

B R E A K A W A Y

Vintage Berlingo

T R A V E L

*Citroën Belux:
Out to win new customers*

S P O T L I G H T

*Logistics: Faster production
and shorter delivery times*

C O N C E P T C A R

Variations on the Berlingo

double chevron

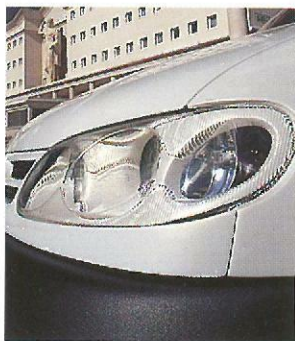


AUTOMOBILES CITROËN INTERNATIONAL NEWS MAGAZINE • No.15 • AUTUMN 1996



Playing it by ear

Head the latest? The Citroën Institute has dreamed up a new method to identify, analyze and locate the mysterious sounds emitted by cars when something goes wrong. Those annoying little noises that seem to increase in volume until they drown out everything else. The innovative new method is implemented by specialists: the marque's expert technicians. Double Chevron put its ear to the ground to find out more. But sometimes the absence of noise can be a handicap. The AX Electric, for example, is so quiet that it needs a special horn to warn unwary pedestrians. Double Chevron talks to the people involved in this current event. Oyez, oyez! How could anybody remain insensible to the Berlingo? Following the launch of the utility version this spring, the marque's latest



arrival will soon be available in a 5-seater saloon version. With this new automotive experience, Citroën sets out to conquer new customers and move towards the future. Speaking of the future, let's not forget the past. History is sometimes passed on by aural tradition. With Olivier de Serres, inveterate collector and Citroën fan, the stories of the past live on in written form. This issue takes readers from the roar of the ZX Kit Car driven by the French rallycross vice-champion Sylvain Poulard, to the quiet success of Citroën Belux, the marque's Belgian subsidiary. Double Chevron echoes the many activities that give the marque its structure and drive it forwards. And since it's always a good idea to go out with a song, we invite you to accompany Luc Marescot and his Berlingo on a wine-tasting tour of France.

A handwritten signature in black ink, which appears to read "Bernard Guerreau". The signature is stylized and written in a cursive-like font.

BERNARD GUERREAU
DIRECTOR OF CORPORATE COMMUNICATIONS

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Double Chevron profiles a Citroën lover whose passion has brought forth not only a collection of cars but also a series of books.



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Pulled-flow manufacturing requires leading-edge technological expertise and flawless logistics.





Plastic, fantastic and fun

The Méhari, the most amusing take on the 2CV, is now the subject of a book written by two enthusiasts and published by E.T.A.I. In *La Méhari de Mon Père* (the title pays homage to Marcel Pagnol's famous novel), François Allain and Jean-Marie Defrance take a detailed look - 110 pages and 200 photos, some of them previously unpublished - at the "French all-plastic jeep", as the car was affectionately known. The authors cover its history from 1967, when the first prototype was developed, to 1987, when the last example rolled off the production line. In addition to describing how the car evolved technically, the book contains a number of interviews with industry professionals and Méhari fans.

Pierre Lartigue wins the Montée de l'Olympe

Pierre Lartigue won the fourth Montée de l'Olympe at the wheel of his Citroën ZX Rallye Raid. The competition was held on August 17 and 18 at Val d'Isère, as part of the international four-wheel-drive and off-road vehicle show.

Citroën Hispania: sales up 30%

Citroën's Spanish subsidiary has recorded a sharp 30% rise in sales since the beginning of the year. In comparison, the overall market in Spain expanded by just 6% during the same period. Growth has been led by the success of the various versions of the ZX, the second most popular car, and the Xantia, the top-selling car in its segment. The Saxo

already has a 7% share of its segment. Citroën Hispania's next goal is to see the Berlingo shoot to the top of the light utility vehicle segment.

The Citroën Tennis Open 1996

Citroën Belux has masterminded a national tennis tournament in the men's, women's and mixed doubles categories. Organised in conjunction with the Association Francophone de Tennis, *Play Tennis* magazine and Wilson, the Citroën Tennis Open 96 consists of three phases. For the first round, players were selected from 102 participating local clubs. This was followed by a series of regional finals involving 956 pairs. The third stage took place on 14 and 15 September, when the 108 top players met in the national finals.

Tour de France updates from an Evasion

From 20 June to 22 July, a Citroën Evasion equipped as a mobile office followed the cyclists on the Tour de France race. The car was used to upload real-time updates on the tour to the Internet.

Vélizy Technical Centre turns 30

To celebrate its thirtieth birthday on 30 June, the Vélizy Technical Centre opened its doors to 4,800 visitors, including a number of local celebrities and representatives of Citroën's senior management. In addition to an exhibition of vintage cars and presentations by the technical branches of the Research and Production Engineering Department, the day was marked by a number of highlights. For example, the works council gave a present to anyone born on 30 June.

China showroom opens

On 19 June, in the presence of Mr Robert, head of the China project, Citroën opened its first showroom, after-sales service and spare parts centre in China, the Beijing Grand

Citroën Automobiles Services. The local media were out in force to cover the event, with representatives from 70 newspapers, television and radio stations. The journalists and numerous other guests were invited to discover the Citroën range and attend a gala reception.



Top of the class

Citroën's private technical high school, ETPC, can be proud of its results for the 1995-96 school year: an overall examination success rate of 97.6%. With individual pass rates that range from 94% to 100% depending on the exam, the school is way above the average for the national education system in the same region.

The seven-millionth XUD engine notched up at Trémery Nord

In May, the Trémery Nord production plant celebrated its seven-millionth XUD diesel engine. This is a sign of the success of the XUD, which has come out in various versions since its launch in 1982. Another major event for the plant is the disassembly of the last machining facilities of the Citroën CX. Nearly 950,000 CX diesel and petrol engines were assembled at Trémery between 1979 and 1994.

Autochina 1996

Beijing played host to the Chinese international auto show

on 18-24 June. As in previous years, the marque was represented by the ZX Fukang, produced by Dongfeng Citroën Automobile Company, a joint venture. With output currently running at 50 vehicles a day, a total of 19,000 ZX Fukangs have been assembled since the joint venture was inaugurated. The other star of the Citroën stand was the Xanae, which embodies the marque's contribution to research into a new generation of motor vehicles.

Citroën in the limelight



Dateline: the Cannes Film Festival. As a sponsor of the Quinzaine des Réalisateurs, the special off-festival fortnight that runs in tandem with the main event, the marque set a new standard in corporate hospitality. At the Nogkia Hotel on the ritzy La Croisette, it inaugurated a "Citroën terrace" and invited its best customers to spend a day at the heart of the festival action. Around a hundred privileged guests were able to rub shoulders with the stars and attend a special showing of one of the films shown at the Quinzaine. One of the guests, the vehicle manager



of the Toulon municipal fleet, summed up the experience: "The Citroën terrace was a great idea. It was like being backstage at the festival, right there with the directors and actors".

The Saxo and Streetball in Italy

For the launch of the Saxo, Citroën Italia teamed up with Adidas and Coca-Cola for the third year of Streetball. This travelling event, aimed at kids, focuses on basketball, table football, volleyball and music. Ten Italian towns along a set route will host a two-day "streetball city" event. In each town, a "Charity Shot" basketball basket will be used to collect donations. Proceeds will go to nonprofit organisations involved in social work and towards building local sports facilities.

Saxo challenges for 1997

For the 1997 season, Citroën Sport is launching a new promotional event, the Saxo Citroën Total Michelin Facom Challenge, to succeed the AX GTi Challenge. To celebrate the event, the marque has also brought out a new A-class supermini derived from the



Saxo Cup, called... the Saxo Challenge. The new car will suit the budget of young amateur drivers keen to take part in motorsports. It has a 140hp engine and a 5-speed gearbox and will come with a kit from the Citroën Sport shop.

Citroën aid to Mongolia at the Master Rally

Citroën entered three ZX Rallye Raids in the Master Rally that finished at Ulan Bator. The carmaker showed its support for the Val de Loire Orléans-Mongolie association, which provides humanitarian aid for the Ulan Bator Traumatology Centre. Citroën's support lorries transported medical equipment to the hospital.

Sylvain Poulard, cha

BECOMING A WORKS DRIVER IS A MAJOR ACCOMPLISHMENT FOR RACING DRIVERS. SYLVAIN POULARD IS A RUNAWAY SUCCESS AS OFFICIAL CITROËN DRIVER IN THE FRENCH RALLYCROSS CHAMPIONSHIP.



Double Chevron: At 26 you are twice rallycross vice champion of France.

How long have you been racing?

Sylvain Poulard: I started rallycross racing in 1990 at the wheel of a Ford RS500.

Two years later I was vice champion of France for the first time and winner of division 1*.

* For the first time, the championships have been split up this year, with one for division 1 (two-wheel drive) and one for division 2 (four-wheel drive). Previously the drivers in both divisions were ranked jointly.

D.C.: Are you following in your parents' footsteps? They competed in rallies too, didn't they?

S.P.: Yes, and I caught the bug when I was very young. My father has been racing for 20 years and won the French championship in 1983. My mother was his co-driver for 12 years. I started on the karting circuit when I was 13. Then, when I had had my driving licence for all of three days, my father signed me up for the ACO, a single-seater Renault contest in which I finished second out of 400 competitors. That was when he gave up his driving career to devote himself to mine. I then raced Renault 5Cup just to get a bit of experience under my belt, and managed to qualify seven times in seven races. Finally I moved into rallycross.

D.C.: You raced in Fords for four years before switching to Citroën. Why?

S.P.: The Ford RS500 was the only car I could afford to race because I was on a shoestring budget and, except in 1992, I had no sponsor. Luckily I am a trained bodywork and paint specialist and my father has his own garage. In 1994, I decided that if I didn't come up to scratch then I would give up. I chose my races carefully and ended up with one win and four podium places. I knew I would have to join a team if I wanted to make further progress. I approached Citroën since it enjoys a very high profile in Brittany. Don't forget, I'm from Rennes.

D.C.: How did you get into the Citroën team?

S.P.: In late 1994 I met Bernard Hainry from Citroën Ouest Competition. I told him



Champion-in-waiting

where I wanted to go with my sporting career. At the start of the 1995 season, Citroën let me have my chance by giving me a ZX. At the end of the year, I became rallycross vice champion of France for the second time.



D.C.: What did Citroën do for you?

S.P.: Everything. A job as works driver, a team, a budget and a car. Then there was my satisfaction at seeing my results recognized by a leading marque. I really feel part of this team and my target for 1996 is Citroën's target too, namely French division 1 champion.

D.C.: This year you are driving the ZX Kit Car. What do you think of it?

S.P.: It's brand new, with a 265 bhp engine, wide track, sequential gearbox, and so on. What surprised me was how quickly we were able to get it into a racing configuration. Our team had reckoned on three or four races to reach top performance. Well, in 6 races I won 5 and flipped over once when my engine cut out! If I can continue like that then the title is as good as in the bag, unless something goes wrong with the driver or the car!

D.C.: Who looks after the mechanics of your ZX Kit Car?

S.P.: Citroën Sport loaned me the ZX Kit Car but the engine and the chassis were prepared and built by Snobeck. At the Magny-Cours circuit, one of their mechanics takes care of the maintenance and is there with us at each race. In Rennes, I have three mechanics from the Citroën plant who help me out free of charge. One deals with the technical side, another helps my uncle with the tyres, while the third lets me know the times of the other race competitors, tells me why they are clocking those times and what kind of tyres they are using, and so on.

My dad handles the logistics and my godmother does the cooking. My manager, Bernard Hainry,



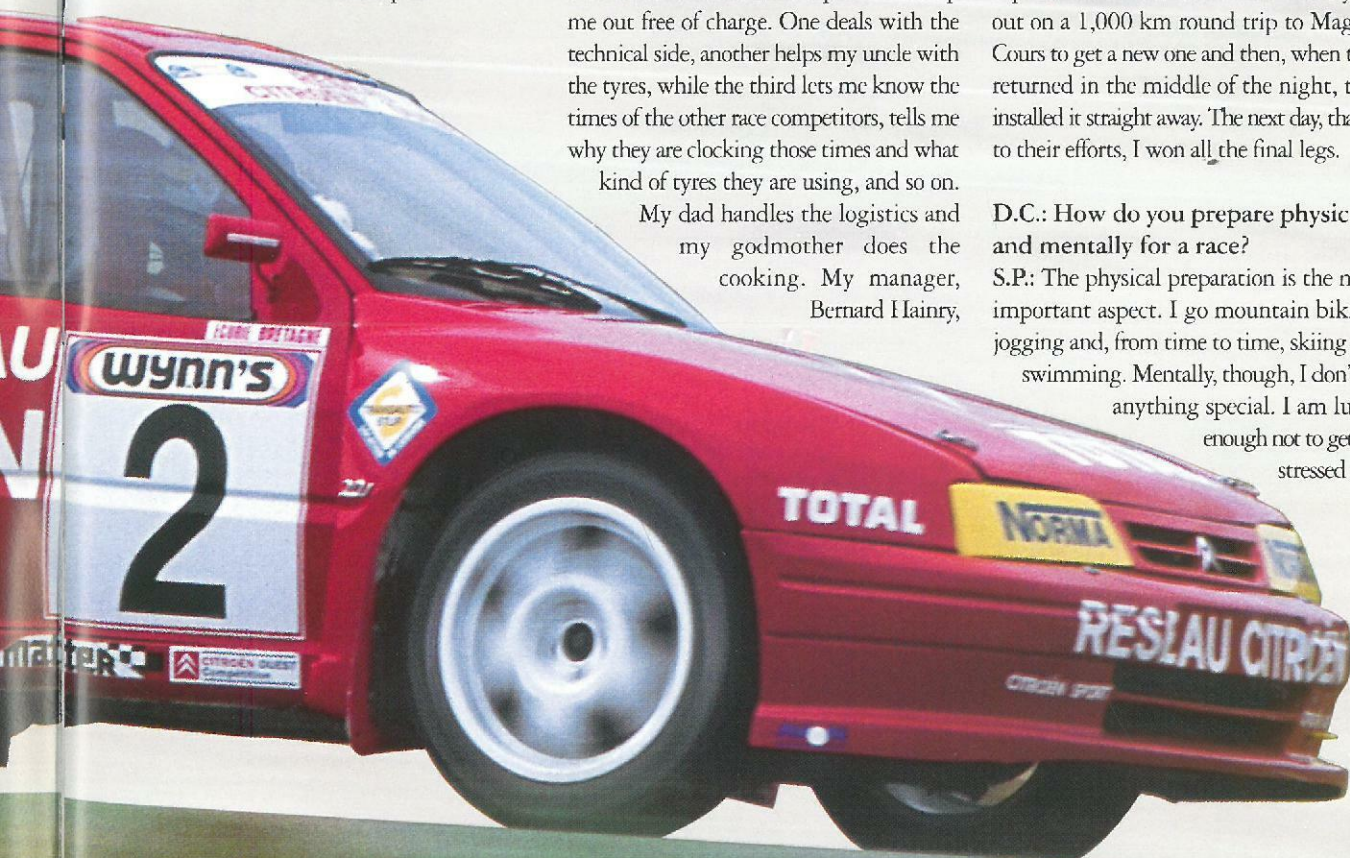
advises me and keeps an eye on everything. We form a close-knit team.

D.C.: Is that the secret of your success?

S.P.: Yes it is. You know, I don't think I would win anything without my team. My mechanics are incredibly efficient and devoted to their jobs. I dedicate all my victories to them, especially the one at Lunéville. They worked around the clock for a week to repair my ZX that I crashed in Creusot. Then on the Saturday morning I hadn't gone 500 m around the Lunéville circuit when my gearbox exploded. The mechanics immediately set out on a 1,000 km round trip to Magny-Cours to get a new one and then, when they returned in the middle of the night, they installed it straight away. The next day, thanks to their efforts, I won all the final legs.

D.C.: How do you prepare physically and mentally for a race?

S.P.: The physical preparation is the most important aspect. I go mountain biking, jogging and, from time to time, skiing and swimming. Mentally, though, I don't do anything special. I am lucky enough not to get too stressed out.





