


Opening up Legislation as Linked Data

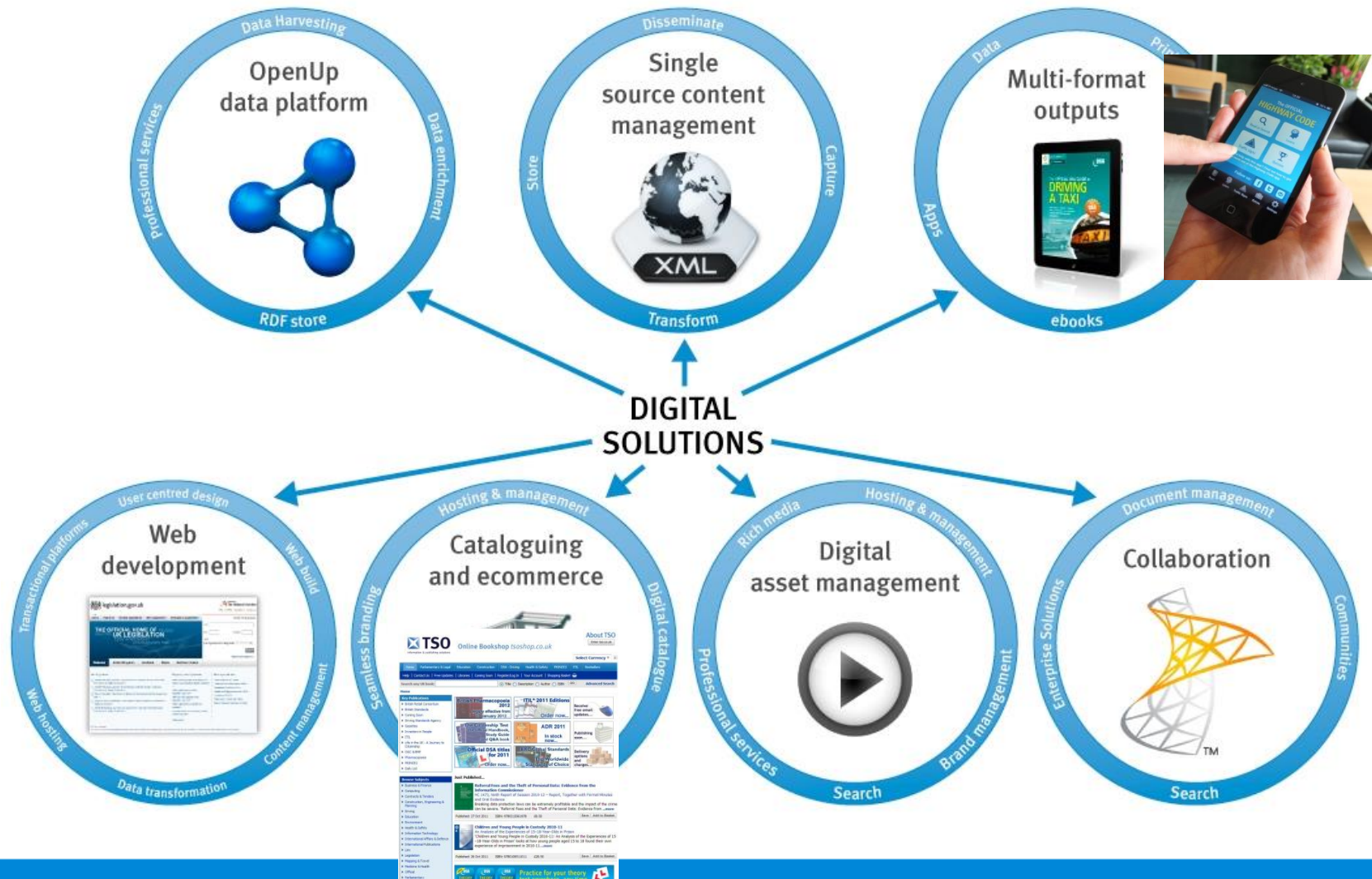


About TSO

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

Deutsche Post 

TSO Service Scope



Some of our clients



RSC | Advancing the
Chemical Sciences



DIAGEO







Department for
Education



- 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

[Restriction of Traffic \(No. 2\) Order 2012 >](#)

