DVN-I
Automotive Interior

Thu, 21 January 2021 Weekly Newsletter **NEWSLETTER #45**

Editorial

CES 2021: Online Trends And Vehicle Interior Technology

The annual CES (Consumer Electronics Show) took place last week in an all-digital online venue for the first time in its history as a result of the pandemic. The mega tech industry trade show, which usually takes over Las Vegas in early January, is where many exhibitors unveil their latest innovations and gadgets to the public.

On the one hand, surely in the 21st century it's appropriate for technological advances to be presented in a technological way, that is virtually over the internet. On the other hand, we missed the in-person event; perhaps you did too. And CES' virtual showcase of startups and tech giants, keynotes from global industry leaders, live entertainment from Hollywood and so much more totalled up to well over 100 hours of conference programming!

This edition of the DVN-I Newsletter focuses on automakers' and home-electronics giants' trends, innovations, and technology presented at CES that are relevant to the

auto interior community; in the next edition we'll cover auto suppliers' and startups' presentations, so stay tuned.

Clearly the future car is electric, but with so much focus on SUVs we decided to take a look at what other kinds of models are in development. The Design Lounge this week looks at how several makers are working to compete against the Tesla Model S sedan.

Not yet a DVN-I subscriber? **Head over here** to join up, and you'll get immediate access to our latest DVN-I Report on Interiors in the New Mobility World.

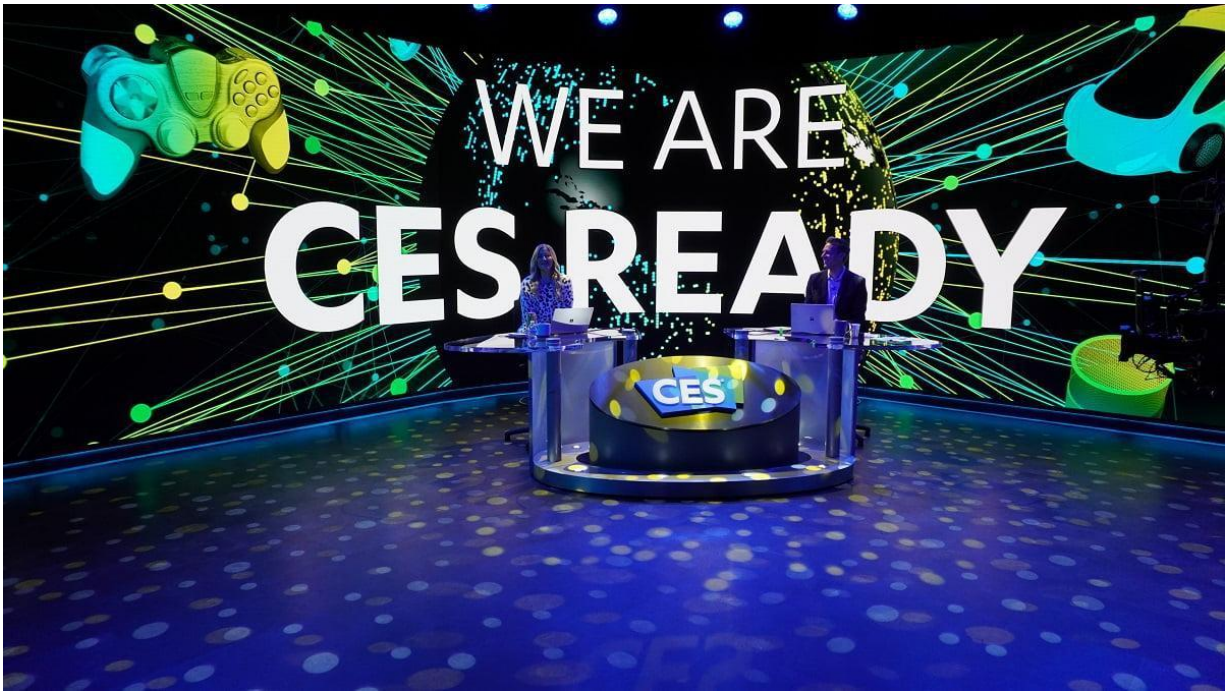
We're glad you're here. Enjoy reading, and stay safe.

Sincerely yours,

Philippe Aumont
General Editor, DVN-Interior

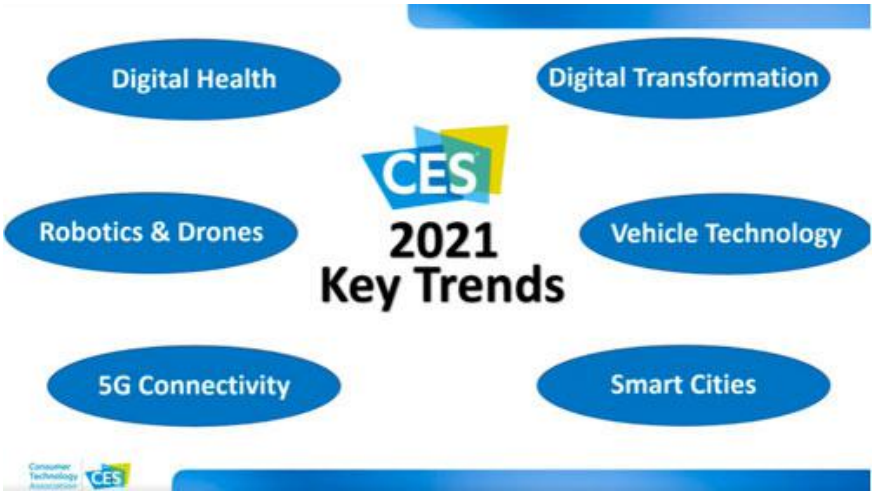
In Depth Interior Technology

CES 2021



CES 2021 is over, and so let’s dive deeply into the news and highlights from the show. The event got started on January 11 with Media Day, through an interactive online platform created with Microsoft.

Despite relatively scant participation by traditional automotive companies—Audi was there, as was GM, Mercedes-Benz, and some large tier-1s including Aisin, Antolin, Bosch, Continental, and ZF—vehicle technology was one of the major themes at CES this year. That's only natural; CES makes sense as a venue for automotive innovations to be unveiled. It’s a hub where digital, home electronics, software, cloud computing, communication, connectivity, and mobility technology intersect, including all ingredients and integration techniques. Big established companies, new entrants, startups, and people from all around the planet with all variety of skills and education converge.



In the introduction conferences, CTA leaders (Consumer Technology Association, producer of CES) previewed trends to watch during CES and throughout 2021. Backed by research, they introduced the main trends of CES 2021 with digital health, digital transformation, 5G connectivity, robotics & drones, vehicle technologies, and smart cities. These factors have been constellating for several years now, but they have accelerated sharply in the last year; Microsoft CEO Satya Nadella said “We’ve seen 2 years’ worth of digital transformation in 2 weeks”.

Global technology adoption has shot up dramatically, given a hard shove from behind by the pandemic. For example, e-commerce delivery has increased by 10 years' equivalent in 8 weeks; telemedicine has increased tenfold in 15 days; video streaming by 7 years' equivalent in just 5 weeks, and remote learning has been taken up by some 250 million students. This bodes well for the future of new vehicle technology and new mobility.

From a transportation perspective, CES 2021 confirmed directions on electrification, MaaS (mobility as a service), V2X connectivity, autonomous vehicle fleets (robotaxis), and smart cities. The health crisis has unleashed a race to cloud computing, which in turn has put the focus on cloud migration, with colateral consequences including data security concerns.

Smart cities include networked sensors, smart kiosks, contact tracing, and X2V (V2X view from the city perspective!), and connectivity. The city system perspective, within the context of encouraging a return to work, must be safe and smart, including transportation. Safe, clean, sanitary *shared* individual mobility presents tricky challenges. These, in turn, are driving the development of numerous kinds of robots and artificial intelligence for cleaning, delivery, close contact tasks, health, and isolation.

IMAGE: INTEL

From an automotive interior perspective, the cockpit is at the center of CES 2021 product introduction, with “entertainmentification” of the driving experience, which can include technologies surrounding occupants with more, larger, and curved screens; HUDs (including virtual- and augmented-reality HUDs), new projection techniques including holograms, and all sorts of new HMI elements, strategies, and designs—such as the Mercedes Hyperscreen—as well as “sensation bubbles” personalizing sound, smell, climate, and comfort/wellbeing in general.

Integration of all these technologies is also a major exhibition theme, for the sake of a better and simpler, more intuitive user experience. It is based mostly on software; "middleware" is the trend here, as the cross-domain software that cements different modules and apps. But there's more to it than that; it also involves using all intelligence and connectivity technologies such as artificial Intelligence, IoT, augmented reality, and 5G.

IMAGE: BOSCH

Commitment to sustainability with CO_2 neutrality is also everywhere. Vehicle electrification is obviously the main pillar there, without too much talking about where the electricity is coming from (if it's from coal, that's a bit of a problem in terms of CO_2…). That's not the only environmental-impact matter at hand, though, and in that respect, batteries are being developed by Panasonic, and by the GM-LG Ultium battery partnership, with up to 70% less cobalt (the mining of which exacts hideous tolls in human suffering and environmental damage).

Nearly 2,000 exhibiting companies participated in this all-digital show, compared to 4,000 at last year's physical show. The CTA says they plan to return to Las Vegas for 2022, combining the best elements of a physical and digital show.

Interior News

Hyperscreen Expands Mercedes MBUX

INTERIOR NEWS

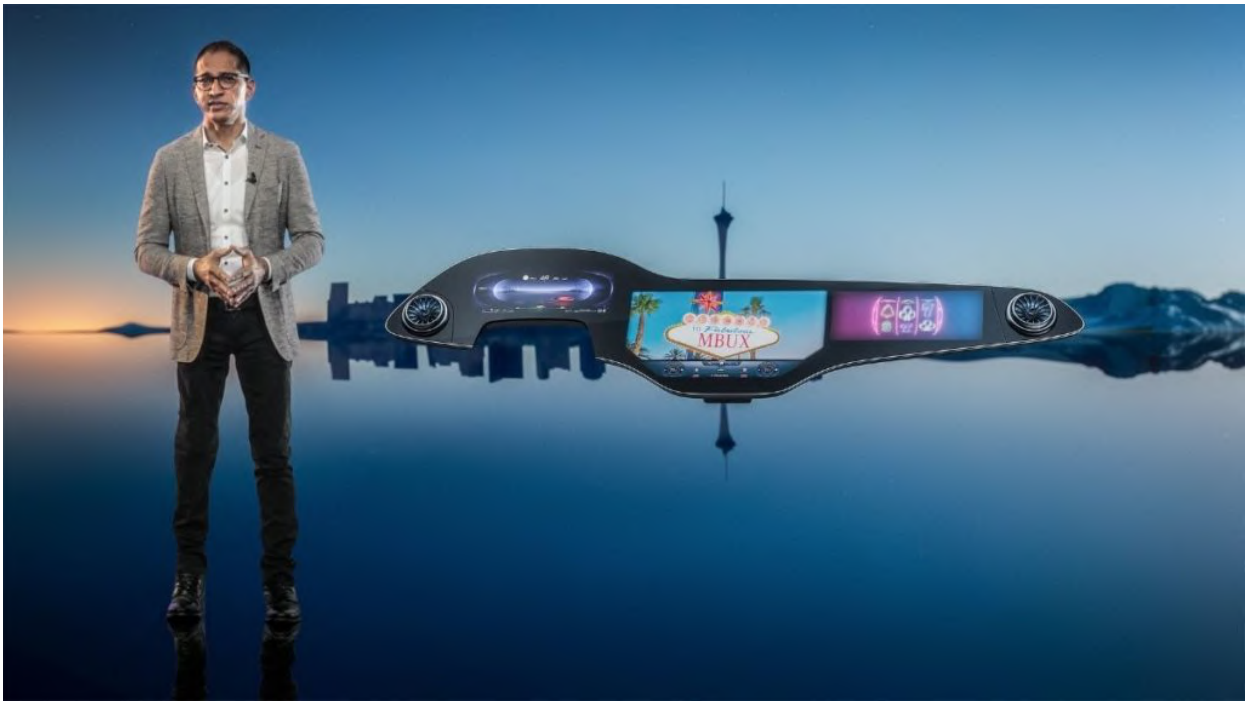


IMAGE: MERCEDES

CES has long been a technology showplace for Mercedes. Last year they showed off their spectacular Avatar concept car, and in 2019 it was their modular Urbanetic van. They introduced MBUX (Mercedes Benz User eXperience) at CES 2018. Since then, it has been improved along with new model introductions, with a major step in the new S-Class introduced last September. The newest generation is presented here in the form of the Hyperscreen, as part of the Mercedes EQS model.

