

Announcement of Opportunity (AO)

Call for Earth Observation Marine and Climate Mission Development Programme (EO4MCM)

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1 Introduction

United Kingdom Research and Innovation (UKRI) and the Centre for Earth Observation Instrumentation (CEOI) announce a new funding line **for an Earth Observation Marine and Climate Mission Development Programme (EO4MCM)**. Within this programme, UKRI and CEOI are pleased to announce an Earth Observation (EO) Technology Call, with the primary aim to solicit new and innovative ideas for EO technology developments for small satellite constellations.

All proposals should be aligned with the objectives of the UK Space Agency (UKSA) EO Technology Strategy [RD4]. Furthermore, technologies that have applications beyond climate monitoring and the environment (e.g., other civil applications, defence dual use) are also encouraged.

The CEOI has the objective to realise an excellent, internationally competitive, national Earth Observation instrument technology research and development programme. It achieves this by building UK academic and industrial capability in EO, and by funding the development of advanced EO instrumentation through a series of themed and open competitions for funding. Brief

details of CEOI's programmes, and previous CEOI funded projects may be found on the CEOI website (ceoi.ac.uk).

The UK Space Agency funds the CEOI, which is a partnership of Airbus Defence and Space Ltd, QinetiQ Ltd, University of Leicester and STFC Rutherford Appleton Laboratory.

1.1 Background

The Department for Science Innovation and Technology (DSIT) programme, of which this project is a part, was announced on 23 November 2022:

“Earth observation (EO) is a vital science and a growing industry, and we are investing in projects which benefit our planet and grow our economy. EO supports the UK to become a science superpower and prioritises our space and net zero ambitions – more than half of key climate data comes from space.

The UK has a vibrant landscape of world leading EO academic and industrial organisations and a well-founded reputation for excellence in EO. For example, in climate science, leading UK research institutions have been measuring sea and land surface temperature from space for over 3 decades (RAL Space, Leicester University, Reading University and Oxford University) brought together through NERC's National Centre for Earth Observation. This data is used by meteorological agencies, including the Met Office, around the world to improve weather forecast accuracy – helping to save lives, infrastructure, and crops.

In the national space strategy, His Majesty's Government (HMG) committed to remain at the forefront of Earth observation technology and knowhow. The projects below will deliver an essential funding boost to recognise the importance of this sector, benefiting academia and industry and building our national capability.

The funding is spread across 17 projects which will deliver benefits across the UK and include a broad range of activities from measuring wind speeds to improving the accuracy of climate data, and from funding SME projects to additional PhD places. Some projects will involve new or extended collaborations with international partners such as Australia.”

The UK EO Marine & Climate Mission Development (EO4MCM) Programme is one of the 17 projects funded by DSIT (see <https://www.gov.uk/government/publications/earth-observation-investment/projects-in-receipt-of-funding#science-and-technology-facilities-council-stfc---1473-million>) which work through delivery partners including:

- ESA (via UKSA); £122.6M for FutureEO, TRUTHS, Aeolus-2, Digital Twin Earth, and InCubed-2.
- UKSA; £15M for EO Technology Programme.
- NERC; £19.3M for UK EO Climate Information Service (UKEO-CIS), EO Data Hub, and SENSE Centre for Doctoral Training Programmes for EO.

- **STFC; £14.73M for EO4MCM, Small Satellite Calibration Facility, UK/Australia EOAgroClimate Programme, and Surface Temperature Radiometer Network.**
- Met Office; £11.73M for Transatlantic Data Science Academy, Twinning capability for the Natural Environment (TWINE), and UK Marine & Climate Advisory Service (MCAS).
- Innovate UK; £4.21M for Innovation in EO.

This Announcement of Opportunity (AO) is for the first Open Call to participate in this new programme. The guiding principles for the selection of proposals will be science excellence, societal impact, and/or commercial potential, but will consider feasibility and affordability.

1.2 Reference Documents

The following documents contain information that is relevant to this Call:

- [RD1] National Space Strategy:
<https://www.gov.uk/government/publications/national-space-strategy>
- [RD2] Companies House accounts guidance
<https://www.gov.uk/government/publications/life-of-a-company-annual-requirements>
- [RD3] Department for Business and Trade (DBT) Guidance - Complying with the UK's international obligations on subsidy control: guidance for public authorities
<https://www.gov.uk/government/publications/complying-with-the-uks-international-obligations-on-subsidy-control-guidance-for-public-authorities>
- [RD4] UK EO Technology Strategy:
<https://www.gov.uk/government/publications/uk-earth-observation-technology-strategy>
- [RD5] UKRI T&Cs and Guidance for Full Economic Costs (FEC) for academic Partners –
<https://www.ukri.org/wp-content/uploads/2020/10/UKRI-291020-guidance-to-fec-grant-terms-and-conditions.pdf>
- [RD6] UKRI Guidance for Applicants
<https://www.ukri.org/councils/stfc/guidance-for-applicants/>
- [RD7] From CEOI website: EO4MCM-RP-SCL-003_Issue-1 (2023 00 06).pdf. UK EO Marine and Climate Mission Development Programme (EO4MCM): Indicative Requirements: Where EO Constellations Might Benefit the UK.

