

Case Study:

Dublinked

Type: Project & Website

Organisation(s): Maynooth University, Dublin City Council, South Dublin County Council, Dún Laoghaire–Rathdown County Council, Fingal County Council, IBM

Tags: open data, process, metadata, standards

Dublinked is a datastore that provides a large amount of data on economic and health measures, facilities, and infrastructure around the Dublin city region. There is a large open component to this, but also large numbers of datasets that are available only to registered users.

The [Dublinked datastore](#) is part of a wider '[Smart Dublin](#)' initiative, which encompasses the digitisation agenda more widely. This also includes projects such as 'Smart Docklands' which aims to make the docklands areas of the city an innovation hub and a testbed for smart city technologies.

[Smart Dublin aims](#) to be a reference site for smart city technologies; increase engagement with citizens; enhance the quality of life in the city, and efficiency of services; and build a collaboration framework to solve urban challenges.

It also acts as a way to coordinate between the four local authorities in Dublin, pooling resources, and seeking to solve problems together.

Background

[Dublinked](#) was launched in 2011 as a regional datastore in a collaboration between Maynooth University and the four Dublin city authorities. Dublin City Council has taken the lead, but the other authorities have also had substantial input.

The project forms a part of a wider Smart Dublin programme which aims to boost innovation and improve services across the Dublin city region. Smart Dublin in turn is run by a team of four coordinators, each of which is based at one of the four Dublin city authorities. The team spearheads smart city and data initiatives within their respective district whilst also coordinating the strategy across the city region. This includes around a hundred projects, from a real-time [HGV permit checker app](#) to a [public WiFi network in Balbriggan](#). As such, Dublinked makes up merely one aspect of the team's work.

In an effort to raise productivity and enhance economic growth in the Dublin city region following the financial crisis, the project team aimed to remove as many impediments as possible to businesses, especially SMEs, that might seek to use and profit from public data.

IT companies with operations locally have also been crucial in the project's development. Initially, IBM, which had built significant operations in Dublin, wanted to develop a smart city dashboard, and Dublin City Council considered bilateral collaboration. However, project leaders realised this would break principles of open and unprivileged access to public data, and instead the Dublinked team sought wider collaboration with the IT community. IBM has still played an important role, however, hosting server space, providing technical capacity, and feeding in proposals of datasets to publish.

The initiative also drew on local best practice, including [early successes publishing basic open datasets](#) by Fingal Council.

Outreach and Collaboration

User involvement has been crucial in defining the direction of the project; the Dublinked team built a network composed of SMEs and public bodies who acted as a user base. This cooperation found expression in regular 'Dubmeets', which were a space to explore new opportunities for opening data, such as one on the topic of [real-time passenger information](#).

Dublinked thus became a platform for wider discussions between private and public sectors about the future of the city.

This open approach relied on a culture change among city managers, embracing the possibilities of innovation as well as being open to constructive criticism to iron out any problems along the way. A basic outline of Smart Dublin's approach to providing open data and data licensing is available on the [Smart Dublin Wiki page](#).

Smart Dublin's [2019 report to Ireland's Arts Culture and Recreation Strategic Policy Committee](#) details how the organisation seeks engagement with the wider smart city agenda, focussing on:

- Creating a strong innovation-friendly internal culture, reaching out to external organisations where interests coincide.
- Regular reporting of updates through internal newsletters and the intranet
- Use of external communications on Twitter, LinkedIn, and the [Smart Dublin blog](#)
- Showcasing examples of successful technological adoption by councils and supporting digital champions
- A focus on more customer-centric services

Dublin Dashboard

The [Dublin Dashboard](#) is part of the Smart Dublin project and brings together and visualises data about the city from different sources. This includes DUBLINKED, but also Eurostat and various Irish government departments.

This includes the tool '[How's Dublin Doing](#)' for an overview of economic indicators, housing, government spending, and other important data about the city. It also includes, for example, in-depth data about measures such as house completions, planning applications, rent prices, and contains a feature allowing the user to report issues to the authorities.

However, whilst this website is still accessible, this portal has not been so regularly updated in the past few years. This reflects a general realignment of Smart Dublin towards other issues, including [challenge-based problem solving and tackling digital exclusion](#).

Important considerations

Content and quality

DUBLINKED is now made up of 292 published datasets in total. These headline datasets often include a large number of subsections and tables. For instance, the [Dublin Economic Monitor](#) includes a range of tables containing various employment and general economic indicators.

The Smart Dublin Wiki provides detailed information on the key principles of how these datasets are organised, such as [which metadata should be included](#). There is a focus on five key areas identified by SmartDublin as major urban policy challenges, which are mobility, environment, energy, waste, and emergency management.

The '[research zone](#)' is an additional layer to the DUBLINKED platform, including high-value data for research purposes. This includes complex data such as real-time streams of energy, traffic, and water. These datasets are still accessible, but can only be used by registered members who submit details about who they are and what they are using the data for, as well as agreeing to the terms of access. This does not meet a true definition of 'open' data.

