Using data in the context of service design

Snook, Urban Tide and North Lanarkshire Council created this toolkit during a project to redesign the Freedom of Information service for non-domestic rates.

North Lanarkshire Council

SNOOK

UrbanTide

The Open Data Institute (ODI) funded a consortia of UK public sector organisations, service design agencies, digital agencies and others to:

- Enable greater release of open data to power the delivery of public services
- Learn from their processes and approaches to build and improve design patterns and learning materials that can be reused by other public sector organisations.

Source: Invitation to tender: Stimulus fund for service redesign

UrbanTide, Snook and North Lanarkshire Council share their approach as an alpha resource. We hope that subsequent projects will help develop this toolkit and we welcome your input.

We focus on the **intersection of (open) data and service design**. The toolkit doesn't aim to be an exhaustive resource on open data or on service design. Instead, we invite the reader to explore the resources mentioned in the 'further reading' sections.

Although organisations are willing and sometimes required to open their data, it is a complex process. They must meet their legal requirements to safeguard personal or identifiable data, deal with source systems that make it difficult to extract, and prepare the data for publication. Costs can impact on the viability of the project, especially when competition for the investment of funds is high. The idea behind opening data in the context of designing services is that it will allow organisations to **generate value that exceeds the costs.**

This toolkit is designed to be read alongside the Scottish Government Open Data Resource Pack and follows a similar outline.
http://www.gov.scot/Publications/2016/08/5556

The toolkit focuses on people who are early on in their journey of opening data in the context of service design - the people asking themselves, “Where do I start?”

Although the brief focused on open data, the research found that in order to accomplish efficient delivery chains and informed policy development, organisations needed to access not just open data, but also official and sensitive, internal and external data. Depersonalising and opening the data would be the final step.

A note on language

This resource uses the data spectrum of closed, shared and open data designed by the ODI as well as the classification in use at North Lanarkshire Council: open data (available to all); official data (available to anyone in the organisation); sensitive data (locked for a specific reason).
The project also used datasets with various licences from external data providers.

https://theodi.org
https://wearesnook.com
https://urbantide.com
https://northlanarkshire.gov.uk

Before you start

Start with a plan

Select your service

A short introduction to open data and service design before diving into how the two can work hand-in-hand.

Adopting an iterative process to redesign data-led services reduces risks and costs and delivers value earlier.

Identify the service that needs redesigned and select the supporting data that you need to source, transform and publish.

Create a dataset

Make data available

You've published, now what?

The guiding principles used by the project to create, improve and open data.

The approach chosen here is to make data available internally and externally to maximise benefits.

Evaluate and iterate to deliver service efficiencies, improve access to public services and inform policy developments.

Before you start

Local authorities need to balance their obligation to release data - while complying with data protection and legal requirements - within the context of resource constraints. Having a thorough understanding of open data is the essential first step.

The Scottish Government Open Data Resource Pack provides an introduction to open data, the legislation, national strategy and further reading. As it is based on the G8 Open Data Principles, it is relevant for organisations beyond Scotland.

Section 1: Scotland's Open Data Strategy
Section 2: Existing Legislation
Section 3: Scotland's Open Data in an International Context
Section 4: What is Open Data and why should you bother?

http://www.gov.scot/Publications/2016/08/5556

Learn more about: Open data

The Open Data Institute (ODI) offers advice, training, research, tools, standards and events around data and open innovation: https://theodi.org/courses

The ODI and Local Government Association (LGA) developed data learning modules: http://lga.learndata.info/#/

The Government Statistical Service offers an online training course including case studies: https://civilservicelearning.civilservice.gov.uk/learning/

Urban Tide delivers in-house open data training to the Scottish and Irish public sector, local authorities, and organisations such as Scottish Enterprise: https://urbantide.com/training/

Learn more about: Service design

Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation. Tim Brown, 2016: http://amzn.to/2o7v3w3

The WhiteHall Effect. John Sneddon, 2014 - For the overview of the separation between front and back office in public services: http://amzn.to/2o1wEE9

The UK Governments help teams create and run digital services: https://www.gov.uk/service-manual

The Scottish Government Digital First Standard describes the standard required when delivering a digital public service and outlines user research and service redesign approaches. https://resources.mygov.scot/standards/digital-first/

Snook delivers service design training and coaching to a range of organisations from the public, private and third sector: http://snooktraining.com

How do I keep up-to-date?

Watch the **ODI Friday lunchtime lectures** online: https://theodi.org/lunchtime-lectures

The Open Knowledge Foundation focuses on realising open data's value to society: https://blog.okfn.org/

