

## Driving efficiencies and innovation in Government

# Land and Property Services

### The Challenge

- Create a one-stop-shop for finding and using geospatial information about Northern Ireland

### The Benefits

- Substantial efficiency improvements
- More transparent government
- Improved public services
- Agile responses to emergencies
- Effortless data management
- Better access to public records

Over more than a decade, Land & Property Services has built, enhanced and extended a versatile spatial data-sharing platform for Northern Ireland called Spatial NI. Powered by ArcGIS, the platform underpins the work of government departments and public sector organisations, enabling them to deliver more efficient and innovative public and commercial services.

### The Challenge

Land & Property Services (LPS) is responsible for collecting, processing and managing land and property information for Northern Ireland. In 2007, the organisation built an entirely new technical infrastructure for storing, managing and delivering maps and location-based data, called Spatial NI. Ever since then, it has striven to continually develop this platform and create a one-stop-shop for finding and using geospatial information about Northern Ireland.

### The Solution

Spatial NI is powered by Esri's ArcGIS platform and has grown dramatically in size and scale since it was first launched. Initially, Spatial NI ran on just two servers; now there are over sixty, all load balanced to meet demand and ensure reliable performance for large numbers of users. Spatial NI currently handles 24 million large-scale base mapping interactions per month and 9 million address searches per year.

20,000 public sector employees have access to Spatial NI on their desktops through the Northern Ireland Mapping Agreement and can simply click on an icon to pull accurate geospatial data into their applications in a seamless way. Spatial NI currently comprises 213 LPS web services plus a further 118 external web services from other government bodies. In addition, there are over 30 active applications, driven by Spatial NI, that have been developed by six government departments.

Members of the public can also explore Spatial NI via a public viewer that is free to use. Each month, over 7,000 people use the public viewer, around 50% of whom are new users. Spatial NI gives everyone easy access to information on everything from flooding and the natural environment to winter gritting routes and computer scams. Following recent enhancements, the platform now provides Unique Geographic Identifiers within large-scale maps that make it easier for people to link up data sets and monitor changes in data.

### The Benefits

Spatial NI is now widely used within local and central government in Northern Ireland, as well as by utilities, commercial businesses, not-for-profit organisations and the general public. It delivers a wide range of benefits including:

#### **Substantial efficiency improvements**

The Education Authority has built an application that utilises services hosted on Spatial NI, enabling parents and guardians to check to see if their children are eligible for school transport. 78% of all online applicants received an immediate decision on whether their child is eligible for school transport. Previously, the paper-based process took 3-6 weeks

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for parents and guardians to be informed of a decision. It frees up staff to focus on delivering other important educational services and provides fast, accurate information for parents and guardians.

“In many ways, Spatial NI has been an enabler and a catalyst for innovation within government. Several government departments have used Spatial NI to deliver efficient new services for the public.”

Jim Lennon, Chief Survey Officer, LPS.

### **More transparent government**

The Department of Finance has used Spatial NI to communicate draft commercial property valuations to business owners in a far more transparent way than was previously possible. During Reval2020, business owners could use a dedicated web app to see their property valuation and compare their valuation to those of other similar business properties nearby. The solution improved customer service, by giving business owners the ability and the time to check their valuations and raise any queries with LPS before business rate charges were finalised.

### **Improved public services**

The Department of Infrastructure has used the platform to develop a range of apps that allow citizens to report pot holes or broken street lights online and monitor the resolution of the fault. “In many ways, Spatial NI has been an enabler and a catalyst for innovation within government,” says Jim Lennon, Chief Survey Officer at LPS. “Several government departments have used Spatial NI to deliver efficient new services for the public.”

### **Agile responses to emergencies**

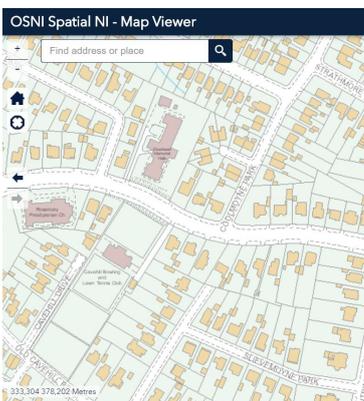
As was demonstrated during the COVID-19 crisis, Spatial NI gives the government the ability to launch new public information services very quickly in an emergency. When the Department of Health needed to inform the public about local restrictions, it was able to launch an app on Spatial NI in under two days, showing restrictions by postcode. In the first three days alone, this public health app received 54,000 views, providing clear information about where local restrictions applied.

### **Effortless data management**

Organisations in Northern Ireland can now consume up-to-date data directly from Spatial NI. For example, Northern Ireland Water uses Spatial NI to make accurate mapping, digital terrain model (DTM) data and aerial photography available to its office-based and mobile staff. According to Sean O’Boyle, Asset Information Development Manager at Northern Ireland Water, “Spatial NI facilitates an enterprise-standard exchange of near real-time spatial data, leading to a consistent, faster and more efficient service for all customers.”

### **Better access to public records**

The Spatial NI public viewer helps to make government data more open and improves access to public records. Indeed, 26,000 users a year refer to the historic maps from the Public Records Office Northern Ireland on Spatial NI, with the platform supporting 54,000 sessions a year for historic maps alone. People can use this facility to trace their ancestry, better understand the history of their homes and help resolve boundary disputes.



The Spatial NI Map Viewer

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