DVN-I
Automotive Interior

Thu, 6 January 2022 Weekly Newsletter NEWSLETTER #93

Editorial

CES Showcases Innovations For '22—One Way Or Another

WHO? WHO'S FIRST…IN WHAT LINE? (CES IMAGE)

With Covid-19 spreading faster and infecting more people than ever before, the tech world is waiting to see if CES 2022 really will go ahead in person in Las Vegas this week. Major exhibitors including GM; BMW; Mercedes Benz; Google; Intel; Microsoft, and others are staying home from what's ordinarily the world's largest tech show, yet the organizers insist CES 2022 will take place in person as scheduled.

Whether in person or online—or both—CES will provide a forum for display of innovations from auto and mobility tech companies big and small. This week's in-depth article presents a selection of teasers from automakers and tier-1s; next week we'll look more deeply at the innovations and particularly investigate small and medium-sized businesses and startups.

For most of a decade now, CES has been showcasing innovations in automotive technology. Most of the industry treks (in non-pandemic years) to Las Vegas to present their their most advanced concepts, and CES is buzzed up as a must-go show for startups. DVN Interior is a CES-registered media outlet, so we've been receiving a blizzard of press releases about the event and exhibitors. These releases are just one of many channels we actively monitor and pursue to keep our community informed. If you're not yet part of DVN-I, come **join us**!

Happy New Year. We're glad you're here. Onward and upward in '22!

Sincerely yours,

Philippe Aumont
General Editor, DVN-Interior

In Depth Interior Technology

CES 2022 Preview: On-Site? Online? Both…?

VINFAST: A VIETNAM-BASED EV MAKE

CES is billed as the most influential tech event in the world; the showplace for breakthrough technologies and innovation. The world's biggest brands meet new partners, and sharp innovators hit the stage. CES 2022 is taking place on 5-8 January both online and in Las Vegas—though with major exhibitors staying home and flights being cancelled by the hundreds and thousands, it's a little difficult to imagine the in-person event having much in the way of legs.

In any event, the automotive sector is to have big presence. No longer is CES a consumer electronic show with a side dish of automotive tech; it’s a real, full-boogie auto show embedded within the larger tech show. There will be over 185 vehicle-tech exhibitors occupying—at least in spirit—the West Hall this year, including BMW, Daimler, Damon Motorcycles and Hyundai. GM CEO Mary Barra will perhaps still deliver, by remote, a keynote highlighting her company's technology roadmap. New companies using CES as a coming-out event include Tusimple, who will showcase their self-driving semi-truck, and Vinfast, a first-time Vietnamese car manufacturer. Suppliers are also to be well-represented by the likes

of Bosch; Continental; Qualcomm Automotive; OmniVision; Aptiv, and Dassault Systems.

Due to the recent spike in the Omicron variant of Covid, a hefty list of companies cancelled their in-person presentations—including Google; GM; BMW; Mercedes-Benz; Panasonic; IBM; Intel; Waymo; T-Mobile; Amazon; Meta (ex-Facebook); Twitter; Nvidia; AT&T, and Lenovo.

Megatrends providing the framework and rubrics for the show are the same ones driving innovation released outside the CES circus tent: electrification; connected customer experience; 5G; new in-vehicle infotainement design philosophy; software-defined vehicles; in-car commerce; in-vehicle health, and relentless monetization all made possible by connectivity. These megatrends are accelerating exponentially.

As this issue of the DVN-I Newsletter is being written, the show has yet to open. Everything about CES you read here this week is based on available information; next week we'll report in more detail on the most interesting interior innovations.

Digital Twin

The first iteration of the “Las Vegas Digital Twin” will be unveiled. Digital twins are virtual models of real-world objects – or places, in this case – that are enabled by the internet of things and offer real-time digital information about what’s happening.

The idea with a digital twin of a city is to leverage advanced 5G networks to “vastly improve mobility, air quality, noise pollution, water management and emissions from major buildings,” according to Cityzenith, a software developer involved in the project.

