

Editorial

DVN-Interior Website Goes Live

We've been busily at work designing and building an **DVN-Interior** website that's an easy joy for you to use. And now it's up and running!

The [new site](#) provides easy, direct access to each newsletter as it is published—including this one, of course. It brings you permanent, searchable access to all previous newsletters, DVN-Interior Reports, and all other content archives. Just like the Driving Vision News website, the new DVN-Interior site is a tremendous value-add for DVN-Interior subscribers. Check it out today! Please let us know what you think; if there's anything about it we can adjust so it works better for you, we'd love to hear from you, so please [drop us a note](#).

In today's newsletter, the Design Lounge brings a Tokyo Motor Show preview—an appetizer for our forthcoming full coverage. Today's in-depth article is centered around new human-machine interfaces and the challenges with occupant monitoring, safety systems, voice assistants, smart surfaces, 3D imaging, and links to connected services, including MaaS itself.

Some of the challenges could almost be called existential; there are big question marks among consumers and in industry as to feasible pricing for a smart surface control, an embedded voice assistant, a drowsiness alert device, or any of the numerous other services and facilities now possible. The recent Dyson announcement of business unviability of their EV car project points up these kinds of challenges, and underscores the role of traditional vehicle business to finance all these new developments.

We hope you find today's newsletter enlightening, informative, and enjoyable to read. (Haven't got your DVN-I subscription yet? You're missing out; [come on in](#) and subscribe!). And don't forget to pencil in your calendar January 28/29, 2020, in Munich, Germany, to join our 1st [DVN Interior Workshop](#) around the theme of "Automotive Interior: New Technologies for New Usages". More on the website!

Sincerely yours,



Philippe Aumont
General Editor, DVN-Interior

In Depth Lighting Technology

Next Steps for Interior UX: Triumphs and Challenges

Simplicity should be a key objective of future HMI (human-machine interfaces) in ACES vehicles. That's the way to provide an optimal user experience, facilitate quick introduction by dint of shortened development time; build and bolster trust, and drive up feature usage, acceptance, and demand.

According to panel discussions and expert presentations at the WardsAuto User Experience conference held shortly ago near Detroit, new technology needs to be presented to users as simply as possible to avoid causing cognitive stress. This applies all up and down the scale of important aspects like occupant monitoring, safety systems, voice assistants, smart surfaces, 3D imaging, and links to connected services, including MaaS (mobility as a service).

User trust in the system is a crucial key to help users behave safely—especially during the transition between manual and assisted or automated driving.



Autoliv Life Cell Airbag

Level 3—the first "hands-off" level—will need full acceptability for the driver to actually remove hands from the wheel, and that amount of trust will take time to build. Autoliv senior engineering director Rich Matsu says his company expects L3 and L4 vehicles, with a slow introduction rate, to account for only about 10% of global vehicle sales by 2030: "We see Level 2 as being dominant for the foreseeable future. It's a big focus of our organization and the industry overall," he says. At L2 the driver has to remain alert enough to quickly take over control from the automated system when needed, so driver trust and a reliable driver monitoring system are critical keys.

Matsu thinks at least 7 seconds will be needed between first alerting the driver to resume control of the vehicle, and their doing so satisfactorily. That's a challenge when L2 systems begin to approach L3 capabilities—think of Audi, BMW, Tesla, Cadillac, and others with advanced adaptive cruise control systems that take much of the highway driving load off the human driver—and as these highway-pilot systems get more sophisticated and allow drivers to focus away from the road for longer periods, it becomes a longer and more difficult task to regain their attention and control.

Matsu and Michael Godwin, Osram's North American director of visible-light LED products, both say the car's steering wheel is coming into focus as the new HMI hub.



Asaphus vision

Take GM's Super Cruise, for example, available on various Cadillac models. It's an L2+ ACC system that uses an infrared sensor to monitor the driver's eyes, and uses lights along the steering wheel to indicate system status, whether it be "all systems go" or that the system's about to disengage because the driver's eyes aren't on the road. Autoliv's Matsu says interactivity in the steering wheel like this is "going to be a more prevalent feature in the future".

