

Ireland

‘Stories from the Silicon Island’

Semicon Europa, Nov 19th 2025



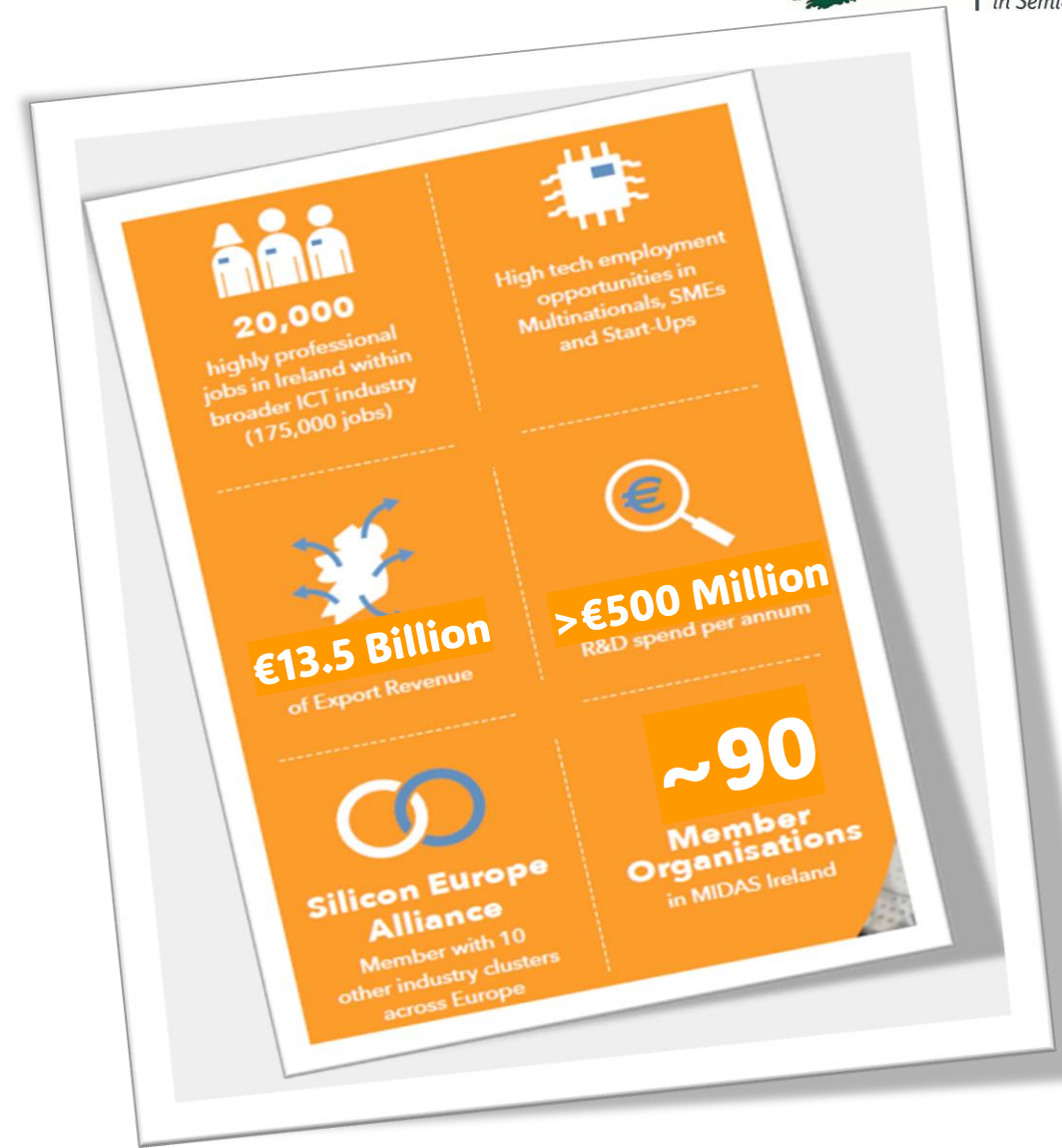
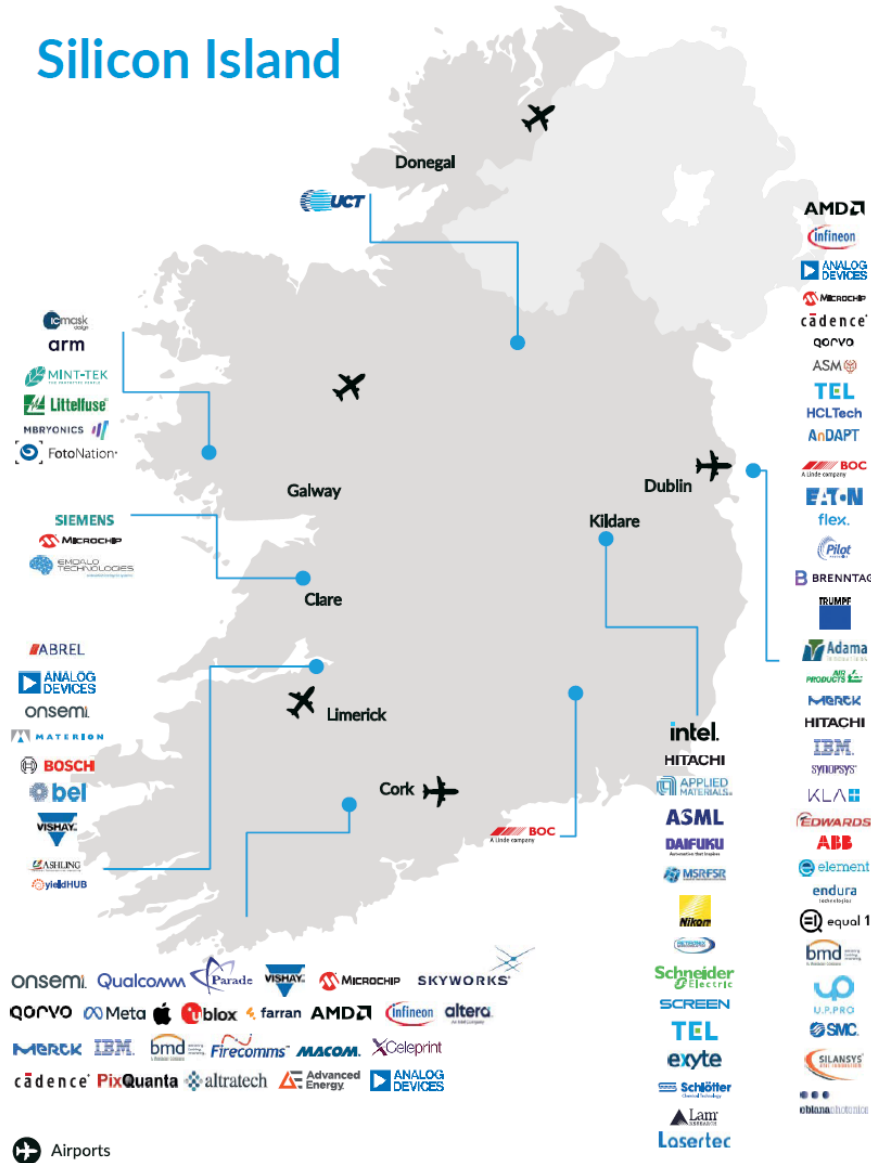
Irish Semiconductor Ecosystem



Silicon Island

*Ireland's Future
in Semiconductors*

Silicon Island



National Semiconductor Strategy



Silicon Island
Ireland's National
Semiconductor Strategy



- **Launched by Minister Peter Burke in May 2025**
- **Recognition of Semiconductors as a Key Sector**
- **3 Strategic Strands:**
 - **Strengthen Existing Ecosystem**
 - **Ensure a Robust Talent Pipeline**
 - **Seize Industry Opportunities**
- **Add 34,500 jobs by 2040 - *KPMG, Sept 2024***



**An Roinn Fiontar,
Turasóireachta agus Fostaíochta**
Department of Enterprise,
Tourism and Employment

"Ireland : Stories from the Silicon Island"

Semicon Europa Executive Forum

Wednesday, November 19th, 2025 - Munich



- 2:00pm** ***Welcome to 'Ireland's Semiconductor Story'*** , John Blake, MIDAS Ireland General Manager
- 2:05pm** ***'Analog Devices 60 Years in Business, 50 Years in Ireland' Fireside Chat***
Martin Cotter, Senior Vice President, Vertical Business Units and President EMEA at Analog Devices
Donal Travers, Executive Director, Head of Technology, Consumer and Business Services at IDA Ireland (Moderator)
- 2:30pm** ***'Operating & Building Europe's most advanced Fabs'***
Enda Murphy, Senior Director, Corporate Services and Facilities at Intel Ireland
Richie Casey, Program Development Group Manager, Semiconductor at Arcadis
- 2:50pm** ***'Advanced Packaging Where to Next'***
Prof. Peter O'Brien, Head of Photonics Packaging & Systems Integration Group at Tyndall National Institute
- 3:05pm** ***'Starting & Scaling Deep Tech R&D' Panel Discussion***
Brendan Farley, Corporate Vice President of Communications Engineering at AMD
Cormac O'Sullivan, Senior Director of Electronics at Mbryonics
Peter Smyth, Chief Executive Officer at X-Celeprint (Moderator)
- 3:25pm** ***Thank You, Closing & Wrap Up***
Seamus Carroll, Vice President, Semiconductor Unit at IDA Ireland
Anne-Marie Tierney Le Roux, Senior Vice President Global Enterprise Technology at IDA Ireland

Analog Devices : 60 Years in Business, 50 Years in Ireland



Martin Cotter
Senior Vice President
Vertical Business Units & President EMEA
Analog Devices



Donal Travers
Executive Director, Head of Technology,
Consumer & Business Services
IDA Ireland





