**Request for Information: Wargaming Support Technologies**

## **Objective of the Request for Information**

The Dstl Defence Wargaming Centre (DWC) and the Integrated Warfare Centre’s Defence Experimentation and Wargaming Hub (DEWH) are requesting information from industry to identify the available tools to support the wargaming process[[1]](#footnote-1); design, develop, execute and validate. This request is to capture information on software or hardware (hereafter referred to as technologies) that can be used to support the wargaming process.

Wargame Support Technologies (WST) should provide improvements to the timeliness and efficiency of the wargame process, leading to increased capacity, learning or understanding. Technologies need to be intuitive, adaptable to multiple situations, environments, inclusive (in line with the Derby House Principles[[2]](#footnote-2)), supported and allow interrogation.

## **Key Areas of Focus**

For the purpose of this RFI, key areas from the wargaming process that can benefit from supporting technologies are listed below. This is not an exhaustive list. Under each key area more specific suggestions of technologies have been provided and examples of previous technologies given. Your responses do not have to be limited to the given suggestions/examples.

* **Knowledge Management**

Tracking and management of data and assumptions for wargames.

* + Technology that can explicitly identify and define the Explicit, Implicit and Tacit knowledge that is being utilised in a wargame.
	+ Technology focused on making collections of assumptions, such as a Master Data and Assumptions List (MDAL), easier to interrogate across multiple projects.
	+ Order of battle (ORBAT) generation technology and visual storage system that could be used to print ORBATs to presentation slides.
	+ Entity symbol generator that conforms to NATO Standard
	+ Intuitive and easily interrogated storage system for wargaming data and assumptions.
		- E.g. OE Data Integration Network (ODIN)[[3]](#footnote-3)
	+ Software to guide designers through the various stages of a wargame commissioning and design process and document progress.
* **Adjudication Support Tools**

Technologies that support, but not replace (see ‘Areas Not Included’ section below) the adjudication process.

* + Technologies that sequence player actions.
	+ Technologies that identify interactions that need adjudication.
	+ Technologies with systems to help players learn rule sets by briefing them and enabling them to dynamically query the rules.
* **Digital Prototyping and Design Tools**

Technology that enables fast paced digital prototyping and design of wargames components.

* + Tools with rapid prototyping etc. and able to run on IT within secure environments.
		- E.g. IT systems with no internet access
	+ Automated rules evaluation technologies.
		- E.g. technology that will verify and validate rules.
* **Design and Production of Materials and Graphics**

Technologies that allow the production of physical wargame components.

* + Automated terrain analysis. Technology that can interrogate requested key terrain features in aid of map creation.
	+ Digital graphic design technologies with a focus on improving the process of designing maps, counters, cards, and associated components for wargames.
	+ Manufacturing technologies to improve the process of producing physical maps, counters, cards, and associated components for wargames.
* **Data Capture / Communication**

Adaptable methods of data capture (textual, audio and video) with controllable attributably, anonymity and security considerations. Live tracking of counter positions on a physical map.

* + Recordable and timestamped communication between multiple cells of people. Allow controllable transparency of conversations between teams with adjustable attributably / anonymity.
	+ The ability to track physical tokens on a map and record positioning per wargame turn.
	+ Double blind and anonymous data capture.
	+ Tagging and filtering of captured data on entry and post-game analysis.
	+ Audio to text capture. Technology to isolate simultaneous conversations in a large space and convert these into text. Technology to sort and filter recorded conversations based on prompts without losing the context of conversations.
	+ Technologies that provide AI analysis of captured data.
* **Visualisation**

Technology to display key components, entities, maps and other visual elements of a wargame to convey information of key metrics both manually and digitally.

* + Hybrid solutions to visualisation such as Augmented Reality support for manual wargaming.
	+ Technologies that provide haptic feedback to support AR/Virtual Reality (VR).
* **Distributed Execution**

The ability to host participants in distributed locations either within the same site or across sites securely.

* + Video Tele-Conference (VTC).
	+ Ceiling mounted camera systems.
	+ Technologies that provide holographic tables.
* **Post-Game Visualisation**

Technologies that improve the visual brief back of wargame results.

* + Technology to display the narrative of a wargame after execution.
	+ Technology to display non-military and non-geographic interactions and game narrative post-execution.
	+ Technology to analyse Course of Action (COA) both taken and not taken.
	+ Technology to interpret 2nd and 3rd order effects across a variety of domains.
		- Including but not limited to tactical and Diplomatic, Information, Military and Economic (DIME).

