

Proposals for priorities for further discussion in KDT GB

🌱 Semiconductor device architecture, process integration and manufacturing

- Advanced computing, memory and in-memory computing concepts
 - Novel device, circuit and systems concepts for optimum Power-Performance-Area-Cost specifications
 - New eNVM technologies to enable local AI processing and storage
- Novel devices and circuits that enable advanced functionality
 - Advanced technologies in sensors, power electronics, RF and photonics communication
- Enable flexible, sustainable, agile and competitive high-volume semiconductor manufacturing

🌱 Design tools and methodologies, IP

- Software becoming a core competence
- HW/SW co-design and simulation from device to system level
- Increased testability, reliability, durability and sustainability
- Rethink the SC value chain

🌱 Equipment

- Continuation of Moore's law via 3-axis of innovation
 - Dimensional, device scaling and lay-out scaling
 - Novel integration & packaging technologies in 2.5 and 3D
 - System and Technology Co-Optimization
- Equipment and manufacturing technologies for integrated photonics, quantum computing chips

🌱 Materials and substrates are making a difference

- For power devices, communications, (ultra) low power computing
- Ever increasing variety
- Essential element of supply chain (SiC)

- Global Value Chain not mastered by any single region – Reinforce strengths and reduce vulnerabilities, and ensure that EU is on a level playing field
- Trusted electronics and supply chains
- Sustainability incl. green electronics, climate
- Success through EU eco-system collaboration across the whole value chain
- Communications (5G and beyond), mobility electrification, health and IoT and secure edge AI are key drivers
- Timing is critical: Prepare now for the future

