Advanced Research + Invention Agency ARIA

Enduring Atmospheric Platforms

Call for proposals

Date: 11 December 2025

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Advanced Research + Invention Agency ARIA

Call for Proposals - Summary

What Is ARIA? ARIA is an R&D funding agency created to unlock technological breakthroughs that benefit the UK and beyond. Created by an Act of Parliament, and sponsored by the Department for Science, Innovation, and Technology, we fund teams of scientists and engineers to pursue research at the edge of what is scientifically and technologically possible.

The Enduring Atmospheric Platforms Programme. Backed by at least £50m, the overarching goal of this programme is to provide a path to low cost, regionally scalable, high performance infrastructure for advanced communications and enable the anticipated £13 trillion to £20 trillion annual economic benefits of AI. This will be achieved through seeking a technological approach, agnostic to solution, that can reliably suspend and power communications hardware at the right place in the sky. Success will be measured by a single, galvanising demonstration: the continuous delivery of 300 W of power to a payload at altitude for a full week, while maintaining line-of-sight contact to a fixed ground point. Every project we fund must move us closer to achieving this galvanising demonstration.

Why this matters? This programme addresses the challenge of achieving ubiquitous, resilient connectivity by establishing a regionally scalable, high-performance alternative to orbital systems. Success enables low-cost, direct-to-device communications that current Low Earth Orbit (LEO) satellite constellations struggle to support practically, creating a UK-led, sovereign capability in advanced communications infrastructure.

What will we fund?

We will fund projects across three Technical Areas (TAs):

- **TA1: Enabling Technologies:** Focusing on game-changing technologies (e.g. power beaming, high density energy storage, low-cost long-lifetime skins for airships) that are so impactful, their development makes achieving the programme's goals comparatively easy.
- **TA2: System Integration + Testing:** Funding core system development, integration, and testing to achieve the primary performance metric, including developing techno-economic models for cost reduction.
- **TA3: Deployment and communications architecture planning:** A desktop exercise defining target product profiles, understanding the emerging capabilities of TA2, understanding potential customers' and their needs, evaluating what

communications and backhaul hardware could be deployed on the platforms to deliver a valuable service, understanding the challenges of integrating the hardware on the platforms, determining constellation sizes and deployment concepts, working out the economics of operations, and understanding legal and regulatory path for market translation.

Who should apply?

The programme is open to a wide range of individuals and organisations:

- **TA1**: Deep tech labs (academic & private) in fields like: aerospace, sensing, robotics, power beaming, weather modeling, aerodynamics modeling, advanced manufacturing
- **TA2** is for larger teams, primarily led by UAV manufacturers, engineering companies, and startups, but also established companies and universities, who can develop and test the full system.
- **TA3** is for small or large organisations or even individuals. It could include visionary technologists, think tanks, philanthropies, deep science venture capital firms, communications service providers, government agencies with good commercial intuition, and industry experts with experience in relevant applications (such as communications, aerial imagery, PNT, or other advanced sensor or photonics solutions).

We're interested in hearing from any combination of scientists and technologists - be it from Universities, research institutes, startups, established companies, individuals, or new spin-outs - who can meaningfully move the programme toward achieving its objective. Applicants can be based in the UK or abroad (see further information here).

How to apply? Concept papers, described in more detail here, are due 19 January.

Concept paper applications open	11 December 2025
FAQ & Lightning Talks Webinar	15 December 2025
Concept paper applications close	19 January 2026
Full proposals applications open	20 February 2026
Full proposals applications close	02 April 2026
Successful/Unsuccessful applicants notified	20 May 2026

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SECTION 1: Programme Thesis and Overview

This solicitation is derived from the programme thesis Enduring Atmospheric Platforms. It sits in the ARIA Opportunity Space: Scoping Our Planet. We strongly recommend reading both these documents, especially the **Enduring Atmospheric Platforms Thesis.**

Introduction

The overarching goal of this programme is to provide a path to low cost, regionally scalable, high performance infrastructure for advanced communications. This infrastructure will provide connectivity to enable the anticipated £13 trillion to £20 trillion annual economic benefits of AI. The programme has evolved since the initial 'Perpetual Flight' thesis – we've now pivoted to tightly focus on long-endurance communication platforms as the target application. We're also now open to a range of technological options to get there - not just harnessing atmospheric sources of energy.

Background

As demand for real-time data and ubiquitous connectivity grows, current communications infrastructure faces performance ceiling, dampening the realisation of massive social and economic returns:

+ Terrestrial infrastructure, such as fibre and cell towers, is prohibitively expensive to deploy and maintain outside population centres, despite achieving high performance locally.
+ Satellite constellations struggle with providing low cost, high performance direct-to-device links. Furthermore, LEO constellations are slow to deploy, immutable, and vulnerable to disruption. Their global scaling creates problematic dependencies on third party providers.

A new layer of infrastructure deployed on High Altitude Platform Systems (HAPS) could overcome these constraints. The proximity and local directability of HAPS delivers a performance advantage over satellite links.

However, existing HAPS approaches remain too limited to deliver a commercially scalable solution. In particular, they tend to:

+ Have excessively high costs, driven by aircraft amortization and low aircraft reuse rates
+ Need to avoid turbulence, as this puts the aircraft at risk
+ Have difficulty operating outside the tropics

+ Lighter than air systems struggle with directability and stationkeeping

A number of emerging technologies give rise to optimism that these limitations could be overcome, and commercially viable communications services could be delivered:

+ Advances in battery specific energy density
+ Rapid advances in drone autonomy, accompanied by progress in regulatory acceptance
+ Demonstration of power beaming
+ A new generation of AI-driven models can forecast weather at unprecedented resolution and update in minutes. They are approaching the ability to predict the location and strength of wind shear and lift, atmospheric energy sources this programme could exploit.
+ Multifunctional materials and manufacturing techniques that have promise to reduce aerobody size and weight, e.g. load bearing energy storage mechanisms.
+ Novel radio communications technologies like switch-mode direct-polar radio circuits require 5-10x less power and weigh 2-3x less than state of the art systems. Similarly, free-space optical (FSO) terminals are also making rapid progress.

The resulting deployment of this new, HAPS based atmospheric communications infrastructure will generate capabilities differentiated from today's offering:

+ Better Performance: HAPS enable higher throughput and lower latency, providing a path to commercially viable, high-data-rate D2D connectivity (10 Mbps or more), a service LEO struggles to reliably support. We assume that satellites' ability to deliver commercially viable direct-to-device connectivity will remain very limited (<100 kbps in realistic scenarios) for the foreseeable future.

+ Regional Scalability & Lower Cost: The cost of regional HAPS deployment could be significantly lower than terrestrial or LEO communications infrastructure. HAPS can be scaled incrementally, enabling fine-grained regional scaling. Manufacturing learning rates are expected to be steeper compared to satellites, driving down long-term costs.

+ Sovereignty & Resilience: HAPS infrastructure avoids the dependencies created by LEO scaling, offering a sovereign and more resilient alternative.

+ Sustainability: HAPS could offer a sustainable complement to the rapid growth of LEO constellations, mitigating the environmental impacts of rocket launches, space debris, and reentry.

If successful, the technology developed in this programme will stimulate significant follow-on investment, creating a transformative atmospheric digital infrastructure layer. The unlocked low-cost, low-energy connectivity could open a path to more prosperity globally and locally.

SECTION 2: Programme Objectives

Relative to the state of the art, this programme aims to increase platform reliability and decrease operating cost by orders of magnitude. It aims to overcome the blockers of commercial viability of atmospheric communications infrastructure that are detailed in the Background section. The overarching goal of this programme is to reduce the technical risk sufficiently to attract massive downstream investment. This will be achieved by identifying a technological pathway, agnostic to the specific means of staying aloft, that can reliably suspend and power communications hardware at the required altitude.

