2000 ROUTES

Women and Men on the Road Forward
I wanted this special edition of Routes to present the men and women who help make the Group what it is today.

For obvious reasons, it has not been possible to open up these pages to every member of the Group, but I am sure that each of you will identify with the profiles presented.

I am certain that by reading this superb issue you will realize what the Group’s shared values really are, namely: a passion for building, a spirit of conquest, a sense of responsibility and the rich diversity of our combined experience.

These values are the roots of Colas strategy: enhancing our market leadership every day.

Alain Dupont
OPERATIONS

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A 160 kilometer long laterite road, 180 structures... The Colas teams are building the first section of the future Bamako-Dakar route.

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In the field every day

Field operations account for 80% of the workforce’s activity. Their aims are to build and renovate roads, bridges, buildings, etc., and give customers complete satisfaction.
**REPORT**  Between Kati and Kita, in Mali, Colas is building 160 kilometers of laterite road and 180 structures. This means taking up a major challenge: opening up a whole region by mobilizing equipment and human resources, including a qualified team and the best sub-contractors.  

**40 PROFILES**  What do the head of a technical design office in the Ivory Coast, a saleswoman with Sregor Ouest, a master welder with Spac and the manager of a wood and iron workshop in Mayotte all share? Enthusiasm for keeping abreast of change.
Colas opens up northwest Mali

A 160-kilometer long laterite road linking Kati and Kita, 180 drainage structures...

The Colas teams are building the first section of the future Bamako-Dakar route linking two capitals.

The village of Negela is part of the Greater Kati area in the region of Koulikoro, some 40 kilometers northwest of Bamako, the capital city of Mali. Visitors are warmly welcomed by village dignitaries – the chief of the village, the mayor, even the school headmaster. It is in the heart of this little village in the countryside that the Colas teams in Mali have set up camp. Their task: to build a six to nine meter wide laterite road to replace a small, neglected track which cannot even be used during the rainy season. Once completed, it will take only two hours to travel the 160-kilometer road regardless of the weather. Currently the journey takes five to six hours and can only be undertaken during the dry season.
“Two daily trains have long served our village,” says the village mayor, Kane Moriba. “But poor upkeep, aging installations and frequent derailings all make it impossible to rely on the railway service. Whether the trains carry staple foodstuffs or take a sick person to Bamako, we just can’t depend on them. The road will be of great benefit to all of us.” It is a view all the village people wholeheartedly share with their mayor.

**VILLAGERS AND CREW LIVE HAND IN HAND**

The crew has set up its base camp around a handful of buildings rented from the villagers for the duration of the job. Orange-colored containers insulated against the cold summer season and the winter rains are the site managers’ and foremen’s living quarters. They also house laboratory and topographical equipment. As the project progresses, trailers will tow them on to their next location as required for operations.

The base camp has fitted seamlessly into the life of Negela, where there is neither electricity nor running water. Villagers and crew members are all determined to live in perfect harmony, for they share the same goal – to build the long-awaited road!” Many young people have seized the new road project as an opportunity to work and earn enough to feed their families,” says an advisor to the village chief. “The road puts the capital city within easier reach, and has brought significant more wealth to the village.” The food required to feed the 300-strong crew has provided a market outlet for the produce of local farmers. To ensure that they have adequate water supplies, the Colas team has upgraded the village drinking-water system. The only thing they have brought with them
Many young local village people have seized the construction of the road as an opportunity to work and earn enough to feed their families.

is a temporary generator for electricity, which could well create hitherto nonexistent needs among the local population.

**A ROAD TO THE OUTSIDE WORLD**

“The road is part of a program to open this extensive region of Mali up to the rest of the country. It will eventually provide easier access to the Manantali dam, which provides the bulk of Mali’s electricity. The Mali Textile Development Company (CMDT) will also be able to transport its cotton harvest to Bamako and sell it there,” says Abdoulaye Sako, the government representative on

The start of the works coincided with the completion of another major job in the same region, thereby freeing up equipment.
The worksite is a centre of attraction for the local inhabitants of the village as well as the schoolchildren.

200 to 300 cubic meters of concrete slabs and box culverts are prefabricated every month on the worksite.

the project and a former vice president of Mali's National Assembly. The man behind this large-scale project was the late Stefan Pancrazi. He had been scouting for markets in the Sahel region. Recalls sales manager Modibo Kouyate: "Stefan paid regular visits to Mali, building contact with the authorities in charge of roads. So when a German backer came up with the funds, we got to work."

SLOW BEGINNINGS

"Getting down to business in a country where we hadn't worked for several years..."
required numerous representations to the authorities. And we had to find qualified workers in record time. That wasn’t a problem, though,” says administrative manager Jean-François Cottel. The completion of another major project in the area freed up equipment for the start of the Negela project. “We managed to retrieve a considerable number of machines even though we hadn’t foreseen that overhauling, shipping and getting them through the customs would take quite so long,” says chief mechanic André Allibert who heads a team of 20 mechanics.

According to the young project manager Stéphane Rey, the road should not pose any particular technical difficulties. “What took us time was adjusting and putting all the machinery in place. We had to select subcontractors we didn’t know, formulate the kind of concrete we would use with new materials, and complete the final engineering phase. The GTOI design office did that.”

It is important to understand that it takes only a few days of rain to flood a road completely. Hence the need for as many as 180 drainage structures along the new track.
PROFILE

Stéphane Rey, project manager

When Stéphane Rey got the chance to work in a foreign country, he had been working in France for two years, including a project on the A29 highway. He packed his bags with no hesitation.

“My very first job took me to the Comores Islands in 1997. I was practically alone. I felt like I was taking a great leap forward in level of responsibility.” His stint in the Comores came to an early end because of political unrest. But Stéphane stayed on in the Indian Ocean area, working in Madagascar. His next stop was the Dosso-Sabongari road project in Niger, Africa. “It’s very exciting building roads from scratch and working on major projects because we have a real medium-term vision of the future. At the same time, you have to pay great attention to logistical matters.”

Stéphane directs the teams with great thoroughness, talking with local authorities and negotiating with management and the workforce. “The jobs we do are very comprehensive, so interpersonal skills are essential.” It is also a very time-consuming job, especially when teams are operating from a base camp. “Unfortunately, it’s difficult to separate our private lives from our working lives. Out here in the bush, leisure is very basic. It’s important to put a lot of effort into interacting with each other so that the general atmosphere remains friendly.”
Work began with these structures. “We made some 200 to 300 cubic meters of prefabricated concrete for the slabs and box culverts, which we poured using forms imported from France,” boasts Louis Gobi Blé, the concrete works manager. “The sheer number of box culverts made advancing in a straight line very complicated.” Many of the culverts were poured in series, then placed under the structure by a crane that had been specially acquired for the job.

**BRIGHT FUTURE IN MALI AND ITS NEIGHBORING COUNTRIES**

Investment in such equipment was worthwhile according to Bruno Blanc, who has been at the head of the Mali branch for a few months. “This project was the opportunity to make heavy capital investment that will pay off in other projects in Mali or neighboring countries,” he says. Although twice the size of France, Mali has a paved road network of only two thousand five hundred kilometers. This is still inadequate for a people of farmers and merchants who have to export their produce and goods to neighboring countries, primarily the Ivory Coast. Although it attracts a blaze of media publicity when the annual Paris to Dakar car and motorcycle Rally passes through, landlocked Mali has not been one of the main recipients of international development aid funds. Donors prefer to put money into coastal countries. The political stability which has reigned for the last decade should nevertheless encourage investment. Projects are currently being drafted which should help improve road links with Guinea, Senegal, Niger and Burkina Faso.

After a slow start, the project is now cruising ahead. It advances methodically, each twenty-five kilometer stage following the next in a straight line. Ahead, a bulldozer clears twenty meter wide strips of bush and scrub at a rate of one kilometer per day. The topographers and laboratory technicians
The project is now cruising steadily ahead. It advances methodically, each twenty-five kilometer stretch following the next in a straight line.

PROFILE
Louis Gobi Blé, concrete project supervisor

The Kati to Kita road project also brought Louis to Mali. He hails from Côte d'Ivoire and admits that the first few months were difficult, both from a technical point of view and in terms of his social life. “When you arrive in a new country, it's important to be very tactful if you are to be accepted by the local teams. But once they do accept you, then things go wonderfully.” Aside from the interpersonal aspect, this project also broke new technical ground for Louis. “The sheer number and variety of structures to be built are enormous. But I'm pleased with that because it's given me fresh experience and the chance to get to grips with new techniques on a large-scale job.” As the man in charge of concrete, Louis sees work as his vocation. “After my wife and children, work is what I live for. I feel proud when I look back on what I've achieved and think that several generations later people will still benefit from what we're building.” Before he joined Colas, Louis had worked chiefly in the building trade. “I've discovered that road construction is more comprehensive. You're in direct contact with nature and with local people. Some work sites being on a very large scale, we have to be self-reliant.” Without a passionate commitment to the job, you cannot expect any results or reap the benefits of success.
follow in its wake. Then come close behind the three earthworks crews. Nearby borrow pits supply the laterite used as finishing material for the 15 centimeter thick wearing course that is applied by a grader.

"Under the terms of the contract, the project completion date is slated for December 2000. But as we've been working flat out for the last three months, we hope to be handing over ninety-five per cent of the road before the next rainy season begins in July," boasts Stéphane Rey. The first forty kilometers already make for a safe and reliable link between Bamako and Negela. "We were once a remote village. We're now practically a suburb of the capital," says the Negela school head master delightedly. He has taken advantage of the presence of the Colas team in the village to teach his pupils about public works. But he is aware that the road raises other serious issues. So he adds: "We must now consider the ways of ensuring the safety of the hundreds of children who aren't used to motor traffic." Local authorities in the towns served by the new road have been talking to the project managers in an attempt to persuade them to use their know-how and machines to put down speed bumps in front of their schools and other public places. These will slow the traffic down, one of the prerequisites of prevention.
“Regional identity is of paramount importance, particularly in commercial dealings with local owners.”

International Southern Man

Alan Gray,
President of Nello L. Teer, USA.

In 1998 Colas expanded into southern USA, acquiring some of the Spectrum Group of companies owned by the Hanson corporation. At the same time, Colas made I.A.'s Richmond VA division, Interstate Construction Corp., a subsidiary of newly-acquired Nello L. Teer, based in Raleigh, NC. Alan Gray was appointed President. "There was hesitation," he confides. "I'm kind of conservative. I think long and hard before taking action." Although Alan - Interstate's President for ten years - was deeply rooted in the Richmond area, he was just the man to run both companies as one, while retaining their distinctive local identities. And he had done good work at I.A. "My objective was to improve the business in Raleigh as we'd done in Richmond. Only on a larger scale. Teer had not been successful. It had a top-heavy divisional structure and seemed to have been run by accountants. I wanted us all to be accountants - accounting to each other. So we did away with divisions and got everybody to work together for the good of the company. But I also had to foster the perception of Teer and Interstate as local companies. Identity matters in the South, particularly in commercial dealings with local owners." Changing working practices, habits and mindsets while appearing not to - that's quite a balancing act! A southern man Alan may be, but he is also Colas. He spots and assesses likely prospects for acquisition and reports on them to Randy Eller, Colas Southeast's Vice-President. "There's growth for Colas in the many family companies in Virginia and North Carolina," he says. The toughest side to his job? "People." The most rewarding? "People." Alan runs his companies on fairly lean overheads, so has to do without a human resources manager. He handles personnel and lines up health insurance. "When I see people in the right positions and prospering, I feel proud. I remember one guy, a surveyor-helper. He injured himself at work, so I drafted him into the office as equipment dispatcher. But I saw he had potential, and when our asphalt sales manager left, I appointed him. He's still there and doing a great job." Another moment of pride came at the Colas Group Presentation in September 1999, when Alan presented Nello L. Teer and Interstate - two local companies on an international stage.
Living in a caravan

Jacques Bonnardot, Chief welder, France.

Jacques Bonnardot has always had a nomadic working routine and lifestyle. He began as an apprentice welder in an oil refinery. From there he went on to work on job sites all over France. "I've worked on rigs in the North Sea and pipelines in Algeria. Most of what I've learned, I learned through working in the field." In 1984, Jacques joined Spac as a skilled welder. "It used to be that you'd just work for the duration of a project," he explains. "Contracts were temporary. I'm now a full-time employee. Materials have evolved and standards are more stringent. But the job is basically the same. I go from place to place, depending on where the work is. Mostly I weld gas pipelines belonging to the French gas utility." Jacques is now 53 and has not yet tired of his nomadic working routine. In fact, he has made it his way of life. "My wife and I decided we didn't want to live apart; we wanted to live like an ordinary couple and have a normal family life. We've lived in a caravan since 1969. I think we know France inside out. Living in a caravan is unusual, I admit. But unlike what people imagine, it's comfortable. Our caravan is seven meters long and weighs 20 metric tons. It's like a real house." Jacques and his wife do have a real house. It is in Burgundy. "There's no way I'll settle in one place when I retire. We'll go on traveling around."

"I've learned my job in the field."

Youssef Boussaid still has all of his

Youssef Boussaid, Manager of La Route Marocaine, Morocco.

Colas recruited Youssef Boussaid in 1989 when he returned to Morocco after graduating as an engineer from the Paris engineering school, ESTP. And immediately he left for the Ivory Coast as a site engineer. "It was a total experience which gave me the opportunity to work in every facet of the trade. From the outset, I found myself immersed in the world of a major work site in the bush. I participated in each phase of execution, starting with marking out the right of way and building base camps." After field work came office work. Youssef sampled management in Abidjan, capital of the Ivory Coast, before setting off in the final months of his expat posting for Mali, Benin, Guinea and Gabon. "The aim was to share with other Colas entities the benefits of the tools I'd developed," says Youssef. In January 1994, he was back in Morocco. "I took on the position of site engineer in Marrakesh for a few months," he recalls. "It was a transitional job which helped me network and get accustomed to local working practices. I"
Total dedication to road signing

Gilbert Marquet, Sector manager, France.

At 47 Gilbert Marquet is already well into his second career. The first one was steel, the second with EL-SI, an electrical road sign company. In between, at 30, he went back to school, graduating in marketing. “When I joined EL-SI, I was the only salesman working out in the field. I was given the job of developing a customer portfolio in five departments of the Aquitaine region in southwest France. This was a double challenge. Not only were road signing and the special requirements for installing signs new to me, so was the public works client base I had to get to know from scratch.” Fifteen years on, he is now in charge of a team of 35 that covers 20 departments. “We were a family company. Being taken over by Somaro has helped us boost the size of our business.” What does he like about his job? “Bringing together all the different facets of a contract: analyzing needs, giving advice, providing technical solutions, and actually installing the signs. We’re here to solve a variety of road safety problems: a dangerous bend, crossroads or access roads. Our customers expect innovative solutions and advice. The maintenance market is currently faster-growing than the equipment market.” In 2000, he will be focusing on local authorities. One more challenge is not about to intimidate him...

"Our clients expect original solutions."

early enthusiasm

might be Moroccan but I’d never worked in Morocco!” He was soon appointed sector manager for Grands Travaux Routiers (GTR) in Meknes and is now work center manager with La Route Marocaine (LRM) in Marrakesh. He has a staff of 250 and has lost none of his early enthusiasm. “It’s important to invest in people, particularly the young people joining the business. We should always bear in mind the training of those who’ll come after us.”

"It’s important to invest in people and always bear in mind the training of those who’ll come after us."
"We surface car parks, carriageways and paths with the Fibredec process."

When recession hit the British building trade in the early nineties, Pat Sheehan accepted a six-month contract working in a Colas laboratory at Rowfant in West Sussex. "I had twelve years' experience as a contracts supervisor and site agent, but I took what was going" confides Pat. A full-time position came up in the lab, and he stayed on for eighteen months. Then he heard Fibredec East at Rowfant was looking for a contract supervisor. He jumped at the chance. Now, four years on, he is managing a hundred sites a year. "The atmosphere is excellent here," he says. "There's a sense of pride in Colas. We're proud of our quality and our processes."

Fibredec is, in fact, named after a process for surfacing type-1 sub-bases. Says Pat: "We surface car parks, carriageways and paths. Fibredec has a special aesthetic appeal. The golden gravel look is a favorite quality."

Is it just a pretty surface? "No. It has excellent aggregate retention. It doesn't rut, one reason why we were chosen to surface much of the nationwide cycle-path network for Sustrans. Nor does it throw up dust. The coach park at Leeds Castle in Kent was a dustbowl until we 'Fibreded' it."

The jewel in Fibredec's crown is London's Millennium Dome where it surfaced the coach park and footpaths. "There was a commitment to saving on materials and thinking ahead."

The make-up was recycled, stabilized clay excavated during the extension of the Jubilee tube line. Fibredec fitted in not only because it's attractive and robust, but also because a recycling machine can just grind it up when the Dome area is redeveloped later."

With Fibredec's many qualities business must be booming, Pat confirms that it is. The future looks good for Fibredec. "Over the past two years we've done better than our budget. Our only obstacle is ignorance. People don't know about us."

The company recently switched from a direct sales approach to a marketing push seeking to identify consulting engineers behind projects. The Millennium Dome job is a case in point.
Getting by, but no slacking back!

Karl Morin, Workshop supervisor, Mayotte-France.

“Back in France when you need a wood truck, you get it in 72 hours. Out here at Mayotte in the Indian Ocean, you have to plan and prepare jobs three months ahead of time,” says Karl Morin. Preparing work sites can be something of an epic struggle but he has come to terms with such difficult conditions. They have never put him off or gotten him down.

At 30, Karl Morin is in charge of the wood and iron workshop and installing frameworks, coverings and carpentry and, more recently, plaster constructions throughout the island of Mayotte which lies off the coast of Madagascar. “Wood is a noble material that boasts a wide range of essences which result in some very fine work.”

A graduate of France’s carpentry and building management school, Karl left for the Colas overseas subsidiary in 1997. “Although the technical level of work is sometimes less challenging than back in France, it is nevertheless very motivating and exciting. You always have to be prepared to find a way round organizational difficulties and find technical solutions using local resources. When something unexpected crops up, you have to make use of all the island’s resources because ordering something from France necessarily takes time. Handling human resources also requires adjusting to local conditions. When a member of a crew goes to report the birth of his child, for example, it can take two days rather than half-an-hour back in France. But careful – getting by and making do with what’s on hand doesn’t mean we’re slack. We’re very tight on safety rules. We belong to a big group which has a corporate image and reputation for quality to keep up. There was a time not so long ago when laborers turned up at sites barefoot and bareheaded. But the same safety rules now apply here as they do in France.”

Karl hails from Normandy but he enjoys his expatriate life. “Even though we’re far away, we don’t feel cut off from the group. Colas people are always on hand to resolve our problems. And we expatriates all support each other.”

"Here, you always have to be prepared to adapt and to find technical solutions using local resources."
"I realized that safety was essentially a behavioral concept. It’s all about educating people’s attitudes."

Put safety first and the law follows

Barry Agutter,
Safety Manager,
United Kingdom

"S"afety is about people. It can be as frustrating as it is rewarding. But dull? Never," states Barry Agutter whose career as safety professional with Colas in the UK spans 20 years. "Safety is about people! Self-evident, surely. Obviously the aim is to protect people. What I mean is you don’t achieve safety by enforcing regulations but by talking and cajoling people into thinking about it. That wasn’t always my approach, though," confides Barry. His career as safety advisor began in 1980 "I’d previously been site engineer, contract manager, plant and transport manager, and estimator. My experience in the field made me a credible safety advisor on sites. Operatives working on blacktop would listen to me because I knew what they were doing. But that didn’t stop me from being a policeman. I’d say ‘that doesn’t meet regulations’, pull out a checklist and file my report. I caught people red-handed but did I change their ways?"

In late 1989 Colas Holdings Ltd had brought in an expert from Dupont Nemours for a 10-week consultancy. "The scales fell from my eyes. I saw safety wasn’t about rules and regulations. It was a behavioral concept, about shaping attitudes." The consultancy changed Barry’s working life and has certainly saved others. Colas adopted the behavioral approach, slashing the lost time injury frequency rate from 25.1% in 1987 to 3.5% in 1992. What’s more, these figures were averages which included newly acquired companies where safety was not all it might have been. An illustration of the behavioral approach?

"There are two parts to site inspections. Part one – equipment, part two – people. I begin with part two. I watch the way crews act for a while. If someone isn’t wearing his helmet, for example, chances are he usually doesn’t. Habit sets in, it’s human nature. I go to him and say, ‘I’ve been watching you.‘ He gets jumpy, so I put him at ease, saying, ‘Good to see you’ve got the right gloves and boots on for the job.’ Then, of his own accord, he’ll probably say, ‘Yes, but I forgot my helmet.’ He won’t necessarily wear it the next time, but I’ll have sown the seeds of awareness. By talking. No checklist, no report, just talk.”

Colas UK’s LTI.F. in 1992 was 3.1%. It has not exceeded seven since – quite an achievement in the business-oriented nineties with its focus on competition. Says Barry wryly: "Safety is a high priority in all minds, but minds slip." So he travels 25,000 miles a year the length and breadth of the UK jogging memories and raising awareness. The training courses he runs focus on actual incidents and risk assessments. A recent safety update course.
saw trainees leave pledging to address two problems they had pinpointed on their work site: first, the interaction of vehicles with pedestrians and second, spillages. Safety can make a strategic contribution, too. When the company was considering acquisitions, Barry carried out audits, some open, others covert. His findings were taken into account in determining the decision to acquire or not - a reflection of the importance Colas management attaches to safety. "Safety is a core Colas value," says Barry. "I feel real pride that people across the length and breadth of the company talk about it. But my job remains essentially a reactive one; improvement is never as fast as I want it to be. Safety is often three steps forward, two steps back. But we're getting there." By taking three steps forward and two steps back, Barry himself has got there: he was recently made Fellow of the Institution of Occupational Safety and Health. A fitting tribute to an advisor, trainer, auditor and, last but not least, manager responsible for safety in the subsidiary of an international group that attaches the utmost importance to safety.

