DVN-I
Automotive Interior

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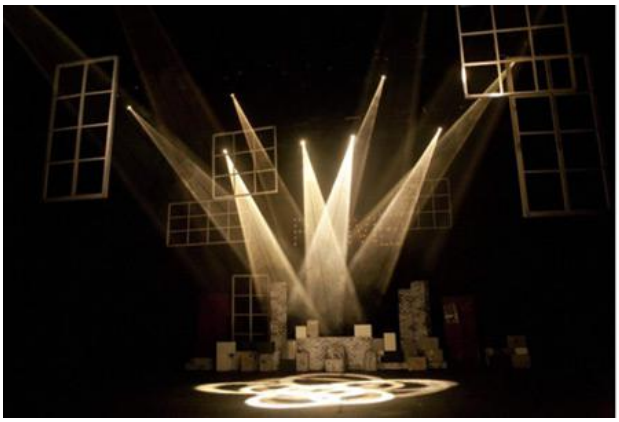
Editorial

The Inside Light Shines Extra-Bright



Interior lighting was a key topic on the agenda of the latest DVN Workshop, held in Munich shortly ago on 28–29 January. Presentations and exhibitions there at the Workshop demonstrated that interior lighting is now a major trend to enhance the perception and experience of (and in) car interiors.

In design work, light is often used to give luminosity, of course, but also to convey and inspire levity and wellbeing. Light reinforces lines and planes, and there are plenty of those in a car cockpit with its complex 3D shapes, expanses of inherently-boring plastic, and various functional zones the driver wants to keep visually and mentally separate. All over the interior of the car, light is part of the experience—just as it is on a theater stage, at a rock concert, in a museum, or in a restaurant. Imagine a stage with only a ghost light or two; that's exactly where our automotive interiors were for many years: 5 or 10 or 20 watts' worth of incandescent light, with operational options of "on" or "off", and nothing more.

That's not at all where we are any more. Light has rapidly become a powerful key tool in the interior developer's toolbox, for its ability to enhance design, material surfaces, functional understanding, and the overall vehicle occupant experience.

And light is the focus of this week's in-depth article. You'll find news on a bunch of new technologies including curved displays, new kinds of HUDs, interior voice assistants, in-cabin monitoring, and morphable seats. And this week's Design Lounge takes a look at the state of American luxury car interiors.

As always, we're constantly working hard to bring you relevant news and informed views in this increasingly vital and important field of the vehicle interior. We're glad you're here—have you subscribed yet? If not, we enthusiastically invite you to **go for it!**

At your service and sincerely yours,

Philippe Aumont
General Editor, DVN-Interior

In Depth Interior Technology

Lighting is the New Chrome

It's a sure sign of the increasing importance of *interior* lighting in the greater world of vehicle lighting: the DVN Workshop in Munich this past 28–29 January included five lectures about interior lighting on its docket. Here we summarize those presentations and discuss their implications:

BMW Vision of Interior Lighting

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Robert Isele, Head of Interior Lighting at BMW, talked about the seamless integration of displays and light and the comfort use cases and assistance systems to enrich today's in-car functionalities. He described new light scenes to create new experience modes, dynamic ambient lighting as new channel of user experience, and the "Caring Car" idea for wellness effects like "Vitalize" and "Relax" modes made possible by mental and emotional stimulation with light. These experience modes are envisioned as changing in accord with dynamic conditions (weather, traffic, vital signs/detected moods of vehicle occupants, etc) and as manually controllable as an overall orchestration: you can change the complete interior with just one click. Dynamic light animations are increasingly used for welcome and goodbye choreography, and for "my space", "express", and "execute" scenarios.

The take rate for upgraded interior lighting at BMW grew in the last six years by nearly 80% in nearly all car segments, and the number of light elements in the car interior will increase tenfold in the near future. Isele sees a great potential for microprocessor controlled IseLED devices being developed and commercialized by a variety of companies united in the IseLED Alliance.