To address the connectivity problem, this programme is predicated on the premise that technical risk is concentrated in the airborne platform (achieving reliability, function, and low cost). Conversely, emerging communications technologies promise significant reductions in the Size, Weight, and Power (SWAP) of suitable payloads. The Programme Director has thus deferred solutioneering the communications architecture, assigning this planning task to the Creators of TA3.
The programme is built on the assumption that:

+ The combination of 20 kg payload capacity and 300 W sustained power defines the minimum viable capability required to enable a robust set of future communications solutions.
+ The required power threshold of 300 W, and the forward-looking plan for 3kW provision, lies significantly beyond the capability of state-of-the-art platforms, forcing applicants to fundamentally reimagine power generation.
+ Scaling up the platform's payload capacity beyond the 20 kg target is a reasonable future expectation, as initial development budgets often constrain aircraft size below their optimal aerodynamic ideals.

The total proposed budget for the Enduring Atmospheric Platforms programme is £50 million, allocated across three synergistic Technical Areas (TAs) and a programme partnership element. The majority of the funding is dedicated to TA1: Enabling Technologies (£6.1m) and TA2: System Integration & Testing (£37.7m).

All TAs will employ a phased down-selection model, allowing us to initially fund a broad portfolio of high-risk concepts and then concentrate investment on the most promising pathways as they mature. This core technical work is supported by TA3: Deployment and communications architecture planning (£3.1m) to ensure a clear path to real-world impact, and a dedicated £3.1 million partnership element to provide all creators with critical support, such as access to flight test sites and regulatory expertise.

SECTIONS 3: Technical Metrics

The progress of this programme will be measured using the **primary metric**. As the programme progresses, downselects will occur, informed by the **secondary and tertiary metrics** as determined by the programme team who will make use of panels **of experts and red teaming** workshops.

Primary metric: Power aloft

Distilled down to a single metric, this programme aims to demonstrate the delivery of **300 W to a payload within a region of interest in the sky** (see *Operating Altitude* and *Stationkeeping* below).

Applicants to the central programme effort (TA2) must present a plan to continuously do so for a full week, while maintaining station within line of sight of a fixed point on the ground. Progress throughout the programme will be measured in Wh delivered continuously in pursuit of the goal to deliver **300 W over one week (50.4 kWh)**, and a plausible plan to achieve delivery of **3 kW over one week (0.5 MWh)** in the future.

Fractionalised solutions (where the power is not supplied to a single monolithic payload, but rather to multiple of payloads on multiple platforms) are not a priori excluded, provided their techno-economics are competitive.

Secondary metric: Proxies for cost

For many historical efforts of HAPS platforms, costs were dominated by aircraft amortisation. This term, spread over limited endurance, typically significantly exceeded other operational costs. This suggests that the goal of low cost operations can be broken down into a solution that:

- Maximises **endurance within range** T_{WR}. High endurance can be achieved by a single or a constellation of aircraft, keeping in mind that the off-station fraction of a constellation will also drive cost.
    - Programme Target $T_{WR} > 1$ week

- Minimises the redeployment cost by maximising the **reuse rate** $R_{redeployment}$ = (recovered missions / total missions) .
    - Programme Target: $R_{redeployment} > 0.95$
- Maximises **payload fraction** $F_{payload}$ =(weight of payload / total weight of platform)
- Maximises the **utilisation fraction of a constellation** $F_{utilisation}$= (# of platforms within range / # of platforms deployed)
- **Minimises customization**, such that manufacturing drives rapid progression on the learning curve, lowering costs

In their proposals, teams must present a techno-economic analysis of their solution tracking these parameters, with a plan to achieve an gross hourly operating (including for aircraft amortization, maintenance, monitoring, and external power/fuel costs) cost below

Programme Target: C_{Gross}< £500 / hour

by the end of the programme. As they progress in the programme, TA2 Creator teams must update their models and show a compelling extrapolation to achieving **C_{Gross}< £100/h** in the future.

Aircraft costs are often driven by:

- Regulation & certification
- Low production volumes, and
- High reliability requirements

Applicants should understand how their approach bipasses these cost drivers, or at least mitigates their cost impact.

Tertiary metric: payload weight

TA2 Teams must present a plan to be able to support a payload weighing 20 kg.

Operating altitude

We assume the operating altitude to be above general and commercial aviation, yet within the atmosphere. Lower altitude solutions can be accepted provided they

- Provide a compelling rationale as to how they will integrate with air traffic, and
- Make economic sense accounting for their reduced slant range.

VLEO and other orbits are excluded.

Stationkeeping

We assume a system must fulfill a stationkeeping requirement of

- Maintaining line of sight connection to a fixed point on the ground; as individual aircraft or as a constellation,

- Not violate the boundaries of the segregated airspace made available for testing and demonstration, and
- Ability to do so in the geographic vicinity of the UK regardless of season, dealing with the weather conditions that may prevail.

Applicants whose solution does not comply with these requirements must present a compelling rationale explaining why their solution is worth pursuing.

Technical Areas of Focus

The programme's Technical Area (TA) efforts run in **parallel**, and their numbering (TA1, TA2, TA3) roughly reflects technology maturity levels. Applicants can apply for a single or several TAs.

Applicants to both TA1 and TA2 must present a path to achieving the programme's goals, identify the key technical blockers and bottlenecks to do so, and propose a workplan that solves the most difficult blocker first.

Collaboration between Creators is desired, both across TAs and within TAs. Collaboration will be fostered by programme incentives (see down-select requirements further down), all-hands Creator workshops, and other community building measures.

Technical Areas	**Key Tasks**	**Metrics of Success**
TA1 Enabling technologies	Develop game-changing enabling technologies that if developed, make the development of a full system comparatively low risk (e.g. advanced energy storage, power beaming, atmospheric harvesting, novel airframes)	TA1 Creators must propose a suitable metric to measure their success toward the programme's goal. Demonstrate strong buy-in from the organisations capable of integrating the full system, ideally a TA2 Creator. Create and maintain a document describing the technologies under development, targeting

		integration into TA2 efforts 26 months after kickoff. Document the target capabilities, interface requirements, and anticipated COGS (Cost of Goods Sold) at the integration date, as well as 3.5 years after kickoff. Downselection will be based on potential impact, success likelihood, and traction with TA2 Creators for integration in their platforms.
TA2 System integration and testing	Develop, integrate, test, and field demonstrate systems (airframes, power, control) that can sustain the target payload specifications.	<u>Primary Metric: Sustained power delivery.</u> Demonstrate the continuous delivery of power to a payload at altitude, while keeping station for a full week. + Target by programme completion: 300 W during 1 week + Future target: 3 kW during 1 week <u>Secondary and tertiary metrics</u>: Develop a techno-economic analysis, and refine it throughout the programme. Base it on measurable quantities (see examples) and show a credible path to achieving the targets. + Target by programme completion: C_{Gross}< £500 / hour

		+ Future target: C_{Gross}< £100 / hour Show a credible path to supporting a 20 kg payload.
TA3: Deployment and communications architecture planning	Design the architecture of a solution that exploits the developments of TA2 to deliver transformational capability. Manage the technical, regulatory, and commercial challenges to plan for deployment.	Downselection is based on the feasibility of commercialisation assuming the programme's technical goals are achieved. The decisions will be based on a combination of impact, feasibility, and RoI.

TA1: Enabling Technologies

TA1 is a set of ~8 projects, of which 1 - 3 are expected to mature into impactful technologies that can be integrated into TA2 to radically improve performance.

