Thu, 5 December 2024
Weekly Newsletter

DVN Interior

NEWSLETTER #239

Editorial

Sustainable Interior: The End-User View

VOLVO CONCEPT RECHARGE (VOLVO IMAGE)

At the recent DVN Workshop in Torino, and in recent newsletters, we have been exploring sustainable interiors—mainly from the viewpoints of automakers and suppliers, trying to draw the path designers and engineers need to follow to support the big challenges we are facing today in reaching goals set by the upcoming circular economy. However, we've not yet given due attention to another fundamental aspect, playing a key role in the successful realization of a truly sustainable interior: the end customer and their needs, wants, habits, and behaviors.

To make sure we can correctly interpret the trends from the consumer perspective, we asked in an expert—see this week's in-depth report.

The first DVN Interior Workshop of 2025 will be in Köln, Germany, on 8-9 April, with the theme **Progress in Interior UX & Sustainability**. As the industry keeps improving user experience within the vehicle, sustainability is not just a nice thing to have—it's effectively mandatory, not just in terms of regulations, but also by dint of end-user expectations.

Save the date! We are looking forward to your contributions of lectures, exhibits, presence, and participation.

Sincerely yours,

Philippe Aumont
DVN-Interior General Editor

In Depth Interior Technology

Interview: The Consumer Perspective on Sustainable Interiors

VOLVO CONCEPT RECHARGE (VOLVO IMAGE)

Consumer behavior is changeable, difficult to predict, and subject to rapid change. So to get an accurate handle on what's blowing in the change-winds generated by megatrends relevant to the automotive world, we've asked in an expert: Jimena Martinez, a qualified psychologist and interior designer whose expertise and experience, combined with her knowledge in automotive and connected goods, enables her to deliver dependable insight into contemporary consumer needs and wants. Martinez is co-founder of LemonLab, a qualitative research agency providing consumer insights in fields ranging from luxury to automotive to consumer goods.

We interviewed Martinez on consumer views of car interiors, with particular attention to the sustainability aspects impacting the future of car interior design.

Decades of research and countless publications dedicated to consumer behavior have validated ideas and inspired innovation processes. However, they have also revealed a fundamental truth: there’s no singular entity that can be defined as 'people'. Even if we generalize, it’s evident that people don’t truly know what they want.

Freedom and Sustainability

Cars have been a part of our lives for over a century, fulfilling roles far beyond transport. They're symbols of aspiration and desire, status symbols, adventure companions. Today, cars sit at the heart of humanity's most pressing concern: how to live sustainably while still enjoying freedom and spontaneity.

When trying to understand what consumers would like in car interiors, the real task is deciphering how their contexts, lifestyles, and social environments shape their decision-making processes. It's about examining how their conscious and subconscious minds interpret the current landscape—the zeitgeist—and ultimately arrive at a choice, even if that choice is to delay a decision until things feel more certain.

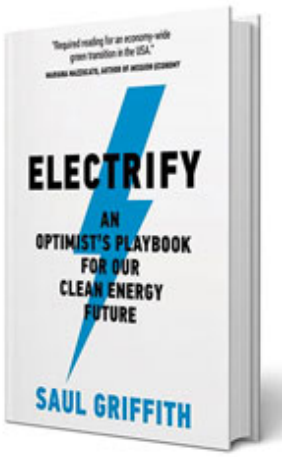
Sustainability as a perceived duty

Consumers today feel overwhelmed by the endless and complicated discussion surrounding sustainability and environmental compatibility of everyday activities and items. They are unsure about what constitutes a good choice. Overall, they don't have the answer. Sustainability isn't experienced as a need or a desire, but a sense of duty—a form of consciousness and engagement. This engagement is no longer celebrated as an added value or perq; consumers expect large, big-money industries to deliver eco-compatible, sustainable products made in eco-compatible, sustainable ways. In uncertain economic times, they need brands to shoulder the burden of responsibility by providing solutions that free them from worrying about sustainability.

Consumers expect automakers to handle sustainability, but they won't tolerate greenwashing or misleading claims. They are demanding, increasingly skeptical, and, in many cases, skeptical or even cynical. Every advance in sustainable discussions often leaves them feeling more like victims than participants—caught in a cycle of guilt, blame, restrictions, and politicized distortion of science.

More than ever, consumers need liberation from the mental load of sustainability. In their daily lives, they already deal with separating recycling, purchasing eco-friendly products, and limiting consumption, travel, and driving. The connection to the goods and services that once inspired them has eroded. Here lies the challenge—and the opportunity. Cars are more than objects; they have the potential to become enablers of experiences, spaces for living, sharing, and exploring. Once a car becomes a financial burden, a short-term compromise, or a mere functional object, sustainability alone won't naturally rise to the top of their purchasing criteria. Sustainability needs to come paired with economic benefits or surprise-and-delight features.

Electrification Doesn't Solve Everything!



What consumers expect from automakers today isn't just a list of sustainable features. They're after a redefinition of the car itself. They want a new vision and relationship with the vehicle that goes beyond just 'it's electric, so you're sustainable'. In the medium- to long term, EVs will become the norm, and simply being electric won't be enough to satisfy the idea of a sustainable consumer. The time of the militant, green-driving idealist has passed. Such engagement is now seen as costly, shortsighted, and riddled with compromises. When the fundamental benefits of driving are challenged by range limitations, insufficient charging infrastructure, and increasing restrictions, consumers won't settle.

