

iac SUNDERLAND 2004

THE SEVENTH INTERNATIONAL AUTOMOTIVE CONFERENCE BRINGS GLOBAL MANUFACTURERS, SUPPLIERS AND CONSULTANTS TO SUNDERLAND

The City of Sunderland in north-eastern England is a bittersweet reminder of a heavy industrial heritage, the glory and power of which once resonated around the world. Like many communities in this post-industrial age, Sunderland has struggled to cope with its new reality. Wastelands have grown in the shadow of the derelict cranes, redundant icons of the shipbuilding industry that once made the region great.

But the tide is turning and new cranes can today be seen piercing the skyline on the banks of the River Wear. Rather than ships, construction in Sunderland today concentrates on riverside apartment buildings amid the tantalising prospect of urban renewal. Fresh optimism saturates the city, underwritten in the main by a new, technology-driven, industrial base anchored by the enormous and sturdy influence of Nissan, now celebrating two decades of tenancy in nearby Washington.

The construction effort in Sunderland is a potent symbol of the need to continually improve and invest in the future. These are themes that sit well with the discussion parameters of the city's International Automotive Conference (IAC), held across the river from the re-zoned dockyards on the plot of a former chemicals plant, reclaimed and decontaminated for the University of Sunderland and turned into a green and pleasant campus. Organized by Ultima Media, in partnership with the City of Sunderland, IAC's remit is a diverse one, spanning topics such as the unveiling of

high technology to discussions on the nature of supplier logistics. However far-sighted the subject matter, what shone through at IAC 2004 were the venerable and traditional tenets of the automotive industry: the doctrines of lower cost, better use of resources and the confident message that not only will the lean survive, but that they will also prosper.

Sunderland's reasons for hosting the IAC stem from a desire to present the city and its surrounding environs as fertile ground for inward investment more varied than a sustained supplier base dependent on the continuing presence of Nissan. To date this strategy has enjoyed some success, notably the investment in manufacturing facilities by Tier 1 suppliers such as conference sponsors TRW. Like the manufacturers it hopes to attract, Sunderland is aware that sustained growth requires sustained effort and therefore the IAC has become an annual event attracting local business and the world's automotive community alike. As usual the conference did not disappoint.

Session One

Following the established form, the first session of the conference concentrates on local issues. Following the introductory address and warm welcome from Councillor Bob Symonds, leader of Sunderland City Council, Professor John McIntyre, Associate Dean of the School of Computing and Technology and head of automotive technology at academic sponsors, the University of Sunderland pointed out that the issues that face Sunderland mirror those faced by many



Councillor Bob Symonds, leader of Sunderland City Council welcomes delegates and speakers to the seventh International Automotive Conference

other manufacturing regions in the industrialised world. Professor McIntyre spoke on the advantages of pre-competitive collaboration and the ability of these regions to learn from one another.

Norman Jones, consultant for business software provider PeopleSoft, came next. Jones made the point that a changing market demands that industry also changes. Specific to automotive manufacturing is a metamorphosis from a supply-side controlled push model to a demand-driven pull economy in which consumers have a much greater role. The new economy, says Jones, requires manufacturers to sense changes in customer demand and adapt production, supply and logistics accordingly and in real time.

This places a heavy burden on software

to connect the entire supply chain in real time, manage the task of continuously adapting production to demand and provide a mechanism through which a manufacturer can respond to constantly changing customer expectations.

Mike Rutherford, head of business productivity for One NorthEast followed Jones. One NorthEast is a Regional Development Agency designed to create and sustain jobs in the north-east of England. Rutherford explained that the remit of the agency is to further the economic development and regeneration of the region, promote business efficiency, investment and competitiveness in the region and by doing so generate employment.

Changing to current affairs the next speaker, Friedrich Wegert, project management director at Karmann discussed time-to-market issues and suggested that the 18-month lead time given to Karmann by Chrysler for development of the Crossfire coupé and roadster will become an increasingly common development timeframe. The Crossfire has been entirely outsourced to Karmann with the German company responsible for design, development, testing and manufacturing, selling finished vehicles to Chrysler at a piece price. Wegert discussed the blueprint developed by Karmann for the delivery of the vehicle to tight deadlines.

