Thu, 22 June 2023
Weekly Newsletter

DVN-I
Automotive Interior

NEWSLETTER #166

Editorial

Peugeot Design Chief Interview

PEUGEOT INCEPTION AT CES 2023 (DVN IMAGE)

Car interiors have evolved from purely functional spaces to cocoons of style, comfort, and luxury. The designer for the vehicles' interior develops the proportions, shape, placement, and surfaces for the whole interior, including instrument panel, seats, door trim panels, headliner, pillar trims, etc. Here the emphasis is on perceived quality, occupant experience and comfort.

Automotive design and interior design are the first steps into the vehicle development process. They define the playground where engineers and technology step in. DVN met recently with Peugeot Design chief Matthias Hossann to get his perspective on design in general, Peugeot philosophy, and the different ingredients to make a great automotive product.

The grand U.S. DVN Triple Workshop still awaits you in San Francisco on 29-30 August, including an interior Deep Dive centered around the theme *Interior Lighting and Beyond*. Interior lighting contributes and interacts for user experience, safety, HMI, and comfort in the car interior. A few lecture slots and exhibition booth are still available if you **hurry**!

Sincerely yours,

Philippe Aumont
General Editor, DVN-Interior

In Depth Interior Technology

DVN Interview: Matthias Hossann, Peugeot Design Chief

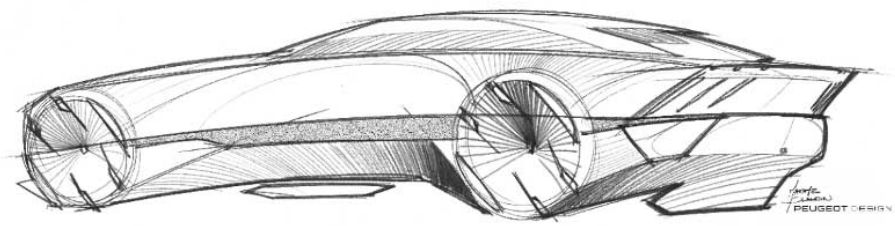
H. FRATTY, DVN · M. HOSSANN, PEUGEOT · P. AUMONT, DVN INTERIOR (PEUGEOT IMAGES IN THIS ARTICLE)

DVN had the opportunity to meet Matthias Hossann, Head of Peugeot Design at ADN (Advanced Design Network) in Velizy, close to Paris. Since 2004, the ADN has mainly brought together Peugeot; Citroën, and DS brands. The ADN center also houses the research and innovation department.

Matthias Hossann on general design

DVN: Where does your passion for cars come from and how did you become a car designer?

MH: I started my university in Fine Arts, and I had always an appetence for automobiles, I was also fascinating by all the possibilities that plastic offers to build shapes; colors, and products. Then I went into design, through Strate Design School in Paris, where I had the chance to have a real automotive guy as a professor (M.HARMAND)—he worked on the Citroën SM and invented the 'comodo' control pod on the steering wheel . An automobile is a very attractive product, as it is probably the most complex technology object you can think about! And it is exciting to create an æsthetic product, generating emotion, within a very regulated and constrained field.



DVN: How would you define Peugeot design philosophy?

MH: The Peugeot logorepresents a lion, so feline stance and dynamic performance are heritage attributes of Peugeot design. The three vertical stripes are integral to this philosophy, as well as the i-cockpit in the interior. The occupant, being one with the car, warm visible materials, like textiles, re-invention of the cabin space, pushing back the walls: that's what we target to achieve. The Peugeot Inception, presented at CES 2023, was our newest expression of our design.

DVN: How is design evolving in terms of vehicle life?

MH: Weneed to rethink the whole life cycle with new materials, potential material refurbishment when functions will be easily updated through OTA updates. The concept of collections, as it exists in the fashion industry, would really fit with this trend. Emotion with elements of surprise is what we are looking for, all along the car's life.

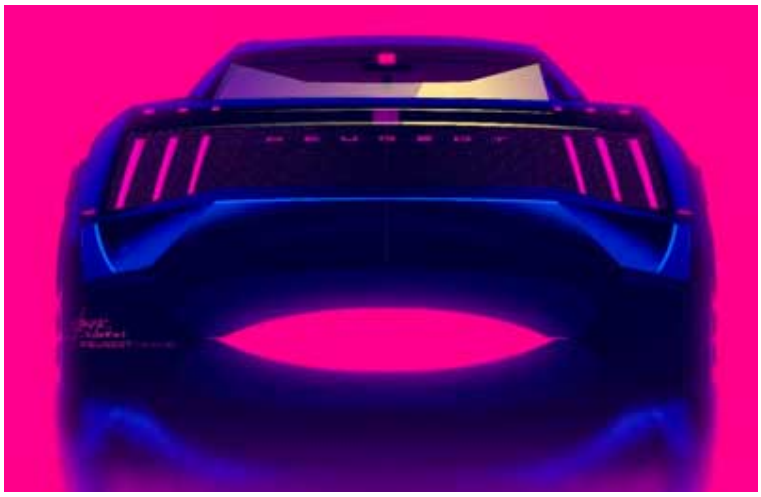
DVN: How is the focus on sustainability affecting design?

MH: Sustainability is the next big thing! Steel, which is a part of the weight of the car, is already recyclable, and recycled. But sustainability applies to everything. The Peugeot Inception has a single-layer body paint; colored glazing is creating new interior ambiance, 'forged' textile (from waste compression) creates new æsthetics. Renewability must be understood also from an artistic perspective, from a styling perspective, in short from a design perspective. **Materials and surfaces play with their colored lighting, redefining the idea of durability through these new techniques.**

Matthias Hossann on exterior lighting design

DVN: How does the Inception highlight Peugeot's new stylistic directions?

