SPATIAL needs political champions

says The Hon Gary Nairn, Business Consultant and former Australian Special Minister of State & e-Government Minister at GSDI 11 World Conference – Rotterdam 15th – 19th June 2009. Here are the excerpts.

Almost 20 years ago, as a Surveyor in private practice, and as someone who had a passing interest in politics, I presented a paper at a surveying conference, titled "Surveying the Political Landscape.

At the time I had no ambition to stand for political office as I was more than fully occupied with my Surveying and Mapping business which was busy adopting new technologies such as Geographic Information Systems and Global Positioning Systems. However in hindsight my paper at that conference may well have been the start of a process that saw me elected to the Australian Parliament in 1996.

During my almost 12 years in Parliament I was one of only about half a dozen out of 226 Members and Senators that could boast a truly practical science background such as surveying or engineering, a fact that had its positives and negatives.

As a Member of Parliament, I saw my role as having three main aspects – representing the people within my electorate in the Parliament; helping to deliver better services to them; and, working to improve their standard of living, which in my view covers their social, economic and environmental circumstances. In fact that last aspect is really what government is all about. And I might add that it is those three issues that the GSDI organisation has identified would be improved with the establishment of national and global SDI's.

I mentioned it wasn't easy explaining this to some of my political colleagues however, personally, I adopted the technologies to assist me in managing and holding the very marginal electorate I represented. Well it worked for 4 elections at least!

In my first re-election campaign I produced localised maps of the various regions of my electorate and overlayed the many projects I had been working with the community on to highlight the funding gained and the various achievements. In political terms, a picture that demonstrates achievements is always so much more convincing than a page of words.

When I became Parliamentary Secretary to the Prime Minister my major responsibilities were Water Reform and coordinating R&D related to domestic counter terrorism. Both responsibilities gave me opportunities to promote the importance and benefits of spatial information at the very highest level of government. Water reform required cooperation with the States and Territories which highlighted the many problems in spatial data, such as completeness, standards and interoperability.

But as Special Minister of State I was able to push spatial information a lot harder. In this role one of my major responsibilities was e-government on a whole-of-government basis. In Australia between 80 and 90% of our legislation has a spatial element, so developing e-Government in isolation to spatial information would be counter-productive and would in fact be a very poor use of taxpayers' funds. So to me, it was not possible to achieve efficient e-government without the involvement of spatial information. Spatially enabled government (SEG) was a key input for e-government.

As standards and interoperability were key issues that needed to be addressed to develop a national Australian Spatial Data Infrastructure, a key requisite for achieving a spatially enabled government, I instigated projects aimed directly at getting common standards across all jurisdictions and for interoperability. The National Address Management Framework (NAMF) was one such project I instigated.

Let me explain that achieving a spatially enabled society through e-government is "a political imperative". But to flesh out further those objectives of government let's look at what the historical role of Government is.

One can go back literally thousands of years and you find that not a lot has changed. The universal business of government generally comes back to such things as property ownership, taxation, defence and the delivery of services, or facilities management. And that's been the case for a long time. The big difference between then and now is that we use computers rather than stones to record that information. For government today, the major roles include such responsibilities as defence, the economy, environment, delivery of services – not much different from 1500BC really.

Also in today's world, what are the most political sensitive issues? Twelve months ago if you took a street poll you would probably come up with climate change as the number one issue that people wanted government to do something about. However, today it would undoubtedly be the financial crisis. But climate change will still be there. As will things like the environment, border security, employment (and read into that

industry and trade), health, welfare and transportation. And probably a few others.

The financial crisis is impacting worldwide. Businesses are going bankrupt and people are losing their jobs and their houses. Experts are saying it shouldn't have happened – the signs were there. Hindsight is a wonderful thing. But the experts are right – it could have been avoided or at least better contained if the United States had a better land administration system that was truly spatially enabled.

What was the root cause of the problem? Sub-prime loans – loans to people who didn't have the capacity to repay; loans of 100% or even greater of what the property being mortgaged was worth; and these loans bundled up with other more credible loans on-sold as a package. The problem started when crunch time came for the dodgy loans and the package started to unbundle.

So where does spatial information fit?

As Professor Ian Williamson from Melbourne University argued at a forum in Malaysia, this could have been avoided by a nation-wide cadastral register and minimum details of the credit worthiness of mortgage holders, neither of which exists in an accessible form in the US.