Indicating that outsourcing neatly navigates the problems monolithic corporations often have with decision-making processes, and that keeping the entire process chain in one location was a clear advantage, Wegert laid out the key project management concepts that allowed Karmann to deliver the Crossfire in a time- and cost-effective manner. These included splitting the work down, allowing it to be carried out by small teams, clear in their roles and responsibilities; shortening decision-making processes; and clearly defining escalation steps. Reporting was kept to a minimum, though the co-ordinating steps and interface with DaimlerChrysler's well-regarded project gateways was extremely rigorous.

Following a coffee break, attention turned back to the role of the government and governance in providing the necessary infrastructure to grow a successful industry. Sarah Chambers, outgoing director of the Automotive Unit of the UK's Department of Trade and



Karmann's Friedrich Wegert speaks on time-to-market and exciting future projects including the German company's work on the Chrysler Crossfire

Industry discussed the UK's advantages to inward investors in a somewhat rose-tinted presentation that fêted a multicultural, multilingual society but failed to discuss the reasons behind recent plant closures, culminating in the announcement of Jaguar's cessation of car production at the Browns' Lane plant in Coventry.

More practical was the following presentation by Dr Nick Barter, programme director for the Society of Motor Manufacturers and Traders' Foresight Vehicle programme. Foresight promotes the future of a globally competitive vehicle manufacturing industry in the UK through its management and direction of various funding streams into applied technology research consortia. Among the recent projects highlighted by Dr Barter were the lightweight, chassis-less, composite semi-trailer, a wide-range radar and communications system, new



Sarah Chambers, director of the Automotive Unit of the UK's Department of Trade and Industry spoke on the UK's advantages to inward investors

engine/generator sets for hybrid and electric vehicles and a newly optimised lead-acid battery.

The session continued with a presentation by Julian Thomas, UK manufacturing leader for conference sponsors Deloitte & Touche, which looked at the automotive trend analysis carried out by the international consultancy. Thomas pointed out that the industry has become more competitive and diverse today than ever before, and that the rate of change is increasing at a rapid pace. Response to market fluctuation, he argues, is becoming the arbiter of success or failure, with manufacturers needing to optimise profits and cash flow, lead trends and drive their competitive advantage.

In contrast the next presentation looked at cooperation rather than competition. Undoubtedly one of the conference highlights, nothing underlined the 'I' in IAC as well as the presentation given by Mohammad Salimi, general manager for the International Cooperation Division at the Khodro Group, Iran's largest vehicle maker. Illuminating in content Salimi's presentation was proof if any were needed that, when analysts discuss the booming Asian market, they do the continent a great disservice by concentrating solely on the Chinese and Indian industries.

Though based almost exclusively on domestic demand, car/light vehicle production in Iran broke through the million unit barrier for the first time in 2004, building upon the average 30 per cent growth that market has been experiencing in recent times. Though Iran has eight domestic manufacturers, two, Saipa and Khodro, (both of which are state run) account for more than 95 per cent of the market. Khodro is the larger of the two and holds a 61 per cent market share. In all, the Iranian industry is Asia's fifth largest car producer, supporting a supplier base of 2,000 companies and directly employing 35,000 people.

Khodro's output is familiar to Europeans, being for the most part models discontinued on that continent in the near past. The company manufactures commercial vehicles through partnership with Mercedes-Benz and, in partnership with Peugeot, produces the 206 and 405 models. The world, however, is changing, and a more confident Iranian automotive industry is actively seeking to develop bespoke products targeted at its own needs.

“We are now the 13th largest manufacturing base in the world, thanks in part to help from our European manufacturing partners such as Peugeot,” explained Salimi. “With Peugeot we are soon to begin production of a new joint venture vehicle based upon the 206. Rather than the five-door hatchback version, we have suggested to Peugeot that Iran is an excellent market for a four-door sedan derivative – the prototype of this vehicle will be presented at the next Paris Motor Show.”

