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Weekly Newsletter

DVN-I
Automotive Interior

NEWSLETTER #208

Editorial

DVN Interior Workshop On Tuesday 23 April—Join In!

The DVN Interior Workshop is about to happen early next week in Köln. You won't want to miss this day-and-half workshop, with the rubric Interior of the Future: New Features and Emerging Technologies.

The docket is impressive: three keynotes; 31 lectures; design and sustainability panel discussions, and more. Major automakers including Ford, Jaguar Land Rover, Volvo, Stellantis, and Lucid will share their views on the future of interiors, including HMI, interior lighting, materials, and design. There's a whole seating session including majors such as Adient, Forvia, and Toyota Boshoku. The HMI and interior lighting sessions include Valeo, Marelli, Continental, Antolin, AMS Osram, Seoul Semiconductors, and more. New companies will also be there, such as Ceres Holographics, Seaborough, Grewus, and Feno. And key material suppliers will also participate in the show-and-tell, such as Dow Chemicals, Mocom, and Delo.

It will be a terrific opportunity for networking, to make new contacts and renew and reinforce existing ones: 200 attendees, representing at least 80 companies, 12 sponsors, and all the newest innovations on display in the expo booths.

If you're not yet registered, hurry fast! And don't forget the 9th question in the DVN Interior survey, the results of which will be presented during the workshop.

Sincerely yours,

Philippe Aumont
DVN-Interior General Editor

In Depth Interior Technology

DVN Interior Köln Workshop Is Just Around The Corner

DVN INTERIOR 2024 KÖLN WORKSHOP IS JUST AROUND THE CORNER

The 2024 DVN Interior Köln Workshop is happening early next week.

The Program is exciting! We have worked hard and long to make sure of that, building in a great deal of worthy content and interaction. We've designed it for participants to be actively engaged and interactive during the full day and half's duration.

To that end, we've increased the number of lectures. And we're dividing the sessions thematically, with focus on HMI and smart surfaces; interior lighting; seats; materials and sustainability, and design. And just before the coffee break there'll be a pitch session for our exhibitors to introduce their expo booths.

We've scheduled a market insight session to open the workshop, so everyone will be primed to discuss it during all the breaks and interaction sessions. One session will be dedicated to design, ending in a panel discussion for designers to interact with the audience via the Slido app, which has made audience participation easy and fun at past DVN events. Audience input will be picked up in real time in the panel discussion.

The full docket is listed below, and also **on the DVN website**. First, here's a concise list of highlights, starting with lectures by automakers including Lucid, Ford, Jaguar Land Rover, and Stellantis, and Keynote Speakers:

- Pierrick Boulay, from Yole Group: 'From LCD to OLEDs: A Journey Through Display
- Technologies' Jose Sierra, from Lucid: 'Interior Lighting of the Lucid Gravity'
- Prof. Dr. Andrea Upmann, from FH Aachen University of Applied Sciences: 'Interior Concepts and Reductive Design of Micro Vehicles'.

The event will comprise seven sessions:

On the first day, there will be two sessions on HMI and smart surfaces, featuring:

- Iris Lydorf, from Ford: 'Trends and Innovations in the HMI — UX Research and Concept Development'
- Karlheinz Blankenbach, from Pforzheim University: 'Toward Codriver Displays with Switchable Privacy'
- Wolfgang Clemens, from PolyIC: 'User-Centred Solutions for Interior Cabin Decoration & HMI'
- Andy Travers, from Ceres Holographics: 'A New Generation of HUDs Provide A Safer View From the Driver's Seat'
- Rémi Mathieu, from Valeo: 'Evolution of Display and HMI'
- Kalpak Patankar, from Marelli: 'Digital Detox Cabin'
- Felix Hake, from Marquardt: 'Marquardt DemoCar 2.0 - Crystal Clear Innovations for the Future Interior'
- Dominique Heilborn, from TactoTek: 'The role of IMSE in Shaping the Future of Automotive Design, Performance, and Sustainability'
- Dr Tim Wolfer, from Continental: 'Visionary Interior Meets User Experience – How we Actively Shape the Automotive Transformation'

HYUNDAI IMAGE

The first day's agenda will end with a session about interior lighting and health:

- Anne Berends, from Seaborough: 'Occupant Health & Wellbeing: From Passive Monitoring to Active Enhancement'
- Ralf Schäfer: 'Interior Cabin Disinfection by UVC Radiation'

