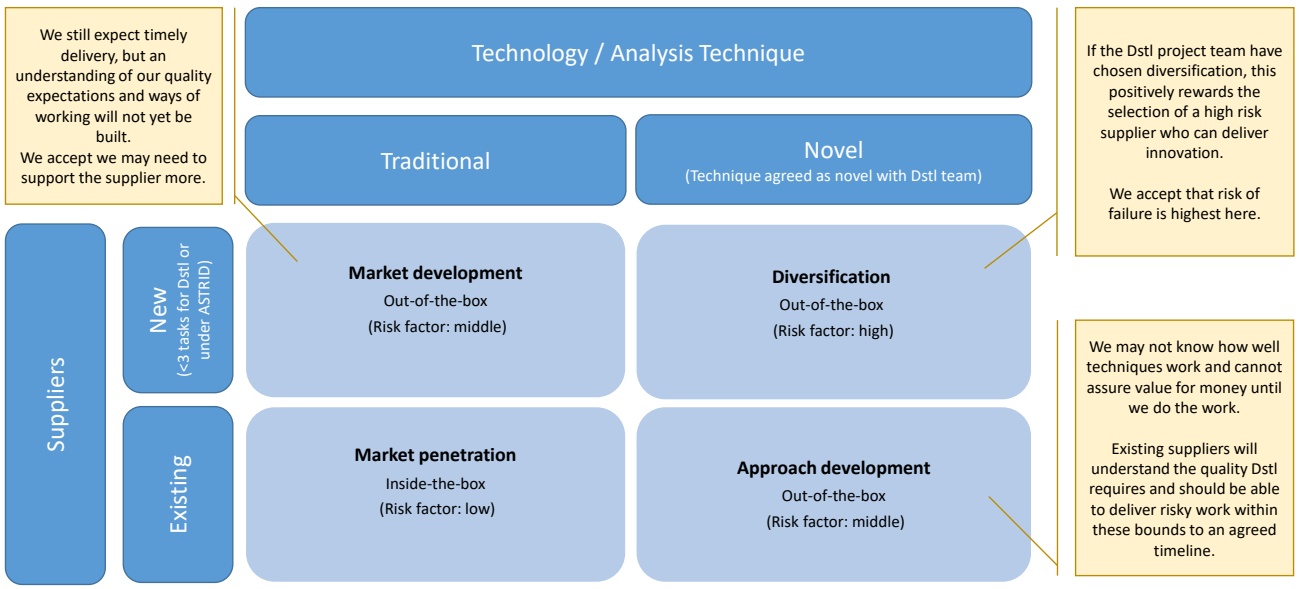
Statement of Requirement (SOR)

Contact & Project Information:

Project Manager	Name	Redacted under FOIA Section 40 – Personal information		
	Email	Redacted under FOIA Section 40 – Personal information		
	Telephone number	Redacted under FOIA Section 40 – Personal information		
Technical Partner	Name	Redacted under FOIA Section 40 – Personal information		
	Email	Redacted under FOIA Section 40 – Personal information		
	Telephone number	Redacted under FOIA Section 40 – Personal information		
iCas project number	PJ100277 - 708552			
Owning division	Exploration Division	**Delivering division**	Exploration Division	
Programme	Defence S&T Futures			
Indicative task budget(s) £k	Core / initial work:	**90,000**	Options / follow on work:	**60,000**

Innovation risk appetite:	Low
Narrative (if applicable):	

Using the Ansoff matrix below, please indicate your risk appetite with regards to accepting innovative bids/solutions. The type of analysis/experimentation technique is included within 'Technology/Product'.



Use of Outputs:

This section is used to inform risks, liabilities, mitigations and exploitation. Questions 1-10 below should be a Yes/No/NA response. Please indicate if the questions do not make sense in the context of your task.