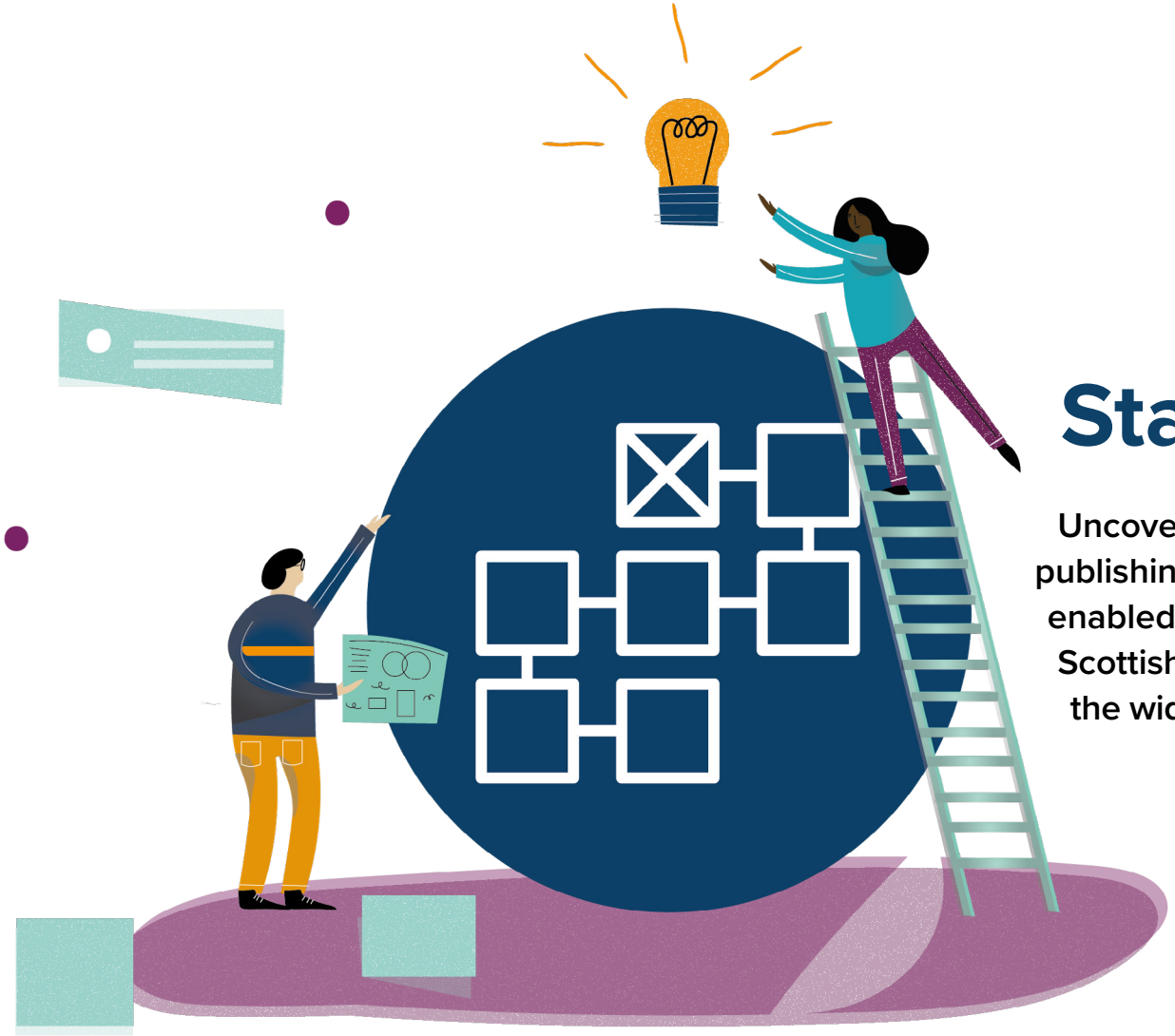
The UK Government's Data in Government blog shares how they find, access and use open data to improve services and policy outcomes: https://dataingovernment.blog.gov.uk/

Use social media to keep up-to-date:
Follow #opendata, #scotopendata, #servicedesign on Twitter, or join the Open Data Network on Knowledge Hub Digital Public Services: https://www.khub.net/web/digitalpublicservicesopendatanetwork

Attend events and conferences such as:

- **Open data camp:** http://odcamp.org.uk/
- **Open data day:** http://opendataday.org/
- **Service design in Government:** http://govservicedesign.net

To offer suggestions on this toolkit, please email:
opendatatoolkit@wearesnook.com



Start with a plan

Uncovering, sourcing, cleaning, using and publishing data are at the core of a data-enabled service. This chapter places the Scottish Government Open Data Resource in the wider context of a service redesign.

The open data process is not static. It is a continuous process that you will go through many times as your open data work develops (...) you will likely do a few of these steps in combination.

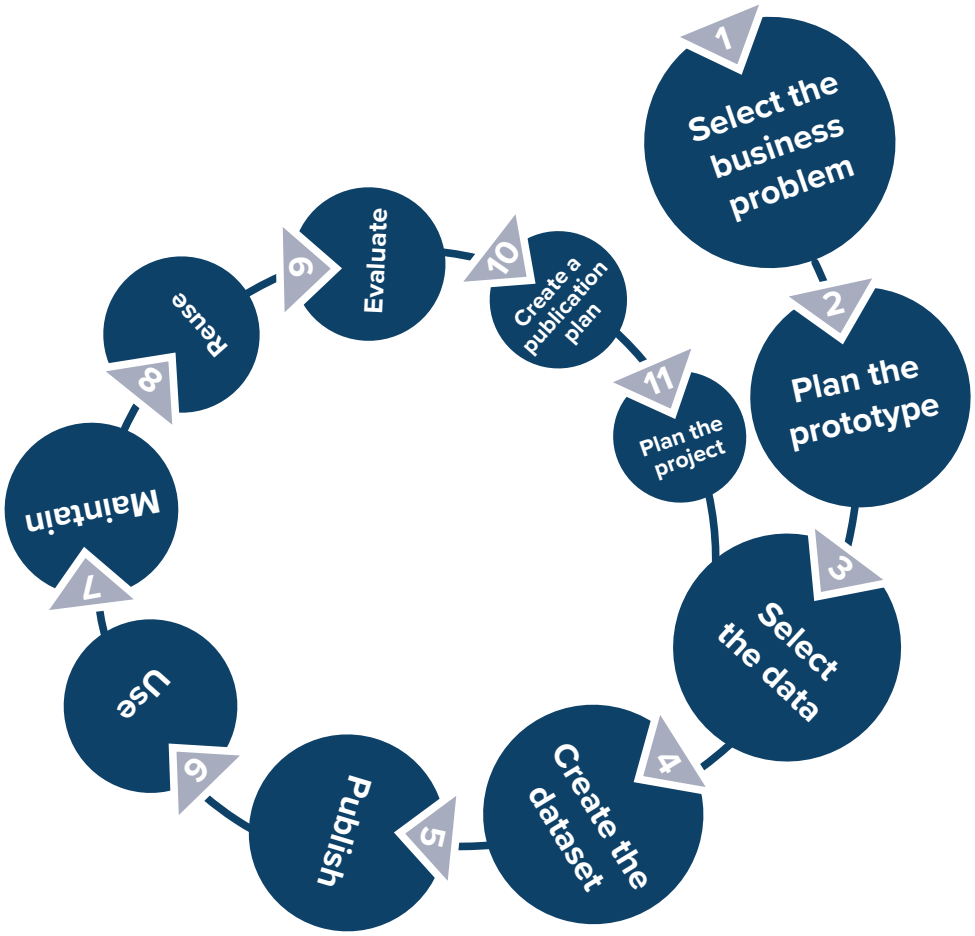
Source: Scottish Government Resource Pack

Adopting an iterative process reduces risks and costs by starting small, building up skills and delivering value earlier to the organisations and the users.

