

C-PIC Innovation Fund - Call 1

At The CORNERSTONE Photonics Innovation Centre (C-PIC), we are offering funding and support for the next generation of great ideas to take silicon photonics from research towards implementation.

We want to fund a wide range of projects from people across career stages and pathways, including early career researchers and technicians.

If you have an innovative proposal to make silicon photonics technology more available to improve everyday life, we want to hear from you.

1. Who are we?

We are CORNERSTONE Photonics Innovation Centre (C-PIC), based at the universities of Southampton and Glasgow, and STFC.

At C-PIC, we accelerate photonic innovation by providing fabrication services, research and development projects, start-up support, funding opportunities, networking and training. Our mission is to build a pipeline of silicon photonics enabled companies serving multiple industry sectors by 2030, underpinned by our open-source silicon photonics foundry.

Our C-PIC Innovation Fund, with funding from EPSRC, is here to support academic-led, commercially focused proposals for innovative silicon photonics solutions across all application areas.

2. The details

- Our total fund for this call: Up to £500k
- Maximum funding per project: Up to £100k fEC (full economic cost)
- As per EPSRC rules: C-PIC will fund 80% of the fEC (your employing organisation must agree to find the 20% balance of fEC for the project from other resources, according to <u>standard EPSRC costing</u>)
- Call opens: 12 February 2025
- Closing date for applications: 9 April 2025, 16:00
- **Notification**: You will hear the outcome approximately one month after the closing date.
- **Project start date**: Within 3 months of receipt of your award letter
- Typical project duration: 6 12 months



3. Who can apply?

You can apply if you are employed at a UK research organisation, perhaps as a research technical professional or an early career researcher, or in any of the 12 UKRI role types. If you are on a fixed term contract, then your contract needs to last beyond the end of your proposed project. Early career awardees will be offered access to mentoring and training opportunities, whenever possible.

To be sure your project is eligible, please read section 6: What should my project look like.

If you have any questions concerning your eligibility to apply, please contact Ruth Churchill, C-PIC Impact Manager: <u>r.churchill@soton.ac.uk</u>

4. How much funding can I apply for?

We are offering up to £100k per project and we expect to fund several projects in this round, from our total fund for this call of £500k. We will be attracted to applications that look good value for money so it's not essential to ask for the full £100k. You will have a better chance with a more realistic, well-thought-out request.

5. How long should my project last?

We expect your project to last typically 6-12 months, so we are looking for rapid outcomes and accelerated impact. We will consider projects where the duration is over 12 months, but the longer timescale would have to be fully justified. Please contact Ruth Churchill, C-PIC Impact Manager: r.churchill@soton.ac.uk to discuss why your idea needs longer.

6. What should my project look like?

6.1 Scope

We are looking for commercially focused proposals for either 'Technology Readiness Interventions' or 'Market Readiness Interventions' (see section 4.3 Figure 1 below for details). Therefore, your project should aim to solve real world industry problems and may include disruptive and novel technologies, and those with a large market opportunity. This is not funding for discovery research.

If your project is for a *Technology Readiness Intervention* you need at least **one named industry project partner** (see section 7 below).

It's important that you are clear how your project aligns with our <u>C-PIC Strategy (2024-2029)</u>.



Your project does not have to include Photonic Integrated Circuits (PICs), PIC technology or PIC fabrication directly, so long as you explain how it relates to our longer-term objective to translate silicon photonics technologies from research labs into industry. For more information on CORNERSTONE, visit www.cornerstone.sotonfab.co.uk.

6.2 Application areas

We have a vision of silicon photonics-enabled devices being used everywhere in modern technology including, but not limited to:

- Data centre communications
- Sensing for e.g. healthcare, the environment, defence
- Quantum technologies
- Artificial Intelligence
- LIDAR

6.3 Project types

We are interested to hear about projects covering a range of both *Technology Readiness Interventions* and *Market Readiness Interventions*. For some examples see Figure 1, but do contact us to discuss your ideas if you're not sure: Ruth Churchill, C-PIC Impact Manager: r.churchill@soton.ac.uk

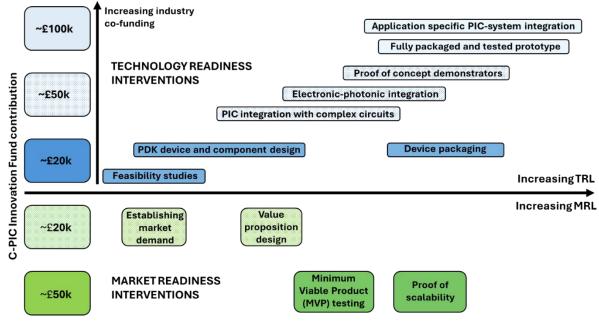


Figure 1: C-PIC Innovation Fund Call 1, Technology and Market Readiness Interventions.



