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## Driver of transformation

The automotive industry is evolving rapidly. Electrification, connectivity and individualization combined with the desire for greater sustainability are changing the way vehicles are designed, produced and how consumers use them.

In a changing industry, transformational companies are needed: FORVIA is at the forefront of this change, working tirelessly to define a more people centric mobility. As the seventh largest automotive technology supplier in the world, FORVIA brings

together two European tech leaders - Faurecia, a leading French company in automotive technology, and HELLA, a leading expert in lighting technology and automotive electronics headquartered in Germany. The Group leverages this extensive know-how to create safe, affordable, customized, and sustainable mobility experiences.

Already, one out of every two vehicles worldwide is equipped with FORVIA technology from six business groups.



- Parts & accessories for the independent aftermarket as well as special original equipment
- Diagnostic services for testing & repair

### **INTERIORS**

- Instruments & door panels
- Center consoles
- Cockpit modulesActivated surfaces
- Sustainable materials

### ELECTRONICS

- Automated driving
- Cockpit electronics
- Energy management
- Lighting/body electronics

LIGHTING

Headlamps

Rearlamps

Car body lighting

· Interior lighting

- HMI/displays
- Sensors & actuators

• Seat structures with advanced safety systems: frames, mechanisms, and mechatronics

**SEATING** 

 Complete seats for a comfortable onboard experience: foam, covers, comfort & wellness solutions, and seat assembly

### **CLEAN MOBILITY**

- Ultra-low emissions solutions for passenger & commercial vehicles
- Zero-emission solutions for battery & fuel cell vehicles

# A bold leader in **sustainability**

FORVIA aims to serve the mobility needs of the future with sustainable and innovative solutions that benefit automakers, consumers and the environment.

Faurecia and HELLA already combine economic growth with environmental protection in many areas by continually optimizing their products, materials, and structures, as well as their manufacturing processes. In 2022, FORVIA became the first automotive company to receive the globally recognized SBTi (Science-Based Targets Initiative) certification: FORVIA aims to be CO₂ net-zero by 2045.

In the meantime, FORVIA is working on specific milestones for today, 2025 and 2030, and the Group is actively implementing new processes and materials for upcoming product generations. As a further step towards achieving its net-zero roadmap by 2045, FORVIA has successfully launched a company called MATERI'ACT, specifically dedicated to the development of sustainable materials.

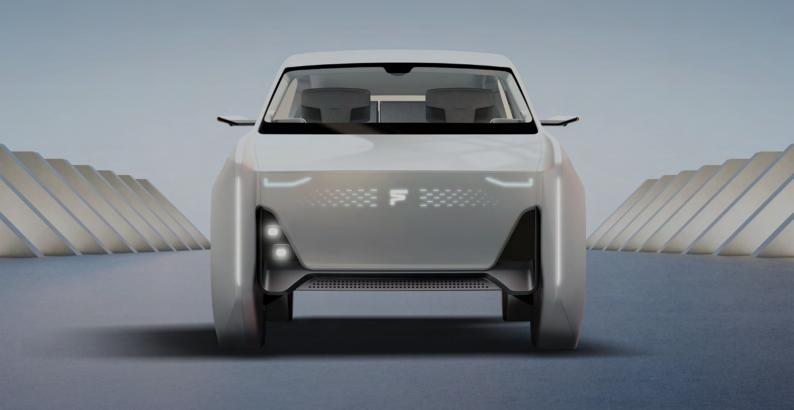






Patrick Koller
CEO of FORVIA

"FORVIA offers technical solutions to support the necessary transformation of the automotive industry. The company is transparently committed to Science Based Target initiatives. A public commitment that engages us and demonstrates our determination. By 2045, all our emissions will be zero and we are approaching two important milestones. First, by 2025, FORVIA will be carbon neutral in terms of its Scope 1 and Scope 2 emissions. I am pleased to confirm that we are on track. The second major milestone will be 2030, by which time we should have reduced our Scope 3 emissions by 45%. This is a colossal task, and Al-formulated biobased materials will be central to the success of our commitment. It's a job you can come and measure at CES 2024, where each of our demonstrators is designed for Scope 3 in order to respond to the industry's technical and technological evolution while reducing greenhouse gas emissions. It is with pleasure and pride that I will be available to our customers to showcase our technological advances."





### **Horizon**

## Experiences that matter to people

Horizon provides fresh user experiences in a midsize SUV package.

At first sight the proud exterior hides its capabilities. Then surfaces transform to high-tech lighting and projection technologies, ensuring safety for occupants and other traffic participants alike.

Selected lighting and sustainable materials communicate roominess and gracefulness. No technology is shouting at the occupants, all is about serenity.

Then HMI features magically unveil, 3D graphics content poetically floats in space and HMI feature selection is happening by eye tracking. The entire interaction model is targeting a measurably safe and at the same time pleasureful driving experience.

