

Valeo

BRAIN DIVISION

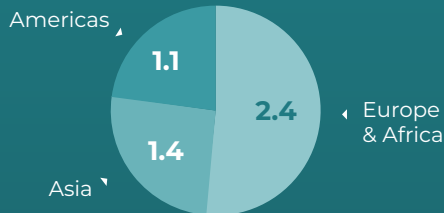
STRICTLY PRIVATE & CONFIDENTIAL

SMART TECHNOLOGY FOR SMARTER MOBILITY

A HIGH TECH PROFITABLE GLOBAL LEADER

€4.9Bn

Revenue in 2023



> €30Bn

Order Intake 2022+2023

> 4x

OEM Book-to-Bill Ratio 2023

24,000+

Total FTEs

of which
10,800 R&D

2/3 of BRAIN
Indirect Employees

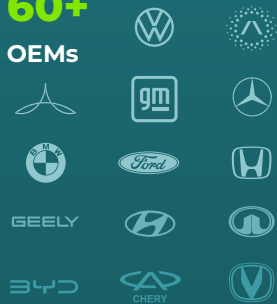
1 out of 3

New Vehicles Has
BRAIN Content⁽¹⁾



60+

OEMs



8,700

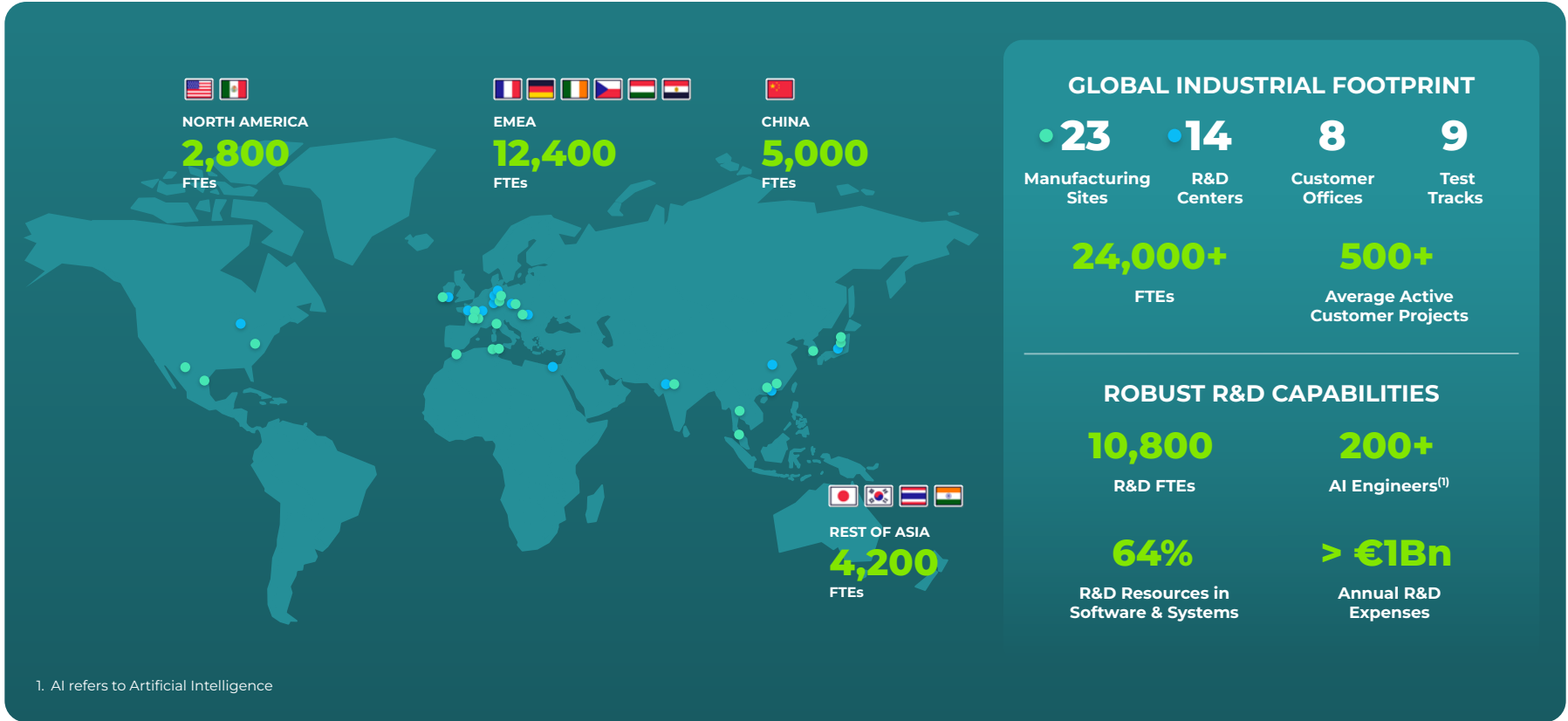
Active Patents
Portfolio



1. Based on Valeo estimates

UNMATCHED TECHNOLOGICAL AND INDUSTRIAL CAPABILITIES AND SCALE

Global Footprint with Robust R&D Capabilities – Managing Complexity is Part of Brain's DNA



1. AI refers to Artificial Intelligence

MAIN RESEARCH & DEVELOPMENT CENTERS

Global R&D Footprint Harnesses Top Technical Talent from Around the World



Créteil, VMTC
France

 800



Bietigheim
Germany

 1,000



Prague
Czech Republic

 800



Tuam
Ireland

 600



Troy
USA

 400



Cairo
Egypt

 1,800



Chennai
India

 1,400



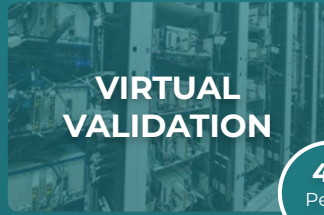
Shenzhen & Wuhan
China

 1,900

 Headcounts

WORLD-CLASS VALIDATION CAPABILITIES ENABLE SYSTEM ROBUSTNESS AND PERFORMANCE

Significant Infrastructure in Place to Harness Data and Use it to Create Value



VIRTUAL VALIDATION

40
Peta-
bytes

Large scale simulation capability with
8 HIL & SIL FARMS
on sites and in the cloud running
250+ test benches⁽¹⁾⁽²⁾



