**Resource efficiency for materials and manufacturing (REforMM) CR&D**

UK registered organisations can apply for a share of up to £12 million for ambitious collaborative R&D projects to support UK materials and manufacturing organisations to become significantly more resource efficient.

## Description

Innovate UK, part of UK Research and Innovation, will invest up to £12 million for this competition.

The aim of this competition is to fund ambitious collaborative research and development (CR&D) projects, to support UK materials and manufacturing organisations to become significantly more resource efficient.

Simultaneous demonstrations of how UK materials and manufacturing will become more resilient or technologically advanced are encouraged.

Your proposal must improve resource efficiency and reduce carbon emissions

You must focus on two or more of these five core areas:

* materials for the future economy
* smart design
* resilient supply chains
* world-class production
* longer in use and reuse

In applying to this competition, you are entering into a competitive process.

This competition closes at 11:00am UK time on the deadline stated.

## Funding type

Grant

## Project size

Your project’s total costs must be between £100,000 and £1 million.

## Who can apply

Text update 18 May 2023: We have adjusted the section entitled 'number of applications' to correctly reflect the number of applications that organisations can be involved in.

**Your project**

Your project must:

* have total costs between £100,000 and £1 million
* start by 1 October 2023
* end by 31 March 2025
* last between 12 and 18 months
* be collaborative
* carry out all of its project work in the UK
* intend to exploit the results from or in the UK

You must only include [eligible project costs](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/costs-we-fund/) in your application.

Under current restrictions, this competition will not fund any procurement, commercial, business development or supply chain activity with any Russian, Belarusian or Myanmar entity as lead, partner or subcontractor. This includes any goods or services originating from a Russian, Belarusian or Myanmar source.

If your project’s duration falls outside of our eligibility criteria, you must provide justification by email to [support@iuk.ukri.org](mailto:support@iuk.ukri.org) at least 10 working days before the competition closes. We will decide whether to approve your request.

If you have not requested approval or your application has not been approved by us, you will be made ineligible. Your application will then not be sent for assessment.

**Lead organisation**

To lead a project your organisation must:

* be a UK registered business of any size
* be a UK registered research and technology organisation (RTO)
* collaborate with other UK registered organisations
* be or involve at least one grant claiming [micro, small or medium-sized enterprise](https://www.gov.uk/government/publications/life-of-a-company-annual-requirements/life-of-a-company-part-1-accounts#micro-entity) (SME)

Applications involving collaborations of businesses with academic institutions and research organisations are particularly encouraged to apply.

If the lead organisation is a research and technology organisation (RTO), it must collaborate with at least one business of any size and must include one eligible grant claiming SME.

More information on the different types of organisation can be found in our [Funding rules](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/general-guidance/funding-rules/#contents-list).

**Project team**

To collaborate with the lead, your organisation must be one of the following UK registered:

* business of any size
* academic institution
* charity
* not for profit
* public sector organisation
* research and technology organisation (RTO)

Each partner organisation must be invited into the Innovation Funding Service by the lead to collaborate on a project. Once accepted, partners will be asked to login or to create an account and enter their own project costs into the Innovation Funding Service.

To be an eligible collaboration, the lead and at least one other organisation must apply for funding when entering their costs into the application.

**Non-funded partners**

Your project can include partners that do not receive any of this competition’s funding, for example non-UK businesses. Their costs will count towards the total project costs.

**Subcontractors**

Subcontractors are allowed in this competition and are limited to no more than 20% of the project’s total eligible costs.

Subcontractors can be from anywhere in the UK and you must select them through your usual procurement process.  
  
You can use subcontractors from overseas but must make the case in your application as to why you could not use suppliers from the UK.  
  
You must provide a detailed rationale, evidence of the potential UK contractors you approached and the reasons why they were unable to work with you. We will not accept a cheaper cost as a sufficient reason to use an overseas subcontractor.  
  
All subcontractor costs must be justified and appropriate to the total project costs.