Board Member and CASE CTO Sajjad Khan led the press conference along with Chief Design Officer Gorden Wagener. They presented the Hyperscreen as the control and entertainment center, with the idea of "quite big car cinema".

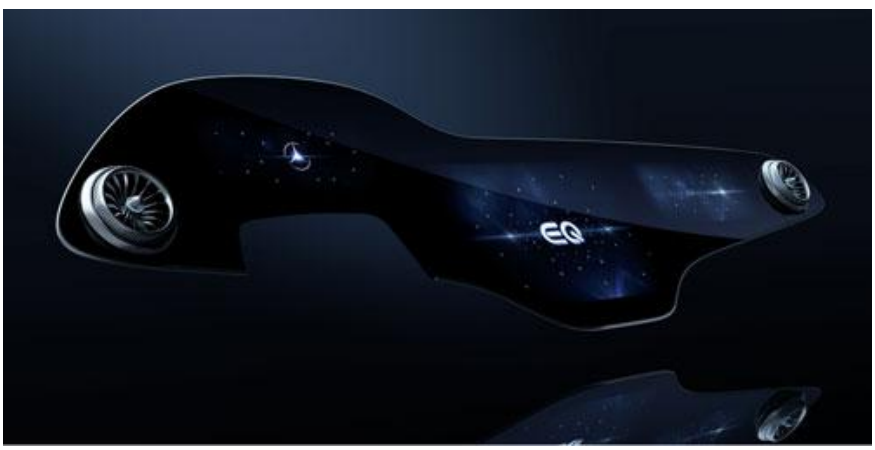


IMAGE: MERCEDES

The MBUX Hyperscreen is a 56” glass masterpiece, completely crystal clear, presented as a window to the digital world. It comprises three display parts—12”, 17”, and 12”. The large, curved unit sweeps almost across the entire width from the left to the right A-pillar. With adaptive software, the display and operating concept adjusts completely to its user and makes personalized suggestions for numerous infotainments, comfort, vehicle functions and apps. It is a fully customer-centric user-experience interface.

Thanks to the "zero layer" logic, the user does not have to scroll through submenus or give voice commands, as the most important applications are offered situationally and contextually at the top level in the field of vision. It uses what the maker calls "emotional intelligence as a digital assistant", and leverages Mercedes Travel Knowledge to help travelers.

The MBUX Hyperscreen infotainment system combines digital and analog design in a single component. Three displays are combined on the curved, 141-centimeter-wide screen band, which also integrates the air ducts and is framed by a continuous plastic front bezel. The driver and front passenger have their own display and control area. The central and front passenger displays use OLED technology. All graphics are designed in a new blue-and-orange color scheme. The touchscreen features haptic feedback.

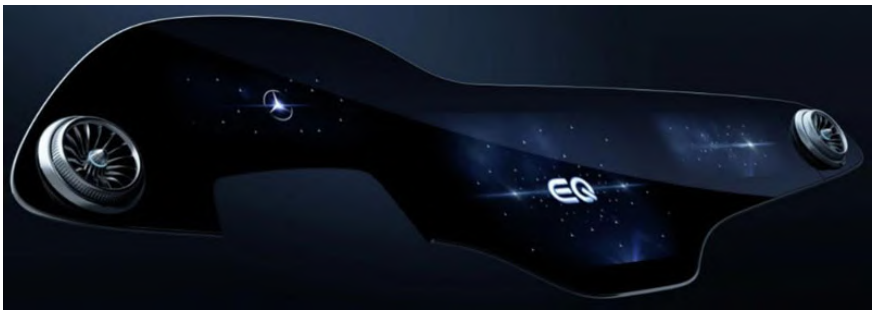


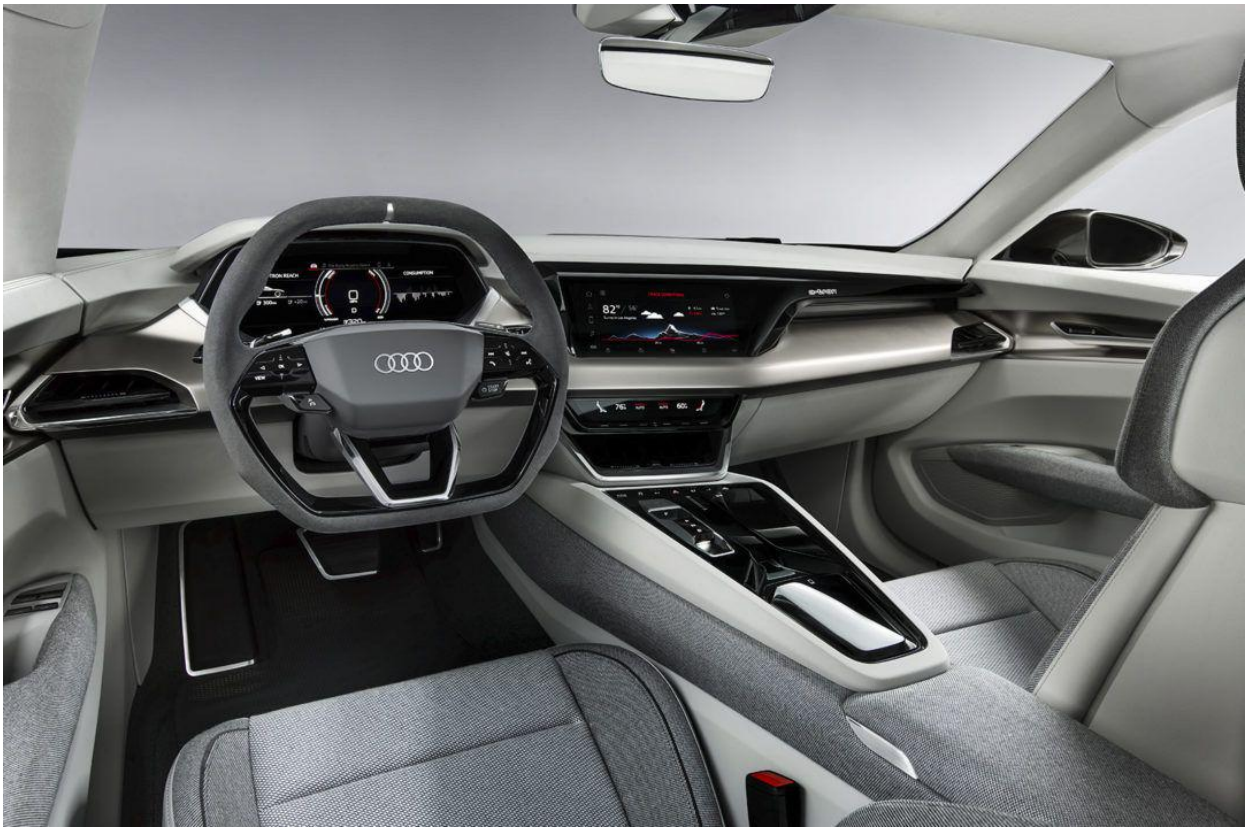
IMAGE: MERCEDES

The MBUX Hyperscreen has eight CPU cores, 24 gigabytes of RAM, and 46.4 GB per second of RAM bandwidth. Using artificial intelligence, the system is said to work context-sensitively, offering information and functions only when needed. For example, more than 20 functions—active massage programs, birthday reminders, suggestions for the to-do list, and suclike—can be offered automatically with the help of artificial intelligence.

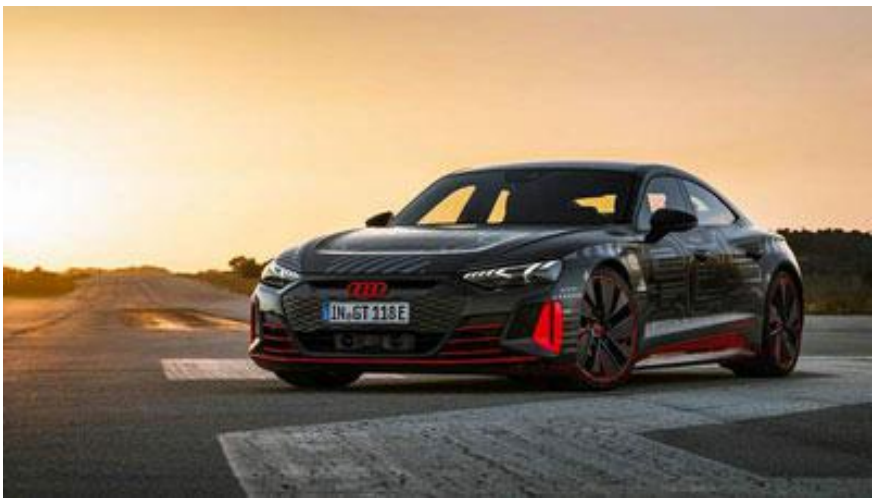
The Hyperscreen will be optionally available for the new Mercedes EQS scheduled to go into production at the end of this year.

Audi's Electrifying Future of Premium Mobility

INTERIOR NEWS



Audi demonstrated their first electric sports car at CES 2021, along with technology that supports sustainability, smart cities and mobility.



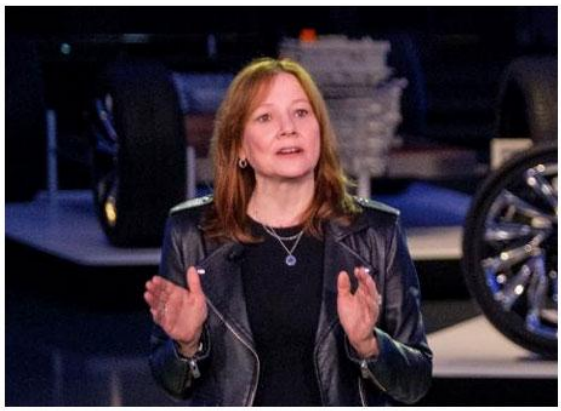
The Audi RS e-Tron GT, shown in concept form, is a relative of the Porsche Taycan, and is set to become Audi’s halo EV. There are four doors and four seats with a 290-centimeter (114-inch) wheelbase. In the interior, the car provides a large dose of everyday usability, coupled with a superior feeling of quality. The functional center of the interior is located at the front left, visibly focused on the driver's seat. The dashboard is a wide, horizontal, angular, futuristic piece of furniture. As in the Taycan, driver and passengers sit low. But it's comfortable, and the room in the rear seat is ample. The RS e-tron GT has three seating position in the back, though the middle seat is raised and narrow. The large steering wheel is a key differentiator from the

Taycan, and the sideview mirrors are the conventional ones required by American Federal Motor Vehicle Safety Standards instead of camera-based viewers on rest-of-the-world versions of the e-tron SUV. Audi is resisting, so far, the trend of retracting door handles.

A fixed panoramic roof will be standard equipment. A carbon-fiber roof is optional and reduces weight by 8 entire kilograms. Like the Taycan, the GT is a sedan. There's a 340-liter (12 cubic foot) trunk with a small opening and a frunk (front trunk) with 85 liters (3 cubic feet)of storage.

