Linked Open Data (LOD) PILOT Austria
Realisation of a Linked Open Data basic Infrastructure for Austria
Objectives – Activities – Impact – Outreach

Project Description (DE language): http://www.semantic-web.at/lod-pilot-at
Short Video (DE language): http://youtu.be/q3cuzNGK9S0

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@semwebcompany

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Semantic Web Company (SWC)

- Semantic Web Company founded 2000 in Vienna, Austria
- **20 experts** in strategy, coding, consulting, research & PM
- **Main Product:** PoolParty Semantic Suite (launched 2009)
- **Focus:** Semantic Information Management & LOD Services
- **Serving** global 500 companies, GOV & NGOs worldwide
- **EU-** & US-based **consulting services**
- **Intense involvement in / support of** LOD community

Project: LOD PILOT Austria

Establishing a digital LOD based Data Infrastructure for Austria

Project funded by Internet Foundation Austria (IPA).
Every day, we create 2.5 quintillion bytes of data — so much that **90% of the data in the world today has been created in the last two years** alone.

**This data comes from everywhere:**
sensors used to gather climate information, posts to social media sites, digital pictures and videos, purchase transaction records, and cell phone GPS signals to name a few.

This data is **big data**.

EU/EC Activities on Open Data

- 21 June 2012 – Launch of EC Open Data Portal (https://open-data.europa.eu/) (Data & Information of the EC)

- > 100 Mio Euros for Open Data Activities in EC funded (F&E) Projects (FP7, H2020 et al)


- Strong Focus on LINKED Open Data (LOD)

- PSI new: until 07/2015 integrated in national law in all MS (+Guidelines: Q1/14)

121 Datenkataloge in EU27
Status: Open Data in Austria

- 20 data publishing governmental institutions (local – regional – national)
- 179 official Applications available on top of ~ 1.151 datasets
- CC-BY as recommended license & DCAT based metadata standard
- Cooperation OGD Österreich pushes Open Data (BKA, Cities, Provinces, Communities)
Requirements on efficient Open Data

- Facilitate re-use by providing standards (open formats)
- Enable easy data-integration (by e.g. providing APIs)
- Link data to use full potential of open data
- Provide most important core data (basic data)
- Make the 'digital location Austria' more attractive
- Follow international trends & standards
- Provide trusted data sources to be used by government, industry, R&D and society
Project: LOD Pilot Austria

- Identify ~30-50 most important basic data (core data)
  - Postal Codes (PLZ) and District Codes
  - Political Districts
  - Points of Interest (POIs)
  - Demographic Basic Data
  - Types of Schools
  - Industry Sectors

- Create (trusted) reference-able URIs (Uniform Resource Identifier)
- Convert data to RDF (Resource Description Framework)
- Link data: among each other & ext. sources (Dbpedia, Eurovoc, ..)
- Make basic data available via HTTP for free (via: data.gv.at)
- Promote the LOD Infrastructure for broad re-use in AT
- Add on: realise 2-3 LOD use cases on top
Project: LOD Pilot Austria

- **Project Set Up**
  - Identify & Contact relevant Stakeholders
  - Establish Co-Operations
  - Project Setup: team, environment,

- **Specification- & Data Analysis Phase**
  - Workshops with relevant Stakeholders
    - Core Data Specification, URI Concept, Licensing, Legal Issues
    - Specification of Infrastructure, Architecture & Tools

- **Implementation Phase**
  - Technical Implementation (Infrastructure, Tools, et al)
  - LOD Publishing
  - Promotion, events & trainings, support

- **Maintenance & Operation Phase**
  - Continuous maintenance
  - Support for future publishing and use

**Timeline**

- **11-12/2013**
  - ✓ Project Set Up

- **04-07/2013**
  - ? Implementation Phase

- **01-03/2014**
  - ✓ Specification- & Data Analysis Phase

- **from 08/2014**
  - ? Maintenance & Operation Phase
LOD PILOT AT - Tools & Architecture


- **Virtuoso Triple Store** for data storage and SPARQL Endpoint: [http://virtuoso.openlinksw.com/](http://virtuoso.openlinksw.com/)


- **SILK** for Linking: [http://wifo5-03.informatik.uni-mannheim.de/bizer/silk/](http://wifo5-03.informatik.uni-mannheim.de/bizer/silk/)

- Additional RDF Converter as **Triplify** or **D2R** et al: [http://d2rq.org/d2r-server](http://d2rq.org/d2r-server)
Summary LOD Pilot Austria

- Create and establish a **basic LOD infrastructure** for Austria
- Provide a **central repository** for semantic assets in AT (follow ISA approach of EC – described in ADMS)
- Establish **official GOV trusty reference-able entities**
- Provide **open basic data** to generate impact (as Denmark)
- Implement **LOD use cases** on top to showcase potentials
- **Foster data literacy** by LOD trainings
- Bringing together all **relevant stakeholders**
- **Involve** (Linked) Open Data **community** (WU, TU, ...)

