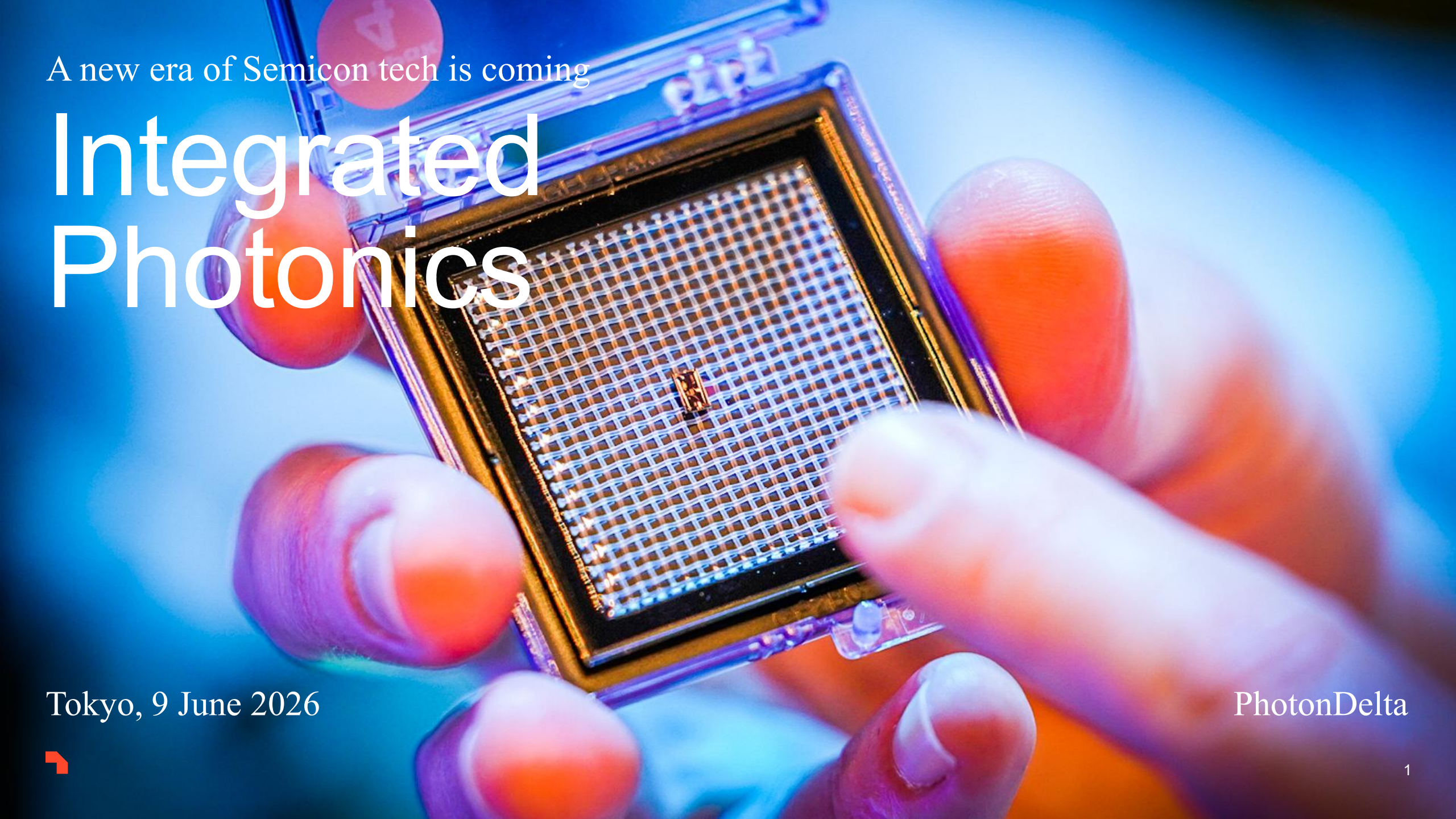




A new era of Semicon tech is coming

Integrated Photonics

Tokyo, 9 June 2026

PhotonDelta



Global megatrends driving change...

