



European  
Commission

# Assessment of economic opportunities and barriers related to location information in the context of the Digital Single Market

## Webinar on Study Findings

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WAVESTONE

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## **01 Introduction**

02 Study Overview

03 Main findings

04 Policy Recommendations

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# Introduction

WEBINAR OBJECTIVES



## Explain

To explain the **study objectives**, methodological **approach** taken and the selected five **cases studies**.

## Present

To **present the main findings** of the study in terms of the context of geospatial data use, value created, identified barriers and opportunities, and **policy recommendations of the study**.

## Discuss

To **discuss and brainstorm** any questions raised by the audience.



# Agenda



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# Study Overview

STUDY OBJECTIVES



## Analyse

Existing geospatial data ecosystems across Europe



## Assess

Economic opportunities and barriers on the re-use of geospatial data for creation of products and services



## Propose

Recommendations for policy makers on how to improve the sharing and re-use of geospatial data in Europe

# Study Overview

## RESEARCH QUESTIONS



**RQ1.** How and in what context do public and private organisations **create value** from geospatial data and the delivery of geospatial data based products and services?



**RQ2.** Who are the **main actors** involved in the processes of creating value from geospatial data and the delivery of geospatial data based products and services?



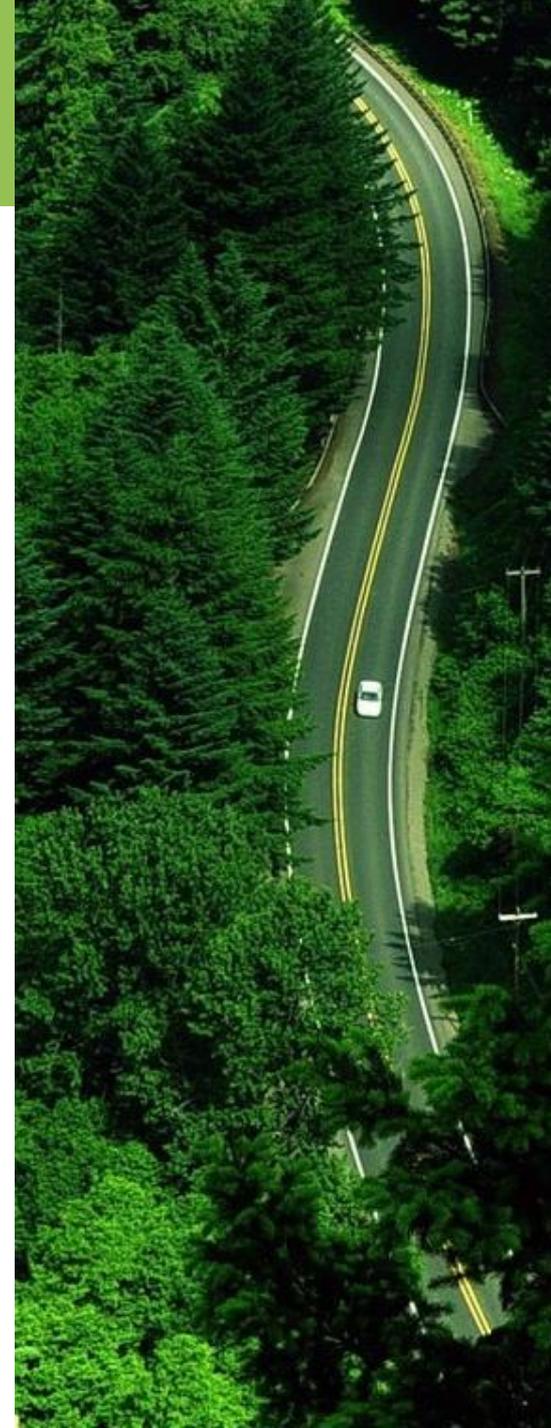
**RQ3.** What are the **main opportunities** that can be found through a more extensive use of geospatial data and the delivery of geospatial data based products and services?



**RQ4.** What are the **main barriers** that limit the access and the re-use of geospatial information, held either by a public or private organisation, by potential users?



**RQ5.** What are the **most important actions that the policy makers** on European and Member States' level should take to improve use of geospatial data and the delivery of geospatial data based products and services?



# Study Overview

POLICY BACKGROUND



Digital  
Single  
Market

The study should be seen in the context of the third pillar of the Digital Single Market Strategy – Economy & Society.

Building  
European  
Data  
Economy

There is a need to implement standards and ensure interoperability, as well as address barriers in the European Data Economy.

Tallinn  
Declaration

There is an increased commitment in the Member States to implement the main eGovernment principles.

# Study Overview

STUDY METHODOLOGY



## Phase 1 Study Initiation

- Together with the JRC team, putting together a **selection criteria to identify the long list of case studies**;
- Identification of more than **50 preliminary case studies based on the selection criteria**;
- Selection of the final **six case studies**;
- Preliminary assessment of the main actors participating to the geospatial ecosystem based on the selected case studies.



## Phase 2 Primary data collection

- Conducting **16 interviews** with the identified actors in the case studies;
- Identification of the **main actors** involved in the geospatial data ecosystem in Europe;
- Identification of **barriers related to sharing and re-use of geospatial data** in Europe;
- Identification of **opportunities associated with wider re-use of geospatial data** in Europe.



