Open Data Scotland is a programme which has involved four of Scotland’s local authorities since Spring 2014 - Edinburgh, Aberdeen, East Lothian and Clackmannanshire.

Aberdeen and Edinburgh City Councils have been at the leading edge of the nascent open data work in Scotland and can be seen as ‘mature’ players, willing to share their knowledge and expertise with others. East Lothian and Clackmannanshire came to the programme with little or no experience of open data, but with an ambitious attitude and a willingness to experiment and embrace innovation.

Each local authority was appointed a ‘Code Fellow in Residence’ (a technologist) who has worked intensively with the local authority staff over 12 months to open up data sets, publish these on a portal so they can be re-used and created new digital public services-apps and web content to enhance both citizens and visitors experiences of the local authority. A ‘Designer in Residence’ also worked with the technologists and local authority staff across the four authorities.

A note from Digital Scotland...

The Open Data Strategy sets out our ambition for making public data in Scotland open and available for others to use and reuse. In doing so we will provide a societal asset which offers significant benefits and supports:

- **Public bodies making better use of data in service design and delivery,**
- **Accountability, transparency and civic engagement on public services,**
- **Wider social and economic benefits through innovative use of the data.**

Aligned with the G8 open data principles, the strategy sets out how we can take an intelligent approach to making our data open. We have identified a number of national actions which will help to support organisations as they implement their own Open Data publication plans.

We have been fortunate to be part of the wider ‘Code for Europe’ programme which has involved designers and technologists across Europe working with civic authorities to increase the use of open data sets to enhance civic transparency and improve decision making. Our learning from our work in Scotland as well as in Europe has been shared in this booklet in order to increase understanding and the uptake of this emerging field.

We hope this is of use.
From the outset it was decided that we should take a multi-phased approach:

- Build an infrastructure first
- Use this infrastructure to create something that the public desired and wanted to use

Initially the plan was to create an Open 311 based portal to allow the citizens of Aberdeen to submit and query non-essential issues. However it rapidly became clear that this would not be possible due to the way Aberdeen City Council worked and the entire project would have finished before the necessary access was in place to the systems we had planned to interact with.

Part of the thinking behind using a Code Fellow working with rather than for Aberdeen City Council meant that failure was an option at any of the stages of development and if failure occurred the direction could rapidly be changed to find alternative solutions or direct attention to different problems. Had this been a traditional project then meeting after meeting would have been called to decide on what to do after the first problem was hit and time would have run out.

The response to the Open 311 set back was to develop a read only Open311 server populated with data about schools, community centres and car parks.

Key to the success of this project was ensuring that we had interest from the public in what we were delivering, after all there was no point in building some big shiny application just because someone in the council thinks it is a good idea and no one in the outside world actually has a desire for it.

A server based solution, called MatchTheCity, was developed to hold a standardised set of data about venues and activities taking place at these venues. Initially the data was captured via scraping from websites and manual entry. However this worked as a very good demonstration to encourage other data holders to make their data available. Further development of the MatchTheCity engine formed a major part of the project.

Using MatchTheCity as the data source, a native mobile app was developed for iPhone and Android. The app, Active Aberdeen, allows users to find activities to do based on their preferences.

MatchTheCity has been enhanced to allow people to create their own organisations and add their own events for people to find out about. However in order to ensure quality of data, a mechanism has been put in place to allow organisations to be verified so the consumers of data can trust the data.

Opening data in government agencies brings with it both benefits and challenges, although the challenges present opportunities for fast moving independent developers like myself working with these government agencies.
Open Data was a new concept to many at East Lothian Council, and the opportunity to work with Nesta was both a challenging and rewarding experience which led to new ways of working within the authority, and useful and exciting technology being developed for our residents.

The first challenge of the project was to sell the idea of Open Data to staff within the organisation by highlighting the benefits and promoting showcase examples of projects and applications that had been developed by other authorities in the UK and across Europe.

On the back of the enthusiasm generated by seeing what could be achieved, we set about creating an inventory of the data sets we held, and looked at the problems that could be solved through using these data sets to produce innovative technology.

One of the main outcomes that I hoped to achieve for East Lothian was a culture change in the way the organisation worked with public data. The green shoots of this culture change have begun to emerge through the drafting of the Council’s first Open Data Strategy, backed up with a showcase Open Data Portal.