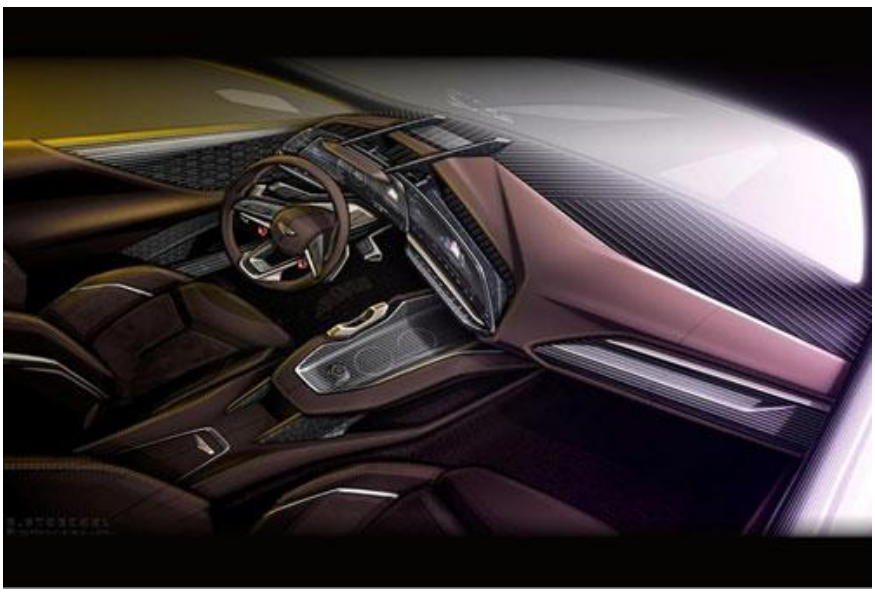
The Future is EVs for People and Goods: GM's Barra

INTERIOR NEWS



General Motors Chairwoman and CEO Mary Barra gave the opening keynote address, centered on GM's “Everybody In” campaign, a call to action meant to reflect a CASE movement that’s inclusive and accessible. Barra and her company took the opportunity to unveil the first new corporate logo since 1964, as the maker envisions a world with zero crashes, zero emissions, and zero congestion. The 'GM', it was said, should stand for 'General Mobility' and reflect the future of the industry, consumers and their employees. 'Motors' will continue to be less and less important in the future of transportation, and future business is more about capturing revenue across various mobility business models than motor business models. The presentation included concepts like the Cadillac Celestiq premium EV, the Cadillac eVTOL air taxi concept; new battery technology, and a new BrightDrop business unit devoted to electrifying the goods delivery market.

The GM presentation, though, was not just a showcase for technology and brand identity. Barra began the speech with a call to recognize and address climate change, to remain vigilant in the fight against COVID-19, and to emphasize inclusion and diversity of employees.



CADILLAC CELESTIQ (ARTIST'S RENDITION)

Cadillac interior design director Crystal Windham shared details about the all-electric Celestiq, a concept that represents Cadillac's future flagship sedan.

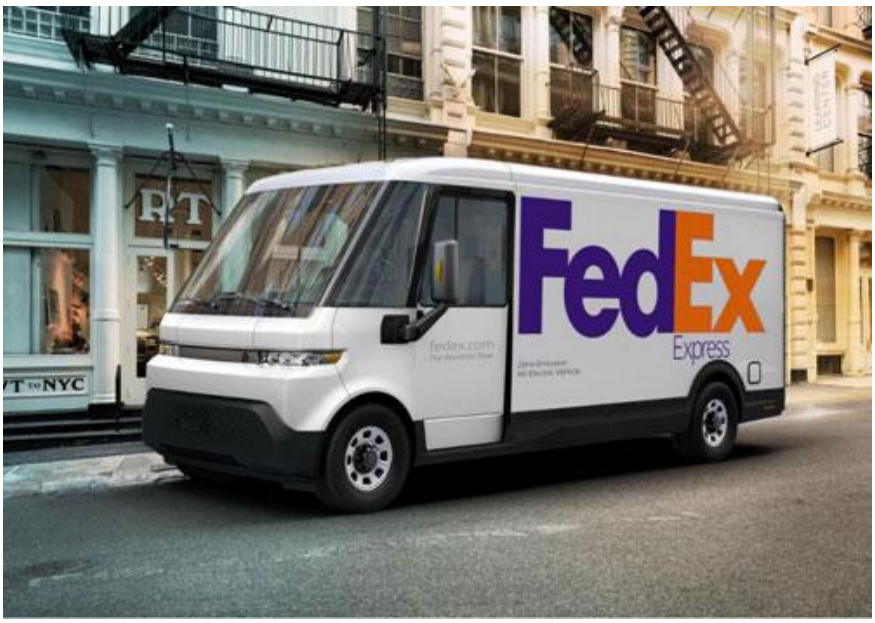
Timing for the Celestiq has not been announced, but GM says they'll have it on the road by 2025, after both the all-electric GMC Hummer and Cadillac Lyriq have launched.

Windham said the Celestiq concept offers a pillar-to-pillar display screen (not shown in the artist's rendition above), and a curated experience, with a glass roof that features four-quadrant, suspended-particle, device-smart glass.

The roof allows each occupant to set their own level of transparency, while the tint of the glass colors to match the ambience and the mood of the interior, Windham says.

GM plans to add the semi-autonomous Super Cruise system to more vehicles, stating that 85% of current Cadillac CT6 owners said they would prefer, or only consider, a vehicle equipped with Super Cruise for any future vehicle purchase.

The press conference also covered GM's Ultium "hyperscale electrical-vehicle platform" to power GM's next-gen EVs, with battery packs stacked vertically for trucks, SUVs, and large crossovers, or horizontally in the floor of lower and smaller cars. The battery modules use 90% less wiring than current batteries to communicate between the cells, will give up to 720 km of range on a single charge, weigh 25% less, and cost 40% less. GM is also working on next-generation lithium-metal batteries that will deliver twice the energy density of the new Ultium battery cells, providing up to 960 km range.



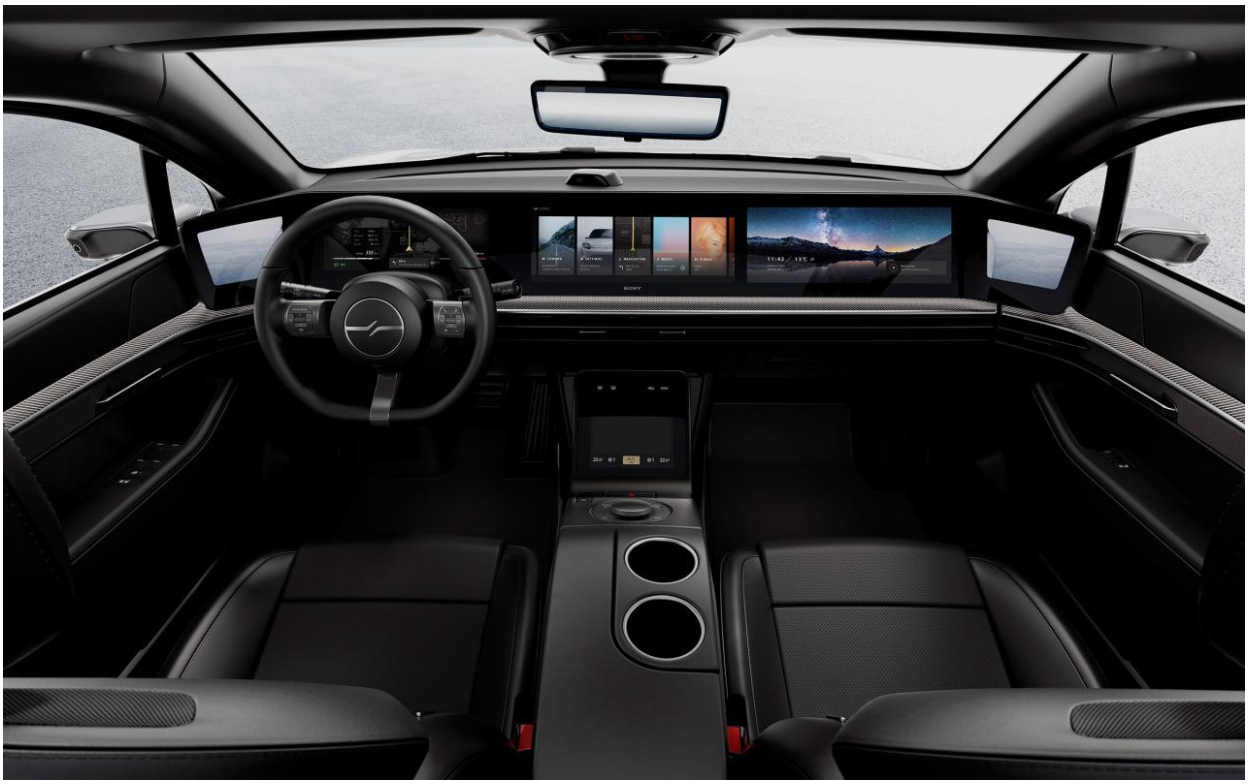
Barra announced BrightDrop as a new GM business that "reimagines commercial delivery and logistics for an all-electric future", and Pam Fletcher, GM's vice president of global innovation, highlighted the BrightDrop EP1, an electrically-propelled pallet that helps reduce the time and physical effort required for couriers to get goods from the delivery van to the front door. Fedex is said to be the launch customer for the new EV600 delivery truck, which will be built in Canada, and for the EP1.

GM also introduced their electric VTOL (Vertical Takeoff and Landing) module, the maker's first try at aerial mobility. The VTOL meets you on the roof and drops you at the vertiport closest to your destination.

GM'S E-VTOL TRANSPORT MODULE

Sony's Vision S

INTERIOR NEWS



Sony released a **video show-and-tell** of their Vision-S electric car concept, which they first unveiled in a surprise move at last year's CES.

The videos provide new insights on the design and engineering of the car, with input from collaborative partners. Sony has started testing their vehicle on public roads near their engineering center in Graz, Austria, to advance vehicle development for safety and security, entertainment and adaptability.

Sony, with partners Bosch and Continental, stated that they have increased the number of sensors for autonomous driving to 40, from the previously-announced 33. "Software-oriented design" is the focus of much of the video, showing off how Sony can leverage their expertise in entertainment devices to make better car software.

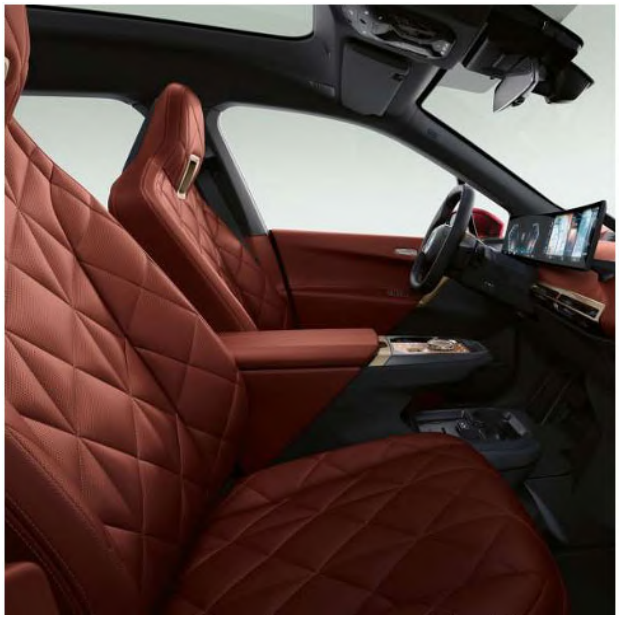
The most eye-catching feature of the original Vision-S concept was a large, wide screen that encompassed the whole dash, and that's still present at this point in the vehicle's development. At one point in the video, a Sony PlayStation controller is shown connected to the screen playing Little Big Planet, a PlayStation game. Cute!

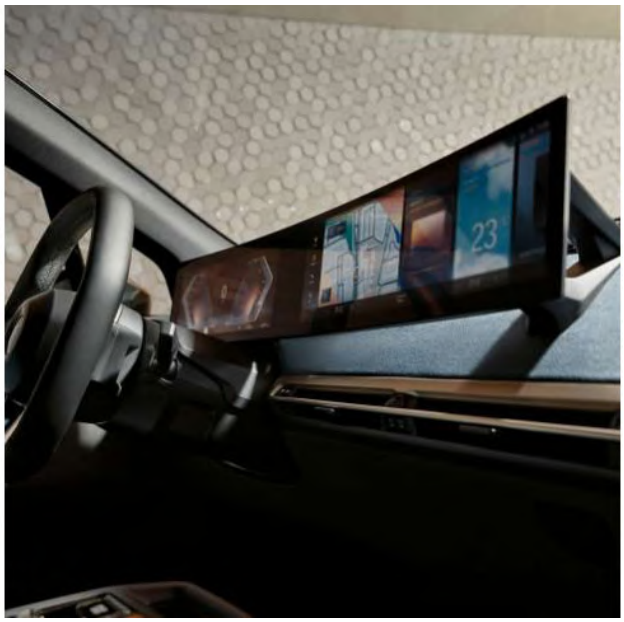
Sony’s partners spoke on the importance of communications and the cloud in today’s vehicles, and a representative from Bosch praised Sony’s human-machine interface features.

That human-machine interface seems to include facial, speech, and gesture recognition. A portion of the video shows thermal imaging of the cockpit while the driver does a gesture with one hand, and also shows a facial and speech recognition system being trained.