TA1 applicants will typically be small teams that have the skills and resources to solve the one (or more) most difficult blocker(s). Examples could be a TA1 applicant making the case for:

+ Harvesting of energy from gravity waves being the biggest blocker, and proposing an effort to verify the existence, predictability and exploitability of gravity waves.
+ Power beaming being the biggest blocker, that if solved makes the rest of the solution comparatively easy. This TA1 Applicant might propose an effort to fully solve the challenges of power beaming relevant to this application.
+ A novel, low-cost Lighter-Than-Air (LTA) airframe or material that solves the key reliability and station-keeping challenges, which have been the primary blockers for past LTA efforts.
+ Demonstrating ballistic or centrifugal ground launch techniques as an effective way to get the platforms to operating altitude
+ A combination of a high energy density storage solution and mass produced, high altitude capable multicopters, enabling cost efficient and reliable drone rotations.

TA1 Applicants must make a strong case that once these blockers are solved, the development of the full system will be comparatively low risk. A rule of thumb from the VC

world is that in order for a customer (in this case a TA2 Creator) to adopt a novel technology (in this case the TA1 technology), said technology must offer the customer at least a 10x performance advantage relative to their current solution in order to justify a switch to the new technology.

With respect to achieving this, TA1 Creators should describe which TA2 technology their approach would be applicable for, indicate their preferred TA2 approach, propose a suitable metric to measure their progress, and describe how success against this metric could be transformed into achievement of the programme goals. TA1 Applicants are encouraged to use the teaming platform and other opportunities to establish a dialog with TA2 Applicants who could carry out that translation, and estimate the cost and timeline to do so. TA1 applicants should use this information to strengthen their concept papers and proposals.

To be selected for funding, TA1 proposals will ideally have identified and received strong buy-in from the organisations capable of developing the full system once the blockers have been removed. TA1 Creators not able to demonstrate such buy-in and path to a full system will likely be eliminated by DS1 or DS2.

TA1 Creators must create and maintain a document describing their proposed technologies. This document should target an integration date 26 months after kickoff. It should document the target capabilities, interface requirements, and anticipated COGS (Cost of Goods Sold) at the integration date, as well as 3.5 years after kickoff. This table will form a part of proposals to TA1. TA1 Creators are expected to update and share the table with TA2 & TA3 Creators on a 6-monthly basis. This helps TA2 plan for adoption and integration.

Traction with TA2 Creators will impact down-selection of TA1 Projects: TA1 Creators whose technologies are experiencing ‘pull’ from TA2 Creators interested in integrating their enabling technology, have a lower probability of being eliminated in the down-selects. Strong ‘pull’ would be evidenced by TA2 Creators updating their planning (as part of their milestone package) to include time and resources for the integration of a TA1 technology, with the TA1 Creator focusing its resources on facilitating the integrating TA2 Creator’s success.

TA2: System integration and testing

TA2 will start with ~8 project teams. TA2 will have decision points at which down-selects DS1 and DS2 will reduce the number of funded teams to the most promising.

TA2 Applicants will typically be larger teams with the skills and resources to develop a system fulfilling the programme metrics and goals. In their proposal they shall identify which is the largest blocker to their success, and deliver a proof of concept overcoming that blocker before DS1.

Some of the blockers that have prevented wide scale commercial deployment of different types of state of the art HAPS are:

- Solar HAPS: Typically limited by endurance (especially at high latitudes) and cost (including high bill of materials, low reuse rates). These limitations appear unlikely to be overcome by improvements in photovoltaics and batteries alone.
- Balloons: Typically limited by controllability (station keeping, recovery) and endurance. These limitations appear unlikely to be overcome by the addition of off-the-shelf propulsion.
- Airships: Typically limited by cost (aircraft cost, endurance), and airspeed. These limitations appear unlikely to be overcome without breakthroughs in both aircraft design and materials.

TA2 proposals must provide a phased development plan that solves the biggest technical risks early in the programme, and tracks progress against the primary and secondary metrics described above. Within the duration of the programme, Creators are expected to achieve the

+ Primary metric: Demonstrate delivery of 300 W power to a payload in the sky, within line of sight of a fixed point on the ground, over the duration of one week (50.4 kWh), and a plausible plan to achieve delivery of 3 kW over one week (840 kWh) in the future.
+ Secondary and tertiary metrics: TA2 Creator teams must develop a techno-economic analysis, and refine it throughout the programme. This analysis should track the relevant variables listed in 'Proxies for Cost', and present a path to achieving a gross hourly operating cost of C_{Gross}< £500 / hour by the end of the programme, and a plan to achieve C_{Gross}< £100 / hour beyond. TA2 Creator teams must also present a plan to achieve a 20 kg payload weight.

A panel of experts and red-teaming efforts will use the secondary & tertiary metrics to inform downselect decisions.

TA2 teams are directed to plan for integration of novel technologies or tools developed under TA1 in later phases of the programme.

Driven by the assumption that making a newly designed uncrewed aerial vehicle (UAV) airworthy, and establishing efficient flight testing operations takes years, we are recommending that to the extent possible, TA2 teams plan to leverage an existing, proven airframe they can modify, along with access to suitable testing infrastructure and established processes for rapid flight testing. This approach appears better suited for achieving disruptive breakthroughs given the short, 3.5-year timeline of the programme. Exceptions may be considered if the described concerns are addressed in a compelling manner: Such teams should clearly demonstrate they have the expertise to design aircraft and bring them to airworthiness, including establishing suitable flight testing and improvement campaigns. They should present a compelling plan that aligns with the programme's goals and timing.

The 'adapt existing' rather than 'design from scratch' approach above applies also to modelling and simulation tools to the extent these are important. Such a model could further accompany the project's development plans up to achievement of the programme goals and beyond.

Teams are welcome to propose testing and demonstration environments of their choice, keeping in mind that test & evaluation protocols will be based on conditions typically encountered in the UK's geographic vicinity. Applicants should provide separate costing and describe their needs with respect to:

+ drone test ranges,
+ segregated airspace for testing,
+ radar and other means to track aircraft during test flights,
+ consulting for airworthiness approval,
+ approval costs,
+ and the like.

Applicants should draft their assumptions for how much of these services will be required in what time frames, and preferred suppliers for them. This information should already be included in Concept Papers. This will allow the Programme Team to contract such service providers as Programme Partners.

This thesis lays out the goals of the programme for operations in the middle atmosphere. The programme is open to other altitude ranges, but Creators must argue a compelling case that programme metrics can still be achieved.

The maturity at the end of the programme is expected to be sufficiently high for further pursuit without ARIA funding (be that through commercial viability, the ability to raise venture capital or other forms of funding, or a maturity sufficiently high to become a government-funded programme).

Smaller teams lacking some capabilities required to address the requirements of the TA are encouraged to collaborate to bridge these gaps. The programme team is open to helping facilitate such collaborations.

Creator teams that do not pass down-select may be considered for continued funding under TA1, providing they have a key technology that they are willing to license to other TA2 Creator teams.

The final testing campaign in Month 37 will allow the TA2 Creators to demonstrate their systems' ability to achieve the target of delivering 300 W (or a distributed equivalent) to a payload while keeping station. This demonstration will gauge the programme's success and position the Creators for third party funding beyond the programme.

TA3: Deployment and communications architecture planning

TA3 will start with a portfolio of ~5 teams. TA3 will have decision points at which down-selects will reduce the number of funded teams to the most promising. The target portfolio size at the end of the programme is 2-3.

Viewing this programme's target capability as impactful as satellite technology, TA3 will primarily plan for the deployment of enabled communications architectures and applications for the world of 2030 and beyond.

TA3 teams are expected to design the architecture of a solution that exploits the developments of this programme to deliver transformational capability. To do so, they must understand the emerging capabilities of TA2, understand potential customers' and their needs, evaluate what communications and backhaul hardware could be deployed on the platforms to deliver a valuable service, understand the challenges of integrating the

hardware on the platforms, determine constellation sizes and deployment concepts, and work out the economics of operations.