Shaping the connected world

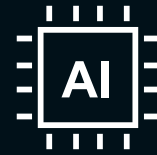
Cloud



6G & Infrastructure



Artificial Intelligence



Intelligent edge



Gaming, simulation & visualisation



Food



Consumer appetite for innovation continues to accelerate

Unprecedented adoption rate for Generative AI shows its future opportunity and value



Deepseek
2024



ChatGPT
2022



TikTok
2017



Instagram
2010



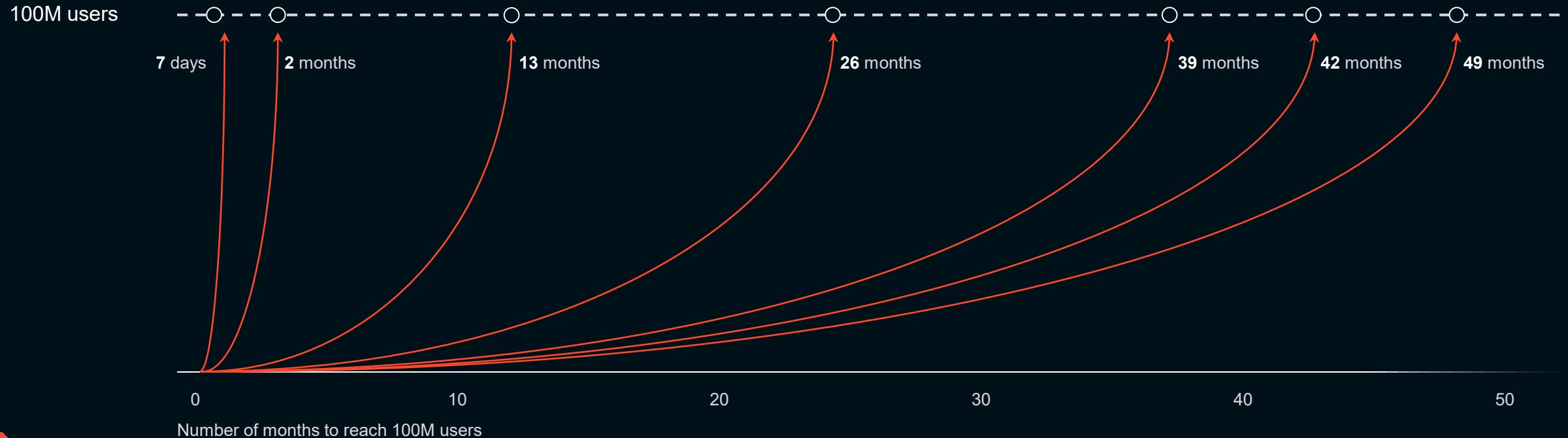
Snapchat
2011



Whatsapp
2004



Facebook
2009



Semiconductor: > \$1.5 trillion market by 2030



HPC/AI

55%



Smart phones

20%



Automotive

10%



IoT

10%



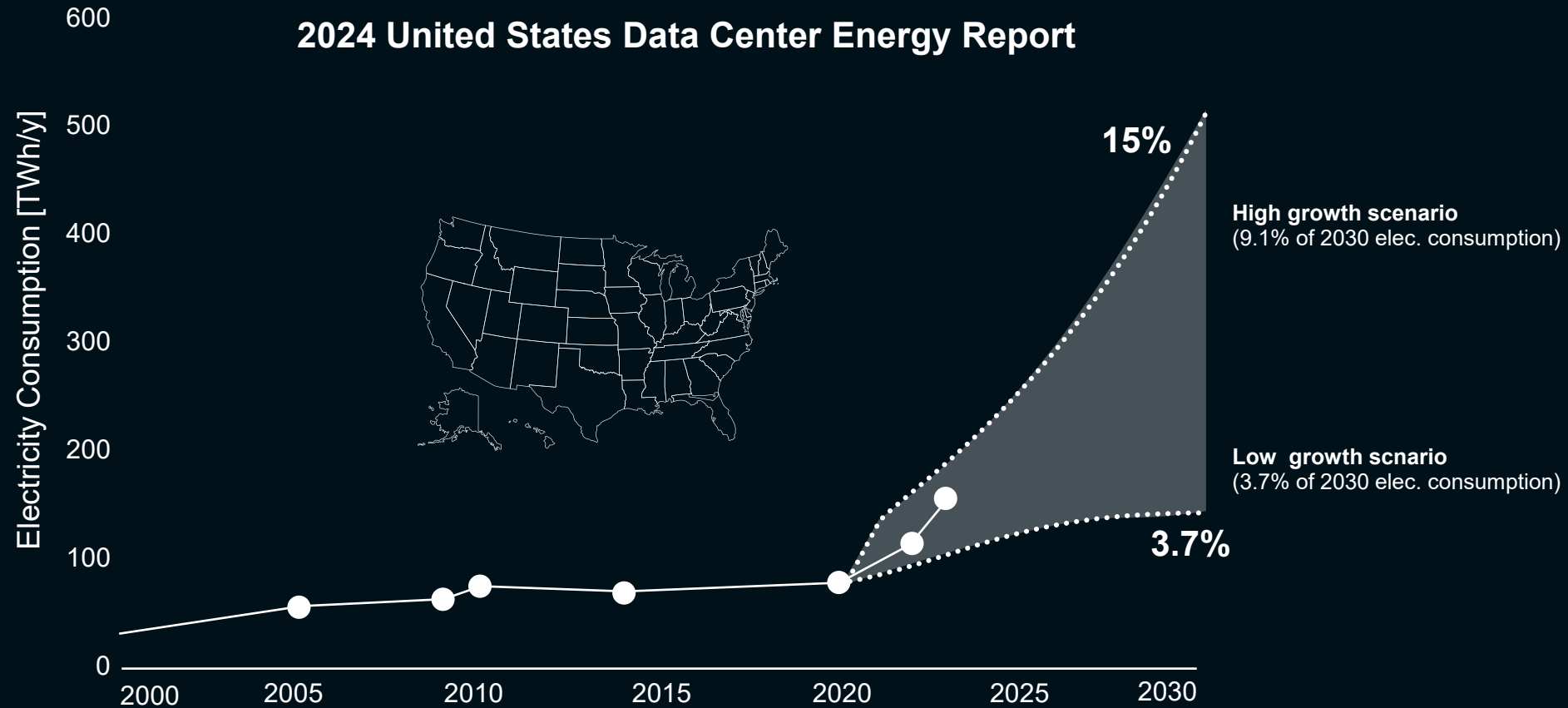
Others

5%



AI growth fuels concerns related to energy consumption

