

The automobile upholstery sector has been a successful area for tanners over the last decade and a half, and leather is an increasingly popular choice. Yet new technologies, quality confusion from oversupply of lower grades and types, and changing geo-demographics are all conspiring to ensure that only the nimble and aware will continue to prosper. Hot seats need clear heads in the cockpit.

Heated seats: getting too hot

For the last fifteen years one of the major growth areas for the leather industry, and one providing a protective niche for western tanners, has been in automotive upholstery. Those tanners in the market have generally done well, and many tanners who missed the moment to catch the wave have lived to regret it as the relentless development of Chinese production has squeezed volume and profit from the rest of the world's industry.

The car business is one that fascinates all consumers. Car purchasing is a major driver of economic growth and an important part of consumers' needs and aspirations. From the weird little Smart car which is still losing money for Daimler Chrysler to the Formula One circuit where the owners and managers are in court over how to divide the spoils, the automobile marketplace is one which grabs the public's attention and the press headlines.

Over capacity—a looming problem

With Daimler Chrysler having quality problems, Fiat wondering what life will be like now that GM have withdrawn, Mitsubishi concerned about its future, and Rover praying that a Chinese deal will save the business, it is not just the leather industry that is wondering what will be the outcome of overcapacity.

With Toyota capitalised at more than the big three US companies put together and gearing up for yet another round of efficiency improvement, there is a growing consensus that we will start to see some serious winners and losers in the car industry and some big companies will actually start to fail.

Allied to this is the huge market growth in the new expanding markets of China and India. All the talk is currently of growth in China, but within ten years or so we will see India's population accelerating past China's, almost assuredly by around 2020.

What has been amazing is the growth in demand for leather seats which the consumer has come to love, and that this growth has moved down to the lower priced cars after makers experimented with it to help sell off end of line models. As car sales have grown in China the percentage of cars with leather in that market outstrips the rest of the world.

Quality compromise could compromise the consumer

This has also brought its own problems as has been highlighted by www.leatherbiz.com. As the proportion of leather interiors has continued to grow the drive to hold costs down has created an increasing willingness in some parts to compromise quality. The introduction of synthetic look-alikes for the backs and other less noticed parts is one concern, but what is worrying some tanners is the introduction of low grade leathers and materials



The Faurecia Audi A8 seat

such as PU coated splits into the market. If the consumer starts to see leather as a low grade commonplace material, as opposed to a high quality premium article, leather may lose its cache.

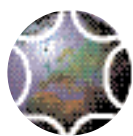
China also causes worries to the world's major car makers because of the weakness of its intellectual property regime. GM, Honda and VW have all had issues with the copying of designs or the improper use of parts by Chinese partners in Chinese car models.

At the same time, the consumer is getting more demanding. With people suffering with back problems at much younger ages than previously, and with more expected in terms of luxury and quality inside cars, we can foresee continued changes in seat design and quality in coming years.

Take the Recaro seat for the car manufacturer Aston Martin's DB7. It is covered in leather, of course, but also offers as standard: seat heating, electric backrest recline adjustment, seat back release on both sides, electric lumbar support, and electric seat length adjustment. All in a day's work for a nice piece of cattle hide, carefully crafted by the world's top tanners.

The route to market has also been seeing vast changes over the last fifteen years with companies such as Lear Corporation, Johnson Controls, and Faurecia amongst the big suppliers of seats to the world's automakers. These are large companies, emphasising the problems of asymmetric relationships in the leather industry.

World leader in seats is Lear Corporation, a Fortune 500 company headquartered in Southfield, Mich., USA. It focuses on integrating complete automotive interiors, including seat systems, interior trim and electrical systems. With annual net sales of \$16.96 billion in 2004, Lear is the world's largest automotive interior systems supplier. The company's world-class products are designed, engineered and manufactured by ►



Passenger car production in major countries (in 1,000s)

