



A glowing heart-shaped microchip is the central focus, resting on a complex circuit board. The chip and board are illuminated with a warm, golden light, contrasting with the cool blue tones of the background. The background is filled with out-of-focus bokeh lights, creating a sense of depth and a futuristic, high-tech atmosphere. The overall composition is centered and balanced, with the heart shape symbolizing passion and innovation in technology.

Welcome to the Melexis capital markets day 2023

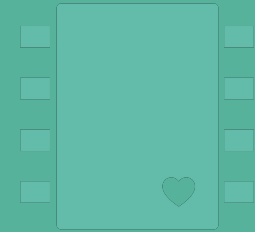


Disclaimer : Except for those statements that report the Company's historical results, the statements being made are forward looking statements. Actual results could differ materially from those projected in the forward looking statements. Factors which could cause actual results to differ from expectations include the following: volatility in supply and demand affecting revenues and market prices, price and availability of silicon foundry, assembly and test prices, assembly and test subcontract capacity required to meet financial targets and/or meet backlog requirements, risks and delays associated with bringing up new production capabilities or with deliveries from subcontractors, timing and market acceptance of new products, increased expenses associated with new product acceptance of new products, increased expenses associated with new product introductions of process changes, delays in developing or achieving volume production of new products, which can result in delays or failure to contribute to revenues and profits, ability of the Company to maintain its customer and vendor base and delays in and/or inability in raising additional capital.

Agenda

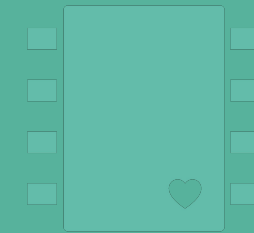
09:30	Arrival and coffee	
10:00	Welcome and introduction Melexis' playground for the next 5 years	Marc Biron, Vincent Hiligsmann and Karen van Griensven
10:45	Break	
11:00	EV powertrain	Syrine Mansour and Bruno Boury
11:15	EV thermal management	Laurent Otte and Marc Lambrechts
11:30	EV battery	Magnus Ahlstedt
11:45	E-braking and E-steering	Antonius Duisters and Karen Stinckens
12:00	Lighting	Michael Bender
12:15	Questions from the audience	
12:45	Lunch	
13:15	Beyond automotive	Vincent Hiligsmann and Gael Close
14:00	Questions from the audience	
14:15	Conclusion	Marc Biron
14:30	Rotation in groups: Production tour, demos and networking reception	
17:00	End of the day	

Trends



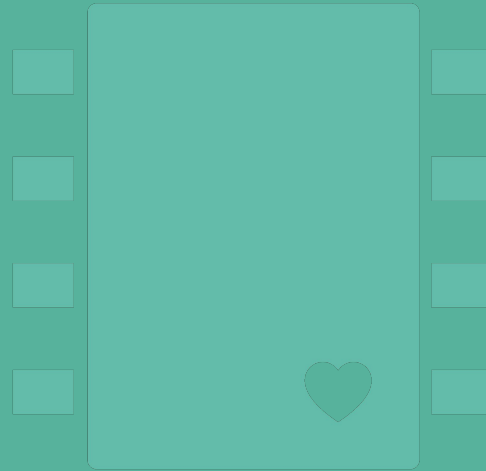
Electrification

Electrification



China's EV leadership

China's EV leadership

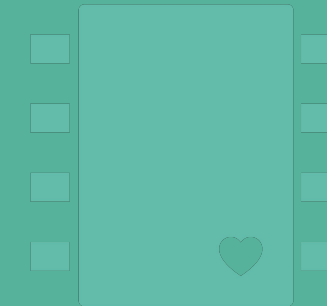


Climate change

Climate change

Competition for talent

Competition for talent

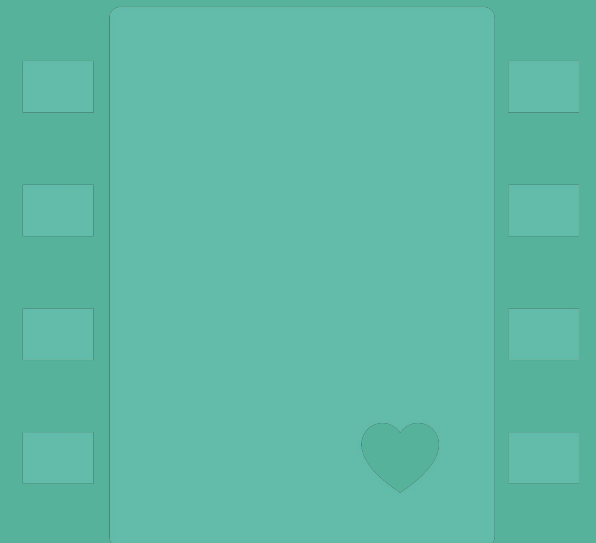


Aging and increasing world population

Aging and increasing world population

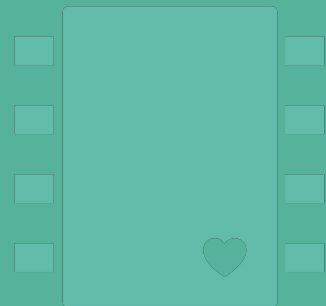
Artificial intelligence

Artificial intelligence



Changing mobility

Changing mobility



Strategy

Technology

Automotive industry → Innovation → New applications

Beyond automotive → Digital health, Robotics,
Alternative mobility, Sustainable world

Partnerships

Customers, suppliers, research and educational world

Increased knowledge, broadening horizons, sharing
inspiration

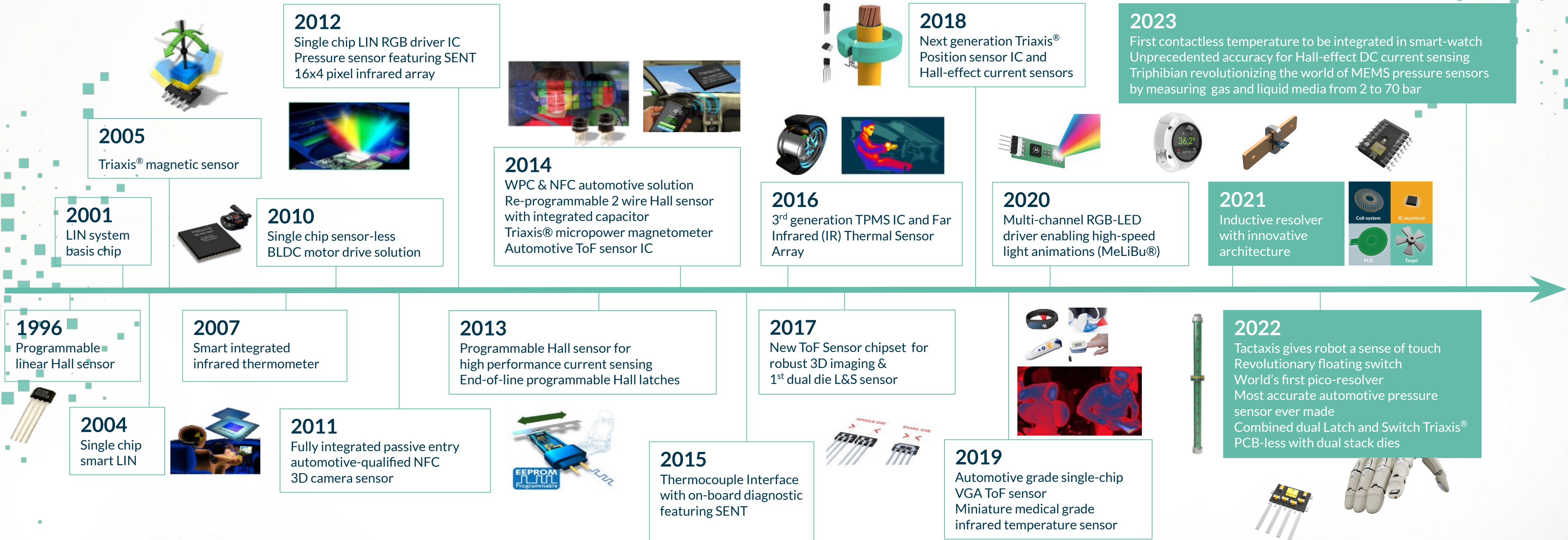
People

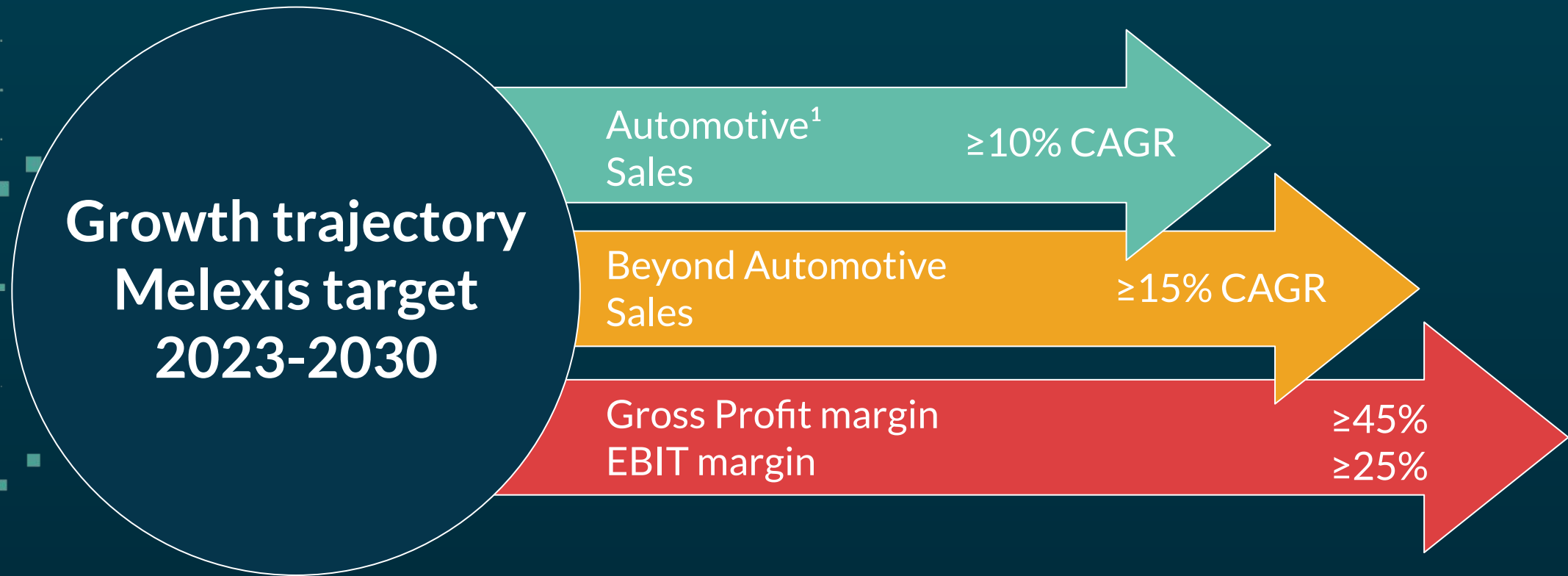
Attract the best imaginable talent

A vibrant, exciting and inclusive work
environment

Innovation with Heart

Industry first from Melexis





Growth drivers

EV powertrain
EV thermal management

EV battery
E-braking & E-steering

Lighting

Sustainable World
Alternative Mobility

Robotics
Digital Health

(¹) Assumption: 0% growth for the global vehicle production

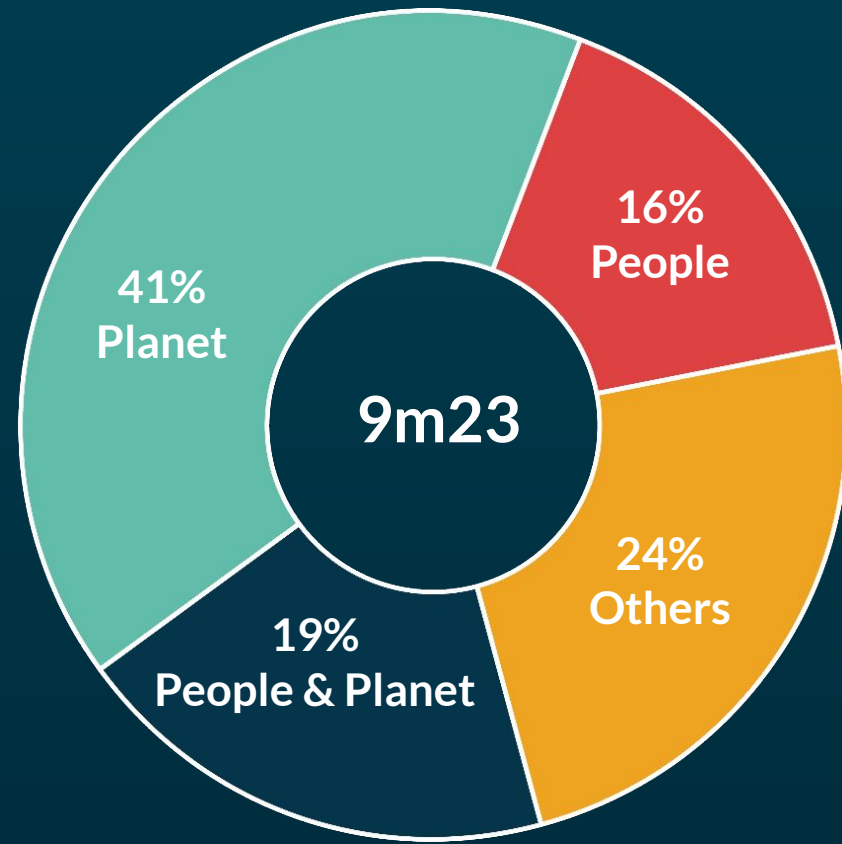
New Kuching building answers to global challenges



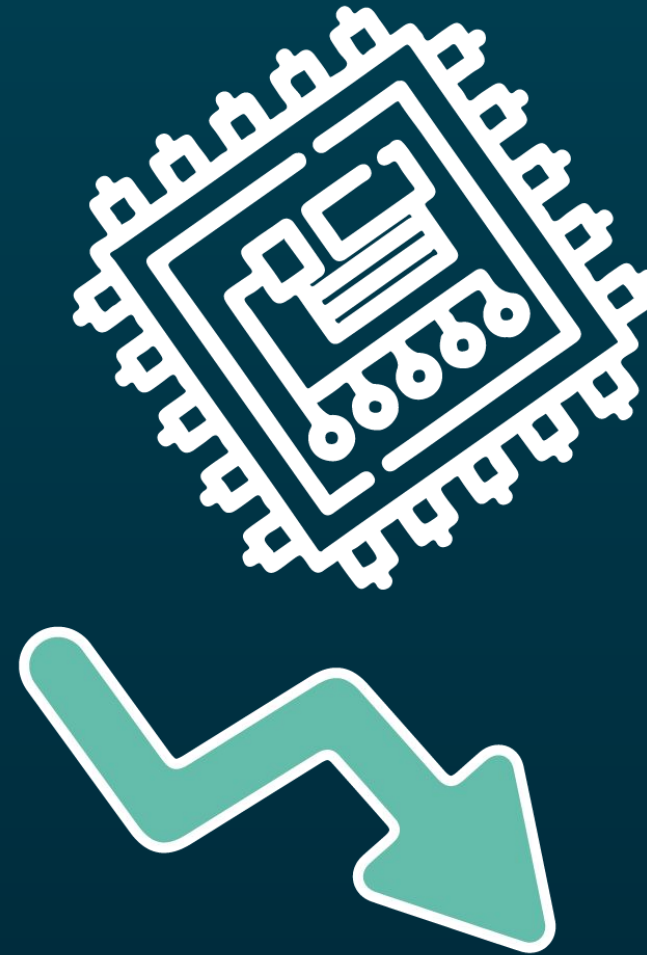
Sophia-Antipolis



ESG



**Sustainable Portfolio
(% Sales)**



**40% less CO₂ emissions
per chip by 2030**



Board of directors (50/50)

