

UKHO provides S-100 navigation data for Mayflower Autonomous Ship during at-sea testing before departure for US coast

The UK Hydrographic Office (UKHO) has announced that it is the provider of S-100 navigation data for the Mayflower Autonomous Ship (MAS) project. This marks the first time that S-100 data is tested aboard an unmanned or autonomous marine vessel. The vessel is currently in Plymouth Sound in the UK, undergoing an at-sea trial which started on 28 March 2022 and is testing the ability of the ship to read, integrate, and use S-100 data.

The UKHO is funding the integration and testing of S-100 Universal Hydrographic Model data into the Artificial Intelligence (AI) and Machine Learning (ML) software stack for the MAS project. The S-100 data provided by the UKHO is designed to be machine readable and higher resolution than S-57 electronic chart data, which MAS previously relied on to inform the onboard mission manager – and will be the future standard supporting digital navigation products globally.

During the current trial, the MAS is demonstrating its ability to read and interact with the S-100 data provided by UKHO and safely manoeuvre autonomously, recreating a typical passage from sea to Devonport Naval Base – a ‘what-if scenario’ that requires an unusual and potentially hazardous passage, deployment to and from the Mayflower Base at Turnchapel Wharf, across Plymouth Sound and to and from the sea. Numerous iterations of these test scenarios are being run in varying sea states, tidal flow, and wind and weather conditions, as well as with local vessel traffic. During these, the MAS is simulating behaviours of a larger autonomous ship, performing and behaving like a Royal Navy Frigate in terms of size, manoeuvrability, draft, and other vessel characteristics.

Safety is paramount for the project, with a human operator always on the loop from the remote operations centre and a local safety boat in proximity to the MAS at all times.

Commenting on the announcement, Mark Casey, Head of Research, Design & Innovation at the UK Hydrographic Office, said:

It is fantastic to be able to play an important part in the Mayflower Autonomous Ship project as provider of the S-100 data that will inform the navigation of the vessel. Our contribution to the sea trial, which will see the use of S-100 aboard an unmanned ship for the first time in history, is a proud milestone for us at the UKHO. It not only reinforces our position as an internationally recognised Hydrographic Office, but also as a leading institution

in the advancement of autonomous navigation and development of S-100.

We are grateful to our partners and all parties involved in this exceptional project, which will highlight the importance of S-100 as an enabler of autonomous navigation in a way that the world has not seen before. The MAS project is of major significance for the potential of autonomous shipping and will have crucial implications for the wider industry.

This project will be highly relevant for the user case of S-100 as it will provide feedback on the utility of the S-100 data and format, identify gaps in the data and method of deployment and integration, and provide real-world operational testing that will inform future deployments of S-100 data from the UKHO to other manned and unmanned vessel operators across the world. The MAS project will also help to advance the state of the art in marine autonomy and will be crucial for the advancement of autonomous shipping.

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Emergency support put in place for people fleeing Ukraine and entering the UK with their pets

The Government has put in place new [emergency support for those fleeing Ukraine with their pets](#). Using an emergency licence, people fleeing Ukraine can bring their pets to the UK with any quarantine costs met by the Government.

The Animal and Plant Health Agency is providing quick licence approvals and quarantine arrangements to avoid creating additional burdens or delays. The Government is also covering their vaccination, microchipping and quarantine costs, recognising that many individuals from Ukraine will not have been able to complete the full health preparations required for their pet on arrival.

The maximum stay in quarantine for a pet which has received no rabies vaccination is four months. Pets are considered on a case-by-case basis, with a shortened quarantine period for those that are vaccinated.

The Government has also introduced a new rabies blood test that will be able to detect existing rabies vaccinations faster. This will help in instances where refugees have travelled without vaccination paperwork.

Results can be turned around in a minimum of two days with some animals then moving to isolation if they are found to have rabies antibodies. This will help maintain our strict biosecurity measures and allow people to be reunited more quickly with their pets when possible.

We are working with vets and quarantine facilities to make sure that the arrival of Ukrainians in the UK is not delayed by the process to make arrangements for their pets.

Animal Welfare Minister Lord Goldsmith said:

People having to flee Ukraine are in an appalling situation. I'm pleased that Ukrainian refugees will be able to bring their pets to the UK with any quarantine costs paid for by the Government.

As part of our new streamlined process, any animals which have already received some treatment may also have their stay in quarantine facilities reduced and be returned back to their owner as soon as possible.

Before arrival, people fleeing Ukraine should use the [online application service](#) to apply to bring their pet to Great Britain. APHA will then be able to confirm approval for their emergency licence and organise any necessary stay in quarantine which is required to complete the rabies risk management

process.

There is a limited amount of quarantine facilities in the UK and we will prioritise those fleeing Ukraine who wish to bring their pets with them.

The Chief Veterinary Officer previously [urged rehoming charities](#) to check online guidance and ensure rescue animals have the necessary vaccination paperwork after recent follow-up border checks by the APHA showed a shipment of 19 animals imported by a rescue charity travelled illegally on falsified rabies documentation.

Ukraine is an unlisted country regarding the movement of pets due to the confirmed presence of rabies. We have serious ongoing concerns around the onward commercial movement of animals between or from Ukraine and neighbouring countries and the health risk that presents. The UK has been rabies free for 100 years and the movement of large numbers of rescue animals who are entering Great Britain from high-risk rabies countries, without the correct health preparations, presents serious risks to biosecurity and public health. There has also been a number of serious instances of non-compliant imports, including those under falsified paperwork.

