

## P01.1

## Developing a geographic Information policy and implementation strategy for Northern Ireland

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### Introduction

Geographic Information (GI) is no longer just about maps, nor just another IT project. It is much broader, encompassing environmental, demographic, societal and many other locationally relevant data and interests. It has the potential to deliver real social and economic benefits, but only if these data are compatible, and these interests communicate and collaborate. However, GI has been seen for too long to be about mapping or a very specialist area within IT. Some in the GIS community have not helped by trying to claim some sort of specialist knowledge of “issues”, which can actually be perceived as barriers to implementation, and presented in often overly complex ways using technical jargon that confuses, rather than enlightens. This is a perception shared by government policy makers, politicians and the non-“techy” alike. It has prevented real progress in GI Policy at European, national and regional level. The development of technology over the recent past has removed many of the technology barriers. This enables truly cross-governmental GIS. What remain, however, are institutional and other organisational obstacles.

Overcoming the institutional barriers remains a problem as the economic, funding and competition arguments continue to dominate concerns, particularly those relating to Ordnance Survey. However, these arguments often hide silo thinking, becoming reasons why things cannot be done, rather than trying to identify the things that can be done. They distract from developing the strategic view required to really make the difference; unfortunately it is the public interest that loses out.

The devolution of power from Westminster to Scotland, Northern Ireland and Wales within the United Kingdom, has offered a real opportunity for these devolved administrations to begin to address, in a constructive and inclusive way, the institutional barriers preventing progress in GI. In Northern Ireland the first steps to removing these barriers has been taken. There is a long way to go. However, progress has been steady and the potential is there to address those matters of concern to GI stakeholders, in a way that is sustainable, and best meets the needs of Northern Ireland society and benefit its economy. This paper describes the steps being taken, but first puts these efforts into a broader context.

### Devolving power to the people of Northern Ireland

On Thursday 2 December 1999 power was devolved to the Northern Ireland Assembly and its Executive Committee of Ministers. On the same date the North/South Ministerial Council, North/South Implementation Bodies, British-Irish Council and British-Irish Inter-governmental Conference became fully functioning institutions.

This was a direct result of the Belfast (Good Friday) Agreement, which was endorsed by the people of Northern Ireland in a referendum on 22 May 1998. 108 members were elected to the New Northern Ireland Assembly in June 1998. The functions of the 11 Departments were agreed by the Assembly in February 1999.

The Assembly meets in Parliament Buildings in Stormont, Belfast. It is the prime source of authority for all devolved responsibilities. It has full legislative and executive authority - that is, the power to make laws and take decisions on all the functions of the Northern Ireland Departments.



*Parliament Buildings, Stormont, Belfast*

The Assembly has elected, on a cross-community basis, a First Minister, David Trimble and a Deputy First Minister, Mark Durkan and 10 Ministers have been appointed with responsibility for the new Northern Ireland Departments. Together these Ministers make up the Executive Committee.

The Committee meets to discuss and agree on issues which cut across the responsibilities of 2 or more Ministers. It will prioritise executive business and recommend a common position where necessary

### Northern Ireland Executive Programme for Government “making a difference” 2001 - 2004

In the Belfast Agreement, in order to create effective government of Northern Ireland, it was agreed that:

*“The Executive Committee will seek to agree each year, and review as necessary a programme incorporating an agreed budget linked to policies and programmes, subject to approval by the Assembly, after scrutiny in Assembly Committees, on a cross-community basis”.*

Following widespread consultation, in particular with Assembly Committees, a Programme, which covered the 3 years from 2001 but with a focus on work in 2001/02, was endorsed by the Assembly on 6 March 2001. It provides a strategic overview of the Executive’s work and demonstrates how policies and programmes, delivered by different departments and agencies, can be best combined to achieve our agreed priorities. It also sets out in Public Service Agreements the key targets that each department is seeking to deliver.

