



Enabling Collaboration in the Automotive Value Chain Faster, More Transparent and Secure

Barbara Frenkel, Member of the Executive Board, Procurement, Dr. Ing. h.c. F. Porsche AG

Keynote SEMICON Europe | November 15th, 2022

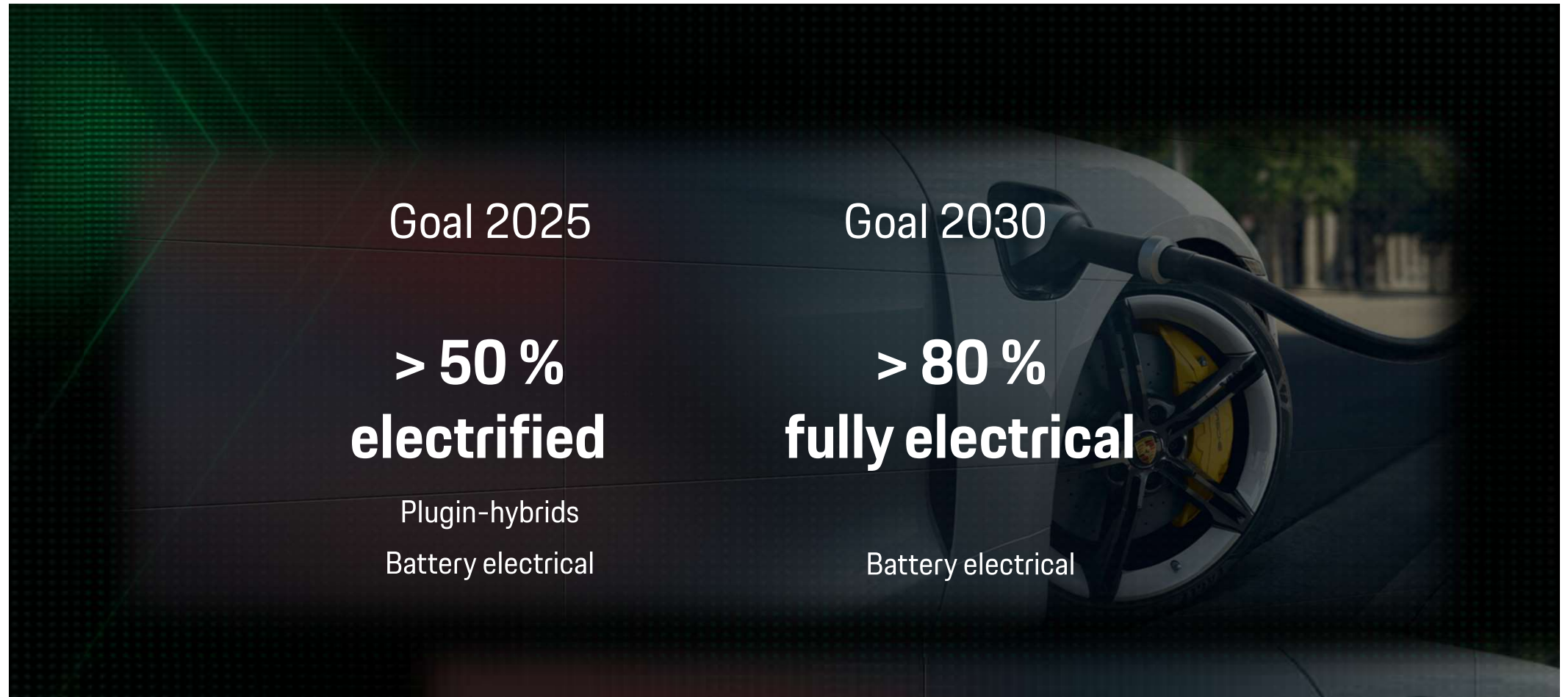
PORSCHE

Software and its high-performance computing platform are defining the car of the future



PORSCHE

Our electrification roadmap until 2030



PORSCHE

Automotive is facing challenges in making semiconductors a key component for this transformation



