



BRICKS NEED CLAY

LOCAL GOVERNMENTS AROUND THE WORLD ARE USING GEOSPATIAL DATA. BUT IS THIS REALLY BENEFITING THE CITIZEN, IS IT MORE ABOUT DRIVING DOWN COSTS AND IMPROVING INTERNAL PROCESSES, OR CAN BOTH BE ACHIEVED, ASKS MARC HOBELL

“Data! Data! Data! I can’t make bricks without clay!” cried Sherlock Holmes impatiently in 1892, in *The Adventure of the Copper Beeches*. More than a century later, the wise words of Sir Arthur Conan Doyle’s super-sleuth ring true across many organisations. Local government is no exception: a data-driven approach to local government has become common, as public sector organisations derive value and insight from information gleaned from many diverse and different data sets. This data is used for forecasting, strategic planning, accurate decision-making and precise budget-allocation.

Geospatial data is used widely across a diversity of government agencies including:

- Policing, to identify high concentration of criminal activity and allocate resources effectively; to understand how problems are interconnected, such as how drug addiction in teenagers influences crime rates in certain areas; to provide officers with access to crime reports for particular control zones in the previous 24 hours.
- Health care, to identify environmental health risks, to plan containment of a particular disease, or to provide care appropriate to age in certain areas.
- Housing, to assess potential risks and hazards and direct planning programmes accordingly.
- Traffic management, to manage and control the flow of traffic in a particular area, or manage parking in high-demand areas.
- Fraud and social cases to identify anomalies and target responses to ensure the right resources are in place to aid and support.
- Waste management, to plan household waste management programmes and provide the right level of resource per area.

Precise, accurate geospatial data drives decision-making and ensures strategies and plans are founded on facts. Citizens and communities should experience better self-service communications, an improved service from local government and ultimately, a greater quality of life:

CASE STUDY: TRANSPORT FOR NSW (NEW SOUTH WALES) AUSTRALIA

Transport for NSW provides extensive information to the public by phone, websites and social media, including travel planning tools, live network updates, incident coordination, and information and support in the event of an emergency. To improve its service, Transport for NSW undertook a major upgrade of its public journey planner website. As part of the project, it wanted to standardise on a common road network dataset to be used across multiple systems.

To do this, it implemented the StreetPro dataset as its core road network representation. This dataset provides regularly updated street network and address data and underpins a significant number of Transport for NSW business applications. It also lets Transport for NSW collaborate better with partner agencies, since datasets match exactly across these partners. Data is more easily shared internally with all core data being held in a centralised database, making it easy for Transport for NSW to update data.

Implementing the solution enables Transport for NSW to provide accurate and up-to-the-minute data, both internally and to the public. Updates and data changes are handled quickly and efficiently, and the solution improves internal productivity, reducing data maintenance overheads.



Traffic travelling across the Sydney Harbour Bridge, New South Wales, Australia



Tomaree Head Lookout, New South Wales, Australia



safer streets, better parking, more accessible healthcare and enhanced community services. Indeed, some of the initiatives generated by geospatial data are extremely clever and have a far-reaching, positive impact on citizens and communities, as well as driving efficient services cross-council.

What's going wrong?

Unfortunately, other initiatives barely scratch the surface of geospatial data's power. It may be that the data is:

- So complex that only the GIS team understands it. If the individuals involved move on, this knowledge is lost.
- Seen as purely an IT initiative, with other functional decision-makers excluded from the early scoping stages.
- Not cleaned and nurtured, and slowly becomes tangled up in 'tumbleweed', quickly becoming outdated and irrelevant.
- Presented in the form of huge image files that cannot be edited, manipulated or sent across an organisation.
- Difficult to integrate with existing systems or inaccessible from outside a core site

Perhaps the initiatives have been quickly rolled out to mirror other government initiatives, or brought in to meet digital targets without thought of adoption or access. Moving services online supported by geospatial data can save money and increase efficiency, but this may need to run alongside a wider initiative to provide better access to faster broadband or to educate particular communities on the use of digital services.

How to fix it

Location intelligence has the potential to entirely transform government agencies and citizens' experiences. Its benefits are deep and far-reaching and go way beyond a box-ticking exercise to meet internal

digital objectives or enable budget cuts. So how can local government really unleash its potential?