The Programme for Government is reviewed annually. The latest review sets out the Executives plans and policies for 2002/03 and beyond, and has determined its priorities as being: Growing as a Community; Working for a Healthier People; Investing in Education and Skills; Securing a Competitive Economy; and Developing North/South, East/West and International Relations.

Under ‘Securing a Competitive Economy’ there is the sub-priority of “Developing a Geographic Information (GI) Policy for Northern Ireland by 2002”.

Given that an estimated 80 % (and probably more) of Government held information relates to location, it is clear that GI has an important role to play within government. The ability of the public services to meet E-Government targets will rely heavily upon their ability to manage and distribute appropriate Geographic Information.

## INSPIRE – European perspective

The Environmental European Spatial Data Infrastructure initiative (E-ESDI) aims at making available relevant, harmonised and quality geographic information for the purpose of formulation, implementation, monitoring and evaluation of Community environmental policy-making. At a later stage, the initiative will be broadened to other sector policy areas such as transport and agriculture, and will eventually culminate in the establishment of a cross-sectoral European Spatial Data Infrastructure (ESDI).

The INSPIRE concept is based on a new approach for creation of a European spatial information infrastructure stated in a Memorandum of Understanding between Commissioners Wallström, Solbes and Busquin. Two facts drive the demand for an appropriate European action on a GI Infrastructure.

The first is that all themes of environmental policy (water, air, climate, soil, biodiversity, etc) have a common spatial dimension. This spatial dimension is important for environmental and other sector policies in the way that thematic information used in the sector have to be based on or related to geographical information. The information needed in different sectors therefore must be integrated in a common information infrastructure on local, regional, national and European level – a European spatial information infrastructure.

The second fact is that an infrastructure for information has to be based on a co-operative approach where activities on different levels and in different sectors are co-ordinated in order to make relevant information available. This co-operative approach calls for co-ordination between national systems and systems on European level – a European spatial information infrastructure.

The EC developments in INSPIRE clearly require adequate, clear and strong focal points at Regional and National level, as well as at European level, for the integration and co-ordination of GI Policy.

## UK perspective

No one group currently holds the over-arching remit for handling GI Policy for the UK. A number of representative bodies, such as NGDF, IGGI and others, have attempted, bravely, to fill this role, but without the clear authority of Government - therefore little progress could be made. Within the UK, GI is a devolved matter, and with the INSPIRE initiative at the EC level, it was essential that some degree of co-ordination for the UK was established, with the clear remit to carry out the required role. Although not finalised (at the time of writing) the proposed e-Champions Geospatial Data Working Group is being established to:

- Provide high-level coordination of public sector geospatial information initiatives
- Coordinate UK input to international geospatial initiatives (such as INSPIRE)

This group is a sub-group of the e-Government Interoperability Working Group, and acts on behalf of the e-Champions e-Government Group. Membership is proposed (at the time of writing) to be representative of central government departments and agencies, local authorities and representative bodies, other public sector bodies and the devolved administrations who have the authority and expertise required to help GDWG meet its objectives.

The success or failure of this (or any) group to fulfil the UK wide role will largely depend upon the extent to which it ensures the interests of various organisations and bodies outside of Central London government, such as the devolved administrations, are taken into account.

## Northern Ireland Geographic Information System (NIGIS)

NIGIS (Northern Ireland Geographic Information System) was the successor body to the Ordnance Survey of Northern Ireland (OSNI) Computer Mapping System and Topographical Database (COMTOD) established in 1981 to establish the benefits for computerising the paper mapping

system. Its purpose was originally to link all government departments and public and private utilities together in the use of OSNI mapping and other data related to this mapping.

A review commissioned in early 2001 gave a valuable insight into the status of GIS in NI and provided an objective analysis of the successes and failures of NIGIS.