The interior is then transforming into various configurations, all respecting safety and design integrity. The highly comfortable front seats will take a comfortable and relax position while the vehicle is recharging. The passenger seat is equipped with long-range tracks so, in a single movement, it can be positioned in place of part of the rear bench, enabling its occupant to interact fully with rear passengers. Thanks to a furniture-like table pod detaching itself from the instrument panel and moving backwards when the front seat is moved backwards, the passenger can also enjoy a dedicated work surface, while broadening their visual horizon and increasing their sense of space.

entirely in order to recycle the metal, while the remaining components are incinerated or

landfilled.



## **Supremo Seat**: Comfortable, sustainable, desirable

Designed to meet the specific challenges of electric vehicles while offering unprecedented comfort, the Supremo seat is at the cutting edge of sustainable design. It is based on a structure that's more compact than traditional seats, freeing up extra space for batteries and allowing rear passengers to place their feet comfortably under the front seats. When the vehicle is recharging, occupants can enjoy optimum comfort in a high-reclined position, thanks to the design of the seat's compact frame as well as a headrest that is as soft as a pillow.

## **Surface activation**: Phygital surfaces for improved cockpit experiences

FORVIA is shaping the occupants' experience within the cockpit through the activation of the car's interiors surfaces. This transformation is achieved through the seamless integration of technologies into surfaces. With the activation of our surfaces, we create more intuitive, interactive, and personal experiences through a PHYGITAL cockpit at the convergence between the PHYsical and diGITAL realms. This includes smart and dynamic lighting combined with sound, shy tech, and intuitive human to machine interaction, personalized cocoon with heating and cooling, and digital continuity for all passengers through convenient smartphone integration.

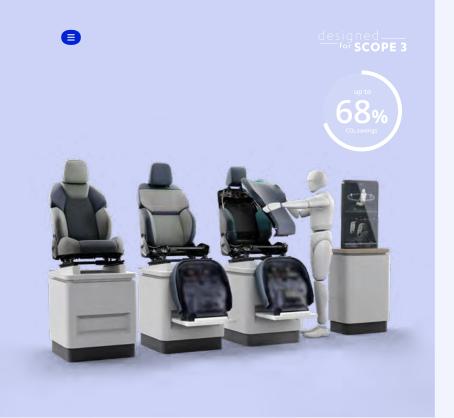




## **AirVision**: New visual experiences through floating images

FORVIA'S AirVision is an integrated system solution that offers new ways of displaying information and creating immersive experiences through image reflection. AirVision offers a stable and vibration-free reflection by creating a 3D, virtual image of a display on a flat translucent surface integrated on the Instrument Panel. The system combines displays, lighting, surfaces and structures in a game-changing way. This scalable system can replace clusters, center displays and co-driver display configurations in automotive applications. It provides a super clean interior design, decluttering the dashboard by replacing traditional display configurations and removing display frames, borders and split lines.







### Christophe SCHMITT Executive Vice President Seating

With a carbon footprint 68% lower than a conventional seat, our Supremo seat has been designed using a decarbonized steel structure as well as other sustainable materials, such as our new Auraloop range of cushioning. Auraloop is composed of recyclable polyester fibers, commonly known as PET, and can be used to replace seat foam or elements in the door panel, which are currently made from polyurethane, a petroleum derivative.

# Modularity & upgradeability

Modular, recycled, recyclable

FORVIA is actively committed to decarbonization and is working on every component that we use in our seating to improve its recyclability:

- In the near future, seat structures could be made entirely from decarbonized steel, also known as "green steel," which is easier to recycle and is smelted using hydrogen instead of coking coal.
- Rear seats will soon be made with hybrid structures made from recycled plastic and green steel, with components that can be easily separated using magnets and recycled at the end of their life.
- Our seat cushioning will also soon be made from 100% recyclable polyester-based fibers.
- We are working on ways to create covers made entirely from yarn recycled from the automotive seating industry.

Finally, tomorrow's vehicles will themselves have a longer lifespan, thanks to FORVIA's new approach to modular, sustainable seating that is easier to assemble and disassemble. Unlike conventional seats, which are made up of 100 to 150 components, our seats comprise only around ten modules, which are easy to detach and recycle. Modular seats are simple to repair, as modules such as backrests and cushions can be exchanged or replaced throughout the seat's lifetime. They also give automakers creative options for differentiating their models simply by changing the combination of modules.