Further reading

Making transparency work for you
http://lga.learndata.info/#/id/587e0764b61c46e176e7e1ad

The iterative process of data-led service design



Example for North Lanarkshire Council

1. **Create a data publication plan** and reduce the cost of Freedom of Information (FOI) requests
2. **Work with Snook and Urban Tide to create a prototype** of a data-enabled service through ODI funding
3. **Select a single area (non-domestic rates).**
4. **Automate the creation of a full non-domestic rate dataset**
5. **Publish the full dataset** internally and the open dataset externally
6. **Customers able to use the dataset** instead of placing FOI requests
7. **Operationalise publication as routine process**
8. **Staff able to use the full dataset** to identify misclassified or non-registered properties
9. **Evaluate the prototype and monitor the impact of the service redesign** to increase investment, employment and improve people's understanding of their local authorities
10. **Inform the creation of the publication plan** and wider service redesign
11. **Plan the next phase** of the project

Assess current publishing and use

The ODI Pathways tool helps organisations self-assess how well they publish and consume open data, and identifies improvement.
http://pathway.theodi.org/

The model is based around:

Five themes:

1. **Data management processes**
2. **Knowledge and skills**
3. **Customer support and engagement**
4. **Investment and financial performance**
5. **Strategic oversight.**

Five levels of readiness:

1. **Initial** — the desirable processes are non-existent or ad hoc, with no organisational oversight
2. **Repeatable** — processes are becoming refined and repeatable, but only within the scope of individual teams or projects.
3. **Defined** — processes are standardised within the organisation based on best practice identified internally or externally. Knowledge and best practice start to be shared internally.
4. **Managed** — the organisation has widely adopted the standard processes and begins monitoring them using defined metrics.
5. **Optimising** — the organisation is attempting to optimise its process to increase efficiency within the organisation and its business sector.

The tool on the following page gives organisations a self-assessment of their open data readiness.

For a prototype, we have used a shortened version to assess where the prototype fits in but leave the full assessment until later.

Further reading

https://theodi.org/guides
https://theodi.org/open-data-skills-framework
http://opendatahandbook.org/guide/en/how-to-open-up-data/
https://theodi.org/elearning
http://pathway.theodi.org/
https://ico.org.uk/for-organisations/data-protection-reform/overview-of-the-gdpr/

Inspired by:

A guide to the Open Data Maturity Model, assessing your open data publishing and use. http://bit.ly/2rHxydi

How well does your organisation perform in each theme?

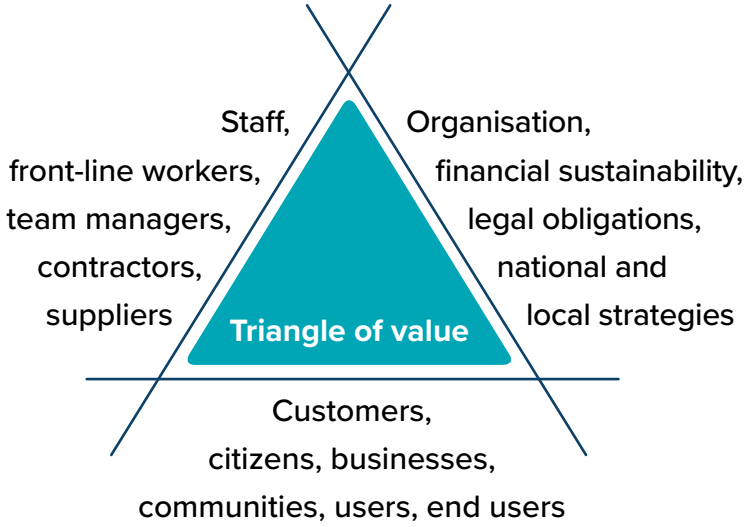
	Notes	**Diagnostic** (circle)
Data management processes support the release and reuse of open data: • Do we have defined processes to open data? • Do we use industry standards? • Are we developing a data governance process? • How do we manage sensitive data? **Staff have the knowledge and skills to deliver the open data strategy:** • Do we have a shared understanding of the value and application of open data? • Do we have skills to implement the strategy? • Do we use open data to deliver strategic outcomes? **The organisation supports data users:** • Do we engage customers? • How well do we know our users are? • Do we help them understand and reuse data? • Are we fostering a user community? **The organisation evaluates its open data practice:** • How well do we monitor costs and benefits of publishing and using data? • Are we able to prioritise the most valuable datasets? • Do the procurement processes include open data practice? **The organisation has a clear open data strategy:** • Do we have, publish and measure progress of the open data strategy? • Do we treat data as an asset?		**1** (initial) **2** (repeatable) **3** (defined) **4** (managed) **5** (optimising)

Demonstrate value

This toolkit takes a holistic view of open data to place it in the context of service (re)design. To be sustainable, the redesigned service needs to meet the needs of customers, of the organisation, and of staff who deliver the service.

To be successful, a data-driven service redesign requires support across the organisation. It is important to articulate how the redesign will not only meet customer needs, but deliver value to the organisation itself through more efficient internal processes and data-driven policy decisions.

Logic models focus on identifying project components in a framework focused on articulating inputs and activities, outputs and outcomes. They are focused on the technical aspects of how this will this lead to that.

