About the Geospatial Commission

The UK's Geospatial Commission delivers the national geospatial strategy. This sets out how, together, we can enable the UK to unlock the power of location.

We are an expert committee that is part of the UK's central government department, the Cabinet Office.

We have four key missions:

1. Promoting and safeguarding the use of location data
2. Improving access to better location data
3. Enhancing skills, capabilities and awareness
4. Enabling innovation

Geospatial
Commission

The Parthenon of value

Building a strong data pillar

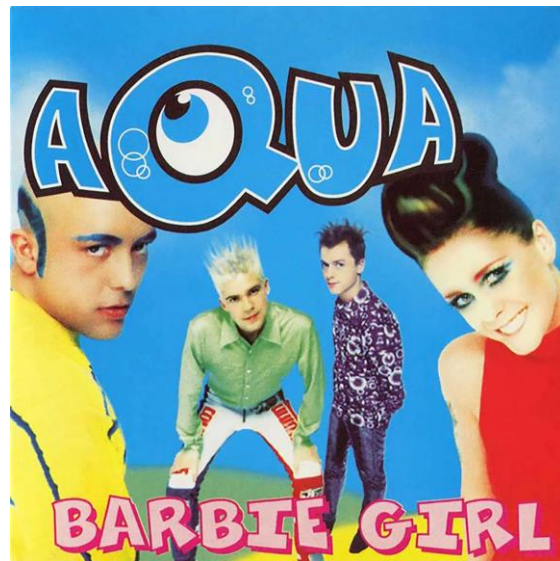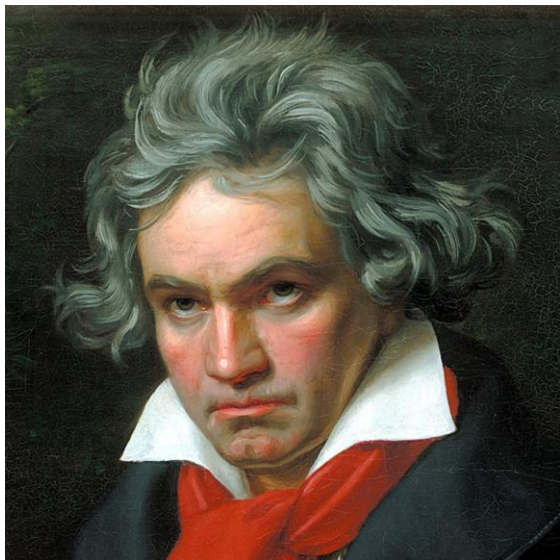Quality

Findable

Accessible

Interoperable

Reusable

Mission 2: Improve access to better location data: We will streamline, test and scale the development of new and existing location data ensuring it is findable, accessible, interoperable, reusable and of high quality.

FAIR - music to your ears

FAIR - pumping on your stereo
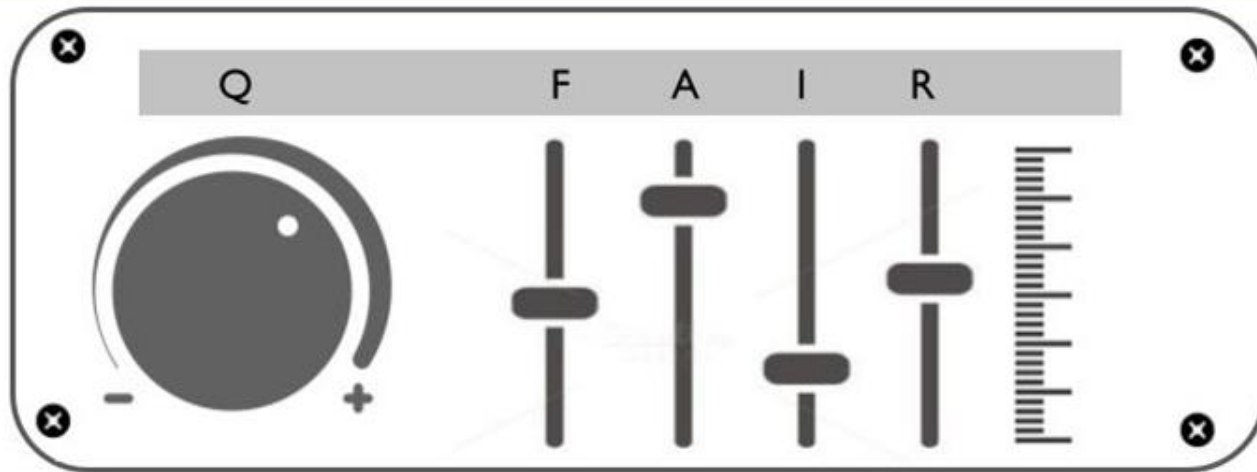
The UK approach so far

Using lenses: Classical or Pop?

