EPSRC South Wales Compound Semiconductor Place Based Impact Acceleration Account (SWCS PBIAA)

Third Call for Early-Stage Commercialisation Proposals: Applicant Guidance Notes

About PBIAAs

The role of universities and research institutions in driving innovative clusters of economic activity is well-established. *Place Based* Impact Acceleration Accounts (PBIAAs) are key to the delivery of EPSRC's Place strategy and aim to support a programme of impact activities that strengthen existing partnerships and drive *regional* growth in place-based research and innovation clusters, built on national and local insights. EPSRC PBIAAs offer a complementary funding approach to institutional Impact Accelerator Accounts awarded to individual institutions.

Key features of PBIAAs are:

- a focus on developing place-based impact (a concentrated delivery of impact that drives benefits within a research and innovation cluster)
- delivery through a consortium approach that builds sustainable collaboration in research impact between UK universities, co-created with civic actors and aligned with civic ambitions and with businesses.
- broadening access to impact funding for eligible research organisations enabling all those with a relevant research portfolio to contribute
- a programme of impact activities tailored to the needs of the place.

Find out about the current PBIAA projects at: **£41 million to enhance UK research and innovation clusters**. For more information about EPSRC's portfolio and strategies, see their website: https://www.epsrc.ac.uk/research/ourportfolio/

About the South Wales Compound Semiconductor PBIAA

SWCS PBIAA is led by Cardiff University in collaboration with Swansea University, working closely with industry and public sector partners within the South Wales compound semiconductor cluster, branded as 'CSconnected'
https://csconnected.com/

SWCS PBIAA leverages unique regional expertise, translational research infrastructure and critical manufacturing capabilities as innovation assets – these include Cardiff University Institute for Compound Semiconductors (ICS) and Swansea University Centre for Integrated Semiconductor Manufacture (CISM).

CISM: https://www.swansea.ac.uk/campus-development/developing-bay/key-projects-bay/cism/
ICS: https://www.cardiff.ac.uk/institute-compound-semiconductors

The PBIAA has been set-up to support UK 'place-based' academic entrepreneurship and start-up companies, and to contribute skills training to support growth of the sector located in the UK and primarily in the South Wales CS cluster. SWCS PBIAA aims to make a step-change in the expansion rate of CSconnected, attracting academics and researchers from across the UK to set-up and innovate in South Wales.

SWCS PBIAA is supported by civic partners from the Cardiff Capital Region (operating across ten local authorities across south east Wales) and Swansea Bay City Deal region (led by four local authorities, two Health Boards, two universities and private sector partners).

CCR: https://www.cardiffcapitalregion.wales/about-ccr/

SBCD: https://www.swanseabaycitydeal.wales/about/

The SWCS PBIAA includes three key strands of activities:

- Early-Stage Commercialisation support for company formation in the South Wales region, facilitating engagement with follow-on funding opportunities.
- Culture and community building by creating an innovation environment which enables entrepreneurs to interact with the capabilities in the region, allows non-CS experts to innovate and create new products and CS components and subsystems and ways of manufacturing these, while establishing a broad network of all interested parties in the region. We will create entrepreneur-facing

service portals for the ICS and CISM facilities, help entrepreneurs and start up create at least 12 prototype manufacturing routes and demonstrate at least 8 as well as run 30 networking events over 3.5 years.

- Building capacity and capability in the industry by upskilling current CS company employees and motivating and training a wider range of people to join the CS workforce. SWCS PBIAA will deliver training to small groups of cluster company staff in equipment heavy practical skills, organise training events for teachers and other community leaders, provide high-level upskilling to cluster company staff to meet needs and demands of CS industry, develop video materials for teachers and demonstrator showcase starter packs – amongst other motivational materials – and establish and accredit a Semiconductor Micro-Credential Program.

Eligibility for this call

- Applicants must demonstrate how they will set up a company and innovate in the South Wales region. PBIAA early-stage commercialisation funding is to be used to support and facilitate the initial steps towards company formation.
- Applicants must make use of the CSconnected cluster capabilities at the Centre for Integrative Semiconductor Materials (CISM) in Swansea University and / or the Institute for Compound Semiconductors (ICS) at Cardiff University, or any other Cluster entities in South Wales to perform activity detailed in the proposal.
- Candidates must have an existing employment contract, at application stage, in an academic, research or technical role at a UK Higher Education Institution.
- If awarded funding, employing institutions must confirm the lead applicant will have an employment contract that covers the full duration of the project.