BMX iDrive: Intelligent Fusion of Sensing

INTERIOR NEWS





20 years have passed since BMW's first version of iDrive. At this year's CES, BMW unveiled the future of their display and operating system, intended to bring driver-vehicle interaction to a new, even smarter level and further into the digital domain. They say it's all about the “intelligent fusion of sensing”, in the form of the BMW Intelligent Personal Assistant.

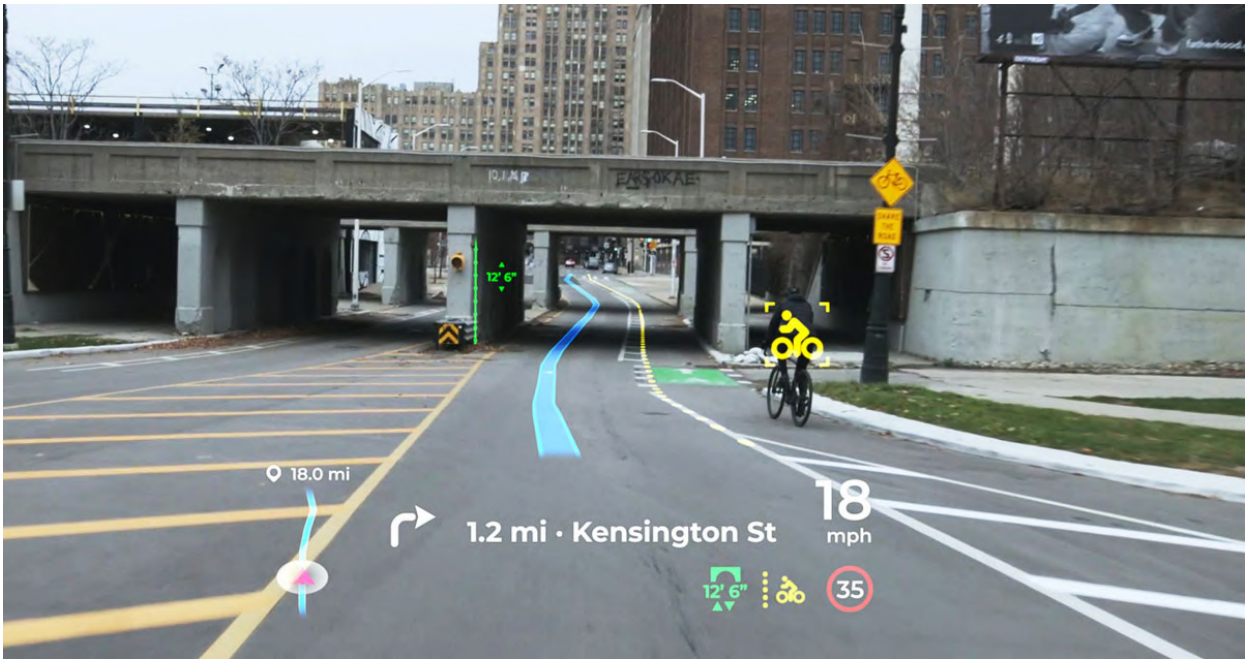
The BMW Intelligent Personal Assistant enables various vehicle functions—climate control, lights, and media—and settings including experience modes and "caring car".

BMW says the key to tomorrow’s driving experience is an intelligent use of sensor technologies, combined with personalization and a nearly human way of interaction to achieve a seamless experience for drivers and passengers. To that end, they've created what they present as an intuitive and natural interaction with the car. It's technically sophisticated, ergonomic, and uniquely designed.

More than just a great user interface, new software, or a virtual assistant, it establishes a new paradigm: the emotional connection between cars and humans. One important ingredient of this connection is its driver orientation, providing a personalized interaction and an individual experience through organized driver setups and its design. It also does this by making the right information available at the right time and in the right place, which relates to skills in terms of intelligence and automation.

Panasonic's Cockpit and In-Vehicle Experience Technologies

INTERIOR NEWS



PANASONIC AUTOMOTIVE'S NEW AUGMENTED REALITY HEAD-UP DISPLAY

Panasonic Automotive says their new augmented reality head-up display covers more of the road. Traditional cluster readingssuch as vehiclespeed and fuel level are displayed in the near field of the head-up display, while navigation and other driver data are mapped spatially to the road ahead in the far field.

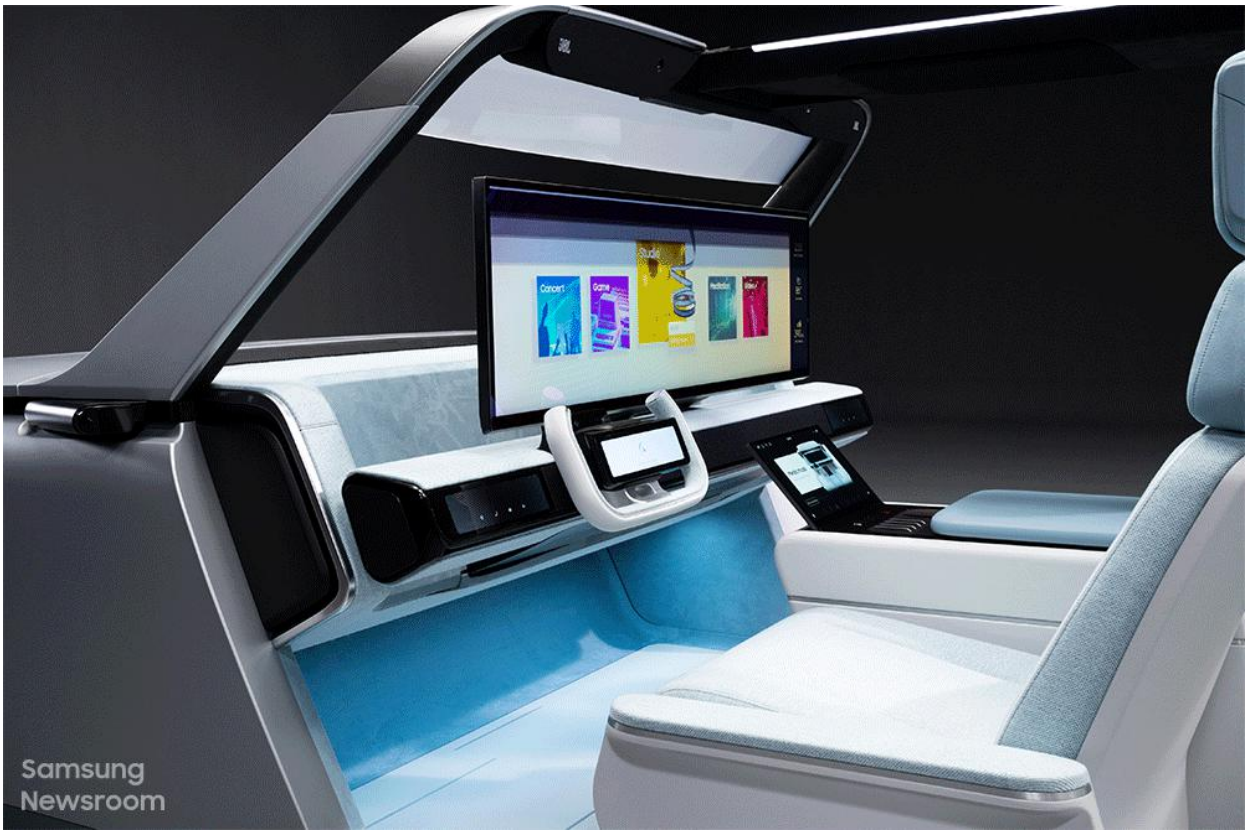
Panasonic partnered with Phiar Technologies to add 3D localization, artificial intelligence-powered navigation and situation awareness analytics to the HUD, and with Envisics to incorporate holographic technology.

The AR-HUD uses eye-tracking technology to project information at the driver's level of sight. Advanced optics provide an expanded field of view, while augmented reality technology, boosted by artificial intelligence, provides 3D graphics that adjust with the moving vehicle's surroundings. The display also provides real-time environment information updates. It exerts a low cognitive load on the driver, so it enhances the safety rather than being distracting. It uses the SPYDR Complete Cockpit Domain Control Platform, a single e-brain managing the HUD and the driver monitoring system.

Panasonic also showed a premium audio system developed in conjunction with Klipsch and Dolby Atmos, a wireless Wi-Fi camera for better visibility while hauling, and a new in-vehicle wireless charging technology.

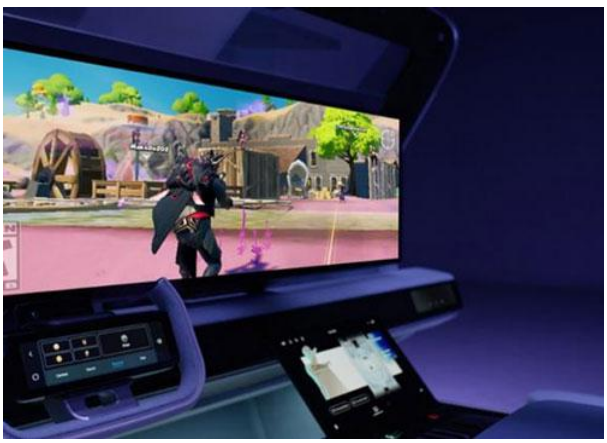
Samsung's Digital Cockpit

INTERIOR NEWS

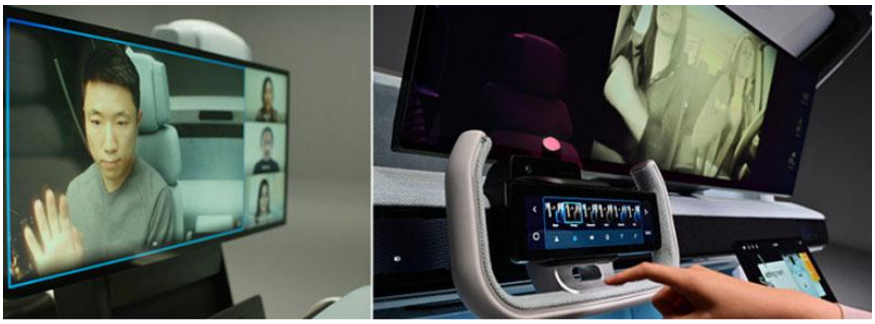


In a fully-autonomous car, the occupants need and want a different kind of interior, one that can be a rolling living room or office. **Samsung's Digital Cockpit** is that company's answer to the question of how far that idea can be taken.

It's packed with a range of experiences created to keep passengers entertained on long, driverless trips. The heart of the concept cockpit is a swiveling 49” QLED display with an immersive sound system. Around this center piece, there are also several screens designed to maximize productivity and entertainment options.



THE SCREEN MOVES UP WHEN NOT IN DRIVE MODE. (IMAGES: SAMSUNG)



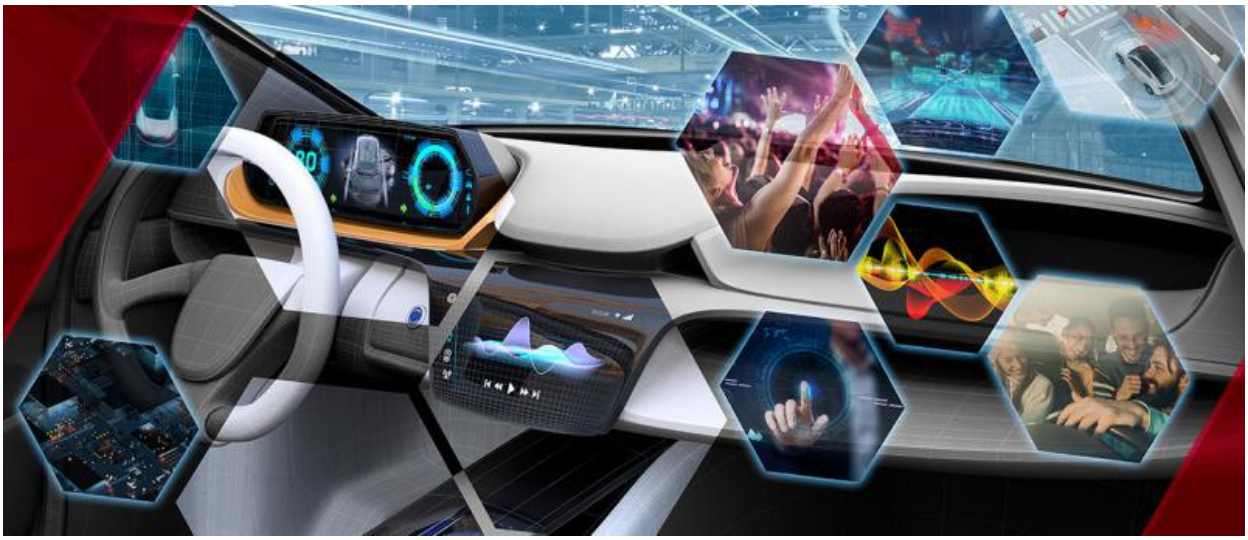
VIDEO CONFERENCING AND WORK MODE ARE ALSO POSSIBLE.

