[dstl]

The Science Inside

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DSTL/DOC135267

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Request for Information: Horizon Scanning / Technology Watch Software Platforms and Advanced Knowledge Analytics

Object of the Request for Information

Short description of requirement

The purpose of this Request for Information (RFI) is to understand the capability of horizon scanning, or technology watch software platforms and any associated advanced analytics available from the market, particularly automated solutions. Dstl is looking for a software platform to enhance and multiply the efforts of our analysts looking for emerging Science and Technology (S&T) with implications for Defence and Security.

Analysts need a software platform to speed up and improve finding relevant content (research, investment/funding, patents etc.), understanding how the content is interconnected, filtering/prioritising results, visualising and analysing the S&T landscape and how it's changing (including the key actors driving the change), and collaborating with others to create a shared view of a scientific or technology development. Analysts need support in interpreting and judging all of the above to assist them determine which of these signals have most implications for Defence.

Our capability to find relevant content and assess it needs to scale up, while the number of analysts remains the same. Semi-automated or fully-automated searching for relevant content and advanced analytics to help understand the evolving science and technology landscape and how/when it could affect Defence and Security are of particular interest. Platforms not covering all of these areas will not be excluded, and platforms designed for other applications that can be adapted to all or part of the need will be considered. The output of this RFI will be used to help Dstl develop its procurement strategy and requirements.

Dstl is interested in companies of all sizes from Micro through to Large Enterprises to offer their ideas or products that may fulfil all or part of this need.

Time-limit (Date & Time) (by 23:59 on):

26/11/2021

Ministry of Defence

Information requested: Description of Requirement

Background

The MOD Science and Technology Strategy 2020 has a clear focus on Science and Technology that can lay the foundations for the generation-after-next of military capability. In its chapter on "Understanding the Future", the Strategy sets a Defence ambition to search the entirety of the S&T landscape, judge the likely impact and implications, and respond appropriately. The Defence Science and Technology Futures programme (DSTF), is a key part of that ambition. Within DSTF, the S&T Intelligence Project seeks to utilise the advances in Data Science, Machine Learning and AI to automatically ingest, process, collate and derive meaning from the information feeds relating to the shifting S&T landscape. The aim of the project is to augment and direct the in-depth S&T analysis and judgement that human specialists in Dstl, perform on behalf of MOD and potentially wider Government.

Objectives of the S&T Intelligence Project:

- Develop or procure a best-in-class platform to allow users to explore, summarise, investigate and enable understanding and judgement of areas of S&T worldwide (covering internal and external data sets);
- Conduct advanced analytics on S&T data sources incorporated into the platform to enable automated or semi-automated horizon scanning, and predict impact and implications.

RFI Responses

Suppliers who believe they can offer full or partial solutions, or contribute to the collaborative development of such a software platform are invited to respond to this RFI by answering the questions below within a Word document or Powerpoint slides and returning it **by e-mail to s+t_intelligence@dstl.gov.uk and jmottram@dstl.gov.uk by the 26th November 2021**. You do not have to answer all the questions. We will be interested to see relevant case studies or background material regarding systems already in production or in concept phase that will allow us to develop our procurement strategy and requirements. Please do not send general sales materials. Information provided in response to the question set will not be shared outside of the UK Government. Demonstrations/discussions are welcome in addition to the written response.

QUESTIONS

Describe at a high level what your product is, what it does and how it works? Demonstrating how it has worked and the results/evidence obtained for other customers, looking at analogous problems, would be advantageous.

Is the platform designed for this problem, making it ready for use as-is, or is it designed for analogous problems? What level of adaption will be required?

What content does or could the platform provide access to? What is the source of the content? Which countries is this content sourced from / does it cover? Is foreign language material translated? Which languages are covered? How has the content been prepared /

curated for use in the platform? How frequently is it updated? How much historical content is included?

How are different sets of content connected across the platform?

What options does the platform provide for searching and exploring the content (key word – what options, semantic, natural language, ontology/taxonomy/topic, meta data)? If content is labelled as part of an ontology or taxonomy, describe how and whether this is maintained? Are the search options federated across all content or are separate searches required?

In what ways could the platform automate aspects of horizon scanning / tech watch, or be adapted to do so?

What other advanced analytics or visualisation does the platform provide? Describe any use of machine learning or artificial intelligence.

In what ways can the platform be used to collaborate with other users and those without access to the platform (assuming a licence is required for access)?

What knowledge management functionality does the platform provide? To what extent does the platform go beyond searching, collation, reporting, fusing, connections analysis, to provide inference or judgements on implications?

How and where is the platform hosted? Are there any options for on premise or private cloud? Could sensitive data held by Dstl be incorporated into the platform in a secure way? Are there any restrictions on platform access or use? Please provide details of any relevant government accreditation, and any design standards or MOD policies that the platform complies with.

Does the platform or the provider expose any APIs or other options to procedurally access data or services? Is it possible to directly access bulk data? Could it be possible to co-develop algorithms to run on the platform as a private service for Dstl? Do you see any restrictions with respect to loading or processing closed source data available under licence from another provider?

Please provide any other information you deem relevant to the requirement stated in this RFI or that makes your product / offering stand out from competitors.

You do not have to answer all the questions.

Potential next steps

Following receipt and review of the RFI responses as a next step you may be invited to provide a further presentation/demonstration between the time of your response until Feb 2022 to explain how your proposed solutions could meet or significantly contribute to the Authority's aims as set out in this RFI. At this stage you will need to provide, in confidence, your potential solution/s, identifying any key risks to developing and implementing them if not already available. A very Rough Order of Magnitude of costs for any additional development proposed should be provided, and details of any licencing models and costs. Please state your assumptions on costs to guide the Dstl team. As part of the presentation, you will also need to provide a short brief on your company's background, existing customers, and insight into your technology. This will then help shape the scope and direction of the next stage in the engagement process.

Time bounded trials of existing platforms after the presentations/demonstrations are desirable for applicable platforms.

These activities will inform Dstl's procurement strategy and requirements. Dstl makes no commitment to procurement of any type, this request is for information purposes only. Any subsequent activity is Subject to Contract.

Market Engagement Timescales

Market engagement through release of RFI from Oct 21. Supplier presentations/demos/trials to Authority by February 2022. Authority strategy to inform any next phases planned by April 2022.