Throughout the project, a recurring challenge has been trying to ‘sell’ the idea of Open Data to already extremely busy departments. The best way to sell the concept was to produce workable, functional examples, and we did this through two web and mobile applications developed by our Nesta fellows.

The first project was in response to the council’s Digital Inclusion strategy which highlighted the need to get residents without home internet access online. We produced a web-based map that showed all council-owned wifi spots and internet access locations across East Lothian. Then we reached out to the local business community to invite those businesses with free wifi spots to have their details promoted on the map.

The second project involved working with colleagues across various service areas to produce a tourism mobile app to encourage residents and tourists to explore the stunning coast and countryside in East Lothian. The app pulled together GIS data of the core paths network and wildlife data from a paper based publication. Together, these two data sets formed an easy-to-use mobile app, which lets the user choose a path from areas around the county, giving the distance and route, and showing what wildlife can be spotted.

It is my hope that the Nesta project will act as a catalyst for continued Open Data development both in East Lothian and throughout other Scottish Local Authorities and organisations, through a joined up, collaborative approach to ensure common standards and practices.

Our first task in East Lothian was to assemble an open data stakeholder group to feed ideas, requirements and constraints into the project. This gave us access to people inside the council who were enthusiastic about open data. From this group, we identified a number of departments to act as internal clients for our project.

By targeting our work at specific departments, we hoped to address problems that had already been clearly identified and also to ensure that the outcomes of the project were sustained past its conclusion.

Like many of the engagements, our project broke down into three parts; a data portal, based on CKAN, to host open data from within the organisation, a mobile app that showcases the data in use and a number of small experimental projects.

Early on we wanted to demonstrate that software could be made quickly and used to solve small specific problems. East Lothian is a relatively rural county where the availability of high-speed internet connections can be limited. In a couple of days we created a map of all the public Wi-Fi hotspots in the county and got it online. We then accepted submissions from local businesses such as cafes and bookshops. So far we have 34 networks mapped that are free for members of the public to use.

For our larger project, we began working on an app to help tourists and residents of the county plan trips and days out. This had two motivations. Firstly, we had identified the Economic Development department as our internal client and this addressed their objective to increasing commercial activity outside the main tourist centres. Secondly, to achieve this would require a large amount of information about attractions, places, local events and the transport infrastructure to be made open. We hoped to use to project to drive the adoption of the open data practices across multiple departments. We simultaneously began to develop the app and gather the necessary data.

Unfortunately it became evident that the council lacked the resources required to keep a data set of this kind up-to-date. For this reason we pivoted, identifying a new internal client in the Landscape and Countryside Service and producing Go Explore, an app for wildlife spotting along the county’s core paths network. This change in direction was only possible because of relationships built up at the monthly stakeholders meeting.

Another outcome of the stakeholders group was the creation of the East Lothian Open Data Strategy. The council’s Corporate Policy and Improvement Unit undertook this, members of whom had been attending our stakeholders meeting. The document ensures that there is a strategic legacy from the project.

**Key lessons**

- Assemble a stakeholder group as your first task
- Demonstrate value early in the project
- Ensure the organisation has the capacity to provide necessary data sets and maintain them
- Work on the data before working on the app.

**Project links**

Find Open WiFi
http://eastlothian.gov.uk/findopenwifi

C-Kan
https://opendata.eastlothian.gov.uk

Go Explore!
http://goexplore.eastlothian.gov.uk
http://github.com/davemor/goexplore-ios
http://github.com/davemor/goexplore-android

http://eastlothian.gov.uk/findopenwifi

C-Kan
https://opendata.eastlothian.gov.uk

Go Explore!
http://goexplore.eastlothian.gov.uk
http://github.com/davemor/goexplore-ios
Our project for the Open Data Scotland programme was ambitious, to deliver a new digital service that offers a fresh approach to creating future heritage. We have largely delivered this with Edinburgh Collected, a platform where individuals and groups can contribute material related to their daily lives past and present, their working life and the areas where they live, expanding Edinburgh’s digital heritage.