## Phase 3 Data analysis and reporting

- Analysis of the primary and secondary data collected;
- Presentation of **main findings and conclusions** in terms of geospatial data ecosystem, value created through the use of geospatial data and the identified barriers and opportunities;
- Proposal of **policy recommendations** for EU and national policy makers.

# Study Overview

THE 6 CASE STUDIES



## **PDOK - Public Services on the Map (NL)**

PDOK is a central platform for storing and sharing Dutch open geospatial data in a single repository allowing users to browse and download the necessary data.



## **The FOODIE Project (DE, CZ, PL, LV, ES, IT)**

Foodie aimed at building an open and interoperable agricultural platform hub on the cloud for the management and exchange of geospatial and non-geospatial data.



## **Danish Basic Data Programme (DK)**

The programme aims for all the basic information that public authorities collect to be described using the same standards and be available freely for re-use.



## **Smart Open Data Portugal-Spain Pilot (ES, PT)**

The pilot focused on building a web based collaborative spatial data infrastructure prototype with the main goal of promoting sustainable agroforestry management.



## **Innovate UK (UK)**

Three cases studies related to the use of geospatial data were chosen from UK's governmental funding programme: Future City Glasgow, Manchester CityVerve and Building Data Exchange.



## **EULF Transportation Pilot (NO, SE)**

The pilot demonstrated the benefit adopting a TN-ITS protocol for the exchange of road safety data between road authorities and commercial mapping providers.

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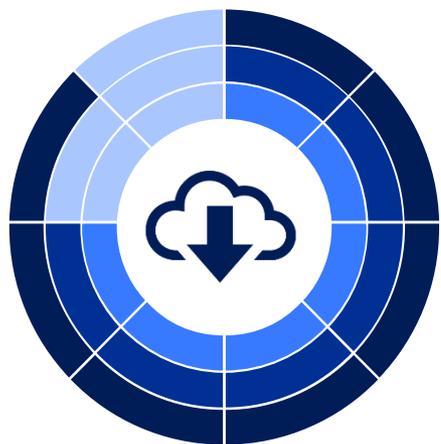
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# Main Findings

CONTEXT OF GEOSPATIAL DATA USE



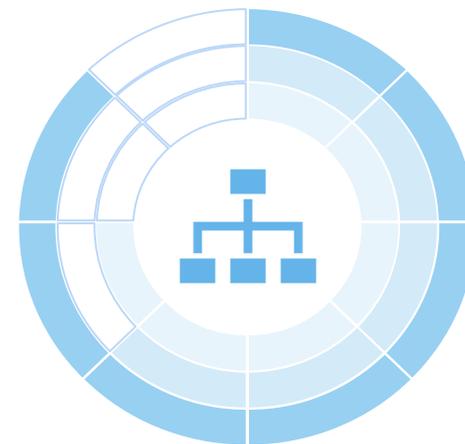
## Geoportals

Geospatial data is collected from various public agencies and national registries, processed according to a common data model and distributed to end users via direct downloads and web services.



## Platforms

Platforms bring together different type of users and data providers, allowing them to interact by exchanging data, uploading their data products, accessing support tools and downloading data sets.



## Integrated & linked with other data types

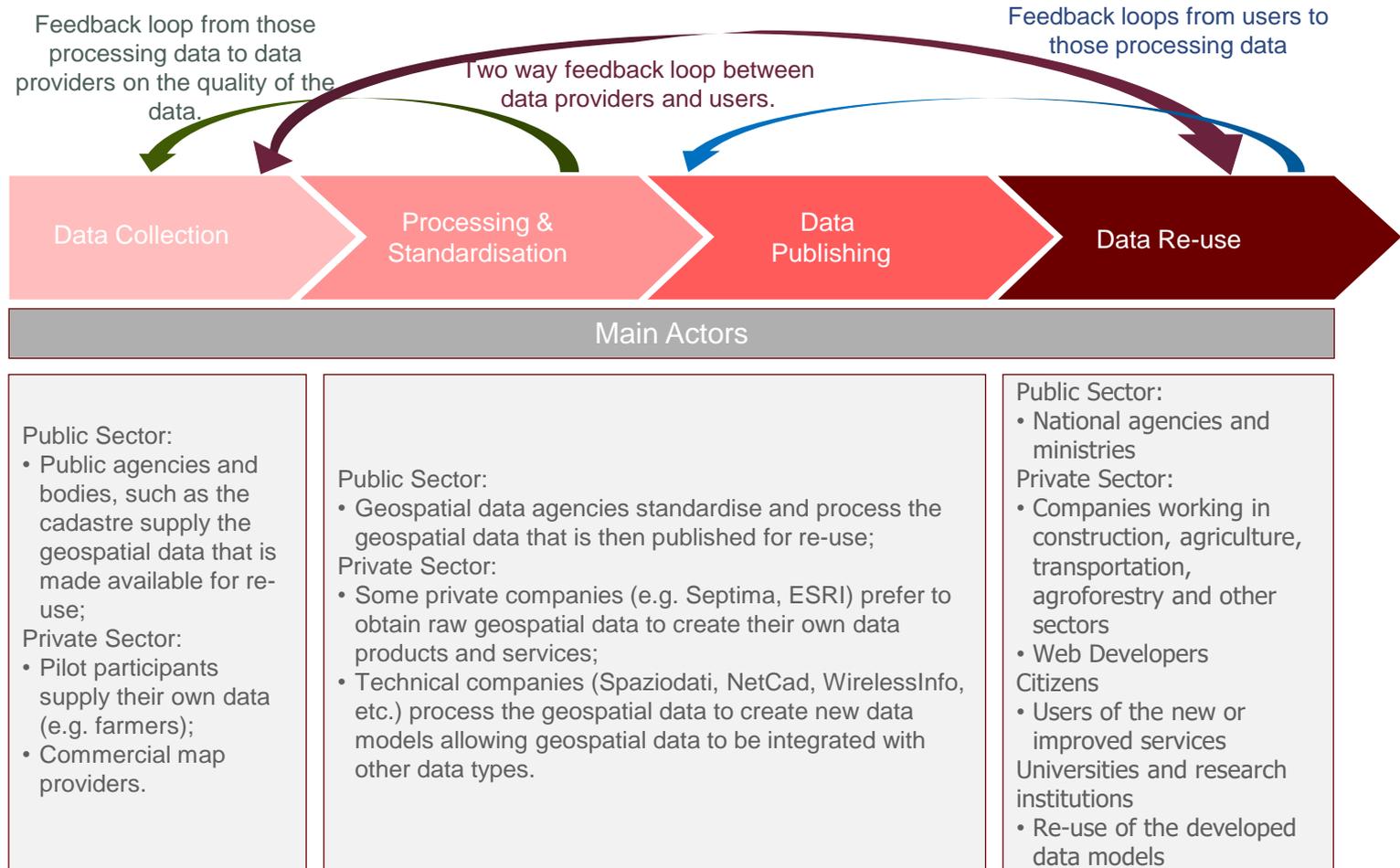
Geospatial data is often integrated and linked with other types of data to create innovative services and products for citizens, businesses and public administrations.

