

LOD achievements and challenges

- Web - a global, distributed platform for data, information and knowledge integration
- exposing, sharing, and connecting pieces of data, information, and knowledge on the Semantic Web using URIs and RDF

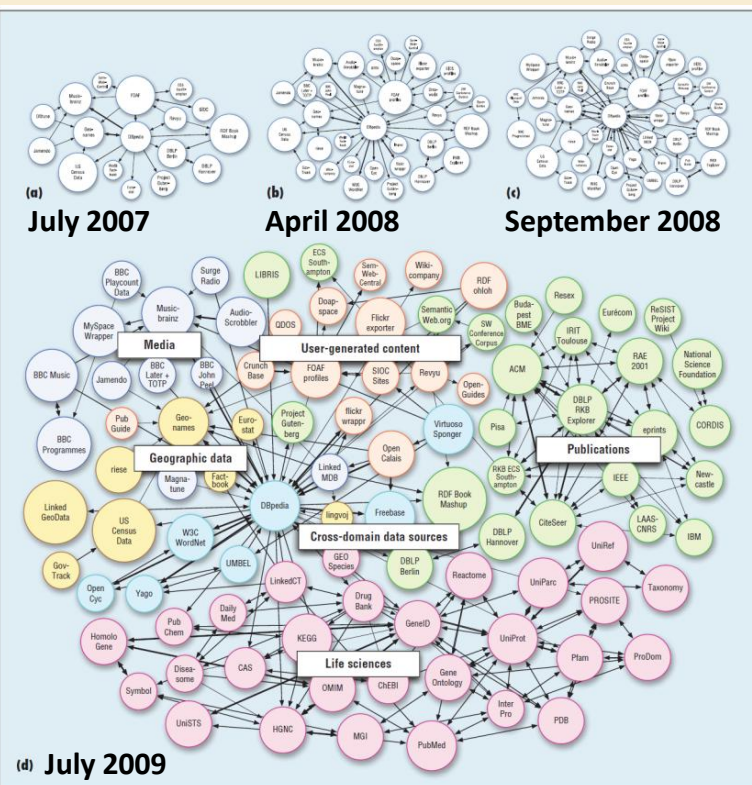
▶ Achievements

1. Extension of the Web with a **data commons** (13.1 B facts)
2. vibrant, global **RTD community**
3. **Industrial uptake** begins (e.g. BBC, Thomson Reuters, Eli Lilly)
4. Emerging **governmental adoption** in sight
5. Establishing Linked Data as a **deployment path** for the Semantic Web.