The second day will start with an interior lighting session, where the number and the diversity of lectures reflects the strong focus in the industry on that topic:

- Lydia Hewitt, from Jaguar Land Rover: 'Sustainable Luxury Interior'
- Michael Brandl, from AMS Osram: 'Stronger Together – Partnering to Enable the Next Level of Interior Lighting'
- Tony Allison, from DesignLED + Jean Baptiste Trollé, from Faurecia Clarion Electronics: 'Light and Display Convergence'
- Prof. Dr.-Ing. Benedikt Lamontain, from Hochschule Magdeburg-Stendal: 'Human Centric Lighting in Tomorrow's Mobility – How to Assess it Virtually?'
- Tanja Thiele, from TechnoTeam: 'Measurement Innovation: Advancing Light Measurement Technologies for Automotive Interiors'
- Íñigo Mateo García, from Antolin: 'NightSight Assist'
- Roland Steger, from Melexis: 'The Ambient and Dynamic Lighting of Tomorrow — Solution for Interior Applications'
- Thomas Rothhaupt, from Inova Semiconductors: 'System Solution and Calibration of the ISELED LEDs Being Used Behind Different Surfaces'
- Nils Benter, from Seoul Semiconductor: 'Multi-Junction LEDs – High Voltages for Automotive'

SUSTAINABLEPLASTICS IMAGE

After the coffee break, there'll be a materials and sustainability session, which is now a critical constellation of issues within car interiors mostly made out of plastics:

- Gabriele Giaccio, from Stellantis: 'Materials and Sustainability for Automotive'
- Sven Hujo, from Delo: 'Innovating Automotive Interiors: Energy-Efficient Adhesives Powering Lighting, HMI and Sensors for the Future'
- Esther Quintanilla Lujan, from Dow: 'Material Science for Circular, Durable, and Comfortable Premium Interiors'
- Werner Aumuller, from Mocom: 'Carbon Fiber Recycling — Sustainable Lightweight Solutions'

We'll have a sustainability panel discussion, including speakers from various event sessions.

TOYOTA IMAGE

We'll continue with a session on seating:

- Elisa Santella, fron Grewus: 'Seat Haptics as Part of a Multimodal Human Machine Interface'
- Vedat Tuncay, from Leggett & Platt: 'The Future of Automotive Comfort Seating'
- Christian Neyrinck, from Forvia: 'Forvia's Next Generation of Complete Seat Architectures and Materials'
- Ingo Kubenka, from Toyota Boshoku: 'Mobility for All'
- Thomas Dillinger, from Adient: 'Relaxing in an Automotive Interior'

The workshop will end with a panel discussion on design, featuring multiple high-level designers and starting with two lectures, one of which jointly presented by Volvo and NBHX, who co-developed interior parts for the new Volvo EX30. The other is by Feno's Lena Nguyen: 'Immersive Interior Lighting – What Does Light Art Do in the Car?'.

If you haven't yet registered, hurry and **do so now**!

Interior News

Webasto + LG = Infotainment on Ceiling Display

INTERIOR NEWS

WEBASTO IMAGE

Webasto and LG Display have a transparent OLED screen for vehicle ceiling integration.

In-vehicle entertainment is becoming increasingly important as an idea for during autonomous driving. Webasto, longtime experts in adding content to the overhead area, is presenting a high-tech roof system with an integral transparent screen and sensor integration.

The transparent OLED screen, from LG Display, transforms the vehicle into a private movie theatre. Webasto supplies the technology to lower the display from the headliner in a graceful rotating motion, guided by two lateral articulated rails. The transparency of the switched-off display provides an unobstructed view, of the sky or of light effects integrated into the panoramic roof.

Additionally, Webasto integrates a long-range lidar from Luminar into their roof sensor module (RSM), to support automated driving. At CES, Luminar exhibited a long-range lidar that Webasto seamlessly integrates into a roof system. The elevated position is optimal for the performance of the lidar sensor, and ensures reliable monitoring of the vehicle's surroundings.

Materi'Act: Sustainable Interior From Ocean Bound Plastics

INTERIOR NEWS

FORVIA IMAGE

Materi'Act, the sustainable materials subsidiary of Forvia, is presenting a concept car integrating instrument and door panels made with ocean bound plastics (OBP). It was exhibited for the first time during the Forvia Sustainability Day in Paris shortly ago.