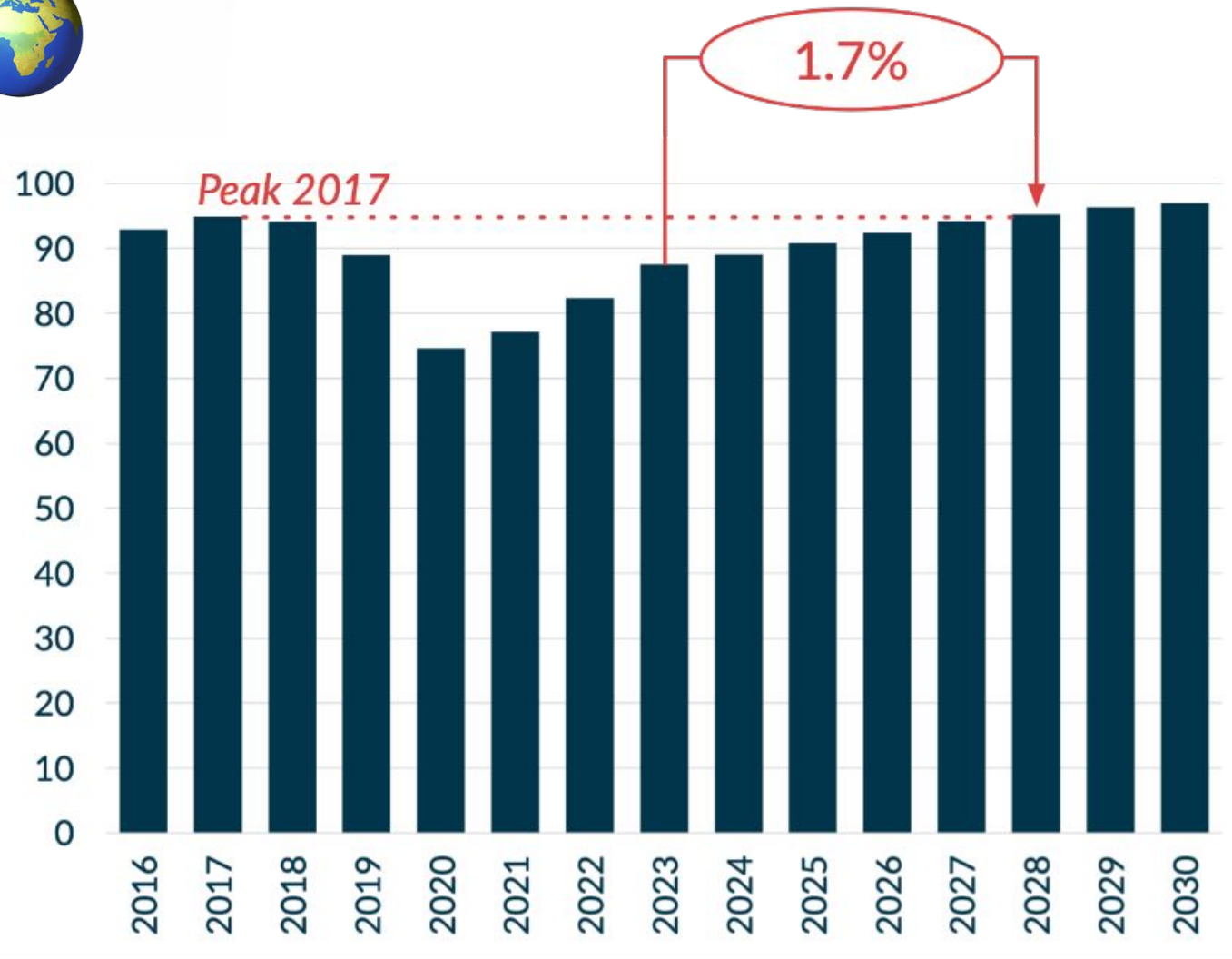
AUTOMOTIVE



Automotive Market



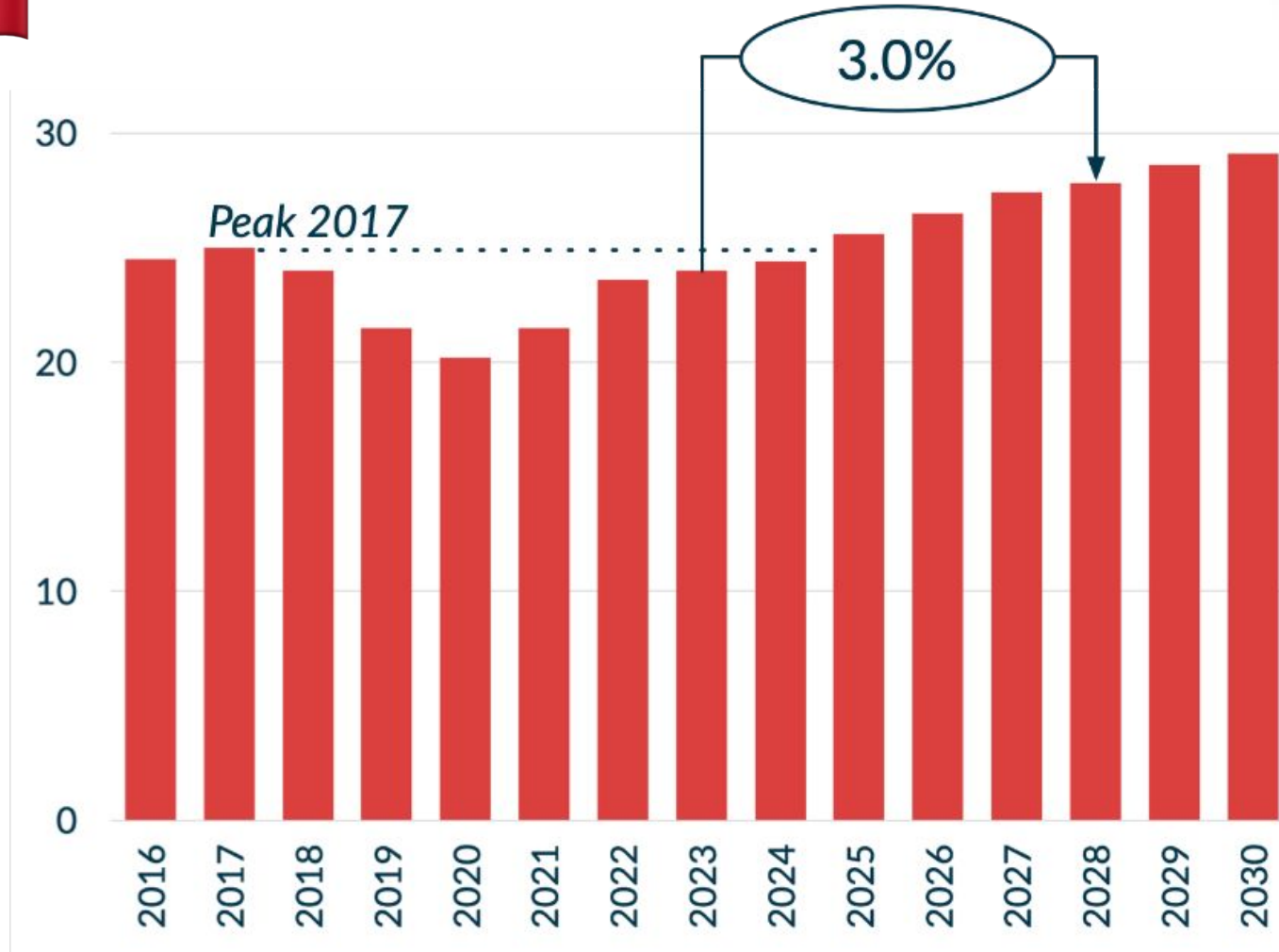
Global Vehicle Production (Million Units)



Source: S&P Global Mobility - Light Vehicle Alternative Propulsion Forecast (6/2023)



China Vehicle¹ Production (Million Units)



(¹) Passenger Vehicle (excl. Commercial Vehicle)

Source: China Association of Automobile Manufacturers [CAAM] (2023)

Major Automotive Trends

①

Electrification

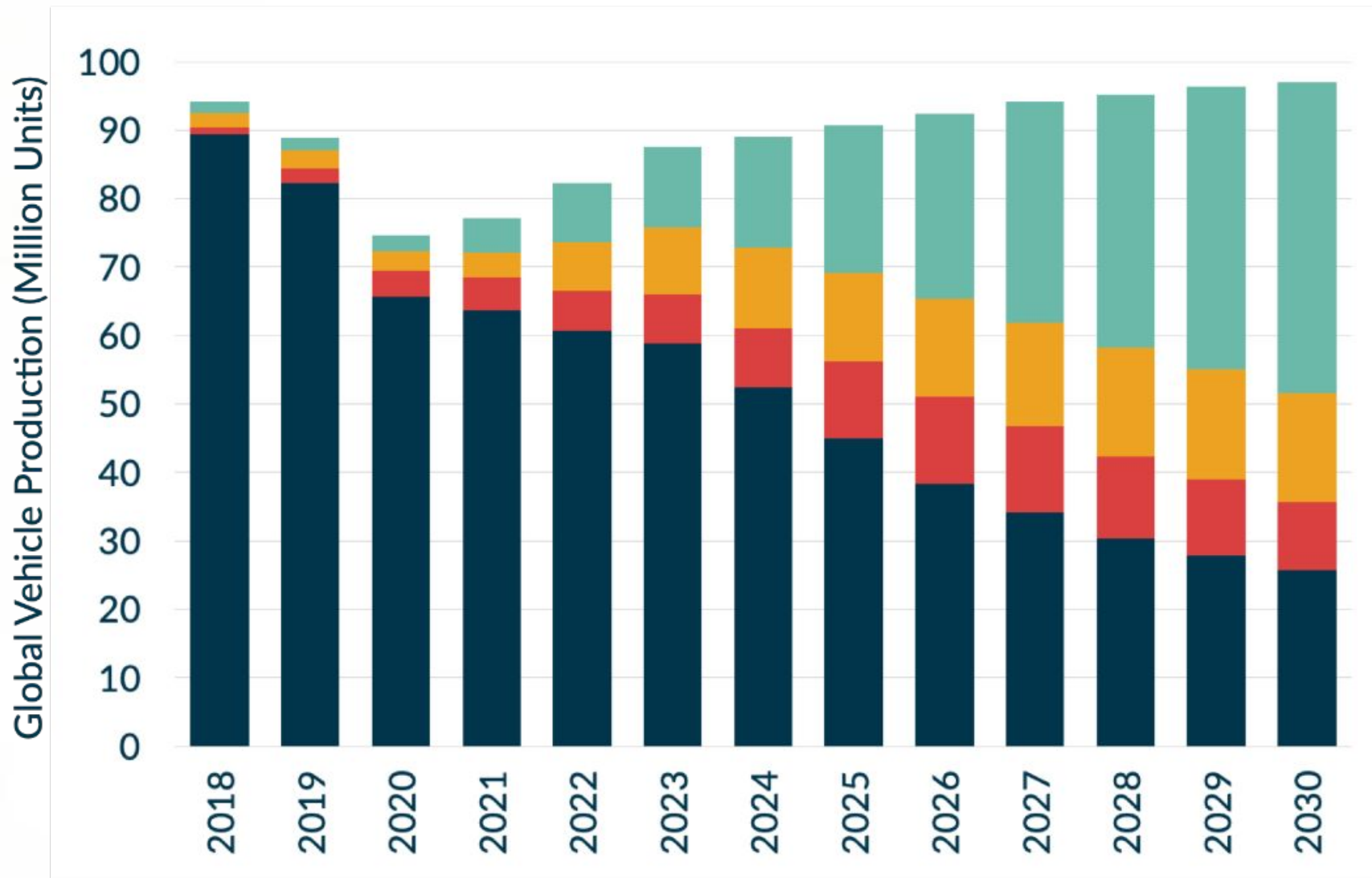
②

Premiumization

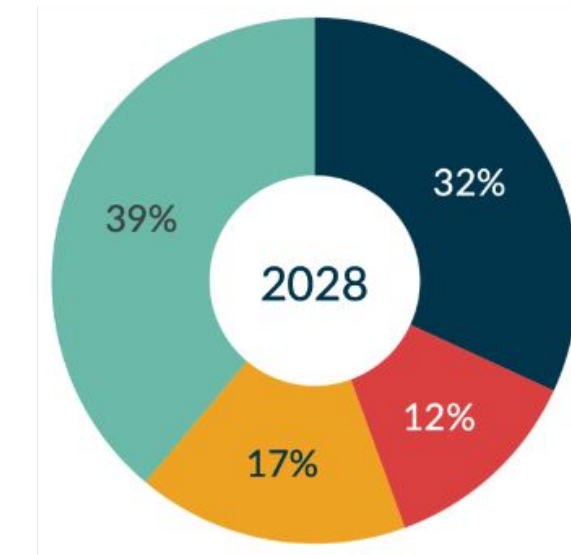
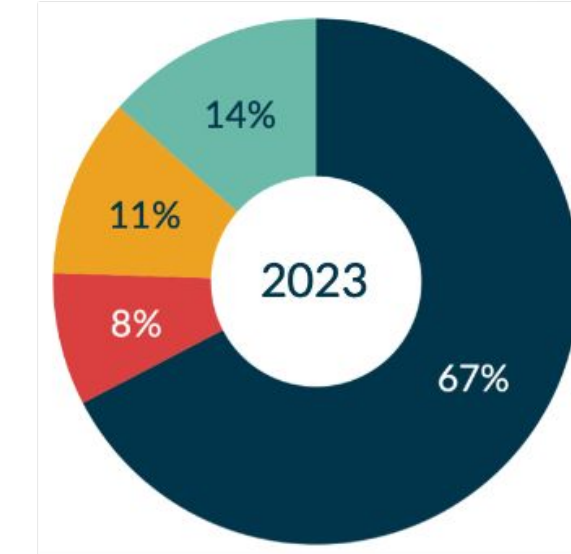
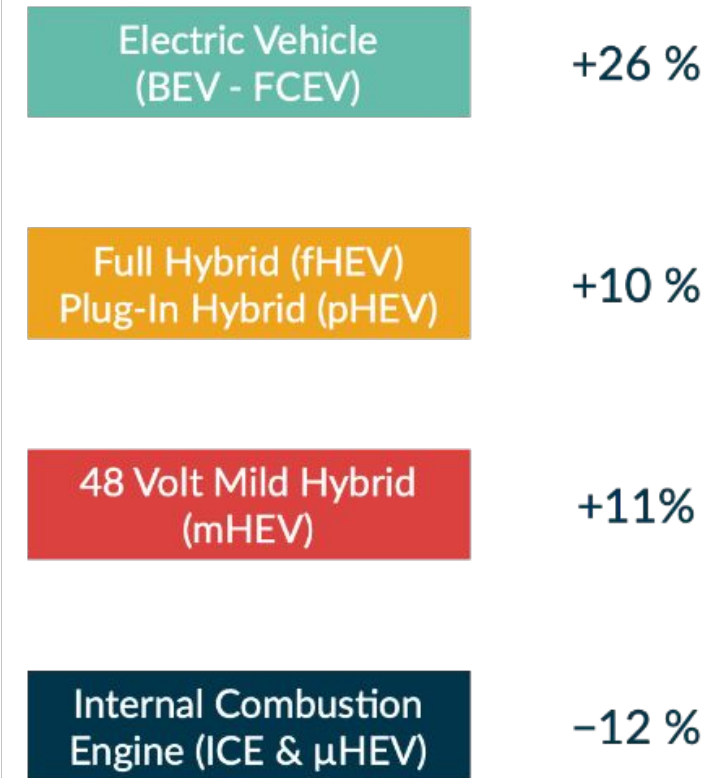
③