Intel Presentation

Enda Murphy
Senior Director
Corporate Services & Facilities
Intel Ireland

The Irish Fab Construction Supply Chain

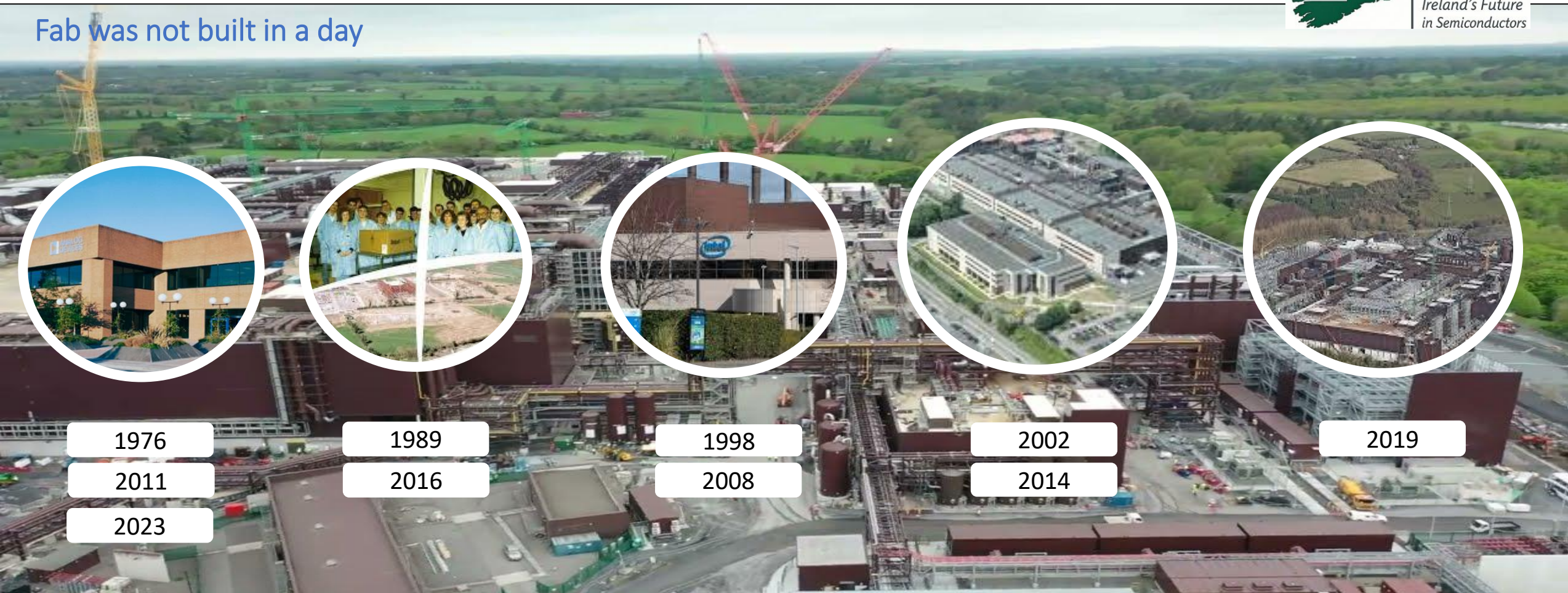
Semicon Europa, Nov 19th 2025

Richard Casey  ARCADIS

Ireland's Fab Building History



Fab was not built in a day



50 years of Fab Building Experience

Semiconductor Construction driven Innovations

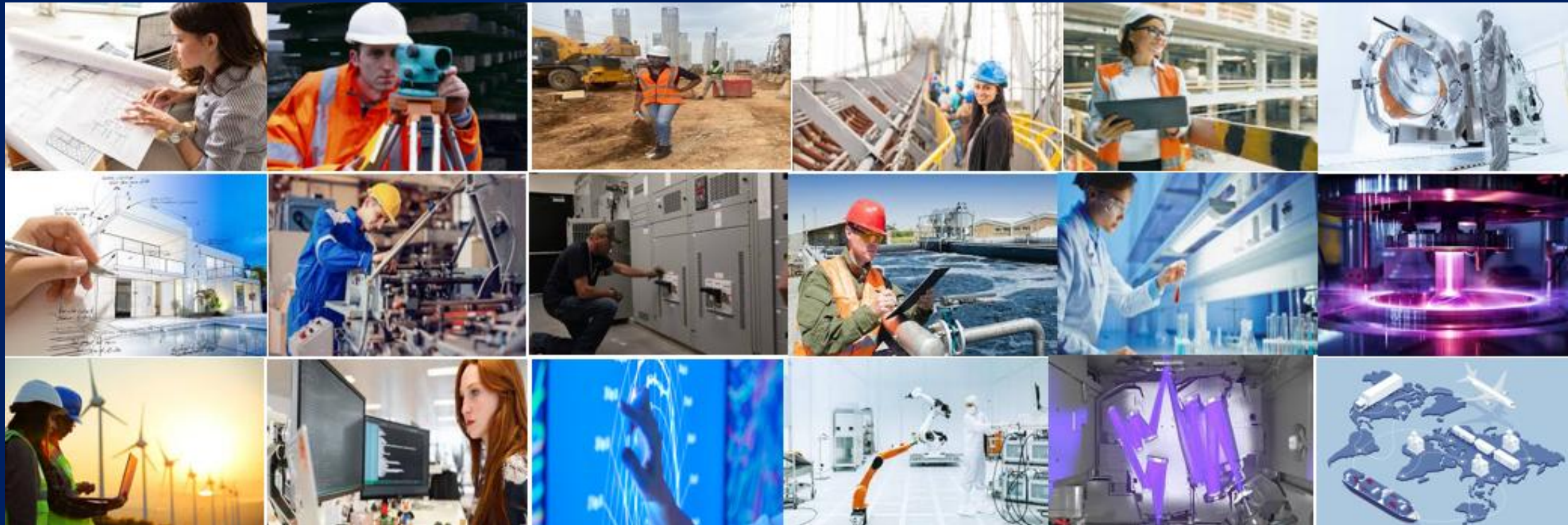
Driving Innovation



Early adaptors and leading edge MMC capability

Construction capability.

Site selection to Commissioning



Advanced Fab Design and Construction Supply Chain

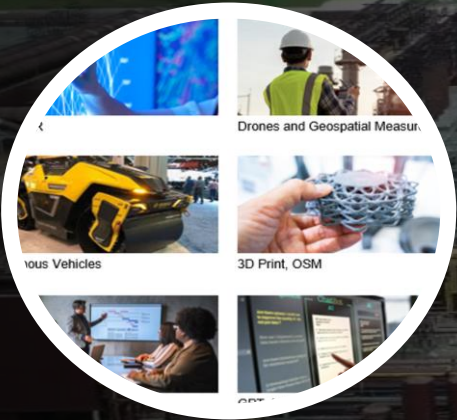
Ireland's Semiconductor Fab Construction Capability



Come to Ireland



Talent



Technology



Capability

=



SiliCON Island

Building Silicon Isle



Keep in touch



Richard Casey
Program Development
Group Manager



Advanced Packaging – Where to Next

Prof. Peter O'Brien

Head of Group (Packaging & Systems Integration)

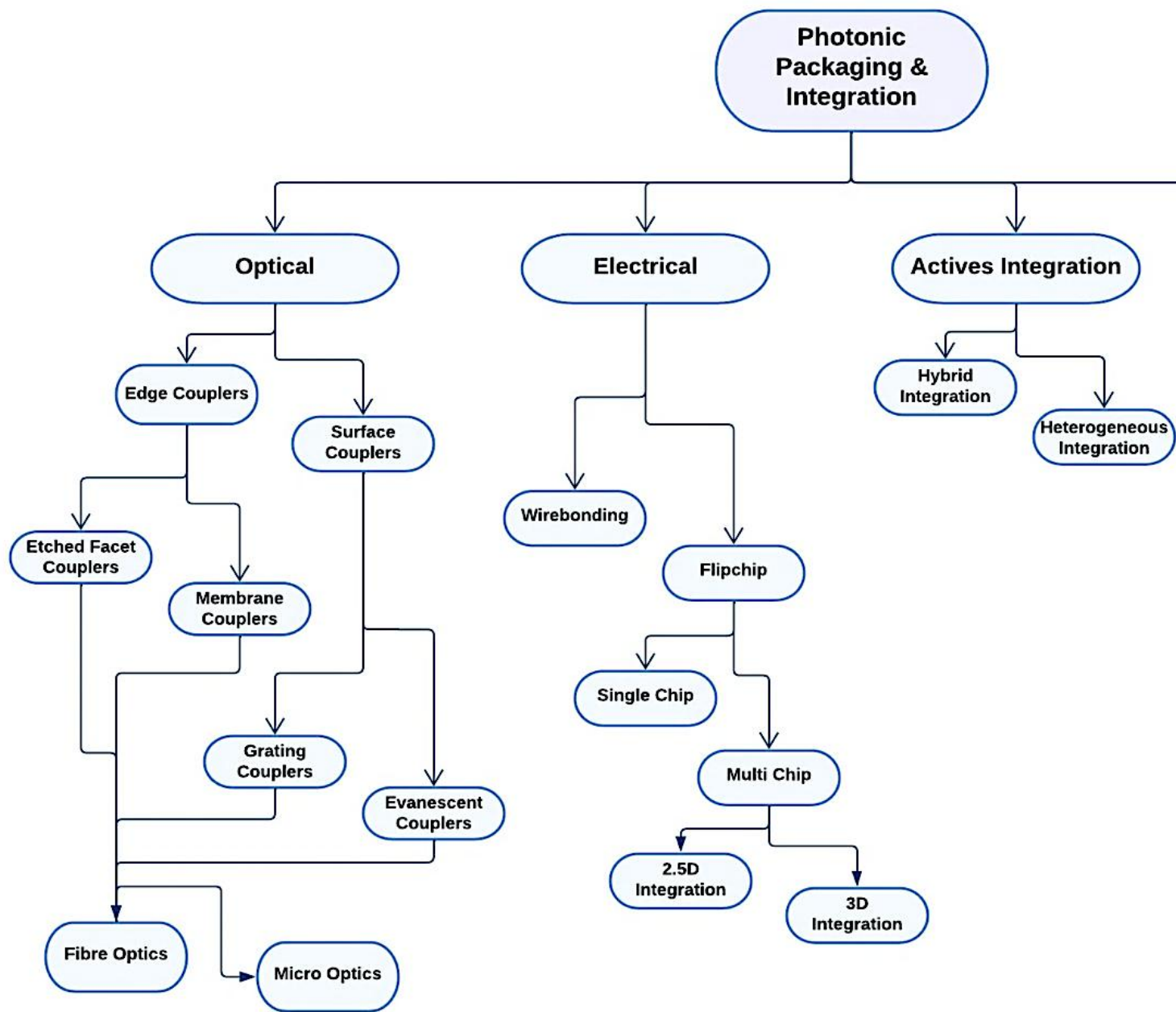
Tyndall National Institute

University College Cork

Ireland

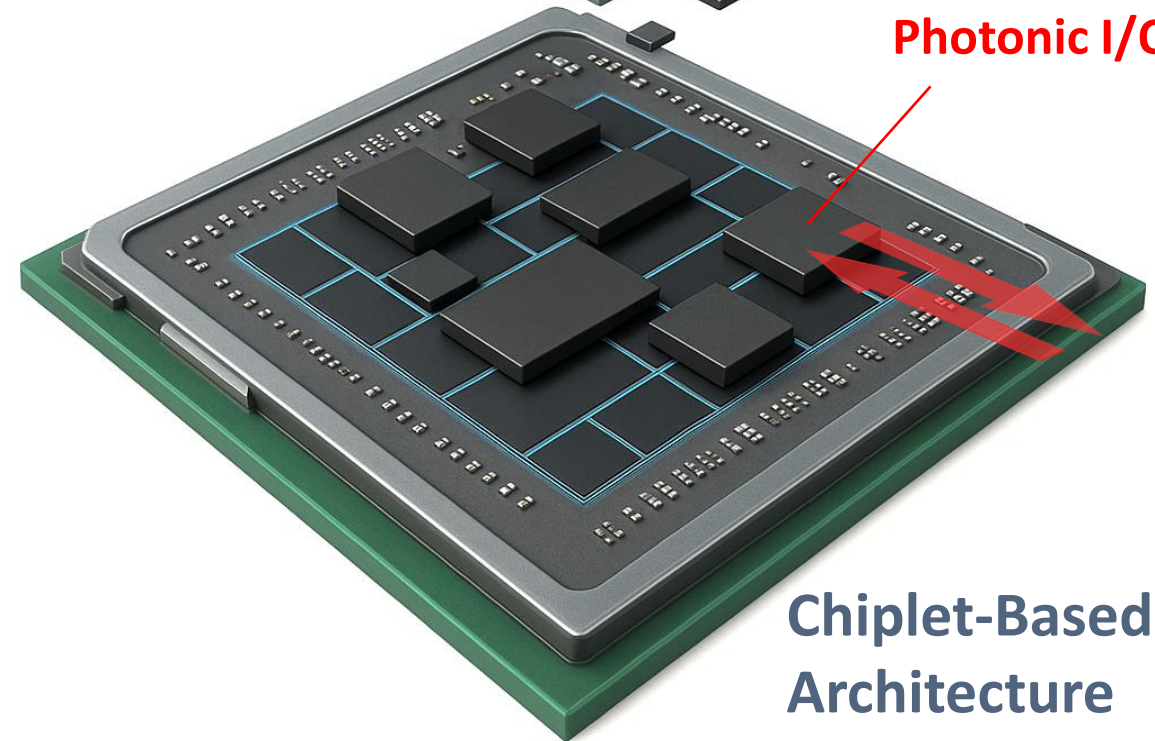
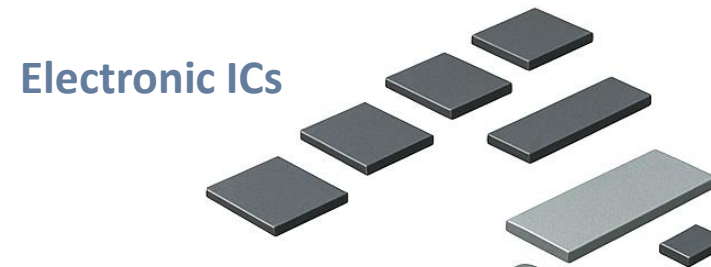
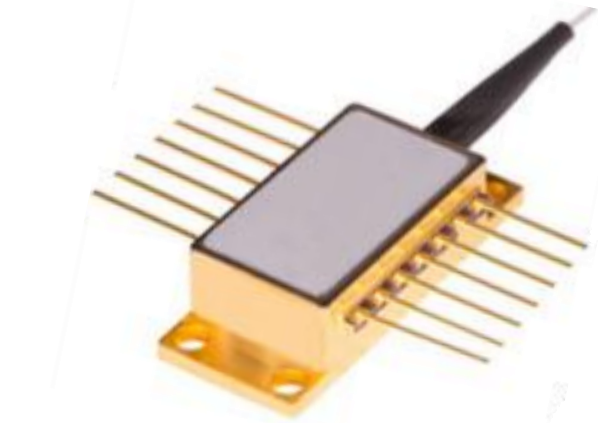


