



Editorial

Lighting Community Heads To Paris Next February

The DVN team have been working very hard for months on the DVN workshop which will be held on 1-2 February in Paris. We are now proud to present the first information concerning this event—probably the most important Workshop in DVN's history.

With two keynotes and 30 lectures in seven sessions during two full days, the workshop will centre around the rubric **Safety and Design Challenges and Opportunities**. One keynote will be made by GRE Chair Timo Kärkkäinen, who has overseen GRE's recent wonderful job with the approval of road projections and new regulatory text that opens the possibility to have lit logos. We are in active discussion with a major VIP regarding the second keynote, so stay tuned for more info.

The lectures will be given by eight speakers from automakers and eight from tier-1 suppliers, the first time for such a high level of communicative participation from automakers and tier-1s. There'll also be high-content presentations about vehicle interior technology as well as light sources news and perspectives from tier-2 suppliers who are doing a marvellous job of supporting the commercialisation of lighting and interior innovations.

The Workshop will cover two *full* days, starting in the morning, to present the keynotes, lectures, and panel discussion at an efficient, enjoyable pace with plenty of time for networking and perusing the expo booths during coffee and lunch breaks.

After these two difficult years we've all slogged through with the pandemic, we'll be extra-happy to present special awards—more information soon, but we're working on picking recipients for six special awards, and organising this Workshop as a grand event for all participants and attendees!


DVN CEO

In Depth Lighting Technology

Save the Date: DVN Workshop in Paris Next February



The poster features a dark blue background with white text. At the top left, a dark blue square contains the text '1 - 2 FEB. 2022' and 'PARIS' below it. To the right is the DrivingVisionNews.com logo, which includes a stylized white mountain range above the text 'DrivingVisionNews.com' and the tagline 'Automotive lighting, driver assistance and smart interior'. The main title 'DVN PARIS WORKSHOP' is in large, bold, white capital letters. Below it, the subtitle 'Safety & Design: Challenges & Opportunities?' is in a larger, white, sans-serif font. Further down, the location 'HYATT REGENCY HOTEL, PARIS ÉTOILE' and the event activities 'Conference • Expo • Social Cocktail • Soirée' are listed in white. At the bottom, a dark blue horizontal bar contains the text '- 24TH DVN WORKSHOP - 15TH DVN ANNIVERSARY CELEBRATION -' in white.

Eight years after the last DVN Workshop in Paris, we're now organising the 24th DVN Workshop as a live, in-person event at the prestigious Hyatt Regency Paris Étoile Hotel, on 1-2 February 2022. Registered attendees who will not be able to travel to Paris will benefit from an online replay of the complete event.

Safety & Design: Challenges & Opportunities!

Exterior lighting • Interior lighting • ADB • LED • μ LED • OLED • Laser
• MLA • Technology effects on design • New lighting functions •
Regulation • Simulation • Testing • Metrology • and More!

Don't miss out on this world-class symposium, which will highlight how new technologies contribute to safety in the world, while offering new design prospects. The event will bring together over 300 experts involved in lighting, ADAS, and advanced vehicle interiors. Among the 30 lectures, contributions are expected from car makers, tier suppliers, and researchers, including Audi, BMW, Mercedes, Nio, Renault, Rivian, Stellantis, VW, and Volvo; Hella, Koito, Marelli AL, Mobis, Stanley, Valeo, Varroc; AMS Osram, Lumileds, Nichia, Kyocera SLD, Samsung, Texas Instruments, Everlight, and Seoul SC; multiple universities, and more!



Discussion panels and exhibition booths will host fruitful exchanges and facilitate effective networking with European, North American, and Asian colleagues, and promote your company's products, services, innovations, and ideas. Discussions in the lecture sessions will help you to optimise your company's strategic decisions in the rapidly-shifting market realities of today and tomorrow.

In a ceremony during dinner on 1 February, awards will be bestowed—including Personality of the Decade; Personality of the Year; Best Lecture of the Year; Best Scientific Work, Best Hope in Lighting, and more.

All applicable Covid safety measures will be in place. Conference and exhibition spaces will be arranged for the safety and convenience of attendees. Registered attendees unable to travel to Paris can access the complete event online.

