



# Call for Proposals

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## UK Space Agency-Axiom Space Astronaut Mission Projects 2024/2025

Science Case Overview must be submitted by 16:00 on 4<sup>th</sup> March 2024  
Full proposals must be submitted by 16:00 on 29<sup>th</sup> April 2024

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## 1. Introduction

The UK Space Agency and Axiom Space are working together to deliver a fully commercially sponsored UK astronaut mission.

This mission is expected to see UK astronauts fly to the International Space Station (ISS) to carry out scientific research and technology demonstrations, pursue the achievement of strategic advantages across five critical technologies set out in the UK Science and Technology Framework, and undertake education and outreach activities designed to engage more young people in STEM and future careers in the space sector.

We intend to place the UK at the forefront of the global race for commercial space investment, continue to support scientists and engineers to test new technologies, and carry out important research and, ultimately, bring the benefits back to people and businesses across the country.

**The UK Space Agency is now requesting proposals for Science Experiments and Technology Demonstrations that could be flown to the ISS in late 2025.** Experiments must be designed, developed, built, and qualified by the experiment team. Axiom Space will provide assistance with integration to the ISS programme and the payload will be operated by a payload operation centre, supported by the experiment team. In some cases, Axiom Space may work with ESA on integration and operation of payloads.

To make information clearer, the UK Space Agency has separated request for proposals for the UK Astronaut Mission into two grants calls. Proposals for **Science Experiments**, herein referred to as **Proposals**, should be submitted using this call.

**Applicants are to note that funding for this call (proposed to be Commercially funded) is subject to the UK Astronaut Mission dependent agreements being concluded between UK Space Agency, Axiom Space, and ESA prior to Grant Awards being made.**

UK Space Agency reserves the right not to award funding under this call for any reason, including that the dependent agreements are not concluded. Any grants awarded are contingent upon the UK Astronaut Mission proceeding, which may include (although not exclusively): Mission flight confirmation (anticipated after grant awards), or any other feasibility issue for the programme. Applicant costs associated with the call process are the sole responsibility of the applicants, including if this call does not result in any UKSA awarding funding, and will not be considered eligible costs under the grants.

The UK Space Agency will select a combination of projects that overall score highly in the judging criteria and that fit within overall budgetary concerns, mission feasibility and operational requirements as detailed further in Section [6](#).

The UK Space Agency expects a budget of up to £9 million available for this call, with a maximum award of £5 million (please also note Subsidy Control limits set out in Section [5](#) and ANNEX [1](#) for various types of organisation).

**All applications are made at risk, and funding is not guaranteed.**

## 2. Science Experiments Call Objectives and Scope

This call, developed in partnership with Axiom Space and planned to be delivered by the UK Space Agency's Exploration Programme, will support UK-based researchers to design and execute scientific research which utilises microgravity and the space environment. We want to enable the growing UK community to secure the maximum scientific benefit and wider returns from this mission and ensure that the UK's investments and world leading capabilities in science and technology continue to thrive.

We therefore welcome ideas from all research areas, and in particular projects that align to the goals of the National Space Strategy, UK Science and Technology Framework, or research priorities identified by the UKRI research councils (including BBSRC, MRC, EPSRC, STFC, NERC). Proposals should outline how they support the ambitions of the National Space Strategy and the UK Science and Technology Framework.

Within the Framework, Government has identified 5 critical technologies for the UK that will deliver prosperity and security for the UK and deliver benefits to global society:

- Artificial Intelligence
- Engineering Biology
- Future Telecommunications
- Semiconductors
- Quantum Technologies.

The Agency is particularly interested in proposals which support the development of these priority technologies, either directly or through a credible supporting technology, and those which fall under the categories of biology (human, fundamental, medicine, physiology, and life support) and engineering, although all proposals will be considered.

Depending on the specific needs of the proposal, access to Microgravity will be via the ISS, either internally or externally. In exceptional cases experiments could take place inside the crewed transport module, such as the SpaceX Dragon Vehicle. All proposals must comply with the constraints of the science experiment location outlined in Section [6](#).

This call is open to UK Higher Education Institutions, other research organisations (including not-for-profit organisations), SMEs, and industry. Academia-industry collaborations are encouraged and there is no restriction on which type of organisation can lead. Organisations that are sponsoring the mission are ineligible to apply.

Applicants should contact the UK Space Agency at [spaceexploration@ukspaceagency.gov.uk](mailto:spaceexploration@ukspaceagency.gov.uk) if they are unsure if an activity is likely to be within the scope of this call or if they have any other questions.

Due to the timeframe that UKSA and Axiom Space are working towards, please consider the timings below when planning your proposal. Projects should plan to start in June 2024, and be able to deliver flight hardware in time for a flight in late 2025 (prospectively). Applications will be assessed under the review process outlined in Section [9](#).

### 3. Call and Delivery Timeline

The following schedule sets out the indicative timing of processes for this call. Please note that each deadline may be subject to change in the event of operational constraints.

<b>Call Opens</b>	20 <sup>th</sup> February 2024
<b>Webinar</b>	26 <sup>th</sup> February 2024, 11:00
<b>Science Case Overview Deadline</b>	4 <sup>th</sup> March 2024, 16:00
<b>Call Closes (Full Proposal Deadline)</b>	29 <sup>th</sup> April 2024, 16:00
<b>Successful Applicants Notified</b>	Planned end-May 2024
<b>Project Kick-Off Commences</b>	Planned June 2024
<b>Project Development Period</b>	18-month duration from date of award to readiness for flight (nominally Launch minus 12 weeks)
<b>Flight (Prospective)</b>	No earlier than late-2025
<b>Projects Conclude</b>	Following completion of experiment operations in orbit and return of data

#### Webinar

A webinar will be held on **Monday 26<sup>th</sup> February** at 11:00 am to detail the call process and answer any questions that applicants may have. To receive an invitation please complete this short form: <https://forms.office.com/e/rcqp9p9Ehx>

### 4. Science Case Overview

To be eligible to submit a full proposal, applicants **must** submit a science case overview by **16:00 on the 4<sup>th</sup> March 2024** to [SpaceExploration@ukspaceagency.gov.uk](mailto:SpaceExploration@ukspaceagency.gov.uk) to enable the Agency to identify appropriate peer reviewers. Please see Section [8](#) for more information.

#### 4.1. Exclusion Criteria

The UK Space Agency reserves the right to reject proposals without reference to panel review if they are outside of the call remit, do not contain all the required information, or do not provide all required information for assessment. All proposals **must** be led by organisations based in the UK.

Consideration will be given to mass and transport parameters, in addition to the availability of microgravity facilities and resource use indicated by proposals. Please see Section [2](#) Assessment of Applications for full explanation. Please note, however, that projects may still not fly after selection for a variety of reasons (such as incomplete technology, changes to mission constraints, or if the project becomes unfeasible).

## 5. Subsidy Control

Fundamental research by non-economic organisations will not be treated as a subsidy. See also ANNEX 1. Subsidy Control standard guidance.

This award is being offered under the Research, Development and Innovation Streamlined Subsidy Scheme subcategory 2: Industrial Research and Experimental Development Projects, in accordance with section 10(4) of the Subsidy Control Act 2022. Projects funded as part of the UK Astronaut Mission qualify as “industrial research” or “experimental development”, where:

“Industrial research” means the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for bringing about a significant improvement in existing products, processes or services.

“Experimental development” means acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of developing new or improved products, processes or services.

Subsidies given under these categories are subject to maximum award amounts and subsidy ratios set out in the Research, Development and Innovation Streamlined Subsidy Scheme. These are as follows:

	Industrial Research	Experimental Development
Small Enterprises	70% of the eligible project costs	45% of the eligible project costs
Medium Enterprises	60% of the eligible project costs	35% of the eligible project costs
Large Enterprises	50% of the eligible project costs	25% of the eligible project costs

Enterprises may receive a 15% uplift to the subsidy ratios where the project involves collaboration between enterprises, where at least one of the enterprises is an SME, or between an enterprise and one or more research and knowledge dissemination organisation, which must have the right to publish its own research results.

For the purposes of subsidy control, the following definitions are applicable:

- A small enterprise has an annual turnover below £10.2 million, a balance sheet total below £5.1 million, and the average number of employees must not be more than 50
- A medium enterprise has an annual turnover below £36 million, a balance sheet total below £18 million, and the average number of employees must be no more than 250
- A large enterprise has an annual turnover above £36 million, a balance sheet total above £18 million, and the average number of employees is above 250

To qualify, two of the three conditions in the above definitions must be met.

Applicants should note that the maximum award amount for both industrial research and experimental development projects is £3,000,000 per enterprise per project. Due to cumulation rules and limits of the scheme, organisations seeking project funding that would exceed a total of £3million from public bodies in the last 3 years for this project will be ineligible to apply for this opportunity.

To ensure this competition provides funding in line with the UK's obligations and commitments to subsidy control, the intervention rates detailed above shall apply unless:

the bidder seeks to claim exemption from having to make a contribution under the Minimal Financial Assistance Allowance (previously known as de-minimis under State Aid & Small Amounts of Financial Assistance under Trade & Co-operation Agreement) rules

the bidder is a research or public sector organisation or charity and the award of funding does not meet the definition of a subsidy in accordance with section 2(1) of the Subsidy Control act 2022 (see ANNEX 1)

grant recipients will need to demonstrate that cumulation of project costs do not exceed the limit for awards under the streamlined scheme.

