the new TGV link
A new TGV high-speed railroad linking Valence, Marseille and Nîmes shortly after the year 2000 will have no fewer than 500 bridges. Colas Privas (Colas Rhône Alpes) has the contract to carry out watertightening on 100 of them with Colétanche OA. The surfaces to be treated vary between 150 m² and 1600 m². Colétanche OA is a bitumen-coated polyester fiber geotextile, chosen because of its low cost. It has the further advantage that shortly after being laid, it is covered with a raked sand-asphalt levelling course that light equipment can be moved over. This protective covering means that the treated bridge can be immediately opened up to traffic. The work is being carried out for Spie and will take a ten-man team 16 months.
On the runway at Mauritius airport

A joint-venture company made up of Colas Mauritius and a local company, General Construction Corporation Ltd, is carrying out the work for the extension of Plaisance airport on the island of Mauritius. The contract, worth over 70 million French francs, has been financed on a 50-50 basis by the European Investment Bank and the Mauritian government. Work started last October and completion is scheduled for July 1998.

Refurbishment of the existing 2,590-meter runway has been carried out mainly at night to keep air-traffic disturbance to a minimum. Shortly after the last plane of the day has taken off, the teams are in place, ready to start work on a section of runway across its entire width, and varying in length from 100 to 150 meters.

The first stage took place during particularly fearsome weather conditions between October and April, hurricane season in the southern hemisphere. The teams were also under considerable pressure to hand over a clean runway every morning, cleared of all equipment and obstacles so that the first planes could take off on schedule, no matter what the difficulties encountered during the previous night's work (breakdowns, weather, etc.). The first phase is completed and work now continues with runway surface marking and grooving to increase grip and improve rainwater run-off.

At the same time, teams are working to extend the runway by 500 meters. Because of the poor quality of materials in the immediate vicinity of the airport, it was decided to use millstone recovered during the clearing of sugar-cane plantations.

This has resulted in the recycling of high-quality materials and considerable savings in outlay for the local economy. So far, an extra ten hectares of land have been turned into plantations. This solution could not have been arrived at without the help and negotiating skills of the local joint-venture partner, General Construction.
Easier travel between the Scandinavian countries

Forty team-members of Novejfa, a road building company forming part of Colas Danmark, and Norvin & Larsen, its subsidiary specializing in concrete structures, are working on the jobsite that will result in Denmark’s E 39 and E 45 motorways.
Built with the intention of allowing easier travel between Denmark and southern Sweden, the new E39/E45 motorways will also make for easier road journeys right across the Scandinavian countries. The two east and west branches will handle 12,000 and 8,000 vehicles a day respectively. The junction point between the two sections is the city of Aalborg, which has been tagged the "little Paris of the North" on account of its large number of restaurants per inhabitant.

HAND-BUILT BRIDGE CONSTRUCTION

"Road construction work is a man's job!" says Lars Christiansen, managing director of Norvin & Larsen. And he means it, as there are no women amongst the company's sixty or so staff, either in the offices or out on the sites. Specializing in new construction works and in upgrading existing road structures, Norvin & Larsen operates upstream from the subsequent grading works.

Two teams of ten men each have been working on building two bridges for the past few months, one for a by-road and the other for a bicycle track. These projects, amounting to 30 million Danish kroner, include seven structures on farmland right in the middle of the Danish countryside. They are being entirely hand-built, or almost: the foundation work and laying of pillars, ironwork, coffers and concrete bear little comparison with the huge machines officiating on some of the motorway construction sites in France. Laborers, all Danish, are working under the superintendence of a site manager, himself supervised by an engineer governed in turn by the guidelines and plans of the customer, the Danish Highways Division.

ESSENTIAL SHORT-LISTING

A family business founded in 1945, Norvin & Larsen shares the stage with the major Danish contractors and holds down a close to 10% share of the national market. "The secret of our success is our short-listing by the government but also our flexibility, our reactivity and the speed of our decision-making circuits," smiles Lars, an inveterate pipe-smoker and company manager since
1991. "In our business, short-listing is more decisive than quality certification." To build these two structures, one measuring 60 meters long and 16 meters wide and the other, intended for pedestrians and cyclists, 60 meters by 6 meters, multi-skilled teams will be working for a four-month stretch from 7 am to 4 pm, Monday to Friday.

Hiring labor here is no problem: "As soon as a site begins to take shape, local people show up for a job. Because our business does not require skilled labor, we hire and release workers in pace with jobs at hand."

The picture becomes more complicated when hiring engineers. The Danish civil engineering industry is suffering from a dearth of home-grown talent, which is more attracted by the services sector. So the

Specializing in the construction and upgrading of road structures, Norvin & Larsen operates upstream from the subsequent grading works. Founded in 1945, the company is one of the leading contractors today, with almost 10% of the Danish market.

Else Marie Sorensen, grading site manager

Else Marie owes her present job to perseverance and pugnacity. A trained technician, she has spent the past twenty-five years on building sites, doing every job and climbing her way up to the top! A mother of three and a grandmother of five, this little lady coyly admits to being somewhat around fifty years of age.

During the summer months, when the company is not closed, Else Marie is closely seconded by Marie-Louise, aged nine, the eldest of her granddaughters. "I'm teaching her my job; it might give her ideas for the future. For the moment, she seems to have fun tracking the state of work progress with me," she admits with undisguised pride.

Else Marie acknowledges that being a woman at the head of a jobsite is not always easy. Every day, she has to show her skills as a technician, administrator and manager of people, otherwise she is vulnerable to all sorts of remarks. "But at least I have one advantage, you can recognize me a mile away!"

Otherwise, Else Marie reckons that she has always been able to dovetail family and business life. As she says, "How is this different from any other job?"
To build two structures, multi-skilled teams will be working for a four-month stretch from 7 am to 4 pm, Monday to Friday.

A manager of Norvin & Larsen highlights his company’s ability to export their know-how abroad: “Expatriation now attracts skilled and ambitious people.”

While Norvin & Larsen has turned its business of road structure works into a specialty, it still posts a certain preference for upgrading. Last year, to repair and consolidate an old bridge from the 1930s, the contractor deployed its know-how underwater at a depth of 17 meters to clean a pillar, cut out the worn sections with a robot and reinforce it by injecting special sea-water-resistant concrete.

On average, Norvin & Larsen manages about fifteen Danish jobsites per year, split half-half between new construction and upgrading.

FATHER TO SON, AND MOTHER TO DAUGHTER

A few kilometers away, at Novejfa, they speak a different language and use different methods. Carrying out almost one third of Colas Danmark’s business, the company is still portrayed as a family affair. Clocking on at Novejfa sites runs in the family, not only from father to son, but also, and more unusually, from mother to daughter! “There are just a few families who provide the core of our staff, sometimes spanning three generations,” explains Novejfa manager Martin Ostergaard. Otherwise, the majority of people join the firm through word of mouth.

Novejfa will join the operation after the completion of road structures by its subsidiary Norvin & Larsen on a 5 kilometer stretch of two by two lane motorway. Over a period of eighteen months, a team of 28 people will complete a total of 700,000 cubic meters of earthworks, plus the main services.

Under the direction of Else Marie Sorensen, a meticulously regulated and synchronized procession of excavators and trucks will move across the sandy terrain. This is an impressive fleet of machinery which will be operating for almost eighteen months to deliver the road level for this motorway. The route will be used by some two million Swedes entering or leaving their country, and will boost road communications between the Scandinavian countries.

“In Denmark, we voluntarily hire women for road works. They are more careful and attentive to the performance and maintenance of equipment, and are first-choice employees for looking after the machines. They can easily detect breakdowns by simply listening to the noise made by machines,” says Martin Ostergaard. “If a woman is pregnant, we find her another, less demanding job for a few months.”

Another difference for road works is that government short-listing is not a necessity. In contrast, quality certification is a requirement.
for all public contracts. Martin Ostergaard displays, not without considerable pride, his ISO 9002 certification, obtained a few weeks back and today the token of genuine teamwork. “Everyone was in on the action to get this,” he says. To celebrate the certification, each and every one of the company’s 250 employees recently received a bottle of champagne accompanied by a message of congratulations from the manager, who clearly has a way with people! 

Colas Danmark employs 900 people and generates annual sales of approximately 800 million Danish kroner.

COLAS DANMARK

70 years of Colas business in Denmark

A subsidiary of Royal Dutch Shell, Colas Vejmateriale, a manufacturer of bituminous products and emulsions, was founded back in 1930. From 1983 onward, the company was exporting projects to South Yemen, Greenland and Iceland. In 1989, Colas Vejmateriale purchased Novejfa and in 1993 the group changed its name to Colas Danmark. In 1995, as part of the acquisition of the Shell group’s Colas companies, the firm joined the Colas Group.