[Online registration](#) is open, and you'll want to book your expo booth right away; two sizes are on offer, and every booth comes with two free entries for the entire conference. To enquire about an expo booth, or any other aspect of the event, please [drop us a line](#). We'll eagerly look forward to seeing you there!

Lighting News

Systemic Dysfunction at NHTSA: Audit

LIGHTING NEWS



Last week's article about [regulatory lag in the U.S.](#) pointed to a finding that at least 13 auto safety regulations are badly behind schedule. Now, there are new official findings that NHTSA doesn't work.

The National Highway Traffic Safety Administration is an agency of the U.S. Government's Department of Transportation. That department has an Office of the Inspector General, which periodically audits DOT agencies' work, effectiveness and efficacy to see how well it measures up to what it should be. Now the Inspector General has filed and published their [latest audit of NHTSA](#), and it is a damning report.

Among its findings: NHTSA is unable to issue or update Federal Motor Vehicle Safety Standards; the agency cannot act on petitions or complete investigations within the legally prescribed time limit, the agency has no standard process for evaluating petitions (nor other crucial key processes), the agency hasn't implemented agreed-upon recommendations arising from the Inspector General's 2011 audit.

This new audit adds ugliness to an already-disturbing portrait painted by previous audits in [2018](#), [2016](#), [2015](#), [2014](#), and [2011](#). That tracks with what we see in our corner of the automotive world's topography: audits over the last decade reveal major, structural brokenness at NHTSA...and the whole of the vehicle lighting community feels the dull ache and toothgrinding gritchment of over a decade's worth of NHTSA inaction on ADB. Could it be other than cause and effect?

We hasten to emphasise that the shortcomings and faults described in these audit reports are institutional and systemic, not individual or personal. They are problems with NHTSA, the agency—not problems with the people who work there. There are many thoughtful, skilled, talented, knowledgeable, passionate people at NHTSA, and they valiantly carry on doing their best in a situation made terribly difficult by the damaged condition of the organization as a whole.

ZKW's New Logistics Centre Comes Onstream

LIGHTING NEWS



After about a year's worth of construction, the new ZKW logistics center at Wieselburg is now in operation. The highly automated warehouse system on the site of a former car park guarantees a fast and efficient supply of materials for the entire production site. The fully automated flow of goods from receipt to the assembly line saves time and costs

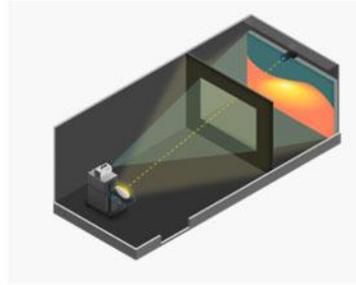
Additional assembly lines have been connected to the new system each week since the middle of last month; the goal is to have all 28 production lines linked to the logistics centre by the first quarter of next year. The smart warehouse not only provides additional storage capacity, but also clears up former storage areas to be used as new production space. ZKW's General Plant Manager Stefan Hauptmann says "in the future the entire flow of goods—from receipt to manufacturing—will be fully automated and will include no extra steps to move goods into or out of storage. Now it takes just 15 minutes from the time materials are ordered on the assembly line to the time the required parts arrive".

Instrument Systems' Optronik Gonios: Fast, Flexible Photometry

LIGHTING NEWS



AMS Goniophotometer system



AMS Screen imaging system

The Optronik line of AMS type A goniophotometer systems from Instrument Systems with extensive accessories reflects more than 50 years' experience in providing the automotive industries with tailored solutions to measure the photometric properties of exterior automotive lamps.

The company offer turnkey solutions for R&D and regulation compliance testing of all types of headlamps including ADB, HD, and matrix beam; signal lighting, and retroreflection. Everything—including the goniometers, photometers, source meters, spectroradiometers, and control software—is made by Instrument Systems and is fully intercompatible for outstanding measurement speed and efficiency.