Lessons we’ve learned:
- It’s essential to have a sponsor who can support the project and sustain it post delivery
- Project scoping is critical as there is a resource commitment for the project beyond paid for developer/designer time. Scope should be as detailed as possible and potential dependencies such as user testing, meetings and external commitments for team members
- Make sure your entire team is in place and committed from the start – you will lose valuable time catching up and coping with delays if not
- Agile planning techniques are great for this type of project but you must allow time in the project plan for the regular stand-ups, iterations and reviews
- Build a responsive web solution first – it avoids support implications of multiple apps
- Have a clear plan for marketing, embedding and sustaining your project
- Have a wider strategy that your project sits within, to achieve maximum benefit

Benefits
- Working with Nesta is a great opportunity to learn new approaches to projects, digital and open data
- This is a great way to build digital products, building ownership and delivering a quality project
- You will learn and share new skills and make some great contacts who will help your work in the future
- You will learn new approaches and thinking that will drive innovation and change in your organisation

For the future
We hope to see open data become embedded in Scotland with the support of the new Scottish Government strategy, and for Scotland to become a living data store, where local people as well as policy makers and developers are encouraged to engage, contribute and innovate with data that informs and empowers everyone to have better lives.

What was achieved?
The main focus of the engagement was Edinburgh Collected (https://edinburghcollected.org), a responsive web application that enables citizens of Edinburgh to share their memories of the city. Citizens can add their own memories, browse those belonging to others and gather memories together in scrapbooks that can then be shared. The content is searchable and is fully moderated by the Libraries division. It allows citizens to add to the city’s open data store, which can then be used through an API by developers looking for location-aware media of the city.

Through building this application, and reviewing other similar projects we were also able to put together a guide for how developers can work with the council.

We also carried out a flash hack in a week to help one of the council departments get some quick feedback on an application that they were putting a proposal together for.

What did we learn?
1. If I could start over I would probably prefer to implement a number of smaller projects and use the experience of building and launching those to inform the Local Authority’s overall policy towards open data and application development. This is kind of a “teach a man to fish” scenario. Instead of just building a product, build the process and environment in which successful products can be built after the engagement completes. It was for this reason that we dedicated time in Phase 2 to put together a guide for how developers can work with the council.

2. It is easier to share knowledge than data. Data and the format it comes in tends to be specific to the organisation that created it, but the knowledge of how you were able to extract that data and the lessons learned doing so are much more transferable and, arguably, more valuable.

3. It is easier to share data than code. Code is written in a specific language and is hard to share with code written in other languages. Data has fewer formats and if it can be read by one language there’s a good chance it can be read by all.

4. It is easier to share code libraries than whole applications. Applications tend to be specific solutions to specific problems. Even if your problem looks the same there is a good chance it will differ in some way, either now or in the future. Instead prefer to extract libraries that carry out a single task. It is much easier to reuse those.

PROJECT LINKS
Site: https://edinburghcollected.org
Code: https://github.com/urfolomeus/edinburgh_collected
API: http://www.edinburghopendata.info/dataset/edinburgh-stories-api-memories

Sally Kerr
Digital Services Manager
City of Edinburgh Council

As a result of this project we are:
- sharing existing open data from our Capital Collections digital repository
- crowd-sourcing new heritage data
- writing and sharing newly produced open data
- offering a platform and digital support to organisations and groups across the city for their own heritage data
- we’ve developed a platform that’s shareable and reusable
- sharing agile techniques training with teams in the Council
- we’ve held the Council’s first flash hack, a proof of concept that developed a prototype for a new app over a week’s intensive activity. We have embedded this approach in our working practices

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The biggest lesson is that even a very small Council can engage with Open Data.

John Munro
ICT Service Manager
Clackmannanshire Council

With little prior knowledge of Open Data, our initial ambition for this project was to develop a mobile App which would provide personalised access to childcare resources as part of the early intervention strand in our Making Clackmannanshire Better change programme.

As the project evolved we focussed on three main areas: Knowledge Transfer, Developing a Portal and our Childcare Application. Knowledge transfer provided Council officers with information about standards and systems used in Open Data, the ecosystem of agencies involved in Open Data and the sources of existing Open Data applications which were available for re-use.

