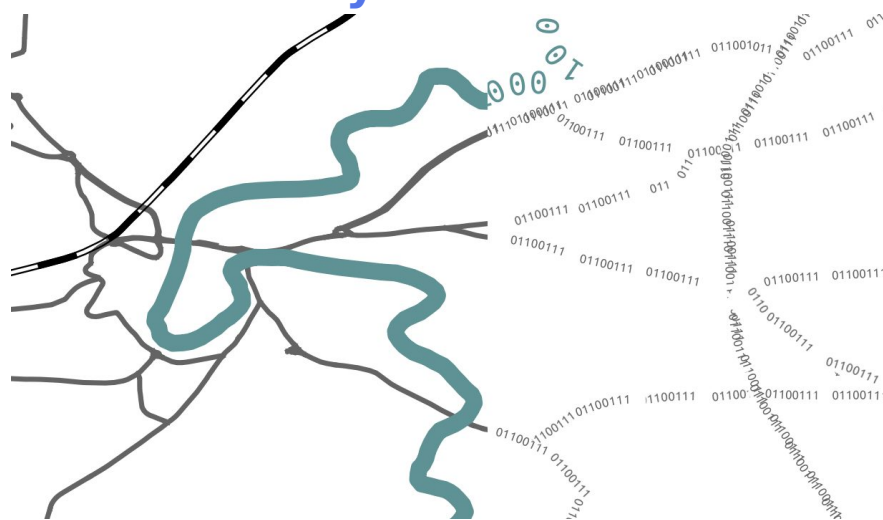# Open Data activity of selected UK councils

Produced 4th March 2016
by No More Grapes Limited

Contents

Title image created based on OpenStreetMap.org data (OdbL).

Introduction

Research was commissioned by Durham County Council to look at how other councils in the UK are active on open data. What data sets the councils published was important, particularly those that were decided to be the first to be published. From the councils publishing open data, there was interest to document the communities surrounding data and open data in the geographical area. Communities is used as a wide term and encompasses both professionals and hobbyists or interested citizens. The communities may be made up of individuals or whole companies and community groups, or a mixture. Markets exist around free and open data, although the market and business growth is not always measurable by monetary or usual economic measures and this is why they were looked at with the term "communities".

The research was carried out by investigating textual and also quantitative information online, particularly the meta data of data.gov.uk accessed via the API. Portals and open data websites were looked at to see what and how news were presented, and the elements that took place within the communities. More-over, conversations were held with contacts that are known for being on the fore-front of local government open data. This may be seen as self-selecting limited conversations based on contacts held, however they are those that are in the lime-light of the industry and thus hold insights helpful for a desire to join their position and move forward beyond it.

The research was carried out for Durham County Council and a report delivered in November 2015. This is a slightly modified report, with specific references to Durham removed, particularly in the "Data release options" and "Suggestions" chapters. In the spirit of open data, the council were in support of the research being shared with others.

Executive summary

Several councils and their communities were studied through online information, and four were deemed to be exemplar areas due to the actions they have made. Hampshire Council has been publishing open data since 2010, and presents it's platform as a non-technical source of information which draws in a wider and more inclusive community. The community around Leeds City Council is also large and very diverse in profession, this community has done a lot to drive the council. Bath and North East Somerset (BANES) Council were late on to the open data scene, but from within the council there has been a passionate drive for open data which has led to a community being supported and building up around

the releases of the council and associated authorities. Devon was included due to the county's rural setting as opposed to a city authority. A node of the Open Data Institute (ODI) was formed in Devon and this is being followed by an increase of open data publication and understanding by Devon County Council.