Iran’s aspirations do not stop with derivatives, nor are they content to stay within its borders. “With Renault we will be producing the Logan which is seen as a low-cost vehicle that will appeal to the



Julian Thomas of UK manufacturing leader for conference sponsors Deloitte & Touche

relentless and the journey from high end option to base model staple is more raging torrent than trickle down. “For instance, think of ABS. It’s strange that we’re starting to regard ABS as a component when only a few years’ back it was regarded as a wonderful new system. On these foundations we’re building a new range of products such as stability control, electric steering systems and smart restraints, all of which use more complex algorithms and higher integrity sensors. Now we’re moving forward with these, linking them together, bringing a portfolio of products in at a higher level – these we’re referring to simply as active and passive safety. Passive safety is concerned primarily with vehicle occupants but active safety takes an integrated approach to vehicle control – and this is really exciting. Active safety is going to prevent the accident in the first place.

“Electronics is clearly the enabling technology, and electronic content is (still) increasing dramatically and we’re looking for nothing less than complete protection and control.”

Session Two

The remainder of the afternoon was given over to Design for Performance, a nod in the direction of motor sport and the interaction between it and the mainstream automotive industry. Detroit-based Jeremy Burne, automotive sector specialist for the British Government and UK Trade & Investment in North America, chaired the session. The theme of the session was headlined as ‘the route to the exciting vehicle of tomorrow’.

Burne’s particular subject was the issue of global competitiveness. “It really



Lunch in the stunning award-winning Glass Centre provided many opportunities for networking

Iranian middle class. The contract with Renault is one of the major projects in Iran at the moment and we think there will be an excellent market for the Logan. Moreover we have been granted the rights to export the model into neighbouring countries.

“But beyond working with our partners in Europe, we want to develop our own designs and development capabilities,” continued Salimi. “And so Khodro and Saipa are collaborating to develop a common indigenous sedan. For platform and powertrain we have a lot of help from Peugeot, but the body and the interior were developed and produced locally. The basis of the project is an attempt to use the capabilities of local manufacturers in terms of low-cost production with the goal of introducing a family car. Our marketing shows that middle class families don’t want an old car, but something that looks innovative and is

filled with high technology.”

Changing tack, the session continued with Mark Basten, UK ACC Engineering Manager for TRW Automotive Chassis Systems. Basten discussed the two sides to advancing safety systems: on the one hand rising consumer awareness and interest, and on the other the increasing sophistication of electronic controls that underpin the leaps and bounds with which safety systems advance.

“It’s a matter of push and pull,” he said. “Vehicle manufacturers push safety and consumers demand it. In fact a recent survey suggested that 85 per cent of buyers look at safety before making a purchase, which is interesting because a similar survey in 1999 showed only 68 per cent were interested in safety. The public is now conscious of the technologies available, and they want them for themselves and their families.”

The march of safety systems is



Truly international – Mohammad Salimi of Iran Khodro Group, Iran’s largest vehicle maker, talked of the increasing development autonomy and success of the Iran auto industry



Mark Basten, UK ACC Engineering Manager for TRW Automotive Chassis Systems talked about the increasing sophistication of the customer and their awareness of the latest vehicle technologies

is the fundamental question," he said. "In the UK the automotive industry is largely foreign-owned – and therefore its continuance is going to be based on an ability to stay competitive as a location. This may hinge on the ability to offer things that other regions cannot.

"[The UK] has a particularly strong capability for performance engineering. There are a great many specialised engineering firms and highly talented motor sport engineers. Package these together and you have performance engineering. It is increasingly relevant as vehicle manufacturers look to produce more and more high performance derivatives and niche vehicle designs," he said.