Country	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
France	3,175	3,051	3,148	2,234	2,603	2,676	2,883	2,991	3,009	2,883
Germany	4,094	4,360	4,540	4,678	5,348	5,310	5,132	5,300	5,123	5,145
Italy	1,341	1,422	1,318	1,574	1,402	1,410	1,422	1,272	1,126	1,026
UK	1,467	1,532	1,686	1,698	1,748	1,787	1,629	1,492	1,628	1,658
Spain	1,822	1,959	1,942	2,010	2,216	2,209	2,445	2,211	2,267	2,399
Canada	1,216	1,337	1,280	1,373	1,481	1,626	1,551	1,275	1,369	1,211
USA	6,614	6,351	6,083	5,927	5,554	5,638	5,543	4,882	5,017	4,510
Brazil	1,249	1,297	1,459	1,679	1,254	1,108	1,343	1,474	1,505	1,506
Korea	1,806	2,003	2,265	2,308	1,625	2,362	2,602	2,471	2,651	2,768
Japan	7,801	7,611	7,865	8,491	8,056	8,100	8,363	8,118	8,618	8,478
Others	4,751	4,870	5,372	6,763	6,673	6,932	7,236	8,053	10,219	10,533
Total*	35,336	35,793	36,958	38,735	37,934	39,158	40,149	39,538	42,532	42,118

* Total Motor Vehicle Production = 60,658,000

SOURCES: JAMA, OICA

NOTES: 1) The figures for "Others" are estimated.

2) The Comité des Constructeurs France d'Automobiles (CCFA) instituted new calculation rules in 1998. These changes are reflected in the figures for France from 1997 on.

111,000 employees at 280 facilities located in 34 countries.

Johnson Controls had more than 80 subsidiaries worldwide in 2004, sales of \$26.4 billion and has 123,000 employees in 260 locations around the world. In the middle of last year Johnson Controls added to its 12 facilities in China with an \$8 million expansion of a seat-component production plant near Shanghai.

Created in 1997, SYJCS is a joint venture between Johnson Controls and Yanfeng Visteon Automotive Trim Systems Company, Ltd. that operates 10 plants in China. The facility will make fabric and leather vehicle seat covers for export to Johnson Controls operations in Japan. These covers will be used primarily on seats made by Johnson Controls in Japan for integration into Nissan vehicles. From its facility in Nanhui, Shanghai, SYJCS has been supplying Johnson Controls-Japan with seat trim covers since 2000.

Faurecia describes itself as Europe's leading seat supplier, number three worldwide and the world's leading manufacturer of adjustment mechanisms but even it, for whom we only have 2003 figures, had sales of €10.1 billion, with 60,000 employees working on 160 sites in 27 countries.

Market-focused innovation

These giants do make things other than seats and increasingly work on the full cockpit and describe themselves as vehicle-interior suppliers of various kinds. But leather is now a vital component of any interior design in the cars as shown by the new Recaro seat launched at the Geneva Motor Show this March, and the matching steel blue leather on the seats and door panels in the new Nissan.

The pace of product research is relentless. Faurecia describes its R&D as visionary and pragmatic. Visionary, because it takes three to five years to bring innovations from the design stage to market. To maintain a competitive edge, it is vital that they monitor new technologies and understand emerging aspirations from the results of surveys of current consumer trends and lifestyles.

Pragmatic, because the automotive market is developing in an extremely restrictive regulatory and competitive environment. This requires keen responsiveness. In addition to anticipating the quality demands of consumers, Faurecia innovates in safety, pollution control and cost control in product development and

production.

The group's ambition is to provide original and competitive solutions in response to the major challenge facing automakers: offering their customers better and safer cars, with greater functionality, while controlling costs.

Innovation helps Faurecia create and win new programmes. They have three main priorities, which correspond to major market trends:

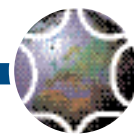
Functional integration: to expand the range of services it provides

