

## Editorial

### Dwindling Car Count At Paris Mondial



PRESIDENT MACRON + RENAULT CEO LUCA DE MEO @ ALPINE GLOW CONCEPT (DVN IMAGE)

France's President Emmanuel Macron made an honest effort to give the Paris auto show some significance. However, there was not a lot of exciting stuff in the three exhibition halls.

It's almost sad what's become of what was once one of the world's biggest car shows. Not even the French car companies are there with all their brands: Citroën was missing. German, Japanese, and Korean manufacturers stayed away from the Paris show completely. Mercedes launched the EQE SUV at an event in a museum next to the show, but it was the night before the show started. French automakers (other than Citroën) were there because they sort of had to be. Chinese automakers were there, because that's their expansion strategy. Vinfast was there from Vietnam, presenting their range of electric cars.

However, you can count on this: DVN Interior was there to fulfill our mission, and this week we bring you a full presentation of what we saw at the show.

As always, we're glad you're here with us!

Sincerely yours,

Philippe Aumont  
General Editor, DVN-Interior

# In Depth Interior Technology

## Paris Mondial In-Depth Review



RENAULT SCENIC VISION (DVN IMAGE)

After being canceled in March 2020 due to the pandemic, the Paris Motor Show is back. It happened last week on a much smaller scale compared to past events. Most French marques were present, along with several Chinese brands and Vietnam's VinFast. But German, Japanese, and South Korean brands sat out the event, though Mercedes organized their EQE premiere the evening before in a nearby Paris Museum. The show was squeezed into three smaller halls

This did not discourage Renault CEO Luca de Meo: "I go to the Paris Motor Show because I like the event, because I like to present to the public the best of what we make", he said, adding that he was sure auto shows will continue to draw crowds.

In this article we describe the production and concept cars on display, as well as events within the event, such as...

### **the Paris Automotive Summit**

This conference brought together the like of Renault and Stellantis with their respective CEOs Luca de Meo and Carlos Tavares speaking there, as well as French Minister of Finance Bruno Lemaire and the top staff of BYD. Here are summaries of selected presenters' comments,

#### **Luc Chatel, president of the Automotive Platform (PFA):**

This 89<sup>th</sup> Paris Motor Show is probably the first one in a world where electric and mobility are the two pillars of the industry. When the complete value chain has adapted, the number of EVs will be multiplied by 10, compared to today, and number of models multiplied by 5.

The industry has two big challenges:

- Social acceptance: 89 per cent of people want freedom of mobility; 87 per cent use cars every day. EVs need charging stations! 500 of them are coming onstream every week in France, but we would need 1,500 per week to meet the 2035 target.
- Sovereignty: the quantity of rare earths needed will be multiplied by 40, and we will use as much copper in next five years than in the last 100. Industry needs the technologies and the power to manage its supplies; its workforce, and its industrial footprint.



**Bruno Lemaire, Minister of Economy and Finance:**



DVN IMAGE

Bruno Lemaire serves as the French Minister of the Economy and Finance under President Emmanuel Macron. His message to the French auto industry was that he would never give up on them, even in the heart of the storm. And that the state, manufacturers, and Europe must be more united and armed in the face of more aggressive and uninhibited actors, pointing to China and the United States. He also strongly stated that after Europe decision to ban ICE engine after 2035, the industry should not keep crying over spilt milk, and just do its job to be prepared.

He also insisted on reciprocity of trade, especially on CO<sub>2</sub> impact of vehicles, with at-border adjustment total impact exceeding impact of local products. He confirmed the €100 per month lease rate that the government will subsidize as soon as the local industry has appropriate and affordable products.

**Luca de Meo, Renault CEO:**



DVN IMAGE

Renault's CEO emphasized the need for exciting products; without emotion, the industry will not survive. He justified Renault's presence at the auto show in those terms, with emotion being central to festive auto shows.

The industry is going through a lot of turbulence, he said, and automakers must be brave. Renault is transforming an assembly plant (Flins, in the Paris area) to a circular ecosystem. They've created "Future is Neutral", a separate entity but invested in by the Renault Group and partners, aiming to completely recycle every element of vehicles. Mobilize, the new brand for mobility services, is presenting a new vehicle, the Duo, which is said to cost 35 per cent less for mobility operators.