Bidders must identify the work proposed, and this must be consistent with the work programme described in the technical proposal. Note that the company size defines the maximum 'intervention' rate (and hence the minimum required match funding level) that is permitted (see ANNEX 1). Bidders will be expected to justify the category of work selected.

Bidders must ensure that they supply the correct information that allows the 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.](#)

## 6. Requirements

### 6.1. General Requirements

All successful proposals will address the following mandatory requirements:

The project must be led by a UK organisation who will receive a grant from the UK Space Agency. This can be any type of UK organisation including University-led academic research proposals and Industry-led commercial research proposals.

### 6.2. Project Requirements

- Experiments that can run autonomously may last longer than the two-week mission period if needed. For this call, we define the end of the project as when the experiment has been completed in orbit and the data have been returned.
- Projects requiring astronauts (as test subjects or to operate the experiment) should aim to last no longer than 10 days.
- The preparation of the project should commence no later than June 2024 and be able to deliver for payload integration to launch vehicle and expected flight to the ISS by late 2025.
- The project must have strong justification for requiring use of the ISS (as opposed to other microgravity facilities such as a parabolic flight or sounding rocket).
- Funding for scientific exploitation of any data collected across the duration of the experiment is out of scope for this grants call. This type of funding could be sought by the research teams from other sources, such as the UKRI councils.

- Proposals must be compatible with the operational constraints and capabilities of the International Space Station and/or the crewed transport vehicle, see Section [7](#) below.
- Experiment proposals must take into consideration the practicalities and limitations of performing research on the ISS platform, see Section [7](#).
- The project team will be expected to work with UKSA (with support from Axiom Space) to complete all necessary reviews, including Flight Safety, Flight Acceptance and Flight Readiness reviews, as well as all necessary design reviews and other formal processes during the period of the project. Details of these are provided in ANNEX [3](#).

The project team will be required to be part of (but not limited to) the following as part of project management for the experiment:

- The grant recipient will attend a kick off meeting to initiate each project.
- The grant recipient will provide progress reports to the UK Space Agency project coordinator along with regular review meetings (expected to be on a monthly basis). Attendees: project team, UKSA project coordinator, UKSA OCE, and Axiom Space representation.
- The grant recipient will attend a quarterly review meeting where their progress will be reviewed against the Grant Funding Agreement (GFA).
- The grant recipient will provide evidence of meeting the milestones/deliverables agreed in their GFA in line with the process outlined in ANNEX 2 of Template B.
- The grant recipient will provide regular updates on benefits and lessons learned throughout the project.
- The grant recipient will also schedule a final review meeting with the coordinator at the appropriate time.
- The grant recipient will provide a final project report including but not limited to an executive summary, delivery, actual outcomes, lessons learned, benefits, communication and outreach, next steps. For this call, we define the end of the project as when the experiment has been completed in orbit and the data have been returned.

## **7. Microgravity Facility Selection and Resource Use**

Proposals should detail where they foresee the science experiments taking place i.e., onboard the ISS, in the Space Environment (external to the ISS), or inside the crewed transport vehicle. Proposals should also detail which facilities and resources their experiment would make use of.

All facilities on the International Space Station, both internal and external, and available resources, other than those from ROSCOSMOS, may be considered for use. Commercial facilities may be considered if costs are reasonable. The crewed transport vehicle can be considered where absolutely necessary, inside the crew module, and inside the cargo hold.

Experiment proposals should take into consideration the practicalities and limitations of performing research on the ISS platform. Crew time, upload and download mass, volume, power, conditioned stowage and other resources are all limited. All payloads must pass relevant ISS safety certifications and other boards as applicable, including Medical Boards, Security Control Boards, Software Control Boards, etc.

For life and biomedical experiments that utilise a human subject, experiments may propose the use of multiple subjects if appropriate to the research objectives.

Further details of ISS facilities available can be found here:  
<https://www.nasa.gov/mission/station/research-explorer/>

As specified, if you wish to use the crewed transport vehicle you must be able to explain why this is necessary (rather than using the ISS). The need for astronaut time associated with the demonstration must also be noted.

### 7.1. Crewed Transport Vehicle

Cargo Transfer Bags (CTBs) are the standard containers used by the Axiom Space team and its launch partners to send payloads and cargo to the International Space Station.

The Cargo Transfer Bag (CTB) used in the crewed transport vehicle can support a total mass of 27.2kg each. Please note that this will also include packing materials to support the safety of payloads in the CTBs. The mission is expected to carry approximately four CTBs, however, the total number of CTBs in this mission is not yet confirmed.

Any payload proposed under this solicitation shall not exceed the size of a CTB equivalent (CTBE) defined as 45cm x 40 cm x 20cm or 27kg per CTB.

Vehicle provided power is not available to payloads during ascent to the ISS. Temperature control is possible for payloads during ascent, but is a limited resource.

Applicants are to note that agreement to supplementary terms and conditions for use of ISS flight resources may be required, depending on the application specific requirements.

## 8. Guidelines for Preparing an Application

PLEASE READ THE FOLLOWING GUIDELINES CAREFULLY TO ENSURE THAT YOUR APPLICATION INCLUDES ALL OF THE INFORMATION REQUIRED IN THE CORRECT FORMAT.

### 8.1 Submission Overview

Only the lead company or organisation must submit an application. It is the lead organisation's responsibility to ensure that all required information is complete and accurately submitted before the deadline.

**The decision of the UK Space Agency is final.**

Minimal feedback can be requested with no course for appeal. Incomplete or late applications and altered templates will not be considered.

Applications for project funding must be submitted to the UK Space Agency as follows:

Science Case Overview Template (2 pages) submitted as a PDF by **16:00 on 4<sup>th</sup> March 2024**.

File name format: *Plurname\_SCO\_UKAM\_24.pdf*

**Note that applicants must submit a science case overview to be eligible to submit a full proposal.** to enable the Agency to identify appropriate peer reviewers.

Full application submitted by **16:00 on 29<sup>th</sup> April 2024**. This will include:

- 1 page cover letter
- Template A
- Template B (which includes the science case (assessed), full proposal (assessed), and CV (for information))
  - Merged into a single PDF titled: *Plurname\_UKAM\_24.pdf*
- The following attachments submitted alongside your full application by **16:00 on 29<sup>th</sup> April 2024**:

- Risk Register Template (excel file titled Plurname\_RR\_UKAM\_24)
- Financial Information (excel file titled Plurname\_FI\_UKAM\_24)
- Overheads Template (excel file titled: Plurname\_OT\_UKAM\_24), **if used**.
- North Star Metric Template (excel file titled: Plurname\_NSM\_UKAM\_24)
- National Security Questionnaire (PDF titled Plurname\_NSQ\_UKAM\_24)
- Grant Application Checklist (excel file titled: Plurname\_GAC\_UKAM\_24)

All application documentation must be sent by email to the UK Space Agency Space Exploration Team at [SpaceExploration@ukspaceagency.gov.uk](mailto:SpaceExploration@ukspaceagency.gov.uk) with the subject 'Plurname: UKSA AM APPLICATION'.

A Q&A can be found in ANNEX [2](#). In addition, a webinar will be held on 26<sup>th</sup> February for further questions. Details on how to register are in Section [3](#).

## 8.2. Detailed Guidance

Applications for project funding shall take the form of a proposal in single-spaced typescript (minimum font size 12-point Arial, minimum 1.5 cm margins all round, including diagrams and tables) and **must** contain all of the sections listed in the table below.

Where a Template is specified, this must be used unaltered and submitted.

Should any Section be omitted, or a Template altered, the proposal will be rejected.

Should any part of the application overrun the specified page limit, we will only consider material up to the designated page limit that is in the correct format.