ADAS

① Electrification

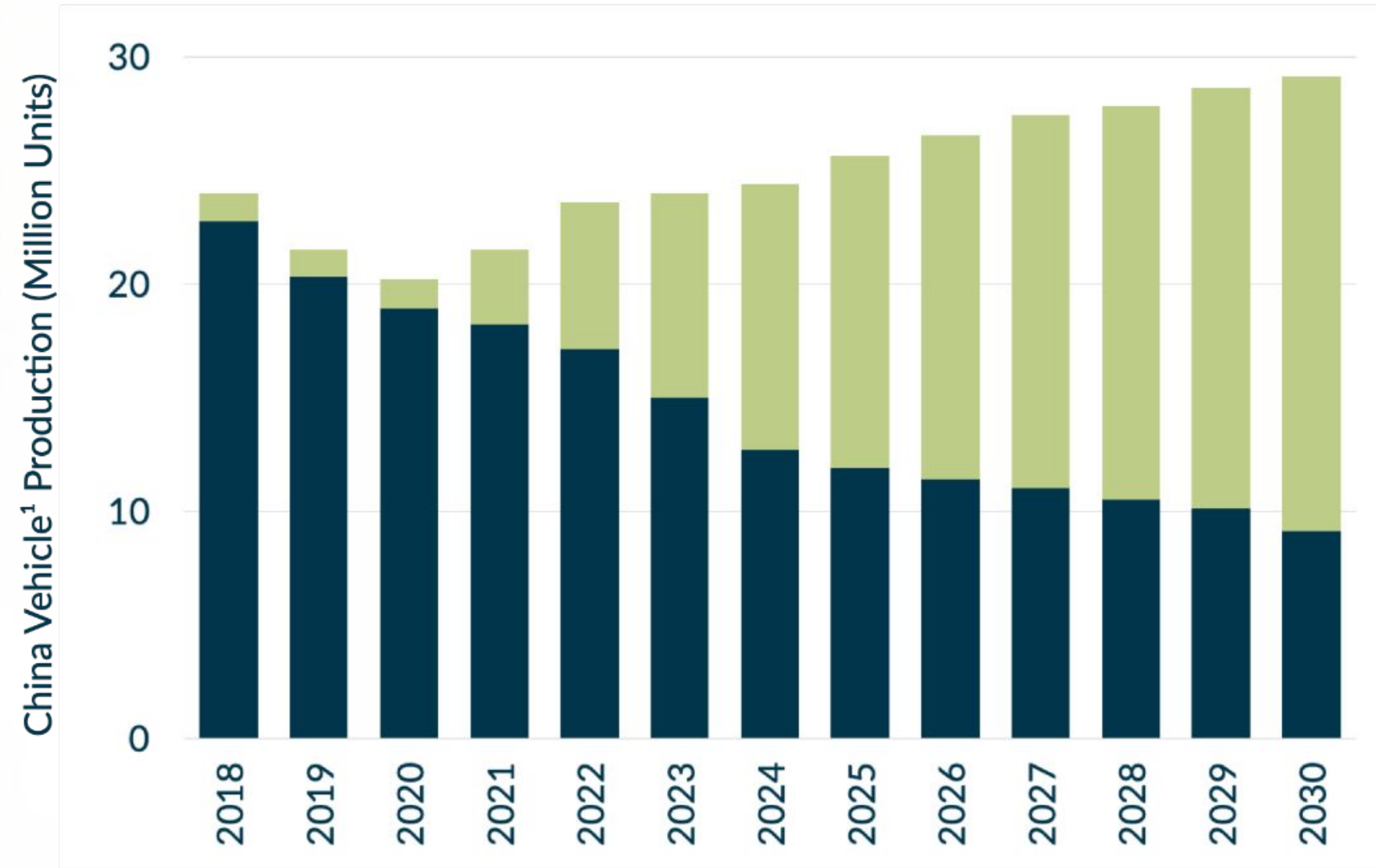


CAGR 2023-2028



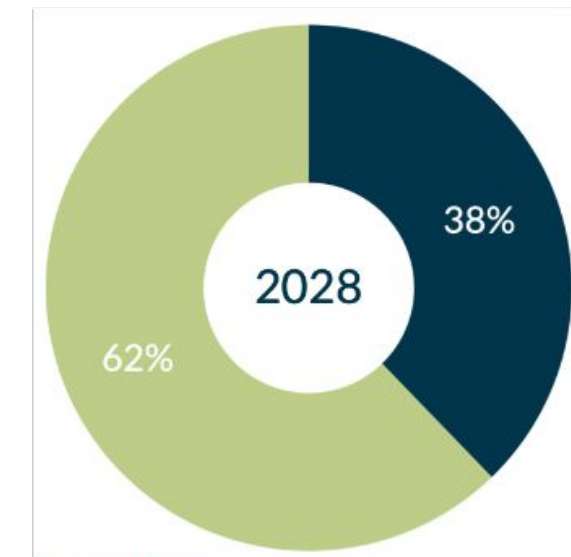
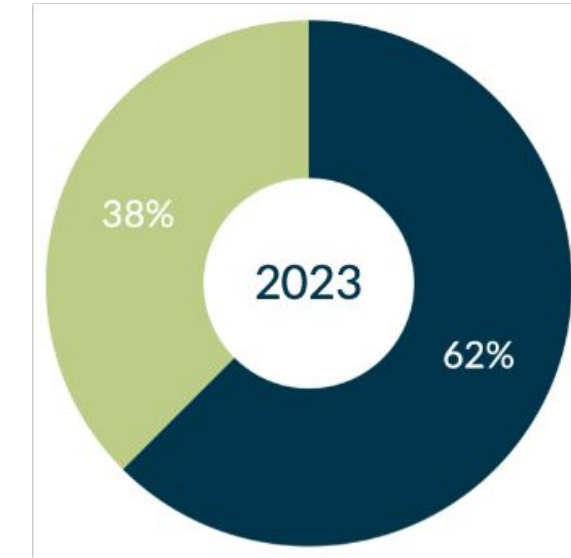
Source: S&P Global Mobility - Light Vehicle Alternative Propulsion Forecast (6/2023)

① Electrification



Source: China Association of Automobile Manufacturers [CAAM] (2023)

CAGR 2023-2028

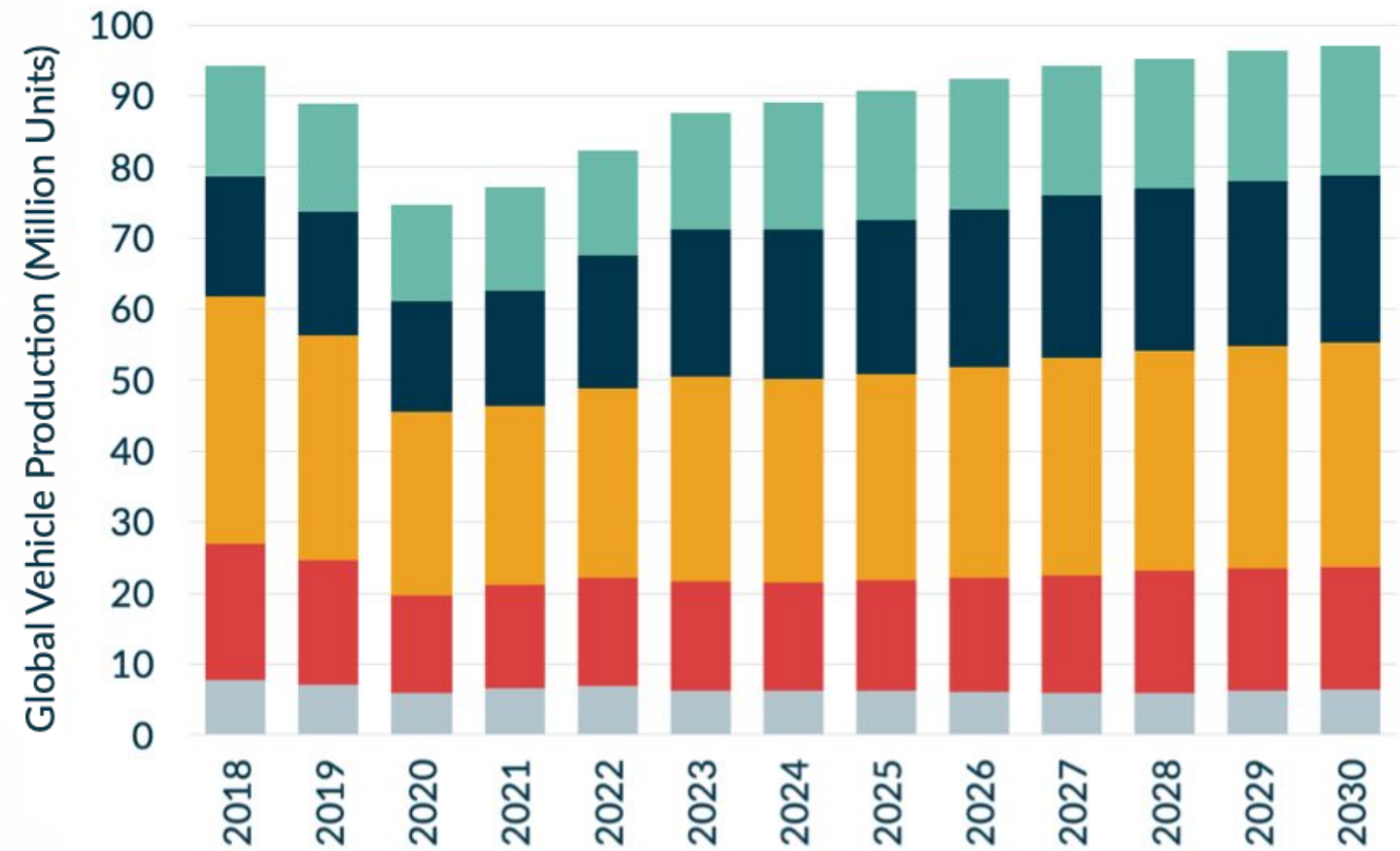


⁽¹⁾ Passenger Vehicle (excl. Commercial Vehicle)

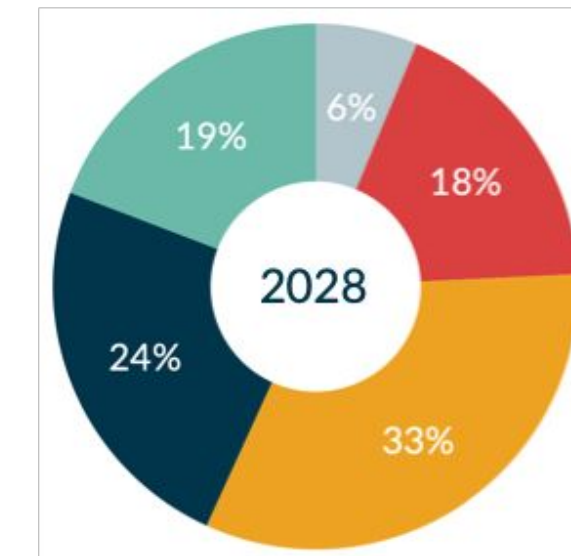
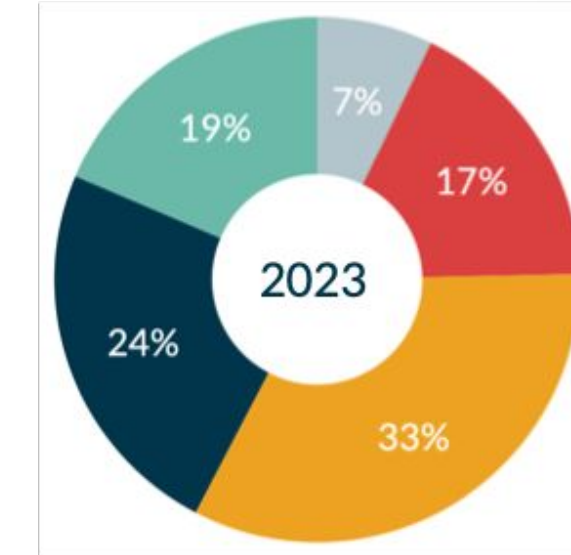
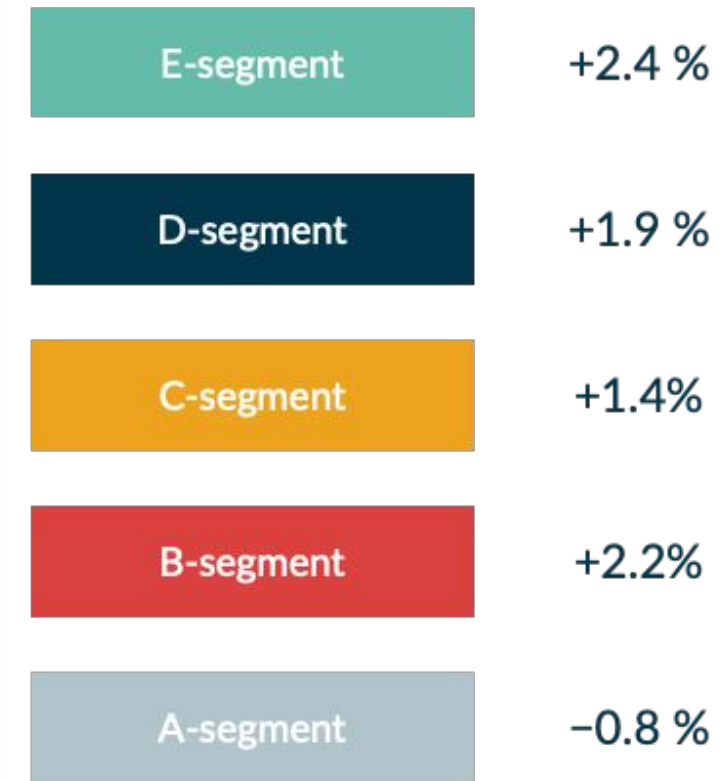
⁽²⁾ NEV = New Energy Vehicles (incl. BEV, FCEV, pHEV, fHEV)

