

“Geopolitical implications of latest disruptions on nearshoring vs. off shoring decisions”

Paul Schockmel, CEO IEE

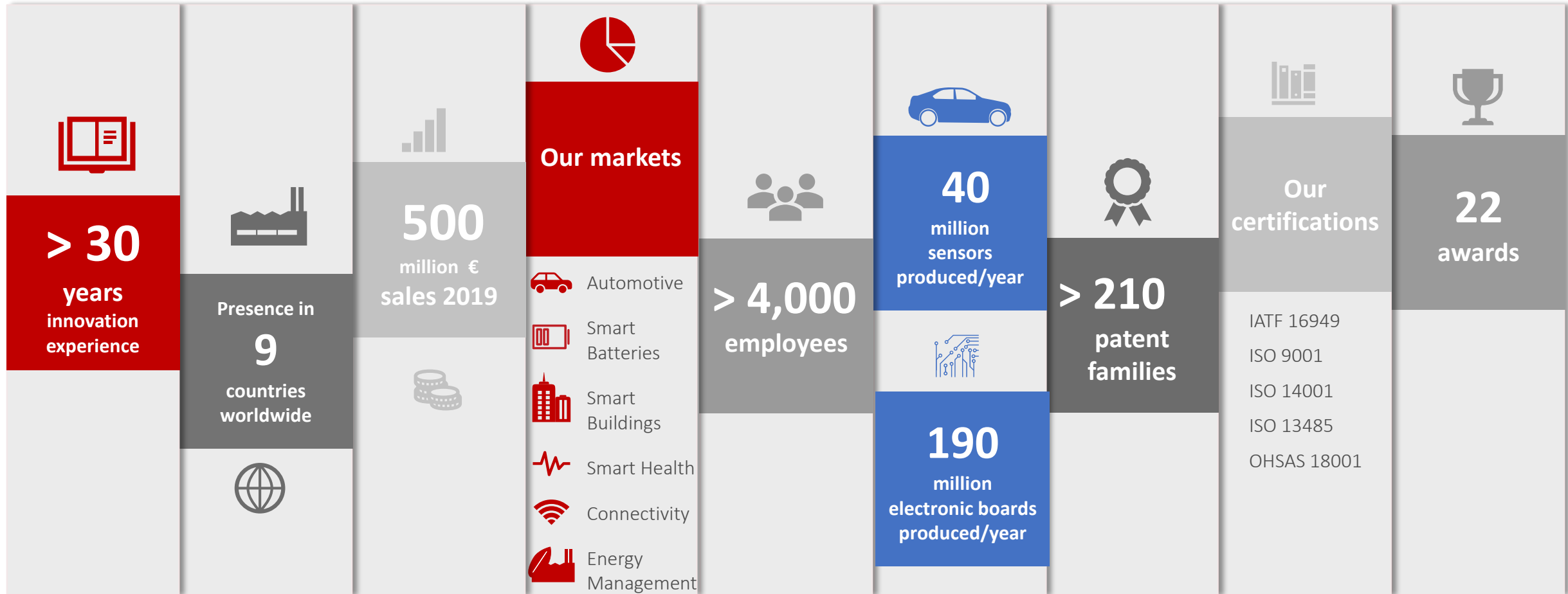
eXplore Conference, 18.04.2023

“Why is finance vital for supply chain performance”



The IEE Group at a Glance

A few key facts about us



HOD - Hands Off Detection System



Sensing unit for monitoring driver hands on/off the steering wheel

- Fast and reliable information on whether the driver controls the steering
- Functions even if the driver is not actively steering (e.g. in traffic jam situations)
- Supports UN R79 requirement for hands off detection warning (*Level 2 vehicles*)
- Monitors transition from automated to manual driving as required by UN R157 (*Level 3 vehicles*)



