

RCloud Tasking Form – Part B: Statement of Requirement (SoR)

Title of Requirement	Confined Space Entry and Search (CSES) Robotic System
Requisition No.	RQ0000012040
SoR Version	0.1

1.	Statement of Requirements
1.1	Summary and Background Information
	<p>Dstl wants to fund the development and test a remote system capable of making entry into confined difficult to reach areas and conduct a search once entry has been made. The test arena for this system are domestic structures and industrial buildings, with entry points including but not limited to, letter boxes, sewage pipes, air vents and chimney stacks.</p> <p>Once entry is made the system should be able to conduct a search of the area, primarily using electro-optical devices but with options to fit alternative ideally modular payloads to the system.</p> <p>The search pattern and control mechanism for the platform should be automated to reduce the operator cognitive burden.</p> <p>In order to increase soldier survivability through standoff from the threat, the employment of remote systems to conduct high risk and dangerous tasks is becoming ever more common.</p> <p>This task requires the development and demonstration of a CSES system capable of making entry into UK domestic and industrial structures and conducting a search of the interior features of that structure.</p> <p>Integration and testing must be complete ahead of a live demonstration(s) no later than the close of financial year 22/23. Optional work packages for financial year 23/24 are listed in section 1.5.</p>
1.2	Requirement

The project has two phases, a core delivery phase in financial year 22/23 and an optional set of objectives in financial year 23/24. The progression of which requires sufficient technical progress to have been made in the core delivery phase. These phases are set out below.

	Phase 1	(Optional) Phase 2
Date	FY 2022/2023	FY 2023/2024
Firm Price Cost	CAD\$464,460.77	CAD\$465,366.76
Outline description of work (subject to suppliers bid)	Development, testing and demonstration of CSES.	Maturation of system. Development of modular payloads. Demonstration and testing across additional environments.

The requirements below are tradeable with threshold and objectives adjustable as long as the bidder presents a clear and evidence based technical reason to do so as part of their bid documentation. Bidders should note that these requirements are development objectives therefore compliant bids can include either evidence of the technical approach to meet the requirement or evidence of the requirement already being met.

UIN	Requirement	Threshold	Objective
CSES1	The system shall be able to enter confined spaces via pipe	Main sewer pipe and air vent – 4 inch diameter	Internal sewer pipes – 1.5 to 2 inch diameter
CSES2	The system shall be able to enter confined spaces via letter box	UK letter box 10 x 1.5 inches	As threshold
CSES2	The system shall be able to ascend	Stairs	Pipes
CSES3	The system shall be able to operate in water	Move through shallow water (not submerged)	Move through deep water (submerged)

1.4	Contract Management Activities
	Monthly progress meetings and report from contract award.
1.5	Health & Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement
	ISO9001 (Quality Management Systems)

1.6	Deliverables & Intellectual Property Rights (IPR)					
Ref.	Title	Due by	Format	Expected classification (subject to change)	What information is required in the deliverable	IPR Condition
CSES-1	Kick off	Within 6 weeks of contract placement	.pptx	Redacted – FOI Exemption	Kick off meeting to discuss requirements set and technology approach.	Standard R-Cloud T&Cs
CSES-2	Monthly technical updates	Monthly following kick off	.pptx	Redacted – FOI Exemption	Single slide covering progress to date, planned activities, issues, and requests for support/information.	Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and international partners
CSES-3	End of year 1 report	By close of FY22/23	.doc and .pptx	Redacted – FOI Exemption	End of year technical report will be delivered describing the development process to date as well as highlighting key activities for the following year.	DEFCON 705 Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and

						international partners
CSES-4	Prototypes	By close of FY 23/24	Physical system	Redacted – FOI Exemption	Two physical systems for further Dstl led testing and evaluation. At TRL 5/6	DEFCON 705 Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and international partners
CSES-5	Test and demonstration	By close of FY 23/24	Demonstration	Redacted – FOI Exemption	Demonstration of system in representative operational environments showing entry and search. At TRL 5/6	DEFCON 705 Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and international partners

CSES-6	System training	By close of FY 23/24	Training	Redacted – FOI Exemption	Up to 4 MOD users trained on the systems operation to allow further Dstl testing.	Standard R-Cloud T&Cs
CSES-7	End of year 2 report	By close of FY 23/24	.doc and .pptx	Redacted – FOI Exemption	End of year technical report will be delivered describing the development process to date as well as highlighting key activities for the following year.	DEFCON 705 Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and international partners

1.7	Deliverable Acceptance Criteria
	As per framework T&Cs
1.8	Specific Deliverable Acceptance Criteria
	<ul style="list-style-type: none"> • The supplier will provide a demonstrator compliant with the System Requirements. • The supplier will run a demonstration with Dstl of the integrated system.

2	Evaluation Criteria
2.1	Method Explanation
	<p>A total technical score will be calculated by each team member using a sum of marks weighted by importance based on the table below. Once approved by the joint evaluation board, the scores will be averaged across all team members to produce one technical score for the whole team.</p> <p>Bids will be deemed to fall short of the Authority's technical requirement and therefore be technically non-compliant in the following case:</p> <ul style="list-style-type: none"> • A score of 3 or less (Adequate to Inadequate), prior to weighting, is recorded on two or more questions in any of the technical criteria • A score of 3 or less (Adequate to Inadequate), prior to weighting, is recorded on any one of the Criteria marked ID 1, 2, or 3.
2.2	Technical Evaluation Criteria

ID	Criteria	Score	Weighting
1	The Tenderer provides a series of detailed technical plans against each requirement showing how they would deliver a solution to section 1.2.	0, 3, 7, 10	35%
2	The Tenderer demonstrates a clear understanding of system complex design and integration against niche systems requirements in representative operational environments.	0, 3, 7, 10	20%
3	The Tenderer demonstrates evidence of development of niche and specialist remote systems for operation in representative operational environments.	0, 3, 7, 10	20%
4	The Tenderer demonstrates (showing evidence of prior research and development and test and evaluation) a deep knowledge of technical components necessary to meet the technical requirements.	0, 3, 7, 10	15%
5	The Tenderer is able to demonstrate confidence of successfully completing the project within the required timescales identifying risks and risk mitigations.	0, 3, 7, 10	5%
6	The Tenderer demonstrates a collaborative approach and provides evidence of how they will support Dstl shape the concepts in order to provide the best possible solution given the available budget and timeframe.	0, 3, 7, 10	5%

The following scoring guide will be used to evaluate technical scores against each criteria, each technical criteria will be a score of 10, 7, 3 or 0.

Score	Rating	Characteristic
10	Excellent	The response addresses all elements of the requirement, and provides a comprehensive, unambiguous and thorough explanation of how the requirement will be fulfilled.
7	Good	The response addresses all of the elements of the requirement and provides sufficient detail and explanation of how the requirement will be fulfilled.
3	Adequate	The response addresses the majority of elements of the requirement but is weak in some areas and does not fully detail or explain how the requirement will be fulfilled.
0	Inadequate	The response does not address or explain how the requirement will be fulfilled and fails to demonstrate the ability to meet the requirement.

2.3	Commercial Evaluation Criteria
	Commercial evaluation will be undertaken to ensure submission is in line with R-Cloud T&C's