2 The EO4MCM Programme

2.1 Aim of the Programme

As stated in the 23 November 2022 announcement:

“The UK EO Marine & Climate Mission Development Programme will deliver early preparation to gather UK requirements, research and industry strengths, and space technologies to build and operate a UK-led Earth Observing system to support the fight against climate change and achieving Net Zero. By working with government, academia, industry and international partners, the project will capture and translate new climate and environmental challenges of the UK and its surrounding waters into a set of mission technologies and concepts, that will help the UK prepare for future challenges.”

The aim of the programme is to support the development of EO instrumentation for constellations of multiple micro to small satellites that provide spatial and/or temporal improvements in sampling. These should complement the capabilities of existing spacecraft and provide the UK with a leading capability in marine and climate applications.

UKSA is looking for proposals that:

- include use cases and address the validation of the data in some detail
- show how the instrument is commercially viable.
- address the development and manufacture life-cycle and show there is a minimal environmental impact
- show how their proposals build up UK capability.

Our intention is to issue five grants of around £500K (with additional funding required by industry in line with national Subsidy Control measures) each from a budget of ~£2.5M to prototype an instrument.

The Call is released on Wednesday 7th **June 2023 with a closing date of Monday 3rd August 2023** at noon. Proposal selection will take place soon after, in anticipation of projects starting from September 2023. Grants of up to £500k, are expected to result in projects of up to 18 months duration, with completion at or before Monday 31st March 2025.

Permitted activities, as defined in the subsidy control guidelines below, include Industrial Research and Experimental Development both with and without collaboration. Academic partners will be funded in all cases at 80% of Full Economic Cost (FEC). We expect the instruments selected to be capable of reaching a level of a functional model leading to Preliminary Design Review (PDR), the format of which will be agreed at the time of acceptance of the proposal. Therefore, proposals for Feasibility Studies will not be accepted.

Projects should outline the activities which might follow and a roadmap to flight with Rough Order of Magnitude (ROM) costs.

2.2 Parallel Activities

Bidders are invited to consult the Indicative Requirements document [RD7] to stimulate ideas for their proposals. This document synthesises discussions with UK government departments and other interested parties on the requirements for satellite constellations that may be developed under the EO4MCM programme. The consultations took place over the first three months of 2023, principally via web conferences and email exchanges; these consultations are ongoing, and it is intended to update [RD7] as the EO4MCM programme progresses. Bidders are also welcome to bid based on user requirements that they have gathered independently.

It is intended that reports on supporting UK mission capabilities, (e.g. satellite buses, launch, operational services) will also be developed in parallel and shared with the teams during the programme. Information on these capability reports will be made available publicly as soon as possible. Bidders are also welcome to bid based on capabilities they have gathered independently but the development of such capabilities is not the intention of this programme of work.

3 Notification of Intention to Bid

Applicants are requested to notify CEOI of their intention to bid by email to CEOIadmin@le.ac.uk using the pro-forma at Annex A, by **noon on Monday 19th June 2023**.

The purpose of this is to gauge the size of the response and to inform the selection of the reviewer panel. The notification and information therein will be held in confidence as described in Section 9 ConfidentialityC below. The closing date for EO4MCM mission proposals is **noon on 3rd August 2023**.

Early in the main bidding window, we will hold a bidders Q&A session which should be attended by all potential bidders, see Section 5 Bidders' Briefing. The Q&A session will be held by conference call. We welcome enquiries from potential bidders for clarification of any aspect of the call outside of the Q&A session, but to maintain a level playing field any answers provided by UKRI/STFC or CEOI may be published on the CEOI website.

Proposals will be subjected to independent peer review by CEOI and UKRI, using established methods for assessment of funding of UK involvement in missions.

This EO4MCM Call is open to Industry, Higher Education Institutes (HEI) and other research organisations based in the UK:

- **Academic bidders:** CEOI will invite successful academic bidders to submit Joint Electronic Submissions (Je-S) forms to the UKRI Research Grants system. The UKRI grant regulations specify the FEC rate applicable. Refer to UKRI funding guidance for further details (<https://www.ukri.org/councils/stfc/guidance-for-applicants/costs-we-fund/>). We will not seek match funding in addition to this. Overheads are calculated according to UKRI's Guidance for Applicants [RD6].
- **Bidders from industry:** Successful industry bidders will be contracted via a commercial UKRI contract. We will seek match funding in addition to the grant funds in accordance with the UK Subsidy Control regulations for the category of work propose, see Section 15 Subsidy Control.

The UKRI will only award grants to proposals judged to be of sufficient quality.

