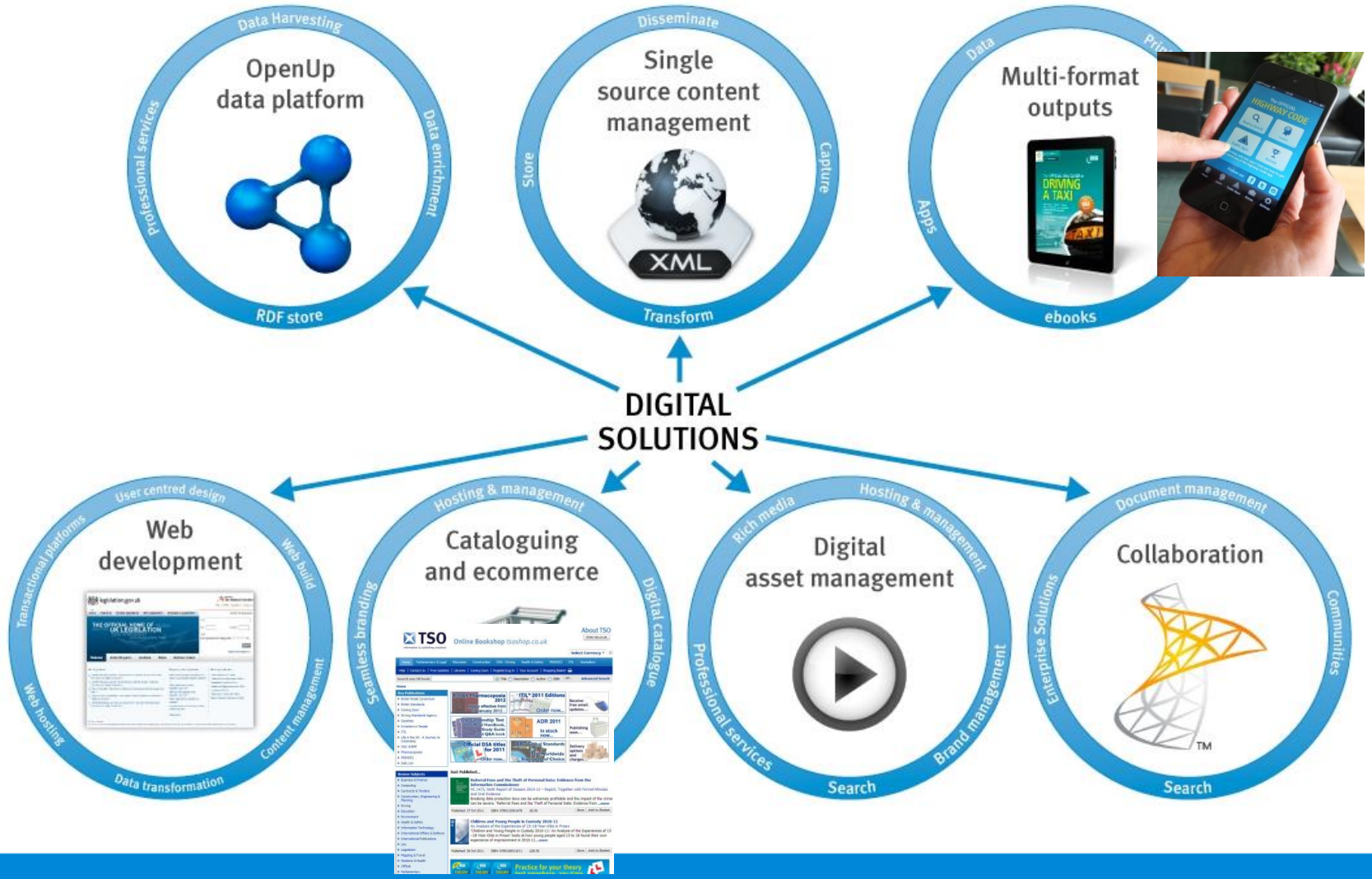
Opening up Legislation as Linked Data

Amanda Cooper – Marketing Manager- Europe

About TSO

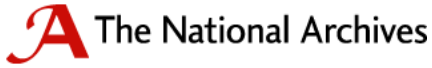
- Long-established UK firm employing 365 staff
- Offices in London, Norwich, Edinburgh and Belfast
- Part of: WILLIAMS LEA corporate information solutions Deutsche Post
- Contract publisher
- Digital solutions vendor
- Over 60 UK-based developers and 8 project managers
- OpenUp® Semantic Platform and Semantic team