More councils were looked at, and the research documented for these is included in the "Other notable councils" section. Along with the exemplar councils, discussions are continuing with these councils, however insights were not fully realised in time for the finishing of this report, or did not provide the same level of inspiration. The innovation and intelligence lab setup by Trafford Council had open data priorities which were transferred from council-defined interests and helps start considerations on what data sets to release. Sheffield is unique in releasing data sets that are of interest in the locality, not simply to meet council transparency responsibilities. Aberdeen is a council that is leading the way and is influencing a wider region. However it is currently in a phase of change along with cities across Scotland and so documenting past and current actions are hard to fix down. The relatively high-number of data sets published by Bristol City Council may create interest, however the focus of the city on an Internet of Things and large-scale sensor network places it's work in a very different domain that has been defined as policy and established on a large scale.

Looking at the councils in this research, they have not released massive amounts of data or maintained a regular schedule of releases. The biggest steps made are in the creation and maintenance of open data platforms/websites. These online-presences promote the actions of all involved and hold a place for open data projects, news, and events to announced which goes on to fuel further open data work. In this environment, there is still the opportunity for other authorities to get on-board the open data movement and be part of developing an open data community. This community will be beneficial if it not only includes data scientists and information specialists, but includes other professionals such as designers, communicators, business advisors and also engaged residents of the county.

A number of suggestions were made regarding potential types of data that could be released and connected with themed events. The suggestions start with releasing overview information about the council's activities and information such as categorised service point figures. Then suggestions move on to domain-focused data that could support work to solve the issues of the domain, with winter services being one proposed example.

Backing of policy and commitment needs to be done first with open data releases. Events which encourage discussion and use of the data should be followed by promotion of any work done. This chain of actions then starts a circle

of specific open data requests, releases, and use. Into a moving circle will come data programmers, and analysts, other professionals, and citizens that connect with the council and the professionals. Naturally, an authority's open data work will become celebrated further afield by both internal staff and external individuals/businesses involved.

Exemplar councils

Hampshire

Hampshire County Council (Hants CC) have been publishing news and spending as open data since 2010. In 2013 they published open datasets relating to education, and walking/cycling routes, along with statistics for both their website and their customer service centre. East Hampshire District Council have published a few geospatial open data sets last month(October) regarding open spaces, listed buildings and conversation areas/trees. The geospatial datasets come in a mixture of WMS format and KML format, while other datasets are usually as CSVs.

The Hampshire County Council website[1] details that open data is for the aims of improving transparency/trust(like other councils), continuing on to state aims of residents understanding open data and improved reputation of the area.

Hampshire Hub is a partnership set-up in 2012[2] as a Local Information System (LIS). The homepage portrays itself as "the home of information about Hampshire and the surrounding area" in a way that welcomes general public and community interest into the data, not primarily a technical source for developers. Data can be explored

	A	B	C	D	E
1	**Service**	**Jan-12**	**Feb-12**	**Mar-12**	**Apr-12**
2	Roads and Transport Offered	9020	7585	8552	855
3	Roads and Transport Answered	8701	7486	8384	822
4	Libraries Offered	7087	6638	6870	707
5	Libraries Answered	6903	6553	6754	688
30	Arts and Heritage Offered	330	324	341	30
31	Arts and Heritage Answered	313	305	324	27
32	Countryside Offered	254	215	219	19
33	Countryside Answered	230	208	202	16

Extract of Customer Service Centre Call Statistics 2012, released by Hampshire County Council (OGL license)

very graphically by ward, or individual datasets can be searched on or found through lists, themes, and publishers. Although the Hampshire Hub is underwritten by Hants CC, it is supported and used by many of the borough councils, and authorities in the area, even the British Army is a partner. These include the emergency service agencies and some central government agencies. After an openly-documented tender process, the Hampshire Hub was built around PublishMyData platform by Swirrl IT.

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1   Hampshire County Council open data policy http://www3.hants.gov.uk/opendata.htm
2   Hampshire Hub, about page http://www.hampshirehub.net/about

The starting aims of the hub have were not small - beginning with a removing data silos, reducing daily requests to intelligence teams, onto aims of enabling partners to achieve more, and going as far as "offering a new culture that will underpin the way partners work together". The aims have formed into Hampshire Hub being a place for many activities[3], not just a council data store. This has led to it being well known in the UK and often talked about when local gov open data is mentioned.