This review found that while NIGIS has broadly achieved its stated Terms of Reference, the organisation had failed to evolve once these Terms of Reference had been achieved, and failed to recognise the significant changes in its external environment both from technical and business perspectives, and the organisational dynamics required to continue to be effective. Its original objective had become confused, membership had become very technical, with the dominance of some personalities and OSNI to the project which had led to confusion as to whether this was an OSNI initiative or a truly cross cutting Northern Ireland project.

NIGIS significantly advanced the development of GIS in Northern Ireland. But many things had changed in the 20 years since the project had begun (not least the technology used) and therefore it was appropriate to reconsider how best to take forward developments in GIS for the benefit of Northern Ireland, in a manner which best took into account the Community of Interest. Consultees in the review expressed a strong desire for a successor to NIGIS.

Following discussions in the Department of Culture, Arts and Leisure (DCAL), which retains policy responsibility for GI in Northern Ireland as the parent department of OSNI, as to how to take the GI Policy objective under Programme for Government forward, the Future Search technique was explored, and agreed, to be an innovative and inclusive way in which to develop consensus as to the way forward. This technique had been successfully used internationally, and in Northern Ireland it had been used to develop a soccer strategy (a very contentious area), libraries policy and the Creative Industries agenda.

## Future Search

Future Search is an innovative planning conference used world-wide by hundreds of communities and organisations. It meets 2 goals at the same time, (1) helping large diverse groups discover values, purposes, and projects they hold in common; and (2) enabling people to create a desired future together and start implementing right away. Many sponsors have used Future Search to transform their capability for co-operative action in a relatively short time.

Future Search is especially helpful in uncertain, fast-changing situations. Participants need no prior training or expertise. People build on what they already have. Conferences focus on a wide range of purposes in schools, hospitals, churches, communities, government agencies, voluntary networks, foundations, business firms, and not for profit bodies in every sector. Because Future Search is largely culture free, it has been adopted with success by people from all walks of life in North and South America, Africa, Australia, Europe and South Asia.

A Future Search usually involves 60 to 70 people – large enough to include many perspectives and small enough that the full group can be in dialogue at each step in the process. This makes possible a shared picture of the “whole elephant”. The optimal length is about 2-3 days. When people stay engaged in a task for that long, they are more likely to make a notable shift in their trust of each other and in their capability for action.

### How Future Search Works

The conference workshop is designed to principles that enable people to work together without having to defend or sell a particular agenda. This opens the door to creative new opportunities.

Future Search Principles:

- Get the “whole system in the room”.
- Think globally, act locally – Explore the same world.
- Work toward common ground/desired futures.
- Self-manage conversations/action plans.

The first principle involves “getting the whole system in the room”. That means inviting people with a stake in the purpose who don’t usually meet, thus enlarging everybody’s potential for learning and action. The second involves putting the focal issue in global perspective, helping each person to see the same larger picture of which they have a part. The third means treating problems and conflicts as information rather than action items, while searching for common ground and desirable futures. The fourth invites people to manage their own small groups in talking about and acting on what they learn.

### The Future Search Agenda

The work is done in 4 or 5 half-day sessions, 16 or more hours of actual work. There are 5 tasks. The first establishes a common history, the second, a map of world trends affecting the whole group. The third step calls for an assessment by stakeholders of what they are doing now that they are proud of, and sorry about, an important step toward mutual understanding. Next, people devise ideal future scenarios, living their dreams as if they have already happened. A mind map of present trends helps everybody focus on talking about the “same elephant” Then all groups identify common ground themes – key features that appear in every scenario. The whole group confirms their common future, acknowledges differences and makes choices about how to use their energy. In the final segment, they sign up to work together on desired plans and actions.

Most groups are surprised at how much they agree upon and how many values they hold in common. Many communities and organisations discover capabilities they did not know they had. They take actions they did not believe were possible.

The more diverse the group, the more important it is that the people in the room arrive at their own meanings, conclusions, concepts, and goals. The technique resists the temptation to “organise the data” for a group, or to impose categories and priority-setting mechanisms. Instead, it helps people understand what it is they are saying to each other and what choices they can make.