# Main Findings

## CONTEXT OF GEOSPATIAL DATA USE



- Despite a variety of geospatial data applications identified in the case studies, similar actor groups participate in the main stages of the geospatial data ecosystem.



# Main Findings

VALUE CREATED



## Public Sector

- Creation of tools and services that help public administrations provide **new, better** and **more efficient** public services;
- Improved **cross border administrative cooperation** thanks to the creation of common data infrastructures.



## Private Sector

- Re-use of open geospatial data fosters **innovation** and creation of **new products and services** by businesses as well as leads to the creation of new ones;
- Open geospatial data generates new revenue for the private sector, hence creating **economic growth**.

## Citizens

- Citizens benefit from **better public services** and increased engagement with the public sector;
- Open geospatial data allows citizens to benefit from **cheaper** and **more innovative** goods and services created by the private sector;
- Increased **safety** and **wellbeing** through the consumption of public services optimised by the use of geospatial data.

# Main Findings

## IDENTIFIED BARRIERS



### Barriers to geospatial data use

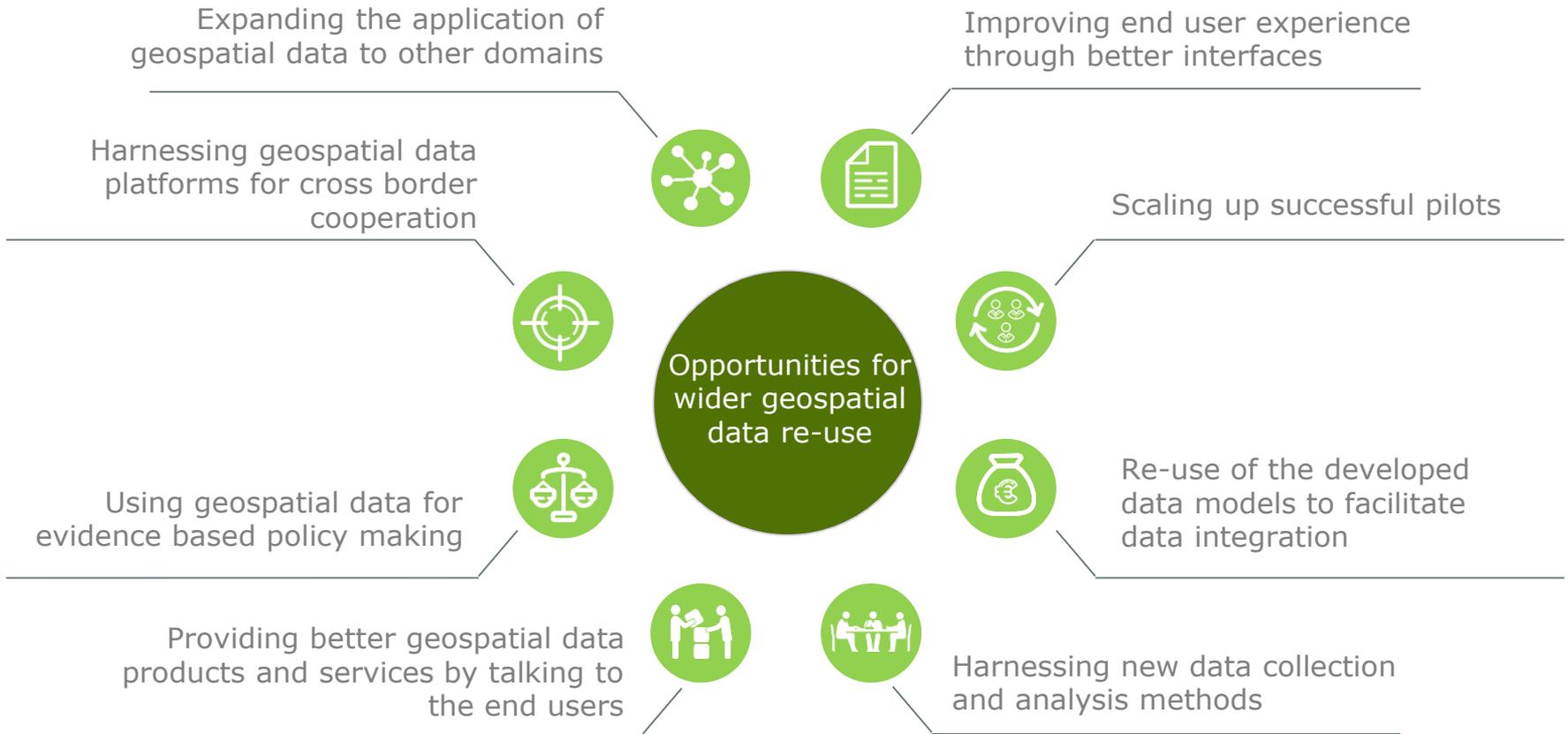
- ✘ Difficulties of cooperation (organisational constraints, silos within public agencies)
- ✘ Access to reliable and sustainable data in the right format
- ✘ Financial constraints
- ✘ Need for heavy infrastructure to process the geospatial data
- ✘ Lack of legal clarity
- ✘ Lack of communication with the private sector and end users
- ✘ Lack of awareness of the existence of open geospatial data and its benefits
- ✘ Difficulty of integrating and linking geospatial data sets with other data types