“We may be the Danish number two in volume, but we are number one in terms of quality,” jokes Henning Kaas, who is Development Manager at company headquarters. With a dozen or so offices spread around Jutland and Zealand, the company, managed by Vagn Nielsen since 1982, posts sales of 800 million Danish kroner and employs a staff of 900. Each year it produces one million metric tons of asphalt mix and 600,000 metric tons of aggregate. Colas Danmark conducts maintenance work on the 75,000 kilometers of the Danish road system, including grading, coating, surfacing treatment, concreting and pavement works. It exports proprietary know-how internationally, notably to Bangladesh, Uganda and Jamaica, and is also qualified for working at United States Navy bases. In this respect, it has just completed Guantamano projects in Cuba. Through the acquisition of Valtatie Oy (see page 31), the Danish firm today boasts a third permanent location overseas, the other two being Iceland and a partnership in Poland.
Colas achieves its goals in soccer stadium project

The construction of a new soccer stadium for the city of Amiens, begun last fall, will rank as the city’s most prestigious jobsite for many years to come.
More than 45,000 metric tons of sand from the bay of the Somme River were applied to drain the soil of the future stadium.

THE MAIN PROBLEM TO SOLVE: SOIL DRAINAGE

The site of the future stadium and ancillary buildings was located in the southwestern suburbs of the city, in a zone of uncultivated peat bogs and marshland that was vulnerable to flooding. The first step in the operation therefore consisted in clearing nearly ten hectares of woodland, the equivalent of two thirds of the total area to be occupied by the stadium. This land would subsequently house two playing fields and a training area in synthetic materials.

Work began in fall 1996... in the rain, which did nothing to help the task of either man or machine. But this turned out to be only a taste of things to come!

Once the first process had been completed, the teams set about draining the soil. It was here that the famous Colas creativity came into play. The alternative to the original specification consisted in criss-crossing almost half of the land with hollow blocks filled with coarse sand, separated by a geotextile. A natural material, the cost of sand is more economical than gravel, which was used only to surround the blocks of sand and to provide a final layer. The painstaking work of presenting the plans for the various alternatives was handled by Eric Dessailly, of the Amiens branch’s engineering office.

SOIL STREWN WITH SEASHELLS

More than 45,000 metric tons of sand were brought from the bay of the Somme River by a constant procession of trucks. In the middle of this uninterrupted flow labored a bulldozer, without which the works would never have been completed. The trucks...
had to drive in the water, and not a day passed without one of them getting stuck... There had to be a piece of equipment on hand capable of dragging them out!

At this stage of operations, drained soil – albeit strewn with seashells – had replaced the muddy wasteland. The main witnesses of this transformation turned out to be a small herd of perplexed deer. “Each morning, we could see their hoofprints,” recalls site foreman Jean-Pierre Lefer. “They weren’t alone, either. We sometimes saw the tracks of wild boar.”

DRAINING THE FIELD...
A JOB FOR EXPERTS

Once again, Colas called upon its expertise, backed up by past experience in building the Hotoie basin in a peat zone in the early 1980s.

In the space of a few months, after laying a temporary course, the site team installed 2,300 weighted pillars reinforced with 750 controlled modulus pillars below the grandstands. Under the grass, the soil was packed with 3,000 drains, intended to speed up ground drainage. "When you have wet soil, particularly peat, you have to be very careful of how it behaves, especially after periods of freezing and thawing during the winter, and react in consequence," observes Francis Mercier, technical director of Colas Nord-Picardie.

Surrounding the main field, a recovery network for rainwater, spray water and runoff water allows evacuation to Colétanche-treated catchment basins.

After this, chalk embankments 1.2 meters thick had to be constructed. "Just imagine!" says site manager Lucien Carle. "That meant a truck-full of chalk arriving every minute!" The spectacle of the waltz of the dump-trucks will not be quickly forgotten by neighboring residents. In total, over 27,000 m³ of this inexpensive and highly workable material was extracted from surrounding quarries to provide the base for the grandstands.

A 130 MILLION FRANC PROJECT FOR THE COMMUNITY

The preliminary work over, the city of Amiens – owner of the site – expressed its satisfaction. The feeling was shared down at the branch. "By completing this first phase of the jobsite, we broadened and strengthened our skills," says Daniel Lemaire, head of operations. Christian de Bray adds, "This jobsite enhances the status of Amiens, and also reinforces the Colas image. It will be the city's prestige site for years to come." With a total capacity of 12,000 spectators, the multisport stadium is a feather in the cap of this major northern French city. It has created local employment for 150 people who are working on the construction site and will also result in a number of permanent, full-time jobs once the stadium is built and fully functioning.

On a sporting level, the stadium is part of the community infrastructure, with equal funding from the town, the Department and the region. It will be a place for young people to come together and take part in sporting activities. The stadium is located to the west of
Amiens and will be linked to the A 16 Paris-Abbeville motorway by an access road and roundabout. Spectators will be able to reach it easily from the surrounding area of the Somme, but it is expected to drain visitors from all over the Picardy region, especially if Amiens makes it to French soccer’s First Division!

“By participating in the financing of a large stadium for Amiens, the entire community, has given a major boost to the development of the Amiens Sporting Club,” says club chairman Pascal Puillot. “This stadium is a fantastic corporate communications tool, but it also means that the ASC will now have new and even-surfaced training facilities.”

The stadium will also do much to consolidate the claims of Amiens for recognition as the regional capital of Picardy. Mayor of the city is Gilles de Robien, who is also Chairman of the District. Since the redevelopment of the city center, refurbishment of inner-city areas and extension of the A 16 motorway, the Mayor’s endeavors are beginning to bear fruit as businesses start to move into the area.

A MORE CONVENTIONAL SECOND PHASE

Back at the Amiens branch office, work has gone into its second phase, scheduled to last a year, involving laying of services and road construction. After the difficult winter of 1996, Colas managers in the Amiens branch are displaying more confidence. “We demonstrated our creativity and our professionalism when it came to soil drainage. The main services and roads are of a traditional nature, right in the mainstream of our core business,” says Christian de Bray. Something that is certainly to be hoped, given the proximity of the waterfront and the presence of a stream at the edge of the stadium.

So Colas site vehicles are now on the move again, over well-drained ground...

Another progress report next year.

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**INTERVIEW WITH THE MAYOR OF AMIENS**

**Gilles de Robien**

**Will the new stadium have an impact on the performance of the Amiens soccer team?**

Like all supporters of the team, I hope so. The stadium will create the right conditions for the team to succeed, showcase the players’ game, give a new dimension to matches and encourage the public to come and watch. The primary objective of a facility such as this, which offers 12,000 seats, 2,000 parking places and synergy with the Mégacité, the horse race track and the western arterial road, is to bring the people of Amiens more enjoyment, leisure activity and entertainment. Let me say that we have been very glad to work on such an enormous project with skilled people who have been partners of our city for many years.

Colas is a company that we can trust, that has a very strong local base, and that is very attached to the quality of its work. At Amiens, we have devised a sort of motto for the next four years: “success, social harmony and space to breathe!” This fits the new stadium perfectly.

We are bringing the people of Amiens together for sports events, to pick up vibrations from the players, and to be in a high-quality facility that is light, hospitable and spacious, and has the potential to be enlarged.

**You have turned Amiens into a regional capital. What vision would you like to give of your city at the dawn of the new century?**

The revival of Amiens owes much to the involvement of the whole population. With the municipal team, neighborhood committees, a council of young people, and so on, the people have drawn the face of the city as they see it for the next twenty or thirty years: open to the future and to the world, concerned about its environment, imaginative in its dealings with young people, ready for change, and enthusiastic.

**What are your priorities for the development of the infrastructures of the city of Amiens and the rest of the region?**

If it wishes to retain its status as a regional capital, Amiens has to invest in communications and exchanges. First of all, thanks to motorways, and, in this respect, the A 29 Rouen-Amiens-Saint-Quentin motorway and the A 24, from Amiens to Lille, are indispensable. And thanks, too, to rail links, with the renovation of the Amiens railroad and the line from Amiens to Roissy-Charles de Gaulle airport. We are also investing heavily in the information superhighway, with the ambition of making our city into an exemplary pilot site in this domain.
Every day, El-Si’s teams face up to the challenge of easing the flow of almost 60,000 vehicles per day in the greater Bordeaux area, through the maintenance of the traffic light network.
FRANCE

No bottlenecks in Bordeaux

For more than 20 years, Somaro subsidiary El-Si has been responsible for maintaining the traffic lights in the French city of Bordeaux and its outskirts. Days, nights, weekends, public holidays, this band of technicians work a schedule that is non-stop... and all-go!

Pessac is a small town a few kilometers outside Bordeaux. It is eight o'clock on a Monday morning. Eric, Guillaume, Francis, Olivier, Laurent, Franco and their colleagues are all present. Ten men are on duty each Monday morning, ready to patrol their El-Si vehicles over the length and breadth of the Bordeaux Urban Community (CUB), which in all comprises some 27 towns. "We have worked with the CUB ever since it was created, back in 1976," relates Jean-Pierre Lahitte, who manages work schedules.

"Centralized management of the lights dates back to 1974. The CUB has set up a semi-public company, named Gertrude, that collects and analyzes data. El-Si is responsible for maintaining the network and the installations."

There is no denying that this is a giant-size maintenance contract. There are 850 intersections with traffic lights, plus 400 electronic panels with flashing lights as well as 100 traffic metering cabinets which serve to regulate traffic flow and transmit information to intersections. The system has to operate efficiently: it is responsible for ensuring the flow of 60,000 vehicles every day in the rush hour through the CUB's area of jurisdiction.

Some working alone, others in pairs, equipped in some cases with paint brushes, in others with spare bulbs, even laptop computers, El-Si technicians perform both preventive and curative duties. No one need remind them of the meaning of service, availability and efficiency: as their day-to-day work shows, these notions are second nature to them.