MH: The Inception front bumper has adopted the Peugeot light signature, which incorporates the three emblematic claws. This highly distinctive front end merges the entire front grille and the signature part into a single object that also houses the sensors. It is made up of a single piece of glass with the logo in the center, magnified by the 3D luminescent effect. This mask is lined by three thin horizontal bars crossed by the three claws. The four optical modules are housed under the glass mask, which is itself treated with a mirror effect. We call it the Fusion Mask, and it gives an embodied gaze to the vehicle, clearly visible, night and day.



DVN: We see more and more vehicles with full-width front and rear light bands. What do you make of that?

MH: The Inception's rear end, reflects the new front-end signature; it has a very high-tech treatment, with also the three claws seeming to enter the car infinitely, thanks to the two layers of glass. It's a design to emphasize the subtle shape of the wings, marked by a simple line which unfolds in a nice curve.

DVN: What do you think of illuminated grilleboards and logos on EVs? How about using front grilleboards and rear displays to communicate to pedestrians?

MH: The Fusion Mask uses newly-vacated real estate in a front of a car. A logo is the signature of the brand; it has to be visible, but it shouldn't be too much of a 3D object. The idea is to make it unique as a 2D shape, enhanced by lights, within the limit of regulations. Yes, communication to pedestrians is possible, as well as other car users. Lighting is a way to communication, it could go up to a real display, if the cost of it would be affordable.

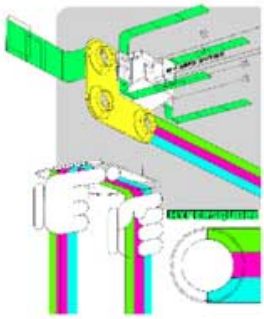
DVN: How does ADB factor into design decisions?

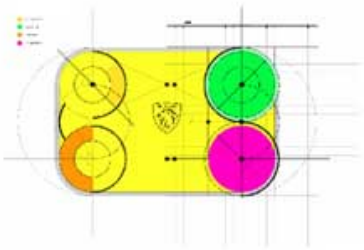
MH: Today we have ADB on the new 308 and 508. Other vehicles will of course be equipped with it in the future. The decision to use ADB or not depends on many parameters (positioning of the vehicle, cost arbitration, etc.).

Matthias Hossann on interior design

DVN: How strong is the trend, really, to design new vehicles from the interior out instead of the old way, the other way around?

MH: Our i-Cockpit and the Hypersquare control system (squared steering wheel) offer a new driving pleasure. The I-Cockpit is really the signature of a Peugeot interior, it is already in more than 10 million vehicles for about 10 years. The Peugeot Inception has a new generation of i-Cockpit, where you control all driving parameters and steer-by-wire technology makes driving simpler with a very small turning angle.





The Hypersquare with digital electric controls consists of a screen with four circular cells in each of its four corners.

DVN: We're transitioning to EVs and AVs—big changes, but the cars on the roads today still look more or less as they always have. Will this change?

MH: With EVs, engine size is not the differentiator anymore, maybe autonomy and screen size are getting pivotal. However, Peugeot is not playing the screen contest. The i-Cockpit is not going in that direction.

DVN: Are you getting into CMF (Colour-Materials-Finish) design?

MH: Cars still need to differentiate, and competition is supporting it. Our design direction is to be flush wherever possible. Chrome finish is over; new surfaces and interior lighting are making the unique signature. Lighting is giving also the colour, and design must be airy and dynamic.

DVN: With EVs and new architecture opportunities, how do you re-invent the interior cabin?

MH: We are trying to maximize the volume of the cabin for a given car footprint. What is important is how it is perceived by the occupants. Dematerialization of displays, thanks to HUDs; smart surfaces, and less-bulky seats, all these elements are supporting this strategy.

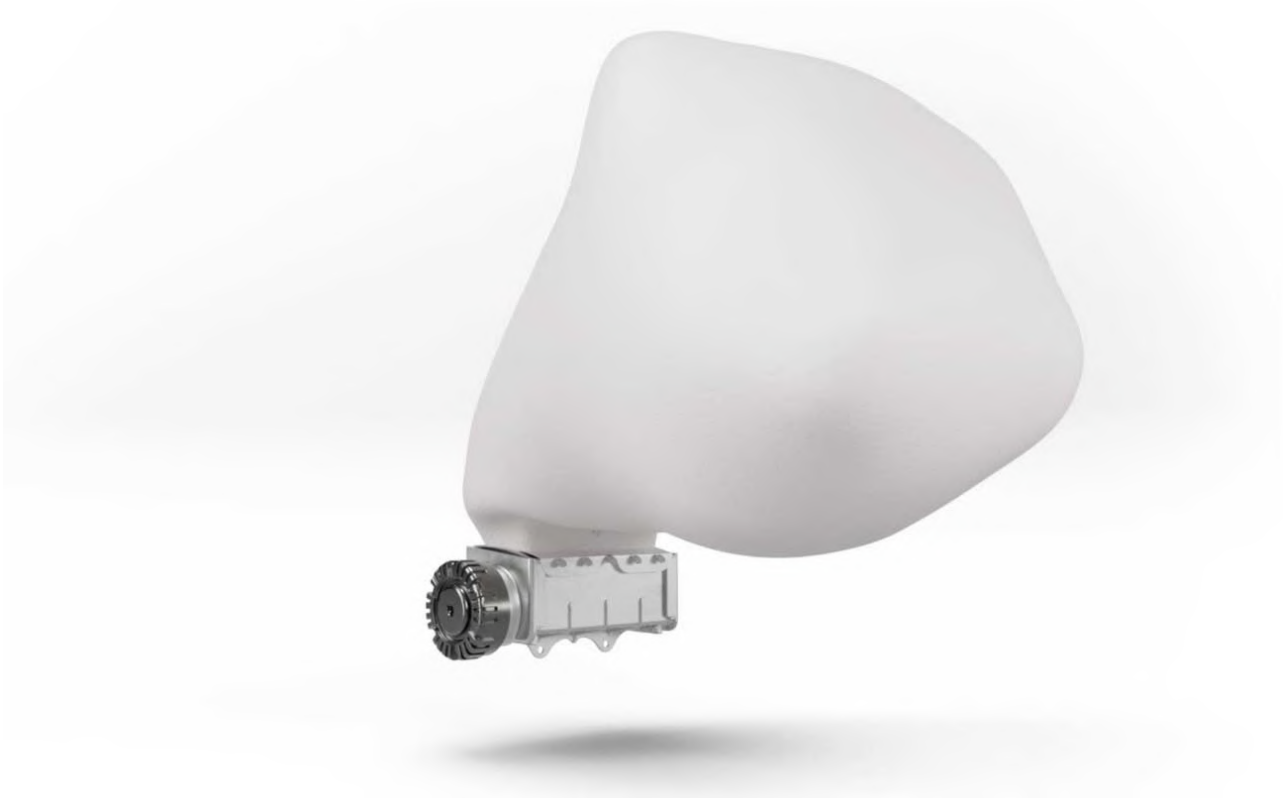
DVN: But does the thin-seat idea translate from concept to production?