## **Areas that are not in the scope of this RFI are listed as follows:**

* **Adjudication Methods and Tools**

The design of the nested tools, techniques and models that converge into a wargame. Including the use of simulations and models.

* **Event Organisation and Planning**

Large events require adequate planning and coordination. This includes floor planning of facilities and ensuring the required hardware and software is present.

* **Analysis and Data Capture Plan**

The experimental design of a wargame, identifying metrics and data to be captured and how this will be examined. Tool for advising on how the data will be collected, the frequency and format of this collection, and so on.

* **Vignette Generation Support**

Creation of credible scenarios and vignettes for use in wargaming.

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

28th March 2025

## **Information requested:**

Description of the available technology and the use case.

If you provide any information that you consider to be confidential such as costing, IPR, technical specifications you should mark these sections in your reply so Dstl can make sure it is appropriately treated in any future procurement.

## **Specific Parameters**

Information on technologies must be appropriate to one or more of the key areas identified above, but can cover sub points not highlighted if deemed relevant to the wargaming process. Technologies can span multiple key areas and parts of the wargaming process.

Suppliers who believe they can offer full or partial solutions, or contribute to the collaborative development of such a software platform (as covered in **Key Areas of Focus**) are invited to respond to this RFI by completing the response template in **Annex A: RFI Response Template** and returning it by e-mail to wargaming@dstl.gov.uk by the 28th March 2025, including the phrase “EAD WP1” in the subject line. Any responses without “EAD WP1” in the subject line of the email will not be seen. Please respond to all the sections if relevant. We will be interested to see relevant case studies or background material regarding systems already developed or in the development phase that will allow us to develop our procurement strategy and requirements. Please do not send general sales materials. All information provided in response to the Response Template will not be shared outside of the UK Government.

## **Response Template Descriptions**

Provided information in the format provided in **Annex A: RFI Response Template**. If information on multiple technologies is being submitted, please complete a response for each. Descriptions of the specific information expected in each response are below.

|  |
| --- |
| **General Information**  |
| Name | *Name of the Technology. Abbreviations should be spelt out.* |
| Developer | *Developer name (Include link to website).* |
| Publisher | *Publisher name (Include link to website).* |
| Host software | *Any software the technology requires to be hosted (e.g. Microsoft Excel) if applicable.* |
| Wargaming life cycle | *Which part(s) of the wargaming life cycle does the tool support?* |
| Purpose | *General keywords used to describe the use of tools*. *Multiple labels can apply to the same tool. A full list of keywords to use are described in* **Appendix A: Purpose Keywords*.*** |
| Development status | *Current status of the WST as part of a development cycle. Only one label can be set to the tool*. *A full list of keywords to use are described in* **Appendix B: Development Status Keywords*.*** |
| Available Support | *What level of support is available for this technology?*  |
| Licensing Type | *What are the typical licencing arrangements for this technology?*  |
| IT requirements | *Has the technology been rated for classified work? If so, what level?**Does the technology require internet access?**How is the data stored?**Can it be run as stand-alone?* |
| **Tool Information** |
| Briefly describe the tool | *Top line overview of the technology* |
| What is the general use case for the tool?  | *What task was it* ***designed*** *to accomplish?* |
| How adaptable  | *Include expected challenges and development time* |
| What are the technical limitations of the tool? | *e.g. Always requires internet connection*  |
| When is it appropriate to use the tool? |  |
| When is it inappropriate to use the tool? |  |
| Prior use | *Any wargames that the tool has previously supported and how it was used* |
| **User Information** |
| Please frame information in this section by the usage of the technology in a wargame event.  |
| **Developers** (personnel required to make amendments to the technology and troubleshoot) |
| Prerequisite skills | *Programming languages, experience, etc.* |
| Minimum required developers in support of an event | *During a wargame event, how many developers would be required to ensure an uninterrupted experience and provide troubleshooting.*  |
| Training time required so support an event | *Time required for personnel with the prerequisite skill to become familiar with the technology to develop and troubleshot.*  |
| **Analysts** (personnel required to set-up the technology for an event) |
| Prerequisite skills | *Programming languages, experience, etc.* |
| Training time | *Time required to learn how to use the technology to deploy it during an event.*  |
| **Players** (personnel that will use the front end of a technology during an event) |
| Prerequisite skills for players | *Programming languages, experience, etc.* |
| Training time | *Time required for a player to learn how to use the technology during an event.* |
| **Additional Information** |
| Any additional information you believe is relevant |  |

## **Possible Next Steps**

Following receipt and review of the RFI responses you may be invited to provide a further presentation/demonstration to describe in more detail how your tools, skills and experience could meet or significantly contribute to the Authority's aims as set out in this RFI. In addition to this we would like to understand any key risks to developing and implementing the requirements in this RFI.

