

Tue, 4 April 2023
Weekly Newsletter


Lighting & ADAS

NEWSLETTER #797

PixCell LED

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Editorial

Lighting: A Great Lever For Automotive Design

I followed last week a lecture by Peugeot design chief Matthias Hossann, and I was impressed by the messages he conveyed: the design of Peugeot cars is the main reason for the success of the brand, and interior lighting is a great part of this success-driver.

I like his three pillars—excellence; look, and emotion—which make Peugeot cars recognizable, and his mindset to avoid 'not invented here' narrowness. His message warrants contemplation by all of us involved in vehicle lighting, so this week I'm pleased to bring you an in-depth analysis of his lecture and its implications, with six key interesting takeaways. It's a terrific foundation for the forthcoming DVN Interview with Hossann. I'm working on that, so watch this space!

Sincerely yours


DVN CEO

In Depth Lighting Technology

Matthias Hossann: Peugeot Design Chief's Vision



Matthias Hossann, head of Peugeot design since 2020, presented his vision of automotive design for the coming years at a "Grandes Ecoles" ('major schools') alumni meeting, at Hotel des Arts et Métiers in Paris.

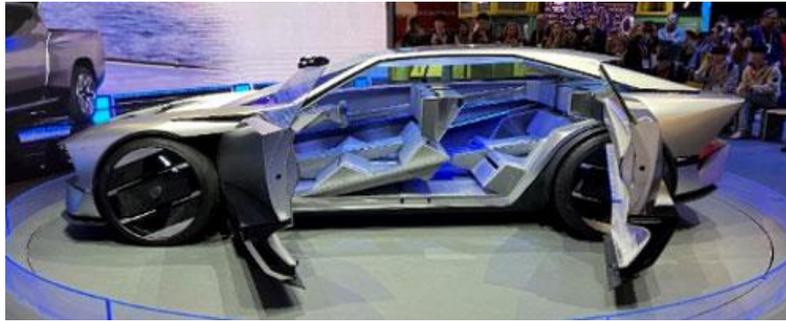


Peugeot Inception concept

His challenge is to continue the good trends of recent years, during which the work of designers has greatly contributed to the success of the brand, with a design staff of 110

—including 50 creative people, coming from 10 different countries.

The latest Inception concept car presented at the 2023 CES is a brilliant achievement indicating the major styling directions to come.



Inception concept at CES 2023 (DVN image)

Car design today is a daily-life experience, and must focus almost equally in four areas of the vehicle: exterior; interior; colour & material, and HMI (human-machine interface). EVs are changing the game with new modes of interaction; new kinds of seats and surfaces, and more autonomy for powertrain, but also with adaptation along the useful life of the vehicle.

New objects are getting into the landscape, such as front end re-thinks (grilleboards), and new kinds of steering wheels like the 'Hypersquare' in the Inception concept). All this means the innovation scope is much broader, and many new ideas flow from external inspiration—other mobility modes; consumer electronics; suppliers, and startups.



Hossann lecturing in Paris (DVN image)

Six Takeaways:

- Peugeot cars are easily recognizable with their brand pillars: excellence; allure, and emotion.
- Lighting and materials are central to meeting today's design challenges—Peugeot lightstyle with vertical claws and the illuminated grille; materials relevant with increased drive for recyclability and sustainability.
- EVs are a great opportunity for new design (in turn, more lighting) and brand differentiation.
- Using new design tools is crucial at Peugeot; virtual reality to reduce development and tooling costs and improve efficiency; HMI (human-machine interface) development using proposals from within and outside the auto industry (iCockpit started 10 years ago, already 9 million equipped cars shipped).

- Peugeot uses its great heritage of design as a framework to integrate technologies –historic design cues are used not to resurrect an old model but to contextualize new designs
- Concept cars are very important for Peugeot: great return on investment in the form of feedback; concept cars are used as labs to optimize technologies and refine brand vision. Here are Peugeot concepts presented over the last decade:



Onyx 2012 Paris



Exalt 2014 Shanghai



Quartz 2014 Paris



Fractal 2015 Frankfurt



Instinct 2017, Geneva



Instinct 2017, Geneva



E Legend 2018, Paris



E Legend 2018, Paris



Inception 2023, CES – with Mathias Hossann



Inception 2023, CES – with Mathias Hossann

Lighting News

Stellantis Find New Ways to Wring Money Via OTA

LIGHTING NEWS



Stellantis have big plans to make big money from vehicle software in the coming decade, by offering added features car users can pay for on a periodic or ongoing basis.

The automaker expects to wring USD \$21bn in revenue every year from vehicle software by 2030, and offering features on demand will be a key part of that. Mamatha Chamarthi, Stellantis' chief software experience business growth officer, says customers needn't worry about having to pay and pay and pay for the likes of heated seats—a bit of a dig at other automakers who have been trialling that idea—because Stellantis' pay-more-if-you-want-it offerings will "provide additional value". By way of example, Chamarthi painted a picture of someone bringing a car to a race track and paying for an extra bunch of horsepower to be unlocked via over-the-air technology.