MH: It is true that concept cars always have thinner seats than real-life cars. However, we keep looking for thinner seats. It is a major objective, within the constraints of high investment made in seat frames on more than one car generation, as a platform.

Interior News

Autoliv's New Airbag Technology

INTERIOR NEWS



AUTOLIV IMAGE

Safety equipment supplier Autoliv has unveiled a new airbag technology, based on the Bernoulli Principle: as the speed of a fluid increases, the static pressure decreases.

Traditionally, airbags rely on internal gas pressure to inflate rapidly during a crash. Instead, Autoliv's design uses pressure differences to draw in surrounding air, augmenting the inflation process.

The new technology has an inflator which receives a signal indicating a collision. This then propels high pressure gases at high speeds through multiple inlet tubes. As the gases flow through the tubes, they create a vacuum effect, drawing in the ambient air. The combination of pressure dynamics and aspiration allows for the inflation of a larger airbag with a smaller inflator.

Autoliv says this offers increased efficiency while significantly reducing development time and costs. "The Bernoulli airbag generates less heat, is lighter, and can reduce customer development testing in the US by 30 per cent. Low-risk deployment requirements can be met with a single stage inflator," said chief technical officer Jordi Lombarte.

The new airbag will be available to automakers in the third quarter of this year.

Apple Carplay Connects Multiple Smartphones

INTERIOR NEWS

OPEL IMAGE

In the future, Apple Carplay will make it possible to integrate multiple smartphones into the car's infotainment system. Passengers in the back seat can then use their cell phones to select music, program the navigation system or accept calls.

This 'Share Play' function has already been used for some time to create ad-hoc shared sessions among iPhone users, but can now also be used for the first time in conjunction with the Carplay connectivity software on the infotainment system in the car.

Apple's simultaneous networking of multiple phones is the first such feature on the market. In the future, Carplay will run on all screens in the car, including the central instrument behind the steering wheel for the first time.

The software reads vehicle data on speed, engine revs and tank level and displays the information in the familiar Apple style. Users can choose from various design templates and themes. In addition, it will be possible to control vehicle functions such as air conditioning and radio directly via the software in the future.

The new generation of the app will be available in specially-equipped vehicles from the end of this year. Cooperation partners include Audi, Mercedes, Porsche, Ford, and Renault.

Hybrid Working in Audi with Cisco Webex App

INTERIOR NEWS

AUDI IMAGE

To offer additional flexibility for hybrid workers, Cisco and Audi will make the Webex application available in certain 2024 Audi models, with other Volkswagen Group vehicles to be added in the future. The Webex app will be available for download through the Audi infotainment system, with no phone required for setup. Drivers will be able to seamlessly transition from Webex meetings on smartphones or electronic devices to in-car meetings.