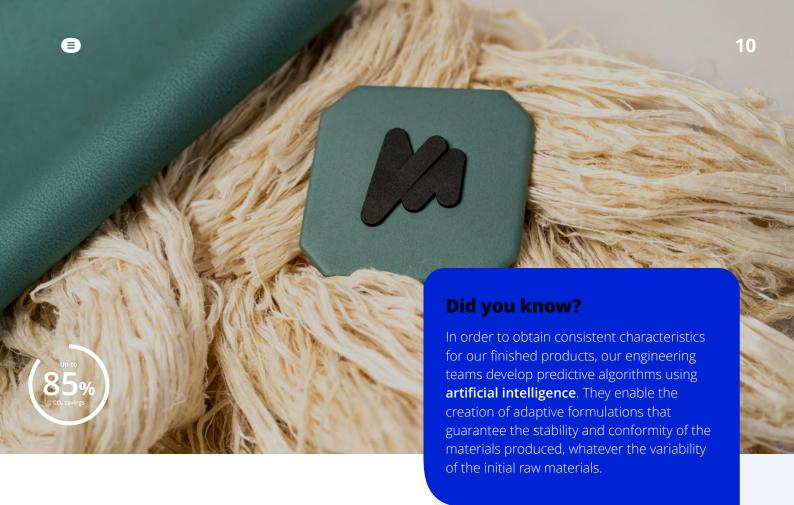
# Sustainable Lighting Shining the path to sustainable mobility

Our sustainable headlamp design concept utilizes alternative materials and reusable components to increase the recycling rate while maintaining high standards of visibility and illumination. This concept contains an intelligent combination as well as reduction of components and incorporates lightweight, thin, high-efficient Fresnel optics as well as cover optics made from bio polymer, which weighs 2 kilograms versus 5 kilograms compared to a traditional headlamp, without compromising performance. These materials enable us to harmonize the headlamp's design, function, and costs throughout the product lifecycle.



Yves ANDRES
Managing Director, Lighting at HELLA

Sustainability and the responsible use of resources are of the utmost importance to us. As thought leaders, we are therefore presenting a pioneering headlamp concept at CES that harmonizes sustainability, high performance and attractive design in a costneutral way.



# Creating tomorrow's materials

MATERI'ACT focuses on sustainable and attractive materials and products enabling CO₂ neutrality. MATERI'ACT is our end-to-end showcase of a mastered sustainable value chain. Through the its ecosystem, we can achieve global feedstock securing and qualification. Using trained Artificial Intelligence models, we can develop adaptative formulations to explore and investigate compounds with different textures variants, colors, and grains.

MATERIACT has an ambitious growth trajectory: the company will employ 400 talents in 2025 and achieve sales of 2 billion euros by 2030.



Jean-Paul MICHEL
Executive Vice President Interiors at FORVIA

For more than 10 years, FORVIA has been acting and investing in materials with a low CO₂ footprint. Today, with the creation of MATERI'ACT, FORVIA is changing scale, accelerating and amplifying the development of sustainable materials which are essential to the decarbonization of the automobile industry. With MATERI'ACT, we anticipate future market needs for sustainable and affordable materials.



## **NAFILean Vision**Visible & attractive sustainability

NAFILean Vision is a composite material developed for visible parts. It allows great freedom of design. It can integrate various sources of biomass (hemp, wood, reed, olive pits or oyster shells) and recycled plastics from multiple sources (from post-industrial and post-consumer, from end-of-life vehicles, as well as from ocean bound plastics). It is fully recyclable. NAFILean Vision allows for a wide variety of shades and textures, creating an advanced decorative effect.

The NAFILean product range already equips 9 million vehicles on the road and will equip 15 million vehicles by 2025.

## CO<sub>2</sub> reengineered Carbon fibers

MATERI'ACT develops less energy-intensive and bio-sourced carbon fibers with a low CO₂ impact while maintaining a high level of technical performance.

Our carbon fiber composites feature high stiffness, stretch resistance and chemical strength, and low thermal expansion, making them the optimal manufacturing material for many industrial parts. MATERI'ACT's carbon fibers are primarily intended to be used for the production of hydrogen tanks.





### Plastic Odyssey door panel A FORVIA Foundation & Plastic Odyssey collaboration

FORVIA is showcasing a first industrial collaboration between the FORVIA Foundation, MATERI'ACT and Plastic Odyssey, an organization that fights plastic pollution and promotes the reuse of plastic waste from coastal areas, on potential industrial applications, supporting local recycling initiatives and frugal business models: a door panel that demonstrates our capacity to introduce up to 20% of ocean bound plastics in the compounds used in the production of performant serial application parts. This part also highlights our capacity to offer advanced textures capabilities on the surfaces.



### Radar portfolio for 360° coverage and increased performance

Based on more than 20 years of experience and over 20 customers worldwide, including some of the biggest international OEMs, HELLA is a mature and trusted partner, providing scalable and flexible radar sensors as a single solution, but also as part of advanced ADAS platforms. The company's 77 GHZ radars are equipped with innovative waveguide antennae and the latest chip technology to provide extended distance recognition and greater precision over the whole field of view, to support complex scenarios for automated driving Level 3 and above. With the latest radar Gen 7, we continue to extend our portfolio and increasing the sensor capability in a cost-efficient manner.