It has been assumed that the best way to bring a large group together was in the presence of an expert speaker or panelists who would answer peoples’ questions. The belief that someone else has the knowledge we need is deep in us. So is the belief that if others tell us what to do we can do it. Future Search turns those assumptions upside down. Future Search assumes that people already have the skills and motivation to do more than they are doing now. What they need is opportunity.

The success of a Future Search is determined during the planning – in accepting conditions that will make future action more probable. So diverse people are invited who have a stake in the agenda. The larger context is visited before confronting the planning issue. Work is undertaken in self-managing groups. The meeting is for at least 16 hours (excluding breaks and meals) over 3 days in windowed rooms. People learn from each other rather than expert speakers. Action planning only takes place when there is consensus on the future.

Future Search is not easy work nor can 16 hours make up for years of inertia. The process is simple, not easy. Figuring out the appropriate task and how to get the right people into the room is hard work. Putting on a Future Search requires changing many assumptions about what can be done in one short meeting. But the meeting process is simple, astonishingly so to those who have spent decades chasing rainbows with more elaborate methods that are not up to the task. Facing ambiguity together – instead of trying to squeeze it out of a meeting – leads people to a new world view and to creative new ways of working.

## Future Search Agenda

Future of GI in NI - 5 to 20 years Out

Task 1: The Past: Where We've Been

Task 2: The Present: Trends Affecting Us & What We're Doing Now

Task 3: "Prouds" & "Sorries".

Task 4: The Future: What We Want To Do.

Task 5: Common Ground & Action Planning

## Lusty Beg Island, Lough Erne, Co Fermanagh *Future Search Conference Workshop*

Thus, during 2001 the Department of Culture, Arts and Leisure established a planning group and brought together a number of Geographic Information stakeholders to help develop a Geographic Information Policy for Northern Ireland. This was to be undertaken using the Future Search technique, facilitated by a trained team from the Sustainable Northern Ireland Programme (SNIPS).

A Conference Workshop was held on Lusty Beg Island in Co Fermanagh, a unique, wind swept, and beautifully located event, over a 3 day period between 20-22 February 2002. A sense of adventure was a prerequisite in order to attend, as indicated by the directions:

*" Get on to the M1 at Belfast. Drive to the very end.  
Follow the road to Ballygawley Roundabout (Big Roundabout) and take the turn off for Omagh.  
From Omagh follow the signs for Enniskillen.  
6 miles outside Omagh take the road to your right for Kesh.  
Follow the road straight through Lack and Ederney.  
Come to a "T" junction in centre of Kesh village turn right and follow the sign for A47 to Boa Island and Belleek (Left turn just outside Kesh, past the petrol station).  
Keep Driving straight on, will come onto Boa Island over the Bridge you will see Lusty Beg clearly signed on your left.*

*Drive down the laneway, go into the phone box and dial 0."*

Over 55 participants from UK, Ireland and Europe attended, and followed these directions. On dialling 0 a small ferry arrived to take participants onto the island of Lusty Beg. Participation numbers alone indicated the potential for success in that it confirmed stakeholder interest in developing a GI Policy and also identified key actions required in order to take this Policy forward.





Lusty Beg Island & Conference Centre



*Fig 2. Some well known faces contributing to their timeline*

#### Task 1: Focus On The Past - “The Past Is Prelude ...”

Purpose: Tell the story of the recent past;  
To develop a mutual picture of our world, values and histories;  
To establish a context for our shared future.

This used timelines to record Personal, Global, Northern Ireland and GI events in context. See Table 1

#### Task 2: Focus On The Present - Trends Affecting Our Future

Purpose: To create a shared picture of the world we live in and experience the whole together

This developed what is called a “Mind Map” (see Fig 1), which identified the key issues as seen today:

- Priorities

- Joined up government
- Standardisation
- Internet
- Full large scale data coverage of NI
- GI as an economic resource

#### Task 3: Focus On The Present - “Prouds and Sorries” – Owning Up

Purpose: Accepting our feelings about what we are doing now

See Table 2.