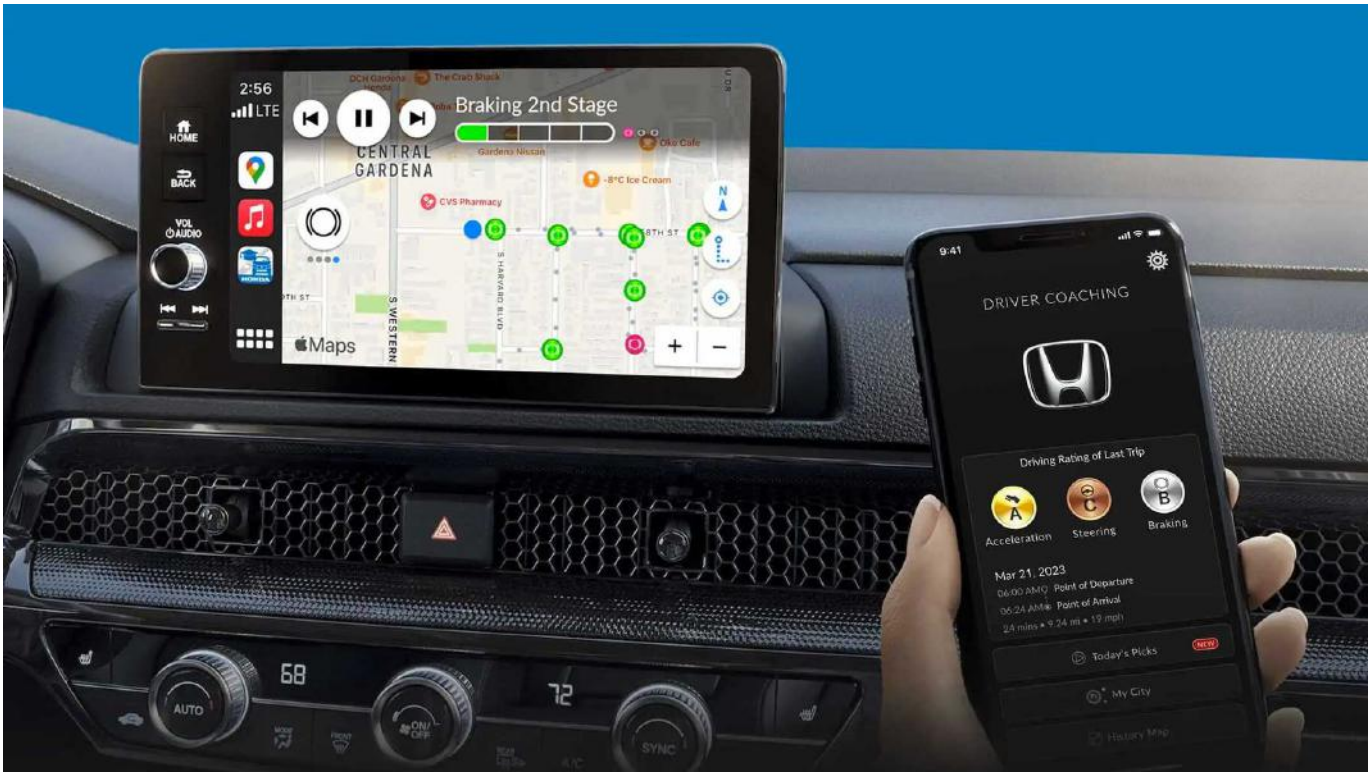
For enhanced safety, the Webex app switches into an audio-only mode when the car is moving, to ensure drivers are not distracted (at least not visually). When parked, however, vehicle occupants can view other meeting participants, share content, and have access to the full range of Webex features. Built-in AI features improve voice audio and remove background noise to deliver clear sound no matter the driving scenario.

Beginning this July, the Cariad Application Store will be available for new Audi A4, A5, Q5, A6, A7, A8, Q8 e-tron, and e-tron GT in Europe, the USA, Canada, Mexico, and other markets.

Dr Riclef Schmidt-Clausen, Cariad's senior vice president of intelligent cockpit and body, says "With our new Application Store we will offer customers a vast variety of essential and popular apps, seamlessly connecting their car with their digital life. Together with our Volkswagen Group brands and partners, we take the digital in-car experience to the next level, turning the car into a smart companion for drivers".

Honda Driver-Coach App Launched

INTERIOR NEWS



HONDA IMAGE

Honda has a new smartphone app called Honda Driver Coaching, which aims to improve the skills of new drivers and promote safe driving practices. It provides the user with access to their Honda-made vehicle's onboard computer to deliver real-time driving analysis.

Building on Honda's "Safety for Everyone" initiative to advance safety for all traffic participants, the app features game elements to ensure the safety lessons are engaging for young (and young-acting) new drivers.

The application can be downloaded from Apple's App Store, and is compatible with a range of new and previous Honda models that feature Apple CarPlay. Once installed, the driver's smartphone is connected to the vehicle, enabling the app to monitor and analyze steering, braking, and accelerator inputs in real time. If required, the application will provide the driver with assistance.

Once a lesson is finished, the application will provide the driver with a driving score. Users can then track their progress in addition to reading a summary, complete with additional driving tips. it also gives a playful side with this 'quantify me' perspective.

MJ Foxley, American Honda Motor's safety strategy leader, says "We created the Honda Driver Coaching app to take meaningful action to address a critical issue: nearly one-third of US traffic fatalities involve drivers under 25 years of age. With schools getting out and summer driving season just around the corner, we hope our new Honda Driver Coaching app can positively influence young drivers and the safety of everyone sharing the road".

Harman Kardon Sound System for VW ID.7

INTERIOR NEWS

HARMAN IMAGE

Harman will supply what they describe as a ‘cutting-edge Harman Kardon sound system that combines advanced technology and iconic design’ for VW’s ID.7. The audio-expert supplier's senior director of global acoustic systems, Greg Sikora, says “Harman Kardon and Volkswagen have once again combined their expertise to deliver the best of both the driving and the listening experience. Harman Kardon’s acoustics engineers worked hand-in-hand with the Volkswagen design team to create a sound system that is the perfect match for Volkswagen’s first all-electric limousine".