**Number of applications**

A business can only lead on one application but can be included as a collaborator in a further 2 applications.

If an organisation is not leading any application, it can collaborate in any number of applications.

A research and technology organisation (RTO) can lead or collaborate on any number of applications.

## Previous applications

You cannot use a [previously submitted application](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/general-guidance/before-you-start-an-application/#contents-list) to apply for this competition.

We will not award you funding if you have:

* [failed to exploit](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/general-guidance/before-you-start-an-application/?&_ga=2.98539991.913447116.1679301632-569737599.1638174502#contents-list) a previously funded project
* an overdue [independent accountant’s report](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/general-guidance/before-you-start-an-application/#contents-list)
* failed to comply with grant terms and conditions

## Subsidy control (and State aid where applicable)

This competition provides funding in line with the Subsidy Control Act 2022. Further information about the Subsidy requirements can be found within the [Subsidy Control Act 2022 (legislation.gov.uk)](https://www.legislation.gov.uk/ukpga/2022/23/enacted)

Innovate UK is unable to award organisations that are considered to be in financial difficulty. We will conduct financial viability and eligibility tests to confirm this is not the case following the application stage.

EU State aid rules now only apply in limited circumstances. Please see our [general guidance](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/general-guidance/funding-rules/#contents-list) to check if these rules apply to your organisation.

**Further Information**

If you are unsure about your obligations under the Subsidy Control Act 2022 or the State aid rules, you should take independent legal advice. We are unable to advise on individual eligibility or legal obligations.

You must always make sure that the funding awarded to you is compliant with all current Subsidy Control legislation applicable in the United Kingdom.

This aims to regulate any advantage granted by a public sector body which threatens to, or actually distorts competition in the United Kingdom or any other country or countries.

## Funding

Up to £12 million has been allocated to fund innovation projects in this competition. Funding will be in the form of a grant.

If your organisation’s work on the project is commercial or economic, your funding request must not exceed the limits below. These limits apply even if your organisation normally acts non-economically but for the purpose of this project will be undertaking commercial or economic activity.

For industrial research projects, you could get funding for your eligible project costs of:

* up to 70% if you are a micro or small organisation
* up to 60% if you are a medium sized organisation
* up to 50% if you are a large organisation

For experimental development projects which are nearer to market, you could get funding for your eligible project costs of:

* up to 45% if you are a micro or small organisation
* up to 35% if you are a medium sized organisation
* up to 25% if you are a large organisation

For more information on company sizes, please refer to the [company accounts guidance](https://www.gov.uk/government/publications/life-of-a-company-annual-requirements/life-of-a-company-part-1-accounts#micro-entity).

If you are applying for an award funded under State aid Regulations, the definitions are set out in the [European Commission Recommendation of 6 May 2003](https://ec.europa.eu/growth/smes/sme-definition_en).

**Research participation**

The research organisations undertaking non-economic activity as part of the project can share up to 30% of the total eligible project costs. If your consortium contains more than one research organisation undertaking non-economic activity, this maximum is shared between them. Of that 30% you could get funding for your eligible project costs of up to:

* 80% of full economic costs (FEC) if you are a Je-S registered institution such as an academic
* 100% of your project costs if you are an RTO, charity, not for profit organisation, public sector organisation or research organisation

## Your proposal

The aim of this competition is to fund ambitious collaborative research and development projects to support UK materials and manufacturing organisations to become significantly more resource efficient.

Simultaneous demonstrations of how UK materials and manufacturing will become more resilient or technologically advanced are encouraged.

Your proposal must improve resource efficiency and reduce carbon emissions.