New kinds of car lights call for a particularly high degree of precision in sample positioning and higher spatial resolution; to respond to those needs, Instrument Systems' DSP 200 high-speed photometer combines great spatial resolution (thanks to a small sensor surface) with the capability to measure PWM LED sources of low frequency or extremely short duty cycles. The AMS Screen Imaging System with the latest LumiCam 2400B 5-megapixel imaging photometer, equipped with appropriate components and accessories, can cut measurement time for headlamps to a fraction of the time usually needed.

Faurecia to Offer Notes to Finance Hella Stake

LIGHTING NEWS



Faurecia has priced €1.2bn in sustainability-linked notes they could use to partly finance their acquisition of a majority stake in Hella. The notes, which come due in 2027, are the first issuance from Faurecia's Sustainability-Linked Financing Framework released last month. The environment, social and governance (ESG) debt market is soaring as investors and authorities demand for more accountability.

Under the framework, Faurecia are starting to reduce the carbon footprint of their sites and activities through energy and transportation decisions. They are also using more environmentally friendly materials and processes, with the overall goal of becoming climate-neutral on their CO₂ emissions by 2030.

Faurecia won a bidding war in mid-August for a 60 per cent stake in Hella, in a deal that valued the lighting company at €6.7bn. Plastic Omnium and Mahle were also reported to have put in bids. The deal, expected to close early next year, is one of the biggest in the European auto parts industry in the past three years. It will create a company with about 150,000 employees and annual sales of about €23bn, forecast by Faurecia to exceed €33bn in 2025.

Water-Projected Holograms...?

LIGHTING NEWS



Road-projection type car lighting is much in the news these days, but now come Ford with an idea to go the other direction—up, instead of down. A recent patent application suggest they're looking into holographic projection for vehicles. The idea is to spray a water mist upward, and project a hologram on it so the vehicle can be identified at a distance, for example in a dark or stormy car park.

The patent filing says it pertains to a *holographic projection system and method for a vehicle*: "It has been recognised that there is a need for a holographic projection system and method for a vehicle, which can help vehicle users find their vehicle easily, especially in the case of cloudy, night or other low light conditions".

The system comprises a projector—perhaps atop the vehicle or at the leading edge of the hood—and water mist device on the vehicle, and an ECU to trigger the system when its key gets close enough. Different water sources are proposed, such as rain collection and air conditioning condensate.

Covestro PC: Award for Grille and Light Bar Innovations

LIGHTING NEWS



Every year, Plastic innovations are highlighted at the SPE Innovation Awards. Dozens of teams made up of OEMs, tier suppliers, and polymer producers submit nominations describing their part, system, or complete vehicle and why it merits the claim as the Year's Most Innovative Use of Plastics.

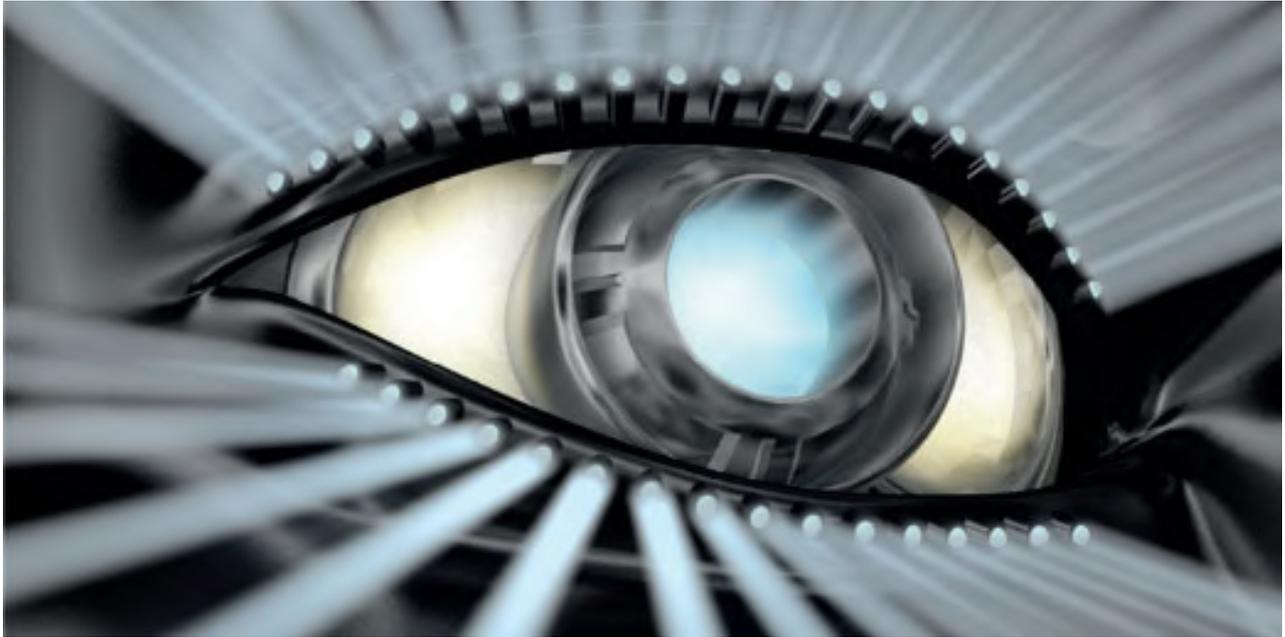
This year, Covestro was honored for its collaborative work in two categories.