Occupant/driver monitoring— knowing precisely where occupants are and what they are doing—is rapidly shaping up as a critical HMI element. Driver monitoring can already help to reduce vigilance and drowsiness issues in existing vehicles. And biometrics to measure the health and task-fitness (including sobriety) of the driver will be needed in a world where the driver isn't necessarily driving all the time.

Asaphus Vision, headquartered in Berlin, Germany, is a university spinoff with strong links to the research community. They develop software to provide innovative technology for face identification and driver monitoring. Many developments are under way on more advanced biometrics and other locations—in seats and head restraints, for example—and forms of sensing to better understand the position of occupants and their mental and physical condition.



Another challenge is to better inform the driver. Osram's Godwin says forthcoming models will have "more vivid head-up displays with wider fields of view that will keep the driver informed and engaged". And he notes that interior lighting is coming to be employed in new ways, like to signal drivers if the auto-piloting vehicle needs attention or intervention. A lot of human-factors study is going on to determine what kinds and colors of light are most effective, where they should be placed, whether and how fast they should blink, and what audible signals should accompany them.



New kinds of controls are rapidly coming forth, too. CGT, based in Ontario, Canada, introduced its Reveal material last year, developed in coordination with audio supplier Harman. The material integrates touch-sensitive electronic controls into the interior panels without the use of physical switches.



A VUI (voice user interface) opens the door to spoken occupant interaction, using speech recognition for voice command. Amazon's Alexa is one of the leading technologies in this field, and GM recently signed a major deal to bring Alexa Automotive to a wide array of Chevrolet, Buick, GMC, and Cadillac models.

Arianna Walker is Amazon's "chief evangelist" for Alexa Automotive. At the WardsAuto UX conference, she predicted the voice assistant playing a role in autonomous cars of the future. Alexa could aid in the handoff between autonomous and manual driving modes, for example, and Walker says "You can imagine all sort of other ways voice can help". Amazon has been working to get automakers and big T1s to embed the Alexa voice assistant in vehicles. Ford did it with Sync App Link, which requires the Alexa app to work, and Faurecia did it for its latest Cockpit of the Future CES demonstrator.

But here again, it has to be simple, and must simply *work*—all the time, every time. Panelists at the conference all agreed that frictionless usability of a user interface, including a voice-command interface, strongly influences usage rate, and eventually take rates. Another point of agreement among the panelists: today's first equipped models are not yet at that level.

Still, the technology is promising. VUI could prepare the car before you go, heating or cooling it to suit, or charging it, or doing maintenance, as public transport companies are trying to do autonomously with their buses when they're not in use. VUI opens a gateway to connected services; Walker says innovations allowing the likes of "Alexa, please close the garage door and add milk to the grocery list" are under development. Or if there's room in the car because it's not full, VUI could help you find people in the neighborhood looking for the same commute—along the lines of French carpooling service BlaBlaCar.

One of the biggest challenges for VUI systems is how to tailor it to the individual operating systems of various automakers.



Ford Sync App Link

All in all, it's increasingly clear that a simple, intuitive user experience, with seamless continuity to other life segments (home, office, grocery, etc) is a critical key to success for vehicle HMI. Buyers won't buy if they have to spend too long understanding what it is and how it works, if it takes too long to respond or responds wrongly—nobody likes to feel as though they're not being listened to—if it looks weird versus what's expected or what's been experienced, and so on.