"Safety is a core Colas value at all levels and across the entire corporate structure."

"I am proud to be playing a part in

Pierre Michodjehoun, Works engineer, Benin.

While he was still studying at the ENSTP engineering school in Yamoussoukro, Ivory Coast, Pierre spent time with Colas as an intern. When he graduated, in 1987, he quite naturally turned to the Group's Benin office for his first job. The company gave the young engineer the chance to learn his craft in the field and his responsibilities grew as he progressed to general foreman, then site manager. "In 1993, they assigned me the site for the regular maintenance of the Porto Novo-Cotonou-Godomey highway," he recalls proudly. "Then in September 1997 came the refurbishment of the Cotonou-Hillacondji highway, and, soon after, laterite roads in Niger." Within a few years, the inexperienced young engineer has become a fulfilled site manager: "My role consists in bringing job-sites in on time under the best conditions - organization, definition of schedules, managing teams, maintaining contacts with the Roads and Infrastructures administration, and keeping in touch with verification agencies." A natural leader of men with a love of his profession Pierre feels at home with roads. "We are permanently acting on nature, with immediate results. What's more, Benin is a transit country, through which the goods of neighboring countries with no access to the sea such as Burkina Faso and Niger are transported so
The white knight of the tramway

Serge Langlais, Site manager, France

In September 2000 the extension to the first tramway line in Nantes will be opened to the public. The Sacer Atlantique company completed their contract four months early. It has taken up much of Serge Langlais's time. He was the site manager. "A job this big requires constant monitoring of each phase and supplies," says Serge. From the initial estimate to final delivery, the site manager has to handle everything: supplies, subcontractors, invoices, and relations with the site owner, the consulting engineers, and government department representatives. "There were weekly meetings and daily conversations either face-to-face or by phone." Serge Langlais joined Sacer Atlantique in 1998. He had already built up experience as site foreman and manager with small and medium-sized local companies. It was by design he joined a big company. "Rigour is not the strength of small firms. They rely on the technical departments of big companies. But I like the conviviality of a company on a human scale."

"I like the conviviality of a company on a human scale."

the construction of my country"

"Roads have great economic importance. When we open a new stretch of road, it's a cause for all future users to celebrate."

Pierre returned to his studies, as he took part in a two-week session of Colas University in Paris. "For the first time, I met people in the Group who have similar functions to me in France or in other international subsidiaries," he says. "It was a highly rewarding experience which reinforced the key ideas of the Group for me, such as customer service, ethics, quality and man management, but also growth and productivity. We are all working in the same direction, but each of us with our own personality." This training gave Pierre the opportunity to stand back from his everyday work, but also a better knowledge of the Group. "I got to know people I only knew on the telephone." In coming years, Pierre knows his future is closely tied up with the development of his country and that of its neighbors. But before he can look too far to the future, he knows he must continue to prove himself. And he knows there is much work ahead of him.
"The other important side to my job is sales and marketing."

A bit of a juggler, and an acrobat too...

Laurent Curtet, Sector manager, France.

Sector managers have to be jugglers, too. Laurent Curtet, 32, whose in charge of the Western Paris Sector, knows this only too well. He has to juggle between the 20 or so waterproofing jobsites he manages: five are under preparation, 14 are currently being executed and the rest are being finished. "Either you can handle everything, or you break under the strain," he says. "I sometimes feel snowed under, but at the same time the sheer diversity is what I like. No two contracts are alike. Their size, their value - some are worth only FRF 3,500, others millions of francs - and our relations with site owners are different every time."

Laurent Curtet is both an engineering and business graduate. He attended the Mines engineering school in Alès in the south of France. He joined SMAC in 1993 as site manager. One feather in his cap was the project for rehabilitating Air France's head office, located in the Montparnasse Tower above the Gare Montparnasse in Paris. He led the eight million franc project which spanned four years with his team of 27 laborers and three site managers. "We began by provisionally waterproofing the building with asphalt just before demolishing its top floors. Part of the jobsite was located directly above the railway lines."

Between the signing of the contract and the end of work on a jobsite, Laurent Curtet has to see to everything: preparation, mustering human resources so that they match the needs of the site, organizing equipment like cranes and demolition machines, buying materials and negotiating with suppliers, ensuring supplies, safety, administrative and legal questions, and more besides.

In dealings with the client he must be able to convey his message and to defend the technical solutions chosen. "The other important side to my job is sales and marketing in search of new contracts. It takes up about 50% of my time." He does not need just to be a juggler, but an acrobat, too.
A taste for adventure

**Michel Villarmet,**
Earthworks site manager, French Guyana.

In a career spanning 30 years in bulldozers, scrapers and front-end loaders, Michel has moved mountains of materials in Kuwait, Saudi Arabia and Iraq. In 1994, after a short spell in France, he decided to head for French Guyana. Says Michel, a fishing and hunting enthusiast: “I was yearning for adventure once more.” But earth-removing is no

“I’ve climbed every rung in the earth-moving business.” nothing I won’t do, and I’m surprised at how fast I’ve been progressing.” Michel is happy he chose public works. If he had to do it again, he would – plus some training to see his career evolve faster. “Like a lot of Colas people, I’ve climbed the ladder. This has taught me how to get on with the teams I manage. Every day brings fresh experience.”

Working on the road at all times

**Pascal Duhoo,**
Sector manager, France.

There is no respite for sector manager Pascal Duhoo and his teams who work round-the-clock seven days a week. Whether it is to repair a guard rail, replace a traffic sign or paint the markings on a highway under construction, they have to be ready to move at any time of the day or night to meet all kinds of road markings and traffic signing. Their sector is vast ranging over seven French departments in west and southwest France. It is a tough job. Their working conditions are dangerous and stress is always present. “Our working conditions have undergone a radical change in the last few years,” confides Pascal. “We have to be faster and more proactive. The consulting engineers who call us expect us to be on site within the hour. The contract governing the Bordeaux bypass for which we do the maintenance states that we should be on the spot in no less than four hours. On the A63 highway it’s two hours.” So he and his teams have to be ready to go at any time. It is quite common for them to get several calls a night. “Three years
My best construction site

André Lauzière,
Waterproofing Technician, France.

"I learned everything on the job." When André Lauzière started work at the age of 21 on his first waterproofing site for Smac, he knew nothing about the craft. "I thought I'd become a mason - in fact, I'd already completed my apprenticeship as a plasterer... But I had to stop for health reasons." He suffered from painful tendinitis in his shoulders. "So I changed from white to black. From plaster to bitumen." With hard work and determination, our man climbed up the ladder. Today, aged 40, he looks after roof and terrace waterproofing sites. In recognition of his work, he was awarded the title of "Companion de l'Arc" skilled worker in 1992. What role does he play? To train and supervise waterproofing crews. "Instead of tiles, we lay bituminous or mastic asphalt sheet coatings. Transportsed by special tankers, the mastic asphalt is carried in wooden buckets or specially fitted wheelbarrows and applied with a wooden mortar-board... It's really physical work!" It is risky too, since it is carried out high above the ground. The company worked on the "Zenith" hall in Toulouse and the regional council building. "To mention only a few," adds André. In his view, his best construction site was his own home he built in his free time. "It took me 10 years."

of the day and night

"I learned everything on the job."

"Three years ago, we did 90% of our work during the daytime. Today, the trend has reversed completely."

Eighty percent of our calls come in at night now. We're currently putting up safety barriers and road signs and painting road markings for a 17-kilometer stretch of the A10 highway and we work exclusively by night. The operators are able to keep their highway open to traffic that way." In spite of his job's growing stress, Pascal Duhoon savors the satisfaction of knowing that his rapid reaction capacity provides "a solution which helps us stand out from our competitors". That said, 36-year old Pascal acknowledges that after 10 years' work at such a pace he is now tempted by a more commercially-oriented development to his career. A change is as good as a rest.

 ROUTES number 8 • special year 2000 edition
Technology and efficiency

Rostislav Kamenik, Site foreman, Czech Republic.

Prior to becoming site foreman Rostislav Kamenik turned his hand to many a trade. As an 18-year-old with a building apprenticeship behind him, he left school and worked on a succession of sites. His two years in the army which then followed gave him the wanderlust. He traveled around Europe spending six months in France where he worked as a seasonal farm laborer harvesting and grape-picking. On his return to the Czech Republic in 1992, he was hired by Silnice in Jihlava as a temporary worker. He worked on road construction sites, gradually building up experience of a wide range of jobs. “I now organize the crew of 14 that I’m in charge of. Our main task is laying all sorts of asphalt mix,” he says. “Since 1994 we’ve been part of the Colas group and we’ve been updating our old technologies in an attempt to become more efficient and competitive. As well as our routine projects we also repair a section of the Czech Republic’s biggest road, highway D1, every year. Last year we completed a very long section near the town of Loket in the center of the country.

Rostislav Kamenik loves his work very much. “For the time being, I’m not raising my sights any higher,” he says. “Everything happens so fast that it is my routine daily work that helps me evolve the most.”

“Everything happens fast. It’s my routine work that helps me to evolve the most.”
The fast track for a gifted person

Frédéric Aaron,  
Building project manager,  
Réunion Island, France.

Frédéric Aaron joined the profession at the age of 20 with a 2-year technical degree in the building trade. Within seven years, he became a contract manager with GTOI on Réunion Island, his birthplace. The fast track for an exceptionally gifted person? “No, I just climbed the ladder one rung at a time, always within the same company, starting as an assistant to the project manager,” he answers, with modesty. “In the construction field, we have the same duties and obligations as in road building, the only difference being the regulations. In the building trade one is faced with several technical constraints - buildings that are open to the public have to meet a certain number of specific standards.” On a large site, apart from the project manager and his assistant, there are often one or two site managers, two foremen and around 60 workers. “The tasks we undertake are very varied - from deciding on the technical approach with the general foreman, which involves dissecting the project, look at building options, trying to do the job as fast as possible, while achieving the best quality, to the commercial - side relations with the client and architect, and so on,” explains Frédéric. “In addition, one has to manage the financial aspects and ensure that the targets are met. It’s all very interesting.”

Far removed from mainland France and the traditional Colas line of business, Frédéric Aaron manages his jobs, such as housing projects, schools, clinics, shopping centers, etc., with an obvious sense of professionalism. That is just one of the characteristics he shares with most of his colleagues in the Group throughout the world.
"Colas offers real career prospects if you like a challenge and are prepared to give your best."

From the bottom rung upwards...

Bob Tebbens, Area manager, USA.

I guess I’ve had a kind of whirlwind career," says Bob Tebbens, looking back on his five years with I.A. Construction Corp. He joined I.A. affiliated Sparr Associates in 1994 as a laborer then equipment operator. His area manager, Coston Shockley, a former baseball pro turned coach spotted his talent and made him crew foreman. He worked for two years in Delaware before graduating to general superintendent in the Delmar area of Maryland, then the Tasley area of Virginia. He is still in Virginia, working as the Tasley area manager.

A tough prospect working his way up at the age of thirty-seven? Bob shrugs. "I didn’t mind because I knew the Colas organization offered real scope for advancement. If you like a challenge and work hard, you’ll make it." Like the best-laid sites and roads, Bob’s career has sound foundations—experience in the field. It was as a boy working on a farm that he discovered his love of working outdoors and handling equipment.

In school he took summer jobs as a worker and though he majored in business administration he went to work out of school as worker-operator. He then became a full-time operator, operating cranes and bulldozers, before taking a job as general manager for a concrete company.

He soon returned to construction, though, with a track record that served as a dress-rehearsal for his climb through the Colas ranks. As area manager Bob’s responsibilities are overall management and administration—bidding, planning and allocating resources. But his in-depth knowledge of being out there with the crews is still with him. He has drawn on it in the Tasley area to improve communication and make sure contract terms are executed to the letter, whether they cover earthworks, paving, piping or utilities. "No two projects are the same. But if a project goes smoothly, nothing gives me greater satisfaction." One example was the recent Accomack Airport contract. "It was well-executed, smooth, ahead of schedule. The crew did an outstanding job." He also has fond memories of the Route 50 job in Maryland during the 1999 construction season when he was general superintendent for the Delmar area. His office received an award from the National Asphalt Pavement Association for Quality in Construction.

"Another great team job, with special credit to the paving foreman." Team spirit is not confined to projects or local areas. In Virginia, he has noticed that the sense of belonging to the Colas group grows with time. "Bob Field encourages us to react with operators, workers and foreman to foster the Colas mindset, the sense of being part of something bigger."

How does he see his future? "I watch Colas growing. Colas is on the move across North America. Colas refuses to be stagnant and if you’re ready to go, it will take you with it." And Bob is ready.
Road marking ace

Dominique Beugnon, Paint application site supervisor, France.

"The most important side to a road marking operation is safety," says Dominique Beugnon. "There is always some flow of traffic when we are at work. We're at the mercy of a careless motorist even though the site is cordoned off by traffic cones and warning signs."

In 10 years of putting down road markings, 30-year old Dominique has had a few scary moments. "Once, to apply markings on the edge of a highway, I crossed a lane that was supposed to be closed to traffic. I jumped back just in time, otherwise I'd have been hit by a truck." Others have not been so lucky. "As a result, I'm super careful about my crews' safety. Especially with temporary workers, who don't always realize there's a danger."

To reduce risk, road markings on highways are increasingly painted by night. "There are fewer cars, so it's less hazardous. If the traffic flow is still too heavy when a job is about to get under way, we put it off. We then have to make up for lost time, which piles on the pressure!"

Jobs include painting new roads, repainting worn markings, applying deviation and road-narrowing markings, and painting cycling lanes, toll booth areas and car parks. Though not all these jobs are carried out under stress, Dominique Beugnon most enjoys painting new roads. "I get pleasure from doing my section well and as flawlessly as I can."

"The most important side to a road-marking operation is workers' safety."
He has always dreamed of living abroad

Karim Hamdan,
Building and civil engineering center manager,
Madagascar-France.

A n agricultural dam deep in the bush, a fish-farming facility in a "mangrove" (strip of clayey land in an estuary), a building site in the port of Mauritius, the construction of the French high school in Antananarivo... in Madagascar, the life of a profit center manager is far from monotonous. "In fact, it's the variety of jobs that I like, the fact that we look after both buildings and civil engineering works", explains Karim Hamdan, 35. "But you have to be very adaptable. We must continually adapt our techniques to the means available in the country, to prevailing conditions and to the specific environment of our work sites, particularly in the bush, sometimes in completely isolated areas, where supplies have to be brought in by air or boat... Of course, we also have to adapt to the local pace of work, which is much slower than in mainland France." But that doesn't seem to be a problem for this young man from Lebanon, who always dreamed of working abroad. "As soon as I finished my engineering degree, I volunteered to be sent out. I did my voluntary service in the Ivory Coast as a teacher". On his return, he spent four years with a structural research department in Lyon but jumped at an offer from Colas to go to Madagascar, as head of the design office. He stayed for three and a half years before taking charge of the building and civil engineering profit center.

"Here, we must adapt our techniques to the means available in the country and prevailing conditions."

"As head of the design office, I drew up the plans and schedules for completing the different projects, both for building and civil engineering. It called for much greater versatility than work in metropolitan France, where you have specialized research departments. Today, I'm much closer to actual field operations." Bidding for tenders, finding technical solutions, preparing the jobs and sites, taking care of staff - Karim certainly can't complain that his job is monotonous!
The guardian angel of the road

Hervé Geline, General foreman for guard rails, France.

Guard rails are key roadway components. Usually made of metal, though sometimes of wood, they weigh around 50 kilograms for a length of four meters. Installing them is a special skill in itself. It is a part-manual, part-automated job. The interlocking parts are fitted by hand, then a compressed-air machine locks them into place. “With a crew of five to seven men, we install around 400 meters of guard rails a day on local roads and around 900 meters on highways,” says 33-year old Hervé Geline, site foreman with Somaro in Grigny, just outside Lyon, France. “After a day’s work I always feel that I’ve done something towards improving safety for motorists.” He has good reason to feel that way. One Monday morning in 1989 near Evian, he arrived at the day’s jobsite, but too late. “That weekend a car had left the road at exactly the spot where there was no guard rail. It had plunged down the embankment into a camping site.” Hervé originally intended to be a baker. “When you’re young it’s hard getting up before dawn every day,” he says. So in 1986, he joined Somaro and gradually climbed the ladder rung by rung, from laborer to head worker (a necessary staging post on the way to becoming labor foreman) then site foreman and finally general foreman. “I’m in charge of installation. I tour our jobsites with the site managers and ensure that the rails and their installation are duly delivered to the customer as agreed.” says Hervé. “In the spring of 1999, I went to New Caledonia in the South Pacific to train Colas staff in how to set up wooden guard rails. It was quite a change from the Rhône-Alpes region of south-east France, where I spend most of my time.”
Thirsting for competition

Guy-Valery Nguema, Site manager, Gabon.

After a rather unusual career path, Guy-Valery finally found his vocation: to work in the public works field and to participate hands-on in building his country. He started with architectural studies in Bordeaux but he found them too theoretical and abstract. “I therefore turned to a civil engineering diploma from a technical institute, during which I also worked as a trainee with Scereg Sud-Ouest”. The son of government officials, the young general foreman also chose to return to his country and work in the private sector. “I was thirsty for competition, and that’s what the Group offers me. You should challenge yourself all the time!” In spite of the difficult economic situation in Gabon, Guy Valery feels fulfilled because he is working in his chosen field.

“I love reaching an untouched plot of land, shaping it and developing new construction projects. Since every site is unique, you have to start from scratch every time”. After a stay in France for the Colas University, this general foreman was full of enthusiasm. “I was surprised to see that in Colas, such a big Group, every employee is treated as an individual!” Guy was also able to refresh his memory and discover new road building techniques. “The French focus on recycling building material. The main objective of the Gabonese is to open up their country. The Colas university has helped me look to the future.”

“I love reaching an untouched plot of land, then shaping it and developing its space. Every site is unique so you have to start from scratch each time, which is very challenging.”
"We’re focusing more and more on cold mixes because that’s definitely where the future lies."

Keeping it in the family

**Damien Henry,**
General manager,
Ireland.

When Damien Henry joined Coldchon in County Sligo from college in 1982 he was perpetuating a family tradition which stretched back to 1965. That was the year his father began working for the Colfix group, which also employs four of his brothers. He worked for Coldchon for six years, operating a small bitumen plant. In 1988 he was appointed operations manager for the Dublin area. "In the late 80s and early 90s, the recession was biting," recalls Damian. "Against this background, my job was to reorganize manufacturing and product installation in the Leinster area. The government had cut public spending, so we were bidding for contracts which were few and far between. To remain competitive, there was nothing for it but to cut overheads and rationalize. It was tough, but those were also years of achievement. In 1993, Damian planned, designed and installed the first polymer emulsion plant in Ireland. And he looks back proudly on 1994, too, when Colfix Dublin gained ISO quality management accreditation 9002. His success was rewarded the following year when he was made general manager. "In addition to operations, quality, safety and the environment, I took on responsibility for sales, marketing and overall strategic direction in the Leinster area. We worked hard at reasserting Colfix's reputation for expert know-how and quality. Thus, as soon as the upturn came round in 1996, I'd helped put in place the foundations for building the new Colfix," explains Damian.

In 1996, the company joined the Colas group at the opportune moment. "The thing about Colas," says Damian, "is how business-focused it is. Its R&D capacity and know-how are tremendous. With that kind of technological expertise behind us, we're well equipped to meet the challenges ahead."

What are those challenges? "We're catering to the rising demand for polymer modified bitumens and building a Colétanche plant in Galway. In addition, we're focusing more and more on cold mixes because that's where the future lies...

We're fully committed to the environment. If all goes well we should gain ISO 14001 environmental management accreditation this year."
Jean-Claude Derieux, Site manager in charge of electricity, Mayotte France.

Jean-Claude Derieux’s career as general foreman on power cable jobs in France once looked set to follow the standard path. Until 1980 that was, when he was offered a one and a half year assignment in Niger. And then things really took off. His next stop was Rwanda, then Chad, then Haiti, where he met his Belgian wife. He returned to Niger, then headed for Mozambique. In 1987 he found himself back in Rwanda working for a Belgian company.

“When the first troubles began in 1993, my employer pulled out. But I stayed on and saw the job through as a freelance for Colas. The job was the rehabilitation of a road from the capital Kigali to the Tanzanian border, for which we were subcontracted.”

That was his first contact with Colas which he finally joined in 1995, as electricity site manager on Reunion Island. The “family-like” atmosphere there reminded him of the atmosphere he had valued on the Rwanda contract. “The welcome from the team on Reunion Island was very friendly. It helped us fit in very quiedy.” With only two electrical works divisions in all the group’s Indian Ocean subsidiaries, Jean-Claude’s next destination could be easily guessed at:

“Luckily, the group’s know-how is there to support me whenever I need help.”

in June 1996, he headed for the island of Mayotte. He now knows the tiny island, which boasts a surface area of only 374 sq. km., like the back of his hand. But his job continues to hold novelties. “Two years ago,” he explains, “I got the opportunity to lay undersea power cables for the first time. Luckily, the Colas know-how was there to support me.”
Excellent interpersonal skills

David Piantino,
Cladding site manager,
France.