In 5 to 10 years Power and Electricity is consider to be the main bottleneck

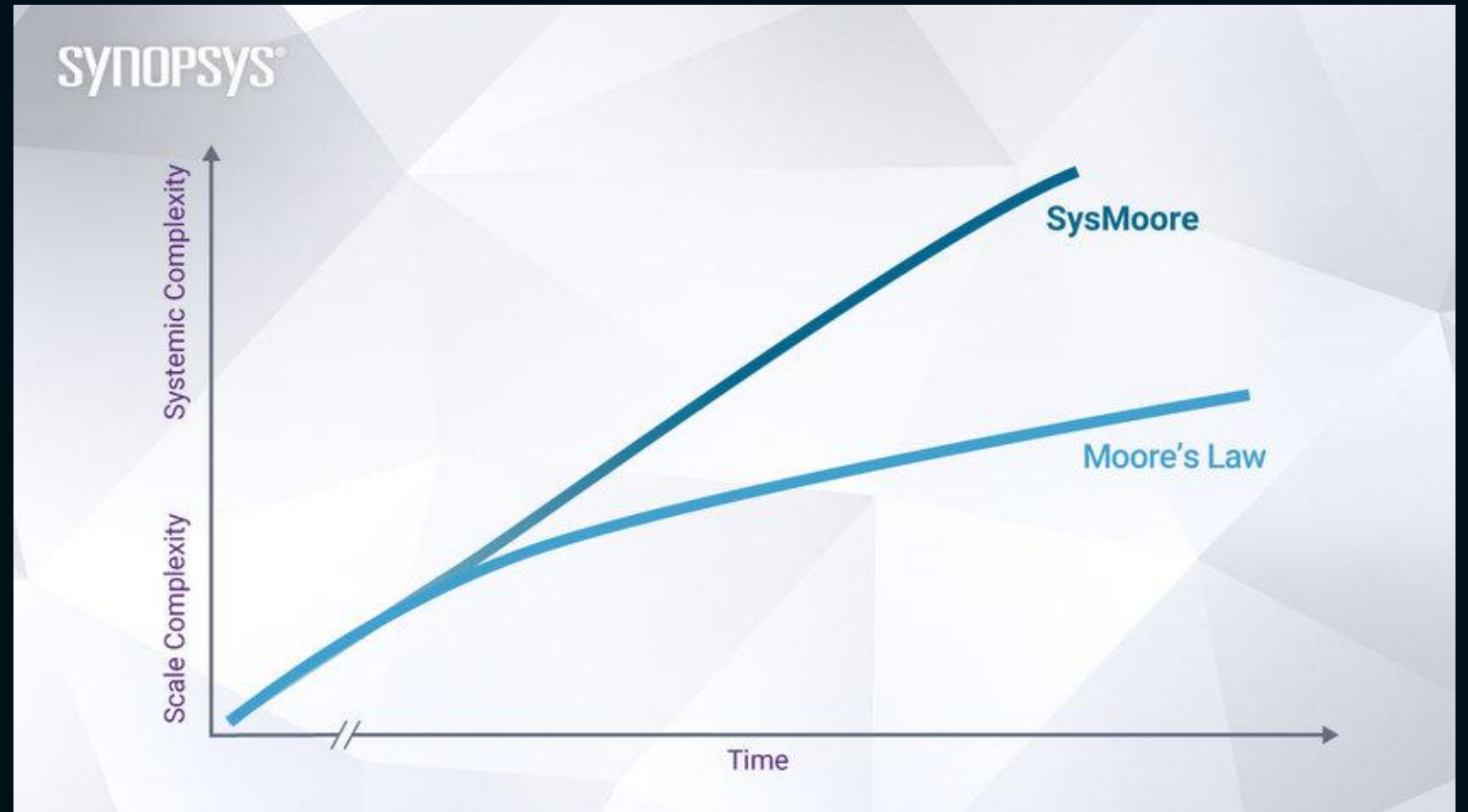


Moore's Law running out of room

The number of transistors on microchips doubles every two years

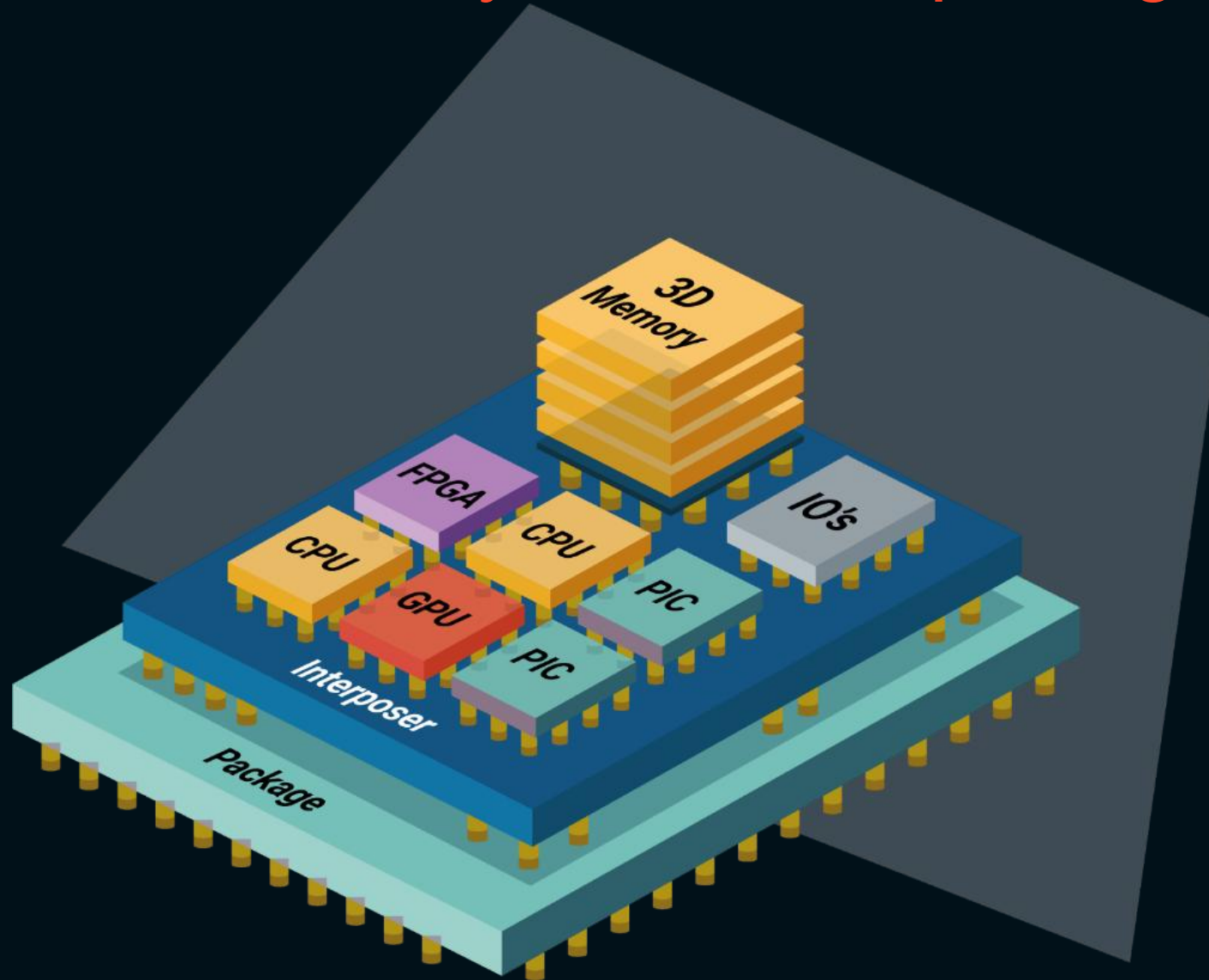
The growth dynamics of Moore's Law are slowing down, pushing industries to seek new solutions to handle increasing needs.

