

Annex A: Completing the Proposal Form

Please submit the proposal [online](#), or in **WORD** format. If you wish to attach a PDF as well, that is acceptable, but the CDT Office must have an online application or a word document in order to prepare the catalogue.

Section 1 Title	Please provide a concise Project Title .
Section 2 Supervisor Details	<p>The Lead Supervisor must be employed by one of the four University partners in the CDT. Normally, the student will be enrolled at the University that employs the Lead Supervisor (their Home University).</p> <p>It will be the Lead Supervisor’s responsibility to make suitable arrangements for a workspace at the Home University for their student and to ensure that EPSRC Terms and Conditions are met.</p> <p>The project must have a Second CDT supervisor, who is employed by a different partner University than that of the Lead Supervisor.</p> <p>If the Lead Supervisor has not previously supervised a PhD to successful completion, then the CDT Co-supervisor must be an experienced supervisor.</p> <p>Experienced Lead Supervisors are encouraged to seek ECRs as second supervisors.</p> <p>Please provide information on the number of students currently being supervised by the Lead and Co-supervisors as 1st or joint 1st supervisors, including the students’ start and end dates.</p> <p>You should submit a project for the 2025 Cohort only if you have supervisory capacity for 2025-2028, as defined by your employing University.</p>
Section 3 Project Details	<p>The Project Description, Research Excellence and Research Training (sections 3.1, 3.3, 3.4) will be included in the Project Catalogue, so you should provide a description sufficient to attract a student to the project. Make it clear, for example, if the project has a practical or manufacturing element or is theoretical modelling, and whether the project can be done by students on either the CS Physics route, the CS Engin route, or both (3.2).</p> <p>Please do not exceed the word limits.</p> <p>Note that the Lead Supervisor is responsible for ensuring that it is possible for a reasonably diligent student to complete the project and submit the thesis within the funded period, which is by 30 September 2028 for this Cohort. This is an EPSRC requirement and is non-negotiable, with normal exceptions for sickness absence, parental leave etc.</p> <p>The PhD project must be scoped to take account of the student’s attendance at CDT CSM training and engagement activities, which will be approximately 15 days per annum.</p> <p>EPSRC also expects that students will have an annual leave entitlement of 40 days per annum, inclusive of Bank Holiday and University closure periods.</p> <p>Research Facilities (3.5) will demonstrate to the Management Board that the student will have access to the facilities they need to carry out the work.</p>
Section 4 Project Costs	<p>Project Costs must be itemised by the heading given. Each project will have a total Research Training Support Grant (RTSG) of £20,000 over the three years of the project. Do not include any expenses that would normally be met by the University for its students.</p>

	<p>Note that CDT CSM students <u>must</u> have the opportunity to attend at least one UK and one international conference during their PhD, the costs of which are paid from their RTSG. The student must also be able to attend relevant training specific to their project and/or needs; the costs for these must come from the RTSG.</p> <p>Do not include costs for the student to attend the required CDT CSM Cohort training events, because these will be paid from CDT CSM funds rather than the RTSG.</p> <p>If the project costs exceed the RTSG level, describe how these costs will be met, for example by the industry partner or from other research grants you hold.</p>
Section 5 Partner Details	<p>Please state the proposed Industrial Partner and include the name and contact details of the contact person at the company and the name of the industrial supervisor (if different). <i>Only the company name will be provided in the student catalogue.</i></p> <p>If the industrial partner has agreed to fund the project, you must append the email or letter which confirms this. The minimum contribution is £45,300 for this Cohort. Note that this is an estimate of one-third of the cost of a studentship (see FAQs).</p> <p>If you are still in conversation with one or more partners, please describe the status of these. The last possible date for confirmation of industrial funding is 30 November.</p> <p>Regardless of whether the project is funded at the point of submission, please state the industrial involvement that is expected in the project.</p> <p>If the partner is interested in several projects that you are submitting, please be clear on how many they will fund in this round.</p> <p>Please also ascertain if there are any issues with students of nationalities from outside the UK being assigned to this project, or any consequent Export Controls if the Company is outside of the UK.</p>
Section 6 References	<p>Please provide several references that provide the context or a starting point for the student to learn more about the topic. Normally, four or five should be sufficient.</p>
Section 7 MSc Project	<p>Please give a brief description of the MSc project(s) that might be suitable as a foundation to this PhD project and whether there is a preference for where the project should be undertaken (your University, industry partner premises or Cardiff). Remember that students may not be able to move during the summer, due to accommodation contracts, so please ensure the project can be conducted in Cardiff or remotely.</p>
Section 8 Covid19 Impacts	<p>COVID-19 Impacts: Please describe possible impacts from COVID-19 on the PhD Project. These may include UK or overseas travel, accessing facilities, equipment, materials, resources, or personnel required for the projects, or delays to start dates or milestones. Note that it is not expected that additional funding or time will be available to manage these impacts so the project scope would need to be adjusted.</p>
Section 9 Student Numbers	<p>Student Numbers: If you believe that this topic could support more than more student from this cohort, please state how many you could supervise in this topic area.</p> <p>However, if the project is one of several that you are submitting, please state how many students in total you can supervise from this Cohort. So, if you have submitted four projects to enable student choice, but only have capacity to supervise 2 students – please state ‘2’ on each of the proposal forms.</p>
Section 10 Confirmation	<p>As Lead Supervisor, you will be confirming on behalf of the supervisory team that you will participate in the CDT activities and monitoring process, and that you will make best efforts to ensure that the student selected for this project participates in CDT CSM</p>