Automotive demand in semiconductors will triple by 2030



Electrification and Autonomous drive chip demand in Automotive



Faster-than-projected recovery of the Automotive industry



Frequent natural disaster risks in the US, Asia and Europe including Covid



Geopolitical risks as tensions rise between key countries for supply

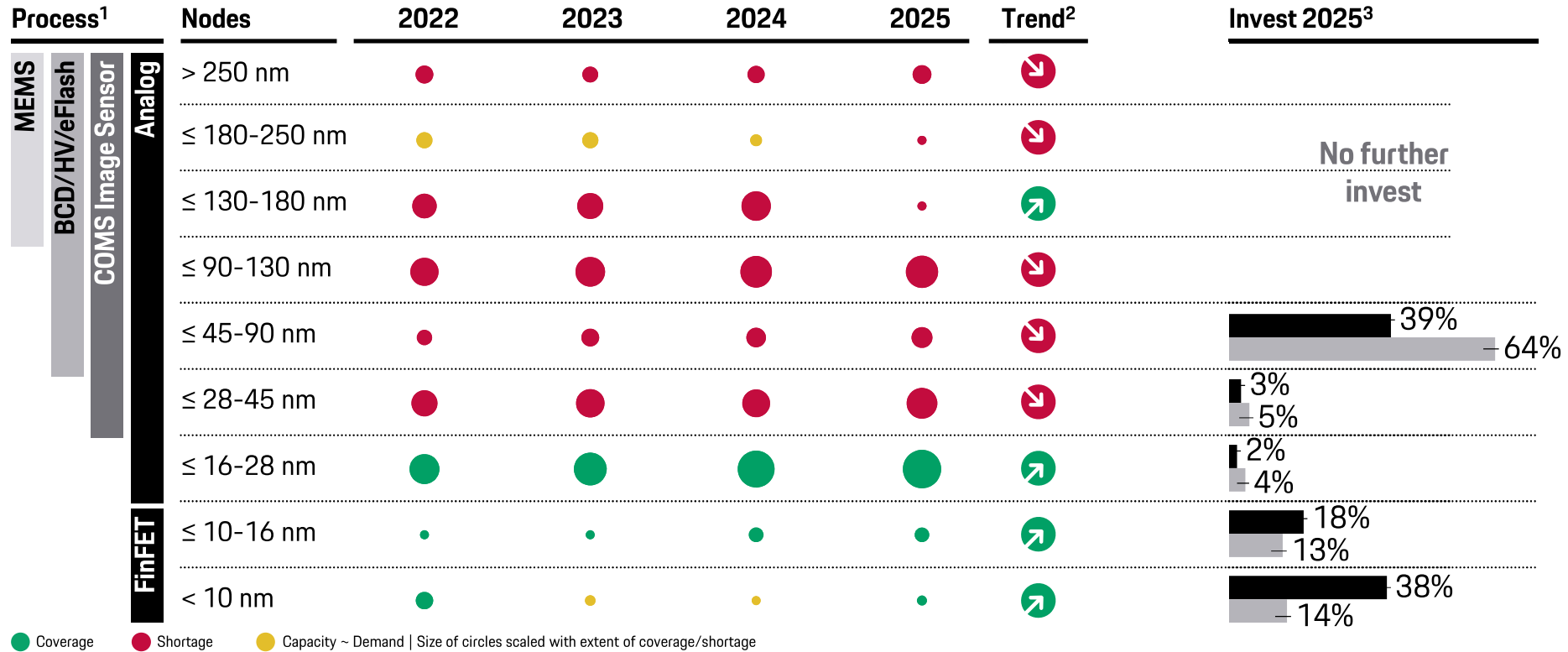
Estimated global damage

**Automotive
Industry 2021**

61
Billion USD*

* Based on projected sales for 2021 equal to 5.02 Million units
Source: Porsche Consulting, VDI, Semiconductor Industry Association

Projecting a tripling in demand, Automotive is faced with a structural shortage in larger node sizes



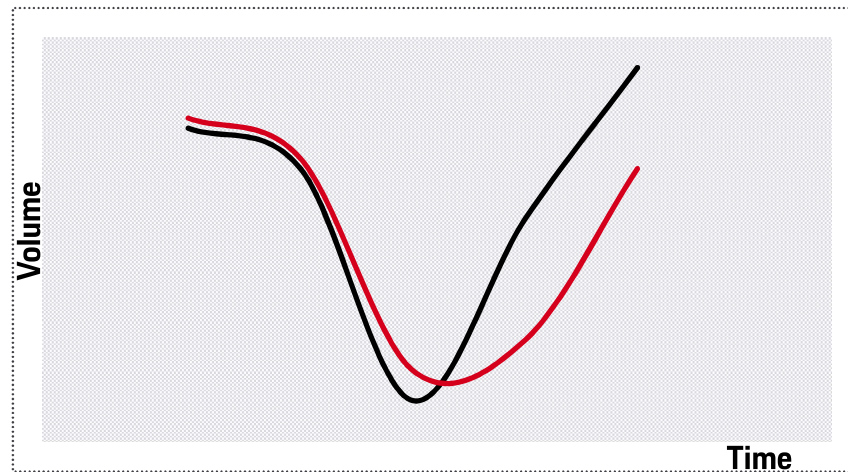
Investments will be necessary to support nodes sizes >28nm

