
**CEOI 13th Call
Bidders Briefing
23rd January 2020**

**Mick Johnson, Director CEOI
Chris Brownsword, Technical Director CEOI**

CEOI EO13 Bidders Conference – House Keeping

- Expected duration: 10:00 – 11:30 (with the possibility to go on until 12:00)
- Participants join the telecon via Webex and can choose to remain anonymous
- No list of participants will be circulated
- Questions can be emailed at any time to Charlotte Moretti cm738@leicester.ac.uk who will ask them on your behalf
 - Please clearly indicate which proposal section/topic they are related to
 - Charlotte will ask them on your behalf either during or after the presentation
- CEOI will decide if any of the issues raised warrant the publication of a formal clarification notice, which will be issued on the CEOI 13th Call website
- The Announcement of Opportunity (AOO) and any clarification notices take precedence over anything stated during the bidders conference.
- **Please** read the AOO and other information contained on the Call website carefully; this Bidders Conference will not present all the information available.

CEOI 13th Call – Summary

- The Call is for EO Technology and Instrumentation Development Proposals.
- Proposals should be for world-leading and high-impact CEOI Flagship projects to enhance national capability in EO technologies, with a particular focus on climate, environmental and societal applications.
- The budget available for the Call will be £2,000K, with additional PV funds required from industrial bidders.
- [Details of the Call and all related documents are available here.](#)
- **Full proposals are due for submission by 3rd March 2020 at noon.**
- The Call is open to industry, HEIs and other research organisations based in the UK.
- Collaborative proposals involving industrial and other partners of all types are strongly encouraged.
- Proposals should be aligned with the objectives of the recently [updated UKSA EO Technology Strategy](#).

CEOI 13th Call - Timeline

Deadline Date	Deadline Time	Application Stage
23rd January 2020	10:00	Bidders Briefing Telephone Conference
29th January 2020	17:00	Partner pro-forma due
4th February 2020	Noon	Intention to Bid Form due
3rd March 2020	Noon	Full Proposal due
1 st week April 2020		Assessment/Recommendation
3 rd week April 2020		Selection announcement
May 2020		Projects commence (earliest)
April 2022		Projects complete (latest)

CEOI 13th Call – Partner pro-forma

- CEOI encourages participation from organisations new to space technology development.
- A partner pro-forma is available on the CEOI website for any organisation that would like to be considered as a potential partner in a bid with another organisation.
- Organisations should indicate what skills and/or capability they can offer or are seeking and email the completed partner pro-forma to Miss Charlotte Moretti, CEOI Technology Call Administrator at cm738@leicester.ac.uk by 17:00 hrs on Wednesday 29th January 2020.
- The information will be published on the CEOI 13th Call webpage for leading organisations and potential project partners to access.

CEOI 13th Call – Intention to Bid

- Applicants are required to notify CEOI of their Intention to Bid (ItoB)
- Complete the pro-forma (see AOO Section 12) and email to the CEOI Call Administrator Charlotte Moretti, cm738@leicester.ac.uk, by 4th February 2020 at noon.
- The purpose of this is to allow CEOI to gauge the size of the response and to inform the selection of reviewers.
- The notification and information therein will be held in confidence (see AOO Section 9).
- Submitting an ItoB form does not commit the organisation to submit a bid
- CEOI appreciate the details in the ItoB form may change during bid evolution
- CEOI appreciate the designate Lead Organisation may change during bid evolution

CEOI 13th Call – Preparing an Application

- Section 5 of the AOO contains GUIDELINES FOR PREPARING AN APPLICATION
- All Proposal Sections defined in the table and/or described in this section of the AofO must be supplied in the proposal, unless indicated otherwise.
- Proposals which do not include all of the Sections (unless explicitly indicated in Table 5-1 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 the Agency, University of Leicester or CEOI will not refund any costs associated with preparing proposals responding to the CEOI Call.

CEOI 13th Call – Covering Letter

Bids must include a covering letter containing:

- A firm fixed price for the work to be carried out;
- A committing offer to University of Leicester, who contractually administer the grants on behalf of the Agency and CEOI;
- A statement of acceptance of the standard CEOI Terms and Conditions (T&Cs), defined in the CEOI Grant Agreement document which is available on the CEOI website.
 - 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;
- 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;
- The completed Application Form (see AOO Section 13).