Increasing Photonics Complexity (co-packaging with electronics)

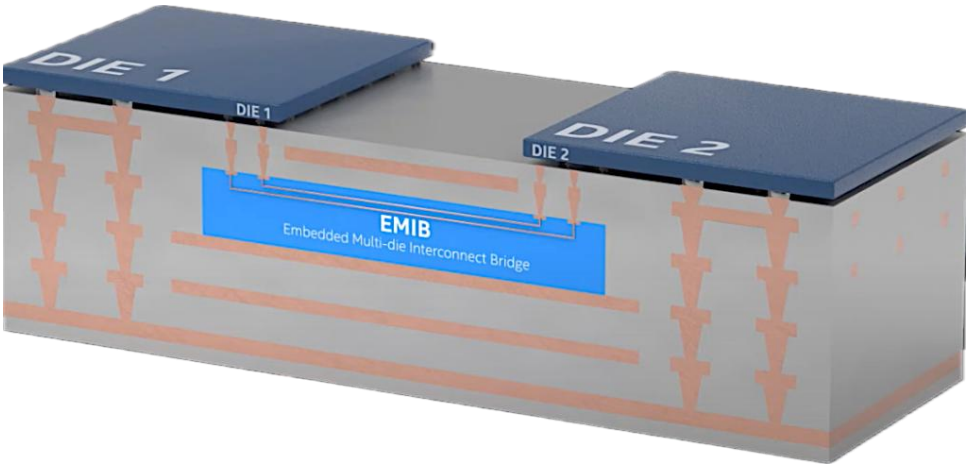
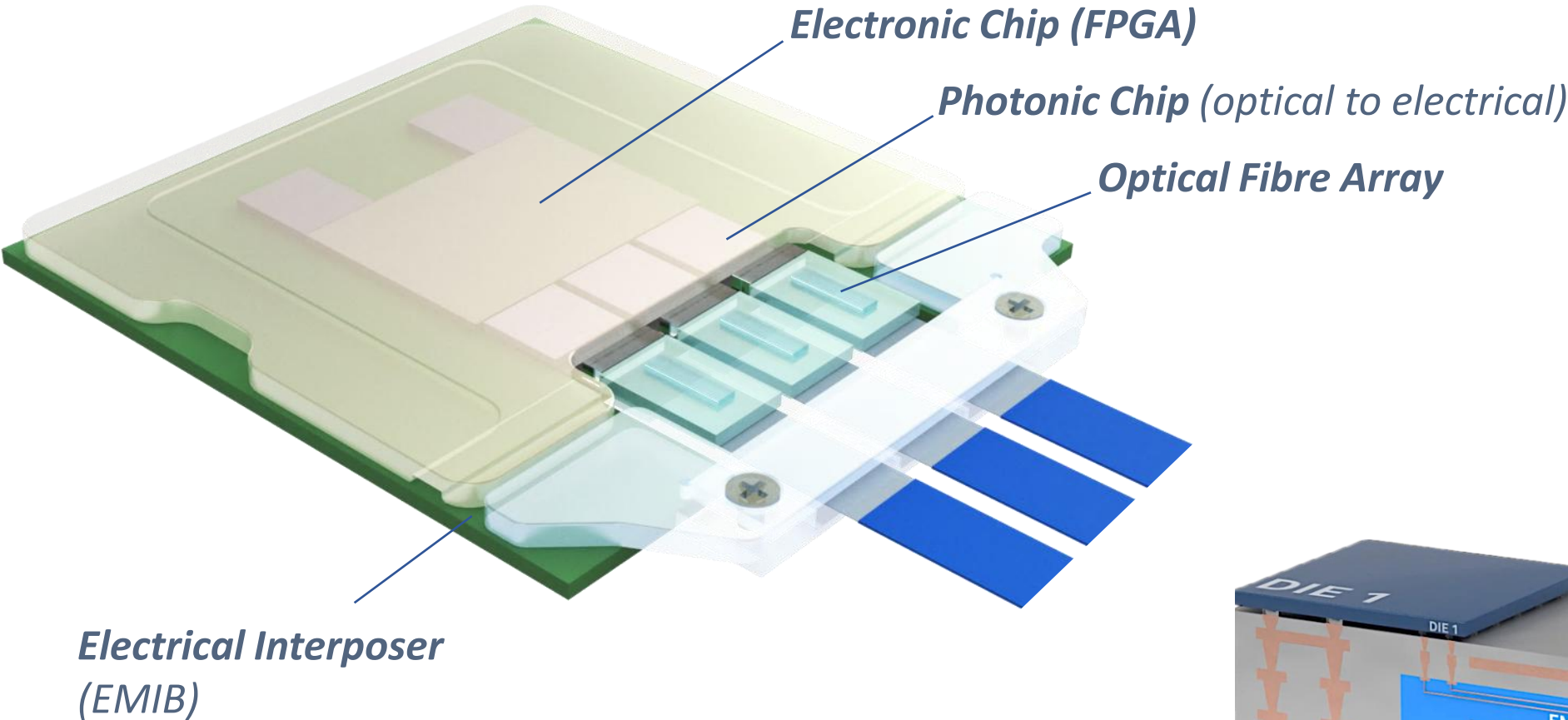


*Integrated silicon photonic MEMS
Nature Microsystems &
Nanoengineering
Vol. 9, March 2023.*

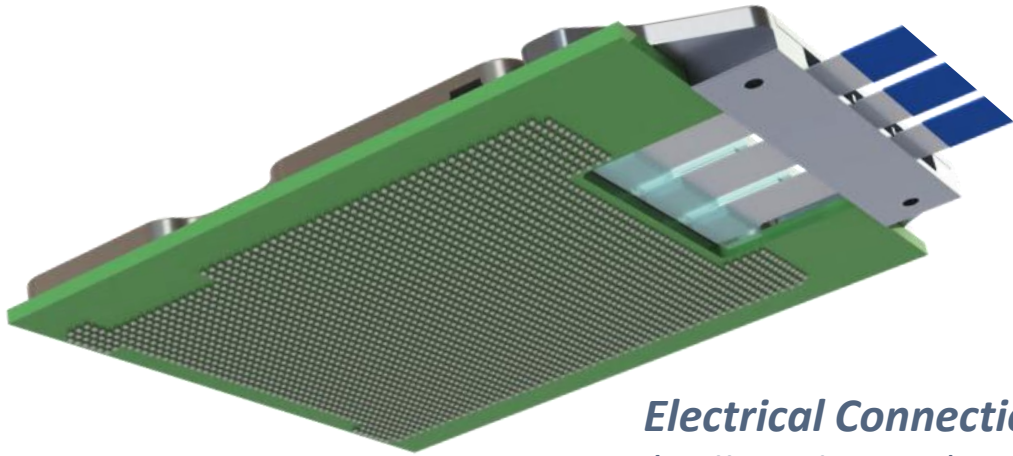
Increasing Photonics Complexity (co-packaging with electronics)



Photonic-Electronic Co-Packaging (chiplet approach)



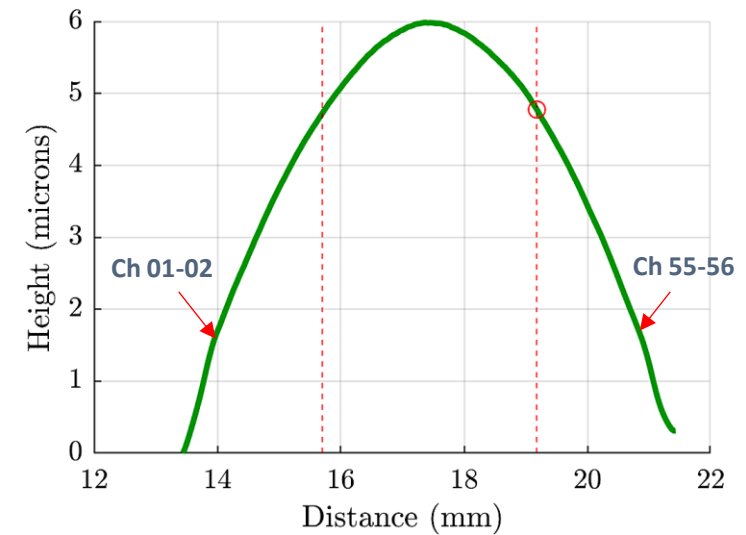
Photonic-Electronic Co-Packaging (chiplet approach)



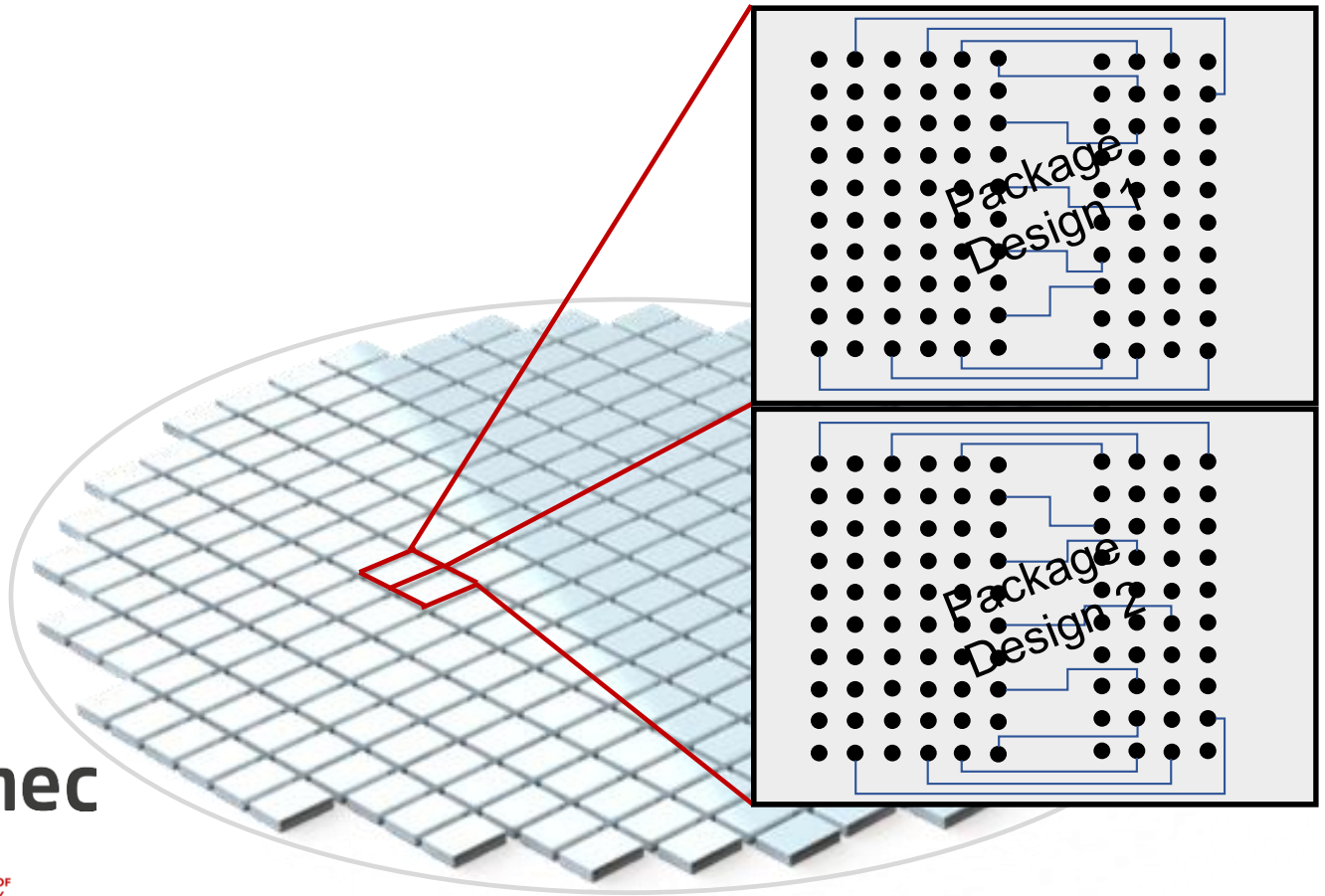
Electrical Connections
(Ball Grid Array)



