ADVANCED MATERIALS RESEARCH & INNOVATION

ROYCE

HENRY ROYCE INSTITUTE

2025 Industrial Collaboration Programme

Briefing Session and Q&A

19th March 2025

12:00 – 13:00

Before we start:

- This session will be recorded and made available on the Royce website, please do share this recording with your contacts
- Q&A Button: Please add questions during the course of the webinar and these will be answered either at the end of the meeting (or afterwards via the frequently asked Q&A notes)

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Royce – Industrial Collaboration Programme (ICP)

This is the fifth iteration of the Royce ICP funding programme.

The Royce ICP aims to:

- Support industry-academic collaborations
- Help industry solve industrial problems and promote UK growth

Previous ICP projects have:

- Aided the development and optimisation of products
- Helped companies create jobs through supporting R&D
- Allowed companies to bring in new investment through proven results

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Summary:

Royce Industry Collaboration Programme (ICP) 2025

Focused on short term collaborative RD&I projects that should explore innovative ideas with a focus on technology translation. Projects must:

- Be between £50k-£130k and incur costs within the project's duration
- Must include at least one business and at least one university or RTO, up to a maximum of 3 organisations
- Carry out the work and intend to exploit the results in the UK
- Be a new project or activity that has not already started
- Are expected to run from 1st October 2025 to 28th February 2026

It is anticipated that a minimum of £3M of funding will be awarded.

Application Deadline: 5pm, 12th May 2025
Further details available on the Royce Website

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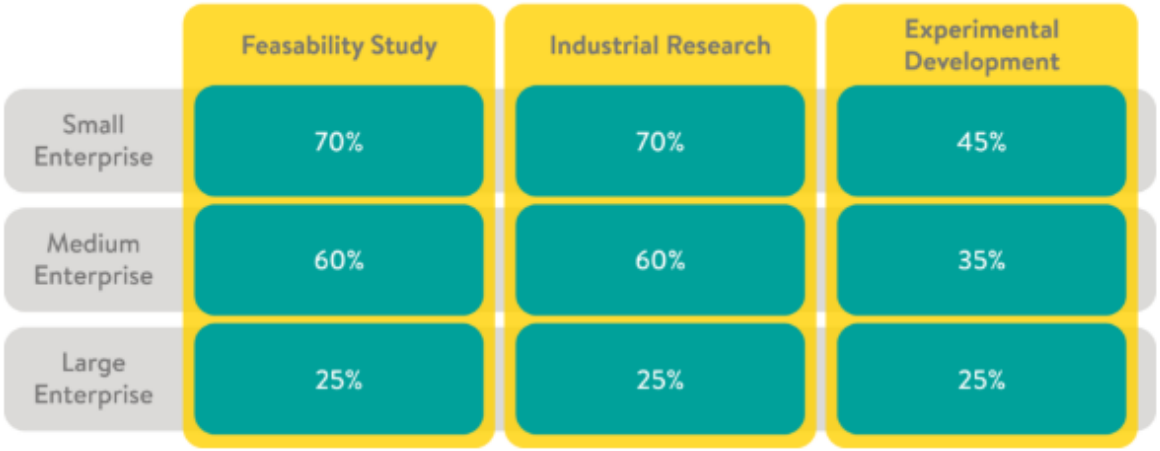
ABOUT THE FUNDING CALL

Applications to ICP Round 5 will open 17 March 2025.

The Henry Royce Institute for Advanced Materials is offering grant funding for research, development, and innovation sprint projects.

Universities, research and technology organisations and companies can apply for funding of total project costs between £50,000 and £130,000 for exploring innovative ideas with a focus on technology translation. A maximum of 3 organisations may collaborate on each project. These awards are not offered to support fundamental research projects.



The application deadline is 17:00 Monday 12 May 2025.

Projects are expected to start by **Wednesday 1 October 2025** and Royce-funded project expenditure must be completed by **Saturday 28 February 2026**.

Further details can be found in the guidance document and FAQs.

Royce Industry Collaboration Programme (ICP) 2025

Further details available on the Royce Website

Application Deadline: 5pm, 12th May 2025

Who Can Participate:

To collaborate or lead, you must be one of the following:

- **Academic institution**
- **Research and technology organisation (RTO)**
- **Charity or not for profit organisation**
- **Business of any size**

UK registered companies may participate and claim funding. International companies are eligible for participation but cannot claim funding.

A maximum of 3 organisations can collaborate on each project.

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Application Deadline: 5pm, 12th May 2025

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Who Can Participate:

Project leads can be:

- **An appropriate senior manager from industry (e.g. R&D Manager, CTO, etc.)**
- **A researcher holding an academic position (e.g. lecturer or equivalent)**
- **Holders of early career fellowships whereby the university grants you the same stature as a permanent academic staff member.**
- **University or research and technology organisation technical professional services staff (e.g. Technical facility experimental leads and technical specialists or equivalent)**

Postdoctoral fellowships are ineligible.

Project Leads can lead one proposal and collaborate on one additional proposal.