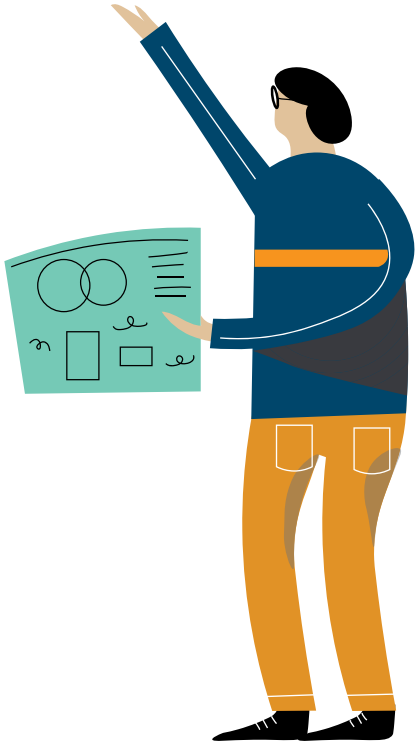


The model is a living tool and is updated throughout the project.

For example, you might create one before you start, then work through it during the initiation phase, and review it at critical times to incorporate lessons learned.

“Why should a local authority invest in opening data instead of funding schools? Because opening data will help us save money on operations and go back to our core functions.”
Peter Tolland

On the following page find a shortened example for the North Lanarkshire project to open non-domestic rates data.



Demonstrate value tool example

Input

Assets

- Funding from the Open Data Institute.
- Senior support.
- Good communication with elected members and stakeholders.
- Buy-in from the non-domestic rate team and support teams.
- Expertise from consultants.
- Data analysis has defined a prototype with a clear scope.
- Strong business case (80+ FOI requests a year).
- NLC already publishes some reports.
- Staff attended open data training.
- Technology available (USMART)
- Other internal and external datasets.

Barriers

- Short timeframe with end-of-year break.
- Potential reorganisation.
- Worry about data quality.
- Worry about engagement from customers.
- Depersonalising data.
- Not being perceived as blocking FOI requests.
- New website in the pipeline.
- Because NLC already publishes some reports, we don't have a true baseline.

Activities

- Data analysis and research with customers who (could) use the service and staff who deliver it.
- Use open datasets as an asset to support new open data publication.
- Design and implement the publication of a full depersonalised dataset of non-domestic rates.
- Identify and analyse data to demonstrate benefits of releasing data for the Council and for the customers.
- Collect the project activities into a reusable toolkit to enable the Council to apply the same approach to other areas and other Councils who wish to do the same.

Outputs

- A short report to understand the demand for business rate data.
- A full depersonalised open dataset of business rates data for North Lanarkshire with the appropriate licence and in a reusable format.
- A short report outlining the business case for investing in releasing non-domestic rates data.
- A practical toolkit to support local authorities who wish to release open data.

Outcomes (short to long-term)

For the Council

- Reduce cost to produce the business rates report.
- Avoid cost to create a non-domestic rate relief report.
- Reduce cost of residual FOI requests.
- Reduce cost and risk associated with depersonalising data manually.
- Improve data quality.
- Identify new revenue streams.
- Support a more transparent and business-friendly economy > increase revenue in the long-term.
- Learn lessons to inform publication strategy.

For customers

- Make it easier to identify credit balances.
- Make it easier to identify business opportunities.
- Save time turning reports into reusable datasets.
- Timely access to data.
- Identify available business properties.

Demonstrate value tool

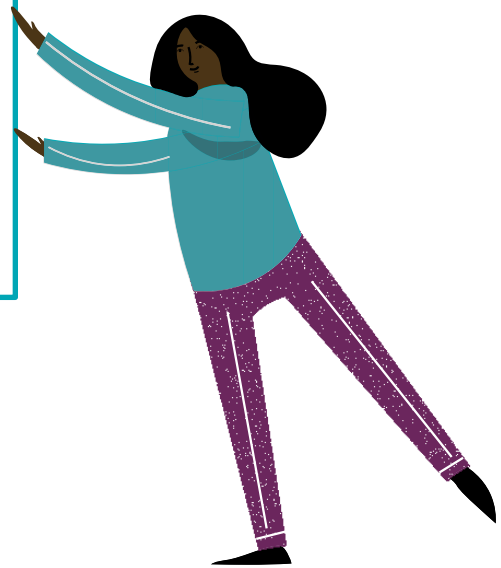
Input	Activities	Outputs	Outcomes (short to long-term)
What are your organisation's assets to start this project? What barriers can you foresee?	What would you like to do during this project? What can you do given the input available?	What will the project deliver as tangible deliverables?	What will be the impact in the short, medium and long term? For the organisation, for direct and indirect beneficiaries?
Your turn:			

Get support

Articulating the business case clearly and at every stage of the project helps build support. We are sharing two ways to help get the right people on board early.

Stakeholder mapping

"A stakeholder map is a visual or physical representation of the various groups involved with a particular service. By representing staff, customers, partner organisations and other stakeholders in this, the interplay between these various groups can be charted and analysed."
(This Is Service Design Thinking, Schneider and Stickdorn (Eds) p.150)



Initiation meeting*

The initiation meeting explores in depth the deliverables expected from the project to create a strong shared understanding:

- The business case: Why are we here?
- The deliverables high-level features
- The minimum viable product (MVP) detailed requirements
- Technical feasibility and plans
- Project management and team building

