Thu, 2 May 2024
Weekly Newsletter

DVN Interior

NEWSLETTER #210

Editorial

Future Interiors, Awesome Technologies At DVN Interior Workshop

The 4th DVN Interior Workshop happened last week in Köln, with the rubric **Interior of the Future: New Features and Emerging Technologies**.

The docket was impressive: three keynotes; 31 lectures; design and sustainability panel discussions, very productive Q&As with real-time participation facilitated by the Slido app, and more. Major automakers including Ford, Jaguar Land Rover, Volvo, and Stellantis shared their views on the future of interiors—including HMI, interior lighting, materials, and design. A session devoted to seating included majors such as Adient and Forvia, and technology suppliers including L&P and Grewus. The HMI and interior lighting sessions included Valeo, Marelli, Continental, Antolin, AMS Osram, Seoul Semiconductors, and many others. New companies were there, such as Ceres Holographics, Seaborough, and Feno. And key material suppliers participated in the show-and-tell, such as Dow Chemicals, Mocom, and Delo.

It was a terrific opportunity for networking, to make new contacts and renew and reinforce existing ones: 170 attendees, representing approximately 80 companies, 12 sponsor-exhibitors, and all the newest innovations on display in the expo booths.

We can't wait until the next event, in Torino, Italy this October, with the rubric **Mobility and Sustainable Interior Design**. Keep reading your DVN-I Newsletter for more details as they develop!

Sincerely yours,

Philippe Aumont
DVN-Interior General Editor

In Depth Interior Technology

DVN Interior Workshop Report · Part I

WORKSHOP OPENING; CORE TEAM PRESENTATION

Here we present the Workshop Highlights, the keynotespeeches, and the design and seating sessions. (later in this newsletter, in the Interior News section, you'll find coverage of **ams Osram** and **Ceres Holographics** news those companies announced first time during this Workshop).

Workshop Highlights

Sustainability was a key underlying concept in all the presentations and strategy layouts. Automakers presented a variety of approaches, with a working definition of 'sustainable automotive' centered around EVs and renewable materials. Examples:

- JLR's Sustainable Modern Luxury idea of recoding the indications of luxury—more is not more—and to help users not to feel guilty
- Stellantis' string material perspective with decarbonization and circularity, including many parts coming from recycled or bio-based polymers (green plastics) with good thermal and mechanical performance and feasible cost.
- Volvo showed their active work toward sustainability, with the highest interior recycling content ever in their portfolio
- Lighter and smaller city vehicles, like the L7 quadracycle studied at Aachen University, with frugal but smart interiors
- Human-centric design, or 'design thinking', is at the center of new developments presented by Ford, with their Explorer as an example.

The workshop ended with a design panel including Volvo, Forvia, feno, and NBHX. Discussions emphasized the influence of interior design in all we do, in term of architecture, functions, materials, and aesthetics.

More talking points from the event:

- The car as living room: cocoon is the target, making sure it fits into a moving object with limited dimensions.
- HMI with more displays and fewer buttons (but not zero buttons), HUDs, and transparent displays
- Displays are getting bigger, pillar-to-pillar, and they're getting repositioned to the junction of dashboard and windshield. They're combining high-pixel density (LCD) for mission critical information, and low pixel density (LED) for simple information.
- Personalization, and privacy on displays and audio
- IME (in-mold electronics) and FIM(with films) to enhance aesthetics, shape (3D) and functions in surfaces

- HMI extension with HUD, and even transparent displays (see Ceres Holographics news later in this Newsletter)
- Interior lighting is everywhere, edge-to-edge, crispy light lines, black panel effect (light-from-nowhere; see AMS Osram news later in this Newsletter)

Health is one of the next topics to address, with subtopics including:

- UVC to clean air and surfaces, even if it has lost momentum since the pandemic has 'ended'
- Healthy NIR (SunLED), going from passive monitoring to active enhancement of health and wellbeing (Seaborough's activity, for example)
- Interior sensing may also evolve to intention detection, which Marquardt is working on
- Visibility improvement, directly triggering the driver's pupils with the likes of Antolin's Night Sight Assist.

Seats were addressed specifically in this Workshop for the first time. There were presentations from raw-material suppliers like Dow; lectures about components including more and more intelligence/electronics (Grewus, L&P…); system modularity and integration talks by Forvia and Adient, and a presentation about inclusive mobility (accommodating disabilities) from Toyota Boshoku.

Keynotes

Yole on Display Technologies

PIERRICK BOULAY (DVN IMAGE)

Pierrick Boulay, Senior Analyst at Yole, introduced the Workshop with a journey through display technologies.

Over recent years, the number of displays in cars has constantly increased. The size of display is also increasing with pillar-to-pillar displays to combine the instrument cluster display, the central stack display, and passenger display into one single display.

The vehicle interior must provide an increasing amount of information and control, while at the same time limiting distractions to the driver. The driver must be able to find information and access the control they need when they need it at a glance, with limited hands-off-wheel/eyes-off-road time (preferably none).

Display technologies are changing rapidly and are following what can be found in the consumer market:

From standard LEDs to miniLEDs, OLEDs, and possibly microLEDs; curved and conformable displays; rollable and flexible displays, and transparent displays as a next step.