Jörg WEISGERBER
Managing Director, Electronics at HELLA

Radar sensor technology for autonomous driving is all about trust: trust in the technology, trust in the functionality, and trust in the partners we work with. With our engineering and industrialization expertise, we are in a leading position to turn autonomous driving into a reality.



### Faurecia Aptoide Apps Market

Turn your car into a digital cockpit

Faurecia Aptoide, a joint venture between Aptoide and FORVIA, is a leading automotive apps market connecting OEMs and app developers. More than 3 million vehicles are already using our service and distribution rights to our portfolio of around 200 applications available. A vehicle in production from one of our customers will be displayed outside our CES booth so visitors can experience the apps market in a live demonstration.



### François TARDIF

**Executive Vice President Asia and Clarion Electronics** 

"Pioneering innovative solutions is at the heart of the FORVIA mission, and collaborating with, TikTok, Zoom and Webex shows our commitment to excellence in delivering an enhanced cockpit experience by elevating connectivity to a new level with our apps market."

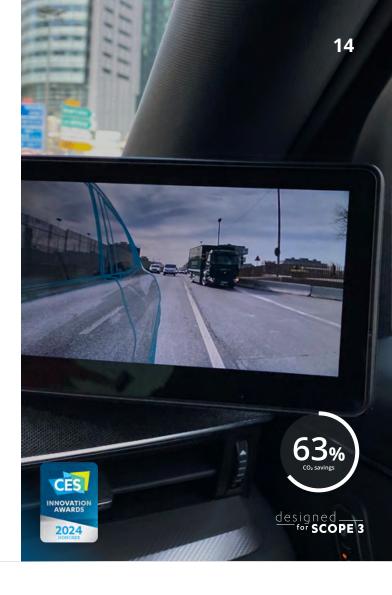
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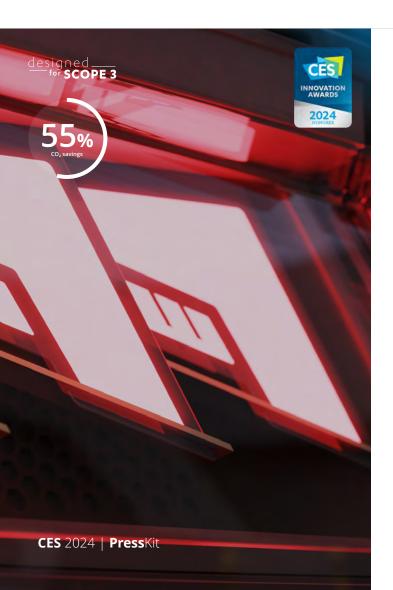
### **eMirror Safe UX**

Next-generation software for safer mobility

Software platform helping drivers better see their driving environment by replacing side and rearview mirrors with a camera-based system to provide better visibility, safety alerts as well as fuel/energy efficiency.

Transparent View, Reactive Dimming and Advanced Image Processing are the software features expanding driver's field of view and improving visibility in challenging environments.





### FlatLight | μMX When innovation meets efficiency

Flat, efficient and scalable: HELLA's FlatLight |  $\mu$ MX is all about a slim design, maximum energy efficiency and superior homogeneity and performance. The technology is based on an innovative LED light guide concept with so-called micro-optics: optics smaller than a grain of salt. This enables a module depth of just 5 millimetres - and completely new design options for the front and rear, as different lighting functions can be realized in just one lighting element. Another plus: it has up to 80 percent lower energy consumption compared to conventional LED tail lights.





# **Light Tile for Transparent Door**Seeing through safety

The Light Tile for Transparent Door provides a see-through view on door panels and creates an extended window effect. It offers a new kind of advanced driving assistant information: if any risk is detected before opening the door, the information will appear through the transparent door to help occupants react in darkness or critical conditions where the human eye may not see properly and respond fast enough. The Light Tile is perfectly integrated in the door panel upper area and provides a high-quality display of the vehicle environment, bringing the outside atmosphere into the vehicle.

# Skyline Immersive Display Integrating safety

Integrating safety and displays

Innovative pillar-to-pillar display positioned at the intersection of the windshield and the instrumental panel, reducing the re-direction of driver's attention from the road to displays, reassuring "eyes on the road time" and creating a safer driving experience.

HD displays and HMI appear only when required and graphical content is across the surface by modular low resolution LED pixel matrixes.



# FORVIA by the numbers





R&D centers





150,000+ employees



### FORVIA in the USA



**7,000**+ employees



3,300 engineers





industrial sites



**R&D** centers

Figures as of december, 31st 2022