At only 29, cladding site manager David Piantino has some impressive projects to his name. To name but two: the facing and interior cladding of the new Terminal 2F at Paris' Charles-de-Gaulle airoport and the two-kilometer tunnel between Le Bourget and Bobigny on the outskirts of Paris, which he and his teams waterproofed and fitted with soundproof coffers.

"The Charles-de-Gaulle jobsite was especially exciting because we innovated. We used new materials to face and side the towers, using strips designed to be both aesthetically pleasing and soundproof. We slid the strips in between concrete and metal shells. It was a tricky job. Workers on manlifts slipped them into place."

David Piantino and his teams also innovated with materials to clad the inside of the terminal. They used stainless steel meshing, stratified materials and embossed panels to clad the walls, totems (large central columns that camouflage the fan system) and lifts.

"Cladding work has to meet technical and safety requirements as we increasingly work at height. There are also organizational constraints with increasingly tight schedules and deadlines," says this civil engineering graduate who joined Colas four years ago. He also has to ensure that jobsites meet quality standards - every single joint must be totally waterproof - and to coordinate the different skills and departments involved.

"As a site manager I have to liaise between our teams and clients, be they companies, architects or owners..."
Topography in the sun

Mahjoub Boukhras,
Topographer, Morocco.

With a spirit level in his hand and a theodolite to his eye, Majhoub Boukhras has been going from job to job, from Rabat to Agadir and Fes, for 25 years. His job? Topographer. “I'm often the first to set foot on a future jobsite,” he says. “I'm taking my readings. I return when work is underway. With the site manager I verify our work and calculate volume measurements.”

Mahjoub Boukhras, 58, joined GTR in Rabat in 1965. “I started as a clerk. That involved keeping a job's books, counting how many hours the crews put in and the amounts of fuel used. Then I graduated to a design office before going back to work in the field.” His track record as topographer boasts some fine achievements. He worked on the huge Matmatma deviation railway project before going on to the construction of the Fes sports complex, the Errachidia airport, and finally the Jerada dam. Currently, Majhoub is busy on an international airport at Nador in Morocco. “I learned all I know from old hands,” says Majhoub. “It's important to be self-reliant and thorough to determine a road's land take.” The theodolite is now giving way to all-inclusive workstations with calculators. Large quantities of data can be keyed in and stored. Sooner or later Majhoub will have to come to terms with this technology.

From desk job to job site

Kathy Flachmeier,
Works engineer, USA.

At 43, Kathy Flachmeier believes she has found her calling. “I just love road construction,” she says. After graduating in chemistry, it was in a perfume company that she made her debut. It was an inconclusive experience. She realized her vocation lay in another field. That was when she joined Sully Miller, the California-based Colas subsidiary. She agreed to start on the bottom rung of the ladder and learn all about a whole new sector. “I've been through the whole spectrum. From secretary to payroll, to subcontractors and dispatching. Then in early 1999, I was put in charge of work sites!” She now travels the highways and byways of
Lending a hand

Joël Pascaud, Chief mason, France.

Fate sometimes holds surprises for us. It did for Joël Pascaud. He was 19, had just served an apprenticeship as a pastry cook, confectioner and ice-cream maker, but he became ... a mason in public works. "After a few seasons in Spain and Switzerland, I figured out that to make a living I would have to change jobs." He learned to handle a trowel, gradually becoming an expert in curbs, gutters, and walls. Twenty-two years on, he has been heading a crew of tradesmen on job sites for a year. But he is always ready to help so as not to lose his touch. "Sacer Atlantique’s masons now mount dry stone walls and build squares and lay swept concrete roads. They also do curbs, speckled and washed concrete sidewalks and swept paving joints. These techniques are dear to Sacer’s Poitiers branch," he says. "Materials might be the same but they way they are used has evolved." At 41 he is still looking for the chance to take on greater responsibility. He would like to become labor foreman and then site manager. "I have to be patient," he confides. "At my level, the important thing is to ensure quality and performance – a tricky combination at times."

Kathy has a determined, positive attitude and always present in her mind is what her father used to tell her: "It’s easier to catch flies with honey than vinegar." Those words have become her motto both inside the company and outside in her dealings with clients and suppliers. Kathy loves to travel. She has been all over France and is delighted that Sully Miller is now part of the Colas Group. "We’re a road construction company. We finally belong to a corporation that shares the same core business, namely, road construction."

Los Angeles with her crews and feels the job has brought her self-realization. "Sure the days are long. We start real early in the morning and finish late, but I learn on the job all the time. It’s so exciting," she says enthusiastically. "I now understand the job satisfaction workers feel when they complete a work site fast and the client’s pleased. I realize that every rung I climbed on the ladder was necessary for me to be where I am today."
"We work with extremely dangerous inflammable substances such as oil and gas."

In 30 years, he's never had a problem

Daniel Audibert, head of drilling under pressure, France

Daniel Audibert knocks on wood: in a 30-year career, he has never had a problem. No accidents, no burns due to oil, nothing. As the head of drilling and closing on refineries points out, "We work with extremely dangerous inflammable substances – oil and gas."

Daniel is a mechanical enthusiast. He started out as a repair and maintenance mechanic at La Suburbaine, and rose through the ranks (skilled worker, foreman) before becoming site manager. "I have always liked taking things apart and putting them back together," he says. "First it was my bike, then a moped..." Then came rally cars – his real passion – which he repairs during regional competitions. "At least two weekends a month. I'm on a team." In a petrochemicals plant, the rules governing repairs are a little more delicate, though! And the operations he performs are extremely risky. "Our work involves repairing pipes which carry products under pressure, following leaks or other incidents. The system of drilling under pressure means a new connection can be added to a pipe, while closing off means isolating a pipe. In both cases, we do our work without stopping production." Safety is therefore one of the prime considerations. "When you start out, you can never relax. But with experience you know the rules you have to respect to prepare and install equipment, and it all goes well."

The profession has developed a lot, though, and there has been enormous progress made in equipment and techniques used. "Twenty years ago, we didn't work with certain products but we do today. And we never used to close off at over 100 °C. But now, thanks to improvements in seals, we can work at temperatures of up to 250 °C." Yet another very good reason to keep a close eye on safety.
From south to north

Jens Filtenborg did not like school. He quit early and took a job on a farm for a while before joining his father to work on road construction sites. "I began on the bottom rung of the ladder," he quips, "as a raker. Then I drove site vehicles before becoming a screwman. In 1991, I went to work on the American air force base in Cuba. I was there for a year. Then, in 1995, I headed out to Uganda. I worked there for six months, again on an airport project. I've never had any traditional training, but I believe I've made up for it with sound experience in the field." Jens Filtenborg and a colleague plan and supervise the work some thirty operatives.

"But my work also comprises a commercial side," he adds. "I frequently have dealings with customers, building companies, local authorities and private individuals. I spend half my time on jobsites and the other half in my office, especially in the winter when snow or bad weather make it difficult and even impossible to work." Jens Filtenborg says he is happy with his job. "I'm proud to be where I am today. I would like to have the opportunity to train and acquire further skills. But, quite frankly, my job has already taken on a pronounced sales slant and I really like what I do very much."

I deal with clients and local authorities.

A sense of eternity

Christophe Ranger keeps a press book of all the structures he has helped to build. "I take photos of all the buildings I help put up," he says. This 33-year-old cladding foreman is proud of his specialty. Yet he stumbled into it quite by accident. In 1986, at the age of 18, as a newly qualified electrician, he took a job with SMAC in Poitiers in the west of France, working on a waterproofing and cladding contract. "They were looking for staff, so I had a go," he recalls. It was a revelation thanks to the foreman, "Mr. Richard, a sort of spiritual guide". He gave Christophe a taste for the job, instilled in him drive and self-confidence, and showed him the ropes. "He gave me my first job sites and said to me, 'go on, you can do it,'" Christophe recalls fondly. Six years later he parted company with his mentor and headed for the Tours branch in central France. It was the start of an important period in his career. He clad the nuclear power plant at Civaux, a project that lasted for four years. It was an unforgettable
An adventurous career

José Cano,
Skilled worker in surface dressings, France.

José Cano is a personality in the Landes region of France. José, who is in charge of surface dressing on sites in the region, knows everybody. Some people actually request him by name for some roadworks jobs. And there are contracts aplenty! Last year he applied between 800,000 and one million m² of surface dressing. José Cano has patiently built up his reputation through 15 and 1/2 years of good and loyal service. He joined France-Routes in 1966 as a vehicle operator and has had a number of unforgettable experiences, such as the rehabilitation of the runways at the two airdromes on the Comores Islands, the resurfacing of roadways in Madagascar and a job in Burkina Faso. Working conditions were sometimes epic. Take the Anjouan airdrome. Every day, between 10 a.m. and 1 p.m., it had to be reopened to air traffic. He has some amazing recollections of Madagascar, too. “We transported bitumen in 200-liter drums on junks. When they couldn’t berth, we would pass the drums overboard and the crew would swim them ashore!” Twelve metric tons of bitumen were transported along waterways for José’s site. José is now back in France, but he says he is ready for new horizons.

“I applied 1 million m² of surface dressing last year.”

“Living and working together as a team for several years was unforgettable.”

team experience. “We all lived and worked together for four years. It was tremendous. I learned a great deal about technology and safety. The nuclear industry’s occupational health and safety standards are the best.” Another job Christophe looks back on with pride was a municipal heating plant contract, where he was in charge of cladding. “Our task was to coat the chimney, a sort of giant cone 40 meters high, with an aluminum cladding. The work had to be high-precision and thorough. What I liked about the structure was the aesthetics of it.” Mr. Richard has every reason to be proud of his protégé – who was recently made a fellow of the prestigious Compagnons de l’Arche Order of skilled workers.
"Each projet allows me to discover a completely different world."

A dynamic young lady

Céline Queunech'dhu
Sales representative, France.

Selling civil engineering and public works projects is not at first sight the obvious job for a young woman newly graduated from the ESC Business school in Bordeaux. That does not bother dynamic sales rep Céline Queunech'dhu. She loves her job. "Promoting projects is often more rewarding than selling finished products. Each project is different and the range of customers is enormous - architects, businesses, multiple retail outlets and local government, to name but a few," she says. The private sector accounts for 80% of her client base. Although the public sector customers are fewer in number, demand from local authorities has been growing as the municipal elections of 2001 and draw closer. "Business is booming at the moment because the local authorities all have ambitious town planning and development schemes. But they have to be careful with their money, so they want us to come up with solutions that meet their needs and budgets. It's an opportunity to offer and develop "Street Print" paving for town centers." Céline scours Brittany with great method and even greater enthusiasm looking for new contracts. "It's up to me to talk people out of their preconceived ideas of Screg as a company that's interested only in major projects and highways," she says. She does not only prospect for new customers - far from it. She carefully monitors project and jobsite timelines. "We don't just sell a deal then forget about it. We keep in touch with our customers and keep up with how contracts are developing," says Céline. What is it like being a woman in a man's world? "It can be an asset. Sometimes they agree to an appointment just because they're curious about doing business with a woman. Otherwise I have to be very professional because there's always some guy who tries to catch me out on my knowledge of technical subjects."
His work takes him all over France

**Thierry Brunon, Site foreman, France.**

From the mountains of Savoy in the east of France to the Pyrenees in the southwest and from the northernmost tip of the country to the Riviera, Thierry Brunon is a man on the move. At 35, the work sites he leads take him all over France with his men and machines installing extruded concrete safety rails. A former machine operator, he was promoted to labor foreman then to site foreman with BRS, and was accredited with the Colas Losange d’Or award in 1994. “My crew is made up of one man who does the staking out and another who does the drainage. There is also a truck driver, a machine operator, a mason who bevels the ends of the safety rails, and myself, of course,” says Thierry Brunon. “Sites can last anything between a day and a week. Once, we even worked for four months on a drainage job at the Somport Tunnel in the Pyrenees. Luckily, we always get home at weekends. With the new 35-hour working week, we sometimes head for home on Thursdays. Being away from home for a whole week doesn’t always square with family life,” rue Thierry Brunon, who has two young children. But there are the compensations: discovering the country.

Being constantly on the move and deriving satisfaction from the sheer variety of jobs. “Fifteen years on, I’m still learning. Working with concrete requires experience. Before you actually master the trade, it’s important to understand concrete so you can judge when its texture is right for pouring. That takes three to four years. A slight misjudgment, and the concrete subsides or just doesn’t hold.” Despite his enthusiasm, Thierry Brunon hankers after a less itinerant working routine. He would like to devote more time to his wife and children and to his passion – motocross.

“Fifteen years on, I’m still learning. Working with concrete requires experience.”
Recognition of work well done

Dominique Roet, 
Foreman, France

When he joined Sตรง as a temporary employee at the age of 22, Dominique Roet had already gained solid professional experience. He had a vocational training certificate in masonry, a technical school certificate in reinforced concrete construction, a year's specialization in architecture, military service in the army's architectural department and varied work experience from small contractors to companies doing specialized structural work. That was seven years ago, and the temporary work contract turned into a full-time job. He says, "Working as a mason in Val-de-Reuil is a very varied job, from preparing the site for grading works, to operating the machines, drainage, the road system, colleagues too. I've gone through a full range of training programs, from topography to company management, not to mention subjects with a heavy slant on interpersonal relations, such as safety, understanding and anticipating accidents, communicating with colleagues for improving productivity. Such training is really useful to everyone." Since Sตรง joined the Colas Group, the conditions under which Dominique Roet and his colleagues do their work have changed. "We use better and higher performance equipment. But the biggest difference is safety: clothes, risk prevention and so on. There are fewer accidents and our working conditions have improved. The training programs we are offered are also important - they enable us to develop both professionally and personally."

"The Green Riband award gave me an opportunity to be trained in fields such as management and topography."

and even a bit of building construction... Of course, I prefer working on engineering structures..." Used to outdoor work in diverse weather conditions, Dominique Roet enjoys the open air so much that he confesses to a problem remaining confined to within four walls when he returns home. "Another thing I really like about my work is the team spirit - we're lucky enough to get along well, and that's very important." His professional and personal skills earned him the Sตรง Green Riband honor. Dominique Roet says, "What I appreciated most in this award was the opportunity to be trained in several fields, which is as useful for me and for my
"Building roads is a bit like the work of a doctor in a hospital."

From theory to practice

Mamadou Ouattara
Engineering office manager, Ivory Coast

H is father drove a low-bed trailer and sometimes took him along to job-sites when he was a boy. After gaining a technical high-school diploma, Mamadou enlisted at the Yamoussoukro Public Works school and joined Colas after spending a year in IT. "I already knew Colas because I'd done a spell there as an intern while I was a student and I was keen on having the chance to go back to really prove myself." Now head of the engineering office, Mamadou is enthusiastic about his work in which he can reinvest everything he learned during his studies. "I think of my job as a competition. Our field is so competitive that you have to be ingenious to keep prices down and win contracts. "Mamadou regrets that he's sometimes not in close enough contact with the teams on the job-sites, but he looks on his profession as "team work. "Building roads is a bit like the work of a doctor in a hospital. We try to maintain defective infrastructures or to create new itineraries for the community."

After these early experiences, Mamadou would like to get more involved in the core end of the business and become a site manager. When he recently spent five weeks in France at Colas University I, he met French colleagues. "We do similar jobs as far as management is concerned," he remarks, "but the works and the techniques are very different. So I wouldn't go so far as to say that the biggest priority in the Ivory Coast is using porous asphalt yet, for instance!"
Back to the field

Patrick Cula,
Assistant operations manager, France.

I was looking for work out in the field that involved getting my hands on materials and building. That is how Patrick Cula describes what drove him to look for a career in public works. On graduating with a geology degree, he joined Scereg-Est as a site engineer. "My university syllabus entailed in-company courses that gave me a foretaste of handling soil and interacting with site crews," says Patrick Cula. Three years later, he was appointed to Scereg-Est's design office in Besançon in eastern France. He learned a great deal, but felt the job was too far removed from the job site. "Although I learned a lot about new techniques, I asked to return to operations."

Now, at 40, as assistant operations manager at the Doubs roadworks company, Patrick has fulfilled his ambitions. What does his job involve? "Overall job site management. From the planning, preparation and organization stage through to overseeing job execution."

It is a hands-on job par excellence and one which requires flawless professionalism. The A36 highway rehabilitation project last year was a case in point. Thirty-three kilometers of road resurfaced in 17 days for a contract worth FF10 million. It demanded high-precision organization including 24 people and three heavy construction equipment units. "We had to plan a precise execution schedule with special phasing, since we worked under traffic. We had to be able to chart progress accurately and plan ahead."

When he plans a night job or changes working hours for members of his crew, he has to apply to the Labor Ministry for permission. "Our role is to work out job site scenarios and see that they are executed according to plan, while handling all the glitches. A day's downtime can cost a fortune. Deciding to halt work on a job is a very heavy responsibility indeed."

"Although I learned a lot in the design office, I asked to return to operations."
**A fresh start**

**Roman Jozwiak,**  
**Skilled road worker,**  
**Poland.**

In 1997, Roman Jozwiak chose his camp: from the Polish Public Works Division, where he had been working, he switched to Strada, a state organization bought out by Colas during the wave of privatizations in Poland at that time. It was a new start for this man, then 48 and a modest road worker. "I have no regrets," says Roman today. "I was really motivated by this change. I met new people, learnt new methods - I can adapt to anything." It was all very different from the practices prevailing in 1967, when the young Roman joined Strada, aged just 18. "At the time, we did everything by hand - we used to work with whatever means were available," he recalls. "Because supplies were problematic, we could only buy bitumen when it was available - it really messed up the work schedule. Today, I look after the application of asphalt mixes: I follow the finishers, remove their tracks, and lay the intermediary points. I have a good eye - I guide the graders." Whether he is working on a minor road cutting across the fields or laying asphalt on a new freeway site, Roman says he has no real preferences.

"Joining Strada really motivated me; I met a lot of new people."

Lately, the huge Korona shopping center job in Wroclaw to the south offered him the opportunity to learn a lot, in spite of his extensive experience. "We kept up the pace, working even on Saturdays and Sundays, but we handed over the project in record time."
A timetable that is set by the seasons

Sigthor Sigurdsson, Project manager, Iceland.

Sigthor Sigurdsson and Colas go back a long way. Sigthor was 16 years old and like all young Icelanders, he was looking for a summer job. He got a job at Hladbaer, an Icelandic contracting company. “That first year,” he recalls, “I worked in a paving team. Then every summer until I was 24, when I finished my engineering degree at the University, I worked for Hladbaer and later Colas, at first as a worker then as a foreman, finding out all about the business step-by-step.” Colas Danmark bought Hladbaer in 1987 and started its activity in Iceland. On graduating as a mechanical engineer, Sigthor went to Denmark where he spent a year as a postgraduate at The Denmark Technology University. “When I returned to Iceland, it seemed the natural thing to do to apply for a job with Colas,” he confides. “I’m now a project manager. I’m involved in the calculation of bids; I organize the entire working schedule and monitor quality on site. In Iceland we’ve got two asphalt plants. One is a stationary plant placed near the capital Reykjavík, while the other one is a mobile unit. With the mobile unit we completed a major project in 1998, the 6 km long Hvallfjords tunnel and 20 kms of access roads to the village Akranes, now placed about 40 km outside Reykjavík but 10 km before the tunnel. In 1999 the mobile plant was in Akureyri, a town in the north part of Iceland. Over the next two years we will be renovating Reykjavík airport. It will require about 50,000 metric tons of asphalt and we will move the mobile plant to the airport as a back-up to the stationary plant in Reykjavík.” Colas Iceland boasts a workforce of 35 on average with numbers climbing to 55 over the summer period. The weather dictates work patterns. “We work every day, weather permitting,” says Sigthor, “but ice and snow bring operations to a standstill for four to five months a year. From December to April, my job basically involves planning equipment maintenance. We’re now working on the quality system ISO 9001, we plan to launch in the year 2001.” Denmark still has a special place in Sigthor Sigurdsson’s heart: after travelling and studying in neighboring Denmark, he now speaks fluent Danish. “Visiting sites in Denmark has helped me to enrich my training. I’ve drawn on the Danes’ wealth of experience, particularly in maintenance. They’re now ahead of us for putting in place quality and certification processes, an exciting new field towards which I’d like to see my career evolve.”

“Quality and certification processes are an exciting new field towards which I’d like to see my career evolve.”
An electrical trouble-shooter

Olivier Beaumont,
Electrical repair engineer, France

As a boy, Olivier Beaumont wanted to be a mechanic like his father. "My mother wasn't particularly keen on the idea of seeing another man in the household coming home every evening covered in grease. Luckily for her, I realized when I was about 16 in technical school that I didn't much like the idea of being a mechanic either." He gained an electro-technical qualification and at 17 went to an electricians' school run by the EDF - the École des Métiers. It was a boarding school and he was far from his family. "I dropped out; I couldn't cope with it. When I was 20 I did my military service and then joined Lafon as an electrical assistant." Now 35, Olivier has no regrets. "I picked up my know-how as I went along and I eventually became an electrical repair engineer." His breakdown vehicle is like a hardware store on wheels. It is full of devices and apparatus like ladders, circuit-breakers, bulbs and numerous spare parts. He and his equipment travel some 25,000 kilometers per year on average. He sees to telephone, computer and electrical failures. He has been up on the rooftops of office blocks in the Paris business district of La Défense to mend aerials and on water towers to repair circuit failures. "I travel pretty much all over France," says Olivier. "But I'm mostly based in the Greater Paris area. I love being mobile. And although I sort of happened into public works but I enjoy the mobility."

“I sort of happened into public works but I enjoy the mobility.”

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France
"The group really highlights human values and individual qualities."

My dream of entrepreneurship

Jean-Michel Guettier, Branch office manager, France.