Value of open data is realised in projects that have made use of datasets, especially those focusing on the unique specifics and needs of this county. The Landscape Watch Hampshire[4] project was commissioned by the council and the local university and not only makes use of a huge open data set but also generates more open data about the county. Through this the council are engaging citizens more and transferring from being a broadcaster to a listener.

In March 2015, the Southern Policy Centre become the ODI network node covering Hampshire.[5] This is different to other ODI nodes, where councils have usually been a key partner or lead. It's too early to know whether how this will pan out for both the node, the open data institutions, and individual open data champions.

Leeds

The earliest publications on data.gov.uk by Leeds City Council are from 2013, a year before the Leeds Data Mill was created. The initial releases related to payments to the 3rd sector, councillors allowances, and a pdf of the organisational chart. The site analysis from data.gov.uk shows us that finance-related datasets are popular, but also a number of varying insights into Leeds are popular such as city centre footfall data APIs to live data for drivers.[6] Due to the wide-span of the data community, or perhaps to encourage it, the majority of data releases are regarding education, local services, transport, and arts and culture. From all data mill publishers, it is usually CSV datasets or APIs which are published, allowing easy importing into many programs or programming systems.

In February 2013, "Leeds Data Thing" held it's first event[7] in the Cross Keys pub with two short talks to start off discussions. The aim was to "bring like-minded,

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3   Hampshire Hub, thoughts on the place http://www.hampshirehub.net/whats-in-a-hub
4   Landscape Watch Hampshire http://www.hampshire.landscapewatch.com/about.php
5   ODI Hampshire background http://hampshire.theodi.org/2015/06/30/where-did-odi-hampshire-come-from/
6   Popular Leeds datasets https://data.gov.uk/data/site-usage/dataset?month=&publisher=leeds-city-council

data-loving people together to network, share ideas, learn a few things and chat", and with a vision to arrange regular hack days later in the year. The group was founded by a group founded by public sector representatives, creative and digital agencies/professionals, and the market research community.

The popularity of Leeds Data Thing, and increased world-wide focused on open data, led to the creation of Leeds Data Mill[8] in March 2014 by Leeds City Council and the founding of ODI Leeds (a node of The Open Data Institute) in May 2014. The node was founded by Leeds City Council, Bradford Metropolitan Council, West Yorkshire Combined Authority, along with Bloom Agency, Arup, and Leeds Innovation Hub. As a physical space, the Leeds Impact Hub was set-up as office space for specific open data projects, hot-desking,
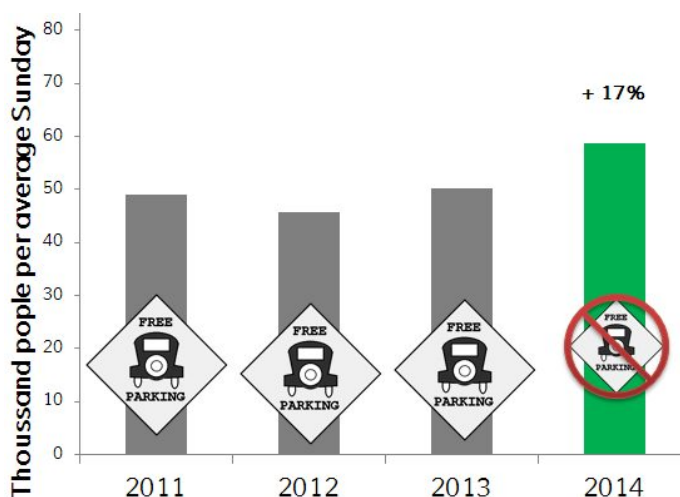

Chart of Sunday footfall on Briggate pedestrian street, before and after parking charges were introduced to Leeds city centre. Created by Thomas Forth using figures from Leeds Data Mill.

drop-in sessions, and small events. This allowed the importance of in-person locality to continue from what the Leeds Data Thing had got going. Each of the partners in the ODI node had a project that moved to be based in the hub, another move to show commitment.

