**Linked Open Government Data**

**What is this fact sheet about?**
This Fact Sheet introduces the concept of Linked Data applied to Open Government Data. 20 years ago, Tim Berners-Lee invented the World Wide Web. In 2006 he introduced the concept of linked open data as the new paradigm for the future of the Internet. With Linked Open Data best practices the Web has evolved from a global information space of linked documents to one where both documents and data are linked. There is consensus that data can only be processed and analysed on large scale following LOD best practice.

**Definition**
The term Linked Data refers to a set of best practices for publishing and connecting structured data on the Web. It builds upon standard Web technologies such as HTTP and URIs, but rather than using them to serve web pages for human readers, it extends them to share information in a way that can be read automatically by computers. This enables data from different sources to be connected and queried allowing for better interpretation and analysis.

**Technology Stack**
URIs and HTTP are supplemented by a technology that is critical to the Web of Data – RDF. Whilst HTML provides a means to structure and link documents on the Web, RDF provides a generic, graph-based data model with which to structure and link data that describes things in the world.

The RDF model encodes data in the form of subject, predicate, object triples. Such as “Peter lives in Sofia” or “Sofia is Capital of Bulgaria”. The subject and object of a triple are both URIs that each identify a resource, or a URI and a string literal respectively. The predicate specifies how the subject and object are related, and is also represented by a URI.

**Linked Data principles**
In 2006 Tim Berners-Lee outlined a set of 'rules' for publishing data on the Web in a way that all published data becomes part of a single global data space:

1. Use URIs as names for things
2. Use HTTP URIs so that people can look up those names
3. When someone looks up a URI, provide useful information, using the standards (RDF, SPARQL)
4. Include links to other URIs, so that they can discover more things

These have become known as the 'Linked Data principles', and provide a basic recipe for publishing and connecting data using the infrastructure of the Web while adhering to its architecture and standards.

**The “Open” in Linked Open Data**
What is the difference between linked data vs. linked open data? In fact any data can be linked following the Linked Data principles. However for Data to be re-used it must be openly licensed with a license allowing for its re-use. This is why in 2010 Tim Berners-Lee introduced the 5-Star scheme for Linked Open Data:

The first star (and consequently all other stars) can only be achieved by publishing the data on the web under an open license. See ePSI fact sheet “The Five Stars of Open Data” for reference.

**The Linking Open Data cloud**
Linked Open Data best practices have been adopted by an increasing number of data providers over the last three years, leading to the creation of a global data space containing billions of assertions - the Web of Data (see figure below).


**Linked Open Government Data**
In recent years Governments from around the world began to publish their data as Linked Open Data applying the same Linked Data best practices to Open Government Data. By 2012 Linked Open Government Data (LOGD) makes up to 1/6 of the LOD Cloud.