EVs are the future, and Renault is committed to manage 80 per cent of the EV value chain, versus today's 30-per-cent figure— itself up from 10 per cent three years ago.

Finally, he said, this revolution cannot happen without the employees of the company being reskilled or upskilled as needed.

**Carlos Tavares, Stellantis CEO:**

Tavares expects inflation to be under control in one or two years: "inflation will have to go down, because higher interest rates are now taking care of it. But it will be at the cost of some slowdown in the economy, eventually also at the cost of an increase in unemployment".

He said one of the tasks facing Stellantis will be improving their performance in China, the world's largest car market, where they have a considerably smaller market share than in Europe and the United States. "No global car company can afford not to be in the largest car market in the world," Tavares said.

PSA is no longer investing in internal combustion engines as Europe and China push for cleaner driving, Tavares said. He also said PSA is far ahead of objectives in meeting European Union CO<sub>2</sub> emission targets. He warned the industry that the ICE ban in 2035 is coming too soon, as EVs will not be at cost parity at that time, and consumers will probably use existing petrol-cars longer, ending up with higher emissions in that period.

Tavares said Stellantis has made a huge shift to lower their breakeven, which is today at 40 per cent of total capacity, giving them the agility to survive in very low business situations. He also emphasized the necessity to reskill and upskill their total working population.

**Christophe Perillat, Valeo President:**



VALEO BOOTH (DVN IMAGE)

Périllat spoke about the stakes and challenges of the biggest transformation in the history of the automobile industry, including raw materials and prices; employment conditions; energy costs; charging stations; dependence on Asia, etc.

Transport still represents 18 per cent of the total CO<sub>2</sub> emissions, so the industry has to decarbonize—which requires to build the ecosystem, which will progress at the speed of the *slowest* link in the total value chain. So, he said, better to behave as a team.

Material shortages will continue, he predicted, and we'll have to live with it as we continue to use non-previously-used materials in higher quantities. He pointed out that technology must be ready, and noted the 48-volt motor in the new Citroën AMI as an example. Valeo has the target to have a 200-kw motor ready by 2027 with no rare earths.

As for driving automation, he reminded that there are only two vehicle in the world at the moment, which are really at Level 3: the Honda Legend and the Mercedes S / EQS. He expects more or less all makers to have at least one L<sup>3</sup> car by 2027.



## Chinese Brands

### **Great Wall Motor's Wey**

The Wey brand showcased its two new EVs, the Coffee 01 and Coffee 02 PHEVs.



BYD IMAGE



DVN IMAGE

Moreover, Wey announced the official launch of its Coffee 01 PHEV model to the European markets, with a price range of €55,900 to €59,900.

Wey's strategy is presented as "zero anxiety intelligent electric vehicles". Up to now, the Coffee 01 has completed the WVTA (European vehicle type approval), and meets the Euro 6d emission standards. And the PHEV model received a five-star rating in the EuroNCAP safety tests.

Ora, another Great Wall brand, showed two vehicles, the Cat and the Funky Cat:



DVN IMAGES

Interesting: a face recognition camera protruding from the A-pillar trim.

## BYD



ATTO 3 (BYD IMAGE)

BYD has started a major push into the European market, with EVs that are expected to undercut the competition on price but still deliver market-level technology. By the end of this year, BYD—either the second-largest global EV maker after Tesla or the world's largest, depending on who's answering the question—will start selling their Atto 3, a compact crossover.

They'll also begin selling the Tang midsize crossover and the Han midsize sedan, and all three were presented at the Paris show.

BYD made a presentation at the Paris Automotive Summit with a video of their CEO, and an emphatic speech by their European Leader, Michael Shu. He reminded that aside from batteries, BYD is strongly involved in trucks; buses; forklifts, and in cell phones, with 20 per cent of the market having BYD electronics.

They have developed "blade" batteries, integrated in a honeycomb-structured E-Platform 3.0. Car architecture can therefore be completely optimized: the thin underslung battery, combined with a longer wheelbase, results in a much larger cabin, with much better roominess. BYD also mentioned they already have carbon-neutral plants in China.