VitaSense™ - Child Presence Detection

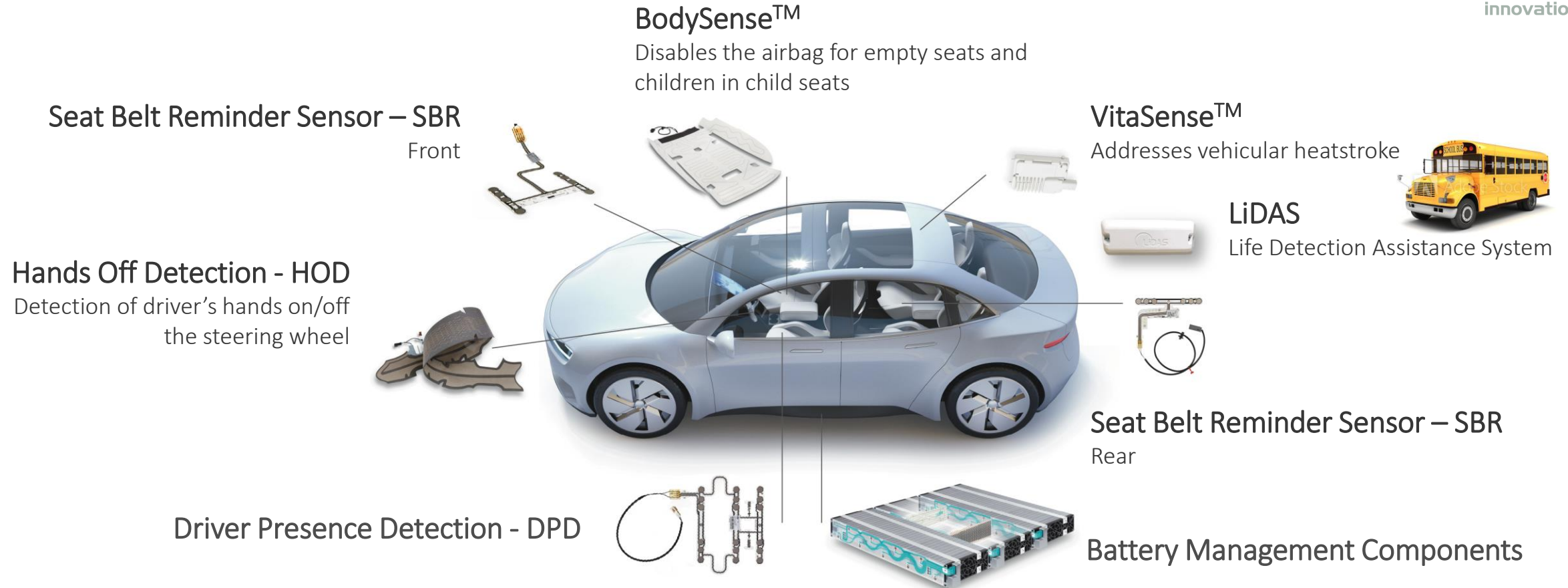


Detects children to help prevent heatstroke deaths in vehicles

- First radar-based occupant detection sensor on the market
- Senses children left behind based on their movement/breathing even when they are sleeping
- Invisibly installed behind the headliner
- NCAP incentives for Child Presence Detection starting 2023



Our Automotive Solutions



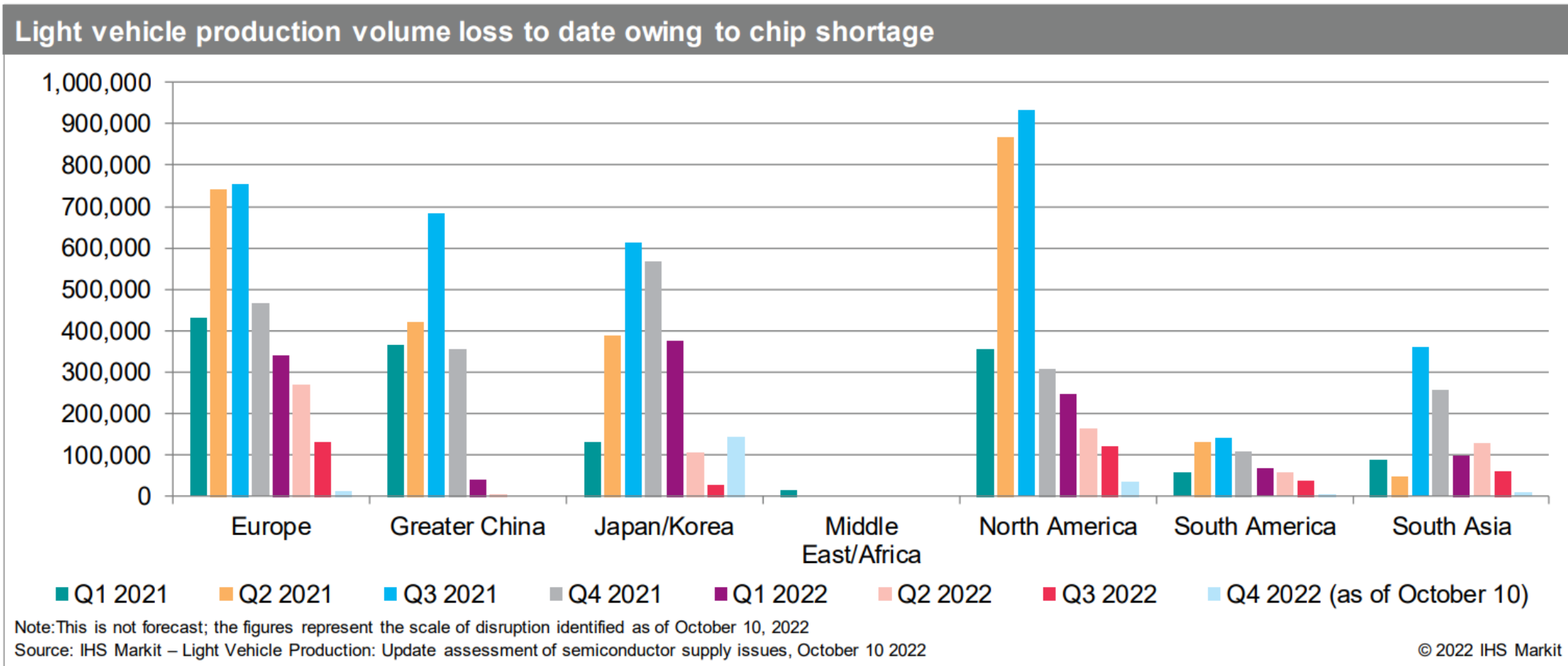
Our Vision
Interior sensing functions will increasingly be software driven in the future