The Data Mill is a platform for datasets, not exclusively those originating from or relating to the council. Along with ways to explore and download the datasets available, there is also space for communities to share information and projects that relate to the data. A customisable dashboard tool has also been created, which allows people to engage with data about the city on a daily basis without having any technical knowledge.

On and around Big Data Week (April 2013) a number of events were hosted by Leeds. The Big Data Challenge released health data and got people to explore it to encourage amazing creativity, use of technology, quality of hacked products, and communication of stories.[9] The virtual "Data in a Day" event brought even

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7   First Leeds Data Thing event http://www.eventbrite.co.uk/e/leeds-data-thing-tickets-5385995658

8   Leeds Data Mill http://leedsdatamill.org/

9   Leeds Big Data Challenge, April 2013 http://www.leedsdatathing.co.uk/event/big-data-challenge-how-healthy-is-your-city-leeds/

more people together, through blog posts and a twitter hashtag conversation.[10] In April 2015, a weekend DataDrive took place in Leeds for a wide mix of people to use their skills to gain insights into community programmes and do good for the local community.[11]

The value of open data and wide inclusiveness of the community has been seen in many projects from health insights to outdoor art exploration and documentation. Open data has helped news outlets and individuals challenge thoughts that certain decisions led to certain outcomes, such as parking charge introductions[12] where individuals presented the data in different ways.

Bath (BANES)

Bath and North East Somerset Council (BANES Council) has released lots of datasets, not in dumped waves but frequently since June 2014. The datasets tend to be geospatial, beginning with community assets (such as allotments, leisure centres, parking zones) and moving onto more specific areas including the flood register, education data, air quality, and housing permissions.

Bath:hacked[13] started in March 2014 with a two-day hack event[14], and is now a council and community initiative hosting a Bath-focused open data store and organising regular hack events. Set-up as a Community Interest Company (CIC), Bath:hacked was started by the community and continues to be entirely volunteer-run, but works closely with BANES council which have done well to support the initiative and respond to any open data requests made. The successful events continue to run and be exciting because projects worked on are reported and promoted on the website, and two staff members with in the council have been eager to listen to and connect directly with the work of open data. Events vary between project hacks, informal meet-ups or talks, and round table discussions. The close relationship between the community and the council helps everyone understand the value each other attributes to other people and organisations, with constant renewal and updating of those thoughts.

Unlike the other places mentioned in this report, there is not an ODI node for Bath. The networking and communication of open data seems to revolve around the Bath:hacked community that is very open and welcoming, while it is likely high-quality open data training training needs can be met by The ODI and other organisations due to the proximity and good transport links to London.

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10 Leeds Data In A Day http://www.leedsdatathing.co.uk/data-in-a-day/
11 DataDrives by DataKind http://www.datakind.org/datadives
12 Leeds Guardian reports debunking of town centre misconceptions http://www.theleedsguardian.com/2014/03/17/parking-charges-leeds-centre-footfall-data/
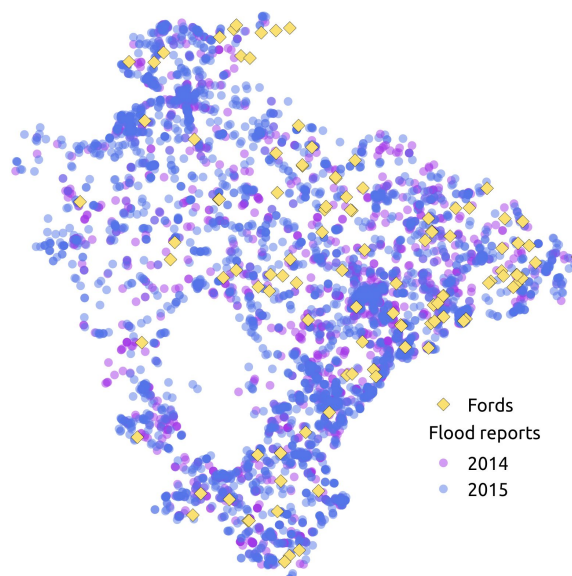13 Bath:hacked http://www.bathhacked.org/about/
14 Bath:hacked, announcement of first event http://www.bathhacked.org/news/day-one/