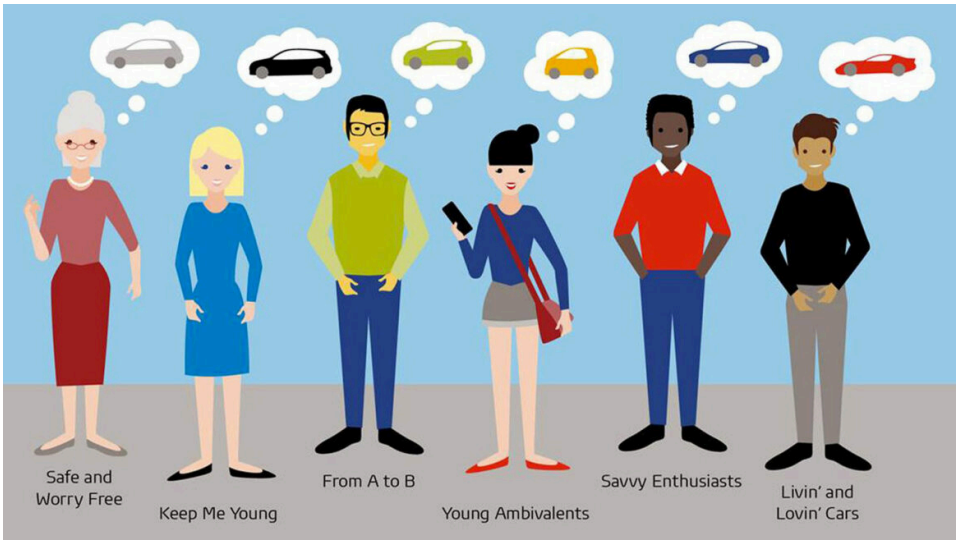
Automakers need to remember that driving speaks to three fundamental human needs: safety, connection, and freedom. This is why consumer insights—not just consumer research—are crucial. Consumers seek a balance between pragmatic and emotional triggers. Meeting basic expectations for sustainability in car interiors might check all the functional boxes, but it won't spark emotional connection or excitement—not even for the most pragmatic buyers.

CONTINENTAL IMAGE

Sustainability: Beyond 'Must-Have'

As society evolves, so do consumer needs, driven by innovation. For a time, electric driving was synonymous with luxury, offering silent power and advanced technology accessible to the happy few. Yet even premium EV brands with marketing centered around sustainability and simplicity struggles to meet certain emotional needs. While the technology is impressive, it lacks long-term engagement, personalization, and consumer-focused UX. Similarly, when it comes to sustainable car interiors, consumers might not know exactly what they want, but they need to feel heard. They want industry to interpret their unspoken wishes and deliver user experiences that go far beyond the must-have features of a sustainable interior.

Full sustainability as a standalone benefit isn't enough, just as technology alone isn't, either. For most consumers, outside of niche enthusiasts or those with high budgets, the decision to pay extra for an ecologically-sound interior hinges on added emotional or functional benefits, which sustainability alone doesn't provide. Consumers might be willing to spend more on interiors offering tangible health or comfort benefits, such as improved air quality or luxurious textures that create a sense of coziness and indulgence. They may also appreciate proven long-term economic advantages tied to sustainable materials or processes. In these cases, sustainability becomes part of the actual value rather than just an abstract concept.



GFK IMAGE

Consumer clinics, a cornerstone of traditional research, remain useful for validating concepts. However, they must be interpreted with caution. The insights they provide are often snapshots of a moment. Using this data to design cars that will hit the market four to five years later requires careful extrapolation to anticipate future scenarios.

Without considering the broader cultural and social dimensions of consumers' lives, the results risk being overly neutral, resulting in designs that appeal to no one. Similarly, designing a sustainable car interior must go beyond the idea of completely-green brands, which often end up as niche players, appealing only to a small, militant audience. A car that feels overly green—natural and sustainable but lacking aesthetic appeal—might elicit polite admiration, but rarely a purchase.

Brands that deliver authentic sustainability while tapping into emotional connection will engage consumers far more effectively than brands relying solely on their eco-credentials.

There isn't a straightforward yes/no answer to the demand for sustainable interiors. The art of design thinking lies in creating scenarios that integrate as many variables as possible, addressing consumers' practical and emotional needs in their socio-cultural contexts. When done successfully, these scenarios establish connections that resonate deeply and make complete sense, delivering products that consumers don't just accept but truly desire.

Data-Informed Design

As an integration to qualitative insights, universities like the Hochschule Niederrhein in Germany and the Chalmers University of Technology in Sweden (whose studies are summarized in this article) are also working on qualitative and quantitative data to understand how the uncertainty regarding customer expectations for a sustainable car interior design can be reduced.

The information gathered through qualitative and quantitative research methodology by researchers of these two universities is the result of investigations of customer perception and wishes regarding sustainability in electric cars. These data are then used as input for a sustainability-driven, data-informed design process.

The objective of data-informed design (DID) is to drive decisions in the design and development of products, services, and systems through a thorough understanding of available data. DID can help within a design-for-sustainability framework to identify patterns and trends as well as to make predictions about future trends. This can help designers and engineers to create products that are better aligned with the needs and wants of their customers. The data can also be used to test and validate design decisions, providing a more objective basis for making design choices at very early stages of product development.

While data can inform design decisions, it should not dictate them. Designers must use their expertise and intuition to find creative solutions that align with the project goals while using data as a tool to inform and support those decisions.

ROLLS ROYCE PHANTOM 2018 (ROLLS ROYCE IMAGE)

Decline of the Car as a Status Symbol

There is an ongoing decline of the car as a status symbol. Owning a car is becoming less important, particularly among younger generations, who no longer see the car as a symbol of status but rather as a functional tool. This shift in mindset is leading to increased interest in shared mobility and car share services, as reflected in research like the 2015 Ford Automotive Zeitgeist Study, wherein a significant portion of respondents expressed interest in using environmentally friendly vehicles and shared cars for ecological reasons.