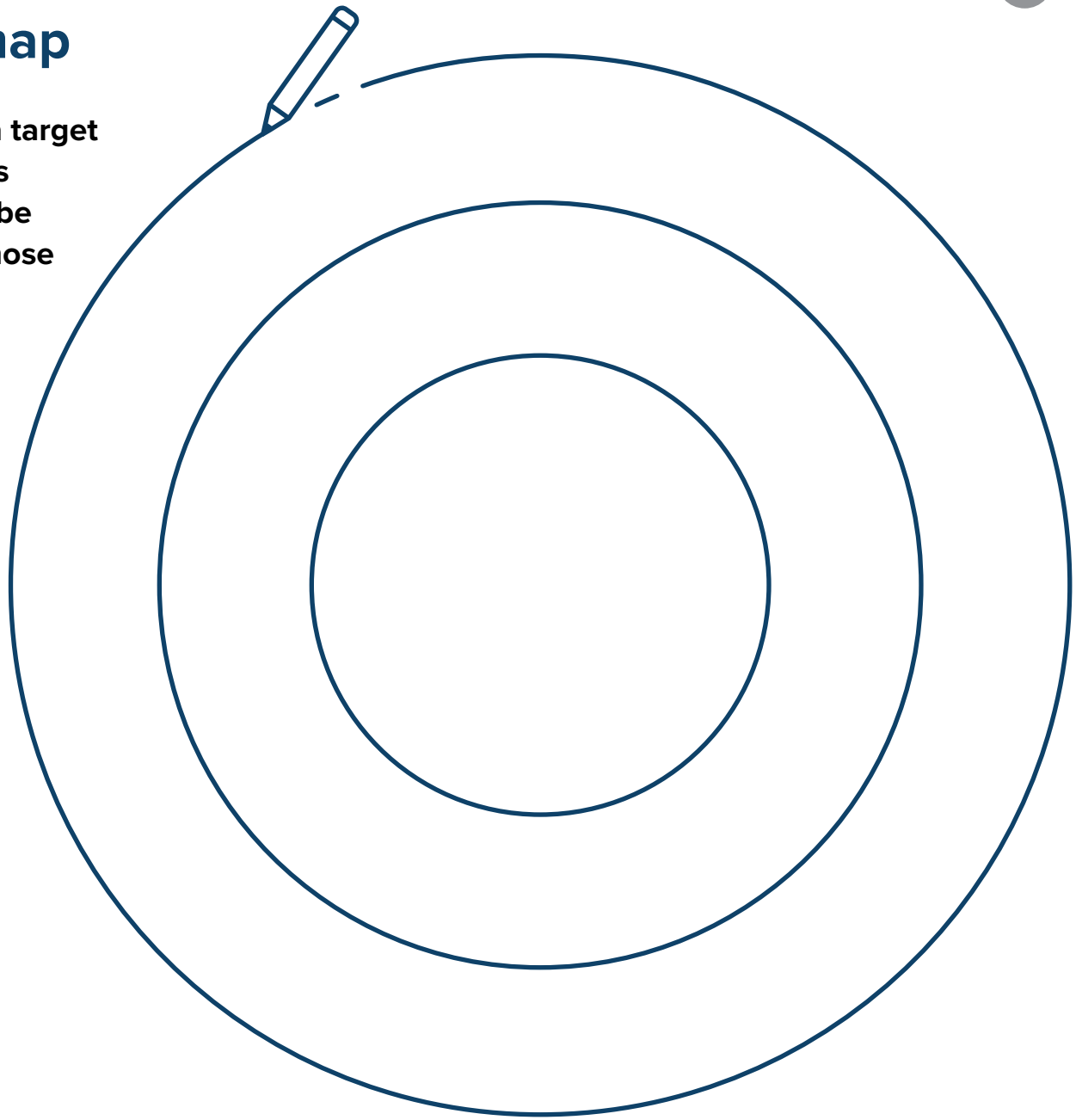
*4-walls approach - Credit: Nick Walker and Sarandeep Banwait, UK News

Stakeholder map

Use a flipchart to draw a target and list on sticking notes everyone who needs to be involved, or informed, those who will be impacted.

It is better to include too many people than too few. Place those who are the most engaged toward the centre.

You can then draw plans to have the right people involved at the right time and ensure they have their managers' support. Think about communication strategies for each audience.



Initiation meeting agenda example

9.30 - 9.45	**Introductions** • Getting to know the team, their knowledge of open data
9.45 - 10.10	**The business case** • Start with why. What are you hoping to achieve?
10.10 - 10.30	**Stakeholder mapping**
10.30 - 11.10	**Project deliverables and the MVP** • Understand the demand for data access - user research • Publish open data sets - internal blueprint • Updating the toolkit to share your approach • Build and monitor the business case - quantitative research
11.10 - 11.15	**Break**
11.15 - 11.45	**Implementation plans** • Where will this live? Which systems? Who will use it? How will we promote it?
11.45 - 12.00	**Risks** • What are the risks to the project and how will we manage them? Any upcoming re-organisation? Who needs to sign-off on the deliverables? Who might have an issue with the project? Who will keep the elected members informed?
12.00 - 12.30	**Team roles and responsibilities** • Communication, tools, stand-ups, planning meeting, retrospectives. Does the team have access to a shared platform to share files and communicate openly?

Attendees:

Representatives from Information Management, Governance, Digital Services, FOI coordinator(s), GIS (Geographic Information System) manager, Business teams and external.

Select your service

Identify the data-rich service that you want to redesign. Select the data that you need to source, transform and publish.

“How do you decide which data to publish first? Prioritisation of data release is necessary, as it is impractical and potentially costly to release all your data at once. There is no definitive guidance on data prioritisation; there are many ways an organisation can choose to select its data depending on its goals.”
Scottish Government Resource pack p.8

It is often recommended to focus on ‘the most valuable assets’. In our experience, these can also be the most difficult to work with. Instead, we advocate focusing on:

- The triangle of value: Combining opening data and service design creates an opportunity to **focus on the sweet spots** where the needs of users, staff and the organisation converge to deliver better access to services, service efficiencies and informed policy development.
- Within this triangle, focus on the **‘low-hanging fruits’ and ‘quick wins’** in order to experience the redesign end-to-end, demonstrate the value and reduce risks. The tool on the next page allows you to identify what those quick wins might be.

We recommend that you read the “Section 7: Select your data” chapter in the Scottish Government Open Data Resource Pack, as this toolkit does not address the need to identify data, create metadata or establish an information asset register. We recommend that you leave the ‘create a publication plan’ until after you have completed your prototype, so that you can incorporate the lessons learned.