Hella: Interior Lighting to Support Future Use Cases

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Dr. Ana Bizal, Head of Optical Development and Lighting Innovation at Hella Interior Lighting Systems, explained that with megatrends of connectivity & digitalization, individualization, efficiency & electrification and autonomous driving, the impact of light has completely shifted:

"Light surrounds us in and outside, enables us to see, is integral to our lives, creates emotions, is a common language, is information, and allows us to operate in the darkness."

All future use cases for automotive interior lighting are derived from these basics for a perfect light in rolling offices and living rooms; for wellbeing, signaling, and warning. Lighting technologies with low- and high-resolution dynamics increasingly supplement the current static lighting functions. Light supports the trends toward a better personal audio experience, to increasingly-intuitive HMI, to more comfort for a better feeling at the end of a journey, and to new occasions for more togetherness. Therefore, interior lighting is trending toward an optimized functional lighting, to better lighting support and enhance color and trim and night versus day designs, and to light projections in the car interior.

To realize all the future light features, a tier-1 supplier for lighting should have the full scope of capabilities and expertise in the fields of power supply, electronic controller and interface, light emission, optical systems, and A-surfaces.

Dynamic Surface Backlighting by DesignLED

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DesignLED is a Scottish technology company specializing in LED light-guide solutions for automotive applications. CTO and Technical Director Dr. James Gourlay presented trends and technologies in automotive interior surface backlighting with demonstrators and use cases.

Feasible backlighting of A-surfaces needs super-thin, scalable systems with perfect uniformity, easy integration in the smallest spaces, low cost and price, and flexible addressability. DesignLED's process begins at the customer with the concept, the phases of design, modelling, test & qualification, fast prototyping and manufacturing of medium volumes in Europe and higher volumes in China.

The use cases for uniform and dynamic illuminated surfaces comprise the fields of seat detail lighting, backlit trim components, floor lighting, fascia and dashboard lighting, surround illumination, pixelated dynamic lighting, panoramic roof lighting, obstacle alert and information displays. DesignLED applies technologies like embedded LEDs inside transparent films and light guides, optics to extract light from a light guide by controlling spatial and angular light distribution from surfaces, thin illuminated capacitive switches, and integration of smart sensors into light guides.

Osram: Dynamic Lighting Enabling New Functionalities

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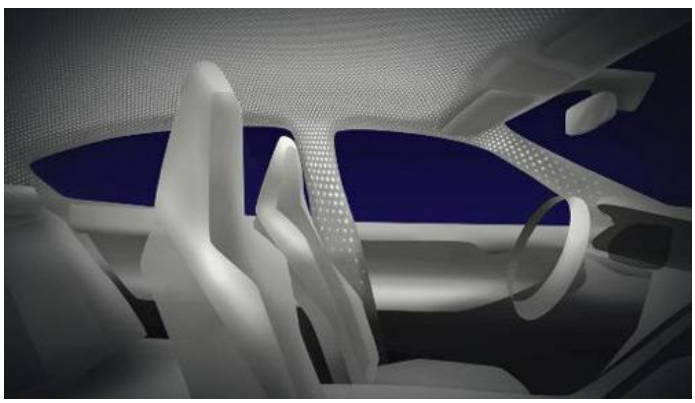
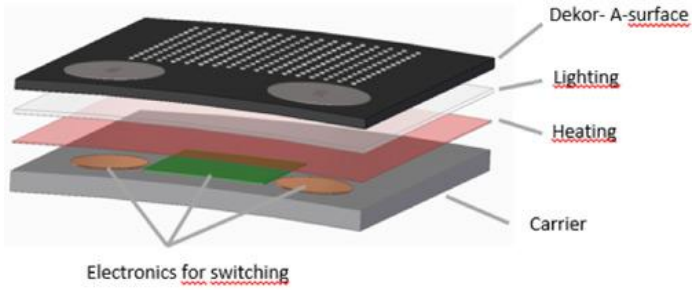
With changing concepts of mobility, more focus must be put on the safety and wellbeing of (autonomous) passengers. Osram's Director of Automotive Interior Applications Engineering Michael Brandl showed two concepts, how dynamic light can enhance passengers' perceptions in those areas. Autonomous cars turn drivers into passengers. The passengers will be focused on non-driving tasks with decreasing attention to the road. This brings the risk that passengers will get carsick, especially under conditions of limited external view. To avoid motion sickness, it's important to maximize "optical flow" and forward and sideways visibility of the external environment. It becomes desirable to simulate the external environment on interior surfaces and displays—velocity, intended acceleration and deceleration, cornering, etc., with enough time for reaction. It is also important to communicate to passengers about the conditions regarding erratic motion (like an airplane pilot advises passengers of upcoming turbulence).