### Identified enablers

- ✔ Access to EU and government funding
- ✔ Technological enablers
- ✔ Organisational enablers (Memorandum of understanding, clear definition of roles and complementary project partner skills)
- ✔ Value adding private sector actors (geospatial data promotion, processing and standardisation)
- ✔ Geospatial data knowledge and lessons learnt from previous projects
- ✔ Cooperation with end users
- ✔ Awareness of the importance of open data
- ✔ Legislation fostering or mandating data sharing

# Main Findings

IDENTIFIED OPPORTUNITIES



# Agenda



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1

## Continue promoting the implementation of the INSPIRE Directive

The European Commission and responsible national bodies should invest in efforts **to promote the implementation of the INSPIRE Directive**, promoting its associated benefits to specific stakeholder groups.

2

## Continue promoting the use of interoperable INSPIRE based specifications

The Commission should continue promoting the **development of INSPIRE based specifications**, including INSPIRE data models and their extensions. It should also **support the re-use of the already developed data models built from INSPIRE**. Finally, the use of INSPIRE based specifications whenever a new European initiative requires the use of geospatial data or integrating any other kind of data with geospatial data, should be promoted.

3

## Facilitate access to funding of initiatives aiming to increase interoperability of geospatial data, products and services

The Commission should fund the initiatives that focus on **data management (including geospatial data)** and those that aim to **increase the interoperability of geospatial data, its products and services**. Where funding is already available, the Commission can support business by providing information and user friendly guidelines on how to access the correct funding opportunities.

4

## Ensure transparency regarding the re-use of geospatial data across the EU

In light of the review of the PSI Directive, the EU should encourage Member States to **open up their public data** in a user friendly way by **making use of APIs and platforms**; the **standardisation of reporting practices** across the EU; the **availability for re-use of data generated in the context of the provision of a public task** by publicly owned companies or by independent economic operators.



5

## Support the creation of a harmonised licensing framework for geospatial data

The European Commission, in close cooperation with the Member States, should facilitate the creation of and promote a **clear and harmonised licensing framework** for geospatial data in the EU.

6

## Support the adoption of the emerging technologies into the geospatial data ecosystem

The European Commission and national governments, in close cooperation with the private sector, should work together to **prepare for the smooth integration of the emerging technologies into the geospatial data ecosystem.**

7

## Ensure a user centric approach when opening up geospatial data

It is crucial that national governments and other responsible public sector agencies, when standardising and opening up geospatial data, **consult with the users of the data.** This would help the public sector to **better understand users' needs** in terms of data products and services, hence overcoming the lack of 'geospatial data literacy' among users and helping them to better plan ahead.

8

## Perform an assessment of the value created by (open) geospatial data

In order to overcome political barriers and silos, ex-ante, interim and ex-post cost-benefit **assessments of the value of geospatial data could be performed.** It could serve as a tool for responsible public sector agencies to supporting the use of geospatial data and raising the awareness of its expected benefits.

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## **05 Q & A**

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# Any questions?