MicroLED displays are only just now emerging, and will be found where they can differentiate from other technologies. High brightness, flexibility, and transparency are microLED display characteristics which can bring an added value. But there are still steep challenges; for example, mass-transfer of LEDs hasn't been solved.

MicroLED use in automotive applications won’t be about replacing OLEDs and LCDs, since price competition will be out of reach, but addressing new use cases to allow automakers to differentiate. Which iconic gadgets will then embed the technology? Smart knobs, E-mirrors, rollable displays, window displays?

Due to their high cost, the newest technologies enter the market in luxury vehicles first, and then migrate lower-level segments, which will push traditional LCD technology to entry-level cars only.

Aachen University on Specifics of Interior Space of Micro Vehicles

ANDREA UPMANN (DVN IMAGE)

The second keynote kicked off day 2 of the Workshop. It showed us what could be smart solution for future sustainable mobility, combined with a frugal development approach to define best minimum interior solutions. The lecture helped us to understand the specifics of micro vehicle interiors (L7e vehicles), these vehicles being an interesting alternative to new mobility in a context of climate change mitigation in increasingly crowded urban areas.

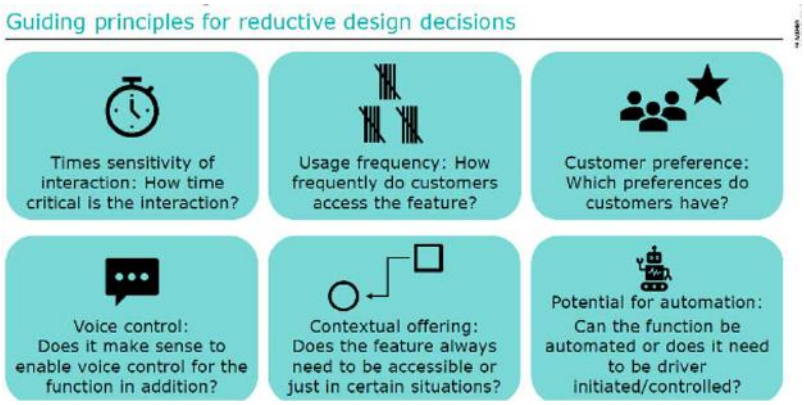
CITROËN AMI (CITROËN IMAGE)

L7e vehicles with low weight payload, smaller footprint, and no local emissions (because they're electric) are characterized by weight of around 487 kg; 10.5 kW power, 3.4 m^2 footprint, and price around €10,000. They offer enclosed weather protection, unlike any kind of bike or scooter.

L7e vehicles could support 70 per cent of existing trips, according to a German study, with 70 per cent less emissions than a midsize BEV, and 60 per cent less lifecycle emissions. Regulations would need to be adapted, extending what exists today in France and Italy. Obviously there are safety concerns with tiny micro vehicles sharing road space with big SUVs and trucks.

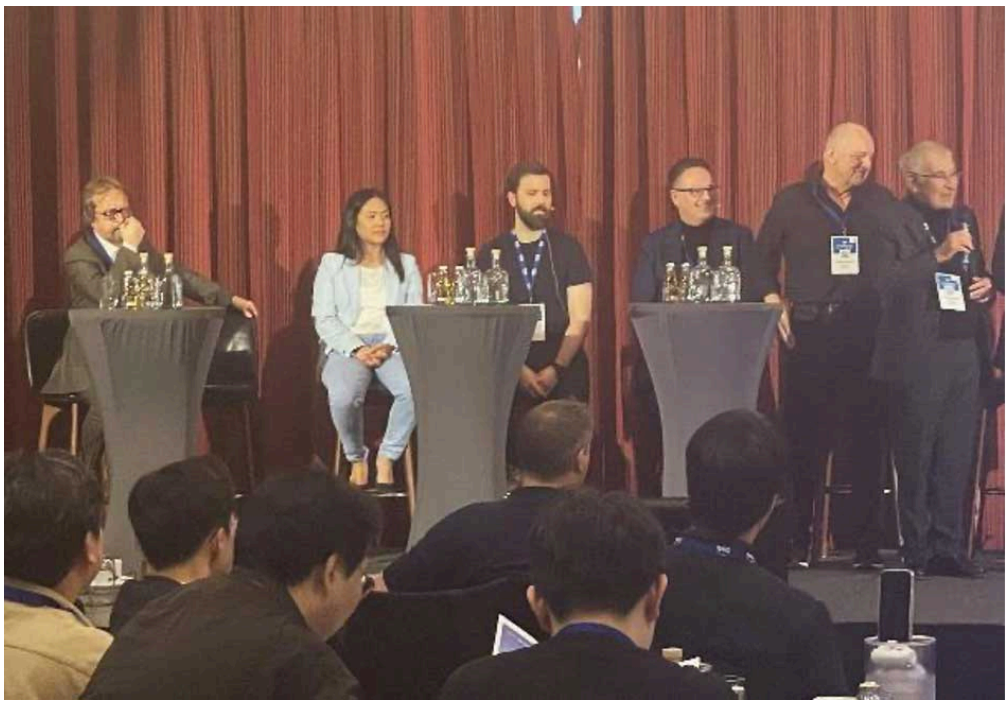
Their interiors have very few buttons, a small cluster display, a second small display, open storage solutions like textile nets, budget seats, fan and heaters, portable speakers, and a structural bar as a kind of cockpit to attach a smart phone.