In November 2014, BANES Council published it's open data policy[15] that declared it's commitment and encouragement of open data. There is a clear invite to ask simply for datasets that you think might exist and business cases will only be needed if the request is deemed to be expensive to response to. Requests can be e-mailed to a BANES Council research address, but are also accepted via the Bath:hacked community on social media. Data is published on the Bath:hacked website, which has a data section using the platform developed by Socrata.

Devon

Devon County Council had only published a two datasets before ODI Devon was set-up, they were on government spending and a community directory containing thousands of services and groups. In 2015 datasets have been published relating to rights of ways and features such as stiles, fords, and drainage ditches, a total of 23 for by Devon County Council. These were uploaded to the council's CMS[16] rather than through a dedicated data system.

East Devon District Council have published 9 datasets since 2012, relating to government spending, social housing, and car parks. Mid Devon District Council published a wave of geospatial data in February 2015 about environmental areas and heritage features in towns. The data is listed on the council's website[17], but feeds of the data list are also provided so they can be harvested automatically by data.gov.uk. West Devon Borough Council is yet to have an open data policy or have released data of it's own, showing that this is a movement that is still only beginning even in a geographic area where great strides are being made.

Fords, and flood reports. Visualised from data released by Devon County Council.

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15 BANES Council open data policy http://www.bathnes.gov.uk/services/your-council-and-democracy/local-research-and-statistics/wiki/open-data

16 Open data on Devon County Council's website https://new.devon.gov.uk/factsandfigures/open-data/

17 East Devon District Council, Transparency page http://eastdevon.gov.uk/help/transparency-code/

The datasets being released clearly relate to the rural nature of Devon. Users of the open data may value knowing the locations of utilities through land, including good drainage and road links that may restrict travel to certain vehicles or at certain times of the year. Footpath data will be valuable to recreational residents and those looking to attract more/regular holiday makers to enjoy and explore the areas of Devon.

The ODI Devon node[18] was founded at the end of 2014, and is different to other nodes as it covers a rural county rather than a city area. The plan is for it to act as a communications node, joining up: councils, emergency services, community organisations, business, and citizens, before it matches the open data work that is happening in large cities. Devon is similar to the North East, in that it has world-class expertise in specific sciences which could be made more to a wider data community. ODI Devon runs The Devon Open Data Forum every 6 weeks as a networking event forming the backbone of it's activity.

Other Notable Councils

Trafford

While Trafford is only a small part of Greater Manchester, it has become known across the UK due to some active open data individuals working with the council. It has many data sets listed on it's website[19], and through the Greater Manchester portal[20] that is a CKAN platform. However, only 5 of these have records on data.gov.uk, thus limiting our research again. At the end of 2014, the council set up the Trafford Innovation and Intelligence Lab[21] that has a strong focus on open data being used across multiple organisations and for multi-disciplinary topics. The lab is aiming to reduce demand on services, redesign services, improve people's understanding of the area, and attract/retain investment. Additionally, the Trafford Partnership set priority areas for the lab's work which currently are Mental Health, Aging Population, Unhealthy Weight, and Worklessness.

Although this report has had limited time to research open data in Trafford, there is a lot of benefit to further investigation. The presence of an "Open Data Champion", Jamie Whyte, (recognised by The ODI and other) within Trafford Council has enabled conversations to be started about local government from their view locally and across the UK.