D.C.: And how do you feel during a race?
S.P.: I cut myself off from the outside. The instant the starter's flag goes down I am extremely concentrated and nothing else matters. I can feel the slightest vibrations of my car and I know whether I am driving well or badly, and generally it is average. Thus my time over 5 or 6 laps will rarely differ by more than 3/10ths of a second.

the rules of rallycross, which legs count and which don't, lap times, and so on.

D.C.: This winter you competed for the Andros Trophy. What do you make of racing on ice?

S.P.: I find it unnatural as you have to go easy in order to go fast, and I didn't pick up on that at first. In my first race at Val

I went to watch the others in action. There I saw drivers driving a quite different race, braking 50 m before I would have, for example. The following weekend I adopted their tactics and came in second. I really enjoyed competing in the Trophy and I really learned the feel of ice, how to control a slide, etc. I wouldn't mind competing on ice again, but next time it will be in a more



D.C.: Do you invite VIPs to your races?
S.P.: I don't, but Citroën's regional divisions do from time to time. They invited around 80 customers to both the Lunéville and Nancy events. During the meal we explained

Thorens, I went all out as I do in rallycross. As a result my AX finished in 18th position. I found that odd because by all accounts I had been going faster than the other drivers. Since I like to get to the bottom of things

powerful four-wheel drive ZX like the one Jean-Luc Pailler let me test drive.

D.C.: How do you see your future career in racing?

S.P.: I have no long-term career plans. In the short term, I aim to achieve the goal set by Citroën Sport, namely to win the championship. My driving future depends on my skills, of course, but also on the marque and its racing policy. You know, if someone had told me I would one day be a Citroën works driver I would never have believed them. I like to take opportunities as they arise. At the end of the rallycross season I am going to try rally racing, just to see. However, I do want to remain on the competitive circuit even when I have given up driving: it has a real magic that I wouldn't find anywhere else.



The Berlingo 5-seater

A car of many talents

WITH THE BERLINGO, CITROËN PIONEERS A NEW CONCEPT: THE GENERIC VEHICLE. FOLLOWING THE LAUNCH OF THE UTILITY BERLINGO, THE MARQUE IS PLEASED TO ANNOUNCE THE 5-SEATER BERLINGO. WITH ITS DISTINCTIVE STYLING AND UNIQUE FEATURES, THE NEW BERLINGO EMERGES AS AN INNOVATIVE AUTOMOTIVE SOLUTION THAT STAYS ONE STEP AHEAD OF CUSTOMER REQUIREMENTS. THE BERLINGO IS TRULY THE CAR WITH SOMETHING FOR EVERY MEMBER OF THE FAMILY.

The Berlingo programme was original right from the start, with two vehicles developed at the same time from the same base. The first is a utility vehicle aimed at the van segment of the market, while the second is a multi-purpose 5-seater vehicle for professional or family use. "Originally, we set out to satisfy the requirements expressed by Spanish, German and Italian customers. In these countries, the small "combis" based on light utility vehicles are frequently used as working tools during the week and for family outings at the weekend. With the Citroën Berlingo, we decided to reach beyond the needs of these customers and to offer a vehicle encompassing a broader range of requirements. That's why the Berlingo 5-seater is specifically designed for professional and family use. We wanted to place the focus more on leisure," stresses Vincent Rebel, Project Manager for the Berlingo at the Marketing Plan/Programmes Division. This 5-seat-

er vehicle is available with two levels of trim (X, SX), two powerplants - 1.4i, 75bhp and 1.9D, 71bhp - and a version baptized "Multispace", designed to slightly different specifications (see box). The new Berlingo rounds out the marque's range of leisure vehicles.

A pleasant personality

Like all the other Berlingos, the 5-seater was designed by the team at Citroën's Styling Centre, using an idea from Stile Bertone. "We worked on the utility model and 5-seater simultaneously throughout the Berlingo project. We prepared a styling model, with one side representing the utility vehicle and the other the 5-seater. That way, we were sure to maintain homogeneous styling. We also gave the 5-seater a rear hatch like the back of an estate or a people-carrier, and this fits in



perfectly with the line of the vehicle. And we added a third brake light, also designed to continue the flowing lines of the Berlingo," emphasizes Dan Abramson, Head of External Styling for the Berlingo Project at the Styling Centre.

Innovative and pleasant like all the Berlingos, this 5-seater version with its homogenous styling bears a clear resemblance to certain leisure vehicles, such as the small 4-wheel drive models or the American minivans. The Berlingo's rounded forms and flowing lines mark it as a robust vehicle of high manufacturing quality. The front face, headlamps, bumper and ribbed bonnet, with the chevrons integrated in the radiator grille, clearly identify the Berlingo as a Citroën.

HANDY STORAGE SPACES

In trim levels X and SX, as well as in the Berlingo Multispace, every effort has been made to ensure the vehicle is practical and pleasant to travel in. In addition to a 1.5 l bottle holder located in the front doors within easy reach, the Berlingo offers a wealth of nifty storage spaces. The dashboard, for example, has two gloveboxes. The top one is closed by a lockable cover, the inside of which can be used to store pens and two 33 cl cans. The lower box is open, wide and deep. A cubby has also been provided opposite the passenger on the top of the dashboard. The SX trim and the Berlingo Multispace offer roof storage space as standard, located above the driver's position and running the entire width of the vehicle. This wide, deep storage space is eminently practical. And to facilitate the transport of small objects in the Berlingo Multispace, wide storage nets have been placed above the partially opening side windows!

And on the SX level of trim, which is targeted more at families, the designers added a number of special features: tinted windows, chrome strips on the front and rear bumpers and "Saint-Malo" wheel embellishers. Available in ten colours -



from Buckingham Blue to Innsbruck Green through Calendula - the attractive hues of the Berlingo enhance its original looks.

Five comfortable seats

The Berlingo boasts an innovative architecture, with a high seating position similar to that of a 4-wheel drive or people-carrier. The Styling Centre team were able to use this characteristic to give the

5-seater a spacious interior of proportions hitherto unknown on a compact vehicle, the new Berlingo being virtually the same size as a Citroën ZX (4.11 m long and 1.72 m wide). As a result, the Berlingo can transport up to five people and 300 kg of luggage, including bulky objects such as mountain bikes and surfboards. That's a bigger loading capacity than any European estate, whatever its size!

This spacious interior makes the Berlingo ideal for a mother taking her children to school, for a company carrying people around, or for a craftsman. The Berlingo is a car of many talents. That's why its spacious and user-friendly interior is packed with convenient features (see box) to optimize practical aspects and comfort, such as the pleasant driver's station with the ergonomic and functional dashboard, common to all the Berlingos. Moreover, with its wide range of equipment - e.g. ABS, air conditioning, central locking, electric window lifts, coat hooks, adjustable headrests - the Berlingo is as enjoyable to drive as a saloon.

Three adults can travel in comfort at the



back of the Berlingo, which offers remarkable elbow width. In-depth ergonomic studies were conducted on the design of the back seat. The foam is hollowed out to form three



well-defined seats, highlighted by upholstery in two different fabrics. Designed for a wide variety of needs, the bench can be folded down to become a luggage stop behind the two front seats. To achieve this configuration, the user simply pulls the lever unlocking the catches on both sides, folds the back down onto the seat and tips the entire bench forwards. When the bench is in the seating position, the back is protected by a strong steel sheet, which is ribbed for stiffness.

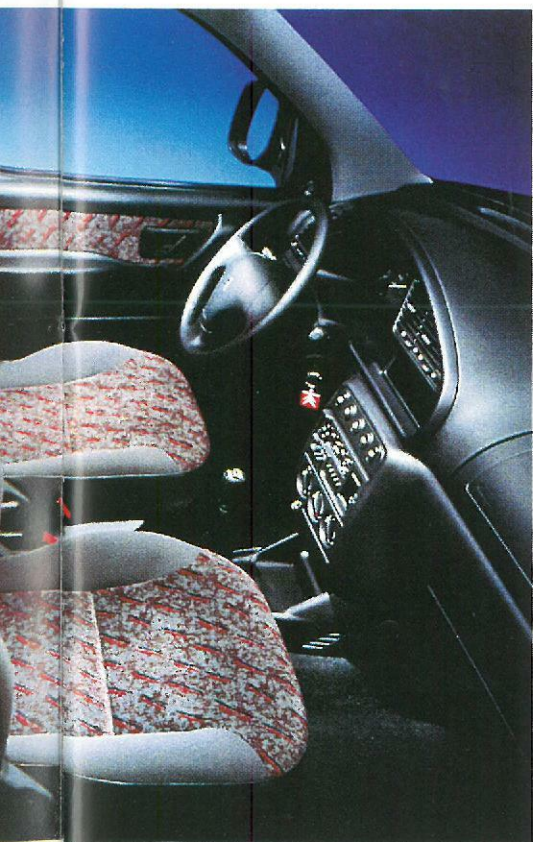
FEATURES FOR FEET

The Berlingo is packed with convenient features to enhance driver and passenger comfort. A special foot rest for the left foot lets the driver relax while driving down the motorway. Passengers travelling at the back of the Berlingo 5-seater also have a foot rest, which doubles as a side seat stiffener. And, according to their height or their mood of the moment, they can rest their feet on the bar or stretch their legs out under it.

The back of the seating cushion is protected by a grid covered by carpeting fabric with a reinforced hessian fibre finish to prevent tearing. Moreover, the height between the seat and the roof gives an impression of space to both the driver and the front and rear passengers. The pleasant interior is enhanced by the light flooding in through a broad windscreen, a huge windowed area and four side windows, all of which can be partially opened. Like Citroën's saloons, the Berlingo reaps the benefits of the experience and know-how deployed by the marque's engineers in the field of active safety and passenger protection (see *Double Chevron* No. 14).

Designed for easy access

For the Berlingo, styling specialists and engineers joined forces to maximize the well-being of users. The vehicle offers easy access for passengers both at the front and at the back. No matter where they are sitting, passengers will have no difficulty getting in or out of the Berlingo. The entrance is wide and high and, when the back of the passenger seat is tipped towards the front, the passage is left free. The passenger compartment is high enough for a child to stand upright and for an adult to move around stooped over but without bending at the knees.



THE BERLINGO MULTISPACE



The design brief given to Citroën's styling specialists and engineers called for a car that was pleasant, spacious, economical. Working on the basis of the 5-seater Berlingo, the team sought to develop a car with a strong personality, staying one step ahead of the requirements expressed by a young, active

and family-oriented customer base. Vincent Rebel, Project Manager for the Berlingo at the Marketing Plan/Programmes Division, is proud to present the Berlingo Multispace. "The Berlingo Multispace illustrates Citroën's efforts to win customers on the leisure vehicle market. It is therefore slightly different from the other Berlingo 5-seaters. Focusing on the key ideas of freedom, convenience and family, we designed a vehicle that is spacious, comfortable and user-friendly. The open canvas top (optional) reinforces this impression and calls up fond memories for Citroën fans. The sparky character of the Multispace is underlined by the seat upholstery in two colours, combined with three bold bodywork colours: Amazonie Green, Enfer Red and Grand Pavois Blue." Available with two powerplants - 1.4i, 75 bhp and 1.9D, 71 bhp - "the Berlingo Multispace is designed to be indispensable in leisure activities with family and friends."





Get wired for the Saxo Electric

Citroën put its Saxo Electric on display at the Paris Motor Show. The new Saxo will come on the market in December, and should appeal to individuals as well as municipal councils and public organisations. The Saxo Electric joins the Citroën range alongside heat-engined vehicles. The new electric-powered vehicle offers a silent, economical and pleasurable driving experience. Based on the technical characteristics of the AX Electric - 20kW from 1,500 to 5,500rpm and torque of 127N.m, the car has a maximum speed of 91km/h and a range of 80km. Featuring fully automated transmission and power steering, the Saxo Electric is also exceptionally silent.

The Citroën ZX: flexing more muscle

The new Citroën ZX 16V coupé, which arrived in showrooms in September, packs plenty of punch. Combining lively performance, comfort, excellent roadholding and overall safety, it boasts an entirely



new, 2-litre, 16-valve engine that develops 120kW (167hp) at 6,500 rpm, with maximum torque of 193N.m (20m.kg) at 5,500rpm. With its 83.6hp per litre, the Citroën ZX ranks right at the top in the sport category, where the average is 75hp per litre—great news for everyone who enjoys the pleasure of driving in complete safety. And there's more. New exterior and interior styling details give an added touch of personality to this already distinctive Citroën. "Le Mans" 15-inch aluminum rims, a "16V" monogram on the rear side panel, a new colour (Grand Pavois blue) in the selection already available in the range, adjustable headrests on the split/fold rear seats, Anaïs velvet upholstery. When it comes to equipment, the new ZX has a host of features to provide more comfort, pleasure and safety such as electric windows, height-adjustable driver's seat, leather-covered sports steering wheel, 4-sensor ABS, power-steering and seatbelts with grabbers and pyrotechnic pretensioners.

Finding Harmonie with the Citroën Evasion

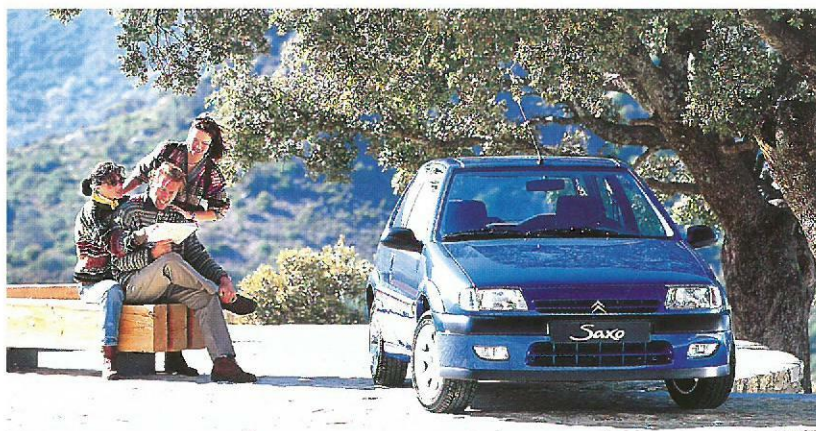


On the market since July, the Citroën Evasion Harmonie 1.8i is powered by an engine developing 74kW (103hp) at 6,000rpm. This model in the personalised Harmonie range is being produced in a limited edition of 1,000 examples, including 500 for France. Citroën Evasion Harmonie 1.8i meets the expectations of people-carrier customers looking for good value in terms of equipment but also giving high priority to comfort, modular design and performance. Available in Véga Pearlescent Green, Marquise Pearlescent Red, Royal Blue and metallic Chateau Gray, the Evasion Harmonie 1.8i is

equipped to provide an excellent level of comfort and driving pleasure: power steering, electric front windows with driver's-side sequential control, central locking of doors, the rear hatch, and the petrol tank flap, with remote control as a standard feature.

All-round safety, total pleasure and comfort

With its 1997 model-year range, the marque has made more big advances in the three general areas it has targetted for progress in the past several years: all-round safety, driving pleasure and total comfort. Rounding out the Saxo line (which now numbers 27 models and six power plants -five petrol and one diesel) with the Saxo 5-door, automatic VTS and VTR and launching the new Berlingo 5-passenger utility vehicle, available in six models with four engine options, are the two major events. Then there are the changes in the Citroën ZX range. It still includes the Volcane 16V and Exclusive versions and will be available with two levels of trim, X and SX. The 1.8i engine, with 16 valves and 112 horsepower, will also be offered in the ZX range. And speaking of engines, the 1.4i has been redesigned with multipoint injection to make driving even more pleasurable. Other highlights are the launch of the Xantia Activa 2.1 TD, with an 80 kW (110 hp) engine, and the introduction of the Xantia V6 Activa (194 hp),



which will come out at the end of the year. The Xantia line has three models (two petrol and one turbo diesel). Also, all Xantia Saloons now have a high-mounted third brake light, located in the rear hatch. As for the utility vehicles, eight models of the Jumper 4x4 are now being marketed. Finally, all Citroën ZX models are progressively being equipped to meet the Euro96 non-pollution standards.