Development of these vehicles needs frugal innovations—reductive design: cost reduction, concentration on core functions, best minimum performance—which will then support sustainable mobility.



Microlino

Design



DESIGN PANEL, L-R: FORVIA'S JB TROLLÉ, FENO'S L NGUYEN, VOLVO'S E EDHOLM, NBHX'S T SÜSS (DVN IMAGE)

Interior design is all about developing product concepts, proportions, shape, placement, and surfaces for cockpits, seats, trim panels. It's about the visual appearance, or æsthetics. Design also, via CMF (color, materials, and finish) expertise, oversees selecting the materials the different parts of the vehicle will be made of—textiles, plastics, metals, leathers, bamboo, cork—as well as the trim package.

The first design session at the DVN Interior Workshop wrapped up with a panel discussion emphasizing the importance of interior design and CMF.

NBHX + Volvo on EX30 Design

VOLVO IMAGES

This lecture was team-presented by Volvo Car Design's Colour & Material Studio Engineering Leader Erik Edholm, and NBHX Trim Group Design Director Thorsten Süss. They described how collaboration between the automaker and supplier and between engineering and design more broadly, is the recipe for success.

After a brief overview of the exterior design of the EX30, they delved into the interior and their centralizing-the-functions approach. They covered the details of the CMF offer in the car, with specificity on the decorative trim parts Volvo designed and developed together with NBHX.

They have taken all the elements we like in our bigger SUVs and distilled them into a smaller, more concentrated package. Looking at the overall proportion of the car, the ambition was to find a balance between aerodynamics and versatility, thanks to nearly equal overhangs, which are a sign of electrification and have pushed the wheels out to the corners to really open the interior space. This allows to create a feeling of space beyond the vehicle's size. Using color, pattern, and texture, they've added extra visual punch to the EX30.

For this smallest car in the Volvo portfolio, they created a big-car experience with a spacious feeling in the cabin, combining features to make the interior as smart, spacious, and material-efficient as possible.

There are four different 'rooms'—mist, pine, breeze, and indigo—each with different inspiration from nature, fashion, and sports. Each room is designed with combination of colors, textures, and material, with the goal to design the most sustainable car to date. And for each room, Volvo and NBHX worked together to get the appropriate parts fitting each theme.

In the Pine room, they combined wool blend with metal-grey Nordico—a bio-attributed material with a backing of recycled polyester. It's their solution to replace leather with lower CO_2 footprint. The Pine room gives a cozy and outdoorsy feeling, and it has flax deco running around the cabin.