Intended uses (including the approximate time before use and any key decisions that will use the output):
The outputs from this study will determine whether this approach provides a clear understanding of opportunities for defence engagement and collaboration underpinned by an evidence base for decisions on focus areas. It will be used to inform where the UK could collaborate with a given / specified nation based on opportunity; rather than determining any specific UK needs first.
Possible uses:
The output may be used to assist Dstl and DST in identifying areas of opportunity for engagement and collaboration with the Indo Pacific.
Excluded uses:

1	Will any output be directly used as part of a safety critical system, or will it be one of the most important factors in decisions on Cat A/B investments (>£100M), or at Ministerial level policy making?	no
2	Is this task collating and presenting previous work without making further / new recommendations?	no
3	Is this task research - for example, an exploration of new methods, models or tools?	yes
4	Will a re-run of the modelling or analysis be required before outputs are presented to a decision maker?	no
5	Will the outputs form a minor part of the work that will be combined by the Dstl Project Team before being used for decision-making?	yes
6	Has the approach to the work (how to undertake the work) been fixed by Dstl/MOD?	no
7	Will 100% of the technical assurance of the outputs provided by the Dstl Project Team?	No
8	Is the Dstl Project Team capping the maximum levels of verification and validation to be carried out on outputs?	N/A
9	Is this task developing or maintaining a method, model or tool (MMT) which will be used for multiple use cases over a period of time by Dstl Project Teams?	yes
10	Can you confirm that there are no known intended uses of the outputs over and above those described here that could result in new risks if the output was incorrect?	N/A

Statement of Requirement (SoR)

Project's document ref	**Dstl/708852/SOR- Country strength**
Version number	**1**
Date	**10/08/2021**

1.	**Requirement**
1.1	**Title (including AST/ prefix)**
	AST/Country Strength – IRC S&T Enterprise
1.2	**Summary**
	MOD needs to prioritise how it should approach International Research Collaboration (IRC); and a primary driver for the S&T Enterprise is identifying what areas specific countries or organisations have prioritised and/or are leading in. Dstl is seeking to develop and pilot an innovative approach(es) to support IRC decision-making, which can provide both a quantitative and qualitative analysis of the R&D strengths of a particular country or organisation. This can then be aligned to UK interests in order to inform policy, strategy, plans and governance; ultimately leading to the allocation of effort to engage for a range of purposes, from information exchange to collaborative working.
1.3	**Background**

	The MOD S&T Strategy articulates the need for the UK to advance towards securing its status as a Global Science Power. It states that we will work with international partners in a targeted and structured way to deliver strong mutual benefit. We will collaborate by design, which means developing a broader approach to collaboration beyond just research, aligning S&T priorities and objectives with our international partners and identifying new opportunities for joint work and true burden-sharing, with a focus on the five capability challenges for generation-after-next capabilities. **To develop that targeted and strategic approach to working within the international space we need to understand the international landscape within the defence area, as well as identify areas of alignment between potential partners. Dstl already has many productive, mutually beneficial international collaborations, but the majority are with our main allies and nearly all have grown organically using a more project specific approach, as opposed to identifying a broader technical area or capability gap to address. In addition the knowledge of areas of strength within the international R&D landscape have generally come from the personal networks and understanding of Dstl scientists. These personal networks are extremely important and key to international engagement, but a more objective, systematic view is needed when looking at generation after next capabilities, emerging technologies and non-traditional partners. If successful this approach to assessing country strengths will provide that assessment.**

1.4	**Requirement**

The purpose of this task is to develop an innovative approach (es) to assessing the R&D priorities, activities and strengths of a particular country or organisation. The method should be developed by conducting a pilot study, but should be repeatable for other countries or organisations. The approach should assist decision-makers in determining what specific countries' investment priorities / activities are for Science, Technology, Research and Development, and assess their strength in the following areas:

i. Defence and Security
ii. Government
iii. Academia

The approach should aim to map out the key functions / organisations within government and academia for delivering government-funded S&T and overseeing any S&T within.
The task will focus on developing the approach within the context of the Indo-pacific region and the study should test the approach by conducting a pilot case study, which will assess the country, India.
The pilot study assessment should cover the following three core parts (A, B, and C). However, the priority should be on parts A and C; with B being a secondary priority if data and costs allows. Any proposal should articulate the approach taken and the amount of effort required for each of these areas, A, B and C.