These screens are packed with tools that allow users to video conference, game, edit video clips, and binge their latest tv shows. The screens can also be used to display a range of information, including passenger's health, using Samsung's new service called Automotive Samsung Health.

This futuristic technology is capable of analyzing an individual's health and stress levels while driving, and adjusting the vehicle’s lighting, scent, or music to help them relax. It can even track your sleep, waking you up just before you arrive at your destination. On the exterior of the vehicle, you will find a front-mounted display that communicates with other vehicles and pedestrians to ensure their safety.

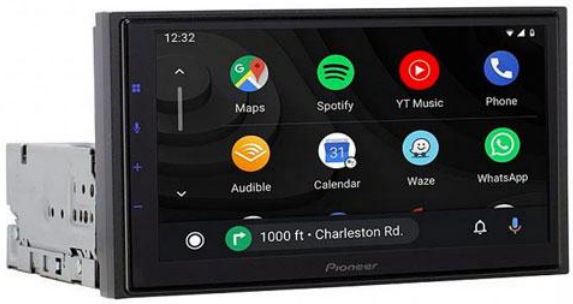
Pioneer Mobility Experiences

INTERIOR NEWS

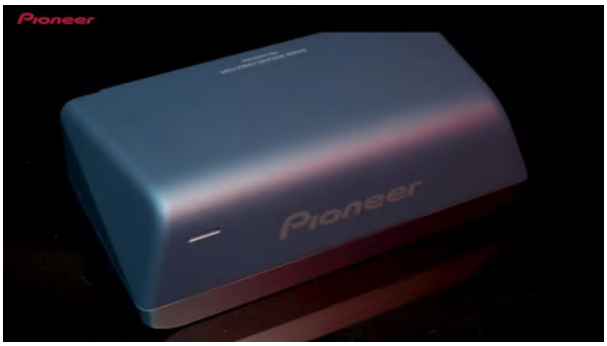


Pioneer shared their vision of next-generation mobility that offers new and unique products, entertainment, and safety in vehicles, plus providing an overview of several technology solutions designed for vehicles and lifestyles of today's automotive consumer, as aftermarket products.

The next-generation multimedia software package of Pioneer IVI Software and Pioneer Cabin UX Solution that combines navigation, audio, and smartphone integration features produces a new mobility experience. Pioneer is developing new technologies, including realistic reproduction, in-vehicle individual acoustic fields, and in-vehicle conversation assistance.



Pioneer also introduced their DMH-WC5700NEX, the newest addition to their NEX line-up for aftermarket. Featuring Amazon Alexa Built-in, Apple CarPlay and Android Auto both via wired and wireless connection, the unit's modular design combines a large 6.8" touchscreen display with a hideaway control unit to provide for vehicles with limited or restricted dash space. This modular solution allows the installation of a Pioneer in-dash receiver into various vehicle makes and models.

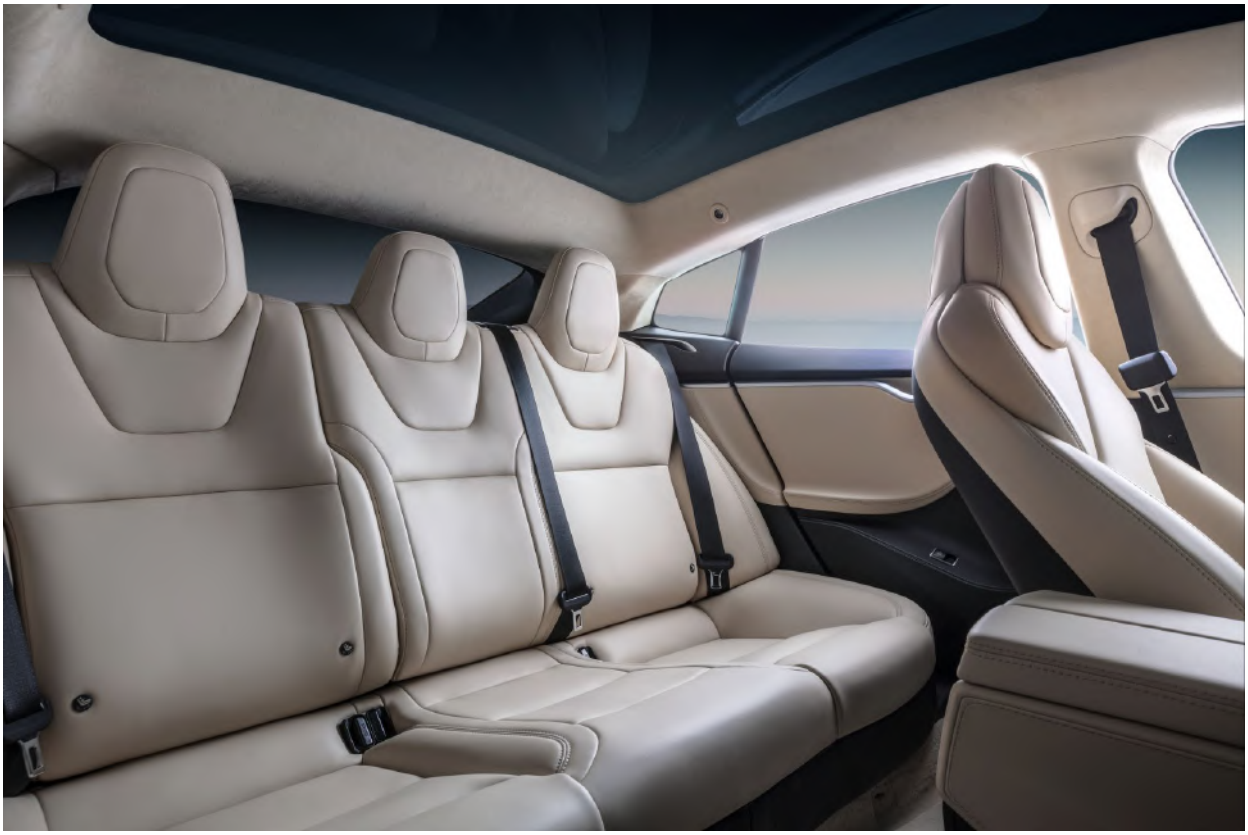


Pioneer's next evolution of compact powered subwoofers designed for today's automotive landscape has arrived. The TS-WX010A, measuring 17 × 7.8 cm, provides installation flexibility and a unique audio upgrade solution for a wide range of vehicles, including hybrid and electric models. With exceptionally low power consumption, it delivers powerful bass and reflects well on Pioneer's eight decades of experience designing and manufacturing loudspeakers, combined with an understanding of the evolving automotive scene.

The Design Lounge

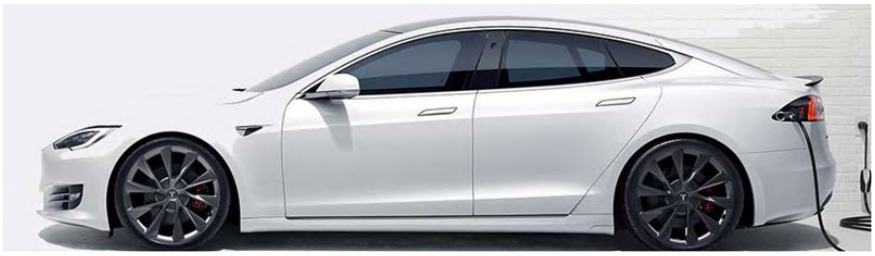
Return of the Sedan? BEV Revival

THE DESIGN LOUNGE

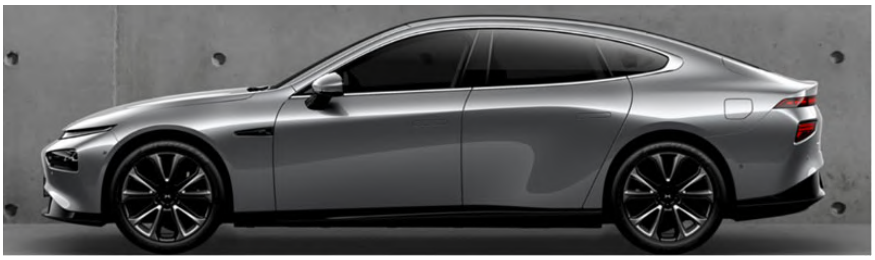


Welcome to 2021 and the revival of the sedan. With new BEV luxury sedans being introduced from Xpeng, Lucid, and Nio, is the sedan making a comeback in a world full of CUVs?

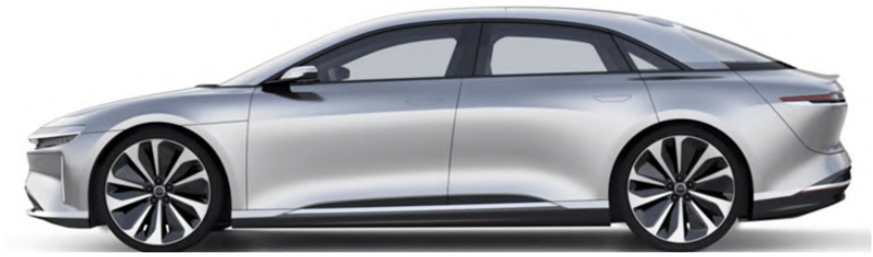
Let’s make a comparison of these new BEV sedans with the market standard, the Tesla Model S.



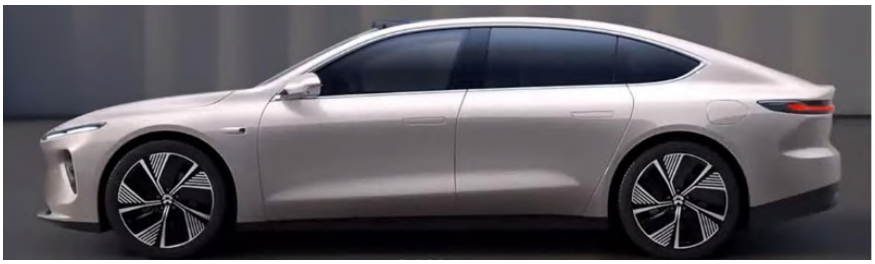
TESLA MODEL S



XPENG P7

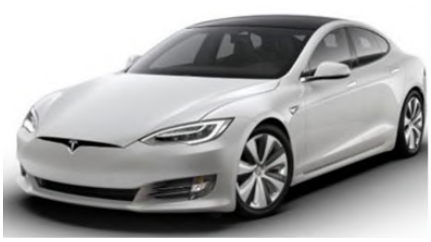


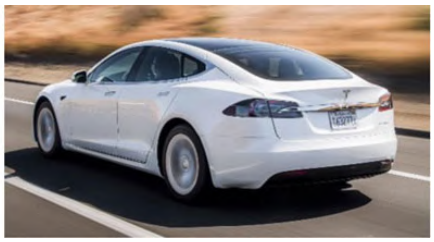
LUCID AIR



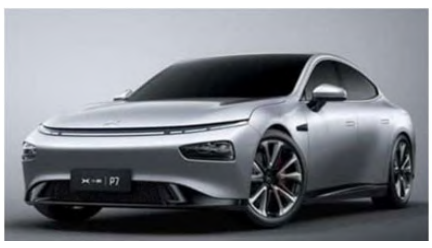
NIO ET7

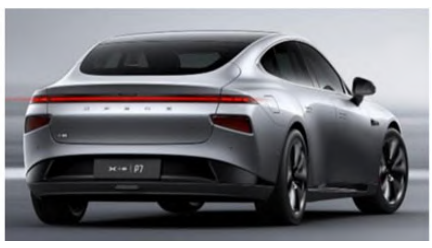
If you compare these four new BEVs from an overall packaging and proportion aspect, you can see the long wheelbase and short overhangs from the Tesla Model S and Xpeng P7 has further evolved with the Lucid Air and Nio ET7 with the overhangs further reduced and wheelbase extended that further enlarges the interior volume.



