Ordnance Survey Releases First Fully Automated Geospatial Dataset



Ordnance Survey (OS) has released its first fully automated product derived from large-scale source data. This means that users can now create a premium national dataset using the most up-to-date OS source data in just eight days. The automated derived version of OS VectorMap Local, which is a world-leading first by OS, was released to customers on 18 October 2018.

The OS project team defined several objectives which included delivering efficiencies to OS by replacing the highly manual process of maintaining the product, improving the product currency, and implementing a 'framework' system which could be re-used for other OS products.

The development also introduced four core principles which were fundamental to the project. These consisted of: trusting the data source; only using commercial off-the-shelf tools (COTS); creating full end-to-end automation; and delivering data quality which meets the needs of the end user.

Jon Butts, OS project manager, said, "This is the first fully automated product derived from large-scale source data. It has taken a huge amount of effort and persistence from around the business to achieve this long-held aspiration of OS, which is shared by many national mapping agencies around the world. It's a huge achievement to have developed and created a fully automated derived product, which has a great deal of benefits for our customers and OS by improving the value of the product and increasing production efficiency. Our customers will see hugely improved currency, consistent refreshes across GB, more analytical value where features no longer end at tile edges, better building parameters, connected roads and consistency with other products that allows for a consistent zoom stack."

The team delivered a fully automated map production process solution utilising a range of the latest technologies, including Esri ModelBuilder and Python for geoprocessing, Esri ArcGIS for publication of map images, as well as end-to-end system orchestration delivered by Workflow Manager. The solution also relies on the Azure cloud environment for data processing.

Product benefits include:

- Increased currency of data: reduced production time and increased speed to market providing even more value to OS customers.
- Improved production and product quality through fully automated data processing at national scale, including partitioning, edge-matching, publication and creating change-only updates.
- Increased consistency of output data of both contextual and analytical products.

Business benefits include:

- Reduce hardware/support costs through use of COTS software and distributed processing in the cloud.
- Removal of manual input, freeing up production resource to work on other production flowlines.
- Use of COTS software removes the cost of developing and maintaining an in-house bespoke capability.

OS VectorMap Local will be released every three months, allowing customers to access and benefit from a consistently updated and trusted national geospatial product. As well as producing raster and vector versions of the data, this is also the first OS product to be released in GeoPackage, responding to customer feedback around OS data formats.