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# Project Team



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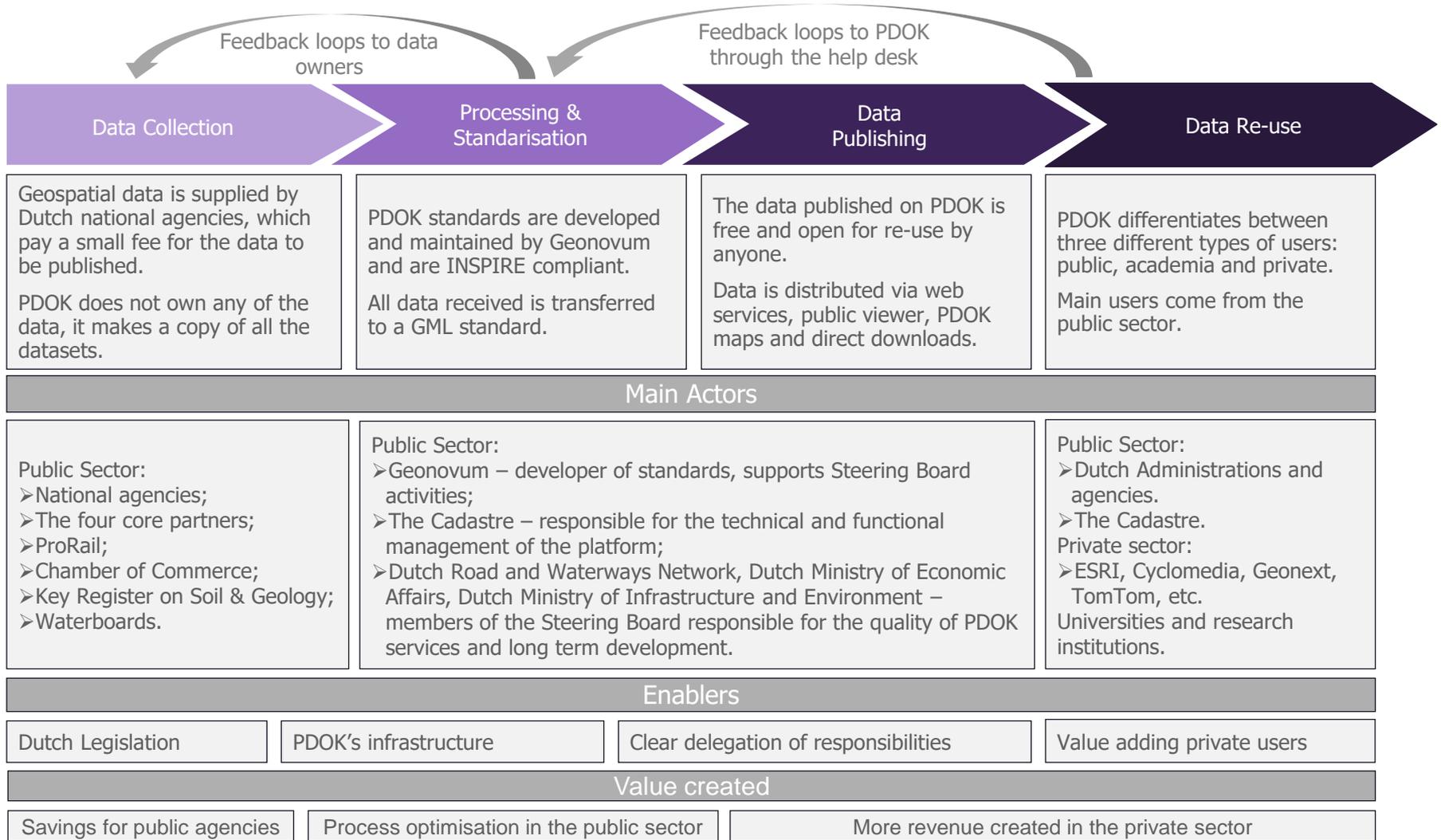
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# Supporting Material