-  [The A23 Trunk Road \(Warninglid Junction - Pease Pottage Interchange\) \(Temporary Prohibition of Cyclists and Pedestrians\) Order 2012 >](#)
-  [The A2 Trunk Road \(Jubilee Way, Coastbound Carriageway\) \(Temporary Prohibition of Traffic\) Order 2012 >](#)
-  [The M621 Motorway \(Junction 7\) \(Temporary Prohibition of Traffic\) \(No. 2\) Order 2012 >](#)
-  [The A27 Trunk Road \(Crossbush Interchange - Worthing\) \(Temporary Restriction and Prohibition of Traffic\) Order 2012 >](#)

[legislation.gov.uk? >](#)

- [Will I find new legislation on legislation.gov.uk? >](#)
- [What legislation is available as revised? >](#)
- [How up to date is the revised content on this website? >](#)

[View more >](#)

[Disability Discrimination Act 1995 >](#)

- [Consumer Credit Act 1974 >](#)
- [Health and Safety at work etc. 1974 >](#)
- [Children Act 2004 >](#)
- [Employment Rights Act 1996 >](#)
- [Environmental Protection Act 1990 >](#)

TSO's Legislation Journey



Transparency Agenda
Efficiency Board Formed

2009



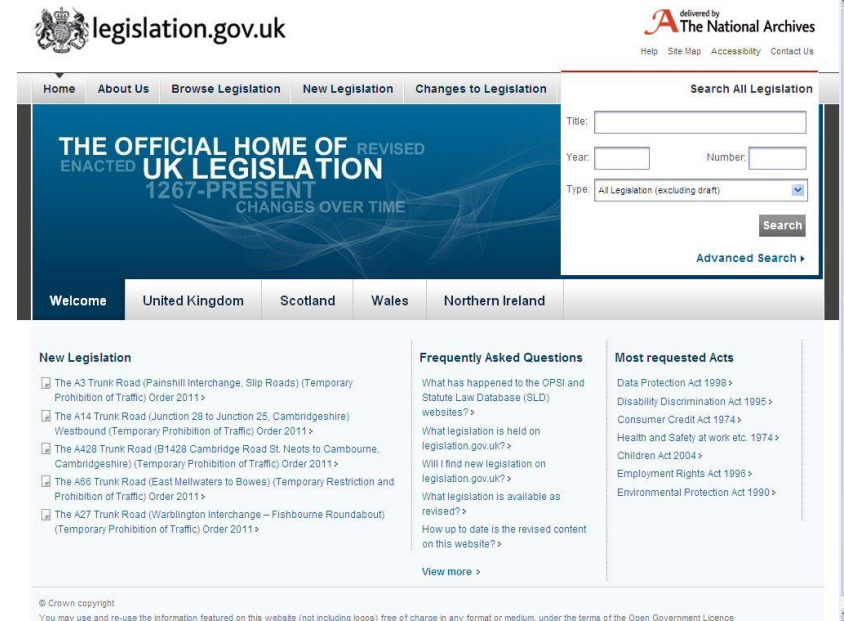
1996

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

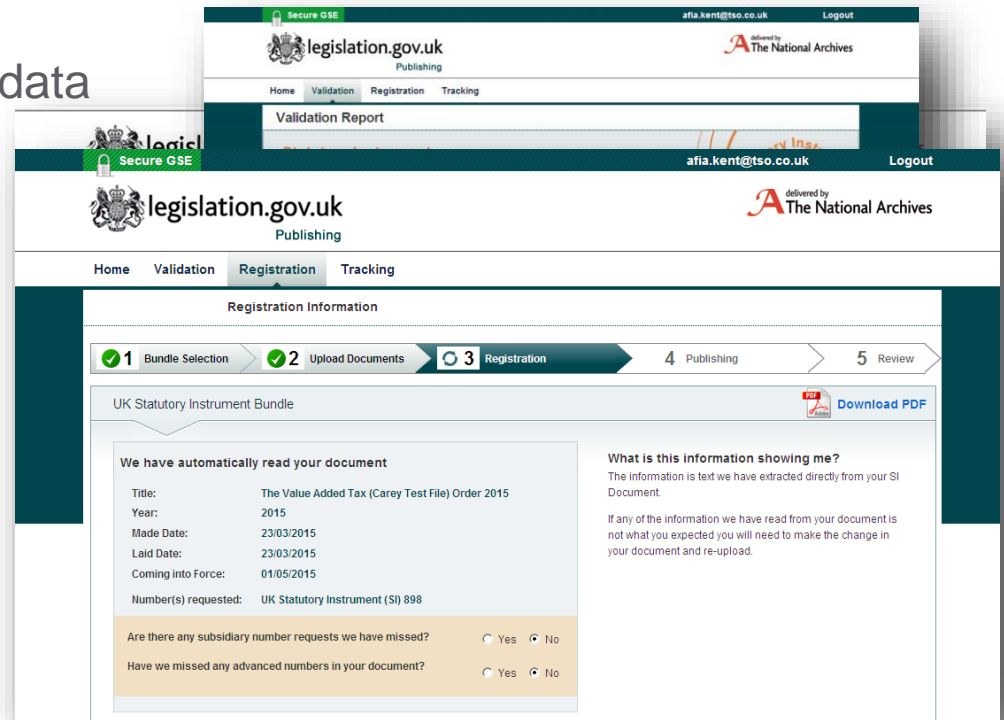
3 Main components of the solution



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

Capture

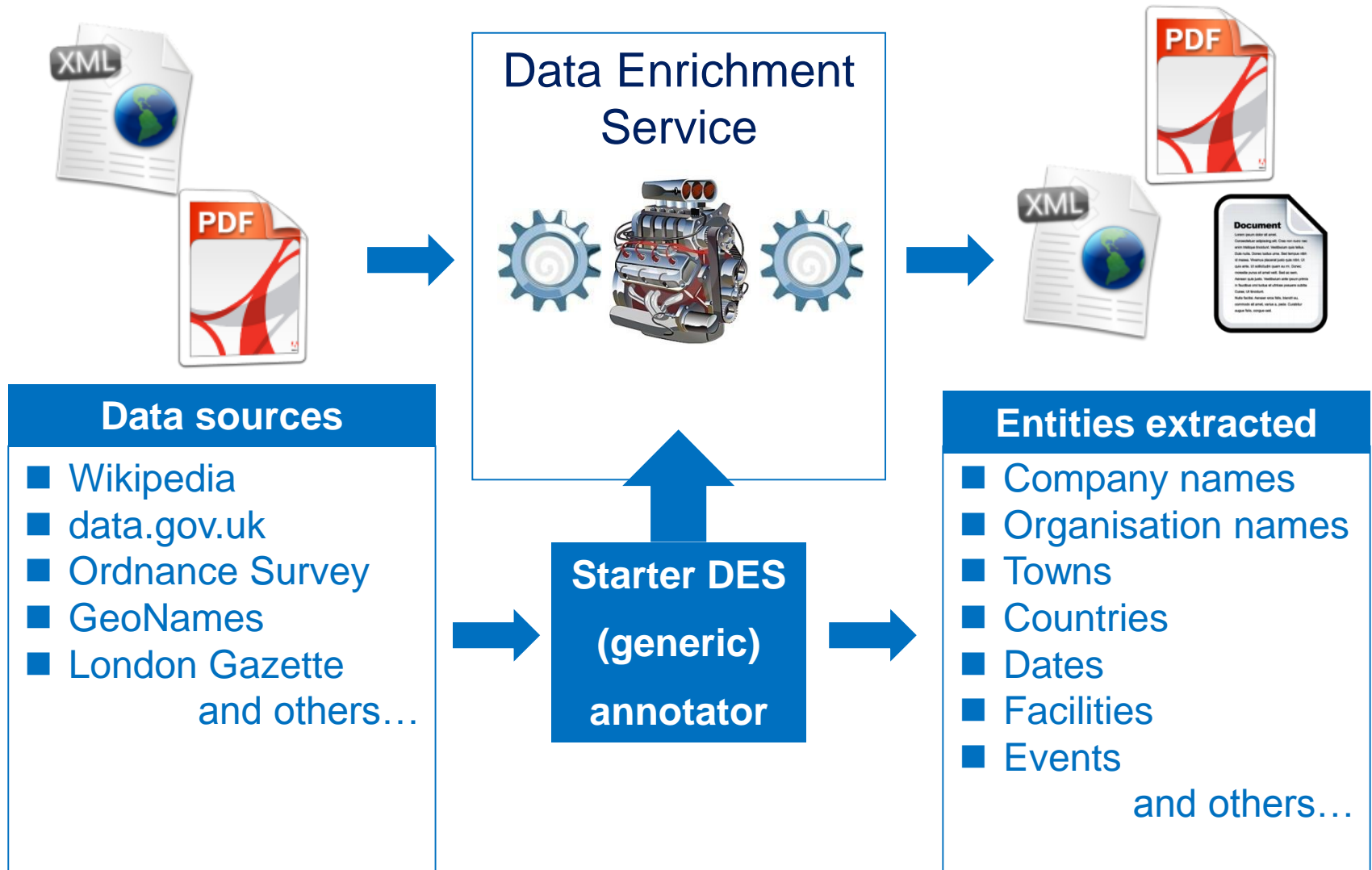
- Streamlined the way legislation is ingested
- Removal of the manual processes
- Digital Validation
- Automated extraction of metadata