⁽³⁾ ICE = Internal Combustion Engine

② Premiumization

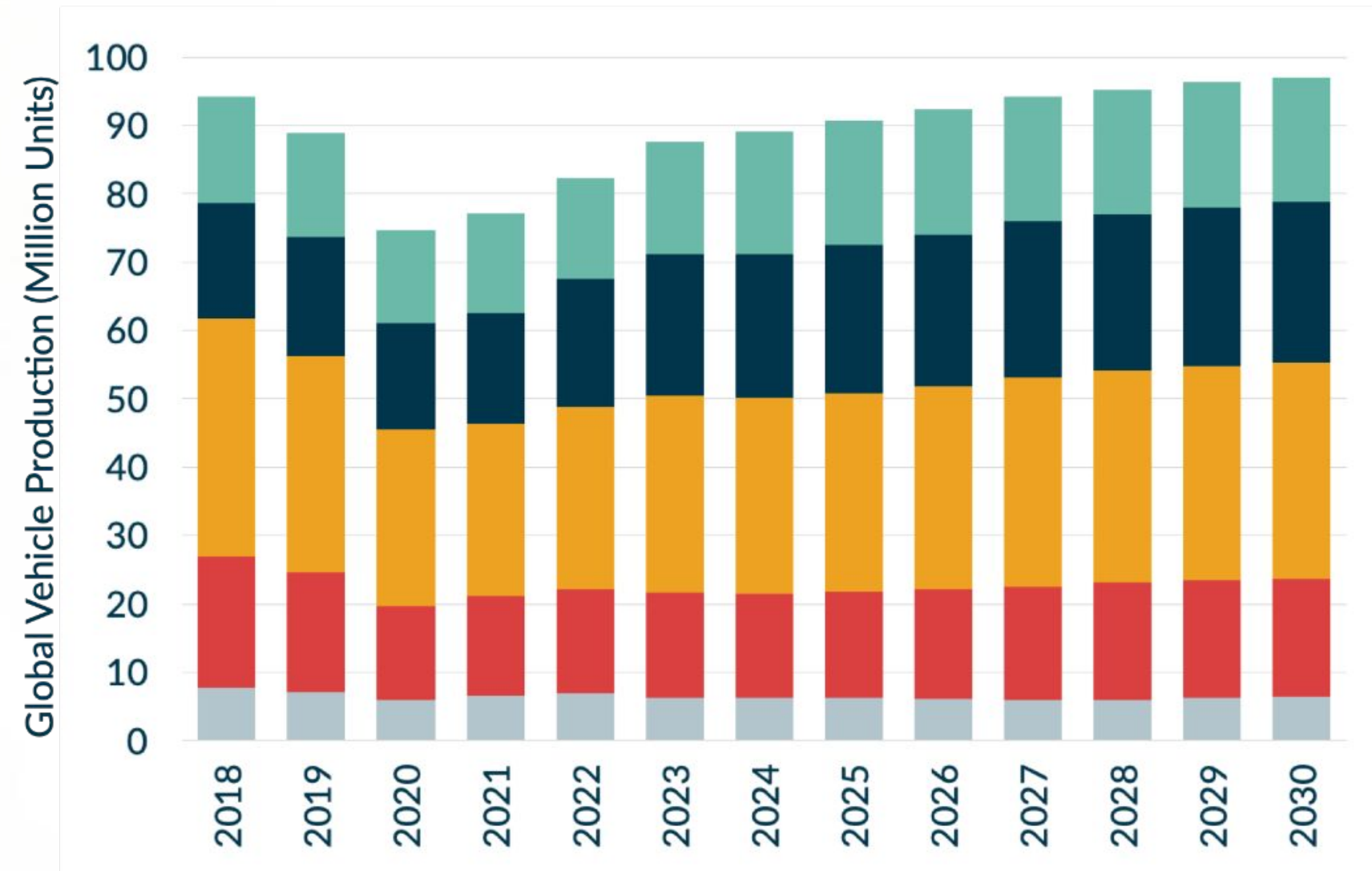


CAGR 2023-2028

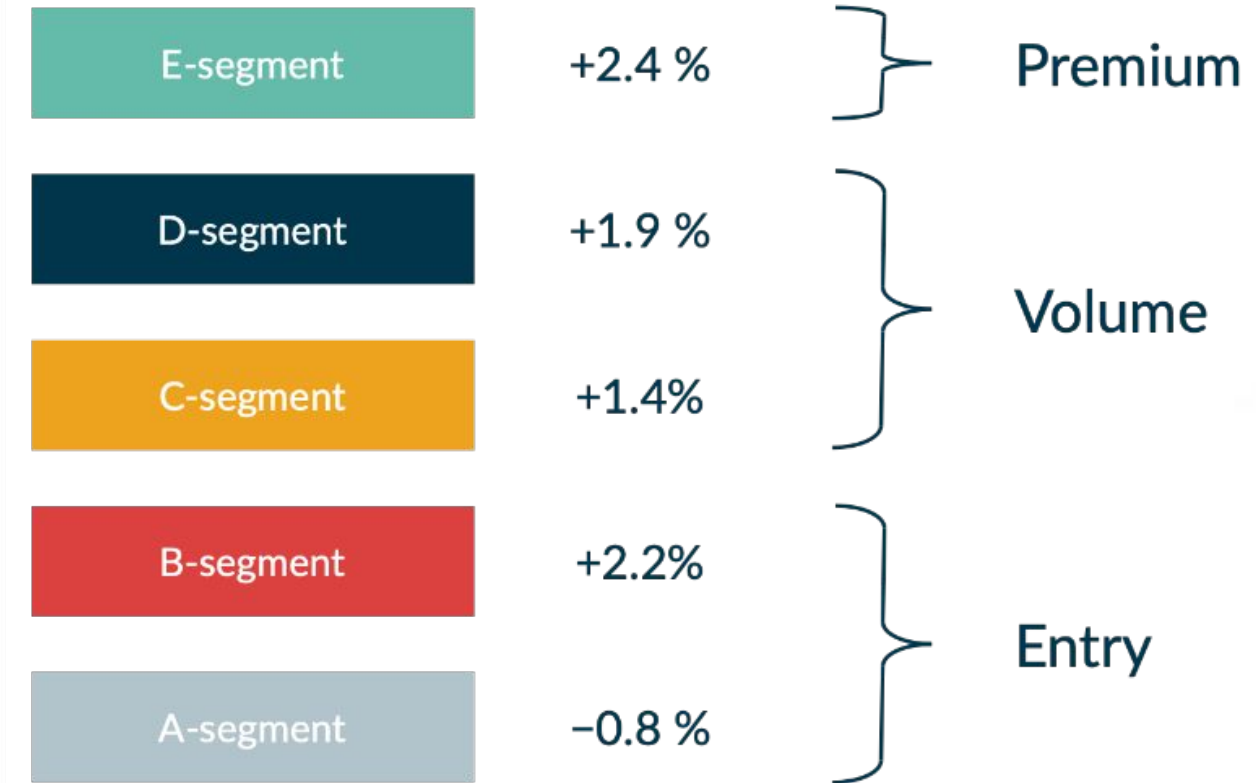


Source: S&P Global Mobility - Light Vehicle Production Forecast (10/2023)

② Premiumization

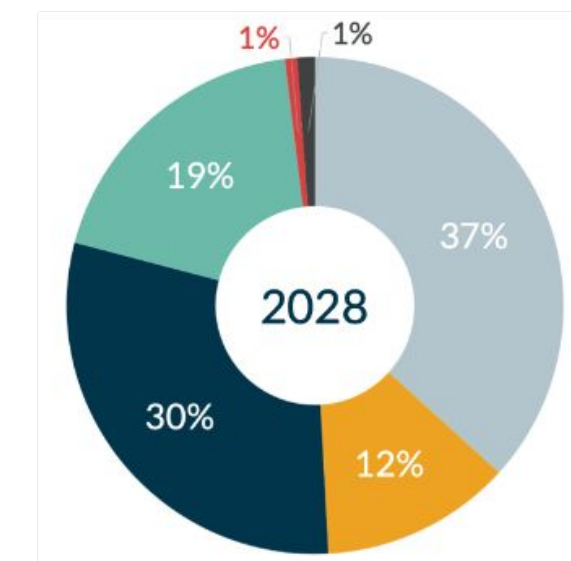
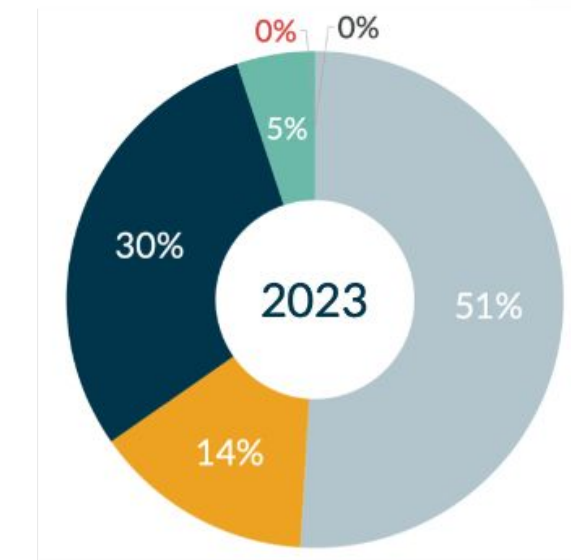
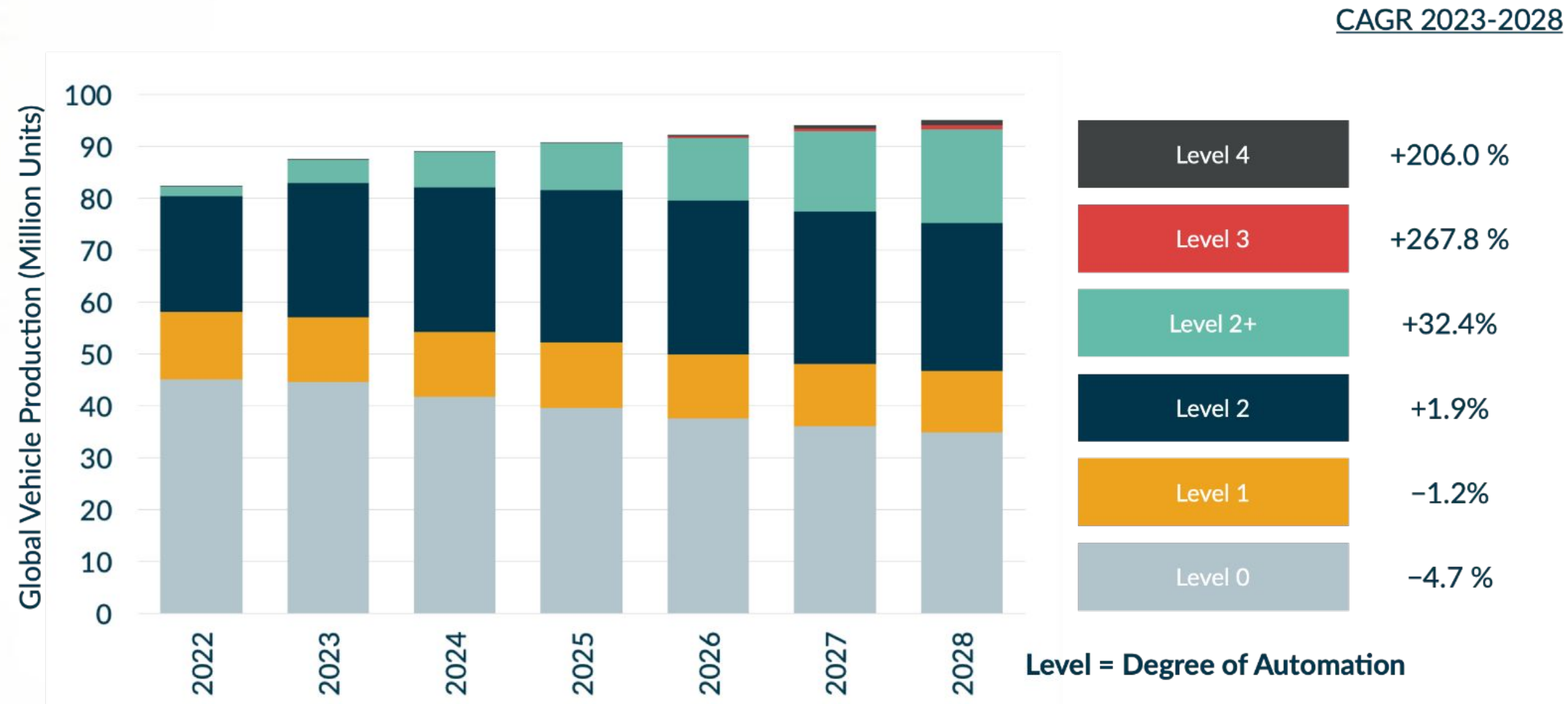


CAGR 2023-2028



Source: S&P Global Mobility - Light Vehicle Production Forecast (10/2023)

③ ADAS (Advanced Driver Assistance System)

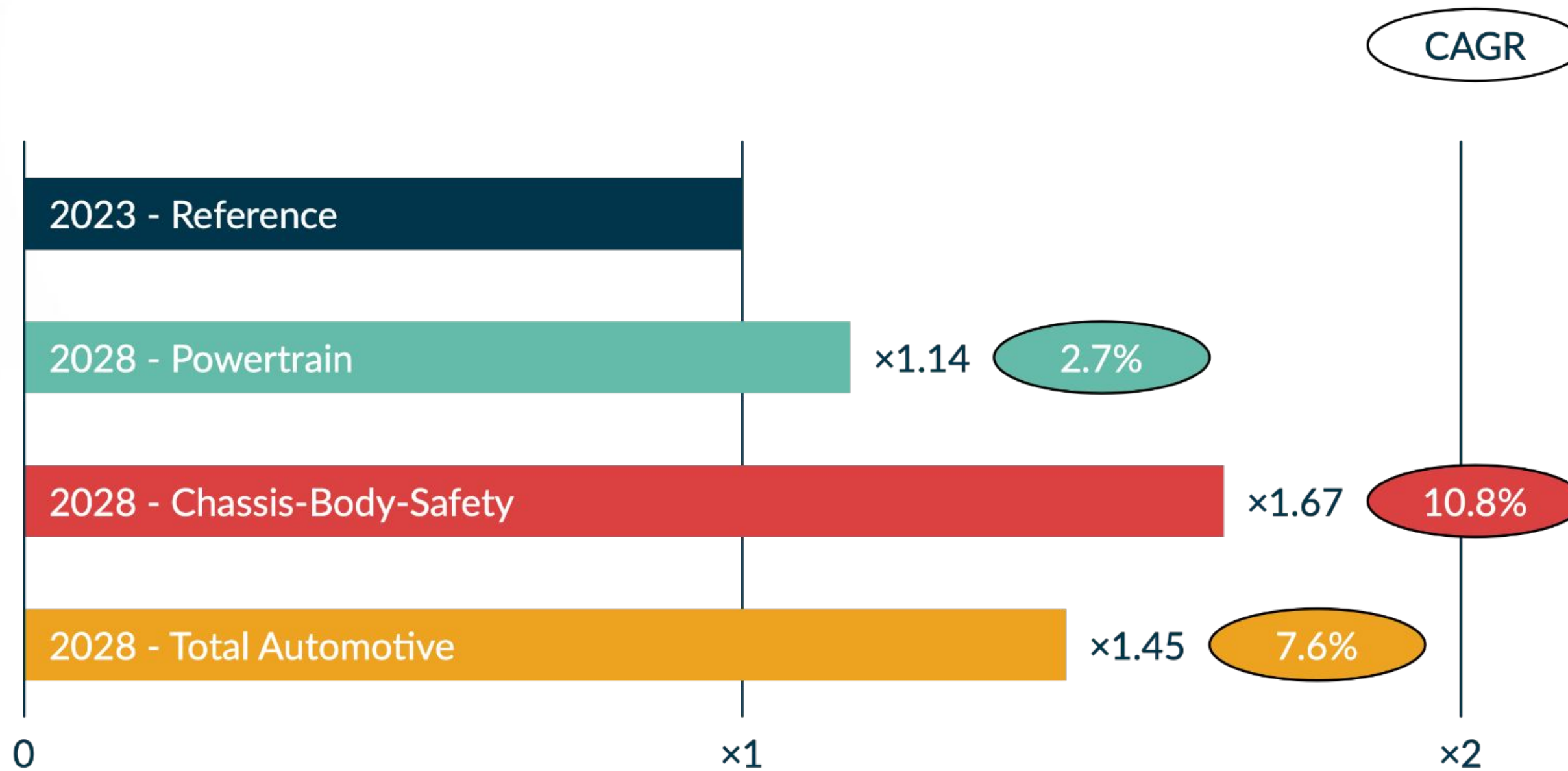


Source: S&P Global Mobility - Autonomy Level Forecast (11/2023)