Secondarily, TA3 teams are asked to anticipate the intercept of the outcomes of this programme with the trajectories of novel emerging technologies beyond communications that could be combined in a disruptively valuable manner.
Over the course of the programme, TA3 teams are expected to study the technical and commercial viability of their vision, and work with TA2 teams to understand the gaps and blockers standing in the way of achievement. TA3 will also have decision points at which downselects will reduce the number of funded teams to the most promising.

TA3 teams will serve as translation partners. Unlike TA1 and TA2 efforts, which involve hardware and software development, TA3 is a desktop exercise in technology foresight, impact determination, solution architecture, working with regulatory bodies to create novel solutions, and business strategy. TA3 teams will establish target product profiles, define constellation sizes for the foreseen missions, and explore the legal and regulatory framework required to translate the technology developments and scientific understanding unlocked in TA1 and TA2 into practical deployment. They will coordinate with regulators like the CAA and Ofcom to do so.

TA3 teams may be large or small organisations or even individuals, enlisting the support of subject matter experts to fill critical skill gaps. Teams could include technology developers, service providers or industry experts with experience in relevant applications such as communications solutions, aerial imagery, PNT or other advanced sensor or photonics solutions.

TA2 & TA3 teams should feel a strong incentive to collaborate, as their successful collaboration could unlock a new and untapped future market for the technology developed by this programme. TA3 Applicants are encouraged to use the teaming platform and other opportunities to establish a dialog with potential TA2 Applicants to inform their Concept Papers and Proposals.

Programme Partners

In parallel with the creator funding above, we will contract with 1 - 3 partners who will act as critical enablers for the programme. These partners will provide Creators (in particular TA2 Creators) with essential support services, such as access to UK flight test sites and regulatory expertise, proactively derisking one of the programme's biggest operational challenges. **We**

are not requesting standalone proposals from potential programme partners as part of this funding call see more information here.

SECTION 4: What are we looking for/what are we not looking for

This programme is open to a broad range of approaches to satisfy the programme's goal of persistent, low cost atmospheric platforms that can hold station while carrying and powering a payload.

Pathways that could suspend and power a 20 kg payload drawing 300 W, while maintaining a line-of-sight connection to a fixed point on the ground could include

- Harvesting of atmospheric sources of energy,
- Tethered atmospheric platforms,
- Lighter than air vehicles,
- Variable buoyancy driven gliders,
- Solar powered aircraft,
- Ground powered aircraft rotations, possibly including automated refuelling/recharging,
- power beaming,
- Ballistically or centrifugally ground-launched systems,
- Aircraft exploiting unconventional approaches to remaining aloft, including membranes, aircraft comprised of an aggregation of smaller aircraft, aircraft exploiting the earth's electro-magnetic field, and aircraft exploiting photophoretic effects
- Well thought-through schemes to exploit 3rd party platforms of opportunity
- Hybrid approaches combining two or more of the above approaches

In order to be considered, proposals need to show radical differentiation from state of the art and a path to fulfil the programme success metrics. We strongly encourage proposals from teams that bridge traditionally disconnected fields, including aerospace engineering, advanced materials, energy generation, energy storage, and autonomy.

It is likely that many TA2 approaches will use an airframe that falls into one of the following categories, with subbullets listing possible enabling technologies that could help overcome current deficiencies

- Fixed wing aircraft
    - These might benefit from technologies that could solve
        - Energy collection and storage, including power beaming

        + Achieving very low sink rates without compromising structural robustness
        + Achieving high reuse rates and radically reduced cost
        + Weather and latitude agnostic operation, including launch & recovery
+ Lighter than air aircraft
    + These might benefit from technologies that could solve
        + Stationkeeping, especially for balloons
        + Weather and latitude agnostic operation, including launch & recovery
        + Achieving high endurance and high reuse rates
        + Low cost gas envelopes, especially for airships with integrated photovoltaics
+ High-altitude capable multicopters
    + These might benefit from technologies that could solve
        + Energy collection, storage, power beaming, and in-flight transfer capability, possibly to a persistent stationkeeping platform
        + Rapid and efficient ascent to high altitude and descent, the latter possibly recuperating energy
        + Weather and latitude agnostic operation, including launch & recovery

We are not looking to fund

- **Single-Condition capabilities**: Efforts unlikely to deliver more than a 'sunny day' capability that merely works under optimal conditions. The solution must demonstrate viability in real operating conditions typical to the UK.
- **Efforts predominantly using solar power to achieve endurance:** We will not fund efforts that rely primarily on incremental improvements to solar-battery endurance, as this area is extensively explored elsewhere. Our focus is on disruptive steps to sustain power when solar is unavailable or insufficient.
- **Outdated architectures**: Lighter-than-air vehicles where buoyancy is the sole principle of action, or airframes/technologies that are unlikely to fulfil programme targets, including the post-programme operational targets.
- **Incremental approaches**: We're looking for step-changes in capability, not incremental improvements of existing.
- **Orbital systems**: Orbiting systems, including air-breathing VLEO satellites, are out of scope.

SECTION 5: Programme Duration and Project Management

Duration of Programme

The programme will run for 3.5 years.

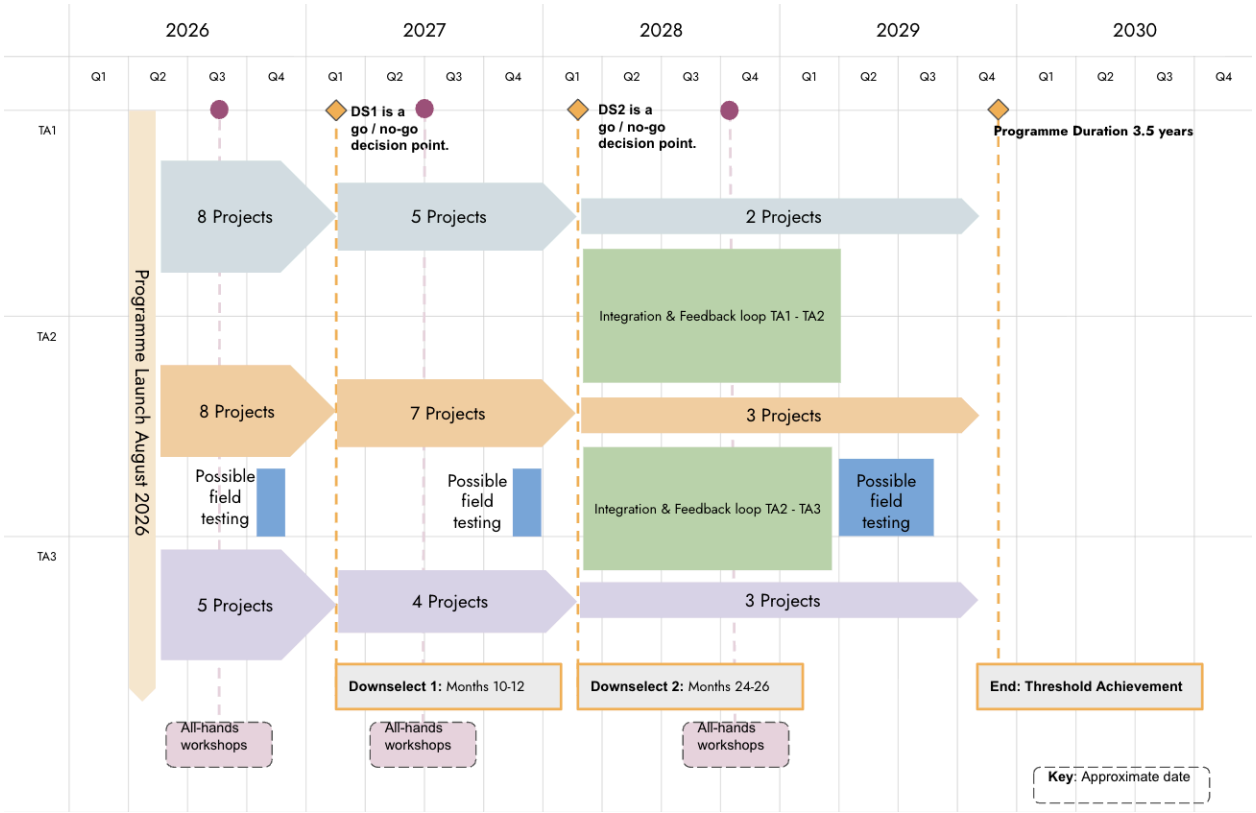
All projects will start as soon as the funding agreement is in place. The maximum term of the programme is 3.5 years, though applicants are strongly encouraged to propose plans which may reach success or failure on faster timelines.