Paradigm Shift

PORSCHE

New supply chain models are emerging – a huge opportunity for the semiconductor industry

CURRENT SUPPLY CRISIS

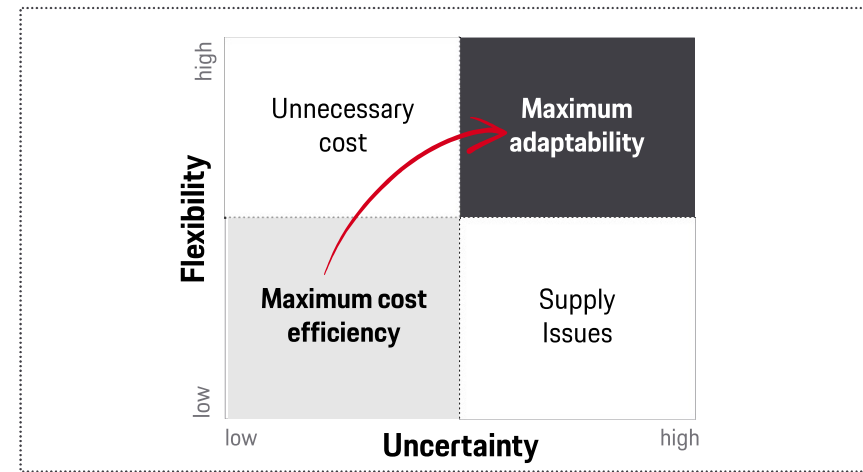


Demand and supply drop and demand increases faster than supply recovers

— Supply — Demand

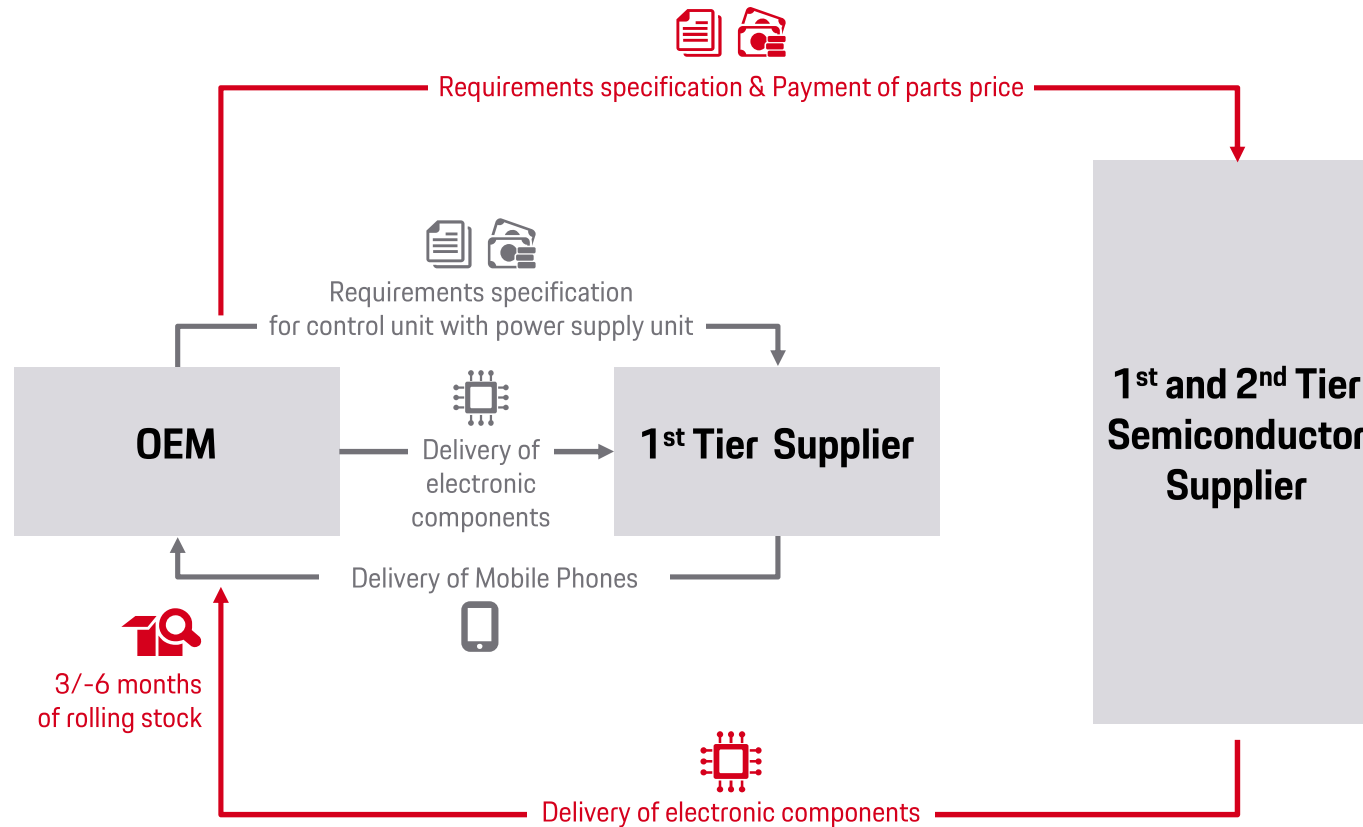
A NEW PARADIGM =

NEW SUPPLY CHAIN STRATEGIES



Invest in flexibility of semiconductor supply chain

Automotive has learned from larger semi costumer industries and their supply chain models



What's in it for the semiconductor industry

- 👍 Long-term OEM commitments
- 👍 Innovative, stable partnerships
- 👍 Transparency about stock and quantities in circulation
- 👍 Increased volume bundling
- 👍 OEM End-to-End system view

Porsche
**Semiconductor
Management
Framework**

PORSCHE

