Statement of Requirement (SoR)

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| **Reference Number** | **RQ0000024839** |
| **Version Number** | **7** |
| **Date** | **22/03/2023** |

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| **1.** | **Requirement** |
| **1.1** | **Title** |
|  | RCSP RCDP System |
| **1.2** | **Summary** |
|  | Dstl wants to purchase a commercial-off-the-shelf, Remote command & Control system with multi-drive Dynamic Positioning (RC&DP) capability for its remote controlled surface platform. |
| **1.3** | **Background** |
|  | Dstl is developing a prototype Remote Controlled Surface Platform (RCSP) that will be used in naval trials to assist in the recovery of explosive ordnance from the seabed. The RCSP will be equipped with a lifting winch, which, in coordination with a separately controlled remotely operated vehicle (ROV), will transport ordnance to a safe area for disposal. All personnel involved in the recovery operations will be located at a safe standoff distance (>250m) aboard a crewed vessel within line of sight at all times.  One of the key subsystems required for the RCSP is a remote command & control system with multi-drive dynamic positioning (RC&DP) capability. This will be used to position, control and navigate the RCSP to the ordnance location and then maintain position and heading whilst the winch is in operation. Once the ordnance is raised, the RC&DP system will then be used to navigate the RCSP to a different location suitable for release and/or disposal of the ordnance. |
| **1.4** | **Requirement** |
|  | The requirements of the RC&DP system are as follows:   | **Ser** | **Requirement Description** | **Key / Essential / Desirable** | | --- | --- | --- | | K1 | Must be able to direct a <9m LOA multihull-surface platform equipped with multiple propulsors to a location, controlling heading, speed and position (remaining within line-of-sight of the crewed support vessel). | Key | | K2 | Must provide a remote operator with a remote helm with the ability to manually control a platform over a wireless link. | Key | | K3 | Must meet UK existing and planned Maritime Regulations (MCA) / DMR / NAG for remote controlled platform. | Key | | K4 | Must be capable of dynamic station-keeping (location and heading) and low speed maneuvers over a given point in Beaufort sea-state F2 within a 5m radius at 2 x sigma. | Key | | K5 | Must be able to control on on-board systems including:   * Propulsion (comprising of two outboard engines or drives with waterjets or shrouded propellers) * Winch (remote control) * Multiple camera feeds to monitor system operation (e.g. winch, ROV launch and recovery) including an underwater camera feed to monitor the suspended load. * Other auxiliary systems with digital and/or analogue inputs and outputs, serial connections and control of external devices power. | Key | | E1 | The system shall be capable of positioning the platform, under slow speed remote control, within 5m at 2 x sigma of a given point in less than 10m water depth. | Essential | | E2 | The system shall be able to operate on 24Vdc. | Essential | | E3 | The system GUI shall be easy and intuitive to use by a maximum of two trained personnel. It must provide the operator with situational awareness, allow dynamic mission flexibility and display platform & engine safety monitoring systems status & alerts. | Essential | | E4 | The system shall provide platform loiter control in the event of a loss of remote communications or control | Essential | | E5 | The system shall operate in air temperatures from -20 deg C to + 50 deg C and sea temperatures from -5 deg C to + 35 deg C in up to a Sea State 3 | Essential | | E6 | The System shall be procured as a proven Commercial Off The Shelf product at Technology Readiness Level 9 | Essential | | E7 | The system shall comply with either CE or UKCA standards and be safe to transport by land, sea and air. | Essential | | E8 | Any RF control system shall be compliant with all NATO and civilian frequencies. | Essential | | E9 | The System shall not store position or planned / historic navigation data on the remotely controlled surface platform. | Essential | | E10 | The system shall be designed to be maintained by the trained operator with minimum tooling. | Essential | | E11 | The system shall be capable of being stored for up to 6 months without any required maintenance. | Essential | | E12 | The System must support as a minimum, partial protective monitoring. | Essential | | D1 | The system should allow for future component changes or the addition of other subsystems. | Desirable | | D2 | Should be capable of dynamic station-keeping in sea-state F3 within a 3m radius at 2 x sigma. | Desirable | | D3 | The system should be capable of operating using supervised autonomy for path planning, obstacle detection & avoidance. | Desirable | | D4 | The system should have an autonomous “follow-me” capability to keep station with the crewed support vessel and/or ROV. | Desirable | | D5 | The system should be capable of self-navigating the platform to a given location or waypoint. | Desirable | | D6 | The system should provide obstacle detection and avoidance capability (separate costed option) | Desirable | | D7 | The system should be designed to be stored for up to 12 months without any required maintenance. | Desirable | | D8 | Data held on all equipment (data at rest) should be encrypted with a UK MoD approved software. | Desirable | | D9 | Transmitted data should be encrypted with a UK MoD approved software or standard. | Desirable | | D10 | The System should be capable of enforcing Role Based Access Control (RAC) for up to 50 accounts. Access control shall be commensurate with protecting SECRET material. | Desirable | |
| **1.5** | **Options or follow on work** |
|  | None |

