

## Quick Reference

Please note that you must read the full Call document for guidance before submitting your proposal

### Trustworthy Autonomous Systems Nodes - Full proposal

Closing date: 16:00 2 July 2020

**Funding Available:** Up to £20.5 million available to support seven research Nodes. This funding is part of the Strategic Priorities Fund (SPF).

**How to apply:** Please note applications will **only** be accepted from those who were successful at the outline stage and have been **invited** to submit a full proposal.

**Assessment Process:** Invited full proposals will be assessed by postal peer review followed by a panel interview.

#### Key Dates:

Activity:	Date:
Full proposal submission deadline	16:00 2 July 2020
Interview panel	Week beginning 14 September
Nodes start date	1 November 2020 (fixed start date)

#### Additional information:

**Please note this call is invite only and is for Node full proposals only.** Only invited full proposals will be accepted at this stage.

**Please note** that although some similarities exist between the call documents for the hub and the nodes (typically within the background and objectives of the programme), there are differences between the two in the expectations, requirements and assessment criteria. Applicants must read the relevant call document in full before submitting an application.

UKRI would like to emphasise that a highly multidisciplinary approach will be required to deliver the objectives of this investment and to address the research challenges in the TAS agenda. Multidisciplinary applications led by and involving any discipline that fits the scope of a given node, from across UKRI portfolio are encouraged.

Due to the nature of this funding stream, there will be specific spending requirements, monitoring and evaluation. These aspects will be reflected as specific grant conditions for successful proposals (see Annex 1).

**Contacts:**

- Please email [AI.Robotics@epsrc.ukri.org](mailto:AI.Robotics@epsrc.ukri.org) for general enquires.
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- Dr Danielle Lloyd ([Danielle.Lloyd@epsrc.ukri.org](mailto:Danielle.Lloyd@epsrc.ukri.org) )



UK Research  
and Innovation

# Trustworthy Autonomous Systems Nodes Full proposal

Call type: Invitation for full proposals

Closing date: 16:00 2 July 2020

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## Summary

**Please note applications will only be accepted from those who were successful at the outline stage and have been invited to submit a full proposal.**

UKRI is inviting full proposals for the research Nodes, which are part of the UKRI Trustworthy Autonomous Systems programme. Up to £20.5 million (at 80% fEC) will be available to fund seven research nodes for 42 months, with a fixed start date on 1 November 2020. UKRI expects to fund seven research nodes, each focusing on **one** of the following research topics: trust, responsibility, resilience, security, functionality, verifiability and governance & regulation. It is anticipated that each node will be of approximately £3 million (UKRI contribution). Each node will be expected to collaborate broadly with other nodes, the Hub and the

wider community. This programme will be funded through the Strategic Priorities Fund (SPF).

The **deadline for Nodes full proposal submission is 16:00 2 July 2020.**

Proposals will undergo postal peer review followed by an interview panel. The successful applicants for a given node will be required to start their activities on 1 November 2020.

Applicants may refer to the Nodes outline call document for background. The outline call document is published here:

<https://epsrc.ukri.org/files/funding/calls/2019/trustworthy-autonomous-systems-nodes-outline-call/>

## Background

Autonomous systems are already being developed and deployed across industrial sectors in specific, controlled conditions, with little focus on trustworthiness. When autonomous systems are used in an uncontrolled environment, where there is a high level of interaction with people and a much larger number of variables, the resulting potential for unexpected and/or undesirable results is non-negligible. These unanticipated events could have a very significant negative impact on the acceptability and thus compromise widespread deployment of autonomous systems in the UK.

For society to use and benefit from autonomous systems people need to trust them. This means that the autonomous systems need to function as expected for their purpose, and they need to be designed and tested to ensure that they work consistently, and that they are appropriately developed within a legal, ethical and social context. Trust will only be enabled through technical advances conducted in specific societal circumstances.

To ensure that autonomous systems can be trusted, and ultimately adopted by society, fully integrated advances in **both technical, and social sciences and humanities research** are needed. For example, research in logic, autonomy and intelligence and engineering (robotics & vehicles) is needed, but these technical developments must be carried out in the context of fundamental social sciences and humanities research across psychology, sociology, economics, ethics, philosophy, law, political science, international studies, innovation management and science and technology studies. The engagement of multiple disciplines in this endeavour, alongside regulators and the public, is key to ensuring that autonomous systems are developed to be used in real world situations.

