

Engaging the whole spatial community to deliver innovative and creative applications of spatial information

Presentation to TASSIC Spatial Innovation Showcase – 27 October 2011

Olaf Hedberg

Victorian Spatial Council

Introduction

Good afternoon ladies and gentlemen.

It is a pleasure to be here today.

Since 2008, the objective of the Victorian spatial information community has been to bring about a ‘spatially enabled Victoria’.

Today I would like to show how having a policy making body such as the Victorian Spatial Council has been critical to delivering that goal.

I want to do this in three ways.

Firstly, I will outline how we define this goal and our approach to setting up the conditions under which it can be achieved – our policy.

Then I’ll illustrate how that has been translated into practice using three significant initiatives as examples.

And finally I’ll identify highlights of our new Strategy that will further our efforts to reach our goal.

Defining Spatial Enablement

So what is ‘spatial enablement’?

Being ‘spatially enabled’ recognises the central role ‘location’ and ‘place’ have in delivering social, economic and environmental benefits to everyone.

It is the outcome of applying spatial information to the decisions we make about the services we deliver or how we solve problems.

Achieving spatial enablement involves:

- Putting in place an **enabling platform**, ie accessible information and technology, standards, and opportunities for collaboration and partnering
- **Governance** to bind together these components that will comprise the enabling platform
- And, the **engagement** of the whole spatial information community to build the platform and raise awareness about the capability of spatial information.

The Victorian Spatial Council and our Strategies aim to provide the environment in which these three conditions can be delivered.

The Victorian Spatial Council

One of the reasons that Victoria has a strong spatial information community is the close collaboration between the government, industry, academic and professional sectors.

This is most visible in the Council, of which I have had the pleasure of

being Chair since its inception in late 2004.

The Council was set up to

support the advancement of Victoria's social, economic and environmental goals through the provision and application of spatial information.

It does this by providing a multi sector approach to developing policy and strategy, to developing and managing spatial information, and to facilitating opportunities for partnerships and collaboration.

Council members represent the major peak bodies active in Victoria, as well as academia, the emergency services, land administration and the Australian Government.

The peak bodies are:

- The Spatial Industries Business Association
- The Surveying and Spatial Sciences Institute
- The Association of Consulting Surveyors Victoria
- The Municipal Association of Victoria
- The Local Government Spatial Reference Group
- The Geospatial Information and Technology Association
- The Victorian Government Spatial Group, and
- The Association of Public-Safety Communications Officials

All sectors of the spatial community therefore have a say in how the community develops and help shape its strategic direction.

Through its activities, the VSC acts as an enabler by building the institutional environment that encourages innovation and creativity.

We define ‘institutional environment’ quite broadly.

It is more than just the bodies making decisions and policy.

It also encompasses:

- a framework for managing information,
- decision making by and for the whole spatial information community, and
- collaboration and partnerships to develop new products and services

One of the strengths of Victoria’s approach is clearly defining the roles of all the sectors.

In broad terms, we have defined these as follows.

- Government establishes policies and standards, manages and provides fundamental data, and supports development of new products by the private sector.
- The private sector develops value added products and services, and markets for them, undertakes R&D, and manages its own data according to the standards.

- And academia provides education and undertakes R&D.

Supporting these sectors, the Council plays the role of communicator, advocate, educator, facilitator, and supporter or sponsor of initiatives that show off the potential for spatial enablement.

The certainty and trust created by defining these roles provides opportunities for collaboration between and within the sectors of the spatial information community.

It is by drawing on all our expertise, and from the wider community more generally, that we will continue to meet our goal of facilitating access to and use of spatial information.

What we have already achieved

We have already achieved a number of significant milestones – as illustrated in this and the next slide.

And I'll refer to a number of them in more detail in the rest of my remarks.

How the spatial information community is working together

The key element in giving effect to Victoria's framework is the participation of all sectors of the spatial information community.

The most obvious way this is happening is the Victorian Spatial Council.

But it also depends on collaborative arrangements between Government, the private sector and academia.

Already a variety of partnerships are in place to deliver products and

services.

Today I'd like to highlight three initiatives that demonstrate the success of Victoria's collaborative approach.

The positioning network

The first illustrates the opportunities that can be created when a broad range of stakeholders are partners in delivering critical infrastructure.

The development of Victoria's positioning network also shows how the model of defining the roles and responsibilities for government, the private sector and academia can work in practice.

Vicmap Position is one of Victoria's framework or core datasets and has two components:

the **infrastructure** – known as 'GPSnet' – which is the State-wide network of 102 Continuously Operating Reference Stations that operate throughout Victoria; and

the satellite positioning **services** that provide correction data to users in real time at +/- 2 cm accuracy

Since its inception in 1996, the development of Vicmap Position has been a cooperative venture.

Government manages the network and the services it provides, and enters into agreements with a range of organisations such as local government, private companies, and utilities, to act as site hosts for the network's reference stations.

In return these hosts receive free access to the data correction services

provided by the network.

Other users are serviced by private sector Value Added Resellers who are able to offer a range of products and services to target markets such as farmers, mining companies and others.

And finally, Government and the academic and research sectors collaborate closely to develop the science around the network, such as real time quality control, and ensure it remains up to date with the latest technology and practice.

As a result of this collaboration, and funding of \$3.5 million from Government, Victoria was able to complete its network in 2010 and is now delivering high accuracy positioning services across the whole State – the first in Australia to do so.

