Open Innovation in the Private and Public Sector

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We want a world where data works for everyone.

We work with companies and governments to build an open, trustworthy data ecosystem.
Our theory of change

How value is created from data
The Data Spectrum

- Small / Medium / Big data
- Personal / Commercial / Government data

**Internal access**
- Employment contract + policies
- Sales reports

**Named access**
- Explicitly assigned by contract
- Driving licences

**Group-based access**
- Via authentication
- Medical research

**Public access**
- Licence that limits use
- Twitter feed

**Open access**
- Open licence
- Bus timetable

**Access levels**
- Closed
- Shared
- Open

[theodi.org/data-spectrum](http://theodi.org/data-spectrum)
Open Innovation in the Public Sector
Public services are an important mechanism for creating positive impact.

Better use of data can help us move towards this positive impact more efficiently, and maximise its potential

Our theory of change

POSITIVE IMPACT

DETERMINE
CREATE
STEWARD
DATA
Using open data for public services
<table>
<thead>
<tr>
<th></th>
<th>Better access to public services</th>
<th>More efficient service delivery chains</th>
<th>More informed policy development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct beneficiaries</td>
<td>Citizens</td>
<td>Commissioners</td>
<td>Public sector workers</td>
</tr>
<tr>
<td></td>
<td>Businesses</td>
<td>Managers</td>
<td>Elected representatives</td>
</tr>
<tr>
<td>Decisions/actions taken</td>
<td>How and where to access public services</td>
<td>Where to prioritise operational resources</td>
<td>Where to target policy interventions</td>
</tr>
<tr>
<td>Information produced</td>
<td>Targeted service information</td>
<td>Insight and patterns</td>
<td>Data visualisations and analyses</td>
</tr>
<tr>
<td>Types of data</td>
<td>Open real-time service data</td>
<td>Open performance data</td>
<td>Open data across government</td>
</tr>
</tbody>
</table>
Impact of data enabled services

Oxfordshire Cycling Infrastructure Evaluation

Worked with community cycling groups to map cycle routes in Oxfordshire

Published a map of the data, as well as the raw data as open data

Using the map to make infrastructure investment decisions

Scaling to Buckinghamshire County Council
Common barriers to change

- **Data skills** and knowledge
- Easily accessible and **findable datasets**
- Clarity about **who is accountable** for the datasets
- **Evidence** about the value and impact of other data initiatives within the public sector
- Better **cross-department/team working**
- **Limited funding** to explore new service delivery models
- Engagement and buy-in from **senior management**
The Data and Public Services Toolkit

This toolkit aims to help people use open and shared data more effectively when designing and delivering public services.
Encourage collaborative design

Sara
Service Delivery Manager and Budget Holder
“I want to make things better but I have so little time.”

Alan
Data re-user (analyst, data scientist)
“I need data to be taken seriously.”

Chris
Chief executive with a strategic, whole organisation view
“I’ll resource open data activities if they provide strategic benefit.”

Pat
Policy officer, compliance
“We have to get data right so we can meet our obligations”

Ida
Internal advocate
“Stop talking, start doing!”

Dan
Digital Transformation Lead
“I need evidence that open data will support a better service for users”
Guidelines

1. To select a specific layout simply click the Layout button above and choose the most appropriate slide layout for your content.

2. In order to change the background colour of your slide, right click and select Change Background. Choose a colour from the theme colours embedded in the template and click Done.

3. To place an image into a slide please use one of the image templates provided right click on the placeholder image and select Replace image. Then just select the appropriate source and the image will crop into the correct size and position on the slide.

4. If you would like a certain crop of the image, double click and move the anchor points accordingly to position the image in the correct place.

For other FAQs please refer to the guidelines provided here.

Data and Public Services Business Case Canvas
The steps involved in using the Business Case Canvas
Step 1
What are the aims and needs of your service?
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What will the service do?

Who is it for? How will it help users?

How does it fit with your organisation’s goals?

What other parties are involved?
Step 2
What data do you need and from where?
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Data Ecosystem Mapping
How do we map a data ecosystem?
Mapping data ecosystems

1. map the actors
Mapping data ecosystems

2. Follow the data
Mapping data ecosystems

3. Follow the insights
Mapping data ecosystems

4. Find opportunities
Step 1: Map the actors
Plot all the people, organisations or services that are linked in some way to your service.

Step 2: Follow the data
Start with the data that could be shared or used by different actors. Draw and label to indicate what data is being shared or used.

Step 3: Follow the insights
What kind of information is being generated in your ecosystem? How are these insights being shared?

