

OGC Spatial Data Infrastructure Modernisation Project 2025 – 2026

OS is interested in contributing to the OGC Spatial Data Infrastructure Modernization project. We propose providing content related to examples of our current work which we believe demonstrate some of the desirable characteristics of a modern SDI.

Ordnance Survey has been active in various international forums contributing to the discussion on the modernisation of spatial data infrastructures. Too numerous to mention in full they have included, over a period of years the UN-GGIM, UN-GGIM Europe, Geospatial World Industry Council, and on a more regional level the EU INSPIRE initiative.

The three themes of Data and Technology, Governance and People are recognised by Ordnance Survey as a suitable framework to focus future efforts. Within each of the three themes We have made further distinctions to improve the understanding of a modern SDI.

Data and Technology

- Improved data access
- More diverse data
- Data analytical services
- Open data standards
- Innovation services

Governance

- An efficient governance structure
- Policy / Legal

People

- Training, certification, skill development
- More diverse community of data users and providers

In addition, it is also clear that the modernisation of any SDI will also have to look to increase the use of public private sector partnerships in the provision of more diverse data and services.

There are two clear examples where OS has fostered and developed a more SDI approach in recent years. These are the National Underground Asset Register and the OS Data Hub.

National Underground Asset Register NUAR

NUAR is a digital service which provides instant access to a map of underground assets (pipes and cables) in England, Wales and Northern Ireland. Scotland already benefits from a system of this kind, known as Vault and linkages between NUAR and Vault are currently being explored.

The NUAR service has been designed to improve the efficiency and safety of the way we install, maintain, operate and repair our buried infrastructure by providing secure access to data from the 700+ public and private sector asset owners about the pipes and cables beneath our feet.

These include gas, water, electric and telecommunications companies and local authority assets.

At its simplest form NUAR is a digital data access service with a set of customers, or the underground asset owners and a set of end users. The end users are the contractor organisations with safe dig status that complete the build and maintenance activity on the buried infrastructure. Access to the underground data is restricted for security reasons.

Further information can be found here: [National Underground Asset Register \(NUAR\) - GOV.UK](#)

And here: [NUAR's journey to being fully operational | Blog | OS](#)

The success of NUAR has been built on the consortium offering the whole package this has included

1. secure access to the data platform
2. data access via any mobile device and a web browser
3. a data transformation service that converts the data from the asset owner's native format into the NUAR harmonised data model, (derived from the MUDDI conceptual model)
4. a comprehensive data sharing agreement, allowing asset owners to share their data with others securely

An assessment of NUAR against the modern SDI themes

Data and Technology

1. Improved data access – Data access on multiple devices with key asset owners refreshing their data at least once a month
2. More diverse data – There was no previous access to underground data at this scale. Approximately 80% of the target area is now covered by NUAR with more than 300 Asset Owners currently participating in NUAR on a voluntary basis
3. Open data standards – The OGC MUDDI conceptual model was developed and used to derive the logical UK excavation profile and the physical harmonised data model (HDM)

Governance

1. An efficient data governance structure - This has focussed on establishing a data accountability model, addressing data privacy and cyber security concerns and the data sharing and licensing agreements.
2. Legislation – With the passing of the Data Bill in June 2025, NUAR has been put on a statutory footing. This is the foundation to making NUAR a comprehensive register of all recorded underground assets. A consultation with industry about mandating data provision into NUAR is expected in later summer 2025.
3. Governance – stakeholders in the private and public sectors have taken part in formal government consultation and advisory group and are included in the governance arrangement of the NUAR service.

People

1. More diverse community of users and data providers – Additional work is ongoing to identify if and how additional benefits could be delivered with increased access to the NUAR platform. This involves the identification of other use cases and other user groups for safe digging purposes.
2. Public private sector partnerships – There are currently over 300 data sharing agreements, signed as part of NUAR. A recent blog on this topic identified 15 principles for the successful delivery of data sharing programmes [Publication of principles for successful delivery of data sharing initiatives – Geospatial Insights](#)

OS Data Hub

Launched in July 2020, the OS Data Hub is our data distribution and customer engagement platform for our Licensed Data products.

The OS Data Hub supports the public and private sectors critical natural, built and digital infrastructure and services by making it easier for anyone to find, access and use authoritative geospatial data.

Public access to the OS Data Hub can be found here: [OS Data Hub | Free Maps & API Data for Developers](#)

The OS data hub was presented at the future directions section during the 132nd member meeting in Merida. The presentation material across two presentations can be accessed here: [Technical Committee/Meetings/2025 Meetings/2025-06 Merida/Future Directions](#)

An assessment of OS Data Hub against the modern SDI themes

Data and Technology

1. Improved data access – Data access via the data hub was a significant improvement on the previous OS offering. The OS data hub provides access to our enhanced National Geographic Database in two ways via the select and build service or via our OS NGD APIs.
2. More diverse data – Additional OS data offers have been much easier to distribute via the OS data hub. This has included more diverse building height and building materials attribution. OS data hub is now also providing data from third party organisations with the recent addition of British Geological Survey data.

Governance

1. An efficient data governance structure – The data being supplied into the OS data hub is well governed from point of capture through to final product. The data lifecycle is monitored by the appropriate data governance groups ensuring transparency in decision making. Data accountability in the form of data owners, stewards and custodians have been established to provide the oversight required and the ability to make the necessary changes.
2. Legal – A number of different data sharing agreements are available to meet our OS Data Hub customers' requirements.

3. Open data standards – The NGD APIs have been built around the OGC API standards. The older W*S set of data access standards remain in place for our customers that prefer this method of data access.

People

1. More diverse community of users and data providers – The success of the OS data hub has shown that new communities of data users will take advantage of improved data access arrangements.