DVN IMAGE

BYD's Seal has a 17" screen in landscape format, which at least gives a better access for the driver.

## Renault



DVN IMAGES

Renault, together with all Group brands including Dacia; Alpine, and Mobilize attended the show, under the theme "Revolution is on". It was an opportunity for each brand to present at least one exclusive world premiere, as well as their latest innovations; partnerships, and several iconic vehicles from their range.

Renault unveiled a reinterpretation of one of their iconic vintage models, the Renault 4. The Renault stand was centered on [the Renault 4ever Trophy](#), a show car version of a small full-electric crossover that will go into production by 2025. To conclude the year-long celebration of the 50<sup>th</sup> anniversary of the Renault 5, the public will have the opportunity to discover a sporty and offbeat show car. Between concept cars, production models and show cars, the 2022 Paris Motor Show highlighted the manufacturer's commitment to motor shows. Renault also showed their new Mégane E-Tech EV and Austral E-Tech hybrid—models for the reconquest of the C segment.

As we've [previously reported](#), the Renault Scenic Vision presents an opportunity to feel and touch the huge living space, and to touch all the embedded sustainable materials and surfaces, including the lighted door trim with a small touch screen to control visors.



DVN IMAGES



Dacia revealed their new range-wide branding and a hybrid-powered version of the Jogger SUV. But the model we were most keen to see was the Manifesto concept car.

Styled like an off-road buggy, it's not going to enter production, but it reaffirms the values Dacia will prioritize in the future, including minimalist features—not giving customers things they don't need—plus a push towards sustainability



ALPINE IMAGE

The Alpine brand continues to tweak the A110 and improve it, with a more extreme A110 R model. But the real highlight is the Alpenglow. It's a futuristic concept car with wild and adventurous styling, and a hydrogen powertrain—a potential hint at what Alpine wants to drive its sports cars with in the coming years. No interior was visible.





DVN IMAGES

Renault Group's mobility and finance division, Mobilize, showed the Duo: an electric quadricycle aimed at urban users and short-term rentals. The Duo is one of four dedicated EVs designed for Mobilize, joining the Limo (for ride-hailing).

## Vinfast



DVN IMAGE

Vietnam's only automaker has big ambitions for Europe, with a network of retail sites planned that will sell several full-electric models. VinFast plans to start delivering EVs to customers in Europe and the U.S. before the end of 2022, and aims to be profitable within the next three years. The models due to arrive in the U.S. and Europe before year-end are the midsize VF 8 and large VF 9 SUVs, which were at the show alongside the VF 6 small crossover and VF 7 compact crossover.

## Peugeot



DVN IMAGE

While the Peugeot 408 was first revealed last July, this stylish new crossover was shown to the public for the first time in Paris. Set to slot in Peugeot's line-up between the 308 and 508, it offers a similar ethos to the Citroën C5 X, as it takes the profile of a raised crossover-inspired sedan. The interior has a classical sedan architecture, with a screen which looks like a postage stamp compared to the giant screens in other vehicles at the show.



DS IMAGES

Stellantis' premium DS brand has facelifted their SUV range, with the DS 7 and DS 3 receiving exterior and mechanical updates. The DS 7 was the first model designed from the ground up for the brand, which was spun off from Citroën in 2016.



It offers a variety of different leather trim, such as this "bracelet" finish.



## Fisker



FISKER IMAGE

Henrik Fisker previously designed cars for BMW and Aston Martin, His company, a California-based EV startup, will show the Ocean: a midsize SUV slated to start production with Austrian contract manufacturer Magna Steyr. The Ocean Extreme shown in Paris will be the most expensive of the three mainstream production trim levels offered by Fisker.

The Fisker vehicle was presented at the Credit Agricole booth, supporting the bank strategy to have a portfolio of car financing offers including mobility subscription. BNP, another French banking giant, was also on stage at the show to introduce their automotive and mobility financing portfolio.

## Jeep



JEEP IMAGE

The smallest Jeep model, the Avenger, will also be the first full-electric Jeep when it is launched next year. The Avenger, which will also have combustion-engine variants, will be Jeep's second entry in the small SUV/crossover segment, joining the slightly larger Renegade. It will be built in Tychy, Poland, on Stellantis' eCMP platform.