What did we find?

1. There is a wide adoption of FAIR principles to UK geospatial data managed by our Partner Bodies and overall it is adequate for its current use

2. There remain wider and systemic challenges to improving UK geospatial data, particularly as its volume and demand increases

Full report can be found here:
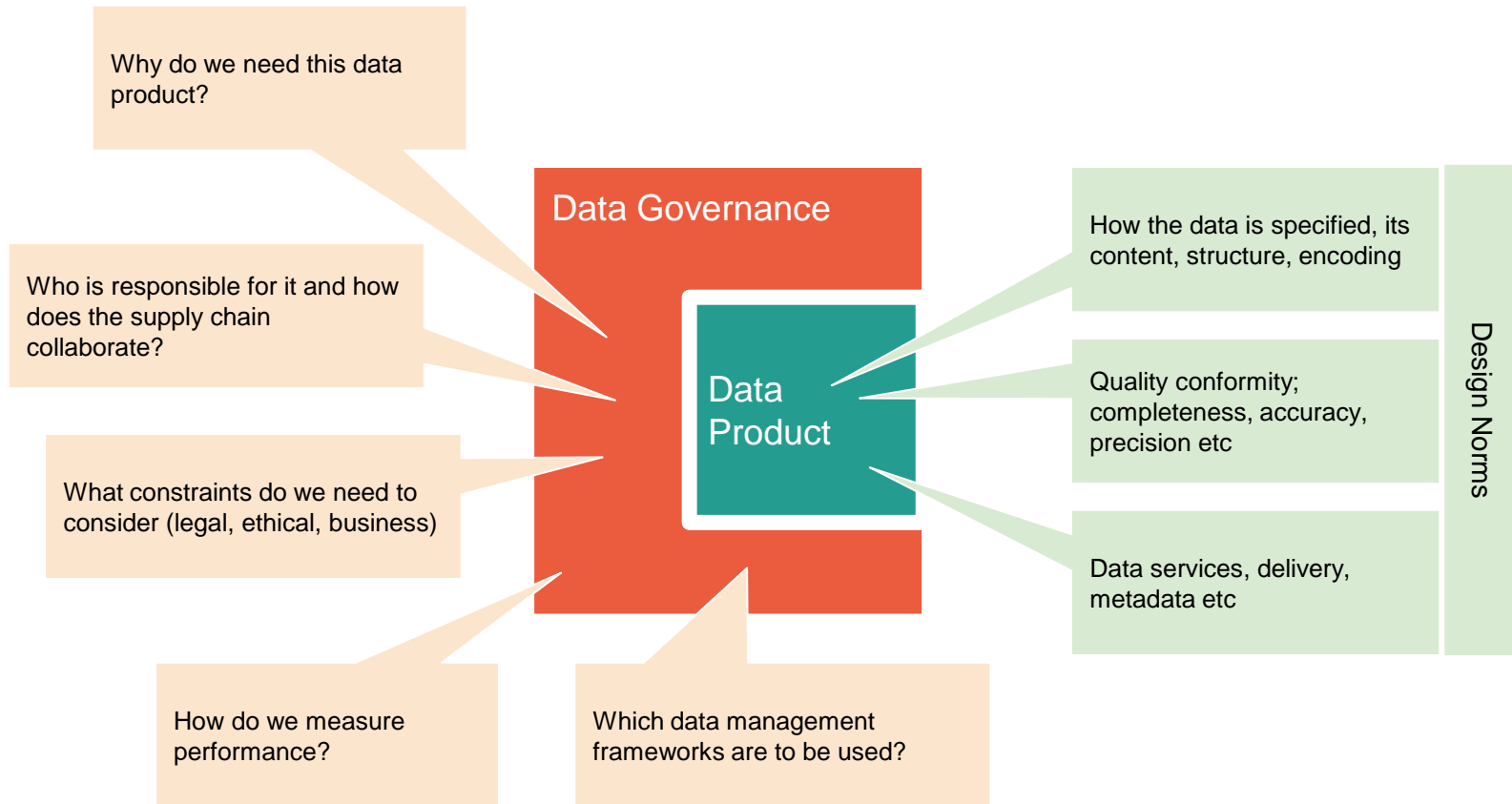
Turning principles into action