4 Full Application Format and Guidelines

Applications should take the form of a proposal in single-spaced typescript, minimum font size 12-point Times New Roman, minimum 1.5 cm margins all round, including diagrams and tables. All sections defined in the table and/or described in this section of the AO must be supplied in the proposal, unless indicated otherwise. Proposals which do not include all Sections, unless explicitly indicated in

Section	Further Information	Proposal Maximum Page Count	Marks
		EO4MCM activity	
Cover letter	See 4.1	2 pages	Mandatory
Application Form	See 13	1 page	Mandatory
Project Summary, with picture or diagram	See 4.2	1 page	Mandatory
Technical Case	See 4.3	10 pages	30%
Exploitation Plan and Enhancement of National Capability	See Error! Reference source not found.	4 pages	20%
Project Team	See 4.5	2 pages	10%
<u>Annex A1</u> : Organisational background and track record		2 pages per organisation	
<u>Annex A2</u> : CVs		1 page each	
Project Management	See 4.6	5 pages	20%
<u>Annex B1</u> : Gantt Chart (landscape or portrait)	See 4.6	2 pages	
<u>Annex B2</u> : Risk Table	See 14	2 pages	
<u>Annex B3</u> : Work Package Descriptions	CEOI template	1 page each	
Project Finances	See 4.7	4 pages	10%
CEOI Cost Schedule	Use CEOI Excel template	Separate Excel file; Summary sheet plus 1 sheet per partner	
Collaboration	See 4.8	0.5 page	5%
Grant Conformance	See 4.9 and 8	0.5 page	5%
Eligibility - supporting information (Proposal Annex C1)	See 8	2 pages	
Letters of Support (Proposal Annex D)	See 4.10	1 page each	Optional

Table 1 as optional, may be rejected. Should any part of the application overrun the specified page limit, the Assessment Panel will only consider material up to the designated page limit, in the correct format. No additional annexes or appendices will be considered. Bidders should note that UKRI, University of Leicester or CEOI will not refund any costs associated with preparing proposals responding to this Call.

Section	Further Information	Proposal Maximum Page Count	Marks
		EO4MCM activity	
Cover letter	See 4.1	2 pages	Mandatory
Application Form	See 13	1 page	Mandatory
Project Summary, with picture or diagram	See 4.2	1 page	Mandatory
Technical Case	See 4.3	10 pages	30%
Exploitation Plan and Enhancement of National Capability	See Error! Reference source not found.	4 pages	20%
Project Team	See 4.5	2 pages	10%
<u>Annex A1</u> : Organisational background and track record		2 pages per organisation	
<u>Annex A2</u> : CVs		1 page each	
Project Management	See 4.6	5 pages	20%
<u>Annex B1</u> : Gantt Chart (landscape or portrait)	See 4.6	2 pages	
<u>Annex B2</u> : Risk Table	See 14	2 pages	
<u>Annex B3</u> : Work Package Descriptions	CEOI template	1 page each	
Project Finances	See 4.7	4 pages	10%
CEOI Cost Schedule	Use CEOI Excel template	Separate Excel file; Summary sheet plus 1 sheet per partner	
Collaboration	See 4.8	0.5 page	5%
Grant Conformance	See 4.9 and 8	0.5 page	5%
Eligibility - supporting information (Proposal Annex C1)	See 8	2 pages	
Letters of Support (Proposal Annex D)	See 4.10	1 page each	Optional

Table 1. Application Checklist

4.1 The Covering Letter

To ensure ease and speed of placing the contract following selection, the bids must include a covering letter containing:

1. A firm fixed price for the work to be carried out and committing offer to CEOI on behalf of UKRI, who will arrange for funding of successful bids: for academia led bids, via the Je-S mechanism, and via a contract for industrial bidders with UKRI.
2. A statement of acceptance of the standard UKRI Terms and Conditions (T&Cs). Bidders should note that these T&Cs **will not be open to negotiation** and that in submitting this statement, you are accepting the T&Cs on behalf of your organisation. Please ensure that authorisation is obtained from your organisation before submitting your bid.
3. Reference (Industry only): The name of at least one customer contact in the UK who may be approached, with whom you have recently undertaken similar work. The CEOI reserves the right to seek a customer reference for consideration by the Review Panel.
4. The completed Application Form.

4.2 The Project Summary

The project summary should provide a brief overall description of the project in a form suitable for publication, if the project is funded (i.e., free of any commercially sensitive or IP material).

It should include a short plain-language description of the project, its objectives, and benefits to describe its purpose in a way that can be widely understood by non-experts. A relevant image, diagram or other graphic should be included, if possible, to enhance the description.

The project summary, plain-language description and graphic image may be included in a press release and published on the CEOI and UKRI websites after any award is made.

4.3 Technical Case (30% of assessment mark)

This section should justify the need for this technology development and describe the work to be undertaken in the context of your proposed mission concept(s). It should also provide an assessment of technical feasibility and innovation in the project and explain how the development fits into a wider technology development roadmap.