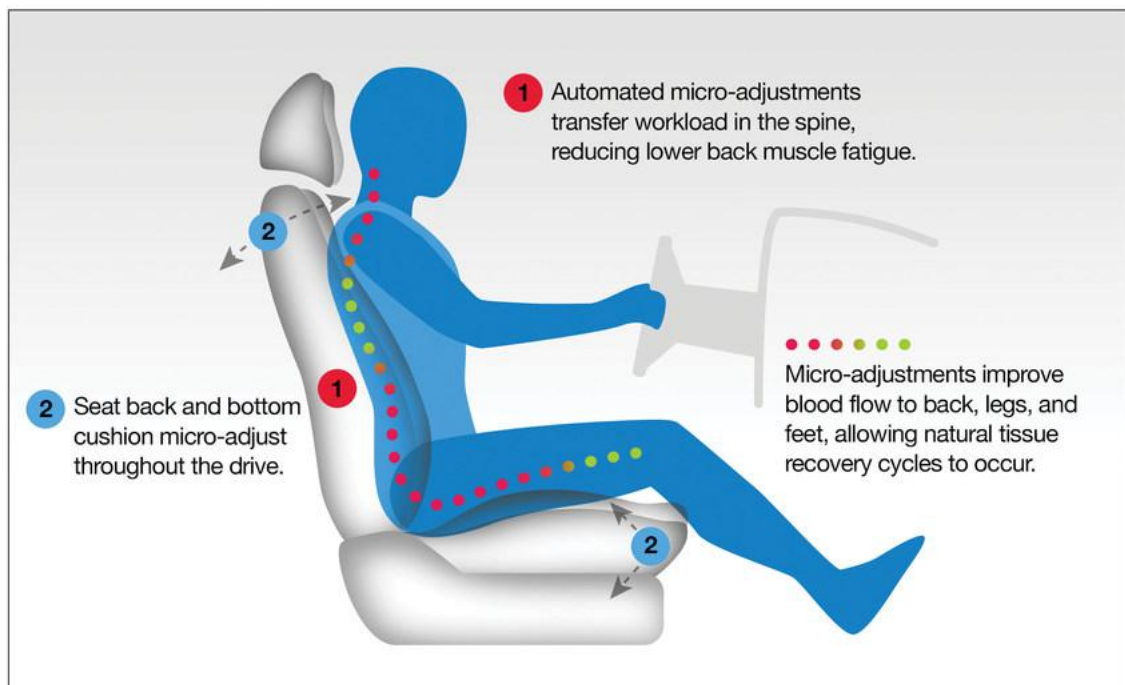
Success will help the auto industry to create new revenue opportunities and relationships with vehicle buyers via connectivity and mobility. These new revenues will be even more necessary as the industry has no real idea yet how to cost and price these new features, while buyers, for their part, don't yet know what they will be ready to pay. Stay tuned!

Interior News

Mercedes' Anti-Fatigue Seats



Daimler is the first automaker to offer seating technology claimed to reduce driver fatigue and discomfort through automated micro-adjustments of the cushion and seatback. Based on Comfort Motion Global's proprietary technology and branded as Energizing Seat Kinetics, it is available for the driver and front-passenger electric seats in Mercedes GL, GLS, and A- and B-Class models.



CMG says they developed the technology to forestall tissue fatigue and reduce related discomfort. The system, which micro-adjusts the seatback and bottom cushion throughout the drive, is user-controllable via the vehicle's touchscreen. Its automatic adjustments redistribute the occupant's weight in the seat, continually transferring stresses so they aren't concentrated for prolonged times on specific tissues. With each small motion, the system transfers the workload in the spine and supporting muscles to a new area so that no one area does all the work. This allows natural tissue recovery cycles to occur, improving circulation and decreasing fatigue and discomfort, the company says.

The biomechanically-tested technology was developed by Dr. Paul Phipps, a chiropractor in the U.S. state of Indiana who has long treated patients for chronic back pain associated with the cumulative effects of sitting, especially when driving frequently or for long distances.

Phipps is CMG's chief medical officer and director of R&D. "Specializing in human performance biomechanics, I had worked extensively with professional athletes helping them to create structural balance, increased flexibility and greater stability", he says. "I realized these same principles could be applied to helping improve driver and passenger wellness for those spending repetitive or extended periods of time sitting in a car".

Uncomfortable Seats Cost Big Money

According to Volvo Car UK research, 68% (22 million) of the 32.4 million employed people in the UK use their car to drive to work, or for work purposes. Of those, 12% (2.64 million people) have taken up to two days off work for back pain from poor-quality car seats, and 13% (2.86 million people) have had to use up to four sick-leave days for the same reason. Volvo's survey was based on a sample of 2,000 UK adults who drive to work or use the car for work purposes.

