# DOUBLES CITROEN NEWS MAGAZINE

ENVIRONMENT

RECYCLING: QUALITY WITHOUT WASTE

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## **Prevention is better** then cure

Aware of its responsibilities as an industrial producer, Citroën has put recycling firmly at the top of its list of environmental protection schemes. From vehicle design to end-of-life processing, the Marque puts the emphasis on recyclability and waste re-use. **Page 6** 

**Citroën ZX Coupe** In October 1992 the ranks of the Citroën ZX collection received a new recruit, the ZX Coupe. The family resem-blance to the ZX Rallye Raid is triking. Equipped with a choice of highperformance engines, the 6 new Citroën ZX models combine

all the class of a coupe with the confort of a saloon. **Page 4** 





## **1st Paris-Moscow-**Beijing Rally Citroën ZX Rallye Raid takes first prize

Citroën won a major victory in September when Pierre Lartigue and Michel Perin were first to cross the finishing line in their Citroën ZX Rallye Raid. Further proof of the Marque's dynamism and technological knowhow. Page 10

## She sells Citroëns...

Pounted in 1988, at Citroën's initiative, the Instituts Féminins de la Vente Automobile now gives women a foot-hold in what used to be an male domain. Page 28



## Astride two worlds

A Tuareg from the Niger, Mano Dayak now divides his time between life in the Ténéré desert and the offices of this "Temet" travel agency, which specializes in tours around the southern Sahara. He is also the local Citroën ZX Rallye Raid trials organizer. Page 33

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## 27 September 1992

be Citroën Rallye Raid ZX driven by Pierre Lartigue and Michel Perin passed the finishing post to win the first-ever Paris-Moscow-Beijing Rally. On all counts, the victory was a sporting, technical and human triumph. But for the marque, it was also a three-fold symbol. A symbol of its special relationship with China, which began sixty years ago with the Croisière Jaune expedition; of a dynamic brand image rooted in long-standing traditions; and of the exceptional quality of a car that has won plaudits in France, Europe and the rest of the world.

Although it sometimes seems that we live in a global village, in reality the world is as rich and mysterious as ever. For example, the competitors in the Paris-Moscow-Beijing Rally may have crossed ten countries, but they came into contact with an incredible diversity of peoples and cultures.

A carmaker with international ambitions must be fully aware of that diversity when designing new models, planning the launch process and adapting its vehicles to new regu-

lations or standards. In short, to keep pace with the changing demands of its customers, a marque must be closely in touch with them. In touch with YOU.

Double Chevron aims to turn a spotlight on the myriad facets of company life, to arouse your curiosity and keep you informed about the issues that face us all. We count on your remarks and suggestion to make this more than just a magazine. We want it to be YOUR magazine.

Eric Ehrsam.



## PLEINS PHARES





It's not a coupé, but it sure looks like one! The new 3-door Citroën ZX combines an innovative style with all the comfort of the 5-door version. This young, lively new model moreover comes with a choice of two new engine options.

he flowing lines of the model's compact chassis feature an original "kick" in the waistline, vertical door handles, distinctive, reshaped rear quarter panels and a slender new look for the rear quarterlight windows. In all, a set of wholly eye-catching choices designed to break with the more conventional features of the 5door saloons, giving the 3-door upstarts a look and a personality all of their own and a true coupé feel, while retaining the comfort of their more sedate elders. Officially presented to the public at the Mondial de l'automobile in Paris, the new ZX includes all the recognised qualities of the 5-door model, notably the highly advanced safety features of a stiffened

frame and programmed selfsteer rear suspension for outstanding ride and handling.

The 8 new versions rolling off the production line at Citroën's Vigo plant in Spain bring the total strength of the ZX collection to 25. The two new ZX models, the 16 V and the Furio, are powered by 2.0i 16V and 1.8i engines respectively.

Both symbolize youth and dynamism, with each engine type differing only in the number of cylinders and the type of inlet system, providing the perfect balance between power and torque and enabling rapid changes up through the gears and comfortable manoeuverability at low revs.

The Citroën ZX 16 V represents a watershed in the collection's development. Its top-ofthe-range market positioning and presentation give the vehicle an exceptionally strong brand image.

## CITROËN ZX 16 V

The Citroën ZX 16 V is fitted with a new 4-cylinder, 16valve engine using the same variable inlet manifold system as the 24-valve XM, ensuring improved performance at low revs. This 1,998 cc engine is capable of developing up to 111.6 kW (155 bhp) at 6,500 rpm. The Citroën ZX 16 V has torque of 18.3 m.daN (19 m.kg) at 3,500 rpm, giving exceptionally high performance levels across the board: a maximum speed of 220 km/h and an acceleration of 0 to 100 in 9.4 seconds. This balance is achieved by precision road holding designed principally for better body movements and to limit the stress on load-bearing parts (pitch and roll). Rear axle suspension has been uprated and stiffened for a faster response time and better resistance to transverse stress.



## **CITROËN ZX FURIO**

The Citroën ZX Furio is fitted with a new 4-cylinder, 1,761 cc engine capable of developing up to 74 kW (103 bhp) at 6,000 rpm. The car is aimed principally at the young end of the market, with a presentation combining personality and discretion. With an engine that delivers one of the best torque performances in its category (15.3 m.daN, 15.6 m.kg at 3,000 rpm), the ZX Furio offers flexibility and driving comfort coupled with a characteristic robust and lively feel. All engine types (petrol and diesel) fully comply with European standards coming into effect as of 1 January 1993, with the petrol engines equipped with fuel injection and a 3-way catalytic converter.

## The market

Three-door hatchbacks captured a quarter of the European lower medium range car market (M1 segment) in 1991, representing some 950,000 vehicles. The majority of buyers tend to be young, single, well-paid professionals who put a car's appearance above robustness and durability on their list of priorities.

Six countries accounted for

83% of these sales: Germany, Great Britain, the Netherlands, France, Spain and Italy.

Germany dominated, with buyers snapping up half of the European total (474,000 vehicles), far ahead of Britain and the Netherlands.

Of these six countries, the Netherlands has the highest proportion of 3-door hatchbacks on the road (43%), followed by Germany (36%), while Italy brings up the rear with only 8% of the total, typifying the Southern European preference for 5-door saloons. The Volkswagen Golf, with sales of over 320,000 units (41% of the market), heads the European manufacturers' lists, and the vehicle dominates all but the British market, where it is relegated to second spot behind the Ford Escort.

Other marques that have a sizable stake of the M1 segment include Opel, Honda and Renault.

Japanese manufacturers have a better grip on the North European markets, although they enjoy a strong position in France, where the Honda Civic has been particularly successful.



## **REVENTION IS BETTER THAN CURE**

Citroën took this axiom as the motto for its far-reaching recycling programme.

ENVIRONNEMENT



Whith environmental protection in mind, the marque applies the principle of prevention to every stage of the vehicle life-cycle — design, manufacture, serviceable life and destruction. As a result, Citroën cars are truly environment-friendly.

## PROTECTING THE QUALITY OF LIFE

As a carmaker, Citroën is aware of its responsibilities to the environment and has consistently made nuisance analysis and reduction part of its industrial strategy. This involves systematic reduction of air pollution, optimized water consumption and efficient waste



management. Citroën now relies on two bodies — the Industrial Environment Observatory and Commission set up specially by PSA Peugeot Citroën to investigate and improve the relationship between industry and the environment.

## **CLEAN PLANTS**

The plants of the PSA Peugeot Citroën group produce 600,000 tonnes of waste annually. To manage its own waste, Citroën has adopted the "clean plant" concept. The principle is simple. Each category of waste is processed using the method most suitable to its pollution potential (destruction, recycling, energy recovery, etc.). As a result, the company has had to introduce not only clean and reliable technologies but also new methods of collecting and sorting waste.

## WATER QUALITY IS VITAL

Preserving water quality is a duty that the company has long respected. In each industrial plant, the use of water and the nature of the effluent produced are subject to close scrutiny. In addition, each plant uses a biological treatment process that is appropriate to the



Production residue, worn or damaged parts, car shells - a car produces many waste products throughout its lifecycle. Wreck are recycled at the industrial site of Saint-Pierre-de-Chandieu. specific type of effluent it generates. For example, the Rennes-La Janais production centre in Britanny employs a complex and highly efficient purification principle that comprises three phases: recycling wherever possible, pre-treatment at different stages of the production process and final biological treatment in a special filtration unit. With a capacity of 800 cubic meters per day - sufficient for a town of 30,000 people — the filtration plant discharges water containing just 2 - 5 milligrams of suspended solids per litre. The legal limit is 30 mg/litre. The quality of the filtered water is monitored every ten minutes.

## FRENCH CAR MANUFACTURERS INVESTING IN RECYCLING

In the Paris suburb of Athis-Mons, PSA Peugeot-Citroën and Renault are working jointly to design the first industrial recycling centre built by the national scrap metal company. To ensure the best possible reuse of car-crushing waste. each of the three manufacturers have already performed pilot tests and started up experimental sites. Today they have decided to pool the results of their experiments in order to finalise a process of industrial recycling capable of processing 200 vehicles a day (instead of the currennt figure of 16). To optimise the benefits of their association, the manufacturers decided to build on their initiative of cooperation at the Athis-Mons centre by sharing the design of all the necessary concepts, and

together to produce a waste collection programme based on their existing marketing networks.

All of these operations could then be progressively made available to other European manufacturers.



## **75%** RECYCLED

In France, breakers' yards handle more than 2 million written-off vehicles a year. It is possible to recycle 75% of a car containing 600 kg of sheet metal and cast iron and 80 kg of other metals. The remainder — plastics, glass, rubber, foam, paint, etc. - is not recycled at present. After the wrecks have been crushed, the remaining materials are sent to landfill — the equivalent of some 280,000 tonnes of waste. This may appear paltry compared with the 1.8m tonnes of household refuse and 28m tonnes of industrial waste that are sent to landfill every year in France. However, rubbish dumps everywhere are now saturated and tight restrictions prevent the opening of new ones. Industry therefore faces an economic and ecological challenge, to which carmakers are determined to rise.