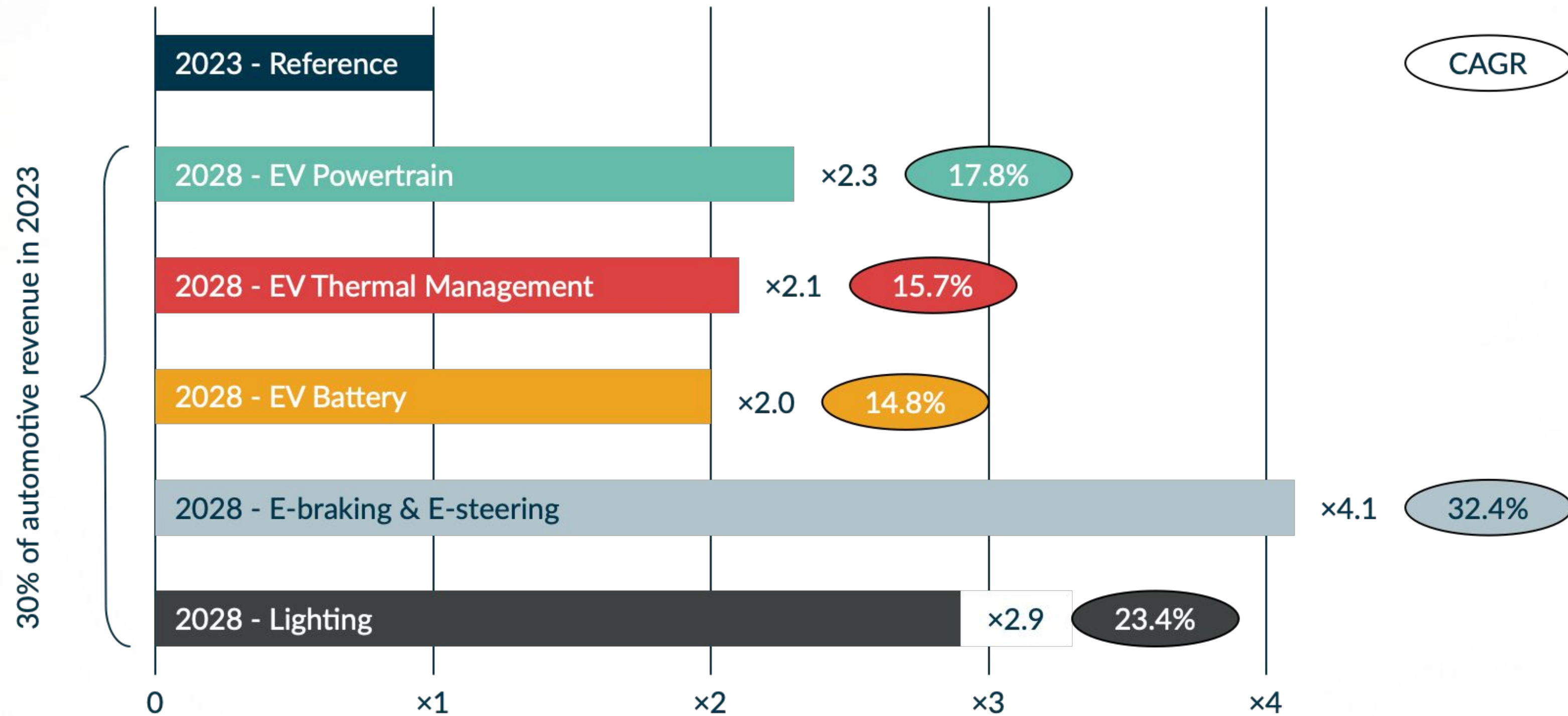
Serviceable Addressable Market (Euro)

- Updated view based on a thorough bottom-up sockets model
- Assumptions:
 - More conservative than S&P Global (former IHS Markit)
 - Global vehicle production: CAGR = 0% (vs. 1.7% @ S&P Global)
 - Electric Vehicle: CAGR = 18% (vs. 26% @ S&P Global)
 - Powertrain: split vs. Electrification types
 - Body-Chassis-Safety: split vs. Entry, Volume and Premium segments
- Resilience Test vs. Electrification penetration: less than $\pm 2\%$ variation

Serviceable Addressable Market (Euro)

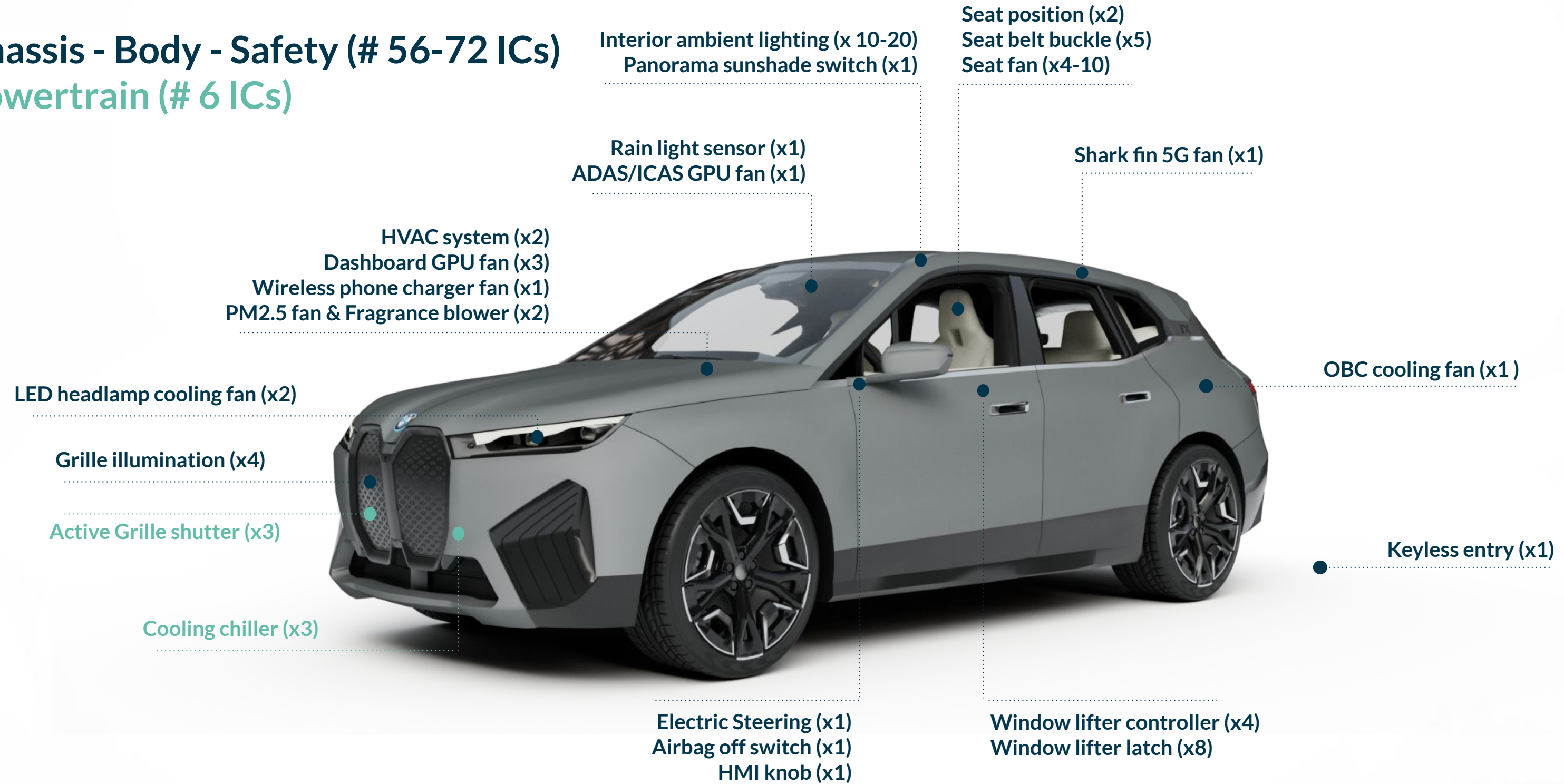


Serviceable Addressable Market (Euro)



BMW iX

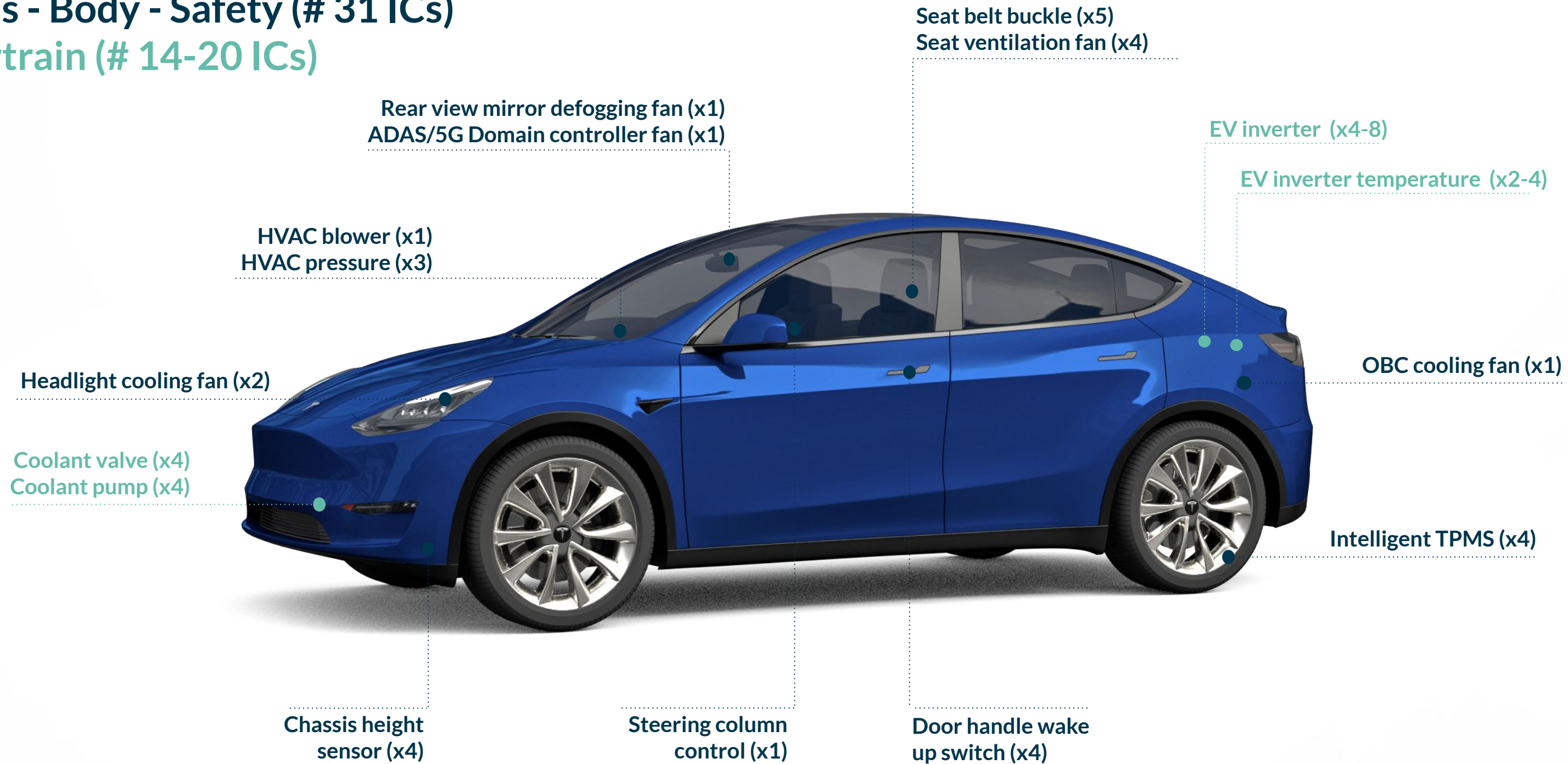
Chassis - Body - Safety (# 56-72 ICs)
Powertrain (# 6 ICs)



Tesla Model Y / X, S, 3 and cybertruck

Chassis - Body - Safety (# 31 ICs)

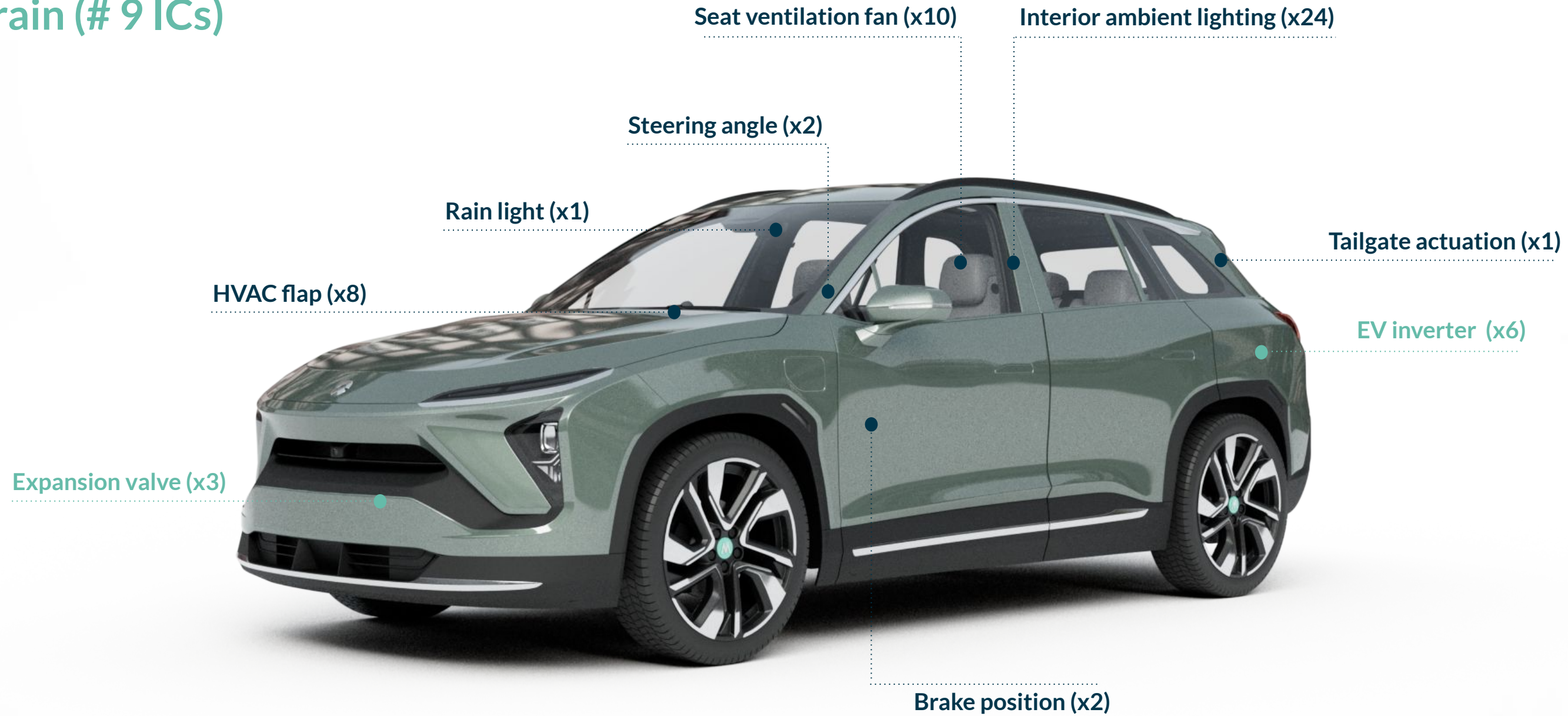
Powertrain (# 14-20 ICs)



NIO ES6 蔚来汽车

Chassis - Body - Safety (# 48 ICs)

