

Publishing local 5 star data.

A Local Data Ecosystem?

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To: The London Borough of Redbridge, 7th August 2013

This is about ...

- A vision for a real-time 'local data ecosystem, based on 5* data, and standards.
 - partnership working;
 - democratic engagement;
 - open public services;
- Datashare and Linked Data
 - Schemas, Linked Data Profiles
- National Information Infrastructure
 - Inventories
 - Connective Reference Data

- **Mission**

- *To promote eStandards that support Efficiency, Transformation, and Transparency of Local Services*
- *Syntax, Semantics, Quality, Rights, Authentication, Transport, Governance*

- **Funded by sponsorship from**

- **DWP**
 - Universal Credits, Welfare Reform Data Sharing, ATLAS message formats
- **Communities and Local Government**
 - Transparency, Comparable Financial Data
 - Open Public Services
 - Troubled Families
- **BIS/BSI**
 - Smart Cities

- **Governance**

- Originally an ODPM National Project
- A part of the iNetwork
- Accountable body is Thameside Council

- **Executive Steering Board**

- LGA, SOCITM, DWP, CLG, Cabinet Office, BIS, Health, Education, Intellect, Information Commissioner's Office

Code of recommended practice ...

- expenditure over £500, (including costs, supplier and transaction information)
- senior employee salaries, names, budgets and responsibilities of staff paid over £58,200 - equivalent to the lowest Senior Civil Service pay band
- an organisational chart
- the 'pay multiple' - the ratio between the highest paid salary and the median average salary of the whole of the authority's workforce
- councillor allowances and expenses
- copies of contracts and tenders to businesses and to the voluntary community and social enterprise sector
- grants to the voluntary community and social enterprise sector should be clearly itemised and listed
- policies, performance, external audits and key inspections and key indicators on the authorities' fiscal and financial position
- the location of public land and building assets and key attribute information that is normally recorded on asset registers
- data of democratic running of the local authority including the constitution, election results, committee minutes, decision - making processes and records of decisions.

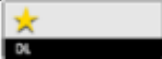




The Code of Recommended Practice for Local Authorities on Data Transparency





- Publication should be in open and machine-readable formats. The recommended 5 step journey to a fully open format is:
 - * Available on the web (whatever format) but with an open license
 - ** As for one star plus available as machine-readable structured data (e.g. Excel instead of image scan of a table)
 - *** As for two star plus use a non-proprietary format (e.g. CSV and XML)
 - **** All the above plus use open standards from the World Wide Web Consortium (such as RDF and SPARQL) and
 - ***** All the above plus link your data to other people's data to provide context.

Publishing up to step 3

Star Rating ⁵	In practice	Pros	Cons
	<p>This is typically a static document, perhaps containing data as tables.</p> <p>Often this would be web page as html⁶, a document as pdf⁷, or an image.</p>	<ul style="list-style-type: none"> • easy to produce; • retains presentation and layout; 	<ul style="list-style-type: none"> • cannot further manipulate the data such as sorting, filtering, summing etc; • cannot join or compare to other data, or earlier versions;
	<p>This is typically data, such as a spreadsheet, published in the format of the tool that was used to extract it, such as xls⁸.</p>	<ul style="list-style-type: none"> • no new tools or skills necessary; • data can be downloaded and further processed and analysed. 	<ul style="list-style-type: none"> • assumes that the consumer has the same tool as the producer, or is able to use the format. • very large data sets might not be attractive to download.
	<p>This is typically 2* type data published using an open format, such as csv⁹ or xml¹⁰.</p>	<ul style="list-style-type: none"> • there is typically a choice of open source tools available for each open format 	<ul style="list-style-type: none"> • Some conversion necessary. • Where data has greater structure than a simple 2-dimensional table, many files may be necessary, which may become disconnected; • The meaning and scope of columns and rows can be hard to express.

Publishing up to step 5

	<p>This is explicitly about publishing data to the RDF¹¹ data model, and providing a query service using the SPARQL¹² language.</p>	<ul style="list-style-type: none"> enables others to make statements over the web about individual lines of data; can be queried over a data service so that a complete data set does not have to be downloaded; gives precise definitions to the meaning of the data. 	<ul style="list-style-type: none"> requires a skill set that most local authorities do not have yet; not suitable to provide directly to residents. Requires some infrastructure
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	<p>This is Linked Data in the Rdf model, that contains links to external datasets to describe the 'things' that the data refers to.</p>	<ul style="list-style-type: none"> adds context; can build into a 'data ecosystem'. can enable 3rd parties to join data from many sources together to provide new targeted information services and insight. 	<ul style="list-style-type: none"> requires a 'spine' of core reference data to make links to.
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- What
 - Explains what linked data is
 - Uses three real examples to illustrate good-practice steps to produce linked data
 - Draws out ‘gaps’ in content and infrastructure
- Why
 - Feedback from local authorities tells us that, while many wish to publish data in a smarter, joined up way, that will benefit their residents, they have not been able to find relevant material that explains the practicalities of 5* data publishing.
 - At LGA events across England in March 2013, LeGSB presented the material in this guide to roomfuls of local authority practitioners, who then fed back that they would value it being turned into a proper guide, and were likely to take part in supporting web collaborations.