The Avenger gets a rugged-looking interior with a 10.25" infotainment display that houses Jeep's latest Android-based UConnect infotainment system. A 7" digital driver's display is standard on lower trims, and a 10" configurable screen on upper trims. Focus has been made on storage, with a huge central storage bin; enormous door pockets, and a shelf that spans the whole width of the dashboard.

## Mercedes-Benz



MERCEDES-BENZ IMAGE

Coverage of Mercedes' doings around the show are in a separate article later in this newsletter.

Many entities not usually known for attending auto shows were present at this one, Banks have been mentioned, but even Netflix was there to introduce a new program—maybe as a future Infotainment content provider?



DVN IMAGE



# Interior News

## Mercedes EQE SUV Debuts

### INTERIOR NEWS



MERCEDES-BENZ IMAGES

Mercedes-Benz presented their EQE SUV the evening before the start of the Paris Motor Show, in a private show at a Paris Museum—Musée Rodin. It was presented as a "multi-purpose variant" of the EQE business sedan. Although Mercedes timed the world premiere of the EQE SUV in the French capital, the e-SUV wasn't on display at the Paris Motor Show.



Inside, the SUV draws heavily on the EQE sedan with the choice of two different dashboard layouts. Standard versions receive separate instrument and central infotainment displays with Mercedes-Benz's Hyperscreen, which supports up to three individual displays in an optional 55.5"-wide panel. The displays operate in combination with the MBUX operating system, which offers conversational speech commands via a "Hey Mercedes" prompt as well as OTA software update functionality via an embedded SIM card.

Latest enhancements to the MBUX system include the integration of major music streaming services including Spotify; Amazon Music; and Apple Music, among other online services. Mercedes-Benz also is launching a new optional Burmester sound system featuring Dolby Atmos surround sound in the EQE.

The space in the first and second row should be about the same as in the sedan—though you sit a bit higher. Especially in the rear, headroom is greater because the roofline doesn't drop, but knee room is smaller on account of the 9-cm-shorter wheelbase. When the backrests of the rear seats are in the comfort position, there's 520 liters of cargo space according to VDA standards. With the more upright cargo position, it's up to 580 liters. If the rear seat backrests are folded down completely, the cargo compartment can hold up to 1,675 liters. There is no optional third row; that's available only in the larger EQS model.

Mercedes has also dispensed with a frunk under the front hood in this platform, where the large HEPA filter of the air conditioning system is located.

While the SUV adopts many familiar functions and features—comfort functions like the massage seats; numerous driver assistance systems, etc—the chassis has been given another helping hand and its own setup has been defined for the model. Mercedes calls the 3.03-meter (119.3") wheelbase "comparatively short" in the press release. Standard EQE models receive a steel suspension featuring adaptive damping. Other developments include electromechanical active roll stabilization and four-wheel steering. Series production is scheduled to start in December in Alabama, USA.



# Ascend Performance Materials for Safer, Quieter EVs

## INTERIOR NEWS



CADILLAC LYRIQ

Two new materials called Starflam X-Protect and Vydyne AVS have been released by Ascend Performance Materials, a chemical company based in Houston, Texas. Ascend says the new materials will improve safety and comfort in EVs.

The Starflam X-Protect material is a flame-retardant nylon 66 that can withstand direct flame and temperatures up to 1,100°C for 15 minutes. This surpasses standard flame-retardant materials and aluminum(!) as tested in accord with SAE AS5127.

Ascend's senior e-mobility business director Ian van Duijvenboode says "Safety remains one of the primary concerns for people considering an EV. Despite being relatively rare, critical battery failure and thermal runaway can occur and X-Protect was designed to keep people safe even in extreme circumstances".

To damp noise; vibration, and harshness, which in EVs are 10 times the frequency of those in ICE vehicles, e-mobility application development engineers and polymer scientists at Ascend produced Vydyne AVS. The newly-engineered material is extremely effective at damping high-frequency vibrations from noise sources including motors and compressors, resulting in an 80-per-cent reduction in cabin sound pressure.

Vydyne AVS has been used within the Cadillac Lyriq to create a mounting bracket for an electric AC compressor, significantly reducing vibrations at the source and providing structural support for the component.

