



## Making better use of geographic information in local public services delivery

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### Scope:

The way local government is managing and delivering geospatial information services is responding to change that is needed to meet the rapidly evolving challenges and opportunities facing local public service providers in the 21st century. These drivers for change include:

- The shift from a traditional direct provider role to one that centres on self service and self help society with councils as commissioners, coordinators, facilitators or guardians rather than direct providers. Geospatial services will need to be seen as an enabler for future service provision
- The call for more public engagement in service delivery from shaping public services (customer led transformation) to enabling self serving by citizen and business requires the freeing up of public sector information as exemplified by the linked data concept championed by Tim Berners-Lee.
- The expectation of serious constraints on public finances over a prolonged period that is driving an even more intensive search for cost effective models for delivery and innovation.
- The implementation of a spatial information infrastructure (INSPIRE) across Europe and the UK that requires implementation of a framework to enable wider and easier access to, and sharing of, geospatial data.

As a result, the Local Government Association (LGA) and Improvement and Development Agency (IDeA) are working with the sector to develop a policy framework and accompanying value proposition to drive necessary changes in GI policy, practice and development as an enabler in providing better service to the public. As part of this work, we are examining the current management, use and future delivery of Geospatial Information to determine how to make best use of the information to provide public services.

### Current position:

Local Government has long term expertise in managing and using geospatial information: place and the distinctions between places and between communities are crucial to the work of councils. Geospatial data have been used traditionally in local public service delivery in planning, highway and grounds

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maintenance, traffic and transport planning, environmental protection, school admissions, housing and accessibility to local services. Some of the data is provided under public task for example as part of street naming and numbering. Geospatial data is more recently used in monitoring and performance assessment. 34 of the national performance indicators on which councils are judged are linked directly to geospatial information.

During recent years, data have been made available to the public via web viewing services but access is limited due to the licensing restrictions for data, for example, derived from the Ordnance Survey. This has and is hampering the innovative sharing and reuse of geospatial information across partnerships and the provision of access to the data for use by the public for wide ranging functions that include consultation, accessing services or holding the public sector to account.

The National Land and Property Gazetteer NLPG ([www.nlpg.org.uk](http://www.nlpg.org.uk)) speaks for itself as a success story for establishing a framework for a cost effective spatial data infrastructure that facilitates the management, sharing and reuse of property information in its own right. Property data linked through a unique property reference number facilitates shared services within a local authority and with partnership organisations such as police and fire that have signed up to the Mapping Service Agreement.

### **Where Do We Anticipate Future Change?**

Local government and other local service providers are challenged to succeed in an increasingly difficult environment with sophisticated, multi faceted problems such as those stemming from shifting demography or climate change, more demanding technical and efficiency targets. These challenges can only be met through working more collaboratively to deliver local public services by sharing data and services across wide ranging partnerships, often framed through what are called local strategic partnerships, but increasingly involving collaboration across public, private and voluntary sectors.

This will in turn challenge those managing and providing data to work collaboratively, for example, through, local, regional or national data service hubs. For example, INSPIRE places a burden on public authorities to meet new technical requirements. There are opportunities for cost savings if such joint infrastructures and solutions are developed to provide benefits across the local public service planners and providers.

Working more collaboratively across the public sector and beyond in involving businesses and citizens in service delivery requires policy change in the accessibility and use of public sector information, and in particular geospatial information. Certain geospatial core reference data such as administrative boundaries, addresses and streets are fundamental to providing a public service and for citizens in managing their own lives or participating in local democracy. In short, there is a strong public good value to much data that is produced by the public sector. And the modern world dictates a more open and digitally engaged society that cares about local place.

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The world of Wikipedia, of social networking and of Tim Berners-Lee urging us to adopt concepts such as linked data, is challenging the public sector to rethink our approach to data, information and the use of statistics. This new world increasingly acknowledges that citizens often know better where things are, what they are called and when they change. We need to embrace digital engagement and, indeed, digital democracy to involve the citizens in keeping data up-to-date and accurate. Such citizen participation will place greater responsibility on ensuring accuracy and currency of data back to the citizens with local government fulfilling a coordination, custodian and regulatory function to facilitate the discovery of the data, the adherence to data specification and data quality and the publishing of the data.

The emergence of a new localism, with a cross party acknowledgement that many decisions are best made locally means that profiling local places is ever more important in providing and improving local services in ways that are responsive to local citizen, community and business needs. The use of statistical and life style information linked to a place will therefore be ever more important in using geospatial information alongside traditional property and land related services.

### **Impact of Changes upon the geospatial industry and upon customers:**

The key consequences of all of this must be a presumption that public sector sourced and derived data will have to be more freely and openly available to manage this shift from centrally provided services to a more enabled and self service society. This must include building capacity so that citizens and commerce can use and reuse the data, add value to information, create new services and participate in shaping their local place.

