Local Data Ecosystem

and the Smart City Concept Model

Greater Manchester IT Managers

Salford, 8th April 2014

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Director of Standards for the Local eGovernment Standards Body (LeGSB)
Introduction to LeGSB

- Operating since 2006

- Funded by Central Government Departments – currently
  - Department for Communities and Local Government (DCLG)
  - Department for Work and Pensions (DWP)
  - Department for Business, Innovation and Skills (BIS).

- Mission
  - To promote Standards for Efficiency, Transformation, and Transparency of Local Services

- People
  - All personnel are employees of local authorities, and central government departments.

- Web Site
  - http://www.legsb.gov.uk
A Local Data Ecosystem

- February 2014, the Open Data User Group awarded funding to Tameside Council, to develop a ‘Local Data Ecosystem’, illustrated using a ‘Troubled Families’ theme.

- The ‘local data ecosystem’ will contain
  - role based access to a multi-agency secure case management system
  - community access to a 5* open data publishing platform
  - personal data access via personal data store
  - dashboards for various stakeholders

- Data will flow across the components via common standards and frameworks.

  - **Semantics**
    - the meaning of information
  - **Syntax**
    - the format of information
  - **Data Quality**
    - the confidence to re-use information
  - **Rights**
    - the right to use information
  - **Authentication**
    - who is accessing information
  - **Transport**
    - how to move information
  - **Information Governance**
    - the behaviour and culture to protect and exploit information
Context

- **OPERATIONAL** - Data about real people and places, with real needs and circumstances, using real services, i.e., case work.

- **STATISTICAL** - Aggregated operational data – organised using common classifications and segmentations.

- **ANALYTICAL** - The conclusions drawn from an analysis of statistical data.

- **POLITICAL** - The decisions taken to shape services, e.g., budgets, strategies, priorities, targets etc.
Semantics

• The Smart City Concept Model
  – funded by BIS, as a BSI Publicly Available Standard PAS182
  – currently at public consultation stage with BSI.
  – relevant where many ORGANIZATIONS provide SERVICES to many COMMUNITIES within a PLACE.
  – http://www.smartcityconceptmodel.com
    • pas182, concepts13

• Extensible Data Dictionary
  – Define the classes/properties/vocabularies for a theme, e.g. Troubled Families
  – Reuse them for other themes, e.g. dementia, early years, potholes
Establishing a right to data

- For data to be shared, the data controller needs to be assured that
- A person is empowered by their organisation to act in a role that has a right to a set of data items for a purpose, and agrees to the terms by which the data is to be used and handled.

- define the ‘purposes’ for which data was originally collected;
- define ‘purposes’ for which data may be re-used;
- define the ‘terms’ for access to data;

<table>
<thead>
<tr>
<th>Class</th>
<th>Data Sharing Service</th>
<th>Id</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Data about school exclusions.</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Links**
- Changes
- Export

**supports**

<table>
<thead>
<tr>
<th>Id</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>identifying troubled families.</td>
</tr>
<tr>
<td>2</td>
<td>* Crime and Anti-Social Behaviour</td>
</tr>
<tr>
<td></td>
<td>* Education</td>
</tr>
<tr>
<td></td>
<td>* Work</td>
</tr>
<tr>
<td></td>
<td>... and locally set criteria.</td>
</tr>
</tbody>
</table>

**is enabled by**

<table>
<thead>
<tr>
<th>Id</th>
<th>Legal Gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Section 17 of the Children Act 1989.</td>
</tr>
<tr>
<td>2</td>
<td>School attendance data is covered by Section 17 of the Children Act 1989. Local authorities may collect and share this information under these implied powers in order to support/protect children.</td>
</tr>
<tr>
<td>3</td>
<td>As the data shared is likely to be considered ‘sensitive’ (under the terms of the DPA), authorities should only share this data for the purposes of identifying their troubled families.</td>
</tr>
</tbody>
</table>
Syntax

• Syntax for data in the local data ecosystem
  – Data will be stored as a series of triples in named graphs, in RDF format

• Syntax for import information
  – Data will typically originate in a computer system, or in a spreadsheet.
  – The ‘local data ecosystem’ will have facilities to
    • map source data to the Data Dictionary
    • transform and import data

• Syntax for querying and extracting data from the local data ecosystem
  – The ability to extract data will be restricted based on the rights/authentication/transport/governance parts of the framework.
  – The local data ecosystem will be query-able using
    • SPARQL, as a general query language
    • Search parameters using terms from the Smart City Concept Model, and the extensible Data Dictionary
  – Data will be extracted in a variety of syntaxes including
    • flavours of RDF;
    • Csv
    • Xml
    • Json
    • html
Quality

• Provenance
  – Provenance information describes the processes and actors that data has passed through, such as collection, verification, audit, aggregation and so on.
  – The ‘local data ecosystem’ will include a standard structure for describing the provenance of each dataset, and each statement

• Fitness for Purpose
  – Provenance information describes expectations such as precision, accuracy, timeliness, completeness and so on.
  – The ‘local data ecosystem’ will include a standard structure for describing the fitness-for-purpose of
Thank you

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- http://www.legsbo.gov.uk