As the importance of engine performance, exterior design, and vehicle propulsion diminishes with the rise of electric vehicles, the focus is shifting towards the interior experience. The demand for durable, adaptable, and aesthetically appealing vehicle interiors is growing, especially in the context of shared mobility. Consumers expect manufacturers to adapt and meet these ecological demands, contributing to decarbonization goals. Driving and interior experience are becoming more relevant to customers, offering the potential for manufacturers to differentiate and remain competitive.

Researchers have been concentrating their apposite investigations on how potential customers perceive the sustainable interior of an electric car, and whether the design of new materials for car interiors needs to differ from traditional materials to meet evolving customer preferences for sustainability, durability, and functionality.

ECO-FRIENDLY CAR INTERIOR (PINTEREST FIND)

Key Findings

- The interior plays a major role in the sustainability assessment of a car.In general, sustainable materials are perceived as future-oriented, but they should be indistinguishable, design-wise, from conventional materials.
- These materials should be of at least the same quality—durability, wear resistance, etc—as common materials.
- Visually, a classic and simple interior design is preferred.
- Natural tones are less demanded in the interior.
- Materials play an essential role. Sustainable design should use sustainable and pollutant-free raw materials, recycled materials, and resource-saving production.
- No plastics, but natural fibers. Start with seat covers, carpets, and roof linings

Data-informed design strikes a balance between using data to inform design decisions and allowing designers to use their expertise and intuition to create meaningful and engaging products. From these results, we can gather that the DID process is not in conflict with scenarios identified by consumer insights, but can complement the qualitative view introducing more objectivity into the design decision-making process and allowing design management to make more informed and strategic decisions.

Interior News

Closed-Loop Seat Foam from Dow, Adient, JLR

INTERIOR NEWS

ADIENT IMAGE

JLR, Adient, and Dow have collaborated to produce new seat foam for JLR's luxury vehicles using closed-loop recycled content. That is a significant technical breakthrough in the depolymerization closed-loop recycling polyurethane using seats foam from used vehicles. This innovative process reintegrates the recycled PU foam back into new seat production, setting a new benchmark for circular economy practices in the mobility industry.

As part of Dow Polyurethanes' Renuva sustainability program, this initiative addresses the growing demand for recycled materials by diverting what used to be waste from end-of-life vehicles, and converting it into raw materials.

In that case, it his means 'post-consumer' PU molded foams have previously been collected from end-of-life vehicles, sorted, and shredded. On this basis, Dow produces a new, circular polyol, which is subsequently processed and integrated into Adient's seating formulas. As a result, the Adient Front Seat Cushion prototypes are currently **composed of 20% re-polyol from PU end-of-life vehicles**.

This innovation reduces emissions, eliminates waste, and enables a secure supply of low-carbon seat foam for vehicles while maintaining the superior comfort and quality standards of JLR seats.

Andrea Debbane, Chief Sustainability Officer at JLR stated: "This breakthrough is a great example of how the automotive value chain can work as a collective to demonstrate that full circularity is feasible and unlock meaningful change at scale. This way of working holds significant potential for increasing sustainability and is critical to JLR's transition to more circular vehicles."

Collaboration like this, based on shared vision, accelerates the sustainability journey that supports net-zero carbon emissions and circular and renewable solutions goals.

Premium Interiors at Los Angeles Auto Show

INTERIOR NEWS

HYUNDAI IONIQ 7 CONCEPT (HYUNDAI IMAGE)

This year's Los Angeles Auto Show pointed up the rise of hybrids and arrival of the mainstream 3-row electric SUV, with a central presence of Hyundi/Kia, and (as in the US-Canada market at large) almost no Chinese presence. No matter the segment, all of the new vehicles have premium interiors.

Hyundai introduced the 2026 Ioniq 9, a big 3-row electric SUV, and Kia introduced their high-performance 2026 EV9 GT three-row electric SUV—Kia America COO Steve Center calls it a "Dad's soccer car". Even Jeep touted its first 3-row SUV.

Premium-feeling interiors are now de rigueur, whether in a luxury or mass-market vehicle. “People want nice stuff,” Kia's speaker said. “People want the interior to be comfortable and functional and luxurious.” The Kia

EV6, for example, has more sophisticated interior textures and new infotainment features including a Wi-Fi hotspot.

“Automotive interiors years ago were an afterthought,” says Center. “Now there is kind of a renaissance in design. As the price of the car continues to climb, another way to justify the price is to make the interior nicer.”

The Jeep Wagoneer S has a screen over 45" wide in its dashboard, 64 options for ambient color lighting, and heated front and rear seats. Personalized front seat settings include a massage.

2025 VW TIGUAN: LUXURY-LEVEL INTERIOR AND AMBIENT LIGHTING (VW IMAGE)

The 2025 VW Tiguan, a midline CUV, has seat massagers, real wood trim, and mood-specific ambient lighting. Quilted leather seats add to the comfortable mood.