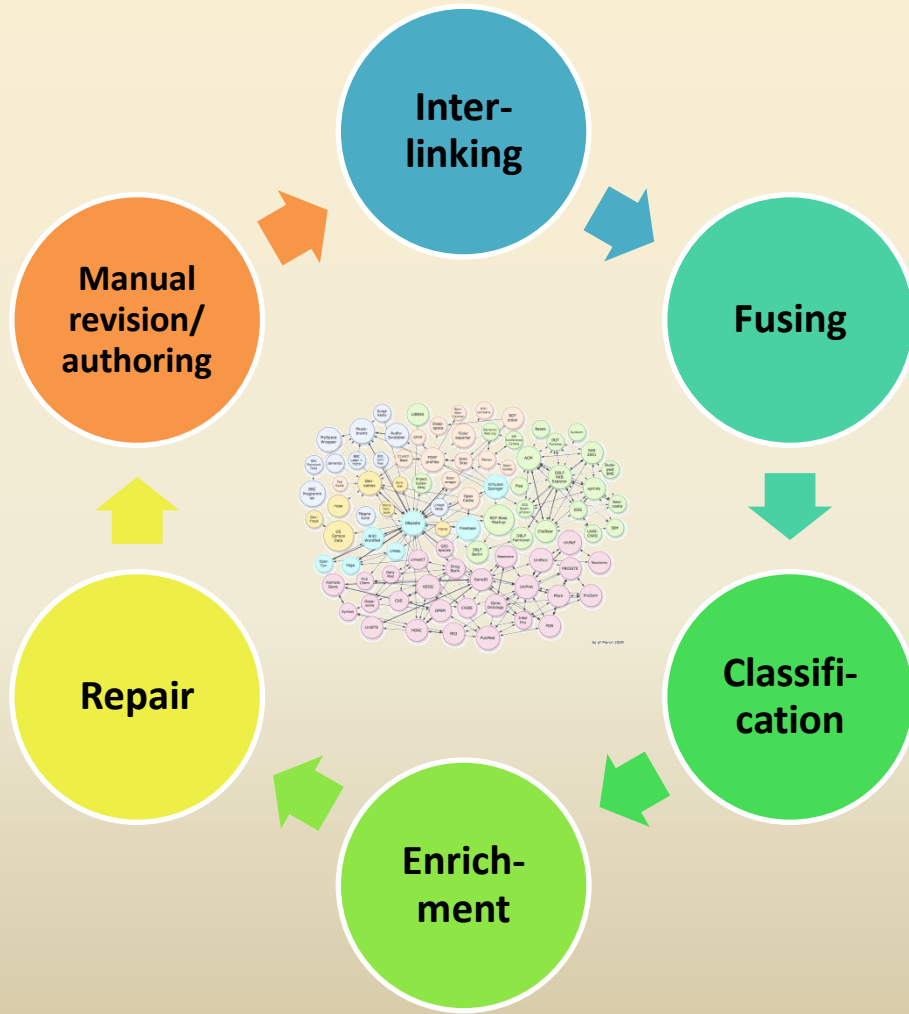
▶ Challenges

1. **Coherence:** Relatively few, expensively maintained links
2. **Quality:** partly low quality data and inconsistencies
3. **Performance:** Still substantial penalties compared to relational
4. **Data consumption:** large-scale processing, schema mapping and data fusion still in its infancy
5. **Usability:** Missing direct end-user tools and *network effect*

These issues are closely related and need to be treated in an integrated, holistic fashion.