The screenshot displays the 'legislation.gov.uk Publishing' interface. The top navigation bar includes 'Home', 'Validation', 'Registration', and 'Tracking'. The 'Registration' tab is active, showing a progress bar with five steps: 1. Bundle Selection, 2. Upload Documents, 3. Registration, 4. Publishing, and 5. Review. The 'Registration' step is currently selected. Below the progress bar, the page title is 'UK Statutory Instrument Bundle'. A section titled 'We have automatically read your document' lists extracted metadata: Title (The Value Added Tax (Carey Test File) Order 2015), Year (2015), Made Date (23/03/2015), Laid Date (23/03/2015), Coming into Force (01/05/2015), and Number(s) requested (UK Statutory Instrument (SI) 898). To the right, a section titled 'What is this information showing me?' explains that the information is text extracted directly from the document. At the bottom, there are two questions with radio button options: 'Are there any subsidiary number requests we have missed?' (Yes/No) and 'Have we missed any advanced numbers in your document?' (Yes/No). A 'Download PDF' link is visible in the top right corner of the main content area.

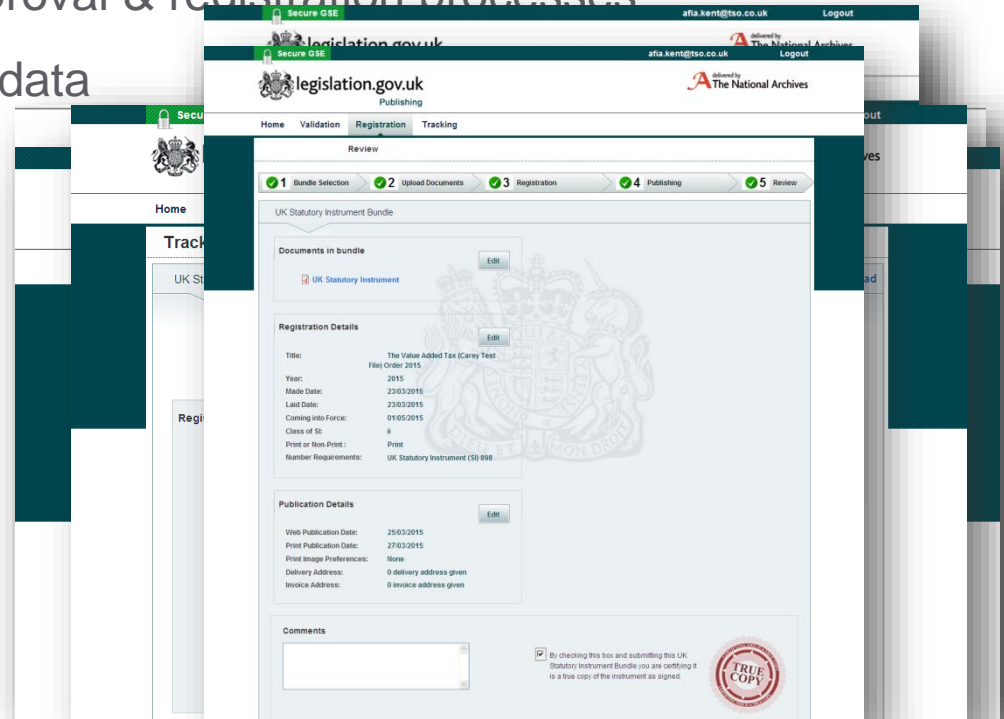
Transformation

Infrastructure for automated extraction processes



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



The screenshot displays the 'legislation.gov.uk Publishing' interface. The top navigation bar includes 'Home', 'Validation', 'Registration', and 'Tracking'. A progress bar indicates the current stage is '3 Registration', with previous steps '1 Bundle Selection', '2 Upload Documents', and '4 Publishing' completed. The main content area is titled 'UK Statutory Instrument Bundle' and contains three sections: 'Documents in bundle', 'Registration Details', and 