Impact of supply chain shortages on IEE Group

2022 Component shortage impact on IEE Group

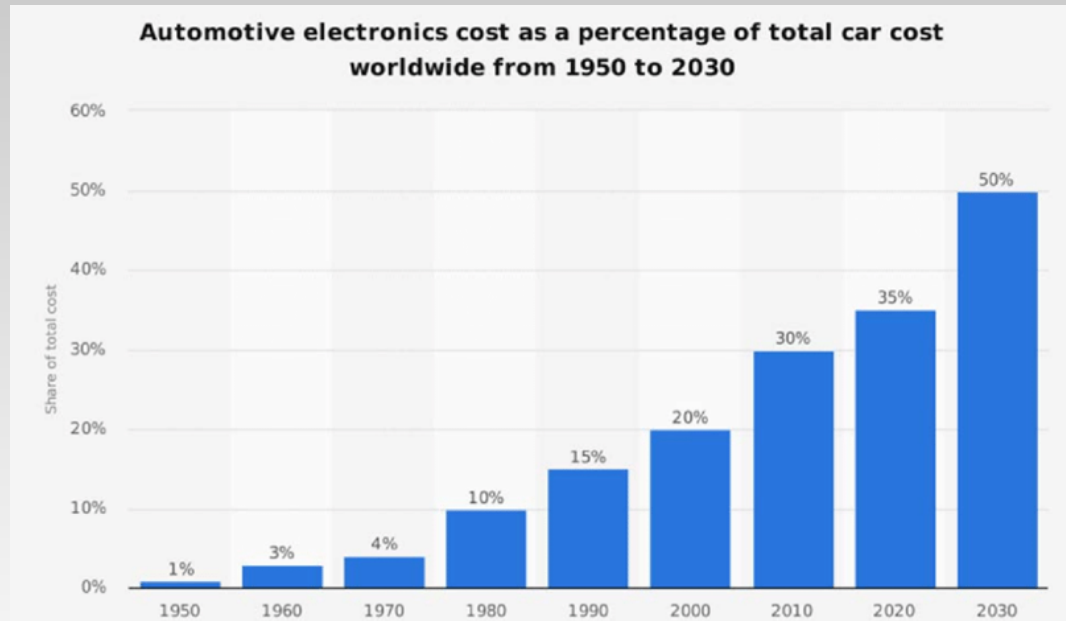
- 850+ critical components concerned by shortage, IEE group level
- Sales turnover loss caused by semiconductor and other shortages: - 6%
- Variable cost increase, components only, 4%, IEE group level
- Additional costs, 5+ Million EUR, IEE Sensing Unit
 - Additional operational costs
 - Increased logistics costs
 - Broker costs for component purchases
 - Shortage task force
 - Hardware redesign and qualification