This project was conceived as part of a solidarity partnership between the Forvia Foundation and Plastic Odyssey, an NGO responding to the plastic-pollution emergency. They work to support local communities in collecting, cleaning, treating, and recycling OBP.

In January, Materi'Act revealed a vehicle door panel where black virgin materials were replaced by a deep blue engineered experimental compound made of plastic material collected by Plastic Odyssey on beaches, and oyster shells.

Materi'Act revealed a complete cockpit interior with four door panels and an instrument panel integrating OBP. The combination of OBP and biomass allows a 20-per-cent reduction in CO_2 impact, opening the path toward the company's target of up to 85 per cent CO_2 reduction.

Up to 20 per cent of recycled OBP is integrated into a compound material in the NAFILean Vision range, standing for Natural Fillers for Lean and Visible design. The bio-based fillers, in this case, are oyster shell particles. Decarbonization of plastics can indeed be maximized by combining low-carbon recycled plastics and renewable bio-based fillers that can also sequester CO_2. The need for post-processing with paint or film in automotive applications is also reduced, furthering CO_2 reduction, easing recycling, and reducing cost.

OBP presents therefore a potential source of recycled feedstock, supplementing other sources like postconsumer recycling (PCR), end-of-life vehicles (ELV), and postindustrial recycling (PIR).

This also results in a range of visible sustainable materials to facilitate design possibilities reflecting the nature and origin of the feedstocks in a wide variety of colors, grains, and high-quality textures.

Antolin & Via Optronics' Sunrise Cockpit Concept

INTERIOR NEWS

Antolin and Via Aptronics, a supplier of interactive display solutions, unveiled their new Sunrise vehicle cockpit concept at an event in Nuremberg during the European Embedded World exhibition.

The two companies are leveraging their combined expertise and capabilities to design, develop, and produce innovative integrated display systems for vehicle interiors including cockpits, floor consoles, door panels, overhead systems, and seat headrests. The Sunrise concept will also be shown at Display Week in San Jose, California, from 14th to 17th May.

The companies say the new concept sets a benchmark in user experience and seamless display integration offering many benefits including: a sleek and minimalist design; integrated displays and smart surfaces; on-demand technologies for improved user experience and versatility; immersive ambient lighting, and an enhanced safety profile that helps prevent driver distractions. The Sunrise incorporates innovative, environmentally friendly materials.

Antolin's EVP of Technology Solutions Jorge Juárez says, "The outcome of our collaboration reflects strongly on the future of both of our organizations. User experience takes center stage in the design of every new vehicle cabin, and Antolin is ready to deliver excellence in this regard. With our extensive portfolio of integrated solutions, we are poised to meet the evolving demands of OEMs worldwide".

And Via CEO Roland Chochoiek says, "It was a pleasure to see the development of the demonstrator, beginning from idea to concept, and now we are pleased to demonstrate a new system which shows very impressive advanced integrated technology".

Nio Puts 'Automotive Grade GPT' in In-Car Assistant

INTERIOR NEWS

NIO IMAGE

*Chinese EV maker Nio has put ChatGPT technology in their cars' NOMI interior assistant (previously **reported-on** in DVN-I).*

The rollout will be across its European range on the NT2.0 platform, expected to begin later this month. It will be delivered by firmware over-the-air update capabilities.

Nio says this will enable existing users of all current NT2 platform-based smart EVs to benefit, with the functionality initially available in English, German, and Norwegian. NOMI can be used via voice control and capable of addressing complex queries, responding in a natural language to deliver vehicle-specific information.

Benjamin Steinmetz, Nio's European Product Experience Director, says NOMI now can "generate more relevant responses and address more complex queries — making journeys more valuable and joyful for users".

In-Car Display Function "More Important Than Show": DFF

INTERIOR NEWS

BING KI IMAGE

Experts from the German Flat Display Forum (DFF) discussed the use of touch displays in vehicles, concluding that a display in a vehicle does not sell well because it is beautifully arranged, but because it is easy to read. Current possibilities were discussed and possible trends identified.

Touch displays have revolutionized the way we interact with technology. Since the advent of the iPhone, operating devices via touchscreens has become commonplace. Today, touch displays are standard in many modern vehicles and offer a personalized user interface. Despite their convenience, touchscreens irritate drivers and **pose safety hazards**, to the degree that they're spurring **increasing discontent**.

In addition to the technical challenges, a fundamental dilemma was discussed: using a smartphone while driving is prohibited, but using a touch display to control vehicle functions is permitted.