PREVENTIVE AND CURATIVE TREATMENT

Dealing with urgent matters first of all means repairing damage caused by road accidents. On average, there are almost 1,200 per year at all intersections with traffic lights on CUB territory, often resulting in traffic light poles coming off the worse from collisions with vehicles. In addition, underground cables and magnetic loops get cut, cabinets get vandalized... and bulbs burn out.

Today, an electrician, Jean-Marc, and a laborer, Jacques, are dealing with repair work. Their van contains shovels and spare poles. The operation is run so that an El-Si team reaches an accident scene within sixty minutes. "If we take longer than an hour to arrive, El-Si's responsibility is engaged in the event of an accident," explains El-Si director Philippe Royer. In the best cases, the traffic lights can be restored to active service, but if the damage suffered is too severe, they are replaced by flashing lights. This is because statistics show that when lights are out, French drivers interpret this as an invitation to proceed – the cause of many a more serious accident.
While some members of the team concentrate on curative operations, others are scheduled this week to deal with prevention. Youssef, Gérard, Francisco and Christophe are four maintenance technicians whose job is to tour all the intersections and replace bulbs. Every traffic light is checked three times per month.

Numerous other tasks have to be performed. Miloud is filling the water tank of his van, ready to wash down the traffic lights, while Guillaume prepares his gear for checking out the electrical cabinets: he ensures that they are in good condition technically, tests them and cleans them to reduce the chance of breakdown. Eric is going to deal with the metering cabinets. His job includes checking that the magnetic loops and detectors are operating correctly, making adjustments in conjunction with the Gertrude control center, and completes a check-list that is submitted to the customer at the end of the month. And two painters, Antoine and Victor, are responsible for the general upkeep of the equipment.

**DAYS, NIGHTS AND PUBLIC HOLIDAYS**

For maximum efficiency, all team members have to be in contact at all times. During the day, they use a short-wave radio link – "Radio Gertrude" – but at night, they turn to mobile phones and beepers. "Under the terms of our contract, our emergency teams have to be on-site within one hour of a call-out, 24 hours a day, 365 days a year," says Philippe Royer. "This puts us under very heavy pressure."

Consequently, teams are organized for outside normal working hours. Seven technicians are on a roster for "night duty" – which includes a shift from 5 p.m. on Friday through to 8 a.m. on Monday. This comes around one week in five. During this period of maximum availability, technicians can be asked to perform a wide range of emergency actions, so they have to be relatively versatile.

**HISTORY**

Electricité et Signalisation, alias El-Si, was founded in 1949, and acquired by Somaro in 1990. It is managed by Philippe Royer and is based in Bordeaux, with centers in Lyon, Colmar and Paris. It employs 72 people. The company has two primary interests. Apart from its business maintaining traffic lights, El-Si both designs and manufactures temporary traffic lights for jobsites, traffic controllers for intersections with permanent traffic lights, and programming cabinets.

The French leader for temporary lights (with 65% of the market), motorway traffic management trailers with variable messages and luminous lane-change indicators, the company works with all the French motorway operators. In addition, it exports its products to ten European countries, plus Canada, Japan and Brazil.
All night long, the automated Gertrude control center transmits messages by beeper to the emergency teams, with reference numbers showing which intersections are experiencing traffic light failure. On receipt of the information, an El-Si technician rushes to the scene to make the necessary repair and re-start traffic signals at the intersection. The control center is directly informed as soon as all is well.

"On a good night, we may get away with around ten beeper messages, but the average is closer to fifteen or twenty," shrugs Guillaume. All the preventive work during the day significantly reduces the failures at night. Each call-out takes between 10 and 20 minutes. "We're like country doctors, always on call," he adds. "As soon as one problem is settled, you set off to deal with the next!"

HAVOC FROM STORM DAMAGE

There are times when El-Si ups the number of people available for the CUB from 7 to 11. This depends on weather conditions, and periods of heavy traffic such as vacation departures and returns.

The chief cause of damage is the storms which occur frequently in late spring and summer. The cabinets may be fitted with anti-lightning protection, but automatic controllers and electronic boards often burn out. Guillaume recalls one memorable week-end shift in May, when a single night saw 84 calls come in! "When you start the night shift, you take a look at the sky. When you hear the thunder rumbling, you know you can expect a long and animated night!" Whenever possible, the technicians wait for the rain to stop before intervening. Although the intersections work on low voltage, the cabinets have current at 220 volts. Better safe than sorry...

At every call-out, technicians are required to complete a report while still at the site. All the relevant details are noted: day, location, time of arrival and departure, nature of the fault repaired, and so on. Each week, the reports are handed over to the customer. Once a month, a meeting is held between managers of the CUB and representatives of El-Si's technicians and Gertrude, at which all the call-outs are analyzed.

SAFETY FIRST AND FOREMOST

Bearing in mind that the El-Si personnel spend all their time on the road, day and night, and are working with electrical equipment, all aspects of safety are a paramount consideration. Vehicles show warning lights when they are stationary, and are equipped with a flashing emergency light when they are on the move. At day and night, it is compulsory for all technicians to wear a reflective safety jacket whenever they are out of their vehicles. "Regular inspections are made both by ourselves and the customer to ensure that this regulation is observed," notes Philippe Royer. As for working on the EDF electricity network, technicians have to be officially accredited, and they receive special external training.

"In 20 years, the number of intersections handled by El-Si has doubled, and their man-power has tripled," remarks Michel Lamiothe, who heads the CUB's traffic department. "Technological progress has enabled them to reduce the time taken to deal with each cabinet, but as a consequence the technicians require more and more complex training."

Through two decades of collaboration with the CUB, El-Si has amply demonstrated its technical qualities, its innovative skills, and its capacity for rapid and efficient response to any situation. And all of this know-how is now bearing fruit, as El-Si provides similar services for other urban communities.
Creating new products, honing new methods, responding to new markets, organizing people, breaking new ground... What’s changing at Colas around the world.

Inauguration

Colas Martinique’s head office gets the Midas touch

On Tuesday, July 1, one and a half years after the groundbreaking ceremony, Alain Dupont inaugurated the new head office of Colas Martinique at the Pointe des Grives, in the presence of local dignitaries, including the Prefect of the region, Jean-François Cordet. The 25,000 square meter site is large enough to house the administrative offices, laboratory, workshops and asphalt plant. The premises are both functional and pleasant, and are located close to an orchard of fruit trees.

The main building, at garden level, is built around a patio containing a garden onto which the offices open. Since the site is not far from a densely populated zone and is close to the coast, every precaution has been taken for collecting and processing wastewater, with numerous powerful drainage installations. Great care has been taken over signs and signals on roads throughout the zone which will be used by traffic entering and leaving the facility. A third measure to minimize disturbance to the local community is an extractor hood in the laboratory which will help maintain the quality of the air.

The building was designed by an architect from Martinique, Jacques Midas. Over twenty local contractors were involved in the construction process and moving the company into its new premises.

The first Colas emulsion plant on the island dates back to 1934, at the Pointe des Nègres. So coming after sixty-three years of presence, this investment serves to confirm the Group’s attachment to Martinique and its confidence in the future of the island.
Colas moves into Finland

Colas and the Danish construction group Superfos have jointly acquired 100% of the capital of the Finnish road building company, Valtatie Oy. The company generates annual sales of more than 150 million French francs and ranks as the second largest producer of hot-mix asphalt materials, with annual production of 600,000 metric tons.

Valtatie Oy is particularly well established in the south of Finland, the most densely populated region of the country, mainly in the cities of Helsinki, Turku and Tampere. It employs 250 people. The capital is 25% owned by Colas SA, 25% by Colas Danmark and 50% by Superfos.

The acquisition forms part of the Group’s international development strategy, allowing it to improve its positions on North European markets.

Colas Ltd strengthens its positions in England

The Group’s British subsidiary, Colas Ltd., has acquired South Western Distilleries Ltd., a company that manufactures and lays road binders.

With annual sales of £4 million sterling and a thirty-strong workforce, SWTD has earned a high reputation for the quality of its products and services. This acquisition gives a further boost to Colas’ business in the south of England.

APPOINTMENTS

- Gilles Frotrier de Bagneux Bagneux has been appointed Chairman of Spac.
- Following the retirement of Claude Salé, the Board of Directors of Colas Ile de France-Normandie has named Jean-Paul Brossard Chairman.
- There will now be a single Chairman for Somaro and SES, in the person of Jean-Marc Jolivet.
- Michel Rivier, Chairman of Colas Rhône-Alpes, has been named Chairman of Colas Est.
- Yves Labrosse, a member of senior management who acts as a special adviser to Alain Dupont on international affairs, has been elected Chairman of European International Contractors for a two-year term of office.

He is the first Frenchman to preside over this association, whose purpose is to promote and represent the interests of the European construction industry by organizing international conferences.

SAILING

Sails of the century...

To commemorate the one hundredth anniversary of Scrog, the fifteenth sailing challenge will be held at Hyères, in the south of France, from May 21 to 24, 1998.