Impact on global production output

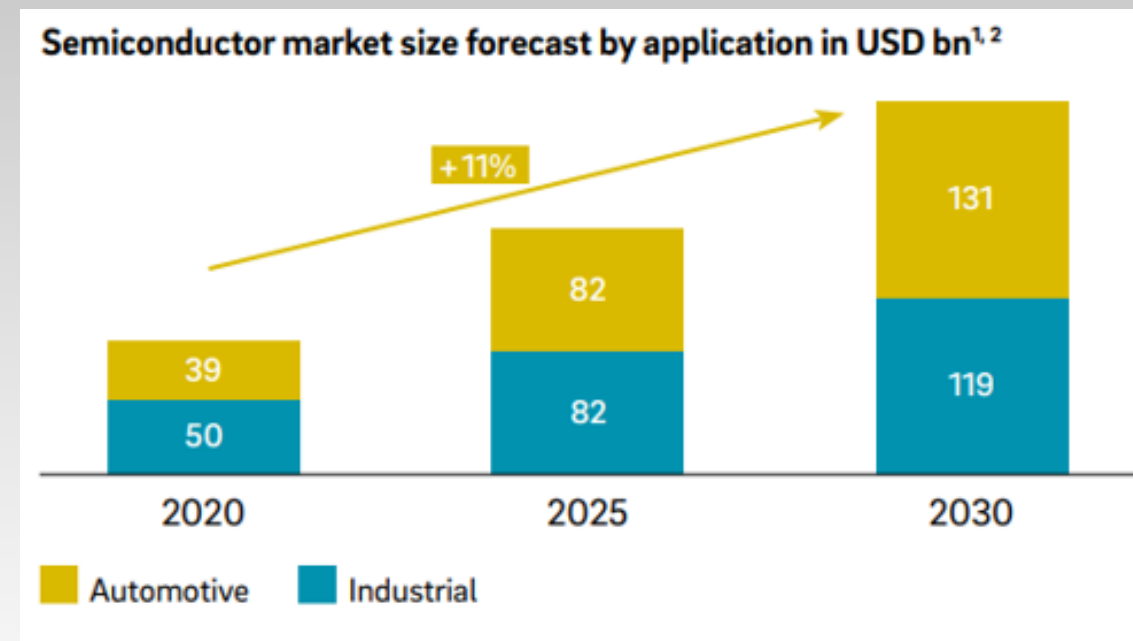


Because of chip shortage, 12 million cars not produced since 2021

Future demand for electronics components in automotive



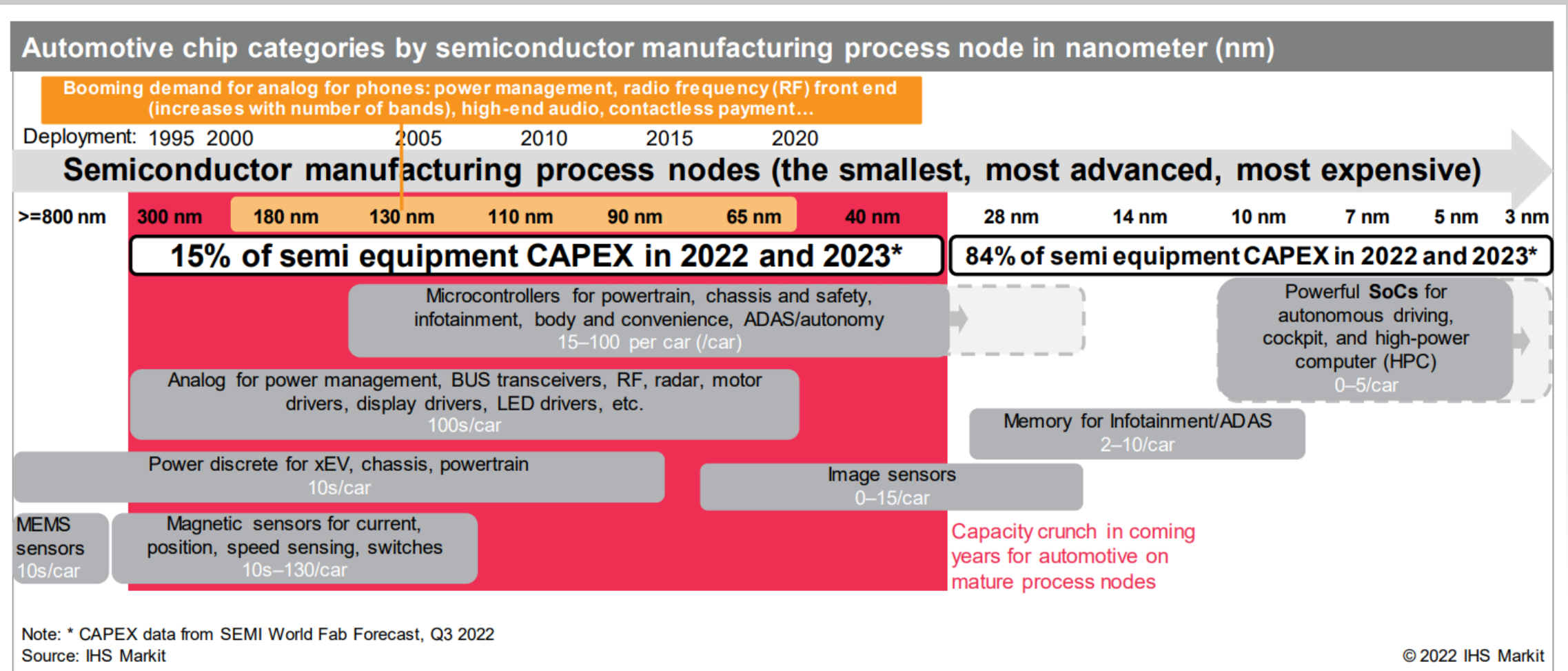
Source: PWC; statista 2017