Addressing Gaps

- Content
 - which ‘concepts’ commonly recur in local public service data?
 - which properties/URI Sets/controlled vocabularies should we consistently use?
 - what existing linked data is already available that could be linked to?
 - what ‘core reference data’ is missing, which we will need to be able to make links in linked data?
- Methods / Tools / Architecture / Standards
 - modeling
 - describing quality and provenance;
 - patterns for common scenarios such as statistics;
 - expressing the ‘profile’ of a dataset;
 - data formats to respond with when dereferencing URIs;
 - options for triplestores, APIs, data services;



Home Publishing Local 5* Data Events News White Papers Projects Promoted Standards Consultations Governance

Publishing Local 5* Data

This LeGSB guide is currently a draft. Various Linked Data experts have checked it for us and we have been able to improve it as a result. The final version will be available soon when we get endorsements and recommendations from other organisations, but for now, here is the draft.

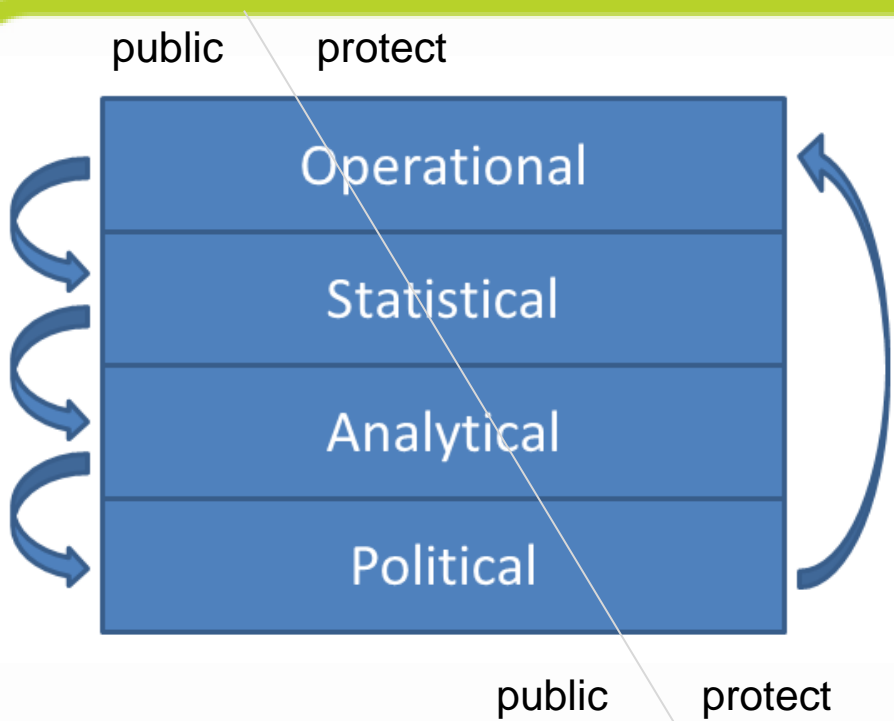
[LeGSB-PublishingLocal5StarData-Rev3](#)

Please give us feedback to this document using the form at the bottom of the page. You will see that we have also provided further pages to discuss some of the issues and 'gaps' that the guide highlights.

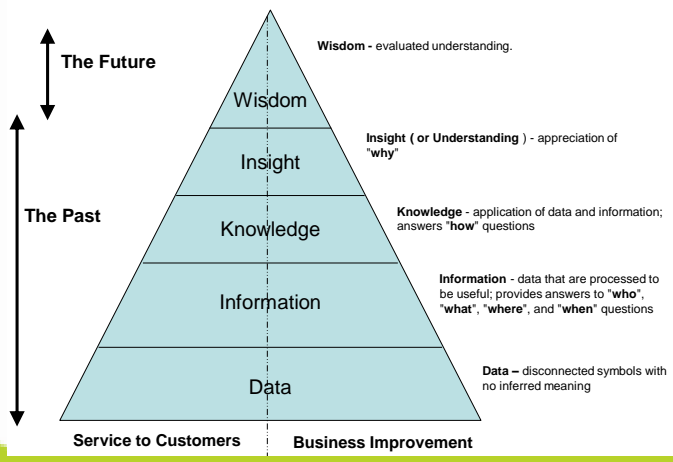
Why do we need this guide?

