

ROI from addressing

ConsultingWhere
 Making the most of your location

Cost Benefit Analysis of Address and Street Data for Local Authorities and Emergency Services in England and Wales
 Final Report

Prepared by: Andrew Carter
 Director
 ConsultingWhere Ltd
 Version: 1.0
 Date: 20/08/2016

"Government investment in the Local Land and Property Gazetteers (LLPG) and Local Street Gazetteers (LSG) over the period 2010-5 has yielded a net benefit of approximately £86m in savings from reduced data duplication and integration, improved tax revenues, channel shift and route optimisation in waste management."

The statement above comes from a report prepared by ConsultingWhere for GeoPlace. It adds, "Future net benefits from the same applications are likely to be in the region of £200m over the next 5 years. Based on the current rates of adoption, this represents a Return on Investment (RoI) or cost benefit ratio after discounting of 4:1."

The report goes on to argue that the "return could be significantly higher if barriers to adoption, particularly access to funds, staff retention and

looked more widely and included comparable studies from countries as diverse as Australia and Denmark.

Treasury approved technique The technique used to analyse ROI in this study is one based on cost-benefit analysis, a method where results are often expressed as return on investment, i.e. "for each £1 invested the return is £xx over a period of xx years", a method approved by the Treasury as the most robust approach for projects where results are as real and tangible. Such a cost benefit analysis (CBA) attempts to collate all of the costs and the quantifiable benefits, adjusted for the time value of money, i.e. returns achieved at some future date are discounted to take into account the opportunity cost of having made an alternative investment. However, ConsultingWhere note that associated qualitative benefits discovered during the study while reported are often difficult to express in financial terms.

The environment in which GeoPlace operates was also subject to analysis. A framework analysis tool, PESTLE works through six key indicators: Political,

Multi-million pound savings bring ROI from right addressing

Earlier this year a report commissioned by GeoPlace found that the return on investment (ROI) to local councils and emergency services from accurate addressing had delivered multi-million pound savings. *GiSPro* reported briefly on this in the last issue of *GiSPro* (June 2016, page 16–17). We have now had unique access to the full report.

improved national collaboration are addressed. We estimate this could be worth additional benefits of £20m over the next 5 years."

Accurate geo-referenced address data from a single authoritative source is vital and can deliver substantial socio-economic benefits. As ConsultingWhere point out, "Inaccurate and unreliable addresses that are inconsistently geo-referenced carry a high financial cost and, in the despatching of emergency services, a human cost." (A recent example in London was a patient in cardiac arrest had to wait half an hour for an ambulance dispatched to the wrong address despite the location being a well known sports venue.)

In Great Britain that "single authoritative source" is GeoPlace, a partnership between the Local Government Association and Ordnance Survey. Through its links with local authority address and street gazetteer custodians, GeoPlace creates and maintain the National Address Gazetteer and the National Street Gazetteer for England and Wales to provide definitive geo-referenced address and street data from Ordnance Survey, which makes it available to the wider public and private sectors.

The study looked in detail at ROI from address and street data for local councils in England and Wales including the emergency services. It also

Economic, Social, Technology, Legislative and Environment, hence PESTLE. Under Political, for example, the observation was made that there is a general lack of political awareness of the potential of address and street gazetteer data to inform and enhance decision making in the public sector. The potential benefits from the integration of health and social care are poorly understood by decision makers. Let's hope that the bold declaration of Cabinet Office Minister **Matthew Hancock** at this GeoPlace Awards day, "I will be your champion!" bear fruit (see June *GiSPro*).

Since GeoPlace was founded in 2010, the Public Sector Mapping Agreement (PSMA) of 2011 has had significant impact to the public sector through access to Ordnance Survey digital mapping and OS's AddressBase product. Nevertheless, since 2010 severe reductions in local authority budgets have meant cuts to staff engaged in gazetteer maintenance with loss of expertise. On the plus side, there has been an increasing integration of the Address ID (UPRN) into core local authority systems resulting, for example, in the identification of benefit fraud, more efficient recording of new houses and street names and more shared services including address and street gazetteer maintenance.