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Competition Scope

Projects must fall within the following scope areas:

- **Sustainable Materials Innovation**
- **Extending Life of Major Assets through Materials Science**
- **Advanced Materials for Next Generation Quantum and Semiconductor Devices**
- **Energy Materials and Green Hydrogen Technologies**
- **Healthcare Innovation**

The full details are given in the Competition Guidance Document.

It is up to the applicant to demonstrate in their proposal how their project fits the competition scope as defined in the competition guidance.

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Competition Scope

Overarching Theme	Scope
Sustainable Materials Innovation	• Materials innovations to support sustainability across the foundation industries (cement, metal, glass, chemicals, polymers, paper and ceramics sectors), including design, production, use, and end-of-life considerations • Resource efficiency and scarcity: innovations in materials use and recycling to address the scarcity of critical minerals and reduce dependence on limited resources.
Extending Life of Major Assets through Materials Science	• Performance Enhancement and Degradation Mitigation: Development of surface treatments, coatings or repair strategies to enhance or extend lifespan of large infrastructure assets • Smart infrastructure management: Solutions that enable structural material health modelling (prediction), measurement and monitoring
Advanced Materials for Next Generation Quantum and Semiconductor Devices	• High-frequency Telecommunications, Sensing and Power Electronics • New functionalities, Heterogeneous Integration, and Metamaterials • Thin film development for Low-Power Electronics
Energy Materials and Green Hydrogen Technologies	• Materials for production, storage, transport, and utilisation of hydrogen in gaseous and liquid form • Advanced energy materials: energy harvesting, storage and conversion technologies for efficient, scalable solutions
Healthcare Innovation	• Material innovations in healthcare: Materials for medical applications that interface effectively with biological systems to realise a healthier population.

Competition Scope

We encourage translation of digital methods within the scope areas leveraging Materials 4.0 approaches which may combine with advanced experimental methods. E.g.:

- **Accelerated Materials Design:** Leverage simulations, modelling, artificial intelligence (AI), machine learning (ML) and large language models (LLMs) to predict behaviour and optimise properties, reducing experimental reliance.
- **Smart manufacturing of materials:** Utilise digital twins, data-driven control, and automation to optimise processes and enhance efficiency.
- **Data-Driven Discovery:** Applied AI/ML/LLMs for materials informatics to accelerate discovery and analysis of data. Modelling capabilities: Predict and explain material behaviours to accelerate the design of new materials.
- **Simulation capabilities:** Develop rapid (real-time) simulation methods, including data driven and surrogate models, to support development of digital twins to mirror physical processes.

The full details are given in the Competition Guidance Document.

It is up to the applicant to demonstrate in their proposal how their project fits the competition scope as defined in the competition guidance.

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Funding Model

- The grant awarded to successful projects covers a proportion of the project partners eligible costs. The grant amount is determined by the type of recipient (University, RTO, or business).

- Academic, non-profit and research and technology organisations undertaking non-economic activity can obtain a grant equal to:
  - 80% of their project costs if using Full Economic Costs (FEC) or
  - 100% of project costs for RTO, charity and not-for-profit organisations conducting non-economic activities

- Companies can claim a grant equal to a percentage of their total project costs depending on their size and the project's research, development and innovation classification

	Feasibility Study	Industrial Research	Experimental Development
Small Enterprise	70%	70%	45%
Medium Enterprise	60%	60%	35%
Large enterprise	25%	25%	25%

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Eligible Costs – For Organisations Using FEC

Item	Eligible cost	Notes
Directly incurred:	PDRA costs	Should be an existing staff member
	Consumables and minor equipment	The maximum individual consumable cost is £10k per **partner**. The maximum cost of minor equipment is £10k per **project**.
	Equipment usage	**For Royce facilities, costings should be obtained from the appropriate facilities manager. Contact details can be found in appendix D**. Royce facilities are funded at 80% FEC.
	Travel and subsidence	Max £5k. Reasonable subsistence is allowed for essential project meetings.
	Training and development	Max £5k
	Events and outreach	Max £2k
	Subcontractor	With prior agreement. Please complete this enquiry form at **least 2 weeks** before the competition deadline with the full expected project costs and subcontractor costs.
Directly allocated:	Investigator time	
	Technician, technical specialist	
	Application Scientists	Costings including hours requested and cost/hour should be obtained by completing this enquiry form **4 weeks** before competition deadline. Funded at 80% FEC.
Indirect Costs:	Estates, technician IS and other costs	

Project leads require explicit consent from all staff named on a project, including confirmation from relevant facilities managers and application scientists that there is a sufficient time allocation to ensure the work can be completed on time.

Royce Support - Application Scientists

Application scientists are agile postdoctoral-level scientists based across Royce partners available to support project delivery. Support may include project scoping, management, experimental work, data analysis and reporting.

- Where a project conducts work in an area where there is direct overlap with expertise of an application scientist (see next slide for table of expertise), Royce positively encourages their incorporation into the project work, where appropriate, to de-risk and ensure timely project delivery.

- The application scientist team may be included in project costs between 20% and 50% of their time to complement other direct staffing costs (e.g. PDRAs, experimental officers, technical specialists, and investigators).

- Senior application scientists are eligible to be a Co Investigators on proposals and application scientists are eligible to be Researcher Co Investigators if either has significant input to the research.

