Met Office Early Engagement Notice: Request for Information for Marine Iridium Satellite Communications Service

Who we are

The Met Office is a world leader in providing weather and climate services. We are the UK's National Meteorological Service and a Trading Fund within the Department for Business Energy and Industrial Strategy, operating under set targets and returning a dividend.

Recognised as one of the world's most accurate forecasters, we use more than 10 million weather observations, an advanced atmospheric model and a high-performance supercomputer to create 3,000 tailored forecasts and briefings every day. These are delivered to a wide range of customers from the Government to businesses, the general public, armed forces, and other organisations.

We play a key role on the international stage by providing vital services, advancing global understanding through research and being an important participant in projects and organisations.

We are at the forefront of climate change research, playing a key role in helping determine the worldwide response to climate change. Our involvement in global collaborative projects includes advising the Intergovernmental Panel on Climate Change (IPCC) and our tailored advice and services help decision-makers and businesses across public and private sectors to manage risks and opportunities associated with a changing climate.

Further information about the Met Office is available on the following website:
http://www.metoffice.gov.uk

Background information about our requirements

The Met Office operates a network of c.75 weather stations in the marine environment across buoys, ships and other remote platforms or islands – these are deployed in nearshore waters and the Atlantic Ocean, with a few ship stations travelling further afield.

The network relies upon satellite communications to ensure continued timely submission of essential marine observation data, with all stations hosting an Autonomous Marine Observing System (AMOS2X) equipped with an Iridium short burst data (SBD) modem.

Our contract with our current satellite communications supplier has expired, and we now have a requirement to re-tender / contract in order to continue to be able to transfer observational data from remote marine stations to our data ingestion system via Iridium service provider generated emails.

Information we are seeking from the market

Whilst our overarching requirement refers to an Iridium SBD airtime service, we are seeking input from the market in terms of the both the financial and technical feasibility of switching sites to TCP/IP connectivity with communications including MQTT over TLS 1.2 and above.

We would like to understand the differences between an SBD airtime and TCP/IP service, with a particular emphasis on the technical implications i.e. hardware and hardware integration, and if a TCP/IP service would deliver financial savings, and if yes, what they might look like.

We have provided below, example network configurations for both SBD and IP IoT, and a number of essential criteria, your responses to which, together with indicative cost information for our business case, will assist us in determining how best to take this forward. Specifically, we are trying to unearth any areas that could be a problem or limiting factors on our being able to achieve what we want to, so we can put measures in place to address those before issuing a tender.

Essential criteria

1) Information on the availability of a web-based network management tool with comprehensive user instructions, access for multiple users; invoicing; service registration; suspension; and data delivery.

2) Information on airtime subscription and data costs with invoicing available via an online portal – for illustrative purposes, please provide monthly (30 days) projected cost for an example network with the following configurations operating over SBD, include any annual fees/12:

   Current Uncompressed network:

   20 x 412000b per month (Buoys)
   10 x 80000b per month (LVs)
   60 x 40000b per month (SAWS)

   Binary Compressed network (estimate):

   20 x 330000b per month (Buoys)
   10 x 40000b per month (LVs)
   60 x 20000b per month (SAWS)

3) Information on airtime subscription and data costs with invoicing available via an online portal – for illustrative purposes, please provide monthly (30 days) projected costs for an example network with the following configurations operating over IP IoT messaging, include annual fees/12:

Buoys only:

20 x 1mb per month

Whole Network:

20 x 1mb per month
10 x 0.5mb per month
60 x 0.5mb per month

4) A breakdown of charges including, where applicable and not limited to, activation fees, subscription fees, excess data fees, data bundling options, suspension fees, early termination penalties and SIM card costs.

5) Details of any/all new hardware required to facilitate a switch to TCP/IP connectivity with communications including MQTT over TLS 1.2 and above to include integration with existing hardware. *Please note - hardware power consumption will be a significant deciding factor in suitability for roll out across the buoy network; and*

6) The Met Office requires assurance that our data (and that of our partners and customers) is processed, held and stored securely in order to assure us of our obligations to the Data Protection Act 2018, relevant legislation, accreditations, best practice and compliance regimes within UK government. Any services Met Office may ultimately procure should be capable of demonstrating the principles of 'Security by design' and 'Security by default'. Please outline what steps your organisation has taken to make the proposed solution robust from an IT security perspective?

How to respond to us

If you would like to participate and submit a response, please do so by emailing your response and any supporting documentation to lisa.marvin@metoffice.gov.uk by **12:00 hours Tuesday 18th of April 2023.**

What the next steps may be

The Met Office may follow up your response by asking further questions or having a brief MS Teams meeting to understand your stated provisions and get the best understanding of the marketplace before any formal tender is issued.

Once we are sure we have all the information we need, we will advertise our requirement formally for suppliers to submit tenders.

PLEASE NOTE *–*

This notice is an information gathering exercise rather than a call for competition, and therefore publication or response does not commit the Met Office or any respondents to a future procurement, nor provide any process exemptions or preferential treatment to any parties expressing an interest. The Met Office will not be liable for costs incurred by any interested party in participating in this exercise.

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