Peripheral communication light can be merged into design elements, e.g. in-above-below windows, in A-pillars, in the headliner, along the seats and armrests, and along the door interior. Intelligent LED solutions enable dynamic light in materials to keep up the wellbeing. Brandl presented the Osire, an intelligent Osram LED. He described a trend from signaling to messaging with light on segmented lamp assemblies with discrete cells of size 5.15 mm to create dynamic light signals with simple symbols, or on displays with individually addressable pixels (<100µm RGB) for symbols, text, pictures, and HD Graphics.

Future Lighting Technologies' Heated and Lighted Textiles

- 



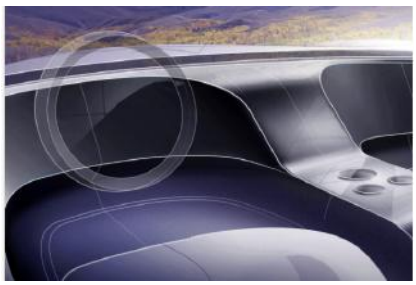
Björn Sobischek, founder of Future Lighting Technologies in Germany, explained the advantages of flexible illuminated textiles compared to rigid plastic light guides:
Homogeneous light emissions out of thin materials over the whole textile surface, 2.5D geometries with special weaving structures for lamination processes and low or no tooling costs. The textiles can be personalized by displaying light patterns on demand, printed with sharp contours and changing LED colors and brightness. Björn Sobischek presented a wide variety of application concepts with 3D-structured textiles, artificial and perforated genuine leather, real wood veneer, and spacer fabrics for 3D lighting and backlighting effects.

The right picture shows a compound of heated and lighted flexible textiles. It's important to contact the heated fleeces or textiles at the long sides to get a homogeneous heating over the whole surface. The heating properties depend on the dimensions of the heating area, the electrical power, and the material properties like thermal conductivity and capacity.
Further advantages of flexible heated textiles and fleeces compared to conventional heating systems: The Heating Power can be adjusted by the definition and composition of the raw material, the number of processed heating fibers and the perforation of the heated fleece. The heated textiles are 2D-deformable, thin, lightweight, robust, breathable, and can be laminated with lighted textiles for uniform heat and light output at very low tool costs.

These presentations and concepts make it abundantly clear: light will be everywhere in the automotive interior to set the scene as our cars transform into living spaces. The next step is for sure to experience it in the real world with occupants and thus gain positive feedback loops to enhance development—that will be a big step over today's demonstrators, which are so far just about always without human occupants.

Interior News

Corning, LG in Auto Interior Design Pact



Glass specialists Corning say the evolution of automotive interior displays has similarities to that of consumer electronics: users want larger, curved, and more immersive display designs.

Corning's ColdForm technology for curved automotive interior display systems will be commercialized in a new collaboration with LG Electronics Vehicle Component Solutions. Working together, the companies expect to bring more economical and high-quality curved display modules to the automotive market.

The glass is first molded in a bending furnace before going through the rest of the process. The ion-exchange tank for chemical strengthening must then accommodate shaped parts and, further down the line, coating and decoration applications must be calculated to uniformly coat the curves. The whole process is, of course, patent-protected.

