

The Data Ecosystem Mapping tool is for anyone who wants to understand and visualise a data ecosystem. It aims to help you map the actors, data infrastructure and value exchange across a data ecosystem, so it can be communicated and improved.

## What is a data ecosystem map?

A data ecosystem map illustrates the different actors in a data ecosystem, and how value is exchanged across it.

A data ecosystem consists of data infrastructure, and the people, communities and organisations that benefit from the value created by it.

Data infrastructure is made up of data assets, standards, technologies, policies and the organisations that steward and contribute to them.

## Why use this tool?

Creating a data ecosystem map helps to understand how data creates value.

It identifies the data, data stewards and data users; the different roles they play; and the relationships between them.

You can use your map as a practical tool to plan and visualise a data ecosystem, or show opportunities for increasing value to particular parts of a data ecosystem.

A data ecosystem map can be used to:

- > **Collaborate** directly with other stakeholders for organisational/ecosystem change
- > **Explore** new sources of data to improve internal operations
- > **Exploit** existing data flows to drive new services or improve existing services
- > **Inform** a project to build a data-enabled service
- > **Identify** where changes are needed, and what effects they might have

The mapping process prompts you to consider different actors, relationships and ideas in the ecosystem, and can generate useful insights and talking points.

## How to use this tool

### Materials

You will need a large sheet of paper (ideally A1 size) or a whiteboard. Use sticky notes and coloured pencils or pens.

### Method

Using the instructions on p2 and p3, draw your map onto your paper or whiteboard.

You can either work on your own, or in a group with other actors in the data ecosystem. It may be useful to use a workshop setting with a facilitator.

Ideally, you will spend one to two hours drafting the ecosystem map, and gather two or three rounds of feedback afterwards to ensure a shared understanding of the data ecosystem.

Once you are happy with your draft map, take a photograph for reference.

Background information and further resources can be found at: [theodi.org/mapping-data-ecosystems](http://theodi.org/mapping-data-ecosystems)

## What next?

You can use your data ecosystem map to communicate the shared understanding of the actors and value exchanges in a data ecosystem.

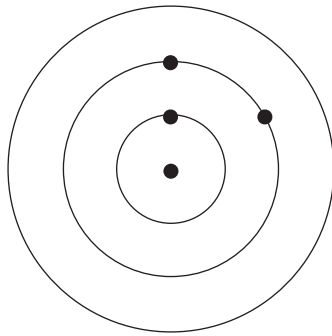
Drafting the map will reveal where the data ecosystem could be optimised and will help to communicate these opportunities.

You can also photograph your map and share it on social media using #OurDataEcosystem.

You could also recreate your map using mapping visualisation software.

## 1. Map the actors

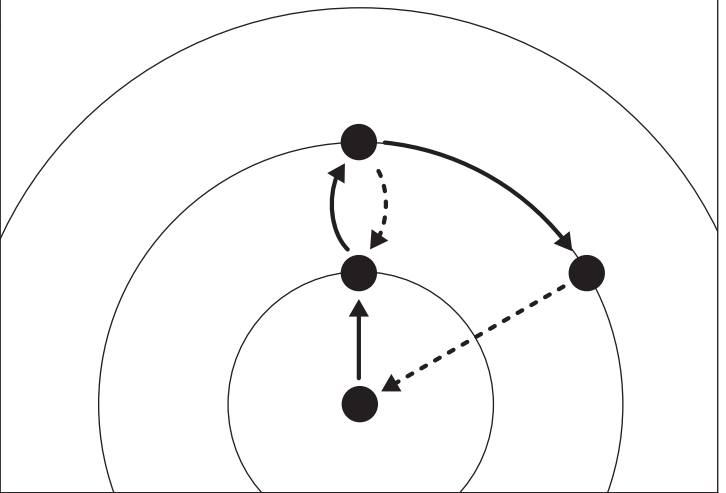
Draw three circles using a whiteboard or a large piece of paper. Plot all the people, organisations or services that are linked in some way to the data. You may want to map the ecosystem around you and your role, or around an organisation that holds a specific dataset, or a specific use-case of the data.