Individual projects within each TA are awarded as grants/contracts with Go/No Go milestones. These milestones are key decision points that determine whether a project proceeds to the next stage, is redirected toward alternative paths for programme success, or is terminated. The programme foresees possible wild cards, enabling select new Creators to join and commence post kickoff.

All-hands workshops will enable Creators to interact and learn about each others' developments. These events will occur roughly annually. Integrators are expected to improve their capabilities by adopting the development outputs of Creators from TA1 making their offering more competitive in the down-selects.

Project milestones

Each project's progress will be monitored using clearly defined metrics and milestones. These will be defined by the applicant prior to the start of a project, be agreed upon by ARIA during the negotiation phase, and should be designed to easily convey progress to a third party.



TA1

- Within 1 month of grant/contract award, have signed heads of terms for the collaboration agreements of your project.
- Within 3 months of grant/contract award, have signed collaboration agreements for your project.
- DS1 (due Month 10): Demonstrate proof of concept of the proposed technology through an agreed set of performance criteria. Present an updated plan for future development and integration. DS1 is a go / no-go decision point.
- DS2 (due Month 24): Demonstrate system integration readiness by means of a credible and jointly agreed Integration Plan, that aims to achieve the programme goals. This plan needs to be developed by the TA1 Creator together with an integration partner, ideally a TA2 Creator, who fully supports the plan. DS2 is a go / no-go decision point.
- Within 1 month of DS2 notification, have signed heads of terms for the collaboration agreements with TA2 Creator Teams, unless exemption granted by programme team.
- Within 3 months of DS2 notification, have signed collaboration agreements with TA2 Creator Teams, unless exemption granted by programme team.

TA2

- Within 1 month of grant/contract award, have signed heads of terms for the collaboration agreements of your project.
- Within 3 months of grant/contract award, have signed collaboration agreements for your project.
- DS1 (due Month 10): Demonstrate proof of concept addressing the primary technical risk ('blocker') within the proposed approach. Present a substantiated development plan with measurable metrics to track progress toward programme goals. DS1 is a go / no-go decision point.
- DS2 (due Month 24): Demonstrate test readiness for the next phase. Provide an updated Development and Integration Plan, incorporating promising TA1 technologies, alignment with TA3 deployment concepts, and a pathway to manufacturing scale-up. DS2 is a go / no-go decision point.
- Within 1 month of DS2 notification, have signed heads of terms for the collaboration agreements with TA1 & TA3 Creators, unless exemption granted by programme team.
- As part of the Month 26 Milestone, TA2 Creators are expected to update their forward looking planning to integrate compelling TA1 technologies, or make a strong case against doing so.
- Within 3 months of DS2 notification, have signed collaboration agreements with TA1 & TA3 Creators, unless exemption granted by programme team.
- Programme End (Month 42): Achievement of programme goals.

TA3

- Within 1 month of grant/contract award, have signed heads of terms for the collaboration agreements of your project.
- Within 3 months of grant/contract award, have signed collaboration agreements for your project.
- DS1 (due Month 10): Deliver a Preliminary Design for an impactful communication service, based on an anticipated success of a TA2 effort, that would be commercially viable. This design review package must include a preliminary specification of the services provided, definitions of the anticipated payloads and ground hardware, any required control software, the operations foreseen to provide the service, the financial estimates for the costs and revenues, a good understanding of potential customers, and a path to regulatory integration (air traffic, spectrum). DS1 is a go / no-go decision point.

- DS2 (due Month 24): Deliver a Critical Design Review (CDR) package for an impactful communication service, based on the updated anticipated success of a TA2 effort, that would be commercially viable. This design must include a specification of the services provided, updated definitions of the anticipated payloads and ground hardware, any required control software, the operations foreseen to provide the service, the financial plans for the costs and revenues, letters of interest or memoranda of understanding from potential customers, coordination with other elements of telecommunications infrastructure, plans for spectrum licensing, and buy-in from regulatory bodies like the CAA and Ofcom. DS2 is a go / no-go decision point.
- Within 1 month of DS2 notification, have signed heads of terms for the collaboration agreements with TA2 Creator Teams, unless exemption granted by programme team.
- Within 3 months of DS2 notification, have signed collaboration agreements with TA2 Creator Teams, unless exemption granted by programme team.
- Programme End (Month 42): Deliver a business plan and design review package for the rollout of an impactful communication service, incorporating confirmed stakeholder engagement (CAA, Ofcom) and validated commercial viability.

Programme & Project Management

The programme team aims to operate as an active technical partner, and Creators should expect a high degree of engagement, including frequent, in-depth technical conversations. The programme team's role is to manage the programme portfolio to accelerate progress towards the programme's galvanising demonstration by identifying synergies, anticipating risks, and dynamically adjusting focus to capitalise on the most promising breakthroughs. This means funding may be redirected, project scopes pivoted, and new collaborations encouraged based on performance and emerging results. We view this process as a collaborative partnership focused on collective success.

Quarterly reviews will be held between Creators and the programme team to discuss progress against each Creator's milestones, as well as further details of the project. As part of that discussion, Creators will be encouraged to think through the following questions:

- What is/are the target deliverable(s) for each phase of the programme?
- What are the top three risks (severity vs likelihood) identified at this stage of the project?
- What are the highest leverage experiments required to overcome each risk?
- What are the expected outcomes/learnings from these experiments?

- How long will these experiments take and how much will they cost?
- What are the dependencies from prior activities/phases of the Programme?
- What new information has been gleaned?
- What (if any) risks have been overcome? What new risks have emerged?
- Did we learn what we thought we would learn? If not, why not?
- Is there anything we can do to learn more or faster?
- Is there still a path towards the target? Are we heading towards any dead ends?

Community events

To foster a collaborative research environment, we will host regular community events, including a programme kick-off meeting, Creator workshops and other events in an approximately bi-annual cadence. These events will be essential for teams to exchange updates, share data and tools, and work together to solve cross-cutting challenges. Attendance is strongly encouraged, and applicants should include estimated travel costs in their budget proposals.

Programme Partners

To support creators with preparation and execution of field testing and demonstration in compliance with regulation, we will contract with 1-3 partners who will act as enablers for the programme. These partners will provide Creators (in particular TA2 Creators) with support services, such as access to UK flight test sites and regulatory expertise, proactively derisking one of the programme's biggest operational challenges. This could include

+ Access to UK flight testing sites
+ Consulting to achieve approval for testing
+ Consulting on regulatory topics

The programme team encourages applicants to include input on suitable programme partners, the services desired from them, and the time frames within which these services are desired, in their concept papers. This will help guide the programme team in selecting suitable programme partners, and planning the windows in which creators require their support. **We are not requesting standalone proposals from potential programme partners as part of this funding call.**

We are considering providing testing windows for field testing and demonstration. A draft schedule of the testing windows might be:

Phase 1: a short window (1-2 weeks) towards the end of Phase 1
Phase 2: a window (~2 weeks) towards the end of Phase 2
Phase 3: a window (~3 weeks) towards the end of Phase 3

Creators would typically spend the weeks before the test window getting their hardware on site and working with the Programme Partners to prepare for testing. During the testing windows, Creators would have access to segregated airspace for testing at a UK test range. Testing windows would not be segregated by creator teams, creator teams would witness other teams preparing and carrying out testing.
The Programme Partners would further help support ad-hoc testing of Creators as necessary. Participation in these campaigns is not mandatory, provided Creator Teams agree with the Programme Team on better suited means to test and demonstrate their developments.