Imagine real-time feeds to the Reserve Bank (or the Federal Reserve in the case of the US, or the equivalent in other countries) of all land transactions and mortgages linked to land use, owner status (i.e. first home buyer) and land values. Such a process and information would have sent warnings bells a long time ago if it had been in place in the USA.

Governments might understand the importance of cadastral information to government processes such as taxation but they have not understood just what a powerful tool it would be if it was made central to an SDI and therefore effectively be ubiquitous or transparent in all government processes and transactions.

Just like the saying with respect to spatial information, "capture once, use many times", the same can be said for a full integration of the cadastre, land administration and an SDI making government spatially enabled. I would then say, "establish once, use constantly".

And it would be used constantly in all those other politically sensitive areas. Climate change – the ever increasing complexities in this space, whether it be measures to address the causes of climate change, to deal with the consequences of climate change (sea level rise, temperature rise, change in snow and rain patterns, etc) or to implement and manage a carbon trading scheme, necessitate the use of spatial information. So one system on a national basis will ensure consistency of data and apples are compared with apples rather than oranges.

The environment is no different. Whether it be the protection of the environment or using the environment for the benefit of society an SDI will always be the most efficient. With an SDI as a backdrop for government decisions not only gives government the confidence the decisions are the best decisions but will form valuable evidence if a country's environmental record is challenged globally.

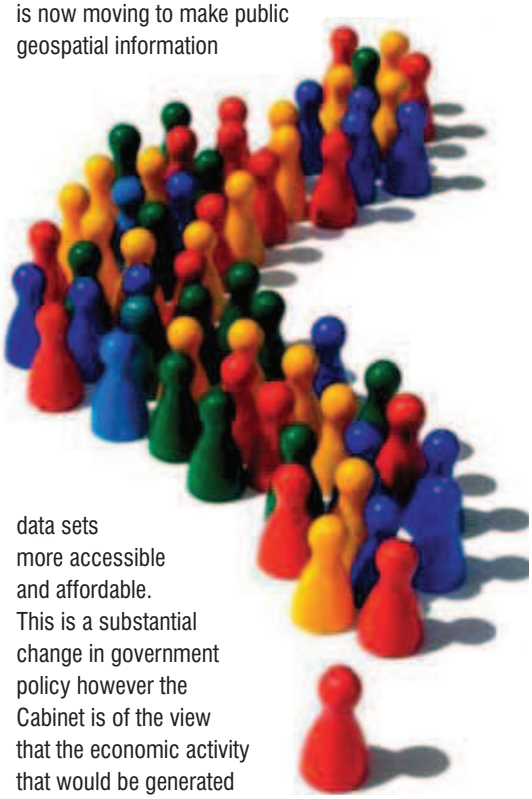
The management of health and welfare systems are two other political sensitive areas that can be better managed in a spatially enabled government environment. For those of you who saw the English comedy "Yes Minister" will probably remember the episode when the government built the most efficient hospital in the health system – the one with no patients! Well the increase in costs of health services caused by an ageing population and exponentially developing technology means government needs every possible aide when deciding the location of facilities. Location is the common denominator when one starts to integrate the abundance of social and demographic data required to make those decisions.

And the final political sensitive area I'll cover is transportation. This is just one transportation problem I've come across during my travels in Europe – getting home Sicilian style!

In an increasingly instant world, where time is money, and money talks all languages, the provision of efficient transportation by government is highly desirable. Technology in your car is telling you how to get from point A to point B. So it is just not the engineering associated with the planning of roads, rail and other transportation infrastructure that needs spatial information it will be the whole operating and management system.

Good responsive politicians, who want to remain politicians, should be grabbing every possible opportunity so that they can deliver better outcomes to their constituents. An SDI and a spatially enabled government are the essential tools to do just that. More timely and better decisions will result. It's a political "no brainer", it's a political imperative.

Many of you will also know that in the UK, at the instigation of the Cabinet, their policy is now moving to make public geospatial information



data sets more accessible and affordable. This is a substantial change in government policy however the Cabinet is of the view that the economic activity that would be generated by such a change will be substantially more beneficial than the income forgone. You will all be very aware of the European INSPIRE Directive that provides for harmonising spatial information in and between European Union member states.

And in the Netherlands you have released a three year strategy titled "GIDEON" - a strategy is to establish the "technical and organisational infrastructure in which spatial data from public authorities – and on request from industry – are accessible and interoperable". The central organisational principle for GIDEON is 'record once, use many times'.