Step 4: Find opportunities
Identify any blockages and look for future opportunities.
Step 3
How does your project affect others?
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What do we know?

What are our obligations?

What are our rights?

What limitations does the data have?
Impact

- What are we trying to achieve?
- What positive impacts will there be?
- What negative impacts might there be?
- How do we minimise negative impact?
Engagement

How do we engage with people?
Is our purpose clearly communicated?
Are we as open as we can be about the project?
Should we share our data and findings?

Communicating your purpose
- Do people understand your purpose – especially people who the data is about or who are impacted by the issue?
- How have you been communicating your purpose? Has this communication been clear?
- How are you reaching more sophisticated individuals or groups Understand?

Sharing data with others
- Are you going to be sharing data with other organisations? If so, who?
- Are you planning to publish any of the data?
- Under what conditions?

Engaging with people
- How can people engage with you about the project?
- How can people correct information, appeal or request changes to the procedure/fairness?
- What action?
- Are appeal mechanisms reasonable and well understood?

Openness and transparency
- How open can you be about this project?
- Could you publish your methodology, metadata, datasets, code or impact measurements?
- Can you ask peers for feedback on the project?
- How will you communicate it internally?
- Will you publish your actions and answers to these queries openly?
Process

- What systems/training is required?
- How often and how do we review?
- What are our actions?
Step 4
What is the business plan for your service?
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Data and Public Services
Case studies
Step 5
Could your service be useful in other contexts?
Guidelines

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Who else could benefit from your approach?
Checklist: How to design to scale
Designing to scale

- Data
- Technical
- Resource
- Knowledge
- Collaboration
Public services are a small part of a much wider city ecosystem.

Organisations must work together to access, use and share data in order to create visible and trustworthy outcomes that work for their city.
Open cities
The open cities project

This project aimed to evaluate the success of open approaches in cities and demonstrate the value of openness to those currently focusing on smart
Data infrastructure

A reliable and resilient data infrastructure underpins an open and trustworthy data ecosystem.

Data infrastructure is strongest when built on a foundation of openness.
Reach out to us!

If you think our tools would be useful in your work, please use them - they’re free!

We offer two different workshops in this space:

- Getting started with the Data and Public Services Toolkit
- Open cities workshop

Email: info@theodi.org
Twitter: @ODIHQ
Getting started with the Data and Public Services Toolkit

This workshop invites a range of stakeholders from within a local authority to think about one specific service idea.

The workshop helps you to:

- discuss your service idea and needs
- explore how data is being used in your proposed service
- evaluate how this use affects citizens
- consider the practical elements of your service
- plan for openness
Open cities workshop

This workshop invites a range of stakeholders within a city to convene around one or more city-wide projects or initiatives.

The workshop helps you to:

- explore how data is being used in your city
- evaluate how this use affects citizens
- uncover new opportunities for creating positive impact
- consider your next steps
Resources

Data and Public Services

- New service delivery models research
- Data and Public Services Toolkit
- Case studies

Open Cities

- Open cities project
- Learnings from our workshops with Bristol Connected City and the City of Coventry
Open Innovation in the Private Sector
Open data means business

> Pioneering, diverse companies are using open data to create innovative products and services

> Identified and analysed 270 open data companies - companies that use, produce or invest in open data

> Companies studied had an annual turnover of over £92bn, and over 500k employees
R&D programme

To advance knowledge and expertise in how data can shape the next generation of public & private services, and create economic growth
Just 27% of British businesses are sharing data but 50% agree that increased access to data would help their business grow.
Data Toolkit for Business

Contains the following tools:

→ Data Ecosystem Mapping
→ Data Ethics Canvas
→ Data Skills Framework
→ Private Sector Data Sharing Case Studies
Data Ecosystem Mapping
Data Ethics Canvas
Data Ethics Canvas

Data sources

- Are there limitations to the data you can use, or are there biases in the data?
- Are there data that you are not able to use due to restrictions?
- Are there data that you are not able to use due to confidentiality?
- Are there data that you are not able to use due to legal restrictions?
- Are there data that you are not able to use due to ethical considerations?
- Are there data that you are not able to use due to technical limitations?

Limitations in data sources

- Are there limitations to the data you can use, or are there biases in the data?
- Are there data that you are not able to use due to restrictions?
- Are there data that you are not able to use due to confidentiality?
- Are there data that you are not able to use due to legal restrictions?
- Are there data that you are not able to use due to ethical considerations?
- Are there data that you are not able to use due to technical limitations?