## ZERO WASTE

To limit the quantity of residue produced by automobile crushers, PSA Peugeot Citroën is studying the feasibility of a new concept: "zero waste". This is based on intensive recycling of principal vehicle components as well the treatment and re-use of metal resi-



due. Together with its partners — Compagnie Française des Ferrailles, Ciments Vicat, Usinor-Sacilor, the component maker ECIA, the chemicals firm DSM and Saint-Gobain the group has developed a pilot instal-

## 700 BUMPERS PER HOUR

The plastic parts collected by the Citroën and Peugeot sales networks have so far been sent to landfill. This is the case for car bumpers, which account for 80% of the plastic parts gathered by dealers and agents. To reinforce its "zero waste" policy, the group has struck an agreement with a company specialized in recycling industrial waste. The agreement covers the design of a lorry-mounted transporter/crusher for car bumpers. The vehicle is a 38tonne half-trailer fitted with a crusher and three conveyor belts. It can crush 700 bumpers per hour and transport more than 1,000.

lation at Saint-Pierre-de-Chandieu near Lyon. Inaugurated in June 1991, this pre-production applications facility — the only one of its kind in Europe — can process 120,000 car wrecks each year. Currently in the experimental phase, it is handling 7,200 vehicles annually collected from the Citroën and Peugeot sales network. The process involves three stages: re-usable items are removed, the body is shredded in a crusher and as much as possible of the resulting metal residue is recovered.

## A "CLEAN" WRECK EVERY 30 MINUTES

Written-off cars first enter a disassembly shop. After the oil has been drained off and the battery removed, a careful diagnostic check is run. Parts that are as-new or renovated are channeled to the second-hand market: engines, gearboxes, alternators and starter motors as well as certain plastic and glass components. All the parts can either be used in their present condition or recycled for raw materials. Each vehicle spends about one hour in the shop. Disassembling a wreck takes thirty minutes.

## TO ROAD YOU SHALL RETURN...

Once it has been stripped of all its reusable parts, the wreck is shredded by the largest automobile crusher in Europe. In less than one minute, the vehicle is reduced to a lump of scrap metal the size of a human hand. Scrap is discharged through a screen and sorted into ferrous and nonferrous metals. Ferrous metals are dispatched for recycling in the steel industry while the nonferrous content undergoes further processing before being sold for use in foundries.

Residue is processed by a special unit into raw material for energy production. Ciments Vicat and Compagnie Française des Ferrailles have developed a process that makes it possible to increase substantially the rate of re-use





Saint-Pierre-de-Chandieu is one of the largest industrial centres for car wreck processing in Europe. To complement the "zero-waste" policy, a transporter/crusher vehicle collects damaged or old blumpers from the Citroën dealer network.

of automotive scrap. The process is based on incremental phases of separation and sorting using the principles of induction, magnetism, antimagnetism and screening. Residue is converted into pellets, which can either be used as fuel for cement kilns or as raw materials in the building and public works industry (asphalt, insulating materials, waterproofing, etc.)

## CITROËN ZX AND THE RECYCLABLE CAR

The Citroën ZX is composed of 75% metal, 13% glass, rubber and paint, and 12% plastics.

Metals are simple to deal with: they can be retrieved and used again in the production cycle. Seventy-five per cent of the plastic parts are thermoset: bumpers, dashboards, side trim, etc. These parts are recycled by means of fusion and are used for other purposes.



## FULLY RECYCLABLE CARS

The long-term challenge is even greater: to reach a rate of recyclability of virtually 100%.

Under European projects developed jointly with other industrial firms, PSA Peugeot Citroën is working on the design of a fully recyclable vehicle. Thanks to the research carried out for the *Carmat* and *Recap* programmes, Citroën was able to design the ZX using re-usable materials that are easy to recycle and have been treated to prevent pollution (box).



## ST PARIS-MOSCOW-BEIJING, CITROEN ZX RALLYE RAID 1ST

RECHERCHE



More than half a century after the pathbreaking Croisière Jaune, Citroën continues its special relationship with China, with the first-ever Paris-Moscow-Beijing rally. Citroën's teams drove their ZX Rallye Raids along a 16,000-km route, crossing a dozen countries and several provinces of China, to the capital of the Middle Kingdom.

wo reconnaissance teams set out in September and October 1989 after agreements had been signed at the highest levels between the organizer of the rally, Maps, and the Chinese and Soviet authorities. The race director, René Metge, led a convoy of five Land Rovers and an 8X8 van on a mission to map the route. Gradually, the first drafts of the road book took shape, the organizational structure fell into place and the radio and TV transmission tests finally proved successful. The overwhelming enthusiasm generated by the Paris-Moscow-Beijing was contagious, and the then head of the international motorsports federation, Mr Balestre, gave his total support.

Meanwhile, the men in the field were making headway. On the border between China and what was to become the CIS, the military authorities of both countries posed together for a souvenir photograph. Said René Metge, "For one minute, the officials of the two countries, stationed as they were in such a highly sensitive spot, were reluctant to pose together. By crossing over to the other side, they were doing more than just breaching regulations - they were violating the other's territory. But in the end, the sporting instinct prevailed." The Paris-Moscow-Beijing rally had just opened up another horizon, forging a new relationship between nations. After a final recce, the route was reduced to 16,000 kilometers and the definitive road book was ready. The rally was set to go.

## **GETTING UNDERWAY**

Citroën's Competition team quickly got down to work. The stakes were high. The marque wanted to repeat in 1992 the success of the Croisière Jaune sixty years earlier and to don again the victor's laurels thanks to the performance of its latest model, the Citroën ZX. Guy Fréquelin and his team spent month after hectic month testing and preparing the cars. With surgical accuracy, the mechanics laboured night and day in the workshops of Citroën Sport, searching out

the slightest malfunction and making hundreds of pinpoint adjustments to the five cars. The weeks flew by as the team strove for perfection. Meanwhile, the drivers were hovering in the wings. Pierre Lartigue, Björn Waldegard, Hubert Auriol, Timo Salonen and Alain Ambrosino followed the cars' progress attentively. Relying on the experience gained in earlier rally expeditions, they test-drove the cars, gave advice... and then tested them again. Gradually, the team gelled. As the starting date approached, the pressure mounted. All eyes were glued to the calendar. On 1 September 1992, in the shadow of the Eiffel Tower, five Citroën ZX Rallye Raids, two P4s for fast assistance, two 4X4s from Georges Groine's team, in charge of en route assistance and five 6X6 breakdown lorries revved up for the start. And so did the Mitsubishis. At the initial events — the prologue — at the Alencon circuit on 31 August, the Citroën ZXs had taken the first four places, so they had the honour of kicking off the first-ever Paris-Moscow-Beijing.

## The Journey of a lifetime

A sixteen thousand kilometer route, starting via France, Belgium, Germany and Poland, lay ahead of the competitors. On their way to the Chinese capital, they would also cross six new countries: Byelorussia, Kazakhstan, Turkmenistan, Uzbekistan and Kirghizya. And just a few kilometers further on, the start of the legendary Silk Road. The competitors crossed the Xinjiang region of China into Gansu and ran down the historic trade route, which originally linked China and the west. The Chinese have always had a keen interest in controlling this narrow corridor. The route leads to the Great Wall, which once marked out the limits of the Middle Kingdom, the frontier between civilization and barbary.

To reach the autonomous region of Ningxia — home of the Hui minority — in northwestern China, the competitors had to cross the sandy wastes of the Gobi desert — the "waterless place" in Mongolian.

H

Yinchuan, the capital of Ningxia and one of the stages of the rally, dominates a stark, granite landscape. As the rally moved towards Hohhot, capital of Inner Mongolia and the penultimate stage before Beijing, the competitors followed the meanders of the Yellow River. In terms of size, the Inner Mongolia Autonomous Region is the thirdlargest province of China, and the Gobi desert stretches the length and breadth of this wild, far-flung region. Leaving Hohhot, the rally followed the Great Wall for 46 kilometers to reach Hubei province. Hubei's capital, Wuhan, known as the "green city", lies halfway between Beijing and Shanghai. Finally, on 27 September 1992, Beijing — China's showcase and historical treasure - made history yet again when it became the symbol of automotive adventure.

## BACKGROUND TO THE RALLY

• **30** August 1992: Citroën takes the first four places in the prologue to the first Paris-Moscow-Beijing rally, held at the tortuous, three-kilometer Alençon circuit.

• 1 September 1992: The rally leaves from the Place du Trocadéro in Paris.

• **3 September 1992:** Alain Ambrosino wins the prologue at Warsaw.

• 4 September 1992: Connecting stage to Moscow.

• 5 September 1992: 1st stage: Moscow-Tambov (600 kms including a 130.5-km selection section): Citroën takes the first three places in both sections.

### FINAL TABLE

*Ist* - Lartigue-Perin Citroën ZX Rallye Raid 34:49'14 • 2nd -Weber-Hiemer Mitsubishi Pajero 1:08'44 • 3rd - Saby-Serieys Mitsubishi Pajero 1:24'49 • 4th -Shinozuka-Magne Mitsubishi Pajero 1:43'133 • 5th - Auriol-Monnet Citroën ZX Rallye Raid 4:29'46 • 6th - Waldegard-Gallagher Citroën ZX Rallye Raid 8:10'08 • 7th - Ambrosino-Guehennec Citroën ZX Rallye Raid 10:07'03.

## **CITROËN AND CHINA**

*Citroën has enjoyed a prolonged love-affair with China. The marque's lively interest in the Middle Kingdom has not flagged since the 1930s.* 

It all began in 1931, when André Citroën organized an expedition to central Asia. Seven centuries after Marco Polo, a group of forty people set out to retrace the Silk Road, covering the 12,000 kms to Peking (as it was then) in 14 half-tracks. Baptized the "Croisière Jaune", the rally was in keeping with the pioneering spirit of the golden age of the motor car. The purpose was to demonstrate that Citroën cars could withstand any punishment the road could mete out. On 12 February 1932, the world learned that the expedition had reached its goal.

Fifty years later, in 1986, the marque chose China as the setting for the AX launch campaign. In association with the China Council for the Promotion of International Trade, Citroën chose the Great Wall as the backdrop for its advertising film.