The regatta, which attracted more than fifty boats last year, will be open to all subsidiaries of the Colas and Bouygues groups. Full details will be available soon for all those interested in forming crews.
SAFETY

A big drop in site accidents

By running awareness campaigns, including accident prevention in site preparation, and implementing numerous safety, hygiene and environment procedures, the Group has further improved its performance in terms of safety. In the last six years, the work accident frequency rate in France has fallen from 47.4 to 27.6. Branch offices experiencing no accidents at all in the course of a year have risen from 1 in 1991 to 19 in 1994, 33 in 1995 and 43 in 1996.

Branch offices in Albertville (Colas Rhône-Alpes), Amiens (Colas Nord-Picardie), Dieppe (Canal (Colas IDF) and Lorient (Sazer Atlantique) have recently been awarded new safety trophies. Three other winners in their categories over the past 3 years - Trovero (Colas IDF), Boulogne-sur-Mer (Colas Nord-Picardie) and Chatellerault (Colas Centre-Ouest) - have received permanent trophies. In 1997, a new safety competition was set up between the French subsidiaries on the basis of their combined safety records. In 1998, it will be opened up worldwide.

Enviable examples in accident prevention come from several subsidiaries around the world, with the United States, Denmark and, most particularly, Britain, where Colas Ltd's accident rate has fallen from 25 in 1987 to below 1 in 1996. This can be attributed to the strong motivation of managers, intensive training programs (800 days for 1,000 employees), audits of breakdowns in safety procedures and analysis of high-risk situations.

The Midwest South region of Barrett Paving, located in Cincinnati, recorded zero accidents with stoppage of work in 1996. Another region, Northeast North, in Watertown, New York, also achieved an impressive performance, with a frequency rate of 3.31 and a severity rate of 0.01.

These excellent results, along with progress made in other regions, have enabled Barrett to end the year with the best safety figures in its history: 12 accidents with stoppage for 1,524,595 hours worked, a frequency rate of 7.87.
The IRF meets in Toronto

The IRF held its 13th congress from June 16 to 20 in Toronto. This gathering of major players in the road industry was the setting for a rich international exchange of technical ideas, with debates on such themes as Roads, Transport and the Environment; Roads, Transport and the Economy; and Roads and Innovation. In addition, specific aspects of roads in certain geographical zones were discussed, with papers on roads with low traffic in developing countries and a special session devoted to inter-American roads and exchanges.

In his closing address, Alain Dupont, speaking as Chairman of the IRF Geneva, said he was disappointed by the absence of in-depth reflection as to the future of the road industry or the companies involved.

"In view of the privatization of road network operators and a general ideological reaction against successful road building, we have to face a double revolution, one of them financial, the other in the worlds of politics and the media," said Alain Dupont. "The IRF certainly performs a vast amount of technical work, but we are not present enough where public and private investors prepare their decisions, where the ideas, reflexes and preferences are shaped, where politically correct ideas are formed, and where the future of roads is decided. In the face of a European rail lobby that is several hundred strong, the roads lobby is very thin on the ground."

So the agenda has been set for the IRF’s next congress, scheduled to be held in Paris in four years’ time. The IRF proposes a world vision of road development. It functions both to receive and to spread ideas. The organization consists of two offices, one in Geneva, and the other in Washington, D.C. In the year 2001, these two entities will be united, and this should enable the IRF to exert still greater influence on the world's stage.

Scereg is awarded a trophy for quality in Romania

Scereg has received the Araco quality trophy for its work on the refurbishment of highways 4 A and 4 B in Romania. The trophy and the special diploma that goes with it are awarded each year to the construction contractor judged to have performed the highest quality work, either in Romania or outside the country.

The accolade is intended to serve the twin purposes of rewarding quality and promoting modern construction technology in Romania.

The jobsite consisted in widening the road way to bring it up to European standards, 9 meters in width, while overlaying the wearing course with Médisflex. The two stretches – which represent an overall length of 112 km (70 miles) – involved 20,000 m³ of earthworks, 200,000 metric tons of asphalt concrete and 13,000 meters of guard rails.

CERTIFICATIONS

The latest ISO 9000 awards around the Group

At July 1997, 55 Colas companies, centers or departments held quality assurance accreditation, as against 47 in 1996.

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<th>COMPANIES CERTIFIED IN 1997</th>
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More than 130 other centers are now undergoing certification.
ANNIVERSARY

Sintra celebrates two decades in the Canadian West

This year commemorates the twentieth anniversary of Sintra’s presence in the Canadian West. These past two decades have been marked by a number of acquisitions and mergers of companies, which have engendered Terus Construction Ltd, the subsidiary of Sintra Limitée in the western provinces of Canada. As part of the celebrations, all Sintra Limitée’s directors attended a special meeting of the Terus Construction board of directors in Grande Prairie.

This gave Alain Dupont, Jean-Claude Ravalec and Michel Roullet a new chance to meet the Terus management team, led by Wayne Patterson, with Louis R. Gabanna serving as Chairman of the Board. Among local dignitaries who were also present at the celebrations were Alberta’s recently appointed Minister of Transport, Walter Paszkowski, and the Mayor of Grande Prairie, Greg Gordon, who said they wished to express their congratulations and encouragements to the company’s directors. They stated their intention of helping the company prosper and innovate in a flourishing market.

A recent success for the Group in the region came earlier this year when Terus Construction’s subsidiary, Alberta North, won four maintenance contracts covering 2,230 km of four-lane highways (see Routes no. 2).

Looking to the future, Terus Construction intends to broaden its commercial base and conquer new markets on the solid foundations it has established. The company’s workforce varies between 60 and 400 people, depending on the season.
The Compagnons de la Route elect a new Vice-President

The first meeting of the national council of Compagnons de la Route was held at the Group's headquarters, Echangeur, on April 18, with Alain Dupont in the chair.

Council members are the twelve vice-presidents of the Colas, Sacer and Scrig Orders. The council is responsible for ensuring that the Orders' regulations are respected, for encouraging contacts and exchanges of information, for furthering the development of the Orders within the Group, and guaranteeing that all the institutions function harmoniously.

During the course of the meeting, General Secretary Jean-Claude Ravalec presented the Group's economic situation, Financial Director Thierry Montouché gave an outline of the corporate savings program, Human Resources Manager Hervé Garnier talked about the functioning of the Order and, finally, Training Manager Philippe Morvan presented the training packages available to Compagnons. Alain Cochet, a road worker with Sacer Paris-Nord-Est, who won Top Niveau in 1990, was elected a vice-president of the order during the meeting.

The ABC of road building

Compile a complete collection of terms used in road building and in other fields related to roads both in France and the rest of the world, produce an inventory of the terms that are either the most frequently used or the most technical, define them all, translate them all – taking great care to differentiate British and American usage, as well as Canadian French usage. This was the recipe for the recently published Colas Bilingual Dictionary.

For a period of two years, some fifty members of the Colas Group in France, the United Kingdom, the United States, Canada and Switzerland pooled their knowledge and experience, devoting valuable hours in their heavily charged diaries to the creation of "the Colas." The project was managed by Fernand Douarin.

The finished work, over 400 pages long, provides a wealth of information, with definitions of technical terms and the commonest laboratory tests. It is chiefly intended for Group members, but in the near future it will be on sale in France and other countries, allowing it to play a part in giving the public more information about the road building industry. Quite a number of engineering schools, ministries, road operating companies, construction companies and consulting engineers have expressed an interest in purchasing it.

"Reactions have been very positive," reports Fernand Douarin. "But already people are starting to ask when they can expect to see German, Danish or Hungarian editions!"

Does that mean that "the Colas" could be only the start of a whole lexicographical publishing venture? Time will tell...
BEFORE
a saturated city center

How the Rouen “métrobus” system has eased traffic congestion

AFTER
the end of bottlenecks
Resolving the problem of congestion

The greater Rouen area (in northern France) had been suffering from traffic problems for more than twenty years. The bus network was saturated, with vehicles stationary for long periods because of the steep topography of the right bank of the city, limiting the number of access routes into the center. It therefore became necessary to create a light urban rail network. A modern version of the tram, the métrobus blends harmoniously into the city landscape. “We have stopped being slaves to our cars,” says a local user. “Traveling has become less expensive,” says another. “I can get from Boulogne to Saint-Sever in less than five minutes,” says a third. “It’s terrific!”

Even the bus is catching on

The network, which is 11.6 km (7½ miles) long, serves the city of Rouen along both the right and left banks of the Seine River, as well as the adjoining towns of Petit Quevilly, Grand Quevilly and Sotteville-lès-Rouen on the left bank. Today, more than 70,000 of the greater Rouen area’s 400,000 residents either live or work less than 400 meters from a métrobus station. Already the network has picked up an encouraging number of users, and the impetus given to public transportation by the project has boosted the use of regular buses. “I always used to take my car, but the métrobus has won me over,” says a resident of Grand Quevilly. “It’s regular, it’s fast, and it serves plenty of key places, even in the suburbs.”

A facelift for neighboring streets

On the left bank of the Seine, the métrobus had to run above ground... which meant carving out a path for it through the urban environment. As a result, all the roads it crossed had to be relaid. Devaux, a Colas IDPN subsidiary, was awarded a 130 million French franc contract to remove and replace well over twenty kilometers of curbstones and gutters, to redesign underground networks and to rebuild more than 30,000 m² of road way, along with laying 60,000 m² of wearing course and 40,000 m² of sidewalks... not forgetting public gardens and other city amenities.

