



C-PIC Future Leaders 2027

Accelerating Frontier Technologies Through Emerging Research Leaders

Important dates

- **Scoping: 11 November 2026 at the Wellcome Trust, London**
In-person one-day event: 9:00-16:30. Understand the opportunity, shape the research challenge, build connections.
- **Sandpit: 12 January – 14 January 2026 at the De Vere Horsley Estate**
Form interdisciplinary teams, develop novel solutions to industry-driven challenges, pitch for funding.

Application deadlines:

- **Scoping – 21 October 2026**
- **Sandpit – 27 November 2026**

Apply here: [C-PIC Future Leaders EOI](#)

Overview

Industry has identified a critical challenge: defining the silicon photonics platforms in the UK needed to enable scalable quantum communications and sensing technologies. Solving this challenge demands fresh thinking at the intersection of disciplines, bringing together diverse expertise to unlock new possibilities. Yet many emerging researchers lack the networks, industry connections and leadership opportunities needed to turn ambitious ideas into transformative innovation.

C-PIC Future Leaders, delivered in partnership with the Integrated Quantum Networks Hub (IQN) and the Quantum Biomedical Sensing Hub (QBioMed), is designed to overcome these barriers, providing the funding and support to empower the next generation of research leaders to forge new collaborations and develop ambitious, industry-informed solutions using silicon photonics.

The challenge

Silicon photonics has long been touted as a leading candidate for building scalable quantum systems. In 2026, the boom that silicon photonics has experienced in AI infrastructure has shone a brighter light on the ability of silicon photonics to deliver manufacturability and performance at scale.

But significant challenges remain; many of which are exaggerated in the quantum realm. For example, quantum technologies require minimising photon losses, both in



waveguide propagation and in fibre-to-chip coupling. Many quantum applications could benefit from improved polarisation control, which is currently a significant design and fabrication challenge. Also, quantum technologies often require the use of wavelengths outside of the traditional telecoms bands, necessitating alternative platforms to SOI.

What is it about bringing together silicon photonics, quantum comms and quantum biosensing that demands exploration?

Simply put; we anticipate that the technology platform requirements will be highly compatible, likely to be silicon nitride based and capable of supporting visible wavelengths. This combination of applications will help gather detailed end-user requirements to collaboratively build a cross-functional quantum platform that will be made available open-access to the research community to support your research goals.

What is possible if we were to develop these platforms together?

Together, we can build the platform upon which the future of scalable quantum comms and quantum biosensing is realised. The collaborative approach ensures that the technology meets the requirements of researchers like you in these fields and that individual team specialisations contribute to a coherent technology roadmap. Participating teams will collectively define end-user requirements in consultation with quantum technology stakeholders, co-develop design specifications with the C-PIC team, and then concentrate their funded activity on their designated technical specialism.

Projects will be structured around three funded awards of £250k each, a scale that necessarily constrains scope to addressable technical problems rather than systemic challenges.

Industry has set the challenges. We have brought together the funding, partnerships and support needed to tackle it.

Now we need the people.

You are...

A researcher, technician, industry professional, clinician, or policy stakeholder

Working in the field of:

- Quantum science
- Materials engineering
- Photonic integration
- Biological sciences



- A sensing or communications application area

If you're a researcher or technician, you're likely to be **early to mid-career stage** (ECMR) - typically Affiliate / Associate Professor level or equivalent.

And you're ready to **bridge disciplines and create solutions together**.

You've got...

- An interesting technical challenge you want to solve in quantum communications or sensing
- A concept on paper that you'd like to prototype
- A promising solution that needs to become industry-compatible and scalable

We are...

The [CORNERSTONE Photonics Innovation Centre \(C-PIC\)](#). We're an open-source, licence-free silicon photonics prototyping foundry and innovation hub, hosted by the University of Southampton, University of Glasgow, and the Science and Technology Facilities Council (STFC), with support from EPSRC. Our mission is to build a pipeline of silicon photonics-enabled companies serving multiple industry sectors by 2030.