Further reading

https://ico.org.uk
https://www.culturerepublic.co.uk/goodpractice/
https://www.linkedin.com/learning/gdpr-compliance-essential-training

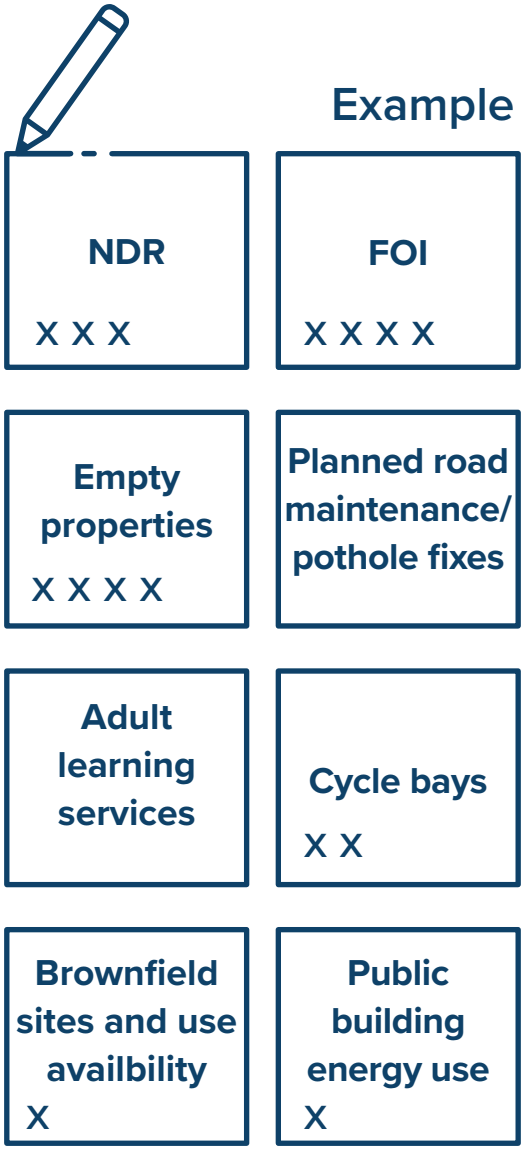
Making transparency work for you

Local authorities in Scotland are expected to be working towards releasing all non-official, non-sensitive data. How can we take this opportunity to redesign services that work better for organisations and customers?

Step 1: Using larger sticky notes, list information-rich services - using or creating data, internal or external, existing or potential. Don't worry about feasibility at this point and put them up on the wall.
Step 2: Move to the side political services and the services that handle sensitive information, but leave those that use a mix of open and official data.
Step 3: Ask the team the following 7 questions. For each question, each person can "vote" for one of the services identified in step 1 by drawing a cross below the service which they think is the most appropriate.

1. **Where could data be opened if budget and technical constraints weren't an issue?**
2. **Where are we able to measure the service provision cost? For example, an FOI request costs between £189[1] and £293[2].**
3. **Which services are a headache for the organisation?**
4. **Where have customers already expressed needs that are currently not, or are insufficiently, met.**
5. **Which services could lead to better decision making with more data?**
6. **Which departments do we have a working relationship with?**
7. **Which services have already been explored by other organisations?**

Count the crosses on each sticky note. The service with the most crosses is the one that the team sees as the most likely candidate for a data-enabled service redesign. If you have identified several potential areas, sort them inincreasing order of difficulty.

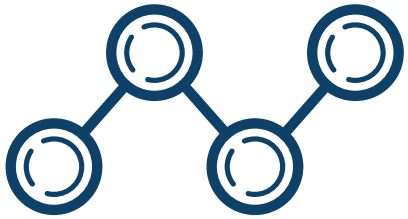


1. http://www.gov.scot/Resource/Doc/933/0107309.pdf 2. https://constitution-unit.com/2011/04/11/the-best-things-in-life-are-free-how-much-does-foi-cost/

Create datasets

A service redesign might identify new datasets that can be created, improved and/or opened. These are the guiding principles adopted for the project.

Look at the big (data) picture



As a policy-maker, I need a wide range of data to be able to make informed policy decisions. As a service manager or as a member of front-line staff, I need all types of data to deliver efficient services.

What this meant for the project:
Working with the full non-domestic rate for North Lanarkshire, then publishing the subset of open data.

It's a dataset, not a report

As a service user, I need to be able to see the full picture - not reports or filtered subsets of datasets - to create meaningful analysis.

What this meant for the project:
Publishing the full depersonalised dataset, even if FOI only requests some subsets.

"By 2017, all public authorities in Scotland should be publishing their data in a format of 3 star or above. 3 star data is data which is made available online, with an open license, in an open and machine-readable format"
Scottish Government Open Data Resource Pack, p.3

Read more:
http://5stardata.info/
Recommended Formats for Open Data (p.8)
http://bit.ly/2Gh6PqC

At least 3 stars

As a service user, I need to filter, aggregate, analyse, visualise and manipulate data without proprietary software.

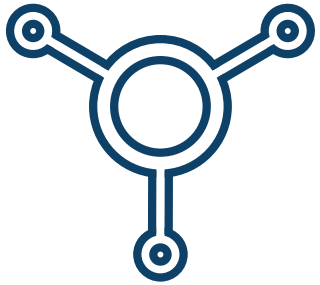
What this meant for the project:
Working with the full non-domestic rate for North Lanarkshire.

Consider the users' literacy levels

As service users, we have varying levels of digital and data literacies.

What this meant for the project:
Publishing multiple data subsets in various formats (pdf, xls, csv) alongside full datasets.

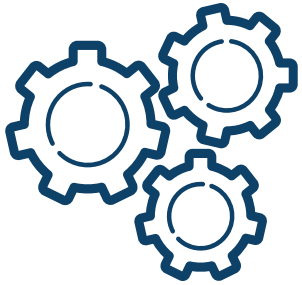
Use external sources of data



As a service manager, I need external data sources to improve our data quality, help analyse our data, or create new datasets.

What this meant for the project:
Running analysis to match the NLC data to other datasets of open, shared and closed data.

Think of metadata as a service



A service helps users do something. Metadata helps users understand the data they are using so that they can make reliable and informed decisions.

What this meant for the project:
Documenting how the new datasets are created so that internal users can easily determine and be confident that datasets contain only open data.

Learn from others

As a manager redesigning a service, I need to learn from other organisations' experiences so that I can reduce the risks incurred by my organisation and increase our chances of success.