Application Section	Description	Format	Max Page Count
Science Case Overview (for information – mandatory to submit)	Section <a href="#">8.3</a>	This must be submitted by the lead applicant <b>by 16:00 on 4<sup>th</sup> March 2024</b> with the file name: <i>Plurname_SCO_UKAM_24.pdf</i>	2 page
Cover Letter (for information)	Section <a href="#">8.4</a>	This must be submitted by the lead applicant <b>by 16:00 on 29<sup>th</sup> April 2024</b> as a merged PDF titled <i>Plurname_UKAM_24.pdf</i>  The cover letter must be on headed paper and signed by the appropriate authority on behalf of that organisation.  CVs are requested for information only and will not be scored.	1 page
Application Form [template A] (assessed)	Section <a href="#">8.5</a>		Per template A
Science Case [part of template B] (assessed)	Section <a href="#">8.6</a>		15 pages
Full Proposal [part of template B] (assessed)	Section <a href="#">8.7</a>		30 pages (excluding cover page and annexes)
CVs [part of template B] (for information)	Section <a href="#">8.7</a>		1 CV per person, 3 pages maximum per CV
Risk Register	See MS Excel spreadsheet template 'Axiom risk	Excel spreadsheet must be completed and submitted by the lead applicant <b>by 16:00 on 29<sup>th</sup> April</b>	n/a

	register template'. See Section <a href="#">8.8</a> for guidance.	<b>2024</b> as an excel file titled <i>Plsurname_RR_UKAM_24.xls</i>	
Financial Information	See MS Excel spreadsheet template - 'Finance Sheet' See Sections <a href="#">10.3-10.7</a> for guidance.	Excel spreadsheet must be completed and submitted by the lead applicant <b>by 16:00 on 29th April 2024</b> as an excel file titled <i>Plsurname_FI_UKAM_24.xls</i>	n/a
Overheads Template	See MS Excel spreadsheet 'UKSA Overheads Template' See Section <a href="#">10.4</a> for guidance.	Excel spreadsheet must be completed and submitted by the lead applicant <b>by 16:00 on 29th April 2024</b> as an excel file titled <i>Plsurname_OT_UKAM_24.xls</i> if you are not utilising the standard 20% overheads approach.	n/a
North Star Metric Template	See MS Excel spreadsheet 'North Star Metric' See Section <a href="#">10.12</a> for guidance.	Excel spreadsheet must be completed and submitted by the lead applicant <b>by 16:00 on 29th April 2024</b> as an excel file titled <i>Plsurname_NSM_UKAM_24.xls</i>	n/a
National Security Questionnaire	See questionnaire template (Section <a href="#">11</a> )	This must be submitted by the lead applicant alongside the application by the lead applicant <b>by 16:00 on 29th April 2024</b> as a PDF titled <i>Plsurname_NSQ_UKAM_24.pdf</i>	n/a
Grant Applicant Checklist	See MS Excel spreadsheet template 'Grant applicant checklist'	Excel spreadsheet must be completed and submitted by the lead applicant <b>by 16:00 on 29th April 2024</b> as an excel file titled <i>Plsurname_GAC_UKAM_24.xls</i>	n/a

### 8.3 Science Case Overview (not assessed, provided for information)

To enable the Agency to identify appropriate peer reviewers, a science case overview must be submitted no later than two weeks after the call opens (see call timeline in Section [3](#)).

Applicants should provide enough information on the science of the experiment to enable the identification of appropriate peer reviewers.

**If you fail to submit a science case overview by 16:00 on 4<sup>th</sup> March, you will not have your proposal considered.**

The science case should be no more than 2 pages in length (minimum font size 12-point Arial, minimum 1.5 cm margins all round, including diagrams and tables) and include:

- A brief overview of the background to the experiment
- A brief overview of the experiment proposed
- A brief overview of the expected results/outcomes

### 8.4. Cover Letter (not assessed, provided for information)

To aid the placing of the grant agreement with successful bidders, the applications for funding must include a cover letter containing:

- A clear indication of the type of grant applied.

- The Subsidy Control Category (see ANNEX 1), or that the grant will be applied for under the Small Amounts of Financial Assistance Allowance.
- A committing offer to UK Space Agency.
- The value of the grant funding requested.
- A statement of acceptance of the standard UK Space Agency Terms and Conditions (T&Cs). The T&Cs are contained in the draft Grant Funding Agreement available as part of the documentation for this call. **(Note – requests for minor changes to the grant document will only be considered by the Agency if highlighted in the cover letter at the submission stage, there is no guarantee of these being accepted. Material changes to the grant terms will not be considered.**
- **(Relevant for Industry bidders 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 bids will be assessed by the Review Panel (Section 9), but the UK Space Agency reserves the right to seek a customer reference, to be considered by the Panel.

### 8.5. Template A - Application Form (Assessed)

The Application Form provided summarises key information concerning the project proposal submission. The format of this document **must not** be altered including any changes to, or the removal of, the UK Space Agency logo. This document is **Template A**.

### 8.6. Template B - Science Case (15 pages) (Assessed)

A separate, full scientific case that will be subjected to scientific peer review, maximum 15 pages. This science case will be used to assess the scientific excellence of the proposal by external peer reviewers.

The scientific merit of the proposed experiment will be reviewed and scored on this science case. The scientific case for support should be a self-contained description of the proposed project with its content relevant background and should not depend on additional information.

Lists of references and illustrations should be included in the page limit and should not be submitted as additional documents or as an annex. You must not include URLs to web resources in order to extend your case for support.

Peer reviewers will have relevant expertise in the proposed field of research but may not be experienced in the restrictions of space-based research experiments. Science cases should not assume knowledge of the ISS research environment or understanding of restrictions, and these should be well explained.

Detail on what to include in your science case is provided in **Template B**.

### 8.7. Template B - Full Proposal (30 pages) (Assessed)

All proposals will be subject to a review for both a spaceflight feasibility review by technical experts and project deliverability by project experts and in accordance with the assessment criteria. The proposal should contain information for each of these different reviewer groups to assess the proposals merits in their areas of interest.

The full proposal must be no more than 30 pages (excluding cover page and annexes), but may also be less. Please provide an appropriate level of detail.

The full proposal should include:

- Executive summary
- Experiment description

- Project plan
- Funding information
- Education and outreach plans
- Further detail on what to include for each of the above sections is provided in **Template B**.

### 8.8. Risk Register Template (Excel Template) (Assessed)

As part of your project plan we require a thorough evaluation of all risks associated with the project should be carried out. This must show how risks are to be controlled and managed with a procedure of how these will be raised, monitored, assessed, communicated, mitigated throughout the project. A summary in the form of a risk table must be provided (see MS Excel spreadsheet template 'Axiom risk register template') and for each high-level risk a clearly identified mitigation strategy is required along with an indication of the associated costs.

Preferably, risks should be assigned a likelihood (1: Unlikely, 2: Possible, 3: Likely or 4: Very Likely) and plotted against the severity of consequences resulting from their occurrence (1: Minimal, 2: Moderate, 3: Serious or 4: Critical). The risks should also be broken down into external (i.e., external to the project or dependencies) and internal with an assessment of the potential criticality and likelihood. The mitigation strategy should also include a mitigation budget.

## 9. Assessment of Applications

The Science case overview will be used to identify peer reviewers for the science case of the proposal only, and will not be assessed. The science case will be subject to standard peer review process.

Full applications for project funding will be assessed by a Panel which will consist of independent UK Space Agency approved reviewers drawn from a variety of backgrounds including academia, industry, Government, ESA, or UKRI council representatives. Axiom Space will assess projects for experiment and implementation feasibility only. The panel will assess the proposals according to the criteria listed below, taking into account the commitment of the organisations involved, in particular the lead organisation, to the success of the project and the financial viability of the organisations involved.

Assessment criteria for full applications:

**Scientific merit (30%):** This will be assessed via peer review. Reviewers will assess the quality of the science and technology involved in the proposal and the stated scientific and technical objectives and consider whether the proposal is likely to achieve those objectives; the likely global and UK scientific impact of the project and at what level it is supported by its relevant scientific community. Scoring criteria:

- **Research quality and excellence**, including:
  - Novelty, relationship to context, timeliness, and relevance,
  - Ambition, adventure, and transformative aspects of potential outcomes,
  - Suitability of the proposed methodology and the appropriateness of the approach to achieving impact,
  - Importance of the research questions or gaps in knowledge that would be addressed. Likelihood of the level of innovation leading to significant new understanding.
- **Research environment and people:**
  - Appropriateness of the track record of the applicants
  - Balance of skills of the project team, including collaborators
- **Impacts**
  - The potential economic and societal impact of the proposed research.
- **Data management plan**

- The data management plan must indicate whether the applicants have (or are likely to have) a sound plan for managing the research data funded through the award.
- **Resources requested.**

**Experiment and implementation feasibility (20%):** Considers the logistics and practicality of carrying out the proposed experiment within the constraints of the ISS facilities, resources and planning.

- Highest scoring proposals will show comprehensive consideration of ISS interfaces and compatibility and be able to be implemented on the ISS in its proposed form.
- Medium scoring proposals will show adequate consideration of ISS interfaces and compatibility and be able to be implemented on the ISS after some limited design evolution or modifications that the panel consider could reasonably be achieved within the scope of the proposed project timelines and budgets.
- Lowest scoring proposals will be unable to be implemented on the ISS, even with moderate design evolution or modifications to the proposed design.

**Project plan deliverability (20%)** Considers the strength of the proposal including background, expertise and skill set of the team, the credibility of the proposed project delivery plan, the scientific, technical, schedule and financial risks and the provisions made for management of risk the feasibility of timeline and work packages outlined.

- All proposals will need to demonstrate that they have effective structure(s) in place for project management, risk management and grant administration, including outlining a suitable approach to achieve the project aims on time and within budget.
- Highest scoring proposals will demonstrate an approach to risk and programme management that is aligned with industry best practice. A team with appropriate expertise has been outlined for delivery of the project which provides a strong skill set to enable the experiment to be developed, testing and built in a timely fashion. The overall project plan is well considered and resourced. There are clearly defined roles and work packages that have clearly considered the route to successful delivery. The plan has considered all elements of design evolution, build, testing, safety and delivery and has considered the interfaces to ISS processes. Risks have been clearly identified alongside costed and detailed mitigations, providing a clear picture of the practicality and viability of the proposal. Contingencies have been planned for. The budget has been well evidenced. Overall the panel will have high confidence that the plan will allow the experiment to be delivered on time and in budget.
- Low scoring proposals will show little regard for industry best practice and provide poor evidence or fail to demonstrate consideration of suitable risks and mitigations. The overall project plan is weak, with very limited evidence that there are sufficient plans in place to deliver the experiment on time and within budget. Roles are unclear; work packages lack coherence, risks are not identified or have inadequate mitigations. There are many areas that have not been fully thought through and contingencies are not identified.