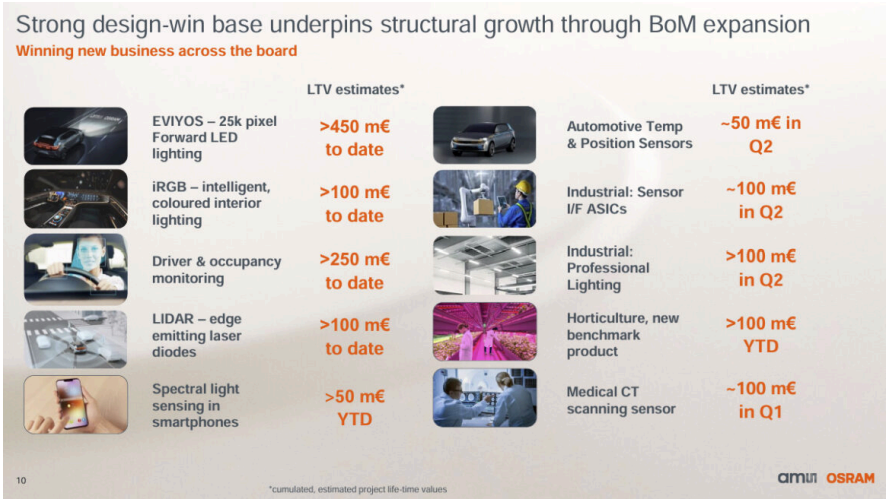
Paris Motorshow: RGB interior lighting

INTERIOR NEWS

DVN IMAGE

By Paul-Henri Matha

Interior lighting was a bit less in my focus area during the last six years at Volvo Cars; I was focusing on exterior lighting. Previously during my time on the Renault lighting team, I handled interior lighting. So, is interior lighting part of exterior lighting or part of the interior department at an automaker? From my current DVN perspective, I say it's 50/50.
What directly caught my eye is the importance of RGB light sources in interior vehicles. I thought of this as a feature only in China, but I was wrong. In ams OSRAM's Q3 financial report, they mention that interior intelligent RGB is a fast-growing business for them with a market above €100m.



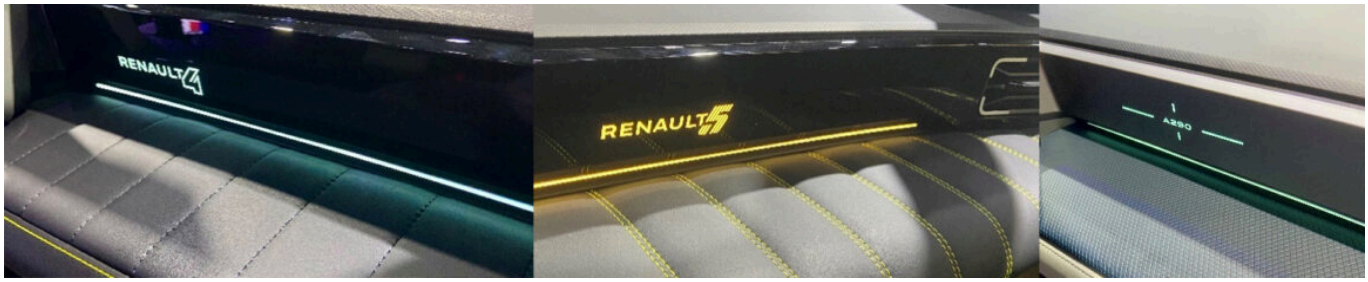
Most automakers are proposing RGB interior lighting with selectable color on the central stack display, even on very affordable B-segment models. This is clearly now the standard, and here are some examples:

Renault 4, 5, Alpine A290

Multi Sense button on the steering wheel to activate / change ambient light

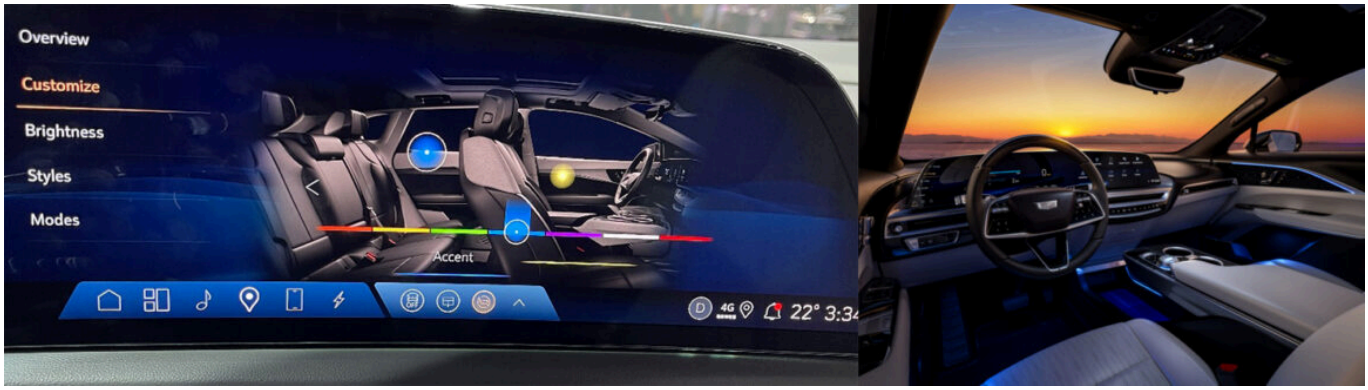
Possibility to change color and ambiance on the central stack display

Renault 4, Renault 5, Alpine A290 logo with RGB LEDs in front of the passenger dashboard