What this meant for the project:
Looking at what other local authorities have been doing in this space.

Follow your organisation's way of doing things

As a service manager, I need to build trust in the organisation that the data-led service redesign will not create additional risks.

What this meant for the project:
The project followed the council's legal department guidance not to release sole traders and partnerships data.

Make data available

The approach chosen here is to make open and official data available internally for efficient service and informed policy decisions, as well as externally to address customers' needs.

Understand your requirements

Who are our users?

- What do we know of our users: staff, customers, citizens, businesses, data analysts, and developers?
- How confident are they at using technology and code?
- How confident are they with data and open data?
- How do they currently use the service?
- What are their main pain points and opportunities?

What are our legal obligations?

- Are there limitations on where datasets can be hosted (e.g. USA)?
- Are there limitations on the type of data that can be published (datasets that include personal data)?
- Can data sharing agreements be used to solve this problem?
- What data are we legally required to publish?

What are our resources?

- Do we have developers who have experience of installing and customising an open-source package?
- If we don't, are we able to recruit them?
- If we don't, are we able to use an external service?
- Are we looking to host the data ourselves?
- Are we looking for an off-the-shelf package?
- Do we need support getting started?

What do we need the platform to do?

Sourcing:

- How will we source the data? Do we want to upload it manually or do we want to connect it to the source systems?
- How many datasets are we considering publishing in the long-term?
- What size are our datasets?
- Do we have any real-time data that we might be able to exploit if we had the tools?

Manipulating & analysing:

- Do we need to depersonalise the data or will we do this in the source system?
- Will we need to clean the data?
- Will we connect several datasets to create new datasets?
- Will we need to connect our datasets with other datasets publicly available?

If yes to any of these questions, do we need the platform to do it or do we have in-house capabilities to manipulate large datasets easily? For reference, Companies House contains 4 millions records.

Using internally:

- Do we need the platform to share data securely for internal and partner use?
- Do we need the platform to help us clean and analyse our data?

Publishing externally:

- Do we aim to publish our data in a single place?
- What will be our process for publishing data?
- How will we update existing datasets?
- Will we push the data to data.gov.uk and the European data portal?
- Do we need to signpost users to datasets published by other organisations?

Deleting:

- What is our data retention policy?
- What will be our process to comply?

The platforms available

There are several platforms available, and making the right choice for an organisation can feel daunting. Yet, getting it right is essential for a successful project that offers a straightforward and streamlined experience, allowing users to find the information they need easily and consistently. During the project, we found three sources of confusion.

Open source vs commercial platforms

Open source platforms are attractive for organisations with limited budgets, wary of the cost of commercial platforms (also called Software as a Service or SaaS). Open source code is free and fairly straightforward to install. The most common open source platform in the UK is CKAN, maintained by the Open Knowledge Foundation. It powers http://data.gov.uk, the largest number of datasets searchable in one place in the UK, and 3rd largest in Europe. (See chapter 5 for federating data)

However, not all organisations have in-house trained staff with sufficient resources to use, customise and develop open source platforms to meet the organisation's long-term and developing needs. These organisations may need to turn to commercial companies to support their open source platforms.

Manipulating data vs publishing data

Creating, improving and depersonalising datasets to prepare them for internal use as well as open publication requires vast amounts of processing which exceeds the capabilities of the existing systems of most organisations. Publishing quality open data reliably and efficiently is key to the long-term sustainability of data-enabled services.

For example, cleaning up postal addresses might require using the Postcode Address File (PAF) which contains more than 30 million UK postal addresses and 1.8 million UK postcodes (source). Identifying limited companies reliably involves using the Companies House register which includes nearly 4 million companies at the end of December 2017 (source).

Publishing vs federating data

One of the main reasons to publish open data is to allow users to re-use data beyond the purpose for which it was originally collected.

For this, the data needs to be easy to find. Federating data is process which collects data from distinct databases without copying or transferring the original data itself. This means that all the data appears to users to be in the same place even if, in the back end, it is actually sign-posting them to the actual source.

- https://data.gov.uk is the central platform for data published by government departments and agencies, public bodies and local authorities. Most open data platforms (see chapter 4) are able to do this automatically. You might have to create an API that shares the metadata with data.gov.uk, enabling it to be searched alongside all of the other UK public data.
- In Scotland, there are options for publishing official statistics (http://statistics.gov.scot) and spatial data compliant with Inspire (https://www.spatialdata.gov.scot). There is no location where all reference data can be published or federated, so it is federated it to data.gov.uk.
- Once there, it will also be sent to the European Data Portal (https://www.europeandataportal.eu).

Further reading

https://www.europeandataportal.eu/elearning/en/module8/#/id/co-01

Open Data platform comparison

Type	Organisation	Source Code	Data Manipulation	Real-time Data Analysis	Secure Data sharing	Open Data	Prices
Open Source	You	CKAN				✓	Your costs
SaaS	Whythawk, Viderum, Zaizi, etc	CKAN				✓	G_Cloud Link
SaaS	You	DKAN				✓	Your costs
Saas	UrbanTide	USMART	✓	✓	✓	✓	G_Cloud Link
Saas	ODS	ODS	✓	✓	✓	✓	G_Cloud Link
Saas	Socrata	Socrata	✓	✓	✓	✓	G_Cloud Link
Saas	Junar	Junar				✓	?
Open Source	You	JKAN (uses Github and Heroku)				✓	Your costs
Open Source	You	Github				✓	Your costs

Prices for implementation by the majority of the providers noted above can be found by searching G-Cloud
https://www.digitalmarketplace.service.gov.uk/g-cloud

You've published, now what?

Evaluate

In the rush to finish a project, it is easy to overlook evaluation. In order to learn the lessons from a prototype and incorporate them in the wider strategy, however, evaluation is key.

The activity proposed here invites you to look at incremental improvements, focusing on what feels feasible the next time around.

Looking back at the logic model created in chapter three, select the activities, outputs and outcomes that you want to evaluate. Outcomes and long-term impact might not be visible yet. For each of them, record honestly as a team, i) what went well and ii) what was challenging. Then try to give yourself a score.