Burne cited halo vehicles as a perfect example of specialists supplying expertise that mainstream manufacturers cannot, or choose to not, retain in-house. "Consumers want more differentiated

products that speak more to their needs. A performance vehicle can have a tremendous impact on a manufacturer's more mainstream production line. The halo effect creates a bigger bang for their buck, but there is more to high performance than fast cars alone.

"Looking beyond the high performance product, we should also see a high performance element in design and development – and the philosophy of speed and efficiency. This really is a process that engineers can use when approaching a project, whether that project is for a race car, a sports car or a high volume production vehicle or an SUV. Not just MPH and MPG, but through the whole development cycle."

This concept was expanded upon in the next presentation. In a change to the published programme, business development manager Paul Higgs replaced Prodrive Automotive Technology managing director Andy Tempest. Higgs discussed the ways in which a company best known for motor sport – particularly with the Subaru World Rally car but also with the management of the BAR F1 team and Ferrari's world sports car racing operation – can leverage its expertise in high performance engineering and niche vehicle design.

"Thirty or 40 years ago racing had a direct involvement with road car development in areas such as chassis development, power enhancement and materials development but today the technology is so far advanced that little can be transferred – but that isn't the whole story.

"At Prodrive we have been able to transfer technology such as composite

materials, active torque dynamics and automated manual transmissions. Even so, we see these engineering transfers as, essentially, a by-product of our business. The key link between motor sport and niche vehicle design is the ability to achieve differentiation in a crowded marketplace. Working with Subaru we have demonstrated this very closely over the past 15 years. Perhaps in the future we'll do a BAR Honda niche variant."

With its acquisition of Tickford, Prodrive gained a strong performance vehicle operation in Australia that today is core to a joint venture with Ford Performance Vehicles. "Why does this exist? What is that advantage to a company the size and stature of Ford? Ford needs to enhance the brand and a partnership of this nature provides increased flexibility of production along with increased efficiency for the company. As a separate company, the joint venture can work outside the usual constraints that are found in any large company and focus all of its activities around enhancing the brand," said Higgs.

He was followed by Graham Barnes of consultancy Enginuity, who, in contrast to Prodrive, has been working very much at the other end of performance vehicle equation. "It started with a phone call from ACC, which is a research group ran by, among others, the US Department of Energy, GM, Ford & Chrysler. Based on the earlier PNGV research, the brief was to take a traditional American car and make it capable of returning 80mpg, while still being of a standard that consumers would purchase.

"The initial research suggested that the vehicle needed to weigh around 900kg with a shell that was 60 per cent lighter than the current steel body with the same torsional stiffness, bending stiffness and durability performance of the current vehicle. We were required to work as though the design would have to meet crash legislation, though we were directed to not worry about a Class A finish. Where the brief got really interesting was the requirement to create a design from which a vehicle could be manufactured every four minutes, with comparable costs to a steel body structure. At first glance this seemed impossiblebut it isn't. We forgot all about the conventions for designing in steel and instead did some concept engineering that designed a structure specifically for carbon fibre. The



The event's gala dinner was held at the Ramside Hall Hotel and offered further opportunities for meeting speakers and fellow delegates

efficiency of the body increased by more than 250 per cent and we eventually finalised on a body structure 86 per cent lighter than the standard, weighing 86kg, down from 257kg. We can even do it in the time, providing panels with a thickness variability of between 1.5 and 9mm can be processed."

The day was concluded with dovetailing presentations from Dave Sargent, partner and executive director of European Operations for consumer analysts JD Power and Silke Jagla, consumer research manager at Johnson Controls (see Modern Day Craftsmanship Box, p07).

Session Three

Day two of the conference began with Matthew Adby, technical manager for sponsors X-Rite, discussing the changing world of automotive styling, as seen through the filter of colour management.

"We manage colour, which is a brief in a very wide format," explained Adby. "Today paint finish is influenced by customer expectations – whether it's the OEM vehicle in the dealership or a repair, people do not any longer expect to see colour differences, they expect to see a perfect colour match. We manage those expectations by allowing the OEM to monitor, measure and improve colour quality."