# Valeo Showcases Sustainable Mobility and DMS

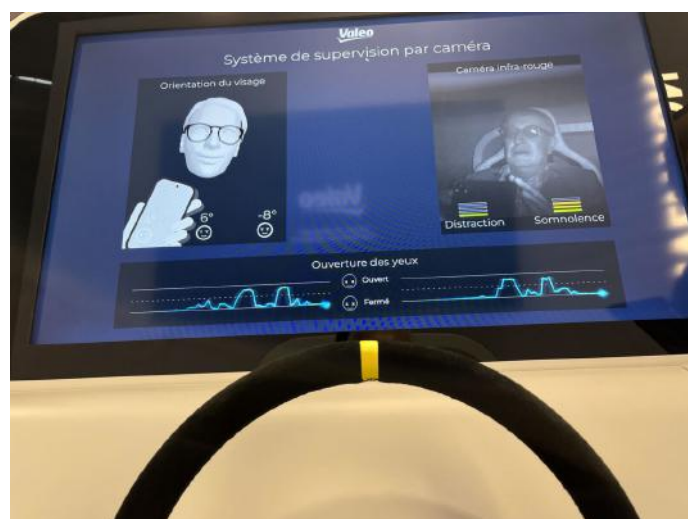
## INTERIOR NEWS



During the show, the Valeo Group presented innovations for the four sustainable mobility megatrends underpinning the company's "Move Up" long-term value creation strategy: vehicle electrification; advanced driver assistance systems (ADAS); lighting everywhere, and reinvention of the interior experience.

A prototype featuring all of Valeo's high-voltage electrification technologies was on display, showcasing in one place the supplier's all-encompassing expertise in electric and thermal energy management for electric vehicles. Valeo has recorded more than €4bn in orders since the beginning of the year for thermal systems for EVs.

Renault Group and Valeo are designing, co-developing, and will produce a new-generation automotive electric motor that is entirely free of rare earth and magnetic metals.



DVN'S PHILIPPE AUMONT TRIES OUT VALEO'S DMS (DVN IMAGE)



Visitors could try Valeo's driver monitoring system, a camera-based technology that tracks driver alertness by identifying the driver and monitoring their attentiveness. Passengers are said to increasingly want their car to be a personalized cocoon where they feel both at home and safe, where they can relax and stay connected with their loved ones. Valeo develops these technologies to provide car connectivity and deliver enhanced safety, greater comfort, and new vehicle interior experiences.

Valeo will also demonstrate the new possibilities electrification brings to lighting, as radiator grilles—obsolete when there's no radiator because there's no combustion engine—give way to grilleboards on EVs. Visibility systems are undergoing an unprecedented transformation as car lighting informs; guides; alerts, and assists road users to mobility safer; smarter, and more attractive.

# Horizon Robotics' New DMS

## INTERIOR NEWS



HORIZON ROBOTICS IMAGE

Horizon Robotics, a robotics chip expert headquartered in Beijing, China, have presented their in-cabin sensing solution. It's vision-based, with up to three cabin cameras to cover driver; co-driver; and rear-seat passengers. It is claimed to use just 2 watts and offer perception of 90 per cent; to detect distraction; drowsiness; drinking; calling; smoking; hands-off-wheel; child in the rear, etc.

This DMS integrates a speech-based front-end for smooth voice interaction. It includes the latest automotive sound technology with noise and reverb suppression; echo cancellation, and beam forming.

Horizon Robotics recently announced their latest collaboration with BYD, China's best-selling electric vehicle brand, to equip BYD vehicles with Horizon's latest Journey 5 automotive processor. The supplier says they have received a strategic investment from Chery Automobile and have completed the funding settlement.



# Faurecia's Low Carbon Leather Alternatives

## INTERIOR NEWS



FAURECIA IMAGE

Faurecia is on the path to carbon neutrality, and getting there means increasing use of renewable and bio-sourced materials. Non-animal leather is a great example of how sustainability ambition and innovative materials achieve reduced carbon footprint.