6.4. Project outcomes

We will choose projects which aim to accelerate the use of silicon photonics in real world applications, resulting in, for example (but not limited to):

- Industry-defined use cases and/or demonstrators
- Patents and patentable work
- Knowledge and technology transfer to companies
- Early-stage commercialisation activities
- Training or skills development
- Strengthening of the UK silicon photonics ecosystem

6.5 Access to the CORNERSTONE Foundry

Our CORNERSTONE Foundry offers a Multi-Project-Wafer (MPW) service on a variety of platforms. You are not required to use our foundry services in your proposal but should you wish to do so, please <u>visit our website for MPW costs</u> or contact cornerstone@soton.ac.uk to receive a quote for a bespoke fabrication batch.

7. Industry engagement for Technology Readiness Interventions

It's important that your project should be driven by industry needs and you should clearly explain the benefit of your idea for driving UK capability (see section 6.4: Project outcomes).

If your project is for a *Technology Readiness Intervention*, you need at least **one named industry project partner**. We are keen to see collaborations with start-ups, SMEs and large companies across a range of sectors. Your industry project partners should have a UK presence and are expected to contribute to the project (cash/in-kind). Your partner's **in-kind contributions** may include, but are not limited to:

- The partner's staff time
- Access to the partner's equipment
- Use of the partner's sites or facilities
- Provision of data
- Use of the partner's software or materials

If your project involves an industry project partner, then you will need to submit a industry partner letter of support (see section 15: How to apply).



8. Eligible costs

What we will fund:

- Staff costs (including associated Indirect and Estates costs)
- Consumables
- Equipment up to £10k (standard UKRI equipment rules apply)
- Travel and subsistence
- Facilities access proposals requiring access to the CORNERSTONE Multi-Project Wafer service can benefit from a 50% discounted rate
- Subcontractor costs we encourage the use of specialist subcontractors, e.g.
 prototype development, packaging companies, to support the UK supply chain.
 Use of subcontractors is subject to the procurement rules of the host
 organisation.

We expect you to have the resources required to **start the project within three months** of receiving the award letter. Please take this into consideration when planning your project, e.g. in any plans to recruit new staff.

We **cannot fund** any industry project partners' costs directly. Industry project partners are expected to provide contributions to the delivery of the project, (in cash or in kind) and are not eligible to receive funding.

For further details on costings and overheads, please see <u>EPSRC's Full Economic</u> <u>Costing (FEC) Guides</u>.

9. Showcasing impact

If we select your project for funding, the C-PIC Impact Manager will liaise closely with you throughout the project to ensure any information held is up to date, and to help you to monitor your progress and impact. You may be asked to contribute to case studies to showcase your work. You will also be supported to provide reports to showcase your project outputs and outcomes, including any published papers incorporating or based on knowledge gained from the project.

For legal reasons you will be required to accept our C-PIC Innovation Fund Terms and Conditions, which are stated in the <u>C-PIC Innovation Fund Template Award letter</u>. Please read this document carefully in advance of applying and bring it to the attention of your Research Office.



10. Trusted Research

Trusted Research aims to support the integrity of the system of international research collaboration. It is particularly relevant to researchers in STEM subjects, dual-use and emerging technologies and commercially sensitive areas. Your application needs to show that any potential security related issues have been considered and that you have taken measures to secure the integrity and safety of collaborations and minimise risks.

You will find these resources useful:

- UKRI guidance on trusted research https://www.ukri.org/manage-your-award/good-research-resource-hub/trusted-research-and-innovation/
- UKRI Trusted Research principles https://www.ukri.org/wp-content/uploads/2021/08/UKRI-170821-
 TrustedResearchandInnovationPrinciples.pdf
- National Protective Security Authority, Trusted Research https://www.npsa.gov.uk/trusted-research
- National Protective Security Authority and National Cyber Security Centre checklist for projects with international collaborators https://www.npsa.gov.uk/system/files/npsa_tr_checklist_final_web.pdf

If you have any questions or concerns about Trusted Research considerations and risks associated with your proposal, please seek advice from **your institution's Research**Office before applying.

If we select your project for funding, you must ensure that your activities are compliant with the National Security and Investment (NSI) Act 2021 and UK export controls. You may also be required to provide additional information about managing considerations and risks relating to Trusted Research and Innovation. For further details, read our full Terms and Conditions.

11. Responsible Research

Responsible Research and Innovation is fundamental to our core values of collaboration, equality, accessibility and trust. We encourage you to use the <u>AREA Framework</u> for Responsible Research and Innovation when developing your C-PIC Innovation Fund proposal.