X-Rite manufactures colour measurement equipment for every industry from graphical design through to FMCG. The automotive industry, however, is a mainstay of its business, though one which regularly throws up fresh challenges.

"Car design constantly evolves, and it has pronounced effect on colour control," said Adby. "Think back to the original VW Golf: the vehicle had a solid body colour and everything else was, fundamentally, black. As we've moved through the generations, we see every component colour matched, with colour coordinated mirrors, bumpers and trims on the interior and exterior. Colour breaks have been eradicated – bumpers directly meet body panels giving you no option but to have a perfect colour match. Additionally today the preference is for smooth flowing lines, which allows the eye to automatically pick out differences much more quickly. Coupled this with increased sales of metallic and pearlescent paint, and it becomes a lot more complicated to control colour than was the case with



The exhibition stands created a lot of interest; here Matthew Adby, technical manager for sponsors X-Rite talks to Friedrich Wegert of Karmann

solid paints. It means you have to raise the standard," said Adby.

X-Rite developed systems in the mid-1990s that allows metallic colours to be controlled much more effectively and have recently introduced a non-contact, multi-angle measurement system called CarFlash that automates inspection.

Following Adby the focus turned to environmental and emission issues, first with a presentation by Dr Derek Charters, powertrain project manager, Advanced Engineering Department, MIRA Ltd (see Box, p06) and then with Dr Thierry Seguelong, vice president, business development at business venture company Aquis & Aquis who discussed research into diesel particulate filters and the different systems that we can expect to see in the future. Concentrating on diesel will allow carmakers in Europe to meet their ACEA commitments on fleet average CO₂ emissions, said Dr Seguelong but discussion on issues such as NOx and particulate matter is still ongoing.

Discussing the various possible technologies such as fuel-borne catalysts and coated-soot filters for particulate filters, Dr Seguelong noted that, to date, only the fuel-borne catalyst system has properly been proven and that the industry may experience severe supply problems, based upon the limited number of manufacturers if it is to meet its 2012 targets.

Rhodia is one of those companies involved in the fuel-borne catalyst technology as the next presentation by Dr Pierre Macaudiere marketing and innovation director, for that company's Automotive Group explained. "The two challenges for putting a DPF system into

the car are to have high regeneration performance whatever the driving cycle," he explained. "Why is the driving cycle important? Well more and more often the car is being driven at speeds of less than 20kph, for instance in London or Paris, which means that the temperature of the engine is very low. Alternately, the same car on the open road, a German autobahn for example, will travel at extreme speeds, and engine temperature will be very high. The system needs to be flexible.

"The second challenge, of course, is that we need something inexpensive. You need to improve the integration into the vehicle. This is why we're working on a DPF platform with Inergy, a world leading company in fuel line systems, in order to improve integration." Dr Macaudiere explained that the Rhodia/Inergy system is automatic, with a fuel-borne additive tank that adds a small quantity of the additive at each refueling. The system is sealed and invisible the consumer and is good for 150,000km.

Following a break, Bob Cherington, applications engineer for Emitec discussed the other end of emission control technology and outlined the company's development of fabricated metallic substrates and how, significantly, Emitec has become much more active in the diesel market in the past 18 months, largely as a result of the tightening legislation and self-regulation that exists within the European market.

Session Four

The final session was devoted primarily to Nissan and Renault with Dave Cameron, general manager, purchasing, Nissan Europe and Christian Hue de la Colombe



The fourth and final session of the event started with David Cameron general manager, purchasing, Nissan Europe

vice president, Vehicle Cost Reduction Programme, Renault describing the return to profitability of the former and the massive cost cutting programme instituted by the latter.

Listening to a Nissan presentation in Sunderland is a curiously split proposition: on the one hand you have Nissan the local manufacturer who, with no little monotony, annually reacquires its title of "most productive car plant in Europe". On the other there is Nissan the global manufacturer, cautiously emerging from a decade of poor performance and only now finding its feet again as the subject of Renault's imperial ambitions.