The section should include:

- An exposition of the science, commercial and/or operational need and drivers, including the relationship to the stated aims of the programme and in particular, the user requirements [RD7].
- A description of the technical work and the main activities to be undertaken.
- An assessment of the technical feasibility of the proposed work, identifying the technical risk and achievability vs. the novel and innovative aspects of the project.
- A clear description of how you would demonstrate and validate the capabilities of the instrument, including use cases and approach to validation of the data.
- A description of any system-level benefits expected (e.g., cost, mass, size, resource requirement).
- A **technology roadmap** showing heritage, future evolution and the start and end Technology Readiness Level (TRL) of the proposed work.
- An indication of the size and scope of possible follow-on activities, including ROM costs.
- Explain the development and manufacture life cycle and show there is a minimal environmental impact.

4.4 Exploitation Plan and Enhancement of National Capability (20% of assessment mark)

This section should provide an exploitation plan detailing how the project will lead to an enhancement of national capability. It should identify all potential space flight opportunities and the key steps required, beyond the requested EO4MCM funding, to successfully exploit the project outcomes. It should describe how the project will result in enhancement(s) to national capability in EO technologies, with a particular focus on climate, environmental, societal, and commercial applications.

The section should include:

- A description of the main exploitation opportunities targeted, together with an assessment of the potential and accessible market(s) (this may include civil and defence dual use), and identification of key customers in the global marketplace.
- A description of the main exploitable products and/or outputs from the project, including identification of the potential scientific and/or commercial breakthroughs, and future steps that will be taken to improve the probability of successful use of the results of the EO4MCM activities.
- Demonstrate how the instrument/mission is commercially viable.
- A description of how the proposed work takes advantage of UK strengths and/or unique capabilities, and where and how the enhanced development in national capability will occur.
- An assessment of the national and international competition, showing the benefits this technology offers over alternatives, and the timeliness of the proposed work in relation to external opportunities and gaining a competitive advantage.
- The potential scientific or commercial return and the overall expected impact on UK national economic growth, job creation and export opportunities.

In the case of projects targeting commercial opportunities, the proposal should include a brief business plan.

4.5 Project Team (10% of assessment mark)

This section should describe the team which will be undertaking the work, highlighting the strengths of the project lead organisation and the capability which is offered by each Partner. Key individuals, their project roles and technical/management contributions should be identified. The section should include:

- A description of the overall team structure, including justification for inclusion of each Partner organisation and justification if there are no partners.
- A brief description of each of the organisations involved with the project.
- A list of the key individuals, their position, technical/management responsibility in the project team, effort required and confirmation of their availability for the required work.
- The track record of the applicants in managing similar projects successfully.

For each of the Partners, background information about the company/organisation should be provided in Annex A1 of the proposal, including diversity and inclusion policies. CVs of key staff should be provided in Annex A2 of the proposal.

4.6 Project management (20% of assessment mark)

This section should provide information about the approach to the management of the project, including planning, the actions that will be taken to maintain the schedule, and the assessment and control of risk (“Risk” is defined here as the probability that the project will meet its stated technology and business objectives). This section should include:

- A description of how the project will be managed and the management measures proposed to ensure on-time completion.
- A project plan, including a summary of the work, work break down structure and a project schedule.
- A table of outputs from each work package, clearly identifying their scope and the delivery schedule.
- A clear identification of which institutions and individuals will be performing which functions, the lead organisation for each task and the resources required for each task.
- An assessment of the major project technical, schedule and commercial risks and the approach to managing, tracking and mitigation of these risks.

The following information should be included as Annexes to the proposal:

- Gantt chart as Annex B1, of the proposal showing the scheduling of main work packages, their inter-dependencies and major project events (progress review meetings, technology development milestones). No template is provided for this.
- Risk Table as Annex B2 of the proposal using the CEOI template provided in Section 14 Risk Table Template.
- Work package descriptions (WPD) as Annex B3 of the proposal (The WPDs should use the CEOI template or equivalent, with a one-page limit on each WPD).

If a project proposal is successful, we will expect project teams to generate a full Project Management Plan (PMP) including a comprehensive Risk Management Plan at the project Kick-Off meeting. CEOI guidelines for the PMP are available on request from CEOI. We do not need the full PMP at proposal stage.

4.7 Project Finances (10% of assessment mark)

This section will describe the project finances, summarising the cost of each work package, the major items of expenditure with justification and propose a milestone payment plan. It will allow an assessment of the value for money of the project and whether this is a good investment for the Agency. This section should include:

- A financial summary showing the cost of each work package and the major items of expenditure by each Partner (staff, travel, external contracts, procurements etc).
- A description and justification of the resources requested, including travel plans and other expenditure.
- Any equipment proposed for purchase must be listed separately .

- Table of proposed milestone payments with description, related project outputs and/or significant events, amount and dates. See Section **Error! Reference source not found.** Payment Plan for further information.

All applications are required to provide a Cost Schedule as a separate Excel file using the CEOI supplied Excel template. The CEOI Excel Finance Table must be completed, using one worksheet (sheets P1-P8 in the Excel spreadsheet) for each Partner¹. Any support/consultancy/service to be procured should be itemised in the ‘Direct Costs’ section of the relevant Partner sheet. The template Excel spreadsheet is available on the CEOI website.