Traveling in perfect safety

as “natural” as possible. They designed light, airy zones without shadowy areas. All underground spaces are constantly surveyed by cameras hooked up to the métrobus control center. Special provision was made for people with limited mobility, with the incorporation of access ramps and elevators.
Road building on the fast track
Colas has links with motor racing that date back well over half a century. From Asphaltimac, the leading product of the 1930s, to Ruflex, a surfacing that has been widely used in the 90s, the Group has repeatedly put its expertise to the service of Formula One racing, with spectacular results. And each circuit requires maintenance.

At Monaco, twenty years or so ago, the cars racing round the circuit came within one meter of the spectators,” smiles French Grand Prix organizer Philippe Gurdjian. “Instead of safety barriers, they just had the sidewalk! But those days are over, and today, a circuit must evolve as fast as Formula One technology does.”

The earliest examples of such innovations could be found on the Monaco circuit as of 1935, with Asphaltimac, which was the star product of its day. By 1969, the Group had made its first appearance at the Paul Ricard circuit at Le Castellet, in the south of France, laying a Rugsphalt surface. Over the years, with work on more circuits, the surfaces became more specialized, and in 1986, elastomer products such as Ruflex came into use. At the Les Essarts circuit in Rouen, followed by the Bugatti circuit at Le Mans, the Paul Armagnac circuit in Nogaro, and – once again – the Paul Ricard circuit at Le Castellet, the surfaces laid by Colas consistently proved to have excellent qualities of endurance and resistance. Such experience of motor racing circuits, coupled with the Group’s proven expertise, soon led to more contracts, and Colas boasted one success after another. In 1988, Sacer Atlantique worked on the Hunaudières straight on the circuit of the Le Mans 24 Hours. The next year, Colas Sud-Ouest rebuilt the track of the Paul Armagnac circuit in Nogaro, and then in 1990, the Nevers work center surfaced the Nevers Magny-Cours track, in time for the circuit to host its first French Grand Prix.

During the 1990s, with the Group’s growing international development, there have been numerous opportunities to export this expertise across the Atlantic. In 1995, North American teams built the Michigan International Speedway in the United States, a speed ring for NASCAR stock-car racing. Meanwhile, two of this season’s Formula One Grands Prix benefited from progress in Colas technology: Sintra has renovated the Gilles Villeneuve circuit in Montreal for the Canadian Grand Prix, and Colas Nevers refurbished the Magny-Cours circuit prior to the French Grand Prix.

A decade on, Ruflex is still the Group’s star product, although it has been much improved over the years. But what has Colas expertise brought to all of these motor racing circuits in France and North America? “When you call in a Colas team, you can be certain of the quality of the work,” says Philippe Gurdjian. With speeds that can reach 300 kph (190 mph), there is no room for mistakes: zero tolerance of error. Added to its widely recognized know-how in road surfacing, the Group has taken on board a number of additional requirements specific to motor sport. The expertise it brings to the motor racing circuit includes stress analysis, tight and precise schedules, products combining high resistance and strong elasticity, and flawless application.
“When you call in a Colas team, you can be certain of the quality of the work.”
Philippe Gurdjian

Stress analysis
Stress analysis, which is the cornerstone of all road building, requires even closer attention in the case of a motor racing circuit. “Of course, all our customers have a lot at stake, and we always go out of our way to work quickly and well,” remarks Bernard Dziadkowiak, head of the Nevers work center. “But the difference is that on a Formula One circuit, an error can prove fatal for a driver, given the very low ground clearance of racing cars.” Racing cars have very stiff suspensions and very little play on the shock absorbers to achieve maximum downforces with reduced clearance. All the cars always drive in the same direction, cornering at high speeds, and they drive virtually identical trajectories, generating very strong centrifugal force on bends and leaving tire marks on acceleration and braking. The track must be relatively light colored so that oil spots or cracks are easy to see. Grip must be good, and the track free of skid patches. Drainage must be impeccable in all types of weather. And most important of all, surface regularity must be perfect, like a billiard table for the driver. All that, plus the fact that the road surface which is laid has to be capable of guaranteeing that the qualities of the circuit will last over time.

“Since 1990, the surface of Magny-Cours hasn’t been touched, apart from when we widened the Adelaide hairpin, which is a very honorable record when you compare it with other circuits,” Philippe Gurdjian is proud to report. “But the works that have been carried out on the two corners had nothing to do with wear. Most motor racing circuits host competitions involving all kinds of vehicles. When riders fall off in motor cycle events, the toe-clips make little cuts in the surface which end up making holes in the track. There’s no question of asking Formula One drivers to

“On a Formula One circuit, an error can prove fatal for a driver, given the very low ground clearance of racing cars.”
Bernard Dziadkowiak, head of the Nevers work center

ROUTES number 3
On the Gilles Villeneuve circuit in Montreal, Canada, the works consisted in removing the existing asphalt concrete by milling, reprofiling the track with hot-mix asphalt, and then applying a layer of high-performance wearing course. The surface, which was applied two months before the Grand Prix, had to resist the exceptional weather conditions in Canada.

use a surface that has deteriorated in any way. The Nevers work center used three pavers for a week over the full width of the corners, laying Ruflex and Colflex SS binder, with 6% elastomer content. The surface is chiefly characterized by a higher degree of resistance to cutting. The result was conclusive, and the customer delighted! "Magny-Cours has a reputation for having the best longitudinal profile - there isn’t a bump," adds Gurdjian. "The height of the joint between the existing and the new surfaces is less than 10 millimeters. Perfect!" In Canada, the FIA demanded the use of an asphalt concrete that was resistant to wear and raveling. Work carried out on the Gilles Villeneuve circuit in 1996 consisted in removing the existing asphalt concrete by milling, reprofiling the track with hot-mix asphalt, and then applying a layer of high-performance wearing course. "We worked with a polymer modified asphalt, which avoids cracks in the paving, and applied it at 165°," says Robert Vanasse, regional manager of Sintra Inc. Métropole. To provide the layers with optimal grip, the scarified surface was heated over its entire width with infra-red apparatus before being coated with Emulcol. This process having proved itself, it was specified by the designer for this year's work. A surface also has to be capable of resisting exceptional weather conditions, depending on the country in question. But according to international motor sport

INTERVIEW

Olivier Panis: a view from the cockpit

Olivier Panis, the number one driver in the Prost Grand Prix team, was the victim of a spectacular accident on June 15 at the Canadian Grand Prix. Panis, who was winner of the 1996 Monaco Grand Prix, is desperately keen to make his return to Formula One competition before the end of the season.

How do you rate the new Magny-Cours circuit in terms of the surface? Very highly. Magny-Cours is a circuit that has a very high level of grip, certainly the best of all the circuits I've ever driven on. And, contrary to what some people think, that doesn't mean that the tires wear out more.

What about safety equipment? Because of my accident, I haven't had the opportunity to test the new equipment that has been installed this year, but all the drivers are in agreement that Magny-Cours is the safest of the circuits. A Formula One is a high-performance car that is becoming safer and safer for the driver, but at the end of the day it's a powerful machine that can easily go wrong. That's why all forms of equipment that are capable of providing extra safety, especially to cushion crashes (gravel traps, tire walls, barriers, and so on), are welcome. Philippe Gurdjian has been working on these improvements for a number of years, in consultation with the drivers and the FIA. These are the conditions that are vital for the survival of Grands Prix.

You belong to a new team that has made a promising start. How do you envisage your future? With a lot of confidence. True, I have had an accident, but thanks to my physical fitness and effective physiotherapy, my convalescence has been going very well, and I expect to be driving again in September. And I have been keeping in regular contact with my team in preparation for the last Grands Prix of the season.
regulations, a surface has to be laid two months before a Grand Prix, to leave enough time for the elimination of surface oils. For the Montreal jobsite, this meant that preparatory work had to be carried out when there was still snow at the side of the track, the thaw being far from complete. To deal with such climatic difficulties, the work teams had to use heaters immediately before using pavers. "We chose days on which the weather was suitable for laying asphalt, neither too hot nor too windy," adds Robert Vanasse.

On the other hand, during the Grand Prix, with summer weather, the track can become exceptionally hot. During tendering for the Magny-Cours jobsite, for instance, Philippe Gurdjian demanded a surface that could resist — without deformation — temperatures ranging from -40°C to +60°C.

Responsible for safety
Colas has proved itself a winning team for surfacing, but the Group contributes just as much to safety equipment on motor racing circuits. Each year at Magny-Cours, for instance, Colas know-how is behind the erection of safety barriers, the refurbishment of the access roads that allow abandoned cars to be removed from the track without race marshals needing to venture onto the...
track, refilling the sandtraps which slow down cars before the concrete walls or safety rails. In addition, the original rumble-strip style curbs have been replaced by negative curbs. And every circuit requires permanent and painstaking maintenance by specialists who can rapidly remove all dust and trace of sand from the track.

**Magney-Cours in Figures**
- Area of site: 355 hectares
- Length of track: 4,250 meters
- Width: between 10 meters and 15 meters
- 47 identical pit garages
- Up to 100,000 spectators
- Over 99,000 tires providing safety protection
- 25,000 car parking places
- 140 helicopter bays
- Price of a ticket for three days: between 350 and 2,500 French francs (approx. $60 to $430)

**Interview**

**Philippe Gurdjian, the man at Magny-Cours**

Philippe Gurdjian has been responsible for the promotion and organization of the French Grand Prix ever since 1985. His vast experience is recognized worldwide. He collaborates closely with the FIA and the FFSA, paying particular close attention to the drivers' views. His innovations have been applied methodically—and successfully—thanks to investments made by the Nièvre Department.