When discussing its recent history Nissan executives habitually prefer to illustrate previous failings in the context of the changes that have been implemented to bring the company back to profitability. By example Cameron giving what could be considered the keynote speech at IAC 2004, highlighted the problems caused by having a manufacturing base in Europe inflexibly tied into Japanese designs. Expanding on the topic, Cameron explained: "It isn't that the specifications are not applicable, but they might be different. For instance if we are thinking about assembling several hundred thousand cars in Europe where there is an indigenous manufacturing capability, we really want to adopt standard European specifications. These are bound to have lower costs than if we were to impose a unique Japanese specification onto our supply chain. "For example, consider steel. There might be a grade produced in Japan, performing the same functions as a steel commonly available in Europe, but with a marginally

different specification. In the past we might have gone to a European supplier and requested several hundred tonnes of a unique, but expensive-to-produce specification when thousands of tonnes of something very similar was available at a fraction of the cost. That kind of issue has been addressed by designing in Europe for the European market – it's a question of seeking out where we can get the best value," said Cameron.

Another, more obvious, issue addressed by Nissan is the need for commonality across its product lines, historically an area where Nissan lost considerable ground to the competition. "Seeking out commonality is something we now do automatically," explains Cameron. "Obviously items such as interior trim are often unique to a vehicle, but even where no obvious commonality exists you can impose a consistency on specifying the same grades of plastics. We can be consistent without detracting from the visibility of the product itself.

Even on those products where there really is no commonality, we can still find something by looking within sub-compartments, within the process, within the supplier."

The figures quoted by Cameron with reference to the cost savings that Nissan have managed to leverage in recent years are truly remarkable, so much so that almost inevitably the conclusion drawn is that Nissan had far more fat to trim off than any of its rivals. "It's a valid point," conceded Cameron. "The cost reductions that we have applied are not that different to the levels that have been sought by other manufacturers. Maybe we had more scope in certain instances and were able to get 20 per cent where others were only able to get 15 per cent."

Whatever the attribution, the statistics suggest that Nissan has managed its recovery with greater speed than anyone realistically expected and is in a position to push on with something akin to confidence. "It comes back to the idea of

DEREK CHARTERS

For anyone wanting to gauge industry interest in a particular powertrain technology, the current area of study undertaken by Derek Charters' group within the laboratories at MIRA is often a useful barometer. Previously heavily involved in fuel cell research, Charters, powertrain project manager within the Advanced Engineering Department is currently researching hybrid technology, and his presentation detailed research carried out with MG Rover to develop a hybridised MGF. Unlike many hybrid projects, Charters' purpose was to develop a vehicle with better performance characteristics than the model on which it was based, the argument being that if hybrids are to truly succeed, they cannot be seen to offer economy while paying a heavy price in driving satisfaction.

But Charters has another motivation behind his interest in hybrid research, seeing the hybrid as the perfect stepping stone to the fuel cell vehicle. "That's why we're doing hybrid research to some extent," he explained. "We looked at the fuel cell and saw that we were far, far away from being able from developing something practical in the mass market. We therefore broke it down, asking 'what makes up a fuel cell?' It is made up of a controller, an electric motor and maybe some form of storage mechanism, because the speed of response and the efficiency of the fuel cell requires some sort of intermediate battery – and this is why hybrid research is a natural area of study –

because you win no matter who else wins. Working on the motors, the controllers and the batteries – and learning how to best integrate them – ensures that this research has a definite future, however the energy is created in the first place. In a sense researching hybrids keeps us independent of technology."

For emphasis Charters pointed out that hybrid research takes in all manner of cutting edge automotive technologies: "For example, we came very close to deleting the hydraulic brakes on the [MGF] that we looked at. It would have allowed us to use electrical regeneration braking but the motors are not yet quite strong enough to replace the hydraulics."