activities. Please be aware that the studentship can be withdrawn if the student fails to engage with the CDT.

Please indicate whether you have already attended your University's ED&I training or whether you are committing to do so prior to the project selection interviews.

Please submit the proposal online (preferably) or in WORD, so that the CDT Office can create the catalogue. If using Word, please use the Lead Supervisor's SURNAME as the PREFIX to the document name.

Annex B: Q & A on Industrial Funding

Does the project have to be funded by a company?

All projects must have relevance to manufacturing, as this is the focus of the CDT.

The CDT has committed to funding 70 students over five years. To achieve this at least 58 of the projects must have industrial funding. In order to reduce the risk of not meeting that target, **the Management Board is prioritising projects with industrial funding**. Other proposals will be considered, but **industrially funded project will be allocated ahead of those that are not**.

Note also that most students are seeking a project with strong industry links; in the post-selection survey, **85%** said that they would have chosen an industrially funded project even if they had not been required to do so.

If you have not yet identified an industrial partner, the Industrial Interface Director and your university representative may be able to help you to do so.

How do I find companies that might be interested in funding a studentship?

The companies who provided Letters of Support for the Centre for Doctoral Training are listed on the CDT website: <https://www.cdt-compound-semiconductor.org/partnerships/>. If you need contact details, please email the CDT office (semiconductors-cdt@cardiff.ac.uk).

There are many other companies using compound semiconductors that might have an interest in the research that you are proposing. [Click here](#) for details of the core and business partners in the CS Cluster and their sphere of activities.

The CDT Management Board is keen to help facilitate introductions where they can – please contact your University Management Board representative or Professor Khaled Elgaid (ElgaidK@cardiff.ac.uk), the Industry Interface Director for assistance.

The Management Board is also canvassing partners for their research interests and will make these available to potential supervisors via an MS Teams space or via the University contacts, to be confirmed. We plan to hold an event in early Summer to facilitate introductions.

The annual expected cost of a studentships is **£15,100 (see below)**. **This represents exceptionally good value to a company compared to, for example, the costs of employing equivalent qualified employees, consultants to do the same research, and access to university equipment and expertise; in addition it is tax deductible via R&D relief or credits (see below)**.

When is the last date to confirm industry funding?

In order that students can make an informed decision, we ask that you provide confirmation of industrial funding **not later than 30 November** so that this can be highlighted in the Project Catalogue.

How much cash does the company need to provide?

The minimum amount requested from an industry partner is **one-third** of a four-year studentship. At this stage, the amount is the *projected* four-year studentship costs as we do not know the annual UKRI stipend and fees increase for the final three years of the Cohort 6 studentship.

This is currently projected to be **approx. £135,902, which means an estimated minimum contribution of £45,300** for students starting their studentship in October 2024 (PhD start date Oct 2025).

Please note that as this is the *estimated* cost of a four-year studentship; it may change slightly with inflationary pressures when UKRI announce stipends and fees for the remaining study period.

This is for a *standard* studentship; if the project costs exceed **£20,000** in total or there are additional costs of a placement (such as accommodation or travel to the site), the company should be asked to cover these unless you have another source of funds.

This sum is payable over the **three** years of the PhD project, beginning in October 2025, or by a single payment in 2025. Payment terms can be negotiated with the company: initial lump sum, 3 annual instalments, 6 six-monthly instalments or 12 quarterly instalments. **The balance may be adjusted in the final year to ensure that the partner contributes one-third of the studentship cost. To reduce industry exposure to risk, any inflationary rises will be capped at 10% of the estimated cost above.**

These sums are familiar to companies who have been involved in industrial CASE studentships where the company must provide a top-up of a minimum of one third of the EPSRC funding.