Our diverse team of experts brings together deep technical knowledge and a passion for developing next-generation photonic solutions. That's why we've partnered on this programme with the [Integrated Quantum Networks Hub](#) (IQN) and the [Quantum Biomedical Sensing Research Hub](#) (QBioMed) – to use silicon photonics to accelerate quantum technologies, advanced connectivity and engineering biology.

We've got

- Funding for 3 x ECMR-led collaborative projects totalling £750,000
- Training and support for future research leaders
- A flexible silicon photonics prototyping foundry

C-PIC Future Leaders is a structured programme that builds the skills, networks and teams needed to shape next generation silicon photonics platforms for scalable quantum technologies.

Programme timeline

Sep-Nov: Building Towards Innovation | Online Training & Networking

Kickstart your C-PIC Future Leaders journey with webinars and online networking to you help you build connections and develop the skills to craft compelling bids.



11 November | Scoping Workshop (In-person, Wellcome Trust, London)

Join us in London to refine the questions that matter most for the sandpit, identify gaps in current thinking and lay the foundations for impactful new research partnerships.

12-14 January 2027 | Mini-Sandpit (In-person, De Vere Horsley Estate)

An immersive three-day workshop, facilitated by **KnowInnovation**, bringing together researchers, industry and expert mentors to form EMCR-led interdisciplinary teams. Develop targeted research propositions and pitch ideas for a share of **£750k in funding**.

Why participate?

- Compete for up to £250,000 in flexible project funding
- Build new interdisciplinary collaborations
- Turn research concepts into prototypes
- Engage directly with industry
- Develop research leadership experience
- Help shape the future of frontier technology research in the UK
- Join a long-term community of innovators and collaborators

How do I apply?

Register your [expression of interest to join any aspect of the programme here](#).

The online programme of training and networking is open to everyone with an interest in the challenge area, regardless of whether you intend to apply to the scoping workshop or mini-sandpit.

Places for the two in-person events are limited:

- 60 people – scoping meeting
- 30 people – mini-sandpit

We will select participants from the expressions of interest based on research area, role type and other characteristics solicited in the application. Our aim is to achieve a balanced range of diverse disciplinary experience and expertise.



The programme – in detail

Sep-Nov: Building Towards Innovation | Webinars, Online Training & Networking

Kickstart your Future Leaders journey with webinars, training and online networking opportunities to help you understand the programme, build connections and develop the skills to craft compelling bids.

- Briefing webinars
- Proposal development skills
- Impact and commercialisation skills
- Online networking via KAI STORM

Who can attend?

These sessions are open to all but are particularly targeted at early and mid-career researchers. [Express your interest to participate here.](#)

What happens then?

You will then receive invitations to all upcoming webinars and online events related to the C-PIC Future Leaders programme.

11 November | Scoping Workshop (In-person, Wellcome Trust, London)

Join us in London to explore what we mean by developing an enabling silicon photonics platform for quantum communications and sensing – what does it need to do, what are the constraints, what are the possibilities?

- Gain insight into industry priorities
- Help shape the research challenge for future funding
- Meet potential collaborators and partners
- Explore new directions for research and innovation

Who can attend?

Places are limited to 60 people, selected from expressions of interest – [register your interest here](#)



What happens then?

On submitting your expression of interest, you will receive a tentative diary hold for the event. Final places will be confirmed no later than two weeks before the event.

12-14 January 2027 | Residential Sandpit (In-person, De Vere Horsley Estate)

A three-day residential workshop led by KnowInnovation at Ada Lovelace's former home, designed to spark innovation and collaboration.

- Form interdisciplinary, cross-sector teams, led by an ECMR
- Support from expert mentors
- Develop a distinct research proposal focusing on targeted technical challenges
- Pitch to panel for an invitation to submit a full proposal for up to £250k funding

Who can attend?