Sharing data with others

- Are you sharing data with others?
- Are you sharing data with others in a way that respects their privacy?
- Are you sharing data with others in a way that respects their rights?
- Are you sharing data with others in a way that respects their confidentiality?
- Are you sharing data with others in a way that respects their legal rights?
- Are you sharing data with others in a way that respects their ethical considerations?

Ethical and legislative context

- Are you sharing data with others in a way that respects their privacy?
- Are you sharing data with others in a way that respects their rights?
- Are you sharing data with others in a way that respects their confidentiality?
- Are you sharing data with others in a way that respects their legal rights?
- Are you sharing data with others in a way that respects their ethical considerations?
- Are you sharing data with others in a way that respects their technical limitations?

Rights around data sources

- Are you sharing data with others in a way that respects their privacy?
- Are you sharing data with others in a way that respects their rights?
- Are you sharing data with others in a way that respects their confidentiality?
- Are you sharing data with others in a way that respects their legal rights?
- Are you sharing data with others in a way that respects their ethical considerations?
- Are you sharing data with others in a way that respects their technical limitations?

Your reason for using data

- What is your reason for using data?
- Are you using data for a legitimate purpose?
- Are you using data for a legitimate purpose?
- Are you using data for a legitimate purpose?
- Are you using data for a legitimate purpose?
- Are you using data for a legitimate purpose?

Communicating your purpose

- What is your purpose for using data?
- Are you communicating your purpose to others?
- Are you communicating your purpose to others in a way that respects their privacy?
- Are you communicating your purpose to others in a way that respects their rights?
- Are you communicating your purpose to others in a way that respects their confidentiality?
- Are you communicating your purpose to others in a way that respects their legal rights?

Positive effects on people

- Are you benefiting people?
- Are you benefiting people in a way that respects their privacy?
- Are you benefiting people in a way that respects their rights?
- Are you benefiting people in a way that respects their confidentiality?
- Are you benefiting people in a way that respects their legal rights?
- Are you benefiting people in a way that respects their ethical considerations?

Negative effects on people

- Are you benefiting people?
- Are you benefiting people in a way that respects their privacy?
- Are you benefiting people in a way that respects their rights?
- Are you benefiting people in a way that respects their confidentiality?
- Are you benefiting people in a way that respects their legal rights?
- Are you benefiting people in a way that respects their ethical considerations?

Minimising negative impact

- Are you benefiting people?
- Are you benefiting people in a way that respects their privacy?
- Are you benefiting people in a way that respects their rights?
- Are you benefiting people in a way that respects their confidentiality?
- Are you benefiting people in a way that respects their legal rights?
- Are you benefiting people in a way that respects their ethical considerations?

Engaging with people

- How are you engaging with people?
- Are you engaging with people in a way that respects their privacy?
- Are you engaging with people in a way that respects their rights?
- Are you engaging with people in a way that respects their confidentiality?
- Are you engaging with people in a way that respects their legal rights?
- Are you engaging with people in a way that respects their ethical considerations?

Openness and transparency

- Are you being open and transparent about your data?
- Are you being open and transparent about your data in a way that respects their privacy?
- Are you being open and transparent about your data in a way that respects their rights?
- Are you being open and transparent about your data in a way that respects their confidentiality?
- Are you being open and transparent about your data in a way that respects their legal rights?
- Are you being open and transparent about your data in a way that respects their ethical considerations?

Ongoing implementation

- Are you implementing your data in a way that respects their privacy?
- Are you implementing your data in a way that respects their rights?
- Are you implementing your data in a way that respects their confidentiality?
- Are you implementing your data in a way that respects their legal rights?
- Are you implementing your data in a way that respects their ethical considerations?
- Are you implementing your data in a way that respects their technical limitations?

Reviews and iterations

- Are you reviewing and iterating your data?
- Are you reviewing and iterating your data in a way that respects their privacy?
- Are you reviewing and iterating your data in a way that respects their rights?
- Are you reviewing and iterating your data in a way that respects their confidentiality?
- Are you reviewing and iterating your data in a way that respects their legal rights?
- Are you reviewing and iterating your data in a way that respects their ethical considerations?