Feedback from local authorities tells us that, while many wish to publish data in a smarter, joined up way, that will benefit their residents, they have not been able to find relevant material that explains the practicalities of 5* data publishing

Making local links



- **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.



Car Parking

Context	Insight / Service	Data
Operational	Where are Car Parks? What spaces are free now? Individual Tickets and Fines	GIS and real-time monitoring. Ticket machine data
Statistical	Average number of free spaces at locations and times of the day/week. Income and Expenditure on Car Parks, year to date, previous years.	Locations, Times. Accounting
Analytical	Capacity of car parks to meet retail and employment needs.	Correlation to Town Centre shopping and employment data
Political	Fees and charges Target income/expenditure Car Parking Strategy	Budgets, Outturn Decisions on future capacity, charges, 'park and ride' initiatives.

Food Premises Inspections

Context	Insight / Service	Data
Operational	What is the rating of a particular food premises,	Inspection report and rating of an identified premises
Statistical	How are ratings and failures spread across premises types?	Types, Locations, Outcomes of Food Premises' inspections.
Analytical	How safe are our food outlets?	Correlation to health incidents.
Political	What is being done to make our food outlets safer?	Targeted training programmes. Risk Based inspections.

A Smart City Concept Model

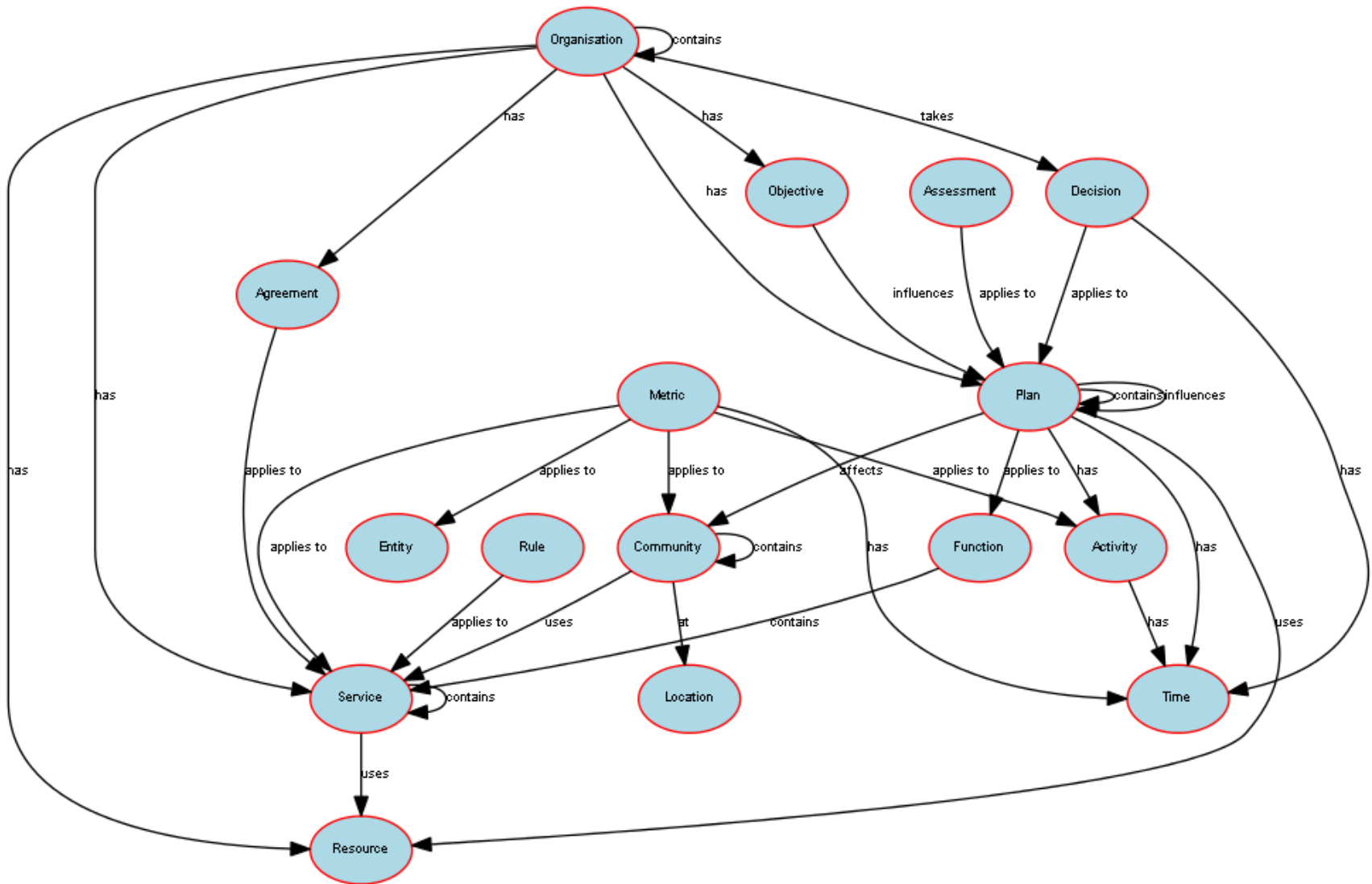
- **What would be in it?**

- Concepts
 - Organisation, Location, Community, Entity, Metric, Service, Resource, Time
- Identifiers
 - Companies House, Ordnance Survey Administrative Geographies, Output Areas,
- Controlled Vocabularies defining ‘types of things’, segmentations
 - Types of Service, Resource
- Relationships between Classes
 - Organisation has Resource, Event as a Location

- **What would it support**

- Core Reference Data
- Publishing ‘transactional’ Open Data
- Sharing operational data
- Querying data from many sources

Joining it up?



Decisions?

Grants Panel

Friends of Apex Park Improvements Group:
To grant £1,000

East Huntspill Sports Pavilion:
To defer for further information

Home-Start Bridgwater:
To refuse the application

Burnham and Highbridge Sea Cadet Unit:
To grant £300

Cooks Alms Houses (Spaxton)
To defer for further information

Hamp Go-Getters Lunch Club:
To grant £500

Somerset Business Agency C.I.C:
To grant £1,000 and request an outcome report

Somerset Trust for Arts and Recreation:
To refuse the application

