



CORNERSTONE Photonics Innovation Centre

Strategy 2024 - 2029

Summary



The **CORNERSTONE Photonics Innovation Centre** is the UK's leading technology hub for silicon photonics. Our mission is to realise a continuous pipeline of silicon photonics-enabled technologies and companies that can serve a wide range of global industries by 2030. We accelerate photonic innovation by bringing together tailored start-up support, engaging networking events, expert design consultancy, and flexible prototyping, backed by our open-source silicon photonics foundry.

We offer seven photonics technology platforms to accommodate a broad spectrum of applications, including telecoms, sensing, LiDAR, quantum, and more. Each platform features a standard component library, helping to lower entry barriers and foster innovation by allowing engineers to focus on their applications. Our unique approach allows us to assist in the development of early-stage R&D projects and build proof-of-concept prototypes, helping to drive silicon photonics innovation.



Our Vision

Our purpose: We make cutting-edge technology more open and available to improve everyday life.

Our mission: We're building a pipeline of silicon photonics enabled companies serving multiple industry sectors by 2030, underpinned by our open-source silicon photonics foundry.

Our values



- **Accessibility:** Our world class facilities and research, and open-source structure and processes enable easy access to integrated silicon photonics technologies and expertise.
- **Collaboration:** We achieve more through collaboration. We collaborate across sectors, disciplines and the supply chain bringing together the best expertise to develop integrated silicon photonic solutions and support the UK economy.
- **Courage:** We want to enrich and improve lives through accelerating technological advances. We're providing industry with the means to be innovative and take risks to bring integrated silicon photonics solutions to market. We have the courage to challenge and be challenged to make this a reality.
- **Curiosity:** We're driven by curiosity to develop new knowledge to solve real problems.
- **Efficiency:** We're empowering industry to innovate more efficiently by learning from small scale open-source testing of novel ideas.
- **Equal opportunities for all:** We're creating an inclusive, supportive and respectful environment enabling people to thrive and belong. Everyone is welcome and valued.
- **Quality:** Quality is pivotal to everything we do from our research to how we work and collaborate. We always strive to learn, advance and improve on what we do.
- **Sustainability:** We are committed to creating a sustainable global future by helping researchers and companies bring new low-cost energy efficient integrated silicon photonics technologies to market.
- **Trust:** We're a trusted source of knowledge, expertise and service provision in integrated silicon photonics. We develop enduring relationships and connect people and organisations together through our networks.

Our 5 years goals



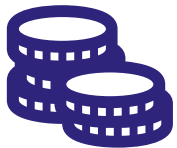
A cohesive UK silicon photonics community

- C-PIC is the trusted voice and front door for the UK silicon photonics community
- Industry visibility, capability and adaptability of silicon photonics well known



A place people want to work and organisations want to engage with

- A diverse, trusted and respected centre where people are happy to work and the silicon photonics community are happy to engage with
- A gold standard centre of choice



Growing investment in UK silicon photonics

- Increased UK government and private investment for SMEs
- Internationally renowned Centre with overseas investment and international partners
- Start-ups facilitated to grow through further funding
- UK policies support UK silicon photonics infrastructure



Capability and applicability of silicon photonics demonstrated to solve a range wide of problems

- Benefits of silicon photonics demonstrated in a range of end-use applications
- C-PIC is recognised among SMEs and start-ups in the UK
- Stories of success (case examples)

Our objectives



We will use key performance indicators as a criteria for success against our objectives under the following three themes:

1. **Champion the use of integrated silicon photonics**

- Interconnect the UK silicon photonics ecosystem, acting as the front door to UK expertise, including by launching an online Knowledge Hub.
- Represent the interests of the community at large with policy makers and the public.
- Act as a convening body for the field in the UK, becoming a hub of skills, knowledge, and networking opportunities, with regular events aimed at ensuring possibilities for advancing the field and delivering impact are fully exploited.
- Support entrepreneurs in their journey to commercialisation by facilitating networks with venture capitalists, mentors, training, and recruitment.

2. **Translate silicon photonics technologies from research labs into industry**

- Fund a broad range of Innovation projects supporting industrial academic collaborations aimed at solving real world industry problems, with the overarching goal of demonstrating high potential solutions in a variety of application areas.
- Deliver an open source, fully flexible silicon photonics prototyping foundry based on industry-like technology, facilitating straightforward scale-up to commercial viability.
- Prioritise key target areas in which to demonstrate capability and adaptability to develop use-cases.

3. **Cultivate a positive work culture**

- Develop and implement an Equality, Diversity and Inclusion strategy.
- Progress careers and develop staff, working with university systems, develop and implement a Promotions Pathway.
- Seek out and take advantage of opportunities to influence STEM education policies in schools and within higher education to influence the talent pipeline (to align with identified opportunities/activities).
- Increase the number of skilled staff working in impact generating roles in the field of silicon photonics via a range of training events and company growth, whilst routinely seeking additional funding to expand training offerings.

Working with



- **Industry:** small, medium and large organisations across a range of sectors
- **Government:** policy makers and funders
- **Investors:** venture capitalists and government
- **Universities:** researchers and research enabling staff
- **Educators:** schools and higher education
- UK and Internationally

Contributing to.....



At 10 years

- Sustainable innovation funding
- Silicon photonics technology that is integrated across all sectors
- A UK silicon photonics community where people and industry stay
- Silicon photonics touching people's everyday life
- Catalyst for the silicon photonics industry
- Proven capability; a magnet for manufacturers and investors
- More individuals from under-represented groups entering the silicon photonics field at all levels

At 20 years

- C-PIC model internationally recognised
- Silicon photonics the place women want to work
- Silicon photonics saving lives/improving health and wellbeing
- Silicon photonics large scale manufacturing in the UK
- A UK silicon photonics cluster ("silicon photonics valley")
- Silicon photonics widely adopted
- Improving UK GDP



OUR VISION



PURPOSE:

We make cutting edge technology more open and available to improve everyday life

MISSION:

We are building a pipeline of silicon photonics enabled companies serving multiple industry sectors by 2030, underpinned by our open-source silicon photonics foundry

Our priority sectors



Telecoms



AI Hardware



Quantum



Environmental Sensing



Health Technology

Increase UK GDP

Saving lives
and improving
well being

Delivering
long term impact

Creating high
value jobs

Accelerating
innovation

What we do?



Fabrication Services



R&D Projects



Start-Up Support



Funding



Networking



Training