On the face of it, Jean-Michel Guettier did not think he was cut out for the public works sector. Originally, he wanted to set up his own company on graduating from France's renowned engineering school ENSAM. But that was reckoning without a fellow graduate who had joined Colas. "What he told me about the company appealed to me," he says. "He said you were autonomous, you swiftly gained responsibility, there were good interpersonal relations, and that you divided your time between the office and the job site. During my military service I had drawn up a list. In one column were all the things I was looking for in a firm. In the other, everything I didn't want. Colas matched just what I wanted." Jean-Michel's rise was fast: from site foreman to site manager, then on to assistant branch manager. "I was recruited at a time when the company was making a lot of acquisitions and needed people who had been educated and trained to take on responsibility." Jean-Michel admits that the pace has been fast - even a bit too fast. "Two years after I started working at Colas - it was eight o'clock on a Monday morning and I’d just come back from vacation - I was asked if I wanted to be assistant branch manager to groom me for taking over the top job two years later."

Jean-Michel accepted and two years on he has no regrets. "Colas was the only public works company I contacted when I was looking for a job," he recalls. "It was no fluke. Colas sets great store by individual qualities. And with a flat chain of command, there's room for autonomy at every level. To sum up - although I joined a corporation, I have in a way realized my dream of entrepreneurship."
INDUSTRIES

From rock to equipment

Specialists in materials and transformation processes, the group's employees dedicated to industrial activities represent 5% of the total workforce. They work in 1,500 industrial sites.
The group's policy is to establish a worldwide presence and to become a major materials producer. In line with this policy, it has acquired a sand and gravel pit on the west coast of the United States. We go on a guided tour.
Three million tons of aggregate in California

The Colas group’s acquisition of a major gravel pit near Los Angeles, United Rock Products, has strengthened its competitive edge in California.

With its 15 million inhabitants, the greater Los Angeles basin stretches 30 miles from north to south and 40 miles from east to west. Newcomers flock there in droves, drawn by the Californian dream of sun and sea, movies and stars. Because of the city’s sheer sprawl and tremendous traffic flow, journeys are expressed in time rather than miles. The only efficient way of crossing LA is by one of the many highways which run its length and breadth. United Rock Products stands 16 miles northeast of the city of Los Angeles, close to the intersection of north-to-south Interstate 605 and US Highway 66, which runs from east to west. Acquired in September 1999, it is the latest gravel pit to enter the Colas group. Located in the San Gabriel Valley below the
mountain range that carries the same name, it boasts a surface area of over 1,100 acres and has long been one of the main aggregate production areas in the Los Angeles basin. For centuries the San Gabriel River - now channeled into concrete basins - swept large quantities of aggregate into the estuary. As a result, alluvial deposits of excellent quality built up.

1,800 TONS OF MATERIALS AN HOUR

"With production of over three million tons annually, we're right up there among the world's top ten aggregate producers," says site manager, Arnold Brink, proudly. "We could produce much more. But we really prefer to build up our reserves and ensure top quality." A tour of the gravel pit always has to begin with an exploration of the three excavation pits. Quarrying is currently going on at the first excavation pit. Out in the middle of this site, one of the most powerful

dredges in North America is very hard at work, its two large 16-yard long buckets alternately scooping and loading the materials. "We're licensed to dig down to 125 feet, but there are more resources as deep down as 250 feet," explains dredge operator Danny Mathews. "Each bucketful of material is 45% aggregate. The rest is sand, with only 2% quarry waste. It's very high quality material indeed." Three specially trained operators man the fully automated dredge in round-the-clock shifts. "To quarry 1,800 tons an hour we have to be on the go for 24 hours a day so that other facilities can start
work as soon as day breaks," describes the production supervisor, Frank Keohane.

As soon as the dredge removes the material from the water it feeds it into the primary crusher. The crusher breaks the aggregate down to around five inches, then deposits it on a conveyor belt which carries it some 200 yards over the water, then another 800 yards over ground to be further crushed at installations near the loading points. "We produce fifteen types of aggregate. We sell some directly, but also keep some that we process on site," explains Arnold.
At the operating plant situated close to the three pits, two asphalt plants that belong to Colas’ local road construction subsidiary, Sully Miller, produce 800,000 metric tons of mix a year. A few hundred yards away, two plants produce ready-to-use concrete. Says Arnold: “We can produce aggregate for ready-to-use concrete, asphalt mix, masonry cement, and even for slurry. Slurry enables us to make use of sand which used to be no good to us at all. However, the slurry market has grown very significantly in recent years and we’re now one of California’s leading producers.” Sully Miller uses 25% of United Rock Products’ production for internal purposes. The rest is sold to
Concrete producers, other road construction companies and local communities.

**25 Tons Loaded in Less Than One and a Half Minutes**

Some 400 trucks come and go daily at the gravel pit. The computer-controlled automated loading facilities are so fast that it takes less than one and a half minutes to load 25 tons of aggregate on to a truck. "Competition is very tough in this area. There are five competitors within a three-mile radius and they all have good facilities too. If we want to beat them, then we have to do so through outstanding service, prices and quality."

People make a very big difference, too. The 34-strong team operating the installations in shifts has on average 15 to 16 years' service in the company. "I'm very selective about the people I hire.Whenever possible I like to take on young people in order to train them in our working practices and instill basic reflexes, especially in terms of safety," says Arnold. A self-made man in his own right, Arnold Brink very carefully maps his people's personal career paths in the company. "Whenever it's possible we give them some opportunities to prove themselves in several different jobs so that if ever one of the crew members is absent, production does not suffer in any significant way."
When excavation has been completed, the pits are filled using dry fill materials left over from construction work.

PROFILE
Arnold Brink, striving for excellence.

From an early age Arnold has always been passionately interested in the construction trade. Then, nearly 25 years ago, he scraped together a little money and set up his own concrete firm. "Being an independent contractor got me into a lot of arguments with my family because I just wasn't giving them enough of my time." So, in 1989, he changed directions and joined United Rock Products. Says Arnold: "I can now work as a contractor, but with backing from a big corporation." Still passionate about his work, his management of the pit is masterly. "It's a constant challenge," he says. "You can't take anything for granted." What Arnold enjoys above all else is the sheer variety of the roles he plays from day to day. "I have to ensure quality, safety and production and lead the crew. Every day you try to do a better job." He believes that there is plenty of future in the sector, so he has brought in his son, Sean, to work at the gravel pit. Sean attended a training course and is now one of the three dredge operators. "I hope the job will give him plenty of career opportunity and broaden his horizons," says Arnold. Father and son spend the week working together and the weekends driving together at Nascar meets. Stock-car racing is one of the most popular sports in North America. "It's in the Brinks' blood. My father introduced me to it when I was a boy and my son appreciates it. When I was a boy I wanted to be a pilot, but I couldn't afford it. Automobile racing is like business – you've got to think fast, be competitive and strive for excellence."
Half of the members of the crew work night shifts, maintaining both the gravel pit site and the dredge, which requires five hours of careful servicing every day.

Road traffic is so heavy in the greater Los Angeles area and in the city itself that roadwork very often takes place during the night, as does the transportation of aggregates and asphalt. Costs would be far too high during the day due to time wasted in traffic jams. The United Rock company transports and sells its products within a 30-mile radius of the Los Angeles basin.

The company likes to take on young people to train them in work practices and instill basic reflexes in terms of safety.

SITES FILLED AFTER EXCAVATION

A few hundred yards further on, excavation work has been completed in the second pit, which is now being refilled. "We refill using dry fill, mostly left over from construction work." The materials used are all very stringently checked, particularly to ensure that there is no hazard to the environment. Furthermore, a landscape designer works full-time on the site. Every layer of materials is 95% compacted.

To what use will the land be put once the pits have been filled in? Sully Miller’s managing director, Bruce Rieser, looks at some possibilities. "We could sell the land to a developer who might build a housing project. There is already a residential area close by which could be extended. The site is so well situated that a shopping mall or even hotels could be feasible." Others see the site as the setting for a golf course. There is no shortage of ideas! But there is no hurry, as the Los Angeles urban sprawl has not yet reached a critical stage. Traffic, though, is so heavy that the local highway authorities have eaten into median reservations to widen some roads, so creating a fifth, even
sixth, lane reserved for car-pools. Because Los Angeles has no public transport system to speak of, drivers are usually alone in their cars. As a result, these lanes are little used.

RESERVES THAT WILL LAST A GOOD TEN YEARS

The aggregate market looks set to enjoy a high rate of growth over the next two years. "We don’t want to produce just for the sake of it. We prefer to adapt our output and hence excavation." The dredge will soon be moved to the third pit, where United Rock has applied for a permit - currently pending - to dig to a depth of 275 feet this time.

"We currently have reserves which will see us through a good ten years, at least," concludes Arnold Brink. However, in addition to its reserves, which guarantee future excavation activity, the United Rock Products gravel pit also occasionally earns revenue from other sources, which can sometimes be very lucrative as well. Last year, for example, the producer of the film Tango and Catch hired the site for the tidy sum of 200,000 dollars per month. The gravel pit was used to shoot certain scenes on location in order to make the action much more realistic and more exciting. By the way, this fast-moving action film starred none other than Sylvester Stallone! ■
"I work on developing our Latin American customers' technical culture, which is less developed than in Europe."

From Spain to Latin America

Didier Germes, International sales manager, Spain.

At 34, Didier Germes, the young manager of the subsidiary Axter Iberica, has two good reasons to be satisfied: "Not only was I able to bring a personal project to fruition, but the company was able to break into a difficult market."

After cutting his teeth for four years in Africa with waterproofing and skylight manufacturer Axter SA, Didier was the driving force behind the creation of Axter's Spanish subsidiary. He presented the project to his senior managers in 1992, "because I knew there was strong potential in the sector." He was granted carte blanche.

The beginnings were not easy. With nothing but a PC and a fax machine, he set up an office near Barcelona. "I had very few resources; there was very little investment available; I was working under rather precarious conditions, but I had faith in the project." Four years later, in 1996, the subsidiary was officially established. Since then, the team has grown to seven other employees, the customer portfolio has risen from just one to 80 and annual growth is not far short of 30%. What's more, the subsidiary is now starting to develop business in new markets - Portugal and Latin America, Chile in particular. "Latin American markets are quite difficult, rather unstable," says Didier. Thanks to the close relations that these countries maintain with Spain, Axter Iberica's technical solutions won a major contract in Chile: the complete contract for the terraced roofing of a large shopping mall in Santiago. "Our role is not confined to supplying materials. I personally ensure that our products are correctly installed by visiting job-sites. I also work on developing our customers' technical culture, which is less developed than in Europe." So on his next trip, he has organized a whole series of visits and meetings with architects, customers, and so on. "Like that, we may manage to get our solutions accepted in the face of our American competitors. Didier is nothing if not determined and stubborn. And he is determined to carve out a place for his company in fast-growing and dynamic Latin America."
For the love of work

Fortune Bellenshen, Manager, Colas Emulsions, Morocco.

The story of Fortune Bellenshen and Colas Emulsions goes back a long way. Hers is a story of faithfulness and affection that has lasted no less than 39 years! Recruited as a shorthand typist in 1961, Fortune rose through the ranks of the administrative departments before being put in charge of the Colas emulsion plants in Morocco in 1985. In 1994, she added the Oujda plant to the existing four sites in Rabat, Meknes, Agadir and Tangiers. She handles not only all the management of Colas Emulsions, but also commercial development. "After all these years, my work's just like a second skin to me. You're so lucky when you like what you're doing and you're fortunate enough to work in a family atmosphere. Colas is like a big family for me," she explains. All year, Fortune travels around Morocco, looking out for and signing - new contracts. "Competition has intensified since the early 1990s," she notes.

"Negotiations have become difficult. You have to fight fiercely." That means that great vigilance is required to track the market and know the competition to take up the best positions. Just like battle tactics. "You must always try to keep track of your customers, see them regularly and always be ready to respond. But the hardest thing is winning the contract!" At 61, Fortune is finding it hard to come to terms with the approach of retirement.

Serial production of signboards

Patrick Peleton, Screen printing designer, France.

You must have seen them while driving along the highway in France - huge signboards indicating the location of a historical site, a gourmet halt, an architectural treasure and so on. They all come from the SES fabrication shops. That's where Patrick Peleton works, as a screen printer and designer. "You have to highlight an element of our heritage. It's a new kind of advertising." Indeed, at 49, this former student of the Corvisart School, where he received his screen printing degree, and the Louis Lumière Institute, where he trained as a photographer, has spent most of his career in the advertising business. "For mass distribution items." However, he has been with SES since 1988. "We work from artists' proofs prepared by the illustrators, who are brought in by the highway managers, municipalities etc. Producing these signboards - normally just one copy or, maximum, two - calls for a great deal of time and attention. Paper print ready, 1/10 scale model, film screening, picking out the colors, making the screens, doing the screen printing, printing the copies, assembling..."
Axter, the specialist in waterproofing

Michel de Bonnières,
Plant manager, France.

Mechanical engineering is familiar territory for Michel de Bonnières. After graduating from college, he joined Gerland Etanchéité in 1982, a company located in Courchelettes, northern France, which appeared capable of exploiting both his theoretical know-how and his insatiable appetite for learning. “I began as a production foreman and rose to plant manager,” explains Michel. “The company’s speciality was manufacturing bituminous membranes, a vital element in good waterproofing for buildings, roofs and all engineering structures.” Axter entered the Colas group as a subsidiary of SMAC early in 1999. The company produces about 87,000 tons of membrane (more than 27,000,000 m²). It supplies 30% of its production to SMAC and exports more than 40% of its production.

“I coordinate the plants’ departments, managing about 60 people who manufacture membranes and deliver customers as quickly as possible,” says Michel. “Apart from standard products, we design new products and test new processes and raw materials to keep pace with our customers’ demands. Our challenge is to manufacture high quality products at the lowest cost.” How does Michel see the Colas Group? “I’m sure that belonging to the Group will help us develop fast,” he answers. “In the long run, Axter hopes to be a supplier to Colas.”

Our challenge: quality products at the lowest possible cost.

“Earlier, screen-printing was a ‘poor relative’ of printing. Today, it stands shoulder to shoulder with other printing techniques.”

and mounting... a lot of teamwork is involved, you understand,” explains Patrick. He got into the road sign business a bit by chance but he really appreciates being able to “work on extremely varied décors. This work has become quite precise. Things have progressed to an astonishing degree - the machines, inks, bases, and so on. In the past, screen-printing was, in a way, a ‘poor relative’ of printing. Today, it can really stand shoulder to shoulder with other printing techniques,” explains the artist, who in his spare time paints his own creative work and exhibits it quite regularly.
One man and his plant

Vijay Goyal,
Plant manager, India.

In early 1995, Vijay Goyal was appointed manager of Hincol’s new, state-of-the-art Vashi emulsion plant in Bombay. “Before I had run Hindustan Petroleum Corp. Ltd’s lubricant packing plant,” he adds. Hindustan Petroleum Corp., Colas S.A.’s partner in the Hincol joint venture, had recommended him. Colas had agreed. The plant had only been running a month when disaster struck. There was a malfunction in the mill. “We didn’t know what to do. We were all new. To make matters worse, it was 4.30 p.m. on a Saturday. I phoned Colas head office in Paris, but there was no reply, it being Saturday. We had to sit it out until Monday morning French time – 48 hours away,” recalls Mr. Goyal. “When I finally got through they told me not to panic, they were sure I could sort it out myself. The important thing was the mill shouldn’t stop. So I got out my manual and followed the instructions. By Monday evening, the mill was running smoothly.” And it has continued to do so. Output reached 17,000 tons, exceeding the target of 16,000 well ahead of schedule. The crowning glory came in September 1999 when the plant was awarded ISO 9002 quality certification, the first emulsion plant in India to receive the award. Mr. Goyal was deeply proud of Vashi which he had nursed from birth to distinction. It was his “baby”. “On several occasions I was caught out referring to the Vashi plant as ‘my’ plant. But it came from the heart.”

The demand for emulsion is growing. Vashi served the western and southern parts of India, so Hincol drew up plans to build a plant in Chennai, formerly Madras. Bigger than Vashi, it was to boast a 25,000 metric ton-per-annum production capacity and set new safety and environmental standards. And Mr. Goyal was to be its manager. It was both a wrench and a challenge when, in December 1999, he moved 1,000 miles east to Madras to prepare the plant for commissioning on January 26 . . . and to read the instruction manual! He believes Colas has a bright future on the developing Indian market. “Growth is 20% per annum, but the market remains relatively small. Our job is to educate customers. With Colas’ technical expertise and Hindustan Petroleum’s marketing knowledge, I see business doubling over the next three years.”

Mr. Goyal’s wishes for the future? “I’d like to visit other Colas plants. Most Indian factories are traditional, mechanical ones. I’d like to be given the opportunity of sharing experience with the managers of Colas’ 70 plants worldwide on a regular basis.” Anybody listening out there?

“I have been caught out referring to Vashi as ‘my’ plant. But it came from the heart!”

India
The pleasure of learning

Lucien Baujard, Production manager, France.

When you hear Lucien Baujard speak, you realize that he entered professional life with conviction, faith and two strong principles: hard work and learning. Now production manager at the SES plant in Tours, central France, he has continually furthered his education ever since he was fourteen years old through evening classes, correspondence courses and training programs leading to diplomas in production management, business management, communications, methods and specific technical themes. Lucien may have started out with a humble grade school certificate, but he has now lined up a substantial curriculum vitae of training and experience. Now production manager at the plant (storeroom, boiler-room, decor, electricity, assembly, dispatch department), Lucien is in charge of about one hundred people. He still goes about his duties with great conviction: improving and simplifying processes, operational methods, searching for savings, safety, and ISO 9001 quality accreditation after a year and a half of effort.

“The important thing for me is to get people to work as a team, to listen, and to spot people with high potential so that they can develop.”

which has to be maintained over time. “It was a marvelous moment when we obtained certification,” he recalls. “We had quite a party to celebrate it, that’s for sure!” Lucien sees every step of progress taken by the company as a cause for personal happiness. “The important thing for me is to get people to work as a team, join in, commit themselves, listen to others... and to spot people with high potential so that they can develop. I would like to advise all those who are starting out in the business to supplement their knowledge through experience in the field, to implement new technologies only where they are a factor of progress and to make the most of and give due credit to the work performed by their teams.” These are the ingredients of certain success.
A passion for concrete

Michel Paressant,
Production manager,
France.

In the Paressant family, concrete runs in the family. With his grandfather, father, uncles and cousins all masons, no one was surprised that young Michel decided to make his career in concrete. When you discuss concrete with him, he talks not only as someone who is knowledgeable, but as someone who is fascinated by it. Now the production manager of the Perasso plant, which manufactures between 25,000 and 30,000 concrete blocks per day, he describes the forms and qualities of concrete in the way a wine connoisseur evokes the robe or smoothness of a wine. To anyone who might think that concrete is a dull, gray material, Michel will explain: “It’s a different material every day, because the rock that is quarried is not homogenous. Every morning, we analyze the gross sand to check the quality. On this basis, we proceed to formulate the sand mixes that will be used to produce the concrete.” So every morning he performs a quality assessment along with the team at the quarry and ready-mix concrete producers. Although the production of his plant is specialized in industrial concrete, Michel always keeps an eye on new types of concrete coming onto the market. “We have to try and improve the quality of our materials to satisfy our customers’ needs.” Who said that concrete never shifts or changes?

“Concrete is a different material every day because quarried rock is not homogeneous.”

To the ends of the earth

Marilys Maynard,
Export sales manager,
France.

After gaining a 2-year college degree, Marilys Maynard got her first job with a building contractor, before joining the export department of a subsidiary of Hutchinson. At that point, she decided to resume her studies and completed a master’s degree in international commerce. “I found myself in charge of the export department of a company at the age of 25,” she recalls. As destiny would have it, the company was a resin manufacturer. In 1995, Marilys joined the sales department of Resipoly as head of exports. “The post was newly created, as was Resipoly’s export activity! For the last four years, I have devoted 50% of my time to canvassing new customers and monitoring projects abroad, chiefly in Europe, but potentially in any country in the world.” Apart from French, she is perfectly at home in English and Spanish, and can get by in Portuguese and Italian. “Resipoly’s customers are very varied,” she adds. “One third of them are for mastics, one third for sports floors, and one third for the rest (safety flooring and industrial flooring). Our big customers are mainly in sports flooring and mastic, but no more than two or three a year. We...
A native of Vendée in Reunion Island

Francis Cassegrain, Supervisor, GTOI prefabrication plant, Reunion Island - France.

Francis joined GTOI in 1989 as a quantity surveyor. “I did the job for a year and then moved to the engineering office,” he recounts. “It was very interesting, but what I always like most of all is being on sites, so I missed the outdoors!” Two years later, after participating in the successful bid for the Julius Bénard stadium in St Paul, he was made project manager. Then in 1996, Francis was asked to manage the prefabrication plant, which produces curb-stones, ducts, guttering, cornices, etc., items weighing anything from 50 kg to two or three tons. Attracted by the challenge, he accepted in spite of a degree of apprehension and the risks entailed! “It’s a very rewarding job, because I’m lucky enough to be able to work in the field, at my desk and in customers’ offices. What I like about prefabrication is that, apart from standard products such as ducts, manholes, curbstones etc., the work is creative.” In the past few months, the prefabrication activity has begun to expand as a result of a project devised by Francis himself, with curbstones and concrete blocks manufactured in a new, entirely automated plant to keep the competition at a distance! A big step forward for GTOI. And, of course, for Francis.