Projects requesting application scientist support must complete this enquiry form at least 4 weeks before the competition deadline, including the following information:

Activity	What is the proposed project, and what is the requested contribution from the application scientist team? What tasks and facilities will they utilise as part of the proposed project?

Royce Support- Application Scientists

Application scientists are available in the following thematic areas and locations:

Location	Expertise
Manchester	Chemistry, surface chemistry, sustainable polymers, polymer synthesis and characterisation, chemical sensors, nanomaterials, 2D materials, graphene, nanocarbon/nanoparticle hybrids, nanocomposites, catalysis/characterisation, electron microscopy, polymer/ceramic composites, additive manufacturing, bioprinting, hydrogels, fibre spinning, textiles, metallurgy, corrosion and protection, electrochemistry, superconducting coatings, X-Ray tomography, life cycle analysis.
Sheffield	Metals processing, powder metallurgy, field-assisted sintering technology, titanium alloys, ceramic processing and characterisation, process development, scale-up and optimisation.
Leeds	X-ray analytical techniques including X-ray diffraction (XRD), X-ray photoelectron spectroscopy (XPS), small angle X-ray scattering (SAXS), X-ray computed tomography (XCT), electron microscopy, particle size analysis, compositional analysis, crystallography, ceramics, mechanical testing.
Oxford	Electrochemical and design aspects of lithium-ion batteries. Handling air-sensitive materials, performing all stages of cell building (from material synthesis to full cell construction), and conducting routine and specialist analysis. Cell Fabrication - Coin, pouch; mixing, coating, calendering, cell assembly. Experience up to pilot scale - automated cylindrical cell assembly and reel-to-reel coating (at other locations). Electrochemical formation/grading, CV, polarisation, impedance, rate, resistance and retention cycling. Analysis - SEM/EDX, CT scanning (other locations), PSD, Titrations, DSC, TGA, XRD, GC, MS, IR. Fault finding and analysis, mechanical testing.
Cranfield	Coating deposition, thin films, thermal spray, CVD, PVD, microstructural analysis, hydrogen permeation barriers, heat treatment, corrosion, analytical techniques

Eligible Costs - Industry / RTOs / Not-for-profits

The project follows UKRI's costs guidance for non-academic organisations.

Eligible cost	Notes
Labour	PAYE costs only
Overhead	Royce funds a flat 15% rate for labour for overheads only
Materials and minor equipment	The maximum individual consumable cost is £10k per **partner**. All items procured under this category must be used solely for research and not for commercial purposes. The maximum cost of minor equipment is £10k per **project**.
Capital expenditure (>£10k)	Ineligible
Capital usage / equipment usage	Allowed as per UKRI guidance
Subcontractor costs	With prior agreement. Please complete this enquiry form at least **2 weeks** before competition deadline with the full expected project costs and subcontractor costs
Travel and Subsistence	Max £5k

Application Process

- All applicants must complete an online application form via Flexigrant.
- Costing for Royce facilities should be done via the budget tables on the online application form. These costings should be sought from and agreed by the relevant facilities manager. Contact details can be found in **appendix D**.
- A Collaboration Agreement must be signed prior to the start of the project.

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Assessment Criteria

Your application will be shared with, and assessed by an independent panel made up of experts in the field from industry and academia against the following criteria:

Question 1 - The idea: What is the problem you wish to solve and why is your proposed approach and innovative solution? (25 points)

- The specific innovation you propose to develop
- How this is different and better than alternative solutions
- Any barriers to adoption and how they could be overcome
- Why your solution is novel, important and timely

Question 2 – Workplan and costs: What will you do with the grant funding? How will you manage the project and risks effectively? (25 points)

- Your project's main work packages, who leads them, and the tasks associated with each
- A list of outputs of the project in terms of specific deliverables, ideally per work package
- The project risks and how you will mitigate them
- Provide a detailed breakdown and justification of what the funding will be spent on, including costs for personnel, consumables, equipment, travel, facilities and overheads for each project partner requesting a grant.
- Your freedom to operate, e.g., patents, IP
- Explanation of project classification assignment

Question 3 - Project resources and capabilities: Explain why you and your partners can deliver this project. (25 points)

- What resources and facilities (whether Royce or external) you can access, including the main people and teams involved and relevant track records
- What are the contributions from each project partner and why the project is an effective collaboration leading to technology translation
- Your capability to deliver in the required timeframe given your existing business activities or constraints

Question 4 - Impact and added value: What will be the impact of receiving the grant to your project? (25 points)

- What is the expected impact of the project? This may be academic or economic impact for the project partners but also environmental, societal, health or other impact for the broader UK
- Why public funding is necessary and value for money, for example, is there currently a lack of investment, or market failure?
- How the project will progress and deliver outcomes beyond the life of the project and under what timescale

Timeline

All Projects must end by 28th February 2026

* Submission must be made via Flexigrant

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Q&A and Further Enquiries

- Please email any queries to: grants@royce.ac.uk
- To apply please visit https://www.royce.ac.uk/industrial-collaboration-programme/

Please put any questions you may have in the chat and a member of the Royce Team will reply.

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