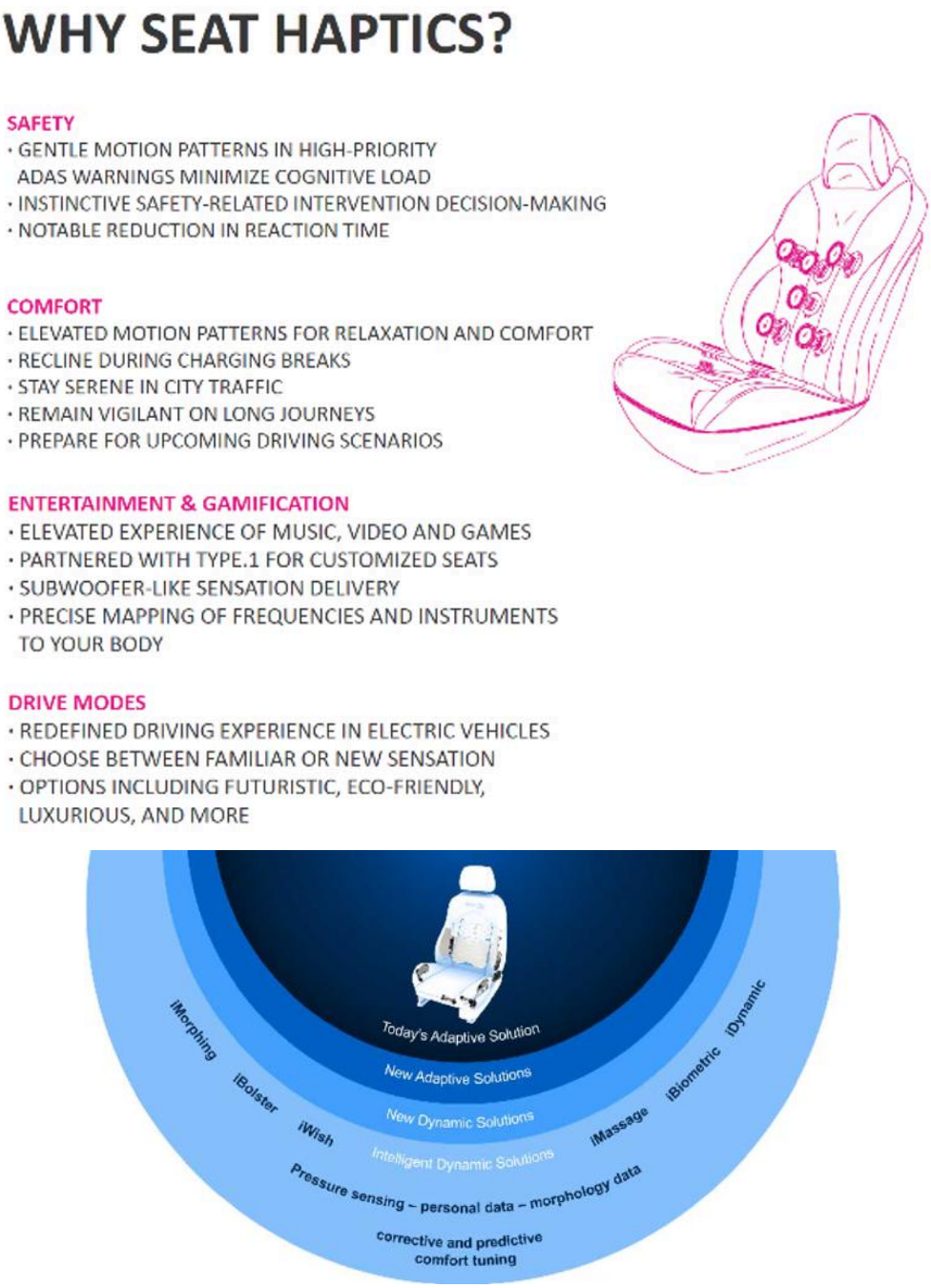
Seat Session

The seating session included lectures by Grewus; Leggett and Platt; Forvia; Toyota Boshoku, and Adient.

Grewus – Elisa Santella – Seating Managing Director

Haptic application trends are increasingly present in automotive HMI; displays; rear-seat entertainment, door control, and other areas. Benefits include personalization and privacy, more intuitive control with improved reaction time and reduced visual distraction, and greater sensitivity.

An example developed together with Typ1 is the voice coil/Hap force, giving maximum power for lowest weight, fast response time, and easy control.



L&P on Future of Seating Comfort - Maxime Samain - Director

The trends of fast adjustment combined with safety, zero gravity, and reconfigurability of the interior, need new technology. And forthcoming new models need the likes of full speed control for all mechanisms, improved acoustics at any speed, no seat ECU, longer durability, lighter weight, and minimal size impact. Of course classical performance metrics are still valid, such as acoustics, EMC, zonal electronic architecture, sustainability, and (of course!) cost. L&P technologies and innovations include:

Smart BLDC actuation, a brushless motor/actuator that includes the driver intelligence and communication inside the motor.

Seat comfort is then managed by new L&P vibration technology, which enhances driving experience and immerses the occupant in their own world of music and gaming, supports ADAS functions, delivers fast and intuitive alerts, with intensity increasing as danger approaches, to immediately direct focus.

It can support health, too, through vibration massage.

Overall system benefits are around simplified seat integration, thanks to smaller packaging, synergy with smart comfort and actuation system

For mid-class lumbar and massage, it saves weight, and costs are going down because of joint integration.

Forvia on Next Gen Seat Architecture & Materials – Christian Neyrinck, Innovation Manager

This talk emphasized the main drivers of the seat business, such as cost, time, flexibility in the value chain, business models, and sustainability (CO_2 and beyond). Seats are put into modules in massified and integrated techno-plants, where flexible final seat assembly scenarios are necessary—multi customer/vehicle exiting JIT for higher volumes, module deliveries (to automakers or to logistics suppliers for lower volumes.

Modules are ready for circularity, and engineered for durability, upgradability, reconditioning, and recyclability. Multi-brand automakers are multiplying the number of vehicles per platform and more and more functions must move freely horizontally and vertically in the product range.

EU circular-economy regulations will require at least 25 per cent by weight of recycled plastics from post-consumer waste (including ELV), of which at least 15 per cent (= 6.25 per cent overall) of plastic weight in recycled plastics from ELV (closed loop).

Seats need to be modular. A seat comprises about 120 components and 10 techno-modules.
Forvia's unique platform approach involves:

- Customization, functions, experiences, and design freedom
- Material and circularity performance
- Extended life by ugrade, refreshment, and repair
- D&D cost savings and development time cut in thirds for subsequent vehicle models

New material examples to follow the CO_2 impact reduction road map include Auraloop, a PU foam alternative consisting of a 3D structure of PE-based fibers. There are roadmaps for circularization of classical seat materials such as steel, foams, and plastics.

Toyota Boshoku: Mobility for All - Cerstin Reiling - Lead Engineer

Toyota Boshoku (TB) addressed the topic of inclusive mobility with a MaaS (rideshare) space concept called 'MX221', shorter and taller than Toyota Motor's JPN Taxi (purpose-designed for taxicab service in Tokyo). TB's vision of shared mobility follows a '5A' approach: Assurance · Attractive · Access · Affordable · Accountability.

This interior was designed for ridesharing mobility with L^4 automated driving in mind. It is possible to remove and replace seat modules and components to meet diverse user needs. Allowing space conversion and updating functions in a short amount of time, it offers a wide range of possible interior grades, thanks to a system that guides passengers to a comfortable position within a brief time, in addition to various personal audio and refreshment functions.

The TB MX Access wheelchair interior grade allows wheelchairs to be secured inside the vehicle without the assistance of a caregiver, providing a safer and more comfortable travel experience for wheelchair users.

They showed an astonishing drone delivery; on the roof of the MX221 is a drone-accessible automatic delivery door. When the drone approaches the top of the vehicle and sends a signal to the vehicle for safe drop off, the delivery door will open to deploy the receiving tray to drop down a meal!