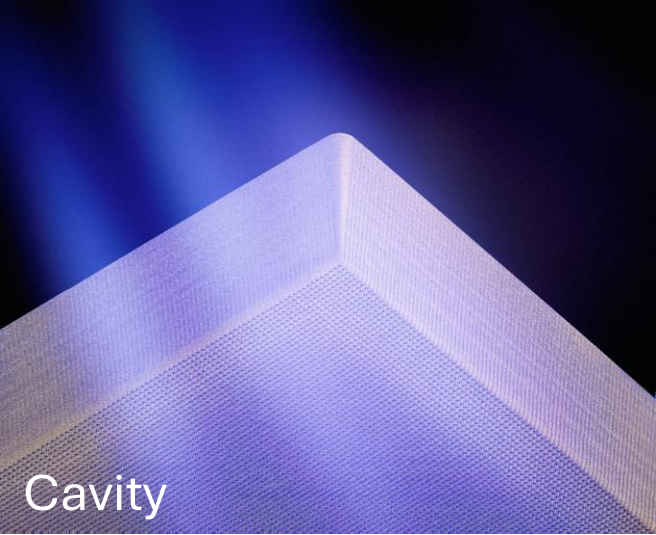
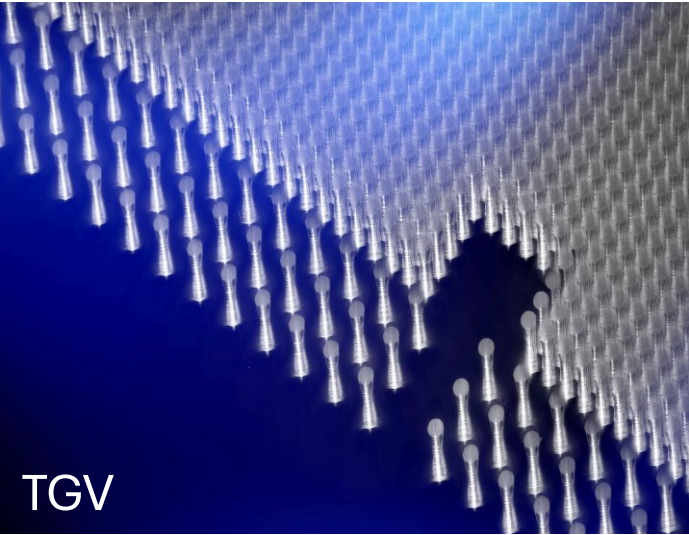
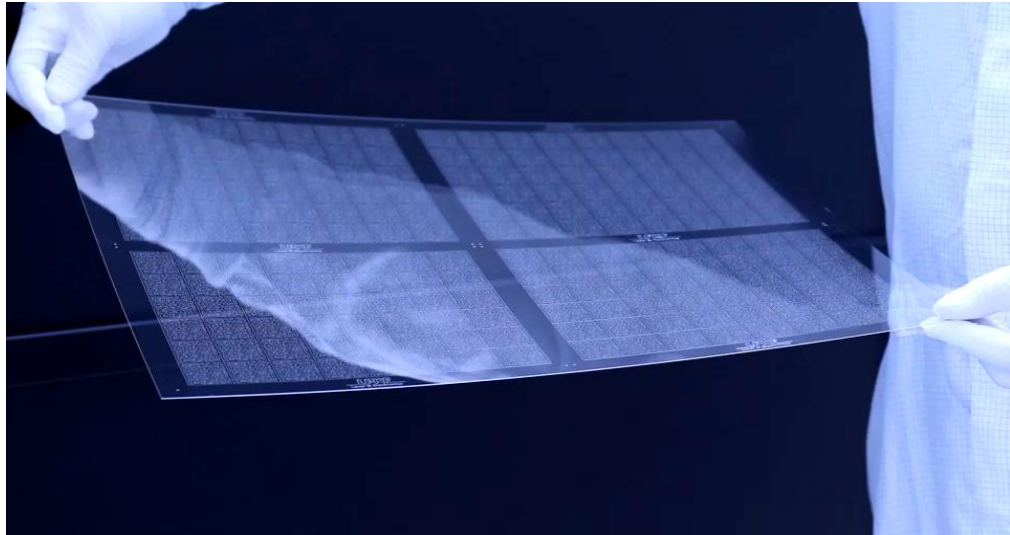
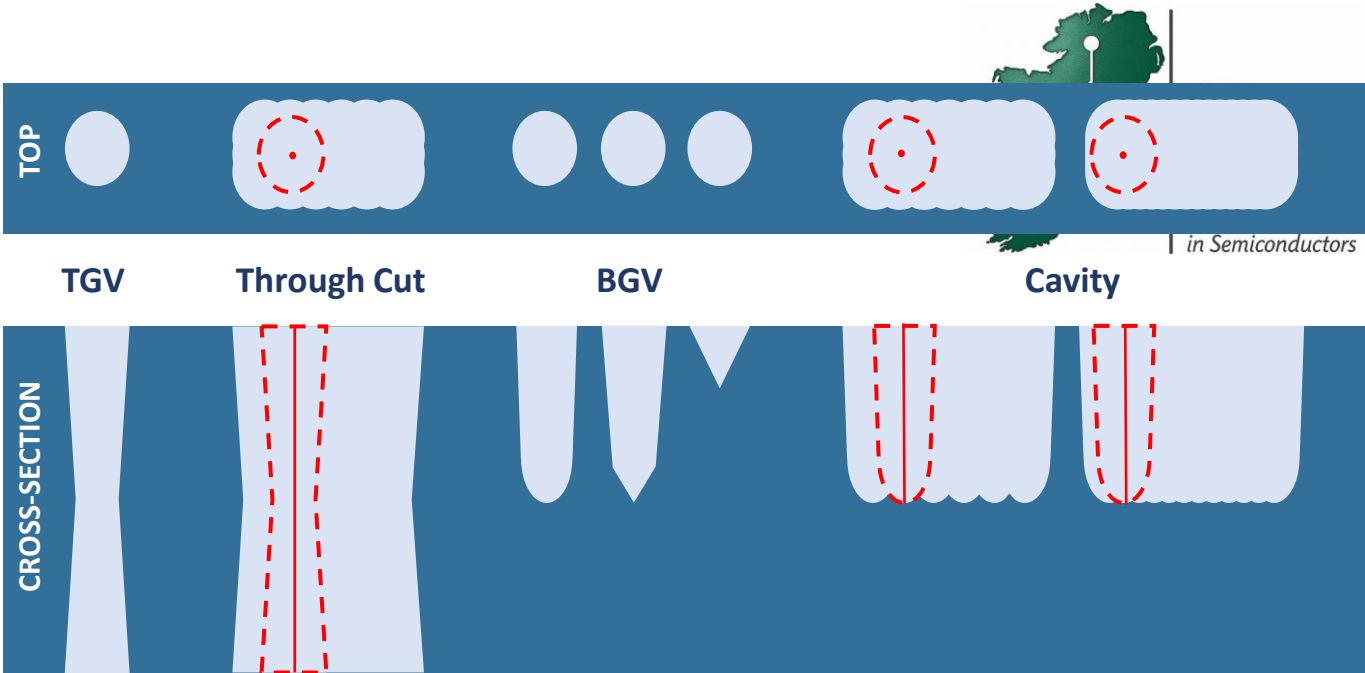
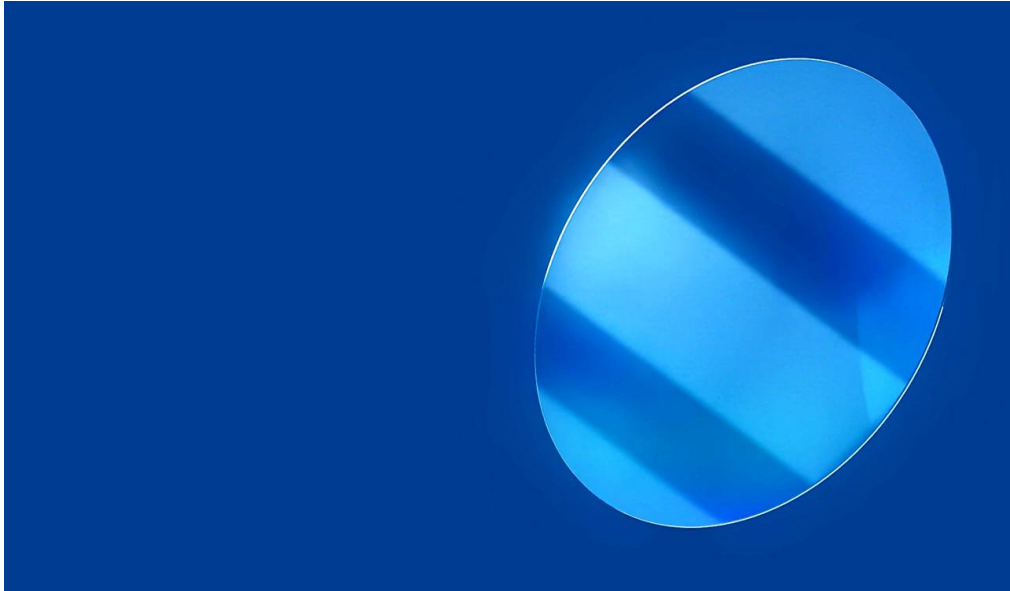
Innovations in fibre array coupling and integration for high-bandwidth FPGA multichip packages, SPIE Photonics West, January 2025.