The UK has significant strengths in computing and autonomous systems, and there is a strong track record of collaboration between these fields and researchers in the social sciences and humanities. UKRI has a number of key activities in the landscape, including (but not limited to) investments made within the Digital Economy Programme, UKRI ISCF in Robotics in Extreme Environments, and networks in 'Validation and Verification of Autonomous Systems' and 'Robotics and Autonomous Systems'. However, the apparent lack of a coherent community or truly recognised authority in trustworthy

autonomous systems has been identified as a barrier to the UK successfully developing, deploying, and adopting autonomous systems.

In this Context, UKRI is investing £33m in Trustworthy Autonomous Systems through the Strategic Priorities Fund (SPF). The Trustworthy Autonomous Systems (TAS) programme aims to bring together the research communities and key stakeholders to drive forward cross-disciplinary fundamental research to ensure that autonomous systems are safe, reliable, resilient, ethical and trusted.

This investment has the following objectives:

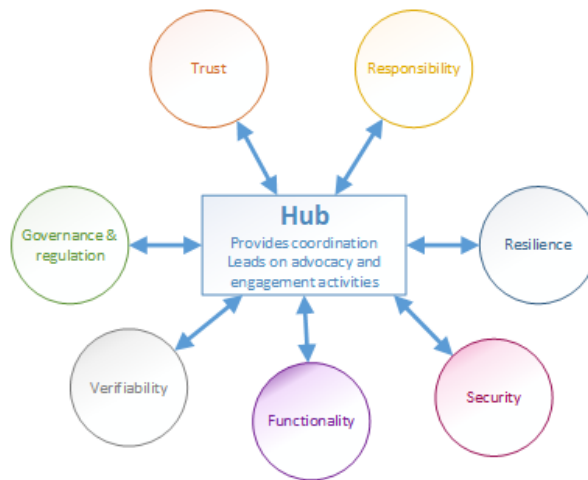
- a) **Coordination and collaboration** - To build a coherent, interconnected and multidisciplinary UK research community around the theme of Trustworthy Autonomous Systems, bringing together pre-existing activities and a diverse range of stakeholders.
- b) **Creativity and multidisciplinary** - To invest at scale in world-leading creative and adventurous fundamental research into the technical, social and ethical challenges surrounding Trustworthy Autonomous Systems, drawing on diverse approaches from across disciplines.
- c) **Advocacy and engagement** - To establish a UK focal point for active engagement with the autonomous systems agenda and enable engagement with key stakeholders including wider academia regulators, policy makers, industry, businesses, Non-Governmental Organisations and the public.

These objectives of the programme will be delivered through two discrete but interdependent components, a single **hub** and multiple research **Nodes**:

- A central **Hub** to build and lead a world-leading multidisciplinary research community. The hub will lead on both the **coordination** and **advocacy & engagement** objectives, building an interconnected research community, and proactively engaging across stakeholders. The Hub (either virtual or physical) is intended to be a single point of engagement for different stakeholders (e.g. industry, businesses, professional bodies, government), help drive culture change and integration of trustworthiness across autonomous systems research, as well as undertaking public engagement activities. It is anticipated that the Hub will also conduct highly multidisciplinary research into cross-node issues and have a key role in delivering pump prime funding for community building activities and to support new ideas, creative research directions, and applications of this research in real world, user-driven contexts. The call for the Hub outlines is published here: <https://epsrc.ukri.org/funding/calls/trustworthy-autonomous-systems-hub-outline-call/>
- Multiple **research Nodes** to undertake fundamental, creative and multidisciplinary research in a number of areas of current un-met need. The Nodes will be separate entities connected to the hub and they are expected to address a research challenge in depth, each focusing on **one** of the following aspects: trust, responsibility, resilience, security, functionality, verifiability and legality. Each node will be expected to collaborate broadly with other Nodes, the hub and the wider community. The call for Nodes outlines is published here:

<https://epsrc.ukri.org/funding/calls/trustworthy-autonomous-systems-research-nodes-call/>

It is anticipated that each of these topics will be tackled by a multidisciplinary team. The Nodes will be expected NOT to focus on sectorial application, but instead to take a cross-cutting multidisciplinary approach to deliver fundamental research. Building on this fundamental research, application-oriented research may be undertaken in partnership with stakeholders and users of research, to demonstrate how the outcomes of the fundamental research might be exploited in real-world and sector-specific contexts.



In preparation for the UKRI SPF funded TAS programme and to facilitate interactions and collaborations between interested parties, UKRI held a Town Hall meeting event in London on 18 October 2019 as described on <https://epsrc.ukri.org/newsevents/events/ukri-trustworthy-autonomous-systems-programme-town-hall-meeting/>. The following documents: Presentation Slides, Nodes Brief, Frequently Asked Questions and Summary of Discussions have been published after the event and available via the above link.