You must focus on two or more of these five core areas:

* materials for the future economy: new material applications for cutting-edge products that reduce emissions, energy consumption and costs
* smart design: effective design methods, design for resource efficiency, and design for maximum through-life value
* resilient supply chains: sustainable feedstocks, supply chain visibility, and co-location of waste and emission streams
* world-class production: flexible production capacity, minimal material waste, high-quality products, high productivity, and full adaptivity
* longer in use and reuse: minimising materials use and waste, practicing complete traceability, and using new remanufacturing services

Enabling areas must not be the main focus of your project. These include:

* clean energy
* regulations and policy
* skills
* relations
* value models

**Portfolio approach**  
We want to fund a variety of projects across different technologies, markets, locations, technological maturities and themes. We call this a [portfolio approach](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/general-guidance/what-happens-after-you-have-submitted-your-application/#contents-list).

## Research categories

We will fund industrial research projects and experimental development projects, as defined in the [guidance on categories of research](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/general-guidance/categories-of-research-and-development/#contents-list).

## Projects we will not fund

We are not funding projects that are:

* an incremental improvement in resource efficiency or reduction of carbon emissions
* a bio-manufacture or biotechnology process
* circularity of rare earth elements
* a carbon capture and storage (CCS) technology
* technologies to directly reduce industrial energy consumption

We cannot fund projects that are:

* dependent on export performance, for example giving a subsidy to a baker on the condition that it exports a certain quantity of bread to another country
* dependent on domestic inputs usage, for example giving a subsidy to a baker on the condition that it uses 50% UK flour in their product

## Before you start

You must read the [guidance on applying for a competition on the Innovation Funding Service](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/general-guidance/your-application/#contents-list) before you start.

Before submitting, it is the lead applicant’s responsibility to make sure:

* that all the information provided in the application is correct
* your proposal meets the eligibility and scope criteria
* all sections of the application are marked as complete
* that all partners have completed all assigned sections and accepted the terms and conditions (T&Cs)

You can reopen your application once submitted, up until the competition deadline. You must resubmit the application before the competition deadline.

**What we ask you**

The application is split into 3 sections:

1. Project details.

2. Application questions.

3. Finances.

**Accessibility and inclusion**

We welcome and encourage applications from people of all backgrounds and are committed to making our application process accessible to everyone. This includes providing support, in the form of reasonable adjustments, for people who have a disability or a long-term condition and face barriers applying to us. Read more on [how we are making our application process more accessible and inclusive](https://www.ukri.org/blog/together-making-innovation-truly-accessible-and-inclusive/) for everyone.

You must contact us as early as possible in the application process. We recommend contacting us at least 15 working days before the competition closing date to ensure we can provide you with the most suitable support possible.

You can contact us by emailing [support@iuk.ukri.org](mailto:support@iuk.ukri.org) or calling 0300 321 4357. Our phone lines are open from 9am to 5pm, Monday to Friday (excluding bank holidays).

## 1. Project details

This section provides background for your application and is not scored.

**Application team**

Decide which organisations will work with you on your project and invite people from those organisations to help complete the application.

**Application details**

Give your project’s title, start date and duration.

**Research category**

Select the type of research you will undertake.

**Project summary**

Describe your project briefly and be clear about what makes it innovative. We use this section to assign the right experts to assess your application.

Your answer can be up to 400 words long.  
  
**Public description**

Describe your project in detail and in a way that you are happy to see published. Do not include any commercially sensitive information. If we award your project funding, we will publish this description. This could happen before you start your project.

Your answer can be up to 400 words long.

**Scope**

Describe how your project fits the scope of the competition. If your project is not in scope, it will not be sent for assessment. We will tell you the reason why.

Your answer can be up to 400 words long.

## 2. Application questions

The assessors will score all your answers apart from question 1. You will receive feedback for each scored question. [Find out more about how our assessors assess.](https://www.youtube.com/watch?v=xyHgqGjxeCU)

You must answer all questions. Do not include any website addresses (URLs) in your answers.

**Question 1. Applicant location (not scored)**

You must state the name and full registered address of your organisation and any partners or subcontractors working on your project.

We are collecting this information to understand the geographical location of all applicants.

Your answer can be up to 400 words long.

**Question 2. Need or challenge**

What is the business need, technological challenge, or market opportunity behind your innovation?

