

# Case Study

## Open data: Leeds Data Mill

### Introduction

This case study highlights how the Leeds Data Mill (LDM) has developed over time and how it links to and supports the strategic development of the council in terms of using data to address the key challenges and issues that the city is facing. More specifically, the case study explains how Leeds

- encourages the publishing of data and
- engages with organisations to release and use the data
- manages an open data partnership within a smart city environment and
- highlights the approach to data publishing and the opportunities for creating an open data city.

### The Data Mill

Opened in March 2014, the LDM is an engagement platform designed to release and encourage the use of open data from the council and other external organisations to drive collaboration, innovation and engagement within the city. To encourage the release of data within the organisation existing data practitioners took on an additional role as data champions. This provided a key contact in each directorate responsible for

- proactively identifying new datasets
- ensuring that data was redacted/anonymised
- publishing data in reusable formats such as comma separated value (CSV) format files

LDM was built using an Open Source approach based on CKAN technology. A user friendly interface also enables requests for new data sets and supports blogs, projects and community engagement. The dashboard solution allows users to create data visualisations and 'stories' from open data which can be published and shared with others. The dashboard facility also allows users to individualise the data according to their interests be it related to work or leisure or social activities.

The council aimed for the Data Mill to be a resource used across the city by a wide variety of organisations and people and not simply as a data repository.

A council officer explains: *"we wanted the Dashboard to be about telling stories and making sense of the data...ultimately, we want to provide a visualisation for each of the datasets on the Data Mill...to many spreadsheet files probably aren't that interesting, however if you make a visualisation and bring that data to life it becomes meaningful. For instance, we created a CSV dataset including longitude and latitude, listing the locations of bike bays in Leeds city centre. A Dashboard Story was then produced using this dataset and using Google Maps which makes it instantly more useable."*

## Embracing the opportunity

*“Leeds has aspirations to be the best city for open data. Whilst making sure we protect personal information, we are working with organisations, analysts and developers from across Leeds to make sense of, and reuse, published data. Increasingly, connected devices (Internet of Things) such as air quality sensors and smart street lighting will provide us with useful data which will help us shape our city for the future and make Leeds the best city to visit, live and do business in.”*

**Tom Riordan, CEO Leeds City Council**

Leeds Council has an open data ambition and understands the potential benefits and added value to both the council and community of releasing data. A core Leeds council value is being open, honest and trusted and this aligned well with the transparency agenda.

The principles for the Leeds's open data agenda were to

- provide an engagement platform for data for the whole city
- develop a culture of openness and encourage the publishing of data from departments inside the council and from external organisations
- build an open data community of SME's, developers, analysts and enthusiasts to make use of the data
- make data accessible and understandable and creating insight on key city topics through innovation labs

The LDM provides a great opportunity for the council to encourage the use of, and engagement with data, to benefit the community including local businesses, third sector organisations and residents. The council aimed to elicit cultural change within external organisations and internally, by increasing the volume and availability of useful data on the LDM and to encourage the delivery of new and innovative services through the creation of web services, apps, data analytics and visualisations by developers, analysts and enthusiasts.

Further details about technical information can be found in the [Leeds Data Mill evaluation report](#).

LEEDS DATA MILL DATA - DASHBOARD COMMUNITY PROJECTS ABOUT -

Dashboard

**LEEDS DATA MILL**

**DASHBOARD**

Leeds Data Mill isn't just about storing data, but about bringing the data to life! We are working hard to create a dashboard which provides an insight into the data you'll find here on the Data Mill and elsewhere on the Internet. Soon, you'll be able to create your own personalised dashboards (Canvases) and even create your own visualisations (Stories).

As a taster, our partners at Hebe Works have created the following Stories which provide a glimpse of things to come:

- Bicycle bays
- Leeds City Council contact centre enquiries
- Leeds Inspired music and arts events around Leeds
- Live river level at Crown Point
- Leeds car park available spaces
- House prices in Leeds
- Leeds City Centre football

Keep watching this space! Click [here](#) to give it a go!

## Engaging with the data providers

Leeds City Council understands that data is a means to an end rather than an end in itself. The creation of datasets, the use of data generally and the application of data to specific issues and challenges can be a difficult and solitary process for individual organisations and services. The LDM provided the perfect way in which organisations could be supported in developing their usage of data and therefore enabled the development of data literacy and enhanced capacity at the local level. Linked to this was the opportunity for those engaged organisations and the community to participate in an Innovation Lab to use data to help understand problems and to develop solutions.

The process involves the data providers developing a brief for the Lab in advance outlining their issue. Developers then come up with prototype solutions by the end of the day. This may be an app, website design or analysis which is presented back to data providers who then discuss afterwards whether they wish to pursue development of the idea further into something tangible.