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| **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 | RC&DP System | Before 30 August  23 | Hardware and software | 9 | UNCLASSIFIED | User Manual | DEFCON 705 shall apply |
| D - 2 | Training | Before 30 August 2023 | In person | NA | UNCLASSIFIED | Training Materials as applicable | DEFCON 705 shall apply |
| D - 3 | Installation and Commissioning | Before 30 August 2023 | In person | NA | UNCLASSIFIED | Configuration details including hardware configuration and software settings | DEFCON 705 shall apply |

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| **1.7** | **Standard Deliverable Acceptance Criteria** |
|  | COTS/MOTS item. This will be checked on receipt for damage and tested for correct operation. |
| **1.8** | **Specific Deliverable Acceptance Criteria** |
|  | Acceptance will be based on our requirements in 1.4 above. |

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| **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)  CE or UKCA certified. |
| **2.2** | **Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement** |
|  | To meet CE or UKCA standards. |

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| **3.** | **Security** | |
| **3.1** | **Highest security classification** | |
|  | **Of the work** | UNCLASSIFIED |
| **Of the Deliverables/ Output** | UNCLASSIFIED |
| **3.2** | **Security Aspects Letter (SAL)** | |
|  | Not applicable | |
| **3.3** | **Cyber Risk Level** | |
|  | Not applicable | |
| **3.4** | **Cyber Risk Assessment (RA) Reference** | |
|  | RAR- 554125424 | |

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| **4.** | **Government Furnished Assets (GFA)** |
| GFA to be Issued - No | |