The 1997 model-year range has been designed with the emphasis on all-round safety, driving pleasure and total comfort.

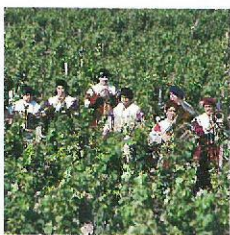




Vintage

TO PROVE THAT THE BERLINGO IS BUILT FOR PLEASURE AS WELL AS FOR WORK, WE TOOK IT ON A TRIP THROUGH THE VINEYARDS OF FRANCE. OBVIOUSLY, THERE WAS NO QUESTION OF DRINKING AND DRIVING, BECAUSE FINE WINES ARE MEANT TO BE SAVOURED, NOT QUAFFED!

Wine lovers all over the world are familiar with such *appellations* as Saint Emilion, Sauternes and Château-neuf-du-Pape. But how many of them have ever visited the towns and villages



that bear these prestigious names? And how many have strayed from the beaten track to check out lesser known wine-growing areas like Irouléguay, Madiran and Vinsobres?

We set out to discover the faces behind the names, the places behind the wines that are so closely associated with the regions whence they originate.

Wine growers throughout France follow the same creed, placing a premium on quality rather than quantity. They believe



that a fine wine should be appreciated, not slurped down in vast quantities. This concern with sobriety predates the motor car and the issue of road safety. In 1633, for example, the Bishop of Vaison praised the wine produced in one of his parishes, Vinsobres, but advised the faithful to pay

heed to its name, which literally means "sober wine".

Today, wine growers in the Sancerre region have adopted that advice. They give a Breathalyser kit to visitors who drop in to taste their wines. Over 10,000 Breathalysers have been distributed so

Berlingo



far, and the scheme has proved highly effective in making people aware that "one over the eight" actually means no more than two glasses of wine - the legal limit for safe driving in France. The Berlingo, which blends the practicality of a utility vehicle with the comfort

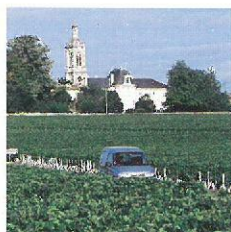
of a luxury saloon, was a sober companion on our trip. Transformed into a mobile office-cum-photo studio, it carried us with equanimity over smooth black-top and bumpy dirt tracks, where normally only off-road vehicles dare to venture. Higher-slung than an ordinary car, it

allowed us to dominate the road whatever the conditions. Whenever we came to a halt to admire the view, the roof provided the ideal platform from which to photograph the glories of the surrounding countryside. The double rear doors allowed us to load and unload our equip-

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ment quickly and easily. This easy access was greatly appreciated because we were always in a hurry - the best photos are those that capture a fleeting moment.



Another handy feature was the ease with which the doorlocks and windows could be opened by remote control. Our Berlingo certainly made an impression. Indeed, on our journalistic expedition, it was sometimes difficult to tell who was interviewing whom - we'd be asking questions about a village while the inhabitants would be quizzing us about our car!

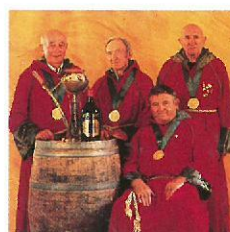
Steeped in history

On the right bank of the River Garonne, fifty kilometres from Bordeaux and just next to Cadillac (the town, not the car!), lie the vineyards of Saint Macaire, which

bears the name of a fourth-century bishop. Benedictine monks planted 2,500 hectares with vines and produced a sweet white wine, which they exported to Armorica (now Brittany), England and Ireland.

In the 12th century, the Duchy of Aquitaine passed into English hands and Saint Macaire, like nearby Saint Emilion, was accorded an unusual degree of freedom, including the right to mint its own coins. The town flourished and soon became the port of departure for all the wines of the region. These were much appreciated in England, where they were known as "claret". On the night of 4 August 1789, in the aftermath of the French Revolution, Saint Macaire lost its privileges. And as if to compound the havoc wreaked by man, the port silted up and the wine merchants moved away. This confirmed the city's decline, and Saint Macaire fell into a deep sleep that has lasted several centuries. But in some ways it reaches out to us down the ages. Before the Revolution, many of the inhabitants of the region, attracted by the lure of the New World, had begun to emigrate to North America. In 1689, a party of several hundred French settlers were massacred by the Iroquois. The only sur-

vivor hailed from Saintes-André-du-Bois, a tiny village near Saint Macaire. His name was Charlebois. Three hundred years later, his descendant, the singer

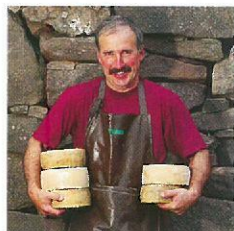


Robert Charlebois, is a star in Canada as well as France.

7,000 years on the warpath

At the other end of the river is Blaye, a town with a proud, warlike history that dominates the impressive estuary of the Gironde. Because of its impregnable location, Blaye has been inhabited since Neolithic times, and the earth still bears traces of 7,000 years of civilisation. Blaye is the resting place of Roland, the valiant nephew of Charlemagne, who campaigned against the Muslims in Spain and was killed at Battle of Roncevalles in the Basque region. This famous incident

inspired the epic poem *La Chanson de Roland*. (The town where Roland fell is now called Roncevaux and is near Irouléguay, another wine-growing town.) Blaye, too, is renowned for its wine but also for the magnificent citadel built by



the great 17th century architect Vauban. For three hundred years, this masterpiece of military engineering played host to the great and good of Europe, including King George I of England in 1722 and the future emperor of Austria, brother of the ill-fated Marie-Antoinette. And before becoming Prefect of Paris, Baron Haussmann, the architect who reshaped the French capital, was Sub-Prefect of Blaye. Although the citadel was decommissioned in 1936 and listed as a national monument in 1938, it had its last taste of war in 1940, when it was occupied by the Nazis. Today, Blaye pursues a much more philanthropic career as the major port for French humanitarian aid to developing countries. Within the citadel's prestigious walls, a tiny 15-hectare vineyard, reached by a drawbridge, produces some 700 bottles of Côtes de Blaye every year. It is twinned with another minuscule wine producing area, the slopes of Montmartre in

Paris. Blaye vineyard is known as a *journal* because it took a man and his horse just one day (*journée* in French) to harvest the grapes.

Prestige of the Médoc

Opposite Blaye, on the other side of the Gironde, lie the world-famous vineyards of the Médoc. Disembarking from the little ferry that links the two banks of the river (there is no bridge), we set off in our Berlingo to discover what could almost be a foreign land, whose inhabitants call the Gironde "the River" and refer to Blaye as "over there, in France". And you really do feel cut off from the rest of the world on this peninsular, which is so arid that only vines can grow. But the wines they produce are as magnificent as the chateaux whose fortunes they have made.

According to local lore, to produce top-quality wines, the vines must overlook the river but not dip their roots in the water. The bushes are very low so that the grapes can "roast in the sun, like woodcock before a fire", as the locals say. The grapes are close to the pebbles, which act as a solar furnace and literally bake them. Starting from the ferry terminal at Fort Médoc, the road runs through the four great vineyards of the Médoc: Margaux, Pauillac, Saint Estèphe and Saint Julien

Beychevelle. The origin of the latter's name lies in antiquity, when cargo vessels would enter the estuary on their way up river to Bordeaux. When they reached Saint Julien, the harbour master would instruct them to lower their sails. But



instead of calling out the order in French ("Baissez les voiles"), he would use the local language, Occitan: "Beyche velle". Throughout our trip, however, the Berlingo never lowered its sails, carrying us in fine style through the magnificent vineyards, where history and gastronomy are so closely related. In the end, it was hard to say which gave us more pleasure: the wines or the Berlingo.

Luc Marescot and Myriam Baran



Out to win new customers

WITH A MARKET SHARE OF 6.2%, CITROËN RANKS SIXTH ON THE BELGIAN CAR MARKET THROUGH ITS SUBSIDIARY, CITROËN BELUX. BACKED BY A STRONG SALES NETWORK, CITROËN BELUX HAS ADOPTED A DETERMINED STRATEGY OF MARKET CONQUEST THAT HAS PLACED SALES ON AN UPWARD TREND. DOUBLE CHEVRON HEADED NORTH TO FIND OUT MORE.

IMAGE

In order to consolidate its dynamic image, Citroën Belux pursues an active communications policy. "Our aim is boost the marque's image and to build up the reputation of its products. In addition to presenting new vehicles to the press, we also regularly lend vehicles to journalists who want to take one out for a trial drive. We're also active in motorsports with two promotional formulae: the ZX Trophy and the AX GTi Challenge," explains Luc Lion, Corporate Communications Manager at Citroën Belux. "We're also involved in events such as the 2CV 24-hour rally, which has been held every year on the Spa Francorchamps track since 1985."

Other events include a partnership with the Comic Strip Centre in Brussels, the organization of a long-distance rally in Tunisia, in association with Citroën and the driver Jacky Ickx, and a comic strip relating the history of the Double Chevron. Luc Lion's department is clearly bursting with original ideas for bringing Citroën's name into the public eye.

Customers



Citroën's Belgian headquarters - a vast building of some 16,000 m² located Place de l'Yser in Brussels - is currently in the middle of renovation. Its imposing presence is a reminder of how long the marque has been established in Belgium. "I believe we were one of the first subsidiaries to be set up by André Citroën in Europe. The marque is undeniably part of the automotive business in



Belgium. There's no doubt about that," states François Guesde, Managing Director of Citroën Belux

It was actually in 1924 that Citroën laid the foundations of its head office at 49 rue de l'Amazone, in the Brussels suburb of Saint Gilles. Two years later, it built an assembly line at Forest. Then, at the beginning of the 1930s, the marque moved to Place de l'Yser and opened one of Europe's largest car production and sales complexes, with a surface area of some 20,000 m².

Extended in 1958, the building has six floors. It houses a branch office and a training centre, as well as all the different departments usually found in a subsidiary, from Sales to Marketing and Management. François Guesde works with a team of 314 people to help Citroën increase market share in Belgium and Luxembourg.

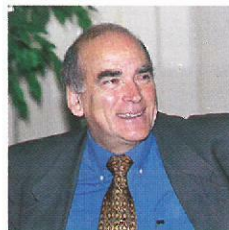
An open and fiercely competitive market

Citroën Belux is unlike the marque's other European subsidiaries in that it is the only one to distribute the marque's models in two countries: Belgium and the Grand Duchy of Luxembourg. "We have a difficult task because the Belgian car market is wide open, with no less than 50 carmakers jockeying for position. Some of them, such as Ford, Volkswagen, Volvo,

Renault and General Motors, have set up assembly plants here and are therefore considered as domestic carmakers," explains François Guesde. Belgium therefore exports more cars than it imports. Overall, more than one million cars leave the assembly plants every year!

Although Belgium is a net exporter of cars, there are nevertheless four million vehicles on the roads, with an average age of six years. The relatively high average age of Belgian cars can be explained by the heavy taxes slapped on passenger cars by the government: 21% VAT, plus a vehicle tax depending on engine capacity, plus a registration tax payable each year, plus a tax disc, plus a car radio licence fee, plus a tax on cars equipped with diesel engines, and so on. "Last year, the market totalled 388,490 new registrations, compared with 470,000 at the beginning of the 1990s. However, our share of the market has always hovered around the 6% mark."

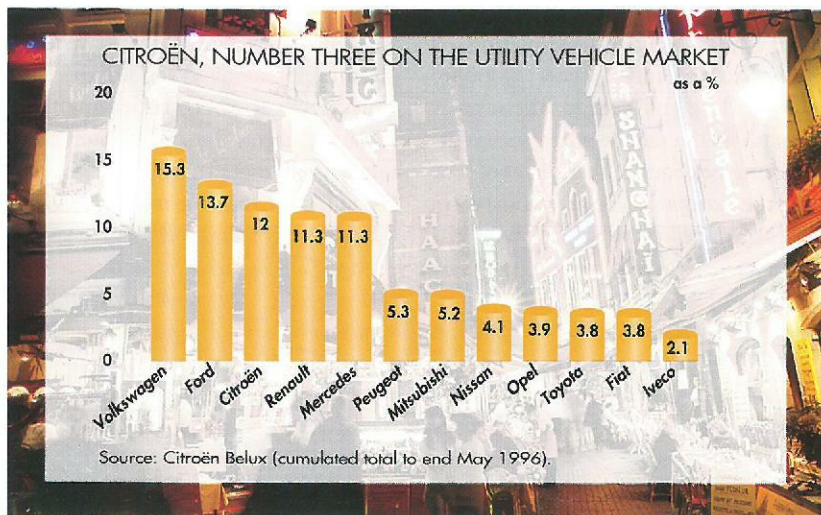
In the fierce competition for sales, German carmakers have come out well ahead of the field, the leader being VAG with 17.6% of the market. German marques hold 45.2% of the market compared with 26.2% for the French. "This year, we seem to be making progress and we plan to increase our market share to more than 6.5% in 1996," explains François Guesde. And Citroën Belux is almost there, since last year, it held 6.2% of the market.



A sales figure with 80% of special editions

Like other Citroën subsidiaries, Citroën Belux sells vehicles specifically adapted to the local market. The subsidiary offers the entire range of models developed by the marque but seeks to place the emphasis on the equipment and engine perfor-

INTERNATIONAL



mance required by local customers. "When we launched the Saxo last June, we adopted the 1.1i as our basic model, so our range is 1.1i, 1.4i, 1.6i and 1.5D. We offer a range of attractive equipment as standard: power steering, coded engine immobilizer, central locking, electric windows, and so on."

At the same time, Citroën Belux regularly offers special editions of the AX, ZX, Xantia, XM and Evasion sold at "net price". "Carmakers were trying to outdo each other in the discounts offered on new cars, and customers had got into the habit of negotiating the price of their new car. So we decided to sell all our special editions at net price," explains

François Guesde. The slogan speaks for itself: "A price so low that nobody's going to argue!". The basic principle is simple. The price ticket incorporates the average discount offered by dealers to customers. Set up last October, the policy rapidly showed results. Net price special editions now account for around 80% of the marque's sales. "In January 1995, for example, the Temptation series derived from the Xantia 1.6 was an immediate success. All our cars were sold even before we sent out the flyers!"

The subsidiary makes systematic use of national and local media when it brings out a special edition. With this strategy of attack and conquest, Citroën Belux has

been able to place the Citroën AX, ZX, Xantia, XM and Evasion in the top ten of their respective segments. But the Xantia takes the honours for the best performance. Elected Family Car of the Year, it occupied third place in the M2 segment at the end of May, with market share of 10.71%. This result is significant considering that lower and upper mid-range cars account for more than 58% of vehicle sales. "Two out of every three Xantias sold are diesel models. With the arrival of the Saxo, we aim to double our share of segment B to 30%. In the top-range segment, 90% of the XMs sold are diesels." As a result, the marque holds 7.5% of the diesel market, which accounts for 46.8% of vehicle sales.

Partners in action

Citroën Belux is backed by a network of five local branches - three in Brussels, one in Namur, one in Ghent - with 110 dealers and 289 representatives, working with the French- or Flemish-speaking communities. "Language apart, all our customers express the same requirements. However, we make sure that all our salespeople understand the cultural differences of each region. Moreover, all our product catalogues and sales documents are published in two languages, although the message is exactly the same," stresses Albert Merlini, Sales Manager at the subsidiary.

Citroën Belux has defined seven sales zones: western and eastern Flanders, Antwerp, Limburg, Brabant-Flanders and the Grand Duchy of Luxembourg, Greater Brussels-Hainaut, Namur-Liège-Eupen and Ardennes-Hainaut. "Each zone is covered by a sales manager who advises dealers and helps them reach their sales targets." Moreover, sales managers work with a zone manager, who is responsible for the representatives in his sector. "Here, distances are small and a dealer covers about sixty kilometers on average with his network of representatives. So I ask all managers to ensure systematic and regular monitoring of sales outlets. This is essential if we are to achieve good results in terms of sales, after-sales and spare parts." Considered as full partners by the marque, dealers and representatives actively apply

TRAINING

Citroën Belux policy includes a specific focus on training, since the professional skills of the sales network are vital to the marque's success. A training centre at the subsidiary's head office organizes commercial, technical and linguistic courses. "For example, each member of the sales force follows a three-month theoretical and practical training course," specifies François Guesde. Moreover, the network already has some forty expert technicians trained by the subsidiary. "When a new vehicle is launched, we organize special sessions to teach employees about the product, its positioning and technical characteristics. For the Saxo, we trained almost 800 people in mechanics, bodywork, electricity, and so on."