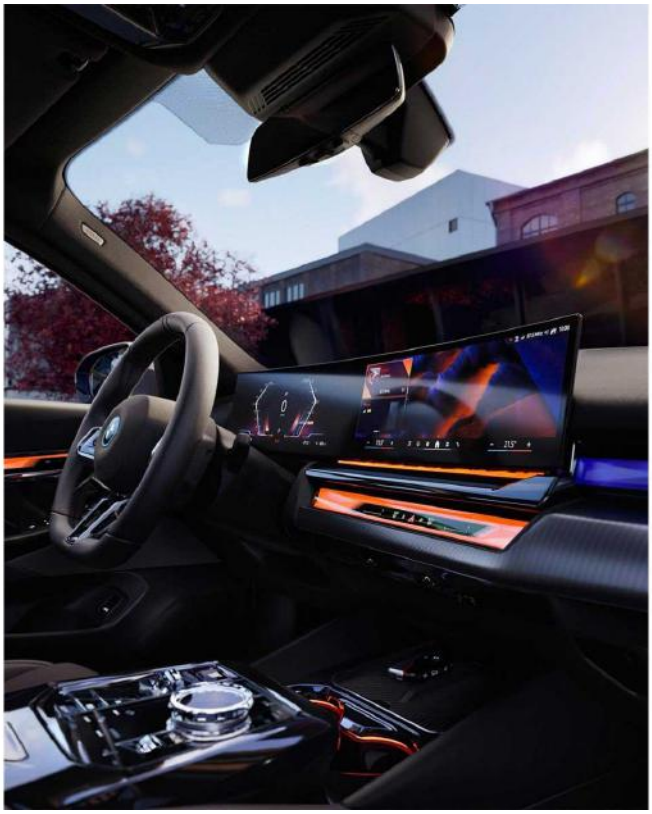
With hundreds of hours' tuning by Harman Kardon engineers working closely with Volkswagen’s teams, Harman says the sound system is finely adjusted to support superior audio performance, regardless of the road ahead. A 14-speaker, 16-channel setup includes a subwoofer and center speaker, combined with the ‘Fraunhofer Sonamic Panorama algorithm’, plus four different sound modes.

The Harman Kardon sound system also features Sound Focus seat optimization technology, wherein specific seats can be highlighted for the best listening experience: all-seat optimization, front seat only, driver only, or rear seat only. And to give listeners the freedom to personalize their listening experience, the system includes a choice of four sound settings. Harmon says each accentuates a different sonic aspect, allowing listeners to adjust the system and enjoy varied sound reproduction that ensures a completely new perception of the sound. The modes are:

- Pure: a high-quality, neutral sound experience with nothing added or taken away, for an especially balanced, authentic, studio-like sound experience.
- Relax: the soft playback setting, ideal for music that tends to play in the background, for a particularly relaxed and fatigue-free music experience.
- Speech: perfectly suited to the clear reproduction of spoken content such as radio, podcasts, and audiobooks, for comfortable listening with increased intelligibility even over a long period of time.
- Vibrant: voluminous sound reproduction for modern and dynamic music that is high in emotion and energy.

New Interior, Comfort, Individuality in BMW i5

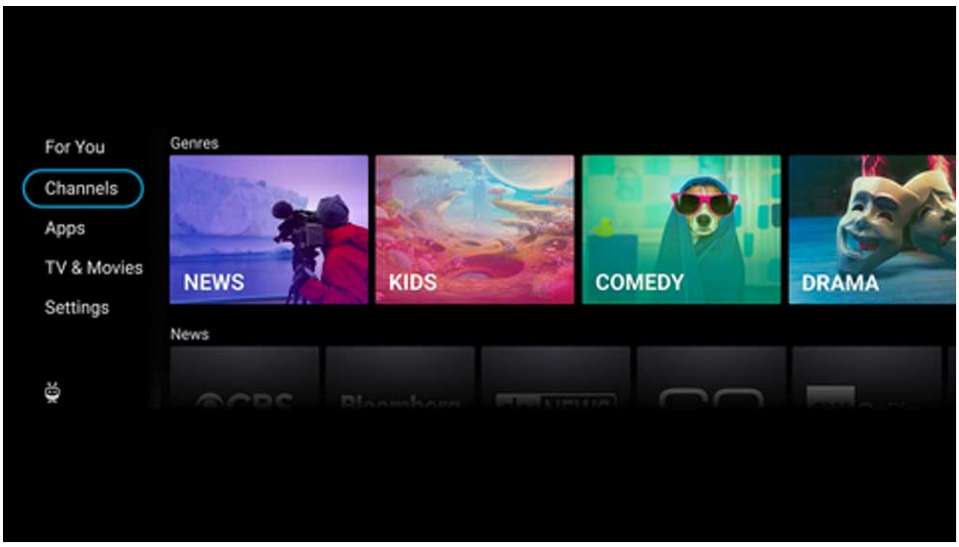
INTERIOR NEWS



BMW IMAGE

The new BMW i5 EV reinterprets its predecessor’s interior with modern functionality and improved digital services. The latest-generation BMW iDrive further enhances its distinct character. The eighth-generation of this model comes onstream this October in gasoline, diesel, plug-in hybrid, and—for the first time—fully electric versions. All are based on the same platform.

Inside, the focus is on the BMW Group's best features. The newly-designed interior is shaped by the BMW Curved Display with the new BMW iDrive and QuickSelect together with the innovative BMW Interaction Bar. Entertainment is courtesy of video streaming and in-car gaming. For the first time, there's a completely vegan interior: the upholstery and steering wheel are done in high-quality Veganza leather alternative as standard.



XPERI IMAGE

Xperi, for their part, brings consumers' favorite video content from the living room to the car. BMW’s implementation of TiVo’s video media platform will include a variety of country-specific content, offering news, movies and access to media libraries. It is expected to roll out as an over-the-air upgrade in initial launch countries by the end of this year.

Through TiVo's video media platform, customers can access an ever-expanding range of video content. This includes a vast collection of linear and on-demand streaming services, as well as channels that feature news, movies, and media libraries. Customers will be able to cut through the clutter of streaming and linear content options with simplified, universal discovery. The BMW implementation integrates TiVo's video media platform into the car to deliver immersive in-car entertainment experiences.