**Relevance to UK Strategy (15%):** Considers the strategic relevance of the proposal and the extent to which it meets UK strategic aims, including UK Space Agency and UKRI strategies and research priorities and the UK Science and Technology Framework.

- Highest scoring proposals will clearly outline and evidence how they align with, and contribute to, UK strategic aims. Strong proposals will include strong evidenced links to meeting strategic aims highlighted in the more than one of these strategies.
- Moderate scoring proposals will demonstrate some consideration of the potential relevance to UK strategic priorities.
- Low scoring proposals will demonstrate little or no consideration of the potential relevance to UK strategy, and little reference to UK Space Agency priorities, UKRI priorities or NSS aims.

**Value for Money (10%):** Considers the strength of the science return, economic opportunities and benefit to UK industry for investment when compared to overall cost.

- Highest scoring proposals will demonstrate they are likely to deliver strong science results that provide economic benefits in UK priority strategic areas, relative to overall cost of the project. Lowest scoring proposals will have relatively high overall costs, but unlikely to deliver strong science results that provide economic benefits in UK priority strategic areas.

**Education and Outreach (5%):** Considers the strength and feasibility of the plan for disseminating the benefits of the project to the public, including reach, accessibility, and diversity considerations.

- Highest scoring projects will have strong opportunities that are implementable within the overall project plan, which demonstrate an understanding of the issues facing the UK space sector and the value of space outreach.
- Low scoring projects will have weak or limited plans, with poor consideration for audiences.

**Score will not be the only factor in selection.**

UK Space Agency reserves the right to apply a portfolio approach for certain competitions. The portfolio will be spread across a range of:

- Scope areas/ Type of experiment
- Capacity constraints for ISS enabling facilities
- Project durations
- Project costs, including demonstrating value for money
- This is to fit the spend profile and practical constraints of the competition. It will make sure that funds are allocated across the strategic areas identified in the scope of the competition and gives due consideration to Mission limitations. Successful applications are all required to meet a quality threshold. The outcomes of the Technology Demonstrator call may inform the portfolio and vice versa.

A summary of the assessment process is below:

- only proposals received by the closing time and date will be considered.
- initial sift of proposals will remove any proposals which do not meet the eligibility criteria.

- eligible proposals will be assessed by reviewers to be scored against assessment criteria.
- a moderation panel will follow to ensure consistency in marking.
- a scored and ranked list of fundable proposals will be generated. This will inform the portfolio selection panel that will determine the projects to be funded.
- if needed, clarifications will be sought from organisations.
- all applicants will be advised of the outcome.
- due diligence will be conducted throughout the call process and project duration. If due diligence results in irreconcilable differences, the grant will not be placed.

## 10. Grant Call Additional Guidance

### 10.1. Organisation Eligibility

There are a series of requirements for eligibility to receive grant funding:

- Grant Recipients must demonstrate the ability to effectively manage a project
- Grant Recipients must have a UK bank account and all grant payments will be made in UK sterling (as per grant funding agreement)
- All project members must have in place and provide evidence of appropriate anti-bribery and anti-corruption policies
- All project members must provide evidence of a process for declaring and managing conflicts of interest
- All project members must be able to provide evidence that they are GDPR compliant
- Projects cannot work in areas that are in active conflict and any travel to overseas must comply with FCDO recommendations
- Projects must pass due diligence checks on company viability (financial standing assessment, governance, conflicts of interest, technical expertise)
- Formal teaming, or equivalent agreements between project partners must be in place within 15 GFA days of grant signature

Projects must comply with the rules stated in this guidance document.

### 10.2. Guidelines for Projects

#### **Cost Recovery**

The funds from Grant funding are on a **cost recovery basis only**. Grants are solely intended to cover the cost of delivering the agreed activity or goal. Any surplus funds not spent will be lost to the project unless there are alternative arrangements agreed.

Grantees cannot receive any funding from other grants/contracts to undertake the same activities.

Grant funding cannot be rolled over between financial years without explicit consent from UK Space Agency.

### 10.3. Finance Policy

All partners must use a separate, project-specific, bank account or project accounting code for project funds to enable a clear audit trail.

### **Invoices**

UKSA will only pay on actuals therefore we expect invoices may differ from forecasts. Should actual costs incurred be greater than the value of the milestone value, these costs will be borne by the Grant Recipient, unless the additional expenditure has been agreed with the UK Space Agency ahead of the costs being incurred and a Grant Change Notice (GCN) executed.

### **Staff Costs**

Staff costs must be calculated on a cost recovery basis only and broken down by pay costs and overheads separately.

### **Pay Costs**

Pay costs are calculated based on your PAYE records. They should include gross salary, employer National Insurance (NI) contributions and employer pension contributions. Pay costs must **not** include:

- Any profit margins
- Commercial charge-out rates
- Allowances for bonuses and benefits in kind
- Business development
- Travel and Subsistence

These pay rates will be subject to checks during the negotiation stage by internal or external teams to ensure that day rates reflect actual costs. High payroll costs will be challenged and evidence (such as pay slips, etc.) must be provided to justify that the rate is on a cost recovery basis only.

When making grant claims against labour costs, actual costs claimed must be supported with timesheets of those individuals who have worked on the project.

In the budget breakdown, you are asked to provide a pay cost per day. Using actual gross monthly payroll costs, please assume 260 working days in the year, less annual leave and public holiday entitlements.

## **10.4. Overheads**

We understand that organisations calculate overheads in different ways.

This section offers 3 options for overhead costs:

1. No overheads. You can select this option if you are not incurring or claiming grant for your overheads.
2. The 20% of labour costs option allows you to claim 20% of your labour costs as overhead. This includes both direct and indirect overhead. Selecting this option allows us to review a successful grant application much faster as no further documentation is needed from you.
3. The calculate overheads option asks you to complete calculations for claiming direct and indirect overheads. Any value claimed under this method will need to be reviewed by our project finance team if your application is successful. This is so we can assess the appropriateness of the overhead value you are claiming.

Full overhead recovery or full absorption costing is not eligible.

Please note that once the overhead is calculated and approved it cannot be exceeded at any time throughout the project life.

For option 3 you must complete the overhead calculation spreadsheet and return with your grant submission.

The spreadsheet has 2 sections to fill:

- Indirect (administration) overheads
- Direct overheads

Once each section is completed the 'Total overheads' will calculate your total amount, for review by UKSA.

### Indirect (Administration) Overhead

Selecting the indirect (administration) overheads link will take you to a template you'll need to complete to calculate these costs.

We class indirect overheads as those costs associated with back-office functions (such as finance, HR, administration staff) whose primary function is to support the running of a business enterprise. Typically, these costs are not directly related to a particular product or service production.

Indirect overhead costs are eligible for inclusion if they are incurred directly as a result of undertaking the project. They must be additional, which means over and above your business-as-usual costs. Requests for higher than 20% overheads that cannot clearly demonstrate the additional resource specifically due to the grant being undertaken will be rejected.

Where you have already identified specific 'indirect' individuals working directly on the project, these should have been captured in the labour costs (section) together with their attributable overhead.

We have provided cost categories in the template. The table below provides our definition for each category.

Cost Category	Definition
Board and senior management	The proportion of salary costs (including employer's NI) of the board and senior management of the company. This should be where they are engaged in strategic or administrative tasks. Do not include those working directly on the project or who are customer facing or operational.
Administrative staff	The salary costs (including employer's NI) of main administrative staff, such as receptionists and central administration. Do not include administrative staff employed to support sales, marketing, account management and profit generating departments.
Human resources staff	The salary costs (including employer's NI) of human resource staff.
Employed estates staff	The salary costs (including employer's NI) of employed cleaning, maintenance, security and other estates staff.
Finance department staff	The salary costs (including employer's NI) of main finance department staff, such as payroll, accounts payable and receivable. Do not include staff employed to support sales, marketing or account management activities.
Administrative support	This should include fees paid for the provision of temporary staff in administration or support services as listed above. Do not include any staff that are operational, such

temporary/agency staff costs	as marketing, sales, engineering, quality assurance, research and development and supply chain.
General office IT services	Include general IT services used across the whole organisation. Do not include IT costs where they relate purely to non-eligible staff or manufacturing, production or fee earning activities.
General postage	Include postage and courier expenses for general administration needs. Do not include product delivery or any postage costs incurred through promotion, sales, marketing customer relationship or accounts management.
Office supplies, printing and stationery costs	General office stationery and supplies such as paper, business cards, corporate stationery, office equipment for support/admin staff listed above. Do not include specific costs associated with sales, marketing, product delivery, product literature or reports.
Security and safety costs	Include costs associated with site and staff safety and security including signage and health and safety costs.
Building maintenance: administration office facilities only	Include general repair and maintenance costs of administration facilities. Do not include repair and maintenance of manufacturing/production facilities and exceptional items such as new works or extensions which are not eligible for inclusion in this section.
Building rental: administration office facilities only	Where office space is leased include the rental costs. Do not include rental costs relating to manufacturing/production facilities and the cost of any deposits or penalties.
Contracted site services: administration office facilities only	Costs of contracted services relating to administration facilities such as cleaning of offices. Do not include contracted service costs related to manufacturing/production facilities.
Site property taxes: administration offices facilities only	Property taxes and charges relating to office space. Do not include manufacturing/production facility property taxes and charges.
Utilities: administration office facilities only	Electricity, gas, water, waste disposal, telecoms costs relating to administration office facilities.