The pain is bad enough for nearly a third of drivers to see a doctor or physiotherapist, costing €222m in appointments and hospital visits. The findings were revealed during Backcare Awareness Week, which began on October 7, and Volvo is using this research to focus on



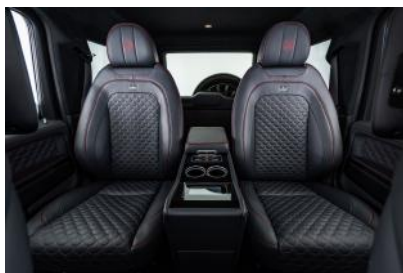
initial comfort, cruising comfort and dynamic comfort. The goal is to ensure drivers and passengers remain relaxed and fully supported throughout their journey, regardless of the length or type of road.

Volvo Cars senior seat comfort lead Tommy Apell says his company "specifically opt[s] to use softer foam compounds for our seats to ensure the fit is comfortable across all body shapes and sizes. We also specially tune our seat springs for improved comfort, with the ergonomics team working alongside designers to ensure things like seat stitching don't create pressure points for drivers and passengers. New seats take up to five years to move from concept to finished product due to our lengthy development and testing program". Volvo was an early believer in human-centric seating design; the Volvo Amazon model of the mid-1950s to late-1960s was first with adjustable lumbar support, and the Volvo 140- and

164-series cars released in 1968 had orthopedically-designed seats; see point № 2 in [this period advertisement](#).

According to Volvo Car UK, seat comfort is a key priority for 63% of UK drivers, with nearly one in five choosing a model because of its seats. More than 1 in 10 drivers also say they've had passengers refuse to get in their car because the seats are uncomfortable. When asked which areas they would like to see improved, the majority of drivers wanted more lumbar (lower back) support, while one-third wanted more adjustability to suit their frames. It's easy to imagine these UK-based conclusions are valid around the world.

New Brabus Buckets for Mercedes G-Class



Brabus, the largest aftermarket Mercedes tuner, has revealed its latest seating modification for the Mercedes G-Class SUV. Brabus' interior designers have replaced the bench seat with two bucket seats that offer comfort features such as multi-contour adjustment and integrated seat ventilation and heating.

Between the two rear seats is a new central console covered with the same leather as the rest of the interior. The top of the console has a 4.3-inch touch screen, which in standby mode shows a clock with a Brabus 800 illustration—that's a car based on the Mercedes E63S. In addition to controlling various seat functions in the rear, this controller also operates the front passenger seat for more legroom.

This panel also provides access to the G-Class' standard-equipment COMAND system to be able to turn the sound system up or down, or mute it altogether. The Starry Sky headliner and overhead reading lights can also be controlled. Another important feature of the modified center console is the integrated strongbox, which only opens after entering a code on the touch control panel.

BASF's New Tough Clear Plastic For Backlit Switches



A semicrystalline polyamide from BASF has been used in a car interior for the first time. Ultramid® Vision is being used in the Valeo window regulator module of a German-made car. The material was chosen for its high light transmission with low scatter, perfect for use with the illuminated symbols on the window regulators and exterior mirrors.

The new polyamide is applicable for semi-transparent and translucent components. Its high resistance to UV, temperature, abrasion, and chemicals recommends it wherever visual control or light design play a role. From the manufacturing standpoint, it can be colored with

polyamide-based color masterbatches, and easily combined with other polyamide materials in multi-component injection molding processes. This enables easy production of multifunctional components with transparent or illuminated areas.

BASF performance materials developer Dr. Rainer Xalter says "Ultramid® Vision demonstrates good adhesion to the switch housing, which consists of glass fiber-reinforced polyamide (...) a further selection criterion was the homogeneous light transmittance. The requirement was to allow as much light to pass through as possible, with high color fidelity of the transmitted light".

As the material can be repeatedly exposed to aggressive media such as sunblocks, cleaning agents, and solvents without being affected, it is ideally suited for touch-contact surfaces such as backlit switches or buttons.

ColorFuse: Techniplas' New Mold-and-Paint Process



UK-based manufacturer Techniplas Prime has launched a new, proprietary injection molding and painting process for direct fabrication and surface coloring. They're calling it ColorFuse, and it makes for high-gloss, scratch-resistant surfaces.



ColorFuse can be integrated into existing manufacturing processes without investment. Compared with conventional processes, colors can be changed through paint coating directly to the part in the closed mold, removing a step from the production process and helping decrease production times.