**Philippe Gurdjian, what does the organization of a Grand Prix consist of?**
The organization of a Grand Prix is a year's work to arrange an event that lasts three days. It means imagining and simulating so that we can anticipate and find preventive solutions to any problem that might arise. In actual fact, we are de luxe personal assistants to an entire population—children, the elderly, VIPs, officials. The 1997 Grand Prix was the 12th time I've faced the challenge. As you can imagine, I'm starting to get quite experienced! Through the year, I manage a small team of fifteen people, but there are about five thousand extra people added to that in the Grand Prix week—truck drivers, electricians, caterers, doctors, firefighters. The medical team alone is 110 strong, and they are expected to treat the drivers just as much as the spectators, for all manner of problems, starting with sunstroke.

People always say that the Magny-Cours circuit is at the leading edge for safety features. What does this mean in practice? The drivers and other motor sport professionals do, indeed, say that it's one of the safest circuits in the world. As an organizer, I visit circuits all around the world, and I have learned a certain number of lessons. And my own past as a former racing driver helps me to install safety equipment and set up safety measures. To give you an example, I have considerably increased the number of gravel traps and trackside tires. I have also made changes to the curbs, the tire protection walls and the layout coming out of the Estoril corner. In addition, each garage is fitted with an orange lamp. When a car comes off the track into the pit-lane, it emits a signal that lights up the lamp in the garage to warn the mechanics. It's an extra safety feature at Magny-Cours which is being taken up elsewhere.

**What is your explanation of the immense popularity that is now enjoyed by Formula One?**
Back in ancient Greece, arena games and chariot racing always fascinated the crowds. In modern times, we have to pay tribute to a great man, Bernie Ecclestone, for successfully masterminding the rise of this discipline of motor racing. It's true to say that he closed off access to it, but it's this very inaccessibility that makes it so desirable. Passion has no price. Even in Argentina, where the standard of living is not of the highest, men go crazy over Formula One. At Imola, in Italy, people go as far as setting up unauthorized viewing platforms on mobile cranes, ignoring all conceivable safety standards, so that people who can't afford the entrance money are able to attend the event cheaply. Naturally, this is a practice we fight against in France. Bernie Ecclestone has managed to re-create a Greek tragedy in seventeen episodes through the year, in different countries but with a unity of time, fearless actors and a dramatic plot. The spectators spend three days in an arena, waiting for the Sunday denouement. And added to the theatricality of the sport is the star system, the role of brand sponsoring, and the magic of the noise. The cocktail is explosive.
Around the world with 40,000 people

Colas is active in some fifty countries around the world. There are now more than 40,000 men and women working as part of the Group, chiefly in Europe, the Indian Ocean, in Africa and in North America. Come see the world!
7,000 people
- Czech Republic: 950
- Romania: 140
- Hungary: 2,040
- Austria: 40
- Germany: 120
- Ireland: 200

850 - Great Britain
900 - Denmark
150 - Finland
500 - Switzerland
1,100 - Belgium
10 - Iceland

400 people
- Indonesia: 100
- India: 10
- Nepal: 40
- Thailand: 250

4,300 people
- Comoros: 300
- Mauritius: 1,270
- Mayotte: 800
- Reunion: 600

- New Caledonia: 40
- Djibouti: 90
- Madagascar: 1,200

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Figures for April 1997
One heads research into binders, resins and emulsions at RTB, another is manager of Hincol in India, a third has been running a mixing plant in Hungary, yet another is a site manager in Burkina Faso... Every day, all of these people give it all they’ve got to make Colas succeed.
From Martinique to Brittany

Christiane Fantaisie, executive secretary, Colas Martinique

The oldest of 8 children, Christiane has just turned 55 and has worked at Colas Martinique for 33 years. “I left home and my brothers and sisters to join the Colas family,” she laughs. Warm and cheerful, she is a small, but determined, woman who fears nothing and is never happier than when finding solutions to all types of problems. “In all this time I have worked with 12 bosses and I have always tried to gain their confidence, despite my outspokenness. We Leos are not known for our flexibility!” says Christiane with a smile. Martinique-born with a dash of Indian blood, she would not want anything in the past years changed. Her only disappointment came when she built a house at Pointe des Nègres to be close to company headquarters, never imagining that the headquarters would then move. But the new head office has once more brought her closer to home. Christiane dreams of retiring to the French countryside, although her husband wants to stay on the island. Meanwhile, she often visits Brittany, her favorite French region, where she calls on former Colas Martinique expatriates.

Time for work, family... and sport

Costen Shockley, area manager, IA Construction

Not many people retire at the ripe old age of 23. But after a baseball career spanning five seasons that’s just what Costen Shockley did. Now area manager with I.A. Construction Corp., he recalls how he quit: “I’d played major league with the Phillies and the Angels. But in 1965 I was told I’d be going back to the minor leagues. I said no. My wife didn’t say so, but she was unhappy with all the traveling. Our first son, Curt, was only a few months old.” He took his wife and son back to his hometown of Georgetown, Delaware, where he got a job in construction. He joined I.A. a year later as asphalt plant foreman, then went out to work in the field as job foreman. In 1972, he became construction superintendent. But baseball was still part of his life, and his finest hour came in 1981, when he coached the Georgetown senior league team to the world championship. “It was the highlight of my life in baseball. We beat Taiwan, who hadn’t lost in eight years. And my son, Jeff, was on the team.” Costen’s devotion to local baseball prompted true support from I.A. “My district manager Bob Donovan helped me work round all that coaching.” Two years ago, Costen became area manager and was inducted into the Maryland Baseball Hall of Fame for his coaching feat in 1981. Delaware followed suit last year in what was a just reward for his loyalty as a native son.
Research applied in the field

Christine Deneuvillers, head of research into binders, resins and emulsions at RTE

Since joining the Sreg RTE research laboratory in 1988, Christine’s career path has taken her straight to the top. Equipped with a certificate in chemistry, she entered the resins department as a research technician, combining research work with providing technical support in the field and in plants. Two years later, she decided to attend evening classes at the CNAM engineering school. Setting off for class after a hard day’s work was not always easy. “I found it tough at first,” admits Christine, “but I am very persevering. Once I have started something I like to see it through to the end.” This philosophy paid off and in 1994 she was rewarded with a first-class engineering degree in industrial chemistry. The following year, Réspoloy decided to set up its own resins laboratory. Christine was given responsibility for the resins section at RTE. Returning from maternity leave in January of this year, Christine was made of head of research into binders, resins and emulsions. Her team, which consists of two technicians and several trainees, is researching into some fifteen areas. “I am particularly insistent that our lines of research are fieldwork-led,” she says. “Our usefulness is demonstrated by the extent to which application processes are being constantly improved.”

A thinker and a doer

Ravinder Dhir, Managing Director, Hincol, India

It is only two years since Ravinder Dhir became Managing Director of Hincol, the Colas SA and Hindustan Petroleum Corporation joint venture. In that time he has accomplished a great deal. He was seconded to Hincol from Hindustan Petroleum where he had spent his entire working life. His assignment was to ensure that construction of the bitumen emulsion plant at Vashi, newly commenced, would be performed to schedule. The plant was commissioned in April 1997, right on time.

Emulsion is a new product in India, so his next job was to market it in the south and west of the country. He scored another success, but prefers to credit “the patience and perseverance of the young and dynamic Hincol management team.”

The facts are in contrast with Ravinder’s modesty. A new plant is to be built in Delhi and the Vashi plant will sell 15,000 metric tons of its 20,000 metric ton capacity this year.

But such burgeoning business does not distract Ravinder Dhir from his intellectual and spiritual leanings. At heart, he is still the student who read Humanities at Delhi University, and his greatest loves are books and music—apart, of course, from his wife and daughter, who will soon be starting college.
Wherever it takes you...

Jean-Michel Ailloud, plant manager, Sreg Sud-Est

"What is special about my job," says Jean-Michel Ailloud, "is that it can't be taught. You have to learn it by doing." He runs a mobile mixing plant for Sreg Sud-Est, and for the past few months he has been assigned to Budapest to work on the M5 motorway site. 30-year-old Jean-Michel will have worked for the Group for ten years next January. After running a stationary plant for some years, he decided to take to the road again with his first love, the mobile TSM 21 drum mixing plant, which has a record production capacity of 400 metric tons per hour. "A plant is like a second wife. You have to take care of it day and night, look after it and maintain it." His assignment in Hungary has not yet given him an "expat" outlook, and for the time being he is content to fulfill site requirements by running his plant at full capacity. He ensures that there is as little downtime and as few stoppages as possible, thereby minimizing impact on schedules. Jean-Michel has to be resourceful and constantly on his toes, but he likes nothing better than to deliver – and he makes sure he gives of his very best on each site he works on.

Climbing the corporate ladder

René Blanvillain, General Manager, SN Pergaz

"When we joined SPAC in 1983, there were just ten of us with three delivery tricycles and two old trucks," recounts René Blanvillain. "Today we have 80 people as technicians, laborers, welders, masons and carpenters and we have a fleet of over 40 vehicles."