12. Equality, Diversity and Inclusion (EDI)

At C-PIC, our EDI Mission is to show that teams in a more diverse workplace perform better. We will look at your project to see:

- How you will support those in your team to work in ways that suit their personal circumstances (e.g. caring responsibilities, alternative working patterns etc)
- How you will create opportunities for career and personal development
- How you will ensure that there is a positive work culture

If you identify as an 'early career' applicant, you may opt to indicate this on your C-PIC Innovation Fund application form (see section 15: How to apply). Early career awardees will be offered access to mentoring and training opportunities, whenever possible.

As part of C-PIC's commitment to Equality, Diversity and Inclusion, we will contact you when we receive your application to ask you to participate in an anonymous survey. This survey is designed to ensure that our funding opportunities are inclusive and attract a diverse range of people. Responses to this survey will be processed and stored independently from C-PIC Innovation Fund applications and will not be used in the assessment of proposals. The information will be used make sure that our future funding processes and practice are as fair as possible. Responding to the survey is optional and your informed consent will be sought prior to participation.

13. Environmental sustainability

Environmental impact is a key consideration in all our decision making. Proposals should consider environmental sustainability in the development of new technology capabilities and research. Opportunities for harnessing photonics innovation to accelerate the move towards net zero are welcomed.

14. Use of generative Artificial Intelligence

Generative artificial intelligence (AI) tools or services can be used to generate text, video, audio and image content in response to questions or instructions, often referred to as prompts. You are permitted to use generative AI to develop your proposal, but caution should be applied, especially when confidential and/or personal information could be involved. If you are thinking about using generative AI in your proposal, we encourage you to read UKRI's: Use of generative artificial intelligence in application preparation and assessment.



In line with UKRI and current sector good practice, we ask you to be transparent about where you have used generative AI in your proposal. This information will not affect the assessment process.

15. How to apply

You should submit your application using our <u>electronic application form</u> by the deadline: **9 April 2025, 16:00.**

Application form fields:

Part 1: Project Summary

- · Project title
- Start date and duration
- Project lead details (name, role, organisation and email address).
 - Do you identify as 'early career': Yes/No
- Core team (name(s), role(s), organisation, email addresses)
- Total funding requested
- Is your proposal for a **Technology Readiness Intervention** or a **Market Readiness Intervention**?
- If applying for *Technology Readiness Intervention*: project partner(s) details (organisation name, contact name, total funding contribution including cash and in-kind (£))
- Have you used generative AI to develop this proposal? Yes/No.
 - If 'yes', please provide details to explain in what context it was used.

Part 2: The proposal

- 1. Project description (max 300 words)
 - I. Provide a **100-word summary** of your proposal that could be understood by a non-scientist, outlining its aims and objectives. HINT: Ensure that this aligns with the aim and scope of the call.



II. Outline the **methodology** of your project explaining how it is effective, appropriate and feasible to achieve your objectives.

2. Industrial and commercial relevance (Max. 400 words):

- I. Why is your project **important**? HINT: We want to know why your project represents an opportunity to advance the adoption of silicon photonics or accelerate the commercial exploitation of silicon photonics.
- II. Summarise the **industrial relevance** of your project, including evidence of industry need/market opportunity. HINT: We are interested in how you have engaged with industry and/or your market awareness.

3. Impact potential (Max 200 words):

- I. Explain how your project could lead to **commercial success.**
- II. Explain how your project could have a **positive effect** on society, the economy and/or the environment.

4. Capability to deliver (Max. 250 words):

I. Explain how you and your team have the right **balance** of experience, skills and backgrounds to work on the project.

5. Alignment to C-PIC (Max. 100 words):

I. Outline how your project is aligned to the <u>C-PIC strategy</u>, indicating which of the C-PIC objectives it will help to achieve and how.

6. Industry Engagement for Technology Readiness Interventions (Max. 250 words + letter(s) of support to be attached):

I. For *Technology Readiness Interventions* only: outline the level of engagement from your industry project partner(s), giving any examples of co-creation and support for the project.



II. For Technology Readiness Interventions only: Upload any Project Partner letters of support using the area provided in 'Part 3: File Uploads': Project partner letters should be in PDF format, on headed paper, signed, and dated within the last 6 months, clearly indicating the partner's meaningful contribution to the project and the expected benefits, and an auditable monetary value of any cash or in-kind contributions.

7. Responsible Research and Innovation (Max. 200 words):

- I. Outline how you will ensure that Responsible Research and Innovation principles are embedded in your project.
- II. Outline how you will take account of any wider ethical and societal implications of your project.
- III. Outline how Equality, Diversity and Inclusion will be embedded in your project.

8. Trusted Research – for projects with international collaboration (Max. 150 words):

N.B: This section is for projects involving international collaboration. If your project does not involve international collaboration, **answer 'N/A' here.**

 Describe how you have addressed Trusted Research and Innovation to manage the project safely and securely.