We successfully built a CKAN Open Data portal and developed an App called Clacks Kids which is a location based service directory. Spin-off activities have led us to develop an open GIS mapping portal which is likely to inform our future GIS Strategy and a reporting platform based on the Open311 standard.

Many of the problems which Open Data is typically used to solve don’t exist in a small Council. Mass transportation isn’t an issue with only 3 bus routes. There isn’t a developer community taking part in hack events and generating innovative applications. Why then should a small Council pursue Open Data?

Open Data affords opportunities to be more efficient, whether through being nimble by adopting freely available Civic Apps to improve service delivery or by reducing the time spent responding to information requests from the public or partners. In time, it is likely that we will be required by statute to share more data anyway.

Location based services will become increasingly important. In the near future citizens will expect to be able to use their personal device and use the tools of their choice, see and interact with services which are nearby. In order for Council services to be part of this world, data about those services must be published openly.

Lessons Learned

- The biggest lesson is that even a very small Council can engage with Open Data. The key components are having access to people with the right skills and attitudes, easy access to servers and software with which to tinker, and permission to experiment.

- Developing an Open Data infrastructure is important if the project is to be sustainable. While the “App” may be the most high impact product, without the infrastructure there will be no data to use in the app. Apps are also transient, they will be replaced by other apps in future.

- Follow your nose! We have revamped our GIS infrastructure opening up the opportunity of significant future cost savings as a direct consequence of our need to provide mapping tools for this project.

- Civic Apps are not as easily transferrable from one Council to another as you might expect.

- In a shrinking Council, persuading others to prioritise your project can be difficult especially when there is nothing concrete to demonstrate. You need to have something to show people. Once we had a working app, we then found services coming on board as they could see how it could be used.

Clackskids and Ohana API

Rory Gianni
Technologist in Residence
Clackmannanshire Council

Clackskids was inspired by Code for America’s SMC-Connect and Ohana API projects. Ohana is an open directory of services, which structures data on all kinds of human services such as counselling, emergency food, healthcare and social services. Meanwhile, SMC-Connect provides a user-friendly interface to search these services.

In our case, we created a localised version of Ohana-API to manage and provide the data on the services that Clackskids uses. Since Ohana API is designed to handle all kinds of services, it could also act as a platform for apps like Clackskids but for other types of services.

Since Ohana follows a clear data specification, co-created by a variety of contributors, this added to the project’s flexibility and transferability. In hindsight, contacting the project’s community (users, developers, and project leads) of Ohana earlier would have been very helpful. The project’s community have helped explain features, best practice, and direction of travel for the project. Many of these are aspects that wouldn’t surface in documentation.

Data Portal with CKAN & GeoSuite

The other main piece of work was the open data portal. We chose to deploy CKAN, given its position as a leading data portal, and strong community support network.

Complementing the CKAN instance is OpenGeo Suite, a geospatial platform for hosting, managing, and creating maps. A variety of maps held by the council are now available to view at:

A plug-in was also written to support the integration of the two platforms. This has been made available on GitHub with documentation

Using this plugin, maps listed on CKAN can easily be viewed using the OpenGeo Suite tools. The benefits of the above solution are several. First, the CKAN platform helps the council open data with the wider public, serving transparency obligations and cutting the number of FOI requests that have to be handled. Since the geospatial software provided by OpenGeo is quite comprehensive, it can replace the current software and the licence fee it obliges.

As goes for all the above projects, taking full advantage of this software requires some internal organisation, hence the champions have a key role. Involving users in the development of the software isn’t just useful in the sense of good design, but also in that it creates users who are knowledgeable about the software and its capabilities. This is important as software isn’t static, and skills need to be in place to keep it maintained and overcome any failings it may have.

PROJECT LINKS

http://github.com/digitalWestie/ohana-api/
http://github.com/digitalWestie/clacks-ohana-search/
http://gis.clacksweb.org.uk:
http://gis.clacksweb.org.uk:8080/geoexplorer/
https://github.com/digitalWestie/ckan-geosuitepreviewer/
My job was to design the user interfaces across all four of the local authority projects and although some of the projects were started before I was brought on board we managed to stick to a typical user centered design process.

