

OFFICIAL

20240112-Alternative Navigation Assessment Phase Prior Information Notice (PIN)-O

710338451 – Alternative Navigation Assessment Phase

Value of Contract: Proposed £52,337,250.00

Notice and Disclaimer

The Ministry of Defence (MoD) is considering future options for the development of Assured alternative Position, Navigation & Timing (PNT) technologies through the Alternative Navigation (Alt Nav) Project - Assessment Phase (AP).

The purpose of this PIN is to:

- Make industry aware of an Industry Day happening at MOD Abbey Wood on 1st March 2024.
- Introduce the Alt Nav Assessment Phase to industry;
- Communicate the Authority's market engagement approach and plans;
- Get feedback from interested parties on proposed technologies and any alternative technologies available; and how industry, through one 'Systems House' can support the Space DT in achieving its Project Aims.

For the avoidance of doubt, this document is not a call for competition. Any comments, indications of interest, participation, or non-participation by any organisation at this stage will not influence the process, selection and/or award decision for any future procurement, nor will it be taken as a supplier's committed position. Non-participation in this pre-market engagement will not be considered in any related future procurement.

Project Background

The UK's Strategic Command have identified a requirement to develop technologies capable of providing alternative sources of assured Position, Navigation or Timing (PNT) data to GNSS ('alternative PNT'), to enable UK forces to effectively operate in GNSS denied or degraded environments.

Under the Alt Nav Assessment Phase, Space Delivery Team (DT) at DE&S are seeking to identify and mature alternative PNT technologies, which will be expected to operate within a wider navigation, or precise timing, system, alongside other PNT sub-systems. Hence, the Alt Nav project is also aiming to develop real-time data fusion techniques, which may include mathematical analysis, modelling, simulation and demonstration.

Alongside the development of the technology, Space DT are keen to maintain an awareness of emerging technologies and trends of development occurring within industry and academia. To maintain this understanding, as well as to influence the maximum exploitation of assured PNT across Defence, and potentially advising Space DT on requirements for future development, we are seeking support from suitably qualified and experienced personnel.

Industry Day

An industry brief will be taking place in Abbey Wood, Bristol on Friday 01 March 2024, where the Authority will provide further details of the technologies currently identified as detailed below and the additional requirements for ongoing support from what is referred to as a 'Systems House' with initial scope detailed within the Project Aims. Industry will have the opportunity to provide questions and comments before, during, and after the industry brief (via email).

The Industry Day will be split into two sessions to allow focus on the different elements of the Project as follows:-

1. Technology Development (See attached RFI)

2. 'Systems House' (See attached RFI)

If your organisation would like to attend, please complete the attached document 'Alt Nav AP EME – Supplier Information Required' and email DESSpace-DT@mod.gov.uk with confirmation you would like to attend. Start time and duration of the industry brief will be made available once your registration has been confirmed.

Dependant on the level of interest the numbers of attendees from each company may be limited. Please complete one Supplier Information Required for each potential attendee and provide a priority should we be unable to accommodate all.

The event will be classified as OFFICIAL; however, delivery of the Alt Nav Assessment Phase will require the generation, processing, storage, and transmission of classified Authority information, up to and including SECRET. The closing date for confirming attendance will be 17:00hrs (BST) Monday 23 February 2024.

Any participation in this market engagement phase and any response to this RFI is entirely at your cost and risk. The MOD is under no obligation to proceed with a formal procurement or in any other way proceed with Project Alt Nav and shall not be liable for any costs arising from participation in this process.

Project Scope

The Alt Nav Assessment Phase is expected to run from 2024 through 2032 with the intention of further developing technologies to reach a maximum maturity that is approximately equivalent to Technology Readiness Level (TRL) 7 (Technology prototype demonstrated in an operational environment) and identifying emerging technologies through annual horizon scan and market survey activity.

Technologies of particular interest include transportable eLoran, UK Sovereign Chip Scale Atomic Clock (CSAC), robust methods for time transfer, as well as Data Fusion. However, consideration will also be given to other alternative PNT solutions that can provide assured PNT data.

The alternative PNT technologies are expected to provide their data to a separate integration/fusion engine (which could become an element of a platform mission management system). Hence, there is particular interest in technologies which make use of open interfaces / standards / architectures.

The project is focused on developing technologies that will be used in applications which require a level of Assured PNT. Any development during this assessment phase will focus not just on improving performance, but also on developing an Assured capability e.g. through appropriate consideration of safety & security etc.

Project Aims

The aims for the Assessment Phase are to:

- Develop, demonstrate, and test multiple, individual, alternative PNT solutions up to a maximum maturity of TRL 7.
- Develop, demonstrate, and test an estimation filter / data fusion algorithm up to a maximum maturity of TRL 7.
- Where required, to develop, demonstrate and test the individual alternative PNT technologies operating as part of a PNT system, including using open interfaces.
- Maintaining a view of alternative PNT and Data Fusion technologies across the marketplace, academia and research communities (Horizon Scanning) to enable the Space DT and UK StratCom to make informed decisions on emerging technologies.
- Support the DT with the below activities (including, but not limited to)
 - Writing requirements for subsequent Space DT led technology development of alternative PNT,
 - Generation of generic requirements for alternative PNT technologies, to underpin future defence capability procurement,
 - Enable the Space DT to influence and encourage core elements of data fusion approach.
 - Enable the Space DT to engage with industry to collaborate and share information more efficiently, with respect to future PNT/Future Alt PNT policy direction

Summary

The industry brief taking place on Friday 01 March 2024 will provide details on the general requirements, and current technologies of interest for the Alt Nav AP and its part of assured PNT.

Two Requests for Information (RFI) are attached to this PIN which include further detail on the project scope and interested parties are asked to complete by Friday the **23 Feb 24** to capture appropriate feedback for the Industry Day. There will be an additional period for interested parties to respond to the RFI, to help inform the approach, before the tenders are released in Summer 2024. Note, this may be subject to change.

A Defence Sourcing Portal (DSP) account will be required to proceed beyond the Industry Day, details on how to register for an account can be found by visiting [Defence Sourcing Portal \(DSP\) \(mod.uk\)](#) and clicking on 'Supplier Registration'.