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18 ODI Devon http://devon.theodi.org/
19 Trafford Open Data page http://www.trafford.gov.uk/about-your-council/data-protection/open-data/open-data.aspx
20 Trafford Council on Data GM http://datagm.org.uk/organization/trafford-council
21 Trafford Innovation and Intelligence Lab http://www.infotrafford.org.uk/

Sheffield

Sheffield City Council has published 28 data sets, half of which were published in 2013 and have since received updates. All the data relates to the environment (parks, public toilets, conservation areas) and geospatial features in the "Town & Cities" theme. The Sheffield data portal[22], which is again one created by Socrata, groups data sets by theme and has the space to promote specific data sets or news. ODI Sheffield is a learning and network node that runs the majority of open data meet up events in Sheffield.

Aberdeen

Aberdeen City Council have published over 30 datasets on their portal.[23] However they have not created records on data.gov.uk. This means that both professionals and citizens looking for certain datasets may struggle to do so and may get an impression that Aberdeen is behind on the open data movement. It also limits the ability for our research to investigate the metadata and understand the history of their open data publishing. Since March 2015, Aberdeen's Open Data page[24] has stated it is no longer current, and data explorers have had to navigate the available datasets it a limited and static manner through the lists on the council website. Because Aberdeen has been strong in it's open data activity, it's work and presence is now reaching further afield and is working with Nesta to form the open data programme for Scotland. Code the City[25] hack events started in Aberdeen and have been running for two years.

Bristol

Bristol City Council have published 67 datasets that are listed on data.gov.uk, many as far back as 2010. Many of the early datasets are in the environment theme, containing air quality water quality, etc. Datasets published in 2011 cover government spending/salaries, election open data, e-Petitions, and council webcasts. Over 2014 there were 26 datasets published, primarily geospatial but covering a wide range of topics. The datasets into 2015 continue to be wide spreading and similar to those released by other councils (transport, government spending, and business permissions). All the datasets published are accessible through a common API to Bristol's open data website.

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22 Sheffield open data portal https://data.sheffield.gov.uk/
23 Aberdeen City open data portal (temporary) http://opendata.aberdeencity.gov.uk/
24 Aberdeen City Council open data
     http://www.aberdeencity.gov.uk/open_data/open_data_home.asp
25 Code The City http://codethecity.org/

"Bristol Is Open"[26] is an ODI network node, set-up jointly between Bristol City Council and the University of Bristol, to again support and promote a smart city. It links the businesses that are working in the Internet of Things industry, media outlets, and other businesses. Bristol Is Open is creating networks for the sensors around the city to be used by R&D projects.

The city council has created an open data website portal to promote it's aim to be a smart city.[27] The open data website has a lot of documentation for developers, and is soon to include a showcase of apps built. The nature of the Bristol open data and associated community is very different due to the specific focus on Internet of Things and connected sensors across the city.

Durham and the North East

Durham County Council has published 13 datasets on data.gov.uk. That datasets that have been published have very few downloads, the only one with significant interest being the public right of way(PROW) dataset.[28] In the North East, Durham County Council is not seen as leading in support of technological openness and a recent report for the Federation of Small Businesses(FSB) painted Durham in poor light regarding open data activities.

Requests made under the Freedom of Information(FOI) Act are sometimes wrongly seen as open data, but they do not carry the openness of a license to reuse the information returned from the request. Additionally, FOI responses are often in PDFs rather than machine-readable formats and they certainly do not carry the sense of willingness to share data and support reuse of it. What FOI requests can provide is an insight into what people desire to be available, while publishing open data can reduce the overheads of responding to similar FOI requests and FOI requests that are made on a repeated schedule. Durham publishes the titles and dates of FOI responses it makes, although the exact details of the information and the data
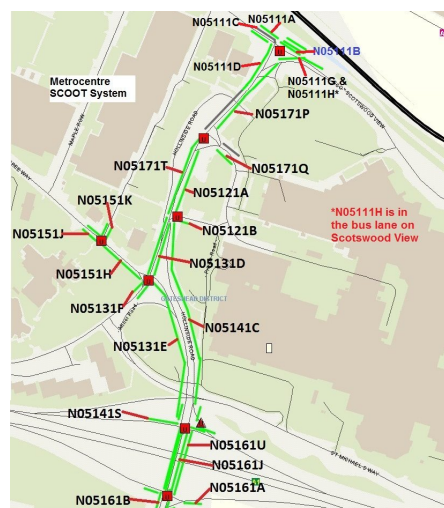