“Prefab work is creative - that is what I like about it.”

mostly work with small and medium-sized budgets.” Belonging to the Colas Group has proved to be both a bonus and an obstacle for exports. “We benefit from the reputation of a group that generates 50% of its revenues abroad,” confirms Marilyse, “but we work on niche markets, with small contractors.” Export sales today account for 10% of Resipoly’s revenues. Marilyse is alone in keeping track of all these files, and she has developed her prospective customer network so well that it is becoming difficult to keep up. “Some projects only work out after two or three years,” she explains. “That’s why it’s so important to keep track of all contacts. My objective is to develop a genuine export department.”

“My objective for the coming years is to develop a genuine export department.”
"You can't fall into a routine with resins: they're highly technical and standards are always changing."

Fascinated by resin

Olivier Bellœuvre,
Plant manager, France.

As soon as Olivier Bellœuvre had completed an initial college degree in chemistry, he joined the Research department at Screg and continued his training over the next three years, during which the company allowed him to work on synthetic resins. "I was 22 and it was my first job," he recalls: "formula development and quality control in the lab. The field was just starting up, and I was lucky enough to have an overall view of the sector. I had a turn at every job." Olivier proved to be a quick learner, so at the age of 25, in 1992, he was appointed manager of the St Mars la Brière production site. The young man enthusiastically focused on his career. "It's a very interesting sector," he says. "We have two production sites, Saint Mars and Villeneuve le Roi, which is also the head office of Resipoly. We produce polyurethane resins for sports facilities, such as gymnasiums, athletics tracks and tennis courts, leisure facilities like children's playgrounds, and decorative surfaces like colored sidewalks and roads. In recent years, these floorings have been subject to stringent safety standards. "This particularly applies to sports facilities," explains Olivier. "According to whether an athletic track is used for competition or training or for a space intended for children, floors must meet specific criteria of flexibility and elasticity." Between St Mars, which produces 800 metric tons per year, and Villeneuve, which produces almost 1,300 metric tons, Resipoly is the French market leader in synthetic resins. "Our customer is the one who applies the surface, which makes Colas one of Resipoly's customers! We produce 'tailor-made' and to order. We can't plan production more than a few days ahead – the end user almost always orders at the last moment and we can't manufacture resin in advance." When an order is confirmed, the plant moves into action! "Our work is intense, especially in summer. Such production requires great flexibility and responsiveness from the whole team. "The people who produce the resin know the product very well, which is why we remain efficient. Technological watch is very important. Chemistry is an empirical field, and approval of our products is in the hands of surfacing contractors. Working with Colas should help us pick up contracts abroad because the Group is worldwide. To stay at the top, we will have to develop higher and higher performance resins and only work with top-range materials. We comply with the strictest standards and will have our ISO 9001 quality label in April 2000." Olivier Bellœuvre is less "hands-on" now than he once was, but he is still fascinated by research. "I still devote 10% of my time to new products. You can't fall into a routine with resins, which are highly technical and standards are constantly changing. It's a very lively sector which is developing rapidly and I'm a long way from having looked into everything!"
A very fine career!

"As a boy, I was attracted by this quarry, which was the driving-force of the region's economic life."

I was attracted by the quarry when I was a boy," he recalls. "It had a huge influence on the local economy. Almost 500 people worked there in those days. The site was operated by the state, which produced 1,200,000 tons of aggregate per year. What I liked most were the site machines, the equipment. In those days, there was even a cablecar." In 1969, Hollőköi was 19 years old. After leaving high school, he went to a technical college. "I started at the quarry as an electrician," he says. "I rose to become head electrician and then they put me in charge of the energy department. Over the years, I went on to become deputy manager of the quarry and then I took over as manager. My work consists in preparing drilling, directing operations and managing production levels in collaboration with the transformation plant adjoining the quarry. It's one of the largest quarries in central Europe. We extract andesite, a volcanic rock." In 1990, the Hungarian state, which was the owner of the operating company, Északkő, decided to privatize Tállya. Colas became the leading shareholder in Északkő. "Until then, we were working with Russian, East German, Czech and Hungarian equipment," explains Hollőköi. "The state was no longer financing either the purchase of new equipment or the training of workers. We trained ourselves simply by visiting more modern quarries that were better equipped. With Colas today, we have adopted European technologies. There are now only 64 of us working on the site - 60 workers and 4 managers - and we produce practically the same quantities as before: 900,000 metric tons and different types of gravel. A major group is a form of security. We have been able to develop our productivity thanks to the technical advice of Colas. I believe we can still make much more progress."
A woman gives the orders

Corinne Recchia, Customer orders supervisor, France.

By 6 for a “No Parking”, B1 for a “One-Way Street” AK5 for “Work in Progress”, EB10 for “Entry into the country” and so on. It’s truly a very bizarre set of alphabets that Corinne Recchia handles. Since she was appointed as customer orders supervisor for Adem in July 1999, she has learned the reference name for each road sign and there are hundreds of them! But her job involves much more than just a good memory. “I have to anticipate the orders coming in, consult with the cutting shop to ensure that the sheet metal is ready and prepare the work of appliers who finally produce the signboards”. The latter, once they are ready and packed, can then be delivered to the various clients: public equipment division, villages, etc.

“I have to anticipate the orders coming in and check with the cutting shop that the sheet metal is ready.”

Last year, we received an order for village entry and exit boards for Benin. It was a rather unusual order because generally the orders come from mainland France. At 35, Corinne Recchia, who has been working for Adem for the last 20 years (first in enamel brushing for 13 years, then as an applier for 6 years), admits that her present post provides her much more satisfaction. “I have more responsibility - and wider contacts - with the sheet metal workshop, the team of 7 appliers and the screen printer from whom I order the decors. He has taught me a great deal. Particularly about typographical details - like fonts, for example”.

Concentrating on the orders she has to deliver, Corinne Recchia keeps busy throughout the day, barely taking the time to breathe. “One has to be very exacting” - to ensure that a village that asks for “No Parking” signs does not receive signs saying “Work in Progress”!
Innovation as a priority

Hugo Devue,
Plant manager,
Belgium.

It may be leader on the Belgian market, but that is not enough to satisfy Tubobel. The Belgian manufacturer of concrete pipes sees innovation as a top priority. 53-year-old general manager Hugo Devue makes sure of this. “Concrete suffers from the negative image of a material that is neither modern nor innovative. We are trying to change that by putting our faith in new products and technical innovations. For example, we are working on a model of pipe that can offer a solution to the problem of flooding, which is very common in Belgium.”

Another good example is a pipe that Tubobel is launching at the present time called Moduloval: its oval interior gives it good hydraulic properties, while the exterior is polygonal, ensuring optimized distribution of forces. “We try to offer our customers a maximum of prefabricated solutions, even for rather complicated installations in order to avoid the need for contractors to assemble systems on site or any in situ pouring. We make as many tailor-made pipes as we can possibly manage,” explains Hugo Devue. Tubobel also designs inspection pits for underground installations, to enable easy access to telephone line connections. On a difficult market, where competition is fierce, Tubobel maintains its efforts and fights to defend its position.

“We are regarded as a serious manufacturer who has built up solid expertise and we are very often invited to bid.”

“The reward is that we are looked on today as a serious manufacturer who has built up solid expertise. We are very often invited to bid.”
Success through on the job training

Melvin Newell,
Asphalt plant foreman,
USA.

On leaving school Melvin Newell went straight into work. His first full-time job was truck driver but it was not new to him. "I used to take summer jobs in the public works sector when I was at high school. That's when I got to know equipment. I drove trucks for four years before I started working in road construction. It was in the 1970s and there was plenty of work building highways. I worked for two or three different companies. Then, in 1983, I joined Reeves. Although I started at the bottom of the ladder, it was my lucky break – they gave me the chance to move up." Through working in the field, Melvin Newell built up experience and gradually acquired new responsibilities. "Reeves gave me the opportunity to train on the job. Asphalt is a field which has changed fast in the last 20 years. Technology has made for a better quality product and more efficient production. A lot of our operations used to be manual, but it's all automated now. Automation is more profitable and the plants require less maintenance." Melvin has four people working under him. "I believe that the most important thing in this business is independence, feeling responsible for your job. A good working atmosphere where people are communicating well helps to develop initiative and self-reliance. When I'm training someone, I teach him a sense of responsibility and pride so that he gets real pleasure out of his job." Melvin's multifaceted job is anything but routine. "Over time I've built up experience and learned to manage relations with clients and suppliers and my job has taken on a very commercial slant. Since Reeves became part of Colas, we're kept informed about what's going on worldwide. That has opened up new horizons."

"Asphalt has changed fast in the last 20 years. Technology has made it more profitable and production is more efficient."
"We have to do more than just sell our products; we also have to give training in how to use them."

Being a chamleleon or cultivating the art of adapting to other cultures...

Jean-Claude Gerster, Export manager, Middle and Far East and Pacific zones.

It has taken eight years to conquer all these new markets, and hard work it has been!" Jean-Claude Gerster, age 45, is responsible for exports to the Middle and Far East zones at Axter. He rapidly outlines his achievements. "When I took over this zone in 1992, we were making 6 million francs' worth of sales in five countries. Today, the figure has reached 22 million francs in twenty countries." And this growth has not come to an end! "There are going to be a lot more new markets, like the Philippines, India and China, on which I want to focus our development. This means signing new partnership agreements with local companies interested in waterproofing products. We have to do more than just sell to them; we also have to give people training in these products and their utilization in an environment where competition is global." Establishing partnerships in this zone can prove to be a long and drawn-out process. Fierce negotiating comes before the first results are achieved, and this can take from one to two years. "You have to be a tenacious negotiator, the extra difficulty being that we are not negotiating in a familiar language. We often have no choice but to work through interpreters, which can complicate discussions. In Vietnamese, for instance, the word 'waterproofing' is translated by a 12-word sentence! We also have to be capable of adapting to the culture of the people we are negotiating with: Lebanese, Arabs, Koreans and so on. They all have their own codes."

It's impossible to overlook the economic and political ups and downs which can bring ongoing contracts to a halt. "The Gulf War in 1991, devaluation of the Italian lire in 1994, the Asian crisis in 1998 (the effects of which we are still feeling), the political instability in Indonesia, with frequent rioting... they have all had a deep effect on our business." And not only on business! "When there was a coup d'état in Bangkok in 1992, I was there to sign a contract. I had to stay locked in my hotel for 5 days. Everything was cut off, even the airport. There wasn't a single flight out of the country." But not even being in the thick of a coup d'état seems to have lessened Jean-Claude's determination to press ahead with his conquest of Asia. "I'd just say that in my line of business, you've got to be prepared to miss the plane you had initially intended to catch."
Seamless assistance

Finances, Accounting, Information Technology, Personnel, Corporate Communication, etc., Administration is at the junction of all of the group's functions and accounts for 8% of its workforce. Its main task? Seamless management.
Information technology: everyone needs it and everyone uses it. What about at Colas? In France, the SPEIG company operates the IT network. It designs, implements and deploys the entire system. Today, IT is gaining ground. To find out more... read on.

He's a treasurer with Colas Midi-Méditerranée; she's a legal affairs manager with Sacer Sud-Est; he gave up his job as a male nurse to complete an IT project for SPEIG... Every day they reinvent their jobs and help Colas successfully implement its projects.
At Colas, information technology is SPEIG’s business

In charge of the group’s IT functions for the last thirty years, SPEIG now has the difficult task of leading Colas into the “multimedia” era.

SPEIG’s duty is to archive data and software programs for a period of four years.

The famous yellow diamond-shaped logo on the glass door of a building in Vélizy business park west of Paris welcomes you to SPEIG (Société parisienne d’Etudes, d’Informatique et de Gestion), the Colas group’s IT subsidiary. In just a few months, the adjoining parking lot will disappear to give way to new buildings with enough space for all the new staff who regularly join the company. Established in the early 1970s, the heyday of punch card computing, IT’s precursor, SPEIG now has 70 employees. It is entirely dedicated to Colas and its subsidiaries. Its tasks cover the whole range of IT services. “Designing, implementing, deploying the information system and its architecture...”
these are our main missions”, says Alain Desnues, SPEIG’s president. “In addition, our everyday activities include producing, monitoring and administering data, training users and providing them with help. Of course, we also advise general management on everything to do with strategic decisions on information systems. In every subsidiary, an IT correspondent completes the set-up – they manage their unit’s IT budget, report on any problems and plan deployments in close cooperation with us.”

EVERYONE’S BUSINESS

At Colas, IT is always on the move, keeping pace with cutting edge technological developments. The most remarkable development was to generalize the tools and applications used in all business functions. IT now involves almost all employees, executives, technicians and supervisors, through software applications specially tailored for everybody: sales and finance staff, technicians, researchers, communicators, accountants, operators... “In spite of this, road construction remains relatively less computerized than other business sectors, like banking or telecommunications”, points out François Ray, Head of the IT and Corporate Communications department. “Nevertheless, Colas has always invested more in IT than its competitors, being more aware of the need to have tools and applications in tune with its lines of business”. This year, SPEIG is gearing up to replace the current Syad information system, which dates back to the first generation of PCs, the first Bull computers and the Cetos operating system. The new system is named “Iris”. It will be the heart of the group’s new management system. It will handle accounting, equipment management, human resources, pay, vocational training, etc. “Two pilot sites have been operating since 15 January: one at RCFC, a subsidiary of Colas Nord-Picardie, and another one at Montaron, a subsidiary of Screg Nord-Picardie,” says Claude Latteau, head of works and industrial activities. “If everything goes according to plans, both parent companies will completely switch over to the new system in July 2000. The ultimate objective is to deploy Iris throughout the group by January 1, 2002, to avoid having to organize the migration of the old system to the new euro currency.”

On the multimedia side, the first Intranet application dates back to 1995: it was a program for online management of claims. Meanwhile, SPEIG developed an application for job references, useful for preparing tender files, as well as a directory of the group’s senior members of staff.
HELLO! CAN I HELP YOU?

Another service delivered by SPEIG is IT assistance. This requires teams of specialists capable of answering requests for help from all the subsidiaries day in and day out. A first level of assistance handles telephone calls from users and generally solves 50% of the problems by telephone, such as connection problems, hardware difficulties, etc. Experts study the remaining 50%. "A 'help desk' software program records every call, keeps track of the problems handled and solutions found in order to enable the telephonists in our 'call center' - known to users as the 'network' - to access this data bank and to find the right answers," explains Didier Coulange, executive manager. "We receive about 1,500 calls a month, with peaks of 2,500 when specific applications are put in place." These calls are unavoidable in spite of our constant endeavors to train future users in all applications adopted by Colas. Before the implementation of a new program, SPEIG writes a "start-up manual" listing
Prior to the deployment of a new program, SPEIG analyzes all the steps to be followed for its proper utilisation.

> in detail all the steps to be followed to ensure optimal use. Thus, in the summer of 1999, about 800 accounting staff were involved in the implementation of new software for reconciling delivery slips. Sometimes, SPEIG trains trainers in order to multiply the number of future users. This was the case during the deployment of Sara, a software application for recording job reports. “We generally have in-house functional experts capable of addressing all issues,” adds Corinne Miss, head of the consulting, audit and communication department. “SPEIG staff include former works supervisors, for instance, who have real field experience and know users’ concrete needs.”

**ONLINE COMMUNICATION WITH JOB SITES**

Thanks to this combined know-how, “on-site IT” should soon experience a boom: the dream of many a manager, on-site IT is gradually breaking free from its constraints. Soon the group’s information system will connect all jobsites, much like the human nervous system connects the whole body. It operates according to the same principle as for a digital nervous system, whose organs are mobile phones and nerves the means of communication. “This is a top priority for 2000, as much as Iris”, says François Ray. “The introduction of new simplified operating systems, such as Microsoft’s Windows CE, will help us. Gradually, Colas will be equipping itself with onboard equipment capable of direct connection to the entire network.”

Jobsites have always been important sources of information for the group on a great variety of subjects, including staff, equipment, supplies, weather records, incidents, etc. The site manager will soon be able to access the internet and Intranet from his vehicle as well as weather services, suppliers’
web-sites, those of distributors of buried networks, etc. In the event of a technical problem, a webcam and a microphone will enable him to carry out a preliminary diagnosis in direct contact with his branch office, before asking for a technician to intervene. These examples illustrate how new technologies will soon be enhancing jobsite life. The second stage in the Colas group’s “IT revolution” will be effective “knowledge management”. “We must make all the group’s employees realize that they now have the tools for freely accessing a maximum amount of data, and that they can – and must – exchange data with as many colleagues as possible,” says Alain Desrues. “Recently, workshop managers said they wanted to have their own network to keep each other as continually informed as specialists. It is up to Colas managers to make their subordinates aware of their responsibilities in this respect and to give them the means to access and process any piece of information”. To be continued...
"To retrain successfully, you need a strong will and determination: SPEIG put its trust in me."

From male nurse to engineer, or the benefits of training

Didier Pawlak, Project manager, France.

When he began his first job, at the age of 19, a male nurse by the name of Didier Pawlak could scarcely have imagined that sixteen years later, a computer engineer named Didier Pawlak would be put in charge of implementing an ERP (enterprise resource planning) system dedicated to the management of equipment for a major international road building group. And yet... “After working in nursing for eight years, family life was becoming difficult to cope with as far as scheduling was concerned, because my wife was also a nurse,” Didier recounts.

“So I opted for a change of direction. I enrolled in a technological university and I joined Speig in 1991 as a programmer. Then in 1994, I took evening classes to prepare for a competitive entrance exam for an engineering school. Between 1995 and 1997, Speig let me follow a full-time university program, and at the end of it I qualified as a computer engineer. That’s how it happened!”

Thanks to all Didier’s desire and determination – not to mention the confidence shown by the company – he is now working on the implementation of a software system dedicated to managing equipment, in other words all the tangible fixed assets in the Colas Group (buildings, hardware, site machines, etc.). “Thanks to this system, every item can be tracked step by step. In the case of site equipment, for instance, you can program maintenance inspections, type homologations and so on,” remarks Didier. “The system became operational on the first pilot sites – Colas and Screg offices in Lens and Maubeuge – on January 15. Full roll-out should be completed by January 1, 2002.”

Didier has been involved in this project from the start, including the choice of the software suite. “Of all the products on the market, the J.D. Edwards ERP package was the best suited to our needs and management methods,” he explains. This has given Didier the chance to prove the value of his newly acquired skills, to validate his degree in a sense. By appointing him a project manager, Speig has taken the first step towards recognizing it.
In the shadows of decision-makers

Renée Kister,
Personal assistant,
France.

Calm, intuitive and with the ability to remain unruffled... That's the impression that 56-year-old Renée Kister gives. "In this job, you have to know how to stay discreet," says the personal assistant to the president of Screg Est. She has worked with dedication in the shadows of some ten senior executives and presidents throughout her career. But discretion does not mean efficiency. Dealing with people with strong and forthright personalities, Renée, formerly a secretary in the Champagne-Lorraine regional headquarters, has always known how to be flexible. "When I was younger I was more inclined to get involved, but experience has taught me to smooth down the rough edges, while maintaining my own personality, though. In my line, you can't seek out conflict. Quite the contrary. Apart from the technical aspect, which is the most important, diplomacy and psychology are vital skills: deciding what is urgent and what can wait, being able to relax the atmosphere when your boss is cranky, finding the right moment to get something done, and so on. But, of course, for the team to work effectively, mutual trust is needed." What is the role of an assistant? "We are there to smooth out day-to-day difficulties when our bosses are at the office, but also to provide a link for them when they are out," replies Renée. "You have to be there without getting in the way."

All the same, she is tenacious and determined and is not satisfied merely following in the wake of her bosses. For several years, she has run Screg Est's twice-yearly in-house magazine, Pulse. "I work on the magazine with a wonderful team, and I genuinely feel I'm creating something," says Renée. "It's a real moment of pleasure."
Like father like daughter at Sully Miller

Jessica Daniels, Secretary, Sully Miller.

Despite the long-standing family tradition that saw her own father and both of her grandfathers work for Colas’ Californian road construction subsidiary, Sully Miller, Jessica Daniels, whose maiden name is Delgado, never really thought she would, too! However, on her return to the workforce after a maternity leave of three years in North Carolina, she applied for a job under her married name and joined the company. “I worked with my father for two years, keeping the fact that I was his daughter a secret. He taught me all the basics about asphalt when

“I don’t curse traffic jams caused by roadworks any more!”

I was a little girl. Once I felt I was part and parcel of the company, I revealed who I was. Everybody was so surprised.”

“I wouldn’t call myself a “road workaholic”, but I really love what I do,” Jessica is amazed at the amount and sheer diversity of work she can get through in a single day.” Sully Miller is like a school for acquiring new knowledge and new experience. At the same time, I meet some really interesting people. It doesn’t matter what you do, whether you work in the office or out in the field, everyone is in it together to achieve the best result.”

Now, every evening as she drives home to her daughter Rebecca - “she’s not into public works yet” - Jessica admits that she understands more clearly why roadworks are important. “I’m proud of working on Sully Miller’s roads, but I don’t curse traffic jams caused by roadworks any more!”

United States
An exotic dream come true

“My job involves serving as an interface between the head office in France and the eight local subsidiaries.”

Jérôme Gaulier, Administrative supervisor, Asia.

Expatriation had always been Jérôme Gaulier’s dream. It began during his studies at the French Institut d’Etudes Politiques, followed by a business school. At 26, the dream became reality. As administrative manager for the Asia zone, he lives and works in Bangkok. He was recruited by the Group in 1997, and just had “long enough to receive six months’ training in France to learn something about the life of a subsidiary at Colas Rhône-Alpes, then to spend seven months in the internal audit department at head office.” before making the leap to take up his post in Thailand, early in 1999. “It’s a country where expatriation is easy. Thailand is extremely developed, and we have very good working conditions, with none of the security problems you can find in Africa or some other Asian countries. And as Asians are influenced by western culture, communication is less difficult than you might think.