The council has recently been involved in “Get Online Week” to encourage people to use the facilities on the leeds.gov.uk website more. The LDM was involved as part of this initiative and attended public facing open days to show that there is another part of the council which is opening up its data through the Data Mill. These events also provided the opportunity for the public to give feedback about the type of data they would like to access. It is worth noting that of the 200 datasets on the LDM, 150 of these are provided by the council and 50 from external organisations.

As noted, the council is keen to ensure that there is greater take-up from external organisations as there are considerable benefits to be had. There are some concerns however from data owners, around the release of their data, specifically in relation to commercial sensitivity. To address these issues the council are working to highlight that publishing on the Data Mill can help promote their message to a wider audience who can then reuse data for a range of purposes, both new and existing.

As a council officer explains:

*“When you publish data on your own council website you have a lot of control and it’s relatively easy. However, when you are encouraging others to publish to a city website it’s harder, for example, we needed to consider the Information Governance aspects for individuals and organisations to publish the data in the right way.”*

To deal with this concern the council have produced comprehensive terms of use in collaboration with their legal team. They have also developed a guide to anonymisation and open data principles which data owners are asked to apply and also work with organisations showing them what to do and discuss all aspects of the information governance in order to mitigate risk.

Looking more specifically at the benefits for the council itself, by releasing and publishing data in a central location the council saw an opportunity to reduce the volume of Freedom of Information requests that they received. This in turn created efficiencies by freeing information staff to undertake other frontline work. This potential benefit was used to galvanise interest and buy in from departments across the council.

A council officer explains: *“rather than receiving many Fol’s with a number of different questions, if we publish a comprehensive dataset we can answer many questions all at once.”*

## Creating insight and innovation

The LDM approach (specifically through the Innovation Lab model) has led to the creation of solutions to existing issues through a variety of apps and websites. Leeds have a small smart cities budget which can provide some seed funding to develop the solutions further if one of the ideas is particularly good.

Examples of innovative data use:

A school admissions Innovation Lab was run recently to address the issue of how to best provide more relevant information to help parents make well informed and realistic choices when selecting and submitting their available five school place choices for their child. The aim was to try and avoid the current issue some schools in Leeds becoming oversubscribed. Key data was published on the Data Mill, including how far away the last person who gained a place at each school lived, how many spaces were available in the previous year and whether specific schools were over or under subscribed. A developer is now creating a web service to visualise this data and make it engaging and useful to the public.

The “put your bin out” app is another innovation currently under development. As a result of the publication of recycling/environmental data the council are working with a developer to encourage recycling and inform residents about the location of their nearest recycling centre. The app will also provide phone reminders about when to put their bin out for collection, and which colour to put out for different collections on which week. The intention is to reduce missed bin complaints and provide a better service to the public.

Available data has been reused for a variety of purposes leading to multiple gains and added value for the council and other users alike. For example, the council received a number of Fol requests for Empty Homes in Leeds information and reduced this figure by publishing the data on the Data Mill. A local enterprise organisation who works towards bringing empty private sector homes in the city back into use then utilised the information to conduct analysis showing that there apparently is a downward trend in empty homes across the city. They are now using this information in marketing their work to landlords and home owners to increase the availability of homes.

Open data can also be used to provide a local economic stimulus. For example, footfall data can be used by local businesses to consider amend opening times and staff employment to meet demand.

Tourism has benefited from the Data Mill. An Italian based company used a range of visitor data published by the council which included tourist information (such as places to eat and drink and local attractions) to create the Viaggiart - a free tourist app for Leeds .

All of these innovations have been supported by the release of data to the LDM

## Taking stock

The LDM has been a success story for both the council and the data providers. The use of the data in analytics has provided new insights into how some of the issues and challenges facing the city could be addressed. In addition, the encouragement of data use created an incentive for developers and analysts to build applications, expand business which is contributing to the growth of the digital sector in the city.

## Useful advice

When considering the development of a similar approach to the LDM, it is worth remembering that:

- creating buy-in from across the authority and CEO is of key importance
- The Innovation Lab approach is effective in providing an agile and constructive way of working and providing results very quickly for using data to frame and help to resolve problems
- consider what data to publish. For example, where can FoI requests be reduced, and what data is of interest to the public. Consider how the data could be reused once published. It may be used for a completely different purpose from what it was originally collected for – and this should be encouraged.

**For more information, visit:**

1. The Leeds Data Mill: <http://leedsdatamill.org/>
2. **Read the Leeds Data Mill Evaluation Report:**  
<http://www.local.gov.uk/documents/10180/11541/Leeds+open+data+report/f3416c54-dffe-4c98-b1e3-1895ef569432>

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