



Integrating the UK Location Information Infrastructure and data.gov.uk

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This presentation

- The issue: How to derive the benefits of INSPIRE
- Background
- UKLII Technical Design Principles and Architecture
- Integration issues
- Benefits of a single UK portal
- Lessons learnt
- Summary



The issue

- A challenge faced by all Member States is how to derive the benefits of INSPIRE while doing more with less!
 - UK approach:
 - Provide access to government information assets, spatial and non-spatial on data.gov.uk to maximise re-use
 - Adopt design principles for the UK Location Information Infrastructure that support re-use and exploitation without unnecessary cost
 - Look to the opportunities provided by the semantic web and linked data to better exploit these assets
- ... make available > at lower cost > exploit in new ways



What is UK Location?

- UK Location Strategy: UK Government's strategic vision for Location (spatial) Information in the UK (2008). Including but wider than INSPIRE
- UK Location Council: Governance Body overseeing delivery of the strategy
- UK Location Programme: Department for Environment, Food and Rural Affairs (DEFRA) led programme tasked with implementation. Supported by Technical Partners

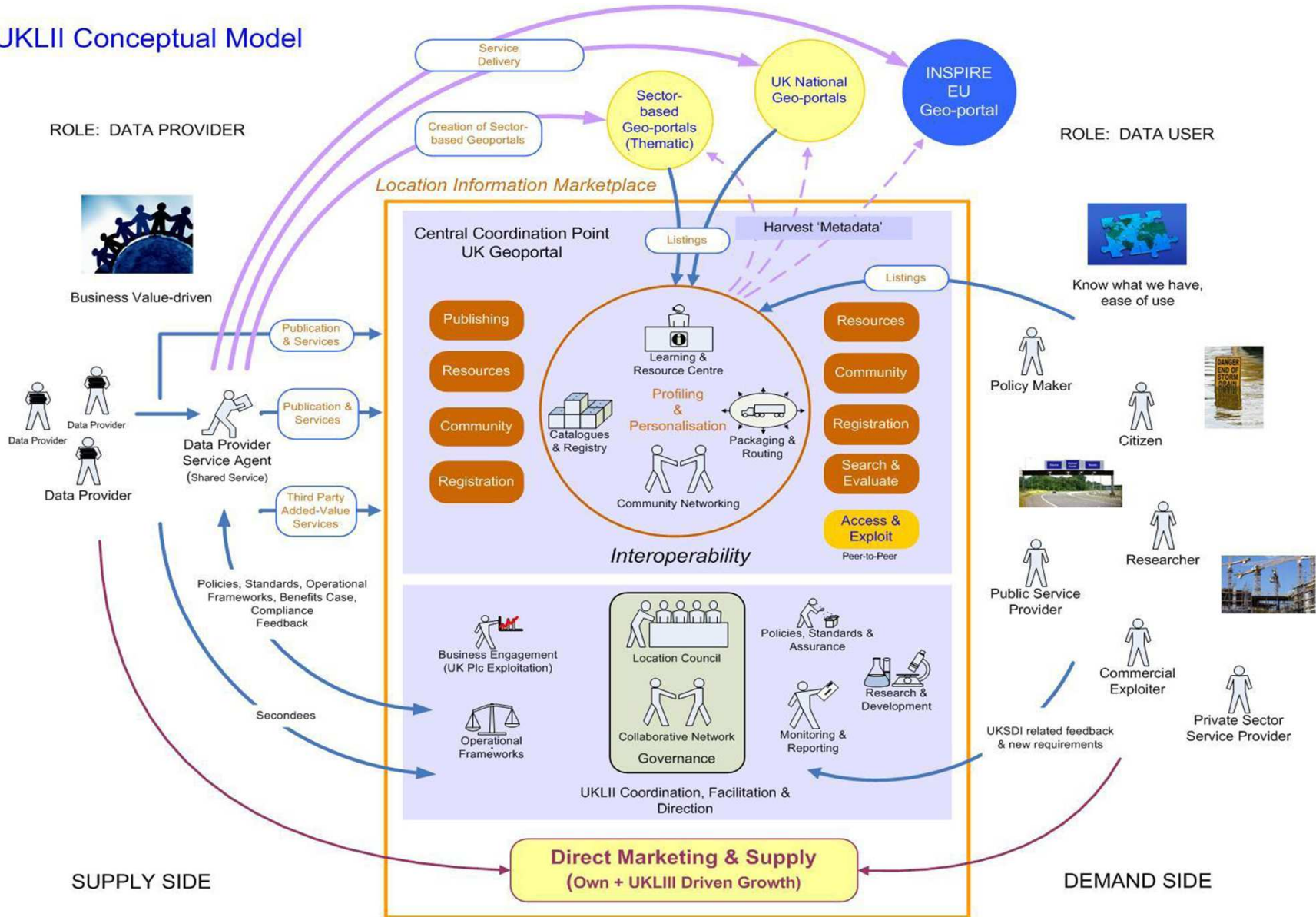




UK Location Information Infrastructure (UKLII)

- As a conceptual model: an effective and efficient environment for the re-use of location information covering:
 - the discovery of what data exists;
 - the creation of foundational, coordinated “core geographic reference” datasets and INSPIRE themes;
 - dataset interoperability;
 - data publishing;
 - data sharing, inc. rights management and charging
- ... and based on an overarching set of design principles

UKLII Conceptual Model





Data.gov.uk

HM Government

Log in or sign up