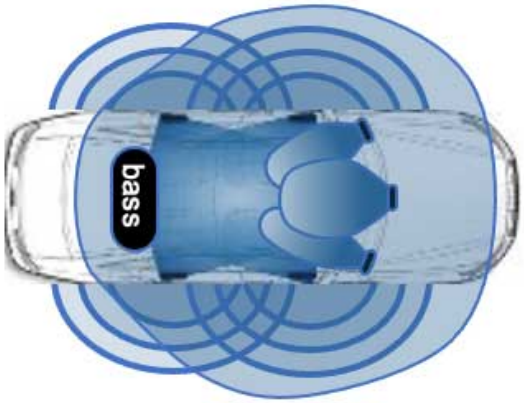
Adient - Relaxing in Car Interior - Thomas Dillinger - Chief Innovation Engineer

Thomas Dillinger started with what is needed to relax in a car. The analogy with a living room defines the target (roominess, environment, quietness…) and what are the main topics to adapt it to the car—to fit in a car cabin, relax posture position and transition (normal to relax), no motion sickness, and minimize noise.

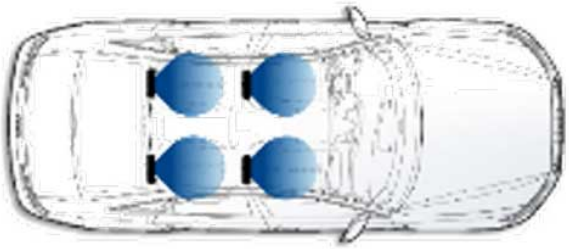
Adient's proposal is the 0G seat, a high-end luxury seat with full lounge articulation and functionality. It is safe, intelligent, elegant, comfortable, and affordable.

But this solution still faces challenges, such as a shearing effect between the back and the cushion.

Through a science-based concept, with new architecture, and tilted zero gravity, and collaboration with Aachen University of Applied Science, with Prof. Dr. Andrea Upmann, using anthropometric data per region, pressure map, The comfort rating of the transition from Relax to Drive was significantly higher than in the reclinerless solution



TRADITIONAL CAR AUDIO ARCHITECTURE



SOUND-IN SEAT AUDIO ARCHITECTURE

Better user experience was addressed through adjustments, use of exquisite materials, sound-in-seat, integrated in headrest – together with Premium Sound Solutions, a near field audio system, a non-Invasive solution, low weight & energy consumption, with ability for active noise cancellation, individual zone per occupant, with possible full staging with additional speaker (e.g. on the instrument panel).

Watch forthcoming issues of your DVN-I Newsletter for summaries of the sessions on HMI, smart surfaces, and interior lighting.

Interior News

Ceres Holographics' Transparent Display

INTERIOR NEWS

At the DVN-I Workshop, Ceres Holographics demonstrated what they call the world's first in-plane heads-up display implementation with multiple, separate transparent displays displaying content on one windshield. Each separate display area, measuring up to 40 × 30 cm, contains a specifically programmed holographic optical element, resulting in a HUD with the industry's largest field of view. This capability can only be achieved using holography and the ability to direct and manipulate light outside the normal confines of traditional reflection and diffractive optics. Each display can be configured at specific off-axis viewing angles within the windshield to show information and content for the intended user only, without distracting the other front-seat occupant and without obscuring the view of the road ahead.

CERES @ DVN INTERIOR WORKSHOP: CEO ANDY TRAVERS WITH DVN'S PHILIPPE AUMONT (DVN IMAGE)

Headquartered in Livingston, Scotland, Ceres Holographics specializes in the design, digital mastering, and replication of thin-film holographic optical elements for new transparent display and augmented-reality applications. With expertise in photonic, optical systems and holographic photopolymer films, Ceres technology facilitates the creation of immersive visual experiences to enhance product functionality and performance for mass-market applications in automotive, transport, aerospace, and wearable tech sectors.

ams Osram + Dominant Ambient Lighting Collaboration

INTERIOR NEWS

AMS OSRAM / DOMINANT IMAGE

ams Osram and Dominant Opto Technologies announced at the DVN Interior Workshop a partnership to integrate ams Osram’s Open System Protocol (OSP) into Dominant's forhcoming intelligent RGB LEDs for automotive ambient lighting.

Introduced in 2023, ams Osram’s OSP is a license-free communication technology that connects RGB LEDs, sensors, and microcontrollers from different manufacturers.

The integration of OSP into Dominant's RGB LEDs presents new possibilities for automotive ambient lighting, including mood setting, conveying information, displaying warnings, and presenting the car’s branding. The OSP infrastructure, alongside AMS Osram's OSP-compliant intelligent RGB LED, the Osire E3731i, fulfils the requirements for dynamic ambient lighting control, the companies say.

The Osire E3731i is the industry’s first OSP-compliant intelligent RGB LED. It features an integrated ASIC that drives three RGB emitters, to provide color homogeneity and to support daisy-chain configurations with up to 1,000 LEDs in a single string. It is AEC-Q102 qualified and compliant with automotive EMC requirements.

Dominant says they are “delighted to join the OSP ecosystem”, which enables them to expand their seddLED product portfolio with the seddLED+ A3H. The company says this will be the first OSP-compliant intelligent RGB LED on the market, with a prototype sample expected in Q3 of FY2024.