Explain:

* the main motivation for the project
* the business need, research and technological challenge or market opportunity
* whether you have identified any similar innovation and its current limitations, including those close to market or in development
* any work you have already done to respond to this need, for example if the project focuses on developing an existing capability or building a new one
* the wider economic, social, environmental, cultural or political challenges which are influential in creating the opportunity, such as incoming regulations, using our [Horizons tool](https://ktn-uk.co.uk/programmes/horizons) if appropriate

Your answer can be up to 400 words long.

**Question 3. Approach and innovation**

What approach will you take and where will the focus of the innovation be?

Explain:

* how you will respond to the need, challenge or opportunity identified
* how will you improve on the similar innovation that you have identified
* whether the innovation will focus on existing technologies in new areas, the development of new technologies for existing areas or a totally disruptive approach
* the freedom you have to operate
* how this project fits with your current product, service lines or offerings
* how it will make you more competitive
* the nature of the outputs you expect from the project (for example report, demonstrator, know-how, new process, product or service design) and how these will help you to target the need, challenge or opportunity identified

Your answer can be up to 400 words long.

You can submit one appendix to support your answer. It can include diagrams and charts. It must be a PDF, up to 2 A4 pages long and no larger than 10MB in size. The font must be legible at 100% zoom.

**Question 4. Team success**

How are you creating the conditions for the team to succeed?

Explain:

* the resources, equipment and facilities needed for the project and how you will access them
* the details of any vital external parties, including subcontractors, who you will need to work with to successfully carry out the project
* any roles you will need to recruit for and detail of plans to increase diversity in the composition of your project’s consortium
* your consideration of any equality, diversity and inclusion (EDI) challenges in your sector and how to mitigate these, for example, reskilling and apprenticeships
* the benefits increased diversity would bring to your project
* how will you create an equitable and inclusive work environment for your team and partners

Your answer can be up to 400 words long.

You can submit one appendix with a short summary of the main people working on your project to support your answer. It must be a PDF, up to 4 A4 pages long and no larger than 10MB in size. The font must be legible at 100% zoom.

**Question 5. Market awareness**

What does the market you are targeting look like?

Describe:

* the target markets for the project outcomes and any other potential markets (domestic, international or both)
* the size of the target markets for the project outcomes, backed up by references where available
* the structure and dynamics of the target markets, including customer segmentation, together with predicted growth rates within clear timeframes
* the target markets’ main supply or value chains and business models, and any barriers to entry that exist
* the current UK position in targeting these markets
* the size and main features of any other markets not already listed

If your project is highly innovative, where the market may be unexplored, describe or explain:

* what the market’s size might be
* how your project will try to explore the market’s potential

Your answer can be up to 400 words long.

**Question 6. Outcomes and route to market**

How are you going to grow your business and increase long term productivity as a result of the project?

Explain:

* your current position in the markets and supply or value chains outlined, and whether you will be extending or establishing your market position
* your target customers or end users, and the value to them, for example, why they would use or buy your product
* your route to market
* how you are going to profit from the innovation, including increased revenues or cost reduction
* how the innovation will affect your productivity and growth, in both the short and the long term
* how you will protect and exploit the outputs of the project, for example through know-how, patenting, designs or changes to your business model
* your strategy for targeting the other markets you have identified during or after the project

If there is any research organisation activity in the project, describe:

* your plans to disseminate the project’s research outputs over a reasonable timescale
* how you expect to use the results generated from the project in further research activities

Your answer can be up to 400 words long.

**Question 7. Wider impacts**

What impacts might this project have outside the project team?

Describe and, where possible, measure the economic benefits from the project such as productivity increases and import substitution, to:

* external parties
* customers
* others in the supply chain
* broader industry
* the UK economy

Explain how you plan to develop a whole system approach, life cycle thinking and analysis to further your understanding of any sustainability trade-offs.

Describe any expected positive or negative impacts, or trade-offs for your project, on for example:

* environmental impacts
* quality of life
* social inclusion or exclusion
* jobs, such as safeguarding, creating, changing or displacing them
* education
* public empowerment
* health and safety
* regulations
* diversity
* regional impacts
* on government priorities

Your answer can be up to 600 words long.