CEOI 13th Call – Application form



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)		
GBER State Aid Category (see Section 15)		
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		
Project Type	Pathfinder/Fast Track/Flagship <i>(delete as applicable)</i>	
Titles and dates of related projects or proposals to CEOI, NSTP or other UKSA programmes	<i>(List on separate sheet if necessary)</i>	

CEOI contribution to total project cost; for collaborative proposals see requirements in AOO Section 15

% have to comply with GBER rules (see AOO Section 15)

Total FEC cost of the project = CEOI grant plus partner contributions

CEOI 13th Call – Assessment Criteria

Section	Subject	Mark
5.3	Technical Case	30%
5.4	Exploitation Plan and Enhancement of National Capability	20%
5.5	Project Team	10%
5.6	Project Management	20%
5.7	Project Finances	10%
5.8	Collaboration	5%
5.9 & 8	Grant Conformance	5%
	TOTAL	100%

CEOI 13th Call – Technical Case

This section should justify the need for this technology development and describe the work to be undertaken. It should also provide an assessment of technical feasibility and innovation in the project, and explain how the development fits into the wider technology development roadmap.

The section should include:

- An exposition of the science, commercial and/or operational need and drivers, including the relationship to relevant national space and EO strategies;
- 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 description of any system-level benefits expected (e.g. cost, mass, size, resource requirement);
- A technology roadmap showing heritage, future evolution and also the start and end Technology Readiness Level (TRL) of the proposed work.

CEOI 13th Call – Technical case

- CEOI calls are aimed at the development of upstream EO technologies; Proposals that solely focus on downstream algorithm development, or the science to raise Science Readiness Level (SRL), are not appropriate.
 - However if you are developing for instance sensor inversion models, then that would be a suitable piece of work as long as it is supporting a broader hardware technology development programme as the main activity in the proposal.
 - Development of on-board processing is applicable, but must have a direct impact on the effectiveness of the EO instrument/sensor. In contrast, the development of downstream applications is something more appropriate to other UK Space Agency and Innovate UK funding routes.
- Flagship proposals should advance technology readiness to between TRL 5 and TRL 9;

CEOI 13th Call – Exploitation Plan and Enhancement of National Capability



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 CEOI 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 and societal applications.

The section should include:

- A description of the main exploitation opportunities targeted, together with an assessment of the potential and accessible market(s), 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 CEOI activities;
- 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.

CEOI 13th Call – Exploitation Plan and Enhancement of National Capability

“....with a particular focus on climate, environmental and societal applications”

- Proposals not aligned to these themes will be acceptable, but will be funded as a second priority ie if funding available, after all good quality fully aligned projects.
- For projects targeting future operational or scientific EO missions, such mission(s) should be clearly identified, the possible route to achieving flight should be described, together with how the benefits for any related opportunities will be achieved.
- In the case of projects targeting commercial opportunities, the proposal should include a brief business plan.
- Preference will be given to proposals that demonstrate an urgent need for funding ie for an identified near-term space mission opportunity or to capitalise on a current competitive edge.

CEOI 13th Call – Project Team

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 summary 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.

CEOI 13th Call – Project Management

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**.

The 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.
- 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);

CEOI 13th Call – Project management

“... normally expected to be up to 24 months”

- Project should complete in 24m from contract award; work lasting >24m will be considered but will need strong justification;
- Schedule overrun is a major concern, so the assessment will look for proposals that have schedule contingency and convincing risk mitigation strategies;

CEOI 13th Call – Project Finances

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**.

The 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 as per GBER regulations
- Table of proposed milestone payments with description, related project outputs and/or significant events, amount and dates. See Section 6.1 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 Partner.
- Any support/consultancy/service to be procured should be itemised in the Direct Costs section of the relevant Partner's sheet
- The template Excel spreadsheet is available on the CEOI website.

Note that CEOI 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.

CEOI 13th Call – Project finances

“Flagship grants of £0.5M to £1.0M, ...”

- Proposals requiring funding outside this range may be considered but strong justification will be required.

Full Economic Costs

- Academic Partners and Government institutions will be funded at no more than 80% of Full Economic Cost (FEC).
- See AOO reference[RD6] for further information on FEC.

In-kind contributions:

- A good way to look at this is to ask yourself questions along the lines of:
 - Has this a definable monetary value?
 - Can I account for this contribution in a way an auditor would recognise?
 - Can I show it was required to deliver the project?
 - Is its contribution to the project commensurate with the value declared?
 - Will it be provided during the project timescale
 - For equipment purchases; residual value (or re-sale value) at the end of the project needs to be taken off the purchase price

CEOI 13th Call – Allowable costs

- Equipment purchases
 - CEOI has an expectation that equipment purchased for instrument development would normally be funded at no more than 50%
 - However if your organisation has limited capability to fund the equipment procurement you could request a higher % funding, but this should be fully explained in your proposal
 - You should also note that this request would be referred to the UKSA, whose policy is to fund at no more than 80%
- Airborne trials
 - Flight trials arranged as an external service, procured through a commercial sub-contract, would be expected to be funded at the intervention rate of the partner procuring the service.