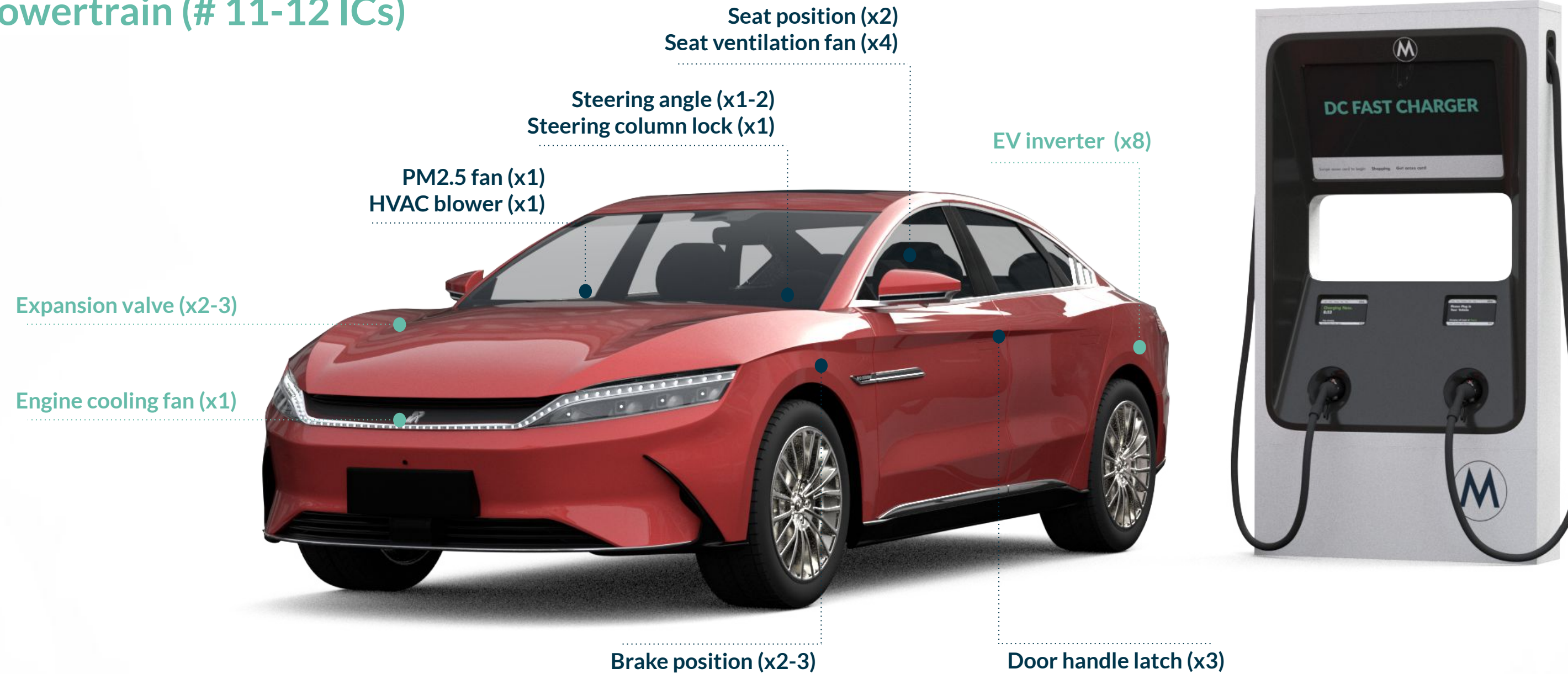
Powertrain (# 9 ICs)



BYD Han / BYD Dynasty Series 王朝系列

Chassis - Body - Safety (15-17 ICs)

Powertrain (# 11-12 ICs)

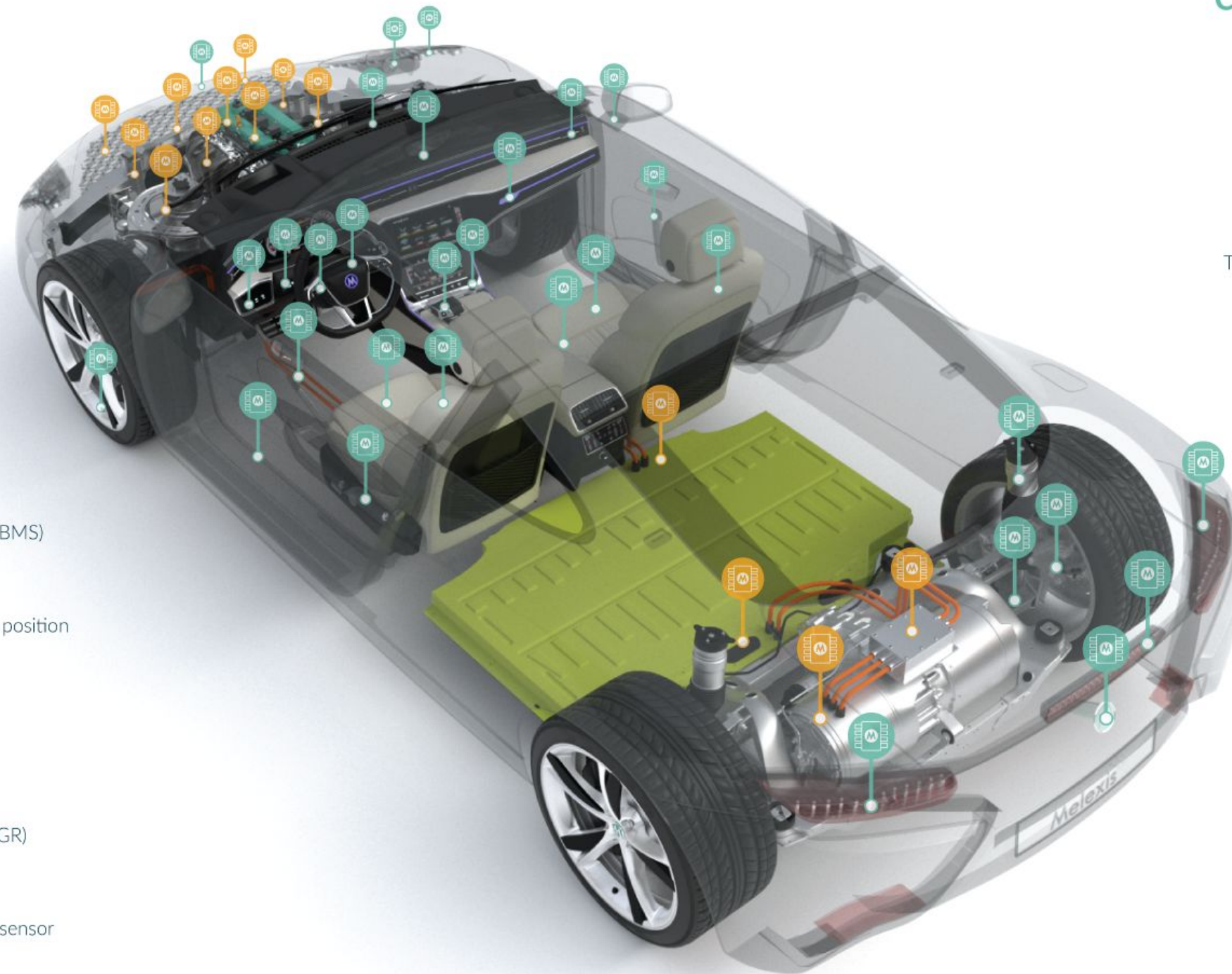


Melexis' car



Powertrain

- Traction inverter
- Battery monitoring system (BMS)
- DCDC converter
- Thermal management
- Onboard charger (OBC)
- Accelerator / brake / clutch position
- Brake fluid level detection
- Transmission
- Clutch switch
- Gear shift
- Engine cooling fan
- Water pump
- Water valves
- Grille shutter
- Exhaust gas recirculation (EGR)
- Valve exhaust gas pressure
- Throttle
- Crankshaft position
- Manifold absolute pressure sensor
- Fuel pump
- Fuel level

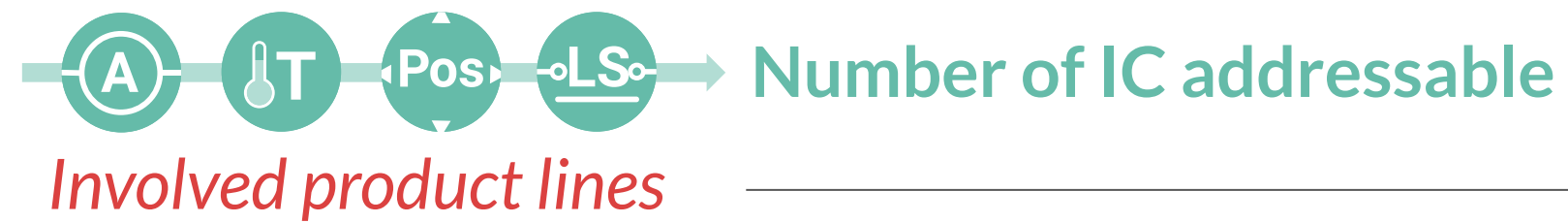


Chassis - body - safety

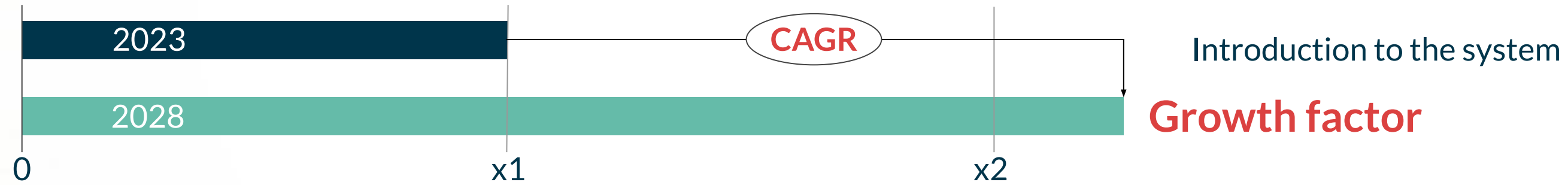


- In-cabin monitoring & gesture control
- Driver monitoring (DMS)
- ADAS / Dashboard GPU cooling
- Washing liquid level detection
- Wiper
- Rain-light sensor
- Hood lock switch
- LED headlight ventilation fan
- LED and laser headlight control
- Tire pressure monitoring system (TPMS)
- Smart tire sensor
- Ride height
- Electrical power steering (EPS)
- Brake light switch
- Turn signals / stalk-end position
- Electric parking brake
- Flap position detection
- Climate control / HVAC
- Seat heating and ventilation
- Seat belt buckle
- Seat position adjuster
- Seat lumbar pressure
- Seat occupant detection
- Keyless entry
- Door lock switch
- Door handle wake up switch
- Side mirror adjuster
- Window lift
- Sunroof
- In-vehicle networking
- Interior ambient lighting
- Interior animated lighting
- Puddle lights
- Stop lights
- Rear lights
- Tailgate/trunk motor opener
- Trunk lock switch

SYSTEM



Serviceable Addressable Market (Euro)



Purpose

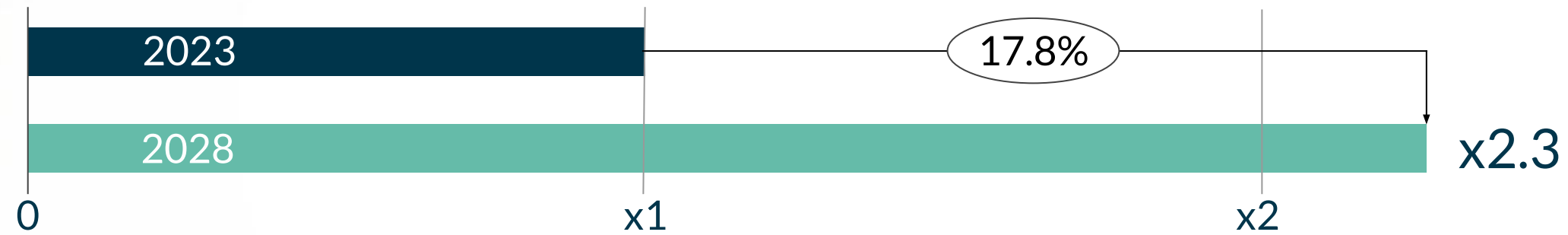


- Key application (product available)
- Key application (innovation ongoing)

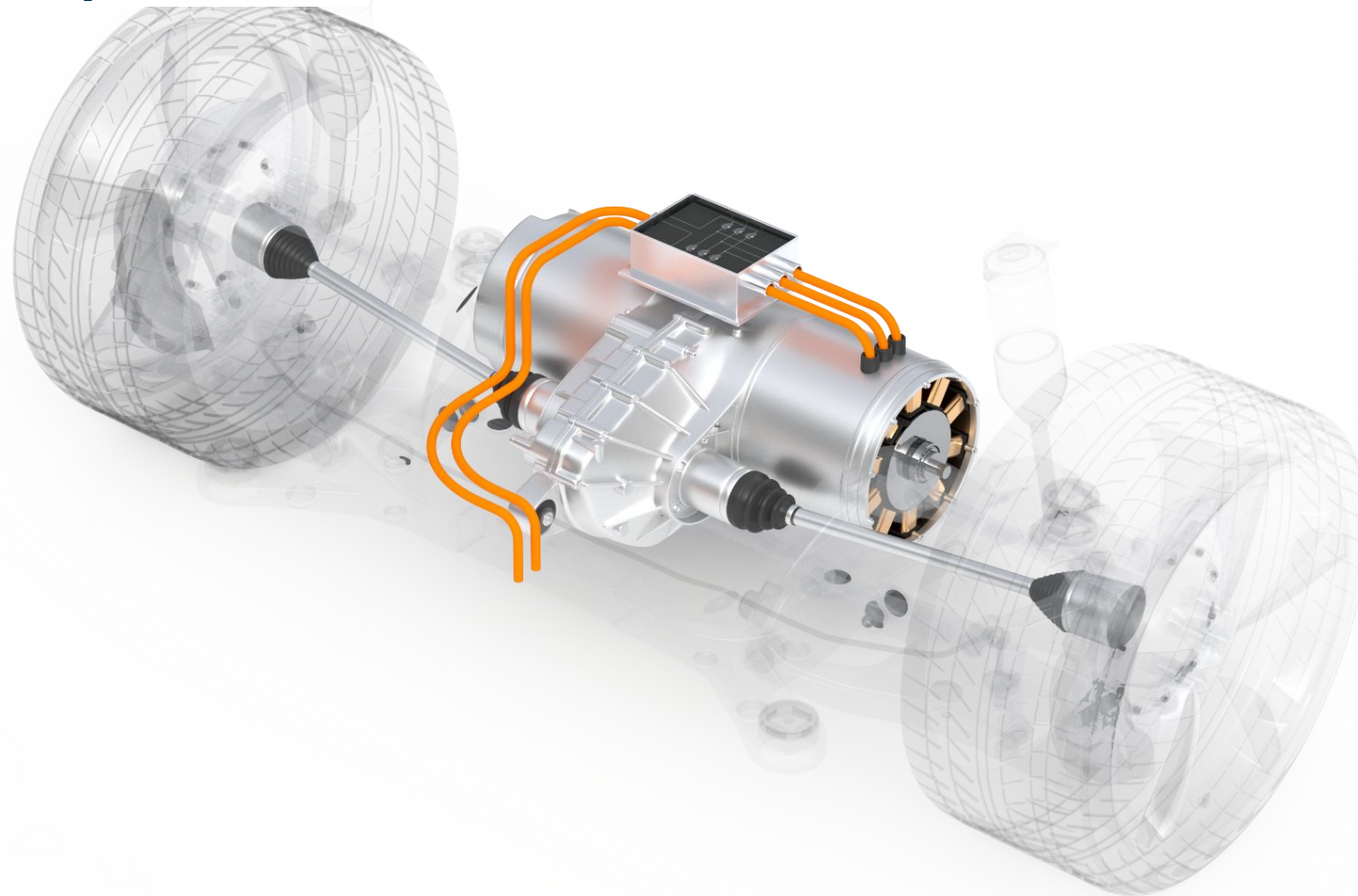
- Pos Position sensor ICs
- A Current sensor ICs
- MD Motor driver ICs
- LS Latch & switch ICs
- T Temperature sensor ICs
- P Pressure sensor ICs
- Sint Sensor interface ICs
- RGB Smart LED driver ICs