By comparison, Corning's Gorilla Glass parts for 3D Interiors are so thin and tough that they can be fully manufactured flat and bent at room temperature using Corning's ColdForm technology. This means all manufacturing steps—fusion forming, chemical strengthening, decoration, shipping, all of them—are done with flat pieces of glass. This preserves the glass' pristine, fusion-formed surface, provides uniformly coated parts, and can produce higher yields through precision cutting.

Gorilla Glass for 3D applications can be concave or convex. The same sheet can be bent multiple ways, providing design freedom and creativity: C-shaped instrument clusters, S-shaped center stack displays, and more.

BMW's Mixed Reality HUD with Futurus

BMW has teamed up with Chinese digital display experts Futurus to create a new kind of HUD (head-up display) involving whole-windshield augmented reality displays.

Chian Futurus showed off their new "Mixed Reality" (MR) windshield at CES this year. Their aftermarket product is already on sale, featuring a six-inch 720p display and voice control. Also, of interest is the firm's holographic tech called Holopixo: a full-color hologram that works in tandem with gestural and voice controls.

MR means that you still view the real world through the windshield as normal, but the glass can also be used as a giant projection screen with information on road hazards, traffic, and even local information projected in the driver's field of view.

The MR windshield features independent projection layers so that from the driver's perspective, the screen is clear aside from hazard warnings—Futurus' systems can detect cyclists and pedestrians at 50 meters' distance, for example—and navigation directions, which can point you directly down the street you need.

From a passenger's perspective, the windshield can be a big TV showing movies, or social media without distracting the driver. The technology is similar to that deployed by Jaguar Land Rover on their infotainment screens: JLR effectively divides the screen up like a venetian blind, showing one set of angled pixels in each direction. These kinds of technology are early steps towards a smart windshield that delivers personalized, interactive in-car entertainment, advertising, and enhanced safety features, thanks to split-screen technology that theoretically won't distract the driver.

Amazon Alexa, Lamborghini Style

At CES this year, Lamborghini showed their Huracán EVO equipped with Alexa, the cloud-based voice service from Amazon.

Amazon's been making multiple entries lately in the automotive industry. Following their big investments in Rivian and Echo Auto, plus Fire TV coming to BMW and FCA vehicles soon, Amazon worked with Lamborghini to bring Alexa voice control to the revised Huracán EVO.

Interior functions including seat heating, climate control, and interior lighting can all be adjusted with voice commands, along with making calls, setting navigation, and changing the infotainment. Alexa also links with compatible devices in one's home, so heating, lighting, and garage doors (for example) can be controlled with voice commands from the car, too.

"Our vision is for Alexa to become a natural, intuitive part of the driving experience, and Lamborghini has embraced that by integrating Alexa directly into its onboard infotainment systems," said Ned Curic, Amazon's Vice President of Alexa Auto.

Our view: voice control is a natural fit with the Lamborghini driving experience, which has always been around speed and excitement and adrenaline—now with voice control, just like in a Star Trek starship.

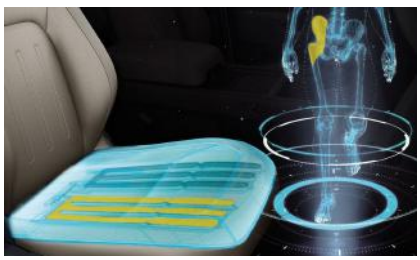
Eyesight, Antolin Team for In-Cabin Monitoring

Eyesight Technologies and Grupo Antolin have entered into a partnership to provide driver and occupancy monitoring solutions to the world's automakers.

Eyesight is an Israel-based provider of computer vision AI solutions for the automotive industry; Antolin is a Spain-based supplier of vehicle interiors. The collaboration will provide car manufacturers with in-cabin sensing solutions tailored to answer regulatory needs and enhance the driving experience, leveraging Eyesight's computer vision AI and Antolin's interior component design and integration capabilities.