Note that attendance of the event was not mandatory and is not a pre-requisite for being eligible to this call. Similarly, attendance the Town Hall meeting will NOT guarantee subsequent funding.

## Scope of the call – Research Nodes for the TAS programme

The research Nodes will undertake fundamental, creative and multidisciplinary research in a number of areas of current un-met need. Each node will be expected to address a research challenge in depth, focusing on **one** of the following aspects: trust, responsibility, resilience, security, functionality, verifiability and legality.

The Nodes will be expected not to focus on sectorial applications, but instead take a cross-cutting multidisciplinary approach to deliver fundamental research. Building on this fundamental research, application-

oriented research may be undertaken in partnership with stakeholders and users of research, to demonstrate how the outcomes of the fundamental research might be exploited in real-world and sector-specific contexts. It is expected that Nodes will not restrict their application-focused research to one specific sector or technology, but that instead they will explore use cases in different contexts and applications.

Nodes will be expected to be complementary to each other and to the programme as a whole, working closely with the Hub to deliver the objectives of the programme. The Nodes will have access to the competitions for pump-priming new opportunities administered by the Hub.

It is anticipated that each node will multidisciplinary, including investigators from across the UKRI portfolio as appropriate. Each node may be multidisciplinary to a different extent depending on the challenges posed by the topic. Applicants for node investments will be expected to articulate the key challenges they intend to address within a given topic and to put together an appropriate multidisciplinary team to tackle these challenges in different configurations.



## Expectations of the Nodes

It is anticipated that the research Nodes will deliver primarily against the creativity and multidisciplinary objective of the TAS programme by:

- Designing and undertaking a creative and multidisciplinary research programme focused on one of the seven key topics (trust, responsibility, resilience, security, functionality, verifiability and legality), seeking to significantly advance the state in one of these areas through a combination of fundamental and challenge driven research.
- Building a multidisciplinary team and mutually beneficial stakeholder relationships appropriate to tackling one of the key topics. It is expected that the level of multidisciplinary will differ between Nodes depending on the nature of the topic.
- Collaborating widely with other Nodes and key stakeholders in the UK and internationally to maximise synergies and complementarities between the research funded through this programme and other activities

- Engaging closely with the hub to build a UK community in Trustworthy Autonomous Systems, and to collaboratively deliver the broader objectives of the investment
- Addressing new and emerging research opportunities through maximising the flexibility of their research programme and potentially by accessing the pump prime funds managed by the Hub.

In addition to their core activities, the research Nodes will be expected to engage closely with the Hub to deliver the three objectives of the programme. This may include accessing pump prime funding distributed by the hub, which may be used to:

- Undertake risky research within, between and beyond the Nodes
- Build new collaborations, nationally or internationally
- Explore new research directions, particularly to address gaps identified
- Engage with stakeholders and users of the research to conduct application-oriented research, building on from the fundamental research undertaken
- Conduct activities to demonstrate how the outcomes of the fundamental research undertaken in the Nodes might be exploited in real world applications.

UKRI would like to emphasise that a highly multidisciplinary approach will be required to deliver the objectives of this investment and to address the research challenges in the TAS agenda. However, it is recognised that the level of multidisciplinary required to address the challenges may be different depending on the challenges posed by the topic. Applicants to node investments will be expected to articulate the key challenges they intend to address within a given topic and to put together an appropriate multidisciplinary team to tackle these challenges in different configurations

## Funding available

Up to £20.5 million in total (approximately £3 million per research Node) will be available to support seven research Nodes, each focusing **one** of the following aspects: trust, responsibility, resilience, security, functionality, verifiability and governance & regulation. The duration of the nodes will be 42 months, and they will have a fixed start date of 1 November 2020.

The nodes will have access to £4 million pump priming funds managed for the Hub, which will distribute these via a competitive process. These funds will be distributed at 80% fEC by the Hub, with remaining 20% being provided by the organisation in receipt of the funds.



**Please note** this call is for applicants who have been invited to submit full proposals following success at the outline stage. Any unsolicited applications will be rejected.

**Please note** that due to the nature of this funding, **additional requirements on spending profile, reporting, monitoring and evaluation as well as the extension will apply**. This will be reflected in specific grant conditions, and those funded will need to comply with them. Further details are provided in the Additional Grant Conditions section below.

Please note that grant extensions will only be considered under exceptional circumstances (in line with the Equality Act 2010) and will require UK Research and Innovation agreement on a case-by-case basis. The Research Organisation remains responsible for compliance with the terms of the Equality Act 2010, including any subsequent amendments introduced while work is in progress, and for ensuring that the expectations set out in the UK Research and Innovation statement of expectations for equality and diversity are met.