The list of assistance systems reads like an encyclopedia of what is possible today. The new Highway Assistant takes over many driving functions, making the vehicle at Level 3.

Remote-controlled parking via the My BMW App also makes its debut in the BMW 5 series as an element of the optional Parking Assistant Professional. This function relieves the burden on the person behind the wheel. For example, the system does not just take account of other vehicles when parking and backing out automatically, but also of marker lines and curbs.

Production of all model variants will start in July this year at the maker's Dingolfing Plant, where the 5-Series has been made for five decades.

Jeep Wagoneer Interior: Stylish, Comfortable, Tech-Packed

INTERIOR NEWS

STELLANTIS IMAGES

Displays and technologies abound in the Jeep Wagoneer, including high-resolution rear entertainment screens with built-in Amazon Fire TV.

The Wagoneer L is a Wards 10 Best Interiors & UX winner this year. Its third row is probably one of the most comfortable on the market, and the first- and second-row captain's chairs feature recliners among their adjustabilities.

There's a strikingly contrasting dark-over-light-over-dark theme, with black trim, white stitching on the dark instrument panel, and chrome even on a speaker in the cargo area. The rubberized bins and cupholders in all three rows and a beefy gear selector with knurled satin metallic trim are high-quality touch surfaces

The steering wheel is *adjustably* heated, and there are separate adjustments for heating the upper and lower parts of the seats.

The infotainment menus are logical and easy to access. A slew of categories can be controlled via voice commands, so the driver can keep their eyes on the road. Users can make conversational statements such as "I'm cold", and the heat will be adjusted upward (no word on whether the system can discern a declaration from a quote within a story being told or a conversation being retold).

Additionally, there are a quick phone pairing, wireless Apple CarPlay, the McIntosh audio system and a huge number of USB and USB-C ports, as well as two house current outlets (providing 115V AC, in North America).

The car has a sturdy roster of ADAS technology: adaptive cruise control, traffic sign recognition, DMS with drowsy driver detection, parallel and perpendicular parking assist with stop, intersection collision-avoidance assist, and a 360° surround-view camera.

IM Motors LS7 Has AI-Enabled Cockpit

INTERIOR NEWS

IM MOTORS IMAGES

Chinese premium-EV brand IM Motors, backed by SAIC, Alibabap, and Zhangjiang Hi-Tech, has launched what they describe as a full-vehicle intelligent software product, the Full-Course AI Cabin.

This release, IM says, integrates unique designs for full-scope software and hardware, intelligent driving technology, and large-scale algorithms, aiming to alleviate driving anxiety and address real driving nuisances by infusing AI into every driving scenario.

The Full-Course AI Cabin comprises three core experiences:

IM MOTORS IMAGE

Glance Sense reduces driving anxiety with its ease-of-driving philosophy. By integrating the vehicle's sensors with the cabin and employing a height-adjustable screen that accommodates the driver's primary field of view, drivers can maintain forward vision, reducing safety risks caused by deviated focus. The driver can receive all crucial driving information at a glance, significantly enhancing safety.

Several key scenario applications were announced, such as Navigation Intersection Light Guidance, BSD Blind Spot Light Reminder, and A-pillar Blind Spot; Side View, and Rear View Supplements. These integrated cockpit images help drivers avoid sudden traffic interruptions such as pedestrians, children playing, or delivery riders.

One Touch iAD addresses common gripes in daily driving. Through algorithms, the One-Touch iAD feature covers various scenarios such as curb parking, extricating from tight spots, and lane following, freeing users from the drudgery of parallel parking and navigating in confined spaces.

Shua broadens users' multidimensional travel experiences. IM is using large-scale algorithms, such as Alibaba's TongYi Qinwen, Tsinghua University's Chat-GLM, Baidu's ERNIE Bot, and MOSS, to implement customized pre-studies. Functions based on the GPT large-scale algorithm fusion with intelligent driving systems will be launched in the fourth quarter.

The Full-Course AI Cabin will be phased into all IM Motors' models based on vehicle configurations. First to receive it is the LS7 electric SUV. That model's Urban Fit variant's One-Touch Electric Folding Rear Seat system expands the trunk volume to 1,731 L, providing ample interior space to satisfy the flexible mobility needs of urban life.

The Design Lounge

Inception

THE DESIGN LOUNGE

COFFEE CORNER
DVN
Interior

PEUGEOT IMAGE

By Athanassios Tubidis

The mere idea of visually separating a metal car body from any other element conveys a clear message for a possible future of automotive morphology: recyclable components are sorted out from anything durable. It is about designing a sustainable process instead of the product, and escaping—at least for a moment—the virtuous circle of a blind financialization which, over the years, transformed the ever-more-loaded automotive interior into new-tech app supermarkets. Breaking the traditional automotive codes, at this point, is a necessity, not innovation in the name of a new design trend.

The Inception, beyond being Peugeot's newest concept car, heralds a forthcoming era of automaker vision. In a world where cars are not cars anymore, where separation between manned and remote mobile systems is being defined, and where sustainability becomes the new 'real estate', a complete re-examination of automotive design is required.

Future projections want cars out of city centers and instead mainly dedicated to linear road networks and smart highways where steering becomes optional, while haptic controls and touchscreens replace buttons and switches. Can we still call steering wheel a steering wheel?