The following is a step-by-step guide to help you fill in the relevant details to make your costs claim for indirect overhead.

### Column A

Starting with your latest set of audited accounts please input your details against the relevant cost category in column A. If you are a new company or this information is unavailable, please use internal management accounts or forecast data.

Note that for the administration support staff costs section, the costs included here must be based upon PAYE (gross salary, NI, company pension contribution, life insurance). They should exclude discretionary package costs such as bonuses, awards, PRP and dividends. In addition please exclude

any members working directly on the project who are customer facing or those engaged in operational/production areas.

#### **Column B**

In this column you should detail the proportion of the costs outlined in column A that represent core administration activity. You should follow the definitions and eligibility criteria outlined in the cost categories table above. You can use a percentage.

#### **Column C**

In column C please state what percentage of these costs you would assess as being additional and directly attributable administration activity to the project you are undertaking. By additional we mean over and above business as usual and specific to the Grant.

#### **Column D**

Based upon the details you've given in the previous columns, column D will automatically calculate the costs you've stated as being attributable to this project.

#### **Column E**

In column E you will need to provide some description of the cost constituents.

Once you have filled in this data you will see a percentage calculation (column F). This calculates what you consider as being eligible indirect overhead costs for your project (D) as a proportion of the annual audited figures (A). To save you time we use this calculated percentage and apply it to the remainder cost categories you have completed.

Any administration costs that are ineligible in this section, but which directly relate to the project (for example based on invoices), should be claimed as direct costs within other sections of the finance form.

Completion of the indirect overheads template will calculate an annual total which will be proportioned for the length of time you are working on the project. You will see a per annum, per month and a per project cost. The per project costs will form your total indirect overheads as a monetary value.

Once you have filled out your indirect overheads information, choose the 'return to the overheads section' to take you back to the main overheads section. Here you will see a summary of your indirect overhead.

#### **Direct Overhead**

Selecting the direct overheads link will take you to a template you'll need to complete to calculate these costs.

We understand that in undertaking a project you may incur associated costs with those staff working directly on the project. We refer to these as direct overheads. Typical costs in this area could include direct staff provision of laptops (non-capital only), desks, office (such as occupancy, facilities and utilities) and IT infrastructure and systems. This section is provided in free format for you to list out such costs.

Direct overhead costs must be directly attributable to the project you are undertaking and should not represent a full recovery methodology inclusive of redundant, spare capacity time or cost.

You should detail the costs and include a description of each item together with the methodology or basis of apportionment used. This should include the calculations that support the claimable costs. This

will help us to validate these costs if your project is successful. If your costs have been subject to an independent audit verification we may ask you to provide this report to support our financial eligibility reviews.

Please note that costs associated with laboratories or workshops should be included within the other costs section of the application form.

Once you have completed the direct overhead you should select 'return to the overheads section'. You will return to the main overhead section where you will see a summary of your overhead claim for both direct and indirect overheads.

## **10.5. VAT Rules**

Grant funding is outside the scope of VAT so you cannot charge output VAT on top of your submitted costs. However, non-recoverable input VAT costs incurred in delivery of the Grant can be classed as eligible expenditure. The UK Space Agency reserves the right to request evidence that these costs are non-recoverable.

## **10.6. Eligible and Ineligible Expenditure**

Subsidies under this category can only be used to fund specified costs (known as eligible costs). Any costs that are not listed below may not be funded using a subsidy given under this Streamlined Route category.

The eligible costs for all projects in the RD&I category shall be:

- personnel costs; researchers, technicians and other supporting staff to the extent employed on the project.
- costs of equipment and instruments, to the extent employed on the project.
- costs of buildings and land, to the extent and for the duration period used for the project.
- costs of conducting research and of external consultancy and contractual research or other knowledge assets, including patents bought or licensed from outside sources.
- any other project operating costs and project overheads; including costs of materials, supplies and similar products, incurred directly as a result of the project.

The following costs are ineligible:

- Payment that supports for lobbying or activity intended to influence or attempt to influence Parliament, Government or political parties, or attempting to influence the awarding or renewal of contracts and grants, or attempting to influence legislative or regulatory action;
- Using grant funding to petition for additional funding;
- Input VAT reclaimable by the Grant Recipient from HMRC;
- Payments for activities of a political or exclusively religious nature;
- Goods or services that the Grant Recipient has a statutory duty to provide;
- Payments reimbursed or to be reimbursed by other public or private sector grants
- Contributions in kind (i.e. a contribution in goods or services, as opposed to money);
- Depreciation, amortisation or impairment of fixed assets owned by the Grant Recipient;
- The acquisition or improvement of fixed assets by the Grant Recipient (unless the grant is explicitly for capital use – this will be stipulated in the Grant Offer Letter);
- Interest payments (including service charge payments for finance leases);
- Gifts to individuals;
- Entertaining (entertaining for this purpose means anything that would be a taxable benefit to the person being entertained, according to current UK tax regulations);

- Statutory fines, criminal fines or penalties; or liabilities incurred before the issue of this funding agreement unless agreed in writing by UK Space Agency;
- Employee paid benefits and bonuses;
- Alcohol.

### **10.7. Travel and Subsistence**

The following outlines the guidelines for travel and subsistence costs. Value for money must always be considered. If for any reason the set limits cannot be adhered to (e.g. to accommodate a reasonable adjustment), you must seek prior written approval from UK Space Agency. No claims for alcohol will be accepted.

UK Space Agency reserves the right to not settle claims which have breached these guidelines.

**All expenditure must be supported by actual, itemised receipts.**

Limits:

- Accommodation: £140 per night
- Breakfast: £5
- Lunch: £5
- Dinner: £15

Travel:

- All travel claimed must be using Economy rates.
- Tolls, Ferry Costs, Parking and congestion charge: Receipted costs for ferries, and tolls bridges and roads unavoidably incurred during your business journey may be claimed. Reasonable parking charges may be claimed. Receipted congestion charges unavoidably incurred on your business journey may be claimed.

### **10.8. Grant Funding Agreement**

The grant funding agreement template is included as a separate document. Applicants must sign up to the terms as set out in the grant funding agreement.

No material changes to the terms will be considered. Minor changes may be considered if an applicant can demonstrate that agreeing to the provision within the Grant Funding Agreement would result in the applicant breaching its statutory or regulatory obligations. Grant applicants wishing to propose changes should not make changes directly to templates, but engage with the call lead and advice will be provided.

### **10.9. Grant Recipient Code of Conduct**

All organisations in receipt of grant funding must abide by the UK government Code of Conduct for Grant Recipients:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/754555/2018-11-06\\_Code\\_of\\_Conduct\\_for\\_Grant\\_Recipients.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/754555/2018-11-06_Code_of_Conduct_for_Grant_Recipients.pdf)

### **10.10. Annual Audit of Project Costs (for Grant awards of £250k and over only)**

All projects will be subject to an external annual audit to ensure that costs claimed from the grant funding have been expensed on agreed project related expenditure and comply to UK Space Agency grant funding policies (e.g. match funding). The auditor will be appointed by UK Space Agency. All subcontractors and partners must provide access to project relevant expenditure. Therefore, Grant Recipients must maintain, and be able to provide upon request, any supporting evidenced as deemed necessary, such as:

- Timesheets (prime and, where applicable, partners)
- Staff costs (contractors)
- All receipts (including T&S)
- All partner and subcontractor invoices
- Breakdown of overhead costs
- Breakdown of capital usage (e.g. licence, data costs etc)

The UK Space Agency reserves the right to conduct ad-hoc audits throughout the life of the project.

### **10.11. Due Diligence**

UKSA will carry out due diligence on grant applications as required using internal and, where necessary, external subject matter experts. The scope and degree of due diligence will be determined by the value, nature and complexity of the grant scheme. All applications will be subject to basic checks such as credit reports and Companies House checks.

Additional pre-award due diligence may include, but is not limited to:

- Technical assessment of the proposed project: including technical viability and sustainability;
- Financial assessment: organisation financial standing/health, assessment of project costs, aid intensity values and match funding contributions;
- Economic impact / VFM assessment
- Commercial: viability and / or commercial sustainability of the proposed solution, market position, demand and / or interest in technology, terms of the grant funding agreement; and/or
- Programmatic: alignment to aims and objectives of the programme, programme plan which demonstrates the project can be delivered within the funding period and the critical path, risks and issues, details on project partners and / or subcontractors.