**Question 8. Project management**

How will you manage your project effectively?

Explain:

* the main work packages of your project, indicating the lead partner assigned to each and the total cost of each one
* your approach to project management, identifying any major tools and mechanisms you will use to get a successful and innovative project outcome
* the management reporting lines
* your project plan in enough detail to identify any links or dependencies between work packages or milestones

Your answer can be up to 400 words long.

You must submit a project plan or Gantt chart as an appendix to support your answer. It must be a PDF, up to 2 A4 pages long and no larger than 10MB in size. The font must be legible at 100% zoom.

**Question 9. Risks**

What are the main risks for this project?

Describe:

* the main risks and uncertainties of the project, including the technical, commercial, managerial and environmental risks
* how you will mitigate these risks
* any project inputs that are critical to completion, such as resources, expertise, and data sets
* any output likely to be subject to regulatory requirements, certification, ethical issues and so on, and how you will manage this

Your answer can be up to 400 words long.

You must submit a risk register as an appendix to support your answer. It must be a PDF, up to 2 A4 pages long and no larger than 10MB in size. The font must be legible at 100% zoom.

**Question 10. Added value**

How will this public funding help you to accelerate or enhance your approach to developing your project towards commercialisation? What impact would this award have on the organisations involved?

Explain:

* what advantages public funding would offer your project, for example, appeal to investors, more partners, reduced risk or a faster route to market (this list is not exhaustive)
* the likely impact of the project outcomes on the organisations involved
* what other routes of investment you have already approached
* what your project would look like without public funding
* how this project would change the R&D activities of all the organisations involved

Your answer can be up to 400 words long.

**Question 11. Costs and value for money**

How much will the project cost and how does it represent value for money for the team and the taxpayer?

In terms of your project goals, explain:

* your total project costs
* the grant you are requesting
* how each partner will finance their contributions to your project
* how this project represents value for money for you and the taxpayer
* how it compares to what you would spend your money on otherwise
* the balance of costs and grant across the project partners
* any subcontractor costs and why they are critical to your project

Your answer can be up to 400 words long.

## 3. Finances

Each organisation in your project must complete their own project costs, organisation details and funding details in the application.

Academic institutions must complete and upload a [Je-S form](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/costs-we-fund/costs-guidance-for-academics/).

For full details on what costs you can claim see our [project costs guidance.](https://www.ukri.org/councils/innovate-uk/guidance-for-applicants/costs-we-fund/costs-guidance-for-non-academic-organisations/)

## Background and further information

On 6 March 2023, Innovate UK published its [Materials and Manufacturing Vision 2050](http://www.ukri.org/reimagine-manufacturing). It is a complete reimagination of the role that materials and manufacturing should have within our economy and society in a strongly net zero focused world.

The UK has clear potential to become a world-class destination of choice for advanced low-carbon manufacturing.

To address climate change and to become internationally competitive, it is strategically imperative that UK materials and manufacturing are:

* net zero and resource efficient
* resilient and responsive
* technologically advanced and digital

By focusing on these imperatives, Innovate UK has identified key factors that must be true in the future and analysed the areas of change to achieve this. In many areas, these align with the strengths of the UK which gives some fantastic opportunities.

This competition has been designed in support of realising this Vision.

## Data sharing

This competition is operated by Innovate UK.

Innovate UK is directly accountable to you for its holding and processing of your information, including any personal data and confidential information. Data is held in accordance with our own policies. Accordingly, Innovate UK will be data controllers for personal data submitted during the application. Innovate UK’s Privacy Policy is accessible [here](https://gbr01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ukri.org%2Fpublications%2Finnovate-uk-privacy-notice-and-information-management-policy%2F&data=05%7C01%7CSachin.Patel%40iuk.ukri.org%7C2db344cc64874c4498af08da7aad0a7e%7C8bb7e08edaa44a8e927efca38db04b7e%7C0%7C0%7C637957180862665866%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=rEidvwM3vbiu4Y%2F9rtbipO504DMTA1SVqKLLEUAhz%2Bc%3D&reserved=0).