Integrated Photonics is a key enabling technology to solve this market paradigm.



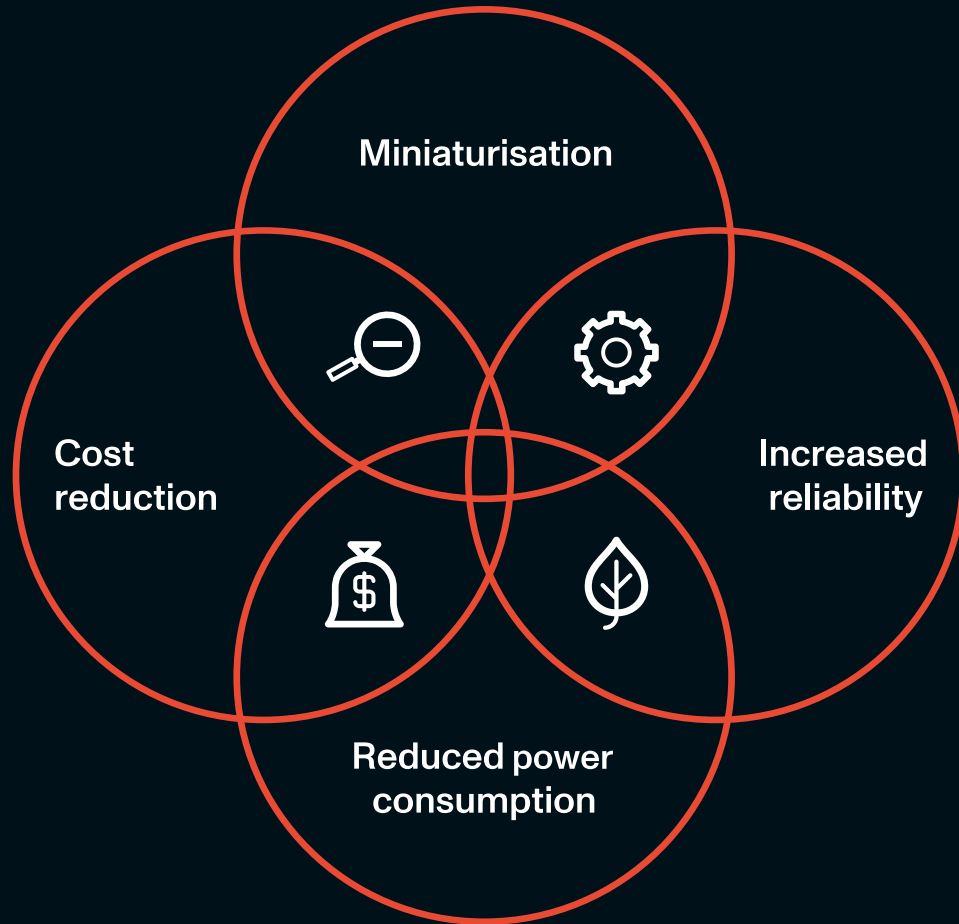
Source: The New York Times, Gordon Moore, 2016

