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

Title of Requirement	Redacted under FOI Exemption
Requisition No.	**RQ0000025608**
Purchasing Agreement Number	Redacted under FOI Exemption
Purchase Order Number	Redacted under FOI Exemption
SoR Version	**1.0**

1.	Statement of Requirements
1.1	**Summary and Background Information**
	PhDs in Bio-inspired Science and Technology to Enable Underwater Robotic Vehicles PhD proposals are sought in the use of bio-inspiration to enable improved operation of underwater robotics vehicles. A key aspect of this is bio-inspired propulsion, and it is anticipated that the majority of the funded proposals will sit in this area. These will focus on bio-inspired hull forms and propulsion systems that enable improved endurance, agility, speed or stealth. However, whilst the core thrust of this programme is focussed on bio-inspired propulsion, PhD proposals researching and applying bio-inspired technologies to wider issues associated with operating underwater may also be submitted. These proposals may include, for example bio-inspired techniques to improve sensing, navigation, or communication, particularly if the approaches are aligned to application on some of the novel hull form robotic vehicles described below. Recent market investigations indicate that only a limited number of bio-inspired hull forms are available to purchase on the market (e.g., Rays). Conceptually, other potential bio inspired hull forms exist (Jellyfish, Cephalopod etc.) that would bring alternative or complementary benefits. The challenge is to bring those conceptual hull forms through to the point where they can be characterised and tested. Specifically, our interest is in proposals that seek to explore novel propulsion that possibly mimics marine creatures, diverging from traditional propeller systems, and could influence future submersible craft. The intention is that any approaches would be applicable to small submersible craft, with assumed characteristics of =<2m^3 and sub 100kg (approximately). Hull forms and propulsion approaches may include, but not be limited to: a. Pulse (Jelly Fish). b. Jet and vectored jet (Cephalopods). c. Body-caudal fin (BCF) d. Median paired fin (MPF) e. Flying Fish Research may also investigate enabling and adjacent technology supporting propulsion using bio-inspired approaches and hull forms, such as bio-mimicking actuators.

1.2	Requirement

This requirement is to fund up to 10x PhD studentships in underwater bio-inspired robotic systems defined above.

- Each PhD will be funded for 3.5 years, and expected to start by October 2023.

In consideration of the above, The Authority invites you to submit proposals for funding against the identified topics of interest, and the deliverables specified under Section 1.6 of this tasking form. In submitting a response please be aware of the following criteria that proposals must include and meet:

- A detailed technical proposal (maximum 6 pages);
- A short title and an abstract (200 words max);
- A single PowerPoint slide which summarises the scope of the proposed work;
- CV/s of university supervisor/s in the UK (2 page maximum – it must list relevant experience and publications to the topic of interest);
- A completed Personal Particulars Research Workers Form for each student (if already identified) and supervisor/s who will work on the requirements.

The Authority sets out to confirm that the nominated research PhD student will be required to complete a Personal Particulars Research Workers Form prior to being given approval by The Authority to start work, and additional expectation include the individual:

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Research Oversight and funding

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1.3	**Options or follow on work**
	a. In addition to the Research and Development Services detailed in Section 1.2 of Task Form Part B, the Supplier hereby grants to the Authority the irrevocable option to undertake additional Research and Development Services in accordance with the terms and conditions set out in R-Cloud V4 and this task form, it being agreed that The Authority has no obligation to exercise such options. b. The Authority shall have the right to exercise the options detailed by no later than 3 years post contract award date. Should the Authority wish to exercise the option, the Authority's Representative (Commercial Services) shall approach the Supplier requesting a quotation for the additional Research and Development Services. c. Should the Authority exercise the option, The Authority's Representative (Commercial Services) and the Supplier shall jointly agree pricing and dates for the completion of Contract Deliverables. Following agreement, the Authority's Representative (Commercial Services) will issue a formal Task Amendment. d. The Authority shall not be obliged to exercise the option(s). Where the Authority does identify a requirement, the Authority will request that the supplier provides a detailed proposal when each additional task arises and this will undergo technical and commercial review.
1.4	**Contract Management Activities**
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1.5	**Health & Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement**
	Redacted under FOI Exemption [redacted]

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1.6	Deliverables & Intellectual Property Rights (IPR)				
Ref.	**Title**	**Due by**	**Format**	**Expected classification (subject to change)**	**What information is r deliverab**
D1	Quarterly Progress and Technical Review	T0+3 Months and every three months thereafter.	Presentation (.pptx)	Redacted under FOI Exemption	Presentation pack to include to: • Update on technical progr
D2	Annual technical report	T0+12 Months and every twelve months thereafter	Written report	Redacted under FOI Exemption	Brief written report outlining

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D3	End of the PhD - Thesis	End of thesis	Supplier thesis	Redacted under FOI Exemption	PhD thesis

1.	Deliverable Acceptance Criteria
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2	Evaluation Criteria
2.1	**Method Explanation**

Evaluation is based on technical compliance and affordability.

The proposals will be evaluated by suitably qualified personnel and will be evaluated both technically and commercially according to the criteria below.

Only technically strong proposals will be considered for funding. The academic/research groups or research centre and linkages criteria will be used to further assess the quality of the application(s). The benefit of funding multiple proposals at a research group/centre and the contributions offered outside The Authority's funding will be judged for single and multiple applications from each group/centre.