Marelli's Integrated Cockpit and Telematics Platform

INTERIOR NEWS

MARELLI IMAGE

Marelli is introducing ProConnect, a fully integrated cluster with infotainment and 5G telematics, at Beijing's Auto China. ProConnect has been targeted for the Chinese market where many automakers are integrating cockpit and telematics functions for entry and mid-segment vehicles, to better balance performance and cost.

Powered by MediaTek's MT8675 SoC, the ProConnect manages both the instrument cluster and the infotainment system, supporting up to six displays and 12 cameras, while providing 5G Release 15 telematics performance. It eliminates redundant components with an integrated SoC supporting cluster, in-vehicle infotainment and telematic control unit functions, offering the potential to save up to 40 per cent of redundancy compared to traditional architectures.

MediaTek VP Mike Chang says, "Through this collaboration, we can offer premium safety features, 5G connectivity, comprehensive multimedia packages and more to address the needs of today's drivers in China".

Nate Sladek, vice president of strategy and product management within the electronic systems division at Marelli, says "ProConnect is the next product in our Connect product line where we already have a significant global program award for 4G LeanConnect from a leading auto maker. EliteConnect is next on our roadmap, which will provide even greater performance but still at a very affordable price".

Forvia, Chery in New JV

INTERIOR NEWS

FORVIA IMAGE

Chery and Forvia have announced a joint venture to develop and manufacture systems and modules for the entire interior—seats, interior fittings, and cockpit electronics. Forvia has set a turnover target of €1bn for 2029.

In Wuhu, around 350 kilometers west of Shanghai, a research and development center is planned alongside the headquarters. The joint venture is also set to open two production sites in the first half of 2024. The companies have not disclosed how the shares will be divided between the partners.

The investment comes at a time when suppliers in general are increasingly expanding their presence on the Chinese market. Forvia subsidiary Hella and other tier-1 suppliers such as Valeo, Vitesco, and ZF are also investing in China.

BYD Sea Lion 07 Interior: Chinese Luxury

INTERIOR NEWS

BYD IMAGES

BYD's new Sea Lion 07 midsize electric SUV has quite a designed interior. As part of its Ocean series, the new SUV features a lightweight design that “highlights a new realm of individuality,” according to BYD. The smart curves “outline the beauty of the ocean.” There are a lot more buttons and controls than the minimalist Tesla Model Y design. The driver display is also integrated into the dashboard. The 15.6″ Adaptive Floating Screen is a BYD signature.

The car has lots of leather on the seats, door panels, steering wheel, and control panels. It will have a Dynaudio audio system.

Opel E-Grandland Offers More Space

INTERIOR NEWS

OPEL IMAGES

Opel has unveiled their newest top-of-the-line Grandland SUV.

It is the first Opel model based on parent Stellantis' STLA Medium platform, and it will be available for the first time as a full-electric variant, alongside plug-in hybrid and combustion-engine versions.

While the new Peugeot 3008 compact SUV on the same platform features coupe styling, Opel opted to take the Grandland in a more traditional SUV direction.

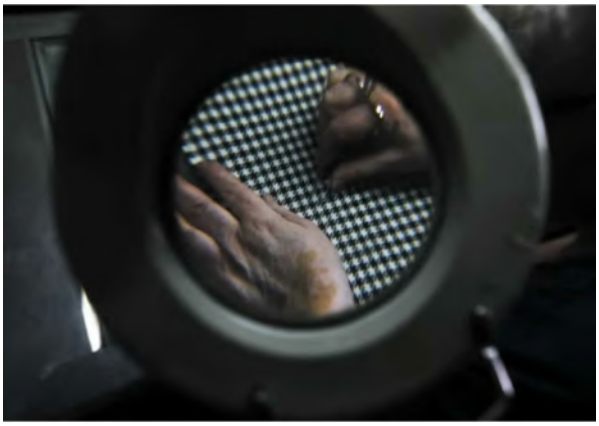
Stellantis has invested €130m to refit the Eisenach plant to build the new Grandland, including adding a new shop to assemble the heavier batteries for the full-electric SUV.

Production of the current model will continue to the summer. The first second-generation Grandland SUVs are already being built in Eisenach on the same assembly line.

Opel has said it will be a purely electric brand by 2028.