René rose through the ranks from plumber to welder, foreman, site superintendent and then site manager. It is his determination to progress which, at age 50, has made him a company manager of a different sort. Using his tenacity and resolve, René has clawed back hard-to-win markets and remains modest about his achievements when contemplating his steadily climbing sales curve. The company has contracts for hooking up all types of buildings to gas main supplies and for hot water and heating network maintenance and renovation programs. It has developed know-how in multiple areas and numbers public utilities such as Gaz de France and French railways among its customers. "We go into nothing without knowing exactly what we are doing," stresses René. "We are a GDF-approved service supplier and all foreman are fully trained in life-saving." To stay close to customer requirements, René is a firm believer in field training. He tries to recruit young, unskilled people who will learn the job from the bottom up, working alongside more experienced operatives. A former judo champion, he believes in sport to improve both physical condition and the ability to respond to customer demands. For example, a welder must be able to work perched on a knotted rope when repairing a riser on the outside of a building.
All you need is a good eye

Louis Rizza, site vehicle driver, Société Routière de Haute-Corse

Almost ten years ago, Louis Rizza returned to SRHC as a site vehicle driver, after an interval of several years spent working as a bus driver. In the company, he is proud of being the one whose job is to adjust the paver. “Not everybody is entrusted with doing that!” he notes. Pavements, tennis courts, whatever the surface, all you need is a good eye! Louis won a Losange d’Or award last November, and he is a conscientious worker who loves his job. Or, rather, his jobs, for whenever his schedule allows, he still likes to get behind the wheel of a touring bus. In recent months, he has driven parties through Corsica, Sardinia and mainland Italy. Once again, great accuracy means everything – in this case, his concern is trying not to frighten tourists on twisty mountain roads. This father of five somehow finds time for other activities. Two evenings a week, he trains the top women’s soccer team in Corsica.

“Not everybody is entrusted with adjusting the paver.”

On the road to Katmandu

Christophe Marchand, site manager, Sarer, Switzerland

Evian-born Christophe Marchand is not the first French border resident to cross the frontier to work in Switzerland. At the start of his construction career, Christophe joined Ertec SA, the Colas Switzerland engineering consultant office, where he worked first as a lab technician and then became head of the roads department in Geneva. In 1994 he became site manager for Sarer, a subsidiary of Colas Switzerland in the Vaud canton. He was offered the chance of a technical assignment in Nepal where the Swiss Development Cooperation organization is financing 80% of the Katmandu-China highway construction that crosses Tibet. Christophe is now on his fifth assignment there. His tasks include setting up a quality assurance plan, installing a laboratory, training lab technicians and supervising the application of materials.

“In addition to the language barrier, the main difficulty locally is the caste system, which acts as a barrier to the transfer of both information and men,” he recounts. “There are almost 1,500 people living and working on the site, for 27 km of road.” However, each time Christophe returns home, he is satisfied with the outcome of his assignment. As he says, “I chose construction work for its contact with people and the different kinds of specialized work involved. Being part of a major Group also means that we are a leading-edge company technologically.” A distinct advantage when on the high road to China.
Living out the dream of working abroad

Laurent Mazzucchelli, site manager in Burkina Faso

"The hardest thing wasn't leaving France, but actually making up my mind that this was what I wanted to do," recalls Laurent Mazzucchelli. For seven years, this contract manager at Colas Est's Mulhouse office nurtured the dream of working under distant skies. One day, he put in an expatriation request, and things went fast from that point on. Destination: Burkina Faso, once he had completed a five-month stint alone in the Ivory Coast, on the site of the Bondoukou-Bona road. It was a harsh initiation to life in West Africa. Laurent discovered the heat and humidity of the equatorial climate, the problems of spending days and nights in an isolated base camp in the brush, new working methods, and long hours on the jobsite before the monsoon season.

He is proud to work on the Group’s largest earthworks site, but was in low spirits when he spent three weeks suffering from a bout of malaria. "A really tough moment," he admits, "but when you manage to get going again, you're all the stronger." Now based in Bobo Dioulasso, Laurent is growing familiar with the smiling faces of the Burkina Faso workers on the jobsite. And, most important, his wife and two daughters recently came out to join him.

Mechanic and volunteer firefighter

Robert Aivaliotis, mechanic at the Saint-Etienne work center

No two days ever alike – that has been the ideal of Robert Aivaliotis for the past fifteen years. After working for several years as a mechanic in a garage, Robert felt that he wanted a job where he could perform more varied duties. Influenced by his father-in-law, who worked as a grader operator in the Group, he landed a job as a mechanic at the Saint-Etienne work center (Colas Rhône-Alpes). "They assigned me to a cement-bound aggregates plant, which I worked with month after month, traveling from site to site."

In 1982, Robert decided that he could do something useful for other people with his free time, and so he enrolled for training as a part-time volunteer firefighter in his home town of Chambon Feugerolles. "There are 34 volunteers in all, and we are on call one week out of three, on weekends and at night, without counting the occasional major emergency, when we are called in to reinforce the permanent team of professional firefighters."

Today, Robert performs a range of duties at the SCHL (Société des Carrières de Haute-Loire), where he hammers home the safety message to his colleagues by day, in the hope of avoiding the emergency situations he deals with at night...
Régis Debray, a philosopher takes to the road
A philosophy graduate of the prestigious Ecole Normale Supérieure, novelist and politician, Régis Debray has written many essays that have added to our understanding of the history of contemporary ideas. After living in Cuba, Bolivia and Chile, he returned to France in 1970 to write. A personal friend of President François Mitterrand, Régis Debray was nominated special advisor to the President in May 1981 and a member of the Council of State in 1985. He is Editor-in-Chief of the publication *Cahiers de Médiologie*, the second number of which is entitled “What is a road?”

Why did you choose the topic of the road?  
Because the road is a fact of culture and culture does not pay attention to it. By linking people up with each other, the road has given rise to communities, exchanges and the transmission of ideas, images and people. But strangely, this appears to be so taken for granted that those involved in culture rarely pay their debt to the road. Mediologie is a discipline that studies media, vectors and networks, in other words, all of the hidden side of culture. The road would appear to me to be every bit as worthy of attention as, say, paper — another invisible medium. I therefore thought that it would be interesting to move from the vehicle to the medium, from known considerations on speed and transportation to what it is that permits transportation and speed, i.e. the strip of asphalt laid over the ground.

You conclude an article entitled "Rhapsody for the Road" with the comment: "The road is not an anecdote, a picturesque excursion to be relegated to the sidelines of human knowledge. It is a direct opening onto the human biped in full action." Do you see this as a universal definition of the road?

I believe that the road is a material mark on the earth, one that is tangible and permanent, because it is a mark that gives rise to a repeatable and reversible itinerary. It is possible both to come and go, as well as to cover the same route twice.

The road is both a tool of freedom and a tool of control. Empires built roads to move troops around. During the age of enlightenment, when the countryside started to be opened up, philosophers spoke out in favor of bridge and road building. The tremendous road building and map making activity that took place during the 18th century was the beginning of human and popular emancipation. The road is an amazing call of hope. It is unusual to find great poets who are not moved by the road.

Dealing with the topic of the road, you have turned to writers such as Kerouac or Péguy, but also to the engineers of companies such as Colas and Michelin. How did you decide who would feature on the list of those who have been involved in the wider concept of the road?

We tried to bridge the gap between people with technological skills and those with a cultural vision, between road builders and road users. Put more precisely, we have tried to establish a passage between the chemistry and the poetry of the road. Mediologie is the study of the relationship between technique and culture. We try each time to extend a fraternal hand to
industrialists so that they can discover the fact that they are also men of culture. The highways department is every bit as much a cultural department as theater or music departments.

There was an exhibition of photographs and a series of lectures, timed to coincide with the publication of the book. The lecture cycle is now over. What did you learn from it? Were you able to use any of the ideas expressed as sources of enrichment?

The road is still a highly sensitive topic, full of easily-triggered conflicts. Between the various transportation networks, dialogue appears to be difficult. Not only are there economic divergencies, but there are different world views, which go to show to what extent the road is a cultural, and not merely a material object. It is an existential choice, directed at the individual, mobility and free choice. The railway implies a world view that is more centralised, coordinated and circumscribed. Every system of transportation, by its very configuration, implies a hidden ideological agenda, just in the same way that ideologues have a mechanistic or materialist unconscious. The discussions were actual confrontations between these different models of civilization, and also, no doubt, of visions of the future of this country. All of this strengthened my conviction that we must take a keen interest in material cultures.

We are apparently undergoing something of a renaissance of “popular” philosophy at present. Philosophical discussions are held in cafés, there are philosophy programs on television and books, such as those by Sophie de Gardner, are being sold by the million. Do you think that we have turned to philosophy to try and find solutions for a better life?

A philosopher with a classical academic training can only look kindly upon these pleasant forms of discussion, but which in the end resemble conversations about ideas of a general nature rather than true philosophical research, which requires discipline and abstraction. The crisis of religious choices and collective belonging has pushed moral, personal and existential questioning into the realm of philosophy when previously the answers would have been provided by the confessor, the psychoanalyst or the head of the family. There is a demand for security, for happiness, to which philosophy does not seem to me to be capable of providing a response. Philosophy is a stimulant, not a sedative or a tranquilizer.