In addition to conventional training courses, Citroën Belux has also put in place specific training modules as part of the marque's corporate mission. Originally intended for subsidiary personnel, the course will be offered to all employees in the sales network over the coming months. "The message we want to convey is: "Nothing moves you like a satisfied customer!" concludes François Guesde.

the sales policy that has been put in place by Citroën Belux.

Working closely with its network, the subsidiary invites all dealers, representatives and branch managers to attend a forum organized twice yearly. "These conferences are an excellent idea because they give us an opportunity to pool our experience in all areas of car sales," explains Michel Braquet, a dealer in Luxembourg.

Branches that set an example

For François Guesde, quality is a fundamental concern and the subsidiary must set an example.

A CENTRE UNIQUE IN EUROPE

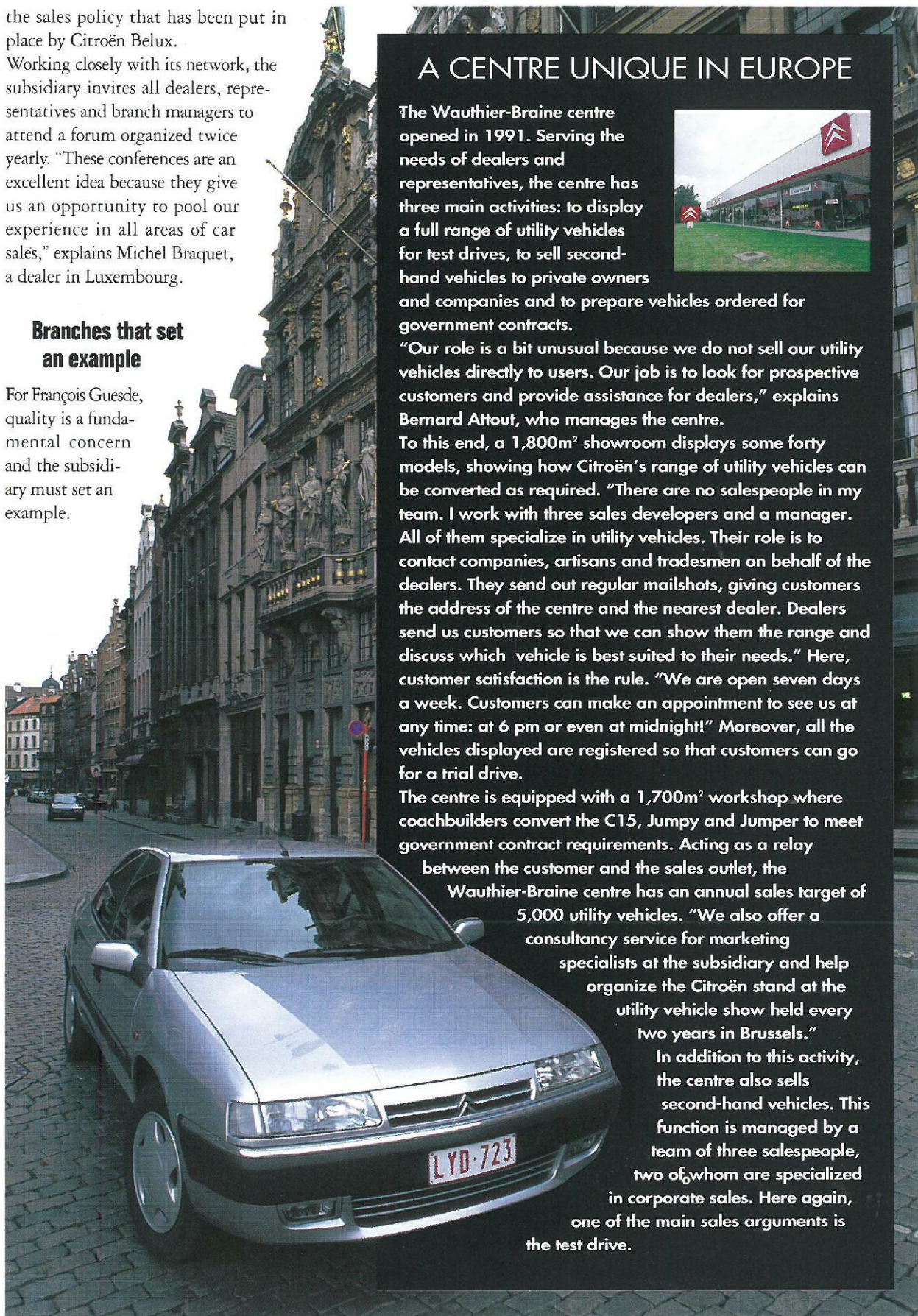
The Wauthier-Braine centre opened in 1991. Serving the needs of dealers and representatives, the centre has three main activities: to display a full range of utility vehicles for test drives, to sell second-hand vehicles to private owners and companies and to prepare vehicles ordered for government contracts.



"Our role is a bit unusual because we do not sell our utility vehicles directly to users. Our job is to look for prospective customers and provide assistance for dealers," explains Bernard Attout, who manages the centre. To this end, a 1,800m² showroom displays some forty models, showing how Citroën's range of utility vehicles can be converted as required. "There are no salespeople in my team. I work with three sales developers and a manager. All of them specialize in utility vehicles. Their role is to contact companies, artisans and tradesmen on behalf of the dealers. They send out regular mailshots, giving customers the address of the centre and the nearest dealer. Dealers send us customers so that we can show them the range and discuss which vehicle is best suited to their needs." Here, customer satisfaction is the rule. "We are open seven days a week. Customers can make an appointment to see us at any time: at 6 pm or even at midnight!" Moreover, all the vehicles displayed are registered so that customers can go for a trial drive.

The centre is equipped with a 1,700m² workshop where coachbuilders convert the C15, Jumpy and Jumper to meet government contract requirements. Acting as a relay between the customer and the sales outlet, the Wauthier-Braine centre has an annual sales target of 5,000 utility vehicles. "We also offer a consultancy service for marketing specialists at the subsidiary and help organize the Citroën stand at the utility vehicle show held every two years in Brussels."

In addition to this activity, the centre also sells second-hand vehicles. This function is managed by a team of three salespeople, two of whom are specialized in corporate sales. Here again, one of the main sales arguments is the test drive.



A DYNAMIC DEALERSHIP

Located a few kilometers outside the city of Luxembourg, Michel Braquet's dealership is a model of excellence.

The 4,500 m² area comprises a 1,000 m² showroom, a 2,000 m² workshop, and a spare parts shop with an automatic delivery system. This dynamic and efficient young dealer is convinced that customer satisfaction is vital to success. "I employ 90 people in three sales outlets, all of them highly qualified. Their job is to offer matchless service. They all follow training courses regularly. We also have an expert technician who works directly with the customer when delicate repairs are required."

The dealership has an annual sales target of 1,140 vehicles and generates 88% of Citroën sales in Luxembourg. "We have already exceeded our 1995 results by 35%. The most popular model at the moment is the Xantia. We also hold 8.70% of the utility vehicle market," states Michel Braquet.

In order to boost sales, the dealership uses a wide variety of methods including mailshots, sales promotions, exhibitions in shopping malls, systematic use of local media, sponsoring and gifts for customers. In this way, Michel Braquet and the marque's six representatives promote the name of Citroën in Luxembourg!

To this end, the marque started moves to reorganize its branches in Brussels two years ago.

"At that time, we only had one branch in Brussels, in the Place de l'Yser. But since the city has more than one million inhabitants, the situation was unsatisfactory for customers who did not live nearby. To remedy the problem, we opened a new branch in Evere, north of Brussels, in 1994. And we're now building a third branch in Drogenbos, south of the capital. We also gave the Yser branch a complete refit in order to improve customer comfort," explains François Guesde.

Designed to showcase the quality of Citroën's customer service, all the branches resemble each other, with a showroom accommodating some twenty new vehicles, a second-hand area, a spare parts shop and an after-sales service. Above all, each branch employs highly qualified staff to deal with customers.

Take the example of the Evere branch, which is located in the heart of the industrial zone. Evere has an annual sales target of 633 new and second-hand vehicles. To achieve this aim, it has a three-storey building of some 12,000 m² at its disposal. When the visitor steps through the door, he finds himself in an immense showroom displaying eighteen models from the Citroën range. A games area is provided for children. Each and every aspect of the Evere service is designed to maximize customer comfort. "We employ a team of four salespeople. They are responsible for sales to private customers, companies and organizations. We also

have one person to deal exclusively with diplomatic sales, since these constitute a significant market in their own right in Brussels," explains Jean-François Constant, Branch Manager.

Behind the showroom is a 4,000m² after-sales area, which is able to handle some 25 vehicles daily. "The workshop manager supervises an expert technician and ten bodywork specialists, mechanics and painters. We also have a "Citroën Express" area for customers who have not made an appointment before coming to the garage. It is our policy never to turn a customer away."

The first and second lower ground floors



of the branch are turned over exclusively to the sale of second-hand vehicles and the preparation of new vehicles, prior to delivery to the customer. Like the dealers, the branches organize commercial and promotional operations to attract new custom.

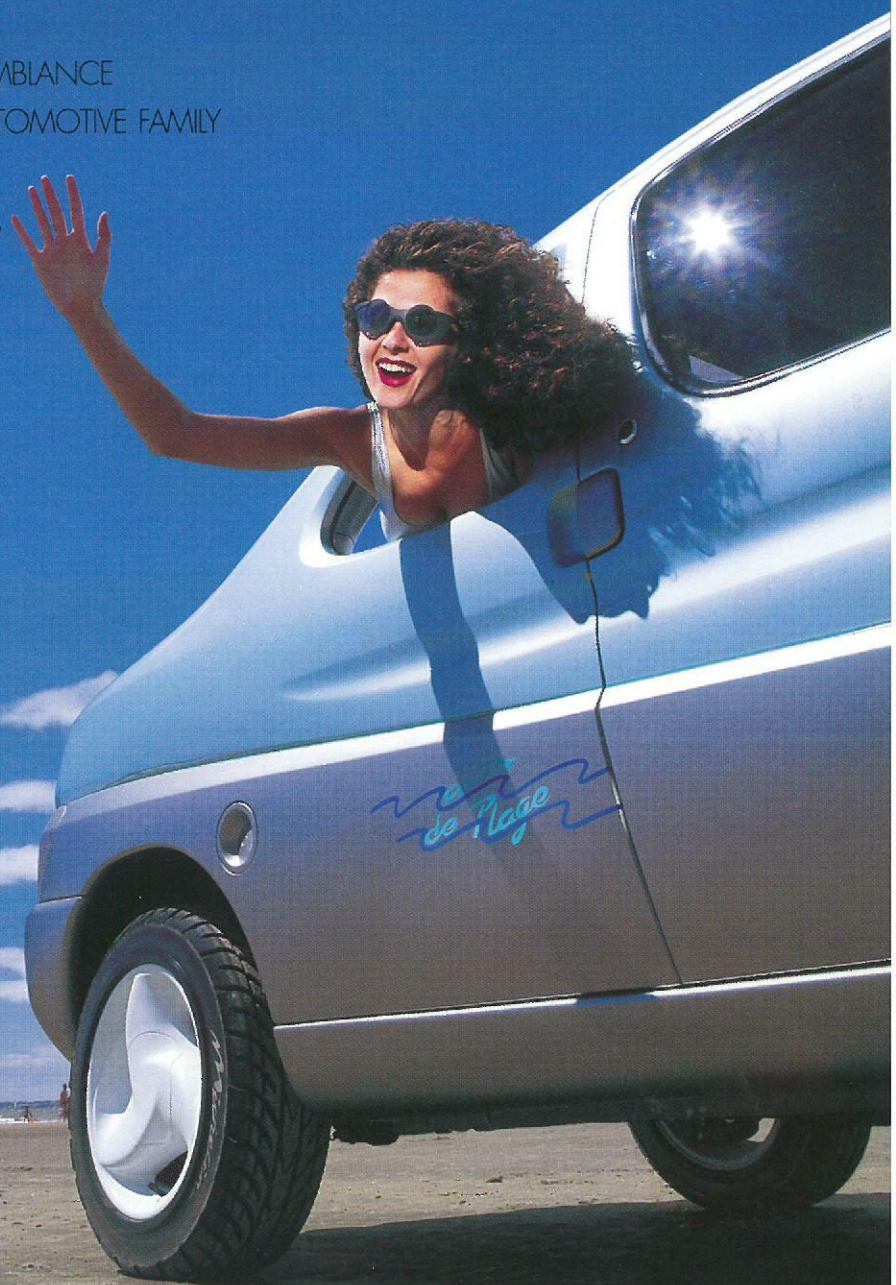
"The image of the network is an important criterion when people are making the decision to buy a new car. This being so, we would like our branches to set an example to all our dealers," concludes Albert Merlino.



Exciting new concepts

Variations on the Berlingo

AT THE 1996 PARIS MOTOR SHOW, CITROËN WILL BE PRESENTING THREE CONCEPT VEHICLES BASED ON THE BERLINGO. DISPLAYING A STRONG FAMILY RESEMBLANCE WITH THE BERLINGO, THE NEW AUTOMOTIVE FAMILY COMPRISES THREE "FANTASY" CARS. MEET THE BERLINGO BERLINE BULLE, THE BERLINGO COUPÉ DE PLAGE AND THE BERLINGO GRAND LARGE.



Exciting new concepts



The roomy Berlingo Grand Large illustrates new concepts in space management with an interior existing in complete *asmasio* with the outside world.

A unique and innovative vehicle, the Berlingo satisfies expectations that were hitherto irreconcilable. Three teams of styling specialists from Citroën's Creative Styling Centre explored new avenues in automotive design.

The Berlingo Berline Bulle

The Berlingo Berline Bulle is functional, reassuring and innovative.

Designed by Citroën's Creative Styling Centre, this saloon has eye-catching curves and generous forms that give it a pro-

TECTIVE and reassuring look. Its luxurious, comfy interior consolidates the overall impression of well-being.

Designed as a vehicle for families living in or around the city, the Berlingo Berline Bulle is equipped with a back seat of generous dimensions, and is able to accommodate up to five people comfortably. The Berlingo Berline Bulle is ideal for busy mums, for example. It is perfect for driving the kids to school or taking them to any of their many leisure activities. When the holiday season comes round, the capacious Berlingo can carry the entire family in comfort - luggage and all.

Spacious and generous, the little saloon has a friendly, comfortable and welcoming interior. The shapes, materials and colours of the seats and upholstery (yellow and white) are in perfect harmony with the oval-form of the vehicle exterior. The oval styling of the four swing doors is a particularly original feature, giving passengers easy access to the vehicle interior. The dashboard is identical to that of the Berlingo. The driver is immediately won over by the attractive and functional styling.



The Berlingo Grand Large

Friendly, spacious and inexpensive, the Berlingo Grand Large combines all the features of the original model with a modest price tag.

Aimed particularly at young people seeking to acquire a comfortable car on a tight budget, the Grand Large is also suitable for people looking for a multi-purpose vehicle or one that is eminently practical and excellent value for money. Its friendly exterior and interior styling give it a contemporary air that transcends fashion trends. The bright and airy interior illustrates the creative talents of the stylists at Citroën's Creative Styling Centre.

Reflecting the results of in-depth studies on materials and colours, the Grand Large sports specific upholstery and trim, in shades of silver, yellow and pale green. A canvas sunroof adds a touch of class.