## 3. Map the 'soft' value exchanges

Data supports decision-making with insight and knowledge. Organisations can support each other with advice or feedback.

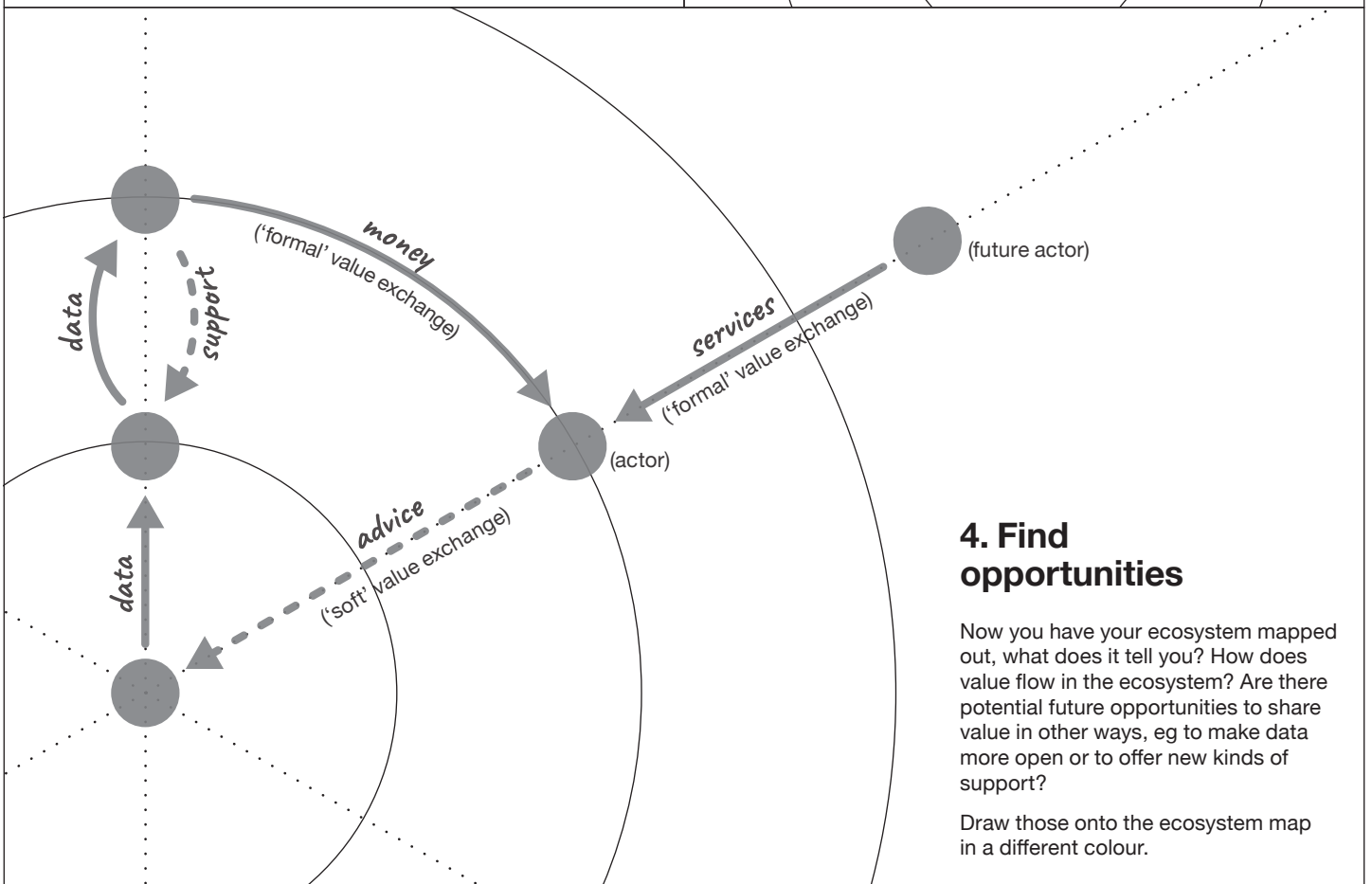
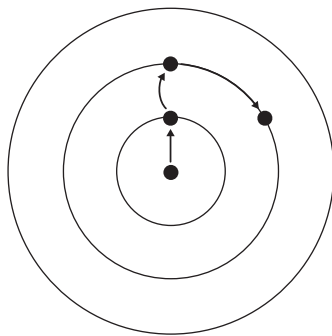
Add these less tangible types of value exchange to your map. It will help you understand more about the connections and relationships between organisations. We suggest using different dotted lines to distinguish them.