TSO Service Scope



TSO
information & publishing solutions

Some of our clients



- 51 million hits per month
- 20 searches per second
- 2 million unique visitors a month
- 6.5 Million documents and growing
- One of Government's most visited sites

TSO's Legislation Journey

Transparency Agenda
Efficiency Board Formed

2009

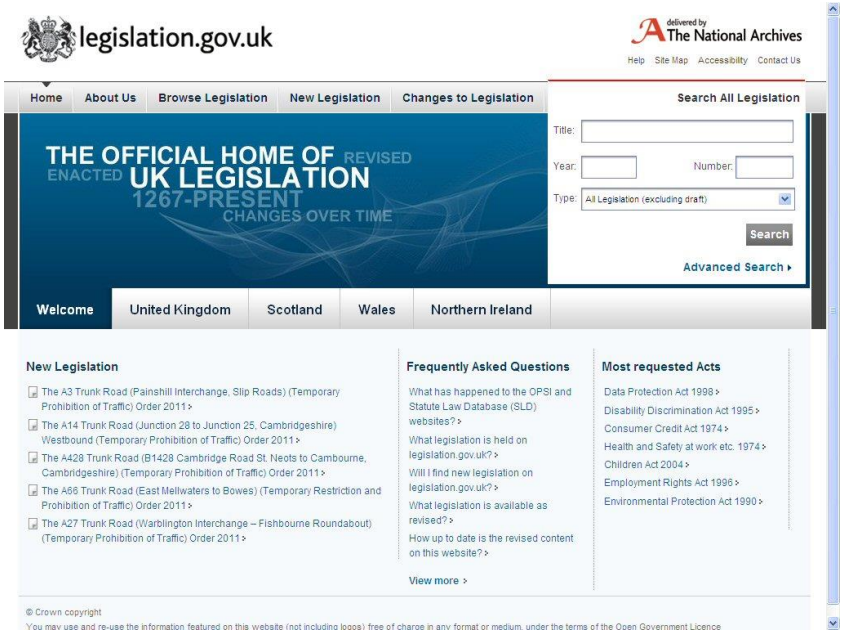
1996

2010

Legislation ITT

www.Legislation.gov.uk

- Developed by TSO for The National Archives
- The Official Portal for UK Legislation
- 1267-Present
- Contains enacted and revised legislation
- Wide range of users
  - Legal professionals
  - Citizens Advice
  - Publishers
- First Linked Data Statute Book in the world



Requirements for the website /publishing system

- Very fast and responsive
- Easy to use
- Data needed to be open standards based
- Provide excellent value for money for the taxpayer