**Semantic Web Company**

*linking data to knowledge*
Creating Knowledge out of Interlinked Data

www.lod2.eu

Where you can find all information
Website: http://lod2.eu
Weblog: http://blog.lod2.eu
Twitter: http://twitter.com/lod2project
Mailing List: lod2@lists.okfn.org
SlideShare: http://www.slideshare.net/lod2project

Please use #lod2 on twitter for your posts & connect with: @lod2project
Many thanks in advance!! AND: #lod2stack for Technology Stack!
Creating Knowledge out of Interlinked Data

Research focus

- Very large RDF data management
- Enrichment & Interlinking
- Fusion & Information Quality
- Adaptive User Interfaces

3 Use Cases

- Media & Publishing
- Linked Enterprise Data
- Open Government Data

15 Partners of 12 countries

- University of Leipzig, Germany
- DERI Galway, Ireland
- FU Berlin, Germany
- Semantic Web Company, Austria
- OpenLink Software, UK
- TenForce, Belgium
- Exalead, France
- Wolters Kluwer, Germany
- Open Knowledge Foundation, UK
- CWI, Netherlands
- Zemanta, Slovenia
- University of Economics, Czech Republic
- Instytut Informatyki Gospodarczej, Poland
- MP: Institute Mihajlo Pupin, Serbia
- KAIST, Korea
3 Use Cases of LOD2

**Objective**
Applying Linked Data technologies in an enterprise stack to support Human Resources (HR) related issues.

**ENTERPRISE APPLICATIONS**
Exalead, France

**Objective**
Improving accessibility, findability and reusability of Open Government Data.

**LINKED OPEN GOVERNMENT DATA**
Open Knowledge Foundation, UK

**Objective**
Supporting content-related production workflows in the media & publishing industry.

**MEDIA & PUBLISHING**
Wolters Kluwer Germany

**Objective**
Improving accessibility, findability and reusability of Open Government Data.

publicdata.eu
3\textsuperscript{rd} release of the LOD2 stack available at: \url{http://stack.lod2.eu} (\url{http://stack.linkeddata.org/})

Integrated distribution of aligned tools which support the life-cycle of Linked Data. The LOD2 Stack also makes use of dataset metadata repositories such as \url{thedatahub.org} and \url{http://publicdata.eu}.

Online demo at \url{http://demo.lod2.eu/lod2demo}.

Virtual machine image \url{http://stack.lod2.eu/VirtualMachines/}

Documentation Wiki \url{http://wiki.lod2.eu/dashboard.action/}

Details & instructions \url{HOWTO Start document}

Webinars on Components, Tools & Services \url{http://lod2.eu/BlogPost/webinar-series/}


**OpenDataPortal – ODP Austria** – [http://opendataportal.at](http://opendataportal.at)
- Data Portal for non-gov data in Austria (OKF, Wikimedia, Coop OGD)
- Launch ~ June 2013
- Strong co-operation with LOD PILOT Austria

**European Data Forum 2014 (EDF2014)**
- 19 – 20 March 2014, Greece Athens
- 1 main focus: Data 4 Development
- Call for Exhibition still open:

21.03.2014, Athens
The Vision of the new Internet

Linked Data realizes the vision of evolving the Web into a global data commons, allowing applications to operate on top of an unbounded set of data sources, via standardised access mechanisms.

I expect that Linked Data will enable a significant evolutionary step in leading the Web to its full potential.
Thank You!

Any Questions?

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1. Makes use of **RDF Data**

SWC realises LOD PILOT

Start: 1. November 2013

Implemented for Austria

2. Is serialised in Triples:

   SWC realises LOD-Project
   LOD-Project started "20131101"^^xsd:date
   LOD-Project implemented for Austria

3. Makes use of **Content-negotiation**

GET [vocabulary URI]
Accept: application/rdf+xml

303 See Other
Location: [RDF content location]

GET [RDF content location]
Accept: application/rdf+xml

200 OK
<RDF>