Post-award due diligence may include, but if not limited to:

- Technical assessment of milestone deliverables against acceptance criteria to allow milestone payments to be released;
- Financial: assessment of expenditure for each milestone payment and reporting on planned costs, follow up review of financial standing/health if it is a multi-year project
- Commercial: change management including any variations to time, cost, scope, or GFA terms; review of milestone deliverables as required;
- Programmatic: project progress and impacts of any delays, risk assessment and mitigation activity; and
- End of project review: Has the technical and economic value been realised? Lessons learned and continuous improvement.
- UKSA commissioned and funded financial audit of Grant Recipient, and if applicable project partner, costs (for Grants of 250k and over only).

Grant Applicants who opt to work with project partners, companies involved in delivery of the project under a flow down agreement rather than a subcontractor, will assume all responsibility for partner due diligence.

Applicants will need to demonstrate they have carried out a sufficient level of due diligence with regard to their proposed project partners and subcontractors. Applicants will need to demonstrate they have carried out minimum checks at proposal stage, which may require further scrutiny if the proposal is to be funded.

To meet this requirement, applicants can provide evidence of due diligence carried out supported by the resulting information or submit a partner reasonable assurance statement. The evidence should be consistent with the checks that we would conduct on our Grant Recipients, for examples, financial standing, technical ability and scrutiny of the breakdown of costs. Any costs associated with project partner due diligence is considered a bidding cost and is to be borne by the applicant.

Applicants must provide evidence that they, and project partners have in place of appropriate anti-bribery and anti-corruption internal policies, and a process for declaring and managing conflicts of interest.

## **10.12. North Star Metric**

### **What is the North Star Metric?**

The North Star Metric is a quantitative metric which measure the level of revenue and investment in the UK Space Sector which can be attributed to UKSA support. Data is gathered as an agreed requirement of UKSA grants and contracts from the recipients of those grants and contracts.

### **Why is this data being collected?**

The UK Space Agency works to ensure that our investment in space brings about real benefit to the UK and its people.

Consistent monitoring and evaluation of our programmes is vital so we understand how well we are delivering the UKSA's objectives. This in turn helps us to ensure we are delivering the National Space Strategy, and informs how we prioritise our resource, select the projects we invest in, and make the case for future public spending on space.

We therefore require, as a condition of funding, that all recipients report the benefits they receive as a result.

The data allows the agency to show the benefits of the UK Space Sector and UKSA spending, these benefits justify UKSA spending.

### **What data will be collected?**

- Reporting will primarily involve four key elements:
- Total income
- Total Internal Investment
- Total Private Investment
- Additional detail on funding sources as appropriate
- Any Additional Benefits you wish to Report

This information will be collected via a simple excel spreadsheet. The template is available alongside the other call documents.

Please note that data will not be shared with other companies and that it will be held securely in an anonymised form so that you cannot be directly identified.

### **When will data be submitted?**

This information will only be required if the proposal is successful (see North Star Metric (Excel) spread sheet).

Grant number	Delivery priority (to be filled out by UKSA programme manager)	Quarter	Total funding value (£)	Amount of match funding provided as a condition of UKSA funding (total value £)	Additional revenue generated from goods and services as a result of UKSA support (total value £)	Private investment generated as a result of UKSA support (total value £)	Source of Additional Investment: Foreign/Domestic	Internal Investment of funds made as a result of UKSA support (total value £)	Additional jobs created as a result of funding received.	Has this programme received any other support from the UK Space Agency?	Has this Grant or Contract had an additional impact on investment which cannot be quantified?

Any Additional benefits may also be reported through open text response.

#### How will the data be collected?

When beginning the grant or contract recipients will be asked to provide name and contact details of the person in your organisation who will be responsible for providing this information.

The data is to be reported at regular grant or contract management meetings on no less than every 6 months from the start of the activity covered by this agreement.

At the end of the grant or contract period the grant manager will decide a reasonable date with the grant or contract recipient at which time further data collection will be reasonable. Data will be required for at least 5 years after the completion of the activity covered by this agreement.

Where the length of benefit realisation would be longer than 5 years, the UKSA may require an extended reporting period. This is to ensure that we are capturing the full benefits of an activity that has a long time period before those benefits are realised. Where this is the case the UKSA will agree with grant recipients beforehand at the time at which a further request for information is sensible.

#### How will data privacy be maintained?

The information provided will only be used by the UKSA and not shared with any other parties. Aggregate information may be presented more widely but this will be fully anonymised and not be attributable to any individual organisation.

In addition, this information is being used to assess the Agency's impact on the space sector and is not intended to be used as a way to evaluate how the grant is being managed.

#### Definitions of the data to be collected

The below table contains definitions for the data we are looking to collect. Information should be reported both on financial information from the grant or recipients own company but also, if know, other companies who may have benefited from the grant or contract for example spinout companies that have been able to take advantage of a new technological development.

Direct benefits should always be reported. Follow-on or spillover benefits should also be reported where there is strong evidence that the spillover benefit would not have occurred in the absence of UKSA funding and is attributable to the grant or contract.

Term	Definition
Private Investment	Money invested by companies, individuals, or financial organisations through the following vehicles: equity, grant, prize, debt or alternative finance sources – excluding funding provided by UKSA directly or via the European Space Agency. The source of the investment can be either foreign or domestic.
Internal Investment	Investment within a company, or from a parent company to its subsidiary, to cover R&D, capital expenditures and other non-capital expenditures such development of intellectual property.
Total Income	Additional Income generated from creation of goods and services, as a

result of the specified grant or contract. In the longer term this may also include income generated from royalties and licenses.

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### **Attribution to UKSA support**

Data should only be reported where it could be reasonably stated that the revenue and/or investment in question would not have occurred without UKSA's funding. Where the revenue and/or investment may have only been partially realised in the absence of UKSA's funding, best efforts should be made to estimate the proportion of contract revenue and/or investment which can have been said to have occurred as a result.

### **Examples of information that should be reported**

#### *Private Investment*

- Equity investment from a venture capital fund which can be attributed to the development of a new technology funded by the grant or programme
- Awarding of a grant from non-government organisations to further develop an idea which was initially funded by the grant or contract
- Foreign direct investment that can be attributed to a company experiencing growth as a direct result of receiving the UKSA grant or contract

#### *Internal Investment*

- A parent company diverting funds toward the company to aid in the delivery of the programme originated by the grant or contract
- The purchase of large capital equipment to further research initially aided by the grant or contract
- Investment of R&D funds within the company to exploit an idea initially proposed as part of the grant or contract programme

#### *Total Income*

- Direct sales of any good or services which have been developed by grant or contract funding
- Income of spinout companies which have been established using a technology developed by the grant or contract funding
- Total Income of sub-sectors of the space market which have been newly developed as a result of the grant or contract funding
- Partial attribution of the revenue received from a future government contract which would not have been won without the development of a technology developed as part of the grant or contract programme

#### *Additional Impact on Investment that cannot be quantified*

- A qualitative description of the investment benefit generated from grants which have a negligible direct impact on investment, but these grants are critical to complement company technology strategies
- A description of how the human capital improvements brought about by the grant or contract would lead to a more highly skilled workforce attracting investment in the UK Space industry from foreign investors.

- An assessment of how a technology developed by the grant has led to wider developments in the technological ecosystem which have generated their own investments and revenue.

### Examples of information that should not be reported

#### *Private Investment*

- Grant funding received from the UK Space Agency – The Agency does not measure its grants success by the awarding of further grant in the future
- Full attribution of equity investment that can only be partially attributed to the grant or contract – If a grant or contract contributed to but is not the direct cause of receiving the investment then best efforts should be made to state the exact contribution of the grant or contract.

#### *Internal Investment*

- Match funding invested as a requirement of the grant – This information should be reported but in the separate field provided
- Funds redirect to divisions within organisations which in truth would have gone ahead without the grant or contract funding – If the grant or contract is part of a wider programme or division which receives additional funding this should only be counted if there is strong evidence these funds would not have been reallocated without the grant or contract being received

#### *Total Income*

- Grant or prize funding received from government or non-government organisations – This is considered private investment
- The Value of the grant or contract itself – This should be reported in the separate field provided

#### *Additional Impact on Investment that cannot be quantified*

- Qualitative assessment of benefits that can reasonably be quantified – This field is a compliment to the other information provided and not a replacement

If you have any specific questions on this requirement, please contact the UKSA programme manager or named UKSA contact.

## 11. National Security

The threat to space is real and coming increasingly closer to the UK space industry as attempted breaches have demonstrated. Everyone needs to protect assets and services from adversaries, incorporating Secure by Design principles as projects, processes and systems are developed. Demonstrating a commitment to security is critical to the ongoing success of any business. Ensuring secure, robust and recoverable services and services can provide a competitive advantage in the marketplace and avoids unnecessary costly retrofitting.

The UKSA works with the space industry to improve security and resilience to attack. In order for this to be achieved grant recipients must:

### **Stage 1:**

As part of the application process applicants must complete the National Security Questionnaire and return as part of the grant application.

Where there is a consortium of partners included on a project, the questionnaire should be completed in the name of the lead partner. Only those deemed successful at the grant stage will be engaged by the UKSA National Security team.