Interior Details Seen on the Web

INTERIOR NEWS



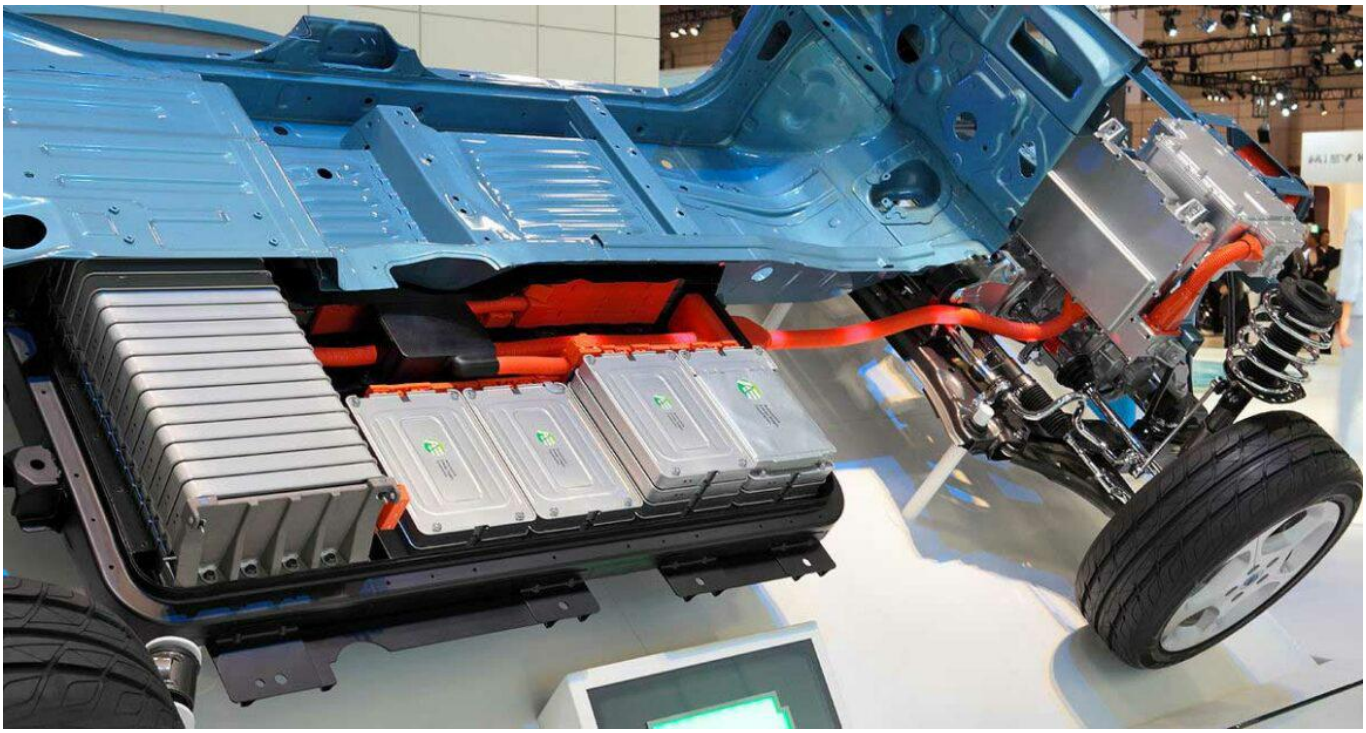
Porsche has put out a **video** about their black-and-white Pepita woven interior material. And Momenta AI's Dr. Sebastian Osswald has **linked** a video showing the extreme modularity of interior fittings and accessories in Xiaomi's new SU7, shown at the Beijing auto show. Both videos give unique glimpses of interior details—one about a modern take on enduring classic interior CMH aspects, the other about a new way of configuring (and reconfiguring, and re-reconfiguring) a car's interior. What do you think of these? **Drop us a line**!

The Design Lounge

Rock-Paper-Scissors

THE DESIGN LOUNGE

COFFEE CORNER
DVN
Interior



NISSAN LEAF PLATFORM (WIKIMEDIA IMAGE)

Shoushling (rock-paper-scissors) is a hand game, the earliest form of which originated in China's Han Dynasty, 206 BCE to 220 CE, before spreading throughout the world. It is a zero-sum game, with three possible outcomes: a draw, a win, or a loss. A player who decides to play rock will beat another player who has chosen scissors, but will lose to a play of paper. A play of paper will lose to scissors. If both players choose the same shape, the game is tied and is usually replayed to break the tie.

Electrification is a keystone of the remarkable makeover that automotive industry is currently undergoing. Energy, distribution networks, charging time, autonomy, range, are some of the concerns that accompany the EV adventure. Confronting applications and technical solutions are losing or gaining ground in the context of what is considered to be the most complex product ever invented. In the assembly and supply chain, batteries are increasingly becoming the usual suspects. While lead-acid batteries gave way to nickel metal hydride and lithium-ion technologies, batteries in modern EVs, are ever more cost effective, lighter, more efficient and with longer discharge time.

Each kind of battery has its benefits and drawbacks. Raw materials, carbon footprint and long time performance are the concerns for lithium-ion and equally the price to pay for its high energy density, low self-discharge rate, fast charging and light weight. And while all these are not as evident in the nickel metal hydride applications, their robustness and long life cycle made them more popular in hybrid cars.

Now an intense battle is taking place between nickel manganese cobalt (NMC) and lithium iron phosphate (LFP) battery technologies. This is not just a technical comparison, it is a world cup battle for the lion's share

of our all-electric world. All that in a presence of other types of batteries that still operational for many reasons, such as cost or specific to market-segment applications.

NMC batteries can box a lot of power into a small package, great if intense energy output is required. But that power comes with a risk: they can undergo thermochemical reaction, generating excessive heat, potentially leading to an explosion. The LFP battery may not stock the same high energy density as the NMC, but it offers better stability and safety. LFP chemistry does not facilitate oxygen release, and this makes it the preferred choice when safety is paramount, such as large-scale stationary storage and electric vehicles.

In 2024, the latest lithium-ion battery advancements reveal a promising future for the technology. AI-driven innovations are reshaping battery management systems, improving performance, and ensuring safety, while the development of solid-state batteries and nanomaterials, envision increased energy density and longevity.