Source: RolandBerger

Electronics and software will outgrow the automotive market

Semiconductor supply chain capacity for automotive needs



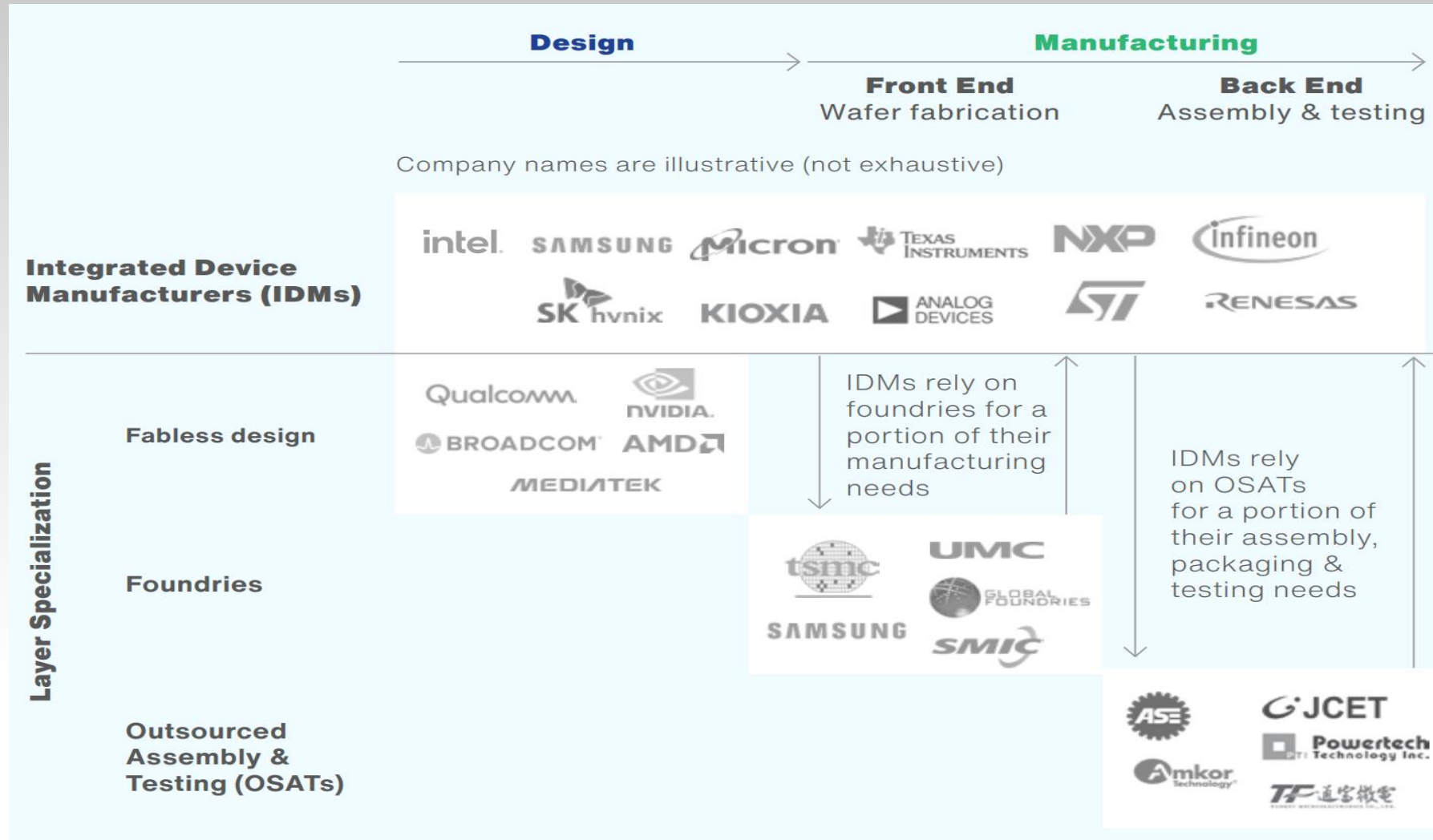
Automotive chip capacity crunch on mature semiconductor manufacturing processes