PHYSICAL VALIDATION

2.5
million
KM

Worldwide network of
9 TEST TRACKS
with on-site facilities running
250+ vehicles

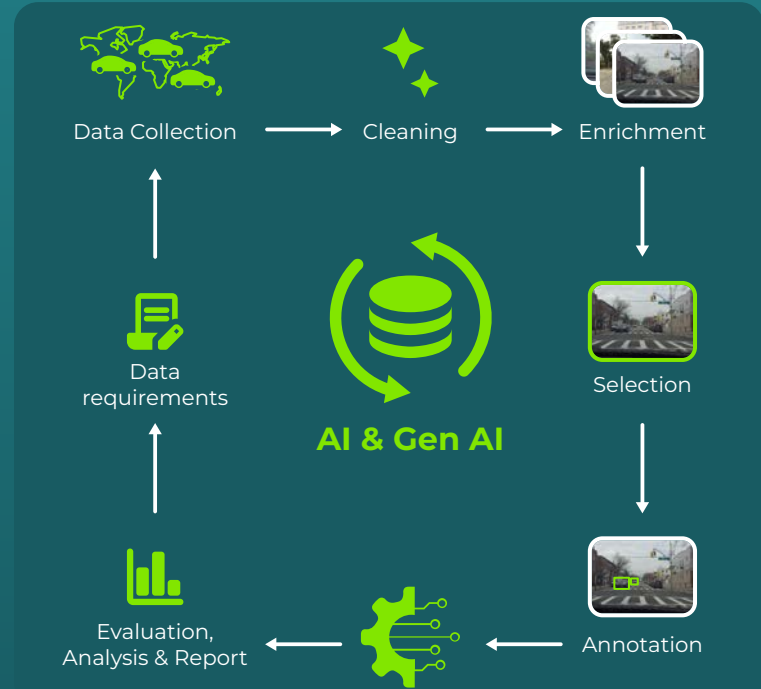


OPEN ROAD DATA

>150
Peta-
bytes

DATA PLATFORM
to ingest, store, orchestrate & automate
growing volume of data
ensuring **quality & efficiency.**
Leveraging data to **create value**

1. HIL refers to Hardware-in-the-loop
2. SIL refers to Software-in-the-loop



DEVELOPING A VIBRANT ECOSYSTEM

“Western World”



DEVELOPING A VIBRANT ECOSYSTEM



China

SERVICES



SOFTWARE



COMPUTING UNITS



DRIVING AUTOMATION SENSORS



INTERIOR EXPERIENCE DEVICES



CONNECTIVITY



Footprint



5,000

Total FTEs

of which
1,900 R&D

20%

of Brain Global
Platforms FTEs

100%

Chinese
Management



BYD



Great Wall



CHERY



GEELY



ROBUST S1 2024 : +2.2PTS EBITDA MARGIN YoY

Driven by Growth in ADAS and Interior Experience

Sales

€2,569 M*

+6% lfl growth
in OEM Sales

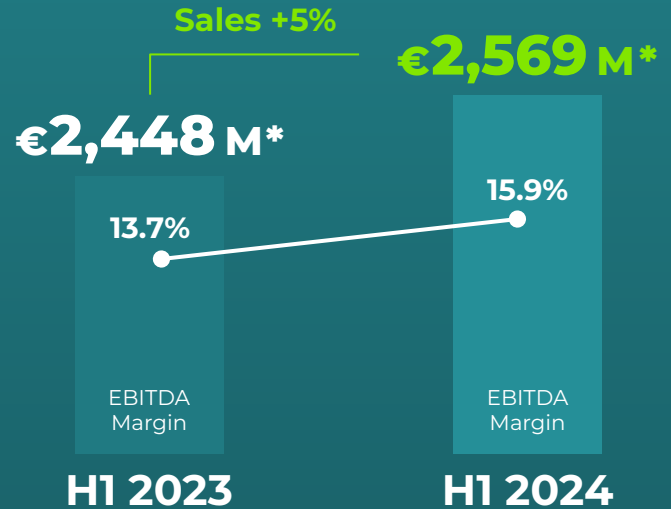
+6pts
outperformance

ADAS

Sales €1,659M
+7% lfl growth in OEM Sales

Interior Experience

+4% lfl growth in OEM Sales



Business Highlights

 Production ramp-up in cameras

 Growth with Japanese and Korean OEMs

 Impact on margins of higher sales in ADAS & Interior Experience

* Including Top Column Module Business

EBITDA Margin

ADAS

16.6% | +0.6 pts YoY

Interior Experience

13.9% | +4.9 pts YoY

VALEO BRAIN DIVISION

DRIVING AUTOMATION

DETECT



VISION



LiDAR



COMPUTE



anSWer

0 1 1 0
1 0 0 1

INTERIOR EXPERIENCE

SENSE



COCKPIT



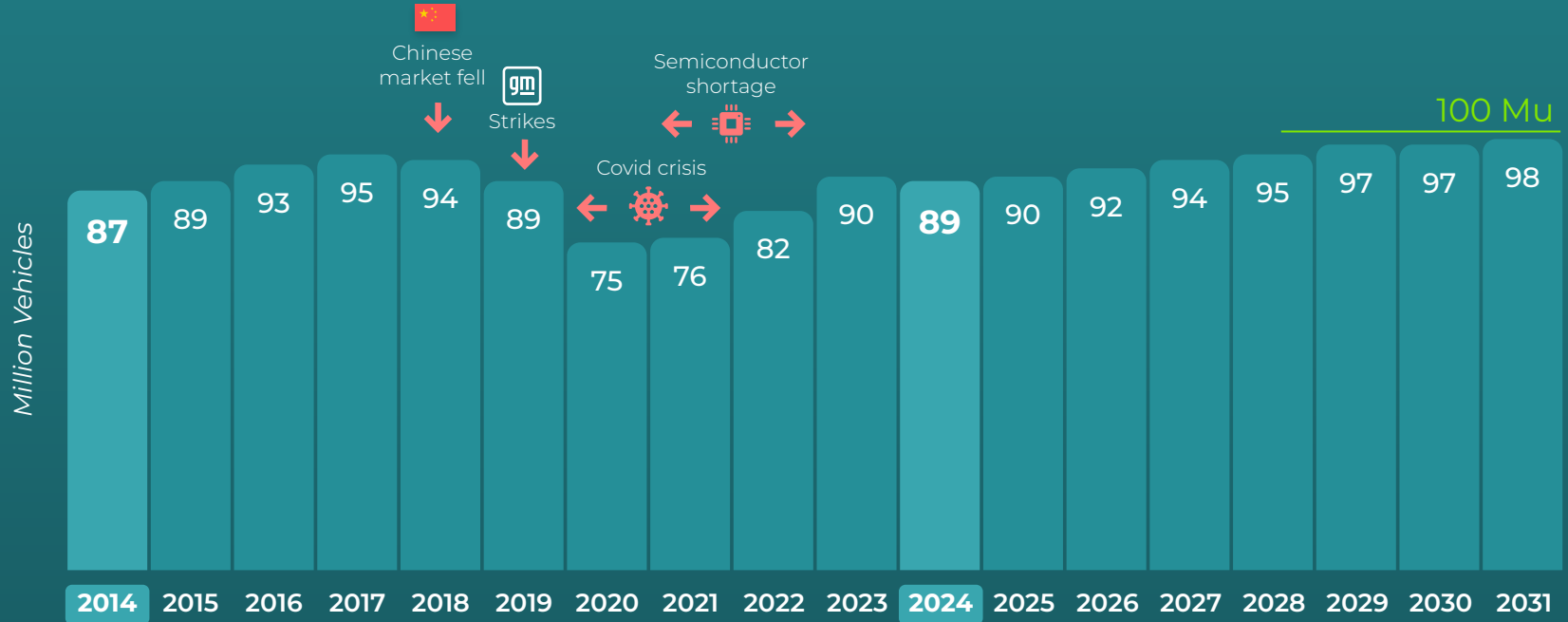
CONNECT



* As of January 1st 2025

CAR VOLUMES BACK A DECADE AGO

Growth Comes From Content per Car Increase



S&P Global Mobility production released on September 16, 2024.