- The first recognizes the company's work around an electric vehicle grille which improves optical performance, featuring polycarbonate that is hardcoated and painted with a back-lit logo emblem. Using Makrolon®, an optical-quality clear polycarbonate, the 3D electric vehicle panel uses injection-compression molding to form its variable wall thickness throughout the entire part, aiding in stability.
- The second concerns the material being used in a Rear Control Lamp (RCL). The thick light guide is made using multi-shot, red, thick light blade meets legal stop and tail functions, and incorporates a homogenous appearance for rear lighting. Previously, RCLs like this have not been possible due to the large size, multi-shot and red transmission requirements. For its part, Covestro saw a need and, to meet the challenge, developed a new Makrolon® LED polycarbonate grade with proprietary red dyes and high clarity that has tighter color controls to make it possible to exceed safety standards.

Covestro LLC is one of the leading producers of high-performance polymers in North America and is part of the global Covestro business, which is among the world's largest polymer companies with 2020 sales of €10.7 billion. The main segments include the automotive industries. Covestro has 33 production sites worldwide and employed approximately 16,500 people at the end of 2020.

Symposium of environmental Automotive lighting concepts and future strategy in Lighting

LIGHTING NEWS



The symposium, organized every two years and head by Varroc's Rainer Neumann, will be held on 2 December in Berlin.

The lectures will start at 10am and will end at 4:45pm

Several lighting experts will be present as Claus Allgeier, OSRAM, Wolfgang Huhn, DRIVING VISION NEWS, Jörg Kälble, BMW, Michael Kleinkes, HELLA, Ernst-Olaf Rosenhahn, Marelli AL, Helmut Tiesler-Wittig, Lumileds.

The fee is €995

Driver Assistance News

DVN Lidar Conference Yesterday and Today in Frankfurt

DRIVER ASSISTANCE NEWS



DVN LIDAR CONFERENCE & EXPO, NOVEMBER 15, 2021

Almost two years after the DVN Lidar Conference in Munich, DVN came back to the 100 per cent live event in Europe with our fourth DVN Lidar Conference, held yesterday and today at the Dorint hotel in Frankfurt. 80 companies are attending the event.

EXHIBITORS:



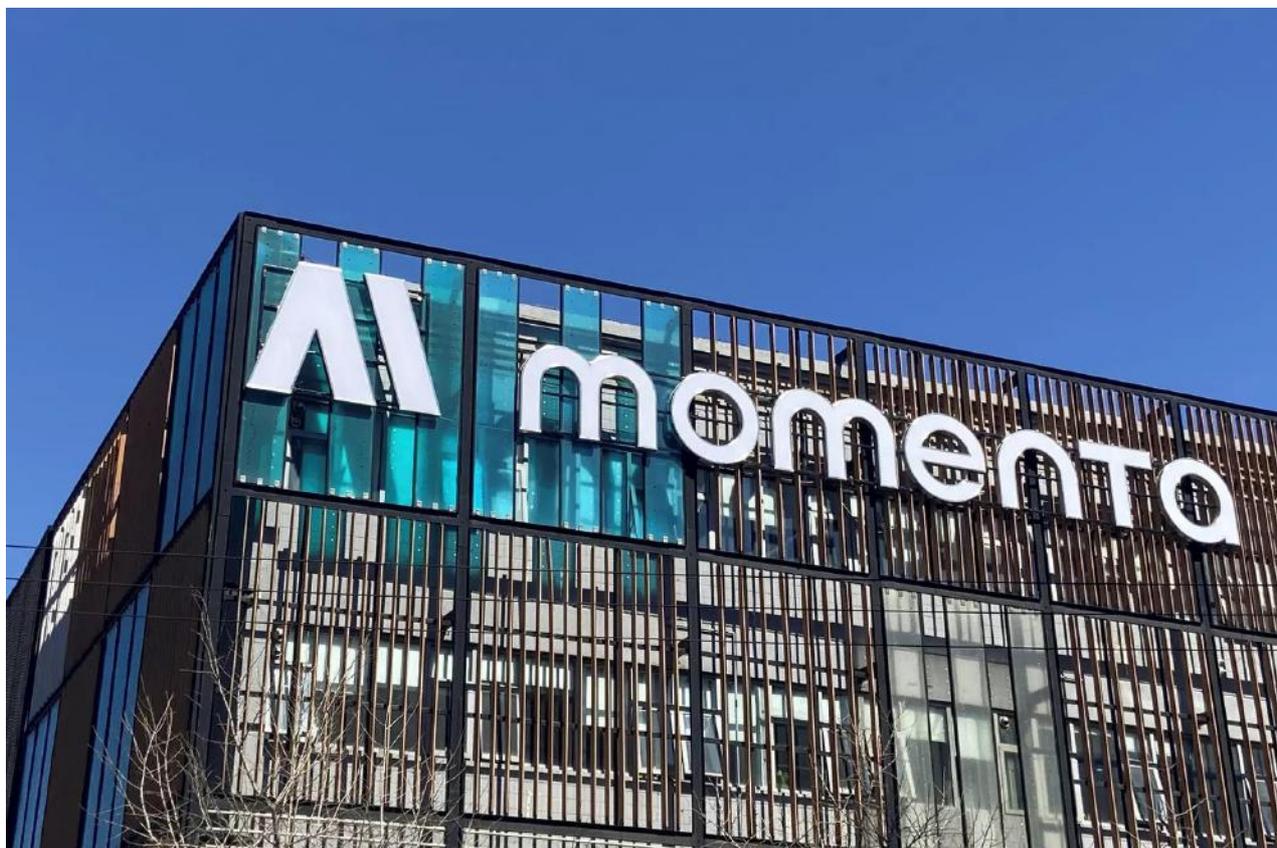
We've got a strong docket full of excellent speakers. The conference started by a keynote of Mostafa Taie, Autonomous Driving System Team Leader at ZF Automotive, with the title "*The importance of Lidars in L²⁻³ Automated Driving Systems— Vehicle level systems engineering perspective*" followed by sessions 1 and 2 on automotive lidar applications with lectures from Ford, Volvo, Marelli-AL, ZKW, Koito, and Fraunhofer ILT. The first day ended with session 3 on the lidar market and ecosystem which features lectures from Leddartech, VSI Labs, Yole, and Carhs Training.

The second day started with a keynote speech by Clement Nouvel, Valeo's lidar technical product line director; the title of his speech is: "*Standardisation: the key to Lidar adoption*".

After that in sessions 4 and 5 were talks by executives and experts from Cepton, Xenomatix, Ibeo, Blickfeld, Continental, Velodyne, Lumentum, and Liangdao. The final sessions 6 and 7 will be dedicated to technology enablers, with lectures presented by Auer Lighting, Canatu, KSLD, AMS Osram, Fraunhofer IMS, Trioptic, and 3M. We will close with a panel discussion with experts and executives brought together to discuss a challenging theme provided and moderated by DVN.