The now-famous Operation Dragon put the finishing touches to the campaign: 140 young Europeans spent an entire summer on the highways and byways of China in a hundred-strong fleet of AXs.

But the sixty-year relationship really reached a climax in April 1992, when the Citroën Dongfeng Automobile Company opened for business. A joint-venture agreement had been signed in 1990 by Chen Qingtai, now chairman of the company, and Citroën Chairman Jacques Calvet. With shareholders' funds of FF1.33bn, the new company

will produce Citroën ZXs in a vast industrial plant at Wuhan, capital of Hubei province, and at Xianfan. The agreement draws Citroën's bonds with China even tighter.

• 6 September 1992: 2nd stage: Tambov-Saratov (610 kms including a timed 168-km section). Citroën produces another triple-header.

• 7 September 1992: 3rd stage, Saratov-Uralsk (610 kms, of which 423 kms of selection). Two Citroën ZX Rallye Raids lead in the overall rankings.

• 8 September 1992: 4th stage, Uralsk-Kenkiyak (697 kms, of which 542 kms of selection) Bruno Saby storms to victory in his Mitsubishi, while our teams are held up by a run of bad luck (the cars developed mechanical problems and Timo Salo-



nen was forced to retired). Nonetheless, Pierre Lartigue still hangs on to first place in the overall rankings.

• 9 September 1992: 5th stage, Kenkiyak-Beynuy (471 kms against the clock). Pierre Lartigue loses 3 mins and his overall first place to Bruno Saby.

• 10 September 1992: 6th stage, Beynuy-Novy-Uzen (383 kms against the clock). Three Citroën ZX Rallye Raids



are among the first four cars in the overall rankings.

• **11 September 1992:** 7th stage, Novy-Uzen-Nebit-Dag (739 kms, of which 669 kms against the clock). Pierre Lartigue is back in overall first place.

• 12 September 1992: 8th stage, Nebit-Dag-Darwaza (562 kms, of which 528 kms against the clock). The Karakum — Black Desert — brings more bad luck for our teams. Bruno Saby in his Mitsubishi wins back his first place ranking.

• 13 September 1992: 9th stage, Darwaza-Bukhara (686 kms, of which 486 kms against the clock). The Pierre Lartigue-Michel Perin duo win back 14 mins from Bruno Saby in his Mitsubishi Pajero. Saby is now just 2 mins 59 secs ahead in the rankings.

• **14 September 1992:** 10th stage, Bukhara-Chimkent (726 kms of which 397 kms against the clock). Pierre Lartigue racks up his second consecutive win and moves back to the top of the table.

• **15 September 1992:** 11th stage, Chimkent-Bishkek (754 kms, of which 456 against the clock). Third straight win for Pierre Lartigue, who widens the gap at the top of the table.

• **18 September 1992:** 12th stage, Kashi-Aksu (527 kms, of which 296 kms against the clock). Double victory for Citroën (Waldegard-Auriol). Strange and exciting: Moscow and Red Square greet modern-day adventurers; a picturesque customs post marks the entry of the Citroën ZX Rallye Raid into China. Jiayuguan-Wuwei (520 kms, of which 203 kms against the clock). Pierre Lartigue is still out in front!

• 24 September 1992: 18th stage, Wuwei-Yinchuan (645 kms, of which 360 kms against the clock). By dominating the race, Pierre Lartigue conserves his overall lead.

• 25 September 1992: 19th stage, Yinchuan-Hohhot (724 kms, of which 414 kms against the clock). Victory for Björn Wildegard. Citroën wins its 10th stage.

• **26 September 1992:** 20th stage, Hohhot-Badaling (618 kms, of which 40 kms against the clock). Pierre Lartigue is still ahead on the eve of the arrival in Beijing.

• 27 September 1992: Badaling-Bei-



• **19 September 1992:** 13th stage, Aksu-Korla (685 kms, of which 159 kms against the clock). Pierre Lartigue consolidates his lead.

• 20 September 1992: 14th stage, Korla-Shanshan (661 kms, of which 395 kms against the clock). Pierre Lartigue retains the overall leadership.

• **21 September 1992:** 15th stage, Shanshan-Hami (418 kms, of which 317 kms against the clock). Pierre Lartigue extends his lead.

• **22 September 1992:** 16th stage, Hami-Jiayuguan (757 kms, of which 545 kms against the clock). Pierre Lartigue is still the overall leader.

• 23 September 1992: 17th stage,

jing. The last leg of the first-ever Paris-Moscow-Beijing rally is a connecting stage of 70 kms. The Citroën ZX Rallye Raid driven by Pierre Lartigue and Michel Perin is the first to cross the line.

Pierre Lartigue and Michel Perin demonstrated that in a marathon rally — 27 days and 16,054 kms, including more than 7,000 against the clock — Citroën could not only take on the Mitsubishis — and any other Japanese contender — on equal terms but also outrace them. The victory belongs to Citroën Sport and the ZX Rallye Raid. But it also belongs to a single-minded, gutsy driver and his skilful navigator.

## ENTRETIEN

## CLAUDE SATINET, DIRECTOR OF SALES & MARKETING, EUROPE N THE SIDE OF THE CONSUMER



**D**ouble Chevron: What is your impression of Europe at the moment?

**Claude Satinet.** I don't have a feeling of uniformity. You see, the more you get to know differ-ent countries and the people who live there, the more you are attuned to their differences and similarities.

Although Europe shares a handful of common values — a certain degree of well-being, peace and unity in the eyes of the rest of the world — it is nonetheless riven with deep

economic and cultural faultlines. People are hesitating between a Europe composed of regions, which is closer to the particularism of its peoples, and a Europe of nation-states.

## D.C.: What are the key trends in motor vehicle distribution in Europe?

**C.S.:** The most salient feature at the present time is what you could call "selective distribution". In other words, carmakers are allowed to build networks of dealers that have the exclusive right to sell cars within a certain geographical area. The notion that a dealer can stake out his own territory is fundamental to the building of a network. It is an exception to the rule of unre-stricted competition that applies to all other products and will remain valid until 1995.

## D.C.: Is this distribution system being threatened?

**C.S.:** I think the major talking point of the next few years will be whether or not the regula-

In the light of France's ratification of the Maastricht **Treaty on** European Union **Claude Satinet** shares some interesting insights into the business of selling cars and into Citroën's marketing strategy for Europe.



tions on selective distribution will be renewed. It is vital for this system to be retained, as it guarantees the consumer a reliable after-sales network. This is what justified the existence of this dispensatory ruling in the first place. It is very important for consumers to feel safe in the knowledge that they can rely on a maintenance network, especially when you consider that buying a new car is a major investment. It is for this vital reason that selective distribution must be retained, to ensure the smooth operation of networks and to best preserve the interests of the consumer.

## D.C.: Is this system under threat?

C.S.: What we may see is a relentless build-up of Japanese carmakers in Europe.

The Japanese want to control distribution themselves inside each country, which is only logical when you consider how their sales are growing. They prefer to set up subsidiaries rather than work with importers. This means that each marque has a policy for all European countries and does not need to rely on an importer. Importers may have vested interests or work with several



carmakers; as a result, they may be reluctant to fall in line with the policy of a particular marque. Look at Nissan, for example, which has bought up

needs of each country, the image is kept consistent



its importers in France and the UK.

D.C.: What is the commercial impact of Citroën's involvement in rallies, particularly the Paris-Moscow-Beijing Raid?

C.S.: A carmaker involved in motorsports obviously has a younger, more sporty and adventurous image than its rivals. So Citroën's decision to return to top-level competition was extremely important. The ZX Rallye Raid's victory in the Paris-Cape Town event — even before the ZX had been launch-ed on the market — had a very positive impact. The car's name and look were familiar to the public even before the car was commercially available. Reputation depends heavily on media coverage of an event. So from a commercial standpoint, it's important to win races that have a high media profile. Such was the case of the Paris-Moscow-

D.C.: How do you organize the launch of new vehicles in Europe? Do you have a standard sales pitch? Do you make allowances for national

C.S.: We do try and achieve a standard sales rationale and keep the vehicle's image consistent throughout Europe. We also try and rein in the cost



of new advertising. That being said, we also try to adapt the product as effectively as possible to local conditions. So, a slogan that is clever and melodic in one language may sound awkward or rude in translation. Consequently, we try and transpose advertising copy rather than translate it. That's the first point. In terms of the launch itself, there is precious little variation: for example, we offered a three-door version for the Citroën ZX. But once the initial phase is over, we have to take first impressions into account, see how the competition reacts in each market and adjust our campaign accordingly. Broadly speaking, the longer a vehicle's lifespan, the greater the need to adapt it to local demands. That's the second point. Lastly, taking local needs into account when devising communication policy depends on the segment that you are dealing with. For example, custo-

A natural relationship between the Citroën ZX Coupe and the Citroën ZX Rallye Raid.



mer expectations in the top-ofthe-rage segment are virtually identical throughout Europe whereas, further down market, the differences are much more pronounced.

## PROFILE

Claude Satinet is a graduate of the prestigious Ecole Polytechnique and of the French National Telecommunications

> College. He joined Citroën at the age of 29 and went on to pursue a highly varied and rewarding career. He is now Director of Sales & Marketing for Europe.

> 1973: Joined Citroën's information technology department

> 1979: Placed in charge of industrial expenditure and plant management

1981: Appointed head of financial control for Citroën and its subsidiaries

1984: Appointed by the management board to improve relations between sales and manufacturing units, with particular emphasis on forecasting

1986: Managing Director of Citroën Spain

1990: Director of Exports, Europe

1992: Sales & Marketing Director for Europe since 1 February



Located in Galicia in north-west Spain, the Vigo plant produces Citroën AXs, 5-door ZXs and all 3-door ZX versions, not forgetting the C15 van.

Particularly well-suited to the Spanish market, the Citroën ZX ranks high in national sales figures.