For greater comfort, 2024 and 2025 Valeo's guidance based on (i) LVP 3% below S&P Global Mobility production scenario released on February 16, 2024, (ii) Valeo sales in high-voltage of around €1bn in 2024.

3 BOOSTERS TO SAFETY AND CAR AUTOMATION

REGULATION



FMVSS 127
by Sept 2029



GSR II
from July 2024

FMVSS refers to Federal Motor Vehicle Safety Standards
GSR refers to General Safety Regulation

NCAP SAFETY RATINGS



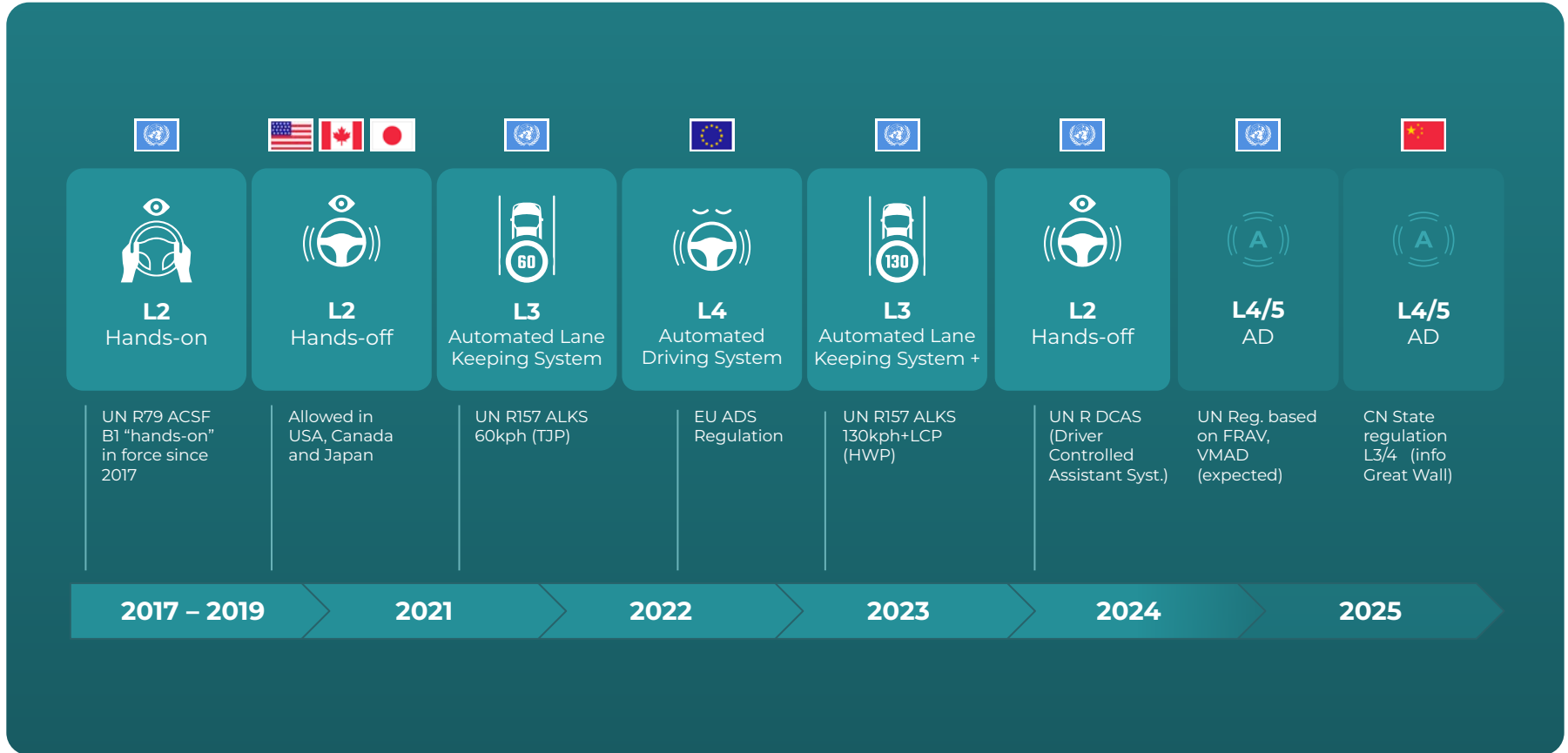
EURONCAP,
which has a strong
influence on car
models' reputation,
now rates ADAS

INNOVATION



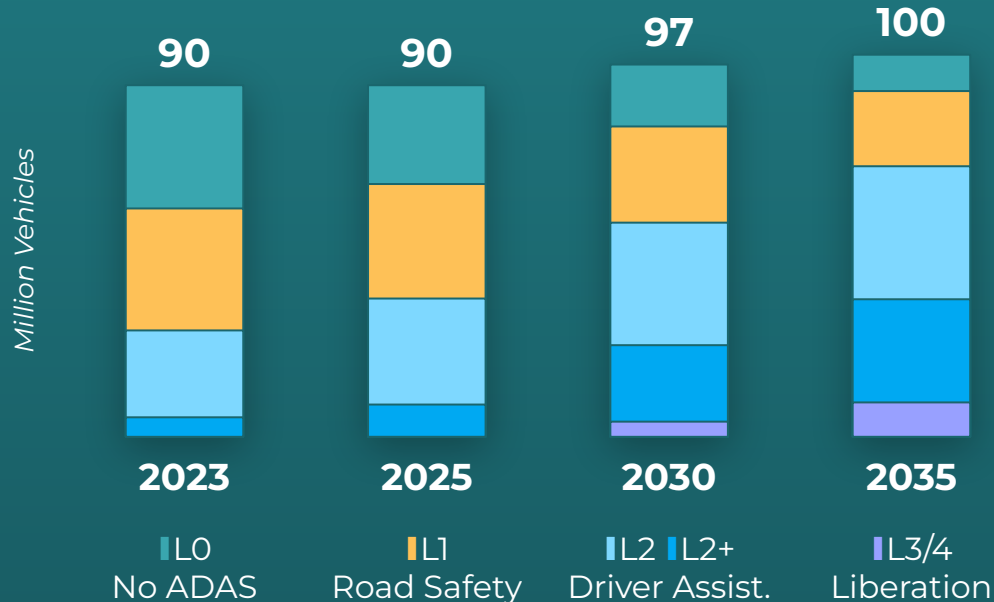
**ADAS and
Automation are
strong differentiators
for innovative brands**