Application Criteria

Submission process:
Cardiff University will administer this funding call and award of funding. Applications should be submitted by email to Dr Rachel Morgan, PBIAA Programme Manager (MorganR60@Cardiff.ac.uk). Co-applicants or university research support offices may be copied into the email submission.

Deadline: The completed form must be received by MorganR60@Cardiff.ac.uk via email by no later than **16:00 p.m. on Friday 30th May 2025**.

Applicants must ensure and consider the following:

- All applications should be submitted on the application form provided.
- Proposed early-stage commercialisation projects and activities must clearly align with SWCS PBIAA aims and objectives – **to support company formation in the South Wales region** – and clearly demonstrate the need and intended workplan for engagement with a Cluster entity and the use of South Wales based facilities.
- All projects must fall within the **early-stage commercialisation/proof of concept** category and detail how they will **set up a company and innovate** in **South Wales**. SWCS PBIAA funding **is not** suitable for research and development projects and such projects will not be considered by the assessment panel.
- Include descriptions of tangible deliverables from the project by each party that demonstrate progress towards **company formation.**
- Include practical timeframes for key tasks and deliverables required of each party in Expected Outcomes and Pathways to Impact, Commercialisation and starting a company.
- Include a full justification of resources – costs for South Wales based facilities access **must be supported by quotes from that entity**.
- If successful, all projects must be ready to start within three months of 1st July 2025, with a maximum duration of six months.
- If successful, employing institutions must confirm the lead applicant will have an employment contract that covers the full duration of the project.
- Adhere to the maximum word count provided for each section on the form.

Reporting and engagement:

Successful award-holders will be required to provide detailed mid-term (at three months) and end-of-project (at six months) reports summarising progress against key tasks, deliverables, main achievements, interaction with CSconnected cluster organisations, identified risks and challenges, and budget position.

Award holders will also be expected to participate in networking events in person in South Wales and/or online, and to engage with the wider CSconnected community and SWCS PBIAA activities (including knowledge transfer, advanced skills training and public and school engagement) where aligned with their interests. Further ED&I funding is available to support engagement with these activities if required – please see ED&I section below for details.

Assessment Process

First Stage

Submissions will be considered and scored by at least two Assessors, with expertise in semiconductor translational research, commercialisation and regional place-based

innovation support. Assessors will be required to disclose any potential conflicts of interest with applicants, their employing institutions, or organisations named in the proposal – all identified conflicts will be managed by Cardiff University.

<u>Second Stage</u>

The Assessors will select candidates to progress to the second round of the Call to present a short business case pitch (a pro-forma template will be provided) to the Panel, consisting of the SWCS PBIAA Management and Governance Boards. Funding allocations will be confirmed by the Panel. Applications will be assessed and scored against the following key criteria:

1. **Summary of Concept and TRL* Status**
- Does the project deliver high quality early-stage commercialisation /proof of concept outcomes?
- Is the approach credible, demonstrating the proposed project team will be able to deliver identified tasks?
- Is the TRL level outlined?

*TRL level 1 – Basic principles observed and reported.

　　　　2 – Technology concept and/or application formulated.

　　　　3 – Experimental proof of concept.

　　　　4 – Technology validated in lab.

　　　　5 – Technology validated in relevant environment.

2. **Benefit to CSconnected cluster, Regional Partnership Opportunities and Alignment to Scope**
- Have you identified an academic or technical lead at CISM or ICS or the wider CSconnected cluster organisations who you have previously, or would like to, collaborate with on this project to form a company?
- Does the proposal complement existing and proposed activity within the SWCS PBIAA and is it of benefit to the South Wales CSconnected cluster?
- Will the project deliverables/outcomes support the development of further funding applications, industrial or academic collaborations or commercialisation support?
- Does your project utilise and leverage South Wales based resources and has it been appropriately costed with a valid quote from a chosen Cluster entity?

3. **Expected Outcomes and Pathways to Impact, Commercialisation and Company Formation**
- Does the proposal present suitable levels of challenge and ambition?

- Is the project high risk, high-return/impactful? Is there a potential for follow-on funding and if so, what commercialisation funding has been identified?
- Are the intended outcomes clear?
- Describe how your project will lead to the **creation** or **acceleration of commercialisation and company formation opportunities** in the South Wales Compound Semiconductor industry and the CS cluster.
- Identify potential future beneficiaries and how your project outcomes might benefit these beneficiaries.
- If beneficiaries are primarily located outside of the South Wales region, please describe how these beneficiaries help create or accelerate Impact within the region.
- Describe what long-term impacts are anticipated from the project.
- Describe the future pathways required beyond the project to deliver these impacts.