Though eager to explore the boundaries of what technology has to offer, Charters was keen to inject a word of caution that referred directly to his presentation theme "We have to be careful and ensure that anything we create is going to be appreciated by the consumer. Look, for example, at electrically-assisted steering, we're moving back to electrically-assisted hydraulic steering because the feel is better. Developments such as hybrid technology, or for that matter X-by-wire, sound like a good idea, but if they deteriorate the driving experience they won't catch on. We have to avoid disappointing the driver. We may be a few years ahead of ourselves, but we have to bring the customer along with us – and some of them are still living in the 1950s and 1960s," he said.

benchmarking," said Cameron. "If you discover that somebody is paying 15 per cent less for a piece of glass than you are paying, you have to understand why that is and what is driving that cost difference. Is it something that we are doing and is it something that our suppliers are doing? In some cases you might not be able to recover the cost differences within the current generation, but you store away the information and the next project that comes through, you are able to negotiate a little bit differently."

While Nissan has been going through its own particular brand of catharsis, over the other side of the boardroom, Renault has been far from idle, rejuvenating its manufacturing base with a mass consolidation of facilities into a series of larger, busier and, above, all, more productive locations closely coupled to a vigorous cost reduction programme. But this, explains Christian Hue de la Colombe, vice president, vehicle cost reduction programme, Renault, is merely the tip of the iceberg. "We've done what we were able to do in the past few years – much of which came from benchmarking and understanding cost drivers – but if you talk about purchasing strategy, globalisation of suppliers, platform development, these are the issues that are going to be developing projects until 2010."



Nissan and Renault representatives discussed the return to profitability of the former, and the massive cost-cutting programme of the latter

Moreover the cost reduction programme itself isn't something that ever reaches any sort of conclusion, "because there are always opportunities," says de la Colombe. "Within an organisation the size of Renault there are always cost reduction opportunities. You have to be creative, and continue that creativity because the trend is continuous. We have to add new features to our products and we have to finance that through improved productivity.

"We can find productivity

improvements in new technologies, in new organisation schemes, understanding synergies with suppliers, with logistics. There are a tremendous number of things that we can do. The industry as a whole is very innovative at the moment, and we find that when you bring an innovation to the market for the first time, it is not necessarily optimized. We always find new ways of optimizing costs."

One of the most fertile grounds for innovation at the moment is the growing

MODERN DAY CRAFTSMANSHIP

The automotive market appreciates craftsmanship, but what about the millions of vehicles produced each year without a hand-stitched steering wheel? Craftsmanship is a buzzword in the mass market as much as in luxury build, even though vehicle manufacturers and Tier Ones spend an inordinate amount of time ensuring that their build processes minimise the amount of free will in assembly operations. Craftsmanship, especially with regard to the interior, has become a by-word for anything that is well made and appreciated. What we're really talking about is customer satisfaction.

Dave Sargent, partner and executive director of European Operations for consumer analysts JD Power, splits this down into two main areas. "Product quality remains the number one driver to customer satisfaction in this industry. There is absolutely no question it is and always has been the key issue. The number two driver is the appeal of the vehicle – what it feels like, what it is like to drive, the perception of style and the levels of comfort."

Sargent added that the interior, viewed

collectively, was the primary driver for customer satisfaction. "It varies by segment and region but in our 2004 survey (27,000 consumers across 33 brands) across Europe as a whole, 44 per cent in the B-Segment, 44 per cent in the C- and 49 per cent in the D-segment viewed the interior as the most important factor in determining satisfaction. When we get into the compact MPV and SUV segments that rises to 53 and 51 per cent respectively. Clearly the interior is critical."

He goes on to argue that, while OEMs should pay attention, the issue of interior appeal is more one for the supply industry to address. "In a situation where the supplier has primary responsibility for determining specification, it also has primary responsibility for finding out what the consumer wants. Clearly this industry is moving in one direction and that is in handing over responsibility to suppliers. To meet this challenge suppliers really need direct contact with end consumers and historically they have not been very good at doing this. One reason is that they find it very difficult to find the end consumer in the

first place [OEMs are notoriously protective of customer lists] and another is that until recently they didn't need to."