Independent of the carrier material, a molded part is flow-coated with a polyurethane reactive lacquer while still in the multi-component tool and then leaves the mold in the desired color with no extension to the injection molding cycle.

Enabling precise accents and styling lines, ColorFuse offers high gloss, matte or grained surfaces for car interiors and exteriors.

Techniplas Prime president Daniel Spirig says ColorFuse "changes the game for coloring interior and exterior car parts; manufacturers gain a one-step process of injection molding and painting combined for direct surface coating with no post mold processing. By combining these processes, parts can be manufactured faster at lower cost with innovative design options including elegant surface aesthetics and logo depictions".

Material cost savings with ColorFuse can be as great as 35% compared with standard wet painting processes, while still achieving the same high-gloss, piano-black appearance and fulfilling scratch-resistance criteria.

Cameras for Mirrors in USA? Data, Public Comment Invited



Japanese and European regulations permit CMS (camera monitoring systems) rather than traditional side- and rearview mirrors. US regulations don't, but perhaps that will eventually change: Tesla and the Alliance of Automobile Manufacturers petitioned NHTSA five years ago, and Daimler Trucks North America put in a petition of their own a year later in 2015, to allow cameras instead of mirrors, citing improved fuel economy through reduced aerodynamic drag. Now NHTSA have issued a [request for public comment](#) and data in response to a comprehensive set of questions about the technology.

Camera monitoring systems are said to offer 35° view fields, compared with the 17° of conventional door mounted mirrors—though the latter figure depends on whether local regulations require plain flat driver-side mirrors with "unit magnification", as in US Federal Motor Vehicle Safety Standard № 111, or allow convex and aspherical ones as in UN and

Japanese regulations. A wider field of view helps to reduce blind spots. The images from the camera being displayed on in-car monitors can bring another safety benefit, because drivers needn't move their eyes as far from the normal road gaze to see the side view, but only if the display is thoughtfully positioned and configured. If not, it can lead to the likes of [this unfavourable review](#) on a popular auto enthusiast website.

And it's not just enthusiasts who have objections to some of the systems that have been commercialised; NHTSA say camera monitoring systems may also introduce new safety risks. A five-year agency study of CMS on heavy-duty vehicles found display screens were too bright, causing distraction and glare for drivers. And the agency's tests two years ago of a prototype passenger car CMS found better-quality images than mirrors at dusk and dawn, but also displays that were too bright at night, distorted images and "bloom" from headlights in the image, and cameras easily obscured by raindrops. Comments are due by 10 December.

GM's China 2-Seater City EV

SAIC-GM-Wuling Automobile, General Motors' light-vehicle partner with SAIC Motor, has released its two-seat EV across China. It is produced in the Southwestern Chinese city of Liuzhou. The micro EV, badged as the Baojun E200, offers two variants at prices of approx. €7,000 to €8,000 after government subsidies, and carries a battery system warranty of 8 years or 120,000 kilometers. With a 160-cm wheelbase and dimensions of 2.49 m long by 1.52 m wide by 1.62 m high, it's 20 cm shorter and 14 cm narrower than a Daimler Smart. It has a range of 250 km, and a 3.8-meter turning circle.



Inside, there are multiple storage spaces—slots in the armrests, special hooks, card slots, and a concealed space in the passenger seat. The back of the passenger seat can be folded forward to provide room for large items.

The air conditioning system has a low-noise compressor and fan. With vibration-isolation technology, A/C noise at idle speeds can reach levels as low as 43 dB.

Safety—a real challenge for small cars—drove GM-Wuling to make the E200 mostly of ultra-high-strength and high-strength steel to successfully pass crash tests.

New Toyota Yaris Brings Urban-Life Design



Toyota says its new 4th-generation Yaris has been designed to meet the increasing challenges of everyday urban life with drivers who expect their car to deliver style and practicality; they want it to be easy to park, agile in the city, and comfortable on longer journeys.