## HE SPANISH NARKET

Has Spain become the new Eldorado for foreign carmakers? Seven of them, including Citroën and Nissan, have recently opened plants in Spain, making the country the world's fifth-largest producer of motor vehicles.



he Spanish market has enormous growth potential. Car ownership in Spain is still just 325 per 1,000 inhabitants compared with a European average of 420, while the average age of the cars on the road is the highest in Europe: 34% of the country's 12 million vehicles are over ten years old. Through its subsidiary Citroën Hispania (Cithispa), the marque has been

present in Spain for more than sixty years and is the country's third-largest carmaker, behind Renault and Ford.

## CARMAKER'S KINGDOM

With more than two million vehicles produced last year, Spain has become a fully-fledged carmaking centre. It boasts the highest concentration of foreign vehicle manufacturers in Europe: in addition to the three French marques (Peugeot, Citroën and Renault), the Americans are represented by General Motors and Ford and the Germans by Mercedes-Benz, which builds its goods vehicles in Spain, and the Volkswagen subsidiary Seat. Industrial vehicle manufacturers include Renault Véhicules Industriels and Iveco, a unit of Fiat. The Japanese marques Suzuki and Nissan have chosen Spain for the production of their off-road vehicles. Thanks to this high concentration of foreign manufacturers, Spain became Europe's third-largest carmaking country in 1991, behind Italy and the UK. Furthermore, importers such as Fiat and Rover, which have well established networks, took advantage of the continual decline of customs duties (40% in 1985 to 3.5%) in order to expand. Meanwhile, imports of Japanese passenger cars are increasing, primarily as a result of new "screwdriver" plants. Starting from scratch, Japanese marques now have 3% of

## TENDANCES

Spain's motor industry when he set up a commercial enterprise in Madrid in 1925. Today, Citroën Hispania which includes the commercial unit and the Vigo production plant — is the largest Citroën subsidiary outside France. The Vigo factory, located in the Autonomous Region of Galicia, produces Citroën AX and ZX saloons as well as the C15 van. Half of the passenger cars built at Vigo are exported to neighbouring countries, while the C15 is shipped all over the world. A fully integrated part of Citroën's production resources, Vigo is a final assembly plant, just like the ones at Aulnay and Rennes. Manned by a staff of 7,000 and equipped with state-of-the-art technologies, the plant can produce 1,100 units per day. Vigo accounts for 25% of Citroën's total worldwide output. In Spain, the vehicles are sold through 1,300 sales outlets (branches, dealerships and agents), strategically located throughout the country. With a remit to conquer market share, this powerful salesforce is helping Citroën gain ground in this highly promising market.

**CITROEN HISPANIA** 

André Citroën proved himself a pioneering figure in



the market. The Spanish car market is acutely sensitive to the economic situation. After a period of spectacular growth between 1985 and 1990, when the market doubled in size, the country is now in the grip of a crisis that began two years ago. However, car sales in Spain rebounded sharply in 1992. According to figures released by the Spanish National Association of Motor Vehicle Manufacturers (ANFA), registrations increased by 21% during the first half of 1992 compared with the same period last year. The upturn was helped by a cut in VAT, which was reduced from 33% to 28% on 1 January 1992, as well as by the general mood of optimism created by the international events hosted by Spain this year: the Universal Exposition in Seville, the Olympic Games in Barcelona, Madrid's stint as

The hightechnology Vigo plant is one of the biggest in Spain. European cultural capital and the 500th anniversary of Columbus's discovery of the New World.

## SPAIN LOVES THE CITROËN ZX

The Spanish carbuyer is a demanding creature who places a premium on innovation. He or she is principally attracted by the look of the car as well as by its accessories, level of finish and performance. Competitive pressure in the Spanish market is among the strongest in Europe. So in order to respond to the specific demands of Spanish carbuyers, Cithispa adopted a

## CARMAKERS

The motor industry in Spain accounts for 12% of total employment, 5% of GDP and more than 20% of total exports. The roster of carmakers reads as follows: Citroën Hispania S.A.: based in Vigo (AX, ZX, C15) Peugeot Talbot España S.A.: Madrid (205, Fasa-Renault: Seville (gearboxes): Valladolid (Clio, Express); Palencia (R19) R.V.I. S.A.: Madrid (lorries and coaches) GM España: Saragossa (Opel: Corsa, Astra) Seat S.A.: Barcelona (Marbella, Ibiza, Toledo); Pamplo-na (VW Polo); Martorell (Ibiza from January 1993) Ford España: Valencia (Fiesta, Escort, Orion) Iveco: Madrid (Pegaso and Iveco lorries) Mercedes-Benz España: Vit-

toria (MB100 D vans); Barcelona (engines, gearboxes, etc.) Santana: Linares (Vitara,

Suzuki Samurai)

marketing strategy based on a carefully concocted product mix. The principle is straightforward: to launch models that are specifically tailored to the market and its constraints. For example, air conditioning is now more or less standard on all the



vehicles sold in Spain. Similarly, subcompact and midrange models, which make up 80% of the market, are more attractive when they offer levels of performance and equipment on a par with top-of-the-range cars. So although the marque does not sell the



Citroën AX 10 in Spain, the AX 14 and AX GT rack up strong sales. This is also true for the Citroën ZX. Launched SPAIN\* Capital: Madrid (pop. 3,200,000) Population: 39,240,000 Area: 504,782 sq km Population density: 77 inhabitants per sq km Languages: Spanish, Catalan, Basque Form of government: parliamentary monarchy \* 1991 data.

in May 1991 and partly built in the Vigo plant in Galicia, Citroën's latest offering has enjoyed a remarkable success. The ZX has attracted a host of accolades, including Car of the Year 1992, Popular Car of the Year and the Golden Trophy. Customers, too, have flocked to buy the ZX, making it the number-two seller in the Spanish market. As a result, the marque posted a remarkable 81% first-quarter increase in 1992 sales compared with the same period in 1991. With nearly 12% of the market, Citroën is gradually gaining on the market leaders, Renault and Ford.

INNOVATION

## **N**EW PROTOTYPE PART PRODUCTION FACILITY

M3P is the name of Citroën's new, space-saving plant for the production of prototype parts. The facility, which replaces the Meudon flexible workshop, is proving that greater productivity can cut lead-times in half.



**B** ack in June 1983, Citroën inaugurated one of the world's first automated, flexible workshops at its Meudon plant just outside Paris. Designed to reduce



lead-times for prototype part production for the marque's engines, the facility slashed machining times from 60 to 35 days and achieved a "synthetic output" (\*) of 69%. Now, under the combined pressures of fiercer competition, diversification and rapid product turnover, Citroën has come up with a new and even more efficient plant.

## PROTOTYPES IN 20 DAYS

The marque set itself a new goal: to produce all the parts for a prototype drivetrain assembly (cylinder head, power unit, gearbox and axle casings) in 20 days instead of 35 and achieve a synthetic output of 82%. Four basic requirements were taken into consideration:

• to integrate all tools and machinery into the organization of the shop;

• to make production machinery totally flexible;

• to operate on a just-in-time basis;

• to increase the productivity of the flexible module.

Opened in September 1991, the plant — known as M3P required an investment of FF12.5m (FF6.5m for plant and equipment and FF6m for information systems). Some of the equipment from the former plant was re-used.

The new facility, which can pro-

duce parts for all types of engines (petrol and diesel), is extremely compact. The palette store and central toolshop are integrated into the two machining centres; production flows have been optimized and space savings in excess of 60% have been achieved.

## Advanced Technology

The high-capacity plant is composed of a flexible module (the old flexible workshop) and a section that houses the finishing equipment suite.

The flexible module covers 420 sq m and has five significant features:

• A preparation area (where parts are flanged and washed);

• Two machining centres outfitted with five-spindle milling machines with an integrated tool magazine that perform the full range of rough machining and finishing operations. Parts are cut from 750mm cubes with an accuracy of 2.5 hundreths of a millimetre;

• A tool crib which dispatches tools to the different parts of the module. Equipped with 336



Rapid, flexible and compact, M3P produce in just 20 days all the parts of a prototype drivetrain: cylinder head, power unit, gearbox and axle casings.

and three tool reception ports.

• A palettized storage unit that moves workpieces around the module. The 46-receptacle unit was designed along the lines of a reach-stacker and serves an elevated toolstore, two machining centres and three part-reception ports.

• A three-dimensional measuring machine that inspects the parts after machining.



slots, the crib is a numerically controlled twin-axis linear robot that moves between a fixed storage wall, two machining centres

## CENTRAL CONTROL SYSTEM

The entire facility is controlled by a computer system that manages all these resources in real time. This has been made possible by the formidable number-crunching power of newgeneration minicomputers. As well as managing data, workpieces and tools, the customized software application interfaces with other information systems, controls the operation of the flexible module, and directs just-in-time supply of parts to the workstations. The computer system relies on three separate networks that share the messaging function (production orders, machine programming) as well as two application oriented packages.

The finishing suite, which is located in the same facility, is composed of numerical control machines, a pre-setting centre for tools and palettes and an area for fitting work. The central control system ensures JIT management of the suite, and the equipment is operated by specially trained personnel.

MP3 is run by a team of thirty people.

To optimize production, the

work cycle of each operative is tailored according to the type of job he performs. For example, the six skilled workers who monitor the flexible module operate in three 8-hour shifts, as do the three workers in the machining centre. The other staffmembers are present for shorter periods (two 8-hour shifts or an eight-hour day). The personnel responsible for supervision, maintenance and control also perform other tasks. Thanks to its pace-setting performance, the new facility has been instrumental in reducing lead-times for the design and production of future PSA Peugeot Citroën models from five years to four.

(\*) Ratio of actual output to maximum theoretical production



## EVENEMENT SLAND SHOWCASE FC Technical prowess and human achievement are being honoured

Technical prowess and human achievement are being honoure private firms — including Citroën — are taking part in Expo '9'



## **R 500 YEARS OF DISCOVERY**

in Seville. For six months, 110 countries, 23 international bodies and numerous. Double Chevron paid a visit. PLEINS PHARES

he Seville Universal Exposition is the sum of all our hopes. A showcase of human achievement, Expo '92 is also a promise. It shows us the ground we have covered so far and is a beacon for the way ahead. Past and present are inextricably linked here in Seville. Each explains the other; both are dialectically and positively interactive. With these words, King Juan Carlos I of Spain inaugurated the last universal exposition of the century on 20 April 1992.



back to life. The Explorers' Way leads naturally into Future Place. The visitor walks through the 100-ft high pink granite archway into tomorrow's world. Four themed pavilions — Environment, Telecommunications, the Universe and Energy — blend naturally into the futuristic landscape. Citroën has chosen the Energy pavilion to display its electric town car, the Citela, as well as the high-tech methods used to produce it (box).