Eyesight's solutions encompass a variety of applications related to driver and passenger safety and experience inside the vehicle. Their Driver Sense driver monitoring system, for example, tracks the driver's eyes, eyelids, pupils, head pose, and gaze to determine the alertness, wakefulness, and attentiveness of the driver. Their Cabin Sense occupancy monitoring system monitors the car's interior, including passengers, to power adaptive safety features, and a personalized in-car environment. Driver identification and action detection such as smoking, seatbelt status, and whether anyone's holding a phone are also available.

Jaguar's Morphable Seat of the Future



Jaguar Land Rover is developing what they call the "seat of the future": a shape-shifting system designed to improve driver and passenger wellbeing.

The morphable seat, being trialed by JLR's Body Interiors Research division, uses a series of actuators in the seat foam to create constant micro-adjustments that make your brain think you're walking. By simulating the rhythm of walking, a movement known as pelvic oscillation, the technology can help mitigate against the health risks of sitting down for too long on extended travels. The seat could be individually tailored to each driver and passenger.

JLR's Chief Medical Officer Dr. Steve Iley says "The wellbeing of our customers and employees is at the heart of all our technological research projects. We are using our engineering expertise to develop the seat of the future using innovative technologies not seen before in the automotive industry to help tackle an issue that affects people across the globe".

According to the World Health Organization, more than a quarter of people worldwide—1.4 billion—are living increasingly sedentary lifestyles, which can shorten muscles in the legs, hips and gluteals and cause back pain.

These efforts are driving JLR towards Destination Zero, the company's ambition program to make societies safer and healthier, and the environment cleaner.

Are These the Tesla Y's 3rd–Row Seats?

The Tesla Model Y is an upcoming electric compact crossover in development by Tesla, based on their Model 3 sedan's platform. It was unveiled in March 2019, and reports are that deliveries are planned to begin next month. The Y will offer optional third-row seats for a seven-passenger seating capacity; these were just revealed in pictures, showing what kind of legroom third-row passengers might expect.

Tesla states on their website that the car has room for "up to seven adults" with optional third row seating, and that the Y is "able to carry 7 passengers and their cargo". Each second-row seat folds flat independently, creating flexible storage for skis, furniture, luggage and more. The liftgate opens to a low trunk floor that makes loading and unloading easy and quick.

Pictures showing the third-row seats appeared on a Japanese blog and were attributed to Reddit, the American social news aggregator; no word on their provenance before they showed up on Reddit. In the pictures, the rearmost seats look perhaps a little bit compromised, at least as far as legroom is concerned.

Some smaller SUVs have similarly-small third-row seating (Honda CR-V, for example) but these photos suggest the Tesla Model Y's could be among the smaller third row seats on the market, even if the overall interior car package looks bigger than a model 3, and close to Tesla's larger S-based Model X.

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Lucid Air's Big Interior Space

Lucid Motors announced they will unveil the production version of their Air electric sedan in New York this April, ahead of the first deliveries planned later this year. In 2017, the company announced an aggressive USD $60,000 base price for the luxury sedan, with a range of 240 miles and some other interesting specs.

At the time, Lucid also unveiled their plan for a $700m factory in Casa Grande, Arizona to produce the Air in 2018. The groundbreaking ceremony finally happened and construction began this past December.

Lucid is currently building 80 prototypes to production specifications at their headquarters in California for testing; they also say they are working on putting together a network of retail and service locations. The cost to reserve an Air is only $1,000 in an attempt to build a backlog of orders.

The Air is striking in proportion and form. Probably because of no combustion engine architecture constraints, the Air looks like an extended interior within the size of an American midsize exterior, giving exceptional seating room and comfort—notably for the rear passengers.

The car includes a panoramic sunroof, executive rear seats that can recline up to 55 degrees, a 29-speaker sound system with noise cancellation, and front seats with heating, ventilation, dynamic bolsters, massage, and 22-way electric adjustment.