SECTION 6: Eligibility & Application process

Eligibility

We welcome applications from across the R&D ecosystem, including individuals, universities, research institutions, small, medium and large companies, charities and public sector research organisations.

Finding potential collaborators and teaming

We expect Creators to be very open to collaborating with other Creators (including within the same TA) and Programme Partners, viewing the Programme's success as a measure of their own success. During the course of the programme, Creators in TA2 are expected to increase their potential by collaborating with Creators from TA1 (integrating emerging enabling technologies to increase capability) and TA3 (increasing the commercial value of the technology).

Finding potential collaborators and teaming to support the formation of Creator teams who are able to address multiple TAs, we offer two pathways for collaboration:
1. Proactive teaming: Before applying, you can use ARIA's teaming tool to find potential partners with complementary expertise.
2. Facilitated teaming: After the concept paper review, we may help facilitate connections between applicants, with the aim of forming stronger, synergistic teams before the full proposal deadline. You will have the option to opt-in to ARIA making introductions where we feel there are synergies between proposals. Please note that no information about the proposal itself will be shared.

By following the link to the Teaming sign up form here you will be able to register and submit details on your area(s) of expertises, and gain access to a list of other individuals seeking to find/share their expertise. All requests are screened via ARIA's internal team prior to access, after which connections will be made by individual users based on aligned expertise.

Programme FAQ and Lightning talk Webinar

Programme FAQ (14:00: - 15:00 GMT): We are also hosting a webinar, on 15 December 2025, to provide an overview of the programme's objectives, scope, and application process, and to give potential applicants an opportunity to ask questions to the ARIA team. Please register your interest and submit questions in advance for this event here.

Applicant Lightning Talks (15:00 - 16:00 GMT): Immediately following the FAQ, we'll hold a series of lightning talks from potential applicants, in which you can share your technological insights, find complementary expertise, and form teams ahead of the Concept Paper deadline. Lightning talk proposals are optional and must be registered using the form here by 12:00PM 12 December. Slots for lightning talks are limited so applications will be approved on a first-accepted, first reviewed basis.

Application Process

The application process for Technical Areas 1, 2 and 3 consists of two stages:

Stage 1 - Concept paper

Concept Papers are designed to make the solicitation process as efficient as possible for applicants. By soliciting short concept papers (no more than three pages) ARIA reviewers are able to gauge the feasibility and relevance of the proposed project and give an initial indication of whether we think a full proposal would be competitive. Based on this feedback you can then decide whether you want to submit a full proposal. You can find out more about ARIAs review process here.

If you miss the deadline for submission of concept papers you can still submit a full proposal. However, we strongly encourage you to submit a concept paper. On average, 64% of applicants awarded funding submitted concept papers.

To ensure the process is quick and open we do not require your organisation's consent prior to submission of a concept paper.

You can find guidance on what to include in a concept paper here.

Following review of concept papers applicants will either be encouraged or discouraged from submitting a full proposal. For more details on the evaluation criteria we'll use, click here.

Stage 2 - Full proposals

This step requires you to submit a detailed proposal including:

- **Project & Technical information** to help us gain a detailed understanding of your proposal
- **Information about the team** to help us learn more about who will be doing the research, their expertise, and why you/the team are motivated to solve the problem
- **Administrative questions** to help ensure we are responsibly funding R&D. Questions relate to budgets, IP, potential COIs etc

You can find more detailed guidance on what to include in a full proposal here. **You can submit a full proposal even if you did not submit a concept paper.**

For more details on the evaluation criteria we'll use, click here.

Non-UK funding

Our primary focus is on funding those who are based in the UK. However, funding will be awarded to organisations outside the UK if we believe it can boost the net impact of a programme in the UK. In these instances, you must outline your proposed plans or commitments that will contribute to the programme in the UK within the project's duration (note the maximum project duration is 3.5 years).

If you are successfully selected for an award subject to negotiations this proposal will form part of those negotiations and any resultant contract/grant.

More information on the evaluation criteria we will use to assess your answers can be found later in the document here.

We have provided some additional guidance on non-UK funding in our FAQs including available visa options.

SECTION 7: Timelines

This call for project funding will be open for applications as follows (we may update timelines based on the volume of responses we receive):

Applications open	11 December 2025
Concept paper submission deadline	19 January 2025 (14:00 GMT)
Concept paper review & notification of encouraged/not encouraged to submit full proposal sent	19 January 2026 - 20 February 2026

At this stage and based on your concept paper, you will either be encouraged/ discouraged to submit a full proposal. If you receive feedback indicating that you are not encouraged to submit a full proposal you can still choose to submit a full proposal. You should note that this preliminary assessment/encouragement provides no guarantee of any full proposal being selected for award of funding.

Full proposals applications open	20 February 2026
Full proposal submission deadline	02 April 2026 (12:00 BST)
Full proposal review	02 April 2026 - 12 May 2026

As part of our review we may invite applicants to meet with the Programme Director to discuss any critical questions/concerns prior to final selection — this discussion can happen virtually or we may seek clarification on certain aspects of your proposal via email. We anticipate any potential meetings at the stage to take place between 05 May 2026 and 11 May 2026.

Successful/Unsuccessful applicants notified	20 May 2026

At this stage you will be notified if you have or have not been selected for an award subject to due diligence and negotiation. If you have been selected for an award (subject to negotiations) we expect a 1 hour initial call to take place between ARIAs PD and your lead researcher within 10 working days of being notified.

We expect contract/grant signature to be no later than 8 weeks from successful/ unsuccessful notifications. During this period the following activity will take place:

- Due diligence will be carried out
- The PD and the applicant will discuss, negotiate and agree the project activities, milestones and budget details
- Agreement to the set Terms and Conditions of the Grant/Contract. Please note

ARIA does not negotiate these terms. You can find a copy of our funding agreements here

SECTION 8: Evaluation Criteria

Concept Paper and Proposal Evaluation Principles

To build a programme at ARIA, each Programme Director directs the review, selection, and funding of a portfolio of projects, whose collective aim is to unlock breakthroughs that impact society. As such, we empower Programme Directors to make robust selection decisions in service of their programme's objectives ensuring they justify their selection recommendations internally for consistency of process and fairness prior to final selection.

We take a criteria-led approach to evaluation, as such all proposals are evaluated against the criteria outlined below. We expect proposals to spike against our criteria and have different strengths and weaknesses. Expert technical reviewers (both internal and external to ARIA) evaluate proposals to provide independent views, stimulate discussion and inform decision-making. Final selection will be based on an assessment of the programme portfolio as a whole, its alignment with the overall programme goals and objectives and the diversity of applicants across the programme.

Further information on ARIAs proposal review process can be found here.

Proposal evaluation process and criteria

Proposals will pass through an initial screening and compliance review to ensure proposals conform to the format guidance and they are within the scope of the solicitation. At this stage we will also carry out some checks to verify your identity, review any national security risks and check for any conflicts of interest. Prior to review of applications Programme Directors and all other reviewers are required to recuse themselves from decision making related to any party that represents a real or perceived conflict.

Where it is clear that a proposal is not compliant, outside the scope and/or does not pass a quality assurance review, these proposals will be rejected prior to a full review on the basis they are not compliant or non-eligible.

Proposals that pass through the initial screening and compliance review will then proceed to full review by the Programme Director and expert technical reviewers.