It's to be built in Onnaing, France, with the Toyota New Global Architecture (TNGA)—the first application of this platform philosophy in the compact car segment—including the new TNGA 3-cylinder, 4th-generation hybrid system. It's 1 cm shorter, 4 cm wider, and lower than the outgoing model, with 5 cm more wheelbase length to maximize interior space, and a lower and more rearward seating position to maintain the same headroom while lowering the car's center of gravity by 1.5 cm.

The interior design follows a less-is-more principle, creating an open and spacious area for the driver and front passenger. High-quality materials include an innovative felt trim finish for the door panels and, for the first time in a Yaris, a soft-touch instrument panel to deliver a warmer cabin ambience.

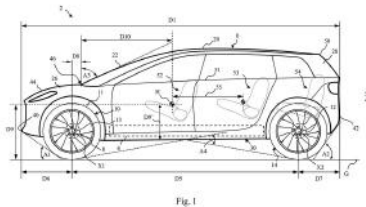
Throughout, sensory quality has been a key focus point in terms of the touch, operation, and sound of the controls, colors, illumination, shapes, patterns, graphics and overall appearance.

The cockpit design has been developed around the concept of "hands on the wheel, eyes on the road". Information is presented clearly and directly to the driver from three interlinked sources: the central touch screen, a TFT multi-information display in the instrument cluster, and a 10-inch color head-up display. The large HUD helps the driver focus on driving with minimum distraction, aided by a reduced steering wheel size.

The new Yaris can be equipped with a wireless charger large enough to accommodate the latest generation of smartphones, a heated steering wheel, and special ambient cabin lighting around the driver's zone. The ergonomic design makes controls intuitive to locate and use, while the dashboard itself has been made slimmer and is set lower, with a wider and higher center console. Safety equipment includes a new central airbag, which Toyota plans to describe in detail at a later date.

News Mobility

Dyson Gives Up on EV Attempt



Dyson has scrapped plans to build what it called a "ground-breaking" electric vehicle, saying the project can't be commercially viable. The British firm, specialists in lightweight vacuum cleaners and public-washroom hand dryers, had established a new Dyson Automotive division that was developing the car, a large crossover-style premium EV, ahead of a planned launch in 2021. Billionaire inventor James Dyson had vowed that new technology and design methods would make it stand apart from every other electric vehicle.

The firm had committed £2.5bn into technology including the car project. The design and development of the machine was being undertaken by a staff of just over 500 workers at a facility in Hullavington, in the UK.

Dyson said his team "has developed a fantastic car; they have been ingenious in their approach while remaining faithful to our philosophies. However, though we have tried very hard throughout the development process, we simply can no longer see a way to make it commercially viable". Given how difficult it is for new auto companies like Tesla and NIO to make money, and the overall move of traditional automakers into the EV space, it makes it even more difficult to new entrants.

However, Dyson says investment will continue to further develop the IP and technology, including investment in robotics, manufacturing techniques and, in particular, solid-state battery technology. The new target is probably to license it later to other companies.

New Consortium for AV Computing Development



Several automotive industry and technology leaders have joined together to accelerate the deployment of safer, more affordable and scalable self-driving vehicle technologies through the AVCC (Autonomous Vehicle Computing Consortium). Arm, Bosch, Continental, Denso Corp., General Motors, Nvidia, NXP Semiconductors and Toyota Motor are all initial members of the consortium, according to a statement from the group.

Its first step will be to develop a set of recommendations for a system architecture and a computing platform for autonomous vehicles. The goal is to reconcile performance requirements of self-driving systems with vehicle-specific requirements and limitations such as size, temperature range, power consumption and safety.

Arm senior VP Dipti Vachani says "The AVCC brings together leaders from across the automotive industry landscape to tackle complex foundational technological and computing challenges".

Each company brings different expertise to the self-driving space. Bosch will develop recommendations for software interfaces for autonomous systems, for example, while Nvidia will contribute its work in artificial intelligence computing platforms.

GM and Toyota, along with Ford Motor Co., SAE International, Uber ATG and Daimler AG, also are a part of the Automated Vehicle Safety Consortium, which works to provide a safety framework around Level 4 and -5 automated vehicle testing.

VW, Nike, bring Blue Ribbon coast to coast



Volkswagen's ID.Buzz Cargo concept has been used to reproduce Nike's first delivery vehicle, a VW Type 2 Bus, and will visit select cities across the United States.