News Mobility

Audi's New Connected Traffic Light Solution

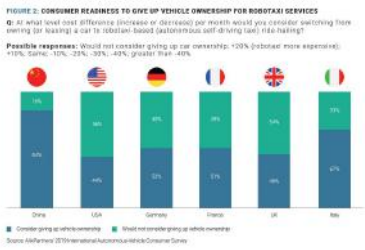
Dusseldorf will be one of the first cities to offer Audi drivers traffic light information within their vehicles. Audi's Traffic Light Information system will advise drivers about 150 traffic lights at first, with most intersections in the city following by early summer. Audi Traffic Light Information consists of two functions, Green Light Optimized Speed Advisory (GLOSA) and Time-to-Green.

GLOSA calculates the ideal speed to get a ‘green wave', advising drivers of the required speed to the next green light. It can suggest reducing speed gradually about 250 meters ahead of traffic lights, so drivers and cars reach the intersection when the lights turn green, reducing stop-start traffic. If stopping at a red light is unavoidable, a countdown displays the seconds until the next green light.

Audi and project partner Traffic Technology Services have developed algorithms to calculate predictions from three sources: the control program of the traffic signals, real-time data of the traffic computer as well as historical data. According to Audi, studies show drivers move through cities more efficiently with networked traffic lights, and a pilot project showed this kind of coordination could reduce fuel consumption by 15%.

Audi Traffic Light Information is available on the 2020 e-tron, A4, A6, A7, A8, Q3, Q7, and Q8s with the Audi connect Navigation and Infotainment package and the optional camera-based traffic-sign recognition.

China Looks Promising for Robo-Taxis: Study



The consultants at AlixPartners have released their Global Autonomous Vehicle Report based on a survey of more than 6,500 consumers across China, France, Germany, Italy, the United Kingdom, and the United States. It concludes consumers are willing to spend just an 8% to 24% premium for hands-off-the-wheel autonomy over today's available technologies (lane-keeping assistance, automatic braking, etc.). The results ranged from Germany's 24% down to 8% in China. Americans surveyed said they'd be willing to pay just a 9% premium.

When asked if they'd be willing to consider switching from personal-vehicle ownership to using autonomous-vehicle ride-hailing services (robo-taxis) if the monthly cost were from 40% cheaper to even 20% more expensive than vehicle ownership, 44% to 84% across the six countries said they would—led by consumers in China, the world's largest auto market, at the 84%. Italy followed China, with 67% of respondents saying they would consider giving up personal vehicle ownership. The U.S., with 44%, was the country least interested with swapping their personal vehicle for ride-hailing under such circumstances.

The AlixPartners survey also found that large percentages of consumers who self-identified as likely buyers of higher-level, personal-use AVs said they'll wait five or more years after widespread availability to buy one. Those results ranged from China's 51% up to 81% in the UK; 79% of Americans said they'll wait five years or more.

Consumers in the survey were also generally less than comfortable about the safety of AVs. Though 58% of Chinese said they were confident in higher-level AVs' ability to navigate safely from one place to another, responses in the other five countries ranged from 36% down to just 18%; in the US 27% of respondents said they're confident.

"There's always the challenge of assessing what is true value when it comes to something they haven't been able to test," said Mark Wakefield, global co-leader of the automotive and industrial practice at AlixPartners.

Navya: 160 Autonomous Shuttles in Circulation

Last year, Navya sold 43 autonomous shuttles, including 22 in the United States, with in particular two fleets of 5 shuttles in the last quarter. The company, based in Lyon, France, now has a fleet of 160 shuttles in circulation, up 38%. In 2019, they launched an autonomous shuttle service on an open road to serve the Parc Olypique Lyonnais. They also marketed their first prototype robo-taxi, and carried out their first real-world experimentation of an autonomous baggage tractor at Toulouse Blagnac airport.

Navya turnover reached €15m, of which €12.1m came from the sale of vehicles (-28% compared to 2018 and its 68 shuttles sold) and 2.9 million from the sale of services (+ 26%).

In 2020, Navya will inaugurate the first autonomous shuttle service on an open road in Sakai, Japan, circulating the shuttle with L^4 autonomy without a safety driver on board.