data.gov.uk^{BETA}

Opening up government

What are you looking for?

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Data

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About



Data.gov.uk is where you'll find public data all in one place. Why not start with Government spending?

Prev

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Next

Over 5,600 datasets to view

Inside Government Data

Who's who in Government and where does the money go? Follow these links to find the data that opens it all up.

- Government spend over £25,000, by department
- Who does what in Whitehall - and how much are they paid?
- Hospitality, gifts and expenses

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Go

Enter your postcode to find tools and information about your local area using government data

Who does what in Whitehall?



How your money is spent



Government contracts in full



Who ministers are meeting



Business plans



Applications



The logo for Data.gov.uk features three stylized arrows pointing towards the right. The top arrow is purple, the middle one is grey, and the bottom one is brown. They are arranged in a fan-like shape.

Data.gov.uk

- A single portal for UK government data
 - *“The Government is releasing public data to help people understand how government works and how policies are made. Some of this data is already available, but data.gov.uk brings it together in one searchable website.”*
 - provide access to all users > enable innovation > support economic growth
 - Launched in Oct 2009 (Test) for as a portal for developers
 - Part of Transparency agenda to open up government including efficiency and reform of Public Services
 - Wide range of non-spatial and (now) spatial data under Open Government Licence
 - Maintained by Central Office of Information (CoI) for Cabinet Office



Integration with UKLII - when and why?