The system being set up in Nevada will help transition the city to zero carbon emissions, Cityzenith says, adding that their Digital Twin technology already has been used in New York as part of a “Clean Cities-Clean Future” initiative, and planned soon for Phoenix, Arizona.

Indy Autonomous Challenge

INDY AUTONOMOUS CHALLENGE

Engineers from 19 universities will spend the entire week on the Indy Autonomous Challenge, which organizers are calling the first-ever high-speed race featuring autonomous cars. The spectacle is designed to encourage breakthroughs that, “speed the commercialization of fully autonomous vehicles and driver-assistance systems,” It is happening on Jan 7 at the Las Vegas Motor Speedway.

Automakers

GM

CHEVY SILVERADO EV TEASER (GM IMAGE)

General Motors decided to stay home from CES, on account of the Covid spike. Previously, CEO Mary Barra was scheduled to give a keynote speech, and they planned to unveil the Chevrolet Sliverado electric pickup. *Exhibit Zero: The Ultium Effect* is a virtual experience showing how GM’s vision, technology, and people are driving us all toward a future world.

Hyundai

Hyundai's plan is to share their vision for robotics and the metaverse under the main theme of *Expanding Human Reach*, building on their idea of a future mobility ecosystem. Exhibit specialties will include their "Mobility of Things" (MoT) concept enabling autonomous movement of traditionally inanimate objects through the company's robotics technology; and presentations on Hyundai's progress toward their goal of fulfilling mankind's aspiration for unlimited freedom of movement, with robots connecting the real world and metaverse

Their vision embraces how robotics will complete the metaverse by connecting the virtual world with reality as a medium, and eventually overcome the physical limitations of movement regarding time and space. They will also showcase their new PnD (Plug & Drive) robotic module platform under the new concept of Mobility of Things (MoT), which aims for the provision of mobility in everything—from traditionally inanimate objects to even community spaces. The company will also exhibit their robot product lineup, including the recently revealed Mobile Eccentric Droid (MobED).

BMW

BMW I7 (BMW BLOG IMAGE)

BMW planned to showcase their "Theater Screen". The BMW blog does not reveal which vehicle the cinema screen is planned for, but the next 7 Series and thus also the BMW i7 are certainly the most obvious candidates. "It really gives an

immersive, cinematic experience in the vehicle," says the BMW Board Member responsible for Sales and Marketing. No other details were offered at this point so it remains to be seen whether this is a new integration of the rear-seating entertainment system or a new and innovative concept.

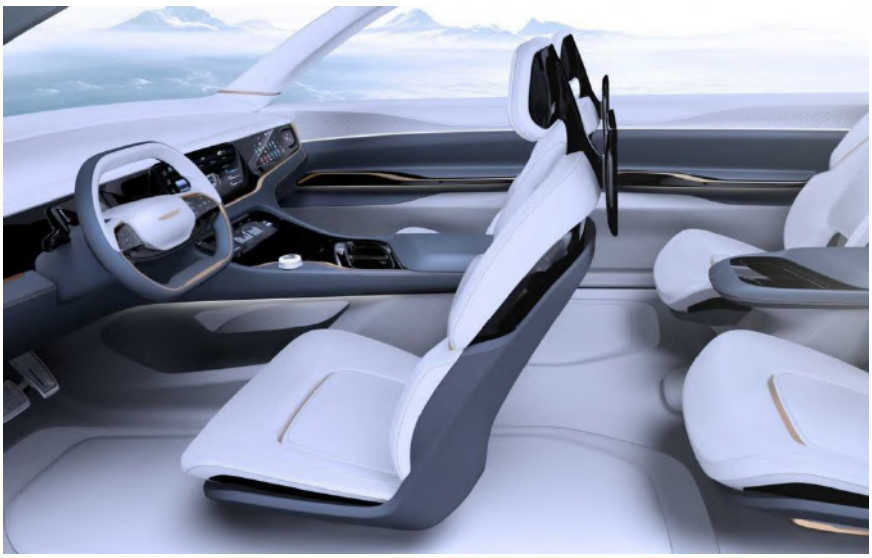
BMW says as well that "on display will be the first-ever demonstration of a technology that changes the exterior color of a vehicle with the touch of a button". We'd like to see that!