Your travels around the world led you to discover different lands, peoples and political regimes. Did the various itineraries you traveled help you in your quest for self?

Can one go so far as to say that you can discover your own path by taking to the roads, no matter how unique they may be?

Education always implies a voyage. In the 18th century this was known as the Grand Tour. As part of their studies, young Englishmen of wealthy families would travel through Europe for two or three years. It was considered absolutely indispensable in order to complete their education. In a similar way the Compagnons du Tour de France, an order of French journeymen-craftsmen, are not considered to be fully skilled until they have completed the trip that takes them from one house to another. Contact with other mores, other people, other climates, other regions leads to self-discovery. The road is also a school and a great educator. To take to the road is to serve an apprenticeship.
Jean-Louis Guilhaumon wears numerous hats in the town of Marcia, in southeast France. He is mayor, principal of the junior high... and founder and organizer of the annual "Jazz in Marcia" festival. A varied but consistently high-class program makes this summer event an annual highlight for jazz-lovers.

In 20 years, you have managed to make a tiny provincial French town of 1,300 inhabitants into one of the meccas of jazz in Europe, with almost 100,000 visitors attending the ten-day festival each year. To what do you attribute your success?

It has been a tremendous adventure shared by a group of genuine people. We have tried to design an initiative with a temporal dimension. Looking beyond the festival, we have developed new activities by staging concerts throughout the year.

We have also installed "Les Territoires du Jazz," which is a musicographical space open all year round, where aficionados and laymen alike can wander through the history of jazz, by means of a series of original decor. And on an educational level, we have had the idea of opening up a jazz class in the Marcia junior high school.

The keys to our success, I would say, are the hard work, stubbornness and enthusiasm of a group of men and women for an original project of local development, and most of all the support of the inhabitants for this project, which is now theirs and part of their heritage.

Jazz in Marcia is described as a festival that is "as sensual as summer, as spiritual as music," where you listen to music "with your feet on the grass but your head in the stars." Although many big names perform, the festival has managed to retain a
familiar style and a good-natured and relaxed atmosphere. Is this because of the organizer, the region or the artists that come and perform?

Most of all, the region. Ours is an authentic and sociable part of the world, where people have an in-built sense of hospitality. But it also comes from the musicians who play here. Jazz has taken root in Marcia because it contains all the seeds that were needed for such a project to flourish. This chemistry is what gives our festival its very special atmosphere. Whenever people ask me to define the positioning of Marcia in relation to other festivals, I simply reply that it’s different here...

What conclusions would you draw after the 20th annual festival?

The 20th anniversary Jazz in Marcia festival lived up to all our expectations, both in terms of attendance and of quality. The musicians gave of their best, and so did the public. As a matter of fact, we have decided to give our audience an opportunity to express itself as a way of celebrating our 20th anniversary. We are publishing a book called Love Letters to Marcia. We have received a vast number of letters in many styles, but all relating musical emotions and testifying to the affective ties between Jazz in Marcia and its public.

Marcia is not only a music festival, but also an event that promotes human values. Our twentieth anniversary was once again a great meeting between musicians and the public.

By creating a jazz school, not only have you given children the opportunity to develop, but you have ensured the survival of a school that was under threat of closure. The festival depends heavily on the commitment of many volunteers, but it has also allowed a number of jobs to be created. You have devised successful schemes that combine economic and cultural development.

Are you planning further projects for the coming years?

Naturally! With aid from the department, the region and the State, we are going to set up a major project which derives directly from the existence of the festival. To give us a better chance of resisting the expected decline in rural areas, we are going to boost our amenities for culture and tourism by developing a number of Marcia’s main features – renovating the market square, the emblematic heart of the town; modernizing concert halls and the movie theater; creating a leisure park, complete with a lake and vacation homes on stilts; and developing a number of facilities around the festival tent, more directly linked to the festival itself. In a word, these are projects which encourage local development and are sure to generate further initiatives.

In twenty years, Marcia, a tiny town of 1,300 inhabitants, has become a mecca of European jazz. Every year, almost 100,000 jazz fans attend the festival.

HISTORY

Marcia turns twenty

The Jazz in Marcia festival, founded in 1978, is supported by a number of sponsors, including Colas. To celebrate its 20th anniversary, a host of jazz luminaries performed here this year, including Ray Charles, Oscar Peterson, B. B. King, Dee Dee Bridgewater and Guy Lafitte.

Jean-Louis Guilbaumen has now extended the town’s links with jazz beyond the annual August event, organizing a program of music courses, with aid from a local arts development association, ADDA 32.
INTERVIEW

Walter Paszkowski: road spending and economic growth go hand in hand

“We are encouraging other government departments to call in private sector partners to optimize their cost management.”

After serving as Alberta’s Minister of Agriculture for four years, Walter Paszkowski was recently appointed the Province’s Minister of Transport. An agronomist by training, he owns a seed production and distribution business. He represents the constituency of Grande Prairie-Smoky in the provincial parliament.

What are the major lines of the roads budget in Alberta?
Because priority has been given to such areas as health, education and welfare, our budget has been subjected to steep cuts in the last few years. But today we are experiencing such economic growth that substantial investments are going to be needed in road infrastructures. By the year 2005, agricultural production is expected to quadruple. Rather than transporting it in bulk, we transform it locally. So we will have semi-finished or finished products that will no longer only be transported by pipe or by rail, but also by road.

Would you envisage transferring infrastructure budgets to municipalities, as other provinces have done?
No, that’s not on the agenda. The system we now have, where the Province finances infrastructures, in conjunction with municipalities, functions perfectly well.

What relations do you have with the road building lobby, the Alberta Road Builders?
We work with road constructors, and keep them informed of the level of investment in the Province over the next two to three years.

What is your assessment of the privatization of road maintenance in Alberta?
Our road network has been shared out for a year between eight companies, which are each responsible for the upkeep of between 1,500 km and 2,000 km of four-lane highway. The system is working well, and we are fully satisfied with it. What the ministry wants to do is cut down its role to running projects, sub-contracting the actual execution of sites. Between May 1995 and November 1996, privatization enabled us to trim our workforce down from 2,150 to 780 people.

What is the impact of winter maintenance on your annual budget?
The principal problem that we have to face is humidity, which brings a risk of freezing. Most of our efforts are therefore devoted to upstream prevention. During the winter, we spend a lot on snow and ice removal. Our annual budget stands at almost 160 million Canadian dollars.

A number of European governments make use of techniques which enable them to benefit from research performed by road building companies. Do you envisage developing co-operations between your ministry and private companies?
The Alberta transports department is recognized as being very innovative, and is the leader in Canada for everything connected with new technologies. We are working in close collaboration with companies.
Yvan Demers: two thirds of the network is in the hands of municipalities

A member of the Quebec Order of Engineers, Yvan Demers became Deputy Transport Minister in November 1994. He is a member of the executive committee of the World Roads Association and since March, 1995 he has been chairman of the Board of Directors of the World Interchange Network, which promotes technical exchanges on the Internet.

"With our workforce growing smaller, my department has to find new ways of working with the private sector."

Several Canadian provinces have privatized the operation of their road network. How does Quebec view this development?

For the time being, the Quebec Ministry of Transport retains full authority for operating and maintaining its roads.

Could this choice be reconsidered?

In recent years, the government of Quebec has been attempting to reduce its workforce. In the past year, the figure has fallen by 20%. To make further progress here, we will have to find new ways of working with private companies, with private operators on certain highway stretches, for instance. No decision has been made for the moment, though. All road construction work has been handed over to private contractors, however. The same goes for one half of summer road maintenance and 80% of snow and ice clearance in the winter.

Part of the Quebec road network is now managed by municipalities.

How was the handover organized?

In 1993, two thirds of the 90,000 km of roads that used to be managed by the Ministry of Transport were handed over to municipalities, in return for financial compensation that varied according to the number of kilometers, the condition of the roads at issue, and the level of the municipality’s resources. Today, the municipalities continue to receive a subsidy from the State, but they are totally responsible for operating, maintaining and improving the network.

Is Quebec envisaging implementing electronic toll collection systems, such as those being piloted in Great Britain?

At present, our entire network operates without tolls. We are taking a look at the British solution, but I doubt if it is suitable. If we were to introduce tolls, we would go for a system where users are charged directly, which would have an immediate effect on congestion.

In Quebec, there is a powerful lobby to promote the use of concrete in road construction. What position does your ministry take on this issue?

The refurbishment of our 2,000 kilometers of concrete highways is usually carried out in concrete cement. For new road projects, we tend to prefer concrete in zones with heavy traffic. This is true for the Montreal region.

Is there a Canadian equivalent to the American testing program SHRP (Strategic Highway Research Program)?

Yes, of course there is. We have set up its Canadian counterpart, a program we have baptized CSHRP… C stands for Canadian. This program has not only enabled us to advance in characterizing bitumens and bituminous mixes, but also to acquire new highly specialized equipment.
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Mohamed Kacimi has no fear of the blank canvas when he paints. Whether with his hands or even with his feet, he piles on the earth colors, crushes the blacks, which sometimes outline the shape with all their weight, and sometimes, on the contrary, escape in spirals, wisps, scrolls. A journey into the imagination.