'Publication Details'. The 'Registration Details' section includes fields for Title, Year, Made Date, Laid Date, Coming into Force, Class of SI, Print or Non-Print, and Number Requirements. The 'Publication Details' section includes fields for Web Publication Date, Print Publication Date, Print Image Preferences, Delivery Address, and Invoice Address. A 'Comments' section is at the bottom with a text area and a checkbox for certifying the submission as a true copy. A 'TRUE COPY' stamp is visible in the bottom right corner.

Secure GSE
afia.kent@tso.co.uk
Logout

legislation.gov.uk
Publishing
Home Validation Registration Tracking

Review

1 Bundle Selection 2 Upload Documents 3 Registration 4 Publishing 5 Review

UK Statutory Instrument Bundle

Documents in bundle

UK Statutory Instrument

Registration Details

Title: The Value Added Tax (Canary Test) (SI) Order 2015

Year: 2015

Made Date: 23/03/2015

Laid Date: 23/03/2015

Coming into Force: 01/05/2015

Class of SI: ii

Print or Non-Print: Print

Number Requirements: UK Statutory Instrument (SI) 008

Publication Details

Web Publication Date: 25/03/2015

Print Publication Date: 27/03/2015

Print Image Preferences: None

Delivery Address: 0 delivery address given

Invoice Address: 0 invoice address given

Comments

☐ By checking this box and submitting this UK Statutory Instrument Bundle you are certifying it is a true copy of the instrument as signed.

TRUE COPY

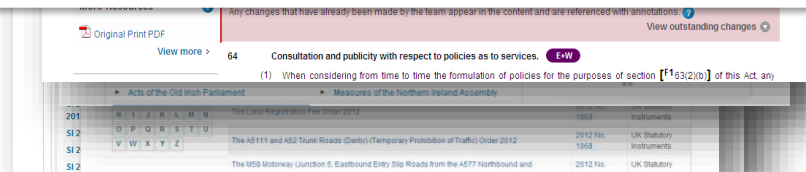
Dissemination – the Legislation.gov.uk site

- 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 legislation
- Feature-rich



‘Best example of ICT-enabled innovation and enterprise’

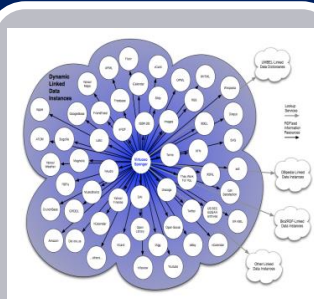
(UK Public Sector Awards 2011)



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:

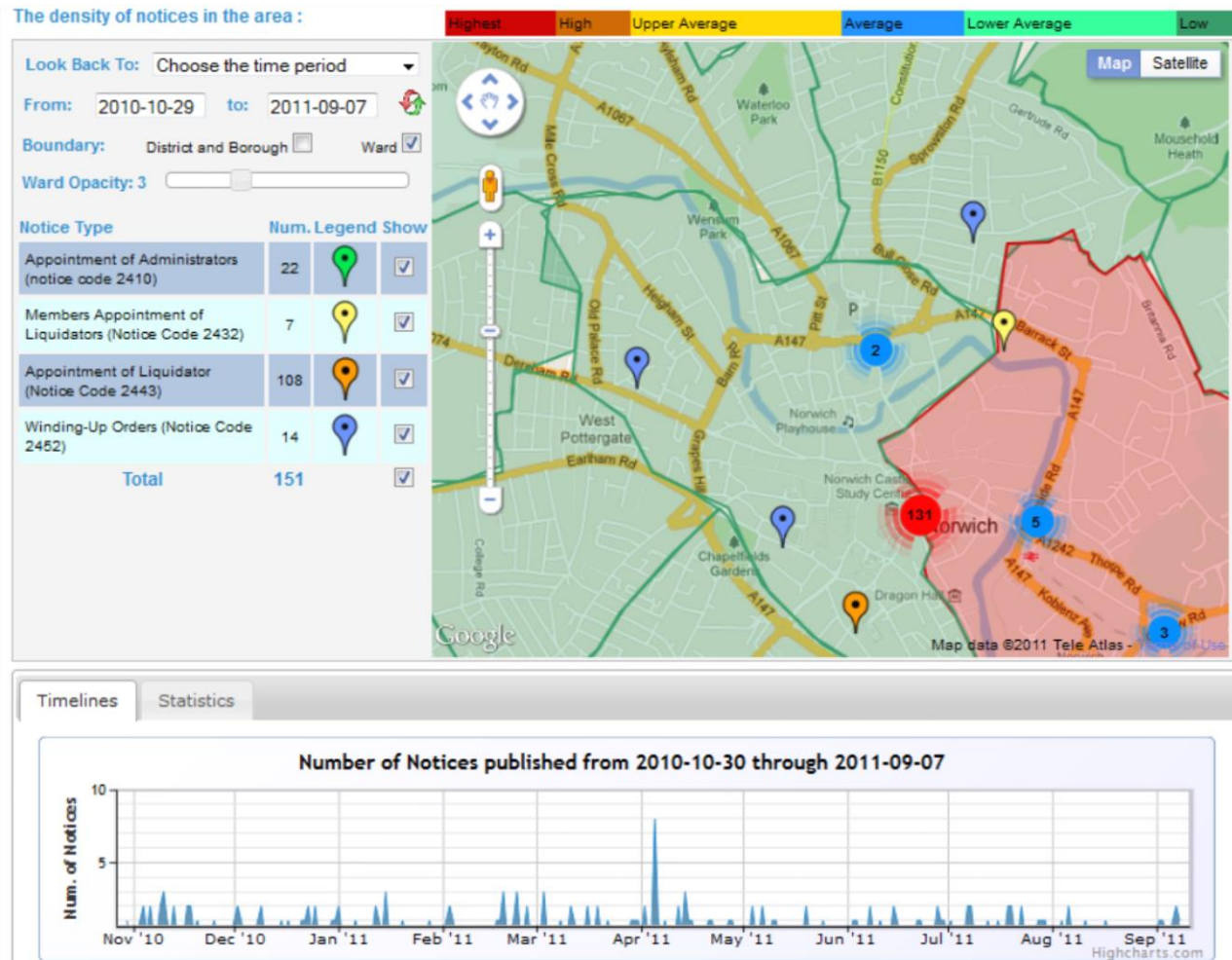
1. Encourage growth and the creation of companies and jobs
2. Increase discovery and transparency
3. Higher innovation, entrepreneurship
4. Encourage technological innovation
5. More informed, empowered and satisfied citizens

Why are publishers starting to publish Linked Data?

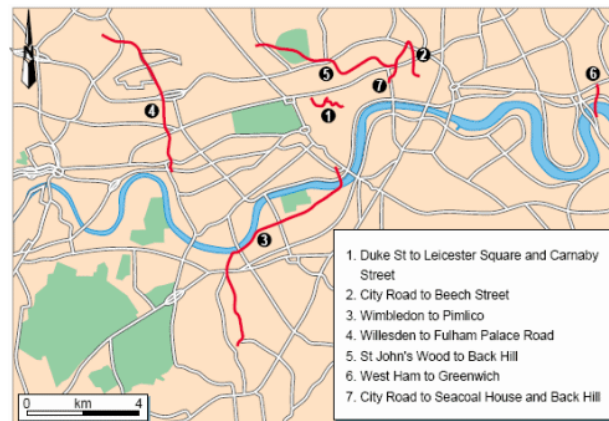
1. Increase usage in their other products
2. Attract authors to their journals
3. Improve their own visibility
4. Support user-driven innovation
5. Foster developer ecosystems using their services as a platform perhaps?
6. Add value to their content
7. To “give something back” to the wider community
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?