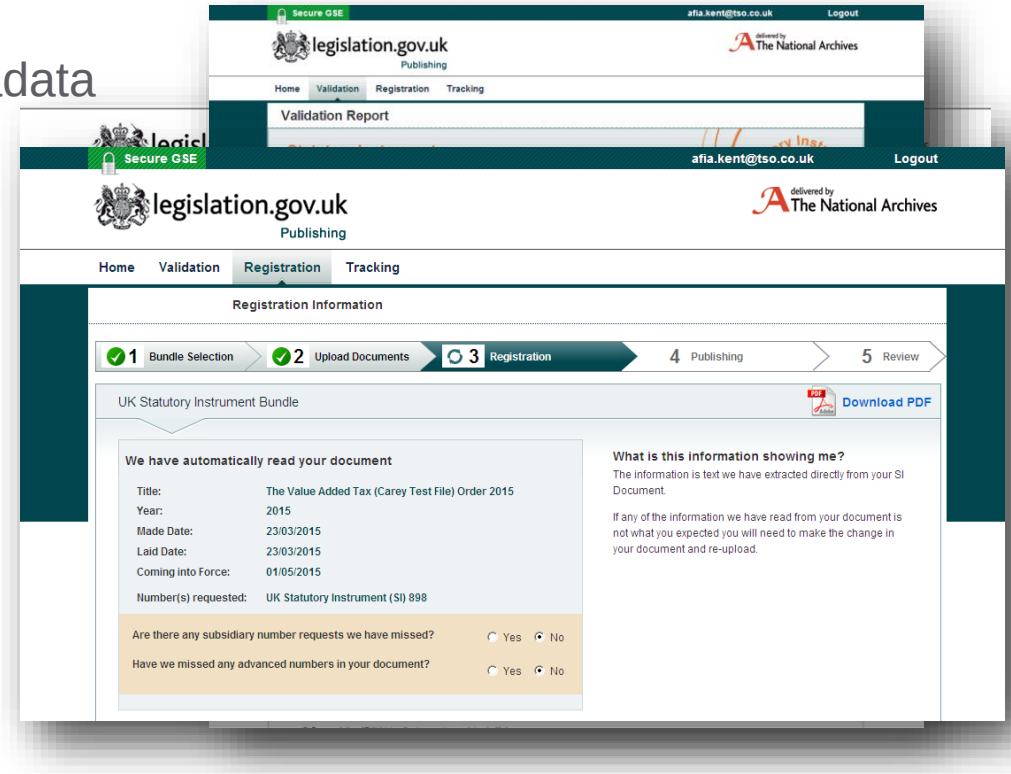
- Had to support (Government's Transparency Agenda)
  - Linked Open Data
  - Data format to be flexible, open and accessible
  - Metadata as RDF

3 Main components of the solution

- Innovative approach to delivering legislation
- User Experience research
- Data re-use

Capture

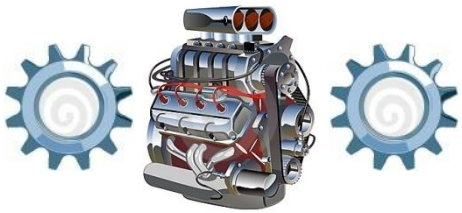
- Streamlined the way legislation is ingested
- Removal of the manual processes
- Digital Validation
- Automated extraction of metadata