Eligible Project Costs

Early-Stage commercialisation funding can be used to fund the necessary costs of project delivery, including directly incurred and directly allocated staff time for applicant(s) and their teams, travel and subsistence, materials, consumables and sub-contracting costs. Eligible costs are funded at 100%.

Applicants should complete the costings table and provide a full justification for the costs requested in the application form.

1. Staff costs: Directly Incurred and Directly Allocated staff time only.

2. Consumables & materials: specific to the applicant's delivery requirements, (excluding ICS or CISM costs which shall be included in their facilities access total quote).

3. Facilities access: total costs will be itemised on a separate quote from entity specific to applicant's requirements. Quotes may include facilities rates, consumables, materials, sub-contacted activities required by the cluster entity, and any additional technical or research staff time required from each institution (excluding FEC overheads on this time). Include the quote reference number in the application costs table. If funding is awarded for work at Cardiff or Swansea University this will be transferred directly to Cardiff or Swansea University and will not be included in the total award value paid out to the applicant's HEI. Further information and contacts for costings are:

- ICS: Facilities list, contact: ICS@cf.ac.uk
- CISM: Dr Matt Elwin, contact: m.p.elwin@swansea.ac.uk

4. Sub-contractor costs: applicants will be wholly responsible for their selection of sub-contractors (if required) and for putting in place appropriate contractual agreements with these third parties in line with their institutional requirements. CISM and ICS staff will signpost applicants to other capabilities in the CSconnected cluster if relevant to their project requirements.

5. Travel, accommodation and subsistence: applicants are expected to co-locate at least temporarily alongside compound semiconductor facilities in South Wales. Costs should be specific to the applicant and team's personal requirements, excluding office or lab accommodation costs. Please also note the separate approach to applying for costs relating to Equality, Diversity or Inclusion requirements, outlined further below.

6. FEC overheads: Indirect Costs, DA Estates Costs and DA Infrastructure Technician costs are NOT eligible costs for this call.

Additional funding for ED&I

Please see section below on ED&I for the separate process to apply for ED&I funding.

Reporting on costs not funded by PBIAA

There is no match-funding or in-kind contribution expected for this call.

However, we recognise that call conditions may result in applicants or their employers incurring additional Full Economic Costs, including overheads or costs falling outside the £35,000 funding maximum.

We will invite successful award-holders to report on total Full Economic Costs as part of their final claim, where this data is available. This data will be collated and reported in aggregate for monitoring and evaluation purposes only.

Award approach

Cardiff University will administer funding for the awards - applicants will be notified of outcomes by the PBIAA Programme Manager.

Cardiff University will issue an Award Letter and supporting collaboration Terms and Conditions to the applicant's HEI, which shall reference:

- Lead applicant's name, employing HEI, project title, and total funding awarded to the project;
- Latest start date and duration of the project.
- Funding award values allocated to the applicant's HEI, to Cardiff University and Swansea University.
- Procedures for the claim of funding against actual costs, in arrears on completion of the project.
- Compliance with UKRI fEC Grants Standard Terms and Conditions of Grant;

- Terms for collaboration between the applicant HEI and Cardiff University and/or Swansea University including confidentiality, publications and Intellectual Property Rights.

Intellectual Property

Projects are expected to operate on an "who invents owns" principle. It is expected that growth, fabrication and characterisation activities by Cardiff and Swansea Universities will be delivered to the applicant's specification without needing to share IP necessary to carry out these functions.

Tasks and deliverables required from all parties must be clearly set out in the application. Each project will be expected to maintain an IP Register, recording the introduction of Background IP and creation of new IP.

Work with third parties/sub-contractors

The applicant's HEI will be responsible for due diligence and putting in place any further agreements required with other third parties (including sub-contractors) to ensure confidentiality, publication rights and IP protection are agreed between all parties involved before any work is carried out.
Award Terms and Conditions will bind recipients to UKRI Trusted Research Principles – please see further below under 'Trusted Research'.

Facilities access

If successful, all individuals involved in a project must be named and approved as visitors to CISM or ICS Facilities. If these individuals require access to facilities, each facility will be responsible for due diligence on named individuals, and for notifying and training any individuals in all required health and safety, IT and cyber security and operational and other protocols relating to the site they are visiting.