#### Task 4: Focus On The Future - Ideal Future Scenario

Purpose: To imagine a future that you want to work towards

This was “brain stormed” and grouped under two headings “Values and Principles” (Table 3) and “Potential Projects” (Table 3). Subsequently they were clustered into common themes or groups.

#### Task 5: Action Planning – Making it happen

Purpose: To decide on short and long term action steps. What are steps will be taken as a group to work toward a common future agenda?

Participants now split into teams, taking each of the clusters and developed action plans, identifying people and allocating names (not only those in the room).



**Table 1 : Timeline**

<b>Decade</b>	<b>Personal</b>	<b>Global</b>	<b>N Ireland</b>	<b>GI</b>
<b>1970's</b>	<p>Lots born</p> <p>Many not yet born</p> <p>Some around long enough to have children</p>	<p>Loads of wars</p> <p>Pop culture (Elvis, ABBA)</p> <p>Crisis (oil)</p> <p>EU,</p> <p>Decimalisation</p>	<p>The Troubles</p> <p>Lack of detailed response (just key issues)</p>	<p>Genesis of basic GIS (mainframe computers)</p> <p>Analogue paper maps</p> <p>First digital maps and DBMS</p> <p>Satellites launched (LANSAT, etc)</p>
<b>1980's</b>	<p>Education, marriage and travel</p> <p>Primary schools, degrees and PhDs</p> <p>Marriage and first children</p> <p>Foreign travel at climbing expeditions</p>	<p>More war</p> <p>More disasters (AIDS, Famine)</p> <p>Technological developments (PCs CDs)</p> <p>Pop influence (Live Aid)</p> <p>Some politics</p>	<p>The Troubles</p> <p>Lack of detail</p> <p>Some sporting achievements</p>	<p>Technical developments</p> <p>Maturing of systems</p> <p>First image processing systems</p> <p>Computer platform developments (VAS, VMS, etc)</p> <p>First civilian apps of GPS</p> <p>Initial uptake of GIS in government</p>
<b>1990's</b>	<p>Lots more PhDs</p> <p>Development of interest in GIS</p> <p>Travel to all corners of globe</p>	<p>War (again!)</p> <p>Politics – Berlin war, Bill Clinton</p> <p>Drug culture</p> <p>Technology – Dot.com/mobile phones</p> <p>Pop Idols</p> <p>EURO</p> <p>Technology (DOT.com)</p> <p>Afghanistan (September 11<sup>th</sup>)</p>	<p>More positive response (i.e., city development and political progress)</p> <p>Ceasefires/good F Agreement</p>	<p>Census and GIS integration</p> <p>Desktop/PC GIS</p> <p>Differential GPS (SA turned off)</p> <p>GPS/GIS integration</p> <p>Imagery developments</p>
<b>Now</b>	<p>Personal</p> <p>New cars</p> <p>New houses</p> <p>Failed soccer and rugby teams</p> <p>Lusty Beg</p>		<p>Technical issues, i.e., NIGIS, Townland, E-Govt</p> <p>Begin to dominate</p> <p>Devolution</p>	<p>Mobile comms/technology</p> <p>Lusty Beg Policy Development</p> <p>GB focus of GI</p> <p>Data developments more than systems</p> <p>No mention of costs</p> <p>Applications</p>



Figure 1.: "Mind Map"

**Table 2: Prouds and Sorries**

Prouds	Sorries
High quality mapbase We have many data bases We are beginning to talk and collaborate We have a forum We are proud of NIGIS achievement We have generated some awareness of GI GI is becoming mainstream National projects, i.e., NLIS Proud of GI and its potential Devolution and opportunities	We haven't educated people Haven't broken down barriers We haven't created an environment of collaboration No overarguing strategic view Not identified tangible actions and outcomes Not as effective as we would like We did not engage at the appropriate policy level Stakeholders did not own it Still too techy Person in street now aware We haven't engaged the younger generation We haven't influenced this Social/economic benefit lost? We haven't facilitated exploitation We have failed to influence We haven't created a model for collaboration We haven't had enough fun Too problem orientated

Note – Space does not allow for all the information to be shown, only an extract is shown here.