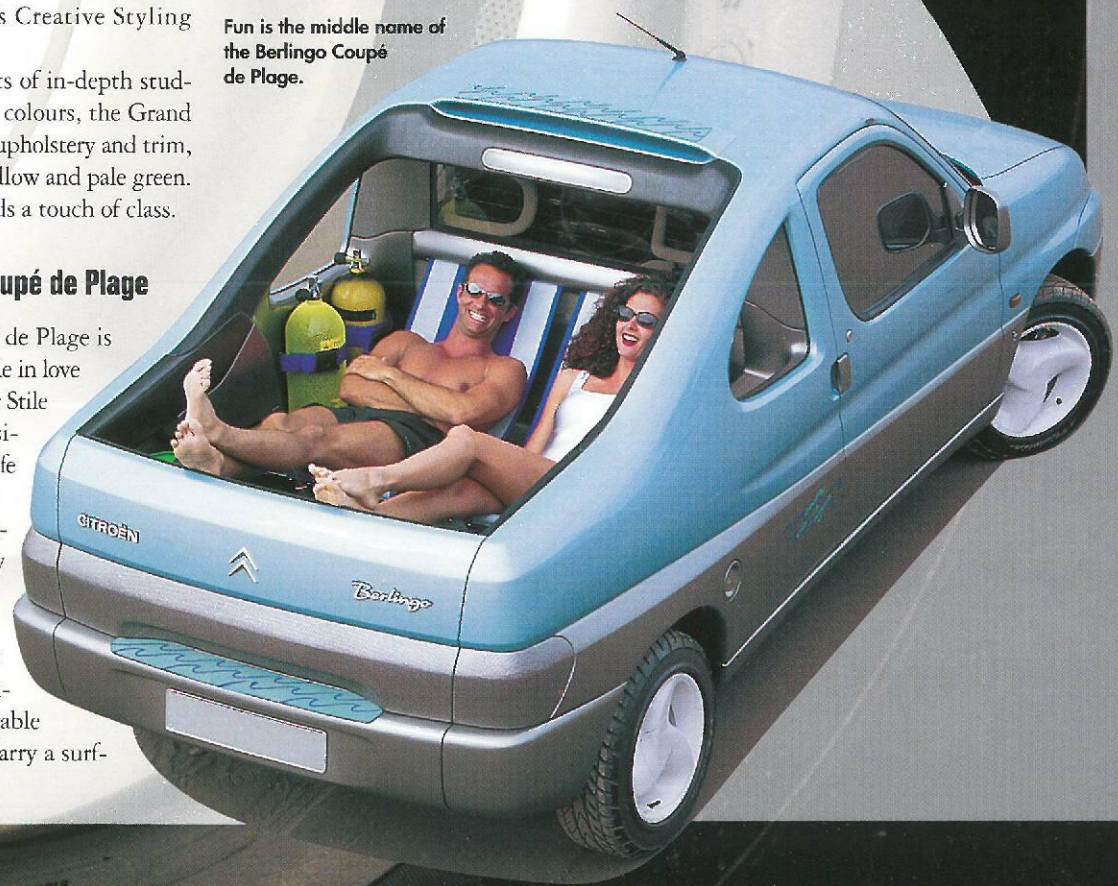
A leisure area is provided at the back with two fold-down beach chairs, folding shelves on the side on which to stand drinks and a remote control radio and stereo. In short, the Berlingo Coupé de Plage is *the* car to be seen in at the beach.

Fun is the middle name of the Berlingo Coupé de Plage.

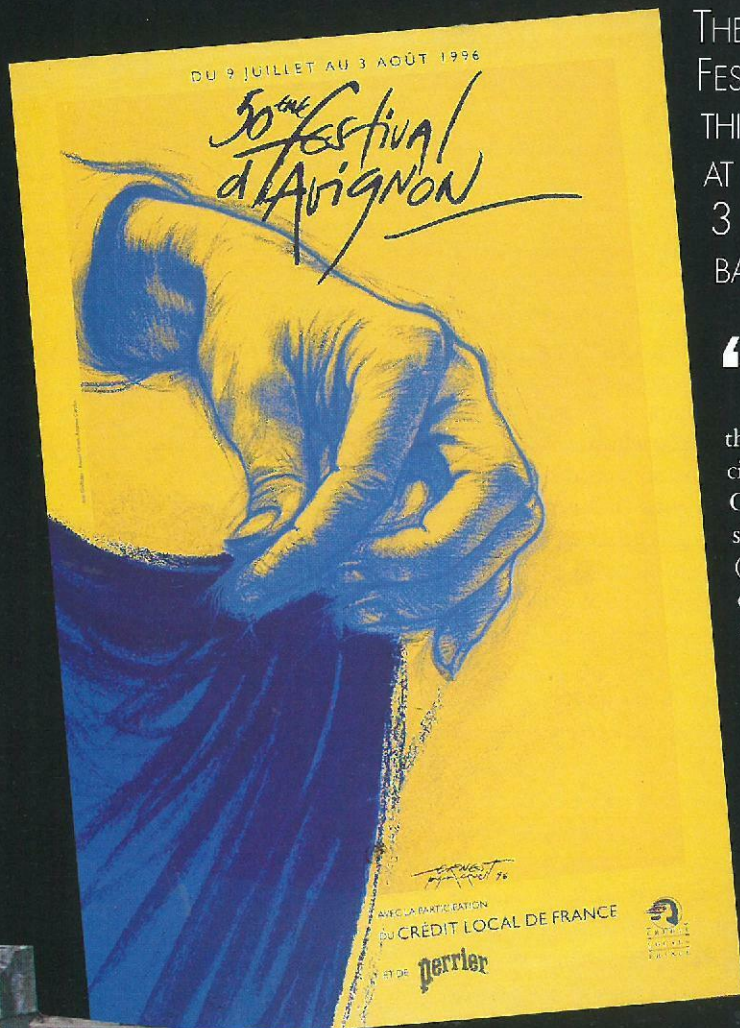
The Berlingo Coupé de Plage

The Berlingo Coupé de Plage is a fun vehicle for people in love with life! Designed by Stile Bertone, the car positively exudes youth, life and *joie de vivre*.

This two-seater leisure-pick up is not only attractive. It is also eminently practical with a host of nifty features. The fin-shaped roof is retractable and can be used to carry a surfboard.



Citroën takes a role a

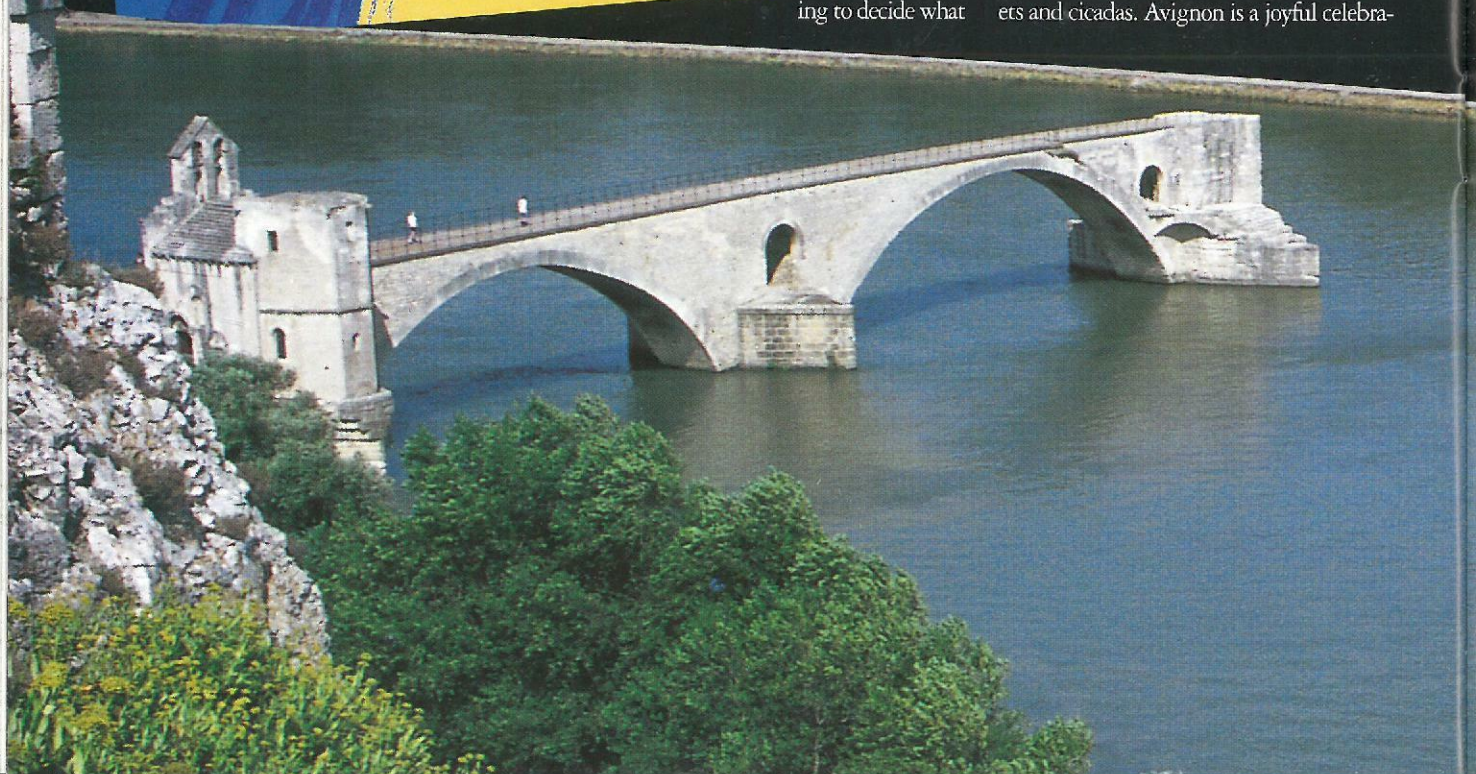


THE WORLD-FAMOUS AVIGNON THEATRE FESTIVAL CELEBRATED ITS 50TH BIRTHDAY THIS YEAR. CITROËN PLAYED A SPECIAL ROLE AT THE EVENT, HELD BETWEEN 9 JULY AND 3 AUGUST. DOUBLE CHEVRON STEPPED BACKSTAGE TO FIND OUT MORE.

“**L**e On” or “Le Off”. That is the question. The official programme (or “Le On”) offers some fifty shows while the fringe (“Le Off”) boasts a choice of more than 400. The Avignon Festival is a treasure trove, a mine of new discoveries. It is also the cause of sudden mood swings in its many visitors: the blissful contentment induced by a good show rapidly gives way to the sheer frustration of trying to decide what

to do next. Choosing what to see - and when - is a task of Herculean proportions. How about Brecht? Or then again Kafka. Or we could go for Aeschylus, Chekhov, Beckett ... and Marlowe too.

Hundreds of theatrical companies come to Avignon, staging original shows that could make or break their future. And word rapidly goes round as to where the best talent is to be found. Taken over by some 500,000 festival-goers and holiday makers, mingling with celebrities from the worlds of arts and politics, Avignon becomes the backdrop for a month-long extravaganza on an unprecedented scale, impromptu and unrehearsed. Eliers are handed round and posters slapped onto walls as one play succeeds another. Theatre-goers swap informed comments on where to go and what to see, their voices mingling with the constant song of crickets and cicadas. Avignon is a joyful celebra-



e at the Avignon Festival

tion, complete with stage costumes, make-up and travelling performers. And that brings us to "Le Off Off", the fringe of the fringe, as it were. Enter Citroën. Official partner at the 1996 Avignon Festival, the marque provided XMs, Xantias and Saxos for use by French and foreign celebrities. Citroën also helped festival-goers to find their way around the labyrinth of allies, squares and ramparts by handing out large numbers of pocket plans showing the location of the main venues inside and outside the city walls, as well as the full programme for "Le On", with times, dates and places.

An image of history

Yet it would be so easy to be side-tracked on the way to a performance. Avignon is a city of unquestionable charm. Its very walls seem to echo with the voices of former festivals, its architecture illustrates a rich and eventual past. History has had time to put down roots here. Even before people danced on the famous bridge, built in the 12th century by Saint Bénézet, Avignon was a much coveted prize. Its appeal dates back to Neolithic times. Consider its long history and you will understand why you need time to retrace Avignon's past and visit the vestiges of each age. You will also understand the sheer magic of watching a play in the main courtyard of the Palais des Papes (papal

palace). The present and the past, the past and the present, the papal palace looks down on five thousand years of history from the top of a 58 m rock. Stroll down the *rue de la Bonneterie* and *rue de la Teinturerie*, visit the



chapel of the *Pénitents Blancs*, a 14th century charitable group whose members marched through the streets in hooded white gowns. Walk round the Carmelite Cloister, the Church of the Celestines, the Cathedral of Notre Dame des Doms and the garden of the same name. Gaze over the ramparts and on the other side of the *Pont d'Avignon* - famous in song - turn your eyes towards the Carthusian monastery of Villeneuve-les-Avignons. All these historical images are reflected in the bodywork of our Citroën XMs, Xantias and Saxos.



The AX Electric

a current eve

LAUNCHED IN AUTUMN 1995, THE AX ELECTRIC IS BECOMING A FAMILIAR SIGHT. ADOPTED BY PRIVATE CUSTOMERS AND COMPANIES Alike, THIS MODERN AND ENVIRONMENT-FRIENDLY CAR, ILLUSTRATES CITROËN'S ACHIEVEMENTS IN THE FIELD OF ELECTRIC VEHICLES.



Today, it is important to move with the times. That does not mean simply wearing the right clothes, going to the "in" places or being *au fait* with the latest buzzwords... it also means driving the right car. That brings us to the Citroën AX Electric - *the* current event for trailblazers everywhere.

The first buyers, seeking a car for leisure or business, were immediately won over by the appealing character of Citroën's electric marvel: no gearbox, no noise and power steering for extra comfort. With its maximum speed of

91 km/h and lively handling, the AX Electric is a real city slicker.

Private customers...

Following a two-year trial conducted with twenty-five AX Electrics in La Rochelle (western France), a number of people decided to buy one for their personal use. Among them was Michel Bisson, a GP at La Rochelle, who says: "Now, only the tourists turn round and stare!". Dr Bisson covers between 50 and 70 km a day when he goes out on his rounds. This distance

corresponds to the range of the AX so he can recharge the vehicle at home. "I just plug it in," he says. Above all, Dr Bisson appreciates the stress-free driving of a quiet car. The AX Electric is so quiet in fact that it needs a special horn to warn unwary pedestrians of its approach.

"I decided to keep my AX Electric because it's such a pleasure to drive," explains Anne Guillaumet, Head of Communications for the city of La Rochelle. Like Dr Bisson, Mrs Guillaumet discovered the joys of driving electric when she took part in the two-year trial. "The AX Electric is first and

ent at Citroën

"offer the best possible response to customer requirements".

...and business customers

At present, the main targets of Citroën's sales strategy for electric vehicles are still businesses and local government offices. Private customers are just beginning to discover the extraordinary comfort of the



little electric car but companies are already adapting it to their activities without difficulty. One such company is the SANEF (responsible for motorway management in northern and eastern France) whose lemon yellow AX Electric with its orange siren can be seen running up and down the A1 and A4 motorways. The bright colours were chosen "for safety", explains Bernard de Saint-Lager, Head of Communications at SANEF. In view of its limited speed, the AX Electric has to be easily visible on the motorway. "But", he continues, "it carries an important message: environmental protection. That image is very important to us." Used by company representatives to drive between toll booths on the 1,200 km of motorway managed by the SANEF, to pick up lost property, to reach motorists who have broken down and to maintain the roads, the AX Electric is a constant source of joy to its users.

Compact (3.53 m) and easy to handle, the car offers a range adapted to use in business. The SANEF's car, for example, does not have to be recharged in the middle of the day but can simply be plugged in overnight. And the AX Electric

THE ELECTRIC MARKET

In Europe, eight people out of ten live in cities and 80% of them travel less than 50 km daily. This being so, the electric vehicle must logically find its place on the market.

All the French carmakers have brought out an electric vehicle: Citroën has its AX, Peugeot its 106 and Renault its Clio.