R&D teams within the seating business unit set out to explore new bio-based materials as a lower-CO<sub>2</sub> alternative to animal or PVC synthetic leather, to meet increasing interest from automakers looking for complementary trim solutions on seats and to cover surfaces of the vehicle interior such as the instrument panel; door panel, and center console.

Faurecia began working in 2020 with TMG, specialists in coating materials for the automotive market. The joint goal was to create a more environmentally friendly vinyl product from renewable and recycled materials, with a great premium quality and aesthetic appeal.

The partners combined their materials expertise to find the right formulation to achieve the optimum durability, elasticity and high-end touch and feel. Faurecia has extensive experience and expertise in the use of natural fibers such as hemp as well as recycled materials; in the creation of lightweight compounds, and in cut, sew and trim operations.

The first prototype was developed in under a year and is based on an innovative multilayer composition incorporating recycled PET material and, in parallel, another featuring hemp instead of PVC, bringing a total natural and recycled content of 15 per cent. The first products in this Ecorium range were featured in Faurecia's seating and interiors at Auto Shanghai and IAA Transportation in 2021.

The partners are already in industrial testing of two new versions of Ecorium family. Faurecia Seating Technology director Nicolas Michot said: "Our customers are extremely interested in new materials that support their sustainability objectives and contribute to the eco-design and reduced footprint of future vehicles. We are already in industrial testing of two new versions of Ecorium family. Reaching 55 to 95-per-cent non-petrol derived and recycled material content, these will cut CO<sub>2</sub> emissions to a third compared to synthetic leather and 90 per cent lower than animal leather".

# Door Handles From ELV Tires

## INTERIOR NEWS



2022 MATERIALICA DESIGN + TECHNOLOGY AWARDS; MATERIAL CATEGORY (BERLIN, 5 OCTOBER). LEFT TO RIGHT: GEORG STALTER / WITTE AUTOMOTIVE · OLIVER GEIGER / BASF · ELENI KOUGIOUMTZI & SIMON HOEBEL / MERCEDES-BENZ. (BASF IMAGE)

A group consisting of Witte Automotive; BASF; Mercedes-Benz, and Pyrum Innovations has successfully closed a material cycle to produce automotive components from mass-balanced plastics.

Witte Automotive develops and produces locking; handle, and hinge systems for car doors; hatches, and seats. Headquartered in Germany, Witte is the European part of the Vast Alliance, the global automotive supplier alliance for vehicle access products.

Before the end of 2022, the group will produce a bow door handle from the mass-balanced Ultramid material. To manufacture the new door handle—set to be used on certain Mercedes-Benz models—BASF used a combination of raw materials in a mass-balance approach. These included pyrolysis oil from scrap tires from Pyrum Innovations; food industry residues, and agricultural waste. The company's Ultramid polyamide 6 benefits from 30-per-cent glass fiber reinforcement, ensuring its strength for different vehicle components.

BASF performance materials president Dr. Martin Jung says "Solutions like these help our customers meet their sustainability goals. This is our Go! Create approach: we invite all our customers and partners to join us in shaping the path toward a circular economy with plastics. With this bow door handle for Mercedes-Benz, we have shown this in an exemplary way".

An independent certification, which follows the REDcert2 scheme, verifies the quantities of pyrolysis oil and biomethane required to replace fossil raw materials for the end product. The certified raw materials are then placed into BASF's production network, before being mathematically assigned to the plastics through the mass-balance approach and then delivered to Witte Automotive. The subsequent production of the bow door handles at the automotive supplier is audited externally in the same way based on the REDcert2 standard.



# The Design Lounge

## Porsche 911 in the Digital Age

THE DESIGN LOUNGE



PORSCHE IMAGE

The old-school analog instrument cluster in the Porsche 911—with three round binnacles and traditional gauges—has reached the end of the line. Work is underway on a fully-digital display for the next major update of the classic German sports car, known to Porsche enthusiasts as the '992.2' generation.

A test car caught on camera in the US shows the revolutionary new approach for the Porsche 911, which mirrors the dash display as used in the Porsche Taycan EV. The current Porsche 911 (992 generation) uses an analog tachometer in the center and a digital display on either side, with graphics simulating analog dials. The previous-generation 911 (991.2) had four traditional analog dials and one small screen.