Automotive OEMs now are strategically managing semiconductor supply

Supply Chain Reliability



Supply Gap Resolution

Working with tier 1 and semi suppliers to identify short-term gaps and finding way to close them incl. broker materials and technical alternatives

Supply Chain Adaptability



Demand Transparency

Creating transparency on supply paths, technology nodes and demand for current and future vehicle projects in one central database



Risk Analysis & Mitigation

Detecting current and future risks and derive mitigation measures, integrating risk assessment into supplier selection process



Technology Roadmaps

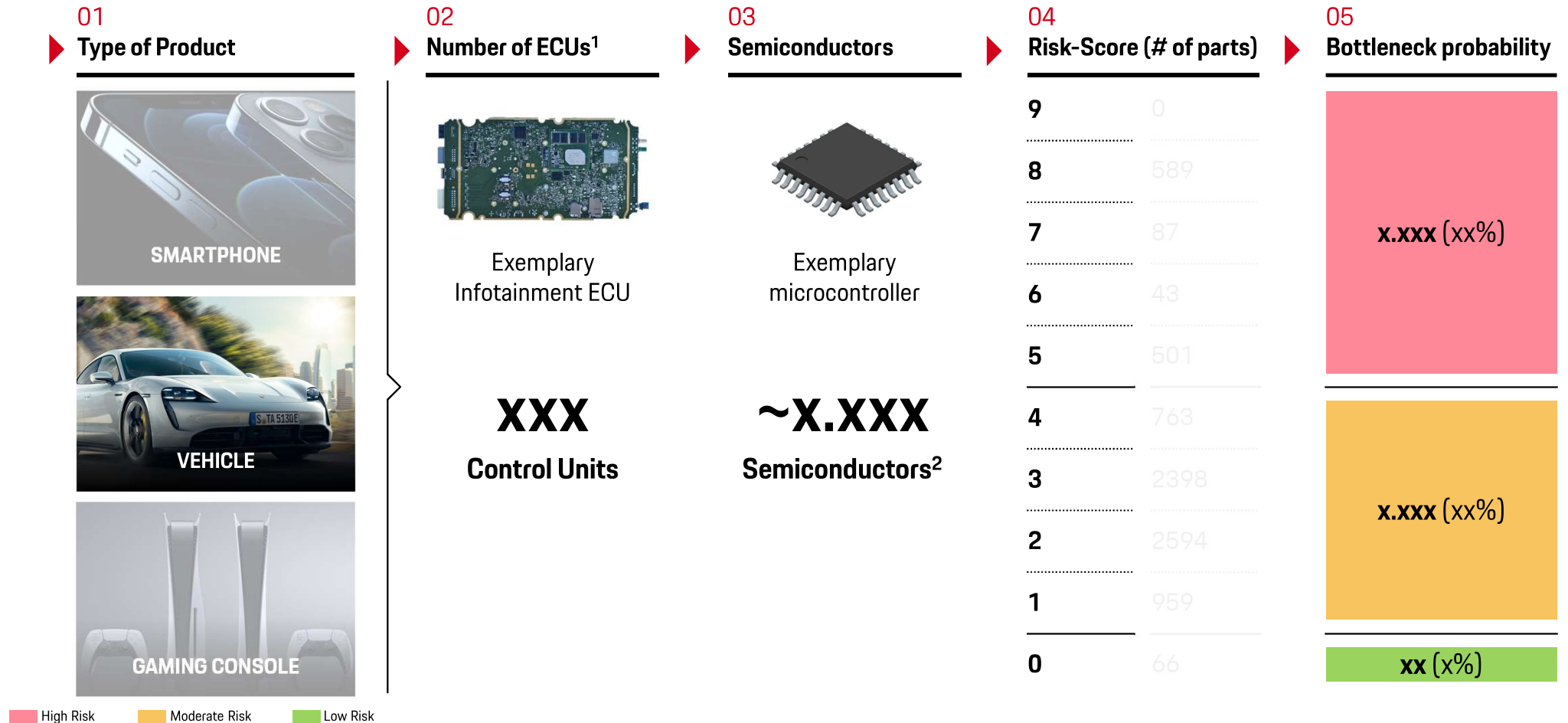
Collecting future requirements and areas of unchanged requirements and compare with market roadmap to derive sourcing strategy