## **Equality, Diversity and Inclusion**

The long-term strength of the UK research base depends on harnessing all the available talent. EPSRC expects that equality and diversity is embedded at all levels and in all aspects of research practice and funding policy. We are committed to supporting the research community, offering a range of flexible options which allow applicants to design a package that fits their research goals, career and personal circumstances. This includes career breaks, support for people with caring responsibilities, flexible working and alternative working patterns. With this in mind, we welcome applications from academics who job share, have a part-time contract, or need flexible working arrangements.

Peer review is central to EPSRC funding decisions, we require expert advice and robust decision-making processes for all EPSRC funding initiatives. We are committed to ensuring that fairness is fully reflected in all our funding processes by advancing policy which supports equality, diversity and inclusion. Please see our Equality and Diversity webpages <https://epsrc.ukri.org/funding/equalitydiversity/> for further information.

## **Responsible Innovation**

EPSRC is fully committed to develop and promote responsible innovation. Research has the ability to not only produce understanding, knowledge and value, but also unintended consequences, questions, ethical dilemmas and, at times, unexpected social transformations. We recognise that we have a duty of care to promote approaches to responsible innovation that will initiate ongoing reflection about the potential ethical and societal implications of the research that we sponsor and to encourage our research community to do likewise.

Responsible innovation creates spaces and processes to explore innovation and its consequences in an open, inclusive and timely way, going beyond consideration of ethics, public engagement, risk and regulation. Innovation is a collective responsibility, where funders, researchers, interested and affected parties, including the public, all have an important role to play. Applicants are

expected to work within the EPSRC Framework for Responsible Innovation given on the EPSRC website (<https://epsrc.ukri.org/research/framework/>).

## Guidance on Journal-based metrics

As part of our commitment to support the recommendations and principles set out by the San Francisco Declaration on Research Assessment (DORA; <https://sfdora.org/read/>), UKRI reviewers and panel members are advised not to use journal-based metrics, such as journal impact factors, as a surrogate measure of the quality of individual research articles, to assess an investigator's contributions, or to make funding decisions.

The content of a paper is more important than publication metrics, or the identity of the journal, in which it was published, especially for early-stage researchers. Reviewers and panel members are encouraged to consider the value and impact of all research outputs (including datasets, software, inventions, patents, preprints, other commercial activities, etc.) in addition to research publications. We advise our peer reviewers and panel members to consider a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice

## Equipment

Equipment over £10,000 in value (inc. VAT) is not available through this call. Smaller items of equipment (individually under £10,000) should be in the Directly Incurred - Other Costs heading (at the full proposal stage).

For more information on equipment funding, please see: <https://epsrc.ukri.org/research/facilities/equipment/>

## Eligibility

**Only applicants invited to submit a full proposal following the outline stage may apply. Any other applications will be rejected by UKRI.**

For this call, standard UKRI eligibility rules apply relating to the status of the organisation and the employment status of individuals applying. Investigators from **all disciplines supported by UKRI** are welcomed and encouraged to apply.

Eligible organisations are Higher Education Institutes, Research Institutes and Research Organisations that can apply for funding from UKRI Research Councils. A list of eligible organisations to apply to UKRI is provided here: <https://www.ukri.org/funding/how-to-apply/eligibility/>.

Certain Public Sector Research Establishments (PSREs) are also eligible to apply. If PSREs wishing to apply have not previously applied for UKRI funding and are not currently designated Independent Research Organisation (IRO) status, they may be required to complete an eligibility form to ensure they have the required research capacity, systems and controls in place to manage the research and grant funding. Please see <https://www.ukri.org/funding/how-to->

[apply/eligibility/](#)for further information. To be eligible, PSREs will need to demonstrate research capacity and capability relevant to UKRI, as per the standard eligibility rules.

For information on the eligibility of organisations and individuals to receive EPSRC funding, see the EPSRC Funding Guide:  
<https://epsrc.ukri.org/funding/applicationprocess/fundingguide/>

Please ensure sufficient time to create Je-S accounts for Investigators who do not currently have one.

## How to apply

This call is subject to two-stage application process and this is the second stage to which successful applicants from the first stage have been invited:

- **Stage 1: Outline proposal** – see outline call document here:  
<https://epsrc.ukri.org/funding/calls/trustworthy-autonomous-systems-research-nodes-call/>
- **Stage 2: Invited full proposal** - the deadline for full proposal submission is **16:00 2 July 2020**. Only invited full proposals will be accepted at this stage, and any unsolicited proposals will be rejected.