A: Activity Capture

For the country of interest, conduct an assessment of their investment priorities and activities within Science, Technology, Research and Development for the three areas listed above. The assessment should draw on a range of open source information and GFX. This should include as a minimum, but is not limited to:

- Primary Sources: e.g. Officially (government) published items
- Documentation, reports, Webpages
- Announcements, including social media
- Speeches
- Scientific publications
- Secondary Sources, e.g. Open & paid databases:
    - For defence, this may include examples such as Janes, IISS strategic balance, etc.
    - For academia, this may include News publications; with some marking as to the quality of such.
- UK Defence derived information: including, but not limited to: Analysis of reports from Embassy and other MOD engagement.
- Interviews with related staff, including but not limited to Defence Attaché staff.
- Survey of Dstl TSLs and Programmes to ask for specific areas to focus on.

As part of the task, Dstl will look to supply an amount of material as GFX during the start-up activities; however, this material cannot be provided as part of this bid solicitation activity. The GFX provided by Dstl is expected to include:

- Prior research material from the Defence Solutions Centre, including:
    - Stimulating S&T Enterprise for Team UK,
    - Bibliometric Analysis - King's College London v1.0,
    - Investment Analysis - UKDSC v1.0
- Source material for documents such as "The Great Tech Game" (Dstl link, MOD link).
- Access to MOD subscribed databases.

- Access to Cross Government networks of individuals and POCs, including the Science and Innovation Network, GO Science and BEIS.

B: Assessment of Strength

For the country of interest, conduct an assessment of "Strength" in the fields of research, development, science and technology for the activities collated under Part A. Dstl will provide some Previous research and thoughts on how this could be conducted (to be supplied as GFX during contract award). Such methods include, but are not limited to:

- Number and trends of patents submitted in total and by category or area (see C)
- Number and trends of academic papers submitted total and category or area (see C)
- Amount and trends of funding in total and category or area (see C)

Suppliers are requested to highlight potential approaches to this part of the work within their bid, and this will be discussed and confirmed as part of the start-up activity, as well as reviewed during project progress meetings.

C: Collation and Presentation

Building on Part s A and B, the supplier will conduct an analysis of the insights captured to summarise the findings and collate or categorise against the following taxonomies:

- Dstl 22 Strategic S&T Capabilities (required, multiple mappings permissible)
- Defence Technology Framework (if applicable)
- Capability Challenges from MOD Science & Technology Strategy

Outputs/Delivery

It should be provided in a both a static form (report) and suitably manipulable format[1] as part of delivery.

Mid term assessment:

A presentation pack to include an update on technical progress and any risks or issues.

Final report:

Report to include, a comprehensive overview of the approach, findings and outcome of the research, conclusions and recommendations in regards to areas of opportunity and likely trends against the taxonomies highlighted in the requirements, including reference to all source material. The overview should include an assessment of confidence in the data sources and consequent interpretation, as some data/knowledge may be less reliable, or more likely to change compared to other sources.

The outputs should also include an assessment of the pilot method, whether it is viable, why it adds value beyond the previous approaches and what further development might be required for any further use. This should also include an assessment of the potential resources/costs involved in running the same approach for other countries.

Final presentation:

This should summarise the findings in the report above, provide an overview of the database and be recorded for use at a later date.

Database:

	A database of all activities is to be provided in a format that can be later interrogated and manipulated by Dstl (e.g.,CSV, Excel or other appropriate spreadsheet format) This should include a "how to" guide in regards to navigation of the data. Data must be referenced (and thus dated). **Additional Information** Links to other ongoing studies should be clarified; including: • DSTF: Promote Project and Engagement strand. • DSTF: Defence Technology Matrix.
1.5	**Options or follow on work**
	. This bid is focused on providing a quantitative and qualitative analysis of the R&D strengths of India as well as an effective set of methods that can potentially be applied to other Countries or organisations. There is the potential for follow on case studies to look at Singapore, Japan, South Korea, but any decisions on this will depend on the outcome of the pilot.