This process involved doing user research - mostly going out and speaking to people on the street about our ideas, analysing the results, designing and prototyping the idea and conducting user testing. While not every project required every step of this process, we took an iterative approach to the design and have tested and tweaked the design and functionality along the way.

After we had agreed site maps or user journeys I utilised tools like balsamiq and inVision which help me create low fidelity prototypes which we could test before committing out plans to code. InVision was a really useful tool for me because it meant that we could test our ideas out remotely, online, and users and stakeholders could comment on individual screens.

We have used a clean, flat design style across all of the apps, but using fun colours and illustration for ClacksKids in a rare instance where brand guidelines were not strict.

Edinburgh Collected was the largest scale project in this program and proved to be the most difficult. I initially started prototyping in inVision so that we could do some user testing but this soon became complicated as we tried to add more and more complex layers to it. While Edinburgh had an organised user testing group I also found it useful to test the app with friends and family for quicker feedback. The good thing about public sector work is that most people are your users!

With Aberdeen Active, Andrew and I hit the streets to find out ‘if we build it, will they use it'? The feedback was invaluable, and luckily a resounding yes, but this really hit home the value of quick and honest feedback. It doesn't cost anything and can qualify your ideas instantly.

At East Lothian we started out designing a Trip Planner app but eventually became aware that the data was not good enough to use and that there were no resources to complete the data set. Luckily however, a member of the stakeholder group was keen to have an app promoting wildlife in the area so I worked with him to identify the content and data sets that we could use to make an informative wildlife app which crosses their wildlife database with open paths data - a handy asset for walkers and nature lovers.

Open Data Scotland was the first time I'd really worked in public sector. Working with Clackmannanshire Council was great as they were really keen on the ideas that Rory and I came up with but also because I learned a lot about how to communicate the ideas better to local authority workers to get them on board.
It feels like we’ve been at this work for years, but it is still really early days for open data. We’re starting out on a journey – we’re testing the water.

The open data movement is a relatively recent, global phenomenon. Local authorities in Scotland, and indeed across most of the world, are not used to thinking that the data they hold and collect – be they cultural, financial, demographic, environmental or relating to transport, services and facilitates – could be a prompt for innovation. But we’re beginning to think very differently about data and its value.

Local and municipal governments across the world have been inspired by Peter Corbett’s Apps for Democracy contest (first run in 2008), initiating similar competitions that invite developers to work with data sets to create new apps and services that solve civic problems. Open Data Scotland and Code for Europe (the bigger programme of which it is part) is part of this movement. Both programmes are modelled on Code for America in their ambitions and design. Code for America identified that governments held huge amounts of data that could be potentially valuable if developers could be encouraged to work freely with it, creating apps and services that solved civic problems and enhanced peoples’ lives. But it also saw that governments do not traditionally have access to the specialised knowledge, skills and capabilities needed for this kind of innovation. The programme therefore aspired to broker those connections, growing capacity for digital innovation around government and communities. This is very much what Open Data Scotland has also aimed to do.

This is important context for this programme and for understanding the achievements of the four participating local councils – Edinburgh, East Lothian, Clackmannanshire and Aberdeen. All wanted to be part of Open Data Scotland because they believed that innovation around the use of data has the potential to bring huge benefit to their localities. But they also understand that they are experimenting at the edge of practice and the outcomes of their work are as yet hard to determine. There are 32 local councils in Scotland and only five are participating in Open Data Scotland. This is in part because of what other councils might need to do to get started or to deepen and accelerate their practice in this area (Edinburgh and Aberdeen).

Learning from the Four Councils

Open Data Scotland has given four councils in Scotland the opportunity to either embark on open data projects for the first time (East Lothian and Clackmannanshire) or to deepen and accelerate their practice in this area (Edinburgh and Aberdeen).

In this cohort, two councils were at the leading edge of practice in Scotland and two had little or no experience, but were up for learning something very new. There was a specific programme requirement to produce and launch at least two new apps and services in the localities, working with the Code Fellows. The aim in getting these projects up and running was to demonstrate the potential of open data and the kind of innovation that is possible working with the public data that councils (and other partners) hold.