Clearly, along with these extended rights will need to be responsibilities, and maybe even some duties, that require citizens and businesses to inform the public sector when data are out of date or inaccurate, and to share the commercial gain with the public sector so that they can continue to provide the custodianship for data and services.

A key challenge that arises from this is for the geospatial industry to provide infrastructure capacity to underpin this sharing and reuse the data and for the government to develop models for a more open access to data.

### **Scenarios:**

Data update by the citizen: Example Public Rights of Way (PROW) data

Open Street Map provides an example for a citizen led initiative to create a geospatial dataset freely available in the public domain. The concept of Open Street Map can be used by local authorities to keep public rights of way or other data up-to-date. Local government has a statutory function to maintain a public rights of way record on 1:10K Ordnance Survey maps. Keeping the data up-to-date and accessible

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to the public places a cost burden on local authorities. Great value could be added to the accuracy of the data if walkers would update the data themselves. Local authorities could act as data custodian. In that function Local authorities would provide the data online for update and reuse by the public, the public could change the data and upload changes to a hub. Local authorities would check that the uploaded data meet certain data and quality standards prior to data approval. However, current derived copyright restrictions would need to be changed to allow the citizen to download the data for reuse (update) and not only for view as permitted under the current licensing scheme.

National data hub: Example use of national land and property gazetteer as a shared core reference data source

The NLPG is already widely used within local authorities as the key reference geography for any land and property related transaction. Through the Mapping Service Agreement, Police and Fire also have access to the NLPG to be used to accurately, efficiently and quickly locate incidences. The data is enriched with intelligence held by the emergency services.

In the future more public service providers could benefit from the access and reuse of the data by making them more widely available across local strategic partnerships. This way the unique property reference would be linked to patient, social care, children and other records used by any service provider within an area. All service providers could contribute to keeping the data accurate by informing the local authority who act as data custodian when data are out-of-date. Making the data more widely available across local partnerships and freeing it from derived data ownership requires a change in current licensing provision.

Taking the use of property records a step further and including a self serving function, property owners should get the ability to update their property record online. Local authorities through their street naming and numbering function would need to approve the change and make the data available to other service providers (such as Royal Mail). The same core property information with the unique property reference number but obviously without the link to personal records can be used by the customers to find a location, by lobbying groups to canvass for support, by service providers to determine accessibility of their service, to name but a few examples. To provide a self serving function would require the data to be made freely available.

### **Regional and National data hubs**

INSPIRE places a particular burden on public authorities to provide a network service hub to publish their data. By creating local, regional or national thematic hubs, individual local authorities could reduce the burden to create their own data hub to publish their property, street, environment or planning information. They would be able to upload their data to a thematic hub from where the data is published. Other service providers would be able to access the data pending compliance with licensing

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arrangement. Accessing and reusing data could be greatly facilitated by a simplified public sector wide digital rights management agreement which would facilitate the sharing of data across the whole public sector.

### Shared service provision

Local or regional partnership will be able to provide a more cost effective geospatial service to local service providers by pooling and coordinating resources, skills and infrastructure through shared services. A prime example for such service provision is Fourth Valley GIS which provides geospatial services across three local authorities by servicing one infrastructure and providing one geospatial service across the partnership. In fact Fourth Valley (<http://www.forthvalleygis.co.uk/gis.htm>) has been so successful that they are offering business services to other clients. A range of other shared service provision is in existence or under development across the country. One example is the New Forest GI service to provide parish and town councils with a web service and joint resource for providing geospatial data to local councils. The better coordination and collaboration of service provision and associated funding across local areas is currently piloted through the Total Place initiative.

### Summary of 5 key points:

- The changing role of local authorities from a direct provider of wide ranging local services to an enabler requires a shift in the way data are managed, made available and accessible and licensed to local service providers and citizens.
- Digital engagement will foster the participation of citizens and business in the update and reuse of public data which could add value to data and services.
- The need for a new value proposition for core reference geospatial information is based on the principle that such data is a public good and must form the basis for customer engagement, participation and public sector democratic accountability. This will most likely require a shift in data policy and the removal of obstructive intellectual property right barriers.
- Constraints on public sector finances will mean wider partnership working and much greater reliance on shared and more cost effective geospatial services by pooling resources and technical infrastructures.
- Local authorities have considerable and sometimes cutting edge experience in meeting the requirements of a spatial data infrastructure through the National Land and Property and Street Gazetteers. This experience will be invaluable in facilitating the interoperability and accessibility requirements for geospatial datasets and services under the INSPIRE directive.

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