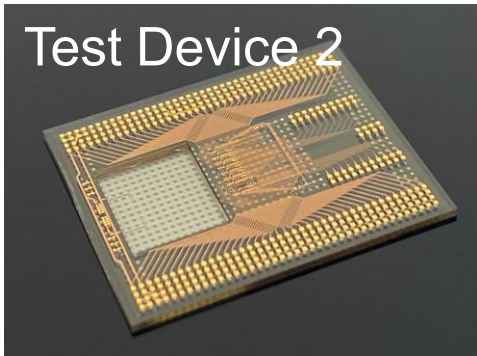
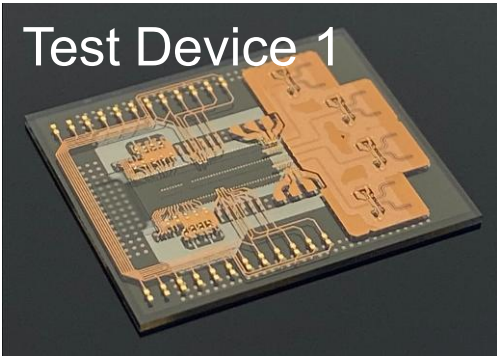
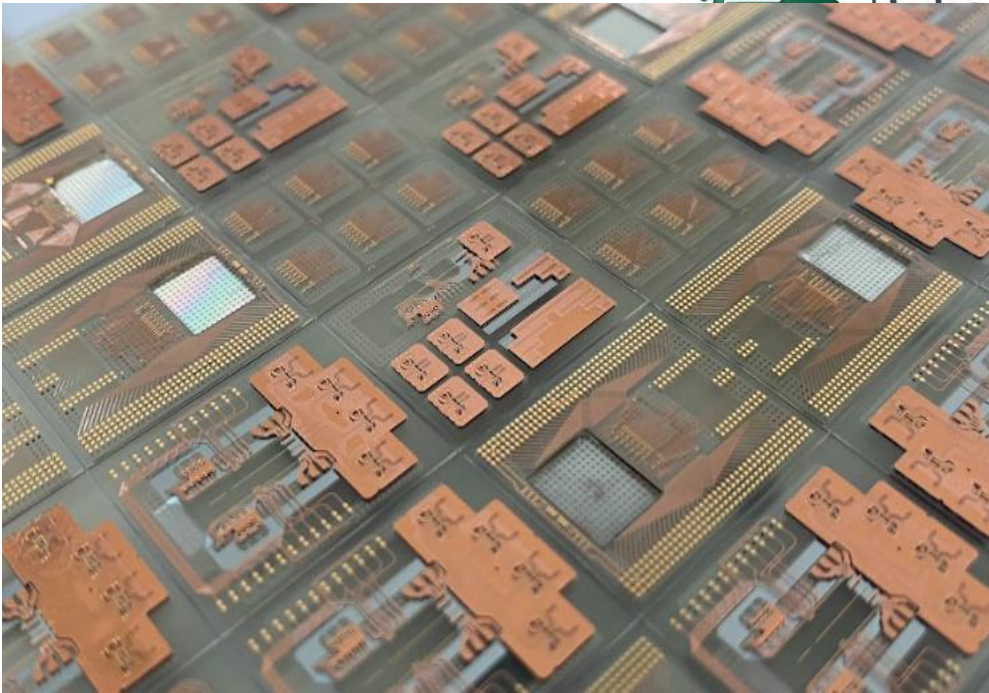
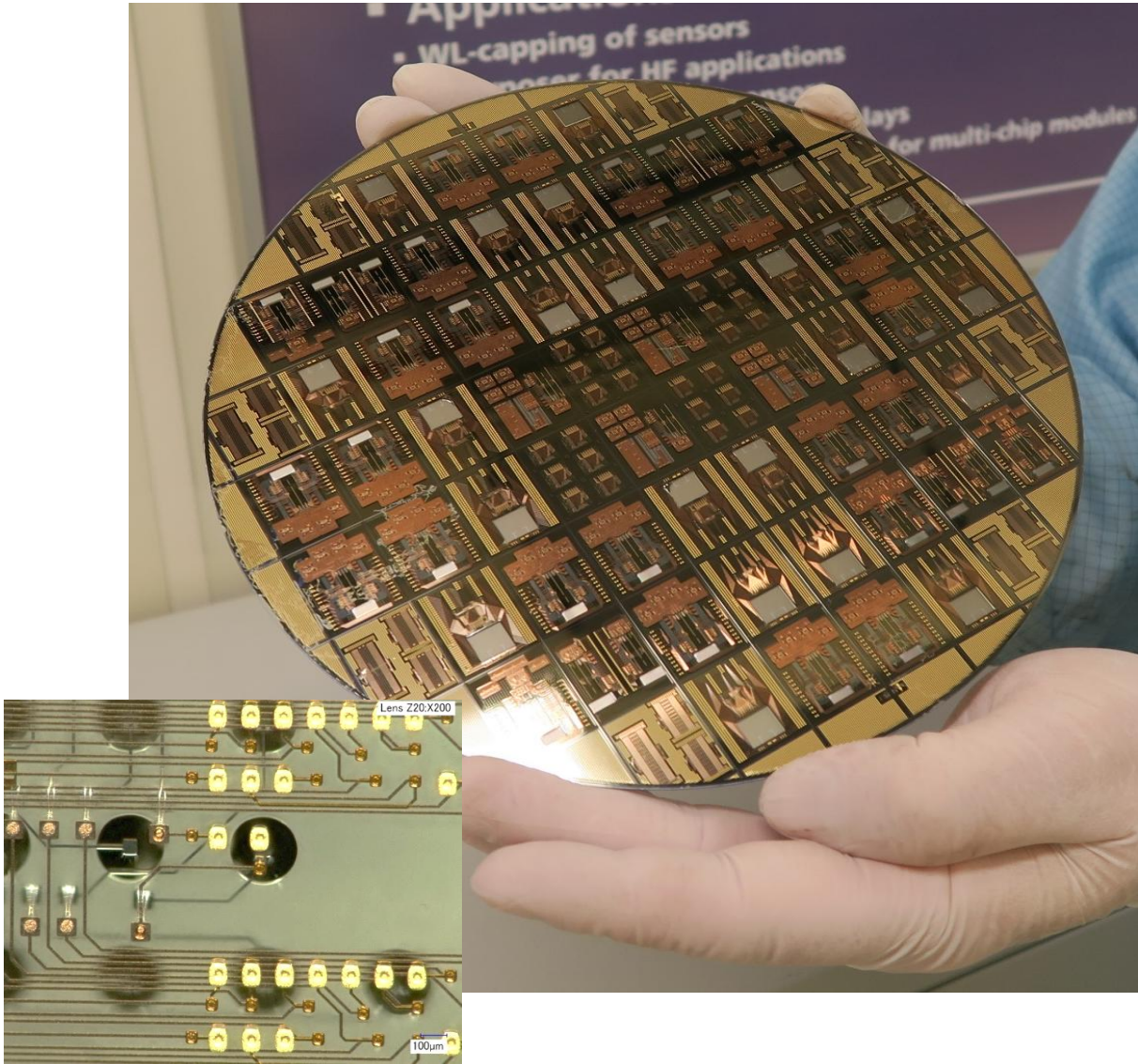
Glass Wafer-Level Packaging



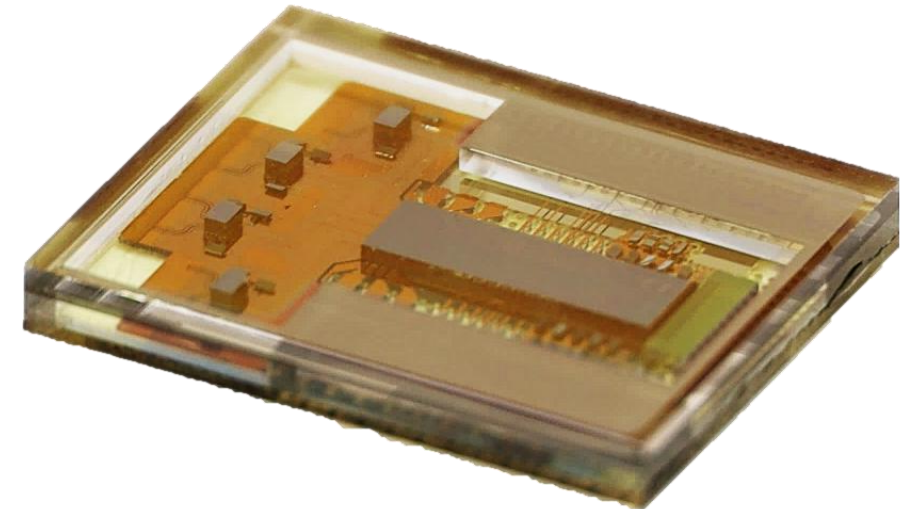
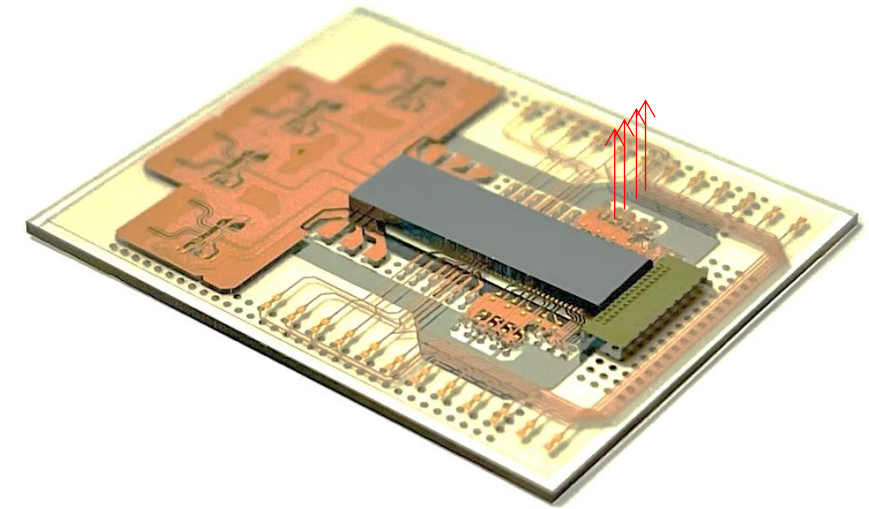
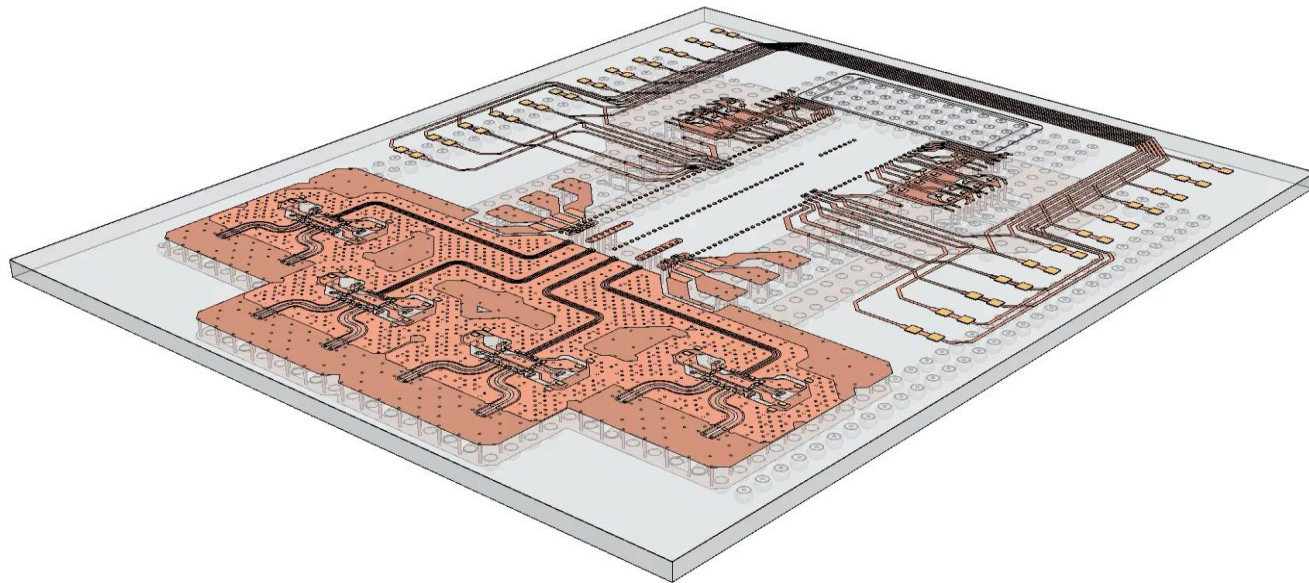
Glass Interposers