Certain functions should be deactivated while driving so as not to distract the driver unnecessarily. Andreas Wittko, Senior Director AUO Europe said that, in the worst-case scenario, the touch function could be banned in the vehicle when the car is in motion, and it would make sense to add voice control.

Klaus Wammes, Managing Director at Wammes & Partner and member of the DFF Board, has observed that in Asia the surfaces of touch displays are etched to ensure that the driver can find the exact position on the display without looking. This method is said to be effective, and should be pursued further in the development of touch displays.

Another problem with vehicle displays is unwanted reflection. To minimize this problem, display manufacturers rely on surface treatment and special coatings. Optical bonding has established itself as a proven method of reducing unwanted reflections.

Wammes attaches more importance to the technical design than the beauty of a display. His conclusion is that function is more important than show. A display in a vehicle does not sell well because it is beautifully arranged, but because it is easy to read. According to JD Power, a US company that evaluates vehicles, customers complain more often about dirty displays in expensive vehicles than about reflections.

The DFF experts also exchanged views on the technical possibilities for future display applications in vehicles. Various options were discussed, such as 3D displays, microLED displays and displays as a replacement for exterior mirrors that are integrated into the side window. It is to be expected that car manufacturers will very quickly show interest in these technical possibilities. The decisive factor is the benefit that drivers derive from the built-in technology and the support that they experience in everyday life.

Polestar's Digital Rearview Mirror

INTERIOR NEWS

POLESTAR IMAGE

The Polestar 4 has a new digital rearview mirror, for improved safety and increased comfort.

The rearview mirror has been a mainstay in car design for the last century. Not a whole lot has changed about them. But now there are digital rearview mirrors.

One of the Polestar 4's innovative design features is a rear-facing camera and a pixel-perfect HD display. It resulted in one of the most significant changes in automotive design in recent years: deletion of the backglass, entire!

The feature was an instant hit, with comments like “Polestar makes the rear window obsolete with its new crossover combo”, “The Polestar 4 replaces a rear window with a hi-def screen”, and “Why electric cars of the future will have no rear window”.

Initially showcased in Polestar Precept, this feature was introduced earlier thanks to technological advancements. A 2.5-megapixel camera with a 121-degree field of view provides real-time information to the cabin's 8.9″ HD display.

And a simple toggle mode turns the HD display into a standard rearview mirror, so children in the rear can be supervised by their parents up front.

Benefits of this innovation are multiple. Firstly, to provide an improved line of sight for the driver. The rear camera provides a much clearer picture of what’s going on behind the vehicle, especially at night or in bad weather conditions. Secondly, not having a rear window transforms the space for passengers. In the back of the car, it’s a completely different experience now.

Alfa Romeo Junior: Telescope Interior Architecture

INTERIOR NEWS

ALFA ROMEO IMAGE

Alfa Romeo presented their new Junior (was Milano, and changed last minute because of political controversy) in Milan, at the historic headquarters of the Automobile Club there. It was an event designed to confirm the proud partnership with the city where Alfa Romeo was founded in 1910.

Standout interior features include the finest materials and the placement of all the controls within the driver's reach, as demonstrated by the compact steering wheel, to adapt to all driving styles. Most of all, the instrument panel and its 'telescope' design create a direct visual connection and persuades one to wrap their hands around the steering wheel, start the engine, and enjoy a unique driving experience.

In the middle of the cluster, there's a 10.25" TFT touchscreen. It presents widgets—graphic components designed for intuitive interaction with all the car's features—which can be quickly customized with easy drag-and-drop.

Every user can create their own homepage, where each of the car's features is an app. To further embellish the interior, the air conditioning outlets in the shape of a quadrifoglio (four-leaf clover), an Alfa Romeo symbol. To catch the eye and welcome the driver, Sabelt sports seats feature an enveloping backrest that combines high mechanical resistance, perfect ergonomics, and structural lightness. The upholstery includes Alcantara and other elements that underline the car's sporty character.

Despite its compact size, the Junior boasts the largest trunk in its BEV class, with a load capacity of as much as 400 liters, accessible using handsfree technology. The car also comes with exclusive features such as the convenient charging cable storage compartment under the hood.

The central tunnel houses a few buttons, all physical, including one for start/stop, the transmission selector, and the driving modes. Beneath the climate controls is the induction plate for charging smartphones, which can also be connected wirelessly to the infotainment system to take advantage of Android Auto and Apple CarPlay.