UP TO A GLOBAL ADOPTION OF HIGHLY AUTOMATED VEHICLES



MARKET BY AD LEVEL

'PRIVATELY OPERATED VEHICLES' BY SAE LEVEL



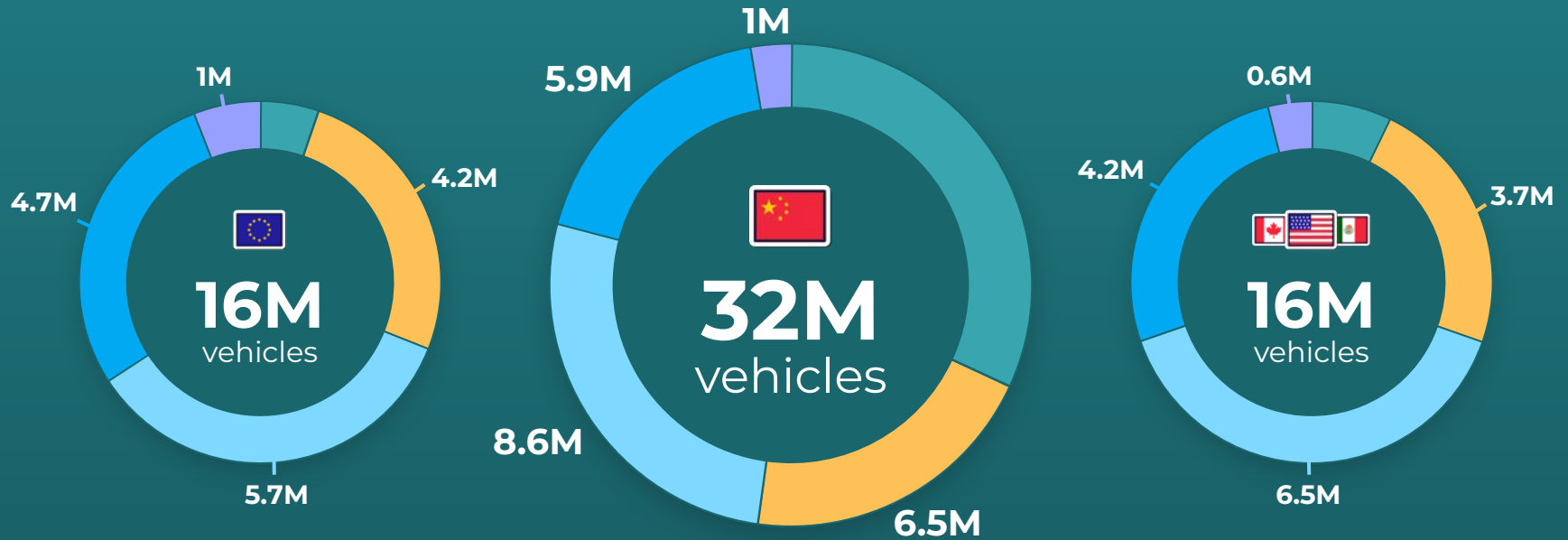
Road Safety becomes standard
(65% in 2025, 90% by 2035)

Driver Assistance (L2/L2+) is the dominant segment
(40% in 2025, 62% by 2035)

Driver Liberation (L3/4) further delayed
(0.1% by 2025, 9% by 2035)

Driverless (L4) in personal cars to start with AVP-type features
(not shown in this graph)