CEOI 13th Call – Collaboration

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.

“The CEOI Call is open to industry, HEIs and other research organisations based in the UK.”

CEOI 13th Call – Collaboration

- Preference will be given to proposals that involve collaboration between partners
- Collaboration also attracts beneficial intervention rates
- For this reason it is important to understand what collaboration entails
- ‘Partners’ are defined as entities/organisations which share and/or retain the Intellectual Property generated by them in the project.
- In contrast, ‘Suppliers’ and ‘Consultants’ supply goods and/or services to one of the Partners.
- 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.

CEOI 13th Call – Grant conformance

This section should provide the information required to show that the project finances conform to State Aid Rules.

The section should include:

- A clear statement of the GBER State Aid Category (see AOO Section 15).
- Level and justification of any industrial or other private investment offered
- A statement on eligibility of each partner to receive State Aid and the financial viability of all the project Partners. See Section 8 for further information.

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

Lessons Learned from Previous CEOI Projects



- **Technical problems**
 - Unforeseen technical difficulties - things harder than expected
 - Manufacturing delays / accidents / component failure
 - Under-estimation of initial technology maturity
 - Quality of out-sourced work poor and slow
- **Resources**
 - People: Internal reallocation post-award, resignation, slow recruitment processes (particularly in Universities)
 - Facilities: Prioritisation, scheduling conflict, failures
 - Procurement: Took longer than expected, relying on a single specialist UK supplier (impacting time & cost)
- **Project management**
 - Poor control of scope / control of partners / no clear identification of project goals
 - Lack of cohesion of team
 - Poor leadership /poor decision making
 - Limited contingency in baseline plan
 - Contracting; Partner contracting delays, difficulty in flowing down Ts & Cs
- **External factors**
 - Loss of key people
 - Customer redirection: Changing project exploitation route requiring work/schedule re-planning
 - “Business” Prioritisation: Pressure within organisations to prioritise other work – perception that part-funded work is of lower priority than commercial/academic activities
 - Dependency on completion of other projects
 - Dependency on time-critical contributions from unfunded collaborators

Lessons Learned from Previous CEOI Projects



Ways to avoid

- **Better contingency / mitigation planning:**
 - Being more pragmatic at bid stage on what is achievable in allocated time
 - Better assessment of project delivery risks and possible mitigation action
 - Inclusion of contingency in baseline delivery plan (timescales)
 - Earlier procurement of long lead items
 - Are academic leads thinking of these projects in more “commercial” terms
- **Tighter Project Management**
 - Use of experienced PM’s – some academic teams successfully sub-contract PM role from outside
 - Frequent team meeting drumbeat – weekly at critical times
 - Avoidance of dual-hatted PMs – either technical delivery or management, not both (n/a to Pathfinder Projects)
 - Preference for industrial lead on larger projects
 - Evidenced through provision of Project Management Plans (for larger projects only)

Common Proposal Shortfalls

- Assumption of pre-knowledge on the background to the technology
 - Cannot assume that the reviewers are aware of previous projects
- Failure to show how this development step fits into a larger story and how it could end in a flight opportunity;
- Generic, generalised risks, without much thought to impact or mitigation
- Poor quality Gantt charts
 - A few blocks stuck end to end is not a good or informative Gantt chart.
 - Unreadable pictures of very complex Gantt charts
- Using non-grant receiving partners could be considered a delivery risk
 - Show support by letters of commitment
- You can submit or be a Partner in multiple proposals
 - But the assessors may question if you have the resources to deliver all
- Staff resources may appear unrealistic:
 - Reliance on a yet to be recruited person, and/or giving e.g. 80% of the hours to an unspecified RA
 - Unrealistic number of hours assigned to a senior technical specialist
- Simplistic business plan
 - e.g. global market is £4B; we will win 1%, hence this is a multi-million £ ROI
- Poor rework of a previously submitted proposal that does not meet the criteria
- Poor quality and/or no review of bid documents

Contact Points

- If you have any questions during the bid phase you are welcome to contact members of the CEOI team for clarification;
- These will be conducted in confidence;
- POC are:
 - Mick Johnson; mick.johnson@airbus.com
 - Chris Brownsword; cbrownsword@qinetiq.com
- Note: the CEOI are not part of the proposal evaluation team.