System Solutions will be Hybrid and Co-packaged



Key Benefits of Photonics Chips

Over discrete photonics or electronic ICs

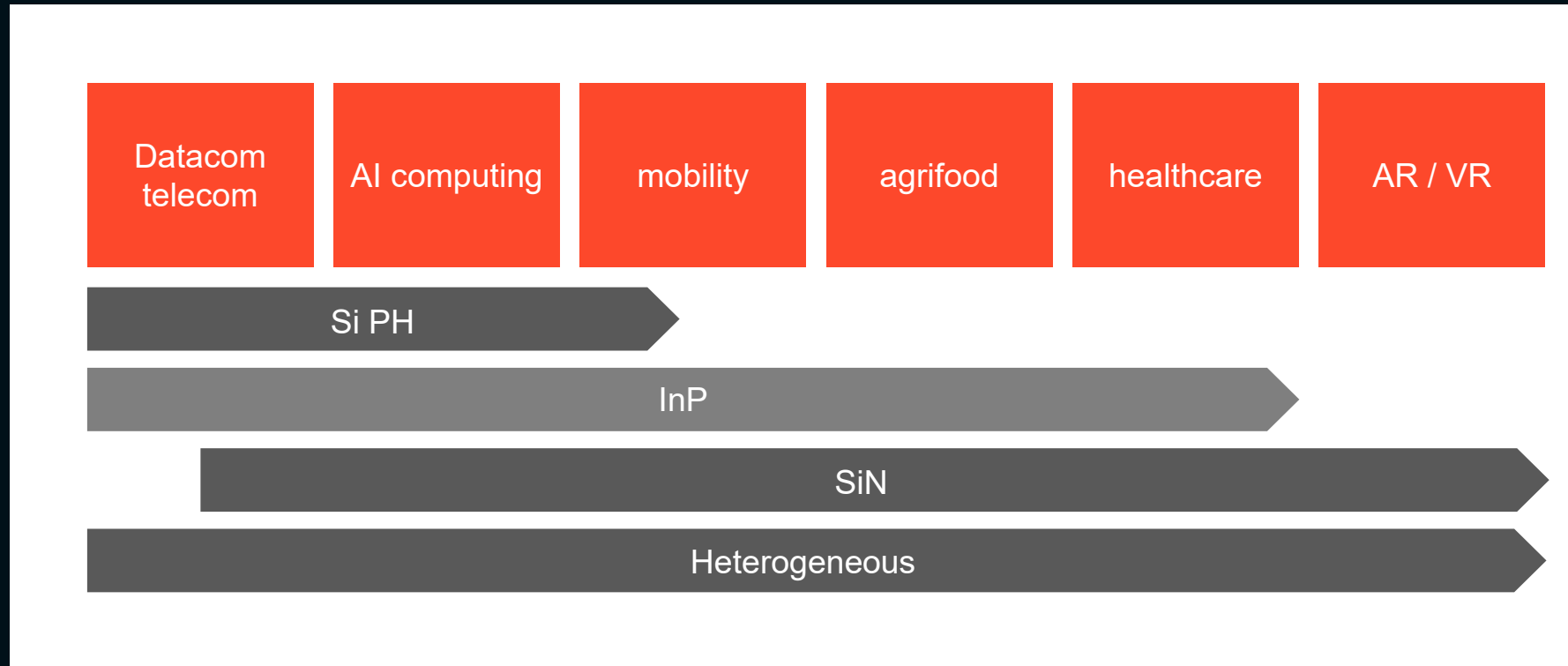


Photonic integrated circuit (PIC) integrate multiple photonic functions, like electronic ICs but with light waves instead of electrons

- High speed data transmission
- Reduced power consumption
- Reduced signal loss and interference
- Scalable to high volumes at low costs
- Compact and scalable design
- Multiple optical components on a chip

Key Technologies to create optimal solutions

- Integrated photonics goes beyond Silicon Photonics only
- Indium Phosphide (InP) is the preferred material for active devices, like lasers
- Heterogeneous integration combines technologies to optimize performance and cost.



- SiPhotonics and heterogeneous integration with InP is focussed on Datacom / Telecom
- SiN is used in Quantum, AR/VR and sensing
- InP and other III-V materials are used in sensing and AR/VR

PhotonDelta ecosystem is set to benefit from the expected growth in Integrated Photonic solutions in all application domains



Market Potential

Strategic markets can support multiple companies across three waves of technological innovation

	 Compute & Comms €650B 2032 POTENTIAL	 Security & Resilience €120B 2032 POTENTIAL	 Autonomy & Robotics €85B 2032 POTENTIAL	 Supply Chain Enablers ~€90B 2032 POTENTIAL	 Healthcare & Biosensing ~€75B 2032 POTENTIAL	 AR & VR ~€25B 2032 POTENTIAL
Wave 1 (Current) 	Interconnects: Telecom to Chiplet	Quantum Cryptography, Free Space Comms, Defense Sensors	LiDAR + Machine Vision	SiPH, SiN & InP Foundry & Packaging Expansion	Lab-Based Diagnostics & Wearable Monitoring	PIC Projectors: Glasses & Cars
Wave 2 	Optical Compute, Disaggregated Memory Network	Defense Assets + Next-gen Satcom & Earth Observation	Multi-modal Sensing & Haptic Feedback	New Materials & Heterogeneous Integration	Point-of-Care Diagnostics, Novel Drug Discovery & Biomufacturing Optimization	Full-Immersion + Holography
Wave 3	Hybrid System: Quantum + Electronic + Optical	Quantum Networks + In-compute Encryption	In-sensor Processing, Humanoid Robotics	Photonic Dedicated Metrology & Lithography Technology	Continuous, Non-Invasive, At Home, Monitoring & Intervention	Universal AR Interface



Growth accelerator for the photonic chip industry

PhotonDelta is a non-profit organisation supporting an end-to-end value chain of photonic chip companies that innovate to contribute to a better world. We do so by creating global awareness and promoting the benefits and potential of the Dutch and European photonic chip industry and its technologies. We leverage funding from the Dutch National Growth Fund.