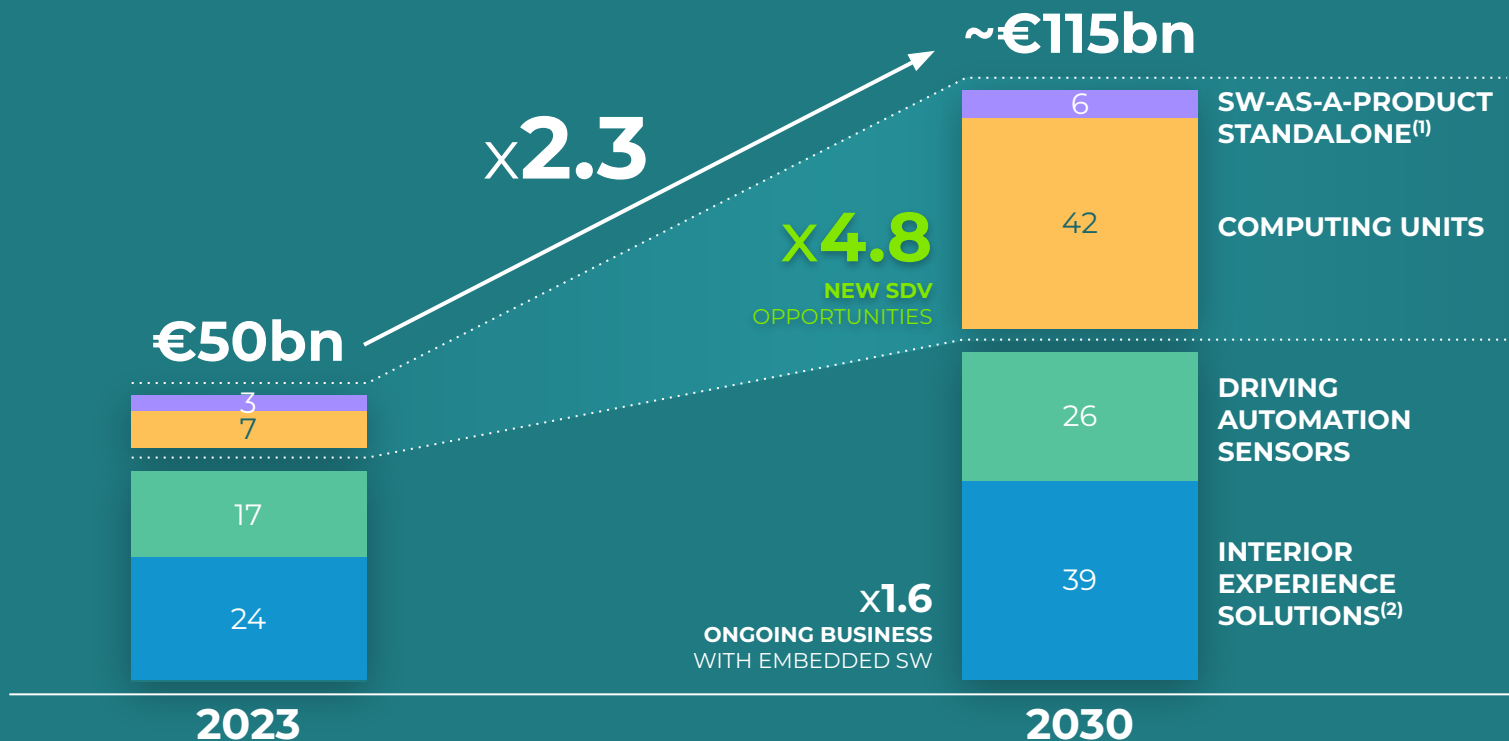
POV¹ MARKET BY AD LEVEL IN 2030



1. Privately Operated Vehicles

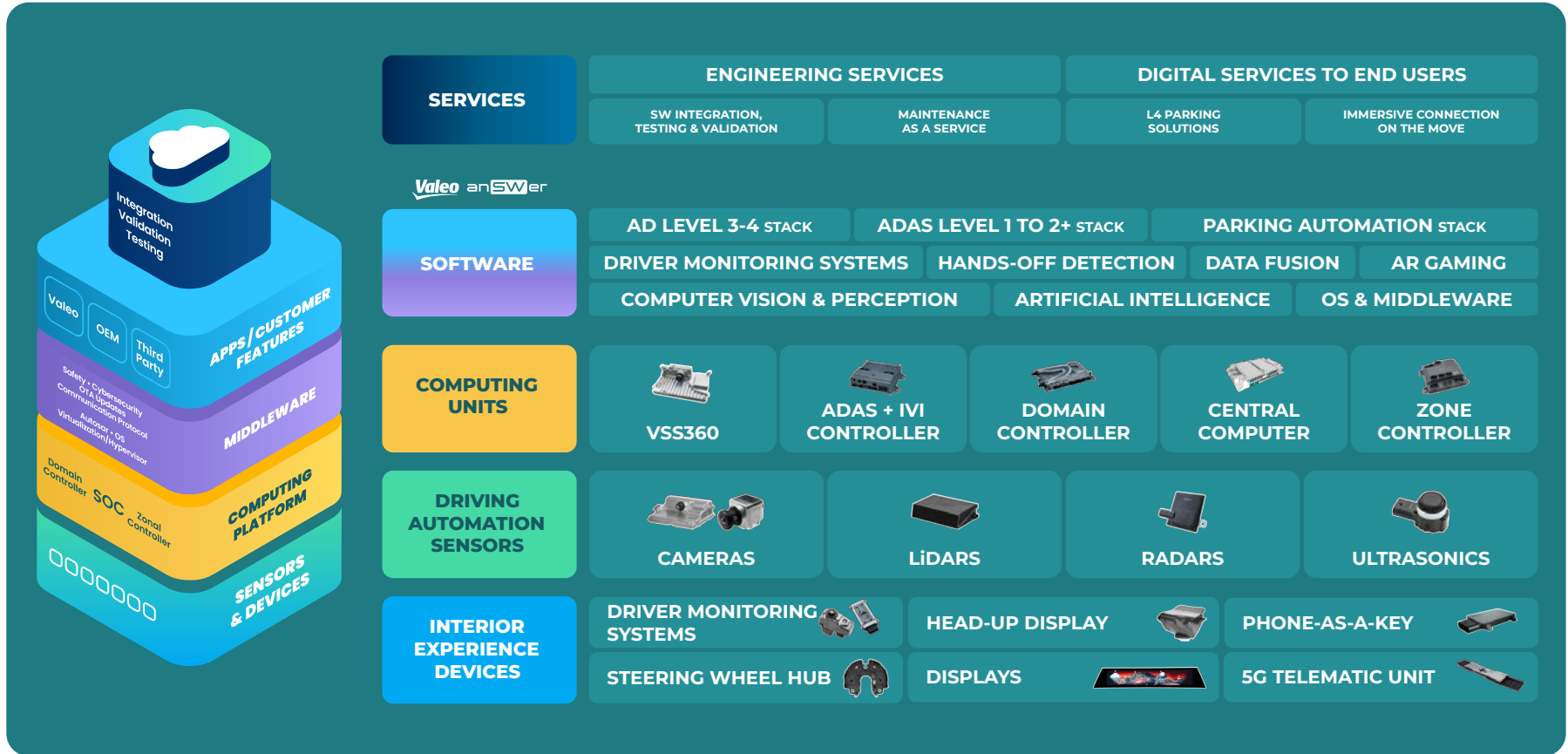
■ No ADAS ■ L1 ■ L2 ■ L2+ ■ L3/4

A BOOMING MARKET BOOSTED BY THE SDV SHIFT



1. ADAS/AD Software and Addressable Middleware
 2. Including Connectivity

OFFERING THE FULL VERTICAL FROM COMPONENTS TO SERVICES



SDV* : A PARADIGM SHIFT IN AUTOMOTIVE DESIGN

Where Software Becomes The Core Of Vehicle Functionality



BEYOND MECHANICS

Shift from hardware to software-centric developments



SAFETY & AUTOMATION

Algorithms and AI for safer and pleasant mobility



PERSONALIZED EXPERIENCE

Adapting to user preferences and needs



CONTINUOUS EVOLUTION

SW updates for new features and post purchase improvements

BRAIN IS AT THE HEART OF THE SDV TRANSFORMATION

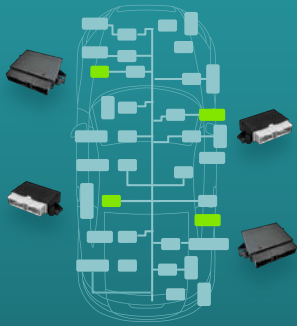
* Software Defined Vehicle

BOOSTING BRAIN ACCESSIBLE CONTENT PER CAR

Accessible Computing Units' Average Content per Car Multiplied by 10 from Distributed to Fully Centralized Architectures