**Table 3.**

<b>Values and Principles</b>		
<b>Cluster One</b>	<b>Cluster Two</b>	<b>Cluster Three</b>
<ul style="list-style-type: none"> <li>• We value important GI as a social, economic and educational resource</li> <li>• Facilitate the development of GI application</li> <li>• Have a NI GI Policy</li> <li>• NI as a GI role model</li> <li>• Strategic leadership</li> <li>• Better strategic co-ordination</li> <li>• Projects are about people</li> <li>• Inclusiveness</li> <li>• Universal accessibility</li> <li>• Universal available</li> </ul>	<ul style="list-style-type: none"> <li>• Maximise Use</li> <li>• Affordable</li> <li>• Openness and accountability</li> <li>• Fitness for purpose</li> <li>• Responsible use of information</li> <li>• Comprehensive/coverage</li> <li>• Data quality</li> <li>• Really up to date</li> <li>• Open systems</li> <li>• Adopt and adapt standards</li> <li>• Approved knowledge management</li> </ul>	<ul style="list-style-type: none"> <li>• Trust and Sharers</li> <li>• Secure – Data systems</li> <li>• Partnerships</li> <li>• Data sharing</li> <li>• Experience sharing</li> <li>• Cost justified</li> <li>• Added value</li> <li>• Develop ways of networking</li> <li>• Communication and education about GI</li> <li>• Jargon Free</li> <li>• User Friendly</li> <li>• Improved internal effectiveness and efficiency</li> <li>• Customer focussed</li> <li>• Practical rather than academic solutions</li> <li>• Key GI datasets must be publicly regulated</li> </ul>

**Table 4.**

<u>Potential Projects</u>	
<p style="text-align: center;"><u>Cluster One</u></p> <ul style="list-style-type: none"> <li>• Develop killer applications to influence government (PPG and EU related) by taking 5 key themes and mapping GI solutions on to them</li> <li>• Health</li> <li>• Benefit Fraud</li> <li>• NI Energy Audit</li> <li>• GI related street digging system for utilities/roads</li> <li>• Water Framework Directive</li> <li>• Emergency Services demonstrator</li> <li>• Public Safety – FA, Ambulance, Coast Guard - Share Data – Share Command and Control</li> </ul> <p style="text-align: center;"><u>Cluster Three – Accessibility</u></p> <ul style="list-style-type: none"> <li>• Engage society to the practical applications and benefits of GI</li> <li>• Curriculum development and teacher training in GI to ensure inclusion in national curriculum</li> <li>• Marketing – convincing non-users of the value of GI</li> <li>• Educational awareness programme</li> <li>• GI consciousness/help for voluntary/community/charities</li> <li>• Create web-based system to facilitate access</li> <li>• Education skill development</li> <li>• Educational professional development</li> </ul> <p style="text-align: center;"><u>Cluster Five – Data Management</u></p> <ul style="list-style-type: none"> <li>• Applications stock-take (pro-active co-operation)</li> <li>• Data warehouse</li> <li>• Meta data</li> <li>• Geographical thesaurus</li> <li>• List of users</li> <li>• Establish register of data sets</li> <li>• GIS Human Resource database</li> <li>• Best practice evidence</li> </ul>	<p style="text-align: center;"><u>Cluster Two – Strategic Bodies</u></p> <ul style="list-style-type: none"> <li>• Create enabling body – key stakeholders and secretariat</li> <li>• Strategic Forum</li> <li>• Establish strategic body to implement GI Policy</li> <li>• Co-ordinate government GI Data first</li> <li>• Establish users</li> <li>• Strategic associations</li> <li>• Develop better strategic co-ordination and ownership</li> <li>• Objective drive association</li> <li>• Industry/Sectoral champion</li> <li>• Internal champion</li> <li>• Engaging and harnessing the political arena</li> <li>• Customer/Supplier Forum</li> <li>• Creating over-arching partnerships</li> <li>• Users Forum</li> </ul> <p style="text-align: center;"><u>Cluster Four - Funding</u></p> <ul style="list-style-type: none"> <li>• Modernising government fund for NI – targeted to joined up data/citizen access partnerships creation</li> <li>• New funding models to ensure exploitation of data within the public, private, voluntary and academic sectors</li> <li>• Developing tools for making GI business case</li> <li>• GI efficiency investigation – cross department – through Chief Executive</li> <li>• Investigate sources of funding</li> </ul> <p style="text-align: center;"><u>Cluster Six – Data Sets</u></p> <ul style="list-style-type: none"> <li>• Identification of key datasets</li> <li>• Aerial imagery</li> <li>• High resolution – digital terrain model</li> <li>• Common Address File – Street Gazetteer</li> <li>• Modernise and integrate government property register</li> <li>• Environmental information</li> <li>• Digital Irish Geological information System</li> <li>• Townland Names</li> <li>• Embrace EU legislation</li> </ul>