[1] CSV, Excel or other tabular format for subsequent processing.

1.6	Deliverables & Intellectual Property Rights (IPR)						
Ref.	**Title**	**Due by**	**Format**	**TRL***	**Expected classification (subject to change)**	**What information is required in the deliverable**	**IPR DEFCON/ Condition** *(Commercial to enter later)*
D-1	Mid-term progress and technical review	week beginning 13th Dec 2021	Presentation – (.pptx)	n/a	Redacted under FOIA Section 23 - National Secu	Presentation pack to include but not limited to: • Update on technical progress • Progress report against project schedule. • Review of risk management plan. • Commercial aspects. • Review of deliverables. • Risks/issues. • GFA and supplier performance	DEFCON 705 shall apply
D-2	Final Technical Report and presentation	31 Jan 2022	Written Technical Report + Presentation – (.docx and .pdf)	N/a	Redacted under FOIA Section 23 - National Secur	Report to include, a comprehensive overview of the approach, findings and outcome of the research, conclusions and recommendations in regards to areas of opportunity and likely trends against the taxonomies highlighted in the requirements, including reference to all source material.	DEFCON 703

						The overview should include an assessment of confidence in the data sources and consequent interpretation, as some data/knowledge may be less reliable, or more likely to change compared to other sources. It should also include an assessment of the pilot, if it is viable, why it adds value and cost of doing the same analysis for other Countries. This should then be presented as an overview, including a guide to the database. The presentation should be recorded for future use.	
D-3	Database of RDS&T activities	31 Jan -2022	A data/excel spreadsheet that can be manipulated	N/A	Redacted under FOIA Section 23 - National Secu	A database of all activities identified in Parts A and B (see Requirement). This should be provided in a format that can be later interrogated and manipulated by Dstl (e.g.,CSV, Excel or other appropriate spreadsheet format) This should include a “how to” guide in regards to navigation of the data. Data must be referenced (and thus dated).	

*Technology Readiness Level required, if applicable

1.7	**Standard Deliverable Acceptance Criteria**
	Deliverable Acceptance Criteria (As per ASTRID Framework T&Cs) 1. Acceptance of Contract Deliverables produced under the Framework Agreement shall be by the owning Dstl or wider Government Project Manager, who shall have up to 30 calendar days to review and provide comments to the supplier. 2. Task report Deliverables shall be accepted according to the following criteria except where alternative acceptance criteria are agreed and articulated in specific Task Statements of Work: • All Reports included as Deliverables under the Contract e.g. Progress and/or Final Reports etc. must comply with the Defence Research Reports Specification (DRRS) which defines the requirements for the presentation, format and production of scientific and technical reports prepared for MoD. Reports shall be free from spelling and grammatical errors and shall be set out in accordance with the accepted Statement of Work for the Task. • Interim or Progress Reports: The report should detail, document, and summarise the results of work done during the period covered and shall be in sufficient detail to comprehensively explain the results achieved; substantive performance; a description of current substantive performance and any problems encountered and/or which may exist along with proposed corrective action. An explanation of any difference between planned progress and actual progress, why the differences have occurred, and if behind planned progress what corrective steps are planned. • Final Reports: shall describe the entire work performed under the Contract in sufficient detail to explain comprehensively the work undertaken and results achieved including all relevant technical details of any hardware, software, process or system developed there under. The technical detail shall be sufficient to permit independent reproduction of any such process or system. 3. Failure to comply with the above may result in the Authority rejecting the Deliverables and requesting re-work before final acceptance. 4. Acceptance criteria for non-report Deliverables shall be agreed for each Task and articulated in the Statement of Work provided by the Contractor
1.8	**Specific Deliverable Acceptance Criteria**
	• Initial delivery of **1 -> A & B & C** above is required to be delivered as a single study (and activities 1A, 1B and 1C are not linear); technically partnered via ASTRID as appropriate. ○ MOD will need to facilitate access to appropriate GFX. • It should be delivered as a Pilot Study against a single country; (single country to be identified) with the method for A&B captured, documented and made available for repetition by other successor studies. • The focus is on the Indo-Pacific region • India should be used us the pilot • Expansion to Singapore, Japan, South Korea • Links to other ongoing studies should be clarified, including: • DSTF: Promote Project and Engagement Strand • DSTF: Defence Technology Matrix. • Project to be completed by 31st January 2022.