Transformation

Infrastructure for automated extraction processes

Data Enrichment Service



Data sources

- Wikipedia
- data.gov.uk
- Ordnance Survey
- GeoNames
- London Gazette

and others…

Starter DES (generic) annotator

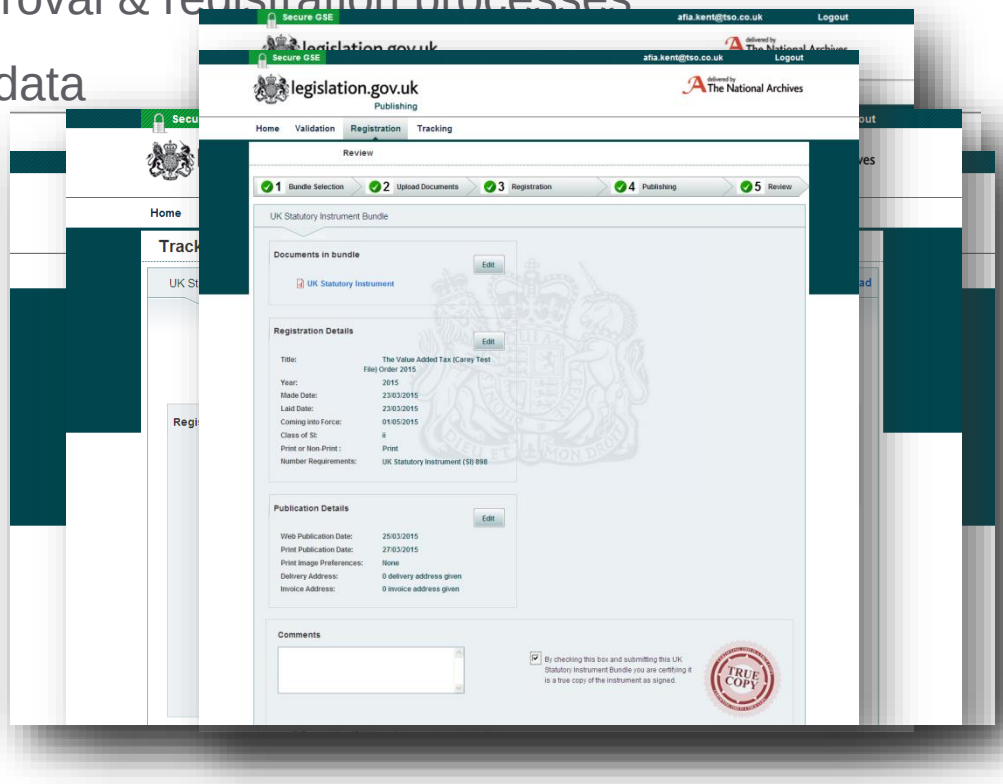
Entities extracted

- Company names
- Organisation names
- Towns
- Countries
- Dates
- Facilities
- Events

and others…

Capture

- Streamlined the way legislation is ingested
- Removal of the manual processes
- Automated the validation, approval & registration processes
- Automated extraction of metadata
- User certifies submission
- Tracking



Dissemination – the Legislation.gov.uk site

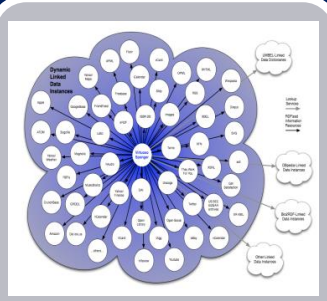
- Developed award-winning website
- Fast search and retrieval
- Ease of use and many ways to access legislation
- “Points in time” view of legislation
- URIs- access granular levels of d
- Feature-rich

‘Best example of ICT-enabled innovation and enterprise’

(UK Public Sector Awards 2011)

The First Linked Data Statute Book in the World

In response to the Government's 'Linked Data' Initiative



Linked Data describes a method of publishing structured data so that it can be linked to other data and become more useful.

Rather than data available purely to serve web pages for *human* readers, it extends data so it can be read automatically by *computers*.

Enables data from different sources to be connected and queried.

What does Linked Data allow?

Structured way of publishing data to facilitate linking to other data and resources

- Allows relationships between things to be expressed
- Facilitates navigation between information sources
- Enables creation of new products from existing data
- Re-aggregation of data into new information sources
- Facilitates creation of “mash-ups”
- Makes data more **useful**

Linked *Open* Data is Linked Data that is free to use

Why are Governments opening up their data?

To achieve important national benefits for both the Nation and its citizens including:

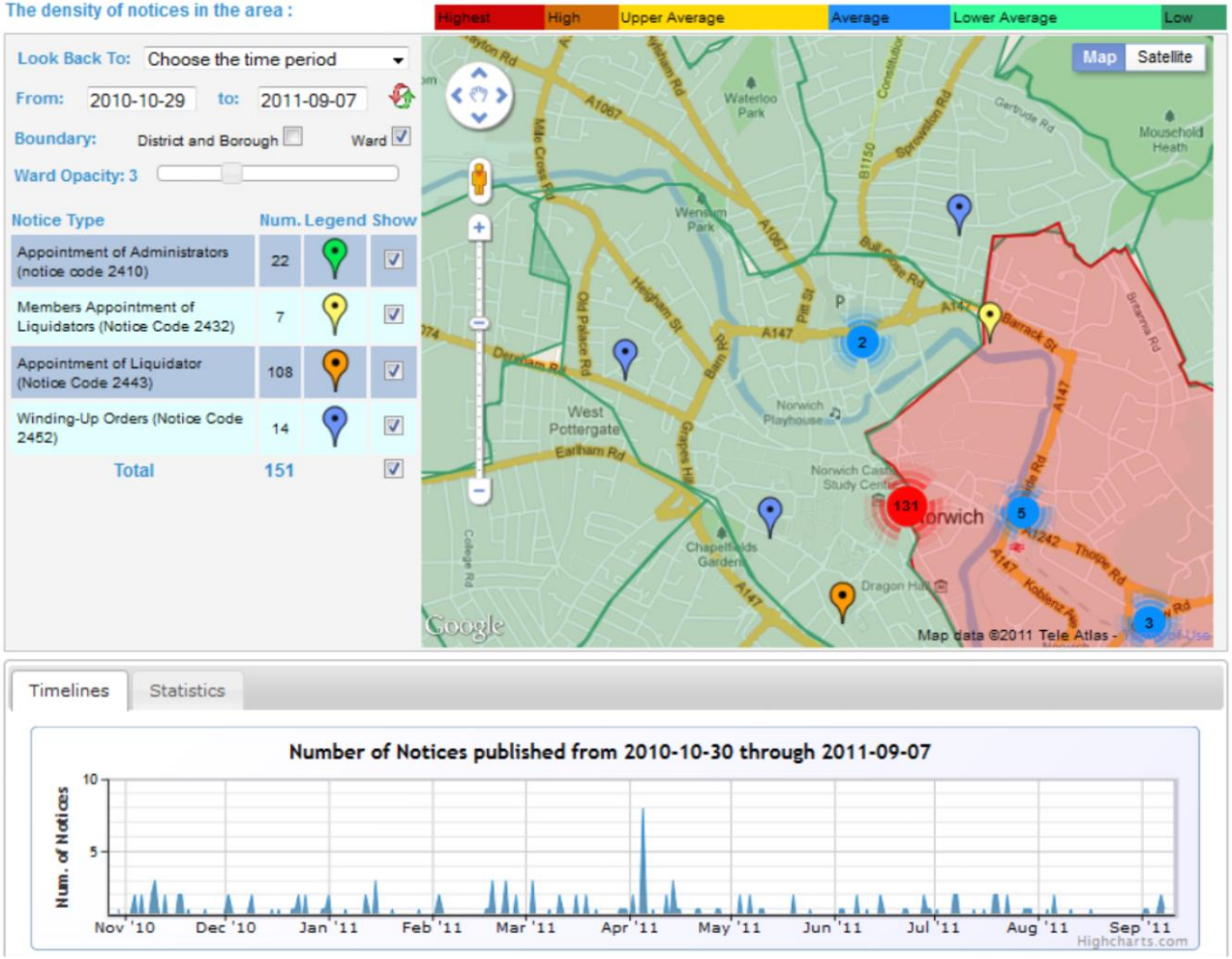
1. Encourage growth and the creation of companies and jobs
2. Increase discovery and transparency
3. Higher innovation, entrepreneurship
4. Encourage technological innovation
5. More informed, empowered and satisfied citizens

Why are publishers starting to publish Linked Data?

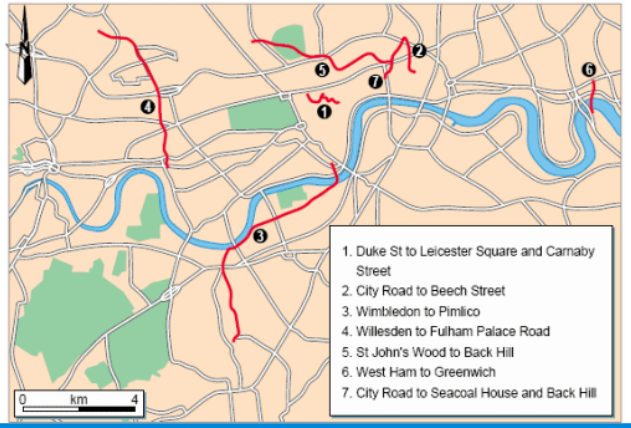
1. Increase usage in their other products
2. Attract authors to their journals
3. Improve their own visibility
4. Support user-driven innovation
5. Foster developer ecosystems using their services as a platform perhaps?
6. Add value to their content
7. To “give something back” to the wider community
8. Show they’re starting to comply with the “Open Data” mandates
9. Cost avoidance- presently have to give permission to use their data
10. Looking at Freemium models
11. Sponsorship- getting advertisers to sponsor the open data

What can you do with Linked Open Data?

