# ASTRID
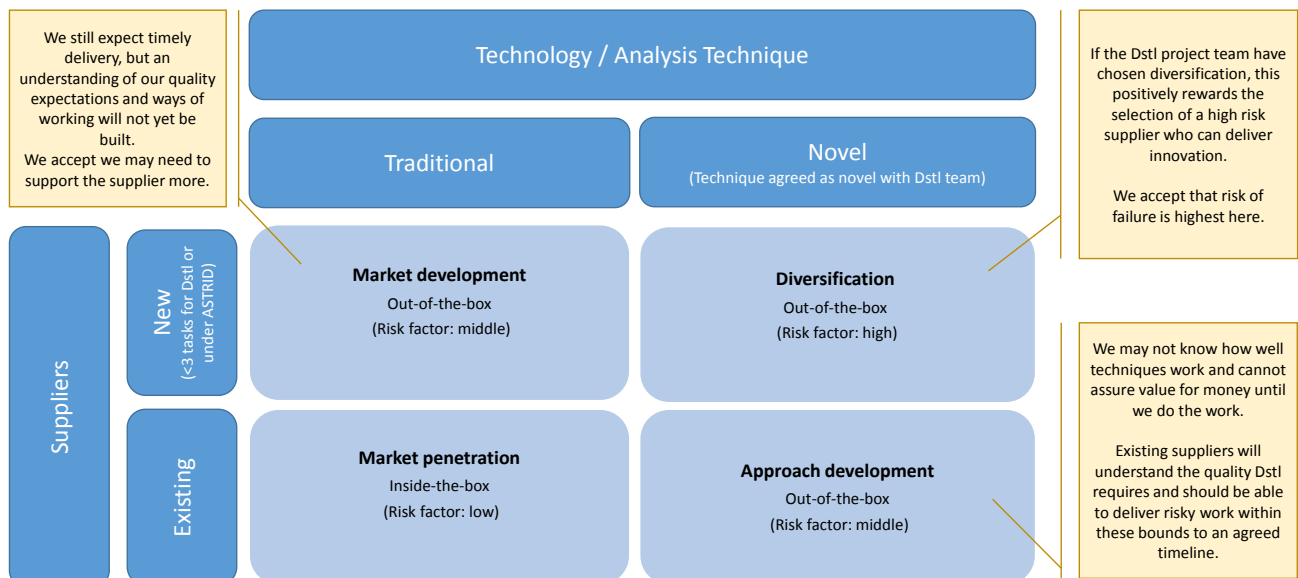ANALYSIS FOR SCIENCE & TECHNOLOGY RESEARCH IN DEFENCE

## Statement of Requirement (SOR)

### Contact & Project Information:

| | | |
|---|---|---|
| **Project Manager** | **Name** | **Redacted** |
| | **Email** | **Redacted** |
| | **Telephone number** | **Redacted** |
| **Technical Partner** | **Name** | **Redacted** |
| | **Email** | **TBC** |
| | **Telephone number** | **TBC** |
| **iCas project number** | **TBC** | |

| | | | |
|---|---|---|---|
| **Owning division** | **DST** | **Delivering division** | **DST** |

| **Programme** | **N/A** |
|---|---|

| **Indicative task budget(s) £k** | **Core / initial work:** | **£500** | **Options / follow on work:** | **£900** |
|---|---|---|---|---|

| **Innovation risk appetite:** | **Middle - Approach development** |
|---|---|
| **Narrative (if applicable):** | **Redacted** |

**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'.**

Diversification



We still expect timely delivery, but an understanding of our quality expectations and ways of working will not yet be built.
We accept we may need to support the supplier more.

Technology / Analysis Technique

Traditional

Novel
(Technique agreed as novel with Dstl team)

If the Dstl project team have chosen diversification, this positively rewards the selection of a high risk supplier who can deliver innovation.

We accept that risk of failure is highest here.