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| **5.** | **Proposal Evaluation criteria** |
|  | Please submit two versions of your proposal. The Technical proposal should not contain any pricing information. The Commercial version should be a full response to the ITT including both Technical and pricing information. Page limit for each proposal: 10 pages including drawings and technical data, minimum font size: 10 point.  This requirement will be competed and awarded on the basis of relative scoring. The technical score, social value score and cost score will be weighted as shown in the below table and then combined to give an overall score. The supplier with a fully commercially compliant proposal, with the highest overall score will be the winning tenderer subject to available funding. In the event of a tie between tenders having achieved exactly the same overall score, precedence shall be given to the tender that has achieved the highest technical score.  Costed options will not be included within the technical or cost scores.  The Authority reserves the right to fail a tender exceeding the unrevealed limit on grounds of unaffordability.  The Authority reserves the right to exclude bids from companies based in countries it deems to be a high security risk.   |  |  | | --- | --- | |  | Percentage weighting of overall score | | Technical Score | 60% | | Cost Score | 30% | | Social Value Score | 10% |   Example:   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Supplier | Technical Score | Weighted Technical Score | Cost Score | Weighted Cost Score | Social Value Score | Weighted Social Value Score | Overall Score | | A | 7 | 35 | 100 | 40 | 1 | 1 | 76 | | B | 4 | 20 | 80 | 32 | 4 | 4 | 56 |   The supplier with a fully commercially compliant proposal, with the highest overall score will be the winning tenderer subject to available funding. In the event of a tie between tenders having achieved exactly the same price per technical point, precedence shall be given to the tender that has achieved the highest overall technically score.  DSTL reserves the right to fail a tender exceeding the unrevealed limit on grounds of unaffordability.  Failure to achieve all of the key criteria will result in the tender being assessed as technically non-compliant and being excluded from the competition. |
| **5.1** | **Technical Evaluation Criteria** |
|  | The Dstl project team will evaluate the proposals against the requirements set out above using the scoring system detailed in Annex A.  Tenders will be technically evaluated using the criteria supplied in Annex A. The maximum technical score is 380, the minimum score is 0. |
| **5.2** | **Commercial Evaluation Criteria** |
|  | |  |  |  | | --- | --- | --- | | **Element** | **Requirement** | **Weighting** | | **C1** | Supplier agrees to SC1A terms and conditions | Pass/Fail |  |  |  | | --- | --- | | **Mark** | **Definition** | | **Pass** | Fully meets the Authority’s requirement.  Provision and acceptance of the sub-criteria information in the format requested, which is clear, unambiguous and transparent. | | **Fail** | Unacceptable/Nil Return.  Tenderer did not respond to the question or the response wholly failed to demonstrate an ability to meet the sub-criteria requirement.   **Any proposal marked as a Fail will be excluded from the competition.** |   Cost Score accounts for 30% of the overall score.  The cost score is calculated, by allocating the maximum score to the lowest cost compliant tender and using the below equation. A maximum of 100 marks are available.  Example:   |  |  |  |  | | --- | --- | --- | --- | | Supplier | Cost | Cost Score | Weighted Cost Score | | A | £80,000 | 100 | 30 | | B | £100,000 | 80 | 24 | |
| **5.3** | **Social Value Evaluation Criteria** |
|  | Social Value accounts for 10% of the overall score.   |  |  |  | | --- | --- | --- | | Theme | Evaluation Criteria | Weighting | | Tackling Economic Inequality | MAC2.1: Create opportunities for entrepreneurship and help new organisations to grow, supporting economic growth and business creation. | 25% | | Tackling Economic Inequality | MAC2.2: Create employment and training opportunities particularly for those who face barriers to employment and/or who are located in deprived areas, and for people in industries with known skills shortages or in high growth sectors. | 25% | | Tackling Economic Inequality | MAC 3.2: Support innovation and disruptive technologies throughout the supply chain to deliver lower cost and/or higher quality goods and services. | 25% | | Tackling Economic Inequality | MAC 3.4: Demonstrate collaboration throughout the supply chain, and a fair and responsible approach to working with supply chain partners in delivery of the contract. | 25% |   Using a maximum of 2,500 characters describe the commitment your organisation will make to ensure that opportunities under the contract deliver the above Policy Outcome and Model Award Criteria. Please include:   * your ‘Method Statement’, stating how you will achieve this and how your commitment meets the Award Criteria, and * a timed project plan and process, including how you will implement your commitment and by when, how you will monitor, measure and report on your commitments/the impact of your proposals. You should include but not be limited to: * timed action plan * use of metrics * tools/processes used to gather data * reporting * feedback and improvement * transparency   Model Response Guidance for tenders can be found: https://www.gov.uk/government/publications/procurement-policy-note-0620-taking-account-of-social-value-in-the-award-of-central-government-contracts  Social Value will be scored according to the below table with a minimum score of 0 and a maximum score of 10. A Social Value score of 0 or 1 does **not** automatically exclude a bid.   |  |  | | --- | --- | | Mark | Criteria | | 0 – Unacceptable or no answer | The response fails to meet the required standard or does not provide a proposal. | | 1 – Poor response | The response meets elements of the requirement but gives concern in a number of significant areas. There are reservations because of one or all of the following:  - There is at least one significant issue needing considerable attention.  - Proposals do not demonstrate competence or understanding.  - The response is light on detail and unconvincing.  - The response makes no reference to the applicable sector but shows some general market experience.  - The response makes limited reference (naming only) to the social value policy outcome set out within the invitation. | | 4 –Good | The response broadly meets what is expected for the criteria. There are no significant areas of concern, although there may be limited minor issues that need further exploration or attention later in the procurement process. The response therefore  shows:  - Good understanding of the requirements.  - Sufficient competence demonstrated through relevant evidence.  - Some insight demonstrated into the relevant issues.  - The response addresses most of the social value policy outcome and also shows general market experience. | | 7 – Very Good | The response meets the required standard in all material respects. There are no significant areas of concern, although there may be limited minor issues that need further exploration or attention later in the procurement process. The response therefore shows:  - Good understanding of the requirements.  - Sufficient competence demonstrated through relevant evidence.  - Some insight demonstrated into the relevant issues.  - The response addresses the social value policy outcome and also shows good market experience. | | 10 – Excellent | The response exceeds what is expected for the criteria. Leaves no doubt as to the capability and commitment to deliver what is required. The response therefore shows:  - Very good understanding of the requirements.  - Excellent proposals demonstrated through relevant evidence.  - Considerable insight into the relevant issues.  - The response is also likely to propose additional value in several respects above that expected.  - The response addresses the social value policy outcome and also shows in-depth market experience. | |

**Annex A - RCSP RCDP System Evaluation Matrix for Proposals**

Scoring:

Failure to achieve all **key** requirement = proposal is non-compliant and shall be excluded from the competition.

| **Key Requirement** | **Scoring** |
| --- | --- |
| Must be able to direct a <9m LOA multihull-surface platform equipped with multiple propulsors to a location, controlling heading, speed and position (remaining within line-of-sight of the crewed support vessel). | PASS/FAIL |
| Must provide a remote operator with a remote helm with the ability to manually control a platform over a wireless link. | PASS/FAIL |
| Must meet UK existing and planned Maritime Regulations (MCA) / DMR / NAG for remote controlled platform. | PASS/FAIL |
| Must be capable of dynamic station-keeping (location and heading) and low speed maneuvers over a given point in Beaufort sea-state F2 within a 5m radius at 2 x sigma. | PASS/FAIL |
| Must be able to control on on-board systems including:   * Propulsion (comprising of two outboard engines or drives with waterjets or shrouded propellers) * Winch (remote control) * Multiple camera feeds to monitor system operation (e.g. winch, ROV launch and recovery) including an underwater camera feed to monitor the suspended load. * Other auxiliary systems with digital and/or analogue inputs and outputs, serial connections and control of external devices power. | PASS/FAIL |