Major markets of the world

Country/ Region	Total Vehicles		Passenger Cars	
	1994	2003	1994	2003
USA	15,411,374	16,967,634	8,990,517	7,610,468†
Japan	6,526,696	5,828,178	4,210,168	4,460,014
China	1,617,780	4,390,806	420,328	1,971,601
Germany	3,470,106	3,501,683	3,209,224	3,236,938
UK	2,139,016	2,945,156	1,910,933	2,579,050
Italy	1,727,524	2,484,148	1,610,282	2,248,682
France	2,298,917	2,440,692	1,972,919	2,009,246
Spain	1,118,272	1,716,204	938,971	1,383,098
Canada	1,062,214	1,625,050	748,821	864,989†
Russia	1,280,310	1,475,079	902,553	1,203,729
Korea*	1,555,602	1,318,312	1,140,399	1,001,874
India*	469,469	1,076,318	232,798	644,117†
Mexico	598,087	998,844	414,654	692,627
Australia	616,286	909,811	460,698	588,511
Netherlands	487,623	579,826	433,913	488,848
Belgium	418,271	521,159	387,348	458,796
Taiwan	575,499	413,914	434,787	366,239
Poland	274,188	392,724	250,267	358,432
Argentina	508,152	155,126	418,379	104,561

SOURCES: FOURIN, TMC

NOTES: * Domestic cars only. †MPVs not included.



The Renault Espace rear seats

to customers, Faurecia is exploiting its expertise in integration. Its seats, front ends, doors and cockpits are pre-assembled as modules, incorporating an ever-expanding range of mechanical, electronic, acoustic and safety features while reducing weight and production cost.

Flexibility: the reduction of time to market is a strategic priority. Faurecia's innovations are designed to fit all vehicle models produced on a single platform. For example, the Syntes structure, which was launched in 2003, equips cockpits on a single Ford group platform, while respecting the brand identities of Ford, Volvo and Mazda.

Standardisation: the group generates profitable growth by transforming its innovations into industry standards. Generic structures, such as seat frames, cockpit architectures, door modules and front-end module assemblies are created and then adapted to automakers' vehicles. This enables Faurecia to make its developments profitable and offer its customers differentiated products in line with their brand policy, while still maintaining economic performance. This also allows automakers to gradually expand options initially restricted to top-end models.

From the tanner's perspective, the innovative approach of companies like Faurecia need to be considered and understood. As Faurecia explains:

Perceived quality

Perceived quality is what consumers sense on their initial—and every subsequent—contact with their vehicles. It is expressed through look, harmony, the choice of materials, ergonomics and the smoothness of controls. Designers begin by taking a global approach before working on the individual components. They use advanced tools such as the ergonomics simulator at the new Hagenbach research centre in Germany, specialised in interior systems. This tool is a reproduction of a full-sized car interior that tests suggestions for module and component distribution on user panels. In order to assess perceived quality systematically, Faurecia implemented a sensory analysis procedure in 2003, which will allow subjective perception to be qualified and measured.

Comfort and modularity

Comfort includes overall appreciation (postural, visual, olfactory, tactile, static and dynamic) and the organisation of

New passenger cars bought in 2004

Country/ Region	Total Vehicles 2004
Austria	311,292
Belgium	483,859
Denmark	121,586
Finland	142,439
France	2,013,709
Germany	3,266,825
Greece	289,691
Ireland	154,142
Italy	2,256,891
Luxembourg	48,234
Netherlands	483,921
Portugal	197,521
Spain	1,517,518
Sweden	264,243
United Kingdom	2,567,269
EU (15)	14,119,140
Iceland	11,599
Norway	115,645
Switzerland	270,140
EFTA (3)	397,384
EU(15) + EFTA(3)	14,516,524
Czech Republic	144,045
Estonia	16,513
Hungary	203,726
Latvia	10,962
Lithuania	9,408
Poland	318,174
Slovakia	55,839
Slovenia	62,002
New EU Members	820,669
Total EU23	14,939,809
Total EU23+EFTA	15,337,193

SOURCES: Association Auxiliaire de l'Automobile
NOTES: * Europe = EU(15) + New EU
Member States + EFTA(3)

space. It also encompasses acoustic quality and the ergonomics of controls. Faurecia is focusing on the polysensory experience through its research into materials, the use or original application of different fabrics, spatial modularity and the integration of new technologies. In 2003, the Seating Business Group launched an air-conditioned seat that emits hot or cold air throughout its structure. Other innovations, such as seat modularity or the thickness of doors, cockpits or acoustic modules, aim to reduce the volume of the components in order to increase the impression of spaciousness inside the vehicle.

