



Ordnance Survey of Great Britain

GIS Manages National Data

Problem

Maintain countrywide datasets accurately and efficiently.

Goals

- Develop new geospatial data storage, management, and maintenance infrastructure.
- Provide field tools usable by more than 400 staff members.
- Maintain 400 gigabytes of data.

Results

- Added ability to store approximately one-half billion topographic and other features
- Developed systems for quality assurance, validation, and job and data management
- Acquired support for a vast range of business and public-sector services

"The decision to adopt ESRI technology . . . was for a variety of reasons: the breadth of products being offered and their suitability to provide data management solutions; the fact that ESRI is a valued Ordnance Survey partner; and ESRI tools offer a wide range of additional facilities such as workflow and job management."

Vanessa Lawrence, Director General,
Ordnance Survey



Ordnance Survey is Great Britain's national mapping agency. It is responsible for creating and updating the master map of the entire country. It produces and markets a wide range of digital map data and paper maps for business, leisure, educational, and administrative use. The public-sector agency operates as a trading fund with an annual turnover of around 100 million English pounds. However, an independent survey has indicated that Ordnance Survey® data already underpins approximately 100 billion English pounds of economic activity across both the public and private sectors. The agency is currently implementing an ambitious e-strategy to further enhance its services to customers and help grow the business.

The national mapping agency licenses organizations to use its data. Its customers are organizations such as local and central governments and utilities that have a Service Level Agreement with Ordnance Survey. They regularly receive updates of data at various scales for their area of interest. A geographic information system (GIS) is an essential component of Ordnance Survey's data services production.

The Challenge

Ordnance Survey's GIS has developed and grown in different departments and has multiple databases. The agency wanted to unify its GIS efforts across the agency for improved management, efficiency, and communication of its GIS data and products. Ordnance Survey sought to develop a new geospatial data storage, management, and maintenance infrastructure.

The Solution

Ordnance Survey signed an Enterprise Site License agreement with ESRI (UK) Ltd. to consolidate its current use of ESRI® software. The license improves the agency's processes for corporate mapping and data capture and evolves the management solution for maintaining Ordnance Survey data and related mapping datasets.



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ESRI Software Used

ArcEditor

ArcSDE

ArcGIS Server

Job Tracking for ArcGIS

GIS Data ReViewer

Other Software Used

Tadpole Technology software

Oracle Spatial

Under this agreement, Ordnance Survey uses many ESRI products including ArcEditor™, ArcSDE®, Job Tracking for ArcGIS® (JTX™), ArcGIS Server, and GIS Data ReViewer.

In 2002, ESRI (UK) and Tadpole Technology were selected by Ordnance Survey to build its next-generation field editing and data management system. Known as the Object Editor, this state-of-the-art solution is used by more than 400 Ordnance Survey field staff members to maintain and update the national large-scale dataset, OS MasterMap®, which is 400 gigabytes in size and contains more than 400 million features.

The Object Editor application is based on ESRI's ArcGIS and ArcGIS Survey Analyst products. For data management, ESRI ArcInfo® functionally rich editing clients and ArcSDE spatial database engine are used.

Results

The implementation of ESRI software facilitates the creation of a spatial database storing approximately one-half billion topographic and other features that make up the seamless coverage of Great Britain provided by OS MasterMap. In addition, many existing GIS and associated systems for quality assurance, validation, and job and data management have been developed using ESRI software.

Vanessa Lawrence, director general and chief executive at Ordnance Survey, says, "OS MasterMap is a complete reference system for British geographic data, which sets a new standard in mapping information. It is, therefore, critically important that the quality and integrity of this data be maintained within an open and secure environment. The decision to adopt ESRI technology, previously taken as part of a European Union public procurement exercise, was for a variety of reasons: the breadth of products being offered and their suitability to provide data management solutions; the fact that ESRI is a valued Ordnance Survey partner; and ESRI tools offer a wide range of additional facilities such as workflow and job management."

Electronic data now makes up approximately 80 percent of Ordnance Survey's annual turnover. Its products help support a vast range of business and public-sector services—everything from supermarkets and fast-food chains to environmental charities and emergency services.

For More Information



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