Navya uses cutting edge multi-sensor technology, with GNSS Antenna, odometry on the wheels, cameras, and lidars for precise vehicle positioning and obstacle detection.

The Design Lounge

Luxury, American Style

Luxury, premium, near-luxury, near-premium, sport-luxury…there seems no end to hyper-segmentation of the upper end of the vehicle market. It's mostly now defined by the German automakers, but there was a time when American marques such as Lincoln, Cadillac, and Imperial were the world's benchmarks. This state of affairs was at its strongest in the 1950s, '60s, and '70s.

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  1963 Lincoln Continental

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The 1963 Lincoln Continental offered bench seating emphasizing the strong horizontal elements including a central horizontal speedometer.

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  1966 Cadillac Sedan De Ville

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The 1966 Cadillac Sedan De Ville interior also using a strong horizontal element of bench seating, a central horizontal speedometer and an instrument panel wrapping into the doors.

These vehicles, while not the beginning or the end of luxury offerings by American makers, best showcase the style and presence that defined luxury for several generations worldwide.

The 1970s fuel crisis was the beginning of the end for this style; vehicles needed to be downsized and dramatically cost-reduced to meet new regulations for emissions and safety. This created a generation of designers, engineers, and product planners who treated luxury as an add-on option, with superficial features intended primarily to generate higher profits for the automakers. Previously-austere German and Swedish interiors grew more luxurious, and then Japanese ones did the same. Then the large, high-profit SUVs of the 1990–2000 decade killed off the big, luxurious sedans US automakers had once done so well with, while also cementing the popular perception that American automakers' version of luxury was a tacked-on artifice rather than a built-in attribute.

In recent years, US marques like Cadillac have attempted a return to luxury by having a go at the sporty European formula used by BMW and Mercedes, for example. Result: limited success. Lincoln, on the other hand, has jumped in feet-first with their latest SUV designs. They make no pretense to be sporty or European-inspired, but rather make a big, bold point of being a very American rendition of luxury with style and presence: today's version of the big American luxury car.

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2020 Lincoln Navigator

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2020 Lincoln Aviator interior has a strong presence with high quality materials, finishes, and textures. Lincolns interiors, especially in their Black Label premium line, also include traditional British luxury finishes such as engine-turned aluminum IP deco trim along with functional pillow-type seat cushions that hark back to those used in the 1970s–'80s.

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  2020 Lincoln Aviator Black Label ‘Flight"
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  2020 Lincoln Aviator Black Label ‘Chalet'

Bold color and material choices further enhance the new approach, including real woods, metals, lighting effects and thoughtfully-placed perforation using the Lincoln logo throughout the interior.

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  2020 Lincoln Aviator 2nd and 3rd row seating
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2020 Lincoln Aviator Black Label door trim options

Now Cadillac has also embraced their heritage with their latest Escalade SUV.

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2021 Cadillac Escalade

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2021 Cadillac Escalade with 2-level curved OLED display and cluster

By integrating the instrument panel and clusters into a long, piano-black horizontal display, the Cadillac IP has a massive presence that echoes the American luxury cars of years past.

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2021 Cadillac Escalade instrument panel using real wood and metals

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2021 Cadillac Escalade seating with integrated speakers and metal highlight elements

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2021 Cadillac Escalade perforated leather: triangular holes evince the Cadillac metal wing element.

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2021 Cadillac Escalade center console: real polished woods and metals, leather wrapping, decorative stitching.

It is very refreshing to once again see credible luxury being offered by these historical brands again. Now with the maturation of Tesla's vehicles and the introduction of Rivian, we may be entering an evolutionary re-introduction of luxury for the new decade.

General News

Adient Sells Recaro Seat Division

Automotive seating supplier Adient sold their Recaro premium automotive seating brand at the start of this year as the company works to bring themselves back to profitability. Recaro is now owned by Raven Acquisition, a privately-owned, Detroit-based investment corporation. Raven is led by a former Recaro executive and TCE Enterprises, a family investment company with experience in the auto industry.