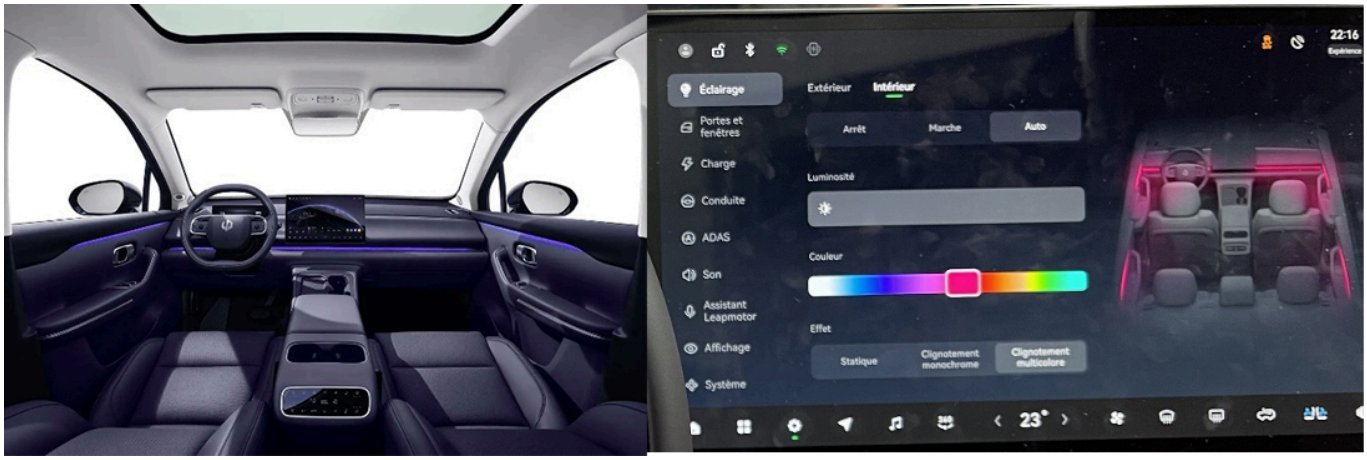
Cadillac Optiq

Possibility to change color and ambiance on the central stack display



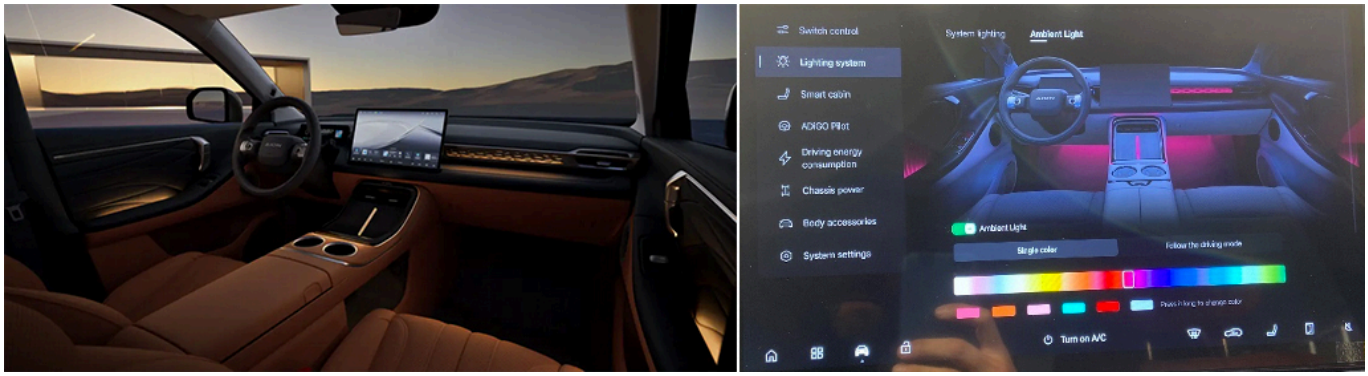
Leapmotor C16

Possibility to change color and ambiance on the central stack display



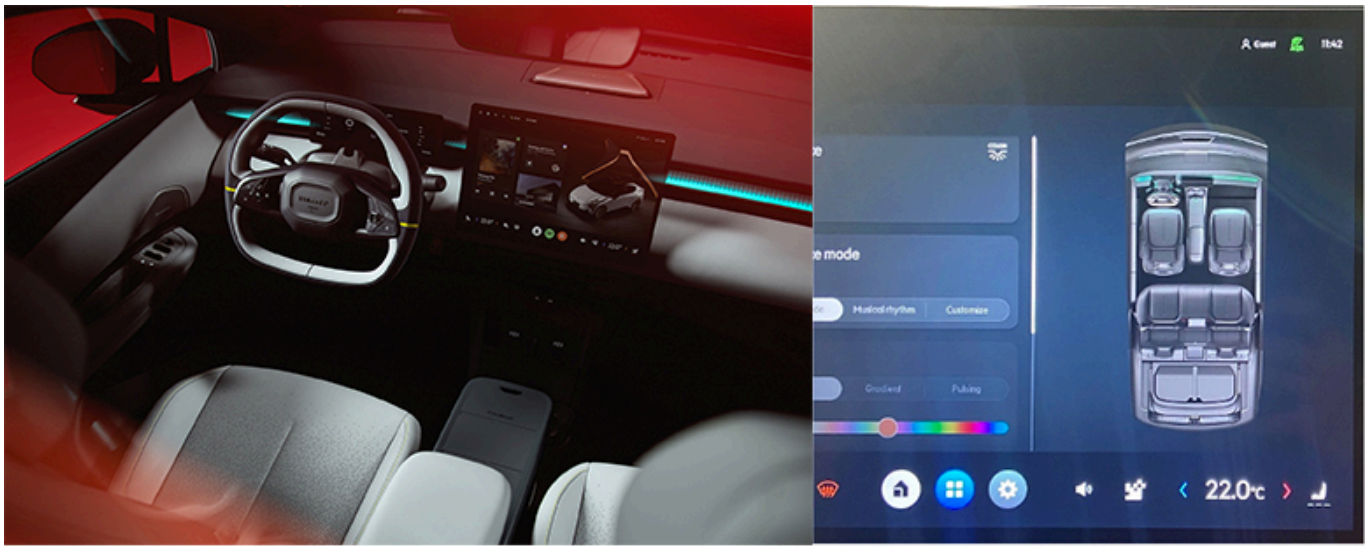
GAC Aion V

Possibility to change color and ambiance on the central stack display



Lynk & Co 02

Possibility to change color and ambiance on the central stack display



Hongqi EHS7

Possibility to change color and ambiance on the central stack display

However, communication standards are not yet done. You can have LIN, CAN, UART over CAN, Ethernet, dedicated LED-IC or integrated IC into LEDs, and also different protocols from microcontroller to LED IC (IseLED, Melibu – **Me**lexis **Li**ght **Bu**s), Open-source Protocol from Osram or Nichia, etc). From a non-expert view, I think it is time to converge to a single solution to simplify, save cost, and reduce development time.