## Stage 2: Submitting a Full proposal (invited only)

**Please note that this call document is for full proposals only.**

If successful at the outline stage, the invited full proposals must be received by the deadline of **16:00 2 July 2020**. Your application should be submitted using the Research Council's Joint Electronic Submission (Je-S) System (<https://je-s.rcuk.ac.uk>).

Note that clicking 'submit document' on your proposal form in Je-S initially submits the proposal to your host organisation's administration and not to UKRI. Please ensure you allow enough time for your organisation's submission process, between submitting your proposal to them and the call closing date, which is **16:00 2 July 2020**.

## Guidance on writing a Full proposal

Applicants are advised to consider the assessment criteria for the full proposal stage of this call, as well as the strategic drivers to ensure that these are appropriately addressed within the application.

As part of full proposal application, the applicants are required to submit the following documents:

- A single **Je-S application form**

- Please note that successful Node proposals will be required to be titled “**UKRI Trustworthy Autonomous Systems Node in ...**”. However, applications can be submitted with any appropriate title and this will be amended if successful.

- **Full Case for Support (up to 10 sides of A4)**

Up to maximum of **ten sides** of A4 case of support covering the following:

- **2 sides of A4** track record highlighting the skills, expertise and experience of the applicant team as relevant to the programme and the chosen node topic. Examples of prior successes and/or lessons learnt from running large-scale, complex or multi-disciplinary projects may be included.
- **8 sides of A4** to include:
  - Background
  - Vision and ambition of the proposed research programme and how it will contribute delivering the objectives of the TAS programme. The proposed research must clearly align with one of the seven node topics.
  - Research objectives and proposed programme and methodology to achieve those
  - Plans for collaboration and engagement with the overall TAS programme, the wider research community and key stakeholders nationally and internationally.
  - A description of the envisaged impact and the plans to maximise this.

- **Work plan (2 sides of A4)**

Applicant teams should include a comprehensive plan for the start of the project and relate to their management strategy to set appropriate milestones. It is not expected that this will be a Gantt chart for the whole time of the project.

- **Management Strategy (2 sides of A4)** –submitted as ‘Additional Document’

This document should include:

- Day-to-day management of the programme
- Strategy for engaging with the Hub and the other nodes
- Approach to monitoring the progress of the programme
- Plans for maximising the flexibility of the programme, potentially by accessing the pump prime funds managed by the Hub.

- **Justification of Resources (max 2 sides of A4)**

This should be a two-page narrative description of the need for the resources requested. Please see the webpage for further guidance: <https://epsrc.ukri.org/funding/applicationprocess/preparing/writing/jor/>

- **Project Partner Letter(s) of Support (no max)**

These must be included from all listed project partners, be signed, dated (no more than 6 months before the call closing date) and on a letterheaded paper. The letter(s) must include an outline of how the project partner involvement helps to enhance the quality of proposed multidisciplinary research.

- **Proposal Cover Letter (2 sides of A4)**

This letter will only be seen internally by UKRI and gives applicants the opportunity to express any other information they feel is relevant to their application.

Please note that on submission to EPSRC **all** non-PDF documents uploaded onto Je-S are converted to PDF, the use of non-standard fonts may result in errors or font conversion, which could affect the overall length of the document.

For additional information on the font size and attachment type, the applicants are advised to please refer to the following guidance:

<https://epsrc.ukri.org/funding/applicationprocess/preparing/writing/>

For advice on writing proposals see:

<https://epsrc.ukri.org/funding/howtoapply/preparing/>

Applicants should use the Ethical Information section on the Je-S form to demonstrate to peer reviewers that they have fully considered any ethical issues concerning the material they intend to use, the nature and choice, current public perceptions and attitudes towards the subject matter or research area. EPSRC will not fund a project if it believes that there are ethical concerns that have been overlooked or not appropriately accounted for. All relevant parts of the Ethical Information section must be completed. If the research will involve human participation or the use of animals covered by the Animals (Scientific Procedures) Act 1986 it is recommended that applicants pay particular attention to the guidance highlighted below. EPSRC reserves the right to reject applications prior to peer review if the Ethical Information sections are not completed correctly.

Further guidance on completing the Je-S form can be found at <https://je-s.rcuk.ac.uk/Handbook/pages/GuidanceonCompletingaStandardG/EthicalInformation.htm>. Other relevant guidance includes: EPSRC's policy on animal use in research (<https://www.epsrc.ukri.org/about/standards/animalresearchpolicy/>) and the Responsible Innovation Framework (<https://epsrc.ukri.org/research/framework/>).

## **Assessment**

### **Assessment process**

This call will use a three-stage assessment process. Full proposals will be subject to Stage 2 and Stage 3 of the assessment process.