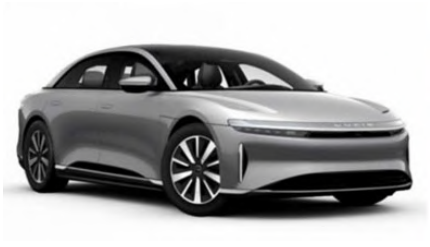


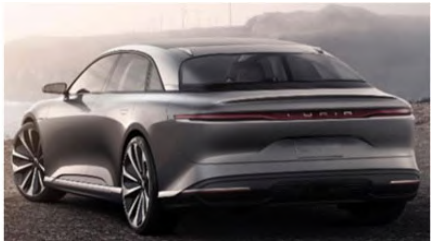
TESLA MODEL S





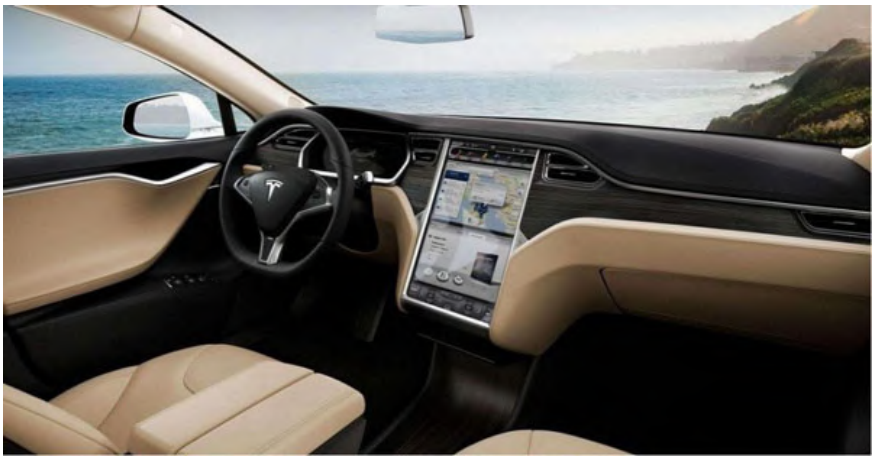
XPENG P7



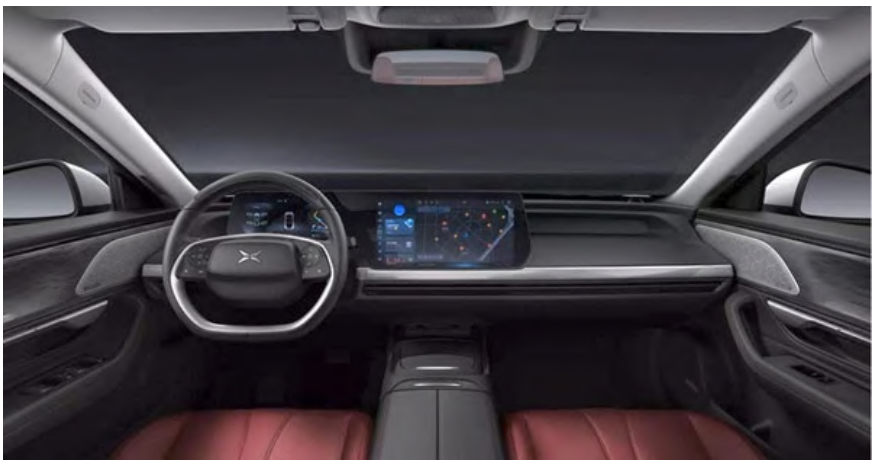


NIO ET7

The no-grille face used in BEVs has been supplemented with localized vents and strong horizontal lighting elements using either a full-width light bar or slim, linear lighting (see it on the Nio).

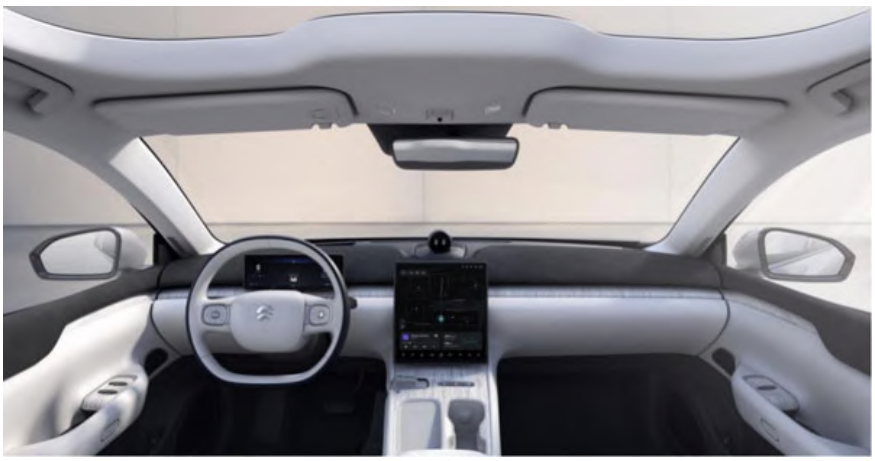


The Tesla Model S interior was leading-edge when introduced with its large, vertical central display screen, but it hasn't changed much and other cars—including other Tesla models—might have leapfrogged the Model S interior. Tesla introduced the 'floating tablet' center display and full-length hidden HVAC ducts, so the Model 3 and Model Y are now, form an interior design perspective, the benchmark.

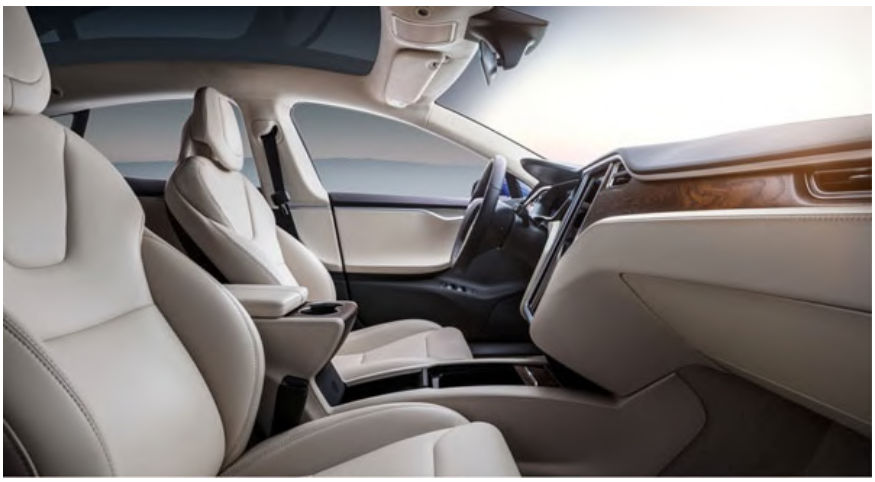


The Xpeng P7 has taken extended the center ‘tablet’ display to integrate with the traditional cluster location. This creates a more drivers focused aesthetic. The HVAC ducts are also very well concealed, though not to the degree seen in the Tesla 3 and Y.

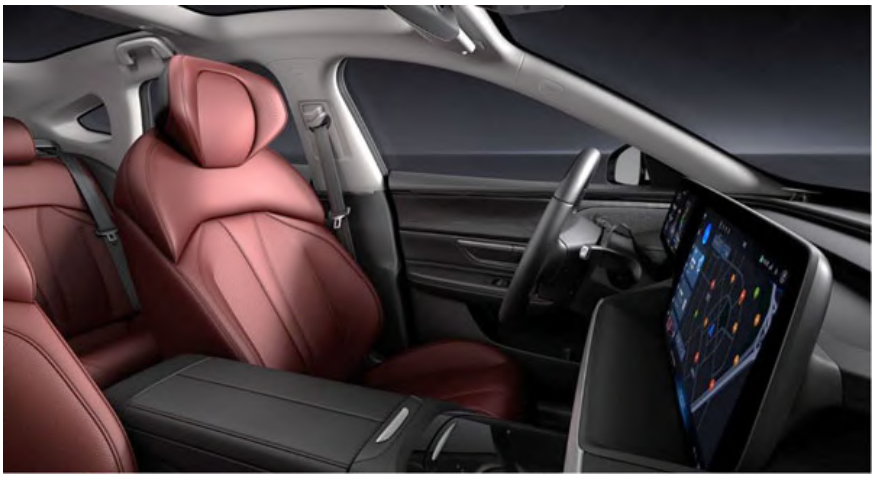
The Lucid Air evolved also has a floating tablet type display for both the center display and cluster but has separated them. The cluster is also extended out to the door, and of a much thinner profile creating an elegantly proportioned form. The center display is clearly a secondary element that also folds away when not in use, further emphasizing the horizontal theme of the instrument panel.



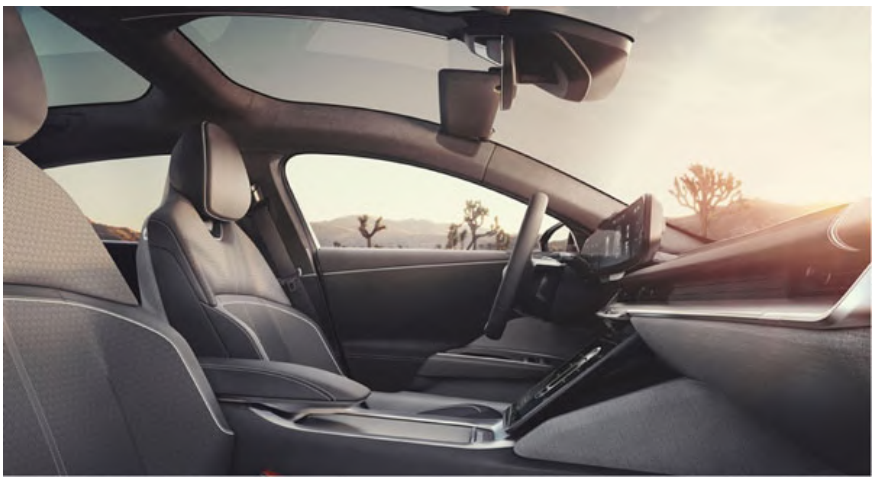
In the Nio ET7, the tablet-style center display proportionally merges with the floor console and not the instrument panel. A smaller secondary cluster is ahead of the steering wheel, and the HVAC ducts are cleverly hidden using the natural gap created from the authentic matte-finish wood trim and the upper instrument panel.



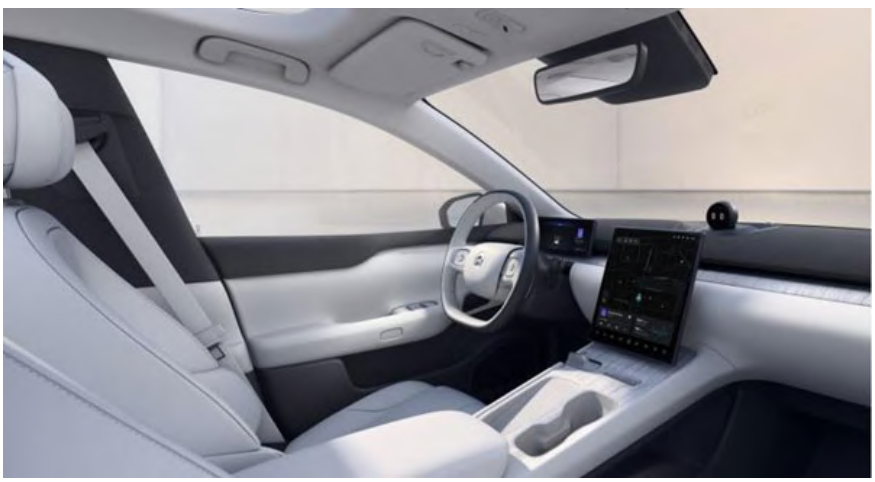
Even though the Tesla S does not have that maker's latest instrument panel design, the floor console and door trim panels are modern, with a very clean aesthetic using hidden door pulls.