#### **Stage 2a:**

Apply for a free login for the UKSA security extranet (Resilience Direct- See the National Security annex for further guidance) to obtain security alerts and other communications; access guidance and other useful information tailored for the Space sector.

#### **Stage 2b:**

All successful grant recipients must:

- Undertake measures that are appropriate and proportionate for the purposes of identifying the risks of security compromises occurring.

Plans detailing how this will be achieved must be submitted to [resilience@ukspaceagency.gov.uk](mailto:resilience@ukspaceagency.gov.uk) by 1 month of grant commencement.

#### **Stage 3:**

All successful grant recipients must:

Undertake measures that are appropriate and proportionate for the purposes of:

- (a) reducing the risks of security compromises occurring; and
- (b) preparing for the occurrence of security compromises.

Mitigation, response and recovery plans must be submitted to [resilience@ukspaceagency.gov.uk](mailto:resilience@ukspaceagency.gov.uk) within 6 months of the Grant Funding Agreement being signed.

Plans should include an annex or separate plan (proportionate to the company/project size and level of risk) detailing specific activity planned in response to a cyber security attack.

#### **Contents of Plans**

The security questions within the questionnaire completed at the start of this funding provides a summary of what is expected within plans.

Other guidance can be found on the secure extranet as covered at stage 2a and <https://www.ncsc.gov.uk/>

Please contact [resilience@ukspaceagency.gov.uk](mailto:resilience@ukspaceagency.gov.uk) for any advice and assistance.

## **12. Project Monitoring and Reporting**

Following an award and completion of grant agreement formalities projects will be expected to start as soon as possible, and no later than June 2024. The UK Space Agency will assign a project coordinator to each Space Exploration project to provide oversight of the projects with the following methodology:

- The project coordinator will initiate each project via a kick-off meeting which should be accompanied by a short presentation on the project by the project team.

- The grant recipient will provide short progress reports to the coordinator, and the schedule for these will be agreed at the project kick-off meeting and are normally on a monthly basis.
- The grant recipient will schedule a quarterly review meeting with the coordinator.
- The grant recipient will provide milestone/deliverables within the proposal using the example template provided.
- The grant recipient will provide reporting on the progress of the project to evidence the milestone/deliverable has been met. On acceptance of the evidenced milestone/deliverable the grant recipient will be invited to provide an invoice detailing the spend against each budgetary category for that milestone/deliverable.
- At the end of the project an IPR free final report and an executive summary are to be provided to the UK Space Agency. The executive summary must not contain any confidential information, as this may be uploaded onto the UK Space Agency website. All other reports should be marked commercial in confidence where applicable.
- The grant recipient will also schedule a final review meeting with the coordinator at the appropriate time.

Axiom Space may attend meetings when required as per the needs of the project, as determined by UKSA. There may be a project final presentation day in which each of the project teams will be invited to present a summary of their work and achievements.

### **13. Confidentiality**

The procedure for handling and assessing the applications for project funding will be as follows:

- Completed applications must be submitted to the UK Space Agency at [SpaceExploration@ukspaceagency.gov.uk](mailto:SpaceExploration@ukspaceagency.gov.uk). All bids will be held in confidence.
- Once the call closing date has passed, electronic copies of all eligible documents will be distributed to the independent assessment panel members. UK Space Agency confidentiality rules will apply.
- For those bids not recommended by the panel for funding, documentation will be retained by the UK Space Agency for reference. The proposals will not be visible to any others, and the names of any unsuccessful bidders will not be published.
- Information submitted for those projects selected for funding will be retained by UK Space Agency but remain confidential.
- Summary information about the projects selected for funding may be published on the UK Space Agency website.

The UK Space Agency will monitor the funded project through project reports and the submission of project deliverables. The Agency requests that any confidential information is clearly marked *Commercial in Confidence*.

### **14. Flow Down Agreement**

Should an award be made, any project partners will be required to establish a Flow Down Agreement between its members and must be in place within 15 days of the grant signature. The Flow Down Agreement should include provisions regarding how the results of the work, including IPR and spinouts, will be exploited by the project partners.

## **15. Ownership of Intellectual Property**

Protection of any Intellectual Property (IP) rights on the project will remain the responsibility of the project participants. The UK Space Agency does not seek any ownership of project IP. Future ownership of any potential IPR should be dealt with as part of any Flow Down Agreement.

## ANNEX 1: Subsidy Control

### Subsidy Control Compliance

Subsidies under this call will be let under the streamlined scheme for [Research, Development & Innovation streamlined route](#), specifically category 2 for Industrial Research and Experimental Development projects. To ensure awards can be let in accordance with the scheme, the call guidance will identify the relevant intervention thresholds for each sub-category, eligible expenditure categories, and cumulation rules applicable to the scheme.

To ensure that awards can be made under the streamlined route, all applications will be assessed against the RD&I streamlined scheme eligibility.

### UKSA Subsidy Control Guidance for Grant Applicants

- 1) The UK Space Agency (UKSA) supports organisations to invest in research, development and innovation. The support we provide is consistent with the UK's international obligations and commitments to Subsidy Control (see further information at Annex A).
- 2) Before awarding subsidies, the UK Space Agency must ensure that the subsidy scheme meets the terms of the principles as determined in the [Subsidy Control Act 2022](#):

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 local or regional disadvantage, social difficulties, or distributional concerns ("the objective")
- subsidies should be proportionate to their specific policy objective 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
- Subsidies should be designed to achieve their specific policy objective while minimising any negative effects on competition or investment within the United Kingdom.

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

The intervention rates detailed in in Table 1 of ANNEX [1A](#) shall apply unless:

- a) the bidder seeks to claim exemption from having to make a contribution under the Minimal Financial Assistance Allowance (previously known as de-minimis under State Aid & Small Amounts of Financial Assistance under Trade & Co-operation Agreement) rules.
- b) the bidder is a research or public sector organisation or charity:

When referring to research organisations, UKSA uses the definition from the Framework for state aid for research and development and innovation which states:

“‘research and knowledge dissemination organisation’ or ‘research organisation’ means an entity (such as universities or research institutes, technology transfer agencies, innovation intermediaries, research-oriented physical or virtual collaborative entities), irrespective of its legal status (organised under public or private law) or way of financing, whose primary goal is to independently conduct fundamental research, industrial research or experimental development or to widely disseminate the results of such activities by way of teaching, publication or knowledge transfer. Where such entity also pursues economic activities, the financing, the costs, and the revenues of those economic activities must be accounted for separately. Undertakings that can exert a decisive influence upon such an entity, for example in the quality of shareholders or members, may not enjoy a preferential access to the results generated by it.”

Within UKSA, this means:

- universities – higher education institutions
- non-profit research and technology organisations (RTOs), including “catapults”.
- public sector organisations (PSOs)
- public sector research establishments (PSREs)
- research council institutes
- research organisations (ROs)
- charities.

This list is not comprehensive and is subject to change and exceptions.

Research organisations undertaking non-economic activity will be funded as follows:

- universities: 80% of full economic costs
- all other research organisations: 100% of eligible costs.

Research organisations should be non-profit distributing to qualify. They should explain how they will disseminate the output of their project research as outlined in the application.

Research organisations which are engaged in economic activity as part of the project will be treated as business enterprises for the purposes of funding

#### **Public sector organisation or charity**

Public sector organisations and charities can work with businesses to achieve innovation through knowledge, skills and resources. These organisations must not take part in any economic activity or gain economic benefit from a project. They can apply for 100% of funding for their eligible costs under the following conditions:

they are undertaking research (this may be experimental, theoretical or critical investigation work to gain knowledge, skills or understanding vital to the project)

they meet requirements for dissemination of their project results and they state in the application how they will do this they include their eligible costs for research purposes in the total research organisation involvement they make sure they are not applying for funding towards costs which are already being paid by the public purse such as labour and overheads.

### Third Sector

Third sector organisations are primarily voluntary and community, such as associations, self-help groups, mutuals and cooperatives. Third sector organisations can be non-funding partners in a project.

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 ANNEX A). Bidders will be expected to justify the category of work selected.

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:

<https://www.gov.uk/government/publications/complying-with-the-uks-international-obligations-on-subsidy-control-guidance-for-public-authorities>

## ANNEX 1A: Subsidy Control and State Aid

### Subsidy Control (and State aid where relevant)

UKSA supports 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 [BEIS \(Dept. for Business, Energy & Industrial Strategy\) guidance](#))
- 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 Subsidy Control Act 2022.

### What is a subsidy?

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

- Is given by a public authority. This can be at any level; central, devolved, regional or local government or a public body.
- 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.

- 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 DSIT 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](#)

More information on the principles of awarding subsidies can be found in the [BEIS guidance](#).

### Subsidy Control Categories and Intervention Thresholds

This award is being given under the streamlined scheme Research, Development and Innovation.

The following table summarises the maximum funding levels for projects and the maximum intervention thresholds allowable under UKSA grant calls. The categories provided align to the Streamlined Routes.