When discussing sponsorship, you should stress that Research Studentship funding qualifies for R&D Tax credits when undertaken via a Contract with a University (Sub-contractor costs). As explained in the box below (source: www.Gov.uk website) an SME would qualify for 100% of their Costs, plus 86%. A large company would be able to claim 100% plus 20% tax credit against their corporation tax. An SME may even be able to claim if they do not currently pay corporation tax.

This is a major boost to the industrial partner where their corporation tax is reduced by 186% for an SME and 120% for large corporations. Even a SME who has not paid any corporation tax but is making NI payments for their employees can recover some of their contribution over a number of years.

[Tax Relief on Research](#)

Types of R&D relief

There are different types of R&D relief, depending on the size of the company and if the project has been subcontracted to you or not.

Small and medium sized enterprises (SME) R&D Relief

can claim* [SME R&D relief](#) if they have with:

- less than 500 staff
- a turnover of under 100 million euros or a balance sheet total under 86 million euros

SME R&D relief allows companies to:

- deduct an extra 86% of their qualifying costs from their yearly trading profit, as well as the normal 100% deduction, to make a total 186% deduction
- claim a payable tax credit if the company has claimed relief and made a loss, worth up to 10% (or 14.5% if you are research intensive) of the surrenderable loss

Research and Development Expenditure Credit

This replaces the relief previously available under the large company scheme.

Large companies can claim a [Research and Development Expenditure Credit \(RDEC\)](#) for working on R&D projects.

It can also be claimed by SMEs and large companies who have been subcontracted to do R&D work by a large company.

The RDEC is a tax credit of 20% of your qualifying R&D expenditure (since 2023).

Whether your company makes a profit or loss, some or all of the expenditure credit may be used to settle your company's, or other group companies' Corporation Tax liabilities. In some circumstances the expenditure credit can:

- be used to settle other tax liabilities your company is liable for
- lead to a payment of credit to your company

*see [terms and conditions](#)

Can two companies jointly fund a student?

Normally, the project should be funded by one company. However, if two small companies wish to co-fund a student, the Management Board will consider such proposals. The companies must be in agreement about the aims of the project and the assignment of intellectual property arising; these should be discussed well in advance to ensure that all material issues are agreed before a student is allocated to the project.

Does the Company have to be based in the UK?

We encourage working with companies within the UK due to the ease of travel and the student experience, however, this is not currently an EPSRC requirement. If a particularly valuable experience can be provided by an overseas company and this meets any regulations in force at the time, any additional travel/subsistence costs will need to be considered when planning the budget. Students must be available to take part in the regular cohort activities, even if based overseas for some period, and the Company would need to cover these costs. There may also be additional complexity around intellectual property and the studentship agreement, which again should be considered well in advance of a student being allocated to the project.

Will I need an Export Control License?

In a research context, export controls are most likely to apply to collaborative scientific or technical research where there is a *potential* for the research to have a military, security or weapons-related application. Semiconductor-related research often falls within this category so you should explore export controls at an early stage, particularly if the research will involve an international partner or element. Where export controls apply, an Export Licence will likely be required prior to the transfer of any controlled goods, technology, software or knowledge to a destination outside of the UK.

A Cardiff University Export Control Policy for its researchers is currently in development and will be available shortly. In the meantime, Researchers are advised to review the information on [this page](#), and to contact the [Research Integrity, Governance and Ethics Team](#) (resgov@cardiff.ac.uk) if they consider that export controls may apply. **For supervisors not at Cardiff, please refer to this [government webpage](#) or to the equivalent department in the partner universities.**

How is the student selected for the project?

As noted above, the Lead Supervisor and the Industrial Supervisor, and ideally also the second supervisor, will interview the students who have expressed an interest in the project and will indicate whether the students are appointable. Management Board receives these recommendations and allocates students to the projects, taking into consideration the balance of students at each University, which is fixed by the CDT agreements.

What if the project is not selected by any student or the Management Board does not allocate a student to the project?

We have received funding for a further five cohorts. Projects may be rolled forward to the following year if not selected by a Cohort 6 student.

What happens after an industrially funded project is confirmed?

The CDT Office will inform your University's contracts office of the funding and you will need to work with them to develop a studentship agreement, as soon as possible and before the start of the PhD project. Your University will be responsible for confirming completion of the agreement to the CDT Office and for collecting the industry contributions.