A CITY BEYOND TIME

The Expo '92 site is located on Cartuja

Island, originally a deserted, 1,200-

acre spit of land in the middle of the

The Citroën exhibit was in the Energy pavilion. 40 million visitors were able to explore the different sources of energy needed to produce a Citroën ZX. Citela, the small, electric town-vehicle of the future, created quite a stir.



Guadalquivir River. It is here that Christopher Columbus would come to recount the story of his voyages to the monks of the Santa Maria de las Cuevas monastery. Steeped in history, the island has now been extensively developed to house the exposition. The inhabitants of Seville woke one morning to find that a temporary city — a city beyond time — had sprung up on the island, the work of nearly six hundred architects of different nationalities. But the most spectacular feature



## TIME KNOWS NO FRONTIERS

Taking as its theme discovery in all fields of human endeavour, from Columbus to the present day, Expo '92 invites the visitor to take the "Explorers' Way". Different themed pavilions line the road like so many milestones - Art and Culture Circa 1492; the XVth Century; Navigation, Nature and Discovery; and many others. From the US space shuttle "Discovery", the time-traveller can look down on a seaport somewhere in the Indies, where replicas of the caravels Santa Maria, Niña, Pinta and Victoria are riding at anchor. Here, the past meets the present, and shades of Christopher Columbus and Ferdinand Magellan come



## **CITROËN IN SEVILLE**

Without energy, life on earth is impossible. The main purpose of the



exhibits in the Energy Pavilion was to illustrate the close relationship between standards of living and the use of energy. Greeted at the entrance by a flight of multi-coloured hot air balloons, a homage to the Montgolfier brothers, visitors went on to explore the different ways in which energy is used in industrial countries (food processing, transport, car production, etc.). To illustrate applications in the motor industry, Citroën His-

pania showed off its high-tech manufacturing methods. The display consisted of a welding robot at work on the body of a Citroën ZX, a chassis fitted with the engine-gearbox assembly, the front and rear axle units and a finished vehicle with a robot in action. A video presentation showed the various methods used by Citroën Hispania in order to illustrate the optimum use of energy during the manufacturing process. "Clean" energy was also taken into account: the marque displayed Citela (see Double Chevron No. 1), Citroën's allelectric town car, designed to improve the relationship between cars and cities. of the exhibition is the way the organisers have managed to control the climatic conditions. Water is omnipresent to protect visitors from the heat - in the form of fine sprays, fountains, micro-droplets released by bioclimatic spheres, walls of water, waterfalls. Water, water everywhere! On Europe Avenue, twelve water towers - ninety feet tall and weighing 15 tonnes form part of a humidification system that sprays a fine mist of water over the entire exhibition site. In addition, artificial terraces have been laid out in such a way as to create over half a million square feet of shade.

## TECHNICAL SKILL AND EMOTIONAL APPEAL

Ninety-five pavilions — some utilitarian and some symbolic in design have been erected on the 160-acre site. Made of wood, metal, glass or marble, each building asserts a national or regional identity (each of Spain's 17 Autonomous Communities has its own pavilion). Some are showcases of technical prowess. The French pavilion, for example, is composed of a vast open space made of glass slabs surmounted by a blue roof weighing 400 tonnes: this 595 sq yd "sky" rests on the tips of four stainless-steel pencil shaped columns some fifty feet high. Inside, visitors can retrace the "Odyssey of Knowledge" down five centuries of discovery. From a 40ft-deep well of light, images of space travel are beamed into infinity. The most exciting pavilions in Seville are those that combine technical skill and emotional appeal. For the design of its pavilion, India drew its inspiration from the country's traditional symbol, the peacock. Japan's offering was a typical blend of the old and the new; nearly seventy-five feet high, it is one of the largest wooden constructions ever built. Morocco's talented craftsmen produced an architectural masterpiece: a reproduction of a palace in Marrakech. Mexico chose two gargantuan X-shaped buildings to recall that the country is a blend of two major cultures.

The last universal exposition of the century closes its doors on 12 October 1992, the anniversary of Christopher Columbus's discovery of America. For six months, a total of over 18 million visitors from Spain, the rest of Europe, the Americas and Asia will have turned Seville into the capital of the world.



A gargantuan X for Mexico and cars called AX, ZX, BX and XM for Citroën. Bioclimatic spheres release ten thousand litres of water per hour in micro-droplets to humidify the air.





## EXPO'92 IN FIGURES

FF45.6bn of infrastructure expenditure;
Participants from 111 countries, 17 Autonomous Communities and 22 international organizations;
95 pavilions laid out on a 215-hectare site;
350,000 trees and 500,000 sq. m. of parks and gardens;
Average daily number of visitors: 300,000.



A Citroën ZX was used to illustrate the different stages of a car's manufacture.









The Japanese pavilion was one of the moste remarkable wooden structures at the exposition. Chile chose to exhibit a 60-tonne iceberg. A vast array of architectural feats composed the EC pavilion, with the avenue de l'Europe lined with 12 towers, one for each EC country. METIER

## HE SELLS CITROËNS WELL ON THE SHOP FLOOR



It's more than an art or a passion. More like a vocation. Selling cars offers an excellent opportunity for strong-willed women who appreciate freedom and who are not averse to earning a good living.

bserving the performance of the women on its salesforce - some of whom were the first in the business - Citroën noticed that they were achieving remarkable results. As a result, the marque decided to encour-

age more of them to come on board.

Citroën had long dreamed of setting up a special school to train women in the subtle arts of selling motor cars. The dream came true in October 1988,

when the company opened a special training institute, the IFVA, with the support of the Fougères Chamber of Commerce in Britanny. The concept has since been adopted in Luxembourg and could rapidly catch on in other European countries.

## **PROFILES...**

A field salesperson at the Citroën branch in Villejuif, 43year-old Ingrid Bonne got into sales four years ago. "Once you know the product, there are no major difficulties. When I set my heart on selling a car to a cus-

tomer, I consider all the angles. It's a fascinating job and you learn a lot. You meet people from all walks of life. My role is

## THE GOAL

Selling new cars is the only activity that involves accepting a used product in partexchange. For that reason, the seller is a buyer at the same time.



to put myself on the same wavelength as the potential customer. That's where women are probably better than men: they make fewer psychological errors and they're more intuitive."

"There's no such thing as a bad sales sector. Since I've been at the Victor Hugo branch, I've changed sectors several times and my results have always been good. I work very hard. The daily briefing is at 8:15 AM and I rarely get home before

## THE INTAKE

The IFVA sales training institutes recruit women of around 35 who have completed their secondary education. The candidates must be available, mobile and determined.

nine in the evening! You must be well organized and able to conceptualize your work clearly. I arrange to visit everyone in my sector once every three months. I even manage to sell cars over the phone [...].

"What do I like most about the job? The freedom. That's priceless. But in fact it's probably more subjective than anything else."

Isabelle Dudilieu began selling cars two years ago. She was working in retailing at the time and wanted to become a sales representative, but she did not know how to go about it. She heard about the IFVA and decided to enrol.

"Those were the best six months of my career," she recollects. "The atmosphere was great." Today, Isabelle Dudilieu, 27, is field salesperson at the Citroën dealership in Châteaulin (Brittany). She loves the job because it brings her into contact with a wide variety of people. "I rub shoulders with company directors, labourers and farmers. A lot of people recognise me, too. I realise that when I'm driving around town. Another advantage with this job is that you can earn a good living when you're successful."

"Selling cars is as much a woman's job as a man's. If men can do it, why shouldn't we? It all comes down to organization. I think that selling cars provides women with a great opportunity. There are plenty of openings.

thing. It's true. Once you've sold the car itself, there's the warranty, the financing package and a

## 

Recruits follow a 6month course of alternating training during which they are entitled to claim unemployment benefit.

The course involves 320 hours of work experience (in three separate periods) and 620 hours in the classroom.

whole host of other things to sell. You have to be committed,



And women have a different approach to customers than men. I think that selling cars provides women with a great opportunity. There are plenty of openings. Anyway, it's a great experience. They say that if you can sell cars, you can sell anyadapt to a wide variety of people — and be patient, because you don't necessarily make a sale very day. You also have to be able to accept failure. Whatever the outcome, I try and keep on good terms with the customer. They remember that." For Andrée Gros, 46, who works at the Citroën dealership in Aubagne, cars have always been a part of her family. They have now become a passion.

"I try and build a relationship of trust with my customers. I'm not into high-pressure salesmanship. But each to his own. Or her own. You have to be fit to do this job. There are no set hours, and it's no good watching the clock if you want to get results. You have to totally available — and extremely persistent. Sometimes, you have several deals on the boil at the same time and nothing comes of them. You must be patient and not give up. When things go well, you can make a good living. The job allows me to share my happiness with those around me."

"In 1991, I sold 350 cars. The market is slack, but I still give my all. For me, the job really is a passion."

WHERE?

In France Chambre de Commerce et d'Industrie • 8, boulevard Thiers 35300 Fougères tel.: 99 44 15 74 • 18, rue Mansard 78000 Versailles tel.: (1) 39 55 00 88 • 8, rue Planas 30000 Nîmes tel.: 66 38 21 70 • 18, rue Gambetta 59613 Fourmie tel.: 27 68 00 00 • 38, boulevard de l'Ayrolle BP 145 12101 Millau tel.: 65 60 24 11

In Belgium Chambre de Commerce du Luxembourg Belge • 2 bis, place Communale 6800 Libramont tel.: 061/22 26 80 **ICHELIN INVENTS T** 

PARTENAIRE

Nord leaders in tyre Michelin today produces 3,300 different types, with weights ranging from 200 grammes to 4 tonnes. Michelin is also synonymous with road maps and tourist guides. We turn the spotlight on this century-old company.

n 1891,the Michelin brothers invented the demountable pneumatic bicycle tyre, followed in 1895 by a tyre for motor cars. The inventions flowed thick and fast: tyres for lorries and trains, wheel-rims for cars, the inner tube, the steel cord tyre, the radial tyre, the snow tyre with self-sharpening sipes, radial tyres for aeroplanes and for motor cycles — the list was endless. Today, Michelin has come up with a new breakthrough: the environment-friendly tyre.