Too Many Touchscreens Annoy Drivers: Hyundai

INTERIOR NEWS

HYUNDAI IMAGE

Touchscreen operation poses a significant safety risk as drivers take their eyes off the road, which increases the risk of distraction and crashes. More and more automakers are pumping the brakes on the touchscreenification of the auto interior, and coming back to more physical buttons again. Hyundai researchers have found that drivers quickly become annoyed with touchscreens.

Over the past ten years, Hyundai has introduced touchscreen infotainment systems in all their models. Functions that were previously operated using switches or levers were moved to the vehicle screen and operated by taps and swipes, like a smartphone. In 2019, Hyundai even presented a touchscreen-concept steering wheel.

Now, though, Hyundai intends to reintroduce physical buttons. This is already starting with the revised Ioniq 5, which has more analog controls than before. The reason for the change is internal research. "In our tests with our focus group, we found that people get stressed, annoyed and angry when they want to control something in an emergency but are unable to do so," explained HDNA Vice President Ha Hak-soo.

The Hyundai Ioniq 6 also features physical buttons and knobs for a lot of common controls. Still, although Hyundai is prioritizing buttons now, HDNA's head of interior design said that self-driving cars could move the needle back towards non-button controls.

Critics of touchscreens have long complained that it takes a lot more time and driver attention to change the HVAC settings (for example) via the screen than to grab and turn a physical knob without having to look at it. Euro NCAP has also criticized the shift towards touchscreen-everything, which will be penalized in the new assessment criteria for 2026.

Xpeng P7+: Software Functions as a Premium Feature

INTERIOR NEWS

XPENG P7+ (XPENG IMAGE)

Xpeng launched their P7+ model in China earlier this month, billed as "the world's first AI-defined car". Company Chairman, CEO, and founder He Xiaopeng said it has an 'AI-enhanced, particularly good' L^2 driver-assistance suite, and natural voice control in the cockpit.

The cockpit integrates XPeng's proprietary X-GPT model, with the Qualcomm 8295P cockpit chip for 50 per cent better performance. This system enables natural voice interactions with a high degree of simulated comprehension, while a series of functions can be activated by one simple voice command. The interior features a 15.6" central control screen, a 10.25" digital instrument display, and an 8" rear entertainment screen with three-screen connectivity.

The car's control is said to be particularly precise thanks to 'AI', and the car offers unusually powerful braking. Its energy efficiency is such that it can travel ten kilometers on one kilowatt-hour (equivalent to 10 kWh/100 km). Xpeng says OTA updates are to be pushed to the cars every two days.

The driving system, developed by Xpeng, does not include lidar hardware; it relies only on cameras and millimeter-wave radar, a lower-cost concept spun as "pure perception".

Inside, the P7+ offers a premium experience with a 2.1-m^2 panoramic sunroof, Nappa leather 'cloud comfort' seats with heating, ventilation, and massage functions as standard across all model variants, and a 10-degree rear-seat recline.

Sales are off to a strong start in China, at least in part because of the low price: around €24,300 to €28,400 for an upper-midrange example.

New Acura ZDX Has Cadillac Lyriq Underpinnings

INTERIOR NEWS

ACURA ZDX (ABOVE, HONDA IMAGE) AND CADILLAC LYRIQ (BELOW, GM IMAGE)

ACURA ZDX (HONDA IMAGE)

Typically, Honda and Acura models share in-house platforms, but Honda has no EV platform available yet, so the first Acura midsize BEV 2-row crossover, the ZDX, is built on the Cadillac Lyriq Ultium platform.

Even though the ZDX and Lyriq are based on the same platform and share the same 102-kWh battery pack, they are not clones.

The ZDX has an airy, minimalistic interior you would expect in a premium car.

ZDX development leader John Hwang says it was designed at the Acura Design Studio in Los Angeles, with designers using 3D virtual reality technologies to collaborate with design teams in Japan on exterior and interior designs, materials, colors, and rear-seat legroom early in the development process.

The interiors of the ZDX and Lyriq are vastly different. Most notably, the Lyriq comes with an imposing 33" high-resolution touchscreen, with 9K resolution capability. It looks like one giant screen, but it is three separate screens connected under the same piece of curved glass.

The Acura, on the other hand, has an 11" display in front of the driver and an 11.3" sideways-mounted center touchscreen that features the first integration of Google built in, as well as wireless Apple CarPlay and Android Auto (no longer in GM vehicles).

Like the Lyriq, the ZDX uses an Android Automotive OS-based infotainment system, although it's displayed over two discrete screens—one for the driver display, another for the infotainment—rather than the Cadillac's 33" all-in-one display.

