

# Spatial unlocks the key to joined-up government



## Case Study: Ordnance Survey Northern Ireland

“The unique identifiers in our Fusion data model allow digitally-enabled solutions across government to talk to each other, creating many new ways to automate processes and avoid mistakes and omissions. By automatically triggering multiple business processes, every user across government with an interest in a particular feature is kept informed of changes to join up systems.”

Jim Lennon, Chief Survey Officer & Director, Ordnance Survey Northern Ireland

**Industry:** Government

**Customer:** Ordnance Survey Northern Ireland (OSNI)

**Challenge:** Interoperability of information within the organisation and across government.

**Solution:** Providing a spatial data infrastructure that manages data quality and validation before integration into the live system.

### Key Benefits

- ▶ Connects distributed architecture to underpin government in an unprecedented way
- ▶ Delivers value for money by enabling greater interoperability and automation across public services
- ▶ Concept of common identifiers supports the Geospatial Commission's FAIR (Findable, Accessible, Interoperable and Reusable) principles
- ▶ Identifiers support a very high standard of Open Data, allowing information from across government and the private sector to be quickly and easily identified, shared and reused
- ▶ Potential to use unique identifiers to enrich data via linking spatial and non-spatial datasets

## Overview

OSNI Fusion, a new data model developed by Ordnance Survey of Northern Ireland (OSNI) together with automation, editing and integration tools from 1Spatial provide the opportunity for Land & Property Services (LPS) to link databases and automate processes across government.

## Challenge

Formed by the merger of OSNI, Land Registry, Valuation Agency and Rates Collection Agency, LPS has a wealth of data relating to land and property. However, with the information held in separate legacy systems preventing it from being shared both within the organisation and across government, it needed a new building block for interoperability.

Furthermore, as LPS data underpins the collection of around £1.3 billion of rates revenue, the solution would also need to retain user confidence in accuracy and quality, as well as capture and management methods.

## Solution

Developed by OSNI, the Fusion object-based model has created millions of features to represent Northern Ireland's land use and built environment, each with a unique spatial identifier. The linkages created by these identifiers geolocate any building, land parcel or other real world object to join up systems across government and create an integrated geospatial information framework. They are also used within the 1Spatial Management Suite (1SMS) to provide a fully automated workflow for capturing and managing change in the national database. Unique identifiers are also enabling the automatic trigger of multiple business processes, so that every user across government is kept informed of changes.

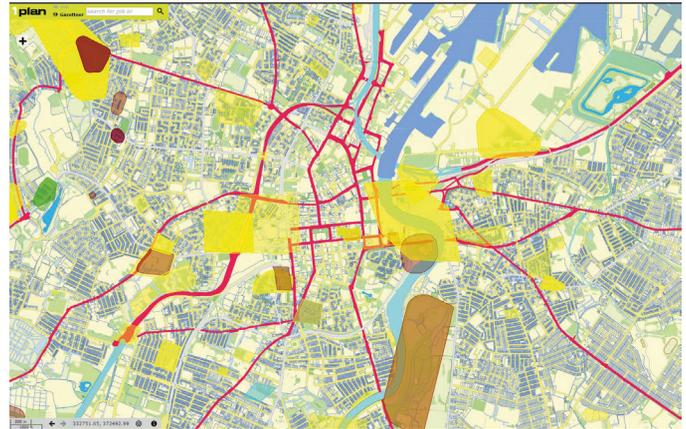
1SMS provides the spatial data infrastructure to manage the object lifecycle and a quality framework which ensures data is subject to validation checks before integration and acceptance into the live system. In addition, the unique identifier provides confidence that quality is retained throughout the object's lifecycle.



“Embedding the unique identifier as a requirement in new systems is an opportunity for the Northern Ireland Civil Service to leapfrog the rest of the world in their application, making us global leaders in supporting joined up government.”



Jim Lennon, Chief Survey Officer & Director, Ordnance Survey Northern Ireland



## Project Benefits

- ▶ Joins up systems across government via a geospatial information framework
- ▶ Ensures data quality whilst improving efficiency using automation for verification against specifications
- ▶ Maintains a live publication-ready production database as only changes conforming to OSNI business rules are accepted
- ▶ Saves time and costs by enabling office-based editing of database changes with no ground survey required – a team of nine can now complete the same volume of work as a team of 25
- ▶ Quality enforced through a spatial data infrastructure
- ▶ Enables daily update of OSNI large-scale, off-the-shelf products through constant application of change-only updates
- ▶ Provide the ability to deliver updates to customers on-demand rather than quarterly by aligning overnight product updates with change-only update of national database
- ▶ Minimises data duplication, re-collection and improves data quality
- ▶ Delivers products that can be integrated more easily and efficiently with other data by both LPS and its customers