Finally, in order to aid any potential future procurement, we would request a very Rough Order of Magnitude of the costs associated with meeting the requirement for any additional development proposed would be requested, including details of any licencing models and costs. Please state your assumptions on costs to guide the Dstl team.

These activities will inform Dstl’s future procurement strategy and requirements. Dstl makes no commitment to continue with the requirement following this RFI.

Any subsequent procurement will be exempt from the PA 2023 under Sch. 2 para. 21, Research and Development Services. The most likely route for any subsequent procurement would be via Dstl’s ASTRID or RCloud contracts.

## **Market Engagement Timescales**

Market engagement through release of RFI from March 25.

## **Appendix A: Purpose Keywords**

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| --- | --- |
| **Keyword** | **Description** |
| Adjudication | A tool that facilitates the determination of outcomes of player actions and resolves interactions between player cells. |
| Baselining | A tool that stores, provides or calculates baseline (“typical”) values for variables within a wargame (fuel consumption, movement speed, etc.) |
| Integration | A tool that ensures the integration of wargame mechanics or technologies.  |
| Data analysis | A tool that processes raw data from a wargame to aid analysts in analysis. |
| Communication & Data capture | A tool that facilitates the collection, storage and management of data during a wargame and/or facilitates communication between personnel before or during the wargame. |
| Designer support | A tools that supports game designers during the design and development phases of the wargaming process. |
| Knowledge management | A tool that ensures information generated for or during a wargame event is stored and readily available for wargame designers to use in the future. |
| Planning | A tool that facilitates the planning of the wargame process and/or tracks the progress of the wargame plan. |
| Player Aids | A tool that supports players during a wargame. This can be aimed to increase the comprehension, verisimilitude or decision making of the player, among other benefits. |
| Quality Assurance (QA) | A QA tool is one that ensure procedures are followed maintains version control and ensures products are of a high standard. |
| Visualisation | The presentation of data and wargame systems in a visual format (graphs, tables, maps, counters, etc.) |

## **Appendix B: Development Status Keywords**

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| --- | --- |
| **Keyword** | **Description** |
| Initial Development | The technology contains all key features necessary to its primary functionality. Development is still going to add non-critical features and troubleshoot issues. |
| Fully developed  | The technology contains all relevant features and is functional. No new features are in development but support still exists for troubleshooting. |
| Unsupported | The technology is fully functional but there is no ongoing support for development of the technology.  |

## **Annex A: RFI Response Template**

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| --- |
| **General Information**  |
| Name |  |
| Developer |  |
| Publisher |  |
| Host software |  |
| Wargaming life cycle |  |
| Purpose |  |
| Development status |  |
| Available Support |  |
| Licensing Type |  |
| IT requirements |  |
| **Tool Information** |
| Briefly describe the tool |  |
| What is the general use case for the tool?  |  |
| How adaptable  |  |
| What are the technical limitations of the tool? |  |
| When is appropriate to use the tool? |  |
| When is it inappropriate to use the tool? |  |
| Prior use |  |
| **User Information** |
| Please frame information in this section by the usage of the technology in a wargame event.  |
| **Developers** (personnel required to make amendments to the technology and troubleshoot) |
| Prerequisite skills |  |
| Minimum required developers in support of an event |  |
| Training time required so support an event |  |
| **Analysts** (personnel required to set-up the technology for an event) |
| Prerequisite skills |  |
| Training time |  |
| **Players** (personnel that will use the front end of a technology during an event) |
| Prerequisite skills for players |  |
| Training time |  |
| **Additional Information** |
| Any additional information you believe is relevant |  |

1. The Development, Concepts and Doctrine Centre (DCDC), *Wargaming Handbook,* DCDC, Ministry of Defence Shrivenham (GB), 2017, UK OFFICIAL [↑](#footnote-ref-1)
2. [Derby House Principles | PAXsims (wordpress.com)](https://paxsims.wordpress.com/derby-house-principles/) [↑](#footnote-ref-2)
3. [OE Data Integration Network (ODIN) is the authoritative digital resource for the Worldwide Equipment Guide (WEG), Decisive Action Training Environment (DATE) and accompanying Force Structures, the Army Techniques Publication (ATP) 7-100 series, and the Training Circular (TC) 7-100 series. ODIN is built to be a living product with standardized technology.](https://odin.tradoc.army.mil/) [↑](#footnote-ref-3)