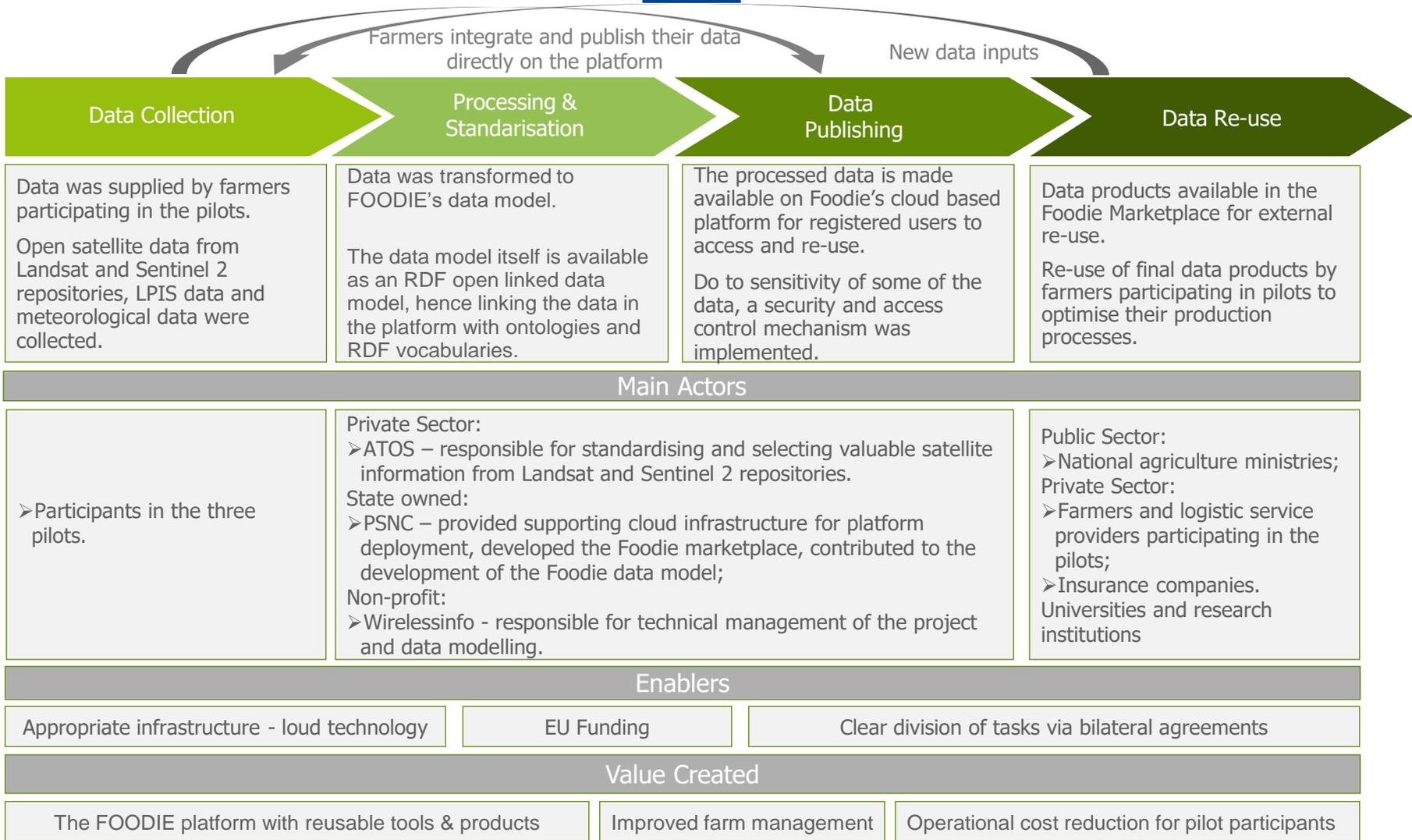
THE 6 CASE STUDIES: PDOK



Source: In-depth analysis of PDOK case study based on interviews and desk research.

# Supporting Material

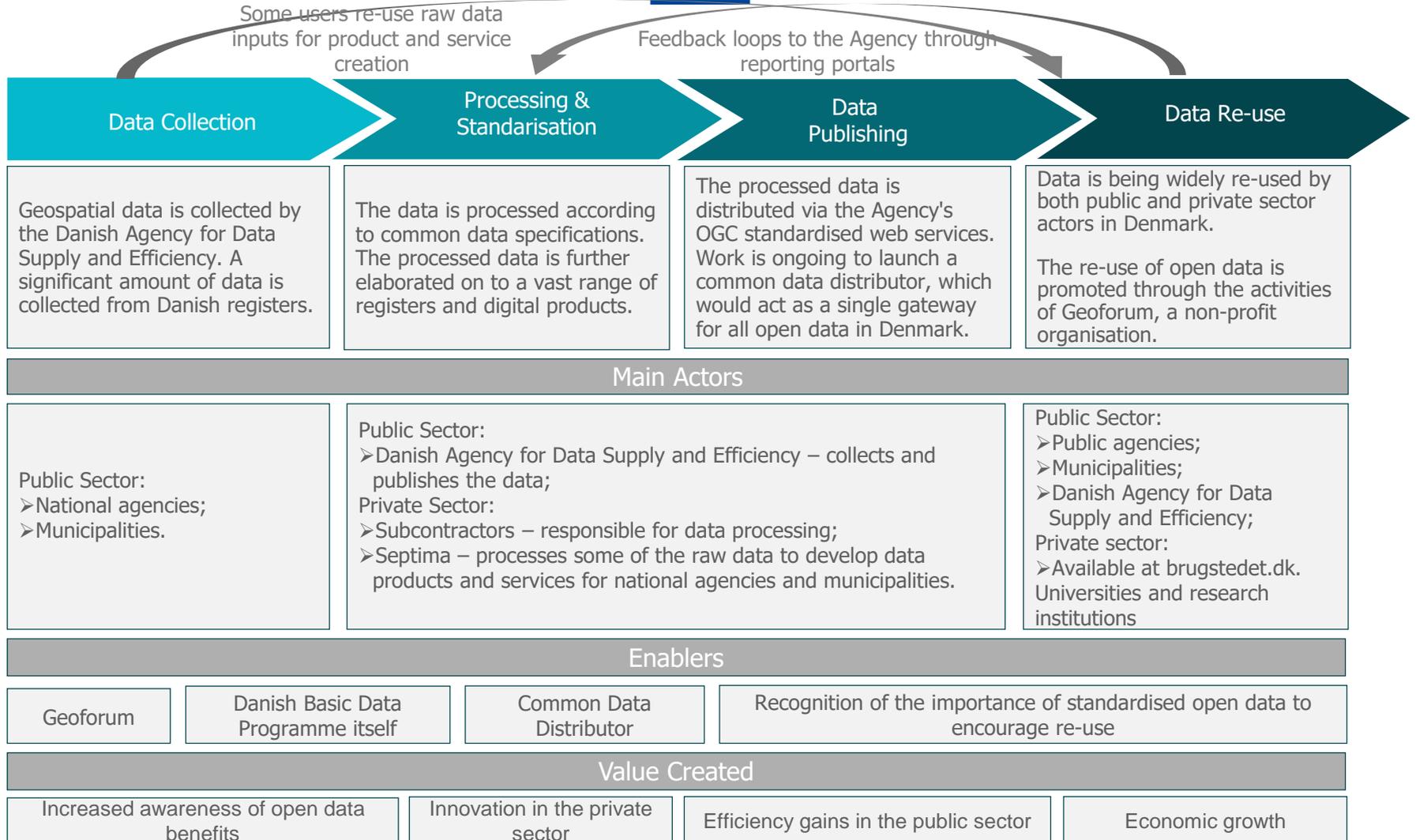
THE 6 CASE STUDIES: **FOODIE PROJECT**



Source: In-depth analysis of the FOODIE case study based on interviews and desk research.

