

The bespoke addressing solution delivered by LPS will save the BSO in excess of **£37,000** per year.

# Using GI to provide bespoke addressing for NI's Child Health System

The Child Health System (CHS) is a regional information system used by all five Health and Social Care (HSC) Trusts to manage data underpinning child health services throughout Northern Ireland (NI). As a NIMA customer through the Department of Health (DOH), the Business Services Organisation (BSO) was able to leverage Land & Property Services (LPS) data and Geographic Information (GI) Consultancy to provide crucial support for the CHS. This support was necessary to solve an addressing problem caused as a result of changes to the Local Government District (LGD) boundaries in April 2015.

## Challenge

Changes to the LGD Boundaries impacted how LPS Pointer data was used within the CHS. The Pointer dataset is integral to the system because it provides definitive addressing information for all children in NI. The BSO faced two challenges as a result of the LGD boundary changes:

- Any change in the CHS would also require changes to all information systems consuming CHS data. As these systems are embedded throughout all HSC Trusts, this would severely and negatively impact organizational resources and, more importantly, health services to the public.
- The supplier of the CHS information system is an external IT provider; therefore, significant changes to the system to update boundaries would incur corresponding costs impacting the BSO's financial resources.



### What is Geographic Information (GI)?

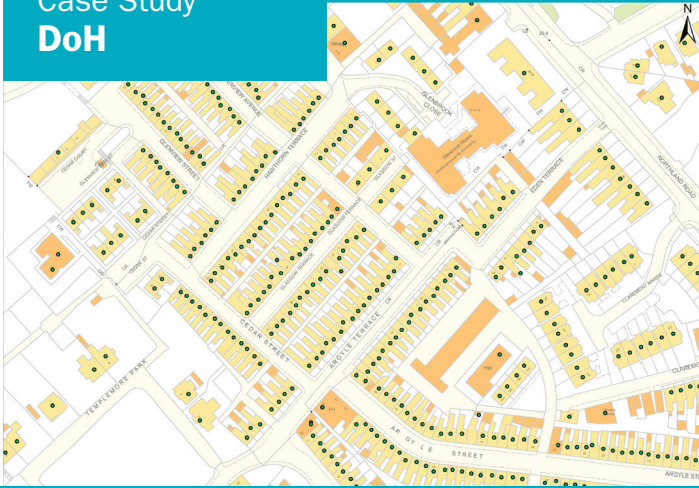
Over 80% of data used by our public sector services can be described as GI because it has a geographic element i.e. an address; and because of this, it can be mapped.

### What is a Geographical Information System (GIS)?

(GIS) refers to a range of software packages that helps organisations harness the geographic element of data, not only to map the data, but to analyse it in new and more powerful ways.

### LPS GI Consultancy Services

LPS provides a free GI consultancy service to the public sector in NI. The team provides tailored advice and assistance on how GI can improve processes and service provision and how to interrogate and present data using GIS.



Land and Property Services Pointer address dataset with the newly incorporated 'Old Council' and 'Old Ward' boundaries, for the new BSO Pointer dataset.

## The Solution

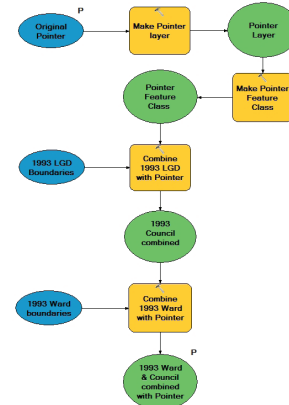
As part of NIMA, BSO was able to access LPS' GI Consultancy, which developed and implemented a solution at no cost to the organization.

At the core of the solution is a bespoke addressing dataset based on LPS' Pointer product. A GIS-based model was created to process and enrich standard Pointer data with additional information including original 1993 LGD boundaries used by the CHS system.

This workflow was automated to output updated data products monthly. LPS was also able to disseminate these products through a secure cloud-based storage system, which BSO staff could access remotely. This end-to-end solution made it possible for the BSO to avoid modifying the CHS in any significant way and ensures child health services are not impacted.

**"Without NIMA, additional resources would be required to manually obtain and record residence area data. It would also impact on the timeliness and quality of reporting and potentially cause delays in the actual delivery of services."**

**Bridie O'Neill, Operations Service Manager, BSO**



Flow chart showing the processes required to generate the BSO Pointer dataset.

## The Benefits

- Without correct and definitive addressing information feeding the HSC's data systems, healthcare staff members will waste precious resources coding client information. Resource savings resulting from access to authoritative LPS data through the CHS is currently immeasurable and potentially vast.
- The solution allowed the CHS to continue to function as the definitive source of addressing information for child health services throughout NI despite the changes to the LGD boundaries and with no disruption to services.
- LPS under NIMA has saved the BSO in excess of £37,000 per year going forward. This includes savings of £30,000 in database development and maintenance costs, as well as an additional £7,000 in data costs annually.