Cheddar Church House:
To grant £1,000

The Executive

The Executive RESOLVED:

1. To approve the expenditure of £110k to replace the general office lighting at Bridgwater House with a more energy efficient low maintenance LED solution.
2. To agree to waive standing orders as quotations rather than tenders have been obtained.

The Executive

2. To agree that the tender submitted by CF Spencer and Co Ltd be accepted by Legal Services for the Harbour Master, Pilotage and the River Survey Service.
3. To note that increases to the Scale of Charges for this Service will be 6% in April 2014 and 6% for April 2015. Appropriate and similar increases will be required for April 2016 and 2017.

An api for a city?

Awards

id	Reference	Name	Type	Category	Estimated Total Contract Value	awarded by		Period	
						Name	Type	Start	End
http://data.sedgemoor.gov.uk/id/contracts/agreement/1		Multi-Functional Devices	Contract	30120000 - Photocopying and offset printing equipment	0			01 June 2008	02 June 2013
http://data.sedgemoor.gov.uk/id/contracts/agreement/2		Banking Services	Contract	66000000 - Financial and insurance services	0			01 April 2009	01 April 2013
http://data.sedgemoor.gov.uk/id/contracts/agreement/3		Harbour Master and Pilotage	Contract	90700000 - Environmental services	0			01 April 2009	30 June 2013
http://data.sedgemoor.gov.uk/id/contracts/agreement/4		Pest Control	Contract	90922000 - Pest-control services	0			23 April 2009	23 April 2013
http://data.sedgemoor.gov.uk/id/contracts/agreement/5		Tankering Services	Contract	90000000 - Sewage, refuse, cleaning and environmental services	5000			13 September 2010	12 September 2013
http://data.sedgemoor.gov.uk/id/contracts/agreement/6		Legal support to support Hinkley Point C	Contract	79110000 - Legal advisory and representation services	100000			01 October 2010	01 October 2012

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?uri ops:awardedBy <http://data.sedgemoor.gov.uk/id/council/organisation/1> .
{SELECT DISTINCT ?uri ?p5 ?p7 ?p9 ?p11 ?p13 ?p15 ?p17 ?p19 ?p21 ?p23 ?p25 WHERE {

?uri rdf:type ops:Agreement .
OPTIONAL { ?uri ops:reference ?p5 . }
OPTIONAL { ?uri skos:prefLabel ?p7 . }
OPTIONAL { ?uri dcterms:type ?p9 . }
OPTIONAL { ?uri ops:classification ?p11 . }
OPTIONAL { ?uri ops:estimatedtotalcontractvalue ?p13 . }
OPTIONAL { ?uri ops:awardedBy ?p15 . }
OPTIONAL { ?p15 skos:prefLabel ?p17 . }
OPTIONAL { ?p15 org:classification ?p19 . } }
OPTIONAL { ?uri ops:hasPeriod ?p21 . }
OPTIONAL { ?p21 ops:periodStart ?p23 . }
OPTIONAL { ?p21 ops:periodEnd ?p25 . } }

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