The ID.Buzz Cargo, presented in 2018 at the Los Angeles Auto Show, is part of VW's ID EV lineup. The Type 2 bus was known, starting from its 1950 introduction, as the Transporter, Kombi, Microbus, Bus, or Camper, depending on body type and market. The VW initiative aims at promoting the electric future of the brand, while Nike includes it in their Reuse-A-Shoe program.

Nike's Reuse-A-Shoe is a sneaker recycling program that collects used-up shoes from consumers and transforms them into Nike Grind, a suite of high-performance materials made from recycled footwear and manufacturing scrap, to create running tracks, playing turf surfaces, and other athletic gear.

Established in 1964 as Blue Ribbon Sports, Nike started with a shop in Santa Monica, California, with delivery service using owner's personal VW Bus. The Blue Ribbon store reopened not long after the U.S. debut of the ID.Buzz Cargo concept vehicle to confirm a commitment to the running community of Los Angeles, giving modern-day reincarnation of an integral piece in both Nike and VW history, through promotion of environment-friendly values and products.

Honda Buys Driver Apps Developer Startup



Honda R&D has formally acquired Drivemode, one of its first #HondaXcelerator partners. #HondaXcelerator is the global open innovation arm of Honda R&D, based in Silicon Valley and operating globally.



Founded in 2014 by entrepreneurs from Zipcar and Tesla Motors, Drivemode is a startup that develops smartphone-based connected services to enhance the way consumers use technology in their vehicles. The concept developed by Drivemode approached the challenge of using the smartphone in the vehicle with the question "what if we built a car with the smartphone as its brain?", says Honda R&D Innovation CEO Nick Sugimoto.

Through this collaboration, the smartphone-as-a-brain concept was created to enable drivers to control core functions like navigation and texting solely through the controls on the steering wheel.

The Drivemode-#HondaXcelerator history is expected to speed up Honda's R&D in this space, with a natural buy-in of the automaker's global innovation community.

The Design Lounge

Tokyo Motor Show 2019: Your DVN-I Preview



DVN-I will be attending the Tokyo Motor Show and compiling an overview of new design trends and features regarding concept and new production vehicles introduced there. In addition to the Tokyo show's long history, it is unique in that not only automobiles but also heavy trucks and motorcycles are displayed, and for 2019 a special "Future Expo" exhibit that is free to the public and will present a holistic vision of the future from the Japanese motor industry—including autonomous driving, ride sharing and other modes of transport. In upcoming issues of the Design Lounge, DVN-I will present in-depth coverage of the designs and trends on display at the Tokyo 2019 show. For now, here's some eye-candy to whet your appetite:

Entering the future

- Greetings and assistance by virtual characters

Future mobility encounters

- Flying car exhibit
- Future mobility demo runs

Connected mobility in city life

- Integration of EV use with daily activities
- Future mobility's new living spaces

Sports viewing

- Sports viewing of the future
- Real-world e-Motor-sports tournaments

Local tourism enhancement

- Retail shopping with AI
- Touring assistance with AI

Future energy technologies

- Next-generation hydrogen vehicles
- Space technology using hydrogen fuel



In this venue, Toyota will be highlighting new mobility concepts along with their BEV micro vehicles.