At the beginning of the century, tyres would wear out after 170 kms. Today, a passenger car can drive for 40,000 kms on the same tyres, and some lorries can even clock up 600,000 kms.

## Tyres AND HI-TECH

To some people, a tyre may look like a boring rubber donut. In fact, tyres are highly sophisticated products with a wide range of applications: in different forms, they are fitted to vehicles as diverse as the bicycle and the aeroplane. The tyres on the Airbus, for example, bear up to 270 times their own weight at speeds of 350 km/h. Every single part of the tyre is subjected to stress and deformation forty times per second, while withstanding wild swings in temperature (from - $40^{\circ}$ C to  $+80^{\circ}$ C in the space of minutes). Tyres are high technology products that involve complex mixtures of composite materials - typically, more than 200 materials are used in a single tyre — each of which has a specific role. By combining the materials, it is possible to achieve the optimum trade-off between different and often contradictory requirements such

## **E GREEN TYRE**

as grip on dry and wet surfaces, steerability, endurance, wear resistance, comfort and safety. Since the development process involves 50,000 nonlinear equations, the most sophisticated number-crunching tools have to be used. Michelin is one of the few firms in France that is equipped with the world's most powerful computer the Cray. After the computer simulations comes the equally important physical testing phase. Michelin has

## MICHELIN THE PUBLISHER

Compelled by the firm conviction that the motor car was a means of achieving greater freedom, Michelin got into publishing as early as 1900. It is now famous throughout the world. The Michelin Red Guide and its coveted stars have become a household name with motorists and restauranteurs alike. With its road maps and travel guides, Michelin Editeur - the tyremaker's publishing arm publishes 180 different titles, which are updated on a regular basis. Constantly on the look-out for new attractions of international significance, the company recently brought out a guide to the Euro Disneyland theme park outside Paris. Michelin publishes over 64,000 maps and guides daily and sells eighteen million copies of its publications each vear.

three test centres: one at Ladoux near Clermont-Ferrand in France, one at Laurens in South Carolina (USA), and the third at Almeria in Spain. The latter is specialized in agricultural vehicles and earthmovers. Together, the three plants total 6,000 hectares of testing facilities, where real-life driving conditions on every conceivable type of terrain are recreated down to the last detail. Before being launched on the market, each new model is driven the equivalent of 25 times the earth's circumference.



MICHELIN SK



The manufacturing process also requires the use of advanced technologies. Michelin designs and produces itself a substantial proportion of the materials used in its plants. The Michelin product range is extensive, and the company's 66 plants produce some 650,000 tyres every day. In addition, it produces 50,000 wheels and 700 tonnes of steel cord daily as well as natural and synthetic rubber. Michelin provides technical assistance for the production of natural rubber and also owns 200,000 hectares of rubber trees in Brazil, Côte d'Ivoire and Nigeria.

The Citroën AX Diesel, unveiled at the Paris Motor Show, is the first European car to feature ''green tyres'' specially designed by Michelin. The MXNs, where the ''N'' stands for ''Nature'', have a road resistance of just 35 %.





"Green tyres" and longer gears mean that the Citroën AX Diesel now holds the world record for fuel consumption: 112.01 mpg, a reduction of 5 %.

## DEPLACEMENTS DIRECTION "Z"

## The "green" tyre: A technological Breakthrough

Michelin took the world by storm with its radial tyre in the 1950s. Today, the company's "green" tyre represents a new technological achievement. Available since mid 1991 in the USA, the green tyre permits carmakers to conform to America's CAFE regulations, which require them to reduce the average fuel consumption of their vehicles. For the first time in Europe, a new tyre — the MXN — offers all the advantages of the green tyre. Designed in association with Citroën's research department, the new tyre is fitted to the Citroën AX Diesel. Thanks to the MXNs and the car's longer gears, the AX now holds the world record for fuel consumption: 112.01 mpg. Based on a revolutionary technology, the MXN has the lowest road resistance of any tyre on the market — 35% less than a conventional tyre — with no loss of grip on either wet or dry surfaces. By limiting the amount of energy lost through contact with the road surface, the MXN reduces fuel consumption by 5% and thus reduces pollution from exhaust fumes.

In France, this would represent an annual saving of one billion litres of fuel — and 2.5bn fewer tonnes of carbon dioxide emissions.

A longtime partner of Citroën, Michelin enables the marque to benefit from its innovative skills. It thereby contributes not only to the victories of the ZX Rallye Raids, but also to the overall quality of new Citroën models.

## MICHELIN: KEY DATA

The world's leading producer of radial tyres, Michelin has 20% of the global market.

Sales: FF 67.6bn in 1991

Workforce: Over 130,000

66 plants worldwide: France, Europe, USA, Asia

## Daily output:

650,000 tyres 50,000 wheels, 170,000 inner tubes, over 700 tonnes of steel cord

**Present** in more than 140 countries

ASTRIDE Mano Dayak is a Tuareg. Born in Niger, he now TWO WORLDS divides his life between his two passions: helping travellers to discover the hidden treasures of the Ténéré region and living among his own people in this breathtaking part of the Sahara desert. For many years, Mano has helped to organize

trans-African rallies, notably the Paris-Dakar. **Double Chevron** spoke to him.



PASSION

## **D** ouble Chevron: What kind of people do you take into the desert?

Mano Davak: My aim, with my agency Temet (\*), is to bring people to know the western Sahara. In particular I want them to discover the Ténéré, with its stunning beauty and its people, whose way of life is becoming increasingly difficult, but who are independent, just like us Tuaregs.

I generally deal with people who are already familiar with the desert and who have a deep respect for the environment.

For many of them, who have already visited Tunisia, Morocco or Algeria, a journey through the Ténéré is the ultimate experience. Every year, thousands of environmentally aware people travel with our organization. Some of them have been coming back every year for the past decade.

## D.C.: What do they learn from their encounter with the Ténéré?

M.D.: People who discover the desert are changed for ever by the experience. Everyone embarks on an interior journey, in their own way and with their own feelings, so we deliberately limit the number of people in the group to around fifteen.

The caravan stays off the beaten tracks, away from the encampments. If the participants encounter nomads or the native population, it is by accident. Your powers of meditation must be strong because the desert accentuates every contrast, and the slightest detail is blown up out of all proportion.

For a couple of weeks, you become a prisoner of the desert. And although the sight of a blade of grass thrusting up between two



«I know I can go back to my original way of life whenever I want ... »

cess. Jacky Ickx, for example,

has financed the construction of

a dozen wells in the Aïr region,

which are of direct benefit to the

nomads. Prince Albert of

Monacco has paid for a dispen-

Second, the rally has an impor-

tant impact in media and econo-

mic terms for the Agadès

Unfortunately, some harm has

been done. In particular, prices have rocketed to extortionate

levels for just about everything.

This easy money changed people's attitudes. The idea that

you have to pay several times

the going rate for goods or ser-

vices is a western one. The Tua-

regs don't think that way. It is a

shame that attitudes have not

changed back, because ordinary

tourists or visitors who arrive

sary in Agadès.

region.

sand dunes can bring a moment of intense happiness, there are many situations that can upset people who are delicate or unprepared for the experience. D.C.: Tell us how you discovered motorsports in general and the Paris-Dakar in particular?

M.D.: I used to have a low opinion of the rallies that crossed Africa. Then I met Thierry Sabine, the instigator of the Paris-Dakar rally, in 1982. I introduced him to the Ténéré and afterwards we achieved some extraordinary things together. We would go off in search of routes and stop-overs, we would map out the trails and organize fuel and food depots. Thierry built up a network based on friendship and generosity; he fell in love with the Tuareg people and with Africa in general.

D.C.: For those taking part in

the rally, Agadès, a Tuareg town in northern Niger, has something mystical about it. Why?

M.D.: Agadès has a passionate relationship

with the rally. First because of the strong emotional links between the people who thought up this event — the first participants — and those who live



the same exorbitant prices. What is even more shocking is to find the burnt-out wreck of a vehicle lying alongside a sand dune or a pile of rubbish left

after a bivouac. It is not right to compare two worlds that are so different. We have to find new solutions. For example, why not ask a cleaning services company to sponsor the rally and follow it round from day to day? That would be excellent for the company's image.

## D.C.: Which of the two worlds do you belong to?

M.D.: My generation has had the great good fortune to live astride both civilisations. I can therefore play a privileged part in the process of radical change. The gap between life in the west and the pastoral existence of the desert will narrow. The nomadic way of life is going to become more and more difficult. Climatic changes are increasingly upsetting the once harmonious balance between the nomads

and the desert. And the authorities do not understand the problem. Last but not least, the Tuaregs are being attracted by the easier lifestyle of the towns and cities.

For someone like me, who divides his time between both worlds, things are different. I know I can go back to my original way of life whenever I want. I can go back to my loved ones, the nomadic and the settled, the educated and the unschooled. Because the desert is in my blood.

(\*) In addition to its organized tours, Temet prepared, though its Saharan agency, the on-site trials for the Citroën ZX Rallye Raid and regularly handles the logistics for films shot in the desert (such as Bertolucci's "The Sheltering Sky" and Raymond Dépardon's "La Captive du Désert"). Temet also rents all-terrain vehicles from its base in Agadès.

## PROFILE

Mano Davak was born in the Tidene wadi (in the Air mountains north of Agadès), 60 miles from the site of Niger's first dispensary. He spent his childhood in the desert, growing up in the Tuareg tradition. At the age of six, he was became eligible for compulsory schooling. He

quickly turned out to be star pupil, coming to the notice of a French schools' inspector and later earning a place at the secondary school in Agadès. After completing his military service at age 20, he was invited to the United States by



some American friends and left for Indianapolis. There, Mano Dayak discovered the city, the bustling crowds and the sea - that "desert of water". Leaving America for Paris, he continued his education, learned a trade and, later, opened his own travel agency. He named it Temet, after that magical and secretive place where the vegetation runs up to the foot of the highest and most beautiful dunes in Niger and the black escarpments of the Air mountains.