Glass Interposers

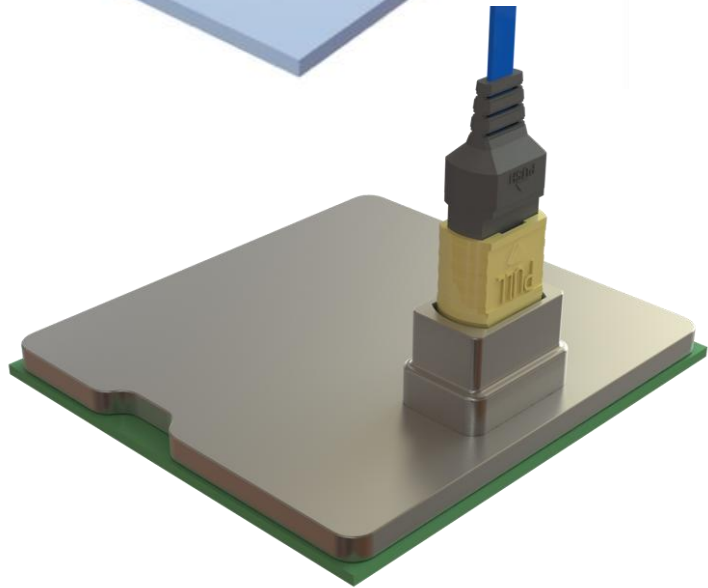
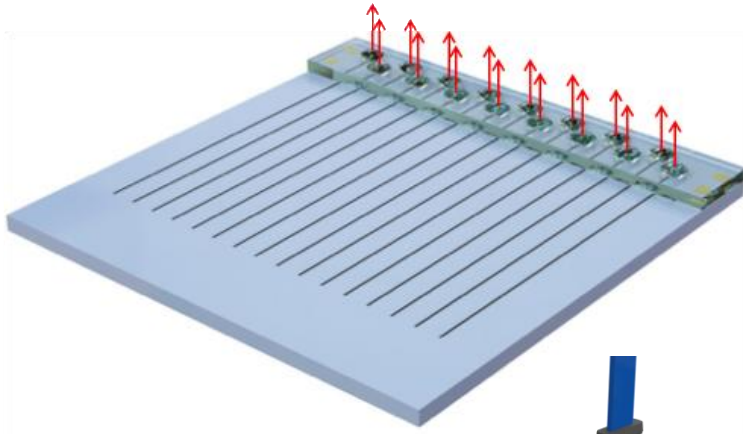


Photonic-Electronic Co-Packaging



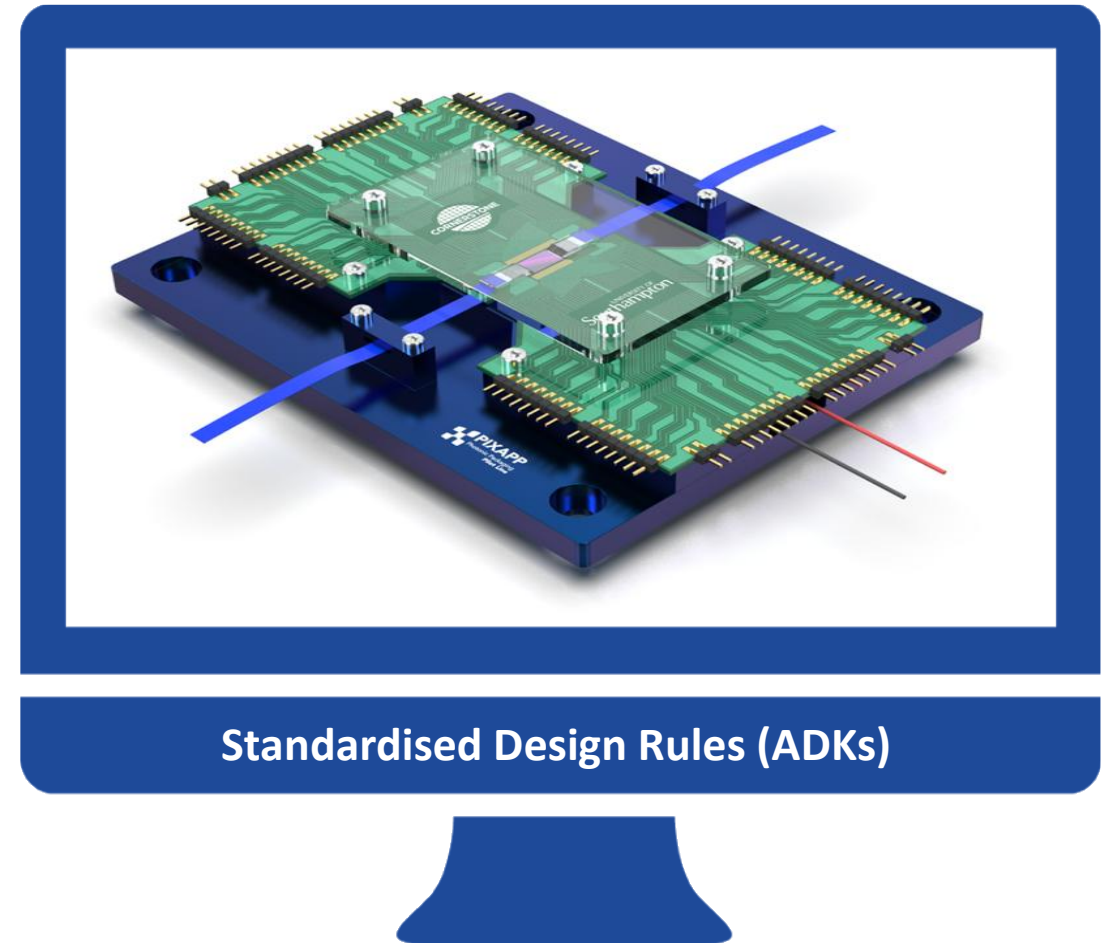
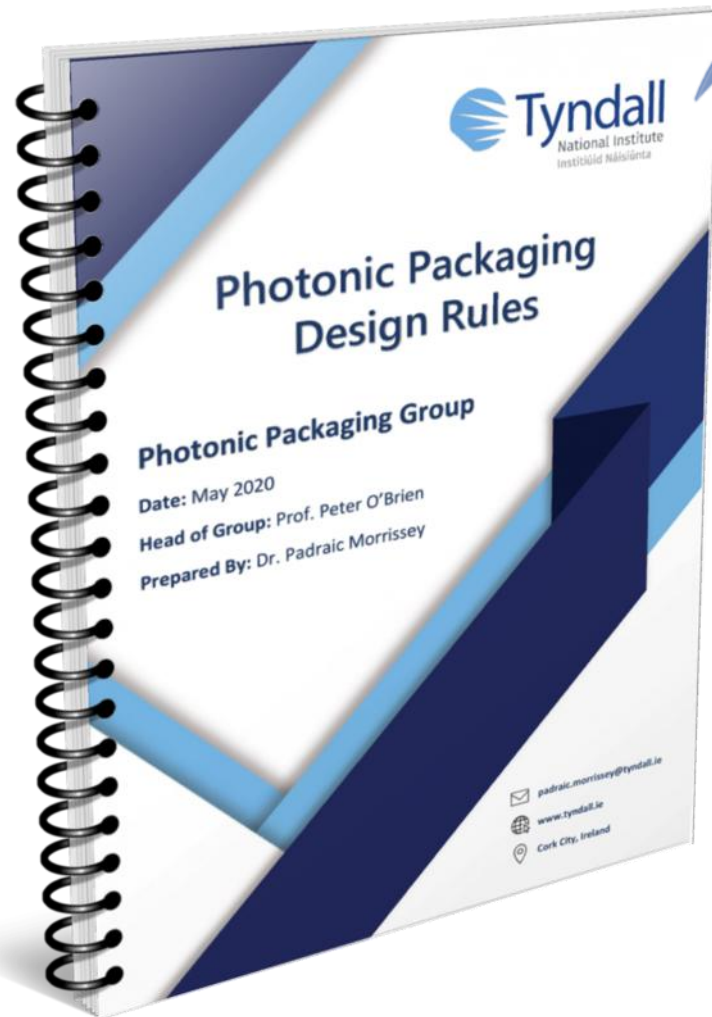
Photonic-Electronic Co-Packaging (working prototypes)

Next: Ultra High-Density 2D Arrays



**Silicon
Island**
*Ireland's Future
in Semiconductors*

Standardised Packaging (design rules)



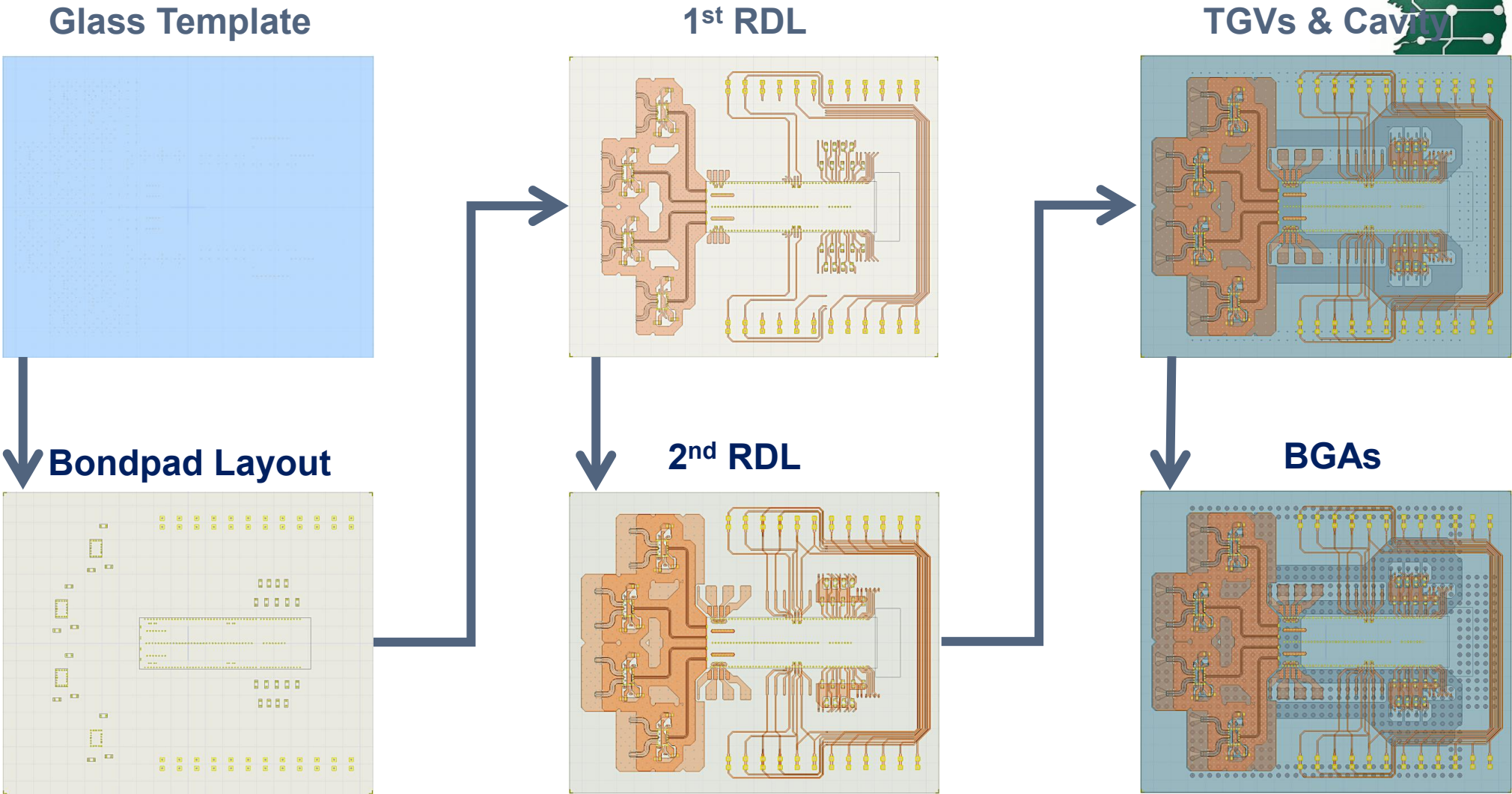
Standardised Design Rules (ADKs)

Standardised Packaging (design rules for glass interposers)