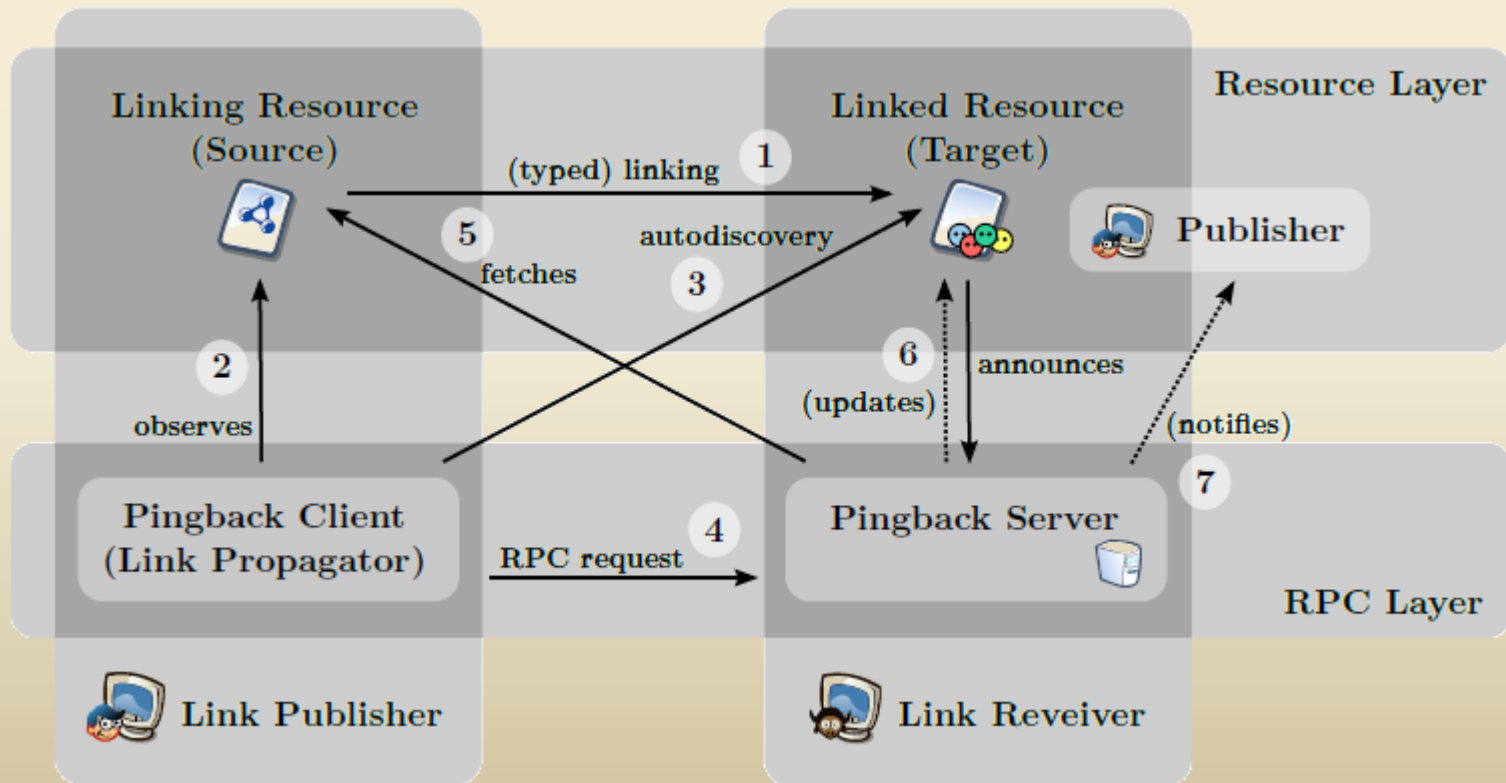


Make the Web a Linked Data Washing Machine



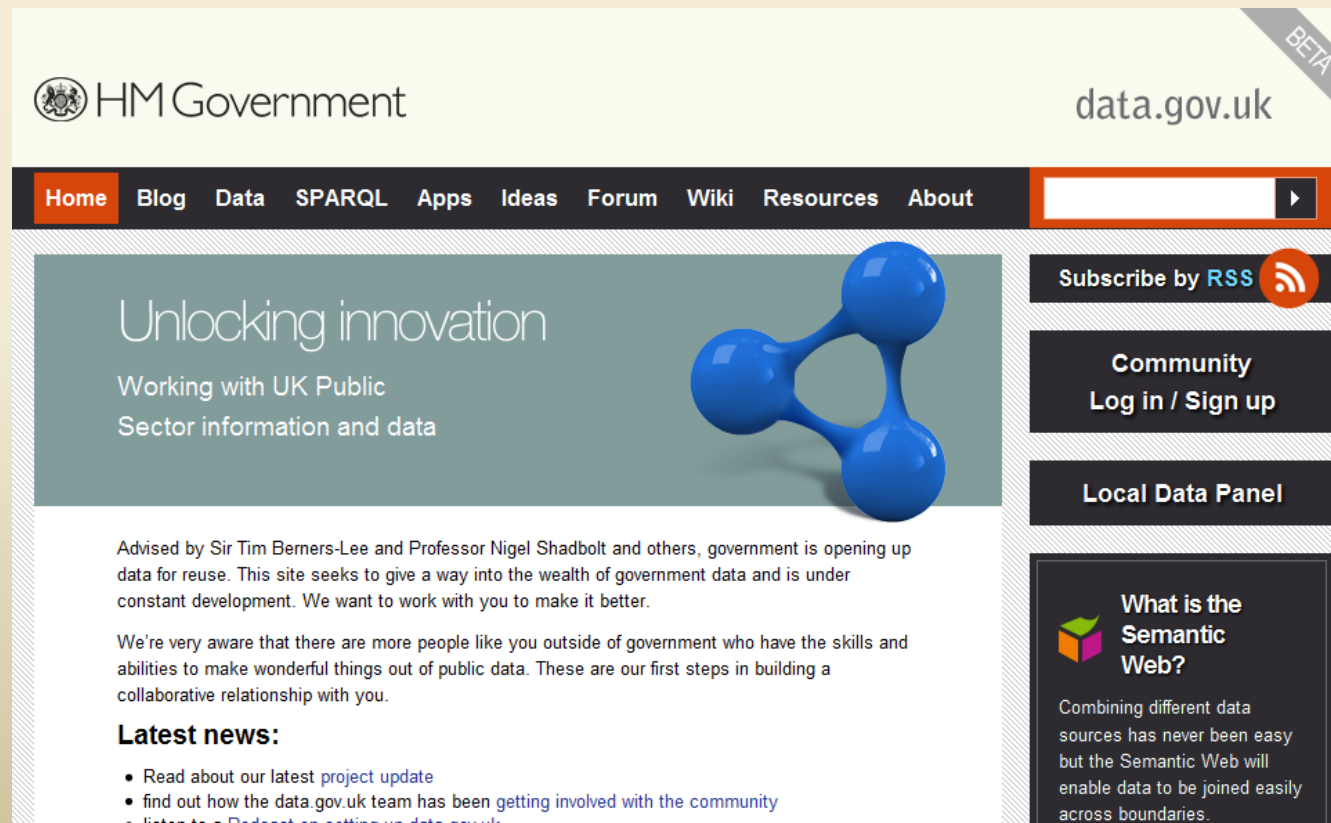
Creating a network effect for Linked Data: Semantic Pingback