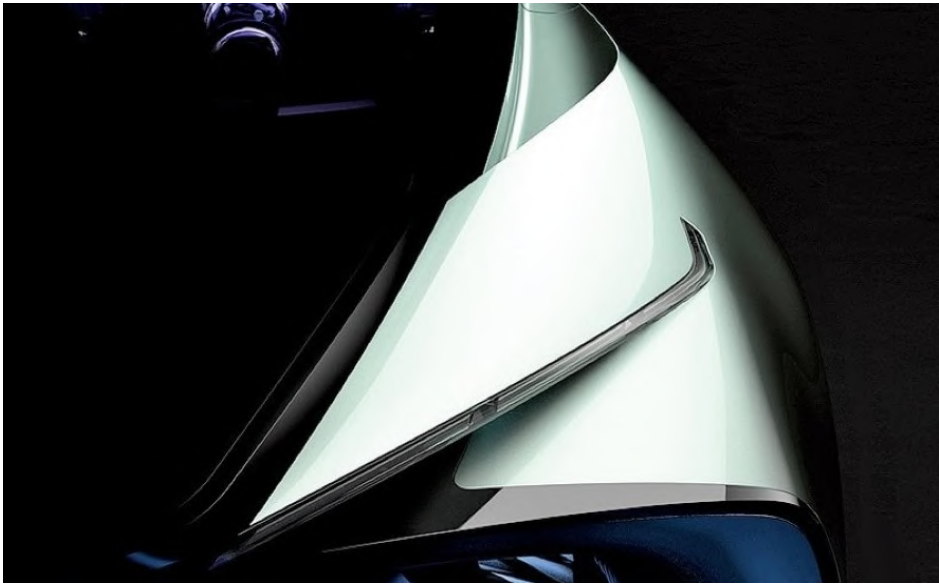




Key Concept vehicles



Daihatsu Icolco



Lexus electric concept



Mazda electric concept



Mitsubishi Mi-Tech Concept



Nissan IMk



Suzuki Every Go Anywhere—baby room, Hanare, Hustler and Waku Spo concepts



Toyota LQ

Key New Vehicle Launches



Honda Fit



Subaru Levorg





Toyota Mirai



Toyota GR

General News

Clotilde Delbos is Renault Interim CEO



Renault's board of directors decided to end the mandate of Thierry Bolloré as President and Chief Executive Officer with immediate effect, and to appoint Clotilde Delbos as interim CEO, with Jean-Dominique Senard as interim President until a process is completed to appoint a new permanent President and Chief Executive Officer.

The Board of Directors gave a favourable opinion on the appointment of Olivier Murguet and José-Vicente de los Mozos as Deputy Managing Directors to assist Delbos in her duties.

Delbos graduated from France's Emlyon Business School. She began her career in California, then at Price Waterhouse in Paris before joining the Pechiney Group in 1992. She held various positions in France and in Brussels in Internal Audit, Treasury and Mergers &

Acquisitions to then become Division Financial Director of Bauxite Alumina and International Trade.

She joined Groupe Renault in 2012 as Comptroller. In 2014, she was additionally appointed Alliance Global Comptrol Director. In April 2016 she was appointed Executive Vice President and CFO, and this year she also took on responsibility of Internal Comptrol. She is a member of the Groupe Renault Executive Committee.

Uchida is New Nissan CEO



Nissan have named Makoto Uchida, head of the maker's important China division, to be their next President and CEO, after resignation of former CEO Hiroto Saikawa.

A Nissan executive with experience in joint purchasing with partner Renault, the Uchida is of a younger generation than past leaders. His selection was announced by the chairman of the Nissan board, and Masakazu Toyoda, director in charge of Nissan's nomination committee, at a press conference in Tokyo. The board's vote in favor of Uchida was unanimous.

Faurecia's New Tel Aviv Cybersecurity Center



Faurecia has opened a new technology center in Tel Aviv, Israel, enabling the Group to accelerate its cyber security strategy.

As vehicles are becoming increasingly connected and providing new user experiences, the reinforcement of passenger safety and data security is essential. Faurecia wants to develop its cybersecurity expertise through collaboration with local startups and major innovation clusters to speed the uptake of emerging trends and new technologies. This will enable the Group to propose complete end-to-end solutions integrated into the vehicle, securing the software, data and cloud connectivity.

In addition to securing its solutions, Faurecia also has been working to globally assess and protect its network of industrial sites and offices from cybersecurity risks. Sixty dedicated cybersecurity experts (so far) are working to prevent, detect and control cyber security issues, and the newly established Tel Aviv platform will contribute to reinforce the overall strategy.

Faurecia CEO Patrick Koller says "The Israeli ecosystem is leading innovation and the development of solutions in cyber security. By working with a broad ecosystem, we are better placed to offer leading edge technology for the security of our products and systems".

This inauguration is part of Faurecia's ongoing strategy to build up innovation ecosystems by relying on technology platforms. The Tel Aviv site joins the group's other technology-platform centers in Silicon Valley, Toronto, and Shenzhen.