Silicon Island

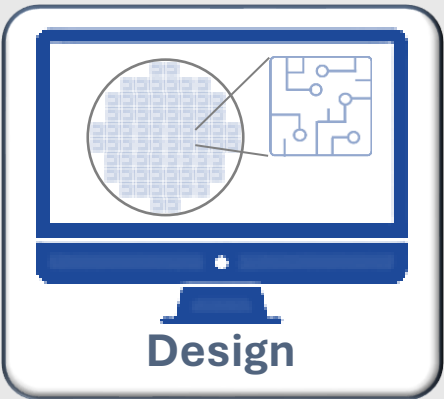
*Ireland's Future
in Semiconductors*



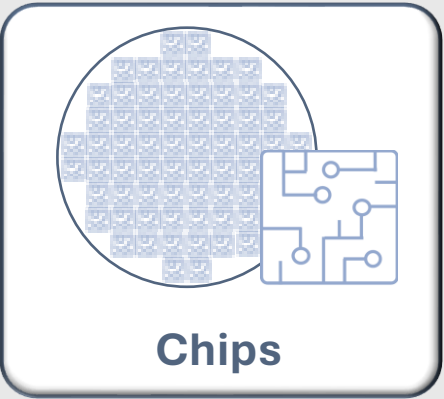
**European Chips Act
Photonics Pilot Line**

PIX•Europe

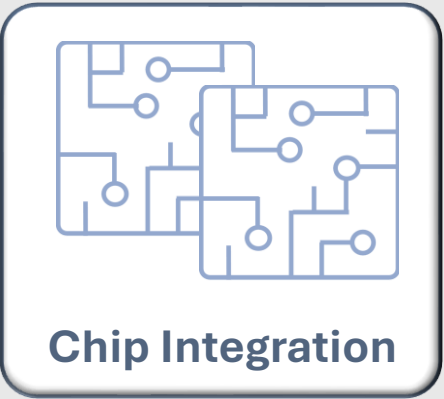
400M Euro Investment
(European Union & Member States)



Design



Chips

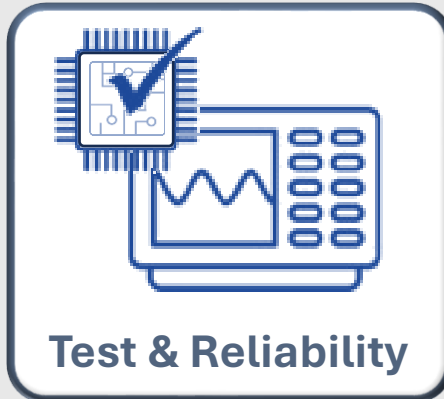


Chip Integration

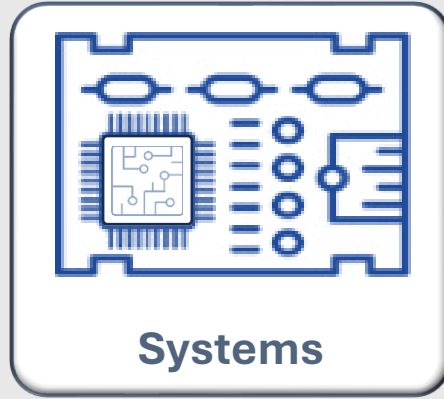


Packaging

PIX Europe



Test & Reliability



Systems



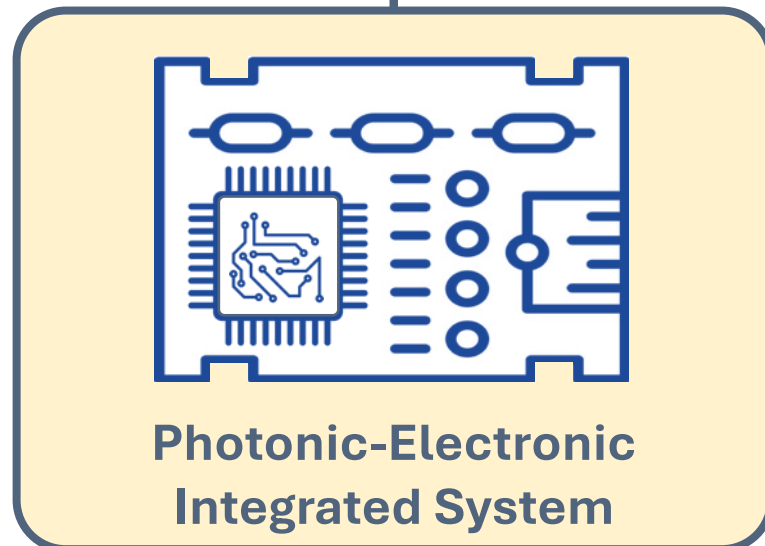
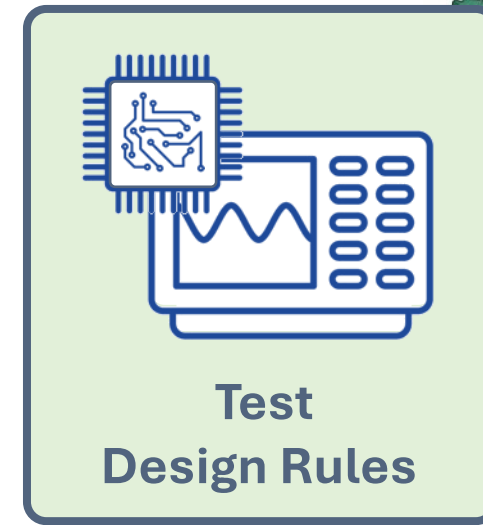
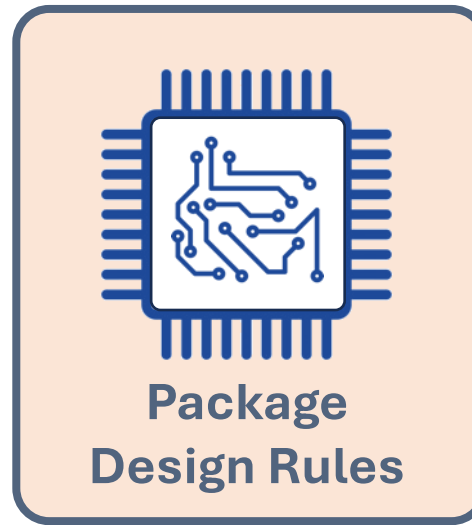
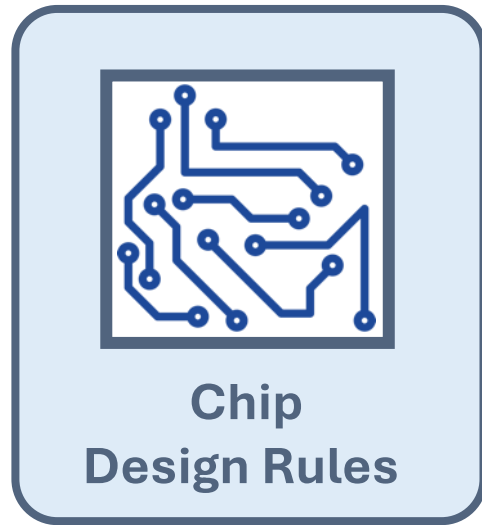
Training



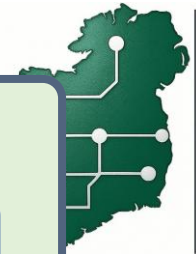
Operations

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PIXEurope Design Standardisation

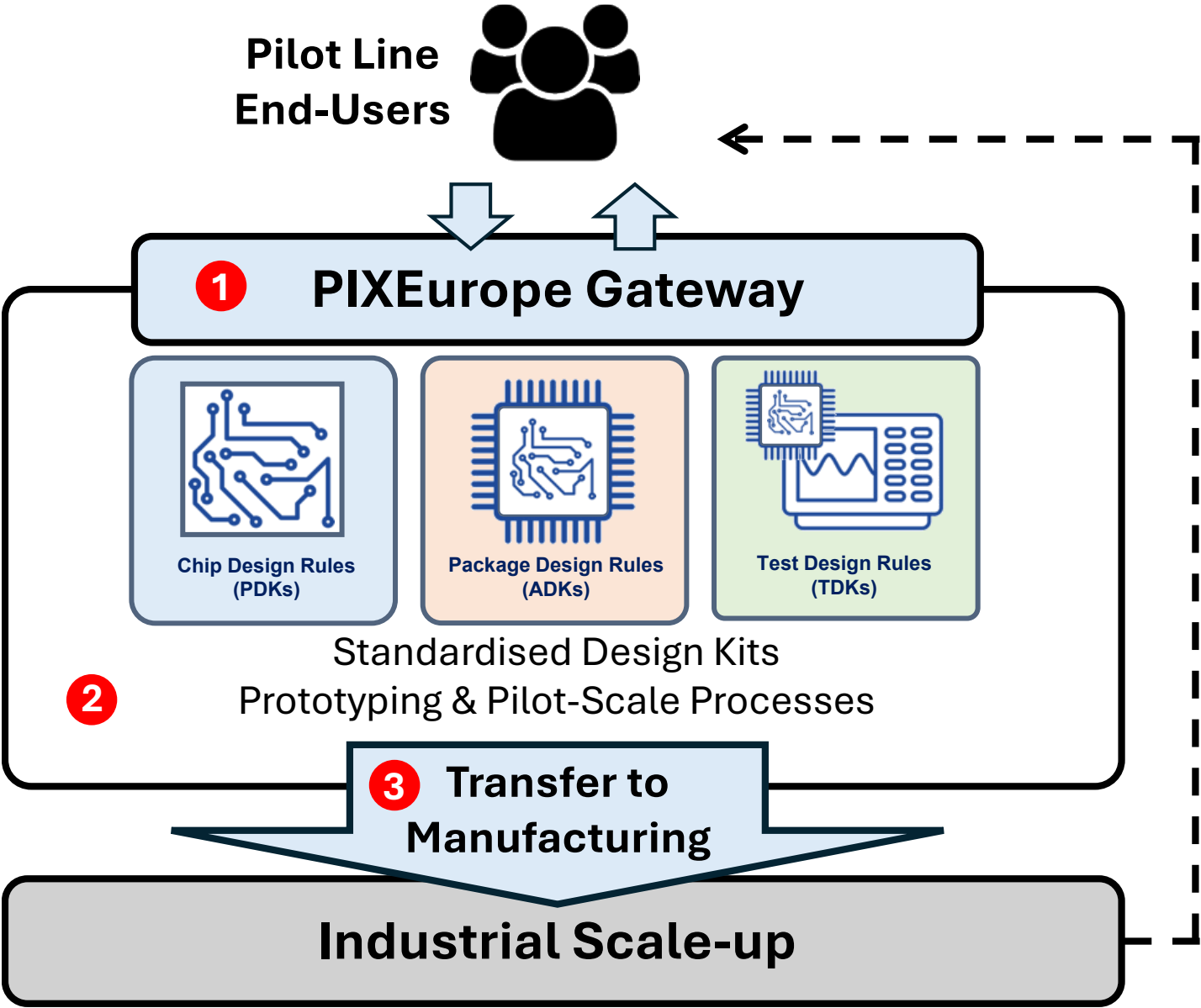


- **Rapid Process Development**
- **Ready for Scalable Manufacturing**
- **Cost Modelling/Prediction**
- **Sustainable Processes/Materials**



**Silicon
Island**
*Ireland's Future
in Semiconductors*

PIXEurope Gateway (single point of contact)



- **Integrated photonic devices becoming more complex and much larger**
optical, electrical, thermal, mechanical packaging challenges
design standardisation is critical (PDKs, ADKs, TDKs)
- **Co-Packaging with electronics with interposers**
2.5 & 3D integration options with 1000s of electrical interconnects
- **Glass interposers offer advantages of performance and manufacturability**
panel-level manufacturing, high frequency, CTE stability, integrated optical waveguides
- **Equipment optimisation essential for volume co-packaging**
surface & wafer-level packaging processes
- **Europe & Ireland developing Pilot Lines as step towards production**
enable transition from research to manufacturing & workforce training
great interest to collaborate with Japanese researchers and industry