Stellantis have previously said they expect by 2030 to have put 34 million connected (i.e., monetizable on an ongoing basis) cars on the world's roads. Wringing money from them is going to be "a fully functional business unit," Chamarthi said. "We are going to make money with a software-defined vehicle (...) our profit margin, because it's software-based, would be equal to that of a tech industry—so more than 40 per cent margin".

New Lightstyle for '24 Hyundai Sonata

LIGHTING NEWS



Hyundai's Sonata sedan for '24, which debuted in Korea at the Seoul Mobility Show a few days ago, is redesigned with prominent emphasis on new lights. There's an uninterrupted white light band across the front, with today's version of hidden headlamps—not the problem-prone, pedestrian-punching popups of the '70s and '80s, but rather slim LED ice cubes nestled on either side of a giant blacked-out grille.



The rear is all about light-lines, too, with a red band spanning the full width of the vehicle and terminating in left and right vertical bracket shapes. The central brake light, near the top of the backglass, echoes the light band design.

FF91 Assembly Starts

LIGHTING NEWS



Some 6 years after it was revealed in prototype form, production of the Faraday Future FF91 has begun, the startup has begun assembling series-production examples of its EV at its factory in Hanford, California.



"I want to thank each and every valued stakeholder to FF, including our employees, supportive investors, suppliers and all of our partners that have travelled alongside us on this long road of perseverance, leading to where we all stand today here in Hanford," said Xuefeng Chen, Global CEO of Faraday Future.

When it comes to sales, at the moment Faraday Future has a Flagship Brand Experience Center in the works for Beverly Hills, in addition to plans for sales locations in Los Angeles and the Bay Area, followed by New York. The EV startup also plans to begin sales in China.

The company is following a three-step plan to "disrupt" traditional ultra-luxury marques including Bentley, Rolls-Royce, and Ferrari, with the launch of its initial model being the first step.

Next, Faraday Future plans to get revenue from what it hopes will be "explosive growth in smart device sales," part of a mobility ecosystem it plans to create, which will include software, car sharing, and apps.

BYD Seagull Has Eyelike Headlamp Design

LIGHTING NEWS



Chinese automaker BYD's Seagull is the entry-level electric model in the maker's Ocean Series, aimed mainly at young people. The price will be around €12,000.

BYD say the Seagull is designed with 'marine aesthetics', with an especially facial front design. The shape of the grille is said to mimic the posture of a seagull spreading its wings and flying.

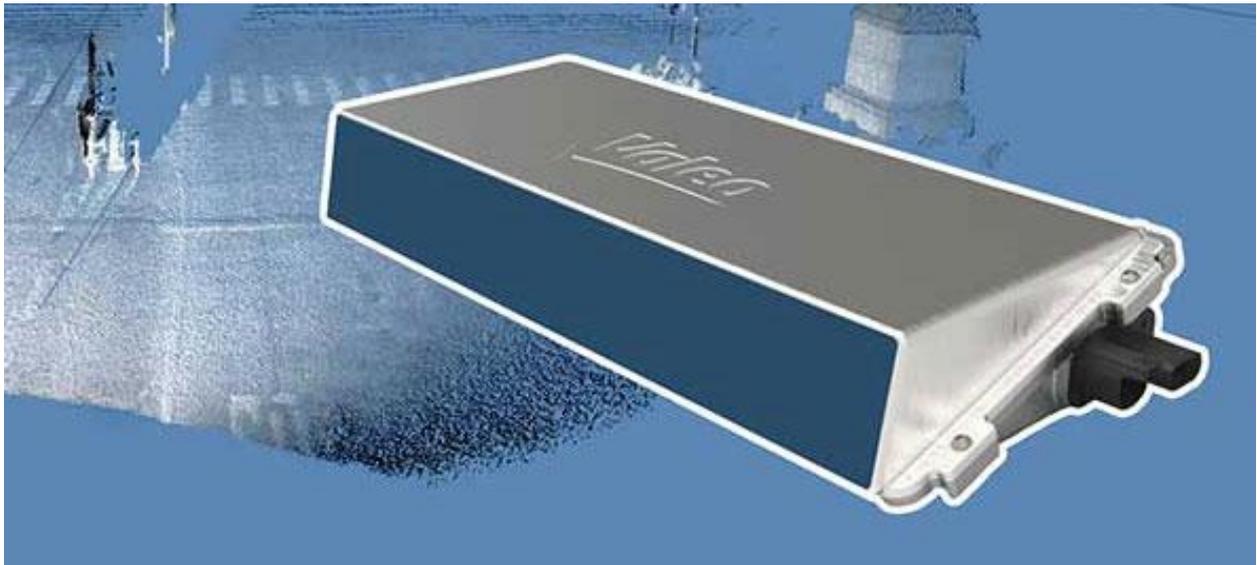


At the rear, the shape of the rear bumper also adopts wing design to echo the front face, and the taillights are tied together with a full-width red-and-white-band.

Driver Assistance News

Valeo Win Big Lidar Contracts

DRIVER ASSISTANCE NEWS



Valeo's Scala³ lidar has been chosen by a leading Asian automaker and a leading American robotaxi company, bringing Valeo's total Scala³ orders past €1bn worth.