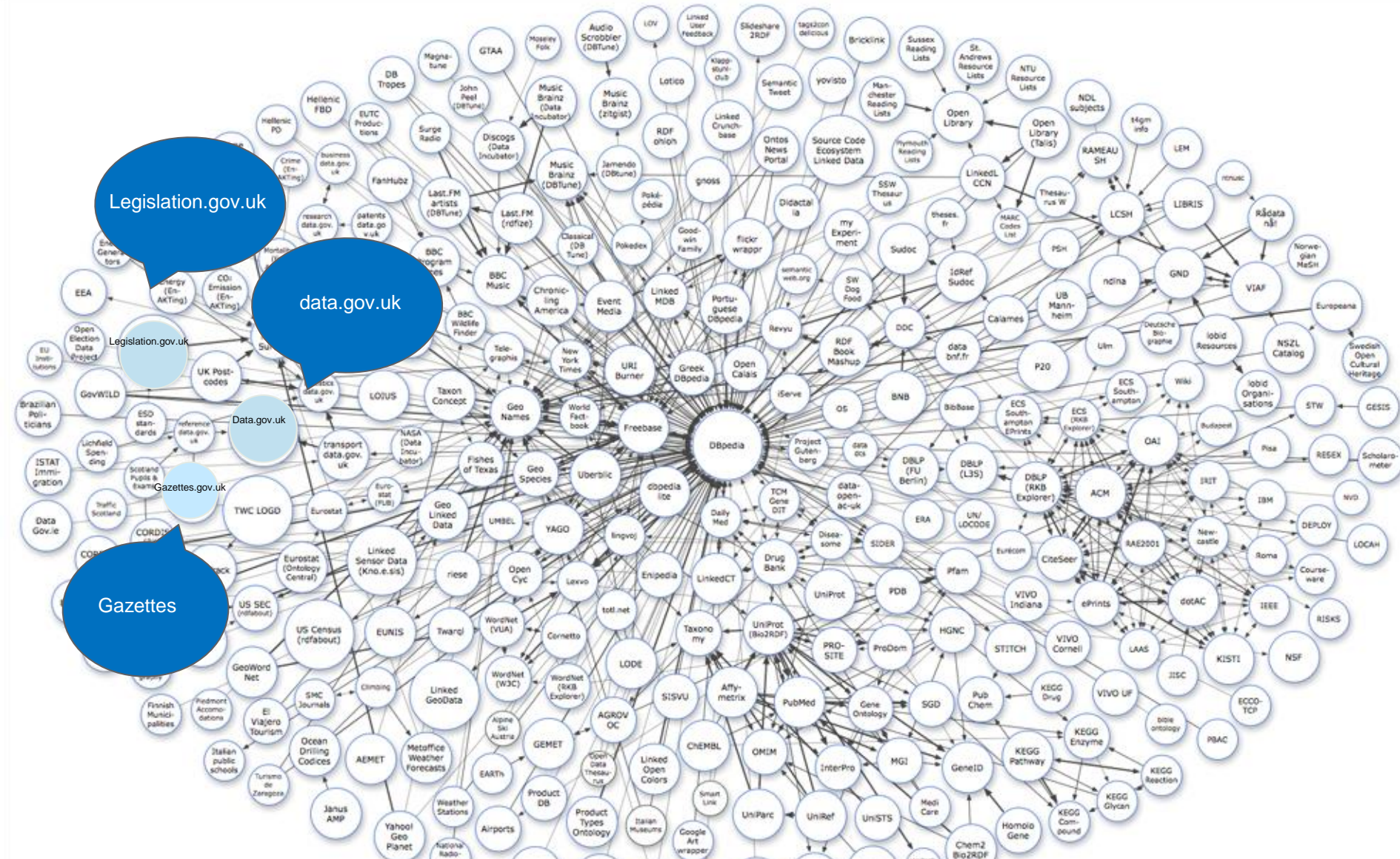
“Mash ups”- pulling data from various sources- Visualisations



