

POINT OF
VIEW

Open Data delivery with Local Government



Introduction

In recent years there has been a significant global movement to make public service data openly available for full use and republishing, without restrictions from copyright, patents or other mechanisms of control.

This paper explores Sopra Steria's point of view on Open Data within the Local Government context. It reviews what Open Data is, the potential benefits, the challenges involved, and how these can be overcome within the framework of a comprehensive strategy and technical architecture for Open Data.

What is Open Data?

There are several slightly different definitions of Open Data, however, according to the UK Government Cabinet Office Open Data is data that is:

- Accessible (ideally via the internet) at no more than the cost of reproduction, without limitations based on identity or intent
- In a digital, machine readable format for interoperation with other data
- Free of restrictions on use or redistribution in its licensing conditions.

All the definitions stress the need to eliminate barriers to reuse, whether bureaucratic, technical or usability, as well as legal barriers, such as distribution and copyright restrictions.

It should be stressed that Open Data is generally not about personal data. The open release of any information that would identify an individual would be contrary to the Data Protection Act, unless they had consented to the release. Further restrictions may apply for sensitive governmental data, or when other considerations such as security or confidentiality are at stake.

The benefits

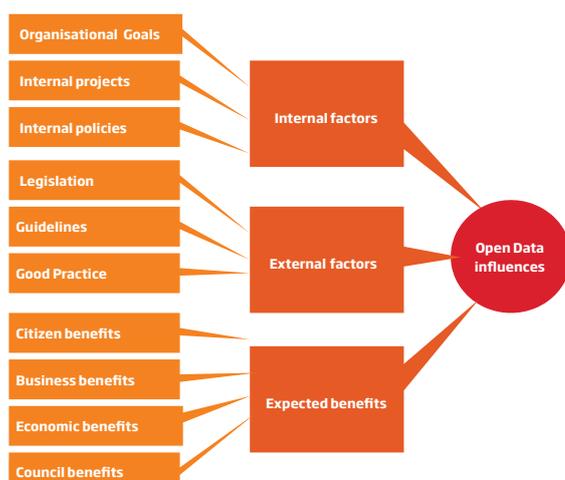
Experience has shown that Open Data is an important resource that can be utilised by citizens, local communities and businesses in innovative and unexpected ways to deliver significant social and economic benefits. Opening up datasets appropriately favours transparency and can empower citizens and drive innovation. It can help improve data quality, both internally and externally. Open Data has been shown to provide incentives for software developers to drive innovation, enabling a growth in applications developed by the community for the community, therefore enhancing economic development. Open Data can also help to make the most of the increasingly limited resources available to local authorities.

For example, developers in several UK cities have used Open Data to map and chart local cycle accidents, providing cyclists with information to help them avoid potentially dangerous roads, and assisting local authorities to design safer highways.

It is important to articulate the expected benefits of Open Data for your organisation and local community, although it should be stressed that these are often intangible and difficult to quantify in monetary terms. Sopra Steria has collected a number of examples of how Open Data delivers benefits to citizens, communities, businesses and local authorities.

Drivers of Open Data delivery

Local Government organisations will have internal drivers to deliver Open Data (e.g. goals such as developing community capacity), and will also be influenced by external drivers (e.g. national guidelines and good practice in the sector).



Internal and external drivers to deliver Open Data

The challenges

The principal challenges for any organisation delivering Open Data are:

- How to efficiently source good quality data. Data may be locked into hard-to-access legacy systems. There may be no central picture of what data is available.
- Delivering the data in appropriate open formats supported by sufficient information about the data to help the consumer, i.e. good quality metadata.
- Developing a robust two-way engagement model with the consumers of the data.
- Internally increasing awareness of the benefits of Open Data and obtaining a commitment to Open Data, then implementing appropriate governance.
- Promoting Open Data to the wider community.
- Implementing a flexible technical environment to support the extraction and delivery of data and consumer engagement.