# Supporting Material

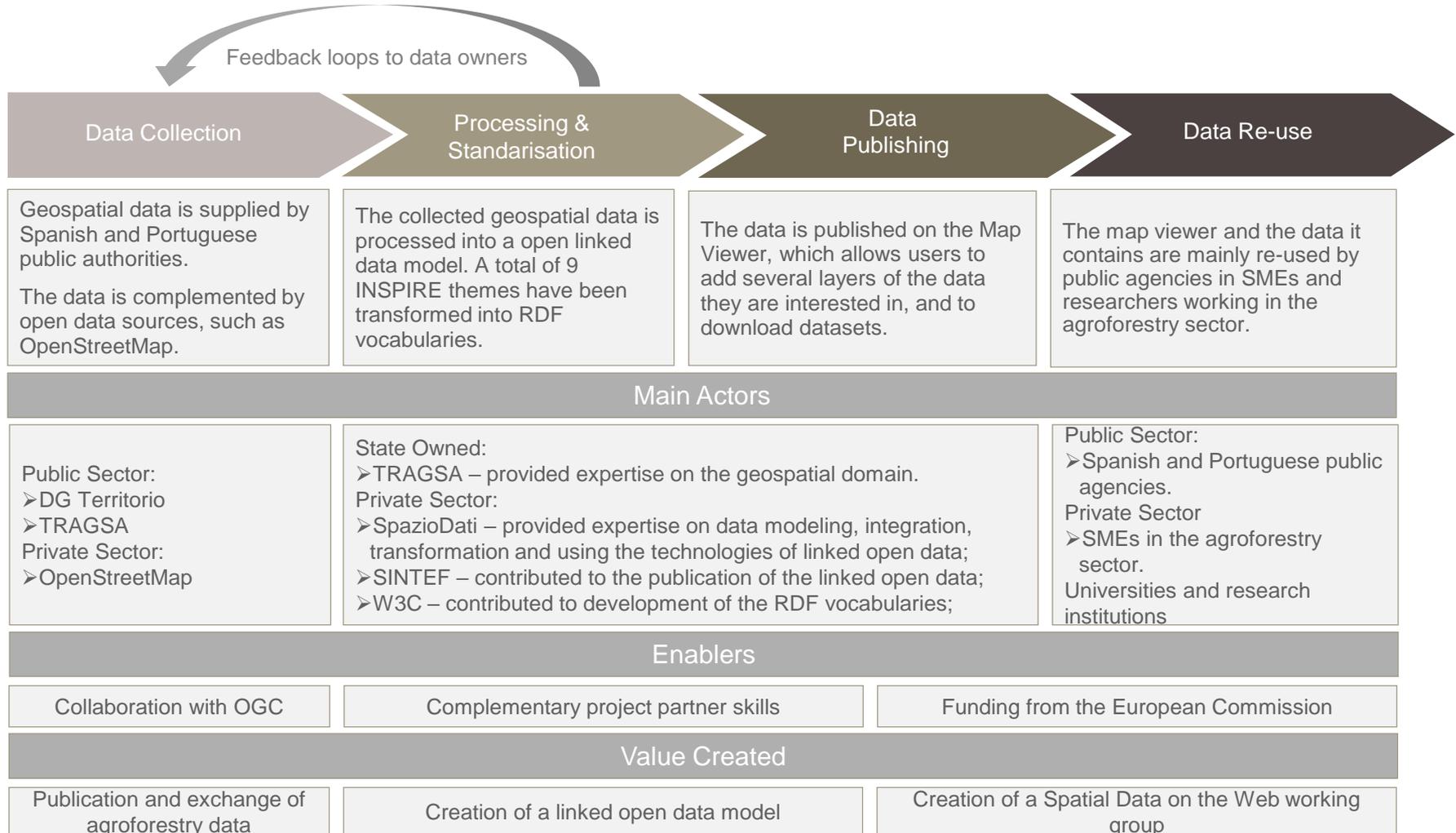
THE 6 CASE STUDIES: DANISH BASIC DATA PROGRAMME



Source: In-depth analysis of the Danish Basic Data Programme case study based on interviews and desk research.

# Supporting Material

THE 6 CASE STUDIES: PORTUGAL-SPAIN SMART OPEN DATA PILOT



# Supporting Material

THE 6 CASE STUDIES: INNOVATE UK



## Building Data Exchange



Thanks to Innovate UK, the Building Data Exchange team built a platform that allows built environment experts access building quality data from over 100 buildings across UK.

## Future City Glasgow



Glasgow City Council received a multimillion euro grant from Innovate UK to realise the first Future City initiative. The project involved numerous demonstrators making use of geospatial data.

## Manchester City Verve Project



The focus of the Manchester CityVerve project was on using internet of things technology to create a Future City.