EV POWERTRAIN

Serviceable Addressable Market



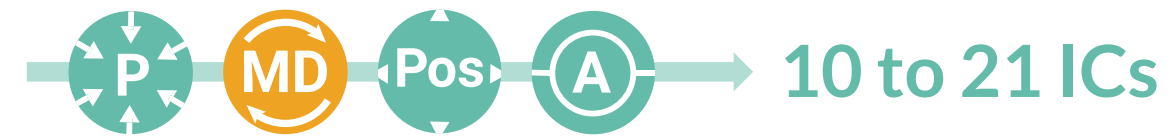
Efficiency matters



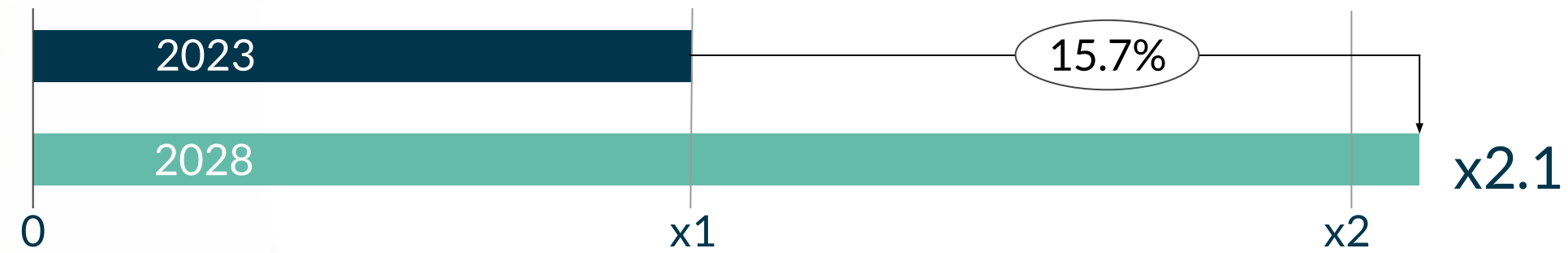
In electric vehicles, the inverter converts DC power from the battery to AC power for the motor drive, which in turn transforms it into propulsion power. The efficiency of this system has a direct impact on the all-electric range, road performance and comfort.

- AC phase current monitoring
- Rotor position sensing
- Power module temperature monitoring
- Safety cover open/close detection
- Power module signal filtering (snubber)

EV THERMAL MANAGEMENT



Serviceable Addressable Market



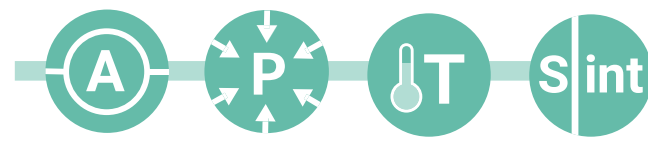
Optimizing energy consumption



In order to optimize energy while increasing the All Electric Range, a perfect thermal management system is key. Ideal performance of the battery requires a temperature between 20-40°C. Without the free heat of a classical ICE, the energy for heating & cooling the cabin needs to be optimized.

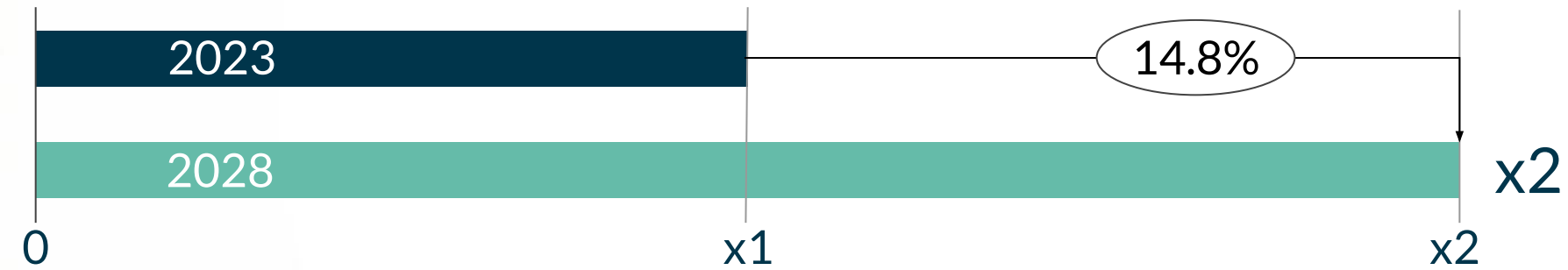
- Pressure monitoring
- Temperature monitoring
- Current consumption monitoring
- E-compressor current sensing
- Fast charge current monitoring
- Valve & pump positioning & controlling
- Refrigerant pressure sensing (Triphibian)

EV BATTERY

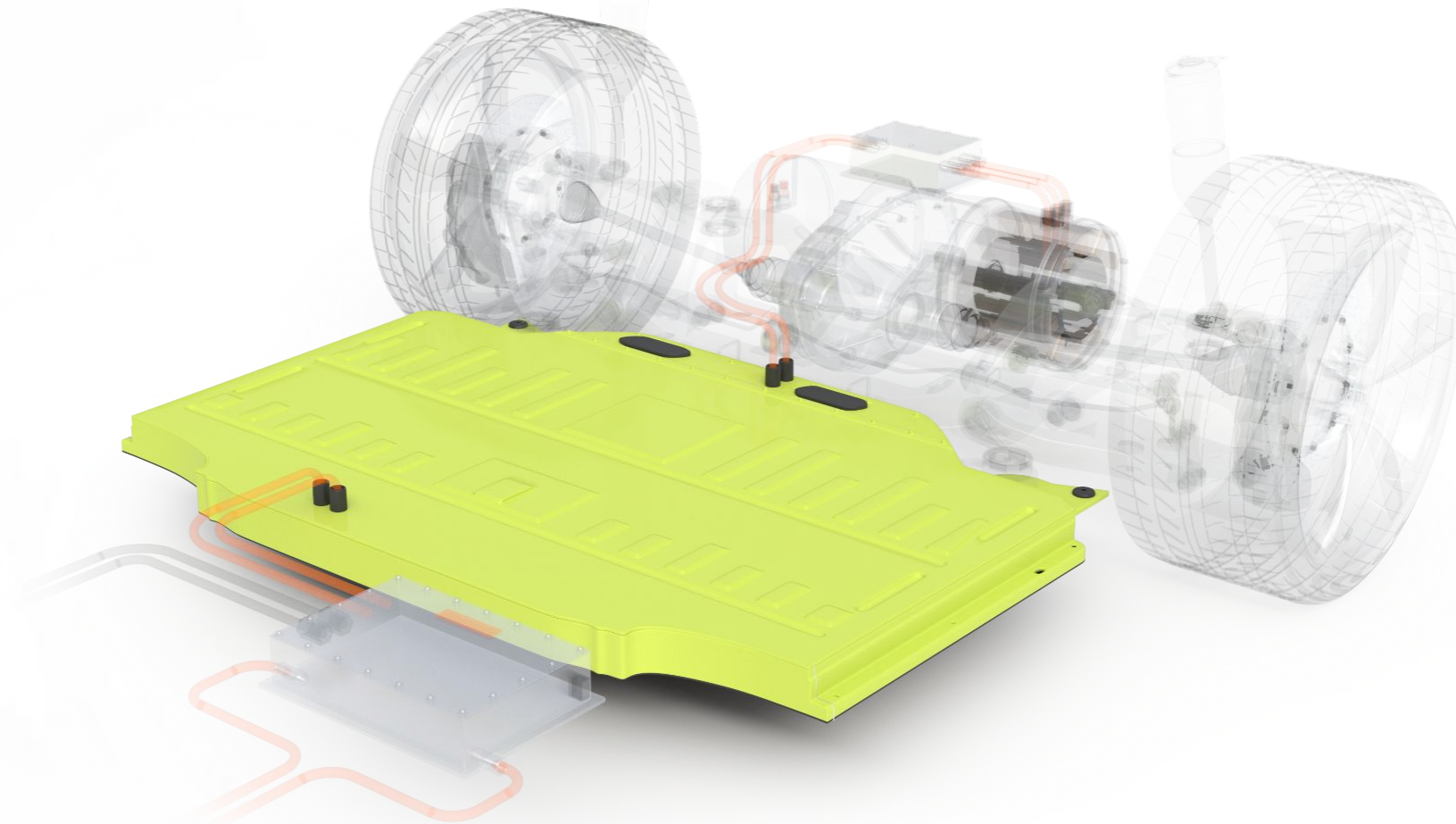


4 to 18 ICs

Serviceable Addressable Market



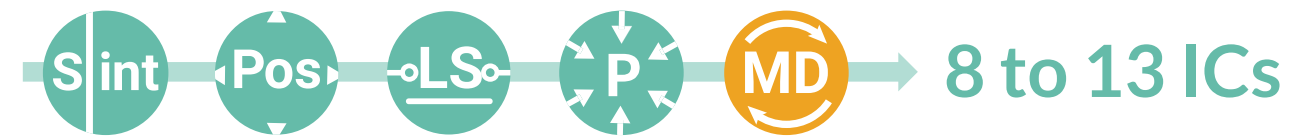
Extending battery range, life and safety



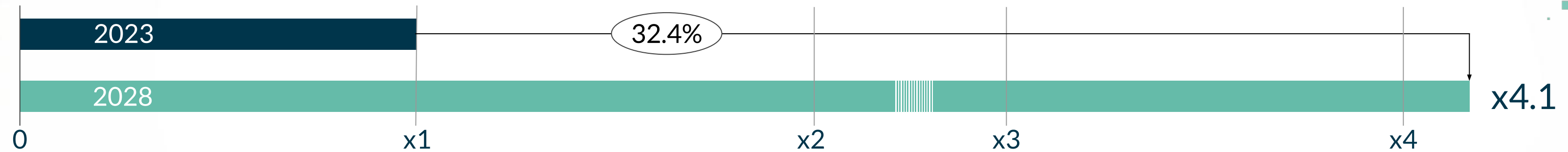
The high voltage battery stores electrical energy which powers the electric motor. It determines the range the vehicle can travel on a single charge. It's optimization is a game changer. Battery management systems ensure the safety and the longevity of the battery.

- Current monitoring
- Pressure monitoring
- Temperature monitoring
- Impedance sensing
- Thermal runaway detection

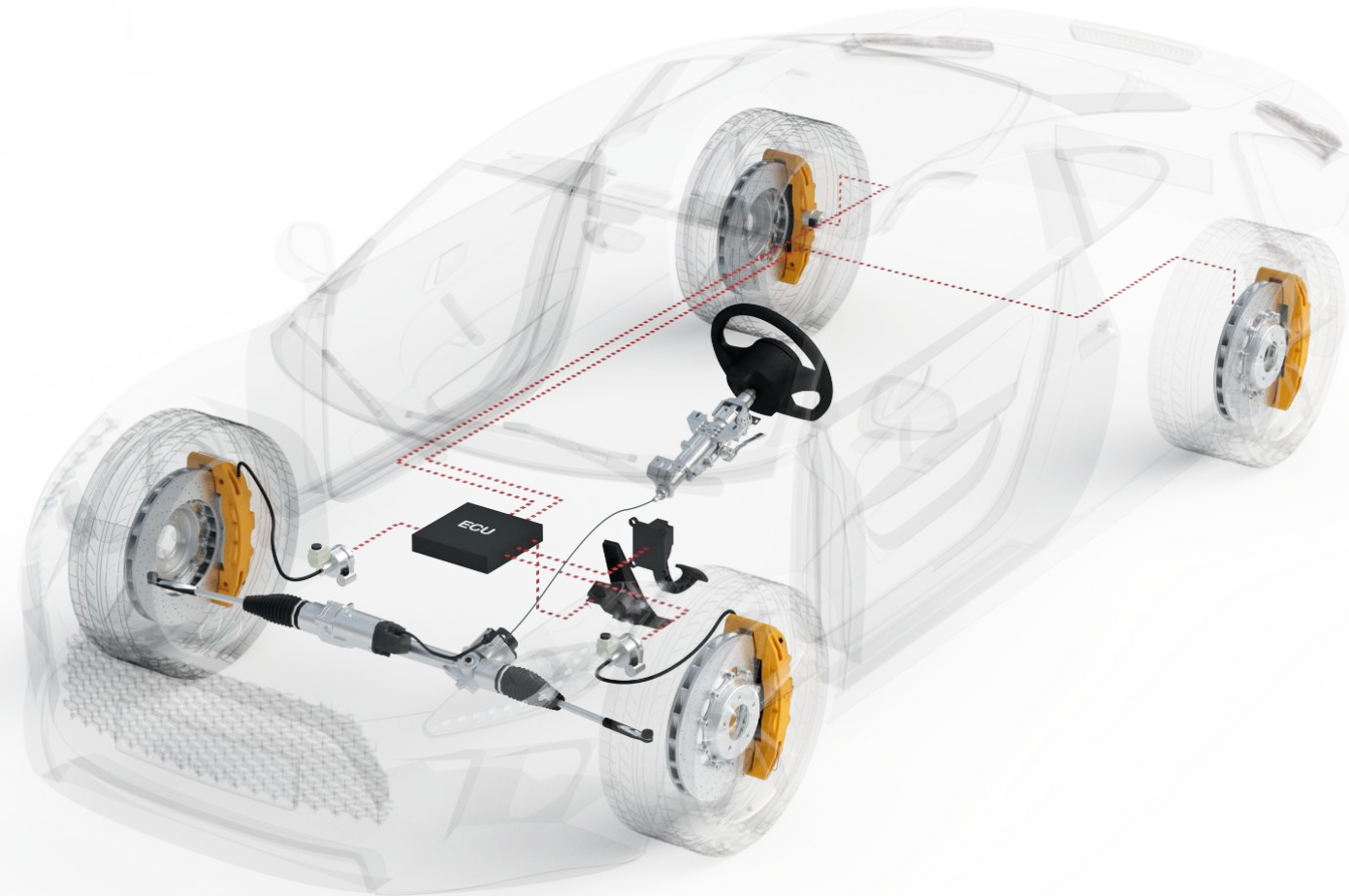
E-BRAKING & E-STEERING



Serviceable Addressable Market



Higher safety level for (autonomous) cars



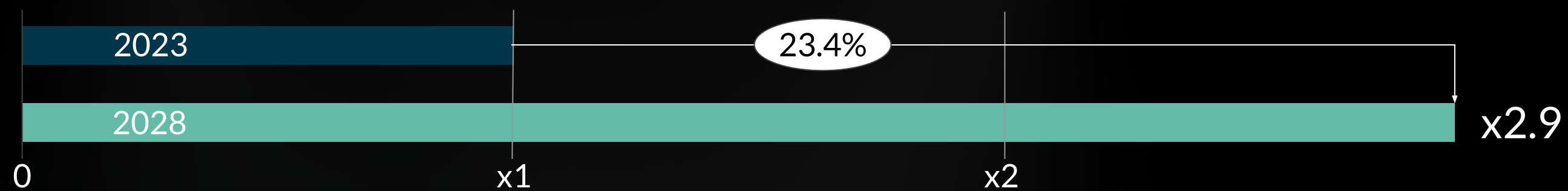
In the world of automotive innovation, sensor ICs act as the silent heroes, enabling precise control, responsiveness, reliability and safety. These technical marvels drive us on the journey from pumps & vacuum (mechanical) to the X-by-wire revolution (electronic).