The Design Lounge

GAC's Era Concept: Global Design From China, US, Italy

THE DESIGN LOUNGE

GAC IMAGES IN THIS ARTICLE

At the end of last year, GAC unveiled their Era concept vehicle.

Fan Zhang, Vice President of GAC's R&D Center, called the Era concept "the collaborative effort of our global teams including Advanced Design Los Angeles and Milan. It goes beyond being just a vehicle; it represents a visionary statement about the future of new energy vehicle design, crafted for those shaping our world".

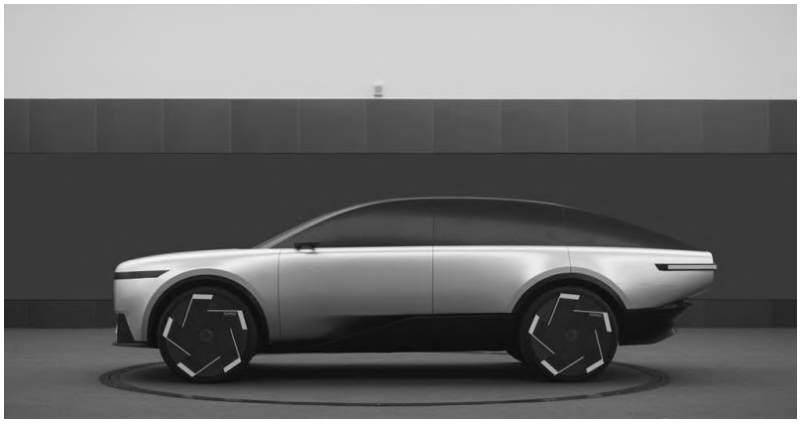
Pontus Fontaeus, Director of GAC Advanced Design Los Angeles, said, "Despite challenges like time, distance, and communication, our international team collaboration was marked by a sense of safety and security. The Era's presence, from show stand to real life, is a testament to our success in overcoming these obstacles, reflecting our commitment and expertise".

The car is built on GAC's multi-energy platform architecture, featuring hydrogen fuel cells and 200-kw distributed motors on the rear axle. This setup delivers 540 horsepower and an 800-kilometer range. This full-size 4WD SUV blends luxury and performance, offering spacious interiors within its 5,413-mm length and 3,132-mm wheelbase, while maintaining a minimum ground clearance of 244 mm for versatile maneuverability.

Its innovative design pioneers a convergence of technological ingenuity with industrial aesthetics. The front fascia seamlessly incorporates headlights, sensors, and cameras into a full-width light band, adorned with a sophisticated geometric pattern enhancing heat dissipation. The body is designed with clean lines and an aerodynamics kit made from recycled marine plastic and seaweed bio-based materials, showcasing GAC's dedication to environmental sustainability.

Inside, there's a highly human-centered design philosophy. The interior boasts elliptical and organic curves, premium materials like bio-based mycelium leather, and a color scheme transitioning from sunrise orange to sunset purple.