I think the European INSPIRE directives and Netherland's strategy are particularly instructive and represent excellent examples of where the world is heading with respect to the importance of geospatial information. And I congratulate the politicians who had the good sense to listen, understand and make these decisions.

The takeout from much of what is happening globally is that the modern economies have realised that SDI's are now about facilitating the use of geospatial information rather than just managing it, that is, the building and managing of data sets. The leading countries of the world have also identified "champions" at the senior political level.

In Australia, the frustrating aspect is that literally hundreds of billions of Australian dollars are currently being thrown at these issues and with an investment of only a few hundred million dollars these challenges could be addressed far more quickly and efficiently.

Here is just one example. Partly in response to the global financial crisis, the Australian Government established an organisation called Infrastructure Australia. Its role is to consider national infrastructure projects and make recommendations to government as to which ones should attract government funding. The projects put forward include everything from major road and rail upgrades and developments to port facilities and communication networks - all eminently suitable and needed for Australia's future development.

But a project to accelerate the development of a National Spatial Data Infrastructure was considered by Infrastructure Australia "not to fit the criteria for being an infrastructure project"!! How could that be?

Basically, in my view, there is no understanding at senior political levels that infrastructure doesn't have to be "hard". They seem to think that it has to have concrete or bitumen or steel to be infrastructure.

But the reality is that "soft" infrastructure such as a NSDI will in fact facilitate the efficient development of the "hard" infrastructures. So what is missing? It is political "champions" who can overcome such irrational decisions. Unfortunately such "champions" have been in short numbers globally and it is incumbent on those in the profession and industry to find and "educate" some "champions". But that "education" will only be effective if it is done in "political terms". Politicians understand politics best and developing national spatial data infrastructures is good politics – they will assist in addressing those major challenges that governments face; they will assist in overcoming such issues as social exclusion, climate change and financial crises; and they will help facilitate economic development thus improving the lives of citizens.

And it is a political imperative that "champions" are found globally. The standards and interoperability projects that are needed within a country are also needed globally as we work on the challenges the earth faces. One country alone can't solve the earth's problems, the world in unison must do that. And global spatial data infrastructures can and will play a vital role.

But political decisions will have to be made to make that happen so global "champions" are needed to argue that a spatially enabled society is a political imperative.

"The betterment of societies through spatial enablement"

Emphasizes Associate Professor, Abbas Rajabifard, Incoming President, GSDI Association on 19 June 2009 at Rotterdam. Here are the excerpts

This conference is a milestone in our GSDI journey. The huge size of the conference program points to the relevance and level of interest in the subject areas of the conference partners. The conference has shown, once again, the essential requirement for the Association to partner in order to delivering credible outcomes, with INSPIRE and Geonovum at this event, as we did with FIG in GSDI 9.

The conference has presented material covering a multitude of topics: Societal challenges; Convergence and collaboration (GEO/ GEOSS, GEOSS/OGC/GSDI, the UNSDI, and, government, business and the scientific community); SDI development (national, regional, continental -INSPIRE, and in the marine environment);SDI applications; Technical issues (data interoperability and harmonisation, …); Research and development; Policy and governance (SDI assessment, data sharing, return on investments; business models); and Capacity building (GSDI knowledge network, regional newsletters, future spatial skills, International Geospatial Society, Rotterdam Geo Youth Capital 2009; Master Classes).

Our activities are dedicated to international cooperation and collaboration in spatial data infrastructure development to address the social, economic, and environmental issues confronting the world. We regularly offer conferences such as this one to enhance communications among practitioners as well as among the leadership of other geospatial organizations. We purposefully take our conferences to different parts of the globe in order to serve all parts of the planet.We publish monthly newsletters within and for various regions of the globe in multiple languages in order to keep all geospatial specialists aware of opportunities to become engaged and participate in their own regions.We offer a regular small grants program in furtherance of SDI development in developing nations. We are expanding support of our working committees that are actively addressing technical, legal and socioeconomic, social impact, and communication issues. An important priority for us is to enhance our inclusivity so that we better respond to the individual needs of members, are open and accommodating to the ideas of others, and draw people from different backgrounds into our Association. The creation of an International Geospatial Society which is an individual Arm for our Association and this is an excellent example of this strategy.

I believe the essence of what we do in the Association is help to create an enabling environment that enhances outcomes in societies, economies and the global environment. The betterment of societies through spatial enablement is one of my goals as President.