"In the 80 sales outlets selling the AX Electric, we have sold 400 vehicles of this type to date," explains Pierre Laromiguière, Sales and Marketing Manager at the Electric Vehicles Division of Sales, France. He continues: "Our current policy is to target primarily companies, local authorities and government offices. Our sales people are trained with this aim in mind".

The French government has taken a number of steps to encourage people to buy electric vehicles and expects to see 7,000 new registrations by the end of 1996 and 100,000 by the year 2000.

The next step will be the arrival of electric vehicles specifically designed as such, a process that is well under way. These vehicles will redefine automotive concepts in terms of architecture, materials and simplification.



foremost an AX and it has the same high-quality interior as its conventional twin!" she enthuses. Above all, Anne Guillaumet likes "the feeling of driving something a bit out of the ordinary, being a pioneer as it were". She is always happy to let friends and colleagues take the car out for a spin. People are clearly interested in driving electric cars, since the Citer vehicle rental firm offers AX Electrics in five of its Paris branches. "That way, customers can try before they buy," explains Michèle Nedjar, Head of Communications at Citer. She explains that the marque's objective is to

requires little maintenance: the batteries are simply topped up every 10,000 km. The SANEF is highly satisfied with its new vehicle. "We're waiting for the launch of the Saxo Electric to renew a large part of our current fleet," explains the Head of Communications.

Other companies decided not to wait and are making immediate use of the spacious electric vehicle. Converted into pickups, the ten AX Electrics owned by the city cleaning firm SADP, are used by the street cleaners of Asnières in the suburbs of Paris. "Since our business is cleaning, the least we can do is to be clean ourselves!" jokes Michel Ridao, Manager of



SADP, referring to the non-polluting qualities of electric vehicles. The vehicle users, who store their tools in the cab of the AX, are also enthusiastic. "It's a real car," they say. "The brakes are excellent and it's really responsive. And it's just as good as a conventional car on start-up." This performance is confirmed by representatives of Paris City Hall. The city authorities manage a fleet of 3,200 vehicles and, as part of efforts to reduce pollution, they have purchased 50 electric vehicles (utility models and passenger cars). The number includes ten Citroën AX Electrics, which are allocated "on the basis of a precise analysis, which looks at the motivation of employees to use this type of vehicle, the number of kilometres they cover and whether they would be able to



TRIALS IN LA ROCHELLE



In December 1991, the PSA Peugeot Citroën Group signed an agreement with the city of La Rochelle and the French Electricity Board (EDF). The accord formed the basis for a scheme to test electric vehicles in the city. In mid-December 1993, 25 Citroën AXs and 25 Peugeot 106s were handed to private users for trials. The local authorities provided free parking spaces while EDF made it possible for users to recharge their vehicles at home, on the streets or in service stations. The trials lasted eighteen months, coming to an end in June 1995. The results were excellent for the AX Electric, which obtained a score of 8.4/10.

recharge at home", explains Yves Delente, Assistant to the Head of Municipal Car Transport at the General Administration Department of Paris City Hall.

Meanwhile, back in the showroom

In order to convince the most reticent customers (and the others), Citroën has put in place a pragmatic sales strategy. The idea is to get customers to try out the AX Electric. Fabrice Pagnier, salesman at the Citroën branch in Vincennes, just outside Paris, explains: "You have to get into the car, see how easy to handle and lively it is, appreciate the driving comfort". It is true that the car offers appreciable driving pleasure. The left foot can take a rest; the AX Electric has just two pedals: brake and accelerator. The right hand remains on the wheel since there is no gearbox. To put the car into reverse, the driver simply presses an orange indicator. Apart from that, driving an AX Electric is just the same as driving any other car - except for the complete absence of noise and pollution! The Vincennes branch has a demonstration vehicle available to customers. Fabrice Pagnier stresses the low running costs of the vehicle as well as the simplified maintenance.

For vehicle maintenance, the technicians carry an electronic unit that is vital for repairing the AX Electric. They connect it to the vehicle motor in order to detect the cause of breakdown. Naturally, they require specific skills to understand the data that flashes up on the screen and to repair the car. To this end, technicians follow an obligatory training course at

the CIFIC International Sales Training Centre. On completion of the course, they are authorized to repair electric vehicles. Even towing an electric vehicle requires special skills. Guy Cressiot works at Citroën's Vincennes branch and Thierry Bodineau at the Nation branch, not far away. They both started off as general mechanics, but decided to specialize in electric cars because "that's what people are going to be using in the future," declares Thierry.

Gérard Borgeat, Director of the Vincennes branch points out that the AX Electric will be "a plus, customers will buy it to complement their usual vehicle and not as a replacement".

THE AX ELECTRIC IN BRIEF

Saloon: 3-door, 4-seater model

Fleet: 2-seater model

Fiscal rating: 2 CV

Motor: Electric DC

Maximum power: 20 kW from 1,600 rpm to 5,500 rpm

Maximum speed: 91 km/h

Average range: about 75 km

Time required to recharge on normal outlet: 15 - 20% per hour, i.e. a complete recharge in 7 hours

Quick recharge on a 20 kW station: 10 minutes for a range of 20 km

Overall length: 3.53 m

Basic maintenance: battery top-up every 10,000 km



snap, crackle or pop?

IMAGINE. YOU ARE A CITROËN MECHANIC AND YOU HEAR A NOISE BELONGING TO THE FAMILY OF BUZZING SOUNDS. NAME THAT NOISE. NO, THIS IS NOT A NEW BOARD GAME.

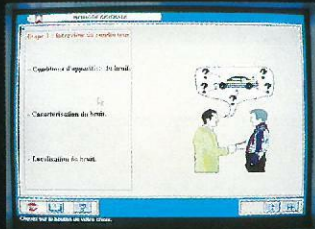
IT IS A TRAINING METHOD DEVELOPED BY CITROËN TO TRACK DOWN - AND ELIMINATE - SPURIOUS VEHICLE NOISE. DOUBLE CHEVRON LENDS AN EAR TO THIS INNOVATIVE METHOD:

When the peaceful silence of the passenger compartment is broken only by a niggling little noise that just will not go away, it gets to the stage where the noise is all you can hear. And yet it is only a creaking sound... or is it a hiss? Or a whistle, perhaps? That is the question.

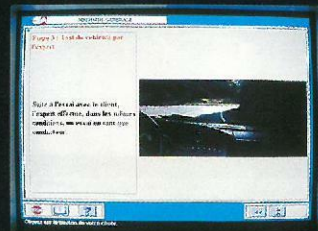




Vibrations, whistling noises, or things that go bump on the road?



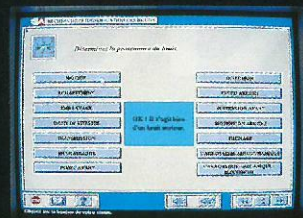
Citraën interviews the driver.



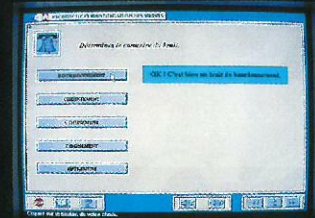
An expert tests the vehicle.



Specialists collate all the information relating to the noise...



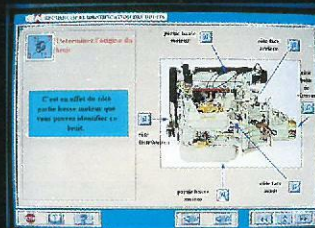
in order to find out where it is coming from.



The characteristics of the noise are set out in detail...



in order to identify the source.



The experts then analyze the problem and decide what action to take.

How can you identify the source of a sound if you cannot describe it? How can you remedy the problem if you cannot find the cause? In short, how can you satisfy



the customer? Clearly, the specialists need to be called in. "We started doing this two years ago," explains Bernard Crochet, Head of Automotive Training at



Citroën and inventor of the method. "We decided that it was vital to include a noise identification module in the training programme for expert technicians", (see *Double Chevron* No. 11).

The module lasts six weeks. A stringent selection procedure is applied since trainees need to satisfy specific behavioural requirements - in terms of self-possession - and to obtain a high percentage of correct answers in a questionnaire designed to test their technical expertise. If a candidate fails this preliminary examination, he will follow a different complementary training course.

Playing it by ear

The training module is based on CAI (Computer-Assisted Instruction) software but expert technicians need no computer skills apart from the

use of a mouse. Working at his own pace, each expert technician seeks to identify noises and their source. A total 41 noises have been listed. This (non-exhaustive) list was drawn up with the assistance of test drivers (see *Double Chevron* No. 5), acoustic engineers from the Design Office and repair shop employees from the subsidiaries. A number of models are made in order to ensure that the noises accurately reproduce those heard in the car.

"As the technician uses the software, his ear gradually learns to recognize the different sounds. He can use the program as many times as he likes and pick up where he last left off."

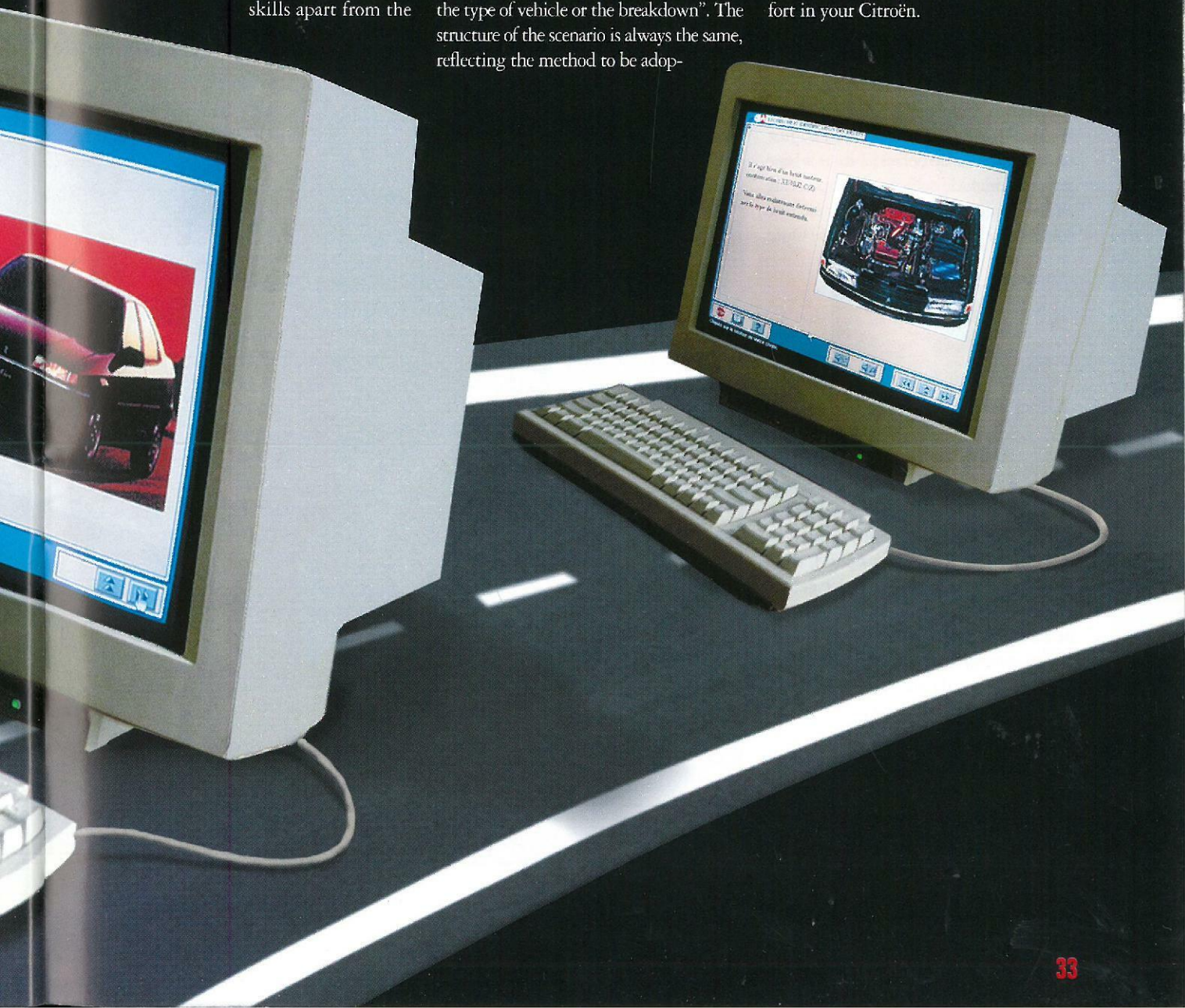
After listening to the different families of noises, the expert technician selects one and the software submits a scenario at random "because when you're working in a garage, you don't choose the customer, or the type of vehicle or the breakdown". The structure of the scenario is always the same, reflecting the method to be adop-

ted in real life: talk to the customer, take the car for a test drive, listen for any abnormal noises according to a number of criteria (speed, etc.), try to establish a comparison with the normal noise, find out where the noise is coming from, identify its type, character, cause, etc. The software submits several solutions for each item. To conclude, the software specifies the repair to be carried out.

"The program lasts eight hours but it is difficult to keep going for more than 45 minutes at a stretch. The trainee saves the work he has done so the facilitator is able to check the results."

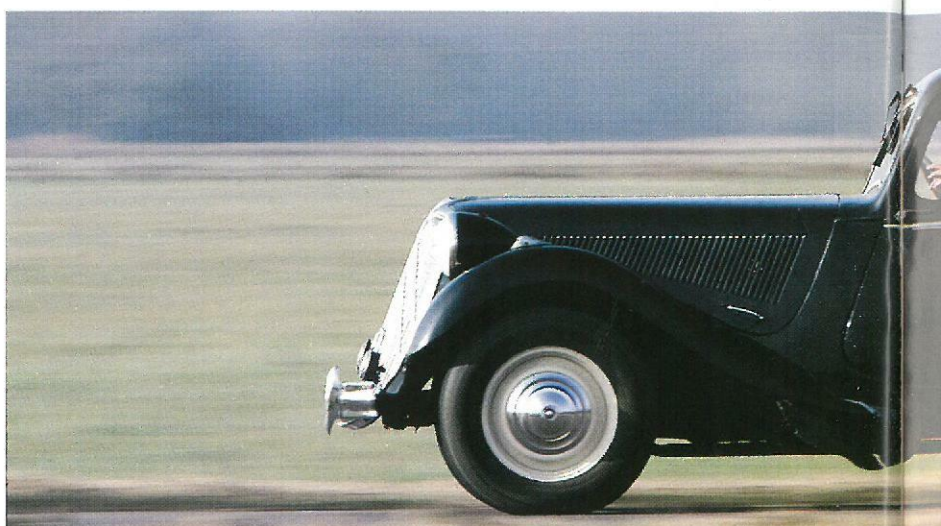
The latest weapons in the hunt for spurious noise? A computer, a sound card, two speakers, a keen ear and technical expertise based on an innovative teaching method.

The end result: high-quality acoustic comfort in your Citroën.



Olivier de Serres

TWENTYFIVE YEARS AGO, OLIVIER DE SERRES FELL FOR THE TRACTION AVANT. A TRUE PASSION THAT HAS BROUGHT FORTH A COLLECTION OF CITROËN VEHICLES - RESTORED BY THE WHOLE FAMILY - AND A SERIES OF BOOKS. DOUBLE CHEVRON RECOUNTS THE TALE OF A MAN WITH BOUNDLESS ENTHUSIASM.



The collector who be

Is it possible to combine a career with a passion that involves writing books and restoring old cars, without neglecting your family? The answer is yes. Just look at Olivier de Serres, a man whose activities include collecting Citroën cars and writing books on the same topic. We could begin the tale in story form. Once



upon a time in France, there lived a family who loved Citroëns and had driven them since the 1930s. As a child, their son Olivier was rocked by the gentle movement of the Traction Avant. When he got his driving licence, it was only natural that his parents should give him the family Traction Avant. End of Act I. Act II. This first car puts Olivier de Serres on the road to becoming a collector. "I got really attached to the Traction. I thought it was beautiful. Don't forget that it was styled by Bertone, who was a sculptor. He presented his work at the *Salon des Indépendants* art exhibition in Rome,





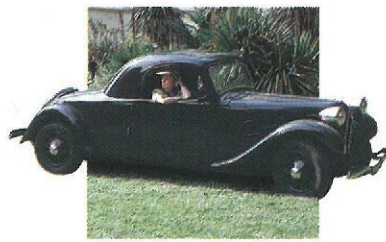
e came a writer



where it won a prize," explains Olivier. "So it's hardly surprising that the Traction is a pleasure to look at, just like a work of art. Then I got interested in the car's history and technique. That was it. There was no going back. And that was twenty-five years ago."