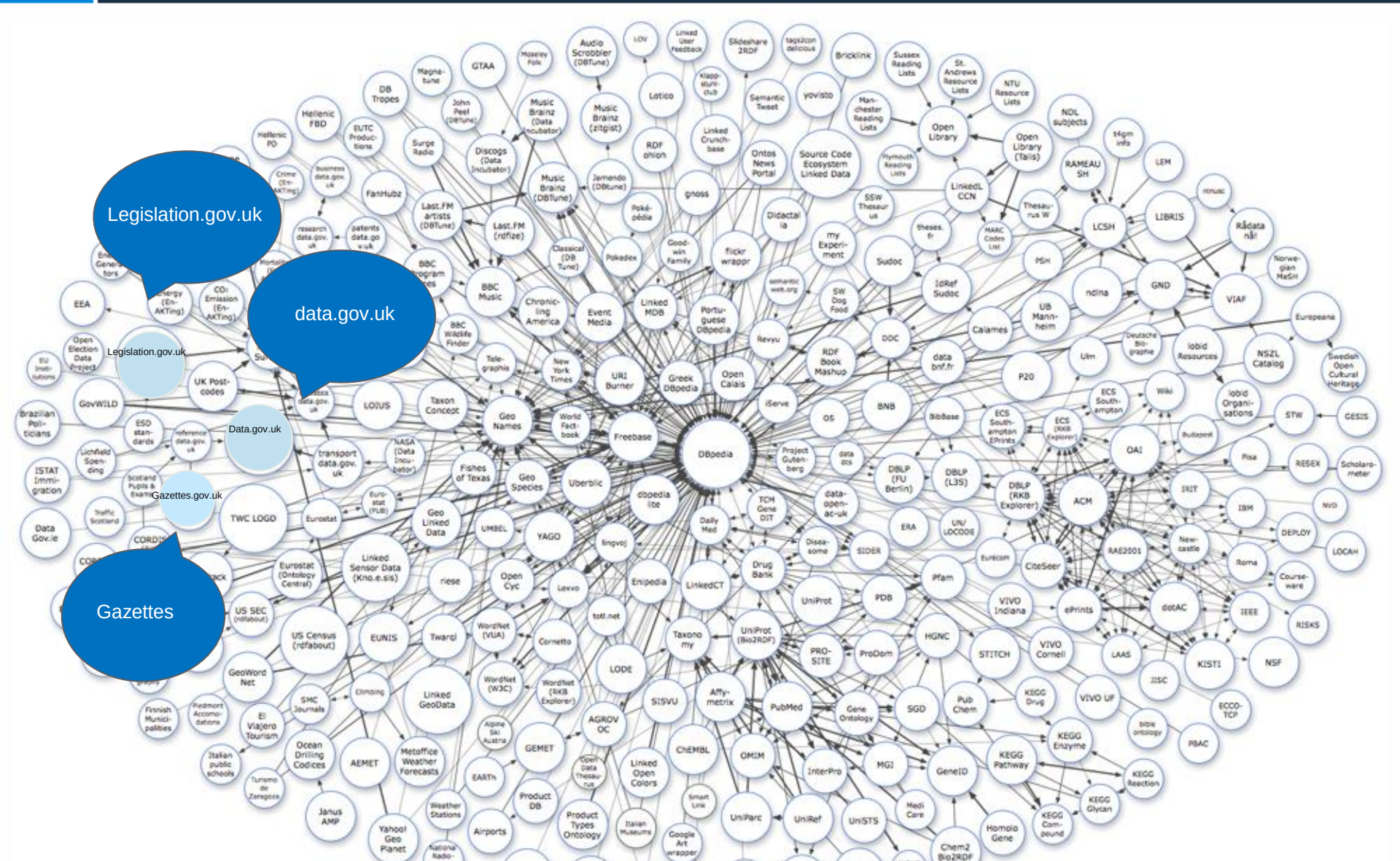
“Mash ups”- pulling data from various sources- Visualisations