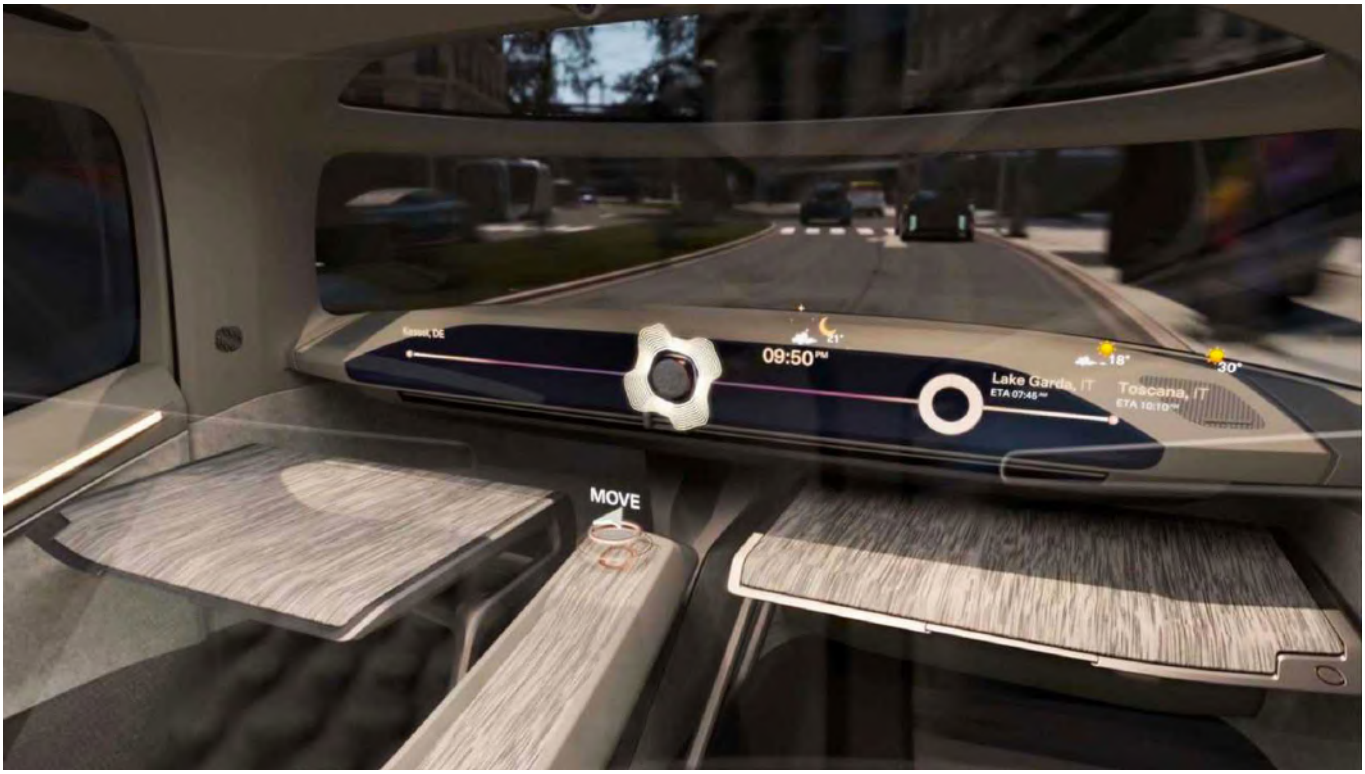
As the doors gracefully open, welcoming lights bathe the interior in a luxurious and cozy atmosphere. The seating design showcases clever innovation; when traveling with a group, the front seats can rotate to face the rear, creating an interactive environment. The rear seats are equipped with foldable extensions that serve as leg rests for enhanced comfort and double as additional seating. With a central console that transforms into a tabletop, the space can comfortably cater to the socializing needs of up to six people. During travel breaks, the rear armrest unfolds into a tea table, allowing passengers to either recline or sit, converse, or simply enjoy the view. Truly, it's a mobile living space.



Stéphane Janin, Director of GAC Advanced Design Milan, says the Era "embodies our vision for the future – a design that's both powerful and elegantly simple, harmonizing with the emerging era of clean technology and energy".

Interior Design of the Day After Tomorrow: VW Concept Study

THE DESIGN LOUNGE



VW IMAGE

At the most recent CES, Continental showed a dashboard with a 1.29-meter-wide, curved 3D display and BMW presented a HUD that extends across the entire width of the windscreen. It is set to go into series production in the BMW "New Class" in 2025.

David Cleaves, head of Creative at the Argodesign agency in Munich, has the opinion: "Displays across the entire width - whether HUD or conventional should have a silent or deco mode and be able to retract when the person at the wheel wants to have a conversation or use their own devices."

Continental has provided such a function: Only control panels that are currently needed appear in the 3D display. Furthermore, according to Cleaves, HUDs are more difficult to see in certain lighting conditions and viewing angles and provide a poorer image quality than a screen. An additional display therefore makes sense.

Other studies embody the opposite extreme and manage (almost) entirely without a visible or inbuilt communication interface. Cleaves' statement: "Minimalist concepts work well with customers who bring their own devices and don't expect much more from the car than an excellent sound and infotainment system and a good driving experience".

The "living room" in the Mini Urbanaut is even more unusual: with a corner sofa and houseplant, it puts the concept of the car as a second living room or third living space into design practice. Cleaves says, "Even if these vehicles seem extreme and sometimes strange, they clearly show where the journey can go, at least in terms of rear seats. Such trends will become established, at least in the premium segment".

Volkswagen has realized this concept with the Gen.Travel design study, specifically for long-distance autonomous mobility. The four seats can be grouped around a table. Or two seats can be transformed into a bed.