Indians have been strongly marked by British colonialism, for instance, and it is easy to get the importance of reporting across to them.” All the same, his assignment is no easy task. “My job partly involves serving as an interface between our eight local subsidiaries and the French head office, particularly for all aspects of financial reporting. I also help prospect for opportunities for acquisitions of companies like those that encountered difficulties during the Asian crisis. I do not have a commercial role, but I act to support managers, helping with financial analysis, assessing profitability and collecting legal information relating to any company we want to buy.” From Bangkok, Jérôme also helps to run the network of subsidiaries located in Thailand, Vietnam, India and Indonesia. “Because subsidiaries out here are joint ventures with local partners, the notion of belonging to the Group is vague. I have to foster this feeling or connection. I have to explain the impact of each decision taken by subsidiaries on the Group.” Conversely, he also has to serve as a cultural interface for head office. “This means acting as a buffer between Paris and local approaches.”
The importance of a job well done

Joseph Olowo,
Deputy to the administrative manager, Benin.

"I found it was a dazzling experience in more ways than one," says Joseph Olowo after attending two weeks of Colas University training in Paris. "It was amazing to get to see France and its capital city for the first time, but I was also really impressed by what we were taught. It was very intense!" Joseph joined the Benin agency four years ago to take charge of management control, reporting to the administrative manager. "It was an opportunity for me to join a large company but in a sector I already knew a little, having previously worked in a construction company."

Joseph's day-to-day work consists in analyzing costs, the results of contracts, and maintaining links between job sites and the agency for administrative and accounting information. "One specific aspect of this sector is that we work with leaders of site teams who haven't received the same training as us. So that we can get on well and all remain on good terms, we have to be able to establish contacts and pool our experiences," he adds. Joseph is delighted about his training, which made him aware of his role within the Group.

"I gained a clearer idea of the importance of some of the tasks I perform every day, and the impact they have all the way through to head office. I now understand better why anticipation is so important, particularly debt recovery!" A conscientious worker and a good listener, Joseph has come to understand the notion of team-work. "Whatever our function is, and wherever we come from, our values and our desire to make progress lead us towards the same goal, which is the development of Colas."

Joseph is proud of being an entrepreneur. Perhaps it is to reinforce his pride in the roads on Benin that every weekend see him traveling around the country with his whole family.
"We have to work on our image and show that working conditions have improved..."

"Our people all have a lot to offer."

Joann V. Gooding, Vice-president human resources, USA.

Joann Gooding's working life already stretches back some 30 years. She began demonstrating her self-reliance at the age of 12 working various jobs. While studying at school, she began a co-op program with a company called Allied Chemical. Upon graduation, she was offered a full time position. "I worked during the day and attended evening classes at the same time. I was first promoted to the position of Administration Supervisor, then to Administration Manager." At the time, Joann was working for the Paving Materials Division of Allied when its parent company, Barrett, was acquired by Colas in 1979. Over the years, Barrett has prospered and so has my career. I advanced to Assistant Director Human Resources, Director Human Resources and now Vice President Human Resources/Assistant Secretary for the entire Company.

Recruitment is extremely important in the road building sector. Competition in the job market is so fierce that it has to make enormous efforts to sell itself." "We have to work on our image and show that working conditions have improved, that our sites and quarries are safe places to work and that the business offers career opportunities. Young people today seek to combine stimulating working careers with a rich private and family life. We also need to understand that spouses may have their own careers, which becomes an important consideration when we are thinking about relocating our employees. Good training is paramount.

New technologies emerge every day, quality products and services are expected and consumers are more demanding."

Joann says she is proud to be part of a global corporation, which is number one in its field and offers a wide range of services. "Everyone I have met in the company, wherever he or she comes from, has made a strong and lasting impression upon me. We are fortunate to have such a wealth of dedicated and talented people. That is why I believe Barrett and the group will continue to grow and be successful. Our people's know-how adds up to years of experience, and they all have a great deal to offer." In 1999, Joann Gooding celebrated 30-years of service. "I felt especially honored by what my colleagues said to me. They thanked me for my contribution to the success of our company and for the support and advice I had given them. This was one of the most rewarding times in my career."
Treasurer, a job in its own right

Laurent Hermann,
Treasurer, France.

When Laurent Hermann was appointed treasurer of Colas Midi Méditerranée in 1997, he saw it as a return to his first love. A graduate in political science from Aix en Provence, he already had several years of experience in the Group in the personnel department at Colas Midi Méditerranée and as an administrative manager for various agencies, but it is as company treasurer that he feels most at home. The daily financial estimate what transfers of funds to make so that the balances are always as near as possible to zero. Each morning presents a new challenge.” Laurent has to work to a very tight schedule. His reporting must be completed by 10 a.m. The start of each day’s work – at 7 o’clock! – is particularly dense. To help him make decisions, he makes use of a host of financial information and statistics transmitted by the subsidiaries and agencies. The rest of his job can be put down to feeling and experience! The remainder of Laurent’s day is no less busy – entering cash forecasts, depositing drafts, issuing payment orders for suppliers, checking that bank conditions are being respected, and so on. “When specific software came on the scene, it changed everything, making the job a great deal easier. We can now instantly visualize the treasury going back several months; we have eliminated the need to handle papers for payment orders; and for the purposes of reconciliation, we can visualize the accounts on a day-by-day basis. In the past, when there was an error, it was only spotted a month later!” Another big change to occur is the particular attention that is given to financial results, not just the company’s business results. “With the development in our tools and resources, we can constantly improve the fine-tuning of our financial decision-making, and so find ways of reducing costs.” In that regard, there is nothing to fear as far as Laurent’s concerned. He may handle millions each day, but he doesn’t hesitate to get on the phone to the bank if he sees a few francs of interest have been wrongly deducted. “It’s a matter of principle,” he insists. “I’m there to ensure that we don’t get fiddled, even for 3 or 4 francs!” You don’t trifle with a treasurer!

"I manage the accounts of 26 Colas Midi Méditerranée companies, making sure they pay minimal interest.”

monitoring of 26 companies (nearly 100 accounts in three different banks!) holds no fear for him. On the contrary, he loves it. “I manage the accounts of the subsidiaries, making sure they pay as little interest as possible. Every day, according to the credits and debits that are expected, I have to...
For the love of numbers

Véronique Etifier,
Head of accounts,
Martinique.

In her office in Martinique, more than 6,000 kilometers from the Colas head office in mainland France, Véronique is aware of the importance of the Group every day. “I appreciate knowing that at any moment I can count on someone somewhere in the Group, whether it’s to answer one of my questions, send me an article from a specialist magazine or help me with a particular problem.” But 37-year-old Véronique also knows that responsibility for the day-to-day management of the Caribbean subsidiary is entirely in her hands and those of her team of four. She juggles with figures, management reports and balance sheets with the dexterity of an acrobat. “When I was 17, I wanted to be an artist, a musician or a dancer, but in the end it was my love of numbers that won through,” she smiles. Véronique is full of curiosity and most of all wants to learn more about the company’s business sector. She recently exchanged her skirt and sandals for job-site overalls to see an asphalt mixing plant in operation for herself. “It helped me to understand everyone’s requirements, and the jobs everyone does.” When she arrives at the office each morning, she sees the smoke from the neighboring plant. She can’t wait until a gap in her schedule will give her the opportunity to go and find out for herself about the world of production. Meticulous and demanding both for herself and her accounting team, she is responsible for customers, cash flow, suppliers and pay. She likes to understand, forecast, manage and analyze with hindsight.

“Despite the distance, I can count on someone somewhere in the Group.”

“Contrary to what some people may imagine, my work is very varied, and I hardly have time to get bored. I also have to keep permanently up-to-date on new rules and regulations, read articles and generally keep one step ahead.” When you are a woman in a company dominated by men, she believes, you have little margin for error and always have to give of your best. “But men also know how to call on female diplomacy to sort out delicate problems!” Véronique was born near Paris, but her family moved to Martinique when she was five. Her job, her interests outside work and her children have so far prevented her from traveling much. But Véronique is open to any opportunity the Group might put her way, to take up new challenges.
“For me, technology is applying the logic of IT to the requirements of the company.”

Going with the flow!

**Fabienne Auffret, project manager, France.**

Just like all the “Mr. Y2K’s” and “Mr. Euro”’s who flourished in companies as the last century drew to a close, Fabienne Auffret could have been labeled “Madam Accounting”. She is head of the “coherent flow” project at Speig. Her role is to ensure that all transfers of data between the Colas Group’s various IT applications – in-house software and such new packages as One Word (accounts and equipment management) and HR Access (payroll management) – operate correctly. All this forms part of the vast IRIS project, which concerns the implementation of a new information system which will progressively replace the now almost obsolete SYAD system on all Group sites. “To allow exchanges between the existing programs and the new ones and to ensure that everything remains coherent, we have defined a certain number of basic rules as we discover the new software and master it more thoroughly,” says Fabienne. “My role concretely consists in providing an interface, making sure that all these ‘bricks’ form a solid whole, which the Group can rely on with confidence.”

After obtaining a college degree in statistics, Fabienne first learned the tricks of the trade at the naval shipyards in Saint Nazaire, her home town. Then in 1987, she joined Speig as a programmer, and became familiar both with living in Paris and with the world of road building. She gradually became a specialist in the SYAD system and spent time providing maintenance and monitoring development of in-house software developed for accounting. When commercial software packages came along, she saw her job change as she moved away from dealing directly with users and became more involved in coordination. “What I appreciate is being able to do a bit of development, a bit of systems analysis and development monitoring,” says Fabienne. “On the basis of detailed specifications, I have to coordinate development teams… and do everything possible to ensure that things advance according to the required schedule. This is far from being an easy task.” She has always had a passion for computers, and adores taking up the challenge of applying the logic of IT to the requirements of the company. There are enough projects lined up for the future to provide her with plenty of job satisfaction.
Unfailing loyalty...

Gisèle Manni, Secretary, Morocco.

As a child, Gisèle used to live in rue Abdellah Ben Yacine in Casablanca, close to where the “La Route Marocaine” company is located. Perhaps it was this proximity that led her to join the company later when she qualified as a shorthand-typist. “I started in 1976 at the age of 26 as a secretary and punch-card operator, after getting married and doing a replacement job at Colas in Toulouse,” recalls Gisèle Manni. “Today, I still work in the secretarial section, but I’m in charge of monitoring contracts and managing bids. Every morning, I read the press to find announcements of invitations to bid, which I then pass on to unit managers. I also handle bank guarantees.”

Gisèle has been assigned to a position of trust because, over the years, she has proved how honest, professional and competent she is. “I proved my adaptability. I quickly learned how to work. My solid background knowledge in French helped me to become a good letter-writer. And now, thanks to information technology, I work faster than ever,” adds Gisèle. “Here, the Colas corporate culture is easily perceptible in the way people work and manage matters. It’s like an extended family; we feel really protected.”

"Here, the Colas corporate culture is easily perceptible in the way people work and manage matters. It's like an extended family; we feel really protected."
The living memory of the company

Martine Gangloff, Secretary, France.

It was originally because she was a few centimeters too short to realize her ambition of becoming a stewardess that Martine Gangloff agreed to enter the family business. She was 19 years old, and in those days her surname was Meunier. The transport and public works company of the same name had been founded by her grandfather. “I used to work there from time to time during school vacations, helping out the secretary. I had taken my baccalaureate in economics, and I’d studied languages. My father convinced me to go on and do secretarial studies and I joined the company.” It didn’t prove easy for a woman to impose herself in what was traditionally a male preserve. “A woman has to prove herself and be up to standard, otherwise she is given very little opportunity to succeed. That’s why it wasn’t easy for me to take over at Meunier. I didn’t have the technical knowledge or the experience of the field. When Colas took over the business, all I could think of doing was going back to what I was good at and liked doing. And everything went very well! Being part of a large group hasn’t prevented us from maintaining the family side, but it has introduced a much more reassuring management style. In a group, the sources of problems are immediately identified, and because of permanent monitoring and regular reviews you can deal with them rapidly.”

“Being part of a large group hasn’t prevented us from maintaining the family side of business.”

Martine is now responsible for the secretarial side, and she is also in charge of scheduling. “Dominique Billon, the manager of our center, spends a lot of time in the field and leaves me a lot to work out on my own initiative, particularly concerning relations with customers, whom I know relatively well. This allows me to establish a spirit of confidence and foster good working conditions.” Her colleagues say that Martine is the living memory of the company. She is clearly much more than that.
"Acting upstream at the start of a transaction avoids problems or litigation later on."

A woman and a true field worker

Chantal Gorski, Legal affairs manager, France

The cliché is ingrained.
"You always think of lawyers in dusty offices surrounded by piles of litigation case files," laughs Chantal Gorski, the 44-year-old legal affairs manager at Sacer Sud-Est. "No doubt it was like that 25 years ago!"

But the function has undergone a lot of change, and Chantal’s day-to-day work is very different from that. "The true role of a company lawyer is to act and advise upstream, as soon as a transaction starts to take shape, to find the most suitable solution and thereby avoid problems or litigation." To this end, the tasks she performs are highly varied.

"I work alongside operations managers, for instance, reminding them of the stipulations of the code on government procurement as well as the rules laid down by our internal procedures. I check out the financial situation of any company with which our company envisages signing a contract. I help the managers of agencies think out suitable legal frameworks. I have noticed that managers increasingly tend to incorporate legal issues in their decision-making, which is a positive factor in a world which is growing tougher and more law-oriented."

Another important aspect of her function is risk assessment. "Sometimes we suggest stopping work on a job-site if our intermediate invoices haven’t been paid, or calling a halt to negotiations with a potential partner who doesn’t offer the necessary degree of reliability or cannot present an adequate guarantee."

Chantal’s daily diet does, of course, include a degree of litigation, debt recovery, claims administration and one thousand and one other "minor hassles".

But the extraordinary diversity of fields in which she operates (contracts, public law, insurance, company law, tax affairs, and so on) means that after 19 years, Chantal Gorski has never grown tired of her work: "I am lucky to have such a fascinating, and rewarding career!"
"As an internal auditor, I feel like I am getting to the bottom of things."

Auditing is an instrument of change

Laurent Torres,
Auditor, France.

"Our object isn’t to mount some kind of police check," emphasizes 31-year-old Laurent Torres, who was recruited last year as an internal auditor. "We’re there to suggest improvements. Our role is primarily to offer advice while ensuring that Group procedures are correctly followed." The majority of his assignments, which may see him working in France or abroad, concern general auditing of subsidiaries. But sometimes the purpose of the audit is to examine a company prior to acquisition or it can be a highly specific audit, of cash flow, for instance. A timetable is meticulously applied. Within a period ranging from a few weeks to two months, depending on the size of the subsidiary, everything must be completed. The organization is painstaking; a preparation phase, while as much information as possible is assembled on the points to be audited; the phase of the audit itself, involving meetings with a number of people - senior executives, profit center managers, administrative staff, site managers, etc. - and visits to job-sites. All assignments culminate with recommendations. "Our aim is to offer an outside view and assistance for people involved in daily routines who may not have the time to take a step back from their daily tasks. In general, we identify risks and make recommendations to eliminate them. In terms of work organization, we can suggest methods to save time, for instance. We have now become very vigilant with regard to the recovery of customer debts and to safety." Laurent previously worked as an auditor for the KPMG management consultancy. "Working externally, I did a lot of auditing but not much consulting. As an internal auditor at Colas, the consulting side of my work goes much further. It’s less superficial – I have the impression of getting to the bottom of things. Not only that, but it’s fascinating being able to meet so many very different people."
Leave it to the specialists!

Research work, trials, tests, technical assistance both in laboratories and jobsites are the daily work of our technical staff, who represent 4% of our total workforce.
Bitumen is thought to have been used for building the tower of Babel and Noah's Ark. Colas uses nearly three million tons of bitumen a year. Where and how is it made? One place is the Shell oil refinery in Normandy, France.
On the asphalt trail

No bitumen, no roads. The Colas group uses several million metric tons of bitumen every year.

Where and how is it made? One place is the Shell oil refinery in Normandy, France.

The Petite Couronne refinery boasts the widest range of bitumen.

The Shell oil refinery of Petite Couronne stands 130 kilometers north-west of Paris, just outside Rouen - the largest city in the region of Normandy - and 75 kilometers south of the port of Le Havre on France’s northern coast. Strategically, its location is ideal for incoming oil shipments and dispatching outgoing refined products.

There are two other Shell oil refineries in France – at Berre on the outskirts of Marseille and at Reichstett in eastern France. Of the three the Petite Couronne refinery boasts the largest output of bitumen. Its range is also the widest and most sophisticated, encompassing some 40 grades of bitumen used in road construction.

WASTE NOT, WANT NOT

Oil refineries have made the saying “waste not, want not” their motto. They discard nothing, put absolutely everything to use. They place their orders for crude.
two months in advance with oil producing countries. Tankers can change hands several times in the course of a single shipment and the price of their cargo – 200,000 to 300,000 metric tons – can also vary in a single voyage as European crude oil prices are fixed daily.

On arrival in Le Havre, the oil is piped to the refinery where it undergoes a three-stage manufacturing process: separation, distillation and conversion and, finally, refining. The end energy products are natural gas, gasoline, diesel fuel and other heating fuels; the non-energy products are oils and bitumen. The 800,000 metric tons of bitumen the Petite Couronne refinery produces account for 10% of its output, and this share is growing. But increasing the plant’s bitumen production capacity is one thing; selling the other products is another. Customer orders and refining always go hand in hand.

CENTRALIZED CONTROL SYSTEM

The oils control room is the refinery’s nerve center. Technicians monitor flows of incoming crude on-screen, dispatching it according to types of products on order. The 80-strong team manning the control room round-the-clock also control the market of refinery units, the mixes of base-stocks approved for bitumen manufacturing, stocks and quality. To ensure the quality of bitu-
men, they analyze each freshly produced batch and should the bitumen fail to meet quality standards, it is either corrected or returned for further refining. The bitumen in each container is checked every five days. In the event of an emergency the refinery keeps 5,000 metric tons of bitumen in storage. Production is usually scheduled one month ahead of time, although the actual manufacturing of bitumen base-stocks takes only 24 hours. Some products – and, therefore, mixes – require a few more hours, however. To meet a wide range of special demands, the refinery keeps a selection of bitumen grades in storage. To keep products at the right temperature, a heating system runs through the entire facility.

In order for the bitumen to reach the asphalt plants at the required temperature, it can be heated prior to transport to 200 °C.
FROM REFINING TO CONSUMING

Approved transport companies ship bitumen to customers. They come to the Petite Couronne refinery to load at five o’clock in the morning. It can be even earlier – 3 a.m. at the peak of the road construction season or the day after a public holiday. Drivers have to observe a strict set of safety measures when loading. They must wear safety shoes, goggles and switch off their mobile telephones and short-wave radios. Initially, the loading process was self-service with trucks weighing in and out. Methods have now

HISTORY

Bitumen is as old as the world

The Bible contains references to bitumen. It was used to build Noah’s Ark and the Tower of Babel. Archeological findings have confirmed that as long ago as 4,000 to 5,000 B.C. peoples in the Middle East used natural bitumen mixed with mineral outcrops found locally in the soil’s surface layers. It was used as mortar for buildings and to make terraces, dams and boats watertight. Because it is so enduring, constructions like the dykes on the River Tigris at Assur in Mesopotamia and many of the artifacts in the world’s museums can still be seen today. Nowadays, bitumen is almost exclusively derived from refining crude oil, of which it is the heaviest fraction. Its remarkable physical and chemical properties make it a multi-purpose material ranging from road construction to waterproofing. Bitumen is chemically inert and boasts great adhesive capacities: it adheres to materials as varied as stone, concrete, wood, metal and glass. For all of these reasons, it is used more and more extensively in the construction of roads, buildings and other facilities. Its properties are being rediscovered and it is enjoying a widespread revival in our era.
evolved towards a system that relies on entirely automated scales. On arrival in the loading bay a driver keys the amount and quality of bitumen he requires into a computer. It prints out a bar code which the driver then feeds into an automated pump. The pumps meet stringent safety standards and the driver is filmed during loading. With this new loading system it takes only 20 to 25 minutes to load a truck, compared to 35 minutes previously. These time gains enable the Petite Couronne facility's 24 loading docks to cater to 160 trucks daily. Mild autumn weather has, on occasion, seen more than 200 trucks loading in a single day.

It can take up to 48 hours for a truck carrying bitumen to reach its destination. It loses about 10°C every 24 hours. So, to ensure that it arrives at mixing plants at the right temperature, it is preheated as high as 200°C.

A SEPARATE QUALITY CONTROL LABORATORY

When a delivery driver leaves the refinery with his load, he is given a quality control certificate which recaps the specifications required by the customer. The certificate is the work of laboratory technicians who analyze the bitumen during the night to ensure it is ready to leave for delivery the next morning. Should any batches fail to meet
specifications, they are removed from the load. In addition to the routine tests like penetration, temperature and acidity analyses, aging simulation, paraffin level and solubility tests are carried out three times a year. In order to ensure the high quality of measurements, the semi-automated measuring devices are checked once every two weeks.

**COLAS’ BITUMEN NEEDS**

Colas France buys a large share of Petite Couronne’s bitumen output. Other customers are principally Shell’s European facilities and the French public sector. The price per metric ton of bitumen is governed by its quality and by the price of crude oil. It can vary by as much as 100% even before transport costs are added.

All loading operations are validated by a quality certificate in which the customers’ specifications are recorded.