To ensure we continue to prioritise those fleeing Ukraine with their own pets, all commercial imports of dogs, cats and ferrets from Ukraine, Belarus, Poland and Romania have been temporarily suspended for a further eight weeks until 29th October 2022.

[Government sets out plan to make UK a global cryptoasset technology hub](#)

- Stablecoins to be brought within regulation paving their way for use in the UK as a recognised form of payment.
- Announcement part of a series of measures to make the UK a global hub for cryptoasset technology and investment.
- Measures include legislating for a 'financial market infrastructure sandbox' to help firms innovate, an FCA-led 'CryptoSprint', working with the Royal Mint on an NFT, and an engagement group to work more closely with industry.

This is part of a package of measures to ensure the UK financial services sector remains at the cutting edge of technology, attracting investment and jobs and widening consumer choice. It includes:

- introducing a 'financial market infrastructure sandbox' to enable firms to experiment and innovate,
- establishing a Cryptoasset Engagement Group to work more closely with the industry,

- exploring ways of enhancing the competitiveness of the UK tax system to encourage further development of the cryptoasset market,
- and working with the Royal Mint on a Non-Fungible Token (NFT) this summer as an emblem of the forward-looking approach the UK is determined to take

Chancellor of the Exchequer, Rishi Sunak said:

It's my ambition to make the UK a global hub for cryptoasset technology, and the measures we've outlined today will help to ensure firms can invest, innovate and scale up in this country.

We want to see the businesses of tomorrow – and the jobs they create – here in the UK, and by regulating effectively we can give them the confidence they need to think and invest long-term.

This is part of our plan to ensure the UK financial services industry is always at the forefront of technology and innovation.

Stablecoins are a form of cryptoasset that are typically pegged to a fiat currency such as the dollar and are intended to maintain a stable value. With appropriate regulation, they could provide a more efficient means of payment and widen consumer choice.

The government intends to legislate to bring stablecoins – where used as a means of payment – within the payments regulatory perimeter, creating conditions for stablecoins issuers and service providers to operate and invest in the UK.

By recognising the potential of this technology and regulating it now, the government can ensure financial stability and high regulatory standards so that these new technologies can ultimately be used both reliably and safely.

The UK's vision for being a global hub for cryptoasset technology was set out in a speech by the Economic Secretary to the Treasury, John Glen at the Innovate Finance Global Summit today.

He also announced that the UK will proactively explore the potentially transformative benefits of Distributed Ledger Technology (DLT) in UK financial markets, which enables data to be synchronized and shared in a decentralised way to potentially achieve greater efficiency, transparency and resilience.

The government will legislate to establish a financial market infrastructure (FMI) 'Sandbox' that will enable firms to experiment and innovate in providing the infrastructure services that underpin markets, in particular by enabling Distributed Ledger Technology to be tested. The government further confirmed that it will initiate a research programme to explore the feasibility and potential benefits of using DLT for sovereign debt instruments.

John Glen also confirmed that the government will consult on wider regulation of the cryptoasset sector later this year.

Other measures include:

- The UK government will explore ways of enhancing the competitiveness of the UK tax system to encourage further development of the cryptoasset market in the UK. It will review how DeFi loans – where holders of cryptoassets lend them out for a return – are treated for tax purposes. The government will also consult on extending the scope of the Investment Manager Exemption to include cryptoassets.
- The Chancellor has commissioned the Royal Mint to create a Non-Fungible Token this summer.
- The Financial Conduct Authority will hold a two day ‘CryptoSprint’ in May with industry participants, seeking views directly from industry on key issues relating to the development of a future cryptoasset regime.
- The Economic Secretary will establish and chair a Cryptoasset Engagement Group, convening key figures from the regulatory authorities and industry to advise the government on issues facing the cryptoasset sector.

In his Mansion House speech in July 2021, the Chancellor set out his vision for the future of the financial services sector, which included a plan to ensure that the UK remains at the forefront of technology and innovation. This was one of four key components of that vision, with the ultimate aim of building a financial services sector that continues to be one the rest of the world looks towards.

The government launched a consultation on cryptoassets and stablecoins last year and has today published its response setting out the next steps.

Further information

[The Global Honey Supply Chain](#)

News story

This e-seminar, by Cathal Henigan, Purchasing Director at Valeo Foods UK, will provide an introduction to the subject of the global honey supply chain



Topics covered in this short presentation include an overview of the role of beekeeping, honey extraction and honey processing. In addition, key aspects of relevant legislation are described, such as the control of pests and diseases, honey composition, and control of the export and sale of honey. Details of the global market for honey are also described as well as an assessment of the risk to the supply chain through criminal activities such as food fraud.

The e-seminar is intended for individuals currently working within the food testing arena, the food industry, and those involved with the UK official control system.

[The Global Honey supply Chain](#)

The production of this e-seminar was co-funded by the UK Department for Environment, Food and Rural Affairs, the Food Standards Agency, Food Standards Scotland and the Department for Business, Energy, and Industrial Strategy, via the Government Chemist, under the Joint Knowledge Transfer Framework for Food Standards and Food Safety Analysis.

Published 4 April 2022