- update and notification services for LOD
- Downward compatible with Pingback (blogosphere)
- <http://aksw.org/Projects/SemanticPingBack>



Linked Government Data - Ideal application scenario for Linked Data

- Public sector extremely fragmented (EU, national governments, states, local communities)
- Benefits:
 - Transparency
 - Close the gap between politics and citizens
 - Use of the creative potential of citizens
 - new value added services



The screenshot shows the data.gov.uk website. At the top left is the HM Government logo. At the top right is the text 'data.gov.uk' with a 'BETA' badge. Below this is a navigation bar with links: Home, Blog, Data, SPARQL, Apps, Ideas, Forum, Wiki, Resources, About. A search bar is on the right. The main content area features a banner with the text 'Unlocking innovation' and 'Working with UK Public Sector information and data' next to a blue molecular structure graphic. Below the banner is a paragraph: 'Advised by Sir Tim Berners-Lee and Professor Nigel Shadbolt and others, government is opening up data for reuse. This site seeks to give a way into the wealth of government data and is under constant development. We want to work with you to make it better.' Another paragraph follows: 'We're very aware that there are more people like you outside of government who have the skills and abilities to make wonderful things out of public data. These are our first steps in building a collaborative relationship with you.' Below this is a 'Latest news:' section with two bullet points: 'Read about our latest project update' and 'find out how the data.gov.uk team has been getting involved with the community'. On the right side, there are three buttons: 'Subscribe by RSS', 'Community Log in / Sign up', and 'Local Data Panel'. At the bottom right, there is a section titled 'What is the Semantic Web?' with a small graphic and text: 'Combining different data sources has never been easy but the Semantic Web will enable data to be joined easily across boundaries.'

What was right?

- LOD as a pragmatic approach to the Semantic Web

What was wrong?

- RDF being born after XML, LOD after the Semantic Web

What should we do in the future?

- Establish a network effect around LOD
- Create the LOD washing machine
- Target Enterprise Information Integration, Open Governmental and Scientific Data
- From eat-your-own-dogfood to convince-you-grandma

What shouldn't we do?

- Neglect the interfaces between research, technology and applications