Each council worked on its own local projects and priorities, but they have all had similar kinds of ambitions. In a programme that offered a lot of flex to adapt to local learning and development priorities, the councils recognized a valuable opportunity to work closely and differently with talent and skills not commonly found in or easy for them to commission. They used this opportunity to make apps and services as the programme specified. But they also addressed a range of additional priorities that are outlined below.

The work they chose to do – and the things they spent considerable time doing – offers a helpful suggestion of what other councils might need to do to get started on this work. It also shows that the councils are serious about open data. Far from a novelty side-project, this programme, was about laying the groundwork for a longer-term future of smarter data management and digital innovation.
Laying the groundwork – key priorities for local government

Project Leads have laid important groundwork in their organisations and localities for future open data and digital innovation. This has involved four key activities:

1. **Helping colleagues to understand ‘open data’ and the opportunities it represents**

   The first job of leaders of this work has been to help colleagues to understand what open data is and why it might be an important opportunity for local government to pursue. Key audiences for these efforts include SMT (who need to support projects at the highest level), IT departments (where colleagues have been doing the work), and a range of internal and external partners (where opportunities for data driven innovation might lie).

   Bringing people into the open data agenda is not at all straightforward. Those who have been doing this for some time suggest that two things are helpful.

   The first is sharing case studies of new services and applications that other local and municipal authorities have built, that are up and running and showing benefit. If colleagues can use the apps themselves (such as transport app that helps them to know when the next train is arriving) then they are much more likely to see what the benefits and value might be and what local projects might be possible.

   The second thing colleagues in councils are doing is bringing people on board is simply involving them in the key parts of the process, such as ‘hack’ events where developers and coders get creative with data and make their first iterations of new apps and services. Councils have found that this single activity – demonstrating the process, and allowing colleagues to participate – is the most powerful way to build champions for the work.

   When colleagues meet developers and see these kinds of processes they think, ‘Wow! I might never have thought you could develop a service in this way!’ Every time we do this, people become enthusiastic. People become open data champions.

   One of the big benefits of this work has been the services within the council have started to see that data is a valuable asset and that it can be put to uses you originally would never have imagined.

2. **Initiating projects with innovative models, demonstrate potential and build confidence**

   Each council worked with Code Fellows, colleagues and partners to get new apps and services off the ground. Councils feel that app development has been a critical thing to do – it is not enough simply to open data and share it publicly, you need to demonstrate the kinds of things it is possible to do and to make with the data.

   Interestingly, councils in this programme feel that it can be worthwhile to do this work even if you take a project no further than a prototype. You can build new knowledge and skills through a quick and inexpensive project that demonstrates what’s possible and helps you to build confidence and interest in a bigger piece of work.

   Until you see it in action, you just don’t know how quickly you can build something, iterate it, add a feature, get feedback and develop it – all over a weekend. The usual way a council would pursue this would be to contract someone and the thing would be developed in 12 months, and if it’s not quite right then you live with it.

3. **Building capability for open data and digital innovation**

   Alongside building new apps and services, the councils have addressed a range of other priorities that support longer-term ambitions for digital innovation. These include:

   • Strategies for data and digital innovation: Each council has developed an open data strategy and is working to define what the action plans stemming from this might look like. In most cases the open data strategy links to the wider strategy for digital innovation.

   • Open data platforms and portals: Each council has established a platform or portal for publishing its data. This provides the infrastructure for open data work in the future and Project Leads are working to develop standards and processes for how to publish data sets on the portals as part of normal information management.

   • Developing leaders of open data and digital innovation: The programme has offered explicit opportunities for its Project Leads to learn about open data and app development. They have reported benefits in terms of increased knowledge and expertise, along with the confidence and connections to lead more ambitious projects in the future. The Project Leads have been directly responsible for influencing a greater commitment to open data in their organisations, along with some deeper pockets of expertise. The more experienced leaders are operating across a much wider sphere – they are bringing external partners into this work (developers, other public and voluntary services, private companies, academics, innovation intermediaries) and facilitating a wider open data ‘eco-system’

4. **Facilitating an open data ‘eco-system’**

   Creating value from open data requires leaders to think in terms of a whole system of activity and to mobilise a range of new people and partners to the challenge.

   Project Leads talk about developing the ‘ecosystem’ for this work. This means encouraging people (whether colleagues or external partners) to open data sets and make them available. But it also means identifying and mobilising developers, coders and designers who can see opportunities in data and create something new that people want and will use.

