

WSRF Innovation Call

Calling Notice text including Assessment Criteria

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Title: WSRF Innovation Call - Next Generation Technologies for Hypersonic Weapons Request for Proposals Required by 10th June 2022

This gives notice of and initiates a Weapons Sector Research Framework (WSRF) Innovation Call. The intention is for this exercise to be a focussed call for highly innovative research ideas that align with the following need.

Many nations across the globe are developing and demonstrating Hypersonic systems and capability in order to provide strategic operational advantage. The UK Ministry Of Defence (MOD) Integrated Review settlement and Science and Technology (S&T) strategy sets out a plan to mature UK Hypersonic weapons S&T in order to initiate the investment and development of a Hypersonic enterprise that will generate UK technology and develop credible options for the MOD to consider as part of future acquisition programmes.

We are therefore looking for highly innovative research ideas that can help address the above aims. We anticipate that the research would align with one of the following themes below, but this is not to be considered as a constraining list and we would be happy to consider any research proposals, from niche component improvements to entire subsystems that align with the objective set out above:

- **Materials & Structures**
 - (e.g. Thermal Protection System, Antenna Windows, Seeker Domes, Missile Airframe Structures, Internal Components, Thermal Management, Manufacturing Techniques)
- **Guidance, Navigation & Control (GNC)**
 - (e.g. Midcourse updates/datalink, Quantum Precision Navigation & Timing, Artificial Intelligence, Algorithm development)
- **Fuzing/Warhead**
 - (e.g. technologies supporting the prosecution of different target types, multi-mission, Size Weight and Power, operating environment and resilience)
- **Aerodynamics/Aerothermal**
 - (E.g. System concepts and design, Thermal management and assessment techniques)
- **Propulsion**
 - (E.g. High speed/hypersonic propulsion concepts, such as scramjets, rocket based combined cycles. Energy dense fuels, including, where applicable, pumping and flow rate control)
- **Any other applicable Novel technologies**

It is anticipated that proposals will initially be short (e.g. up to ~12 months) precursor investigations, which could lead to follow-on work. We welcome bids from small and medium sized enterprises. Depending on the number of innovative ideas funded, the overall budget for this innovation call is approximately £1M to £1.5M. However, if there are potentially game-changing ideas that breach this budget we are happy to review them on a case-by-case basis.

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If you would like to submit a proposal, we kindly request that you complete the attached 'WSRF Programme Innovation Proposal Template' and email back to the WSRF Supply Chain Manager: (WSRFCOMMERCIAL@qinetiq.com) / (WSRFCOMMERCIAL@qinetiq.r.mil.uk) and copy to the Delivery Lead: (wsrfdelivery@qinetiq.com) / (wsrfdelivery@qinetiq.r.mil.uk) by 10th June 2022 .

The following will be used as the assessment criteria for the submissions:

1. If successful and exploited, would the idea offer significant benefits?
2. Is it clear what the proposed work will deliver?
3. Is the idea innovative and significantly different from current methods?
4. How will the technical risks be managed and does the proposal demonstrate a strong scientific approach?
5. Is the proposer competent to undertake the work?
6. Exploitation potential.

The emphasis of the assessment will be on Benefits, Innovation and Exploitation.

Whilst not a discriminating factor during the assessment of the proposals received, please indicate what, if any, restrictions would be in place with respect to government-led International Research Collaboration (IRC).

Once we have received the proposals, an assessment based on the above criteria will be conducted. Feedback on all proposals received will subsequently be provided.

It is anticipated that feedback will be provided around the week ending 1st July 2022.

If you have any question on the process please make contact. Otherwise we look forward to receiving your proposals.

Regards

Gavin Bishop, WSRF MOD Lead
Mike Purnell, WSRF Programme Lead

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