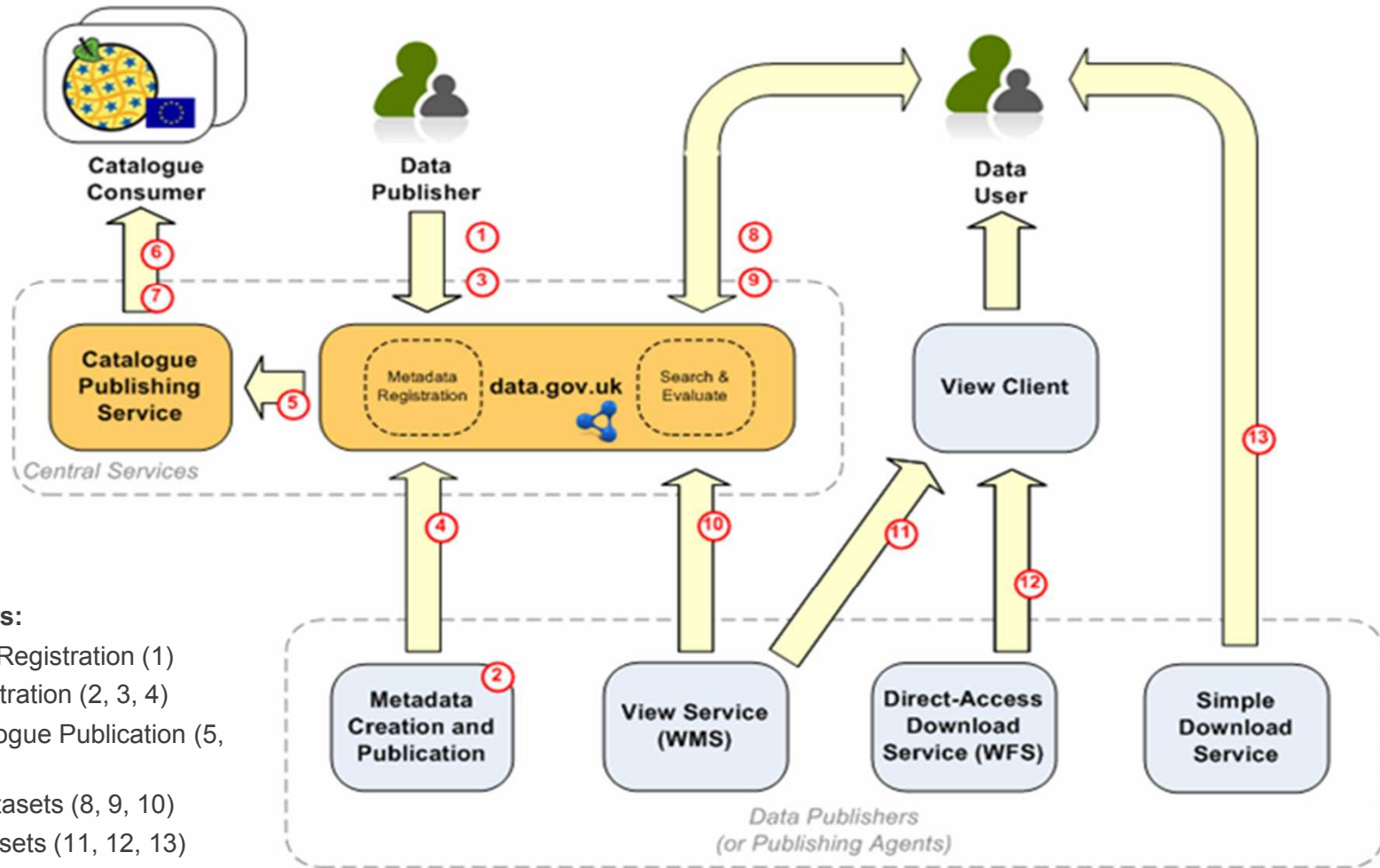
- INSPIRE doesn't mandate a Geoportal but always likely in order to exploit the infrastructure investment
 - A set of circumstances:
 - UKLP wanted a Geoportal
 - parallel development of UKLII and data.gov.uk
 - fitted overall design and technical design principles
 - Cabinet Office represented on Location Council
 - alignment with a key government policy (Transparency)
 - contain costs
- ... and expected greater benefit in exploiting spatial and non-spatial data together



UKLII Technical Design Principles

- These refine, support and extend the principles in the UKLII Conceptual Design Blueprint.
- UKLII Central Services Principles:
 - Metadata discovery delivered through data.gov.uk
 - Central services will not host location information
 - Minimise the scope of central services
 - Maximise use of existing software solutions
 - Maximise use of open source solutions
 - Maximise use of open standards
 - Solutions should be “fit for purpose”
 - Support flexibility and extensibility
- Also design principles for data and metadata

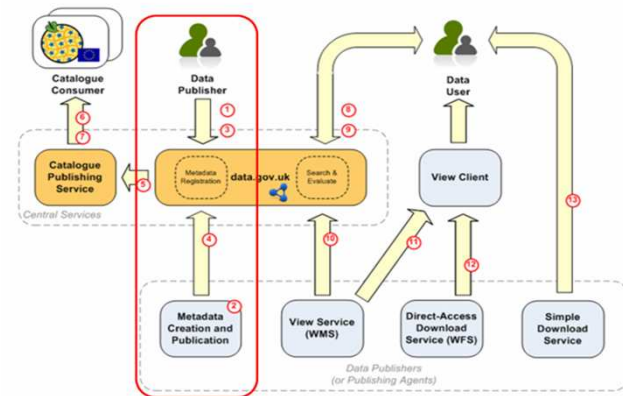
UKLI Technical Architecture overview



Key to numbers:

- Data Publisher Registration (1)
- Metadata Registration (2, 3, 4)
- Metadata Catalogue Publication (5, 6, 7)
- Discovering Datasets (8, 9, 10)
- Accessing Datasets (11, 12, 13)