#### **Stage 1 – Outline stage**

There will be no postal peer review of outline proposals. Outline proposals will be considered by an independent multidisciplinary panel with the necessary expertise to assess the proposals against the criteria listed below. Successful outline proposals will be invited to submit a full proposal.

The Node outline call document with details on the assessment for Outline proposals is here: <https://epsrc.ukri.org/funding/calls/trustworthy-autonomous-systems-research-nodes-call/>

#### **Stage 2 – Invited full proposals**

Invited full proposals will undergo postal peer review. Proposals that do not have sufficiently supportive reviews will be rejected at this stage. Full proposals with broadly supportive comments will progress to an interview panel stage, and the applicants will have the chance to respond to any comments made by the reviewers before the interview.

#### **Stage 3 - Interview Panel**

An interview stage will be held in order to select the final successful proposals. The Principal Investigator and up to two others identified on the proposal will be invited to attend the interview, and it is expected that at least one of the attendees will be from a collaborative institution. Full details of the interview process will be sent to candidates prior to the interviews.

## **Assessment criteria**

### **Stage 2 and 3 – Invited full proposals stage and interview**

Invited full proposals will undergo postal peer review and will be assessed against the following assessment criteria:

#### **Relevance of the proposed approach to the Trustworthy Autonomous Systems (TAS) programme (primary):**

- Fit of the proposed programme of activities to this call for Nodes for the TAS programme, as well as the fit to the objectives of the TAS programme.
- Evidence that the proposed approach will complement the Hub and will contribute building a cohesive UK community in Trustworthy Autonomous Systems.

- Evidence that the aims and objectives of the proposed programme of research will deliver against one of the node topics: trust, responsibility, resilience, security, functionality, verifiability or governance & regulation.

### **Quality (primary):**

- The novelty, ambition and adventure of the proposed research and its potential to drive forward cross-disciplinary fundamental research in Trustworthy Autonomous Systems.
- Evidence that world-class research will be undertaken and that this will contribute to the development of world-leading UK research capabilities in trustworthy autonomous systems.
- Evidence that the proposed research effectively integrates different disciplines and/or expertise as appropriate to tackle the research questions posed by the Node topic.
- Appropriately broad cross-cutting approach to the research topic being addressed, with a focus on fundamental research rather than specific sectoral applications. Application-oriented research with relevance to various sectors and/or technology types may be undertaken (e.g. use cases) but should not be the primary focus of the application.

### **National importance (secondary):**

- Evidence that the proposed approach will support the Hub in establishing a unique world-leading coordination and research activity for TAS.
- Evidence for the need of research in the chosen Node topic, and how the proposed approach adds value to this national programme in TAS.
- Evidence that the proposed research Node complements existing UK research activity in the area and will drive it forwards by establishing or maintaining the UK in a world-leading position.

### **Applicant team (secondary):**

- Demonstrable ability of the applicant team to lead a large, complex multidisciplinary research investment.
- Demonstrable ability of the applicant team to manage this investment collaboratively in the context of the TAS programme, ensuring that it contributes delivering against the objectives and expectations of the TAS programme.
- Inclusive balance of skills and disciplines within the applicant team for delivery of the proposed programme of activities around the node topic being addressed by the proposal.

### **Collaboration and engagement (secondary):**

- Plans for collaborating across the TAS programme (with the hub and other nodes), the wider research community and key stakeholders in the UK and internationally.
- Routes for engaging with stakeholders and users of the research to design and conduct application-oriented research.

### **Resources and management (secondary)**

- Appropriateness of the resources requested to deliver the objectives of the Node.
- Effectiveness of the proposed management plan and risk mitigation strategy.
- Suitability of the proposed resource management strategy to maximise the flexibility and added value of the investment, including progressing emerging opportunities and engaging across the TAS programme.

### **Guidance for reviewers**

Postal Peer Reviewers should consider the following:

- Please add 'not required' in the Impact box as this is not a criterion for this call
- Add your assessment of the criteria Relevance of proposed research to TAS programme (Primary) and Collaboration and engagement (Secondary) in the 'Proposal assessment' box

Information about the EPSRC peer review process and guidance for reviewers can be found here: <https://epsrc.ukri.org/funding/assessmentprocess/review/> EPSRC are managing the programme on behalf of UKRI; consequently EPSRC's peer review process and reviewer guidance, which is similar to that of the other Research Councils, is being used. Postal peer reviewers will be directed to this call document and contacted to review the proposals.