Diagram of SCOOT link IDs for trial data release by the North East Combined Authority.

26 Bristol Is Open, smart city campaign http://www.bristolisopen.com/
27 Bristol City Council Open Data https://opendata.bristol.gov.uk/
28 Durham dataset download statistics https://data.gov.uk/data/site-usage/dataset?month=&publisher=durham-county-council

sent is not given.[29] A number of the FOI requests, and their responses, are made in public through mySociety's website.[30]

In the North East, there are a number of authority partnerships and events around data that Durham appears to be missing from. The North East Combined Authority (NECA) is beginning to release a lot of transport and weather data[31] with the help of the region's Digital Catapult Centre and has launched a competition to invite fresh ideas to make use of this data, with measures in place to ensure they're not left as ideas. Newcastle City Council and North Tyneside Council have released data in conjunction with running a series of open data hack weekends[32]. Durham has the potential to be more present alongside other authorities in the North East, but also there are a lot of specifics to itself that it can initiate and do based on mixing insight from councils across the UK.

As a county council covering a large area, there is a large amount of data held may Durham that has an argument to be open, but the details of this and quality are unknown externally until it is opened.

Conclusions

A lot of councils started with publishing data for the purpose of transparency, such as spending details including those required as a result of 2010 central government policy. As open data has become more of an understood resource, datasets are often about the outdoor environment and transport infrastructure or use statistics. With some councils, the type of later datasets relates to the uniqueness of the area they serve. Often a wave of datasets are published focusing on similar subjects to aid a drive for development in that area. Few councils are consistent on publishing open data throughout the year, with BANES being an exception for the better over last two years.

While there are several councils that appear to be brilliant at open data, the key thing they have done is get on with releasing data and supported groups for people to meet up to discuss or hack. No council is yet at the forefront of continuing the momentum that gets going. Using, promoting, and/or funding the uses of open data will also be important.

Where councils and cities seem to be triumphing, this is usually due to a key person within the council or sometimes in the data community. The two groups have needed to work together very closely to push each other on in their aims. Working together is done through co-managing websites and portals, co-

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29 Durham FOI, including response records http://www.durham.gov.uk/foi
30 Durham County Council on What Do They Know by mySociety
    https://www.whatdotheyknow.com/body/durham_county_council
31 Data Movement by NECA and the Digital Catapult Centre http://datamovement.co.uk/
32 Connecting the City http://www.eventbrite.com/e/connecting-the-city-tickets-17108135895

organising events, and communicating in both public and private mediums. Exemplar councils are powerful in promoting projects that have used their data, or other open data in the region. Whether those projects be finished projects, prototype ideas, or one-off presentations. From the other side, communities will passionately share stories of data opened by their councils and engagements they have. These points make it quick for local open data movements to become known further afield and across national networks.

Data release options

There are many places to look for datasets to start releasing, as councils hold a vast amount of information, however from an external position it's unknown what data exists and that which holds interest or is in good form. Common Freedom of Information Act (FOIA) requests could be reduced by publishing relevant data openly and updated on appropriate schedules.

As a starting point, raw data about the use of the council (e.g. website statistics and customer service centre calls, published by Hants CC) could be published openly which might lead to new insights from outside and could lead to more specific requests for open data.