Valeo Offer

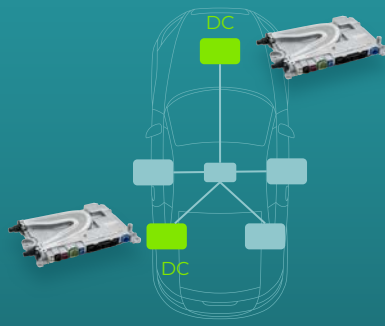
up to **150€**



DISTRIBUTED ARCHITECTURE

TODAY

up to **500€**

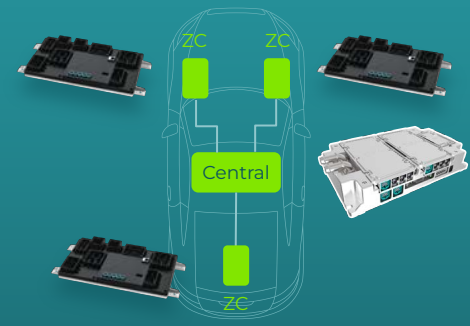


CENTRALIZED ARCHITECTURE

DOMAIN
CONTROLLERS

2028

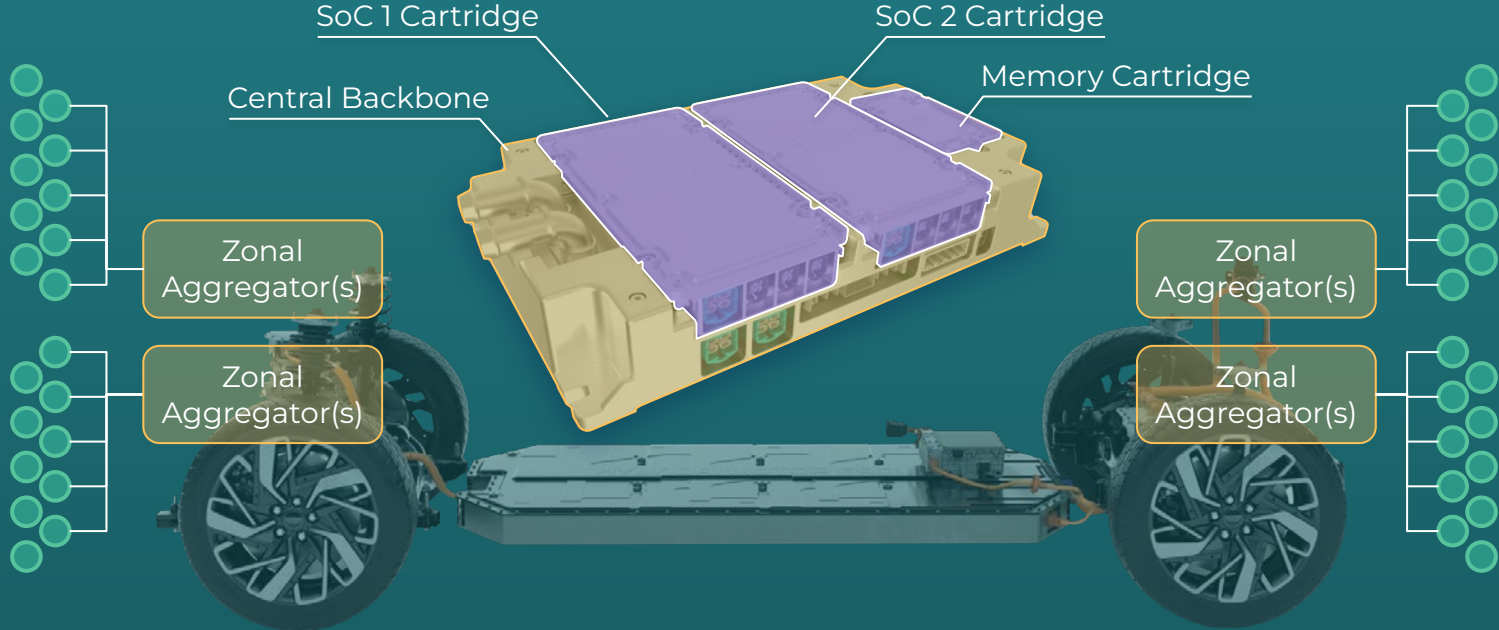
up to **1,500€**



CENTRAL & ZONE
CONTROLLERS

2030

MODULAR COMPUTE CLUSTER ARCHITECTURE



CAPTURING THE TRANSFORMATIVE COMPUTING UNITS MARKET

ZONE CONTROLLER



- High-speed data transfer and power distribution management across vehicle zones
- Strong partnership with Leoni
- Power dissipation and load balancing optimization
- "Smart fuse" functionality and support for multiple communication protocols
- Simplifies vehicle architecture - pivotal in reducing vehicle weight and CO2 emissions

DOMAIN CONTROLLER



- Scalable, high-performance solution for centralized computing in ADAS
- Designed to reduce vehicle complexity and emissions
- Tailored solutions with adaptable computational power
- Supports a broad sensor suite and advanced thermal management
- Compliance to high safety standards up to ASIL D⁽¹⁾

CENTRAL COMPUTER



- Ultimate centralization of computing power
- All domains in one device for vehicle architecture optimization
- Scalable design for massive transversal-wide implementation
- Silent advanced thermal management with liquid and passive cooling
- Long-standing experience in connectors inherited from vision controller know-how
- Compliance to high safety standards up to ASIL D⁽¹⁾

2028: **12%** ⁽²⁾

1. ASIL refers to Automotive Safety Integrity Level
2. Refers to 2030E market position

% 2028 Valeo Market Share

 Leader

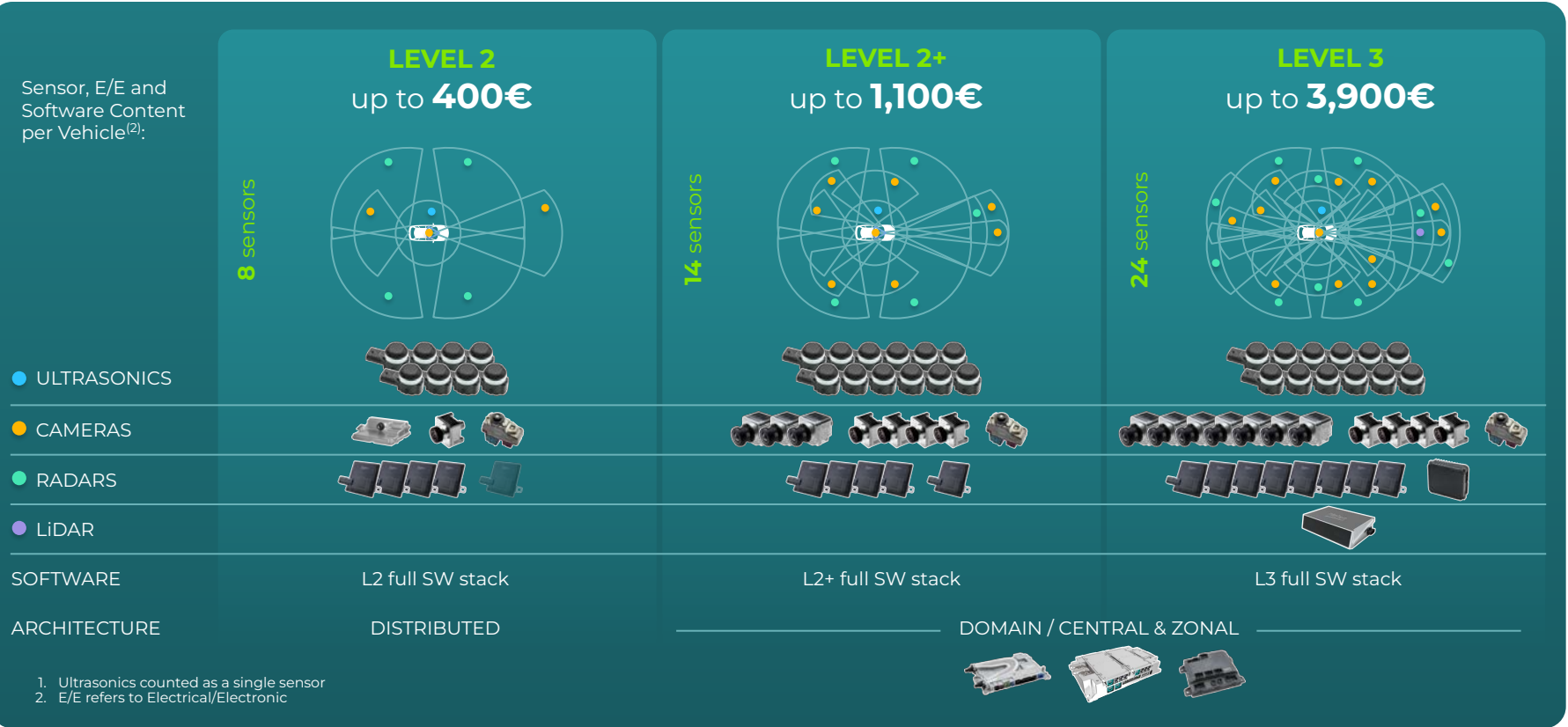
 Top 3

 Challenger

HIGHER LEVEL OF AUTONOMY

Boosting Brain Accessible Content Per Car

Sensor, E/E and Software Content per Vehicle⁽²⁾:



1. Ultrasonics counted as a single sensor
 2. E/E refers to Electrical/Electronic

ADAS BENCHMARK TECHNOLOGY PORTFOLIO

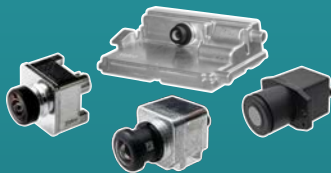
ULTRASONIC SENSORS



- **Invented by Valeo over 30 Years ago** and remains the undisputed market leader
- AI-based USV10 data interface enabling **software-defined validation**¹
- Next-gen USV10.2 reduces harness weight and lowering CO2 footprint

50% 🏆

CAMERAS



- **Smart Front Camera:** Key component in ADAS and AD systems. Powered by Mobileye's EyeQ and Infineon technology
- Leader in **satellite camera technology**
- **360-degree visibility**, driving safety and convenience
- Advanced **thermal imaging**, to detect pedestrians, animals and obstacles on the road

25% 🏆

RADARS



- **Pioneer** in Mid-Range Radar Sensor technology
- Solutions for both ADAS and Automated Parking applications
- Cutting-edge radar technology backed by **30 years of expertise** and strong industry partnerships
- **Mobileye** and **Valeo** partnering to deliver **next-gen imaging radars**

5% 🏢

LiDARS



- Long Range LiDAR enabling **130kph L3-L4 automation**
- High performance point cloud validated through several orders
- **SCALA™ Gen 3** offer superior range-resolution at 12.5 million points/s
- Reliable small objects detection for high speed highway driving

