



**CES 2024**

# **MEMA OE & Deloitte Automotive Supplier Briefing**

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# Introductions and Opening Remarks



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# Deloitte's 2024 Global Automotive Consumer Study – Key findings



## **Is slowing EV momentum putting current regulatory timelines in jeopardy?**

High interest rates and elevated sticker prices may be causing consumer interest in EVs to soften. Despite OEM price cuts and government incentives designed to make them more affordable, a variety of other challenges continue to stand in the way, including range anxiety, charging time, and availability of charging infrastructure.

## **A significant number of consumers may be thinking about switching vehicle brands**

The top three reasons for intending to switch vehicle brands away from a manufacturer brand family include wanting to try something different, cost/affordability, and a desire to gain access to new technology/features.

## **Interest in connectivity features may not fully translate into revenue and profit**

There is a relatively high level of consumer interest in features that provide updates on vehicle maintenance, traffic/road safety, and suggestions for safer travel routes. However, the willingness to pay extra for connected technologies remains low.

## **Younger consumers are driving overall interest in vehicle subscriptions, but more education may be necessary to address lingering concerns**

Against the backdrop of uncertain economic conditions causing concern for financial capacity, a significant number of younger consumers are at least somewhat interested in giving up vehicle ownership altogether in favour of a subscription model, but concerns about vehicle availability, total ownership cost, and the perception of higher monthly fees persist.



# CES 2024 – Key themes

250+ mobility companies exhibiting in 2024 with many on the floor for the first time ever. The West Hall will have 20+ companies with the largest floor space listed below focusing on EV introductions, displays, software-defined vehicles, AI, charging, fleet solutions, and more.



## *New for 2024*



# CES 2024 – Electric Vehicles (EVs) and Charging

Overview of EV advancements showcased at CES 2024, highlights of new models, battery technologies, and range improvements, advancements in charging and fleet solutions.



VinFast, the Vietnamese EV company that only recently entered the US market, will unveil new models including a small SUV



Electric aircraft from Hyundai's air taxi subsidiary Supernal/Hyundai to unveil Supernal eVTOL



LG will introduce charging stations



Smart solutions for fleets and electric mobility

- Automated valet charging, Digital charging and operation services for e-fleets, convenience charging for passenger cars



Valeo + BMW will present a solution for tele-operation from a cockpit with high reliability



Electric boats and motors as well as self-piloting recreational boats



Xpeng's eVTOL will make its international debut at CES



American Axle will showcase a uniquely-designed battery electric light-duty truck, featuring AAM's 3-in-1 high-speed EDUs

The light-duty pickup truck, built entirely by AAM engineers from a production ICE platform, features a single 150kW EDU driving the front wheels and a 425kW e-Beam in the rear

# CES 2024 – Software Defined Vehicles & Connectivity

Overview of SDV and Connectivity advancements showcased at CES 2024, highlights of infotainment systems, IoT integration, and vehicles becoming extensions of the digital lifestyle.



Road to cloud ecosystem, smart cockpit (HPC)



New software platform for e-mirrors enhancing the drivers visibility



LG has collaborated with Saint-Gobain Sekurit to create a transparent antenna which is applied directly to glass on the vehicle



Kia will be making their return to CES after a 5-year hiatus and will showcase concept models and a production model set to be launched in 2025 under the Platform Beyond Vehicle umbrella



Expansion on last year's Snap Dragon announcement with anticipation on how they will scale and partner across the ecosystem



NVIDIA®

Latest autonomous development platform

• APTIV •

WNRVR

Vehicle architecture that's optimized to support electrification and a software architecture that's designed to be sustainable by leveraging a cloud-native approach enabling updates over the entire vehicle lifecycle



Elektrobit

Elektrobit will show their 360° offering, which combines an interactive automotive operating system framework, cloud-based ECU virtualization with Amazon Web Services (AWS), and a next-generation virtual cockpit to enhance the user experience.

# CES 2024 – ‘Display’ification

Overview of display advancements showcased at CES 2024, highlights of transparent, rollable, active privacy to avoid driver distraction, and pedestrian communication.



Hyundai Mobis will show their Innovative Display series at CES 2024. The Innovative Display series includes a transparent display, rollable display, and swivel display along with a 3D display that features OLED-level performance in an LCD panel



Slidable screens, passenger displays, and will have a "switchable privacy mode"



Innolux/CarUX will show a 55-inch 8K display that features active privacy technology to prevent driver distraction. It allows front-seat passengers to view entertainment content while obscuring the screen from the driver's view



AUO (new to CES in 2024) micro-LED in-vehicle human-machine interface and Interactive Transparent Window (Best of Innovation Award Winner)



Marelli will debut their Intelligent Social Display, a solution that increases communication with pedestrians to alert them when the vehicle is in autonomous mode, signaling driver intent, and other critical messages outside the vehicle

# CES 2024 - AI

Artificial Intelligence has quickly become one of the automotive sector's hottest topics, and that will continue into CES 2024.



IDriveAI/Blackberry - Driver Identification using Facial Recognition, and will analyze Distracted and Drowsy Driving in real-time watching the driver's behavior for head orientation, eyelid closure frequency and use of cellphone, to alert the driver in potentially dangerous situations



Showcasing automotive innovation and is expanding its portfolio with the introduction of two new devices, the Versal™ AI Edge XA adaptive SoC and Ryzen™ Embedded V2000A Series processor.

- Versal AI Edge XA adaptive SoCs add an advanced AI Engine, enabling the devices to be further optimized for numerous next-gen advanced automotive systems and applications including forward cameras, in-cabin monitoring, LiDAR, 4D radar, surround-view, automated parking and autonomous driving.
- Versal AI Edge XA adaptive SoCs are also the first AMD 7nm device to be auto-qualified, bringing hardened IP and added security to automotive applications where safety is paramount.



AI-powered Virtual Assistant, which is part of the Mercedes-Benz Operating System (MB.OS).



Cerence will exhibit their new language learning model, CaLLM. CaLLM includes generative AI-powered domains and runs on the NVIDIA DRIVE platform, which perhaps the biggest use case for AI in automotive is for virtual personal assistants (VPAs) to improve the performance of using speech in the vehicle



General Motors and Stellantis have already implemented AI solutions and are experimenting with more use cases for the technology with voice assistance but are not at the show.



# CES 2024 – Safety and ADAS

Overview of Safety and ADAS advancements showcased at CES 2024, highlights of new sensor technology combined with software providing for enhanced driver experiences.



Continental's Radar Vision Parking enabling Level 3 and Level 4 driving and parking functions of software-defined vehicles



Valeo is offering visitors the opportunity to experience its AI-based perception software to see how it helps classify objects identified by lidar, as well as demonstrating teleoperation, with a BMW Series IX on the BMW stand set to be controlled from the Valeo booth



Bosch is expected to demonstrate the fusion of infotainment and driver assistance functions in a software-intensive central computer on a single SoC



Magna's ClearView Vision System, as well as Hesai Technology's ET25 long-range LiDAR sensor, each of which have been recognized as CES 2024 Innovation Award honorees



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