Being able to convey that a council has an action-backed attitude to open data leads to conversations on what data people want better access and where they want to investigate new ideas for business or personal use. Some examples have included open access to information about business rates so support can be driven to areas and company types that are increasing or declining in number. Other examples may first require project to digitise or collate information help within the council, such as family history records or afer-school clubs run by schools.

Suggestions

A declared council policy for open data with specific targets of publishing data is a good action but will not alone cause an open data movement in the county. The council's open data declaration should portray a clear desire for data requests and a contact person within the council. Any declaration of open data support needs to be backed up by history of past actions in order for individuals and any communities to accept that a council is supportive of open data. Before such historical actions exist, the council can release data in open formats and encourage use of them through events and/or prizes. If the results of this work is then promoted by the council, it can be used to demonstrate the authority's dedication to moving forward with an open data policy.

Supporting, hosting, or running events is brilliant for increasing engagement with the council and fostering use of the open data. Casual meetups are often better suited to being organised externally from the council, but this should not discourage staff members from attending them. Events with organised speakers are good for increasing communication channels between the council, relevant companies or professionals, and even hobbyist individuals. All the types of events provide a environment for communication between parties, which is essential for the building of an open data community that can succeed further.

Hack events, usually weekends, are where participants come together to form teams and build prototypes using the data that has been published. These require more planning work than anticipated but when done correctly they give a lot of options for promoting the projects that have used open data. Promoting the open data community/eco-sphere that exists locally or regionally can be done both at, and following, the hack events. Prior to the event, the datasets can be presented with explanations of provenance and how the data can be accessed in a technical manner.

Hack events are often productive when they have a starting focus, such as a specific collection of datasets, but also a reward of increased support, publicity, and perhaps a small prize for the best works. When focusing on an issue to address, both the data sets and the themed hack events can come together. A variety of skilled-individuals should be encouraged to attend: data scientists, programmers, graphic designers, those with understanding of the issue/theme, and citizens with ideas to propose. With good team-forming facilitation, the individuals can work together to produce new works that may be unexpected or not possible internally to the data publisher.

The event should finish, and following online-presence, with support for the works created even if they are unfinished. Support may be in the form of encouragement and publicity, or it may be in incentives to continue the work. It's also suitable if future events can be pointed to, whether that be a future hack event or more data publishing.

This report hasn't made any suggestions regarding an open data portal as this is a big undertaking and in the mean time a lot of work can be done on releasing open data through a council's existing website while manually submitting records to data.gov.uk. References have been made to portals, such as the Socrata-built platform that gives theme navigation, and the Hampshire Hub that has an inclusive non-technical presentation. Other offerings exist that are not mentioned, including a platform provided by Newcastle-based company Arjuna. Portals are important places not only to host data, or present a strong image of

open data support. If functionality is considered from the beginning, portals become can additionally be used to great effect in presenting projects using the data along with news and events related to the open data market.

Further Reading

What is Open Data and the Open Data Handbook, by the Open Knowledge (OKFN). Explains what open data is, in a light non-technical manner and provides further information to help practical and policy issues.
http://opendatahandbook.org/guide/en/what-is-open-data/

8 principles of Open Data by Open Government Data group, USA (2007, revised in 2014). Defines principles that open data must adhere to in order to meet the strongest and most desirable definition of open data. http://opengovdata.org/

Hampshire Hub's full business case (July 2012). Provides insight into the creation of a data platform and community engagement website by Hants CC.
http://www.hampshirehub.net/about/hampshire-hub-full-business-case-for-publication-july-2012__hf000003498312_-2

Open data means business, research by The ODI (2015). Presents statistics, reasoning, and analysis of the value to central and local government. Open data of potentially interesting types, such as tourism and public safety are under-represented currently. http://theodi.org/open-data-means-business

Open Data Project, James Addy, James Barber, Dandan Chen, Yawen Guo, Asif Hossain, Jack Tomlinson, and Zhouqi Wei. Research available from the Federation of Small Businesses.