Focus

**Accelerating
photonic chip
applications and
industrialisation**

**Facilitating
International
collaborations**

**funding start-ups
in the early phase
where risks are
still high**

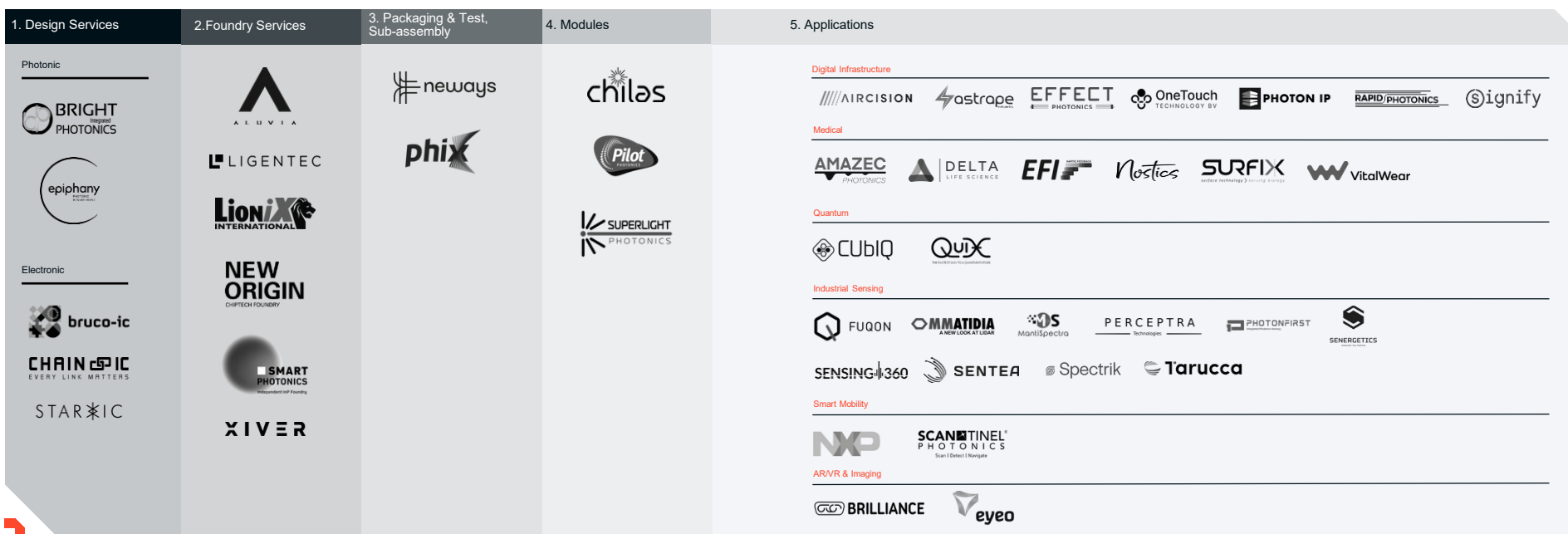
**Development
of a talented
workforce**



PhotonDelta



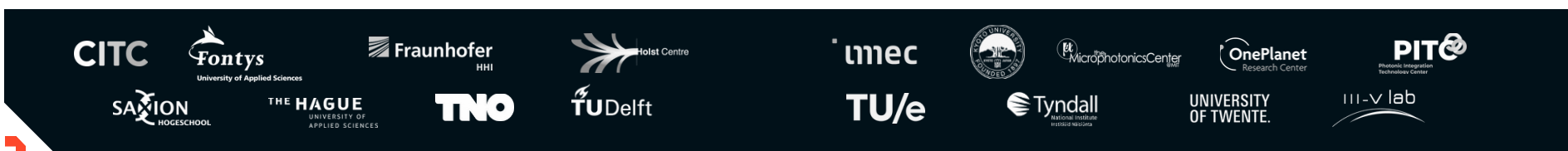
PhotonDelta Ecosystem | Value Chain Partners