Note that STFC/UKRI Grants arising from this call are intended to fund a specific programme of work and should not be used for the procurement of equipment unless they can be shown to be necessary for a specific project. If you want further advice on large expenditures for equipment or other purposes, then please contact the STFC.

4.8 Collaboration (5% of assessment mark)

This section should describe the collaborative nature of the project, or justification if there are no Partners. The response should include:

- Declaration of the team, listing the academic and industrial partners.
- Justification if there are no partners.
- Information on collaboration between partner organisations and exploitation of Intellectual Property Rights.

4.9 Grant conformance (5% of assessment mark)

This section should provide the information required to show that the project finances conform to the DBT Subsidy Control regime. The section should include:

- A clear statement of the Subsidy Control Category (see Section **Error! Reference source not found.**).
- Level and justification of any industrial or other private investment offered.
- A statement on eligibility of each partner to receive Subsidy funds and the financial viability of all the project Partners. See Section **Error! Reference source not found.** for further information.

Supporting eligibility information should be provided as Annex C1 to the proposal.

4.10 Letters of Support

Letters of Support (maximum one page each) from e.g., any proposed partner Space Agency, or user community should be provided, if discussions are sufficiently advanced.

¹ ‘Partners’ are defined as entities/organisations which share and/or retain the Intellectual Property generated by the project. Industrial Partners will also contribute to the project costs in line with the Subsidy Control procedures. This is in contrast to ‘Suppliers’ and ‘consultants’, who supply goods and/or services to one of the Partners.

Any letters should be included in Annex D1 of the proposal.

5 Bidders' Briefing

Telephone/Video Briefing for Potential Bidders

There will be a briefing by virtual meeting from **10.00 to 12.00 on Thursday 15th June 2022** to provide more information about the objectives of the call and provide an opportunity to ask general questions. Although attendance is optional, you are encouraged to join this meeting.

If you wish to participate in the Bidders' Briefing please email a request to the CEOI Call Administrator at CEOIadmin@le.ac.uk by **17:00 hrs on Monday 12th June**.

6 Contractual Information

Award(s) will take the form of a Je-S grant award in the case of an academic lead organisation, and a contract between UKRI and the project's lead organisation in the case of a commercial lead organisation. The lead organisation will be expected to place contracts to flow down the Grant finance to its partners, with terms and conditions flowing from the main UKRI Grant contract.

This activity has been assessed by HMRC as outside the scope of VAT, because no taxable supply to UKRI or to CEOI is taking place. The Intellectual Property Rights (IPR) will not in the normal course of events pass to UKRI or the CEOI.

All relevant costs, including any taxes on procurements, must be included within the total amount of the grant application. Note that a direct procurement for services from another organisation implies that they are not a Partner.

Bidders should note that Grants cannot be provided to the project lead or dispersed through the project lead to companies in financial difficulties.

Subsidy Control

Before awarding subsidies, the UKRI will ensure that the subsidy scheme meets the terms of the principles as determined in the UK-EU Trade & Cooperation Agreement (TCA), as explained in [RD3]. The principles are that:

- Subsidies should pursue a specific public policy objective to remedy an identified market failure or to address an equity rationale such as social difficulties or distributional concerns ("the objective").
- Subsidies should be proportionate and limited to what is necessary to achieve the objective.
- Subsidies should be designed to bring about a change of economic behaviour of the beneficiary that is conducive to achieving the objective and that would not be achieved in the absence of subsidies being provided.
- Subsidies should not normally compensate for the costs the beneficiary would have funded in the absence of any subsidy.

- Subsidies should be an appropriate policy instrument to achieve a public policy objective and that objective cannot be achieved through other less distortive means.
- Subsidies' positive contributions to achieving the objective should outweigh any negative effects, in particular the negative effects on trade or investment between the parties.

To ensure this competition provides funding in line with the UK's obligations and commitments to Subsidy Control:

1. The intervention rates detailed in Section **Error! Reference source not found.** Subsidy Control shall apply unless the bidder seeks to claim exemption from having to make a contribution under the Small Amounts of Financial Assistance Allowance (previously known as de-minimis under State Aid) rules.
2. Bidders must identify the work proposed, and this must be consistent with the work programme described in the technical case. Note that the company size defines the maximum 'Intervention' rate (and hence the minimum required PV level) that is permitted (see Section **Error! Reference source not found.**). Bidders will be expected to justify the category of work selected.
3. Bidders must ensure that they supply the correct information that allows UK Space Agency to award grants within the scheme. It is the responsibility of the grant funder to ensure compliance with the relevant Subsidy Controls rules and the bidder to assist the funder in doing this by acting within the terms and conditions of the scheme.

Further guidance about subsidy control is available on the gov.uk website [RD3].

6.1 Payment plan

The payment plan should be constructed so that no more than 15% is paid at/soon after kick-off against one or more deliverables, and no less than 15% at the final review acceptance. Other milestone payments should be included, which should reflect major project stages and intermediate deliverables.