The DUBLINKED website is easily searchable and navigable by category and publisher. Files are generally available as CSV and PDFs in the case of tables; PDFs for documents; and geospatial data as GeoJSON files and web mapping services.

Among the datasets that are freely available, many are highly relevant to residential and commercial building developers. These include noise and air pollution maps, river catchment areas, traffic volume data, and planning application data. However, datasets are not always consistent in terms of data format and column names, where equivalent sets exist for different local authorities, causing some usability issues.

This is the case with planning application data for [Dún Laoghaire–Rathdown County Council](#) and [Fingal Council](#).

Most of the datasets available as geospatial data are available as layers that can be added to [‘Map Explorer’](#), an interactive map of the Dublin city region.

One interesting project built on Dublinked open data is the ‘Last-mile Delivery Challenge’ in collaboration with Enterprise Ireland’s [Small Business Innovation Research \(SBIR\)](#) initiative. This has involved trialling the [Parkunload app](#) which uses data on kerbside loading spaces and sought to make them dynamically adjustable. This scheme allows councils to establish smart parking zones in the city and then allocate parking based on criteria such as vehicle emissions, vehicle type, driver’s profile, location, and time of day.

Usage

The most viewed datasets of all time have been real-time public transport information; [3D data resources](#) (stereoscopic and aerial photos) of the Dublin Docklands area; and Dublin City traffic count data. Usage or download figures are not available, but it is possible to rank all dataset by usage.

Blockers and challenges

During the initial development of the platform, project leaders noted that it was difficult to find the right relationship with corporate partners that would make use of the best features of public and private sectors whilst ensuring the [rewards of open data are shared equally](#).

It has been noted leaders initially experienced [resistance from data owners](#), due to vested interests around data ownership and worries about the reception of datasets that might present Dublin less favourably.

This was tackled in two ways. First of all, Dublinked started with easier data sets owned directly by the city council without the legal issues that datasets around land use or traffic volumes might have. Then, when the Dublinked team sought to introduce more complex datasets, it did so at a city region level, allowing it to draw from lessons learnt in Fingal, where an [open data programme](#) was already in operation. This also allowed a clear demonstration of the potential of open data when users can draw comparisons across municipal boundaries.

In terms of the data, there were initial concerns about privacy and confidentiality, which are rightly justified. To mitigate some of these issues, and as directed by Dublin City Council’s data protection officer, many datasets have had private information stripped from them. While the datasets themselves still remain useful, the resource and skills needed to ensure this data is removed are not always readily available, holding up the release of some data. Further hold-ups have come from the

multiple layers of discussion and negotiation to access data for release in the first place.

Dublin City Council also provides some quality assurance on all datasets, making checks and cleaning the data before release. Again, this requires significant resource, and does not fully alleviate concerns about open data being used against the data providers.

Legacy data systems have also provided challenges to the release of further data. The mitigation for legacy data systems – not designed for the open release of data – has been to manually export, clean and then release the data, taking up time and resource. Furthermore, the licences for use of this data varied significantly, pushing the team to create a members-only section, where users had to agree to not use the data available for commercial purposes.

User experience

The Smart Dublin team is working constantly to update a backlog of legacy and inactive datasets. For example, a [new real-time public transport feed](#) is now available as of July 2020, and an older dataset that had not been updated since 2013 is now being discontinued.

Also, updates to Dublinked have not always been carried through to the dashboards and visuals based on the data. This highlights how some data visualisations are no longer supported.

What can Greater Manchester take from this?

- Open data is not an easy win. It takes time and resources for a culture of open data to emerge and for data users to discover interesting real-world applications.
- Dublinked's Map Explorer tool is flexible and very easy to use and is a good example of best practice to help inform the development of MappingGM and how to integrate it into a wider datastore.
- Dublinked has relied on a culture of social innovation and a willingness to challenge existing ways of working. This kind of organisational and promotional work required a high level of political commitment and it takes effort to keep this going.
- It is vital to engage end-users in the innovation process to ensure the open data portal is flexible and meets their needs.
- It is possible to achieve successful cooperation between different local authorities within a metropolitan area even without an overarching regional tier of government when interests and goals are clearly defined.

- Where a city data programme forms part of a wider smart city initiative, there are both advantages around linking up with other related projects, but also the risk that the city data aspect might become overshadowed if political priorities shift.
- Showcasing the opportunities open data provides when datasets cross municipal boundaries and broader comparisons can be drawn is a good way to achieve buy-in from sceptical partners.
- Dublin's experience relies a great deal on a thriving local IT sector, with large operations of companies such as IBM and Google bringing a broad skill-based and strong input during collaboration sessions. Making Dublin's strategy work elsewhere might be more difficult, or require more localised solutions.

Find out more:

[DUBLINKED - opening the window on €27 billion EU open data market](#)

[The Open Data Economy: promoting digital innovation in Dublin](#)

[Transitioning towards urban resilience and sustainability](#)