Mercedes Benz

Mercedes-Benz will unveil their all-electric Vision EQXX in a digital world premiere on the *Mercedes me* media online platform. The software-defined research prototype is the most efficient vehicle the brand has ever built.

The car is part of a far-reaching technology program aimed at breaking through technological barriers and lifting energy efficiency. This includes advances across all elements of its cutting-edge electric drivetrain as well as the use of lightweight engineering and sustainable materials. It's equipped with a barrage of intelligent efficiency measures, including advanced software. An exterior teaser is available **here**.

Stellantis



CHRYSLER AIRFLOW CONCEPT, 2020 VERSION (STELLANTIS IMAGE)

Stellantis exhibits include a preview of the future in advanced electrification, interior cabin technology, autonomy, and connectivity. Displays include Citroën Ami urban EV; Citroën future mobility concept; Jeep Grand Cherokee 4xe with Uconnect 5 in-car-technology system; DS Formula E race car; Fiat New 500, and a new version of the Chrysler Airflow concept car.

Vinfast

VINFAST E36 INTERIOR (VINFAST IMAGE)

Vietnamese automaker VinFast continues its rollout with the announcement of three more new all-electric models to be presented at CES, following their e35 compact and e36 mid-sized SUV, last month at the Los Angeles Auto Show, the three new models will fit into the A, B and C segments. Their goal is to price their cars attainably for as many consumers as possible that are ready to make the leap to electric in the coming years.

Indi EV

INDI ONE (INDI IMAGE)

Indi EV—a startup carmaker headquartered in Southern California—has the aim of making an electric crossover called the Indi One. It will seat five and will be sized between the Tesla Model Y and Model X. Their booth will feature hands-on experiences with the car and its groundbreaking computer systems, including what

Indi calls the Vehicle Integrated Computer (VIC), a supercomputer infotainment system such as the personal transportation market has never seen before.

Tier 1 suppliers

Hyundai Mobis, the Hyundai supplier arm, is communicating how the company's robotics business will drive the paradigm shift towards future mobility, going beyond the traditional means of transportation and fulfilling mankind's aspiration for unlimited freedom of movement.

THE M.VISION 2GO, A CITY DELIVERY MOBILE WITH E-CORNER MODULE

THE M.VISION POP, AN ELECTRIC MICROMOBILE CONCEPT

These concepts showcase new technology such as the e-Corner and the communicative LED grille. This e-Corner module allows a vehicle to move from side to side like a crab, making parallel parking in a narrow space easier. An equipped vehicle can also make a 360-degree rotation where it stands. The technology allows to turn by 90 degrees, aiding in sharper vehicle cornering and easier parking. The LED grille helps communication between the vehicle and other traffic participants.

Xperi

DTS AUTOSTAGE (XPERI IMAGE)

HD Radio licensor Xperi's focus this year is likely to be on DTS AutoStage, a radio platform whereon IP connectivity and broadcast radio coexist, enabling a richer, highly visual user experience akin to what digital and satellite radio offer.

DTS AutoStage can accommodate a variety of connectivity and privacy requirements, operating systems, and security schemes while maximizing data quality at scale. This allows automakers and suppliers to create a feature-rich, flexible HMI that matches design themes and leads to an exceptional user experience.

Faurecia

FAURECIA IMAGE

Faurecia will demonstrate Collaborative Virtual Twin, a computing simulation to improve engineering efficiency and time to market with Dassault Systèmes and Accenture. It is presented by their Cockpit of the Future team with Dassault Systèmes and Accenture, on the Dassault booth.

Valeo

VALEO 2019 MOOD-AWARE TECHNOLOGY (VALEO IMAGE)

Valeo is presenting major innovations transforming and shaping a cleaner, safer, more autonomous, more connected mobility: an all-electric 48V motorcycle; third-generation lidar scanner; Valeo NFL (Near Field Lidar), and Valeo VoyageXR Panorama. Valeo has extended their role in driver assistance and protection to inside the vehicle by creating the intelligent interior. Valeo Safe Insight combines technologies to identify the driver and alert tehm in the event of distraction or drowsiness, to recognize when passengers are on board and remind them to buckle their seatbelt, and to detect when there is someone in a stationary car and raise the alarm in case a child has been left behind.