Take a citizen-centric approach

Local government organisations will say that of course, their GIS systems are implemented with their citizens and communities at their very heart, with platforms designed to provide faster services and meet the demand for a multichannel approach. The best use of geospatial intelligence goes beyond this, helping to change behaviours, influence outcomes and make life easier for citizens. This can only really work in a truly citizen-centric government, in which the citizen's experience is tracked from start to finish, and services implemented accordingly.

Internal adoption and education

Until fairly recently, geographic and related data has either been used in silos across an organisation or kept within a GIS department. To be of benefit, it needs to be integrated and adopted across an organisation, moving into the mainstream with departments collaborating, sharing and analysing the data together. Drawing in data from different sets, organisations and departments and identifying how it relates to other data delivers value and insight. This might require training and education programmes for staff within local government to better understand the data



CASE STUDY: SWAN HILL RURAL CITY COUNCIL, AUSTRALIA

To encourage growth in the tourism market, Swan Hill Rural City Council needed to help tourists plan their visit and find relevant information quickly and easily. The council also wanted to provide information to residents about nearby services and facilities. It needed a platform that was easy to implement and maintain, was intuitive for staff and visitors to use, and did not require IT infrastructure changes. The solution was to add a cloud-based mapping portal to its website, enabling visitors to find and visualise the location of services and attractions and allowing the council to host a wide range of data in one place.

CASE STUDY: TORFAEN COUNTY BOROUGH COUNCIL, WALES, UK

Torfaen County Borough Council in Wales, UK, implemented a location intelligence and data management platform to help drive its transformation. The cloud-based approach generated significant cost savings. The data also enabled improved citizen services and citizen engagement across the borough through new web mapping services. Local citizens can now visit the council website and use the mapping system to find out information specific to their exact location on topics such as refuse collections, school catchment areas and leisure activities. It enriches the website, reduces pressure on the council's service support team and improves the citizen experience.

CASE STUDY: CARY, NORTH CAROLINA, US

To meet the demands of its citizens and town officials, Cary's Geographic Information Systems Divisions and JCH GeoInfo Solutions of Durham, North Carolina, spearheaded an initiative to develop a comprehensive website called Maps Online. This serves as an external and internal communication tool, providing Cary's local government employees with the ability to access and post useful information, while keeping Cary residents and visitors informed of town activities.

The maps also help residents access information and documents on demand, limiting trips to the clerk's office and enabling staff to be more productive. By merging civil data with location-based information in one application, the site enables users to obtain answers quickly based on their current address. The site also provides quick and accurate details for public officials considering new developments or making expansion decisions. By providing local residents with current information, the map site reduces the amount of paperwork and time spent replying to requests.

Accessible around the clock on Cary's website, users now rely on the Maps Online site to become informed citizens and take an active role in the town's crime prevention.



A residential street in Cary, North Carolina, US

integrated with other data sets, and its value and insights extracted and shared in a programme understood across all functions. Only then will local government harness its power and citizens truly benefit.

LOCATION INTELLIGENCE HAS THE POTENTIAL TO ENTIRELY TRANSFORM GOVERNMENT AGENCIES AND CITIZENS' EXPERIENCES

Marc Hobell is director, GIS and location intelligence, at Pitney Bowes (www.pb.com)

and the value it generates. In the private sector, most functions across a business require a degree of data management and analytical skills; in the public sector, the same situation can apply.

Collaboration across agencies

Partners in public service agencies such as police, fire and health services could and should improve collaboration to enable greater use of location intelligence. Information-sharing within secure boundaries generates consistency and accuracy of data, as well as a joined-up approach.

Transparency

Some government organisations are using insight drawn from geospatial data to provide greatly improved services, such as 'Where's

my nearest...?' digital platforms to identify local schools or healthcare providers or a new mobile platform that enables the organisation to improve its asset management, adopt real-time traffic management and keep a city moving. Local government organisations need to talk about these programmes and platforms, updating citizens and communities whenever and however they get the chance. This will drive take-up, enable a return on investment and help organisations build better reputations.

Location intelligence has the power to become the most transformative type of information generated by an organisation. Understanding it shouldn't be a privilege reserved for a chosen few: it needs advocates beyond the GIS and IT teams. It needs to be absorbed within an organisation,