Suppliers

New (<3 tasks for Dstl or under ASTRID)

Existing

Market development
Out-of-the-box
(Risk factor: middle)

Diversification
Out-of-the-box
(Risk factor: high)

Market penetration
Inside-the-box
(Risk factor: low)

Approach development
Out-of-the-box
(Risk factor: middle)

We may not know how well techniques work and cannot assure value for money until we do the work.

Existing suppliers will understand the quality Dstl requires and should be able to deliver risky work within these bounds to an agreed timeline.

### Use of Outputs:

**Intended uses (including the approximate time before use and any key decisions that will use the output):**

Redacted

**Possible uses:**

Output may be circulated in raw form to those in Defence who are interested in the detail of S&T analysis and judgement Redacted

**Excluded uses:**

Not intended for external publication.

| | | |
|---|---|---|
| 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? | No |
| 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? | No |
| 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? | TBC |
| 8 | Is the Dstl Project Team capping the maximum levels of verification and validation to be carried out on outputs? | TBC |
| 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? | No |
| 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? | Yes |

## Statement of Requirement (SoR)

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|---|---|
| **Project's document ref** | Redacted |
| **Version number** | 1.0 |
| **Date** | 08/10/2021 |

| **1.** | **Requirement** |
|---|---|
| **1.1** | **Title (including AST/ prefix)** |
| | AST/ (Structured evidence to inform) analysis of future S&T trends |
| **1.2** | **Summary** |
| | Provide a structured dataset to support an assessment of the individual and combined impact of a broad range of science and technology trends on Defence and foreign policy priorities, covering three timeframes: now +5, +10, and +20 years. |
| **1.3** | **Background** |
| | The Integrated Review of Security, Defence, Development and Foreign Policy made clear that science and technology (S&T) is an arena of intensifying strategic competition. In this context, Defence will have to improve its ability to identify future opportunities and threats from S&T, so that we can make the best possible strategy, capability and policy decisions to maintain and extend UK strategic advantage. In MOD's 2020 S&T Strategy, we made clear that this will involve more effort to **search** the breadth of the S&T landscape, **judge** its likely impact, and intelligently **respond**. <br><br> Redacted |

| 1.4 | **Requirement** |
|------|------|
| | **Overview and summary** |
| | The main output required is a structured dataset and accompanying report that will be used to support an assessment of the individual and combined impact of a broad range of science and technology trends on Defence and foreign policy priorities, at a range of different timeframes. The dataset must be supported by a report detailing the methodology used. |
| | **Data requirement**<br>Redacted<br>**Methodology**<br>Redacted<br>**Definitions**<br>Redacted<br>**Skills/capabilities required**<br>Redacted<br>**Outputs required**<br>Redacted |
| 1.5 | **Options or follow on work** |
| | Depending on the outputs produced, further work may be considered to develop the data further, refresh it in future, or carry out more in-depth analysis, assessment and judgement on it. |

| 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 |
| D – 1 | Two-monthly progress and technical review | T0+2 Months and then every two months | Presenta tion (.pptx) and meeting | n/a | Upto OS | Presentation pack to include but not limited to: <br>• Update on technical progress <br>• Progress report against project schedule. <br>• Review of risk management plan. <br>• Commercial aspects. <br>• Review of deliverables. <br>• Risks/issues. <br>• GFA and supplier performance | DEFCON 705 shall apply |
| D – 2 | Structured MS Excel dataset of S&T trend evidence, delivered: <br>• As a single comprehensive file at the end of the work; <br>• As monthly sub-deliverables, i.e. Excel files comprising data collected and assessed so far, throughout the course of the work. | T0+6 Months for final deliverable; T0+1,2,3,4,5 months for interim deliverables. | Excel file (.xlsx) | n/a | Upto OS | Given that this is likely to be an extensive piece of work, provision of monthly sub-deliverables of data is required, i.e. Excel files containing data gathered so far, so that we can begin to exploit the evidence as it is gathered, curated and assessed. <br><br>To comprise: <br>Redacted | DEFCON 705 shall apply |
| D – 3 | Covering report summarising findings | T0+6 Months | Word file (.docx) | n/a | Upto OS | To include: | DEFCON 705 shall apply |