UKLII Discovery Metadata Service (DMS)



- *UKL Metadata Editor tool and metadata creation:*
 - create dataset and service metadata. Publish to CSW or WAF (Web Accessible Folder)
- Data Publisher registration
 - create Data Publisher account on data.gov.uk
- Metadata registration and harvesting:
 - Register metadata resources on data.gov.uk
 - Metadata harvest by data.gov.uk

uk location Metadata Editor Supported by Ordnance Survey

GeoNetwork™ OpenSource
Geographic data sharing for everyone

Home | Contact us | Links | About | Help | Username Password Login

WHAT?

- * Applications
- * Audio/Video
- * Case studies, best practices
- * Conference proceedings
- * Datasets
- * Directories
- * Interactive resources
- * Maps & graphics
- * Other information resources
- * Photo

WELCOME TO THE UK METADATA EDITOR - BETA RELEASE V1.4

With the UK Location Metadata Editor you can, subject to your local configuration:

- Create UK Location compliant discovery metadata for the publishing of data and services into the UK Location Information Infrastructure
- Upload your own customised templates, based on the UK Location generic data and service metadata templates, for the inclusion of standard text
- Search your local discovery metadata repository for data using the search form on the left
- Edit data within your own group from the search results
- Create or import new data using the Metadata section under the Administration tab (above left)

Do not use this on-line editor to store your discovery metadata resources. Always store locally and import, edit and export as part of any session. UK Location cannot be held responsible for any loss of data.

The User Guide provides more general information hints and tips for the UK Location Metadata Editor.

This version of the editor supports UK GEMINI version 2.1.

The Metadata Editor is a GeoNetwork opensource based installation. We would like to thank the community for making GeoNetwork available under the GNU Public License.

Further information

- GeoNetwork

Discovery Metadata Service Collection Interface Specification

Version 0-4
11 February 2011

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data.gov.uk^{BETA}
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What are you looking for?

Home | Data | Apps | **Ideas** | Forum | Blogs | Linked Data | Resources | About

Community account

Username: *

Enter your data.gov.uk username.

Password: *

Enter the password that accompanies your username.

Have you used our data to create an application?

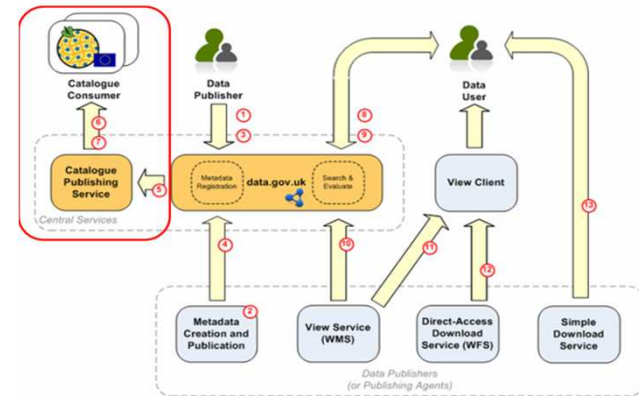
Let us know...

Have you got a good idea for the data?

We can help you find a developer....

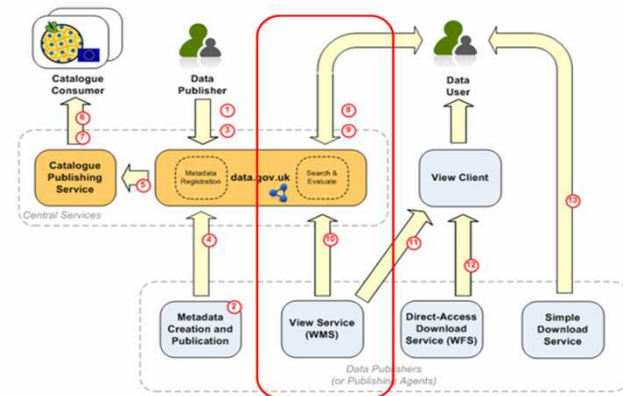
Do you want more data?