Recara Group is the parent company, comprising Recaro Aircraft Seating (aircraft seats) based in Schwäbisch Hall, Germany, and Recaro eGaming (gaming seats) based in Stuttgart. The business areas Recaro Automotive Seating and Recaro Kids are operated by licensees. The Recaro Automotive Seating division, a manufacturer of car seats, was sold to US automotive supplier Johnson Controls in 2011; Adient, including Recaro Automotive Seating, was spun off from Johnson Controls in 2016—and has struggled financially ever since.

Recaro Automotive Seating makes premium and specialty vehicle seats for automakers and the aftermarket. They have three locations in Europe, the U.S., and Japan, and employ about 425 people. In fiscal year 2019, the business generated about USD $150m in revenue.

Recaro said the new corporate structure will help them concentrate on their main business of performance seats, ergonomic seats, and special applications, with shorter and faster decision-making processes allowing greater flexibility to better meet the requirements of the market".

New Serbian Plant for Yanfeng Interiors

Yanfeng Automotive Interiors has officially opened their new plant in Serbia, at Kragujevac. The company manufactures automotive interior components in a production area of approximately 18,500 m^2, and has already brought 180 new jobs to the region. The supplier plans to recruit up to 800 employees over the next few years.

Yanfeng says good infrastructure and availability of skilled workers in the Kragujevac region were key to selecting the location. Other factors included its central location in southeast and central Europe and proximity to other company plants in Hungary, Czechia, and Slovakia.

"With this new plant in Serbia, we are expanding our manufacturing capacity in eastern Europe's growth markets and responding to our customers' increasing presence in the region" said Tony Elenbaas, vice president and general manager, Europe and South Africa at Yanfeng Automotive Interiors.

Yanfeng Automotive Interiors is a joint venture between automotive component Yanfeng, a wholly owned subsidiary of Huayu Automotive Systems (HASCO)—the component group of SAIC Motor—and Adient, a global leader in automotive seating.

DexKo Buys Aguti

DexKo Global, which specializes in engineered trailer running gear, chassis assemblies and related components, has completed their acquisition of Aguti Produktentwicklung & Design, based in Langenargen, Germany.

Aguti has been providing seat systems and seat-connections for motorhomes, electric vehicles, and specialty vehicles since 1992. The company is said to be an innovation leader in the construction of patented special solutions, which are developed and tested in its own center of expertise.

The experienced management team, led by company founder and managing partner Andreas Grieger and managing director Sebastian Janssen, will remain with the business and the Aguti brand will continue under the AL-KO umbrella brand.

Aguti seats can be specially customized to the needs of motorhomes and recreational vehicles. The anatomically adapted contact surfaces for legs and back ensure healthy and body-supported sitting. A wide array array of specifically designed upholstery foams can be specified. In addition, a large number of swivel consoles and seat substructures allow for installation in most any type of vehicle.

Faurecia Finishes SAS Buy to Expand Cockpit Systems

Following approval from the apposite regulatory bodies, Faurecia has completed their acquisition of the remaining 50% of SAS from Continental, a project that was announced last October. SAS is a key player in complex interior module assembly and logistics, with sales of around €740m in 2019 and employing around 4,490 people.

This acquisition reinforces Faurecia's Cockpit of the Future strategy and their systems integration offer, which now covers all interior modules as well as functionalities such as lighting and thermal management. It also strengthens Faurecia's Just in Time plant network with 20 facilities in Europe, North and South America, and China. SAS has an order book showing strong growth potential, and sales growth will be further accelerated through regional and customer diversification particularly in China.

SAS interior modules
a Faurecia company

This acquisition is immediately accretive to Faurecia in operating margin, net income and ROCE. SAS, renamed "SAS Interior Modules" and headed by Hagen Wiesner as Executive Vice President, will lead all the interior module assembly activities of Faurecia. Its financial performance will be consolidated into the Interiors Business Group and synergies will be obtained in manufacturing engineering, logistics and footprint optimization as well as in purchasing and SG&A.