25%² 🏆 40%³ 🏆

1. AI refers to Artificial Intelligence

2. Refers to the global market share

3. Refers to the global market share excluding China

% 2028 Valeo Market Share

🏆 Leader

🏢 Top 3

🏗️ Challenger

DELIVERING CONNECTED & IMMERSIVE INTERIOR EXPERIENCE SOLUTIONS

ADAS and IX Combine to Deliver Enhanced Safety, Ease of Use and Interactivity



INTERIOR COCOON

Driver and cabin monitoring for enhanced safety

2028: **21%** 🏆



HEAD-UP DISPLAY

AR HUD provides the driver with key information at the right place¹

2028: **13%** 🏆²



PHONE AS A KEY

Ultra-Wideband Phone-As-A-Key or key fob bring comfort and security

2028: **11%** 📶



STEERING WHEEL HUB

Hand-Off detection for reliable transition from ADAS to AD

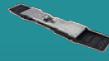
2028: **18%** 🏆



INTERACTIVE SURFACES

Seamless wide displays and smart surfaces for intuitive HMI³

2028: **5%** 📶



TELEMATICS

Connectivity for connected ADAS/AD and connected people

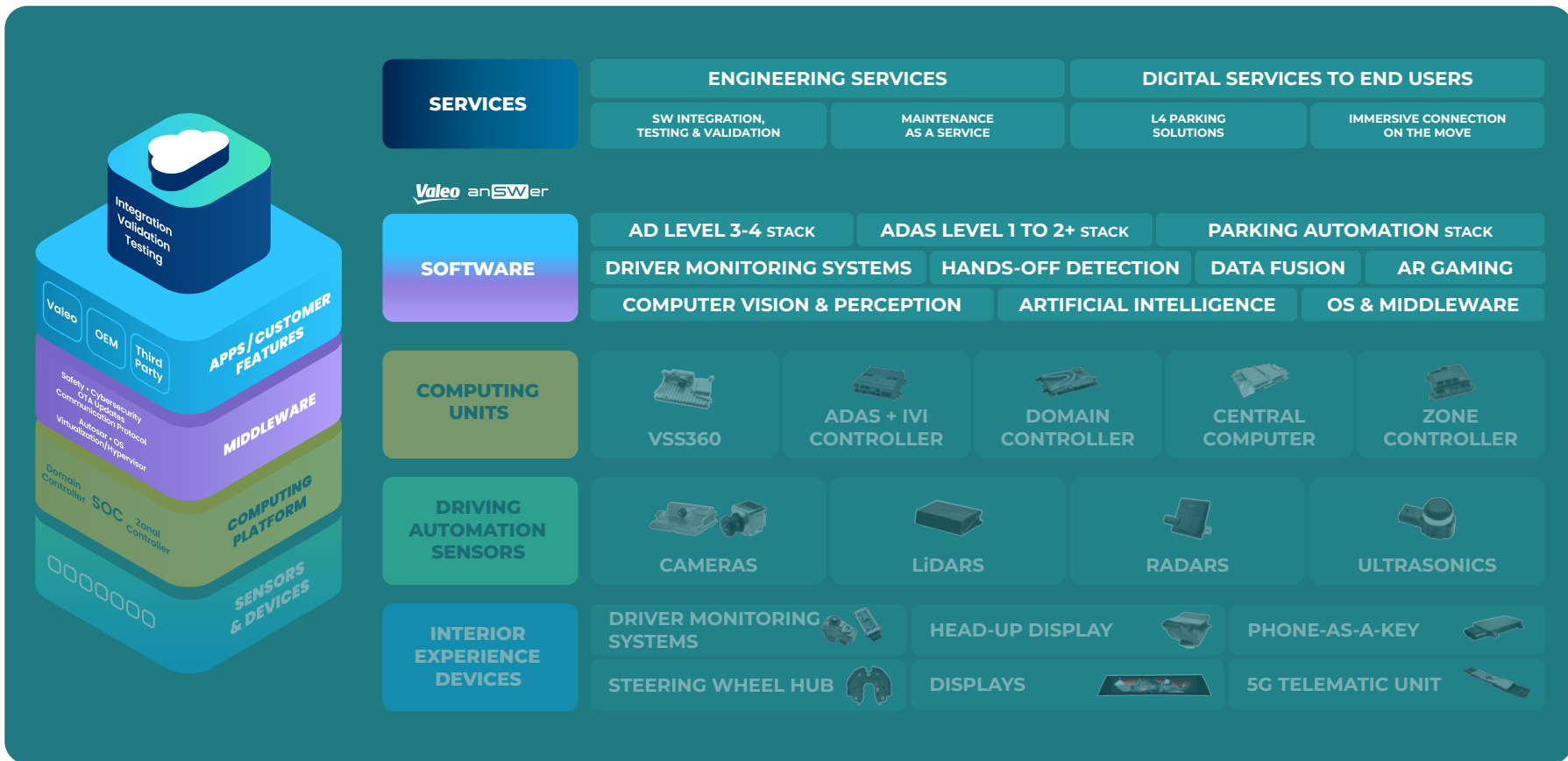
2028: **12%** 🏆

1. AR HUD refers to Augmented Reality Head-Up Display
2. Refers to 2030E market position

3. HMI refers to Human-Machine Interface

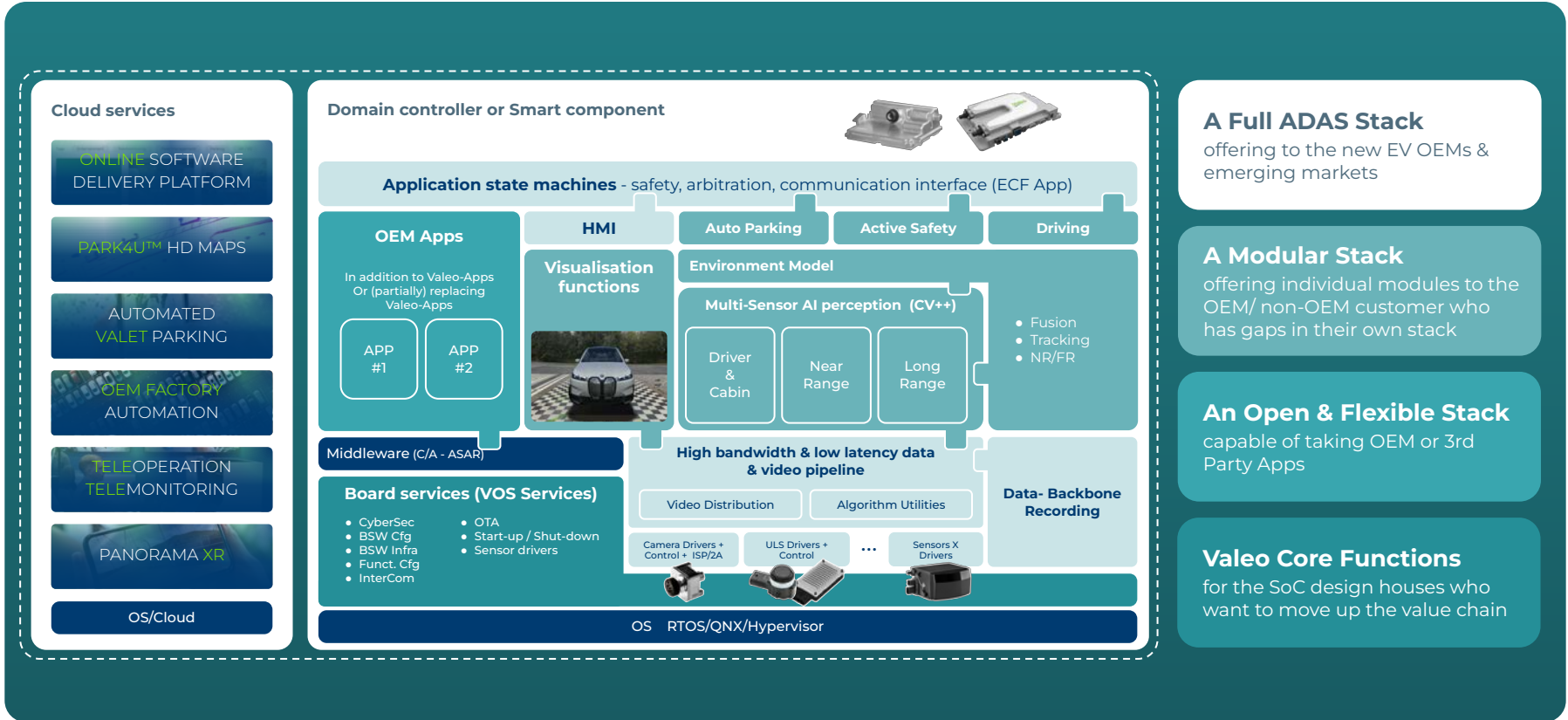
% 2028 Valeo Market Share 🏆 Leader 🏆 Top 3 📶 Challenger

OFFERING THE FULL VERTICAL FROM COMPONENTS TO SERVICES



FULL CONSISTENT ADAS STACK

Modular Subsets Open To Support Customer Development



A Full ADAS Stack
offering to the new EV OEMs & emerging markets

A Modular Stack
offering individual modules to the OEM/ non-OEM customer who has gaps in their own stack

An Open & Flexible Stack
capable of taking OEM or 3rd Party Apps

Valeo Core Functions
for the SoC design houses who want to move up the value chain

MEET DIVERSE CUSTOMER NEEDS

Maintain Stable Development Ecosystem While Enabling Freedom Of SoC Choice



SOFTWARE PRODUCT
anSWer SUITE

READY-TO-USE APPS

- Complete ADAS stack incl. parking, safety and driving apps
- State-of-the-art functionality
- Hardware agnostic perception
- Ability to integrate 3rd party SW
- Maintenance and OTA updates



SOFTWARE PLATFORM
anSWer STUDIO

SOFTWARE ASSETS SUBSCRIPTION

- Extensive asset library
- Always up-to-date
- Always maintained and supported
- Easy and cost effective



SOFTWARE SERVICES
anSWer SERVICES

ENGINEERING & DIGITAL SERVICES

- Software integration
- Maintenance as a Service
- HD Parking Maps Service
- SIL as a Service
- SW factory development and operation
- Validation services (AD-Tech)

STRONG OPERATIONAL FOCUS



**PERFORMANCE AND
QUALITY FOCUS**



**RESILIENT
SUPPLY CHAIN**



AGILE OPERATIONS



AI-BOOSTED WORLD



**ON-TIME CUSTOMER
PROJECT DELIVERY**



**DISCIPLINED EXECUTION
AND MONITORING**

ADAPTING TO UNCERTAINTY



**POWERTRAIN
AGNOSTIC**



**MODEL
AGNOSTIC**

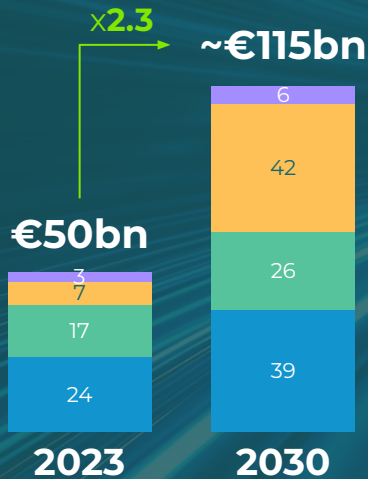


**GEOGRAPHICALLY
& CUSTOMER
BALANCED**

STRONG ECOSYSTEM S



BRAIN DIVISION IS PERFECTLY POSITIONED TO CAPTURE THE HUGE MARKET OPPORTUNITY



SOFTWARE

AD LEVEL 3-4 STACK	ADAS LEVEL 1 TO 2+ STACK	PARKING AUTOMATION STACK	
DRIVER MONITORING SYSTEMS	HANDS-OFF DETECTION	DATA FUSION	AR GAMING
COMPUTER VISION & PERCEPTION	ARTIFICIAL INTELLIGENCE	OS & MIDDLEWARE	

COMPUTING UNITS



DRIVING AUTOMATION SENSORS



INTERIOR EXPERIENCE DEVICES





SMART TECHNOLOGY
FOR SMARTER MOBILITY