Case studies and survey ConsultingWhere's study

“

... ROI in this study is one based on "for each £1 invested the return is £xx"

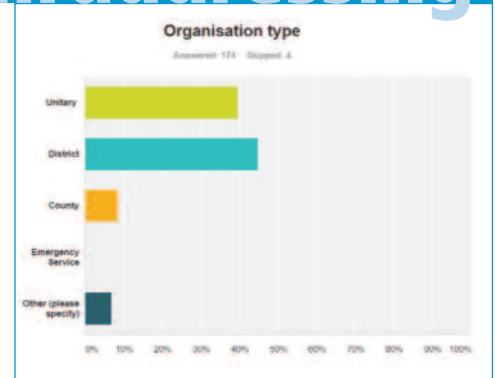
”

relied primarily on GeoPlace's own database of case studies and its international involvement in similar exercises. This was backed by training for potential respondents to an online Survey Monkey questionnaire, of which 178 out of 800 responded. As the report's author **Andy Coote**, comments: "if you have a good story to tell you may respond but otherwise not." Over 30 of the respondents were followed up with interviews. Analysis of the responses ranked local authority department users of address data: Planning and development (54%), Highways and transport (17%) and customer Services (14%) were significant users. The least important current uses of LLPG and LSG in local organisations – those ranked 11-15% by importance – were public health, public safety and interaction with emergency services.

This has led ConsultingWhere to conclude that the functions with opportunities for greater realisation of value include:

- **Corporate services** (reflecting little understanding at senior management level of the value of address and street data);
- **Social Services**, where there is probably a mutual lack of understanding of how data in general and addresses in particular can provide insights in

Unitary authorities (including Metropolitan Districts, London Boroughs and Welsh Counties) represented 40% of the responses and districts 44% of responses. There were relatively few county respondents (9%). The remainder were predominantly shared services.



social care provision;

- **Public Safety**, a sector surprisingly low in importance ranking given recent floods;
- **Education**, best practice indicates significant savings in school placement applications;
- **Emergency Services**, (there is generally less interaction between local authorities and emergency services in relation to data sharing than in the last decade); and
- **Public health**.

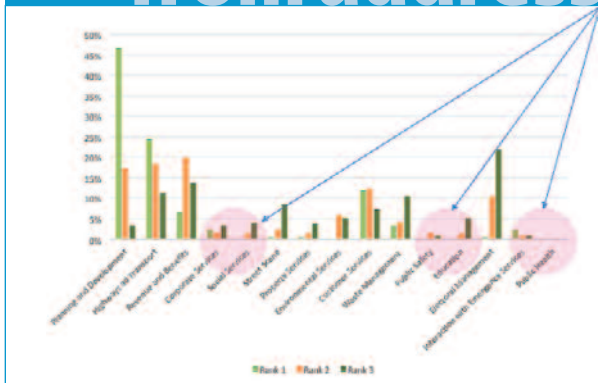
So plenty of evangelising ahead for both local and national custodians of addressing. In the meantime let's look at some of the successful users.

£4 return on every £1 spent on council address and street information

- A GeoPlace commissioned study projects net benefits of up to £202 million by 2020 for the local government sector from better use of the address and street data that councils create and maintain
- Based on the current rates of adoption within councils, this represents a Return on Investment after discounting of 4:1



ROI from addressing



Ranking of current users. Planning and development (54%), Highways and transport (17%) customer Services (14%) scored most highly.

larger Digital Transformation projects and the specific benefits of the LLPG and LSG are difficult to separate out for quantification.

Social services A growing number of uses relate to social services, these include neighbourhood analysis and the identification of troubled families, support for vulnerable people, loneliness studies and special needs transport. Currently, the numbers of implemented systems are small so there is significant potential to recognise these successes, create case studies and promote them as exemplars of best practice.

Street scene The most easily quantified use case for this type of council function is the use of tablets or smartphones to allow council officers to spend more time in the field and react more rapidly to incidents. This technology opens up new possibilities for reporting problems such as graffiti as well as work order management and management reporting. There are however few examples where the benefits have been captured.

Planning and development Well developed uses of the LLPG and UPRN (unique property reference number) include integration into planning and building control processes in the majority of all types of local authorities. Local Land Charges have seen a significant impact too, with the UPRN being the key identifier used to bring diverse data together. Other examples include systems that facilitate notification of neighbours of planning applicants, local plan revision and planning consultations. Plans to move responsibility for Local Land Charges to the Land Registry is delaying investment in this functional area.

Highways and transport The use of the Local Street Gazetteer (LSG) in the planning and issuing of permits for streetworks both by local authorities and by utility companies is well established. The LLPG can also play a role in notifying those affected while the LSG can be optimised for inspection routes for highway maintenance; more effective gritting and salting routes and reducing service interruptions for streetworks.

Property services The address gazetteer (LLPG) has long been used to assist property departments in locating, managing and rationalising their assets. The usage is a small part of a much more complex process and few examples of quantification exist. The availability of the land registry index map as open data under INSPIRE provides opportunities for further work by local authorities on vacant land. The Public Rights of Way (PRoW) maintained by councils can also be hosted within the LSG data.