Marelli

MARELLI IMAGE

Marelli is presenting their streamlined, intelligent, connected cockpit solutions to facilitate a safer, more accessible communication between the vehicle and its occupants. Integrated large displays and intuitive HMI (Human Machine Interface) meet consumer demand for dedicated content while enhancing the user experience.

Bosch

BOSCH IMAGE

Bosch will be presenting connected, smart, and sustainable products and services for a better life. The roster includes a show car demonstrating Bosch systems expertise in software and hardware. For example, Bosch is developing central computers for the electronics architecture of the future. These vehicle computers will be used for assisted and automated driving, controlling vehicle motion, as well as for cockpit functions and body electronics. It provides personalized, cloud-based services for their occupants such as wrong-way driver alerts or road condition updates. Over-the-air updates will keep cars' functions constantly up to date.

They'll present as well the transparent digital LCD sun visor, connected to the interior monitoring camera, which detects the position of the driver's eyes; using AI-based intelligent algorithms, the virtual visor analyzes the information and darkens only the portion of the windshield through which the sun or other light sources would dazzle the driver. The rest remains transparent, leaving the driver's view of the road unobstructed.

Continental

CONTINENTAL IMAGE

Continental is showcasing innovative products and services from server-based vehicle architecture and automated driving capabilities to its sustainable tire concept. For the first time at CES, Continental will present their award-winning Switchable Privacy Display aimed to help reduce driver distraction. To develop it, Continental engineers had to answer two important questions: How can sensory overload of the vehicle occupants be prevented despite very large monitors? And: How can display areas that are not used in a given situation be optically improved?

The fully immersive Wrong Way Driving demo puts participants behind the wheel to demonstrate Continental's innovative solution.

Visteon

VISTEON IMAGE

Visteon is showcasing electrification technologies, advanced display solutions, and intelligent digital cockpit systems. Advanced display solutions enabling the evolution toward a digital cockpit with larger and more immersive reconfigurable surfaces. As mass-market vehicles start to offer 12" or larger displays, premium and luxury automakers are differentiating their cockpits through craftsmanship, style, luxury of materials, perceived quality and functionality.

Covestro

TACTOTEK IMAGE

Covestro, one of the world's largest polymer companies, returns to CES in 2022 with TactoTek (see DVN Interior 16 December 2021), showcasing the endless possibilities of smart surfaces with a new, jointly developed demonstration device, the Nighthawk demonstrator with an integrated display.

More to come in next edition…!

Interior News

BMW Materia: Exposition on Innovative, Sustainable Materials

INTERIOR NEWS

BMW DESIGN WORKS IMAGE

One of the main topics discussed around the world right now is sustainability. How do we keep growing our production quotas without destroying the planet and its resources? It's an important topic for car makers like BMW, who are seeking ways to make sure they can still build cars without running out of resources while doing it. To that end, it's not enough to recycle materials, but it's also important to look into using different materials from the get go.

Hosted by the Space building in Los Angeles last November, BMW Materia included an exposed BMW iX, the most sustainable car ever built by BMW. Materia connected to many biomes such as the ocean, forest, and desert; living organisms and sustainable material advances derived from nature. The Garden of Possibilities installation is part lab, part garden, in process and never static. Displays include bioluminescent algae, a playful nod to electrification in nature.

Further inspiring examples of biomes on display include:

Mycelium: The root network of mushrooms supports a range of material applications such as packaging foams, furniture, leather alternatives, even bacon.

Hemp fiber: Derived from cannabis plants, and among the strongest and most durable natural textile fibers. Hemp is used to make apparel, rope, canvas, skin care products, building materials, paper and food.

Hemp wood: Combining hemp pulp fibers using protein based bonding agents, this wood substitute is 100 times faster to grow and 20 percent stronger than hard woods like Oak.

Mosses: Contributing to healthy air and offsetting more total carbon than all the trees in the world. Mosses also absorb other pollutants which is why they are used in air pollution control projects in urban areas around the world.