6.2 Grants to Industry - Funding Contribution

Industry in receipt of a UKRI Grant as Project Lead or as a Partner in the team is required to provide a contribution to eligible project costs in accordance with the Subsidy Control requirements. Note that other funds from public sources are not eligible as a source of these contributions.

Bidders must identify and justify the Subsidy Category type of the work proposed, and this must be consistent with the work programme. Note that the type of activity and company size defines the maximum 'Intervention' rate (and hence the minimum required contribution level) that is permitted for that activity (see Section **Error! Reference source not found.** Subsidy Control). There are concessions for collaborative activities.

Bidders must ensure that they supply the correct information that allows UKRI to award grants within the scheme and it is the responsibility of the bidder to ensure compliance with the relevant Subsidy Control requirements. Further guidance is available on the DBT website [RD3].

6.3 Academic contribution

Academic Partners will be funded at no more than 80% of Full Economic Cost (FEC). Refer to [RD5] for further information on FEC.

Grant applications for Academic partners should use the same method for calculating eligible costs as is used by UKRI. This includes the rules regarding equipment purchases and sub-contractors. Bidders with Academic partners should ensure that their financial bid conforms to this approach. The reference document is the most recent published edition of the UKRI Guidance for Applicants [RD1].

6.4 Type of Award

The award will be made on a firm fixed price basis.

6.5 Intellectual Property

The Intellectual Property generated during the project will belong to the originators.

6.6 Contractual Pre-conditions

If the project is selected for grant offer, the following conditions must be met before the CEOI will initiate preparation of the contract:

- The company size and Subsidy Category are correctly defined.
- The source and amount of additional funding is fully defined.
- The financial viability of all members of the project consortium and funding sources are established through a due diligence process.
- The consortium is judged by UKRI and CEOI to be eligible to receive a Grant from UK government under HM Treasury regulations and Subsidy Category requirements.

7 Project Monitoring and Reporting

7.1 In-project reporting

Following an award and completion of contractual formalities, the STFC will assign to the project an experienced coordinator. The coordinator will oversee the projects with the following methodology:

- The coordinator will initiate each project, by preference at a face-to-face meeting at the lead contractor's site. If a timely face-to-face meeting cannot be arranged, the kick off meeting can take place through a video conference.
- The lead contractor's project manager will report on progress to the coordinator using the CEOI report template, at the end of every month by email. Any issues arising will normally be addressed by the coordinator by telephone or email.
- There will be quarterly progress reviews, either face-to-face or by video. One of these will be designated as a more comprehensive mid-term review at an appropriate point near the middle of the project. Where feasible, each review should correspond to a significant project event, milestone and/or delivery of some of the project objectives.

- At the end of the project, a Final Report and Executive Summary both suitable for publication will be produced. There will be a formal project final review and there may also be a project final presentation day in which each of the projects will present a summary of work and achievements.
- Milestone payments can be claimed by completing a Milestone Achievement Certificate (MAC), which gives details of the deliverables, and brief evidence of completion. This is sent to the project coordinator, who will sign the MAC if he/she agrees with the milestone completion claimed. It is then sent to the STFC EO4MCM lead who will countersign if all is in order upon check against the contract/award conditions.
- The fully approved MAC can then be used to claim payments via the Je-S or by UKRI invoicing process as appropriate.

7.2 Post project reporting

Projects are required to report the status of the project at completion, including such impacts as Technology Readiness Level (TRL) achieved, leverage, spinouts and follow on opportunities. In addition, the project may be asked to update this information annually for a period of 5 years following project completion, if the EO4MCR activity is included in the UKSA’s onward project monitoring activity. This has not yet been decided. Please use the following reporting template.

CEOI Project identifier	
Title of project	
Project point of contact details	
Project type (Pathfinder, Fast Track, Flagship or Special/EO4MCM)	
Date of completion of project	
TRL Status	
• Estimated TRL at start of work	
• Estimated TRL at completion of contract	
• Current TRL after (n) years	
Mission Status	
• Immediate flight opportunity status	
• Future flight opportunities (list)	
• Commercial opportunities (list) Title, market size, aspired market share, progress status	
Export opportunities	
• Achieved (list)	
• Aspired to (list)	
Leverage and Knowledge Exchanged	

<ul style="list-style-type: none"> Follow on funding details (list) - title, funding body, duration value, aims, status (secured/bidding) 	
<ul style="list-style-type: none"> Knowledge exchange achievements (list) 	
Revenues (where relevant)	
<ul style="list-style-type: none"> Actual revenues achieved 	
<ul style="list-style-type: none"> Future revenues aspired to 	
Training Achieved (list)	
Services arising (list)	
Jobs Created (list) – What where, level, duration	

8 Eligibility

We welcome bids from a variety of organisations including academia, industry and government research institutes based in the UK. The details of some organisations may not be known by the UKRI, STFC or the CEOI, especially for newer entrants. Such applicants should provide brief and relevant background information for the organisation, including areas of expertise and contact information including registration and official address.

Only those organisations in the proposed team which have not previously received a grant from CEOI, or UKRI need provide this information in their bid. Organisations that have previously received a grant should provide a title and date of a relevant previous award.