Interior designers at all car companies in the world are now well-versed in leather types and varieties, be it chrome or chrome free tannages or full aniline or pigmented. The separation of leather types between the US and the rest of the world seems set to narrow, as demonstrated by many speakers at the last ALCA conference. Most likely tanners should anticipate a market that expects soft natural full aniline leathers with the durability and performance of highly finished pigmented ones.

With so much of the car seat business in the hands of the few, their success or failure can have a major impact on the tanning

industry. To adapt and paraphrase an old adage, if the car manufacturer sneezes, the seat builder catches a cold and the tanner could catch pneumonia. At present, it seems as if some of the biggest car manufacturers are sneezing: both General Motors and Ford announced cut-backs at the start of March. Within hours Lear was revising its financial forecast down for the quarter to break-even. Visteon, which relies on Ford for two-thirds of its business, suspended its dividend in early February after losing \$1.5bn last year.

What do they say? There are two rules in business. The first is that the customer is always right. The second is that if the customer is wrong, refer to rule number one. Easy. The customer will get what they want in the end. And for the tanner—well, he will need to understand that his product is part of an increasingly



A crush on cars

Among the motoring cognoscenti the sight of certain cars elicits strong emotions of joy, passion and a certain longing for a bygone age. A Bugatti at full throttle, engine screaming, powering round a bend on an otherwise quiet country lane, a "Blower" Bentley with its lazy four-and-a-half litre engine growling around Le Mans at top speed or the ticking of the clock in a Rolls Royce Silver Ghost, all have the power to inspire awe.

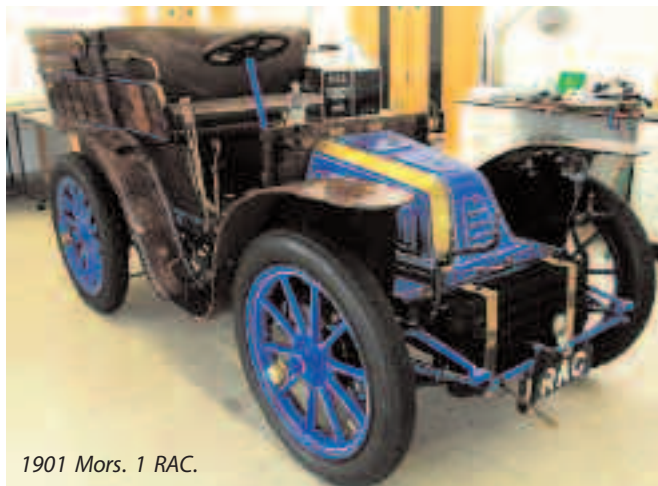
Cars of this ilk were always special and today fetch high prices in the salerooms of the world. Owners are, therefore, careful about restoration and will spend considerable time researching details and large amounts of money rebuilding 'barn finds' or bringing tired examples back to the original specifications.

In the past, it was customary to totally re-upholster vintage cars and replace worn leather; ripping out the remains of the original leather trims to achieve a brand new concours appearance. Today there is more circumspection and the principles of conservation are better understood as is the difference between conservation (maintaining and preserving that which exists) and restoration (replacement with new materials) and an appreciation of the patina of age. Sometimes, of course, there is no choice but to replace, however, where original leatherwork remains, the conservator and connoisseur now strive to keep everything which is original that can be saved.

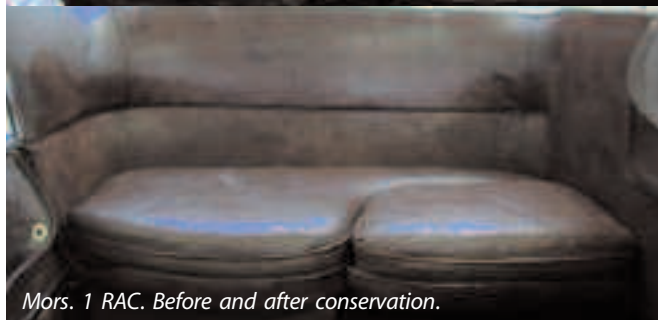
In recent years the conservation of leather interiors of historic motor vehicles, both privately owned and those from motor museum collections, has become a particular area of interest and specialisation at the Leather Conservation Centre (LCC) in Northampton, England.