The principles

Delivery principles

The delivery of Open Data should be guided by the following general principles:

- Keep it simple and small
- Engage early with the data consumers, and engage often
- Be open by default
- Foster innovation
- Share expertise and experience with data consumers and partners
- Be transparent
- Address common internal fears and misunderstandings
- Encourage universal participation

Data principles

The data itself should be consistent with the following principles:

- Release good quantities of high quality data.
- Describe the data (including with appropriate metadata and a searchable registry file or master data catalogue listing key details of all published data).
- Make data freely available (with a few defined exceptions). The UK Open Government Licence provides a standard licence for Open Data.
- Provide easy access to the data.
- Allow reuse and redistribution.
- Aim to publish linked data.
- Ensure data is as up to date as possible.

Open Data strategy

A comprehensive Open Data strategy will provide the foundation and framework for your Organisation's delivery of Open Data. The strategy will need to address the following key issues:

- How to improve knowledge of Open Data within your organisation, including engagement with the various independent organisations promoting Open Data, for example the Open Knowledge Foundation.

The pioneers of Open Data have witnessed how quickly local communities take ownership of Open Data to develop applications, and make creative use of public data. Sometimes all that's needed is a little push. Hackathons, prizes and prototypes have been proven to work well within communities.

- Ways to source appropriate and good quality data in an efficient and sustainable fashion - both internally and externally. At first it is not possible to say with confidence what data will be most popular - as more content is released it will drive new patterns of use. It is an iterative process and your data catalogue will develop over time.
- The presentation of data in a usable and accessible fashion. Access to Open Data needs to be highly usable, i.e. good navigation, presentation, layout and responsiveness. A minimum standard is CSV format, with linked data a target.
- Identifying who might use your data, how they can they understand it, and how you can communicate with them. Types of consumers include citizens, media organisations, software developers, elected members, other public sector organisations, council staff and officers.

Implementing Open Data

- Early and effective engagement with the consumers of Open Data is very important, given the dynamic and symbiotic relationship between data producers and consumers in the Open Data world. It will provide invaluable insights to guide publication, because the people who will be using the data are likely to know which data could be valuable.
- Implementing internal governance and quality control arrangements. You should appoint individuals to champion and coordinate Open Data, and create a senior management team to provide strategic and operational leadership for Open Data, backed up by a robust set of processes for the publication of Open Data.
- The ongoing management of Open Data needs to take into consideration any new or changed internal policies and strategies that might impact Open Data delivery, for example in areas such as Geographic Information Systems (GIS), Records Management and Digital Delivery. Open Data will need to be coordinated with any other internal initiatives or projects which have synergies and overlaps in areas such as source data and technologies, e.g. changes to major source systems.

A two to three year roadmap should be developed for the future expansion of your Open Data delivery, covering both the technical and human aspects of the delivery, and identifying key Open Data projects.

Once the strategy has been developed and agreed your organisation needs to get on with the hard part, i.e. the detailed implementation. Tasks should include:

- Writing a public-facing Open Data Manifesto to assist your engagement with the data consumers.
- Engaging with potential users of your data to identify the most useful data sources.
- Developing a Communications Plan to promote the use of Open Data once published.
- Extracting data from the source systems in an efficient and sustainable fashion. This can require expertise in areas such as linked data, complex databases, application interfaces, master data management, content management, business intelligence, open source and GIS technologies.
- Ensuring integration with your strategies and architectures in related areas such as Content Management, GIS, BI, Digital Delivery and Information Management.
- Defining metadata and presentation themes, and implementing a highly usable and accessible Open Data portal.



The technology

Our experience

You will need to implement an up-to-date technical architecture to support the effective delivery of Open Data. The architecture needs to take into consideration your existing environments and future plans, as well as the latest industry approaches to delivering Open Data. It should be compliant with the following key architectural principles:

- Maximum reuse
- Ease of use
- Secure
- Scalable
- Use of open standards if possible
- Cost effective
- Inter-operable
- Integrated

The UK Government's CKAN based Data.gov.uk To Go package is a good reference architecture to consider.