In addition to routine tests like penetration, acidity, paraffin level, solubility and aging simulation tests are carried out three times a year for high quality measurement.
"Regardless of the projet, I adopt a creative, competitive approach."

A passion for pavement or a person always on the go

Julian Bilal, Technical engineer, France.

Julian Bilal is always rushing off to catch a plane. He barely has time to draw a breath. What about France's new 35-hour working week? "I do 35 hours in two days," chuckles the 39-year old engineer who is always on the go. As technical consultant to all Colas subsidiaries, he puts his knowledge at the service of the group. He also works in R&D, developing new processes and teaches at France's renowned civil engineering universities Ponts et Chaussées and École Supérieure du Génie Militaire. Never a dull moment. At Clermont-Ferrand in central France, work is underway to extend the airport. Julian Bilal advises a puncture-proof shear-resistant asphalt mix instead of the concrete usually used for aircraft hangars. Then he is off again to the tramway system in Montpellier in southwest France which has followed his recommendations and used compacted cement concrete paving, eight times faster to lay than concrete. His next stop is the mammoth Casablanca bypass, a 15-kilometer, two-by-two lane road around the city. It has started to show signs of wear. But rather than rebuild it, Julian Bilal has advocated a recycling solution that involves treating the pavement course with a specially designed emulsion. Says Julian: "Regardless of the project, I have to take all factors - technical, financial, environmental - into consideration. And I have to think of everything, from design, construction and operating conditions, to how a structure will age and can be recycled. I adopt a creative, competitive approach."

Between trips to the USA and Asia, this itinerant technical wizard manages to find the time to design new products and processes. A case in point is Elsa, a piece of CAD software that simulates a construction's serviceability limit. Elsa helped design a bitumen surfacing for tracks used by Leclerc tanks. "It gauged the stress the caterpillar tracks exerted on the track surface and so enabled us to come up with optimized solutions," says Julian. Be it a highway, a track, rails or a Formula One circuit, no road holds any secrets for the indefatigable Julian Bilal after 12 years with the Colas group. But he refuses to rest on his laurels. He is now focusing on technology transfer in order to share out expertise - an asset for the future of Colas.
Weighing up quality

Hervé Bertholet,
Laboratory technician,
France.

Laboratory technician is a deceptive title. It conjures up images of the lab assistant surrounded by test tubes conducting experiments. But little is known about what the laboratory technician really does on work sites. It is a job that is comprehensive in nature, bringing together high technology and interpersonal skills.

“We keep an eye on quality by conducting preparatory studies for manufacturing or work sites.”

It is precisely this combination, along with sheer variety, that appeals to Hervé Bertholet. He has been laboratory technician with Sacer Paris Nord-Est in Besançon in eastern France for 11 years.

“Whether it’s a road, highway or roadbed construction site, our task is to keep an eye on quality by conducting preparatory studies. We might, for example, carry out tests on an asphalt mix or on materials used for a roadbed.”

Equipped with his sieve, electronic scales and various other apparatus, the laboratory technician conducts quality tests on site. Hervé Bertholet has worked a great deal on active joint processes for precracking the base course to prevent microcracks from reaching the surface. It is also very important to be able to interact with branch managers, site managers and foremen. “We often have to act as go-betweens. We explain our technical options to outside quality control laboratories, then at meetings on work sites we have to stand up and explain the same options again.”

France
A man for all seasons

Pascal Robin,
Director of LTR for road technology bureau, France.

Engineer or architect? Researcher or operations manager?
Pascal Robin has always wavered between the pure pleasure of basic research and the need for hands-on work. Now, at the age of 40, Pascal has managed to bring together his heart’s twin desires in a single activity: he is director of LTR, a road-building engineering consultancy and subsidiary of Colas Centre Ouest. “When we set up LTR in 1989 we operated only as a laboratory, analyzing different bitumens and mixes, etc. Gradually we widened the scope of our activity till we reached the stage where we could sell turnkey projects to our customers, be they local authorities or private companies. I’m now able to get my finger into every pie from technology to operations,” says Pascal, who did his thesis in the Central Ponts et Chaussées laboratory in Nantes in the west of the country. It was also in a laboratory that his career started - the Colas research laboratory. LTR now enters projects at the early design and engineering phase, providing services such as topography, road soil mechanics, environmental studies and road layouts. It also gives companies comprehensive advice on projects, tracks the progress of work sites, and acts as engineering consultant and quality control laboratory. In 1996, it even branched out into safety coordination. “Compared to our competitors who pitch themselves as design offices very much in the drawing board mold, our strength is that we can see a project through from start to finish,” says Pascal. The task facing him when LTR started up and he was its only employee was Herculean. “I had to do everything, even the accounts. I even created the company logo.” The staff has gradually grown and now boasts thirty-three people. Their backgrounds vary from field-oriented operations (e.g., project managers) to specialized knowledge in fields like hydraulics, sewage and environmental management. Says Pascal: “We can’t build roads like we used to. You have to take a lot of considerations such as the environment and recycling into account. We now offer such services to all our customers as well as to Colas.”

“Our strength: we can see a project through from start to finish, including monitoring.”
"I retire in five years, so I'll ease up then, but not too much - I'd miss that asphalt smell."

The ideal asphalt quest

Len Strynadka, Technical services manager, Canada.

Len Strynadka followed his nose into the road construction business — literally. "I love the smell of asphalt," he sighs. "I guess that's why I've been in the business 35 years." Len had been a partner in an asphalt engineering and testing company for 25 years when, in 1994, Terus Construction president Wayne Patterson finally hooked him. It was a fine catch. He appointed Len manager of the Highway Division of Terus subsidiary Wapiti Gravel Supplies to boost asphalt paving production. Recalls Len: "Output stood at 175,000 metric tons per annum. By the time I became technical services manager at Terus, we were putting down around 350,000 metric tons. Wapiti's still producing those same levels."

How did he do it? "We used a modified 200-ton Boeing plant, which we then upgraded to a 400-tonner. We also brought in a new crew. They worked real hard. Every employee has pride with a quality product. Laydown becomes easier, production increases and crews feel good about themselves. They had to, because the season up here in North Alberta only runs from May 20 to October 25. They were putting down 750,000 metric tons of sub-base at the same time!"

Upgraded plant, committed crew. What else? Len's answer is crisp: "Quality." Does quality go with quantity? "It sure does. One example is the manufactured fines I've introduced. They are nice and dry and can be processed for exactly the right gradation. They'll always pass the sand equivalent test, unlike natural gravel. Here in Canada the industry works on the End Product Specification system, EPS. So specs are very tight. There are penalties for companies that fail to match them and bonuses for those that do. After just one year with Wapiti, Alberta Transportation Utilities awarded us its highest EPS bonus ever. With manufactured fines, we bonused out at 52 cents a metric ton. Multiply that by 350,000!"

Len has devoted much of his career to the quest for the customizable mix. "Fifteen years ago I was preaching manufactured fines and angularity in the fine portion of the mix. Provincial highway departments didn't want to know," he chuckles. "Now three-way split and manufactured fines are in their specs."

Is there a sure way of producing the required gradation? "There's something called EPS," grins Len. "Terus Construction's competitors used to be my clients. EPS scared them because they ran on 2-3% margins — they couldn't afford not to meet specs. So I worked out a pit analysis calculus. Longhand, it would take six hours."
Wapiti Highway
Division manager, Morgan Hall, was working for me
then. He was a computer
whiz kid and developed
a program that could do
all that math in five
minutes. We called it ACP,
Asphalt Concrete
Pavement. I had to put
the word ‘asphalt’ in.
Must be that smell!
We set up a testing
company named after
ACP1 in 1996 with the
approval of Terus."
ACP quarries and tests
gravel then feeds the test
results into the program
which comes up with
gradation and bitumen
data to meet required
specifications. Its work
converges with Len’s
duties as technical services
manager with Terus
Construction, a position
he took up in 1998.
He steers and advises
Terus’ many companies
in quality and production.
"Before a bid I take a look
at a site and its
requirements. I have
to think about everything.
For instance, the right
aggregate gravel might be
in a quarry some 90 miles
away. The data ACP
supplies is crucial. I do
some phone consulting,
too, helping out other
Colas companies where
I can. I talk to Lorne Davis
from Simon Contractors
a lot. Lorne’s a good
friend. We’re one big
happy family."

What of the future?
"In road construction
it’s quality. As for me,
I retire in five years. After
a lifetime of working
15 hours a day, I’ll ease
up. But not too much –
I’d miss that old
asphalt smell."

"I advise other Colas
companies where I can.
We’re one big happy family."

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The environment has become an

Isabelle Chanas,
Environment supervisor,
Screg Est.

The environment has become like
quality, an essential
requirement there’s no
getting around,” says
Isabelle Chanas.
At 25, she was appointed
environment supervisor

Her task was to foster
awareness of the
environment across
the whole company.
She has college degrees in
environmental management
and technological
risk and hazard
prevention. The first
objective she set herself
was “to make
the environment an
integral part of routine
working practices. Most
people’s reflex nowadays
is to throw something
away or discard it on
the roadside. So it is
important to encourage
new attitudes, like
collecting waste and
leaving job sites clean.
I believe that doing
ordinary things which
call on people’s civic sense
is what leads to awareness
of the environment.”
Screg Est is currently
drawing up environmental
awareness and training
courses for all its branches,
quarries and asphalt
plants. Their purpose is
to find practical ways
of implementing
government regulations
on air, water and noise
pollution and teaching
the virtues of sorting
and collecting waste.
The environment: everyone’s business

Jens Molhave, Environment manager, Denmark.

Scandinavian countries are often trailblazers when in the protection of the environment. Denmark is no exception. Jens Molhave is environment manager in Colas Danmark A/S. He joined Colas in 1967 from university where he graduated as a mechanical engineer. He worked in the technical centre in Viborg until 1978, when he was transferred to the sales and marketing department at the head-office. In 1983 he became project manager and finally in 1989 manager of the Health, Safety and Environment department.

"On 15 January 1999 we were presented with certificates of our Environmental Management System according to ISO 14001 including voluntary supplements for the management of the working environment.” The Environmental Management System is integrated in Colas’ Quality Management System according to ISO 9001 and is a coherent management system. The certificates cover all activities relating to the development, production, sales and laying of road paving materials, bituminous binders; excavation and processing of gravel and mineral aggregates.

"I rely on environment watch groups."

essential requirement

Says Isabelle: “My second task is to find solutions to managing and recycling inert materials like cut and road rubble left over from work sites. That requires setting up units for temporarily storing, then crushing and recycling materials. My other role is to keep watch for any technology and legislative developments pertaining the environment. I have to know about legislation that’s being drafted so that the company is not caught off guard when it’s enacted.”

Isabelle’s job is new at Screg and it poses her an interesting challenge. “We’re laying the foundations for a new system. Respect for the environment is a big challenge in the public works line of business.”
When innovation is a synonym of evolution

Equipment goes hand in hand with Operations. The Equipment divisions account for 3% of the group’s workforce. Their job: to maintain and manage a 32,000 vehicle fleet.
With screens, joysticks, press-buttons, etc., the drivers’ cabins of the future will look like video game consoles. To upgrade their machines, manufacturers are relying on technological innovation. We pay a visit to Caterpillar, the world’s leading manufacturer.

A grader operator at Colas, a shovel extractor driver in Switzerland, an equipment manager in France… they all rely on experience, but also technical expertise…
Caterpillar: 75 years young

What will the construction equipment of the future really look like?
The world's leading manufacturer, Caterpillar, is a step ahead. Technological innovation and new services are critical to leadership.

James Bond might have had a license to kill but he never passed a license to drive a public works vehicle. Which is why Caterpillar handpicked an operator from a top European lineup to drive a vehicle in an action-packed scene from the latest Bond, *The World Is Not Enough*.

The Bond scene was shot in Malaga in the south of Spain where Caterpillar traditionally tests all its new equipment. The machines it produces are increasingly competitive and designed for uses that vary from continent to continent and country to country. In the US, pavers spread mix at a very quick pace, while Europe tends to prefer thicker layers that are put down at a more measured rate. The result is that Caterpillar manufactures equipment ▶

*Routes* number 8 • special year 2000 edition
that closely matches end-user needs. One example is the compact paver that is no more than a meter wide and operates on narrow thoroughfares like cycle tracks and footpaths in the Netherlands, Scandinavia and Germany. The German market is always on the lookout for state-of-the-art equipment that meets high quality specifications. The French, however, tend to focus on methodology rather than machinery. “When you see what the French are able to do with traditional equipment, you realize that they go far beyond what we thought machines could do,” says Peter Voûte, Caterpillar Switzerland’s earthworks and roads marketing manager in Geneva. “A French earthworks team might use, say, a grader on shoulders, while in Germany they’d use a bulldozer.” But beyond such variations in national working practices, the entire European construction sector shares the same standards in quality control and environmental protection legislation. Take the base model, the Caterpillar 950. It uses biodegradable oils and special, more robust flexible couplings that are leakproof. The same goes for other Caterpillar machines that have received the German government’s Blue Angel low-noise accreditation, a much sought-after status.

European entrepreneurs have agreed to quality control and to regulations governing environmental protection.

**EQUIPMENT RENEWED EVERY THREE YEARS**

Bergerat-Monnoyer has been distributing Caterpillar equipment in France since 1929 and has supplied Colas with some 4,000 machines worldwide. It has seen customers’ renewal policies evolve considerably over the years. “Until quite recently, road construction companies used to buy most of their machines. Nowadays, however, they are increasingly turning towards rentals rather than large-scale purchase,” observes Jean-François Brunhes, head of equipment-hire, used machines and international business operations at Bergerat-Monnoyer. “The upshot is that customers renew their fleets more regularly, so benefiting more quickly from Caterpillar’s latest technological innovations.” With its rental fleet of 400 vehicles, Bergerat-Monnoyer is the only company in France that can supply its customers with the latest equipment on request. “Although road construction crews usually work on
Bergerat-Monnoyer is alone in France in renting state-of-the-art equipment to its customers.

Caterpillar has used innovations to widen its construction equipment product lines.

small jobsites with servant machines, unlike excavators who operate with high-productivity equipment, we offer them the newest heavy-duty vehicles which all boast high performance," says Pascal Guillemain, sales manager with Bergerat-Monnoyer. "With its policy of renewal every three years, Caterpillar regularly enhances its range of 300 construction vehicles, especially in terms of computer-assisted capabilities and electronics. Self-diagnosis is the development that has most marked recent years. It helps to plan overhauling requirements ahead of
time and spot failures thus cutting machine downtime. Onboard computers are set to be the next innovation. They will indicate which parts require servicing and when, and which parts to repair in the event of a breakdown. Better still, the combination of laser technology – which has been implemented on graders for 10 years now – and a GPS guidance system means that grader operators will only have to enter a set of parameters in the computer and let their machines do the steering. The technology is entirely workable: it has already been applied in the US and in South Africa, where driverless 220-metric ton trucks are in operation in some of the country’s big open cast mines.

**SATELLITES, COMPUTERS AND GPS ALL ONBOARD**

Other major trends currently include the emergence of what Caterpillar has dubbed the “tool connection”. In simple terms, the concept allows an ordinary hydraulic shovel to double as a modular tool-carrier, or a loading shovel to modify its front-end depending on the job it is doing. “In the future the concept will be applicable to most of our tools and to those of our competitors,” says Peter Voûte. “Hence the idea of developing tool-carriers that can automatically recognize existing systems. It was with this aim in mind that Caterpillar has in recent years taken over a number of small tooling companies like Verachtert in the...
In the 1970s, with support from Nasa, Caterpillar developed its renowned farm tractor, one of its best-selling pieces of equipment worldwide.

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<th>KEY FIGURES FOR CATERPILLAR</th>
<th>...BERGERAT-MONNOYEUR</th>
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<td>• World sales in 1999: $19 billion or FRF 120 billion</td>
<td>• Bergerat-Monnoyer Travaux Publics sold 3,000 new machines and 1,500 used vehicles in 1999. It has nine regional sales departments and a major accounts department (Colas alone regularly uses some 4,000 Caterpillar machines worldwide)</td>
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<td>• FRF 6 billion francs annually are earmarked for R&amp;D (i.e. FRF 25 million per working day)</td>
<td>• in 1999 it recorded sales of FRF 3.5 billion in public works out of a total Monnoyer group sales figure of FRF 8 billion</td>
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<td>• 300 civil engineering and public works machines are featured on average in Caterpillar’s catalog</td>
<td>• Bergerat-Monnoyer is Caterpillar’s exclusive dealer in five other countries (Romania, Poland, Moldavia, Russia and Algeria)</td>
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Progress in telecommunications technology will eventually enable, say, a timber company working deep in the heart of a Scandinavian forest to receive an order by satellite from its customer in Spain telling it, for example, to fell trees in another location. The same kind of technology will make long-distance remote maintenance a reality, too. "Caterpillar's high-yield pavers will also be equipped with an automatic GPS maintenance signal. After each day's work, operators will be told if they need to stop their machine or change a part. They will also get remote advice from their Caterpillar dealer," says Peter Voûte. "And to make it easy for drivers to learn, drivers' cabins will look more and more like game consoles. On some wheel loaders, like the 950G, the steering wheel has already given way to joysticks with push-buttons. The similarity between drivers' cabins in all machines will eventually make it easy for operators to switch from bulldozers to shovel loaders and graders."
along with applied research into fields like new transmission units and bitumen viscosity analysis. There are also development centers scattered across the world. The Japanese center specializes in caterpillar-track hydraulics, the German in rubber tire excavators and the British in articulated dump trucks.

TECHNOLOGIES THAT ARE APPLICABLE IMMEDIATELY

Caterpillar has long orchestrated a committed R&D policy, even though it does not always bear fruit in the short term. Peter Voite provides an illustration.

"Some 20 years ago we developed a rubber running gear assembly complete with wheels and chains. Initially, this newly developed technology was applied only to farm tractors because it increased their range and made for lighter vehicles. It’s only now that we’re beginning to see rubber running gear assemblies on some pavers because road construction companies want to put down asphalt evenly. It affords perfect grip and absorbs vibrations from rough, uneven ground. This is the proof that our clients’ remarks and expectations are sometimes responsible for the new developments we achieve in a particular family of equipment."

The rubber running gear assembly was developed in the 1970s with funding from the US army which was then looking for an all-terrain vehicle able to carry US strike force nuclear warheads smoothly and rapidly. At about the same period, this time with support from NASA, Caterpillar developed its famous farm tractor, now one of its most widely sold vehicles. Which goes to show that opportunities, competence, audacity and business power mix well to produce leadership.
"Nothing will ever replace human know-how and especially human experience..."

There will always be a need for people

Philippe Brissonneau, Equipment manager, France.

In a career with Colas that has spanned 23 years, there is little or nothing Philippe Brissonneau does not know about equipment. He joined Colas on graduating as a mechanic from the French engineering school, ENSAIS. Since then he has steadily climbed each rung in the equipment ladder to become, at 45, general equipment manager for International Operations East. The area for which he is responsible covers Africa, the Indian Ocean, North Africa, Asia and central Europe. He acts as interface between projects and as consultant on all questions pertaining to equipment. “In the course of my career I’ve been lucky enough to have had experience of different facets of the business,” he confides. “In my early years I was involved in a lot of expat projects. In Canada I worked on the James Bay high-voltage lines contract and I was also part of projects in Kenya and Indonesia. My career then took a very technical turn. I was appointed equipment manager for the Colas subsidiary, Midi-Méditerranée, in France. Then I became equipment manager at Colas Ile-de-France, which covers the Greater Paris area. That was tough in interpersonal terms, as I had to see through the restructuring of the company.”

Philippe Brissonneau is also the man behind the thermo-regenerator, a machine that has revolutionized road rehabilitation. He both designed and marketed it in 1988. During his time at Midi-Méditerranée, he also designed the Colflex mobile plant, one of the first high-mobility asphalt mix plants. Philippe continues: “You mustn’t believe that this line of work is only made up of glamorous operations and technical records. On the contrary, most of our time is spent planning, anticipating and smoothing out the little ‘wrinkles’ that could eventually lead to major setbacks. We have to be meticulous and conscientious. The mechanization of tasks has become inevitable, but it still reassures me to know that I can count on a team that is working towards the same goals and has the same values as I. In the end, an equipment manager is the man who knows that bit more than anyone else about equipment. The man who has to find the right machine and can upgrade it to meet performance and safety requirements. The Internet is set to revolutionize our business. It used to take ages to obtain data about a machine and locate spare parts. Now, it takes no more than a click of the mouse to access manufacturers’ data bases and find out. If a machine or part isn’t available, you can just order it. Remote maintenance will also change the site supervision. But the Internet is no more than a tool. It will never replace human know-how and experience.” Which is why there will always be a need for experienced and expert people like Philippe Brissonneau.
An apprenticeship in the country

Joël Votiez,
Workshop supervisor,
France.

As Joël Votiez looks back on his past, entire scenes from his working life fly by. “I was 18 years old and I had just passed my driver’s license. I had a job that took me along the country roads of Picardy repairing farm equipment. From morning till night I saw to breakdowns like clutch failures on combine harvesters and tractor engine failures. I used to dismantle gearboxes in the middle of fields!” He is currently chief mechanic at the Screg Nord-Picardie workshop, a job which brought him into the public works sector after three successive farm equipment companies. But Screg was not just any public works company, says Joël: “The branch office was only about 10 miles from where I live. And I’d gotten to know some of the mechanics who used to come to pick up spare parts. When I started at Screg, I missed the customer relations side of my old job. But I soon got used to it. That was in 1977. I was a mechanic then. In 1981 I became chief mechanic. I’m now in charge of 50 vehicles of less than 3.5 metric tons as well as trucks, excavators, etc. Together with three mechanics I also service vehicles and do quality control checks.” Since Screg became part of Colas, Joël has not noticed much change – apart from the arrival of computers. But he still tinkers with engines, saying, “You have to be able to mend things yourself before you ask others to.” A point worth thinking about.