Spirulina: A natural blue pigment extracted from spirulina algae is a natural alternative to petroleum-based synthetic dyes. In addition to pigment, spirulina is described as the single most nutritious food on the planet.

Algae: This diverse group of photosynthetic aquatic organisms ranges from micro unicellular forms to macro algae, such as kelp. Algae has exciting industrial applications including bioplastics, pigments, wellness, even electricity.

Dinoflagellates: Tiny marine microalgae that photosynthesize during the day and produce a natural glow at night, causing the surface of the ocean to sparkle through physical agitation.

Chitosan: Obtained from the hard exoskeleton of shellfish as well as insects. Every year, 100 billion tons of chitin are produced in nature – 400 times more than plastic consumption. Chitosan has a range of applications including bioplastics.

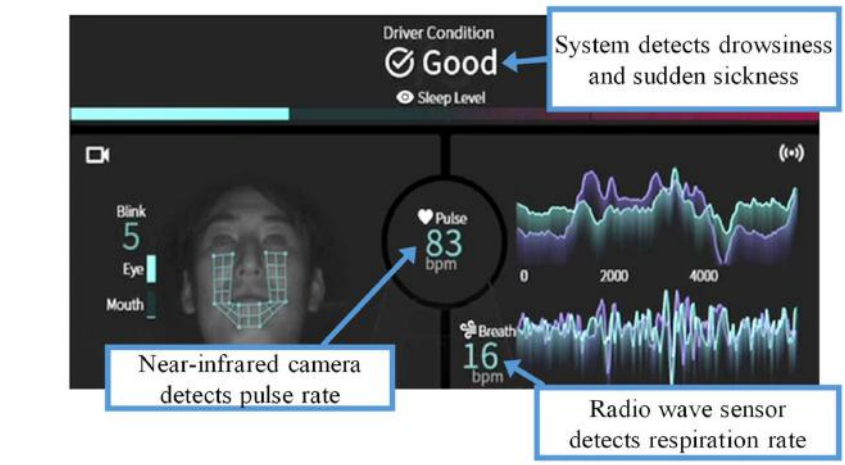
To explain the BMW Materia topics, BMW put together a **video** showcasing their new iX electric crossover.

Mitsubishi Emirai xS Drive Watches Road, Driver

INTERIOR NEWS

MITSUBISHI IMAGES

For some time now, Mitsubishi has been using its Emirai concept cars to showcase emerging automotive technologies. The latest one, the Emirai xS Drive, monitors drivers and passengers, while also using its headlights to highlight potential road hazards.



MITSUBISHI IMAGES

This concept car, perhaps better described as a "concept cabin," features near-infrared cameras which image both the driver and the passengers.

As far as the driver goes, one camera and the associated machine-learning-based software are reportedly able to detect drowsiness or sudden illness via two different processes. First of all, the system monitors the driver's facial expressions, watching for things like closed eyes or a hanging-open mouth. Secondly, by tracking subtle

fluctuations in the person's skin tone, it's able to detect changes in their heartbeat and rate of respiration.

If the system determines that the driver has lost consciousness or is otherwise unable to drive safely, it will alert them to pull over. If that doesn't work, xS Drive can even take control of the car, autonomously pulling it over and parking it.

It is using a near-infrared camera to monitor the driver at all times. Near-infrared cameras also can detect how many passengers are present, using the height of their face and the locations of their upper-body skeletal points to determine each person's body size. Other sensors, which emit radio waves and analyze their reflections, can detect the presence of infants or small children in cabin areas that the cameras can't see. If the driver parks the car and absentmindedly goes to leave their baby behind, the system will alert them.

A combination of the car's forward-facing cameras and millimeter-wave radar module is additionally able to turn the headlamps in the direction of curves or upward slopes in the road, letting the driver see what's coming. This aspect of the xS Drive system also focuses light on hazards such as pedestrians walking in the road, and can even project driver-alert symbols onto the road in front of the car; such alerts could include warnings that another vehicle is approaching from behind.