In conducting a full review of the proposal we'll consider the following criteria:

1. **Worth Shooting For:**
    a. The proposed project uniquely contributes to the overall portfolio of approaches needed to advance the programme goals and objectives.
    b. It has the potential to be transformative and/or address critical challenges within and/or meaningfully contribute to the programme thesis, metrics or measures.
2. **Differentiated** – The proposed approach is innovative and differentiated from commercial or emerging technologies being funded or developed elsewhere. The proposed project focuses on approaches that are distinct from existing applications that are unlikely to have their limitations overcome by incremental improvements.
3. **Well defined** – The proposed project clearly identifies what R&D will be done to advance the programme thesis, metrics or measures, is feasible and supported by data and/or strong scientific rationale. The composition and planned coordination and management of the team is clearly defined and reasonable. Task descriptions and associated technical elements provided are complete and in a logical sequence with all proposed stage-gates and deliverables clearly defined. The costs and timelines proposed are reasonable/realistic.
4. **Responsible** – The proposal identifies major ethical, legal or regulatory risks and that planned mitigation efforts are clearly defined and feasible. The proposed project should consider regulatory aspects pertaining to integration (airspace, frequency spectrum, existing telecom, infrastructure for deployment).
5. **Intrinsic motivation** – The individual or team proposed demonstrates deep problem knowledge, have advanced skills in the proposed area and shows intrinsic motivation to work on the project and key individuals are dedicating sufficient time to the project. The proposal brings together disciplines from diverse backgrounds.

6. **Benefit to the UK** – There is a clear case for how the project will benefit the UK. Strong cases for benefit to the UK include proposals that:
    a. are led by an applicant within the UK who will perform the majority (>50% of project costs spent in the UK) of the project within the UK
    b. are led by an applicant outside the UK who seeks to establish operations inside the UK and perform a majority (>50% of project costs spent in the UK) of the project inside the UK and present a credible plan for achieving this within the programme duration.

    For all other applicants we will evaluate the proposal based on its potential to boost the net impact of the programme in the UK. This could include:

    c. A commitment to providing a direct benefit to the UK economy, scientific innovation, invention, or quality of life, commensurate with the value of the award;
    d. The project's inclusion in the programme significantly boosts the probability of success and/or increases the net benefit of specific UK-based programme elements, for example, the project represents a small but essential component of the programme for which there is no reasonable, comparably capable UK alternative.

    When considering the benefit to the UK, the proposal will be considered on a portfolio basis and with regard to the next best alternative proposal from a UK organisation/individual.

Proposal Feedback

At the concept paper stage, applicants will be notified whether or not they are encouraged to submit a full proposal. If you are encouraged to submit a full proposal, we will provide detailed feedback to help inform your full proposal. For those applicants not encouraged to submit full proposals we will not provide feedback.

At the full proposal stage, applicants will be notified whether or not they have been successfully selected for award. For those applicants not selected for award we will not provide feedback.

SECTION 9: How to apply

Before submitting an application we strongly encourage you to read this call in full, as well as the general ARIA funding FAQs.

If you have any questions relating to the call, please submit your question to clarifications@aria.org.uk.

Clarification questions should be submitted no later than 4 days prior to the relevant deadline date. Clarification questions received after this date will not be reviewed. Any questions or responses containing information relevant to all applicants will be provided to everyone that has started a submission within the application portal. We'll also periodically publish questions and answers on our website, to keep up to date click here.

Please read the portal instructions below and create your account before the application deadline. In case of any technical issues with the portal please contact clarifications@aria.org.uk.

If you are disabled or have a long-term health condition, we can offer support to help you engage with ARIA, navigate our funding application process, or carry out your project, you can find more information here.

Application Portal instructions

APPLY HERE

Advanced Research + Invention Agency ARIA

Concept Papers Guidelines

How to Format your proposal

- Page count: a maximum of 3 pages, including diagrams but excluding references
- Format: single line spacing, standard character spacing (neither expanded nor condensed)
- Font: Arial. Colour: black. Size: 11-point font or larger
- Margins: At least 0.5" margins all around
- File Type: PDF only

Section 1: Technical concept

Applicants are required to provide a concept paper no longer than 3 pages in length that outlines:

- Which Technical Area or Areas you seek to pursue (TA1, TA2, TA3)
- A brief summary of the scientific question you are setting out to answer, the proposed idea / solution, and how it supports the objectives of the technical area and the programme as a whole.
    - Applicants to TA1 or TA2 must present a path to achieving the programme's goals, identify the key technical blockers and bottlenecks to do so, and propose a workplan that solves the most difficult blocker first.
    - Applicants to TA3 must present a vision of a concept for an impactful connectivity service assuming the programme's goals are achieved. They should identify regulatory and commercial blockers and bottlenecks, as well technical blockers and bottlenecks related to the telecommunications aspects.
- A description of the approach or methodology that will be employed to address the research objectives. Including:
    - A description of the idea / solution proposed and why you have not been able to realise it previously.
    - Any data or scientific rationale to support your proposed concept - supporting data, journal articles, blogs, code or other materials may be referenced or linked to in the submission if they directly support your paper, but do not necessarily have to be your own work.
    - Identification of the technical challenges or obstacles that must be overcome

to achieve the research goals. This includes potential risks and mitigation strategies.

- An overview of the proposed activity of work, any key metrics and milestones and any dependencies and assumptions
- An overview of the proposed project team including information about the expertise of the research team, relevant experience, skills, and capabilities.

Section 2: Timeline, Budget and Additional questions

In completing your application you must also provide answers to the following questions. Answers to these questions are not included in the 3 page cap. You should complete these questions in the application portal so there is no need to format these in a specific way.

Budget: How much funding do you need?

Please complete the table below providing an estimate in GBP (inclusive of VAT where applicable and all other costs) of what you consider a reasonable funding amount for your project. It's ok if you're not sure – give your best estimate.

Cost Type	Budget (£ Inc VAT)
Labour	
Materials	
Subcontract	
Equipment & Facilities	
Travel	
Other	
Subtotal	
Indirect Costs	
Total	

Timeline and additional questions:

Question	Guidance
Are you proposing to contribute funding?	*Where you or your organisation are proposing to contribute funding to the project please let us know. If yes, tell us how much funding you/your organisation plan to contribute.* *ARIA will fund 100% of project costs and contribution of funding is not essential however, we welcome proposals that contribute funding in cases when such funding will strengthen the potential success. In these cases, this funding contribution will be considered as part of the overall strength of the project proposal.*
How many months will you need to work on your proposed project?	*There is no minimum length for a proposed project. The maximum length is 42 months.*
Do you consent to ARIA introducing you to other programme applicants to facilitate potential collaborations?	*The primary goal is to facilitate potential collaborations that can strengthen the applicants proposed projects. Please note that we will not share any information about your proposal. All personal data provided to ARIA will be processed in accordance with UK data protection legislation, including the Data Protection Act (2018) and the General Data Protection Regulation (GDPR). Further information on how we use personal data and how you can exercise your right as a data subject can be found in the ARIA Privacy Policy.*

Are you planning to give a portion of the work to external subcontractors?	*If yes, let us know what work you plan to give to a subcontractor. Subcontractors are any proposed third parties that you plan to enter into a contract or agreement with for services necessary for the delivery or management of the project.*
Are there any conflicts of interest?	*Please provide a short description of any potential conflicts of interest.*
Are there any other factors or restrictions that might impact your freedom to operate and deliver the project?	*Please provide a short description of any import/export restrictions; security, ethical, legal and regulatory restrictions that you are aware of.*
What support will your project require from Programme Partners to ensure timely delivery and derisk operational phases?	*The programme is highly focused on overcoming challenging operational hurdles to achieve the primary success metric on schedule. 1 - 3 Programme Partners will be sought to provide essential support services and proactively derisk some of the biggest operational and regulatory challenges faced by Creators, particularly those TA2 E.g. UK test sites including infrastructure for testing, segregated airspace, regulatory expertise etc* *Please quote all costs for such services separately, let us know preferred suppliers, and preferred timing of service provision. This information will inform our programme partnership strategy and the services the programme will contract to support creators.*
Are you proposing to perform the majority of the proposed project outside of the UK?	*Our primary focus is on funding those who are based in the UK. For the vast majority of applicants, we therefore require the majority of*

	the project work to be conducted in the UK (i.e. >50% of project costs and personnel time). *However, we can award funding to applicants whose projects will primarily take place outside of the UK, if we believe it can boost the net impact of a programme. In these instances, you must outline any proposed plans or commitments in the UK that will contribute to the programme within the project's duration (note the maximum project duration is 3.5 years).* *Please provide a brief summary of your proposed plans or commitments*
Additional questions about you/your organisation that can be found in the application portal.	

