

Summary

Data portals facilitate access to, and reuse of, data and information. They are an important element of open data initiatives as they allow users to extract knowledge and information from them. Data portals are designed to save the time needed to find, process and understand data so it can be used, for example, in publications or to effect policy change. They should therefore be designed for the people it will help, the people who will be interacting and capitalising on the information within, and this note touches on some of the key elements to consider when designing and implementing them.



**Guidance from
the UKEOF
Data Advisory Group**

Overview

This advice note aims to provide a broad range of the UKEOF community and partners with an introductory overview of best practice when creating data portals, including UKEOF partner use cases in environmental observation and science, and to highlight some key challenges in this rapidly emerging and developing space.

Data portals are web-based interfaces designed to make it easier to find reusable information. Like library catalogues, they contain metadata records of datasets published for re-use and can allow users to visualise and/or download required information (European Commission, 2021).

When blended with search functionalities, portals can facilitate the discovery of datasets. Application Programming Interfaces (APIs) are also often available, offering direct and automated access to data for software applications.

Data portals are a crucial element of most open data initiatives.

The UKEOF Data Advisory Group (DAG) identified several partners who are working in this area and that there would be a benefit to bringing knowledge and recommendations together. Although aimed at the members of the UKEOF partnership, this note illustrates some considerations, in the context of both the providers and users of data and services, which apply to the wider environmental science community.

Identifying users

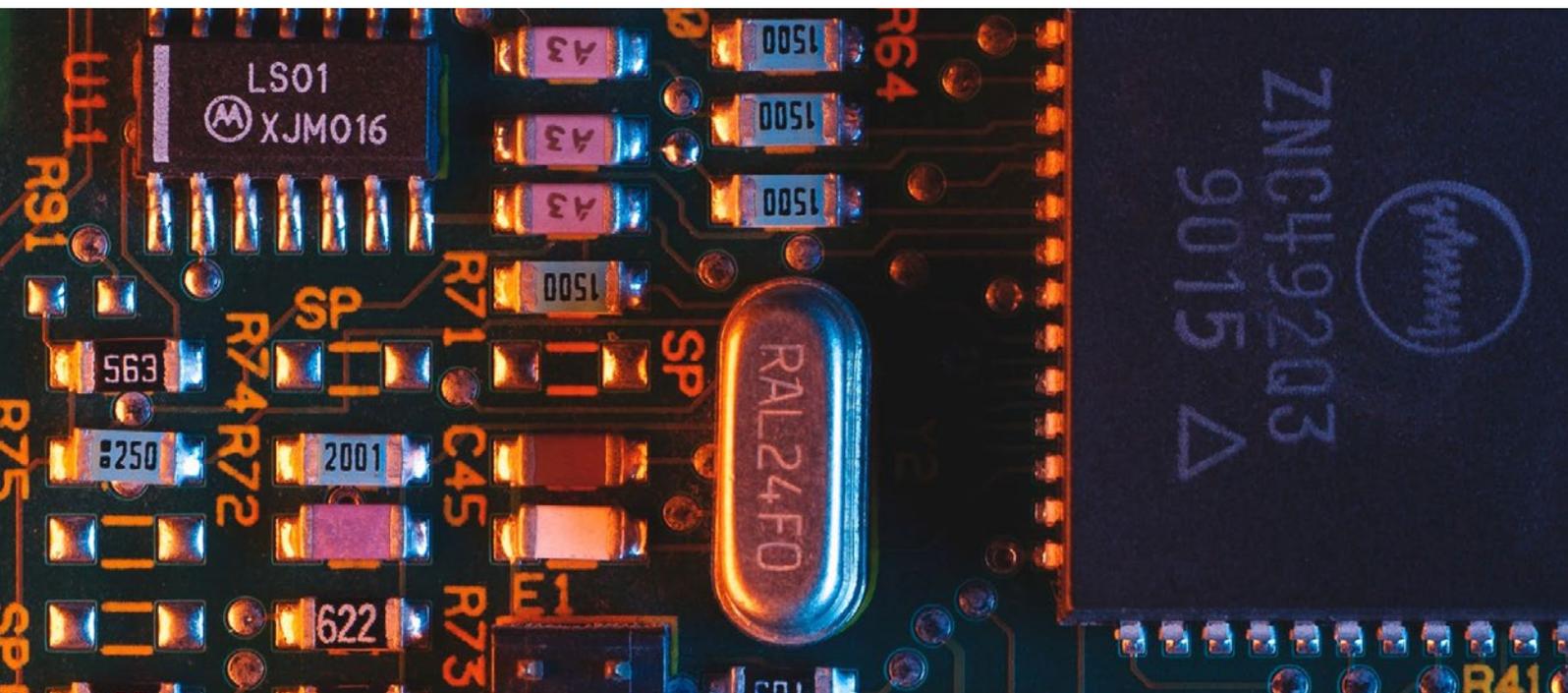
It can be difficult to identify end-users for open data portals, but it is a key point to consider. There are different approaches for different users due to a wide range of stakeholder types and priorities. To get it right, it should be driven through stakeholders and they should be involved in the rapid development of the portal. It is important to get something live that stakeholders can see and iterate this, as without something available it is almost impossible to get any meaningful engagement.

User personas are a useful technique to help to identify users and their needs. A user persona is a semi-fictional character based on your current (or ideal) user(s). They can be meaningful when paired with pathways through which these personas can engage with a project (The Turing Way, 2020).

Users can come to data portals with various levels of technical skills as well as from diverse backgrounds, identities, demographic distribution and lived experiences. Using personas allows us to take experiences and expectations of individuals into account when planning data portals. A joint set of user personas for the DAG is something we would like to explore going forwards.

An important consideration for users is how they will want to view, use, or consume the data. For some, particularly academics, researchers, specialist organisations and those building additional tools, they will want direct access to the raw data and metadata.

For public bodies, this is a requirement in meeting the open data and transparency agendas. It may also produce novel ways of analysing and interpreting the data. This approach on its own, precludes a lot of people who do not have the time, skills, or tools to work with raw data. For these people, providing interpreted information, through maps and visualisations allows them to use the information quickly and easily. This approach is also popular with specialists as it allows them to interpret the data and present results appropriately, reducing the risk of people without specialist knowledge misusing or misinterpreting data.



- 1 European Commission, 2021. Open data portals, <https://ec.europa.eu/digital-single-market/en/open-data-portals>. [Accessed 02/02/2021]
- 2 The Turing Way, 2020. Personas & Pathways, <https://the-turing-way.netlify.app/project-design/persona.html>. [Accessed 02/02/2021]

API	Application Programme Interface
DAG	Data Advisory Group
DCAT	Data Catalog Vocabulary
FTE	Full Time Equivalent
FTP	File Transfer Protocol
RDF	Resource Description Framework
UKEOF	the United Kingdom Environmental Observation Framework

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