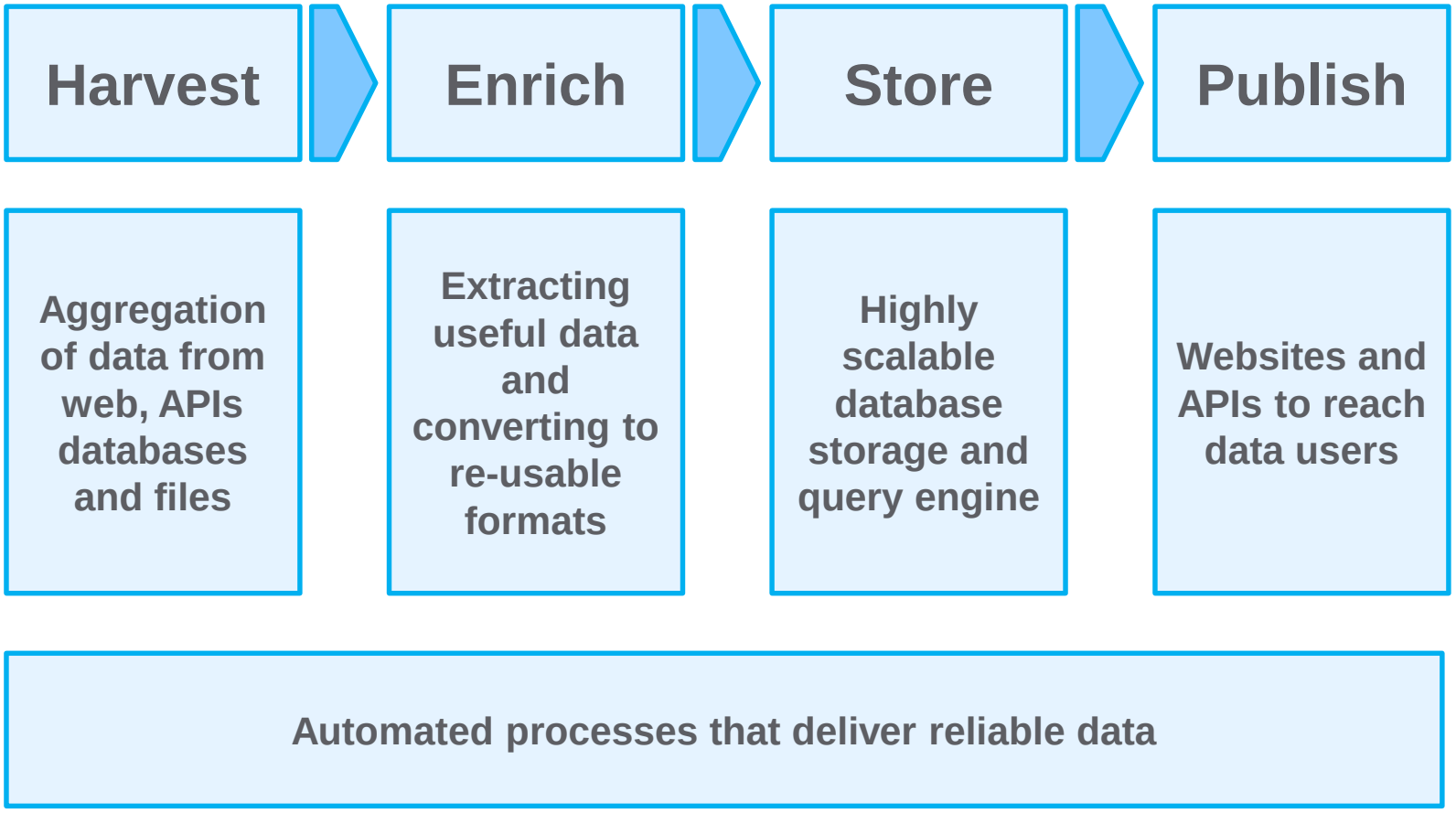
Combine different data sets



Legislation.gov.uk - part of “The Semantic Web”



How do we do this? Via OpenUp® - TSO's Linked Data Platform



Using OpenUp® for Legislation.gov.uk

Automated process:

- Harvests Data from Legislation.gov.uk
- Enriches the content via the Data Enrichment Service
- Creates the URIs
- Creates RDF triples
- Stores RDF in the TSO triple store
- Exposes RDF for querying via SPARQL endpoints and API
- Third parties access RDF and pull it from the store

Legislation.gov.uk data re-use by 3rd parties

Examples:

THOMSON REUTERS

Westlaw UK

Summary – Legislation.gov.uk

- Have we succeeded in what we set out to do?

- Improving access for the public, for businesses and for computers
- Saving Government money
- Transformed legislation publishing
- Truly opened up legislation

Thank you

Want to discuss further?

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