Soiled leather can be cleaned, splits repaired and worn areas supported and in-filled with new colour-matched leather. Missing, worn out parts or lost areas of piping and other trim can be replicated to match and fit in with the remaining original parts. Where the surface of old leather has cracked, discoloured or faded this can be treated to improve the condition of the leather, tone in fading and re-polish the surface to bring back shine without creating an over-finished incompatible and inappropriate appearance. Old leather may have had several previous restoration treatments. Over time these heavy surface treatments are often found to have cracked and delaminated but a conservator can carefully remove these applied layers and get back to the original leather surface.

Understandably, many owners of historic vehicles use their cars regularly; some may still take part in racing competition or in hillclimbs. Owners may express concerns with regard to the durability of conservation treatments as opposed to full



1901 Mors. 1 RAC.



Mors. 1 RAC. Before and after conservation.

re-upholstery in new leather. The primary advantage of conservation is of course that the original integrity of the car remains intact. In most cases the conservation treatments will withstand careful use for a considerable time. For the older or more fragile interiors of cars still undergoing heavy use or periods of tough competition driving, a compromise may be considered. In this instance the original trim, seats and squabs are conserved and retained but replicas are made and installed for occasions where hard wear is expected. The additional cost of this option may outweigh the risk of causing further damage or eventual loss of an original interior and possible diminishment of value to an otherwise totally original vehicle.

One of the fundamental problems of recovering in new leather is the fact that the available leather bears no resemblance to that of the past. Modern leathers are too soft and do not have the same embossed grain patterns and finishes. The LCC is endeavouring to put this right in cases where restoration is the only option. It is working with local leather suppliers who are small enough and flexible enough to be able to supply small quantities of bespoke leather for this purpose. This will be a vegetable tanned leather and have the firmer feel, as the original, and be embossed with the appropriate patterns and historically correct colours.

Vehicles recently treated at the LCC include a 1901 Mors Automobile, an Aston Martin DB5, an Aston Martin DB6, and a Bugatti T.43. 





In the new female designed Volvo concept car, there are eight exchangeable seat pad options to choose from, everything from dark brown leather, linen and wool bouclé, to a shimmering yellow-green embroidered seat pad. Dark brown leather today, or grey nubuck tomorrow. Think of the consequences for tanners if every car owner had more than one set of seats.

Designed for women... for men to follow

The idea of an all-woman team making all the decisions in the development of a new concept car arose at Volvo in the autumn of 2001. Visiting Volvo at the time for a series of workshops was Marti Barletta, an American expert on female consumer patterns. She claimed: "If you meet the expectations of women, you exceed the expectations of men."

"We're sure it's right," says Camilla Palmertz, one of the two project managers for the YCC. "That's why that thesis has been our guiding light in developing Your Concept Car." In June 2002, she and a small group of colleagues were invited to present their idea to Hans-Olov Olsson, president and CEO of Volvo Car Corporation. He greeted it with enthusiasm.

Women form an increasingly important customer group for Volvo Cars. In the United States, 54 per cent of all Volvo buyers are women and the percentage of female customers in Europe is growing steadily too.

Smart storage

Smart storage goes far beyond where to put your handbag—it is a question of what to do with your mobile phone, your keys, your notebook computer, your briefcase, your sports bag for the



gym and so many other things we carry in our cars. The best place for keeping all the things you want on hand in the car is between the front seats. But that is where you normally find the gear stick and handbrake.

"So we moved them. In the YCC, there are gear levers by the steering wheel and the parking brake is electronic and integrated. This freed-up space for storage in the centre console," says Cindy Charwick, who designed the YCC interior.

The rear seats resemble cinema seats—normally folded up out of the way until someone needs them. This frees up large amounts of luggage space in the rear seat, easily accessed through the wide door. Passengers simply lower a seat each as they get in.