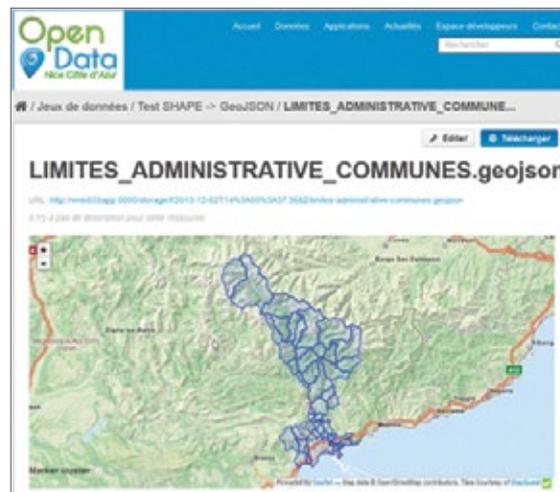
Sopra Steria has strong experience of Open Data strategy development, and of implementing Open Data portals across Europe, in particular in the local authority area. In addition we can utilise our expertise in areas such as linked data, complex databases, application interfaces, master data management, content management, business intelligence, open source and GIS technologies to extract Open Data in an efficient and sustainable fashion. We can also work with you to define metadata and presentation themes, and to design a highly usable and accessible Open Data portal.

Nice Côte d'Azur

In France Sopra Steria created an Open Data portal for the local authority in Nice Côte d'Azur. The project had three objectives:

- Implement data visualisation tools (e.g. tables, charts and maps) to present Open Data to the general public in a relevant and entertaining fashion.
- Provide the development community with access to Open Data via an API
- Become a reference in the world of Open Data.

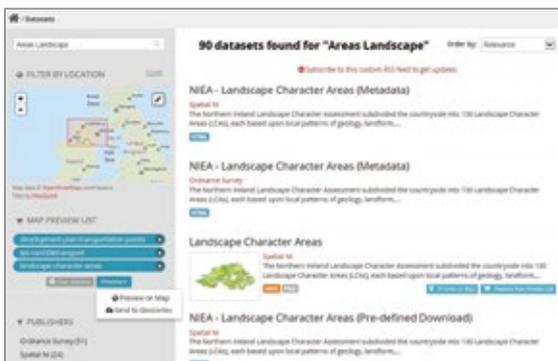
Sopra Steria designed and developed a hybrid CKAN/Drupal solution, based on an existing GIS application.



Conclusion

City of Edinburgh

In Scotland Sopra Steria recently developed an Open Data Strategy and Manifesto for the City of Edinburgh Council. This work involved input from a variety of stakeholders, both internal (e.g. managers for GIS, Freedom of Information and ICT Strategy) and external (e.g. local Open Knowledge Foundation representatives). The strategy considered the Council context for Open Data, including current offerings, existing and planned infrastructure, and the organisational structure. It proposed a CKAN based open source architecture to support the Council's future delivery of Open Data.



The Department of Agriculture and Rural Development (DARD)

In Northern Ireland Sopra Steria created a Data Management System for DARD that delivered the following key objectives:

- Implemented a common data catalogue for internal and external data resources
- Shared, enriched and improved the quality of internal datasets
- Integrated with existing systems such as Esri ArcGIS, Latitude Geocortex and Active Directory

Sopra Steria designed and developed a CKAN solution, fully integrated with existing GIS services.

At Sopra Steria we believe in Open Data, and the benefits that it can bring to citizens, local communities, businesses and local authorities themselves. We appreciate that to take full advantage of the opportunities provided by Open Data you need a clear long-term strategy, supported by a powerful publication platform built on openness principles.

With global experience across many countries and public bodies, and in particular within Local Government, our open data services are tailored to provide a powerful tool to help you document, present, publish and leverage your organisation's resources.

If you would like to discuss how you could make the most of Open Data, then we can arrange a meeting and demo with one of our locally based consultants.

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About Sopra Steria

Sopra Steria, European leader in digital transformation, provides one of the most comprehensive portfolios of end to end service offerings in the market: Consulting, Systems Integration, Software Development and Business Process Services. Sopra Steria is trusted by leading private and public organisations to deliver successful transformation programmes that address their most complex and critical business challenges. Combining high quality and performance services, added-value and innovation, Sopra Steria enables its clients to make the best use of information technology.



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