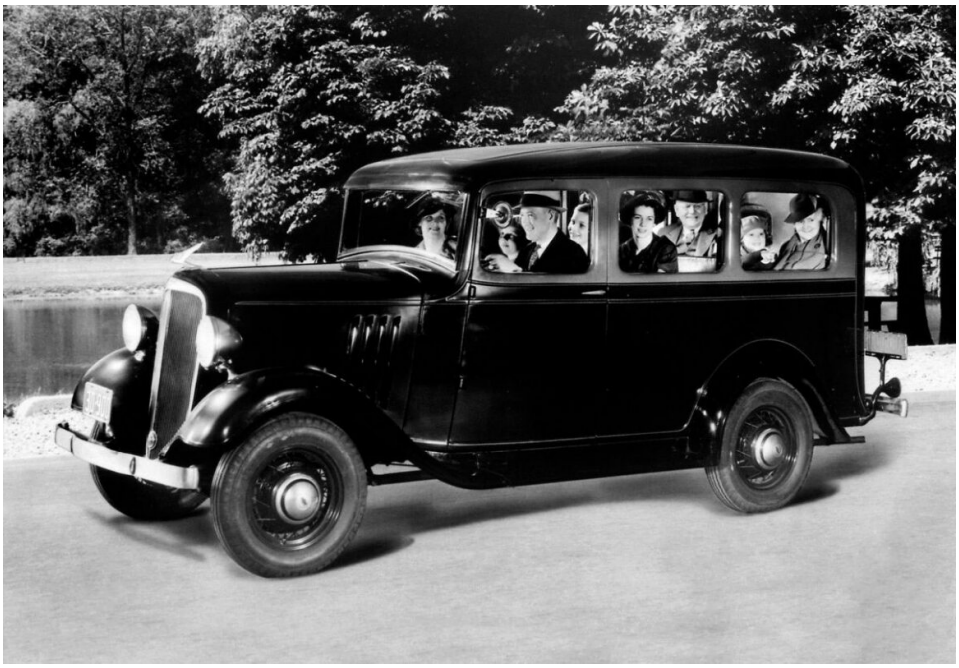
Cockpit materials in the ZDX create a sports car ambiance, with lots of real aluminum trim and contrasting piping and stitching.

The two cars' audio systems also are different. The ZDX has an 18-speaker Bang & Olufsen system, while the Lyriq has a 19-speaker AKG Studio system. The ZDX has a hands-free driving system called AcuraWatch 360, based on GM’s acclaimed Super Cruise system.

Chev Suburban 9-Seater

INTERIOR NEWS

Vans are not very popular anymore, but room for a whole family (and family accessories) is still a market demand. SUVs are increasingly able to accommodate 7 passengers in three rows, and a few models can take up to 9 people, with three seats in all three rows.



1935 CHEVROLET SUBURBAN (GM IMAGE)

One such model is the Chevrolet Suburban, known since the first 1935 model for its spacious interior.

Now the 12th-generation Suburban has been unveiled, and it offers a front 40/20/40 split bench seat.

Even with 9 occupants onboard the new Suburban has a very roomy interior, at any position, in terms of headroom shoulder room, hiproom and legroom.

The Design Lounge

Ford's New Human-Centered Design Studio

THE DESIGN LOUNGE

Ford has integrated their research-focused innovation unit, formerly called D-Ford, into the global design team, and they've rebranded it Human Centered Design (HCD). The team of Usha Raghavachari has opened a new studio in east London, adding to existing studios in Detroit and Shanghai with the aim of fast-tracking physical and software innovations. The new facility brings together HCD with Ford's London advanced design team, which traces its history back to J Mays' famed Ingeni studio in central London. D-Ford, named in homage to Stanford University's famed D-School (D for Design) in California, was set up away from Ford's corporate structures to operate much like a startup. "Typically a big company rejects everything," Raghavachari told journalists on a recent visit to the studio. "D-Ford has educated the entire company on how to think differently."

The Human Centred Design team is under the supervision of Amko Leenarts, director of design at Ford of Europe. Leenarts wants to use the team to drive innovation in the new 'hero' range of vehicles Ford is developing as they move away from their past as a generalist car company to a smaller, more specialist manufacturer in Europe.

TILTING STEERING (FORD IMAGE)

Much of D-Ford/HCD's work so far has been on vans. The team's biggest success has been the tilting steering wheel that debuted as an option on the new Transit Custom 1-ton van. The solution allows drivers to turn the wheel into a desk, and was devised after finding out exactly how Transit owners use their vehicle.

The HDC teams have honed their methods to quickly develop prototypes. They work with easy cardboard prototypes, for example, what we could call learn-fast-do-cheap prototypes. This helps potential users to interact with the prototypes of new or improved feature, mocked up on a vehicle rig.

The team is now moving from vans to cars. Some solutions are obvious, for example the desire of some Chinese customers to sleep in their car. Others will focus on more the intersection between software and hardware. The customer research carried out by the team will help discover what software elements will ultimately be just a gimmick and what customers will actually pay for. "Designers need inspiration, right?" Raghavachari said. "Without it, it's really hard to then connect with the people that you're trying to solve for."

Kia Interior Design Boss All-In on New Tech

THE DESIGN LOUNGE

KIA IMAGE

Jochen Paesen is Head of Interior Design at Kia. He gave an interview with Motor-Exclusive about the development of car interiors. Here are some excerpts:

"Korea is a country that changes very quickly and doesn't stick to the status quo for long. A new technology? Let's use that. That's also what characterizes us in design and development. For me, that's what defines Kia, what defines Korean culture and what we bring to new products. We are not afraid to try something new. We are fast. We are pragmatic. Nevertheless, a Kia must be clearly recognizable as a Kia.

KIA EV3

“We generally make market-specific adaptations. For our global models, we have regionally different offers for colors, materials and options. The EV 3 is a more global product that remains essentially the same in markets such as the USA and Europe, but is offered with different equipment packages.