The YCC is a one-off concept car, a Volvo showcase for sharing bright ideas and solutions with the world. The most popular solutions will be those that stand the best chance of appearing in a future production model.

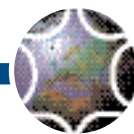
Décor to match your taste

Just as light-coloured walls in a living room focus attention on the furniture, all the YCC's pale surfaces focus your eyes on the seats and carpets. This is where the real scope for individuality comes into play—a range of eight seat pad options with matching carpets means you can decorate your car to match your personal taste.

Swapping them over is quick and easy and they are easy to care for. Some are machine washable, others dry clean only. A range so wide that everyone can find a personal favourite. The options are:

- dark brown leather. A traditional upholstery option in soft leather, complemented by a short-pile carpet of tufted linen.
- black-brown woven leather. A bold, sporty option. Complemented by a multi-coloured carpet of tufted linen with orange, grey-green, beige, wine and yellow-green elements.
- beige linen accented with lime-green highlights. A more subdued style, complemented by a bouclé-based wool and linen carpet, with lime green stripes of tufted linen.





- checked woollen bouclé. A retro fabric in black and lime-yellow which flirts with the 1950s and modern interior design trends. Complemented by a carpet of black woollen felt.
- red wool. A thick, warm covering. The carpet is made of the same type of material.
- cream felted wool. A more restrained choice. Complemented by a carpet of woven bouclé with green and grey accents.
- grey nubuck. An elegant option complemented by a tufted deep-pile carpet.
- shimmering pale yellow with embroidered flowers. The least conventional option. Complemented by a bouclé-based dark brown carpet with strands of pale yellow linen.

Personalised driving position

A key ambition in developing the YCC was to ensure that the driver would be able to sit correctly when driving and have the right line of vision too. The result was Ergovision (patent pending)—ergonomics and optimum line of vision in one system. Your whole body is scanned at the dealership, then this data is used to define a driving position just for you, stored in digital form on your key unit. Once you get into the driver's seat and dock your key on the centre console, the seat, steering wheel, pedals, head restraint and seat belt will all be adjusted automatically to suit your personal build.



Space and convenience

To reinforce the floating, hovering impression the exterior gives, the front seat mountings have been moved inwards, out of sight, and look as though they are hovering above the floor.

The main function of the rear seat is not that of carrying passengers—it is for carrying things, what the target group mostly use it for. The rear seat is actually two separate fold-down seats. They are rather like cinema seats, so they spring back up when not in use—to make even more space for storage. And the compartment on the back of the front seat is actually a removable compact briefcase. The boot is big enough for a set of golf clubs.

This new thinking indicates the trends for the future, all of which offer opportunities as well as challenges for the leather industry. New colours, higher levels of stretch and flexibility, different types of handling and use: change is happening, faster than we expect. ■

Karl Siebert sometimes gets named as "the Chair Man" at Ford and is proud of his work developing the seat for last year's Viscos concept car. Defined by Ford as "configurable clamshell seats that transform to match your driving style" the Viscos seat does some amazing things for an automobile, with a massage capability to stop the lower back muscles stiffening on long journeys, and inflatable cushions to adjust to the shape of the driver or passenger. The samples we have seen are all in a soft black leather but new expectations of a seat inevitably increase the demands on the tanner.



Ford Viscos: envisioning the future of comfort and relaxation

We used to always hear talk of how many years of our life we spend sleeping, and it was a strong argument for buying a good bed. Now we spend more and more time in our automobiles the car makers have started to realise that customers will not accept poor seating.

"The significance of Viscos is in its exploration of future design direction for Ford," said Chris Bird, Ford of Europe design director. "Its interior is just as important as the exterior shape in symbolising where we might go with future Ford vehicles. It presents innovative technologies focused on the driver and other vehicle occupants. Viscos also demonstrates the possibilities of how we will interact with vehicles of the future even though Viscos itself is not intended to become a production reality."

Concept cars are intended to explore future design direction and push the boundaries of automotive technologies. Interior comfort and relaxation were particular priorities and these ►



occupant-focused technologies are an important aspect of Ford's production car design direction under Chris Bird.