Stage 1 – Compliance

Criteria	Pass (Compliant) / Fail (Non-Compliant)
Redacted under FOI Exemption	Pass / Fail
The Supplier uses labour rates no higher than those uploaded previously onto R-Cloud.	Pass / Fail
The Supplier has submitted a completed R-Cloud Tasking Form Part C as part of the submission including a completed Annex A Statement Relating to Good Standing and Annex B, Notification of Intellectual Property Rights (IPR) Restrictions or a confirmed NIL Return.	Redacted under FOI Exempt
Redacted under FOI Exemption	Pass / Fail
The proposal is valid for a minimum of 90 days	Pass / Fail
The Supplier's proposal must include and meet: • A detailed technical proposal (maximum 6 pages); • A short title and an abstract (200 words max); • A single PowerPoint slide which summarises the scope of the proposed work;	Pass / Fail

• CV/s of university supervisor/s in the UK (2 page maximum – it must list relevant experience and publications to the topic of interest); • A completed Personal Particulars Research Workers Form for each student (if already identified) and supervisor/s who will work on the requirements. The Supplier's proposal confirms that if successful, they shall • Redacted under FOI Exemption [redacted]	
The Authority will fund up to Redacted under FOI Exemption for a successful Research PhD Redacted under FOI Exemption Redacted under then any shortfall will need to be funded by the Supplier, and confirmation of this will need to be demonstrated within your submission. The Supplier shall demonstrate to the satisfaction of the Authority, how any shortfall will be funded or confirm a nil return.	Pass / Fail
Redacted under FOI Exemption [redacted]	Pass / Fail
Redacted under FOI Exemption [redacted]	Pass / Fail
Supplier's proposal comprises: a) one (1) full proposal (Technical and Commercial) including all price detail, and b) one (1) Full Technical proposal which excludes all commercial price information	Pass / Fail

Only those Suppliers who pass all the above compliance criteria will be taken forward to Stage 2. Failure to achieve full compliance will exclude your tender from the Stage 2 evaluation process.

Stage 2 – Technical Evaluation (Scoring)
Tender Scoring Mechanism: Best technically affordable tender

The evaluation shall be conducted under the Most Economically Advantageous Tender (MEAT) principles, in line with the best technically affordable tender.

The contract shall be awarded to the Supplier(s) with the highest, non-cost score that is within budget.

Any tenders received that are in excess of the proposed budget above will be automatically deemed non-compliant and will be excluded from the tender evaluation process.

Best technically affordable tender example
In this example, the assumed budget is Redacted under

Tender	Cost (£k NPV)	Non-cost score	Technically compliant	Rank
A	20	62	Yes	2
B	24	85	Yes	1
C	29	100	Yes	Non-compliant

Tender C is over budget and is therefore deemed to be non-compliant. Tenders A and B are both compliant but tender B has the highest non-cost score and is awarded the contract.

2.2 **Technical Evaluation Criteria**

ID	Criteria	Score	Weighting
1	**Scientific Quality and Innovation**		
1.1	The proposal has demonstrated evidence of how the PhD meets The Authority's requirement and is applicable to Defence	0-10	X3 (Max score 30)
1.2	The proposal further evidences any novel methods and or techniques that will be utilised in undertaking the work.	0-10	X3 (Max score 30)
2	**Proposed Approach and Relevance of the PhD**		
2.1	The Proposal demonstrates a clear method for undertaking and delivering the work, and the activities identified are relevant to achieving the objectives of the programme	0-10	X2 (Max score 20)

3	**Supplier PhD Management** • Balance of skills of the project team • Time and commitment proposed.		
3.1	The proposal demonstrates that the Requirement will be delivered and Supervised by suitably qualified and experience personnel (SQEP).	0-10	X1 (Max score 10)
3.2	The proposal includes a populated Risk Register for the performance and delivery of the PhD. The proposal has included clear mitigation of how these risks will be managed.	0-10	X1 (Max score 10)

Any proposal scoring a 0 or 1 in any of the assessment criteria will not be considered for funding. Any proposal scoring less than 50 in total will not be considered for funding.

Technical Evaluation Criteria	
Score	**Definition**
10	Exceeds the Authority's requirement
7	Fully meets the Authority's requirement
5	Adequately meets the Authority's requirement
3	Falls short of the Authority's requirements in a minor respect
1	Falls short of the Authority's requirements in a major respect, or tenderer did not adequately explain their response or did not provide adequate evidence of claimed capability.
0	Tenderer did not respond to the question or tenderer's response indicated that their capabilities wholly failed to meet the Authority's requirements.

2.3	**Commercial Evaluation Criteria**
	The commercial evaluation shall be based on the following Pass / Fail questions (which form part of the Stage 1 Compliance Assessment above): 1. Has the Supplier submitted one (1) full proposal (Technical and Commercial) including all price detail, and has the Supplier submitted one (1) Full Technical proposal which excludes all commercial price information? 2. Has the Supplier submitted the proposal as a Firm price? 3. Are Labour rates and price as per the rates uploaded to RCloud? 4. Has the Supplier submitted one (1) completed copy of RCloud Form Part C – Task Response Form including completed SRGS at Annex A and Notification of IPR Restrictions at Annex B? 5. Has the Supplier completed Research Worker forms as necessary? A fail on any of the above questions will result in your proposal being excluded from further evaluation and consideration.