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| | and judgements derived from data | | | | | • Analysis, judgements and findings derived from the data gathered, structured according to Redacted | |
| D – 4 | Methodology explaining how the data was collected and assessed | Confirm broad methodology pre-contract; Provide formal description of methodology at T+1 Month | Word file (.docx) or other appropriate file type | n/a | Upto OS | To comprise<br>• An explanation of Redacted<br>• Details of any quantitative techniques Redacted<br>• Details of any qualitative techniques Redacted | DEFCON 705 shall apply |

*Technology Readiness Level required, if applicable

| 1.7 | **Standard Deliverable Acceptance Criteria** |
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| | **Deliverable Acceptance Criteria (**As per ASTRID Framework T&Cs) <br><br> 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. <br><br> 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: <br> • 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. <br><br> • 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. <br><br> • 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. <br><br> 3. Failure to comply with the above may result in the Authority rejecting the Deliverables and requesting re-work before final acceptance. <br><br> 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** |
| | Deliverables should be as specified to meet the requirements set out in 1.6 above. |

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

| 3. | Security | |
|---|---|---|
| **3.1** | **Highest security classification** | |
| | **Of the work** | OFFICIAL |
| | **Of the Deliverables/ Output** | Up to OFFICIAL SENSITIVE |
| | The initial phase of the work involves the gathering and aggregation of open-source data concerning science and technology (as described above Redacted). This data has no government security classification, so this aspect of the work is likely to be able to be carried out at OFFICIAL. | |
| | The subsequent work then involves the assignment of assessments and judgements to the data and provision of these in a formal project output. This process of collecting together significant data and assigning assessments and judgements to it may raise the classification of the output to OFFICIAL SENSITIVE. | |
| | The Authority should be given the opportunity to review project outputs to determine the appropriate security classification before they can be shared widely. | |
| **3.2** | **Security Aspects Letter (SAL) – Note the ASTRID framework has an overarching SAL for quotation stage (up to OS)** | |
| | Not applicable | |
| | If yes, please see SAL reference- *Enter iCAS requisition number once obtained* | |
| **3.3** | **Cyber Risk Level** | |
| | Not applicable | |
| **3.4** | **Cyber Risk Assessment (RA) Reference** | |
| | To follow | |
| | 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/](https://suppliercyberprotection.service.xgov.uk/) | |

| 4. | Government Furnished Assets (GFA) | | | | | |
|----|-----------------------------------|---|---|---|---|---|

GFA to be Issued -     No

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

| GFA No. | Unique Identifier/ Serial No | Description: | Available Date | Issued by | Return or Disposal |
|---------|------------------------------|--------------|----------------|-----------|--------------------|
| GFA-1 | N/A | Unclassified information: Redacted | Upon commencement of the work | Project Authority | Dispose |
| GFA-2 | N/A | Unclassified information: Redacted | Upon commencement of the work | Project Authority | Dispose |

**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 |
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| **5.1** | **Technical Evaluation Criteria** |
| | The provider will need to demonstrate:<br><br>• Ability to, and experience of, accessing and integrating comprehensive and diverse data relating to S&T and its applications.<br>• Ability to, and experience of, access and bring together human judgement from a range of sources, including experts in the relevant areas of S&T, experts in the nations of interest, and experts in Defence, security and foreign policy and strategy.<br>• Ability to, and experience of, assess and integrate data of varying veracity (quality/rigour/reliability/trustworthiness/subjectivity)<br>• Their ability to balance statistical rigour with expert judgement to develop a methodology to:<br>    o  assess the plausible direction and speed of evolution of a range of areas of S&T, as specified above, with confidence estimates<br>    o  assess these areas' likely impact (including relative weighted impact) and relevance to a range of Defence challenges over three future timeframes, with confidence estimates<br>    o  The extent to which a range of nations are developing in these areas of S&T and the relative difference between nations. |
| **5.2** | **Commercial Evaluation Criteria** |
| | As per ASTRID Framework T&Cs. |