Héloïse, Danae and Ophelia as Muses

When Olivier de Serres had a Light 11, he wanted a Normal 11. When he had that, he wanted a 15 CV, and so on. A huge collection gradually began to take shape. "It wasn't difficult to find cars in the 1970s. Sometimes people just gave them to me. I like to surround them with atmosphere. And I've given every one of them a name taken from mythology or ancient history: Penelope, Ophelia, Danae, Héloïse, Eurydice, and so on. When my wife found out, she was worried that there wouldn't be any pretty names left for our daughters. At the moment, I have a virtually complete range of Traction Avant models. I say "virtually" because I'm missing a few, including the mythical 22 CV. But then again, where would a collector be if he no longer had anything to collect?" End of Act II. Act III. We return to our subject of passion. Olivier de Serres wants to share his

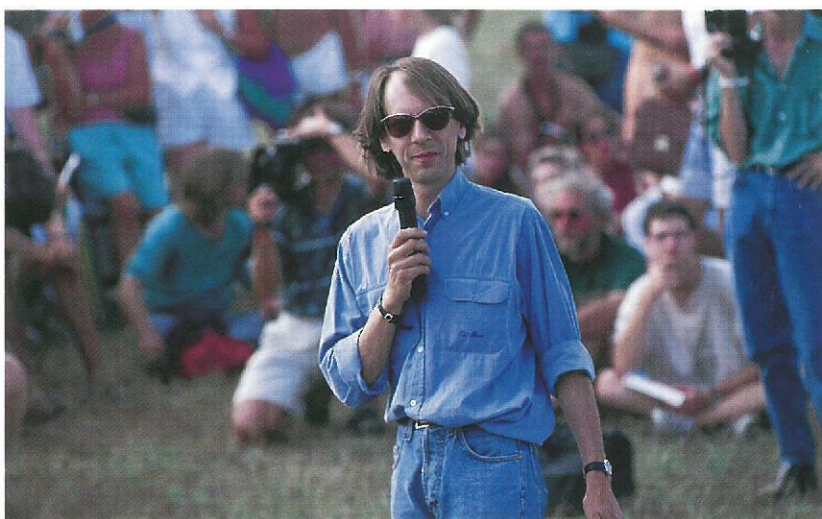


enthusiasm. He is tempted to write and so he takes the plunge. In 1982, he submits a manuscript to EPA, a publishing house specializing in means of locomotion. The manuscript is accepted and the *Grand Livre de la Traction* arrives on the bookshelves in 1984, the model's fiftieth birthday. This first book has enjoyed enduring success and is regularly reprinted. "EPA asked me to continue," recalls Olivier de Serres. "So I wrote the *Grand Livre de la DS*, a car that I consider as the Traction's daughter since it had the same engine, at least to start with. It also came out of the same design office. And it is a

car that I know well since I drove one for quite a long time."

A long task

Olivier de Serres has published six major works to date, including two on Peugeot, one on French cabriolets, and short books on the same topics. "It takes about two years to write a book and prepare the layout," explains Olivier. "The time taken for research is variable and, above all, not clearly defined since it is something I can only do in my free time. It's a long job in which you can enjoy sudden strokes of luck. I'm fortunate enough to have access to the archives of Citroën subsidiaries abroad, even though they are closed to the public. When I unearth old archives, I sometimes feel like a potholer or archeologist. But it's a fascinating job." The books are illustrated with photos taken by the marque, by other collectors, or by Olivier himself, since he likes to take photos of his wife and friends posing with a Citroën. Photography is another passion. "In the 1980s," he continues, "I had the opportunity to meet some great photographers: Peter Vann and Alberto Martinez



who worked for Citroën, and Patrick René, the current manager of the Photo Department. I learned a lot from them".

Act IV. In his capacity as collector and writer, Olivier de Serres has been able to build up a worldwide network of correspondents and friends over the years. The links forged with car enthusiasts have been consolidated through other shared interests, such as architecture, the arts and painting. Olivier is generally considered as a car specialist. So it is not unusual for Citroën car clubs to call upon his services as a "historian" of the

Zabrus (on a BX base) and Camargue (GS) prototypes, the Heuliez prototype, the Vent d'Ouest (ZX) cabriolet and the CX Citroën that had taken part in long distance rallies such as the Paris Dakar".

Shared passion

Act V. What with his career, his books, the articles he writes for the popular press and his autograph-signing sessions, Olivier de Serres does not have a great deal of time to look after his own collection. "My cars are

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- *Le Grand livre Citroën, tous les modèles*
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- *Guide Citroën, tous les modèles de 1919 à 1945 - tome 1*
- *Guide Citroën, tous les modèles de 1946 à 1975 - tome 2*

Published by Séguier

- *Peugeot, la griffe du Lion*
- *La 15 CV (with Josée Lapeyrière)*



marque. He sometimes takes part in elegance competitions as a member of the jury, organizer or presenter. At the 10th International Citroën Car Club Rally at Clermont Ferrand in August 1995 - a major event - he was responsible for the museum. "That involved bringing together some fifty exceptional models," explains Olivier, "for a temporary museum of unforgettable impact". A difficult task. Fortunately, Marcel Allard who is responsible for vintage cars at Citroën's Corporate Communications Department, provided almost twenty vehicles and prototypes. The rest came from private collections. The most beautiful vehicles on show? Undoubtedly, the Bertone

not as well maintained as they could be," he says. "Some of them make a plea for attention by breaking down, for example. However, I do my best to pamper them, with the help of my two sons and two daughters." The eldest son is impatient to get his driving licence so he can drive the family 2 CV, the youngest is interested in mechanics and restoring old cars.

Epilogue. Olivier de Serres maintains that "passion must be tempered by reason" but he has successfully passed on his passion for Citroën to his family and his readers. To find out more, read his next work on Citroën, which is due for publication in 1997.



Faster production and shorter delivery times

As we all know, customers are always asking for more. Every year, they demand higher standards of quality and expect to have their new vehicle delivered faster. "We have cut customer waiting times by half over the last ten years and, with an average delivery time of 25 days following the order, we are now the best in Europe. But we can do even better!" exclaims Bertrand Pétre, of Citroën's Quality and Organization Division. Mr Pétre also heads the PSA Peugeot Citroën Logistics Project for the marque (see box, page 39) and, like the thousands of other people concerned within the Group, he is well aware that short and reliable delivery times are a factor of major importance in efforts to ensure customer satisfaction. Reflecting this, the statement of objectives for the Logistics Charter stresses that: "With the wide range of models and versions now available on the market, the ability to

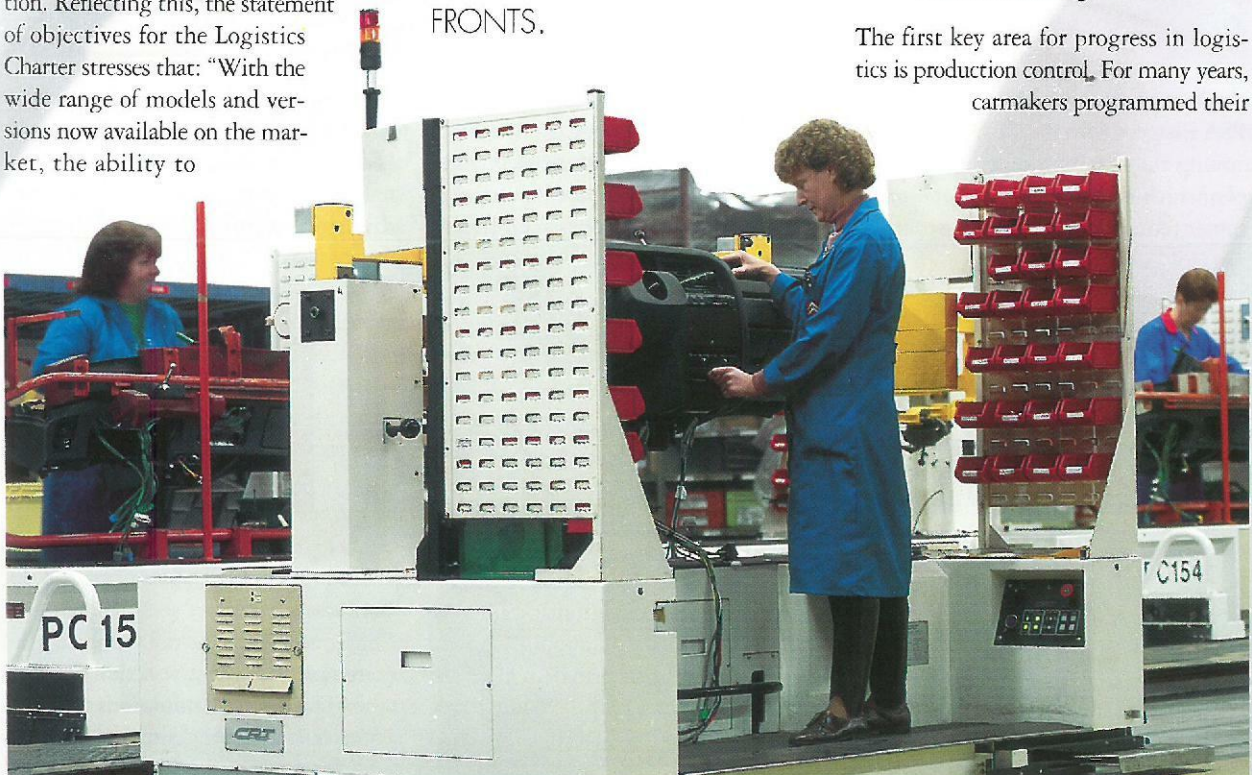
FOR CITROËN, SHORT DELIVERY TIMES ARE ESSENTIAL TO SATISFY CUSTOMERS - AND TO THEREBY GAIN COMPETITIVE EDGE. RANKING AMONG EUROPE'S LEADERS IN THIS AREA, THE MARQUE HAS BUILT UP A HIGHLY COMPLEX LOGISTICS SYSTEM THAT DEMANDS PERFECT COORDINATION ON ALL FRONTS.

produce rapidly a vehicle corresponding exactly to the customer's requirements has become a key competitive advantage". To maintain its competitive edge in this area, Citroën is mobilizing the workforce in an effort to improve performance at every stage, from processing of the order to parts supplies for the various plants, vehicle production and supplier relations, right up to delivery of the finished vehicles to the dealer's door.

This ambitious scheme demands an enormous amount of planning and a highly complex organization. The different stages are all linked, and a problem with one link can snarl up the entire chain.

Manufacturing to order

The first key area for progress in logistics is production control. For many years, carmakers programmed their



INDICATORS TO MEASURE PERFORMANCE

A policy to improve delivery times must be accompanied by practical targets and indicators to measure the levels of performance and quality achieved and to provide an objective for further improvement. For this reason, Citroën has established a wide range of indicators for a variety of production factors: proportion of unfulfilled production orders (the aim is less than one in a thousand), production line utilization rate, stock, delivery-time dispersion, etc. These data give the logistics teams a clear picture of overall performance.

production according to sales forecasts. PSA Peugeot Citroën, with Toyota, was among the first to modify this principle, which is too inflexible to meet customer requirements today (customized



models with short delivery times). At Citroën, the various "flows" are now increasingly "pulled" by the commercial orders received from final customers, French dealers or sales outlets outside France. Dealers outside France, for example, like to have the widest possible

choice of vehicles, be it to provide models for their showrooms, to hone the talents of their sales representatives or, more simply, to reflect the particularities of their region in terms of fashion trends, sunroofs and air-conditioning in hot climates, and so on.

The aim of the Logistics Project is to produce, on a day-to-day basis, only those vehicles that have actually been ordered by customers. It must be remembered, however, that a large share of the daily production orders sent out from head offices will always concern vehicles destined to become part of the sales network's central stock.

Intended to reflect major market trends, this central stock still supplies around fifty percent of final customers, although Citroën is seeking to cut the figure down. "One of our logistics challenges is to find a balance between the advantages of stor-

ing cars in a vehicle pool for delivery within a few days, a system where the overall cost is slightly higher and the car may be more difficult to sell, and the advantages of providing vehicles that are



custom built for buyers," points out Bertrand Pétéré.

Consequently, industrial flexibility is a prerequisite for effective action. For each type of production, minimum and maximum quantities are defined according to sales forecasts, and industrial resources



undergo regular adjustment to respond to all levels of demand within this range. The system applies not only to "vehicle flows" concerning body assembly, painting and final assembly, but also to the "component flows" generated by the thousands of parts and sub-assemblies circulating between upstream plants, including those of the Group's many hundreds of suppliers. "Suppliers sign a contractual agreement to modulate deliveries in accordance with the laws of logistics flexibility and the demands of our production schedules. For example, if we need to turn out 2,000 cars with a specific item of equipment within a period of one month, for a limited series for example, then the supplier, whether he is inside or outside the group, must be capable of doubling or tripling the quantities supplied within 24 hours," explains Bertrand P  tr  . To cope effectively with sudden surges in

demand, advance production flow schedules are essential. These schedules rely on the sales forecasts issued by the company... with all the statistical uncertainties that this implies. For this reason, though schedules are drawn up on a monthly basis and cover a four-month period, weekly updating may be necessary in certain cases. Nevertheless, quantities always remain within the pre-set ranges of variation, the levels of which remain stable in order to cope with the daily choice of orders.

Last but not least is the "contract" set up between sales and production activities. Though this contract safeguards the essential balance between commercial demand and production capacity, it imposes only minimum constraints on sales. It sets out a number of basic directives on overall activity, stating only the model, the powerplant and the country of destination in the quantities to be produced. It is actually the final customer, dealer or sales company who chooses the individual features of the vehicles coming off the production line - the cars are truly made-to-order.