## Developing the vision into a strategy



Following the workshop conference, Ministerial approval was sought, and given, to develop a draft Policy and Implementation Strategy for Geographic Information in Northern Ireland. This was then to be given to GI Stakeholders and other statutory consultees for consideration and comment.

The intention is that the strategy should build upon the work at the conference workshop, and in particular the extremely valuable output from the last day. This clustered GI values and principles around some common views of the future of GI, and began to define potential projects, some of which were taken to the next stage of planning. It is clear from this work that common themes have emerged, on which the draft strategy could concentrate, and against which key issues can be identified, recommendations for addressing these issues made, and actions required in order to take them forward proposed. It would be important in determining these actions that the ability to deliver, (and not only a desire to deliver) would be important; in this way the process would retain credibility both within government and among the stakeholders represented at Lusty Beg Island.

### Strategic Themes

#### *Public Safety / Emergency Services*

Two of the 5 groups at Lusty Beg used public safety and emergency response as an example of where an effective GI Policy and Strategy could generate key benefits to society. Key to these scenarios was the integration of location-based information, and adequate communication between the various bodies involved.

#### *Strategic Body*

One of the key success factors in developing an effective GI Policy and Strategy is the need for a suitably robust, high-level strategic framework for managing, implementing and co-ordinating GI matters. The framework would need to have the authority of government and industry and appropriate governance and administrative structures, as well as adequate communication and collaborative actions developed between government and industry. This is essential if appropriate follow up on the work carried out so far is to happen.

### *Accessibility*

GI technology is no longer “specialist” and there is a need to increase awareness of the potential and the benefits to society and the economy of GI. This requires education at many levels, through schools (such as via the curriculum), but also in the wider sense of an adequate marketing and awareness campaign.

### *Funding*

Many organisations are still failing to make an adequate business case for GIS. Even when they do, difficulties arise in securing adequate funding. Awareness of lessons elsewhere, key tools and business models in implementing GIS, and education about funding sources and models will help develop GI in Northern Ireland.

### *Data Management*

The proliferation of data, applications and jargon requires better co-ordination and communication of what is “out there”. A stock take of applications would help prevent “re-inventing the wheel”, and duplication of effort, establishing a meta database and thesaurus will aid understanding, and even a list of GI users would help better co-ordinate what is happening in the GI world.