Third-party analysts can provide the data that will allow supplier and vehicle OEMs to have an intelligent conversation about consumer demands but there really is no substitute to doing your own research. More often than might be expected, supplier-produced research data arrives at different conclusions to that conducted by the OEM, and while this sounds like a recipe for no small amount of friction it is, says Silke Jagla, consumer research manager at Johnson Controls, very readily accepted. "Actually OEMs know that we do this research and they value it, even request it," she said.

Following her presentation, extolling the virtues and the necessity of upstream market research for Tier 1 suppliers, Jagla observed that the marketplace appears to be moving away from specifications dictated wholly by the industry, to a more democratic arrangement with consumers moving away from passive acceptance of what's on offer ▶▶



Debates at the conference were often lively and continued offstage as well as on the platform – Christian Rennert of Karmann (from left), David Cameron of Nissan, Simon Duval Smith of organizers Ultima Media and Christian Hue de la Colombe of Renault

from Karmann, was given by Dr Christian Rennert, key account manager for international markets. Rennert discussed the relative values of integration versus strategic partnerships, with reference to Karmann's new roof systems operation in Sunderland that will supply roofing systems for the recently announced Micra Coupé Cabriolet.

Discussion of the new Micra Coupé Cabriolet models, to be built in Sunderland, brought together many of the themes discussed across the two days. The fresh investment of £95mn (\$180mn) in the Nissan plant sees 250 new jobs directly created and has a positive effect across the supply chain. Moreover it comes as a direct response to a consumer-driven desire for niche vehicles. Such demand is notoriously time-critical and requires manufacturers and suppliers to raise their performance in terms of applicability of design, intelligence of new technology and robustness of logistics. It provided a fitting closure to the conference.



market for niche vehicles. Renault has not been backward in coming forward with niche products in recent years. Some, such as gloriously quirky Avantime foundered almost instantly, others such as the Mégane Coupé Cabriolet, seem to be on firmer ground. How does the hit, miss or maybe life of a niche vehicle fit in with the scientific process of cost reduction?

"Ah, it is different," conceded de la Colombe. "Not everything is a question of cost reduction. When you develop

something like the Coupé Cabriolet there is automatically a bigger value for the customer. It is a higher cost product but also higher value and there is no problem establishing profitability and return on investment for these kinds of cars, but you have to find the right market and the good idea that sets you apart from everyone else in the marketplace. If you want to go to a niche market you have to be a bit different to others in the market," he said.

The final presentation, and the second

MODERN DAY CRAFTSMANSHIP (CONT.)



Silke Jagla, consumer research manager, Johnson Controls

and beginning to force the pace of change. The point has been made that Tier 1 research, being specific rather than holistic, is liable to accelerate this process.

"Possibly," said Jagla. "The end consumer certainly knows exactly what their current vehicle offers and what they want in the future. When we provide design sketches as stimulus material, consumers have very concrete views on what they can expect for their money."

Consumer opinions may be concrete when faced with existing technology (whether currently employed by the automotive industry or glaringly obvious by omission) but views become less focussed when faced with the unknown. "The consumer is generally well aware of what should be behind a blind switch, so they know when the OEM has saved money on a specification, but when we talk about innovative products, then the consumer has trouble," said Jagla. "Sometimes we show products that are 10 years out and our

survey groups often find it difficult to appreciate their value to everyday usage."

While a greater amount of consumer research doesn't therefore seem likely to lead a new wave of technological advancement, what it is doing is providing a much tighter understanding of consumer aspirations, breaking down markets not only into the accepted derivations (region, gender, age, wealth) but also into subdivisions of these derivations. According to Jagla the future is going to be based around "understanding the individual – knowing very precisely who the consumer is and what they expect."

Inevitably this leads to the question of mass customisation and the willingness of the manufacturing industry to indulge the marketing requirements necessary to cater for smaller and smaller market segments. It's an interesting quandary for the OEM: on the one hand mass customisation invariably raises costs, on the other anything they don't provide, the aftermarket almost certainly will.