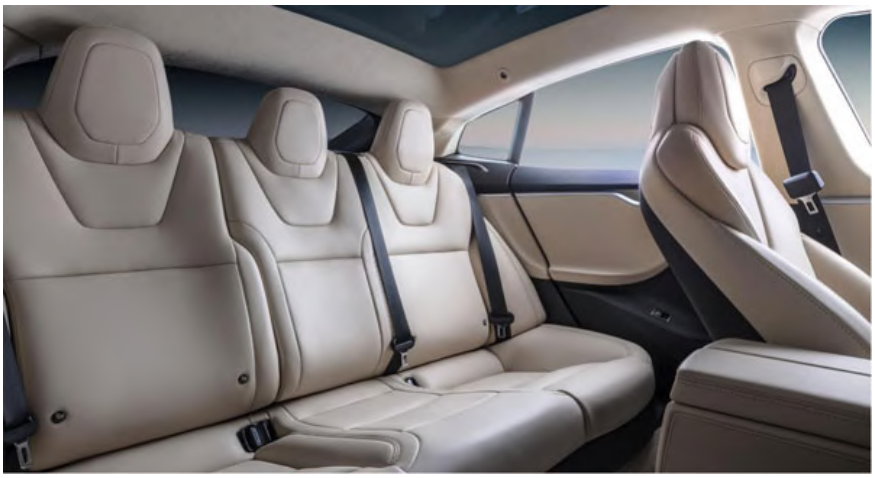
In contrast, the Xpeng P7 uses a traditional aesthetic for their floor console and door panels.



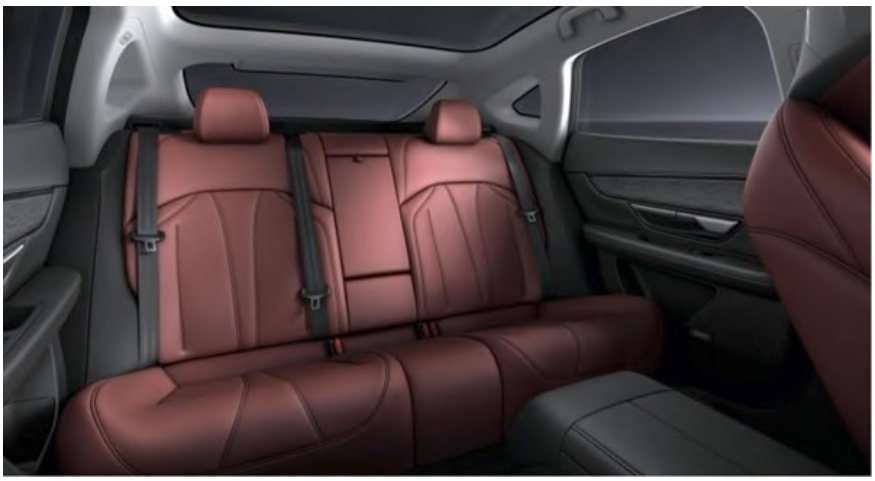
The Lucid Air has used contrasting dark colors for the front passenger compartment to help integrate visually with the door panels and contrast form the instrument panel and floor console.



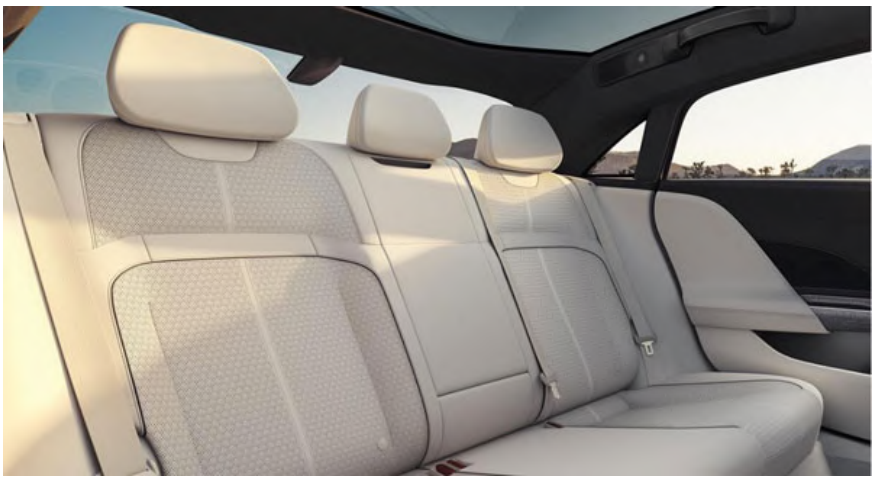
Nio, with their ET7, is contrasting the entire upper instrument panel and doors along a horizontal break. This allows the use of the light colored natural matte wood inlays for a subtler integration into the lower half of the complete interior.



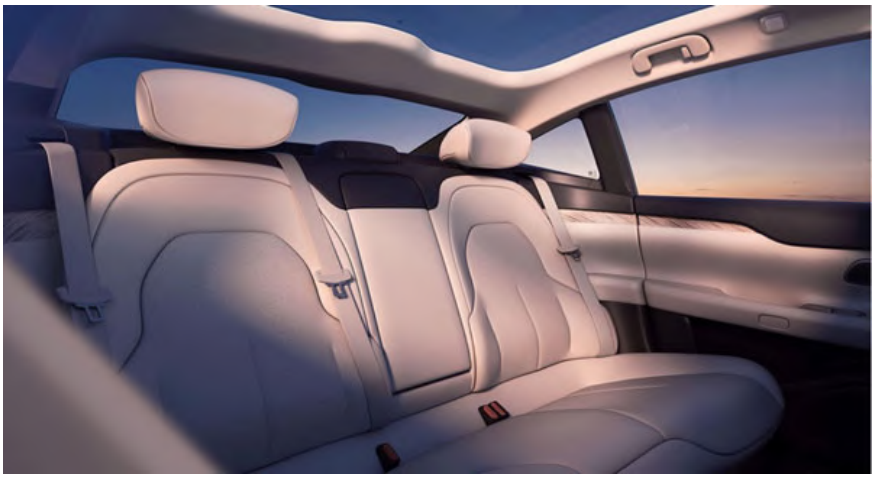
The rear seats of Tesla S are also showing the "age" of their design. Without a fold-down armrest and with enormous integral head restraints, they dominate the rear compartment of the vehicle.



With the Xpeng P7, a more standard luxury approach is used, as also seen with the door panels. This visually opens the rear seating area as the middle head restraint is primarily retracted.

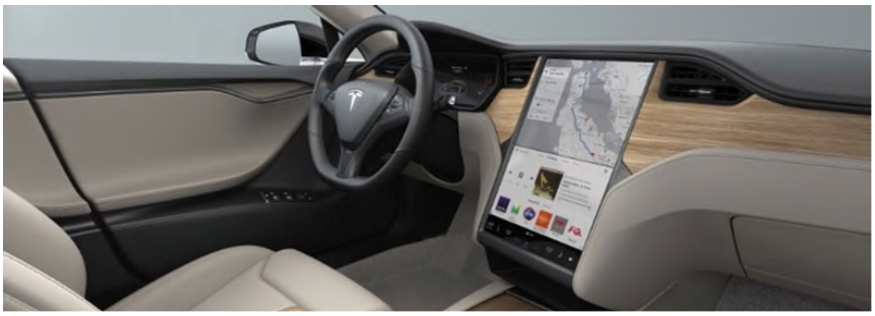


Lucid's Air uses a light color palette for their rear compartment that make an airy environment even with a non-retracting central head restraint.

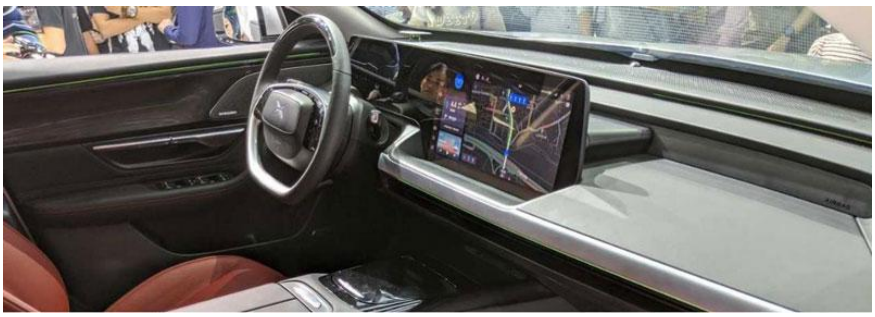


The Nio ET7 carries this strong horizontal split from the front compartment over to the rear, that also includes the wood trim strips that carry form the door panels al the way to the beginning of the seats. Light-colored head restraints, the central one retracting, create a floating impression that further refines and visually lightens the environment for the rear occupants.

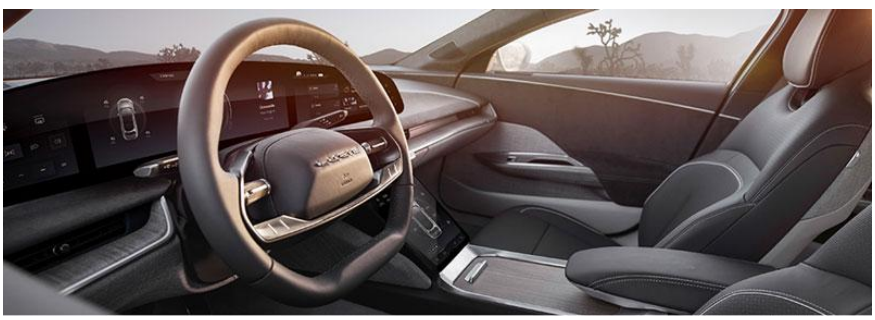
The progression and influence of Tesla's design direction can be best seen by focusing on the drivers' environment. Although the overall integrated center display looks a bit dated compared to their own offering and the new segment competitors, the cleanliness of the door panels and detail integration is still up to date compared to the latest offering form Xpeng, Nio, and Lucid.



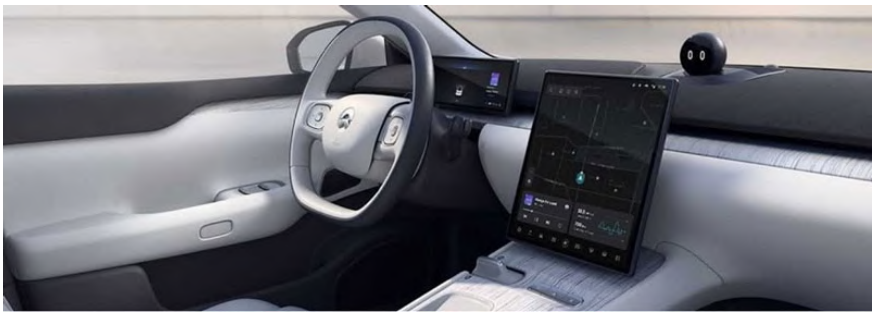
TESLA MODEL S



XPENG P7



LUCID AIR



NIO ET7

In summary, these new offering form Xpeng, Nio and Lucid have revitalized the stagnant sedan market with a fresh interpretation of luxury, space, materials and function. A rumored interior facelift of Teslas' Model S should further invigorate a body style (sedan) that, until now, was thought to be on its last legs.

Welcome to a wonderful design start to 2021.

News Mobility

_ Car interiors Unplugged

NEWS MOBILITY

3. The business case _

(this story is part of an ongoing series introducing automotive interiors as an evolution of our habitat)

A parking lot in the city of Paris costs more than the parked car, most of the time, and so too in many cities. Coincidentally, car interiors are these complex egocentric contraptions that convert a parking lot into habitat, at least for a moment. The regulatory value of such layout in comparison to realty prices is a complex topic. However, car interiors are 'inhabited' generally when mobile. Thus, they occupy more space than just a plot and this peculiar practice/possession is deployed on public space. It is like assimilating ownership into many parking lots uncoiled down the road and each one of them inhabited for a fragment of a second. Nonetheless, all together results to a very coherent, often amusing, experience for the 'inhabitants. Who owns what or when and how often, is not related to space but to a specific moment in space. It is like owing a virtual pathway, consumed as we go; a path at the beginning, an experience at the end; in-between, a trajectory harnessed with a multitude of emotions. Somehow, (in car interiors) time and its value have decoupled from speed and distance.

We cannot detach a car interior from the car but we can argue on this as a pure business case scenario. Unlike cars, car interiors are not about going faster to gain time neither to just be there on time, it is about time itself independently of how long or short that is. Time is contextual, experiential. The more the intensity and the randomness of events the more the facets of time and its complex 'value '. Time across the ocean appeals differently than in city congestion. In the extreme case of

Lewis Hamilton, the F1 pilot, he assessed that the fragment of a second that the accident took place was indeed a very long time. So, what multiplies time and its preciousness and what are the parameters that really define it? Time has a measurable expense only when everything else is constant and coherent; a straight line, a predetermined standardized trajectory or any encoded event. Anything else is the infinity of possibilities where value and time are in odds, which is precisely what really matters in this case. Car interiors act like time capturing bubbles, the only constant border that follows and frames our mobile intentions. Embedded technology converts them into the most multifaceted traffic managers of any activity, in both habitat and motion. With tech at its pic turbocharging new business models, in last week's CES show the most pertinent corporate question is repeatedly asked: 'What is your digital ambition?'