### *Key Data sets and systems*

Much data already exists – however, there are a few key data sets required in order to open up GI. These data sets are required, for instance, by the NI Executives Programme for Government. What are these data? Are they available? Who collects them? Are they up to date and fit for purpose? Each of these questions needs to be answered in order to facilitate the use of GI across government and the private sector. Data for Land and Property administration is an example of a key data set, and this area is the subject of a separate Strategic Theme. Other key datasets include Environmental, demographic and transport.

### *Land and Property Information Systems*

Data and applications to support the delivery of efficient and effective Land and Property services are an example of key GI systems. In recognition of this CITUNI commissioned a feasibility study into the provision of Land and property Information Services to meet the needs of Northern Ireland. This study received Ministerial support, and identified a number of initiatives such as the Common Address File (now renamed Pointer) as well as the development of Land and Property Gazetteers and electronic conveyancing. Taking forward these recommendations will be a key strand of the draft GI Policy and Strategy, and will provide a natural home and strategic focus for this work.

### *Other possible themes:*

Other potential themes presented themselves, and these included Environmental, Demographic, Transport and Utilities & Networks.

## **conclusions**

The Northern Ireland Programme for Government has developed a unique and cohesive programme of action by the Executive over a 3 year timescale. Part of this programme recognises the importance of Geographic Information, and set out the key action on the Department of Culture, Arts and Leisure (the parent Department of the Ordnance Survey of Northern Ireland) to develop a GI Policy for Northern Ireland during 2002.

This paper has described the context within which a GI Policy sits, at Northern Ireland, UK and European levels. It describes how this Policy, and an Implementation Strategy, has been developed using the Future Search technique at an innovative Conference workshop event on Lusty Beg Island, in Co. Fermanagh.

This Event captured a consensus from representative stakeholders about GI for Northern Ireland. These included:

- All stakeholders value the importance of GI as a social, economic and educational resource.
- Recognition of a need to maximise use of GI.



- Importance of working together to maximise this use.
- A number of potential projects identified to take GI forward.
- The need for co-ordination of work and strategy development, both within Government and by Industry (AGI NI).
- Funding, based on need and benefit would be required.

The following key strategic themes were identified:

- Public Safety / Emergency Services
- Strategic Body
- Accessibility
- Funding
- Data Management
- Key Data Sets
- Land and Property
- Other possible themes:
  - Environmental*
  - Demographic*
  - Transport*
  - Utilities & Networks*

The need for a GI Policy, supported by an appropriate implementation strategy, had been clear for many years. NIGIS addressed this need for more than 15 years. However, with changes to the technical, business, political and economic environments it was essential that the organisational framework for the GI Policy implementation was brought up to date. That this should be inclusive required an innovative approach to obtain stakeholder acceptance. Future Search provided this approach in an effective, and enjoyable way. Work has now begun, continuing the collaborative theme, on a draft strategy, based on the work of Lusty Beg. This work identifies key issues to be addressed, recommendations for addressing these issues, and the actions intended to take them forward.

A draft strategy will be issued for public consultation during the Autumn 2002.

## Acknowledgements

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## References and links

For more information on devolved government in Northern Ireland, the Northern Ireland Executive, departments and the institutions arising from the Belfast Agreement see <http://www.nics.gov.uk>.

For more information on the Northern Ireland Programme for Government, see <http://www.pfgni.gov.uk/>

The section on Future Search is based on a paper “What is a FUTURE SEARCH?” by Marvin Weisbord & Sandra Janoff, see <http://www.futuresearch.net>.

“Strategic Review of NIGIS” PriceWaterhouseCoopers. Commissioned report by OSNI, 6th July 2001.

“Draft Position paper on ISF, Implementing Structures and Funding” Inspire ISF Working Group draft paper vo-3 en, 2nd July 2002.

Pointer - a Common Address File for Northern Ireland – e-mail: [info@pointer-ni.gov.uk](mailto:info@pointer-ni.gov.uk)