

Statement of Requirement (SoR)

Purpose

This document is for new Extra-Mural (EMR) Contracts. Use the REDACTED UNDER FOIA SECTION 43 - COMMERCIAL INTEREST
REDACTED UNDER FOIA SECTION 43 - COMMERCIAL INTEREST *page on WikiD when filling out this SoR and a supporting RCA. Please*
seek assistance if desired from REDACTED UNDER FOIA SECTION 43 - COMMERCIAL INTEREST *or your Divisional Procurement Representative.*

This document is supplier facing and the RCA is an internal document. Please delete non-essential grey text before issuing externally/ to suppliers.

Reference Number	1000169950
Version Number	2.0
Date	23/12/2021

1.	Requirement
1.1	Title
	HS 2.011 Robotics and Autonomous Systems (RAS) Medical Evacuation (MEDEVAC) Feasibility Study
1.2	Summary

	Rapid advances in the fields of unmanned aircraft systems (UAS) and unmanned ground vehicles (UGVs), including the payload and range of platforms in development, offers the opportunity to develop Robotic and Autonomous Systems (RAS) Medical Evacuation (MEDEVAC) platforms. These potentially reduce military workforce requirement and the number of personnel exposed to risk to life activity. There are underpinning concepts that must be considered for the possible use of RAS, and how the medical team and the casualty interface with the platform. These considerations include; the technical feasibility, the time frame, formulating non-medical safe ride standards and understanding the associated technologies to realise the aspiration of RAS MEDEVAC as a critical activity. Consideration must be given to the concepts underpinning the possible use of RAS, and how the medical team and casualty interface with the platform. The technical feasibility and in what time frame, formulating non-medical safe ride standards and understanding the associated technologies to realise the aspiration of RAS MEDEVAC platforms is a critical activity. This is a technology area where the UK are working with allied partners, and there is an intention to share work conducted in this area with those partners through The Technical Cooperation Programme (TTCP).
1.3	Background
	MEDEVAC is an inherently dangerous task that can occur under direct fire in close proximity to the Point of Injury (PoI) and is conducted by ground or air assets. Law of Armed Conflict (LOAC) provides that MEDEVAC assets are unable to act in anything other than self-defence and as such often requires force protection, which draws combat power away from other tasks. Rapid advances in the fields of UAS and UGVs, including the payload and range of platforms in development, offer the opportunity to develop RAS MEDEVAC platforms that potentially reduce military workforce requirement and the

	number of personnel exposed to risk to life activity. The SCOPE of this task is to concentrate on RAS. UGV platforms exhibited at Army Warfighting Experiment (AWE) 18, 19 and 20 demonstrated the potential to be utilised as casualty evacuation (CASEVAC) platforms, with some manufacturers seeking to fit their platforms for, but not with, stretchers. MEDEVAC capability requires a means of monitoring, assessing and delivering in-transit care as well as a platform from which to operate. Consideration must be given to the concepts underpinning the possible use of RAS, and how the medical team and casualty interface with the platform. There is a need to understand the enabling technologies required for the introduction of RAS for MEDEVAC functions (identifying its role on the future battlefield and how its introduction could enhance MEDEVAC and to reduce the risk to life and reduce force protection requirements) and the human factors impacting future adoption. This capability will enable emerging mobile robotic platforms to function as a team to locate, assess, and extract a casualty back to a safe location for medical treatment and further evacuation from difficult terrain and hazardous environments. This research will contribute to determining the medical application of RAS in the future. CASEVAC: The evacuation of patients without qualified medical escort. MEDEVAC: The medically supervised process of moving any person who is wounded, injured or ill to and/or between medical treatment facilities as an integral part of the treatment continuum.
1.4	Requirement
	Army HQ HoC Command Support System (CSS) need to understand the technologies required to enable the introduction of RAS for MEDEVAC functions, identify the scope of its application on the future battlefield and how its introduction could enhance MEDEVAC. The supplier is required to provide an indicative roadmap of RAS MEDEVAC technology development providing an indication of when the technologies are likely to be operational

and the steps required to enable the introduction. The roadmap is to include, but not limited to:

- All enabling technologies required to conduct RAS MEDEVAC e.g. remote monitoring, interfaces etc... and their Technology Readiness Levels (TRLs)
- Current limitations of and future blockers for RAS MEDEVAC E.g. numbers/ type of casualties, risk to patients while in-transit, human factors/ perceptions.
- What is the state of the art (internationally in defence; commercially)? Including but not limited to US and Israel.

Ultimately this work is to summarise the steps and time required for this level of technology to develop and be adopted. It is to depict the level of clinical intervention and/or monitoring that is expected to be feasibly delivered remotely and what, if anything will require a medic to physically be in the loop" (see GFI documentation for more details) For example, the monitoring and transport of a "T3" wounded soldier is likely to require less intervention than an unconscious "T1". Will the casualty require a clinically trained individual present throughout evacuation or will the level of technology enable fully autonomous evacuation for the range of casualty types?

MODREC. It is not anticipated that MODREC will be required. Proposals that require MODREC approval will not be accepted.

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1.5	Options or follow on work <i>(if none, write 'Not applicable')</i>
	Suppliers are to provide as a costed option availability to present at a TTCP meeting. Location to be confirmed, it may be possible to present via Videocon (assumption to be made that this will take place Face 2 Face). Physical locations are most likely to be Australia or New Zealand. If physical presence is required, sufficient notice to plan travel will be provided. It is understood that this will be firm priced costs.



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1.7	Standard Deliverable Acceptance Criteria
	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. 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. All Reports shall be free from spelling and grammatical errors and shall be set out in accordance with the Statement Of Requirement (1) above. Failure to comply with the above may result in the Authority rejecting the deliverables and requesting re-work before final acceptance.
1.8	Specific Deliverable Acceptance Criteria
	N/A

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 below)
2.2	Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement
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3.	Security
3.1	Highest security classification
	Of the work REDACTED UNDER FOIA SECTION 26 - DEFENCE
	Of the Deliverables/ Output REDACTED UNDER FOIA SECTION 26 - DEFENCE
3.2	Security Aspects Letter (SAL)
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3.3	Cyber Risk Level
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3.4	Cyber Risk Assessment (RA) Reference
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4.	Government Furnished Assets (GFA)
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GFA No.	Unique Identifier/ Serial No	Description: <i>Classification, type of GFA (GFE for equipment for example), previous MOD Contracts and link to deliverables</i>	Available Date	Issued by	Return Date or Disposal Date (T0+) <i>Please specify which</i>
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5.	Proposal Evaluation criteria
5.1	Technical Evaluation Criteria
	HSSRC evaluation criteria to be used

5.	Proposal Evaluation criteria
5.1	Technical Evaluation Criteria
5.2	Commercial Evaluation Criteria
	HSSRC evaluation criteria to be used