“Security is very important. Safety systems are getting better and better. If we assume that we will have far fewer or no more accidents in the future, then I will be able to sit in my car in a completely different way. That will give new impetus.

“'AI' is here. For us, it is important to integrate it as a helping hand. The character is no longer central. It's not about the personality, but about what 'AI' does. Here in the EV 3, we have integrated 'AI' more discreetly. There is acoustic and graphical feedback anyway. We will continue to develop this further.

“We are looking at what we can do to incorporate sustainability and sustainable thinking into our processes. That is why we have defined ten sustainable must-have elements. These include, for example, BTX-free paints, carpets made from recycled PET, and organic PU foams that we use. One point was also to do away with leather. We now have these ten principles in all our cars and they form a firm foundation. This also includes our circularity emblem in the vehicles with a QR code. You can scan the code and then see what collaborations we are involved in, what we are developing, where we have made progress and where we have not".

News Mobility

China Program to Expand Autonomous Driving

NEWS MOBILITY

XPENG IMAGE

The Chinese Government wants to promote autonomous driving, and so is expanding its support programs. State-controlled media such as the Global Times in Beijing report that this is intended to make domestic car manufacturers more competitive internationally. Since the beginning of this month, the central government has been implementing a plan for this purpose that was published in November last year; road tests are being significantly expanded throughout the country.

As many as nine Chinese car manufacturers received new licenses this past June—including BYD, Nio, Changan, and SAIC— to test L^3 autonomous driving capabilities on restricted areas in seven cities including Beijing, Shanghai, Guangzhou and Chongqing.

This is the first concrete implementation of the Chinese Government plan from November 2023 called "Notice on Conducting the Pilot Program for Intelligent Connected Vehicle Access and Road Traffic". China is thus clearly ahead of the international field when it comes to permission for road tests for driverless driving. Elsewhere, including in the USA and Japan, authorities have been more cautious following accidents and traffic problems caused by autonomous cars.

BMW V2X in China

NEWS MOBILITY

BMW IMAGE

BMW will start series production of cars with V2X technology in China this coming January—starting with the 5 Series, technology in which will then enable "vehicle-road-cloud integration", according to the automaker.

This year, the Chinese Government started focusing heavily on the development of connected driving with the help of the cloud. In this variant of V2X ("vehicle-to-everything"), cars will be able to communicate not only with other cars via mobile data, but also with 'intelligent' traffic lights and 'smart' city control centers via the cloud. The Chinese version of connected driving relies on the exchange of lots of data between hundreds of vehicles, roadside infrastructure and control centers.

BMW is supporting the Chinese Government's goal; this past July, that country's Ministry of Industry and Information Technology (MIIT) announced large-scale pilot tests for connected driving with cloud integration in Beijing, Shanghai, Chongqing, and many provincial capitals.

This new phase for connected driving in China has also drawn criticism, such as to the enormous cost of the necessary new roadside infrastructure.

From a Chinese perspective, connected driving with the help of the cloud has several enticing advantages. Firstly, the technology could be safer than autonomous driving without extensive networking. The perception of autonomously driving vehicles based on the Tesla model ends with the range of the installed cameras and sensors.

With connected driving using cloud data, on the other hand, accidents that are still over the horizon can be communicated to following vehicles. Vehicles on a collision course can be warned of each other. This makes serious accidents less likely.

No other country has such a modern mobile network as China's. V2X via the cloud is not only technically possible, but also allows visionary solutions for well-functioning transportation in megacities. This also promises to reduce carbon dioxide emissions from private transportation.

The automotive industry in the USA and (especially) Europe will likely never receive such lavish government support, due to data-protection concerns that don't exist in China, where constant and universal surveillance is just a fact of life. This gives China's industry another opportunity to overtake Western countries in the transformation of mobility. From 2027 at the latest, it is likely to become even more difficult for Western car manufacturers on the Chinese car market if they do not embrace Chinese V2X plans with cloud connectivity. In the future, V2X technology will be necessary to obtain a high safety rating for individual car models via the Chinese vehicle evaluation program, C-NCAP.

General News

CES Innovation Awards Announced

GENERAL NEWS

CONTINENTAL IMAGE

The Consumer Technology Association (CTA) is announcing its CES Innovation Awards® 2025 honorees. The 2025 awards program received a recordbreaking number of submissions—over 3,400 of them, a 13-per-cent increase over 2024. The awards are for exceptional design and engineering in technology to tackle global challenges.

There are 33 award categories. 'Artificial intelligence' is the fastest-growing one, with a 49.5-per-cent increase in submissions compared to last year, underscoring how 'AI' is seeping into our lives at every turn. 'AI' will be a central theme for CES 2025, present throughout the show floor and conference programming.

Here is a selection of nominees within the auto-interior realm:

• **Continental's Invisible Biometrics Sensing Display** tracks vehicle occupants' vital parameters using a camera and a laser projector installed behind the dashboard display, to support a wide range of safety and comfort functions. The technology detects the passengers inside the car through a high-resolution OLED screen, meaning it is completely invisible to the naked eye.

Smart Eye Sheila AI Co-Driver

Smart Eye's Sheila 'AI' Co-Driver, billed by the maker as 'empathetic', combines the capabilities of chatbots (LLMs) and in-cabin sensing technologies to deliver real-time, context-aware interactions that elevate both safety and comfort within the vehicle.

Tactotek IMSE Technology

TactoTek scooped up CES Innovation Awards for two products: their IMSE Technology Platform, a revolutionary approach to designing and manufacturing electronics, and their IMSE Intelligent Illuminated Door Panel, an innovative application of IMSE that redefines lighting and functionality in vehicle interiors.