The design expert sees new possibilities and end devices for the bring-your-own-device concept: "In terms of display hardware, elegant solutions for smart glasses will finally become established on the market in around ten years' time. They will also be integrated into the driving experience and used as standard BYOD hardware in cars".

AAU, and Lucid Work to 'Reimagine' Future of Mobility

THE DESIGN LOUNGE

ACADEMY OF ART UNIVERSITY SCHOOL OF INDUSTRIAL DESIGN IMAGE

The Academy of Art University School of Industrial Design (AAU) has announced a collaboration with luxury EV maker Lucid to inspire the next generation of automotive designers. Led by senior members of Lucid's design team, students at AAU will do a 90-day project to explore innovative designs that go beyond conventional ideas of mobility.

The project challenges students to think creatively, whether it's enhancing existing Lucid products or envisioning entirely new designs that reimagine the driving experience. Sustainability is a key consideration in the program, with students tasked with incorporating environmentally friendly materials and technologies into their designs.

"By challenging students to reimagine the future of mobility, we can unlock exciting new ideas in vehicle design, functionality and sustainability, ensuring that we continue to lead in the creation of cutting-edge, luxury electric vehicles," said Derek Jenkins, SVP of design and brand at Lucid.

"Collaborating with a brand like Lucid offers our students an unparalleled opportunity to apply their creativity and design skills to real-world challenges at the forefront of automotive innovation," added Antonio Borja, director of the Academy of Art School of Industrial Design.

End-of-semester presentations will include design concepts demonstrated in clay models and 3D-printed prototypes, all of which will be evaluated and rated by members of the Lucid design team.

News Mobility

PAKoS for Human/Vehicle Control Handover

NEWS MOBILITY

BMW IMAGE

For the foreseeable future, there will still be driving situations wherein humans can do a better job than machines at driving. This makes it necessary to pass vehicle control back and forth between the driver and the autonomous system, for example before entering roadworks areas with lanes and speed limits that are not clear to the system or before entering unmapped private property.

The goals of the PAKoS project (in German, it stands for personalized, adaptive cooperative systems for automated vehicles) coordinated by the Karlsruhe Institute of Technology were to recognize such situations and to transfer control from the vehicle to the driver in a predictive and reliable manner, as well as to develop an automated vehicle that adapts to the driver's needs.

For safe transfer of vehicle control while driving, the automated vehicle must recognize where the driver's current attention is and adapt to this. The system can use this to adapt the driving style to the driver's activity or to manage the handover of control safely and conveniently.

The PAKoS system uses cameras in the interior and, if necessary, sensors on the steering wheel to identify the driver's condition and attentiveness. It assesses the driver's current performance and their requirements for automated driving: Are they looking at the road or at a book? Are they talking on a phone or rummaging in their pocket on the passenger seat?

Information and instructions are then exchanged between the two cooperation partners, driver and vehicle, on a multimodal basis in order to support joint actions such as the transition between autonomous and manual driving.

In addition, the driver can use an app to personalize driving behavior according to their needs. The concept is now being presented as a prototype in a demonstration vehicle.

General News

Chery To Start Operation in Spain In Former Nissan Plant?

GENERAL NEWS

Chinese automaker Chery is planning to make cars in Spain, where the EV market is at just 12 per cent—half that of Portugal and France.

Chery was founded in 1997 as a state-owned enterprise by a group of officials from Anhui province and the city of Wuhu, and began automobile production in 1999 using a chassis licensed from Volkswagen's SEAT Toledo. The Chery brand name was, at the time, widely perceived as an imitation of "Chevy".

Now, Chery is looking to begin assembling cars in Europe, and might use a plant in Barcelona, Spain that was shut down by Nissan in 2021. Since Nissan shut down the plant, local electric motorcycle manufacturer Silence have been operating there, as have engineering groups QEV and EV Motors, who have full corporate control of the hub and have been engaged in talks with Chery.

If a deal is reached, EV Motors will continue to operate out of the factory and may make production and commercial deals with Chery to produce their Ebro-branded pickups and electric vans.

It is not yet clear which models Chery intend to make in Europe, nor how many units they expect to produce annually. They were known to be in talks with the Italian Government and had considered setting up a European base there, but—according to an industry source talking with Auto News—there's been little feedback from the Italians, and Chery now favor Spain.

Spain's Industry Ministry said in a statement that the agreement will be formalized in the next few days. Given the slow uptake of EVs in Spain, Chery says they plan to make combustion engine, hybrid, and electric vehicles there.