9. Resources, cost justification and risks (Max. 300 words):

- I. Provide a financial breakdown of your costs and a justification of resources. HINT: Provide your costs broken down as: directly allocated, directly incurred, indirect, consumables, subcontractors etc. For help, speak to your Research Office and see EPSRC costings guidance.
- II. Provide a list of the top three risks that could impact the project, with mitigations.

10. Define success (Max. 150 words):

 Define what success looks like for your project, including the intended outcomes and impact. Propose one primary success measure for the project.



11. Additional information - optional (Max. 150 words – this question is not marked):

This section is optional. You may use this to describe any factors, for example career breaks or personal characteristics that you wish to disclose, which may give context to the capability to deliver, or the wider proposal. This information will be shared with reviewers and panel members.

12. Any other considerations – optional (Max. 100 words – this question is not marked)

This section is optional. You can use this space for anything else you think we need to know in relation to your application. Examples may include, declarations of interest, conflicts of interest, or additional information about eligibility to apply that would not be appropriately shared in the proposal.

Part 3: File Uploads

Part 3 of the application form is for uploading files. Two upload areas are provided:

- I. Image upload: Please see section 16: Use of images. Only one file can be uploaded to the 'Images' upload area. If you have more than one image file, you may upload a single PDF file containing several images. The max. file size is 10MB. If you have difficulties creating a single PDF, please contact us.
- II. Industry partner letters of support upload: Only one file may be uploaded to this area. The max. file size is 10MB. If you have multiple letters of support, please combine these into a single PDF file to upload. If you are unable to create a single PDF file, please contact us.

16. Use of images

You may upload images to the form in 'Part 3: File Uploads', where appropriate to convey information visually that cannot easily be put into words. Please use images sparingly. You must name your image file in a way that is easy to identify and associate with the written proposal (e.g. Figure 1 – descriptive title). If you have multiple images in a single PDF, you should clearly label each image within the document.



17. Personal data

We will handle any personal data collected through your application in line with UK data protection legislation and manage it securely. For more information, including how to exercise your rights, read our <u>Privacy Policy</u>.

18. How we will assess your application

We will carry out an initial eligibility check on all applications, to screen for compliance with our eligibility criteria, start dates, and scope.

A panel of experts, including at least two independent members, will assess all eligible proposals. It's important that you answer **each part of the application form** fully within the word count as we will score proposals from 1-6 against each of the following criteria:

1. Quality of project as per description:

- I. Does the proposal adequately align with the aim and scope of the call?
- II. Is the proposed methodology / approach credible?

2. Industrial and commercial relevance:

- I. Is the project important? Does it represent an opportunity to advance the adoption of silicon photonics or accelerate the commercial exploitation of silicon photonics?
- II. Is there evidence of adequate engagement with industry and/or market awareness?

3. Impact potential:

- I. To what extent could the project lead to commercial success?
- II. To what extent could the project have a positive effect on society, the economy and/or the environment?

4. Capability to deliver:

- I. Is the team suitably placed with the right balance of experience, skills and backgrounds to carry out the planned work?
- II. Does the project represent value for money? Are the resources appropriate to achieve outcomes within the timeframe?



5. Alignment to C-PIC:

I. Is the project adequately aligned to the C-PIC Strategy?

6. Industry engagement:

- I. For Technology Readiness Interventions only: is the industry project partner's level of engagement, co-creation and support for the project adequate?
- II. For *Technology Readiness Interventions* only: are project partner letters of support convincing?

7. Responsible Research and Innovation:

- I. Are Responsible Research principles embedded?
- II. Is consideration given to the wider ethical and societal implications of the project?
- III. Is EDI embedded within the proposal?

8. Trusted Research (only for projects involving overseas collaboration):

- I. Has Trusted Research consideration been applied (if relevant)?
- II. Are any risks of collaboration identified and managed?

9. Resources, cost justification and risks:

- I. Are the financial breakdown of costs and justification of resources adequate?
- II. Does the risk register take adequate account of risks impacting the outcomes of the project?

10. Defining success:

- I. Is the definition of success both ambitious and sensible?
- II. Is the proposed primary success measure for the project realistic?

N.B: Q11. Additional information, and Q12. Any other considerations are not marked.



Funding decisions will be made based on the ranking of the overall score for each proposal and agreed at a meeting of the C-PIC Innovation Fund panel. The panel comprises expert C-PIC team members, and at least two independent members, including a representative from our Compliance Board. An EPSRC observer will be invited to attend.

Applicants will be notified of outcomes no later than one month after the call deadline.

Please engage with us

- If you have any questions about the C-PIC Innovation Fund, please contact Ruth Churchill, Impact Manager: r.churchill@soton.ac.uk
- Sign up to our mailing list for funding announcements and more news.
- Join our community by following us on LinkedIn.