Starting and Scaling Deep Tech R&D Panel Discussion



Brendan Farley
Corporate Vice President
Communications Engineering
AMD



Cormac O'Sullivan
Senior Director
Electronics
Mbryonics



Peter Smyth
Chief Executive
Officer
X-Celeprint



Ireland's Semiconductor Industry Recap

Employs 20,000 people, across manufacturing and technical operations, R&D/design related activity in digital, analog and mixed signal activity

Over 100 companies across the value chain including **15 of the worlds top 30**

Home to Europe's most advanced Fab at a single site investment of over €30 billion with experienced supporting **construction and engineering capability**

3 of the top 4 AI Chip companies, **3 of the top 5 EDA's**, home to **one of the largest advanced chip design centers** in Europe

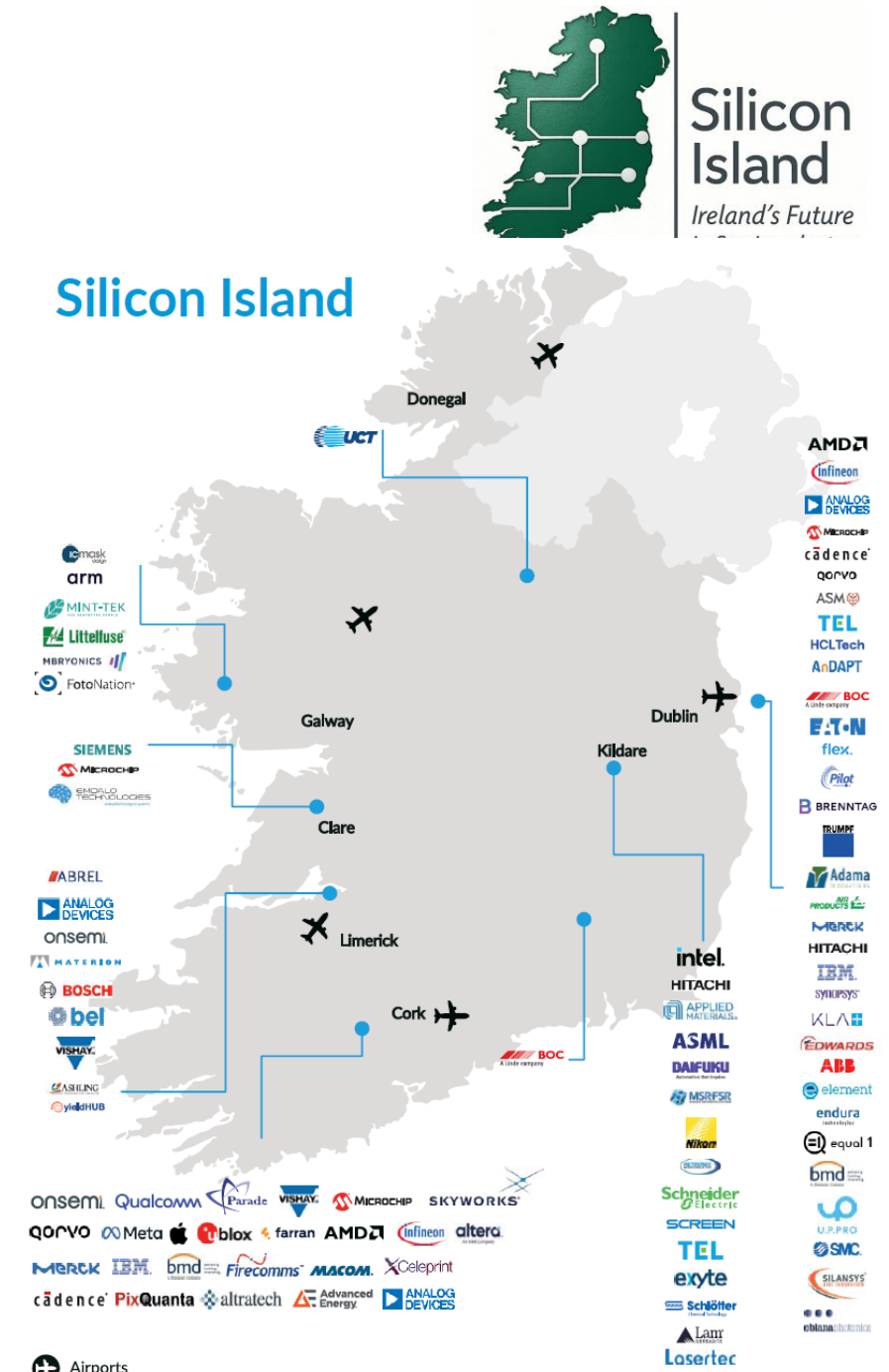
A positive start up environment with a track record of creating world class companies and a European Chip Act **national semiconductor competence centre (I-C3)**

Internationally respected RTO, participating as a hosting entity in **3 Chips Act Pilot Lines** (PixEurope, FAMES, NanoIC)

Experienced management & engineering capability and range of specific skills initiatives to directly support the semiconductor sector

National Semiconductor Strategy that target's a doubling of semiconductor design and R&D, 3 new fabs, advanced packaging supported by focused initiatives to achieve this

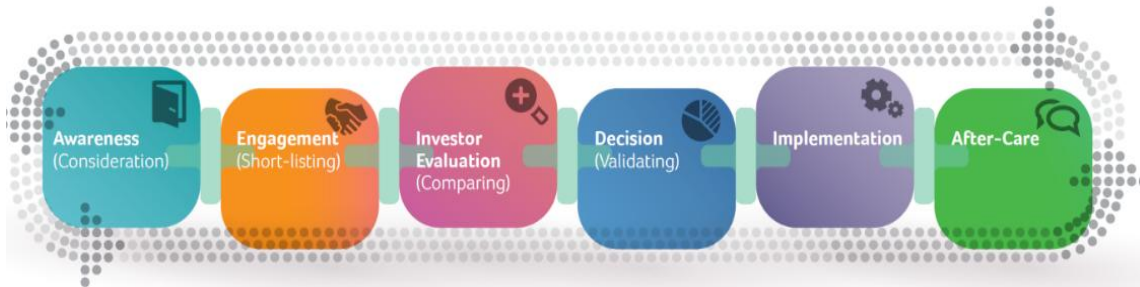
A proven low risk semiconductor location, with ambition, and a plan for the future!



IDA Ireland's Role



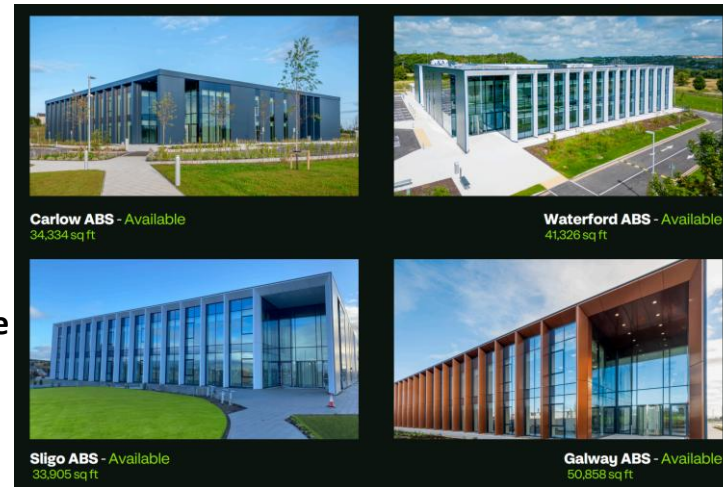
- Irish Government Agency under Department of Enterprise Tourism & Employment (DETE) (Enterprise Ireland, supports the indigenous sector)
- Partner with over 1,800 FDI clients employing over 300,000 people in Ireland to safeguard/enhance activities in Ireland and attract next generation leading-edge companies in core sectors of focus
- Key sector such as ICT including Semiconductors & Software, Life Sciences, Engineering Industrial & Automation
- Provide a suite of services including property solutions to investors in Ireland and potential grant support for a range of value chain activities in Ireland
- Implementation partner in Ireland for aspects of Pillar 1 and 2 of the European Chips Act or initiatives such as IPCEI
- Has a dedicated semiconductor unit to support the sector in Ireland



- | | | |
|-------------------------------------|------------------------------|------------------------------------|
| • Hosted Site Visits | • Information | • Funding Programmes & Incentives |
| • Introductions & Vital Connections | • Ideas & Advice | • Public Relations & Media Support |
| • Fast Landing Service | • Employment Permits & Visas | |
| • Tailored Networks | • Property Solutions | |



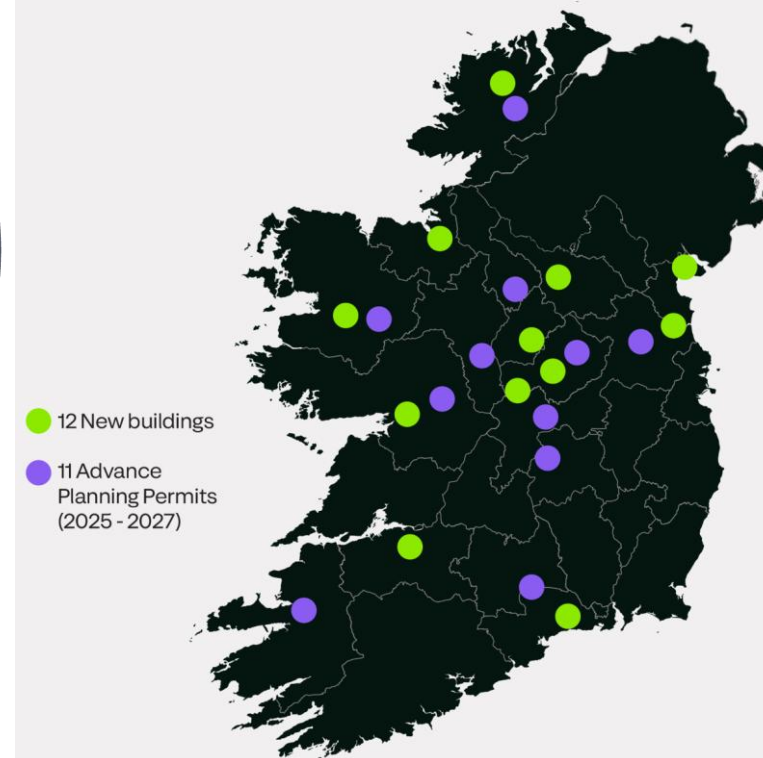
IDA Ireland's Building & Next Generation Site Strategy



-  IDA Ireland has over 50+ high profile business & strategic sites nationwide
-  Designed and delivered to highest standards
Well managed and landscaped park settings
-  Proven track record in Advance Building Solutions suitable for manufacturing and office-based requirements
-  Master-planned for streamlined development and enhanced budget for land program
-  Strategic sites program of various sizes available suitable for semiconductor manufacturing
-  Over 250+ firms in Ireland active in supporting the semiconductor construction and engineering sector
-  IDA Ireland can support eligible 1st of kind or foundry investments under the chips act or use traditional Irish member state supports



Regional Building Programme Overview



Contact Information



General Enquiries:

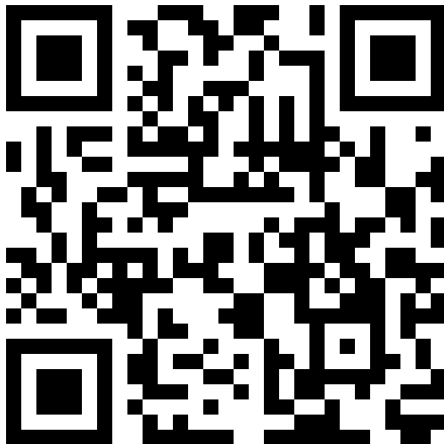
John Blake
General Manager



Email: John.Blake@midasireland.ie

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Investing in Ireland:

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VP Semiconductor Technology



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