The semiconductor value chain



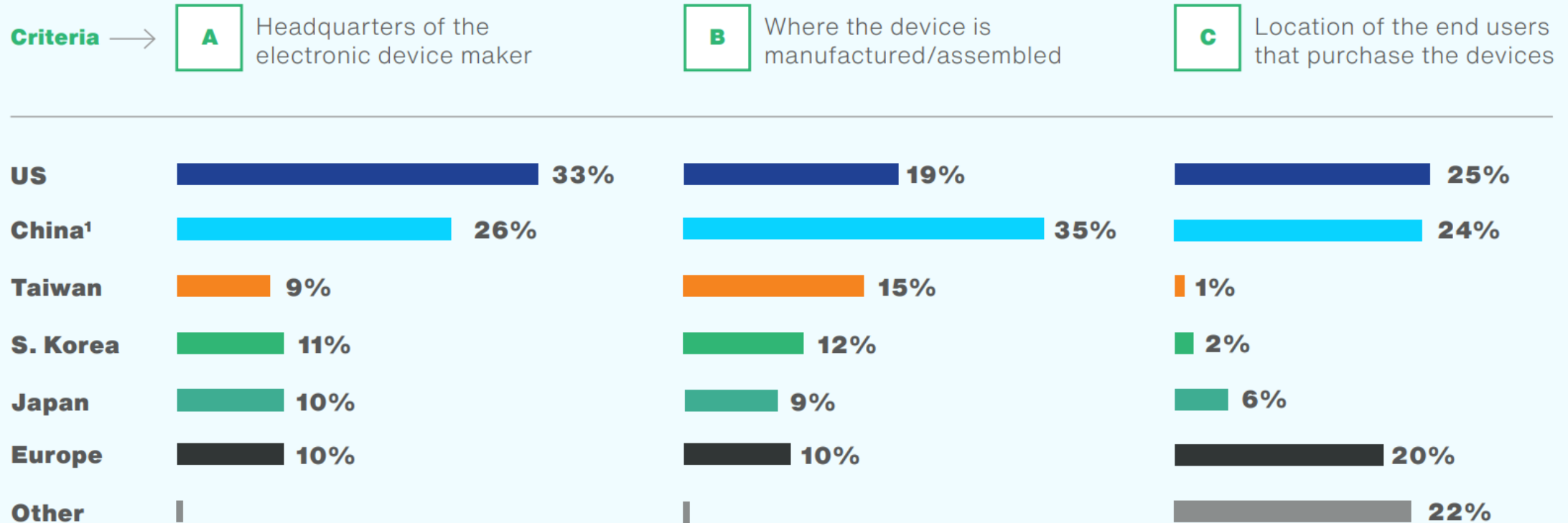
The semiconductor value chain includes multiple differentiated activities

Business Models focused on special layers of the value chain



Global semiconductor business by region

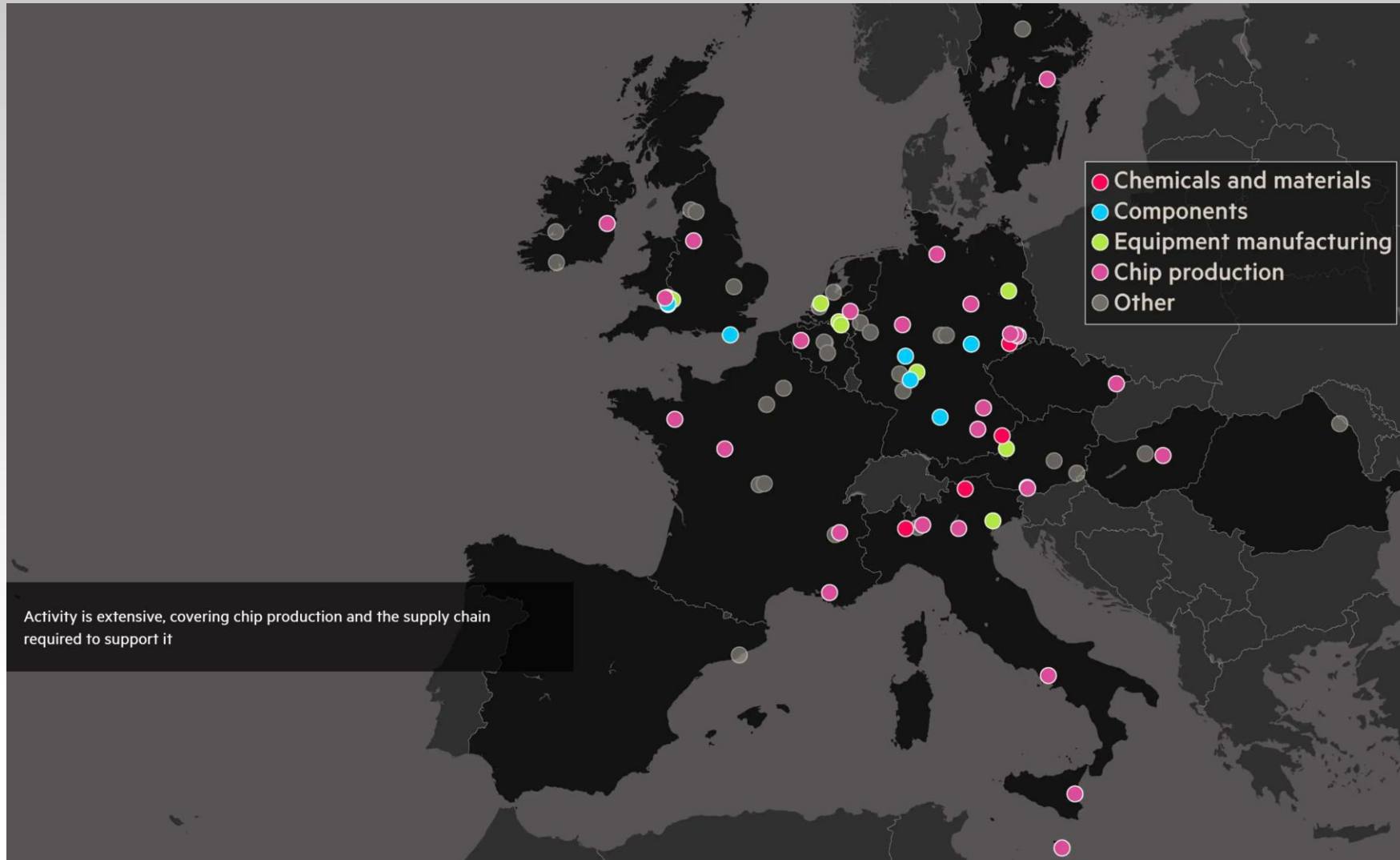
Global semiconductor sales by geographic area, 2019 (%)