Momenta Gain Traction in ADAS, AD

DRIVER ASSISTANCE NEWS



Chinese ADAS supplier Momenta carry on picking up speed—and money. After raising USD \$500m last March from Toyota; SAIC; Daimler, and Bosch, and then announcing a \$300m investment from General Motors in September, they announced a new \$500m round of funding from Mercedes-Benz, IDG Capital, and Tencent.

Momenta got started in 2016 by a team of engineers from Microsoft Research; they work as a supplier to automakers, while investing in R&D to develop their own own fully autonomous vehicles. These are being tested in China, and the company hope to launch a model without need of a human driver next year. They recently opened their first research centre abroad, in Stuttgart. This shower of money is all of a piece with driving assistance technologies raising astonishing sums in China. Other examples:

- Pony.ai, who plan to launch a robo-taxi fleet in California next year, have claimed more than \$660m since 2020.
- WeRide, developing a delivery vehicle, raised \$640m over the last 12 months.

XenomatiX's 6D Road Scanning Solutions Awarded

DRIVER ASSISTANCE NEWS



The International Road Federation (IRF) has awarded XenomatiX the Global Road Achievement Awards (GRAA) for its 6D road scanning and surveying solutions.

"This award recognizes XenomatiX for leading the way in excellence and innovation for the road and transport industry. It is an honour to be recognized by the IRF, one of the industry's most influential organizations globally," said Filip Geuens, CEO of XenomatiX.

The IRF GRAA program is a worldwide competition to identify excellence, innovation, and exceptional achievement in 12 vital road and transport sector categories. The IRF recognised the winners of its 2021 GRAA competition at the 18th IRF World Meeting and Exhibition on November 8th, in Dubai. Nominations for the awards were published this week,

Its road lidar, XenoTrack, is mounted on a regular vehicle and digitizes the road surface, collecting 3D point clouds, surface reflectivity data and 2D camera images in a total of six dimensions, all annotated with detailed GPS data. With the corresponding data, municipalities can better determine when and where road repairs are needed. It is ideal for applications such as pothole detection, surface monitoring during road construction works, seasonal surface degradation analysis, road waviness, digital twin analysis...

In the next 10 years, the company believes that with higher levels of autonomous vehicles, this technology will be implemented in many cars and data will be collected by all road users.

XenomatiX specialises in the design and development of solid-state-lidar and offers millimetre precision road survey measurement equipment and services. XenomatiX technology can identify road waviness, road damage, and small and nearly invisible objects in real-time.

XenomatiX' partnership with Tier 1 suppliers and automotive companies include, amongst others Marelli, AGC, Kautex, Siemens, Imec, Septentrio, Cosworth, TOYO, JAT and Shanghai ZK.

Nvidia: Autonomous Driving Solution with Drive Hyperion 8

DRIVER ASSISTANCE NEWS



With Drive Hyperion 8, Nvidia offers an autonomous driving solution that is no longer just for research but for mass production. It is now available from manufacturers, with first models expected for 2024. The accompanying sensors are supplied by Luminar, Continental, Hella, Sony and Valeo.

Nvidia unveiled more details on Drive Hyperion 8, its system bringing together computing capacity, sensors and software tools to enable driving autonomous. The first equipped vehicles should arrive on the market in 2024.

Nvidia notably unveiled the supplier of the numerous sensors supplied with its solution. We now know that Luminar brings it its Lidar, and that Continental, Hella, Sony, and Valeo supply it for the 12 cameras, 12 ultrasonic sensors and 9 radars that complete Hyperion 8.

The computing power revolves around the Orin chip supplemented by Ampere GPUs but is planned to be able to easily pass to the next generation, Atlan, when it becomes available. Nvidia says it enables use cases of "level 3 driving, level 4 parking and artificial intelligence features for the cockpit".

Nvidia has won over many customers with Drive Orin and Hyperion 8, announcing at GTC 2021 to have been chosen by the British manufacturer Lotus Cars, by Baidu for the third generation of Apollo, by the Chinese start-up Qcraft specializing in public transport, and by Weltmeister, a Chinese manufacturer specializing in electric cars. For trucks, Kodiak Robotics and Plus are joining TuSimple, which already uses Orin. They are in addition to existing contracts with Mercedes-Benz, Cruise, Volvo.