# Supporting Material

THE 6 CASE STUDIES: INNOVATE UK



<p>The geospatial data used for the project was supplied by Ordnance Survey. Additional data was also collected from the sensors in different Future City demonstrators.</p>	<p>The collected data was processed in a way to make it easier to re-use by web developers and integrate with other types of data.</p>	<p>The processed data was published either as open data sets available for re-use, open maps or mobile applications.</p>	<p>Data services and products produced by the Future City Glasgow are open and free for anyone to re-use.</p>
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## Main Actors

<p>Public Agency:          &gt;Ordnance Survey          From the developed demonstrators</p>	<p>Public sector:          &gt;Glasgow Council – the data scientists from the city Council were responsible for processing and publishing the data supplied by Ordnance survey and collected through demonstrators.          Universities and Research Institutes          &gt;University of Aberdeen and University of Glasgow contributed to the development of data models and Future City demonstrators.</p>	<p>Public Sector:          &gt;Glasgow City Council;          Private Sector:          &gt;Private project partners;          &gt;Web developers;          Citizens          &gt;Users and evaluators of developed demonstrators.          Universities and research institutions</p>
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## Enablers

<p>Innovate UK funding</p>	<p>Recognition of the importance of open data for economic growth and wellbeing</p>	<p>Close collaboration with Ordnance Survey to obtain the data</p>
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## Value Created

<p>Savings for the public sector</p>	<p>Raising citizen awareness about their energy consumption</p>	<p>Revenue increase for the private sector</p>	<p>Better city experience</p>
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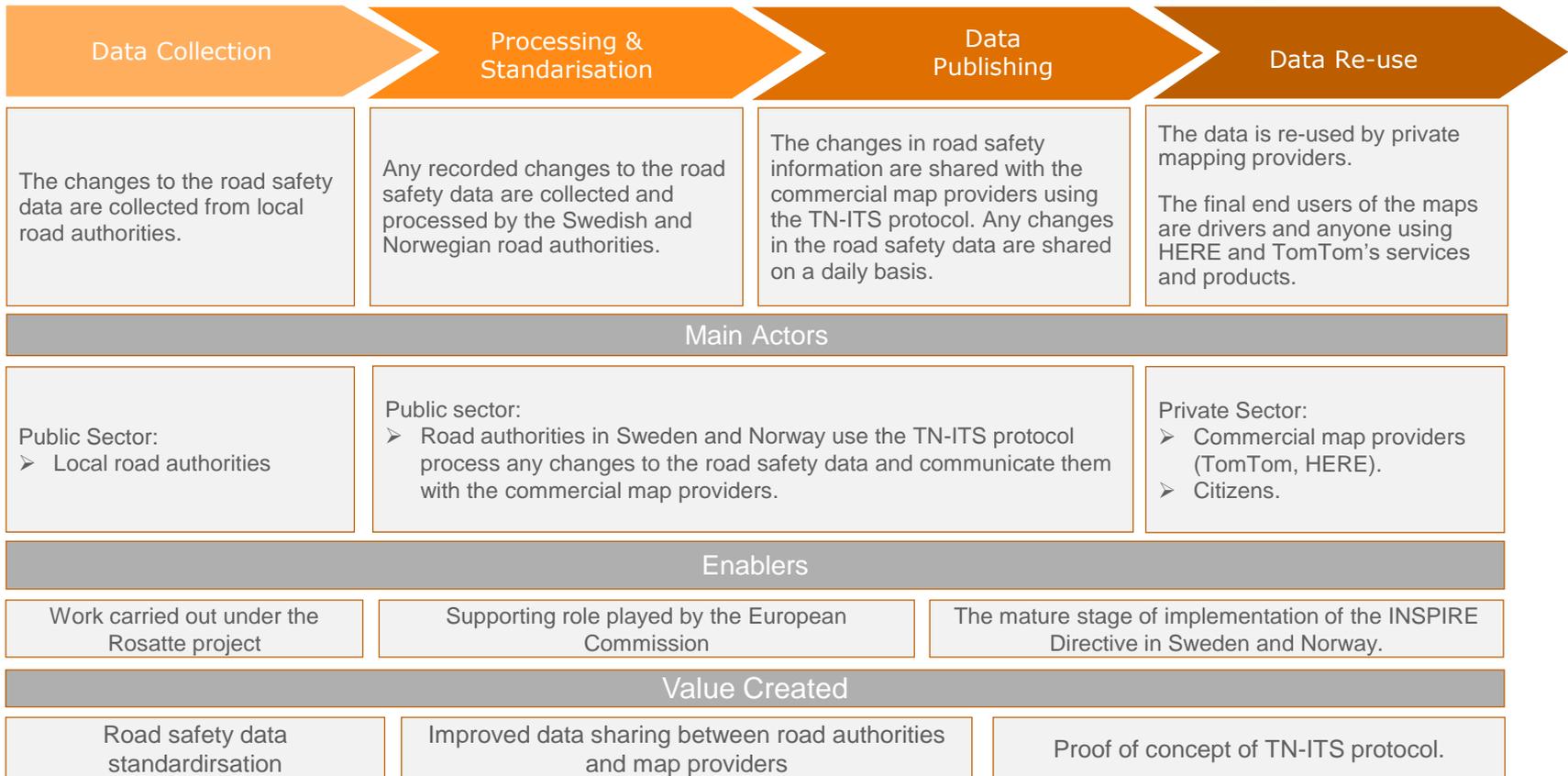
Source: In-depth analysis of the Future City Glasgow case study based on interviews and desk research.

# Supporting Material

THE 6 CASE STUDIES: EULF TRANSPORTATION PILOT



Feedback loops regarding the quality of the data received. The process is not yet automated.





# ISA<sup>2</sup> programme

*You click, we link.*

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