Places are limited to 30 people, selected from expressions of interest – [register your interest here](#)

You are not required to have attended the scoping meeting to apply for the sandpit, but you are encouraged to engage in the pre-event activities to familiarise yourself with the aims of the programme and dialogue between members of the community.

What happens then?

On submitting your expression of interest, you will receive a tentative diary hold for the sandpit. Final places will be confirmed no later than one month before the event.

What to expect from the sandpit

All participants should be willing to engage in frank discussions and assessment of ideas in a collegial and professional fashion.

Sandpit project teams will be expected to have collaboration across at least two disciplinary boundaries, at least two research organisations, and will include a member of the C-PIC technical team. Success will require teams capable of integrating silicon photonics with knowledge from multiple disciplines, while using industry insight to address real-world challenges and opportunities.

Sandpit projects must be led by an emerging research leader. The project lead will:

- Act as the primary contact for the programme



- Coordinate the research project
- Work with their host institution on project administration including reporting, supported by C-PIC mentors
- Lead a case study for the C-PIC programme

Intellectual leadership may be shared across the team, and we encourage established research leaders to participate as senior mentors and advisors.

About the in-person events

These events will be intense and interactive. They aim to stimulate thinking about promising novel solutions at the interface of silicon photonics and other disciplines. Participants will be expected to engage constructively in dialogue with each other, the facilitators, and the Subject Guides (experts in academic, industry and the investor community, who will help to frame and guide discussions) to develop collaborative research proposals. The goal is to bring individuals from different disciplines together to interact and engage in free-thinking on first principles, to learn from one another, and to create an integrated vision for compelling, commercially aware research proposals.

The environment is designed to encourage creativity, collaboration, and rapid idea development. Teams will be supported to challenge assumptions, explore new opportunities, and develop research projects capable of leading to significant technological and commercial impact.

C-PIC Future Leaders will be facilitated by KnowInnovation, a company that specialises in working with science groups to accelerate innovation and achieve strategic outcomes. Participants can expect highly interactive virtual and in-person events. Most of the time will be spent in solution-focused discussions after a few targeted plenary lectures designed to set the stage.

Accessibility

If you are unable to meet additional costs of participating in any of the C-PIC Future Leaders programme, the [C-PIC Participation Fund](#) may be able to support you.

Your personal information

The solicitation and collection of personal information by the website host is solely for the purpose of site administration, application tracking, communication with applicants, and to provide updates. Personal information will not otherwise be maintained, used, stored, indexed, or retrieved from any information system/database without your prior



notice, choice, or consent. Personal information will be safeguarded using appropriate physical, administrative, and technical protocols. [Read our privacy policy.](#)

Funding opportunity

At the conclusion of the sandpit, teams will pitch project concepts to a shortlisting panel. Shortlisted concepts will be invited to submit a fully costed proposal to compete for a share of **£750,000 in funding (up to £250k per project)**.

C-PIC will work closely with shortlisted project leads and host institutions to support project structures that are both funder-compliant and responsive to the needs of emerging research leaders. For example, the project duration will be flexible and agreed with successful teams during the development of full proposals.

Whether you participate for just a day, or go all the way to a funded project, you'll benefit from industry insights, new connections and resources to take your career further.

Beyond the sandpit

C-PIC Future Leaders is designed to create lasting value beyond the funding competition itself.

All participants in the pre-event programme and sandpit will be invited to join the **C-PIC Innovation Fund Community**, bringing together new members engaging with C-PIC funding with award holders from current and previous funding rounds.

Community members will benefit from:

- Continued networking opportunities
- Access to future collaboration activities
- Peer learning and knowledge exchange
- Connections with industry and research leaders
- Opportunities to support future applicants through peer review and mentorship

By building a growing network of researchers, innovators, and partners, C-PIC aims to create a sustainable pipeline of talent and ideas capable of shaping the future of frontier technology research.

Questions?

If you have a question about any aspect of C-PIC Future Leaders, please contact: Ruth Churchill, C-PIC Impact Manager r.churchill@soton.ac.uk