Activities, outputs or outcomes	What went well	What was challenging	Score	What could you try to do to score an extra star?
• E.g. A full depersonalised open dataset of business rates data for North Lanarkshire with the appropriate licence and in a reusable format. • Understanding the service demand for outside.	• Created an algorithm that matched the full Council dataset with other datasets enabling publication as a csv file. • Getting a good understanding of demand.	• Signing the data sharing agreement, and uploading the data to process it. Organisation names and postcode discrepancies. • Engaging with the end user of the data.	★★★★☆ ★★☆☆☆	• Schedule in-person meetings more regularly to address concerns earlier. • Develop user engagement over time.
Your turn:				

The evolution of data-enabled services

In its upcoming report "Using open data to deliver public services (2018)", the Open Data Institute (ODI) found that most open data projects fall within 3 purposes:

1. **Better access to public services**
2. **More efficient service delivery chains**
3. **More informed policy development**

The approach developed during the North Lanarkshire project was primarily designed to improve service efficiency. This gives the organisation a foundation upon which to improve access to services and informed policy development. In particular, it increases confidence that the data is reliable enough to be shared openly and used for decision making. Furthermore, the automation frees internal resources.

This toolkit focuses on this first step in this process: using and publishing data in the context of service redesign. It is beyond its scope to cover full data publication strategy or service design but, rather, invite readers to think about their possible next steps and to sign-post them to further resources.

Further reading

Using open data to deliver public services (2018) The ODI
https://theodi.org

Continue to develop service efficiencies

- Continuously measure the **cost and benefits** of the redesigned service to prove the value of the approach and argue for continued support - either internal or external. It is important to keep track of key metrics such as “datasets download” but other measures are more impactful: time and resources saved by the service redesigns, income generated, data used in strategy and policy developments.
- **Incorporate new data sources into the service** to turn the organisation into a true ‘prosumer’ of data - producing and consuming open data.
- Use machine learning to improve data quality and identify new revenue sources.
- Present the redesigned service to staff through a series of **‘Show & Tell’** to promote the approach and encourage them to identify new opportunities.
- **Reach out** to local organisations and other local authorities to promote a common approach.

Design better access to public services

- How might we deepen our **understanding of end users** - citizens and businesses? The service might have new users, such as the open data community, the press, researchers, schools, colleges and universities. What are they trying to achieve?
- How do they **become aware** of the service?
- **What is their experience** as they use the service? What do customers do after they leave our service? What pain points and barriers do they encounter in this journey?
- What do they see as highlights and benefits? What **skills** might users need to acquire to access the full benefits of the new service?
- What do staff need to do in the **back end to deliver the service?** How might we build upon this data-enable service to address the pain points and opportunities?
- How might we **share the learnings** with other organisations so that they can replicate the approach?

FOI law requires authorities to publish information and respond to requests: the "publication scheme" duty. Scottish authorities have adopted the Commissioner's Model Publication Scheme which requires them to publish a Guide to Information which includes an index of information available and how to access it.

Scottish Information Commissioner
http://bit.ly/2sFUkD9

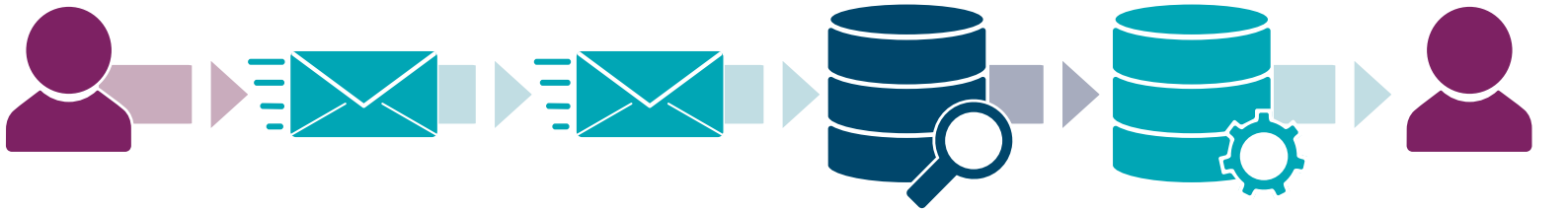
Further reading

This Is Service Design Doing, Marc Stickdorn and Markus Edgar Hormess, 2016
http://amzn.to/2F5PzoM

The Service Innovation Handbook: Action-oriented Creative Thinking Toolkit for Service Organizations, Lucy Kimbell, 2015
https://serviceinnovationhandbook.org

Example for North Lanarkshire

Original FOI process (simplified view)



Self-service model

More informed policy development

Even in the early stages of an organisation's journey into data-enabled service design, it is beneficial to focus on the long-term desired outcomes, such as enabling data-driven policy decisions.

There is also an opportunity to prototype early what they might look like and understand:

- Who the decision-makers might be - public sector workers and elected representatives
- Their motivations and what they are trying to achieve - e.g. targeting policy interventions, obtaining in-depth knowledge of the area they represent.
- How they access information and their technical and data literacies.

For the North Lanarkshire project, the sponsor's motivations were clearly articulated from the beginning. They wanted to support the development of a more transparent and business-friendly economy leading to long-term revenue increase.

Conclusion

You have reached the end of the ‘Using data in the context of service design’ toolkit. We hope that the resources, learnings and ideas have been helpful.

In this toolkit, the Snook, Urban Tide and North Lanarkshire teams have shared their experience of running a project where open data and service design go hand-in-hand. The toolkit builds on existing resources such as the Scottish Government Open Data Resource Pack and the Open Data Institute reports, training and resources.
We have shared how we designed a prototype with a single service, created and published the dataset that enables this service and how it fits in the wider picture of service redesign.

We hope to iterate this toolkit as the service matures. If you have any questions or feedback, don’t hesitate to contact us: opendatatoolkit@wearesnook.com.

Notes

Notes

wearesnook.com/opendata_servicedesign

North Lanarkshire Council

SNOOK

UrbanTide