Innovate UK complies with the [requirements of GDPR](https://gbr01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.gov.uk%2Fgovernment%2Forganisations%2Finnovate-uk%2Fabout%2Fpersonal-information-charter%23privacy-notice&data=05%7C01%7CSachin.Patel%40iuk.ukri.org%7C2db344cc64874c4498af08da7aad0a7e%7C8bb7e08edaa44a8e927efca38db04b7e%7C0%7C0%7C637957180862665866%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=nB%2Fxlfd1A1dNrw87r%2FbgmwN%2FK1Qqlti05anLjvnpfFU%3D&reserved=0), and is committed to upholding the data protection principles, and protecting your information. The Information Commissioner’s Office also has a [useful guide](https://gbr01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fico.org.uk%2Ffor-organisations%2Fguide-to-data-protection%2F&data=05%7C01%7CSachin.Patel%40iuk.ukri.org%7C2db344cc64874c4498af08da7aad0a7e%7C8bb7e08edaa44a8e927efca38db04b7e%7C0%7C0%7C637957180862665866%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=4TgjiMrXhXQMDXK4okUdCGLIcI4RKrXTfn3GHg%2BAouY%3D&reserved=0) for organisations, which outlines the data protection principles.

## Find a project partner

If you want help to find a project partner, contact [Innovate UK KTN](https://ktn-uk.org/).

## Support for SMEs from Innovate UK EDGE

If you receive an award, you will be contacted about working with an innovation and growth specialist at [Innovate UK EDGE](https://www.innovateukedge.ukri.org/?utm_source=innovateuk&utm_medium=email&utm_campaign=competitionsifs). This service forms part of our funded offer to you.

These specialists focus on growing innovative businesses and ensuring that projects contribute to their growth. Working one-to-one, they can help you to identify your best strategy and harness world-class resources to grow and achieve scale.

We encourage you to engage with Innovate UK EDGE, delivered by a knowledgeable and objective specialist near you.

## Next steps

If you are successful with this application, you will be asked to set up your project.

You must follow the unique link embedded in your email notification. This takes you to your IFS Set Up portal, the tool that Innovate UK uses to gather necessary information before we can allow your project to begin.

You will need to provide:

* the name and contact details of your project manager and project finance lead
* a redacted copy of your bank details
* a collaboration agreement
* an exploitation plan

In order to process your claims, we need to make sure that the bank details you give to us relate to a UK high street bank that is regulated by the Prudential Regulation Authority (PRA). The account must have a BACS clearing facility and be in the same company name as your application.

If you have any doubts that your bank account will not meet Innovate UK's funding criteria, you can use the [sort code checker](https://newseventsinsights.wearepay.uk/sort-code-checker). If you input the sort code and find a tick next to the ‘BACS Direct Credit payments can be sent to this sort code’, this will give you an indication that the bank account you hold is acceptable.

**Finance checks**

We will carry out checks to make sure you are an established company with access to the funds necessary to complete the project.

You must check your IFS portal regularly and respond to any requests we have sent for additional information to avoid any delays.

Failure to complete project setup may result in your grant offer being withdrawn.

**Your Grant offer letter (GOL)**

Once you have successfully completed project setup, we will issue your GOL.

The GOL will be made available on your IFS portal. You will need to sign and upload this before you start your project.

Your GOL will show the start date for your project, do not start your project before this date. Any costs incurred before your start date cannot be claimed as part of your grant.

## If your application is unsuccessful

If you are unsuccessful with your application this time, you can view feedback from the assessors. This will be available to you on your IFS portal.

Sometimes your application will have scored well, and you will receive positive comments from the assessors. You may be unsuccessful as your average score was not above the funding threshold or your project has not been selected under the portfolio approach if this is applied for this competition.