1. Mainland China

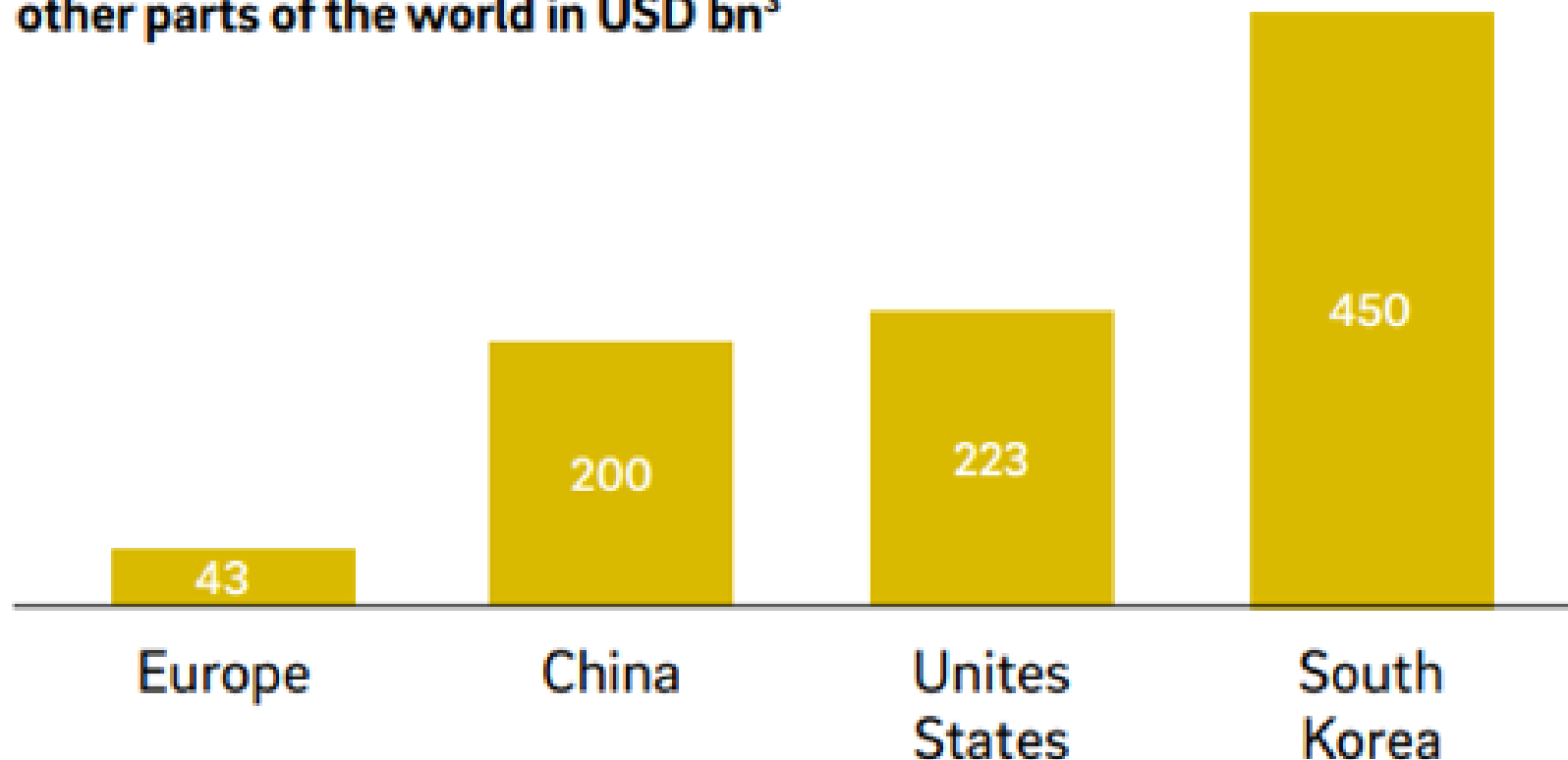
Sources: BCG analysis with data from SIA WSTS, Gartner, IDC