Future choices in the EV sector hold the key to balancing power and safety, while configuring how effective our mobility system will be. It is difficult to judge each one singlehandedly or even making any predictions based on their individual data. In addition, batteries are linked to a wider industrial organization as well as to the architecture of each specific vehicle segment, thus, it is a systemic approach, each with advantages and challenges. Weight, for instance is a common denominator, that often means structure redundancy. And while engineers propose new EV architectures (essentially using the battery frame as a main vehicle frame, or inversely any existing frame as a potential battery frame), automakers seem to be taking the time to adapt current body typologies to electric drive trains. Or rather, electric drive trains to already existing vehicle architectures.

Since development times are long, in the meantime there will surely be additional technologies. Lithium tungsten, zinc manganese oxide, organosilicon electrolyte, gold nanowire gel, and graphene aluminum-ion could be the next big disruptors, yet any unexpected contender could win the next EV phase if based on global strategy and vision. China’s commitment to electrified transport shows no signs of slowing down, with nearly 13 million EVs in China at the end of 2023. It is difficult to predict what the next new battery technology will be, however the global game is on and we are about to choose our weapons for the tech battle ahead. Each known selection seems to be strong against a particular choice, but weak against another.

For the future of the EV batteries and by extension any e-mobility sector, there is no predictable or even statistically calculable way of figuring out the outcome of any hypothetical selection. Like Shoushling, performance against unpredictability will configure the final resolution, while multiple choices at the right time will make the winner. It might be that at this point, the choice will generate the solution and not the other way round. This single factor is the sole determinant of the business game’s uncertainty, its raison d’étre, and its applied cultural continuance.

News Mobility

Easelink-NXP Positioning System

NEWS MOBILITY

EASELINK IMAGE

UWB (ultra-wideband) technology is already known from applications such as the digital car key. NXP has integrated this radio technology for precise positioning in the two Matrix Charging components (connector in the vehicle underbody and charging plate/pad in the parking space) of Easelink. It is particularly characterized by the safe, precise and efficient distance estimation between two electronic devices and thus supports the parking process in the conductive automated charging system.

During automated charging with Matrix Charging, the connector is lowered from the vehicle underbody in the area of the front axle onto the charging plate in the floor for charging. When accessing the charging plate in the floor, the position is shown on a display in the vehicle. This display receives the signals via the UWB modules installed in the Matrix Charging system and shows the driver the optimum parking and charging position. The solution is already being used successfully in the project for automated charging of e-taxis in public spaces.

General News

Volkswagen's New China Strategy

GENERAL NEWS

VW IMAGE

At Capital Markets Day in Beijing on 24 April, the Group presented their strategy update for the Chinese market. The main goal is to strengthen technological expertise and reduce costs. The Group plans to achieve cost parity with local competitors in the compact segment by 2026. A new E/E architecture developed together with Xpeng will make a decisive contribution to this. The measures will be bolstered by a realigned strategy and an efficiency program that has already been launched. In addition, they emphasized their commitment to an "in China, for China" strategy.

To meet the demands of Chinese customers, model developments and market launches need to be accelerated and costs significantly reduced, it said. In addition, more in-house development capacities and strong, local partnerships are intended to make better use of the market's innovative strength and increase local value creation.

In this way, the company aims to strengthen its position as the world's top automaker on the Chinese market. Volkswagen has set themselves ambitious targets for 2030: around four million vehicles sold and growth in the proportionate operating result to around three billion euros including the Anhui joint venture.

Through the Volkswagen brand and based on the China Main Platform (CMP), the Group intends to expand their all-electric portfolio into the compact class. The CMP aims to reduce costs by 40 per cent by 2026, particularly through the zonal electrics/electronics (E/E) architecture developed in collaboration with Xpeng and competitive battery technology. In addition, the use of the "China Electrical Architecture" (CEA) is intended to achieve further standardization of the digital architecture and thus greater cost efficiency.

Volkswagen also wants to bring innovations to customers faster. With the new local structure of the Volkswagen Group China Technology Company, the Group's own research and development center in Hefei, the time to market for new, local products can be shortened by 30 per cent.

The Group and their brands plan to launch 40 new models in China in the next three years, half of which will be electrified. This includes at least eight of the planned China-specific BEV models from partnerships with Xpeng and SAIC as well as Volkswagen brand vehicles on the new CMP.

Valeo's New Power Division

GENERAL NEWS

Valeo has created their new Valeo Power Division, by merging the powertrain and thermal management systems into one entity. This, they say, will better address the electrification market expectations and improve Valeo's competitiveness and financial performance.

The Valeo Power division will implement a lean organization structure based on seven Regional Operations and will progressively replace the former Valeo Thermal Systems and Powertrain Systems business groups until the completion of all social and legal procedures.

Xavier Dupont is appointed Chief Executive Officer of the Valeo Power division and Valeo Group Executive Vice President.

Valeo CEO Christophe Périllat says, "As we further accelerate in electrification, our Valeo Power division will enable us to offer our customers technologies tailored to market expectations in terms of performance and cost".

At the same time, Valeo has updated the names of their two other divisions to reflect the transformation of their activities. The Valeo Comfort and Driving Assistance business group is now the Valeo Brain division. Marc Vrecko is appointed its CEO. And the Valeo Visibility business group is now the Valeo Light division, with Maurizio Martinelli as CEO.

The firm’s new operational structure is now organized around these three divisions that will become the financial reporting segments of the Group starting at the 2024 half-year results.

The supplier's aftermarket operation will still be called Valeo Service, with Eric Schuler as CEO.