Sage Interior NVT 47 Anti-Viral Surface

INTERIOR NEWS

SAGE AUTOMOTIVE IMAGES

Sage Automotive Interiors is a portfolio company of Asahi Kasei and a global supplier of technical textiles for the automotive industry. The company develops and produces automotive interior surfaces such as seating, door panels and automobile headliners.

Because of the pandemic, Sage has developed NVT47, which combines chemistries to ensure desired testing results for antiviral properties on textiles without sacrificing durability and comfort. This technology is built to last with abrasion, heat and light resistance that makes it hard-wearing enough for everyday life while still maintaining antiviral efficacy.

Sage's antimicrobial, odor-eliminating, germ-reducing fabric is designed to accommodate parents taking extra precautions for their families; rideshare drivers carrying numerous members of the public; business owners looking for a fleetwide solution, and the like. It also has antistatic, waterproof, dirt-repelling, and VOC reduction capabilities. These attributes are available for all mobility interiors, from fleet owned to luxury, to continue exceeding customer expectations.

(Sage has issued a disclaimer about this product: *Antimicrobial chemistry is EPA registered. Sage is currently not pursuing antiviral registration and approval from the U.S. Food & Drug Administration. Product not registered for any public health use in the U.S.*)

New HMI for VW Golf 8: Modular Infotainment Building Block

INTERIOR NEWS

VW IMAGE

Customers complained about the operating system of the VW Golf 8: too complicated, they said, and too error-prone. Volkswagen has taken this feedback to heart, and new hardware and software are available for newly built models to "improve numerous functions", Volkswagen promises. They're paying particular attention to voice control, which they say now responds up to four times faster than before.

For this, VW relies on so-called "natural language operation". It will not only understand phrases such as "I'm cold", but will also be able to convert them into appropriate actions. In addition, the system will be able to recognize whether the driver or the passenger is speaking and can adjust the air conditioning to the respective person. The comprehension rate is said to be 95 per cent. The system draws its responses to voice instructions from two sources: the cloud and information stored offline in the vehicle, to ensure that the voice control works even in places with poor reception.

Volkswagen also wants to improve the touchscreen. If a user brings their finger within a few centimeters, the buttons around the hazard warning light switch are locked. As soon as the finger touches the display, this also affects the slider for volume and temperatures. This is to prevent unintentional activation of these functions. Thanks to an infrared sensor system, gesture control is also possible.

These innovations are made possible by the use of the Modular Infotainment Building Block (MIB3). In the latest version, the basic load on the system is reduced. On the hardware side, VW relies on more powerful processors than before. The computing capacity increases by a quarter, the graphics card has three times the performance of the previous one.

Jeep Grand Cherokee L Introduces Passenger Screen

INTERIOR NEWS

STELLANTIS IMAGE

Automakers and their suppliers have long focused on the driver environment. Since the mid-2000s, though, driven in part by the preferences of the Chinese market, car companies have put technology into their vehicles for the rear seat passengers. Certainly, integrated screens in the headrests or overhead in many SUVs have been around for a long time to transform the rear compartment as a mobile office for chauffeured cars, and to keep both adults and kids in the rear seats occupied on long trips. However, front passenger seat occupants have been ignored.

Jeep is changing that with a new 10.25” front passenger interactive display. The screen is meant to allow the front passenger seat occupant to offer co-pilot assistance with navigation, camera viewing, and to provide visual entertainment.

The dash screen for the front passenger is limited to specific premium trims. Jeep continues to take care of rear-seat passengers with available dual 10.1” high-definition rear-seat entertainment displays that have integrated Amazon Fire TV. By integrating Fire TV, on long trips, fans will be able to stream videos from various streaming services, play games, listen to music, and download additional content on the road. Fire TV connectivity is provided via an in-vehicle Wi-Fi hotspot or via a tethered smartphone or hotspot. The rear seat entertainment system also has 16 gigabytes of built-in storage to download content for viewing on the road. However, because of the software and operating system for the entertainment system, only 9 gigabytes is available for each rear display.