"One look inside the Visos and you can see that the interior of the automobile of the future could look radically different," Bird explained. "Things we take for granted today, like bulky instrument panels, aren't necessarily going to be design constraints in the future, especially if we can perfect some of these technologies and make them affordable, like the advanced Sony driver displays, for instance."

The focus is on giving more choice to vehicle occupants, and providing greater opportunities for individual personalisation. Much as the way in which people can personalise their mobile phone with ring-tones and wallpapers, the Ford of the future will be much more adaptable to the interior desires and needs of the driver and passengers.

For example, as the Visos shows, it should be possible to alter the vehicle interior to suit the driver's mood, driving style or even traffic conditions. As these advanced prototype technologies indicate, one day occupants will be able to 'engineer' a vehicle quickly and easily to meet their personal needs.

Seats that fit your contours

Multi-contour seats inspired by those designed for the Ford Visos are truly the seats of the future. They demonstrate that selecting between a highly supportive sport driving seat and a seat geared to long-distance driving comfort doesn't require compromise.

The seats are a cooperative project of Ford's European Research Centre in Aachen, Germany, and the Ford Advanced Product Group.

As Dr. Karl M. Siebertz, research engineer at Ford's Aachen Research Centre explained: "What we wanted to create was a true interface between the driver and the car, and an interface that we could demonstrate for real in the Visos concept. Above all, we wanted to create a seat that could be luxury or sporty on demand."

Ford engineers have developed models that allow drivers to experience the sensations of a seat that bolsters and 'massages' its occupants at the same time, while providing nearly infinite personalisation potential. Future production seat designs could prove this approach to be the most comfortable seat for every body.

Ford's multi-contour seats feature 11 interior inflatable air bladders to control three unique functions—lateral support, lumbar support and anti-fatigue back muscle stimulus. This comfort technology is not just for show, because it contains a highly efficient internal design that requires only one air pump to pressurise and a series of electro-magnetic valves to operate. The seat design is contained within a contemporary lightweight carbon fibre shell.

Air bladders on the perimeter of the seat cushion and seat back

Visos interior



provide customisable lateral support for spirited driving. For lumbar support, a series of three overlapping air bladders allow occupants to personalise their lumbar support within three degrees of freedom, at precisely the height, size and shape required, making the seat far more flexible to different human statures.

But the "active motion" seat cushion system is the most revolutionary. Computer controls create "active motion" by individually inflating and deflating an array of four air bladders within the seat pan. This effect transmits subtle, changing movements into the seat occupant's pelvis that provoke continuous changes in muscular activation. "Active motion" eliminates back pain that is caused by long-term muscle tension and prevents driver fatigue on a long drive, thus contributing to the multi-contour seat's exceptional cruising comfort.

Mondeo: climate seats make comfort a breeze

Another Ford innovation is the availability of the new Climate Seat option in the latest generation Mondeo. A feature more commonly found in expensive luxury cars, Climate Seats augment heating with cool ventilation in warmer conditions, to keep occupants comfortable whatever the temperature.

Geneva Motor Show visitors were able to experience Mondeo's cool comfort for a hot summer drive by trying a demonstration Climate Seat and visualising the results through heat-sensitive imaging.

Mondeo's Climate Seats have 12 levels of control—six air-cooled settings and six degrees of heating—to allow occupants to optimise their comfort. Rear-seat passengers are not left out either, with Mondeo's new heated rear seat option, another first for a European Ford.

Taking interiors seriously

"We have already started by making major advances on improving our interiors in terms of their design, quality and functionality over the last few years," said Ford's vice president of product development, Derrick Kuzak. "Now we want to understand what new technology can do for us in enhancing the comfort and feel of a car interior, what new features we can introduce to make the interior of our vehicles a more relaxing place to be, and how vehicle owners can benefit from such features in personalising their ownership and driving experience."

Ten years ago when Faith Popcorn produced her future trends, cocooning was one of the strong images that entered the car industry. We spent so much time in our car, she said, that we required it to reflect our home.

Tanners who have come to rely on the automotive industry had better be fully aware of just where designers intend to go...and they need to be sure that the leather they produce will be able to perform to these fresh requirements. 🐾