In the facelifted '992.2' car, the traditional central tachometer is carried over to monitor engine revolutions, and there are still three big individual dials, but they are all incorporated in a single large TFT screen. The new look is said to promise better clarity for drivers, and the possibility for more customization, and comes after the introduction of a central infotainment display as one of the biggest changes in the history of the 911's dashboard.

The miles-per-hour readout for the 911 test car's speedometer shows it was set for testing work in the Rocky Mountains in the USA.

# Heuristic Forms of Mobility

THE DESIGN LOUNGE



CITROËN IMAGE

1950s Detroit concept cars—"Dream cars", as they were called—were low; wide, and long, with sweeping lines, fins, bubbled windshields, turbine or rocket shaped front ends, were the looks of what was foreseen to populate the streets by 1999. GM was leading the trend, staging shows where a great deal of automotive extravaganza was displayed and measured up to, and often far beyond customers' expectations. Buick LeSabre, Firebird I XP 21, Pontiac Club de Mer, Buick Centurion, Firebird III, Cadillac Cyclone XP74, Lincoln Futura, Buick XP-300, were some of the stars on the stage but the mere fact of standing next to each other to a never seen before scenery led into a cultural phenomenon.

Everything was projected to a thrilling, stylish, dreamy vision of a mobile world with its own rules of perfection where creativity had no limits—even with production models. The 1959 Chevrolet pushed the GM engineering department into unconventional places, reaching the limits of die stamping. And Ford's 1959 Thunderbird roofline was considered to be the most amazing thing industry could produce. Those were the biggest unibody cars ever built. Change began to come in 1959 as "compact" American cars moved out from the margins with Chevrolet's rear-engine Corvair; Ford's conventional-but-smaller Falcon, and Chrysler's daringly-styled Valiant.

Four decades later, unbeknownst to all these that had pushed the limits of car design back then and unlike any previous future projections, the new millennium started on somewhat peculiar aesthetic rules on city streets and highways. Tall-massive-cubical, now, instead of Harley Earl's longer-lower-wider dictum, became the symbols of new mobility. Opposing any urban logic, SUVs populated city streets culminating at the end of first decade with the BMW X6 marketed as "SAV" (sports activity vehicle); a sports-coupe silhouette on top of a tall SUV beltline with 285/35 tires mounted on a 21 inch rim. The biggest 4x4 tire on thin profile, for highway driving, more often seen downtown: design funded on contrasting notions.

With SUVs pushing city limits not only in terms of size but also pure civic sense, the radical transformation of mobility codes came so rapidly that we still have no idea of what the new design codes of the automobile are or will be. The focus of aesthetics swiveled from designing massive 4x4s to UX design, from huge urban vehicles of exaggerated proportions to rewriting design rules and car literature by the empirical use of tech interfaces.

It seems like the very knowledgeable 100-year long in-depth development process that automobile has put in place, is now crowdsourced per subject, per square inch, per pixel. Cars are commodified and the future is seen through the mental models of their usage. The risk of delayed feedback, if for example the undo button is displayed in a wrong place of a tool bar, seems to be far more important than how the car looks.

Urban mobility is now multimodal and interconnected and its looks are constantly evolving. Aesthetics have to do with our living space, the environment we live in and defines us. It represents an instant visual synthesis of the quality of our surroundings from the most flawless and meaningful app design on the screen of our smartphone, to the silent zero-emotions vehicle, all the way to the vandalized pile of shared scooters blocking a pedestrian passage. Heuristics are quickie rules that



enable us to take fast decisions empirically, like a mental shortcut for a quick and efficient judgment. So it might be that the style of our era is equally crowdsourced and the outcome of a trial and error process will allow us to discover it all by ourselves, while its aesthetic rules remain undefined.

Motor shows are in exactly the same situation as the automobile itself: faced with the need to reinvent themselves. The 89<sup>th</sup> Paris motor show took off on the premises of a new era, setting ambitious horizons at the forefront of the automotive ecosystem and new mobility. Between the stars of the show, Renault's R4 Ever Trophy and the iconic R5 Turbo 3E E-Tech, there is certainly a recall to the past—but nostalgia is replaced by totally new and unexpected design cues.

