# esri UK

## Transforming services through geospatial innovation

# Ordnance Survey

Ordnance Survey (OS) has been mapping Great Britain for over two hundred years. As a government agency, it provides the geospatial infrastructure for the country and needs to keep pace with commercial online mapping platforms, as customers demand ever-greater data currency. By exploiting the capabilities of the ArcGIS System OS is driving transformational change, re-imagining how it captures and shares changes to arguably the world's most detailed and current national basemaps.

### The Challenge

**The Challenge**

- Transform the large-scale data capture and maintenance platform to deliver enhanced customer offerings and services.

OS is responsible for surveying all 243,241 square kilometres of Great Britain on an ongoing basis making more than 20,000 edits to real world features within its datasets, every single day. This national geographic database is one of the largest structural databases in the world with records and details on more than 500 million objects, and a file size measuring over two petabytes.

### The Benefits

- Significant cost and resource savings
- Improved operational performance
- Enhanced supply chain efficiencies
- Better customer offering

Its maps and data are used to deliver critical public infrastructure services from emergency response, land-use planning and transportation to environmental protection. The private sector uses OS data to manage assets, maintain operations and deliver better customer service. And educators have access to a range of resources to help teach and meet the national geography curriculum.

To maintain data integrity and support the increasing and ever-changing demand for rich geospatial content OS needed a more efficient and effective geospatial platform to manage its core data capture and maintenance programmes. Quality control was vital. An adaptable, flexible and robust storage capability to house and maintain the extraordinary size of OS's database was also a must-have. Ultimately, OS needed a solution that could be continually improved and developed, to meet the changing and evolving demands of its customers.

### The Solution

With Esri's ArcGIS System and Professional services support, OS has been able to develop a new large-scale capture and maintenance platform: the Geo-Spatial Production Platform (GSPP). Using Esri UK's web-based Sweet for ArcGIS, ArcGIS Enterprise and supporting tools including ArcGIS Workflow Manager the GSPP architecture supports optimised transformational business processes, a simplified data model and more efficient data capture methods.

Users operating from OS and supplier offices use online web apps to undertake job planning, data capture and quality control activities. Connected working removes redundant or disjointed data extracts, data transfers and dependency on rich clients.

Sweet for ArcGIS is the online editing client and the editing system has been configured to work with rich data themes, to validate the data models and ensure optimum quality. Notably, the validation of data is at the point of capture. Within seconds of a potential update, editors are informed of valid or invalid updates. This reduces validation at the end of a session, previously taking an extended amount of time and often rendering a whole edit session invalid if specific updates were against the defined rules governing data.

Esri UK | Millennium House
65 Walton Street | Aylesbury
Buckinghamshire HP21 7QG
T 01296 745500 | F 01296 745544
E info@esriuk.com | www.esriuk.com

" Without the flexibility of the ArcGIS System our job would have been a lot harder.  It provides us with so much of what we need, as well as the ability to configure and be bespoke.   Quite simply, we could not have done it without the Esri stack. "

Hazel Slawson, Production Engineering & Development Lead, Ordnance Survey

Simplified symbology and capture tools ensure that the configuration is focussed on specific needs of OS.  The web-based nature of Sweet for ArcGIS means that version updates will be streamlined, while ensuring that new innovative capture tools are available to users without prolonged software update processes.  Hosting in the cloud provides flexibility and scalability, and this modern, fully connected web-based editing environment is already driving measurable returns and benefits.

## The Benefits

### Cost & Resource Savings
The cost of data capture has reduced by 67%. To date, internal operating efficiencies of £1.5m per annum have been achieved with further savings anticipated.  Edits in the data warehouse now take two to five days, compared to the previous 40 days.   Staff are working more productively and can channel time savings into improving other products and datasets.

### Data Integrity
The new data editing process is more reliable and consistent, enabling OS to expand data themes and improve the data on offer more quickly. The addition of new layers can be achieved with little down time to production and roll-out disruption is minimal thanks to the high level of automation.

### Supply Chain Efficiencies
End-to-end supply chain costs, from capturing data to making it available to customers, have been reduced by 40%. The ease and speed of dataset delivery to customers helps OS provide even better customer service and enhance commercial relationships.

### Supporting National Growth
OS data makes a vital contribution towards the UK's growth, delivering to business and the public sector.  The success of the GSPP is proving of great interest to other national mapping agencies and has the potential to help other countries better realise the economic value of their geospatial data.

Learn more at: esriuk.com