In pursuit of incident-free production lines

The task is then to implement these production flow schedules (vehicle orders) in the plant. Given that a vehicle comprises 5,000 different parts and that a single model, with its full range of features and options, may include up to

80,000 variants, it is easy to imagine the sheer complexity of the task! What's more, Citro  n has set exacting standards: "Our aim is to complete an order within 10 working days (15 calendar days), from the time we receive the production order from the sales department up to the arrival of the completed vehicle in the parking area at the factory gate," says



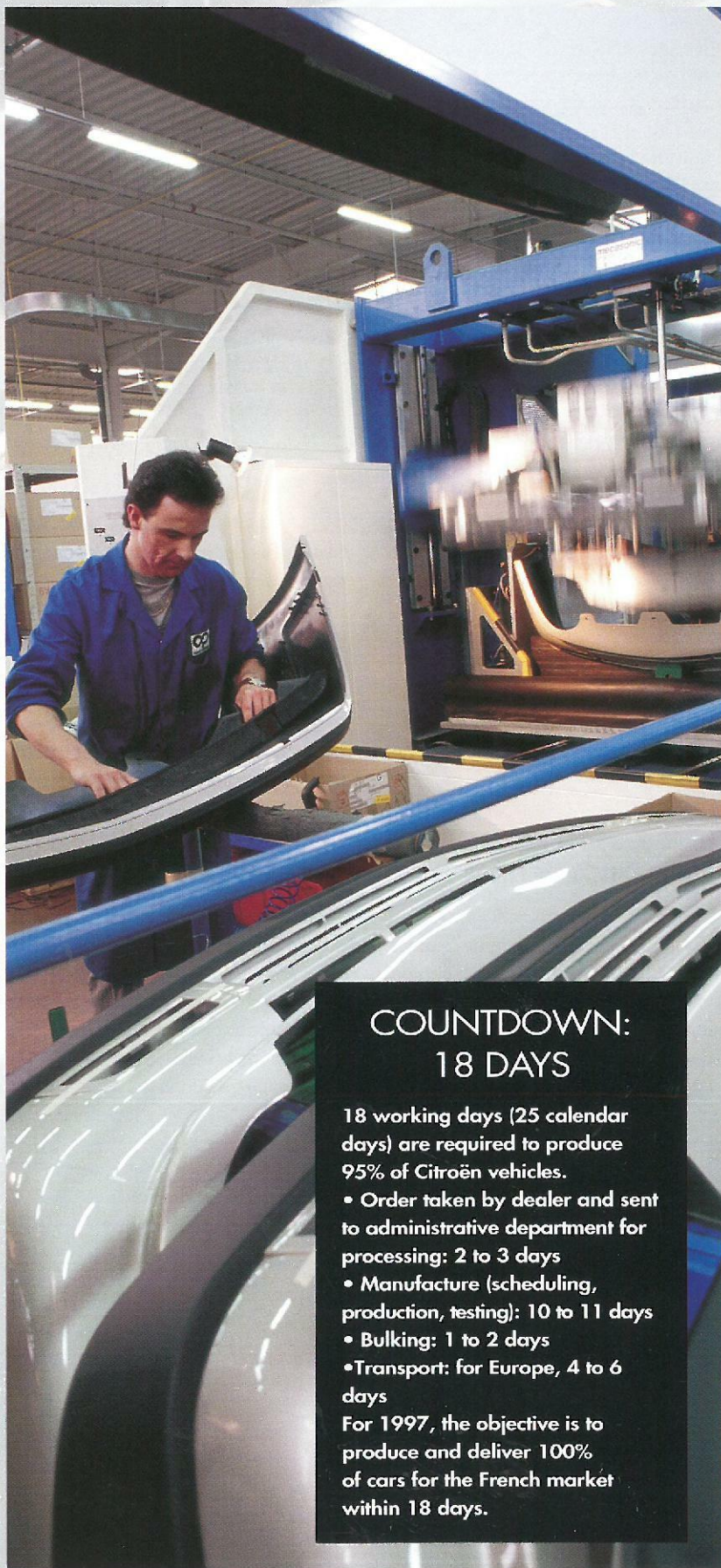
Claude Barel, Vehicle Flow Manager at the Production Division.

In order to meet this objective, Citro  n has developed advanced and rigorous modes of operation in its final assembly plants (Aulnay, Rennes, Vigo, etc.).

Every day, the plant manager and his team establish a production schedule, get the day's production started around the plant, ensure that everything is running smoothly, provide production information, organize vehicles deliveries, and so on. In short, they have to manage all aspects of flow during the four main stages of production: body assembly, painting, final assembly and shipping. Quite a challenge! "That's why we make every effort, from the body assembly stage onwards, to keep production running

THE LOGISTICS PROJECT: A PLAN FOR PROGRESS

In 1986, the two marques of PSA Peugeot Citro  n, Sogedac (the group's purchasing subsidiary) and Gefco (the transport subsidiary) drew up a Logistics Charter as part of Citro  n's Plan Mercure. Ten years on, the principles set out in this reference document have more than proved their validity and their ability to optimize industrial flows within the Group. By organizing action plans and setting performance targets to be reached through the principles defined, the Group has been able to halve vehicle delivery times to customers. These three-year plans, updated every year, constitute the Group's Logistics Project (or Logistics Programme).



COUNTDOWN: 18 DAYS

18 working days (25 calendar days) are required to produce 95% of Citroën vehicles.

- Order taken by dealer and sent to administrative department for processing: 2 to 3 days
- Manufacture (scheduling, production, testing): 10 to 11 days
- Bulking: 1 to 2 days
- Transport: for Europe, 4 to 6 days

For 1997, the objective is to produce and deliver 100% of cars for the French market within 18 days.

continuously while minimizing incidents and wasted time. That way, we can meet our schedules and keep within our delivery deadlines," explains Gérard Guivarch, who coordinates vehicle flow management systems.

The scheduling process sorts and classifies incoming vehicle orders in order to address various constraints such as the volume and type of parts and options to be produced, production line capacity, production problems, and other factors. Powerful computing tools, such as the Argos production control system, ensure that priorities are respected and help the plant to optimize scheduling.

On the production line, Argos informs human personnel and robots of the oper-



ations to be performed, while also enabling the vehicle flow manager to monitor and count the flow of cars in real time on a computer screen in the central control room. The manager is thus able to react quickly to unexpected incidents and to visualize any problems through a series of video cameras installed in each sector of the plant. The cameras transmit data from the bar-code identification sheets placed on the carrier hooks following each vehicle throughout the production process. Argos also works in liaison with the other vehicle flow systems, i.e. Norev for parts list management and Galop for shipping management.

The challenge of just-in-time production

With the "pulled flow" production method, "fluidity" is vital. The production line operator must receive the right part, of the right type and colour for the vehicle being assembled, precisely when he needs it. This is the challenge of "just-in-time" production. Through a detailed

analysis of the parts circuit, from manufacture to consumption, the procurement teams calculate what stocks are available and determine how and when new production orders must be issued. This is yet another highly complex task, given the immense volume of parts and components handled each day and the large number of suppliers.

Two main types of order are applied to component flows: coordinated orders and Recor orders.

Coordinated orders, of which several types exist, are calculated on the basis of production orders and essentially concern families of disparate, expensive and voluminous components (engines, gearboxes, running gear, interior trim, etc.). Parts are differentiated at a later stage, according to customer choice. In this way, coordinated orders resemble Spart orders, which are coordinated with vehicle flows, or synchronous orders.

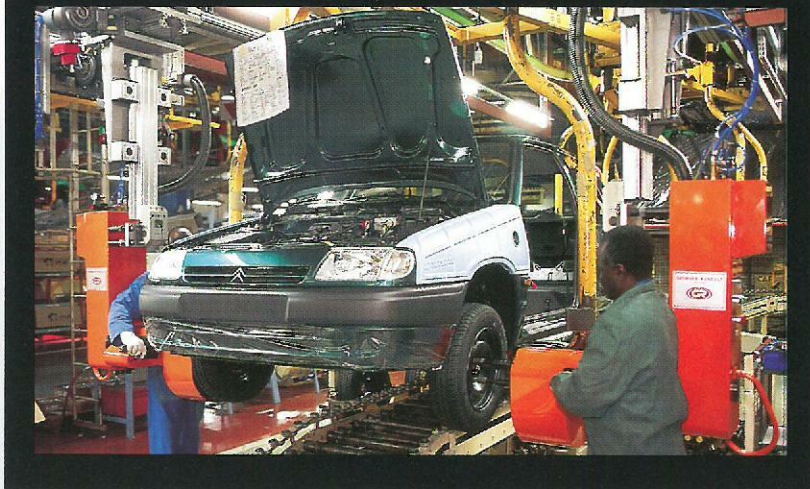
Synchronous orders represent the flow management in its finest possible detail: the seat supplier, for example, produces the required upholstery parts in real time, after receiving an order sent from the plant when the car reaches the assembly area. The parts are delivered a few hours later, just when they are needed on the line! The main advantage of the Recor system (replacement of real consumption) orders, is their simplicity. The procedure is identical to the kanban system used by Toyota, where an empty container calls for a full container.

All these operations, performed by a variety of handling systems, call for infallible part traceability and flawless flow preparation. Here again, computers have a key role to play, with systems such as Pégase, Hermès and Sherpa.

At Aulnay, a bar-code system has been put in place for the incoming parts (5,500 line items in all) delivered to the plant every day by several hundred lorries. The system covers transfer to the storage depots, parts management inside the depots and subsequent transfer to the production lines. Each handling truck is equipped with a bar-code reader and a computer screen and is connected to the central system by a radio link. Once the code of a consumed part has been read by the computer, the proce-

EFFICIENT WORK ORGANIZATION AND MULTI-SKILLING: KEY FACTORS FOR SUCCESS

Short delivery times demand a highly flexible industrial organization, combined with quality objectives and cost management. For this reason, Citroën set up *Plan Mercure* in 1984. Twelve years on, the tried and tested strategies of the plan have revolutionized both the company and its products. Workstations are now organized into highly flexible and easily manageable production lines, often divided into easy-to-run sub-units, while personnel are multi-skilled and operators perform tasks with a high technical content and take responsibility for inspecting their own work. The number of levels of management has been cut to enhance motivation and promote efficient problem solving, quality circles and work groups have become a permanent feature, and rewards are offered for suggestions put forward by individuals or groups. In association with the Logistics Charter, these principles have taken Citroën to the top of the European league table for vehicle delivery times.



cedure for ordering a new part begins automatically.

Optimizing transport to the final destination

When a vehicle has been assembled and inspected through a series of end-of-line tests and adjustments, it is placed in a parking area ready for shipment to the dealer or sales company that placed the order. Vehicle transport and delivery is handled by Gefco, PSA Peugeot Citroën's transport subsidiary. Further upstream, Gefco is also responsible for parts delivery to production plants. "At the final transport stage, our job is to optimize transport arrangements for all vehicle destinations, both in France and abroad" says Claude Guétin, Head of the "Cars" division at Gefco.

The advantages and disadvantages of all the various alternatives - road, rail, sea or even air, transit via a shipping centre or direct delivery, sub-contracting - must be constantly weighed against each other, so that an optimum solution can be found.



"Adaptability is a permanent feature of the transport and distribution networks," points out Claude Leroi of the "Goods" division. Thus, whether the aim is to develop the sales network in a new



export market, to ramp up production for a new model or to deal with the consequences of a rail strike, only the end result counts. For Gefco, the objective is to respect and shorten lead times for bulking and transporting vehicles, while keeping costs to a minimum.

The launch of the Berlingo by the Vigo assembly plant in Spain clearly illustrates the importance of this work.

The production and distribution of this new Citroën utility vehicle, which is manufactured exclusively in Spain, was a mammoth organizational challenge covering such areas as procurement, stock management, preparation of orders, pulled-flow deliveries, spare parts dis-

tribution, choice of shipping centres and delivery of vehicles to tens of thousands of sales outlets throughout the world. In Spain alone, Gefco has around 20 branches, while Citroën has built up a network of 200 dealerships and branches and 1,100 representatives.

To control the vast quantity of data passing through each node of this giant world-wide network, Gefco uses a unique computer system, which is harmonized Europe-wide for increased efficiency.

Any branch can contact another branch to directly transfer information such as customer goods files or "car" information for distribution to Gefco customers, to send messages to Group colleagues via the elec-

tronic messaging system, and so on. Aided by this highly sophisticated system, which incorporates the concept of electronic data interchange (EDI),



Gefco is now working with Citroën to develop new strategies that will further increase its ability to react fast. "Following our success in production, we are now applying more flexible and less complicated procedures to distribution. These include allocating a vehicle to a sales outlet during transport and distributing vehicles directly from our plants, transport links and distances permitting," concludes Bertrand Pétre. Long confined to a minor role within the company, Citroën's logistics teams now occupy the strategic position that they truly deserve.

Didier Counas

DEALERS HOOK UP TO THE SATELLITE NETWORK

PSA Peugeot Citroën is revolutionizing the exchange of data with its 4,200 European dealers. A VSAT satellite link is gradually replacing current procedures, i.e. data transfer through the Transpac network in France, the IBM Global Network in Europe or ... a diskette through the post!

With this new system, now being brought into general use, the central computers at Citroën and Peugeot will be able to send a full range of information (price lists, parts lists, availability of new and second-hand models, and other data) via Eutelsat II to the antennas connected to each dealer's inhouse computer.

The dealers will thus gain 99.9% availability for their calls, while making substantial savings on their phone bills and speeding up data exchange by a factor of between 2 and 6. The satellite link improves reliability and enables Citroën's logistics structure to react even faster.

Citroën to set up two subsidiaries in Slovenia and Croatia

For over 25 years, Citroën was involved in a manufacturing and marketing cooperation agreement with CIMOS (Citroën and Tomos). On July 16, the two partners signed a new accord, under which CIMOS will be responsible for the manufacturing side of the business, which will be slimmed down to production of car parts, while Citroën will take over the marketing arm. Citroën will handle distribution of the marque through two new subsidiaries, which it is setting up in Slovenia and Croatia.

"Automobilia"



A new monthly magazine - *Automobilia* - hit French newstands in May. Each issue focuses exclusively on the history of the automobile in France, marques, manufacturers, models, famous people, miniatures and more. With 68 pages richly illustrated with photographs and drawings, *Automobilia* is available on the 10th of each month.

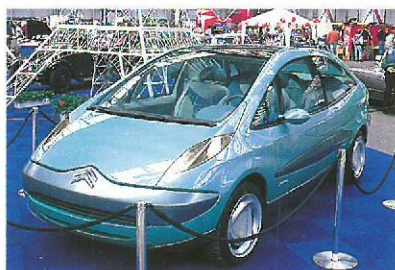
Citroën Sport goes on-line

The Client Competition department of Citroën Sport has launched an on-line information service dedicated to the marque's motorsports activities. The service, carried on France's public videotex system, Minitel, offers a wealth of

detail about the motorsport calendar. Also, drivers can now enrol for upcoming events and study the technical and general regulations - all with a few keystrokes.

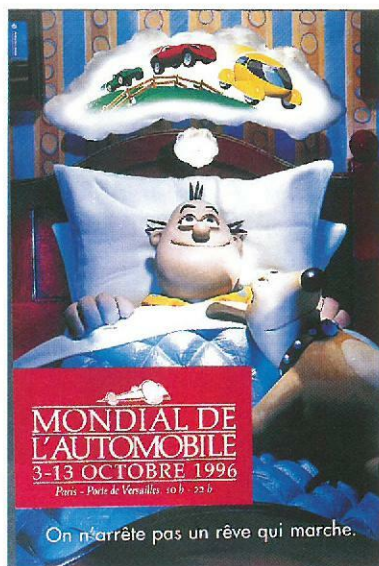
Dutch treat

Around 6,500 people flocked to the Dutch town of Utrecht on 4-5 May for Citromobile, a special exhibition featuring 2,500 of the marque's vehicles. The event was organised by the Dutch Citroën clubs and sponsored by Citroën Nederland. The stars of the show were the Saxo - making its Dutch debut - and the Xanae.

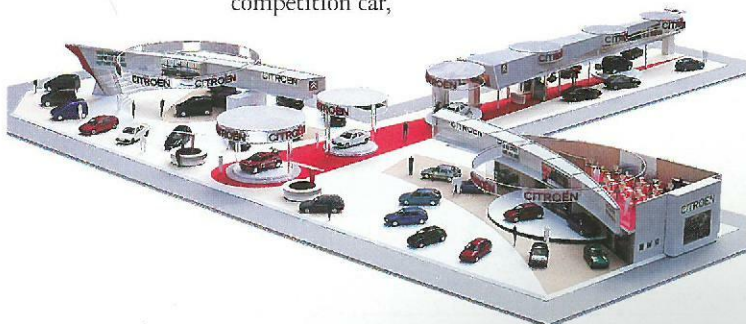


Citroën pulls the crowds at the 1995 Paris Auto-show

At the Paris Motor Show, held from 3 to 13 October in the Porte de Versailles exhibition centre, Citroën exhibited 33 vehicles on a 2,360m² stand. The full range was there, including the AX, the Saxo, the ZX, the Xantia, the XM, the Evasion and the Berlingo hatchback. Also on display were the Saxo Electric, the Saxo and Xantia LPG models, the Xantia V6 Activa, the Citroën ZX Rallye Raid, Jean-Luc Pailier's Xantia Rallycross and Citroën's competition car,



the Saxo Challenge. Special events were organised around the Saxo and Berlingo models. The star attractions of the display were undoubtedly the three Berlingo concept cars: the Berlingo Berline Bulle, the Berlingo Coupé de Plage and the Berlingo Grand Large.



Saxo DIESEL

SI SILENCIEUSE QUE LA NATURE
A DU S'ADAPTER.

#EURO RSCG / SCHEEL LAFFAGE



CITROËN préfère TOTAL



CITROËN