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Mapping out the future: the role of GI in delivering 2005

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1 Introduction

This paper provides the personal view of the author as to the role of Geographical Information (GI) in the lives of local government officers in the future, more specifically its role in the electronic delivery of services. It draws from experience of managing Geographical Information Systems (GIS) in a corporate setting within a large Metropolitan District Council whose investment in GIS to date has been a modest one. It is felt, nonetheless that innovative work undertaken in Bradford is helping to address the demands of the e-Government age, and that others might benefit from the Bradford experience.

2 "The future's not what it used to be" (W.C. Fields)

We can never know what's around the corner in terms of new legislation, new technology and working patterns, data availability etc. Local Government has been transformed in recent years. Councils no longer provide a cradle to grave job-for-life in a static monolith. Most of us now operate in an atmosphere of some uncertainty as the vogue for outsourcing core activities continues to gather momentum.

What can be said for certain is that things are changing and that technology continues to fuel the acceleration of this change. A good indicator of the rate of progress is provided by Nick Chapalaz's observation that more processing power was put into the 'Furbie' toy than there was in the first lunar lander! The speed of change alone makes it difficult to predict the future – no longer can we expect 'more of the same'. It is widely held that more than 80% of information held by a LA is geographical - specifically, addresses are the common currency in the great majority of a LAs transactions. The potential for this resource to be 'unlocked' by GI for more effective planning and delivery of services is therefore immense.

Central Government expects Local Authorities to be more creative, to think 'outside the box', to demonstrate Best Value by working in partnerships wherever appropriate. Demands for 'modern' government are reinforced by guidance and legislation to facilitate compliance. Other drivers such as Best Value, Beacon and Pathfinder Status and the setting up of 'N' initiatives (NLPG, NLIS etc) are building a new vocabulary within Local Government. A holistic approach to government, involving business and multi-agency cross-cutting partnership arrangements is also encouraged with the emergence of Local Strategic Partnerships.

3 "Failure to plan is planning to fail" (anon)

The new knowledge economy and the requirement for increasingly joined-up service delivery make it imperative that robust and reliable information tools are available to support the increasingly complex planning process.

In this increasingly complex and volatile environment it is therefore essential to be in full control of your knowledge assets to be able to respond in a timely and appropriate manner, or ideally – to be influencing and shaping the future. This will minimise painful and wasteful false starts where it is all too easy to be left with a 'white elephant' system that was bespoke to business conditions and priorities that no longer exist.

For these reasons those LAs who fail to plan for the future may be doomed to failure in meeting future targets.

4 How Bradford got it all sussed

I would not pretend that Bradford has all the answers, but at least by formulating many of the relevant questions we are now in a position where we are beginning to implement a range of innovative new systems.

A commitment to progress was made back in 1998 with the creation of the post of GIS Manager in Bradford and its location in a corporate unit – stressing the need to standardise and coordinate existing GIS activity across the organisation. Bradford took a relatively early interest in web-based GIS and took the plunge in 1999 at a time when it felt like most people were adopting a 'wait and see' approach. This corresponded with a successful bid for European funding (ERDF) for a project (Bradford Community Statistics Project - BCSP) which, having web GIS at its heart, provided resources for development, rather than Directors having to be approached at the outset to fund a fairly abstract concept. The successful development of the BCSP has been invaluable in a tangible demonstration of the power and potential of the technology with which to unlock internal resources (see www.bcsp-web.org). Other simple pilot applications have also been developed to make the work relevant to different audiences.

Fig 1. On the <u>Internet</u>, Draw your community – find out the population / deprivation levels etc.
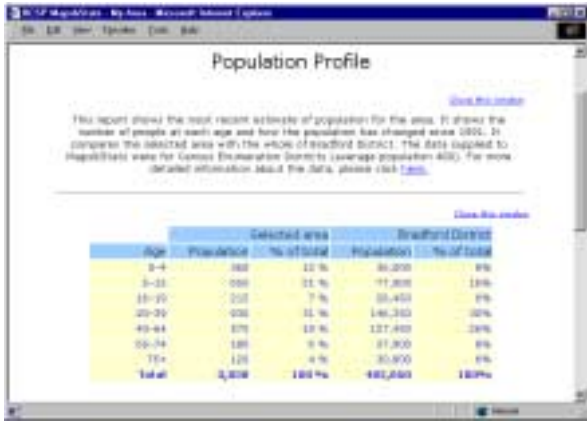
(See: www.bcsp-web.org)