### **Additional grant conditions (AGCs)**

Grants will be subject to the standard UK Research and Innovation grant conditions. However, the nature of this funding will require additional grant additional conditions, such as expenditure, extensions, monitoring and evaluation. These additional conditions are given in Annex 1. Note that these conditions may be amended, or further conditions may be added to those below before the grant is awarded.

### **Moving forward**

If you are currently restricted under the Repeatedly Unsuccessful Applicants Policy, you may submit unlimited outlines, but you will only be able to submit one full proposal (as PI or CO-I) during the 12-month restricted period.



Full submissions to this call will count towards the Repeatedly Unsuccessful Applicants Policy. Further information about the policy can be found at: <https://epsrc.ukri.org/funding/howtoapply/basics/resubpol/rua/>

## Key dates

Activity:	Date:
Invited full proposals submission deadline	16:00 2 July 2020
Full proposal – Interview panel	Week commencing 14 September
Nodes start date	1 November 2020 (fixed start date)

\*UKRI aims to adhere to the key dates as published. However, there may be exceptions where the sift, prioritisation or interview meeting may have to change due to panel member availability.

## Contacts

Requests for help and advice concerning the writing and costing of your proposal should be addressed to the Research Office within your institution.

If you have any requests about preparing and submitting your proposal using Je-S, please contact the Je-S helpdesk via [JeSHelp@je-s.ukri.org](mailto:JeSHelp@je-s.ukri.org), +44 (0) 1793 44 4164, the Je-S Helpdesk opening hours: Monday to Thursday 8.30am - 5.00pm UK Time and Fridays 8.30am - 4.30 pm UK time (Excluding Bank Holidays and Other Holidays).

For any other call specific information:

- Please email [AI.Robotics@epsrc.ukri.org](mailto:AI.Robotics@epsrc.ukri.org) for general enquires.
- Dr Victoria Mico ([Victoria.MicoEgea@epsrc.ukri.org](mailto:Victoria.MicoEgea@epsrc.ukri.org) – 07712 543 215)
- Dr Danielle Lloyd ([Danielle.Lloyd@epsrc.ukri.org](mailto:Danielle.Lloyd@epsrc.ukri.org) )

## Change log

Name	Date	Version	Change
Victoria Mico	13/05/2020	1.1	Amended start date error
Victoria Mico	05/05/2020	1.0	Version for publication
Victoria Mico	29/04/2020	0.3	Revised previous document
	01/12/2019	0.1	Document created

## Je-S attachments Check List

### Full Proposal:

Attachment Type	Max length	Guidance
Full Case for Support	10 sides of A4	This is a <b>mandatory</b> document. Comprising two A4 sides for a track record, and eight A4 sides to address the assessment criteria
Workplan	2 sides of A4	This is a <b>mandatory</b> document. Comprising <b>up to two</b> A4 sides to address the assessment criteria
Management Strategy - Additional Document	2 sides of A4	The Management Strategy should be submitted under ' <b>Additional Document</b> '. This is a <b>mandatory</b> document.
Justification of Resources	2 sides of A4	This is a <b>mandatory</b> document. Please ensure that all resources requested are justified.
Project Partner Letter(s) of Support	No page limits	This is a <b>mandatory</b> document(s) if there are named Project Partners. Letters of Support from all named Project Partners must be included. These must be on headed paper and be signed and dated within six months of the proposal submission date.
Proposal Cover Letter	2 sides of A4	This is an <b>optional</b> document. The cover letter can be used to highlight any important information to EPSRC. This attachment type is not seen by reviewers or panel members.

## **Annex 1: Additional grant conditions (AGCs)**

Grants will be subject to the standard UK Research and Innovation grant Conditions. However, due to the nature of this funding, the following additional grant conditions will apply to any successful proposal. Note that these conditions may be amended or further conditions may be added to those below before the grants are awarded.

### **AGC 1 – Start date of the grant**

Notwithstanding RGC 5.2 Starting Procedures, this grant has a fixed start date of 1 November 2020 – no slippage of this date will be permitted. Expenditure may be incurred prior to the start of the grant and be subsequently charged to the grant, provided that it does not precede the date of the offer letter.

### **AGC 2 – Naming and branding**

The successful node bid must be prefixed with “UKRI Trustworthy Autonomous Systems Node in ...” plus the specific node topic covered by the grant. This title should be used, along with the UKRI, EPSRC and other council logos as appropriate prominently on all websites, published and printed materials. References to the Strategic Priorities Fund must be included.

### **AGC 3 – Collaboration and Collaboration Agreements**

This grant is awarded on the condition that it will remain aligned to the TAS programme and will work in strategic partnership with the other Nodes and the Hub to deliver the objectives of the investments.