**Table 1: Intervention Rates**

Streamlined Scheme	Category	Total Funding	Large Enterprise	Medium Enterprise	Small Enterprise	Startups
Research Development & Innovation	Feasibility study	£3,000,000	50%	60%	70%	N/A
Research Development & Innovation	Industrial Research*	£3,000,000	50%	60%	70%	N/A
Research Development & Innovation	Experimental development projects*	£3,000,000	25%	35%	45%	N/A
Research Development & Innovation	Equipment and instruments	£500,000	N/A	50%	50%	N/A
Local growth	Support to SMEs for Business Development Projects	£400,000	N/A	15%	25%	95%

\* An uplift of 15% to the intervention rate on eligible costs may be authorised for effective collaborations:

*Between Enterprises, where at least one of the Enterprises is a SME, or.*

*Between an Enterprise and one of more research and knowledge dissemination organisation, which must have the right to publish its one research results.*

## **Minimum Financial Assistance and EU de Minimis Awards**

The Subsidy Control Act 2022 has provision relating to **Minimal Financial Assistance (MFA)**

For organisations applying under MFA, the total subsidy which can be given to each organisation is up to a maximum of £315,000 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.

## **Disclaimer**

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 UKSA is unable to award organisations that are considered to be ailing and insolvent companies. We will conduct financial viability and eligibility tests to confirm this is not the case following the application stage.

*If you see an error in this guidance email: [Commercial@ukspaceagency.gov.uk](mailto:Commercial@ukspaceagency.gov.uk)*

## **ANNEX 2: Q&A**

**1. Can I resubmit a proposal that was rejected in a previous call?**

Yes, you may re-submit your proposal which will then go through the independent evaluation process when being considered for funding. We recommend that any previous feedback is taken into consideration.

**2. Do the Private Venture funds have to be immediately available when applying for funding?**

Yes, the PV funding must have been agreed and secured at the time of applying for the grant so that the project can commence as soon as the grant agreement has been completed.

**3. Can the UK Space Agency provide advice about any type of collaboration/partnership programme that the Agency is promoting?**

The Agency does not promote any particular collaboration although collaboration in essence is encouraged in projects.

**4. Can a non-UK based organisation receive funding?**

The UK must lead the consortium. A non-UK based organisation cannot receive national funding as the primary focus of UK Space Agency is on the growth of the UK sector; therefore, any monies awarded cannot go outside the UK to a partner body. If the proposed non-UK capability is essential the work can be subcontracted out, however the proposal must demonstrate clearly that this resource is not available in the UK.

In such instances the subcontractor cannot be a partner to the project. However, if a non-UK entity wants to be a partner in the project that is acceptable. This can be facilitated by the non-UK entity organisation providing PV or capability as contribution-in-kind.

**5. What format will the grant agreement take for any funded proposals, and can I adapt this to suit my proposal?**

We have provided a copy of our standard grant funding agreement. This is the document that will be used as the formal mechanism for any successful bidders to receive grant funding. Applicants are required to accept the main terms of this grant funding agreement when submitting your application.

Applicants requesting changes to the agreement are required to submit a marked-up copy of the published grant funding agreement setting out the proposed variations, along with a justification for any amendment to the standard grant funding agreement terms. Please be aware that the UK Space Agency will only consider variations which are requested where the Applicant would be in breach of legal requirements or statutory regulations by complying with the clause, or series of clauses.

**6. Should we explicitly state the overhead rate attached to salary costs, or would you prefer it to be amalgamated into a combined salary/overhead cost for each staff position?**

The finance template includes notes on what information is required.

**7. Do labour costs relate only to staff on a PAYE payroll or would staff employed on short/long-term fixed contracts be eligible?**

Costs should be applied for any staff that will be part of the project team/work regardless of employment status within the organisation. However, any costs for project work done by sub-contractors must be declared as a separate cost to the project. Sub-contractors cannot be partners

to the project and justification in the proposal would need to be clearly stated as to the requirement for use of sub-contractors.

**8. Are referees required to be within the UK?**

Referees do not have to be UK specific but must be from recognised international organisations and/or from other known space institutions.

**9. Does the organisational background information apply only to the lead organisation?**

No. All proposals must include organisational background information for all those involved, therefore including those put forward in collaboration.

**10. Is there a difference between a partner and a sub-contractor?**

Yes. If you are collaborating with another organisation or company, then they are your project partner and will be included in your proposal as subject to PV contribution.

If you wish to sub-contract some work, then that company cannot be considered as a project partner as payment to them will be made from the award and they will therefore be included in the costs of the project.

**11. Would sub-contractors have any IP publication rights?**

If you sub-contract work this may not affect the IP publication rights of your company, but this is for the lead organisation to confirm.

**12. Does the maximum grant award offered include the PV contribution?**

The maximum grant is the award value the UK Space Agency will give to a successful proposal. However, to industrial organisations (e.g., SME/LE) and FEC to not-for-profit organisations/academia. Therefore, your equivalent PV contribution must match that criterion.

**13. Is an independent audit required of the total cost of the project?**

Confirmation is required that the Grant Recipient has expended the sums in respect of the period in which milestone payments have been claimed. For this purpose, a report must be completed and sent to the Grant Funder within 3 months of the end of the grant or annually, whichever is shorter.

## ANNEX 3: Proposals and Review Process

### Technical Milestones and Deliverables

The UK Space Agency expects the project to have a detailed timeline with milestones attached to certain phases of the project. Each milestone can act as a final critical review gate where it is determined if the project can progress to the next phase. Additional non-critical milestones can also be included if deemed necessary – please provide justification for each milestone included (or justification if any of the expected milestones below are not included).

To pass each milestone, documentation deliverables are expected to be provided to the review panel detailing the progress of the project. The indicative deliverables for each review should be detailed in the proposal – this can be revised as the project develops and new documentation can be included, or any redundant documents can be disregarded. Please also indicate the expected date of each review in the proposal.

The UK Space Agency would expect at least one requirements review and design review, and a final acceptance review as mandatory. A preliminary design review can also be conducted if deemed necessary or useful by the project team. The UK Space Agency highlights the possible need for qualification reviews for certain aspects of the experiment which should be addressed in the proposal as required. UKSA expects to see evidence of configuration control (inc. Ground/Engineering model status report and configuration), as well as documentation / requirements traceability (inc. requirements verification matrices, SVTL/CIDL etc).

Within each review gate, the UK Space Agency team will organise the review as per ECSS-M-ST-10-01C with tailoring as required.

- A review procedure will be made available detailing the review process and establish a formal definition of:
  - o review objectives
  - o data pack contents
  - o the pass/fail criteria
- The data pack will be delivered to the review team
- Review item discrepancies (RIDs) will be raised and delivered to the payload developer team
  - o It is expected to have multiple categories of RIDs, namely
    - Major – if the issue impacts an objective of the review
    - Minor – if the issue is considered part of normal work
    - Editorial – typos or clarifications in the documentation
  - o Each RID will have a suggested corrective action from the reviewer
- Responses to RIDs will be prepared and delivered to reviewers
  - o Reviewers will sign off on RID responses or raise for further discussion
- A co-location review meeting will be held to discuss unresolved RIDs, the next steps and to assess if the review team are happy to pass or fail the review

Some indicative milestones / review gates and data pack deliverables are provided – although there will be some tailoring expected, these can broadly compare with some ECSS phases as described in ECSS-M-ST-10C (B/C/D – earlier if required):

<b>(System) Requirements Review</b>	<b>(Critical) Design Review</b>	<b>Final Acceptance Review</b>
System/mission requirements	Detailed design	Certificate of conformance

document	documentation	
Experiment science requirements (ESR)	Design specification documentation	Verification documents (including requirements verification matrix)
Phase I safety data package	External interface control documents	Test reports
Risk register	Hazard and safety analysis	NCR/anomaly reports, deviations and waivers
	Updated risk register	Close-out photos
	Initial Verification Control Document (VCD)	Final VCD
	(M)AIT plan	Handling/storage requirements
	Development, Validation and Verification Plan	Operation (user) manual
	Quality assurance	Configuration item data list / as-built configuration list (CIDL/ABCL)
	Safety planning document	Reflight form (if required)
	Phase II safety data package	Cleanliness certificate
		Shipping documents and forms
		Phase III safety data package

## OCE Involvement and Support

The UK Space Agency's Office of the Chief Engineer (OCE) will support the Exploration team in providing technical oversight/support and will engage with the project team throughout the project lifecycle, including at monthly progress meetings. Within these progress meetings, The OCE will support tracking of actions with technical relevance within the project – and ensuring these can be answered, delivered and closed accordingly in a timely fashion. The OCE can support as a “critical friend” and provide ad-hoc technical expertise as needed.

Primarily OCE support will be through technical milestones, acting as technical reviewer. Some of the expectations from the UK Space Agency as part of the project milestones are detailed below.

## Requirements and Testing

System requirements should follow the ISO/IEC/IEEE 29148 standard of being: necessary, implementation independent, unambiguous, complete, singular, achievable, verifiable, and conforming. The requirements as a whole should be complete and consistent and feasible.

The tests should verify system requirements (either by inspection, test, analysis or demonstration).

Expected tests (where required) include but are not limited to vibration, shock, thermal, leak, vacuum etc.

The UK Space Agency expects to see traceability of requirements from the ESR and the ISS/Columbus applicable documents.