We are proud of the progress made in integrating data from previously stand-alone databases and applications into a central service with both map-based functionality and built-in reports. Our Mapguide applications encompass the fruits of our research and development work into 'boundary-free datasets' (see BURISA, No.144) which enable seamless combinations of data – no matter what the units of data collection. This is of immense value in joining up Council services, and in so doing, adding value and reducing wasteful

duplication of work. Planners are now able to take a holistic approach to problem solving for any neighbourhood they might choose to define, and so deal more successfully with cross-cutting issues. The potential of these tools in regeneration is also being recognised - both in providing the evidence base for local regeneration bids, and also for ensuring that resources are targeted in the most appropriate and effective ways.

Whilst there is 'no such thing as a free lunch', the pilot work was undertaken with very limited resources. Substantial financial and human resources will be required to support and maintain a full blown corporate system, but we are quietly confident that much of this will be met through the re-focussing of existing resources.

5 "A picture paints a thousand words" (Directors won't read more than 200)

This year's conference has dedicated three days with multiple session streams to the range of complex and exciting current issues in the GI world. The problem many of us have is that the attention span of senior management for over-technical subjects is limited. Unfortunately is is difficult to crystalise in one A4 side of bullet points, the business case for GI, NLPG etc in delivering Modern Local Government. The advantage of a live demonstration (provided the technology behaves) is that web-based GIS makes possible visual and highly intuitive presentation of arguments. Not only that, but it promises to put the same capability in the hands of the technophobe or lay user. GI can be used to demonstrate your business case in a highly compelling way.

The facility to heavily customise the user interface – replacing confusing arrays of menus and buttons and indeterminate data with cryptic file names with a well structured 'Fisher Price' environment helps to deliver systems which truly are user friendly. Customisation of the front end also enables one to develop the elusive 'killer application' for each potential customer.

Fig 2. 'Scoo-by': Safe Routes to School application - for pupils to use themselves

6 Taking the BS out of BS7666: jargon-busting

Progress on the corporate gazetteer in Bradford has taken time to gain momentum partly because, for many, its relevance was not understood. The mention of BS7666 NLPG etc was jargon laden, abstract, dry and technical – mention them and watch your audience's eyes glaze over. With hindsight it may have been a mistake for the I&DeA to concentrate on the role of the NLPG in promoting NLIS, rather than on the universal potential for delivering joined-up Modern e- Local Government. Delivering a 'Vision' is more sexy than delivering a faster local authority 'Search'.

Paradoxically, Bradford is still to submit its data to the NLPG project. The main reason for this has been our the desire to use the gazetteer creation process as the vehicle for achieving cross-referencing of all core council's data to facilitate joined-up working, rather than choosing the standard package (Council Tax list, Non Domestic Rating List, Electoral register, AddressPoint and Street Gazetteer). Perhaps we were too ambitious but things are now moving ahead.

We have developed a proposal for top management which stresses the outcomes and potential rather than the jargon in order to move things forward. We are now capturing the imagination, gaining support and carrying people with us rather than sending them running in the opposite direction. It has taken time to promote the understanding that GI can be seen as the common denominator or 'glue' that joins apparently stand-alone information systems together.

7 GIS by Stealth

The GIS industry is also replete with jargon from which the lay user should be protected if we are not to scare them away. The GIS acronym and the teckie image is not one which promotes a broad user-base. Therefore, in conjunction with the implementation of our Intranet GIS software, in Bradford we have produced an application which introduces officers to intuitive entry level GIS as part of a simple application without trumpeting the fact that they are using GIS. The first council-wide application has been launched under the acronym 'GISMO'. Officers do not need to know that they are using a GIS but rather, they have been presented with a new tool or 'gismo' on the main Intranet home page that will make a number of tasks easier. (GISMO actually stands for 'Get Information Simply, Manage Organisationally' but they don't need to know that either!). In this way, GI is being mainstreamed and officers across the Council being weaned onto it with a view to it becoming a mainstream information interface.

8 A gismo to deliver e-Government

The process of gearing up to deliver services electronically requires a comprehensive audit of existing business activity, the identification of services which might be delivered electronically and work on rationalising the business processes for electronic delivery. Conveniently, this process will simultaneously provide information on business processes which can be fed directly into the corporate GIS. There need be little additional re-processing of data required to optimise the use of the organisation's knowledge assets through corporate systems (such as GISMO in Bradford). Distilling each service into key components for e-delivery will result in more streamlined and structured information systems, enabling more core business activity to be captured in the corporate GIS. The converse is also true – that newly re-engineered back office functions will require new, smarter systems and interfaces between the customer and provider – web-based GIS is an ideal candidate for this. As the NLIS demonstrates, GIS can be at the hub of such developments.