The rear seat entertainment system allows each screen to view the same content or watch individual content. Jeep ships the system with two voice remotes with Alexa. The dual 10.1” HD rear entertainment displays will be a late availability item like the passenger screen. Front and rear passenger screens do have HDMI ports. The front passenger screen can control content for the screens in the back, ideal for parents trying to take care of kids on a long road trip.

New Kia Sportage: Roomy With Big Digital Dashboard

INTERIOR NEWS

KIA IMAGES

An all-new Kia Sportage, the 5th generation of the model, gets a huge infotainment screen. Trunk space and head and knee room have grown. The rear seatbacks can be fixed in two positions and folded down via a lever in the trunk.

Room in front is even more generous. The 12.3” digital instrument cluster is mounted under the same cover as the 12.3” touchscreen for navigation and infotainment. Text and symbols are large and easy to read. When the turn indicator is activated, the image of the respective sideview camera is displayed on the left or right of the instrument cluster.

The control bar below the infotainment screen offers direct selection buttons. It then becomes a control panel for the climate and heating. In this mode, the volume control knob can be used to adjust the temperature without looking. While a head-up display is not available as an option, the other assistance features are extensive: blind spot assist; cross traffic detection; a surround-view camera, adaptive cruise control including automatic recognition of speed limits, and more.

The transmission stages in the vehicles with automatic transmission are preselected via a rotary switch. This high-quality item feels just as good as the other premium materials used; Kia has grown far beyond their origin as a maker with exclusive emphasis on low vehicle price.

News Mobility

Citroën Ami Is Now an Off-Road Buggy

NEWS MOBILITY

This vehicle is based on the production My Ami, an electric microcar. It's full of unusual doors, shapes, designs, and proportions, and has an ultra-minimal interior. Its on-paper specs are staggeringly uninteresting: 8 hp from an electric motor fed by a 5.5-kWh battery, a 45 km/h top speed, and just 72 km of driving range. (See DVN Interior, 12 March 2020).

The doors are the same pieces used on both sides, simply hinged from opposite ends of the car, and the front and rear end designs are very similar—it looks the same coming as going. All infotainment functions, such as they are, are handled by your smartphone and a plug.

Citroën's designers put tiny brush guards over the headlamps and taillamps! There is a low-slung bull bar jutting from a very simple bumper bar. As you can tell, there are no formal doors on the Buggy. Instead, there are canvas panels that can be unfold and secured via zippers for some weatherproofing, along with little half doors that can host the Buggy's color-matched luggage set. The neon yellow, khaki, and black colors scheme makes it resemble a hiking boot.

Should you forget who is driving the Ami, Citroën has helpfully labeled the driver's side roof rail with the word "Pilot" and the matching spot on the passenger side with "Copilot." Taking the labeling theme even further, Citroën included a "tribute to aviation" by way of more yellow arrow stickers under the spoiler that "show the direction of the wind."

Useful upgrades include—presumably for enhanced comfort over poor terrain—seat cushions twice as thick as those on regular Amis. There is a "nomadic speaker" that can be removed and used outside the car, a camera mount, a little shade extending beyond the windshield, and anLED light bar on the front of the roof.

Will the My Ami Buggy concept turn into a real thing? That same question was raised a year ago with the first version, which now is starting to fill the busy streets of Paris!

Autonomous Waymo EV: Ride-Hailing With No Steering Wheel

NEWS MOBILITY

WAYMO IMAGE

Waymo One is Alphabet's Lyft/Uber competitor, based in Phoenix and currently testing in San Francisco. Waymo recently announced a future EV for their US ride-hailing service that will be "rider-first" and have no steering wheel. Development is based on a collaboration with Geely, the Chinese automotive company owning brands like Volvo, Lotus, and Smart.

Waymo will integrate this Waymo Driver into a version of the new mobility-focused, all-electric Zeekr vehicle, designed in Sweden specially for autonomous ride-hailing.

The Zeekr-branded van is optimized for Transportation-as-a-Service (TaaS), rather than private ownership, like the Chrysler Pacifica and Jaguar I-Pace that are vehicles modified for self-driving and used by Waymo primarily for ride-hailing. According to Waymo's announcement, this upcoming car will "prioritize comfort, convenience, and preferences of Waymo One rider" with features like a flat floor, easy entry and exit, and adjustable seats.