Equality Diversity and Inclusion (ED&I)

The SWCS PBIAA fully supports EPSRC's expectations in relation to ED&I and aims to foster and uphold inclusive, diverse and transparent cultures and behaviours. https://www.ukri.org/publications/epsrc-expectations-for-equality-diversity-and-inclusion/

The PBIAA has an Equity, Diversity and Inclusivity (ED&I) plan and a named individual at Cardiff University who leads on ED&I, Dr Cosimo Inserra (InserraC@Cardiff.ac.uk).

SWCS PBIAA has funding available for ED&I interventions specific to the needs of the project or applicant. This is additional to the £35,000 maximum project funding available. As illustrative examples, ED&I funding may be requested for, but not limited

to, support care costs for dependents, travel and subsistence costs related to accessibility, religious considerations (e.g. providing chaperones) or translation/ interpretation support.

Applicants wishing to apply for additional ED&I funding should submit a request by email to the PBIAA ED&I lead Dr Cosimo Inserra (InserraC@Cardiff.ac.uk) before the application deadline, entitled 'Confidential: SWCS PBIAA ED&I funding request'.

An attachment to the email should detail: project title, applicant name, gender identity, ethnic background, any known disability, amount of ED&I funding requested, rationale for need justified in the context of the project (max 300 words), and basis of costs.

Attachments will only be opened and considered by the PBIAA ED&I lead if the application is successful. ED&I information is not part of the assessment and will not be shared with Panel Assessors or Management and Governance Boards. Approved ED&I funding will be added to the total amount of funding awarded to the applicant's HEI, unless the applicant requests alternative payment arrangements.

Please be assured that any data collected is anonymous and held securely on Cardiff University servers. Raw data will be held for one year but anonymised results in forms of charts/plots disaggregated by intersectional data will be part of our ED&I grant analysis.

Confidentiality and management of administrative records

Applicants should clearly identify, anonymise or exclude any commercially sensitive or highly confidential content.

All applications will be considered confidential and will not be shared beyond Panel Assessors, members of the SWCS PBIAA Management Board and individuals within Cardiff University supporting general, financial and contractual administration of the PBIAA. Applications may also need to be shared with auditors or contractors appointed by EPSRC or Cardiff University.

Applications, assessor reviews and scores, award letters and legal documents will be stored in a private Teams folder only accessible to those requiring access to administer the funding.

Trusted Research (TR) and Responsible Research and Innovation (RRI)

 The SWCS PBIAA has a Trusted Research and Responsible Research and Innovation (RRI) plan that takes into account the EPSRC expectations for trusted research - https://www.ukri.org/wp-content/uploads/2021/08/UKRI-170821-TrustedResearchandInnovationPrinciples.pdf
and RRI https://www.ukri.org/who-we-are/epsrc/our-policies-and-standards/framework-for-responsible-innovation/

Trusted Research

Semiconductors are listed as one of the advanced materials that are considered of UK national importance and therefore the sector is subject to export controls, dual-use, and National Security and Investment Act principles. All parties involved in projects

must transparently consider and address trusted research considerations and implement robust data management practices.

Applicants are invited to outline how they adhere to Trusted Research requirements in their application. The answer to the trusted research question will not be part of the initial assessment but a final decision will be made by CU as to whether they believe funding the activity will be consistent with UKRI guidance.

It is not anticipated that applicants/ HEI recipients of Early-Stage Commercialisation project funding will be organisations owned/controlled by overseas entities.

Collaboration with international partners is not anticipated under this call, but there is potential for international parties to access UK- semiconductor expertise through third-party relationships or some of project activities. **HEI award recipients are responsible for completing due diligence and all appropriate Export Control or NSI Act checks on those whom they choose to partner, collaborate or sub-contract with; this will be set out in the terms of award.**

Before we provide financing to you, we undertake checks for the purposes of preventing fraud and money laundering, and to verify your identity. These checks require us to process personal data about you. During the appraisal of your application, we will carry out due diligence checks using various systems.

If there is collaboration with entities owned or controlled overseas, activities must only proceed following further consultation with university advisory services and, if required, the necessary export control or Academic Technology Approval Scheme (ATAS) approval.

Successful award holders will receive further Trusted Research training through the PBIAA, and evaluation of follow-on project proposals will include assessment of their incorporation of Trusted Research principles.