Technical Scoring:

Exceeds requirement = 5, Compliant = 3, Partially compliant = 1, Non-Compliant = 0

| **Requirement Description** | **Key / Essential / Desirable** | **Requirement Weighting** | **Scoring** | **Weighting x Score** | **Notes** |
| --- | --- | --- | --- | --- | --- |
| The system shall be capable of positioning the platform, under slow speed remote control, within 5m at 2 x sigma of a given point in less than 10m water depth. | Essential | 5 | 5,3,1,0 |  | Higher capability = higher score |
| The system shall be able to operate on 24Vdc. | Essential | 3 | Yes/No |  | Yes = 5, No = 0 |
| The system GUI shall be easy and intuitive to use by a maximum of two trained personnel. It must provide the operator with situational awareness, allow dynamic mission flexibility and display platform & engine safety monitoring systems status & alerts. | Essential | 4 | 5,3,1,0 |  | Higher capability = higher score |
| The system shall provide platform loiter control in the event of a loss of remote communications or control | Essential | 4 | 5,3,1,0 |  | Higher capability = higher score |
| The system shall operate in air temperatures from -20 deg C to + 50 deg C and sea temperatures from -5 deg C to + 35 deg C in up to a Sea State 3 | Essential | 3 | 5,3,1,0 |  | Higher capability = higher score |
| The System shall be procured as a proven Commercial Off The Shelf product at Technology Readiness Level 9 | Essential | 4 | 5,3,1,0 |  | Higher capability = higher score |
| The system shall comply with either CE or UKCA standards and be safe to transport by land, sea and air. | Essential | 4 | 5,3,1,0 |  | Higher capability = higher score |
| Any RF control system shall be compliant with all NATO and civilian frequencies. | Essential | 4 | 5,3,1,0 |  | Higher capability = higher score |
| The System shall not store position or planned / historic navigation data on the remotely controlled surface platform. | Essential | 5 | 5,3,1,0 |  | Higher capability = higher score |
| The system shall be designed to be maintained by the trained operator with minimum tooling. | Essential | 3 | 5,3,1,0 |  | Higher capability = higher score |
| The system shall be capable of being stored for up to 6 months without any required maintenance. | Essential | 5 | 5,3,1,0 |  | Higher capability = higher score |
| The System must support as a minimum, partial protective monitoring. | Essential | 4 | 5,3,1,0 |  | Higher capability = higher score |
| The system should allow for future component changes or the addition of other subsystems. | Desirable | 3 | 5,3,1,0 |  | More capable solution = higher score |
| Should be capable of dynamic station-keeping in sea-state F3 within a 3m radius at 2 x sigma. | Desirable | 4 | 5,3,1,0 |  | More capable solution = higher score |
| The system should be capable of operating using supervised autonomy for path planning, obstacle detection & avoidance. | Desirable | 3 | 5,3,1,0 |  | More capable solution = higher score |
| The system should have an autonomous “follow-me” capability to keep station with the crewed support vessel and/or ROV. | Desirable | 2 | 5,3,1,0 |  | More capable solution = higher score |
| The system should be capable of self-navigating the platform to a given location or waypoint. | Desirable | 2 | 5,3,1,0 |  | More capable solution = higher score |
| The system should provide obstacle detection and avoidance capability (separate costed option) | Desirable | 2 | 5,3,1,0 |  | More capable solution = higher score |
| The system should be designed to be stored for up to 12 months without any required maintenance. | Desirable | 2 | 5,3,1,0 |  | More capable solution = higher score |
| Data held on all equipment (data at rest) should be encrypted with a UK MoD approved software. | Desirable | 4 | 5,3,1,0 |  | More capable solution = higher score |
| Transmitted data should be encrypted with a UK MoD approved software or standard. | Desirable | 4 | 5,3,1,0 |  | More capable solution = higher score |
| The System should be capable of enforcing Role Based Access Control (RAC) for up to 50 accounts. Access control shall be commensurate with protecting SECRET material. | Desirable | 2 | 5,3,1,0 |  | More capable solution = higher score |
|  |  | **Technical Score** | |  | HPS = 380 |

**Overall score** = system cost / technical score