## 2. Map the 'formal' value exchanges

Start with the data: draw lines and add labels to indicate what data is being shared or used, and by whom. Add arrows to show direction.

Think of other types of exchange. Add additional arrows for each of these to populate your map.



## 4. Find opportunities

Now you have your ecosystem mapped out, what does it tell you? How does value flow in the ecosystem? Are there potential future opportunities to share value in other ways, eg to make data more open or to offer new kinds of support?

Draw those onto the ecosystem map in a different colour.

## 1. Map the actors

Below are examples of the types of actors you should consider.

### Data stewards

Who is responsible for collecting, managing or ensuring access to a dataset?

### Beneficiaries

People or organisations that benefit from the data ecosystem because it enables them to make decisions.

### Contributors

The people who contribute to the dataset, either knowingly or unknowingly through use of a service.

### Intermediaries

What services add value to a dataset? Are there groups that aggregate data in the ecosystem?

### Creators (or data users)

Who uses the data to create things?

These could be products, services, analyses, insights, stories or visualisations.

### Regulators

Those who create and enforce regulatory frameworks.

### Policymakers

Those who create policies, principles and measures.

● Actor

## 2. Map the 'formal' value exchanges

Below are examples of 'formal' value exchanges you could add to your map.

### Data

Which datasets you are mapping? What is the source?

### Reports and documents

Are there relevant reports and documents that support the data ecosystem?

### Physical goods

Are there physical goods associated with the data ecosystem?

### Services

What services are relevant to the data ecosystem? Eg transport, bank accounts etc.

### Money

Are there fees or charges related to the data and its storage or sharing?

### Certificates

What certification relates to the data ecosystem? Eg data licences, operating licences or safety certificates.

→ 'Formal' value

## 3. Map the 'soft' value exchanges

Below are some examples of 'soft' value exchanges to consider.

### Insights

The insight gained from the data ecosystem, eg when to travel, or how to assign budget.

### Knowledge

Are there knowledge networks that would be useful to note?

### Support

What support is required to help maintain the data infrastructure? This could be financial or structural.

### Feedback

What feedback mechanisms are used within the data ecosystem?

### Advice

What advice do actors within the ecosystem provide?

### Network

Is there a wider network associated with the data ecosystem?

### Policy

What policies relate to the data or other assets within the data ecosystem?

----> 'Soft' value

## 4. Find opportunities

Below are some potential future opportunities you could consider.

### Improving data flow

What methods could be used to improve data flows between actors in an ecosystem?

### Identifying impacts

What are the impacts of changing how data is accessed, used and shared?

### Creating new benefits

Which potential users and communities could benefit from new data infrastructure in a sector?

### Creating new standards

Where could data standards add value and bring clarity to the ecosystem?

*Tip: standards.theodi.org has a helpful guide.*

### Finding new stakeholders

Which new stakeholders should be involved? Eg people or organisations who would be needed to help create a new data standard.

● Future actor  
 → Future 'formal' value  
 ----> Future 'soft' value