A formal Collaboration Agreement must be in place with the basis of collaboration between any organisations involved in this TAS node. This Agreement should include the following:

- the allocation of resources throughout the project
- ownership of intellectual property, and
- rights to exploitation.

It is the responsibility of the Research Organisations to put such an agreement in place before the research begins. The terms of collaboration agreements must not conflict with the UKRI terms and conditions. Arrangements for collaboration and/or exploitation must not prevent the future progression of research and the dissemination of research results in accordance with academic custom and practice.

The EPSRC contact must be informed within three months of the start of the grant, that the collaboration agreement is in place and has been signed by all partners and/or the progress made (unless some alternative timeline has been agreed with EPSRC beforehand). If sufficient progress has not been made within three months of the start of the grant, EPSRC reserves the right to enact RGC 23.

### **AGC 4 – Expenditure**

At the start of the grant the financial spend profile will be agreed by UKRI. In addition to any reporting requirements set out in GAC 4, the Grant Holder must immediately notify the UKRI Project Officer(s) of any accumulation, slippage or

variation in expenditure greater than 5% of the annual profiled funding. We reserve the right to re-profile the grant if required.

Any deviation from the agreed allocation of funding and profiled costs must be negotiated and approved through written consent by UKRI. The approval of profile changes should not be assumed and will be dependent on spend across all associated grants.

At the end of the grant period a breakdown of the expenditure should be submitted along with the final expenditure statement.

### **AGC 5 –Grant extensions**

No slippage or grant extensions (beyond exceptional circumstances in line with the Equality Act 2010) will be allowed. EPSRC will not be responsible for any cost overrun incurred during the course of this grant. The Research Organisation(s) will be required to make up any shortfall from alternative sources.

### **AGC 6 – Monitoring and reporting**

In addition to the requirements set out in the standard UKRI grant condition RGC 7.4.3, the Grant Holder is responsible for providing quarterly progress reports against non-financial performance metrics. These will be in accordance with the arrangements specified in the Trustworthy Autonomous Systems business case.

The TAS Hub will establish monitoring and evaluation plans for their activities and these will be agreed by the Strategic Advisory Board set by UKRI and the UKRI Programme Management Board. The Nodes must facilitate information required by the Hub for the purpose of monitoring and reporting.

### **AGC 7 – Governance**

EPSRC will nominate a member of UKRI staff who will be the primary contact for the grant. They will ensure that the project is being run in accordance with the terms and conditions and in line with financial due diligence. They should have access to all documentation of Governance and Reporting bodies, in so far as it relates to the administration and application of the grant. As funding administrators, all UKRI staff have agreed to maintain the confidentiality required by all parties involved in UKRI funded research.

UKRI will work with the Hub and the nodes once set up to establish and run an appropriate independent steering body (or equivalent body) to oversee the running of the nodes and provide advice on the strategic direction and activities within the programme. This board will have at least 50% independent membership and an independent Chair. A nominated member of UKRI staff will also be expected to attend and participate in Advisory Board and other appropriate meetings for the duration of the grant.

In addition to the aforementioned steering body, UKRI will establish an external Strategic Advisory Board to advise UKRI on the management of the investment and the progress of the programme against the objectives. The Strategic Advisory Board will work with UKRI to identify the desired outcomes for the programme and provide input/challenge the Hub as appropriate to ensure that the anticipated benefits are realised.

UKRI will seek to enable cross-fertilisation between the Strategic Advisory Board and the independent governance structures established by the Hub. Members of the Hub's independent steering body, the PI, and/or other members team members may be invited to join the Strategic Advisory Board sessions as appropriate.

## **AGC 8 – Review of the project and Assurance Reviews**

In addition to the requirements set out in standard UKRI grant conditions RGC 7.4 and RGC 7.5, EPSRC reserve the right to instigate a review of all or part of the grant at any stage during the lifetime of the award, as well as after the grant has finished. EPSRC will give the TAS Node team due notice of any review and will provide details of the Terms of Reference and documentation required. An unsatisfactory outcome of the review may result in a reduction or termination of the grant funding.

Strategic Priorities Fund investments will themselves be subject to Assurance Reviews and the Hub team is required to fully co-operate in these and provide UKRI with information relating to the grant and relevant to the Assurance Review in a timely manner. These reviews will focus on progress to date. These reviews will be organised by UKRI and the format and timeline will be discussed with the TAS Hub team in due course.

A mid-term review of this grant will take place to assess the performance of the grant, in line with the peer reviewed body of work, published scheme assessment criteria and Key Performance Indicators/milestones and deliverables. Any review will be conducted by an expert panel, which will make recommendations to EPSRC for the grant's future.