Revenue and benefits The LLPG is being used to pinpoint missing council tax or non-domestic rates collection. The use of address data as part of a matching process to detect council tax and benefit fraud is included in the cost benefits quantification. This is increasingly being undertaken as part of what is referred to as a data warehouse application or more recently big data analytics. An example of this process is the detection of potentially fraudulent claiming of single person occupancy by cross-referencing against other local authority address data such as parking fines where several people using the same address (claimed to be in single occupancy) for parking fines indicates the need to investigate the claim. Matching with central government data through the National Fraud Initiative (NFI) also has substantial potential to highlight fraud.

Environmental services Address data is fundamental to the licensing and monitoring of commercial premises. However, apportioning the benefits is often problematic. Environmental issues such as illegal tipping can also be monitored and tackled more effectively with address data. The LSG can be used as a base to record detailed environmental information, allowing streetworks activities to be carried out with consideration and awareness of roadside nature reserves and sites and artefacts in the sites and monuments record.

Customer services Customer Relationship Management (CRM) systems are one of the largest consumers of address data for identifying location during calls and face-to-face meetings. GeoPlace data from 2015 suggests that 72% of councils' CRMs are reliant on the UPRN. Address data can also assist with service interruption notices and opinion surveys. The associated benefits of channel shift are quantified as part of the study.

ConsultingWhere's analysis found that whilst effort in local authorities is spent maintaining and improving the quality of data, additional resources would have potentially significant impact on the rate of integration

“

... address data as part of a matching process to detect council tax and benefit fraud...

”

Corporate services The creation of executive and member dashboards that allow decision makers to be able to see what is happening across their organisation in relation to a small area (defined by a group of addresses) or individual address is an important and as yet underused. The use cases in Corporate Services are often "bundled up" into

and thereby accelerate the flow of benefits. They also found that too often it was observed that anything concerning gazetteers was passed unseen from CEOs to custodians, defeating the object of targeting them. Closer work to find partners across government and the public sector; identifying examples where individuals have been successful with short-term impact and limited resource; and collaborating with DCLG's digital local success on waste management as a national model for other use cases. The experience of the London Borough of Harrow is an exemplar here.

Recommendations The report concludes with a series of recommendations to GeoPlace and calls for: "a sustained, multi-faceted, marketing campaign based on the results of this study. The core messages to communicate to local authorities should be:

- The substantial benefits that have been realised from past investment.
- The need for current staffing levels and product quality to be maintained in order to realise greater benefits in the future.
- The multiple opportunities for enhanced benefits tied to national efficiency initiatives, such as the successful Troubled Families scheme."

The barriers preventing wider use of address data identified by the study include lack of funds, insufficient management awareness and software limitations. Coote, who is an evangelist for the benefits of addressing, says that danger lurks in not maintaining a good database. GeoPlace is therefore recommended to:

- (i) Enhance collaboration with bodies working at a national level such as the Audit Commission (NFI), Socitm, CIO Council, DCLG and Nesta.
- (ii) Further promote examples of best practice across a wider range of business functions such as education and social services. The value of data sharing with emergency services should also be re-emphasised.
- (iii) Work more closely with the Ordnance Survey to promote the use of AddressBase for local authority functions where out-of-area coverage is required.
- (iv) Advocate and work towards replicating DCLG schemes such as the DCLG Local Digital Project for Local Waste Service Standards for other use cases.
- (v) Establish key performance indicators that allow realised benefits to be regularly (annually) quantified.

Watch this space for more news of how addressing can deliver worthwhile savings to the public sector.




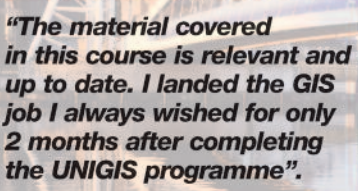
A study in 2015 suggested that 72% of councils' CRMs are reliant on the UPRN.



DISTANCE LEARNING GIS PROGRAMMES

UNIGIS UK

Study for a postgraduate qualification in GIS by online distance learning



MSc GIS Student 2013

unigis@mmu.ac.uk
+44 (0) 161 247 1581

UNIGIS UK has been at the forefront of GIS education for over 20 years, providing online distance learning-based postgraduate education and training in Geographical Information Systems and Science. Our part-time programmes support the personal and career development of GI professionals and those seeking to enter the GI industry. We support you with personal tutors, online resources and web collaboration software for surgeries and tutorials. There are no examinations, our courses are delivered through our bespoke VLE, and are 100% coursework assessed.

- part-time online, distance learning
- flexible entry requirements
- one year for the PgC, two years for the PgD, and three years to complete the Masters
- specialist pathways in GIS, Applied GIS, and GI Technologies
- degrees awarded either by Manchester Metropolitan University or the University of Salford

- recognition by the UK Association for Geographical Information (AGI) for continuing professional development
- annual intake in September
- competitive fees with instalment options
- key textbook and industry standard software included

www.unigis.org

GISProfessional