General News

Rivian IPO Could Top High End of Price Range: Report

GENERAL NEWS



Electric truckmaker Rivian Automotive are guiding potential investors that their initial public offering is likely to price above the top of its marketed range.

Investors will be buying into the promise of a class of EVs that mirror the petrol-powered vehicles that dominate the passenger market: larger, bulkier vans and pickup trucks. Amazon owns a 20 per cent stake in Rivian, and have placed an order for 100,000 of Rivian delivery vans.

As is the case with many richly valued startups, they'll also be buying into ambitious growth plans. Rivian delivered their first vehicles just a couple of months ago and the company estimates annual production will hit 150,000 vehicles at their main facility by late 2023.

A first-day rally in the shares, which have characterised several recent IPOs by well-known companies, could see Rivian's valuation top that of Ford, General Motor,s and fellow EV maker Lucid Group who went public via a blank-check company in July and now are worth about \$74bn. Rivian were last valued at \$27bn in a funding round in January, Bloomberg News reported.

Shares of Rivian surged to \$100 last week after the company raised about \$11.9bn in the biggest initial public offering of the year, giving the startup company a market value of \$98bn.

Renault Must Drive Down Costs

GENERAL NEWS



Renault must keep lowering costs to simplify the company and achieve their target of putting out their best-ever product range by 2025, CEO Luca de Meo says

Renault say they expect to reach their target of paring €2bn of fixed costs by the end of thi year—a year ahead of schedule. The larger aim is to cut €3bn in costs by 2025. De Meo says the company also still need to recover from the €8bn loss suffered in first half of 2020 in the midst of the coronavirus pandemic.

Renault's output will be cut by 500,000 cars this year, more than double the previous forecast, due to the global semiconductor shortage, but the company have maintained their profit outlook, helped by higher car prices and the cost cuts. De Meo expects 20 to 30 per cent of the automaker's turnover to come from non-traditional revenue sources within 10 years as he works to make the company less dependent on other companies. Renault's new unit dedicated to mobility services, Mobilize, is to produce 20 per cent of the group's automotive turnover by 2030.

New Volvo Sales Record Within Reach: CEO

GENERAL NEWS



The goal of Volvo Cars to sell 800,000 vehicles globally by 2020 was derailed by the pandemic and the semiconductor shortage in 2021. Despite the setbacks, CEO Hakan Samuelsson (photo) believes topping Volvo's sales record of 705,000 vehicles set in 2019 is "within reach," even though the automaker took a big hit to production in the third quarter.

"The fourth quarter definitely looks like it will be better, so the loss in production will be lower. Overall, things will be better in the final quarter of 2021, but they still will not be back to normal. For the full year, we will sell more cars than last year, and we will improve our profitability. By the first quarter of next year, we should be back on track with only minor disruption from the chip shortage. It's too early to say what that will mean for the full-year results in 2022.

It's within reach, but it depends on how the production problems in Far East develop. We are close, so maybe we will celebrate a new all-time high. It's not impossible.

"When it comes to the day-to-day basis, here in Sweden we are back to normal. You don't see anybody wearing masks, not even when you're traveling within the country on an airplane. Most people are back in their offices. The big problem we have when it comes to conducting business is traveling to the U.S. and China. We are planning to go soon to the U.S. but China is still very isolated. We haven't been there in almost two years. This is slowing us down as we try to get everybody to understand the objectives and execute the changes. How much of an impact this has is unknown. But we probably would be further along if we didn't have the restrictions. I have been really frustrated that we cannot speak with our retailers face-to-face in many places because of the restrictions."

Tesla Takes 3rd Place from Mercedes in U.S. Market

GENERAL NEWS



Tesla has passed Mercedes-Benz for the № 3 spot in U.S. luxury-vehicle registrations this year through September, according to data from Experian, and could close the gap with Lexus and BMW before the year is over. Tesla totaled 230,000 vehicle registrations through the first three quarters of the year, passing Mercedes with 213,000. Lexus was in second place with 245,000; BMW led the market with 259,000 in the nine-month period.

Reports show that Tesla sales rose 76 per cent compared with the January-September period last year, while Lexus is up 33 per cent and BMW is up 36 per cent.