The call of Switzerland

Raymond Mabut,
Shovel extractor driver,
Switzerland.

Is the month of June more favorable than other months for major decisions? Probably - on 1st June 1984, Raymond Mabut, 23, from the Savoy region, crossed over the Franco-Swiss border again. On that day, he had firm intentions of getting himself a job with the Swiss. “Between the age of 16 and 22, I learned everything about driving an excavator in a small company in my village, Beaumont,” Raymond Mabut recalls. “Grading work for villas, housing estates, small road building works - that’s what I did every day in my job. After a year in the army, I returned and joined another company, but it didn’t suit me, so I thought I’d be better off on the other side...” Since then, working with Jean Piasio in Plan-les-Ouates near Geneva, Switzerland, Raymond sits behind the controls of his 30 metric ton Caterpillar extractor every day - or almost every day. It’s become child’s play for him now: “Machines of this kind are very easy to drive - it’s just
Getting promoted... why?

Michel Arnoux, Grader operator, France.

Michel Arnoux was in a hurry to get out of school and start working for a living. When he was 15 his father, a crane operator with Route Arléienne in Senlis, Picardy, got him a job in the company's mechanical workshop. A year later, Michel was at the controls of his first caterpillar crane in a quarry loading an endless stream of trucks. In 1963 Route Arléienne became part of Colas. "The equipment was brand-new and the machines sported the Colas colors," recalls Michel. "When I came out of the army, I was offered a job as a foreman. But I turned it down, because I wanted to operate a shaper, the ancestor of the grader. I was amazed by all those machines could do."

As a grader operator, Michel and his machine tirelessly even off gravel, level asphalt and shape roads and embankments. "You've got to start young, develop your eye and learn all the tricks of the trade and its technical constraints," he says. "Out of 50 trained grader operators, only about 20 are really good and reliable. You can't afford to make an error. The site foreman relies on us to do our job flawlessly." Michel won the Colas skilled workers award in 1993. He has a passion for his job and has refused promotion several times. "Operating a grader, you see all the work you've done in a day," he explains. "I like that."

"You can't afford to make an error."

A 30-ton excavator? It's easy to drive. The driver's cabin has changed: we now drive with control levers."

"A 30-ton excavator? It's easy to drive. The driver's cabin has changed: we now drive with control levers."

a question of habit," he assures us. "The driver's cabin has changed a lot over the last thirty years. Today, we drive with control levers - no more steering wheels. In 1992, I took part in a mechanical shovel "gymkhana", organized by Caterpillar in Switzerland. Out of the 800 drivers selected, I came in fourth. And I was invited to visit the hydraulic shovel factory in Belgium. That's one of my fondest memories!"
A rock lover...

Dominique Legoff, Gravel spreader, France

The minor country roads of the Bordeaux region that wind their way through the hills and vineyards around Blaye and Saint-André-de-Cubezac - Dominique Legoff knows them well, very well indeed, because in addition to using these roads all the time, he has also played a role in reviving them, as gravel spreader. "Here, in the Blaye region, we normally re-profile roads with limestone, with the help of a grader, before spreading a bitumen-based emulsion and then adding a layer of white, bluish or orange-colored gravel, depending on the final layer," explains our professional. "My only tools are the bucket and broom - I apply the gravel with one and spread it properly with the other, while ensuring that the edges are neat." In spite of his passion for automobile mechanics, Dominique Legoff - 31 years old - moved to the public works sector, to obtain increased job security. When he was 21, he joined Sercé Sud-Ouest (Mérignac) as a temporary worker, on the advice of someone who was working in the same line.

He was never to leave the company: "I learned everything here, on the job, as I moved from one site to another," he confesses. "At the time, I had guts - and still do, today! It's the only quality you need in order to work in this field." Whether he's busy spreading gravel along a village road or the access roads to a housing estate, what Dominique loves most is being outdoors, meeting the locals, the residents, and doing them a good turn from time to time. "That's also the reason I prefer Public Works to working in a garage," he quips. We can understand why.

“My only tools are the bucket and broom. I apply the gravel with one and spread it right with other.”

France
Added productivity makes for greater security!

Damian Ion, Paver operator, Romania.

Damian Ion has always loved driving. So, in 1995, he decided to learn how to drive site vehicles. With his vehicle operator license and love of mechanics behind him, he joined SCREG. “I had my basic training, but working with SCREG is what has really helped me evolve. In the last few years we’ve seen the arrival of machines that are much more high-performance than our Romanian equipment. I began on a Vogele and I’m now driving an ABG Titan. Production has leaped from 250 metric tons per day with Romanian vehicles to 2,500 metric tons. That’s a tenfold increase! And they’re incomparably safer than the machines we used to drive.”

What Damian enjoys most about his job is its variety. “I generally start work very early in the morning – around 5 a.m. I prepare my machine for the day ahead, cleaning and oiling it. Then, together with my adjuster teammate we do the finetuning. The vehicle has to be ready by 6.30 when the first asphalt trucks arrive. All day long trucks arrive and unload. I operate the paver while keeping an eye on the five men in my crew. If the paver breaks down, the whole production process grinds to a halt. That’s why servicing it properly is paramount. It’s a heavy responsibility.”

Damian Ion is currently working on the national DN2 highway project. The job involves rehabilitating a 150-kilometer stretch. “We have jobsites all over the country,” he explains. “Since we became part of the big Colas group, we’ve entered a new dimension. Equipment, productivity, working practices and salaries are all now on a different scale. Sometimes, when

“It makes me feel good when I look at the flag that’s flying over our job sites.”

I look at the flag that flies over our job sites, I think it’s flying in countries all over the world. That makes me feel good.”
An open-minded person

Jean-Michel Josse,
Workshop supervisor,
France.

"I started out as an apprentice milling machine operator," says Jean-Michel Josse. "But machines change fast and my apprenticeship didn't do me a lot of good. So I took jobs as a laborer on public works construction sites. I had an apprenticeship as a mechanic and when I qualified Sacer offered me a job. That was 11 years ago. I worked in Grenoble for five years, before I agreed to a transfer to Carpentras in southeast France. I was to be a workshop manager. The job finally came about... but two years later and in Marseilles!" As manager of the Marseilles workshop, Jean-Michel goes to work sites in the sector to repair and service equipment. He works in collaboration with his counterpart from Gap, a town that falls within his sector. "We've got a dozen crew vans, a dozen trucks, two vibrating rollers, two graders and a compactor to see to. We also have to ensure that the equipment complies with technical standards. The French authorities are becoming increasingly stringent," he says. "Since January, pollution checks have increased. We have to be very careful. I've been familiar with machines and construction since boyhood," says Jean-Michel. "My father used to operate a grader." Yet his career could have taken another turn. "During my holidays I would go on motorbike rallies in Africa that a friend of mine used to organize. We'd ride all the way from Marseilles to the Ivory Coast, covering 5,500 kilometers in about three weeks with the bikers. And every evening I'd tend to the bikes. I believe every experience is good. Last year I went on an equipment management course. It's a good thing to go on learning, even if it's sometimes a bit abstract compared to the daily grind."
Making it in a man’s world

Helle Aarup,
Equipment supervisor,
Denmark.

It is ten years now since Helle Aarup began working for Colas-Novejfa. “After secondary school I wanted to start work straightaway,” she confides. “My father worked for Novejfa, as it was then known, for 27 years. So I joined the company, too.” Helle spent two years wielding a shovel on worksites before going on to drive a dump truck for the next three years. She was then appointed to the Machine Logistics Department. “I spend half my time at my computer and on the telephone. At any given moment, I know the exact location of every excavator and every pump. I plan where they are operating, what they are doing and how much the job they are doing costs. I keep chief site engineers informed. The other half of my time I spend out in the field. I drive round sites in my specially fitted truck with spare parts for faulty machinery or delivering new equipment.” Helle travels from site to site supplying teams with equipment over a radius of more than 200 km. “They might be in need of a new pair of gloves or boots or short of screwdrivers. I’m also in charge of clothing and each year I order the working clothes for our labourers which they come to collect from the store. Everyone knows me. Sure it’s a very male environment, but the men consider me one of them. Because I started working on construction sites like they do they accept me. I like my work and have plenty of room for initiative. What I do is very varied and I’m fairly free in the way I organise my schedule.”

“Like all the men, I started working on construction sites, so they consider me one of them.”
He stays the distance!

David Lowes,
Teamster,
USA.

A sked what kind of license he needs to drive his 50-ton Euclid truck, David Lowes says: "None, because we don't drive on the open road." But special skills are necessary! "The sheer size of the trucks is the biggest challenge. But I've built up my skill over the years," says David. "I started here 13 years ago driving an 18-ton truck with stick shift. Then I graduated to 20 tons, 35 tons and now a fully automated 50 tonner with air-conditioning. We teamsters adjust our speed to road conditions. And we keep an eye on each other because we all have different driving habits." They also keep their eyes peeled should anyone need help. "I work in the pit," says David, "where the rubber-tire hi-lift loads my Euclid with shot rock. I then climb out of the pit to take the load to the primary crusher. One time my drive shaft snapped as I was going up the ramp. I slammed on my brakes and was lucky they held in place. A hi-lift driver spotted me. He came to my rescue and pushed me up to the top."

"The sheer size of the trucks is the biggest challenge."

On leaving school, David worked as a carpenter. "I was a carpenter for five to six years. But there was less and less work and I got a job with a concrete plant. Someone told me there was a teamster job going. Thirteen years on, I'm still here. And with Colas' plans for growth, the future looks good."

Driving heavy vehicles: a pleasure

Lynn Stamp,
Mixer driver-delivery,
USA.

W hen Lynne Stamp drives his mixer truck from Delta's concrete plant to job sites, he passes the proud evidence of jobs in which he has been involved. "Take the Bill Emerson Memorial Bridge," he says. "It will span the Mississippi River at Cape Girardeau upon completion. I'll be able to look at that bridge and say, 'I helped make that.' There are a whole lot of people from the construction business out there watching us because Delta is the only company in the area with all the right expertise, planning and know-how." The same kind of teamwork was behind the extension to the big Akiwa factory whose foundations Delta laid last summer. Recalls Lynn: "That job involved four-feet deep pours of 1400 yards apiece accomplished in seven hours each. The pumps had difficulty reaching that far. I still feel a real sense of accomplishment when I see it." Lynne got his taste for driving heavy vehicles in his first job out of high school working on a farm. When the farm was sold he joined a local concrete company in Scott City, his home town. "The guy who ran the company was a friend of mine. He gave me training and got me started in the concrete business."
At the wheel of heavy-haul tractors

Sherry Simpson,
Heavy-haul tractor driver, USA.

Sherry Simpson joined Simon Contractors in 1981 as a 12 C/Y end dump driver delivering asphalt and aggregates. She continued to drive end dumps until April 1989, when she transferred to the office in her hometown of Cheyenne, Wyoming. The move spelled a short break with driving. She worked as administrative assistant for accounts receivables in Cheyenne until, in 1991, she took over as concrete plant operator. Her tasks included dispatching mixer truck drivers to Simon jobs and outside customers, and coordinating the delivery of all the ingredients necessary for various types of ready-mix concrete. But a year later Sherry was back driving. She operated bottom-dump tractor-trailers and pup trailer configurations. In April 1997 she started driving heavy-haul transport tractors, loading and moving all types of equipment. She also helps transport mobile asphalt and concrete plants. Sherry is nothing if not versatile. As a qualified front-end loader operator and concrete mixer truck operator, she helps out whenever needed. Her versatility does not stop there. Before joining Simon Contractors, she was a licensed emergency medical technician. Now a certified instructor of the American Red Cross for emergency first aid and adult CPR, she trains employees in all of Simon Contractors’ operating facilities.

“\text{I often help move mobile plants.}”

“\text{I'm proud of Delta's many achievements.}”

When he went bust I was able to get a job as mixer driver-deliverer with Delta. That was 10 years ago.”
Lynn drives a 98 Model RM Mac with 11-yard mixer and bridge master.
“I haul concrete from the plant to sites within a radius of 30 miles. I’m on the roads a lot, so I have to be real careful especially with the load I’m carrying. Unloading concrete is always tricky because, 90% of time, it’s the contractor who does the unloading, so I have to pay close attention to his signals.”
Since Delta became part of Colas, Lynn has noticed two important changes. “First, there’s investment for modernization and expansion and a lot of focus on safety. Second, there are now meetings every two weeks, whereas it used to be every two months. All that makes my job safer – in both senses of the word.”
Whistle while you work!

Jean-Guy Houle,
Compactor Driver,
Canada.

On the south bank of the Saint-Laurent, not far from Notre-Dame-du-Bon-Conseil, between Montreal and Quebec, lives Jean-Guy Houle, driver-compactor by profession. So, what does he like? Roads, asphalt, gravel, and so on. "I started working in this field in 1961, as a worker for the Modern Paving company, as Sintra used to be called. And I'm still working for the same company," says Jean-Guy, now 57 years old. "I had no training at all - I wanted to work; there was a vacancy and there I was!" Every day, Jean-Guy leaves his home and travels 25 km away to the Company's offices in Saint-Albert-de-Warwick. From there, he leaves for the work sites on his schedule with his hands on his brand-new roller's controls ("a Caterpillar - I've had it for three years now"). Trans-Canadian highways, major arteries, boulevards - nothing can stop his roller, which weighs several tons. "I drive behind the asphalt being laid to compact it properly," explains Jean-Guy. "For those in our profession, ordinary roads are two to three inches thick or three inches thick with another two inches of finishing in the case of Trans-Canadian highways. Sometimes, the finishing goes up to three inches!"

"I'm healthy enough - I'll carry on working until I'm 65. It's not a difficult job even though we work long days."

From May to November, Jean-Guy travels through some part of Quebec or the other, but three years from now, Jean-Guy Houle will be 60 years old - a good age for retirement? Maybe not! "I'm healthy enough - I'll carry on working until I'm 65. It's not a difficult job, even though we work long days. But I leave the house with a song on my lips - and come back home singing!"
A nomad’s life

Ludwig Sedat,
Distributor truck driver,
Germany.

Ludwig Sedat’s career began at the age of 16 in a service station, where he worked as an apprentice mechanic and pump attendant. “I was there for three years and passed my driver’s licenses,” he recalls. “When I got my truck license I became a truck driver for a transport company in southern Germany. Then, in 1989, I joined Colas as distributor truck driver.” Ludwig has always enjoyed the traveling involved in his job. “I sometimes work on job sites as far as 300 kilometers from home and only get back for weekends. There’s plenty of variety, too” - client relations, team management, preparing equipment. No two job sites are alike. We have occasional problems, but we also have job satisfaction and we’re never bored. However, he does find that the weeks can be a bit long. “Now that I know the whole process and all our clients and partners, I think I might evolve towards a more sales-oriented position.” Being part of a large corporation like Colas could well provide him with just that opportunity. “It certainly opens doors,” asserts Ludwig. “Not only in terms of career prospects but also in technological terms.” Ludwig does harbor one grievance: “We only speak German. So we miss out on the flow of company information.”

“My children are growing up, so I’d like to have a job based in one place; I might evolve towards a sales-oriented post.”

Germany
On the look-out for good contracts

Olli Ruotsalainen, Project manager, Finland.

In the summertime the going is anything but easy for Olli Ruotsalainen, project manager with Colas Finnish subsidiary, Valtatie. "Because our winters are so long and dark we’re very busy throughout the short summer here," says Olli. And as the most crucial and challenging side to his job is to ensure all Valtatie's contracts are profitable, there is no let up for him. "I'm responsible for all the asphalt business in southern Finland. That involves assessing bids, negotiating terms with clients and subcontractors, and not to mention developing new, more cost-effective working practices."

But his passionate interest in the construction business is a driving-force for him. "It goes back to my youth," he confides. "I'd always wanted to work in construction. Which is why I studied civil engineering and worked on road construction sites every single holiday." He joined Valtaties as an office engineer, before going on to become site foreman, then project manager, a position he has held for 13 summers! Says Olli: "The job is a reward in itself. I meet so many different people and get great satisfaction from being able to see the end results of all my effort." He certainly has some impressive end results to his credit. "Probably the toughest job in my career was in Kostamus in the former Soviet Union. That was in 1984. Three months in grueling conditions with every move watched by Red Army guards. The jobs that give me the greatest pride, though, were here in Finland. One of those was the Helsinki-Vantaa airport job."

Valtatie has been a Colas company for three years. Has Olli noticed any major changes in that time? "We now place much greater emphasis on safety and protection of the environment." "Since Valtatie has been a Colas company, we place more emphasis on safety and protection of the environment," he says. He also feels that Colas has provided Valtatie with the opportunity to boost know-how. "And I hope that I'll have the chance of getting to know both the Colas parent company and other subsidiaries better."
Jobsites from day to day: versatility and team spirit

Jean-Marie Lemoine,
Truck driver,
France.

If ever there was a versatile individual it is 57-year old Jean-Marie Lemoine. His career has spanned activities as varied as railway worker, taxi-driver, tobacconist, and truck driver – which he has been for 11 years now with Coter. “But even within that job I’m versatile,” he says. “I always do a bit of everything on a jobsite, from excavation to laying cables, embankment work and operating machines . . . you name it.” He arrived in the construction trade as a temporary worker. “I read a want-ad in a temp agency that said truck drivers were wanted. I had a license, so . . .” He developed a taste for working on jobsites, where he appreciated the team spirit and mutual support. Nowadays, though, as he gets older, working conditions are more of a strain. He is always on the move from site to site as part of a team of four (himself, the foreman, shovel operative and laborer) knowing he will not be going home in the evening. Weather conditions can be harsh, too. “Rain, wind or shine, we’re always out there on a jobsite,” he says.

“I’ve developed a taste for jobsite life. I like the team spirit and mutual support…”

He is based at the Besançon depot, from where he strikes out all over eastern France, particularly in the mountainous Jura region, known for its bitter cold weather. Perhaps, from time to time, Jean-Marie Lemoine, a Compagnon de l’Arc, looks up and dreams of sunnier climates further to the south.
“One day, I replaced a grader driver. And I have remained a grader driver to this day.”

Sole master on board

Didier Gérard
Grader operator, France.

I’ve always loved machines. As a little boy I used to love watching farmers from my village drive by on the tractors and combine harvesters. Didier Gérard’s boyhood fascination is still with him in the shape of his passion for construction equipment and a marked preference for working outdoors.

“I worked for a year in a factory in 1974 as a metal worker,” he recalls. “Then after a series of odd jobs I went into public works, joining Colas in 1975 as a worker. I started at the bottom with a pick and shovel and then I became a spray bar operator. It was a tough job. When I resumed working after my military service I got the chance to replace a grader driver. I never looked back.”

Didier trained as a driver at the Colas-Est work center in Sarrebourg in eastern France in 1977. Twenty-three years on, he passionately plies the same trade in the same center. Always seeking to improve, he regularly attends training courses and, curious by nature, he likes to take part in the development of new techniques. Safety is another of his concerns – he is a first aid officer in the workplace. He enjoys trading ideas and training new labor foreman and vehicle operators. All of which earned him the Colas skilled worker award, Losange d’Or, in 1997. Didier is one of a select band of unrivaled vehicle operators.

“Machines have evolved, especially in terms of technology,” he observes. “Graders with ultrasound or laser guidance systems boast increased capacity. They are able to read the lay of the land they are operating on and work faster. Whether finishing large or small work sites or different road structure layers, grading is always high-precision work.” But it would not be possible without the driver.
At the wheel of a 40-tonner

Jean-Paul Renaude, Skilled driver, France.

Jean-Paul Renaude started working at the age of 14. He was attracted by road building, so he took his truck driving test at the first opportunity and passed. “I started out as a long distance driver for a sawmill carrying ready-to-use wood. In 1978 I joined Lacoste to drive articulated transport trailers that carried site vehicles. I drive 40-tonners and 145-metric ton convoys – they don’t come any heavier in the public works sector in France. There are seven of us working as drivers with Lacoste and we’ve all got 20 or so years’ experience.” Over the last few years Jean-Paul Renaude has seen considerable changes in vehicles. “Backhoe loaders and trucks have improved. Vehicles are more comfortable and less tiring to operate. Working conditions are better, too, so we spend less time on the roads and more with our families.” When Lacoste became part of Sacer Paris Nord-Est three years ago Jean-Paul Renaude and his colleagues were worried. “But the move turned out to be to our benefit,” he says. He has been given the Top Niveau skilled worker award and, like his fellow Compagnons de la Route, he enjoys health and safety training to which he is entitled as a member of the Order. “The training courses are of great benefit to me, although it can be difficult to apply what I learn.” He is already well aware of safety issues. “As a member of the employees council I was in charge of safety clothing like shoes and gloves. I distributed them to my colleagues. Our accident rate has now fallen to 9.63%. It’s a good figure in our business and we’ve had no serious accident to report so far this year.”

“Our accident rate has now fallen to 9.63%; it’s a good figure in our line of business.”
My paintings always tend to feature touches of soft, light, harmonious colours... without detaching myself from nature or day-to-day life and whatever the subject matter, be it a morning village scene, a view of sunset over Halong bay, a bombed out road or an evening scene in a side-street in an age-old district of the city of Hanoi...

Do Xuan Doan was born in 1937 in Hanoi.

He graduated from the Fine Arts university in Vietnam in 1961.

His works are exhibited in the Musée des Arts du Vietnam and in private collections in France, Italy, Sweden, Germany, Singapore, Japan, Great Britain and Vietnam.