9 Putting the customer first, understanding the customer

With web-GIS providing a powerful interface with the public, work can be concentrated upon the look and feel of this customer interface, and upon the necessary back office admin and financial systems to handle transactions.

Effective customer services requires systems that are intuitive and which work. Too many LA web-sites (Bradford's included) tend to reflect organisational structures rather than presenting a theme-based or service-based access point, tailored to the frequently asked questions of members of the public. Services and contacts are consequently in less than rational locations

Penetration of technology into the home is creating high public expectations. Citizens are becoming increasingly sophisticated, with the next generation weaned on home computers. Imagine the frustration when a customer can get Lara Croft to Level 213 on their Playstation, yet are unable to navigate around their Council website to find how to pay their Council Tax! Since the e-environment is increasingly the public face of the organisation, an unprofessional interface may be seen as a wider reflection of Council competency. For this reason, Bradford is not only addressing technology and knowledge management, but also ensuring that our Department of Customer services are at the centre of developments. We hope to be dovetailing the web-GIS project with Bradford's Invest to Save project for developing the Customer Services Interface and One Stop Shop.

10 'What's in it for me?' - changing or accepting the culture

Traditional thinkers within the organisation have to be encouraged to buy in to the idea of a new Knowledge Economy. So long as the main Services refuse to see the benefits, the most important players (and their budgets) will not be on board. These players therefore need to be convinced that the benefits to them alone make a compelling case for their participation in the wider programme. It is probably fair to say that in Bradford, data sharing is being successfully based on the politics of self-interest first and foremost rather than on altruism. In today's pressured workplace, people do not have the capacity to take on the additional burden of contributing to well-meaning corporate initiatives. There must be demonstrably greater benefits to be traded off against the costs of participation in such corporate 'joining-up' initiatives. In Bradford, the model has been one of developing bespoke applications for individual Services (in which they have a vested interest) with the agreement that information can then be creamed of the top of these systems to be shared with others. In this way, considerable progress in possible without significant cultural change.

Most Senior Managers and Elected Members publicly subscribe to the principles of modern, open and transparent Local Government, and yet there is often little evidence of more than lip service being paid to these ideals because of the evident complexity in practical delivery. Systems built around web technology offer powerful opportunities for democratisation of Local Government but also for significant reduction in wasteful duplication of work within a large organisation. Tangible moves towards modern joined-up government can be demonstrated which are both ethically and pragmatically compelling. This can help to overcome the incumbent culture of resistance to change.

At the individual officer level there can be resistance from those whose functions may change or be automated and who may, justifiably, feel threatened. Even this can be portrayed in a positive light, as modern working practices liberate individuals from the more mundane and repetitive tasks and provide new and more interesting opportunities – not least in contributing to the specification and design of the new systems.

11 Summary

I have presented a number of suggestions in this paper for how LAs might approach future planning for the delivery of 2005. Admittedly, much of what is discussed is still at an early stage of implementation in Bradford.

While we have not yet, in all quarters, managed to turn cynicism or scepticism into enthusiasm for the proposed programme for delivering 2005, we have at least raised curiosity because of the high profile which the web-GIS has gained. A 'trail of crumbs' is being laid to raise awareness and coax the main Departmental players to cooperate with corporate plans. GI is therefore playing a key role in providing both core functionality required for the delivery of 'Modern Local Government', and in making it attractive to service providers and customers alike.

NB: Checklist

Don't just consult but involve others – *you will need others to 'own' the ideas if they are to be successfully implemented*

Be tactful – *someone already does the jobs you are proposing to revolutionise!*

Promote modernisation as an opportunity not a threat – *it promises to automate mundane and repetitive jobs and make more interesting work possible*

Seek modernisation money – *external resources may help prime the pump*

Think outside the box – *think in terms of crosscutting 'outcomes' not intra-departmental 'outputs'*

Encourage cross-agency working - *more resources, less wastage, better integrated services*

Raise awareness – *publicise plans and progress made*

Be adaptable - *the future will almost certainly change*

Plan – *or fail!*