We recently found ourselves remote working, partially excluded from our mobility ecosystem. Since then, we have entered a new niche, both static and itinerant. With the most advanced automotive tech keyboards, joysticks, controllers, ergonomic pads, bolsters, and armrests in our houses, we realize that domestic comfort invaded automotive interiors like flat screens of all sizes and resolutions, lounge chairs, ambience mood lighting, sound-systems along with infinite color and trim choices. Are cars becoming houses, or the opposite? Either way, there is certainly an obvious lack of integration. Tesla's Model 3 has a simplified furniture-like dashboard with a big, flat screen right in the middle. The Lancia pu+Ra's interior was presented at a Milano furniture show in cooperation with Cassina furniture. Citroën's 'Skate Platform' future mobility vision was developed in partnership with Accor Hotels,

to provide custom interior spaces. These are some of the trendsetters, and that has nothing to do with one industry influencing another—it is a new lifestyle.

Whether a touchscreen or a steering wheel, physically we can only rely to our reach for our surrounding space. Hence, it is time to reshape our immediate proximity that today is twofold: the tactile 'living' one-and-only, which requires high end perceived quality, concerning anything tactile, experiential and physically engaging (excluding of course the cognitive-neutral screen surfaces). And its broadcasted twin, the one through a screen, the instagrammable one, which has to do with the atmosphere, the light hue, the focal points the visual landmarks, the reflections and shadows. There is a catalyst in the making, expressed by today's most popular word: sustainability. That stands for anything non-consumptive, balanced, symbiotic, minimalist, and efficient in environmental and economic and social terms.

While a single material could be easily traced, a product assembly of 30,000 parts, representing an average car today, is a somewhat more demanding procedure and a difficult-to-describe one. One of my favorite expressions is *I wrote you a long letter because I didn't have the time to write you a short one* (origin: French mathematician and philosopher Blaise Pascal, who wrote in 1657 *Je n'ai fait celle-ci plus longue que parce que je n'ai pas eu le loisir de la faire plus courte* ('I only made this [letter] longer because I didn't have time to make it shorter').

The purpose of a show car is to depict the future in present terms, and Peugeot's design team took the time to do this properly. The construction philosophy is representative of its era and events, illustrating a sustainable scenario on very clear rules. Technology is integrated into one specific unit and place in the cabin and anything durable is under the 'skin' but, the skin itself is a living one, just like our surrounding space (in this case, continuity between seats and floor is attained with a single skinlike material. Comfort is ensured by electro-welded airbags that adapt to any body shape. The easy-to-recycle, metallic effect upholstery comes from anything inflatable that is recovered from classic seat airbags, lumbar adjustment bladders, or massage units).

The automobile has been developed for over a century as a deeply engineered, durable good supporting a complex global industrial supply chain, but for you and I, it is increasingly the 'skin' which is as personal as your clothes and shoes are.

Renault Human First Vision Concept at VivaTech

THE DESIGN LOUNGE

RENAULT SOFTWARE REPUBLIC AT VIVATECH (RENAULT IMAGES)

Created only two years ago, Software République unveiled a collaborative concept at the Viva Technology 2023 exhibition this month. Called the H1st Vision (Human First Vision), it bears functional and innovative technologies to realize human-centered visions of the mobility of the future.

Software République helped create a European ecosystem for sustainable, sovereign and safe mobility. Their roadmap sets out the ambition of launching 10 new services and products, incubating 50 or more startups, and offering services in more than 50 parts of the world by 2025.This ecosystem includes six large companies—Atos, Dassault Systèmes, Orange, Renault Group, STMicroelectronics, and Thales.

The physical H1st vehicle has a virtual twin in a digital universe, where systems ordinarily independent in today's physical world communicate—infrastructure, energy, public services, and different categories of people. This makes it possible to model, visualize, and simulate the different use cases that could arise in the real world. By dint of interconnection with its environment, the car is in constant dialogue with digital and physical ecosystems. So it's not just a concept car, but a tangible vision of tomorrow's mobility experience.

The 20 innovations in this technology demonstrator are centered on people; they take care of the driver, the passengers, and other traffic participants. Examples include secure biometric access control, a 'one-of-a-kind audio experience', driver and vehicle health monitors and assistants, predictive alerts to protect occupants and people on the road, and optimized vehicle range and charging.

With this functional virtual-and-real concept, Software République demonstrated the relevance of the open innovation model for incubating industrial projects to make Europe a prominent hub for the mobility of the future.

With a camera in the exterior mirror, the car can recognize its driver up to 6 meters away, having analyzed and digitized their gait and other aspects of their approach. Another camera recognizes the face from 3 meters away.

As soon as the identification is validated, the doors unlock and the driver's name is displayed on the side window. They sit down, and the seat is adjusted according to their height, which has also been memorized. Then, a second identification is carried out on board by facial recognition. For these access modes, Thales developed a secure 'safe' (digital ID wallet) to store this biometric information. The expected user need only advise the avatar displayed on the dashboard—a humanoid character that reminds a little of E.T.—that you are ready to leave. This avatar then facilitates access to functions.

The atmosphere is individualized, with seats equipped with microphones. Thanks to a spatialized sound system developed by Arkamys, the driver is the only one to hear driving alerts, while passengers can take a call or have an SMS read to them—and only them. Everyone benefits from an immersive audio system, developed with the help of Jean-Michel Jarre. It has 16 speakers and delivers spacialized sound of a quality comparable to that enjoyed by the artist in their own studio.

News Mobility

Mercedes Drive Pilot Gets California's Green Light

NEWS MOBILITY

MERCEDES IMAGE

Mercedes Benz has received L^3 certification for their Drive Pilot technology from the California authorities for highly automated driving on freeways. Mercedes says this milestone makes them the first and only company in the world allowed to introduce an L^3 system in the most populous U.S. state.

Drive Pilot will be available as an optional extra as part of the Me Connect services group for 2024-model S Class and EQS cars. The first equipped cars are expected to be delivered to end customers at the end of this year.