A key figure in the Paris-Dakar rally, Mano Dayak now divides his life between the desert - returning often to spend time with his family - his offices and his many friends in Paris.

In 1990, he produced a magnificent book in association with Jean-Marc Durou called "Ténéré, désert d'absolus". This was followed in 1992 by a book about his people: "Touareg, la tragédie" (published in France by Jean-Claude Lattès).

## A weekend in Baden-Baden



Located in the heart of Europe, the Black Forest is the place the Germans head for when they want to get away from it all. And Baden-Baden, its centre, is a most welcoming place to visit.

B aden-Baden is one of the world's greatest spas. A city with an international flavour, it is a favourite congress centre. Baden-Baden is located at the centre of an area stretching from the Rhine plain to the peak of Badener Höle (1,003 metres). With 61% of the land covered by forest, the region is one of the most densely wooded in Germany. Sheltered on its northern and eastern flanks by the Black Forest and to the west by the Oost valley, which opens out into the Rhine plain, Baden-Baden enjoys a pleasantly mild climate. Spring comes early and the autumns are long and sunny. To understand why the city is so famous, a bit of history is in order.

## IT ALL BEGAN 2,000 YEARS AGO ...

Baden-Baden's renown dates back to 300 BC, when the curative powers of its waters were discovered. The first baths were built and its vocation as a spa town was born, never to die. In the 19th century, Baden-Baden became the favourite spa of Europe's nobility. Two men were to change the face of the city for ever. The architect Weinbrenner gave it the stylish, elegant look we know today, while Edouard Bénazet, who became manager of

the casino in 1838, took charge of the social life. The Belle Epoque had begun. Princes and aristocrats, potentates and politicians, artists and intellectuals all flocked to Baden-Baden, sometimes for business but mostly for pleasure. To entertain the glitterati, Edouard Bénazet dreamt up the famous Iffezheim horse races, which are still the highlight of Baden-Baden social calendar.

The city soon discovered the idea of sport for pleasure. A tennis club opened in 1881 followed by a hiking association in 1884. Later came a golf course (1891) and Germany's first sporting federation for football. Baden-Baden was miraculously spared the ravages of





the second world war and in 1950 moved back into the international spotlight. A number of transformations were made — including an extension to the Kurhaus and a new convention centre — but the city lost none

A sheltered Spa and leisure town, Baden-Baden enjoys international renown. of its refined charm. In 1985, the Caracalla baths were opened.

With a population of 50,000, Baden-Baden long ago anticipated the Green movement: 75% of the metropolitan area was declared a protected zone in 1953, and underground car parks are now the rule. 1989 saw the opening of the Michael tunnel, which runs for twoand-half kilometers underneath the city and reinforces the uncanny feeling that Baden-Baden is designed for



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pedestrians only. One end of the tunnel opens onto a magnificent mountain-top road, the most scenic way of discovering the Black Forest.

## SKIERS' PARADISE

Shaped like a vast teardrop, the Black Forest is a mountain region 160 km long, divided in two by the deep Kinzig Valley. In the northern part, just 25 kms wide, narrow, deep valleys nestle at the foot of roun-

## **CITROËN IN GERMANY**

The marque's Germany subsidiary was founded nearly 65 years ago. Set up in 1928, Citroën Automobil AG is now managed by Régis Ducorroy. Citroën's network of 900 dealers covers the entire country: 700 in the western states (Länder) and 200 in the eastern Länder. The network should continue to expand quickly and by 1994 the number of dealerships is expected to reach 1,200.

The marque also has six branch offices — Cologne, Hamburg, Dortmund, Münster, Sarrebruck and Nürnberg. Others will be opened in Leipzig (1993) and Munich (1994).

Citroén's German organization also comprises four regional management centres (Cologne, Stuttgart, Nürnberg and Hamburg).

Citroën sold some 80,000 new vehicles in Germany in 1991, generating revenues of DM1.5bn and taking 2% of the market. In Cologne, the marque has a staff of six hundred. ded mountain summits covered with woods or pastureland. At the southern end, where the forest widens out to 60 kms, the mountains soar to nearly 1,500 metres. The highest mountain — the Feldberg (1,493m) — is a paradise for cross-country skiers, with hundreds of kilometers of trails.

The last glacial epoch (between 12,000 and 18,000 years ago) shaped the landscape we know today. Tiny, round lakes, formed by powerful whirlpools underneath the glaciers, are scattered in the far-flung corners of the forest and can only be discovered on foot. The best known are the Feldsee, near Feldberg, and the Mummelsee. In addition to its breathtaking scenery, the Black Forest has another precious resource in the form of hot mineral springs, which bubble up from the depths of the earth. Around Baden-Baden are a numA trip to Baden-Baden in a Citroën XM estate – the obvious choice! Ideal for those "high class" leisure activities, the Citroën XM estate combines good looks, spaciousness, safety and an enjoyable driving experience.



ber of watering places, most of whose names begin with "Bad" (bath), which are renowned for the curative properties of their thermal waters.

The Vogtsbauernhof open-air museum near Gutach has an impressive collection of typical chalets with traditional interiors. They bear witness to the culture of a region that has changed little since the 12th century, but that is now accessible by an excellent road network and via international airports such as Strasbourg, Frankfurt, Bâle and Stuttgart.

## On the side of the angels

Derisive, ironic, baroque. Subversive, demystifying, off-beat, romantic. Which of these best describes David Mach?







■ he latest exhibit by the young Scottish sculptor David Mach, currently on show at the Nikki Diana Marquardt gallery in Paris, beggars definition. The gallery's open spaces and unadorned metal structure place no limits on artistic creation. Against this stark backdrop frolics an irreverent host of angels. As they

first sculptures included large quantities of unused objects such as books, newspapers, tyres, bottles and other products of industry, piled into monumental structures that epitomise the problems of waste and excessive interest in material objects.

In keeping with his principles, Mach refuses to create

Humour, fiction and the challenging of values — such is the inspiration behind the works of David Mach, a young Scottish sculptor of international renown. Stung by Cupid's arrows, he imagined this wasterpiece: a Citroën AX borne by a flock of angels.



ascend inexorably skywards, they trail in their wake a kayak, a piano, a table, an armchair and a variety of other incongruous objects. Among them is a small car, a Citroën AX, which two angels are eyeing covetously as they dawdle on their way back to heaven. It will not be long before the car follows them. Despite the lighthearted look of the composition, the artist is actually addressing one of our society's basic problems.

David Mach was born in Scotland in 1956. After attending the Duncan of Jordanstone College of Art in Dundee and the Royal College of Art in London, he quickly earned a reputation as a result of his highly original conception of sculpture, which he wanted to make accessible to a larger audience. Having worked in factories during his student days, Mach is able to link his activity as an artist with the everyday experience of people at large.

He is keenly aware of the glut of production and consumption that is typical of western society, and his works that will endure in material form. Although they would doubtless enhance his reputation, they would be at odds with his rejection of materialism. Although none of his pieces can be considered as a product, they nonetheless depend on what the artist takes or borrows from society. And those of his sculptures that are assembled by groups of friends and put on display invite the onlooker to reflect on the aim of each piece and, ultimately, on the artist's whole philosophy. This in turn draws the public into the conspiracy.

David Mach is no ordinary sculptor. Although his world is steeped in humour, it hides a deeper purpose. His sculptures may be doomed to a fleeting existence, but they leave a lasting impression. By diverting an object from its original purpose, the artist brings it to life, focussing on what it can do rather than what it is intended to be. Angels find their significance in what they do rather than what they are. And if Mach can do wonders with angels, what can he do with the Citroën AX?



## a founding father of corporate communications

He epitomised adventure. The kind of adventure you share, the kind you experience for others. The kind you communicate and that leaves a lasting trace on our society.

urely, you cannot watch the progress of the Paris-Moscow-Beijing West-East Raid without immediately thinking back to the famous Croisière Jaune.

That celebrated expedition in 1931-2 was typical of André Citroën. Over and above his legendary place in automotive history, the marque's founder was a genius in altogether another field: communication.

The century was just nineteen years old when André Citroën launched the Type A, the first vehicle from a marque that was destined to become a household name. And with good reason: the founder not only knew how to organise but also how to publicise.

Born with an instinctive feel for publicity, promotion and publishing — in a nutshell, communication — André Citroën quickly recognized the commercial and social implications of these techniques when properly applied.

## THINK CITROËN

1919. The Type A had no sooner rolled off the production line than a full-page advertisement appeared in daily newspapers throughout France. Unheard of! Until then, advertisements had been genteel announcements, discreetly taking up a tenth of a page at most. Once the example had been set, the creative energies unleashed by the motor car were underpinned by organised surveys of potential buyers. The aim was to impart a reflex: think of a car, think of a Citroën. André Citroën led the way, innovating and launching

one type of media event after another. His imagination knew no bounds: organising the Citroën caravans roving exhibitions that wended their way through the highways and byways of France (1923); emblazoning the Citroën name on the Eiffel Tower (1924); arranging for Charles Lindberg to visit the company's headquarters (1927); installing a neon sign on the bustling boulevards of Paris (1923); printing large-format poster and wall charts for schools; and selling a range of Citroën toys in Parisian department stores (1926).

## TRAIN, INNOVATE, MOTIVATE, ACTIVATE

Less high-profile, but just as inventive was Citroën's involvement in external and in-house publications. January 1924 saw the launch of the "Bulletin Citroën", an improved version of the "Bulletin Commercial", itself founded by none other than André Citroën. "Bulletin Citroën" was an illustrated monthly "reserved for our dealers, agents and stockists". Even today, it is

## RETROSPECTIVE

considered as a top-of-the-range product in the world of house journals.