European semiconductor footprint



European Chip Act and other regional initiatives

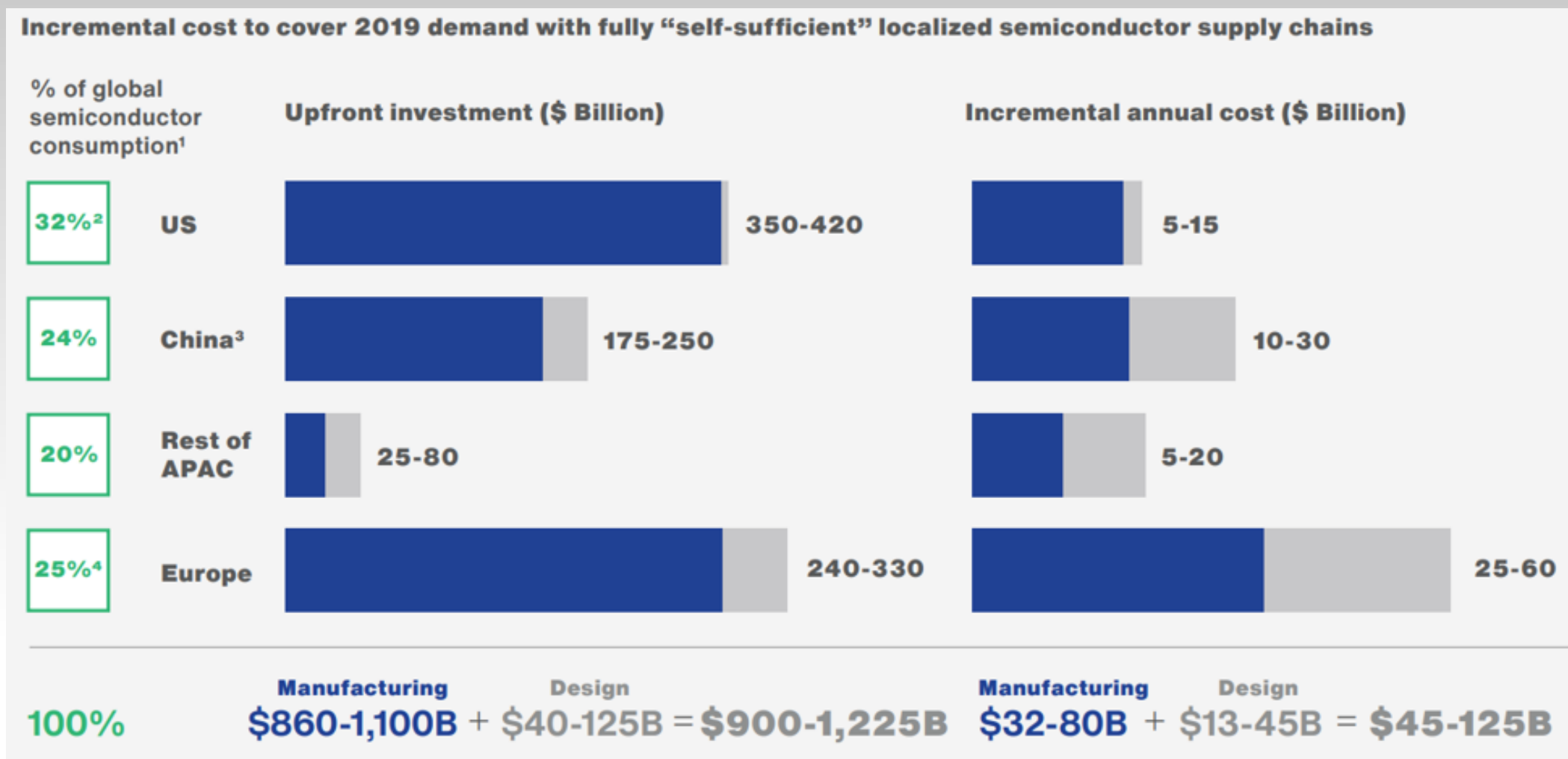
European Chips Act funding comparison with other parts of the world in USD bn³



The budget for the European Chips Act is unlikely sufficient to secure risk-free operations and for Europe to achieve 20% of the global market share by 2030.

RolandBerger; semiconductor shortage: a different kind of trouble ahead; October 2022

Implications of self-sufficient semiconductor supply chain



BCG analysis

The way ahead for suppliers

Short/medium term

- **Focus on downsizing the inventory and improve cash balance**
- Address the structural imbalance affecting legacy chips
- Multi sourcing strategy
- Active reduction of legacy semiconductor content
- Sprint qualifications of alternative components

Long term

- EU Commission to create a competitive and state-of-the-art European chip ecosystem being self-sufficient in strategic and critical areas and being part of a global system at the same timer.

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