National Underground Asset Register (NUAR)

- 4 million kilometres of buried pipes and cables in the UK

- 4 million holes dug every year

- c. 60,000 accidental strikes per year

- Data is held by over 650 organisations

- The economic benefits of NUAR are estimated to be £350m per year
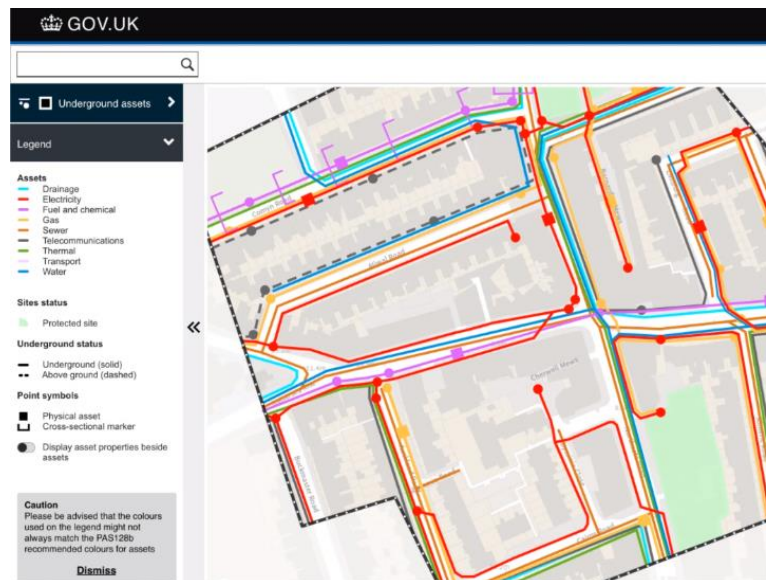
Data shown for illustrative purposes only

Public Sector Geospatial Agreement (PSGA)

- Quality: provision of data building blocks will enable OS to improve individual data components and make them available to the market quickly.

- Findability: improved discoverability via new user interface. All data hosted in a single location.

- Accessibility: new APIs, improved flexibility and reduced costs of downloading and formatting the data.

- Interoperability: Data formats will now allow for remote use. Improved data linkages.

- (Re)usability: access to less sensitive data (building blocks vs. whole products) will reduce user restrictions

Geospatial Commission

You can find out more about our work at:

🌐 gov.uk/government/organisations/geospatial-commission

✉ geospatialcommission@cabinetoffice.gov.uk

🐦 @GeospatialC

Examples

Step 3: Effect on Data Characteristics

Q **F** **A** **I** **R**

QUALITY		FINDABILITY	ACCESSIBILITY	INTEROPERABILITY	(RE)USABILITY
OBJECTIVE QUALITY	**SUBJECTIVE QUALITY**				
"More always better"	*"More not always better"*	▪ Where is the data saved / published?	▪ Ownership of the dataset	▪ Processing requirements	▪ Anonymised
▪ Completeness	▪ Timeliness	▪ Is the data easily searchable?	▪ Licensing arrangements for the user:	○ Support	▪ Ability to (re)share (open source)
▪ Consistent / Coherent	▪ Time series	▪ Discovery metadata	▪ Open / Excludable	○ Format / Structure	▪ Confidentiality
▪ Representativeness / Generality	▪ Granularity / Precision / Resolution	▪ From an authoritative / reputable source	▪ Price / Cost	▪ Joinability / Linkability	▪ Administrative costs associated with:
▪ Interpretable / Good metadata		▪ Have an audit trail / lineage	▪ Liabilities and risks (for the user)	○ Unique identifiers	▪ Usage restrictions
▪ Accuracy			▪ API / ability to query location data	○ Standardised	▪ Permissions
▪ Relevant subject matter			▪ Size	○ Coordinates	