2.	Quality Control and Assurance
2.1	**Quality Control and Quality Assurance processes and standards that must be met by the contractor**
	☒ **ISO9001** (Quality Management Systems) ☐ **ISO14001** (Environment Management Systems) ☐ **ISO12207** (Systems and software engineering — software life cycle) ☐ **TickITPlus** (Integrated approach to software and IT development) ☐ **Other:** (Please specify)
2.2	**Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement**

3.	Security	
3.1	**Highest security classification**	
	Of the work	Redacted under FOIA Section 23 - National Security
	Of the Deliverables/ Output	Redacted under FOIA Section 23 - National Security
	Where the work requires more than occasional access to Dstl premises (e.g. for meetings), SC Clearance will be required.	
3.2	**Security Aspects Letter (SAL) – Note the ASTRID framework has an overarching SAL for quotation stage (up to OS)**	
	Redacted under FOIA Section 26 – Defence	
3.3	**Cyber Risk Level**	
	Redacted under FOIA Section 26 – Defence	
3.4	**Cyber Risk Assessment (RA) Reference**	
	Redacted under FOIA Section 26 – Defence If stated, this must be completed by the contractor before a contract can be awarded. In accordance with the Supplier Cyber Protection Risk Assessment (RA) Workflow please complete the Cyber Risk Assessment available at https://suppliercyberprotection.service.xgov.uk/	

4.	Government Furnished Assets (GFA)

GFA to be Issued - Yes

If 'yes' – add details below. If 'supplier to specify' or 'no,' delete all cells below.

GFA No.	Unique Identifier/ Serial No	**Description:** *Classification, type of GFA (GFE for equipment for example), previous MOD Contracts and link to deliverables*	Available Date	Issued by	Return or Disposal *Please specify which*
GFA-1	Stimulating S&T Enterprise for Team UK	GFI		Dstl	Return
GFA-2	Bibliometric Analysis - King's College London v1.0	GFI		Dstl	Return
GFA-3	Investment Analysis - UKDSC v1.0	GFI		Dstl	Return
GFA-4	The Great Tech Game	GFI		Dstl	Return
GFA-5	Defence Technology Framework	GFI		Dstl	
GFA-6	Science and Technology Strategy 2020	GFI		Dstl	
GFA-7	Integrated Operating Concept 2025	GFI		MOD	

GFA-8	Dstl S&T Planning Framework 2020-2024	GFI		Dstl	Return
GFA-9	Access to networks of individuals and POCs within Defence S&T. All communications related to this task are to go through the project team. .	GFI		Dstl	N/A
GFA-10	List of examples of online resources (including data sources and methodologies) which may be useful in undertaking this task	GFI		Dstl	Return

If GFA is to be returned: It must be removed from supplier systems and returned to the Dstl Project Manager within 2 weeks of the final Task deliverable being accepted. (Any required encryption or measures can be found in the Security Aspects Letter associated with the Task).

If GFA is to be destroyed: It must be removed from supplier systems and destroyed. An email confirming destruction should be sent to the Dstl Project manager within 2 weeks of the final Task deliverable being accepted

5.	Proposal Evaluation
5.1	**Technical Evaluation Criteria**
	WP Technical lead to review the work and its progress in line with the requirements of the SOR, to ensure that they are complying with the request from DST and Dstl. Engagement and communication will be critical with this work to ensure that the supplier is providing what is deemed as important and relevant to the request.
5.2	**Commercial Evaluation Criteria**
	As per ASTRID Framework T&Cs.