L^3 means temporary autonomous driving within a specific scenario. The system takes over certain driving tasks and controls longitudinal and lateral guidance. The person behind the wheel does not need to permanently monitor what is happening on the road, but must be able to intervene at any time within a 'sufficient period of time' (whatever that might mean—three or four seconds?) and take back control if the vehicle is overwhelmed with the situation.

Drive Pilot builds on the environment-sensing technology of a larger driving assistance package from Mercedes, but includes additional sensors. In addition to lidar, these include microphones and a camera in the rear window to detect emergency vehicles, as well as a wetness sensor in the wheel arch. A vehicle equipped with the technology also has redundant steering and braking systems, as well as a second on-board network, so that it remains maneuverable even in case of malfunction and can ensure a safe handover to the driver.

How Should Robot Taxis Behave in Accidents?

NEWS MOBILITY

MERCEDES-BENZ IMAGE

While humans hardly have a chance to react deliberately in the seconds before impact, a robot car can perform millions of calculations during this time, and choose from several courses of action. Should it crash into a wall and sacrifice its occupants, or plow into a crowd? Should it collide with a big SUV, or with a small car? Should it ram a cyclist (who might or might not have a helmet on)? To decide this, the machine needs to have software that mimics a sort of moral code, and humans must program this into the machine.

AV ethics has been prompting philosophizing and thorny debates for years; DVN **looked at the discussion** nine years ago, and at **Toyota's thoughts** on the matter eight years ago, and at an **interesting multinational survey** five years ago; all three of those linked pieces are still well worth a read, as these issues are still very much front-and-center. And as AVs—real ones with *actual* full self driving—inch closer to on-road reality, they're preoccupying car manufacturers: How should the fully automated car of the future decide in a dilemma situation, when life, limb, and property are at stake no matter what action is taken? In 2017, 86 per cent of the industry representatives surveyed in a poll conducted by the IT association Bitkom were in favor of creating an independent ethics council that would define the rules for behavior in the event of accidents. The council should be made up of philosophers, lawyers, technicians and politicians.

A Munich research group's ethical algorithm, which has now been published in the journal Nature Machine Intelligence has determined five factors that should play a role in the decision-making process:

- the acceptable maximum risk of a maneuver,
- the special protection of those who may be worst affected,
- the equal treatment of all people,
- the minimization of the overall risk, and
- the personal responsibility of road users.

Thus, in the future, the risk should be fairly distributed among autonomous vehicles, normal cars, pedestrians, and two-wheeled vehicles.

It is clear, however, that there cannot always be a morally perfect solution in individual cases. Artificial intelligence is limited, and not just in the Munich researchers' version: an algorithm can, at best, in theory, only minimize the risk of damage, not eliminate it.

It is essential to get international agreement on this critical issue, which may take long to build, as moral perspective could be very different from country to country.

General News

JLR's New Logo, Sub-Brands

GENERAL NEWS

JLR—formerly Jaguar Land Rover—has a new corporate logo that minimizes the Land Rover name as they shift the focus of their activities onto four sub-brands. The automaker says the logo "aspires to remove ambiguity" of their former company name, which didn't mention all the brands.

JLR now describes themself as a “house of brands” comprising Range Rover, Discovery, Defender, and Jaguar. The first three previously were models under the Land Rover brand, which now has been deemphasized to become a “trust mark."

CEO Adrian Mardell said, "We have to deepen the understanding and the characteristics of vehicles because clients will be attracted individually to those brands, not just to Land Rover (…) that is why we have actually elevated those sub-brands above the trust mark of Land Rover". The Land Rover name will be retained to become "the equivalent of an 'Intel Inside'", Mardell said, referring to the computer chip maker whose logo is often attached to devices using their chips. "Land Rover continues as a world-renowned and important heritage mark, remaining on vehicles, websites, social media and retail sites, underpinning the world-class Range Rover, Defender and Discovery brands," the automaker said.

JLR is working to create a stronger identity for their SUVs, which have not been always been clearly differentiated as the lineup has grown. Mardell said Range Rover signifies 'luxury, quietness, serenity', Defender represents 'utility, go anywhere', and Discovery models are 'family sized'.

Jaguar will become a luxury all-electric brand, with the first new EV model launching in 2025.

VW's New China Hot Spot

GENERAL NEWS

VW IMAGE

A month ago, VW announced plans to invest around a billion Euros to build their own "Center for Development, Innovation and Procurement in Fully Connected Electric Cars" in Hefei, China. Now Volkswagen Anhui, one of VW's three joint ventures in China, plans to invest a further C¥23bn (around €3bn) in the new Hefei e-mobility hub in Hefei, their CFO Jörg Mull has announced.

Hefei recognized megatrends of modern industrialization earlier than other locations—the increasingly converging semiconductor, screen, and automotive industries in the age of digitalization. Screens and cars need chips, so Hefei invested in all three future technologies at the same time to create an industrial ecosystem. That pond was stocked by attracting targeted battery technology companies including CALB and Gotion High-Tech, in which VW has a stake, automakers including BYD and Changan in addition to VW and Nio, and hundreds of suppliers including Continental and ZF. The synergies that arise here from the cooperation of a wide variety of high-tech companies will shape the innovations of e-mobility in the coming decades.

VW Group China CTO Marcus Hafkemeyer says "With the new VW subsidiary TechCo, we are opening a new chapter in cooperation with our joint venture partners in Changchun, Shanghai, and Hefei as well as the Group's brands. We are reducing interfaces. TThe aim is to bring products adapted to Chinese needs to the local market more quickly and efficiently".