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CASE STUDY 1: NUAR

EXISTING PROBLEMS OR POTENTIAL OPPORTUNITIES	INVESTMENT	IMPACT ON DATA CHARACTERISTICS	IMPACT ON USE CASES	ECONOMIC, SOCIAL AND ENVIRONMENTAL
■ Underground asset data held and shared in varied an inconsistent formats with varying quality standards. Situation is unlikely to reform itself ■ Creating inefficiencies and asset strike risks ■ Causing project delays and inefficiencies to excavators ■ NUAR is a data-sharing platform to provide a combined, comprehensive, interactive, standardised digital view of the location and attributes of buried assets	**Geospatial data improvements**: ■ Transformational data improvements including: ○ streamlining data sharing; ○ standardisation of formats on one single accessible digital map; ○ data securely stored, saved and made immediately available; ○ Conformance reporting against data model and feedback mechanism	■ **Findability & Accessibility:** NUAR will be developed as a secure data sharing platform which will give statutory undertakers a one-stop-shop to view interactive data ■ **Interoperability**: data will be standardised. Heterogeneous source data will be transformed in line with the NUAR data model. ■ **Quality**: will include an observation feature allowing executors to report data inaccuracies back to asset owners. Provision of conformance reports against the NUAR data model will show data owners where data improvements at source could be made.	■ **Safe digging and utility strike savings** benefiting asset owners, excavators, general public and business ■ **On-site efficiency** and project savings benefiting planners and excavators ■ **Site planning and data exchange** including back office efficiencies benefiting planners and data managers	■ **Economic value**: reduced repair costs and loss of supply from utility services ■ **Social value**: fewer interruptions to utility networks, minimised negative impact on local economies and disruption to traffic ■ **Economic value**: **costs** of resuming / abandoning projects after discovering unexpected assets; **efficiencies** interpreting maps on-site ■ **Economic value**: reduced preparation time for excavation. Reduced administrative time burden for asset owners in responding to requests for maps.

CASE STUDY 3: PSGA

EXISTING PROBLEMS OR POTENTIAL OPPORTUNITIES	INVESTMENT	IMPACT ON DATA CHARACTERISTICS	IMPACT ON USE CASES	ECONOMIC, SOCIAL AND ENVIRONMENTAL

EXISTING PROBLEMS OR POTENTIAL OPPORTUNITIES

- Opportunities for increased efficiency. Previous arrangements cannot take account of technological changes and potential efficiencies.

- OS products did not fully meet users' expected future requirements (e.g. ability to use data for analytical purposes). Current challenges around accessibility and usability (inability to access individual geospatial features).

- Opportunity to transform public sector access to geospatial data and stimulate geospatial innovation in UK

INVESTMENT

Geospatial data improvements:

- Creation of a customer engagement platform: the OS Data Hub.

- Building on existing data with new enhanced data for a range of themes including buildings, land use and cover, addresses, transport, water etc.

- Data building blocks can be accessed independently rather than fixed products, reducing data management burden

IMPACT ON DATA CHARACTERISTICS

- **Quality:** provision of data building blocks will enable OS to improve individual data components and make them available to the market quickly.

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IMPACT ON USE CASES

- OS data which is in line with Q-FAIR characteristics will impact a variety of use cases across the economy via:

- **Improved ease of use** PSGA makes OS data easier for users to discover, to manage and to operate and manipulate via the Data Hub. Users will no longer have to actively manage the data they hold to ensure it is up-to-date.

- **Improved flexibility** PSGA allows OS to respond to user requests to access bespoke data.

ECONOMIC, SOCIAL AND ENVIRONMENTAL

- **Economic value**: efficiencies from time savings associated with easier to use data among both public and private sector users. Users can select and access the data they need faster. This leads to higher productivity and increased output. Additional revenue for OS from flexibility to respond to new opportunities.

- **Social value:** New Data Hub will attract analysts who previously avoided using OS products. Increased quality of analysis will have social value via evidence based policy making.

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