- E-steering wheel angle position & torque sensing
- E-steering rack position sensing
- E-brake pedal position sensing
- E-brake caliper position & force sensing
- Rotor positioning for electric motors
- Park lock motor positioning & controlling
- Fluid level sensing

INTERIOR & EXTERIOR LIGHTING

Serviceable Addressable Market

RGB → 10 to 150 ICs



Functionality, personalization and premiumization



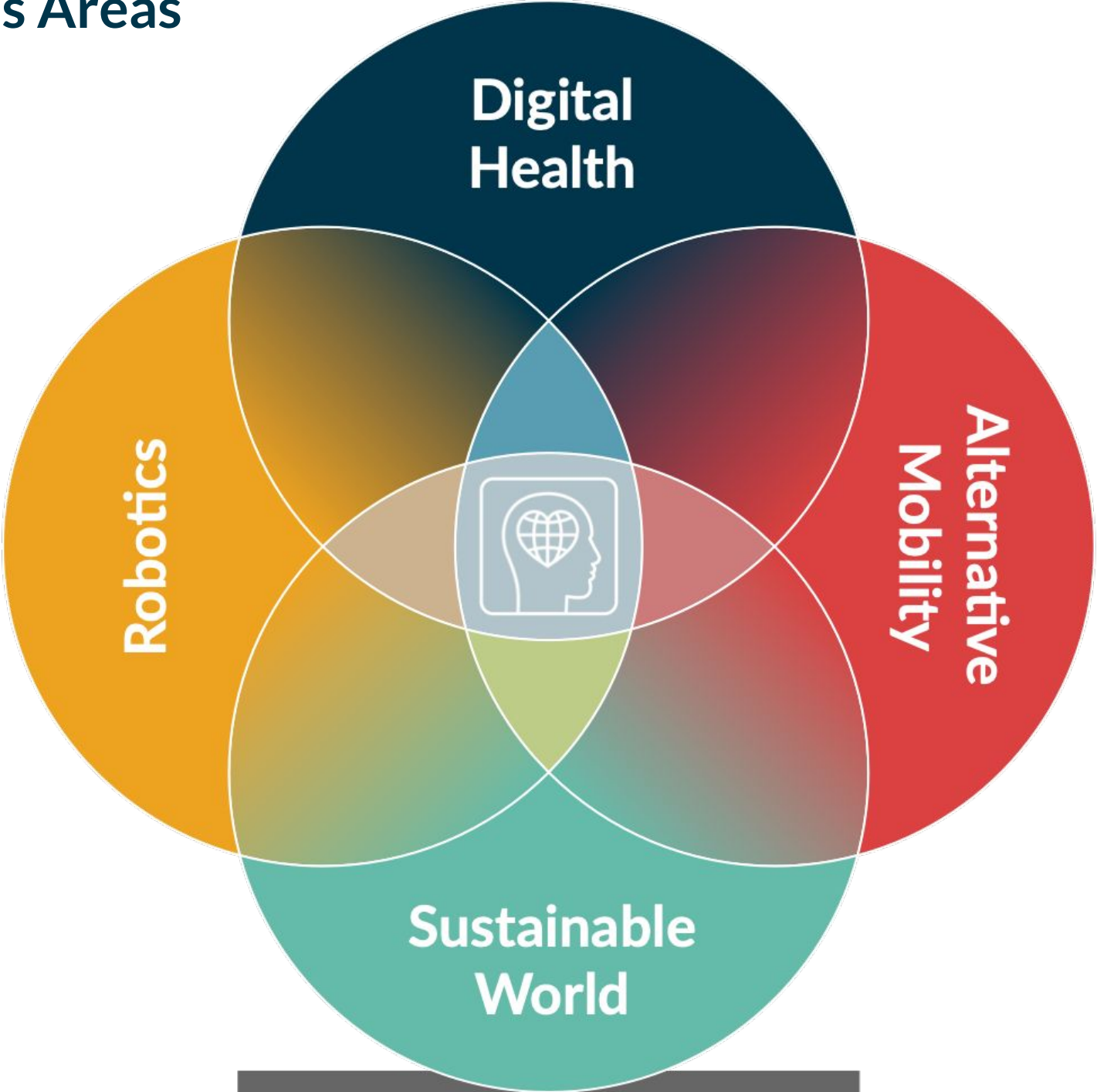
Lighting is upgrading the interior and exterior of our cars. It brings comfort, safety and functionality. Lighting is the new differentiator for OEMs as well as for brand recognition.

- Interior ambient lighting
- Animated lighting
- Logo & grille illumination
- Daytime running light
- Rear lighting



BEYOND AUTOMOTIVE

Focus Areas



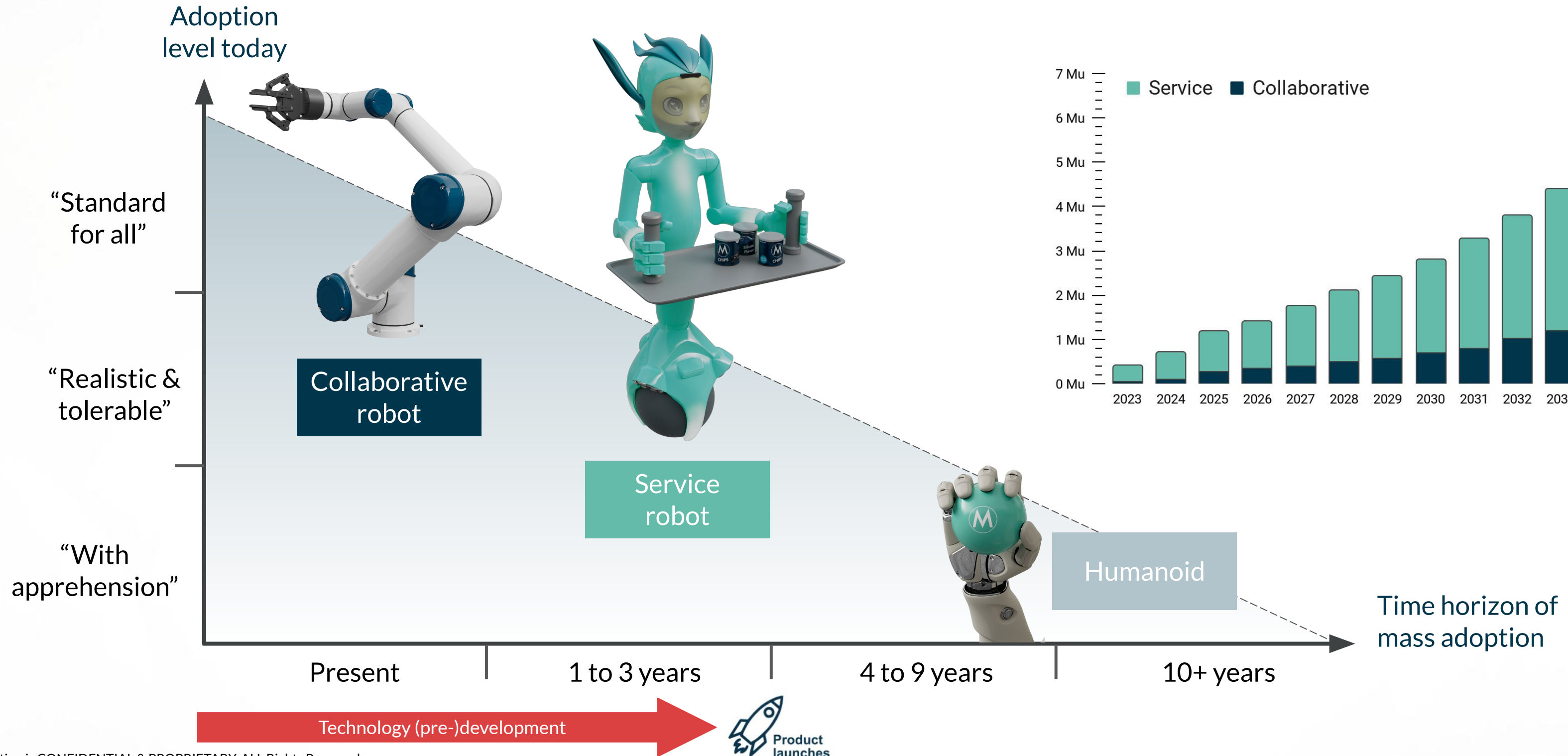
BEYOND AUTOMOTIVE

Growth ambition

$$\text{CAGR}_{2023-2030} \geq 15\%$$



We believe in the mass adoption of robots

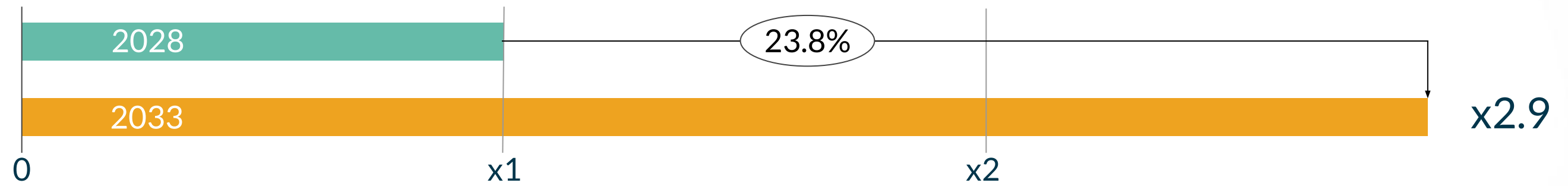


FUTURE OF ROBOTICS



20 to 30 ICs per robot

Serviceable Addressable Market



Let robots feel the real world

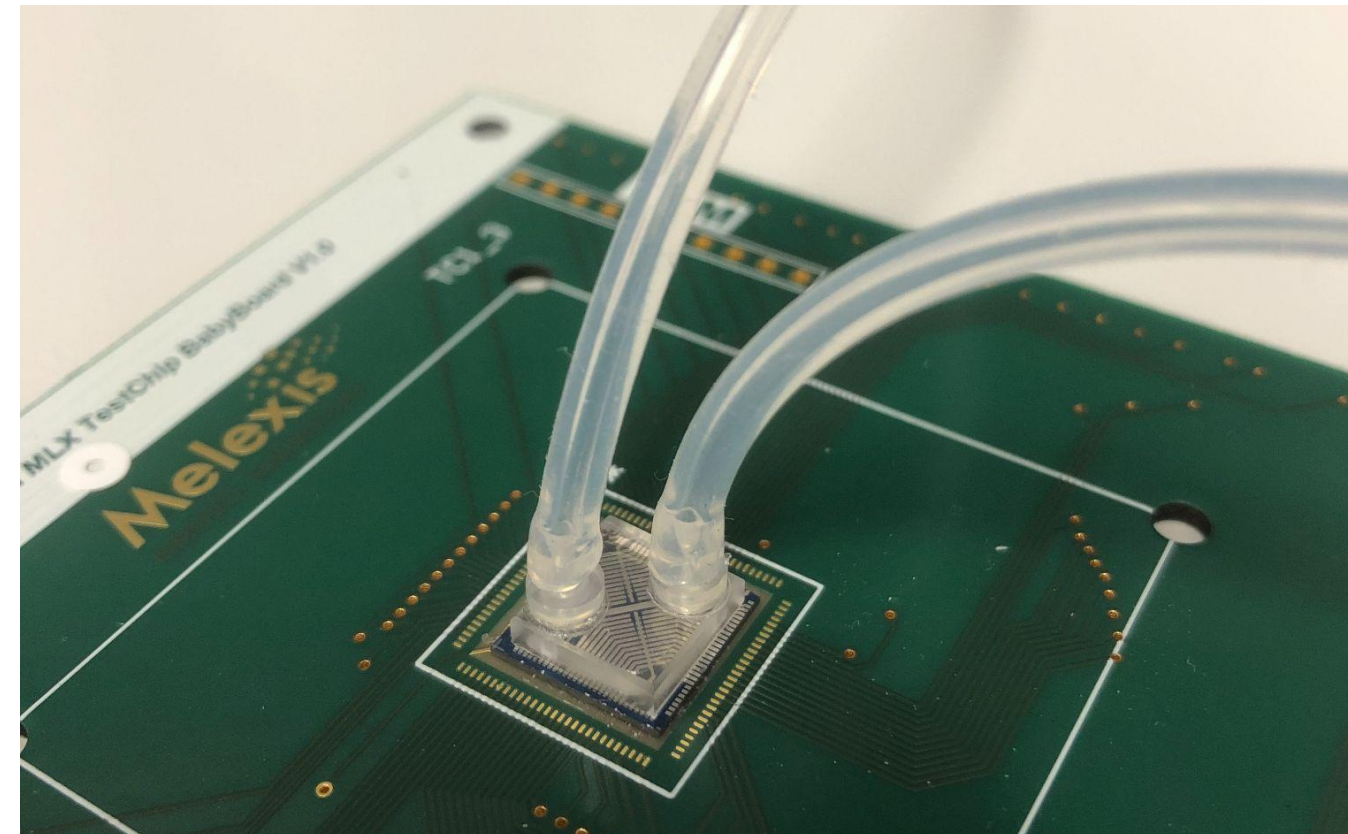


Our innovation team is developing single Integrated Circuit solutions which combine our expertise in magnetic sensing, signal conditioning, on-board diagnosis for safety, automotive quality solutions and advanced packages. Melexis ICs shape the future. Let your robot sense it.

- Force sensing (Tactaxis™)
Give robots a sense of touch
- Position sensing (Arcminaxis™)
Popularize precise motion
- Torque sensing (Elaxis™)
Compact and contactless integrated torque sensing

DIGITAL HEALTH

Biosensing



- In-house innovation
- Technology scouting
- Open Innovation with technology partners and universities

- Aging of population
- Scarcity of medical personnel
- Affordability of healthcare
- Increase of health & well-being awareness

- In-vitro diagnostics devices
- Point-of-care devices
- Home diagnostics or medical devices
- Wearables & skin patches



Melexis
INNOVATION WITH HEART

Vision

The best imaginable future. This is what Melexis shapes.
A future that is safe, clean, comfortable and healthy.
Because we care. We care about our planet, about our
customers and about our colleagues.

INNOVATION WITH HEART



INNOVATE

We are on the customer's side
We always have a plan

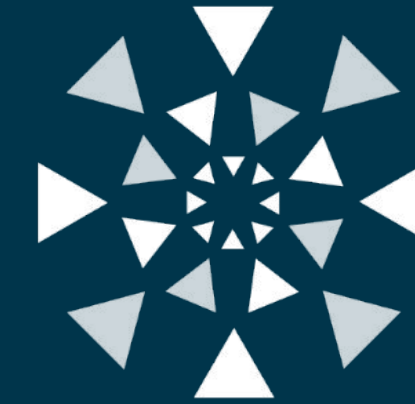
Automotive Sales: $\geq 10\%$ CAGR
Beyond Automotive Sales: $\geq 15\%$ CAGR



PEOPLE

We care
We enjoy the journey towards success

90% of employees recommend
Melexis as a good place to work



OPTIMIZE

We understand the value of money
We always have a plan

Gross Profit margin $\geq 45\%$
EBIT margin $\geq 25\%$

How

Values

Goals



SUSTAINABILITY FOOTPRINT

INNOVATION WITH HEART