Following receipt of bids and before award of any contract, new entrants may be required to provide additional eligibility details:

- It would normally be expected that 3 years of audited accounts are available for all project partners. In the absence of 3 years of company accounts the bid response should provide details of the specific measures that will be taken to protect the UKRI grant investment.
- Evidence of company legitimacy and financial solvency, supported by e.g. company Annual Reports.
- Details of company quality processes and accreditation.
- Track record, supported by reputation or by statements from referees and customer testimonials.
- Micro-SMEs and single-person (Sole Trader) companies will need to show robust risk mitigation against single point resource failure and the measures in place to protect the grant investment.

It is possible that some consortia bidding for projects may need to involve non-UK entities. This is allowable in principle subject to the following conditions:

- The UK must lead the consortium.
- The UK work must represent a substantial proportion of the whole project.
- The consortium must demonstrate that the proposed non-UK capability is essential and not available in the UK.

The rules can be relaxed if the non-UK entity is supplying PV, capability or resources on a no-exchange-of-funds basis. Full details of the non-UK participation must be provided in the bid, appended to the eligibility statement.

9 Confidentiality

The procedure for handling and assessing the bids and notifications will be as follows:

- Bids will be submitted to the University of Leicester administrator who will act on behalf of the UKRI. The administrator will hold all bids in confidence and will not propagate the bids internally in the University or elsewhere.
- Copies of the Statement of Intent (SoI) sheets will be provided by the CEOI Administrator to the UKRI programme leaders, the CEOI Administrator, and Dr Scott, who will retain these as confidential information.
- When the bid period for each Category completes, electronic copies of the bid documents will be distributed to the independent assessment panel members, and to Dr Scott.
- SoIs and bids not recommended by the review panels will be destroyed. They will not be visible to the wider CEOI Leadership Team, STFC or to any others.

10 Teaming Agreement

Should an award be made, the contracted consortium will be required to establish a Teaming Agreement (TA) between its Partners, prior to the commencement of work. The TA should establish agreements regarding how the results of the work, including IPR and spin-outs, will be exploited by the consortium members. A model agreement is available from the CEOI website.

11 Submission and Contact Information

Only the lead institution should submit an application. Bids should be submitted to the University of Leicester administrator, who will act on behalf of UKRI and CEOI, as follows:

- Electronically in PDF format. **The bid should preferably be contained in single PDF file (apart from the separate Excel format Finance Table).**
- In submitting a proposal, bidders accept that all information supplied as part of the bid will be handled under the procedures defined in Section 9 Teaming Agreement, irrespective of any confidentiality markings.

The electronic submission should be sent by email to the CEOI Technology Call Administrator, at CEOIadmin@le.ac.uk

For further information on EO4MCM contact:

Charles Whittington,
STFC RAL Space,

Tel: +44 (0)1235 567283
Mob: 07738 294288

Rutherford Appleton Laboratory,
R25,
Harwell Campus,
Didcot,
Oxfordshire OX11 0X

Email: charles.whittington@stfc.ac.uk

For CEOI matters, contact:

Rob Scott
ScottSpace Limited,
2 Rectory Place,
Guildford,
GU2 4DG

Mob: 07789 756938
Email: Rob.scott@stfc.ac.uk

Or

Chris Brownsword,
CEOI Director,
QinetiQ UK Ltd,
A2 Building,
Cody Technology Park,
Ively Road, Farnborough
GU14 0LX

Mob: 07825 762527 (mobile)
Email: cbrownsword@QinetiQ.com

12 Statement of Intent Pro-Forma

This form should be emailed, before the date and time specified in Section 3, to the CEOI Technology Call Administrator at CEOIadmin@le.ac.uk

Title of the project	
Lead organisation	
Short description of the project	



Estimated Grant request (ROM value)	

13 Application Form

The completed Application Form should be included with the Cover Letter when the full bid is submitted.

Title of Project		
Lead Organisation and Grant Requested for Lead		£
Project Partners and Grant Requested for each Partner		£ £
Address of Lead Organisation including postcode		
Lead Contact – Contractual (Name and e-mail)		
Lead Contact – Technical (Name and e-mail)		
Subsidy Control Category (see Section 15 Subsidy Control)		
Total Grant Funding Requested (£ and % of Total Project Cost)	£	%
Academic Contribution (£ and % of Total Project Cost)	£	%
PV Contribution (£ and % of Total Project Cost)	£	%
Total Project Cost (£)	£	100%
Proposed start date and duration		
Titles and dates of related projects or proposals to CEOI, NSTP or other UKSA programmes	<i>(List on separate sheet if necessary)</i>	

14 Risk Table Template

Please use this table in your proposal.