# News Mobility

## Cariad and Horizon Robotics plan JV in China

### NEWS MOBILITY



VOLKSWAGEN IMAGE

In terms of connectivity, Volkswagen's models are considered uncompetitive in China. The manufacturer urgently needs fresh approaches and better access to hardware.

Volkswagen's Cariad software wants to join forces with a domestic giant for artificial intelligence and automated driving in China, the world's № 1 and VW's most important car market. A joint venture with Horizon Robotics could mean an investment of up to €2bn. According to group circles, the move would be a central building block in the digitization and China strategy of Europe's largest automaker. However, the formal decision is still pending.

Horizon Robotics, founded in 2015 in Beijing, originally developed chips for robots. Now they power the automotive industry through EV and AD innovations.

In China, Volkswagen has long worked with domestic suppliers in vehicle production and, for some time, in the manufacture of battery cells. The joint venture would implement announcements to also build up local expertise in the business with its own software and electronics systems and to become more independent of suppliers.

Horizon Robotics is also a partner of other automakers and suppliers, including Continental. Last year, the Dax corporation from Hanover announced the establishment of a joint venture with the Chinese company. Horizon Robotics itself was founded in 2015 and develops AI processors and algorithms for automated driving functions and road safety.

Volkswagen had lost market share in China over the past two years, largely due to the chip crisis. The supply of semiconductors is improving again, but one problem was special customer requests for entertainment systems and other onboard software that could not be operated. There was a clear need to catch up on the associated equipment, according to the latest report from Wolfsburg. This includes the goal of developing more locally in order to better meet Chinese demands. The software subsidiary Cariad already has a regional branch there.

# Starbucks: Gas Station of the Future?

## NEWS MOBILITY



STARBUCKS IMAGE

By 2030, there could be 26 million electric cars in the U.S., which means they'll need more than 10 times as many EV chargers. Starbucks, with their 15,000 locations across the country, thinks they could help fill part of the gap.

In a pilot this year, the company is partnering with Volvo and Chargepoint to install EV chargers in Starbucks parking lots along a 1,350-mile route from Denver to Seattle, with stops available roughly every 100 miles. "It's one of those charging deserts, so to speak," says Michael Kobori, chief sustainability officer at Starbucks. "There aren't too many charging stations available there."

Charging an electric car is still a fundamentally different experience from pumping petrol; EV owners often plug in at home for day-to-day use, but on a longer road trip, chargers aren't always easy to find. With current charging tech, the process also takes longer than traditional fueling, and sitting at a gas station for 30 minutes or more isn't appealing.

"This is pairing the idea of EV charging with the fact that, hey, if you're on a trip, you're gonna stop in in the morning anyway to get your Starbucks, to get your beverage, to get your breakfast," Kobori says. "And as you're sitting there, getting ready for the day and planning out your route and checking out, your car is just charging." While charging times vary depending on the vehicle, Volvo says their electric cars can go from a 20 to a 90 per cent charge in 40 minutes.

In the pilot, Starbucks will test usage rates and decide whether to expand the service nationally as part of their larger sustainability plan, which is aiming to eventually make the company "resource positive," including a goal to capture more carbon than they emit.



# General News

## Xperi Completes Spinoff

GENERAL NEWS



Xperi technologies, delivered via their brands—DTS; HD Radio; IMAX Enhanced, and TiVo—and by their startup, Perceive, are integrated into consumer devices and media platforms worldwide, powering smart devices, connected cars and entertainment experiences. Xperi has appeared several times in DVN Interior news.

Xperi just celebrated their first day of trading as an independent company on the New York Stock Exchange under the ticker "XPER." CEO Jon Kirchner says, "Our strategy is closely aligned with broad industry growth trends and creates a highly scalable revenue stream through engagement-based monetization. Our market engagement model is well positioned to drive partner adoption by allowing TV OEMs and automotive OEMs to brand the experience, retain customer ownership, and actively participate in long term revenue generation. Our strategic growth, market opportunity, and unique value proposition are demonstrated by recent high profile customer wins such as a key TV OS win with Vestel, one of the three largest global TV producers, wins with BMW and Mercedes in automotive, and numerous IPTV wins, supported by a strong pipeline across our portfolio".