   This is a considerable undertaking, involving a huge amount of network and capacity building and requiring specific kinds of leadership and expertise (and possibly not the kind generally found in council IT departments).

   Two of the councils in this programme are already thinking about their leadership in these terms and regularly do a range of things in their localities to stimulate demand for and creative application of data alongside their ‘day jobs’. They have strong links into communities of developers and coders; great relationships with key intermediaries who support open data work; run regular events to solve civic problems across their localities and are constantly looking for new partners to collaborate with on projects.

Supporting product and service development projects around data involves specific talents, skills and activities, including:

- Understanding what motivates developers to work on projects and being able to mobilise people to causes identified by the council and communities
- Designing and facilitating high-quality events and activities (such as ‘hack days’) that unlock creativity and help people to work to a purpose
- Managing colleagues’ expectations and connecting the outputs of these activities into future service development
- Engaging colleagues in different departments and external partners and make links into communities to test and develop prototypes
- Embedding new service innovations in councils and localities
- Creating, maintaining and building a community of developers and others interested in applying their expertise to civic problems
Key challenges for the local government system

Two big challenges have emerged from discussions around this work. These are presented below along with some questions that should prompt discussion around how we might strengthen the environment for digital and data-driven innovation in local government.

It is not enough to open data – supporting its use and application is critical

Those at the leading edge of practice understand that councils need to have a plan for incentivising and facilitating focussed, creative activity around data that addresses local priorities. Some of the challenges councils are contending with include:

- Leadership and resource requirements for stimulating and supporting development projects around data are not always considered: While there is sometimes support in councils for open data, it is less clear where the responsibilities lie for stimulating and supporting development projects around data. One Project Lead talked about doing this work outside of the day job, using their own time and money: We need a strategic approach in place to drive activity. This is not just about providing data – we need a programme that supports its use. We need to build capacity here and beyond the council.

- The skills and expertise are not always accessible: Councils not located in major cities with relevant skills clusters are struggling to see how they can mobilise talent to their cause, but are looking for creative solutions: We don’t have a big developer community. The only way for us to continue is in partnership – a bigger city runs an app event and we supply our data. We can’t be doing things in isolation, but we could feed into something bigger.

- Current approaches to securing skills and expertise may not be sustainable: Councils are currently relying on the involvement of developers and coders who are sometimes giving their time freely at ‘hack’ events. Developers are sending a gentle message to councils to caution them against exhausting their goodwill: There is a real danger of hacking people off with civic solutions and data and app events. Thinking this is a way to get council apps for free is not on – there is good will there but will have a limit.

Key questions

- Who will incentivise and facilitate the use and application of open data? Who is providing the investment and the expertise? What partners could play an important role alongside local government system (such as innovation intermediaries)?

- How should councils who are geographically distant from developer communities get involved in open data? How could they mobilise talent?

- As we engage developers in this work, how can we maintain their goodwill and create more sustainable working arrangements?

This work is experimental – and it’s difficult to do within a council setting

Local government is a notoriously difficult environment for experimentation and innovation. In order to undertake this work, Project Leads and Code Fellows have had to be ‘creative’. The term ‘under the radar’ describes how this work takes place.

Most obviously, technical work has had to happen on systems unconnected to councils – the permissions required to open up access would not have been forthcoming or would have taken as long to secure as the programme duration. For this reason a lot of the work has taken place with Code Fellows working at home on their own equipment, which hasn’t enabled the degree of collaboration, partnership and embedding new practice that many councils would have liked.

Securing the right technical environment for development is one aspect of this challenge, but there are numerous others relating to various aspects of local government culture and operating environment, including management cultures and procurement.

The projects found ways to address the challenges of the work environment, but it hasn’t been easy. Code Fellows also think that some of these factors actively put developers off from wanting to work for local government.

They discussed the idea of creating ‘innovation zones’ in councils – places free from normal constraints, where development work could be supported to happen.

Key questions

- What different models for working could be usefully explored?

- What could the role of intermediaries and partners be in helping councils to create great environments for experimentation and development?

- What simple changes to internal policies and processes might make it easier for creative work with developers to occur?
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