UKLII Data and Service Publishing



- Metadata catalogue publication to EC and other portals:
 - Extract from data.gov.uk to Catalogue Publication Service (CPS)
 - EU harvest from Catalogue Publication Service via CSW interface
 - Other applications able to access metadata through CPS

UKLII Search and Evaluation



- Discovering datasets on data.gov.uk
 - discover dataset and service metadata via standard search
 - geographic search using Search Map Widget (client)
 - evaluate datasets using Evaluate Map Widget (client) for View Services

Search

Current search

Search found 342 items

> (-) scottish government sdi

Enter your keywords:

scottish government sdi

Search

Retain current filters

Did you mean:

scotland government sdi

Search results

Scottish Government corporate datasets WMS Mapping Service (WMS) Service

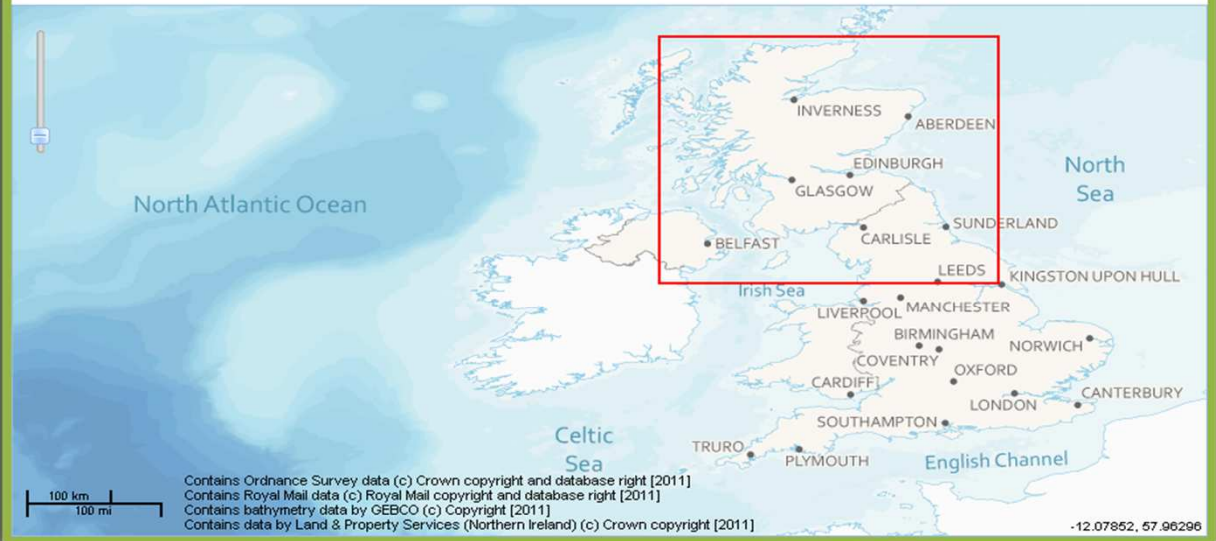
Scottish Government Spatial Data Infrastructure **Scottish Government** corporate datasets relevant to first phases of SDI and INSPIRE. One dataset ... Fishery Districts 18 NUTS 3 20 **Scottish Government** Urban Rural Classification 6

Search

Place name, postcode or coordinate Find
Example: London or EH99 1SP or -5.93, 54.58

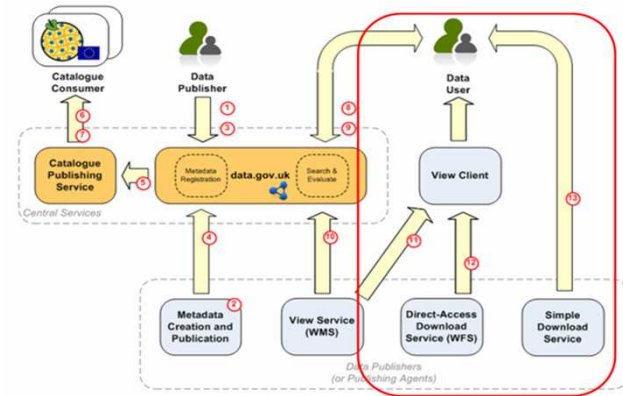
Bounding Box

Draw Clear Search



- > Publisher (103)
- > Idea (403)
- > Data request (212)

UKLII Access and Exploitation



- Accessing datasets via data.gov.uk
 - Data Publisher View Services (WMS)
 - Download Services: Direct Access (WFS); simple file download (not yet developed)
 - Transformation Services: Coordinate and Schema transformation (not yet developed)
 - Spatial Data Services??