Semiconductor Organization

Designing the future organization charged with strategic semiconductor management and connecting with the semiconductor industry

By using a risk management tool, bottlenecks can be reliably predicted and mitigated



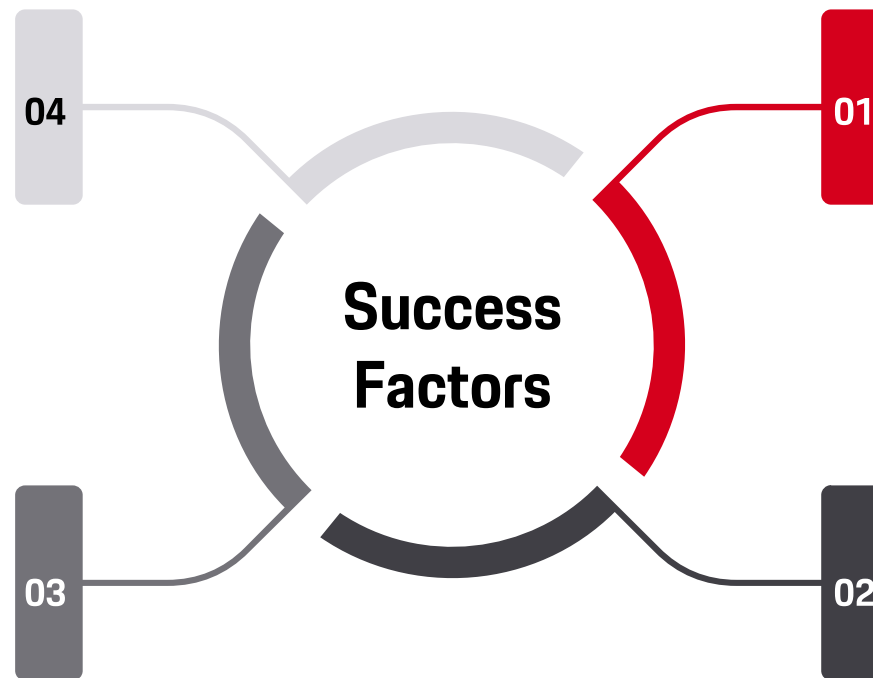
Success factors | Four factors are particularly critical for success in managing the new paradigm

Establishing New Partnerships

Establishing partnerships within the semiconductor industry and offering business benefits to all value chain partners

Implementing the Semiconductor Organization

Institutionalizing the approaches for getting in front of the wave for strategically managing semiconductor supply including the right skill set



Shifting to a Software Defined Vehicle

Selecting the right umbrella specifications to offer a catalog for a wide range of application with minimum complexity for a full product lifecycle

Executing Supply Chain Excellence

Supply chain transparency and risk monitoring in a fully automated approach based on reliable data



Source: Porsche

PORSCHE



Thank you!