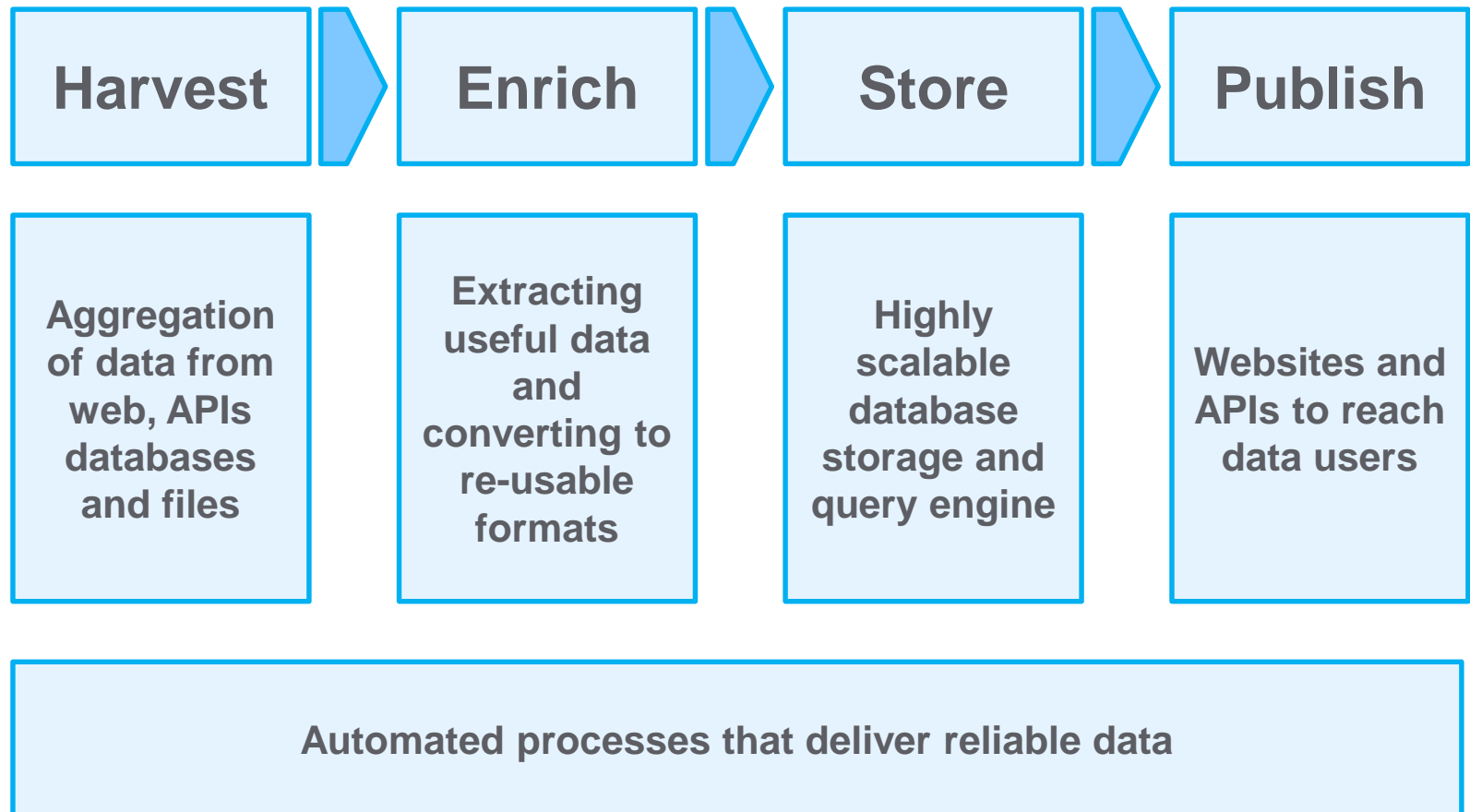
Combine different data sets



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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