The body design, with no B-pillar, low floor, high celling maximizes roominess (headroom, and reclining seats) and ease of access. The ideal, "someday" version of this car has no steering wheel and pedals with just a centered touchscreen at the front, but that design will likely require regulatory changes, depending on the country of operation.

Waymo says this future EV will be available on US roads in the "years to come."

General News

KBA OKs L3 Mercedes

GENERAL NEWS

MERCEDES IMAGE

Mercedes-Benz has just been granted regulatory approval in Germany for a new Drive Pilot L^3 self-driving system. The basis of the approval is the internationally valid (except on the North American regulatory island) UN Regulation 157 dealing with automated lane-keep systems, meaning Mercedes will be able to offer the system throughout most of the world, in those countries that recognize R157.

On the SAE scale of self-driving capability, L^3 denotes systems that allow drivers to take their hands off the wheel *and* eyes off the road in certain situations, but are far short of true autonomous driving as the driver still needs to be ready to take back control at any time. Mercedes said Drive Pilot will work in dense traffic on pre-mapped stretches of highway, at speeds up to 37 mph, with the system handling steering, acceleration, and braking.

With approval from the German Federal Motor Transport Authority (KBA - Kraftfahrt-BundesAmt) in hand, Mercedes plans to offer Drive Pilot on the S-Class sedan starting in the first half of 2022. Mercedes said regulatory approval also applies to the electric EQS, but the automaker didn't say when the system would be available on that vehicle.

Drive Pilot builds on the sensor suite from the S-Class' Driver Assistance Package, adding lidar, as well as a camera in the rear window and microphones designed to

detect the lights and sirens from approaching emergency vehicles, Mercedes said. It also adds redundant steering, braking, and electrical systems.

If the driver fails to take back control when prompted, the car will automatically slow to a stop, and activate its hazard lights, Mercedes said. Drive Pilot will also place an emergency call and unlock doors and windows to give first responders access in case of a health emergency.

Mercedes will initially offer Drive Pilot on 8,196 miles of highway in Germany. The automaker also said test drives are underway in the U.S. and China, but didn't discuss when Drive Pilot might be available in those markets.

Other automakers are beginning to roll out their own Level 3 systems. Honda launched its own version on the Legend sedan in Japan earlier this year, after getting regulatory approval in that country.

BMW is also expected to launch an L^3 system developed with Intel's Mobileye division on the next-generation 7 Series, and later expanding availability to the 5 Series, X5, X7, and iX electric SUV.

SsangYong Likely to be Sold to Edison Motors

GENERAL NEWS

SSANGYONG TIVOLI (SSANGYONG IMAGES)

The SsangYong brand's future is under discussion again (still?). SsangYong Motor just named a group led by South Korean electric bus and truck maker Edison Motors as their preferred new owner.

SsangYong, under court receivership, filed an application with the Seoul Bankruptcy Court indicating that they hope to be purchased by a consortium led by Edison Motors. Court receivership is the last step before insolvency under the South Korean legal system and the court determines what will happen to the company.

Edison Motors aims to turn around SsangYong in three to five years by focusing on transforming it into an electric vehicle-focused carmaker, Edison Motors Chairman Kang Young-kwon said on Friday in an online press conference, according to the Korea Bizwire.

SsangYong will be able to produce up to 300,000 vehicles a year on the three assembly lines at their plant in Pyeongtaek, Kang said.

SsangYong has been majority-owned by India's Mahindra & Mahindra since 2011. Mahindra has been looking for a buyer for all or most of its 75-per-cent stake, bought when SsangYong was ly bankrupt in 2010. Mahindra has struggled to turn around SsangYong.

SsangYong now intends to sign a letter of intent with Edison to finalize details, including the purchase price. SsangYong could cost the consortium, which includes a South Korean investment fund, as much as ₩1tn ($849m).

SsangYong's European vehicle sales increased 8.7 per cent to 6,905 through August, according to JATO Dynamics market researchers.