Time is the absolute currency, and the challenging task is to make a place where is more worthy. Instead of creating the 25th hour by delegating to automatic pilot, it would be arguably better to put more value in the mobile event itself, even if not as extensive. A Rolex watch costs a hundred times more than an entry level wristwatch but it doesn't give a hundred-fold more time, and chances are that is not always as precise as our smartphone screen time. Yet, it stays perennial and highly desirable because time does not exist, only clocks do!

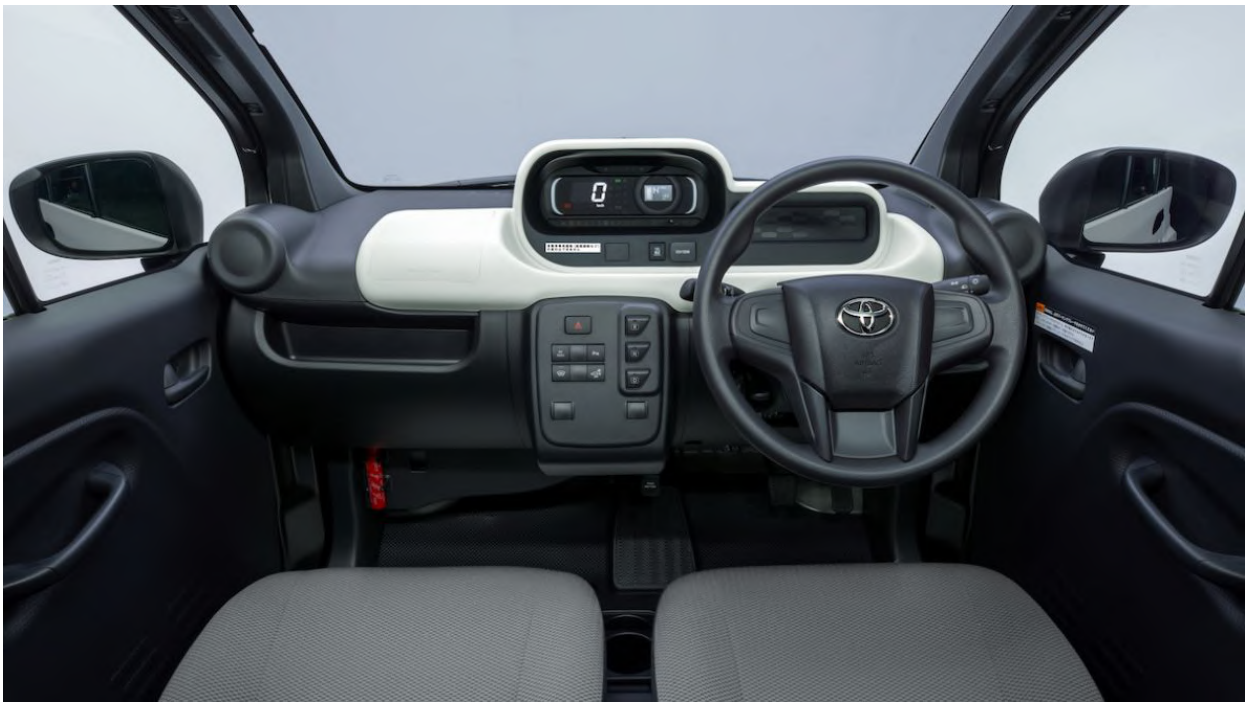
This is the business case of populating the time. A serious trouble. Because it concerns our true 'time', the one we cannot buy but we can only make. Generating information is today's business currency. Capturing time will be the business of the near future and car interiors is the new state of time matter.

_to be continued…

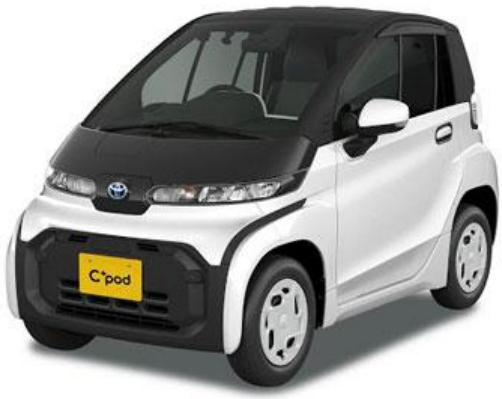
*_____INDUSTRIOUS_*

Toyota Launches C+pod EV

NEWS MOBILITY



Toyota has launched a new electric vehicle that looks small enough to maybe fit under a Christmas tree. Called the C+pod, the new ultra-compact EV is the latest in a long line of tiny EVs meant to circulate in cities and campuses without spewing exhaust emissions.



Only 2.48m long (compare Mercedes Smart at 2.70m), with a 1.80-meter wheelbase (Smart 1.97 m), the C+pod is a 2-seater EV that Toyota says will fit into the new mobility landscape alongside other small EVs like its Walking Area BEV and the Toyota i-Road. While these EVs don't look or act the way most other vehicles on the road today do, Toyota is actively working to get them into service. In fact, Toyota says they are already working with over 200 corporate and local government partners currently involved in exploring new transportation models, to do just that.

With a lithium-ion battery that's rated at 150 kilometers in the WLTC mode, Class 1 test cycle and a maximum speed of 60 km/h, the C+pod isn't meant to go on the main highways. It's actually probably more fun than it looks, thanks to a rear-mounted electric motor and the inherent low center of gravity of EVs.

Since the massive Tsunami hit northern Japan in 2011, the federal government has put a priority on developing electrified vehicles that are able to supply emergency power to

homes and businesses. The C+pod has this ability, thanks to an external power supply system of up to 15 amps at 100 volts AC, that can power the average Japanese home for about 10 hours.

General News

Detroit Auto Show Canceled, Replaced by Outdoor Event

GENERAL NEWS

The Detroit Auto Show as we know it will soon be a thing of the past. Having canceled last year's event, organizers on Monday January 11 officially spiked the 2021 North American International Auto Show, which will be replaced by a new, outdoor program called Motor Bella.

Motor Bella will run from September 21-26, with press and industry previews taking place from the 21st to the 23rd. This is a significantly shorter timetable than previous Detroit auto shows, which were historically open to the public for at least a full week.

Motor Bella is being billed as "a bridge to the future" as organizers reconsider the traditional auto show formula. Plans call for 1.6 million square feet of dynamic vehicle and technology display space including terrain ideal for showcasing off-roading capabilities, and a 1.5-mile hot track on the grounds for technology and vehicle demonstrations.

Executive Director Rod Alberts said attendees can expect a multi-sensory experience at the new event. “This all-outdoor venue, with adrenaline-pumping track activities and a full complement of OEM and technology exhibits, is going to offer the sights, sounds and even the smell of all that the new world of mobility has to offer.”

It's no secret the COVID-19 pandemic took quite a toll on public events around the world, and Motor Bella is Detroit's way of reimagining the whole auto show experience.

Toyota-PSA JV Ends

GENERAL NEWS

The plant in Kolin, Czechia that has built the Toyota Aygo, Peugeot 108, and Citroën C1 A-segment city cars since 2005 will continue production of these vehicles for both Toyota and PSA.

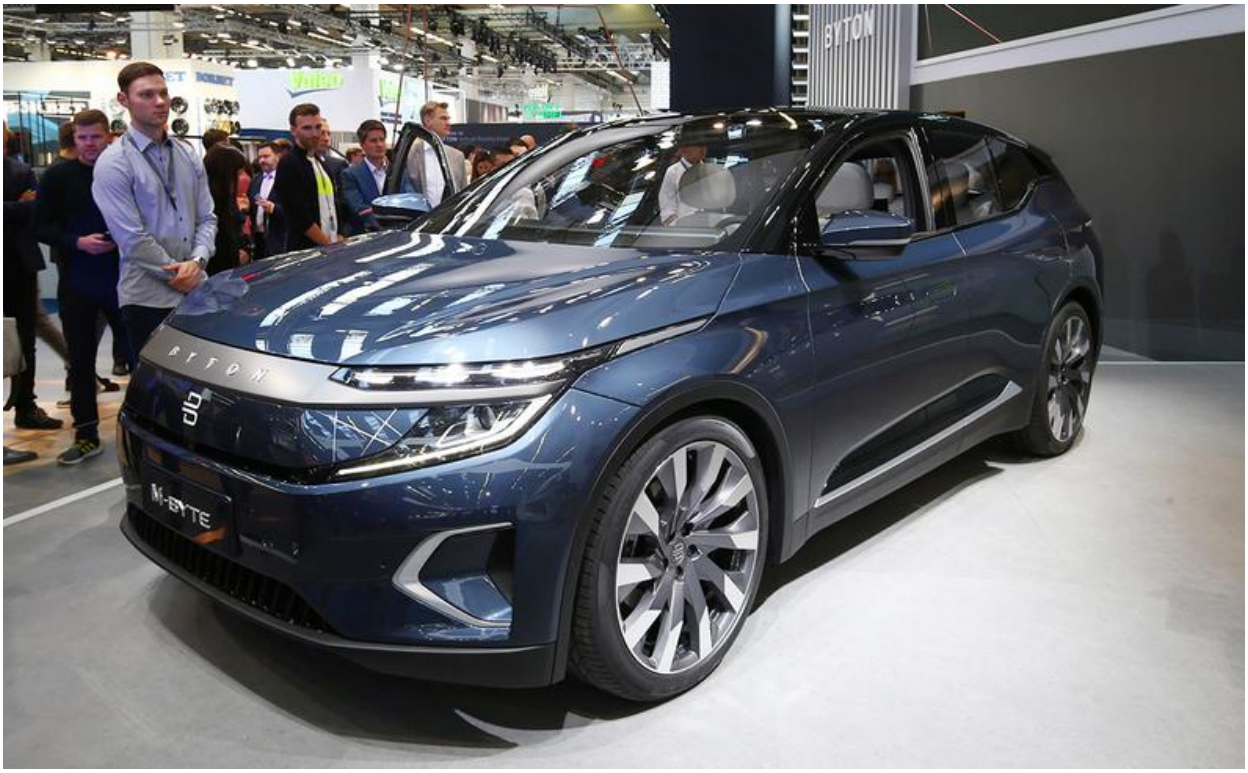
But Toyota is now taking on full control of the plant, which had been running as a 50/50 joint venture between Toyota and the PSA Group. The move comes as Toyota plans to increase output of their hybrid Yaris for Europe. The plant has been renamed Toyota Motor Manufacturing Czech Republic.

Consistent with the abbreviation example of other European Toyota plants, the business will be known as TMMCZ. Toyota invested more than 4bn Czech crowns (USD $185m) to increase capacity and modernize the site. This investment has enabled the introduction of Toyota New Global Architecture manufacturing, allowing the plant to begin producing the new hybrid Yaris in the second half of this year.

Plant President Koreatsu Aoki says "Our plant is part of the Toyota group, which now has eight fully-owned manufacturing centers across Europe. Increased demand for our cars and preparation for the start of production of a new model mean that our operations will move to three shifts from 28 February. “The factory, one of the biggest exporters in the Czech Republic, uses an extensive automotive supply chain within the country.”

Geely, Foxconn Want to Build Other-Brand Cars

GENERAL NEWS



FOXCONN HAS ALREADY AGREED TO HELP BUILD THE BYTON M-BYTE BY THE FIRST QUARTER OF 2022.

Taiwan's Foxconn and Chinese automaker Zhejiang Geely Holding Group said on last week they will cooperate to provide contract manufacturing for automakers.

It marks the latest move by Foxconn, the major electronics contract manufacturer, also a major Apple ODM, into auto production after a tie-up with Chinese electric car startup Byton to help build their M-Byte SUV, and comes amid reports that Apple is likely to launch a self-driving electric car by 2024.The partnership will allow Geely to share their first EV-focused platform, launched in September, with other automakers.

The companies will each hold 50% of a venture that will also provide EV consulting services. Geely, which owns Volvo Cars and holds 9.7% of Daimler, is keen to improve the capacity utilization rate of their plants around China. Their main listed company, Geely Automobile, has the capacity to build more than 2 million vehicles a year but sold only about 1.32 million in 2020. Geely Automobile plans to issue shares on mainland China's STAR board this year.

Foxconn said in October they aim to provide components or services to 10% of the world's EVs by 2025-2027.