Designing the next generation of products and services

Debbie Wilson
Senior Geographic Information Architect
Where we are

OS MasterMap®
Where we are
‘It is traumatic to Process, update and make the data available to users every 6 weeks – could OS provide a free toolset to assist with managing updates?’

GL Noble Denton - consultants to National Grid, August 2013

‘Can you provide a streamed service that will answer questions like how many schools are in my area’

Rushcliffe Borough Council Nov 2013

Provide/push info to us. It would modernise my impression of OS. It would take it from a dusty, geography school-room, which is what is in the back of my mind at the moment, to more of a GIS technical (one). [B2B, CSC]

Our customers and partners need to invest a lot (beyond licensing fees) to extract value from our data

Ease of access and use across multiple platforms is increasingly seen as a key buying decision
Where are going
Mobile Apps

OS MapFinder
All your routes, all your adventures — mapped.
Web Services, APIs and SDKs

Southampton

OS Places

Matching and Cleansing + Capture and Verification = Clean database

OS OnDemand
Geo-enabled applications
Paradigm shift - Information Architecture

Generic Product Model

- Topographic Point
- Topographic Line
- Topographic Area

Component Content Model

- Networks & Transport
  - Road
  - Path
  - Rail
  - Air
  - Water

- Places
  - Address
  - Named Place
  - Points of Interest

- Height & Imagery

- Administrative Geographies

- Buildings & Structures

- Land Cover & Land Use

- Hydrography & Landform

Analytical vs Contextual Content
Maintain product independent content
Next generation OS product content

- Networks & Transport
- Places
- Buildings & Structures
- Land Cover & Land Use
- Height & Imagery

Adopt/Extend

- ISOTC211
  - ISO 19152 - LADM
  - ISO 19156 – O&M
  - ISO 19160 – Addresses

- OGC
  - CityGML
  - SWE Common
  - GML Coverages

- INSPIRE
  - Network Model
  - Buildings
  - Addresses

- IHO/ICAO/....
  - BIM
  - AIXM 5.1
  - ......

- W3C
  - Pol
  - SKOS

ISO 19103, ISO 19107, ISO 19108, ISO 19111, ISO 19115, ISO 19123, ISO 19136/19139

XML/RDF
Building upon INSPIRE Data Specifications

OS Terrain: 5 & 50

OS MasterMap – Water Network

Gazetteer of Great Britain

INSPIRE: Elevation

Hydrography

Geographic Names

GML

CSV

RDF

json
Modelling different representation formats

Logical Model

Implementation Profile

Physical Schema

Flattening (optional)

MDA Transform

GML Building

GML

ShapeChange

JSON

DDL
Issues: Handling identity for real world entities with multiple representations
Conclusions

- Ordnance Survey is undergoing large investment programme:
  - Define platform independent content models & transform into different representation formats
  - Adopt and extend existing specifications such as INSPIRE, W3C, OGC…..
- We need to improve our information architecture:
  - Adopt and extend existing specifications such as INSPIRE, W3C, OGC…..
- Enabling us to:
  - Publish new content quicker via services and apps
  - Ensure consistency between different representation formats and ensure different services produce data is same way
  - Allow us to adopt new formats as they emerge with lower costs
  - Be innovative, agile and deliver what the customer needs more effectively
Questions?

debbie.wilson@ordnancesurvey.co.uk