Full Proposal Guidelines

How to Format your proposal

- Page count: 10 pages, (including diagrams, excluding references)
- Single line spacing, standard character spacing (neither expanded nor condensed)
- Font: Arial. Colour: black. Size: 11-point font or larger
- Margins: At least 0.5" margins all around
- File Type: PDF

Applicants are required to provide a proposal no longer than 10 pages in length that outlines:

Section 1: Programme & Technical

The aim of this section is to gain in-depth, technical information about the project being proposed. This should include:

- A detailed explanation of the proposed idea/solution, how it supports the technical objectives of the chosen pathway.
    + This should be supported by visual aids, data and/or strong scientific rationale for why what you are proposing would work.
    + Please include any required technical information, as specified in sections 2 and 3 of the call for proposals document.
- A comprehensive list of the known technical risks/unknowns standing in the way of achieving the stated goals.
    + Applicants to TA1 or TA2 must present a path to achieving the programme's goals, identify the key technical blockers and bottlenecks to do so, and propose a workplan that solves the most difficult blocker first.
    + Applicants to TA2 must include a brief safety strategy explaining how, in a commercially deployed environment (i.e. after the programme), integration with commercial and general aviation will be safely achieved considering all elements of their solution (e.g. tethers, laser beams) and all phases of operation (e.g. climb phase, station keeping, likely fault cases on station, and descent/recovery). This should highlight areas where regulation is lacking or immature.

    - Applicants to TA3 must present a concept for an impactful connectivity service assuming the programme's goals are achieved. They should identify regulatory and commercial blockers and bottlenecks, as well technical blockers and bottlenecks related to the telecommunications aspects. They must include a strategy explaining how, in a commercially deployed environment (i.e. after the programme), spectral integration and tie-in with existing communications infrastructure and regulation will be achieved, considering the possible elements of their solution. This should highlight areas where regulation is lacking or immature.
- How the proposed approach is differentiated, e.g. from commercial or emerging technologies being funded or developed elsewhere.
- A description of the proposed activity of work, key metrics and milestones and any dependencies and assumptions.
- Estimated timelines - applicants should provide a Project Plan for the lifecycle of the project, showing what you plan to achieve for each period of the project.

Section 2: The Team

This section includes information about the proposed individuals or teams that will conduct the research and management structures. This must include:

- Details of the project team - we want to know who will be doing the work (not just the principal investigator or project lead) and what portion of their time will be dedicated to this project.
- You could include short bios about each team member (we discourage you from submitting CVs).
- If you intend to collaborate with or rely on any third parties, sub contractors/grantees, who they are and which elements of the project they will support/deliver.
- How you intend to coordinate and manage the teams including any collaborations with third parties.
- Any potential gaps in your core competency which would be required in order to achieve the overall goals.
- We also want to know what motivates you or the team to want to do this project and why you are the right person/team to work on this project.

In addition to the above the following table should be completed and attached as an annex to your proposal

Individual	Role / expertise	Already in place? If not, how long after project kickoff are they likely to start?	FTE	Total time on project (months, rounded)
Sophia Fleissig	*Synthetic biologist, project lead (TA1.2)*	*Currently assigned to a different project but could transfer to this project with 6 weeks notice*	*80%*	*28*
Unknown	*Expert in plant tissue culture and transformation (TA1.3)*	*To be recruited, aiming to start within 3 months*	*100%*	*33*
Magnus Formaggio	*Plant geneticist advising on synthetic unit design (TA1.1)*	*Yes*	*40% during months 1-12, 20% during months 13-36*	*10*
Etc	*Etc*	*Etc*	*Etc*	*Etc*

Section 3: Administrative Response

This section includes information about the budget, intellectual property that you intend to rely on, any perceived conflicts of interest and for non-UK applicants how the proposed project may benefit the UK.

In completing your application you must also provide answers to the following questions. Answers to these questions are not included in the 10 page cap. You should complete these questions in the application portal so there is no need to format these in a specific way.

Application	Guidance

How much funding do you need?	*Please provide a cost breakdown by completing the spreadsheet here.* *Prior to completing this template you should review ARIA's Eligible cost guidance here.* *The completion of a more detailed costing template will be required prior to contract/grant signature.* ***Please ensure your budget includes costs for project and programme management.*** *Given the high-engagement, collaborative nature of this programme, you should budget for the time and resources required to coordinate effectively between lead applicants, subcontractors, and the ARIA programme team.*
Are you proposing to contribute funding?	*If you or your organisation are proposing to contribute funding to the project please let us know how much funding you plan to contribute, who is contributing the funding, is the funding already secured and any other relevant details.* *ARIA will fund 100% of project costs and contribution of funding is not essential however, we welcome proposals that contribute funding in cases when such funding will strengthen the potential success. In these cases, this funding contribution will be considered as part of the overall strength of the project proposal.*

Does your proposal depend on background IP (pre existing)?	*If Yes, give us an Indication of: What background IP is required, Whether you currently have rights to that IP.*
Have you already secured funding for a similar project or are you currently in the process of seeking support from other funding sources for the same project?	*If yes, tell us more about the funding you already have or are applying for.*
Any other factors or restrictions that might impact your freedom to operate and deliver the project?	*Please provide a detailed description of any perceived conflicts of interest with the programme director, import/export or security restrictions that you are aware of*
How do you envision commercialisation of the proposed project?	*Please complete and upload a commercial hypothesis for your project using the guidelines here.*
Are you proposing to perform the majority of the proposed project outside of the UK?	*Our primary focus is on funding those who are based in the UK. For the vast majority of applicants, we therefore require the majority of the project work to be conducted in the UK (i.e. >50% of project costs and personnel time).* *However, we can award funding to applicants whose projects will primarily take place outside of the UK, if we believe it can boost the net impact of a programme.* *In these instances, you must outline any proposed plans or commitments in the UK that will contribute to the programme within the project's duration (note the maximum project duration is 3.5 years).*

	Please provide a detailed description of any proposed plans (including a timeline) or commitments).
Has a suitably authorised member of your Organisation approved the submission of this proposal?	*In the application portal, please select the option that best describes your situation and provide details where required.*
What support will your project require from Programme Partners to ensure timely delivery and derisk operational phases?	*The programme is highly focused on overcoming challenging operational hurdles to achieve the primary success metric on schedule. 1 - 3 Programme Partners will be sought to provide essential support services and proactively derisk some of the biggest operational and regulatory challenges faced by Creators, particularly those TA2 E.g. UK test sites including infrastructure for testing, segregated airspace, regulatory expertise etc* *Please quote all costs for such services separately, let us know preferred suppliers, and preferred timing of service provision. This information will inform our programme partnership strategy and the services the programme will contract to support creators.*
Have you read and understood our funding terms?	*Our goal is to ensure your research can get going quickly, so we want to ensure a fast negotiation and award process. We aim to have agreements signed within 6 weeks, which we recognise can be much faster than standard at some*

	organisations. Before proceeding, please confirm that you have read and understand our funding terms. If you are unsure which terms apply to you, you can find more guidance here.
Additional questions about you/your organisation that can be found in the application portal.	