Your actions

- Are you taking actions to ensure that your data is being used in a way that respects their privacy?
- Are you taking actions to ensure that your data is being used in a way that respects their rights?
- Are you taking actions to ensure that your data is being used in a way that respects their confidentiality?
- Are you taking actions to ensure that your data is being used in a way that respects their legal rights?
- Are you taking actions to ensure that your data is being used in a way that respects their ethical considerations?
- Are you taking actions to ensure that your data is being used in a way that respects their technical limitations?
Open innovation

Increasing access to data with third-parties, to help address a specific business challenge.
Data Pitch is a pioneering programme in open innovation

Data user OBUU collaborated with Greiner, a plastic packaging manufacturer

OBUU utilised data from Greiner’s production plants to find supply chain efficiencies

Lowering costs through open innovation
35% Greiner’s reduction in fixed asset investment

Innovation

All Data Pitch data providers interviewed saw themselves participating in open innovation in the future.
Supply chain optimisation

Increasing access to data to improve supply chain activities.
Mapping data ecosystems

map the actors

“What role does your organisation play?”

“Who are your customers, suppliers and partners?”

“Where does data innovation take place in the ecosystem?”
“What data does your business use or share? What about other businesses?”

“How is data shared? (eg via downloads, APIs, portals…”

“Who is funding what? What services are being provided?”
“What insights and advice does my business use and need?”

“How is intangible value shared? (apps, email, etc.)”

“What networks are your business and others connected to?”
Mapping data ecosystems find opportunities

“Are there blockers in data access, or inefficiencies?”

“What data is your service missing?”

“Are there a lack of data standards?”
Airbus APROCONE platform

> APROCONE reduced the time spent on some processes from weeks to hours

> Commercial frameworks in development enable organisations to control IP to promote trust in data sharing

> Enables new technology providers and research organisations to get involved in Airbus’ supply chain
Benchmarking and insights

Increasing access to data to gain insights from the market that inform business decisions
Impact

Your reason for using data
- What is your primary purpose for collecting and using data in this project?
- What are your main use cases? What is your business model?
- Are you making things better for society? How and for whom?
- Are you modifying another product or service as a result of this project?

Positive effects on people
- Which individuals, groups, demographics or organisations will be positively affected by this project? How?
- How are you measuring and communicating positive impact? How could you increase it?

Negative effects on people
- Who could be negatively affected by this project?
- Could the way that data is collected, used or shared cause harm or expose individuals to risk of being re-identified? Could it be used to target, profile or prejudice people, or unfairly restrict access (by exclusive arrangements)?
- How will you identify and engage with the people who are affected by your data?

Minimising negative impact
- What steps can you take to minimise harm?
- How would you ensure any limitations in your data usage? How are you keeping personal and other sensitive information secure?
- How are you measuring, reporting and acting on potential negative impacts of your project?

What are we trying to achieve?
- What positive impacts will there be?
- What negative impacts might there be?
- How do we minimise negative impact?
HiLo Maritime Risk Management

- Data providers in the shipping industry share incident data to HiLo
- HiLo analyse the data and provide safety recommendations
- Insights are shared at both an individual benchmarked level and as an industry aggregate
65% Fewer engine room fires

72% Reduction in lifeboat accidents

25% Reduction in bunker spills
Improving market reach

Increasing access to data to promote products and services to a wider range of customers
The Data Spectrum

- **Closed**
  - Internal access
    - Employment contract + policies
    - Sales reports
  - Named access
    - Explicitly assigned by contract
    - Driving licences
  - Group-based access
    - Via authentication
    - Medical research
  - Public access
    - Licence that limits use
    - Twitter feed
  - Opportunity data

- **Open**
  - Anyone
    - Open licence
    - Bus timetable

TheODI.org/data-spectrum

Small / Medium / Big data
Personal / Commercial / Government data
Everyone Active sharing through OpenActive

> OpenActive is a community-led initiative setting standards for open data use in the leisure industry to help people get active

> Everyone Active publish open “opportunity” data through OpenActive

> Everyone Active has so far seen an increase in customers from its partnership with MoveGB
95% Had never been members before

36% First time using the service

11,500 Additional customers through one partnership
Addressing sector challenges

Increasing access to data to grow a new sector or overcome collective challenges in a mature sector.
Addressing sector challenges
Open Climate Fix &
PassivSystems
Let’s work together to make a more open and trustworthy data ecosystem

We produce free tools and guides to help you to manage, publish and use data.

We’ve researched and developed these tools ourselves with input from the wider community. If you’d like to offer us feedback or help us further develop the tools, please get in touch.

Toolkits for the public and private sectors

Data Toolkit for Business

The ODI’s Data Toolkit for Business is a set of collaborative tools that will help businesses unlock the value of data.

Data and Public Services Toolkit

This toolkit will help people designing and delivering public services to use data more effectively to improve their work.
Thanks for coming!

Data and Public Services Toolkit

Data Toolkit for Business

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Data Sharing in the Private Sector

- Data Toolkit for Business
- Sharing data to create value in the private sector report
- Case studies