The previous two generations of Scala lidar realized conditional autonomous driving in traffic jams, and the present Scala³ dramatically increases the operating domain of private vehicles thanks to a wider scope of use and higher speed support.

The Scala³ lidar generates a 3D image of the vehicle's surroundings, delivering a point cloud of unmatched resolution for an automotive system. With more than 12 million pixels per second—16 times more than the previous Scala²—and detection range of 200 m for low-reflectivity objects and 300m for high-reflectivity ones, it sees almost everything, especially objects that are invisible to the human eye.

It comes with a suite of software modules, including perception and AI-based algorithms. Its lidar functions guarantee unparalleled safety and reliability through blockage detection, rain & spray detection, online calibration or misalignment detection. It can identify objects—such as a tire—on an unlit black asphalt road more than 150m ahead, which the driver, cameras, and radars can't dependably detect on their own.

General News

European vehicle market sees partial recovery in 2023

GENERAL NEWS



GlobalData forecasts only a partial recovery to Europe’s vehicle market this year as supply constraints ease, but demand worries rise.

Europe’s light vehicle market is heading for a recovery in 2023 to around 16.1 million units (compares with 14.8 million units in 2022) according to the latest forecasts from LMC Automotive (a *GlobalData* company).

However, the recovery is only partial when compared to a pre-pandemic European light vehicle market of 20.7 million units in 2019.

European light vehicle market (million) - LMC Automotive

Year	2019	2020	2021	2022	2023+	2024+
	20.7	16.6	16.7	14.8	16.1	17.9

+ FORECAST

Hyundai Motor Group ranks third-largest automaker in world

GENERAL NEWS



Hyundai Motor Group is now the world's third-largest automaker, outpacing General Motors and Stellantis. It's the first time the combined sales of Hyundai Motor and Kia reached the top 3.

Hyundai and Kia sold a total of 6.85m vehicles globally last year, up 2.7% on year, right after Toyota and Volkswagen.

Top 5

Hyundai-Kia	Toyota	Volkswagen	Hyundai-Kia	Renault-Nissan	Volkswagen
Sales (million)	10.5	8.5	6.8	6.2	5.9

Hyundai and Kia beat Renault-Nissan-Mitsubishi Alliance, which sold 6.16 million vehicles last year, and General Motors which sold 5.84 million.

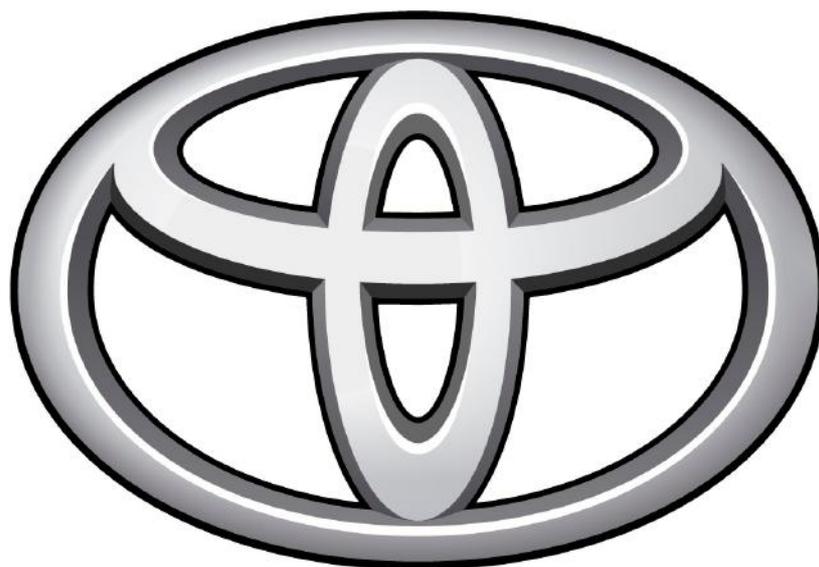
Of the five largest automakers, Hyundai was the only company that saw a year-on-year increase in the units sold. Sales of Renault-Nissan-Mitsubishi Alliance were down 14% on year.

The strong performance is largely due to robust sales overseas, especially of premium Genesis vehicles and eco-friendly cars. The combined share of Hyundai and Kia reached around 10%.

Hyundai and Kia aim to sell 7.52 million vehicles this year, up 10% on year.

Toyota's Electric Push

GENERAL NEWS



TOYOTA

With increasingly drastic regulations looming—in Europe, the end of authorization for sales of new combustion-engine vehicles is planned for 2035, and California and China will surely get onside with similar hard-stop dates—Toyota are urgently pushing toward zero-emissions vehicles, with an ambitious plan for the next decade. They aim to launch 30 Toyota-branded EV models worldwide by 2030—a big departure from their longstanding hybrid orientation (e.g., Prius).

Toyota's electric range presently comprises only the limited-availability Mirai hydrogen sedan; the Proace electric van, and the bZ4X, its first model built on a platform dedicated to electric (Lexus will launch their RZ version this year). An electric Toyota SUV will arrive in Europe soon.