From the outset, André Citroën realised that a house journal should be a source of information and motivation that would bind the company closer together as well as a tool that could be used on the job. That objective was stated plainly in the foreword to the first issue. André Citroën wrote: "As usual, we will keep our readers informed of the working methods which we are able to recommend as a result of our own experience. We shall try and present you with simplified organizational procedures specially designed to help you achieve your stated goal: to sell more cars, more efficiently. With the help of Bulletin Citroën, we want to become a friend and adviser for all of you who, by dint of hard work and a modern, businesslike attitude, wish to improve their efficiency and be recognised as a cut above average. [...] Citroën News will keep you in touch with the activity of the marque in all its multitudinous forms. The text will be copiously illustrated with photographs. The majority of these will be published for the first time, and we are proud to bring you this type of exclusive coverage." Special pages or columns were devoted to features for agents and technicians as well as to legal and fiscal issues.

Although this introduction may appear stodgy to a person involved in today's world of communication who



From 1925 à 1934, Citroën's name was emblazoned across the Eiffel Tower in 30m-high illuminated letters. has a desire to innovate, it still inspires admiration.

The century was just twenty-four years old, and the foundations of corporate communications had already been laid!

In January 1928, André Citroën set a new precedent: he decided to talk directly to his customers. Once a month, he bought up the last page of every single Parisian daily newspaper. This original idea — which today would be called advertorial coverage — gave Citroën a circulation of fifteen million. Aimed at "present and future owners of Citroën motor cars", the monthly page had a twin objective: "to defend the interests of the motor car and, thereby, to make it accessible to the greatest possible number".

That goal was reached with the very first issue. The Citroën Page served as the springboard for a public relations exercise, which in turn helped launch what today would be called a charity event. Citroën announced that its factories would be opened to the public: "Each person that visits will help the less fortunate members of staff.[..] An entrance fee of ten francs will be charged and the monies collected will be handed over in full to needy families."

The Citroën Page had two other functions. It was used as a support by the network salesmen, who would discuss the articles with their customers — because "words have a power of persuasion that even the most beautiful-



ly printed page can never match" — and it also offered a platform "for the man in the street to air his views". The Citroën Page offered all the advantages of mass communication, and it boosted the bottom line! These ideas of André Citroën, which were pathbreaking in their time, are still considered as classics in the world of communication.

Citroën innovated in every field and showed the way ahead. But he made sure that those who followed in his footsteps would be hard pressed to come up with anything more creative!







Less high-pro, but just as inventive was Citroën's involvement in external and in-house publications.





## A Danish image for the ZX

Voted Car of the Year 1992 in Denmark, the Citroën ZX has been warmly received by the country's demanding carbuyers. The launch campaign was a total success. W ith its pattern-breaking rejection of the Maastricht treaty, Bille August's Palme d'Or at the Cannes Film Festival and the national soccer team's breathtaking win in the European Championship, Denmark has once again confirmed itself



and creative presence in Europe. Citroën Danemark — the marque's Danish subsidiary — decided to pay its own tribute to this pocket-sized but talented country. For the launch of the Citroën ZX in September 1991, the firm put together a highly efficient communication campaign.

## JAPANESE AND GERMAN MARQUES OUT IN FRONT

The Toyota Corolla, the Opel Kadett and the Ford Escort have all scored hits with Danish carbuyers. In Denmark, the mid-range M1 segment accounts for 40% of the total market while the M2 segment represents 33%. German and Japanese marques, with 42% and 31% penetration respectively, dominate the Danish car market (there is no national carmaker). But French marques are gaining ground. The rate of penetration of French carmakers rose from 7.3% to 14.8% between 1984 and 1991. Some of that improvement is thanks to the Citroën BX. When it was rolled out in 1983, the BX led the way for other French vehicle manufacturers. Ever since 1924, when Citroën set up its subsidiary in Copenhagen, the marque has enjoyed a high rate of customer loyalty. Today, Citroën has a network of 65 dealerships and 17 agents.

## PRICE IS A CRITICAL FACTOR

Surprising as it may seem, the smallest country in Scandinavia has the highest rate of car tax! In addition

to a registration tax of 180%, the Danes have to pay 25% VAT and sundry other taxes. Typically, a family will spend between 130,000 and 150,000 kroner \* on a new car. This is major investment, and value-formoney comes top of the list of criteria, ahead of quality, reliability, running costs and even safety. As a result, carbuyers are generally conservative in their tastes and tend to plump for well known marques. For that reason, the launch of the ZX was a major challenge for Citroën.

## FORGING CUSTOMER LOYALTY



Confident in the quality of its new model, Citroën Danemark adopted a strategy aimed at winning and developing customer loyalty. The tone of the campaign was based on plain speaking, demolishing preconceived notions about the marque. "So you don't think that Citroëns are built to last. The ZX will

make you change your mind," was typical of the type of advertisement that ran in the Danish daily press.

This forthright tone was echoed in the outdoor advertising campaign. The posters showed a male torso, symbolising the strength of the ZX, next to a man cradling a baby in his arms, emphasising the safety of the new car (see photo). But Citroën's creative drive did not stop there. To ensure maximum impact, the subsidiary worked with a marketing agency to develop a centralised customer loyalty programme. Dubbed "Citroën Contact", this highly original scheme is perceived by the customer as a direct message from his dealer. For this operation, Citroën Danemark was presented with the Gold Award — Best of Europe 1992 prize by the European Marketing Association. This "Danish" image created for the ZX enabled Citroën Danemark to gain ground in a shrinking market (-5%). For the first half of 1992, Citroën recorded a 20% increase in sales compared with the same period last year.  $\pounds 1 = 10$  kroner

## DENMARK \* Capital: Copenhagen (pop

Copenhagen (pop. 1,000,000). **Population:** 5,130,000. Area: 43,069 sq km. Population density: 119 inhabitants per sq km. No. of vehicles: 1,600,000; average age: 15 yrs. Car ownership: 309 vehicles per 1,000 inhabitants; 2.7 inhabitants per vehicle; 3.2 inhabitants per passenger car.

\* 1991 data.

## EN BREF

### SHOWS Paris: International Motor City



The Paris Motor Show resembled an international hall of automotive fame — 809 exhibitors, including 454 from outside France, gathered in a 25-hectare site at the Porte de Versailles convention centre from 8 to 18 October to display their vehicles and products.

Technology, motorsports and environmental protection were the three keynotes of the Citroën stand. The 2,000sq.m. passenger-car display area showed off the entire Citroën range, right down to the latest additions: the Citroën ZX Coupé; the Citroën ZX Rallye Raid, driven to victory in the Paris-Moscow-Beijing Rally by Pierre Lartigue; the Citela, Citroën's electric town car: the XM Turbo CT; and the "eco" AX Diesel, a world record beater for environment-friendliness and fuel economy. The marque's goods vehicles were also very much in evidence. An area of over 1,000 sq. m. was reserved for the commercial versions of the AX, BX and ZX as well as the C15 and C25 electric vans. The Citroën stand also featured video walls and interactive terminals that gave visitors information about Citroën's vehicles and its rally victory.

## From Citroën With Love

Moscow held its first international motor show from 26 to 30 August



1992. The event was a resounding success: 250,000 visitors flocked to see the models exhibited by 19 carmakers from all over the world. Citroën displayed its range (AX, BX, XM, C15 and C25) as well as the Activa 2 prototype. The highlight of the show was a

conference organized by the marque and entitled "Citroën and Style".

## ENVIRONMENT

## **Going for green**

France's National Council of Automotive Professionals (CNPA), with 30,000 corporate members including Citroën, recently published its Green Plan. The CNPA hopes that, if the plan is applied, it will improve waste management inside and outside the industry. This would be achieved by heightening awareness of the issues among all sections of public opinion — professionals, consumers and

— professionals, consumers an potential customers. *CNPA*. 50, rue Rouget de Lisle, F-92158 Suresnes Cedex.

## ...and radio

Throughout the duration of the rally, Citroën held a daily competition in association with the radio stations RTL and Europe 2. Listeners to both stations were offered the chance to win a Citroën ZX. The questions were principally based on Citroën-related topics, including the ZX Rally Raids, China, the Croisière Jaune and the marque's product range.

## SPONSORING

### **Citroën Golf?**

The sixty regional qualifiers in the Citroën Golf Cup took part in the national finals on the prestigious Dijon Bourgogne links on 30 October



### Citela wins over the Norwegians

Citroën presented the Citela electric town car and the C15 electric van at a special conference of Nordic countries. Participants met in Oslo between 24 and 28 August 1992 to address the issue of electric-powered transport. Citela was the star of the exhibition, luring professionals and the general public alike with its futuristic lines. Meanwhile, the rugged C15 proved its worth during a series of trials.

MEDIA

### Citroën, star of TV...

The Paris-Moscow-Beijing Rally was covered extensively by Giga, a TV programme for younger viewers shown by France 2, one of the country's two public television channels. An audience of some 4 million youngsters followed the rally from start to finish, including the arrivals at Moscow, Bishtek and Beijing. Giga's coverage was especially designed to appeal to a teenage audience, with features on motorsports, interviews with the Citroën team (drivers, navigators, technicians, assistants, etc.) and special reports on the cities and countries visited by the rally.

1992. Citroën presented the winners with a weekend on one of France's most beautiful courses, at Speroneu in Corsica.

### Athletics: two Citroën trophies

Citroën sponsored two events at the French Athletics Championship, held in the southern city of Narbonne in June. The first trophy was won by



Pierre Camara in the men's triplejump and the second by Viviane Dorsile, who took the the women's 800 metres, breaking the French record in the process.

## Fair wind for Citroën



As an official sponsor of the Round-France Yacht Race, Citroën presented the winners in each class with a spinnaker bearing the colours of the marque. Meanwhile, a fleet of 25 cars, including 10 Citroën XMs, were made available to the race organizers and later put on display.

### **EDUCATION**

## Citroën Total Quality

On 14-18 December 1992, twenty inspectors and trainers from fields as wide-ranging as design and marketing will be introduced to the tools and methods used in Citroën's Total Quality approach.



## Institut Citroën

The Institut Citroën organized a twelve-day technical course for trainers working with a nationwide adult education association. The purpose of the session was to study the electronically controlled hydraulic and electric servo systems on the Citroën XM. In addition, 45 inspectors and teachers in charge of training students on technical diploma courses met to draw up new curricula for maintenance and aftersales programmes.

