

Geospatial World Forum

Digitising utility assets:
Towards an underground
digital twin strategy

22 October 2021



Geospatial
Commission

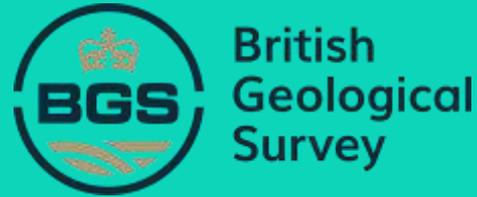
About us

- The Geospatial Commission was created in April 2018 in the centre of government, as an independent, expert committee.
- We work to unlock the significant economic, social and environmental benefits of location data for businesses, communities and the UK as a whole.



Geospatial Commission

Our six Partner Bodies



HM Land
Registry



The UK's Geospatial Strategy

Mission 1: Promote and safeguard the use of location data

Mission 2: Unlocking the power of location

Mission 3: Enhance capabilities, skills and awareness

Mission 4: Enable innovation



Why infrastructure and construction data?

- Public and private sector organisations across the UK are keen to **use data more effectively to support decision making** - yet there is limited understanding of how infrastructure works as a system.
- Initial analysis has concluded that up to £4.6bn in economic value could be unlocked to the UK through better use of geospatial data in these sectors.
- Improving the way underground utility data is accessed and shared has been shown as a particularly high value opportunity area.
- There isn't a consistent way for owners of underground assets to share their data. As a result there is a patchwork of processes and systems in place requiring multiple organisations to be contacted with data delivered in varied formats, scales and quality.
- Disjointed approaches to data sharing and poor data quality increases the likelihood of dangerous and expensive utility strikes, estimated to cost the **UK economy £2.4bn per annum**.
- The technological revolution is changing the way we work, live and play and gives us the opportunity to address long standing problems.
- Now is the time to re-imagine how we access, share and make use of data -- to gain the insights we need to do our jobs effectively, efficiently and safely.

UK's National Underground Asset Register (NUAR)

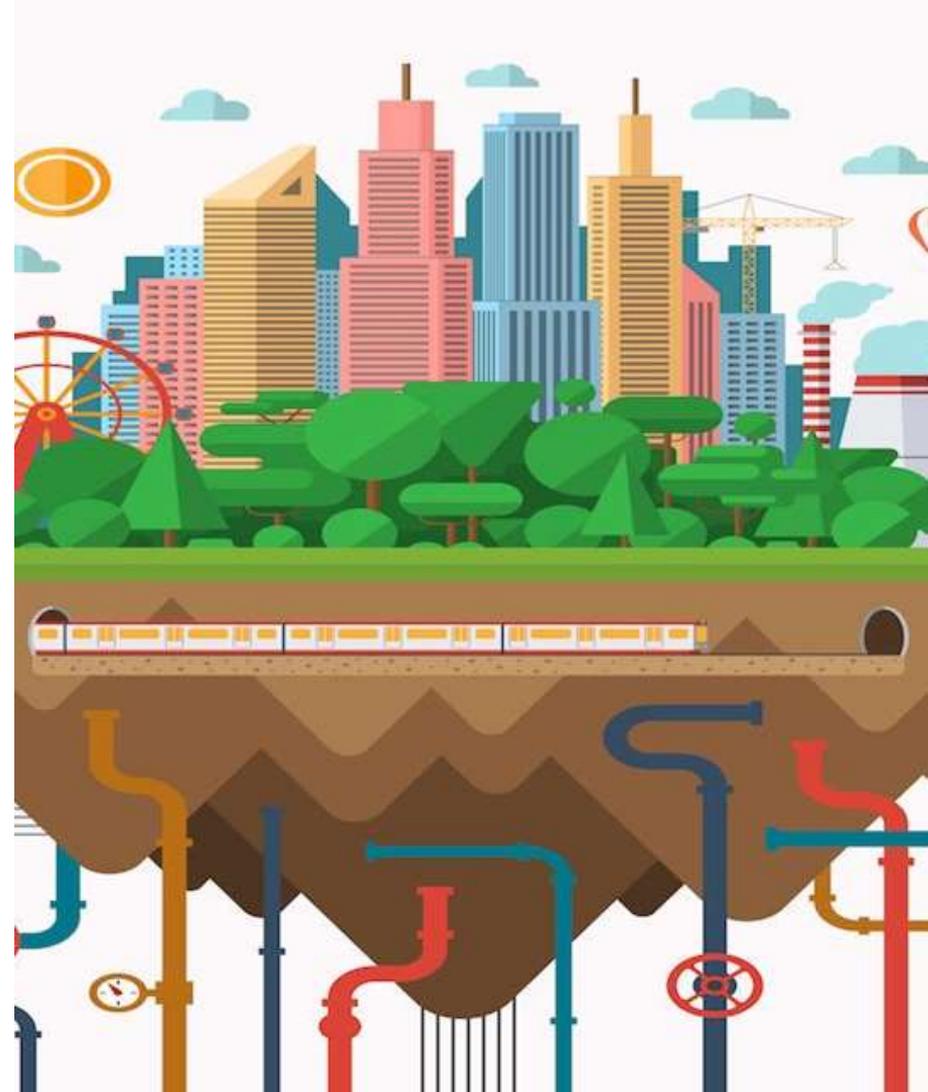
Lord True CBE, Minister of State at the Cabinet Office, said:

I am delighted to launch the build phase of the UK's new National Underground Asset Register. This new digital map of the UK's underground utilities assets demonstrates our commitment to putting innovation at the forefront of the UK's economic recovery and ambition to Build Back Better.



Delivery value through NUAR

- NUAR is an accessed controlled data sharing platform which enables owners of underground assets to share their data for the purposes of excavation planning and safe digging.
- It also enables planners and excavators to view the location of underground assets in a standardised format through an interactive user interface.
- Excavators are also able to report errors in data back to asset owners through the platform and to log unidentified buried objects.



Non-technical challenges

Many challenges are indirectly related to tech, which include:

- Liabilities
- Commercial sensitivities
- Security
- Safety
- Culture

These have been overcome by **working across sectors and organisations** to identify shared objectives and benefits.



Look ahead

- Work is currently underway to build a Minimum Viable Product for the North East of England, Wales and London.
- The platform will then be enhanced and rolled out to the remaining regions in England and to Northern Ireland. The build phase of work is expected to last three years.
- As Scotland already benefits from a system of this kind in the Scottish Road Works Register, initial work is focusing on the other three nations.
- Once operational, NUAR is expected to deliver at least **£347m per annum** to the UK economy.



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You can find more about our work at:

[gov.uk/government/organisations/geospatial-commission](https://www.gov.uk/government/organisations/geospatial-commission)