UKLII Other components

- Technical components on data.gov.uk:
 - Registry; User and Data Publisher Account management
- Community Networking on data.gov.uk:
 - apps; ideas; blogs; wiki; forum
- Supporting Services
 - Ordnance Survey mapping service
 - Ordnance Survey gazetteer service



Integration issues

- Standards – *“the great thing about standards is that there are so many to choose from”*
 - Metadata: UKLII uses UK GEMINI21; Data.gov.uk part based on e-GMS (e-GIF). > Catalogue search issue. Map across
 - Data: UKLII requires interoperable datasets (INSPIRE Regulations); Data.gov.uk requires datasets in re-usable form. > *Data processing issue*
- Data Quality
 - UKLII: comprehensive metadata and data validation (e.g schematron; schemas); Data.gov.uk: limited QA of content. > *Variation in quality*



Integration issues

- Portal functionality
 - UKLII: requires harvesting, spatial search, visual evaluation, catalogue publishing, WFS download, transformation, reporting etc; Data.gov.uk: upload, search, evaluate, download. > extend portal functionality and processes
- Licensing and charging
 - UKLII: includes ‘charged for’ data, commercial and 3rd sector. Data.gov.uk uses Open Government Licence (OGL). > amend site T&Cs; reposition data.gov.uk.
- Terminology/Actors
 - UKLII: has Data Providers, Data Publishers, & Data Users. Data.gov.uk: Data Provider = Data Publisher. > adjust signposting and navigation



Integration issues

- Audience/Users
 - UKLII: deals with location (spatial) data. Data.gov.uk deals primarily with non-spatial data. > broaden site orientation and adjust guidance
- Development and Support
 - Development approach (Waterfall vs. AGILE); Development timetable (INSPIRE vs. Transparency vs. Business); Customer support. > adjust and integrate



Benefits of integration/single UK portal

- Data.gov.uk capability:
 - search capability and scalability
 - community networking capability - support developers/users
 - high visibility/major presence on the web
 - Wider benefits:
 - meets principle of reusing what already exists - costs
 - helps minimise the number of portals - ‘one place to go’
 - aligns with a key government policy – Transparency
 - bringing closer working with Cabinet Office and between Location people and wider Information domain people
- ... and expected greater benefit in exploiting spatial and non-spatial data together



Lessons learnt

- Technical infrastructure being delivered at relatively low cost
- Integrating development work between all the parties is a challenge – planning and control
- Design changes risk delays (v.3.0 Tech.Guidance)
- Maintain good working relationships
- A lot of expertise required – needs maintaining
- Keep language simple – naming and jargon

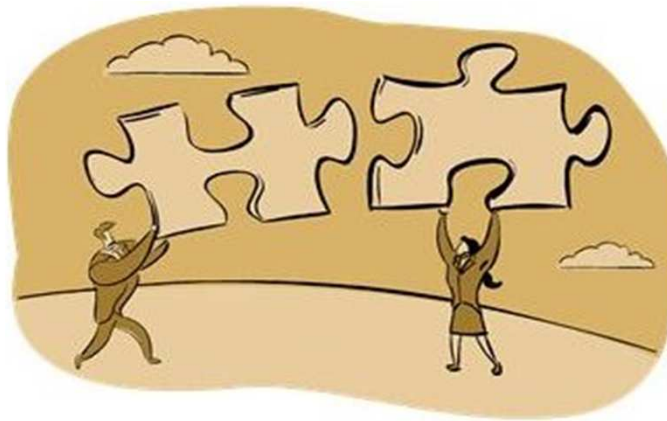
... a typical IT project? ... but INSPIRE is a world first and there's no manual!



Conclusion: UKLII + data.gov.uk



A happy marriage ... with the odd difference of opinion



... but mostly a learning process



Resources

Where can I find out more?

- UK Location website <http://location.defra.gov.uk/>
- Data.gov.uk <http://data.gov.uk/>

Who to contact?

- UK Location Coordination Center
<http://location.defra.gov.uk/resources/contact-us/>
- Rod Kedge, UK Location r.kedge@ccw.gov.uk