Risk No.	Risk Description	Type	Impact	Potential Schedule impact	Probability	Overall Rating	Month retired	(1) Avoidance Strategy	(2) Mitigation Strategy
	Short description of risk and potential consequences	Technical, Commercial or Managerial	1-5	In months	1-5	L/M/H	mm/yy	Actions to be taken to avoid occurrence and/or minimise impact	Actions to be taken during project if risk arises
R1									

Impact and Probability 1 = Low; 5= High

Overall rating Impact x Probability
 where 1 < Low < 6; 8 < Medium < 12; 15 < High < 25

15 Subsidy Control

15.1 Introduction to Subsidy Control (and State aid where relevant)

STFC/UKRI, UKSA and CEOI support UK based businesses to invest in research, development and innovation. The support we provide is consistent with the UK's international obligations and commitments to Subsidy Control. These include:

- [WTO rules](#)
- the EU-UK Trade and Cooperation Agreement (TCA), (see EU-UK TCA summary and DBT (Dept. For Business and Trade) guidance [RD3])
- in certain circumstances (e.g. under the [Northern Ireland Protocol](#)) EU State aid regulations may also be applied
- other bilateral [UK FTAs](#) (Free Trade Agreements) where relevant

15.2 What is a subsidy?

For the purposes of UK international commitments, a subsidy is a measure which:

1. Is given by a public authority. This can be at any level; central, devolved, regional or local government or a public body.
2. Makes a contribution (this could be a financial or an in-kind contribution) to an enterprise, conferring an economic advantage that is not available on market terms. Examples of a contribution are grants, loans at below market rate, or a loan guarantee at below market rate or allowing a company to use publicly owned office space rent-free. An enterprise is anyone who puts goods or services on a market. An enterprise could be a government department or a charity if they are acting commercially.
3. Affects international trade. This can be trade with any World Trade Organisation member or, more specifically, between the UK and a country with whom it has a [Free Trade Agreement](#). For example, if the subsidy is going towards a good which is traded between the UK and the EU this could affect trade between the EU and the UK. It is not necessary to consider whether the subsidy could harm trade, just whether there could be some sort of effect. Subsidies to very local companies or a small tourist attraction are unlikely to be a problem as this is unlikely to affect international trade.

The DBT Subsidy Control regime (or where relevant EU State aid regulations) are designed to prevent unfair advantages and distortion of trade: [Complying with the UK's international obligations on subsidy control](#).

15.3 Subsidy Control Categories and Intervention Thresholds

Error! Reference source not found. summarises the maximum intervention thresholds allowable level of support under this grant call for Financial Year 2023/2024.

Error! Reference source not found. summarises the UK definition of what constitutes an SME, in line with the Companies Act 2006. To qualify for any category, the company must meet at least two of the conditions (staff headcount, turnover or balance sheet total) within both the current financial year and the year previous. Anything above the limits for a medium sized company is designated as a large company. For more information on company sizes, please refer to the

company accounts guidance. This is a change from the EU definition². Other sources of public funding are not eligible as a Private Venture (PV) / match funding contribution. Academic partners will be funded in all cases at 80% of Full Economic Cost (FEC).

Table 2. DBT Subsidy Control categories and maximum allowable intervention rates

Subsidy Category	Allowable Level of Support		
	SE	ME	LE
Feasibility study	70%	60%	50%
Industrial research	70%	60%	50%
Industrial research projects involving collaboration/dissemination*	80%	75%	65%
Experimental development	45%	35 %	25%
Experimental development projects involving collaboration/dissemination*	60%	50%	40%

**NOTE: Collaborations between businesses and research organisations where the research organisation bears at least 10% of the costs and have the right to publish their own research. Procurement/supplier relationships do not qualify.*

Table 3. Definition of company types [RD2]

Company category	Staff headcount	Turnover	or	Balance sheet total
Medium sized	< 250	≤ £36 m		≤ £18 m
Small	< 50	≤ £10.2 m		≤ £5.1 m
Micro	< 10	≤ £632,000		≤ £316,000

15.4 Special Drawing Rights (SDRs) and EU de minimis awards

NOTE: The text below is generic. It is NOT possible to apply to this EO4MCM Call under SAFA. This section is relevant if the Northern Ireland Protocol (NIP) is engaged. More information is available from [RD3].

The [UK-EU Trade & Cooperation Agreement](#) (TCA) has provision relating to Small Amounts of Financial Assistance (SAFA).

For organisations applying under SAFA, the total subsidy which can be given to each organisation is up to a maximum of 325,000 SDR over a rolling 3 fiscal year period. This threshold is subject to change and grant recipients should consult the [subsidy control guidance](#) for regular updates.

When calculating eligibility for the application of the SAFA provision bidders must include cumulation of EU State aid de minimis grants under the European Commission's de minimis regulation for the same 3 fiscal year period. The maximum total under the EC regulation is €200,000. This is for all project types and for most purposes, including operating aid.

² If an application engages the Northern Ireland Protocol then the applicant should revert to the EU definition of SMEs.

This guidance is not a substitute for taking independent legal advice on your eligibility status, before applying for funding. Every applicant is responsible for securing their own independent legal advice to ensure they are lawfully eligible.

Please note the UKRI is unable to award organisations that are considered to be ailing and insolvent companies.

AO Ends