PhotonDelta Ecosystem | Tech Partners

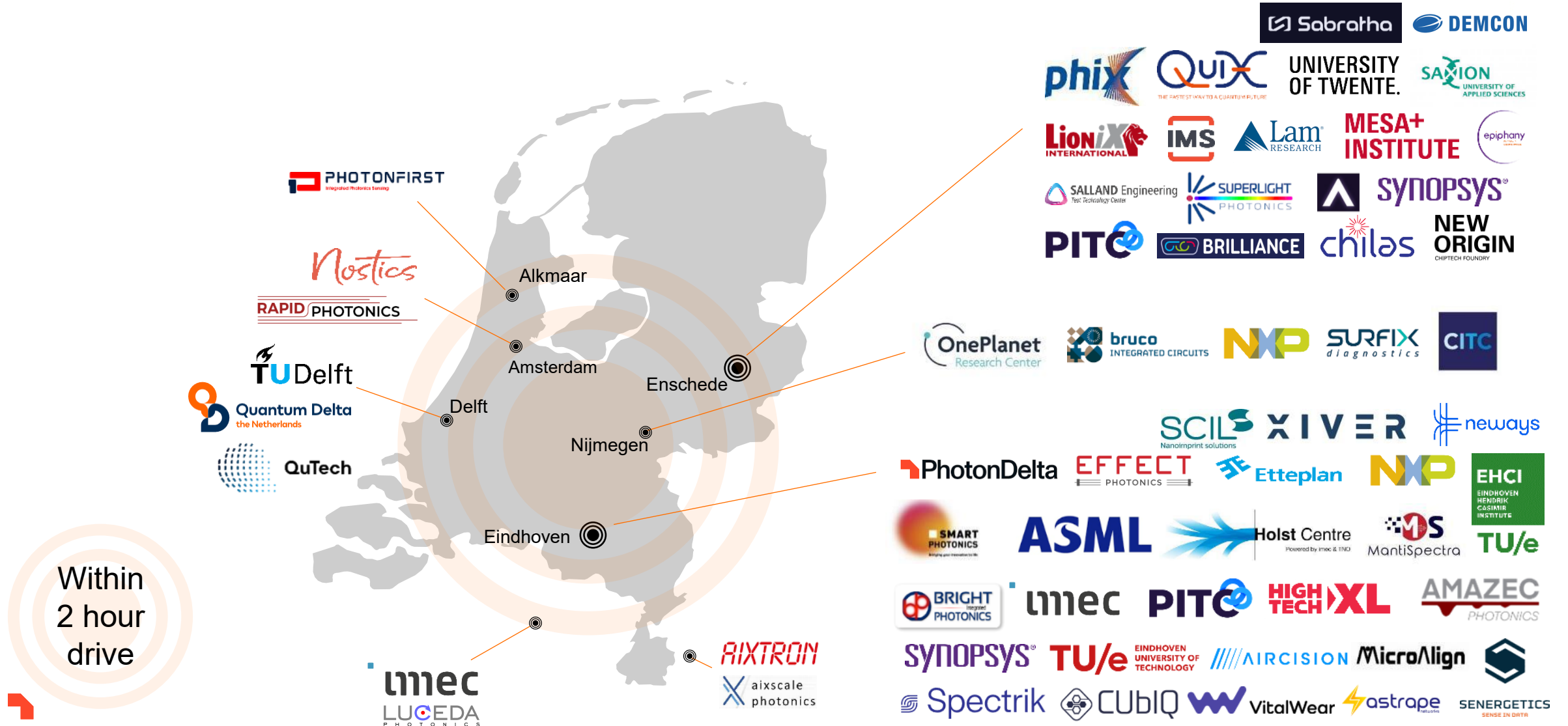


PhotonDelta Ecosystem | Research & Development Partners



Integrated Photonics ecosystem in the Netherlands

PhotonDelta Value chain partners geographically plotted



PIXEurope pilot line

High Tech Campus Eindhoven

- A new pilot €153 million factory for 6" InP chips
- 1650 m2 ISO 5 cleanroom
- Fully automated, state of the art toolset
- 10,000 wafers per year
 - 10 million complex photonic chips per year
 - 500 million components per year.
- Expandable to 20,000 wafers per year
- €53,8 million PhotonDelta investment



Opportunities for cooperation Japan – the Netherlands

In integrated photonics

General

- Research & Development
- Investor
- Market Access
- Supplier of raw materials

Specific

- Design and production of SiPh, InP and SiN
- New platforms (like TFLN, AlOx, BTO)
- Front-end & Back-end equipment
- Testing, advanced packaging & heterogenous integration



Scaling Integrated Photonics for Global Impact

Join the 5-Year Anniversary Edition



Book your
Super Early Bird
ticket now!

PIC Summit Europe

3 - 4 November 2026



PhotonDelta