The VSC was also able to play its part in this achievement as a member of the Project Board for this initiative.

Published Topographic Maps and Books

An institutional environment that gives stakeholders an opportunity to make their views known can lead to innovative solutions to longstanding problems.

This has been demonstrated by the updating of Victoria's entire series of published topographic maps and the development of new products using the latest technology.

By early 2003, many of Victoria's topographic maps were anywhere between 10 and 30 years out of date.

In that year, the *Review of the Regulatory and Administrative Framework*

for Survey and Spatial Information in Victoria, which I chaired, recommended that the State-wide mapping program should be reinstated.

That recommendation was followed up by the predecessor to the Victorian Spatial Council – the Geospatial Information Reference Group – with a public forum that reiterated the need for up to date topographic maps.

That forum was instrumental in the initiation of a program in the Department of Sustainability and Environment to update the entire series of 1:50,000 scale maps and create a number of new products.

The resulting initiative has led the way in Australia and internationally.

As a result of the program, by the end of 2009 automated processes using digital data had been adopted, and a range of new mapping products had been created and made available. These include A4 and A3 size maps in PDF format available for on-line purchase.

In addition the capability to produce up to date maps on demand has been created.

A further outcome of the forum was the release of an Expression of Interest seeking innovative proposals from the private sector to provide new published mapping products.

As a result of this initiative, a new series of Vicmap books has been created.

This State-wide series comprises 5 books, which are updated every two years, and include standard topographic information themes using the latest Vicmap data.

Users of the Vicmap books also contribute significantly to the partnership

by providing feedback on the currency of data through a formal notification process.

The updates are reflected both in the digital datasets – immediately – and in each new edition of the books. The benefits of this approach are already being felt as many hundreds of improvements to the data have been made as a result of the ongoing feedback received.

Adopting a collaborative approach to maintaining core spatial data

The management of Victoria’s core spatial information already relies on a range of partnerships and relationships between agencies across all three levels of government, the private sector and utilities.

For example, local and State governments are critical to property/cadastral data; purchase partners support the development of imagery; and there are multiple custodians of the various layers of the topographic products.

At the same time, the technology that is making it easier to deliver data is also enabling contributions to its updating and maintenance to be extended to ‘volunteers’ – interested parties in the community such as walking and driving clubs, and fire fighting volunteers.

Opening the data maintenance cycle in this way could provide a means for filling the gaps left by government.

The demands on data content providers mean that they are not always in a position to keep up with users’ expectations or have the up to date ‘on the ground knowledge’ of changes occurring at the local level.

One of the ways in which this challenge is being responded to is through the use of Web 2.0.

These technologies may provide new opportunities to bridge the resourcing gap for providers of spatial information by making government, the community and the private sector ‘co-producers’ of it.

In Victoria this form of co-production has been developed through an initiative called the Notification for Editing Service (NES).

It incorporates the principle of ‘managed crowd sourcing’ to communicate instances of errors in data directly to custodians via a managed portal and ‘Easy Editor’.

An on-line workflow process has been developed, incorporating the following four roles:

- **Notifier** – who is a registered person who can report errors in data via a ‘Change Request’.
- **Custodian** – the Organisation responsible for the quality and completeness of their data. The Custodian can create work orders for editing by a Maintainer or directly edit their data themselves.
- **Maintainer** – the Organisation or person responsible for editing the data on behalf of the Custodian.
- **Administrator** – in this case, the Department of Sustainability and Environment, who is responsible for user access, allocation of data permissions, workflow, validation rules and generally running the service.

In the long term the vision for the service is that custodians will edit their data directly; the time from edit to availability of updated data will be less than 24 hours; and general users, that is, the community, can lodge

notifications which will be passed directly to the Custodian.

Current participants are Victoria's 79 Local Councils; the two Vicmap maintenance contractors; the Emergency Services and utilities (in particular water and telecommunications); a range of State Government agencies; and the private company that produces the Vicmap books referred to earlier.

Other ways in which the Council is playing a key role

The Council is also involved in a range of other activities.

It conducts a number of public forums each year so that key issues can be discussed and to inform the development of the Victorian Spatial Information Strategy.

It participates in debates and activities that set government direction.

In recent years it has made a number of submissions to major government inquiries, task forces, discussion papers and policy developments.

We present at events such as this one and to stakeholder groups throughout Victoria and interstate.

Three times a year, we publish our industry magazine – Landmark – which is an important vehicle for showcasing spatial information related developments.

And, we are also participating in setting a research agenda for spatial information with the Cooperative Research Centre for Spatial Information.

Through all these activities, all the sectors play a major role in shaping and supporting the development of spatial information in Victoria.

Strategy

The major Council activity setting Victoria's direction for spatial information is its strategic planning, and on 7 October we released our second Victorian Spatial Information Strategy.

In it we are using engagement to respond to the need to

- Keep pace with rapid change
- Encourage the release of data
- Encourage partnerships
- Manage spatial information so that it can be used and exchanged
- Find new ways to broaden the spatial information skills base
- Maintain a governance model based on participation and collaboration, and
- Raise awareness of the value of appropriate use of and investment in spatial information

Strategic directions

The Strategy is providing the Victorian spatial community with the tools to meet these challenges.

It incorporates four integrated **strategic directions**.

The first is **Creating a framework in which the use of spatial**

information can flourish.

Secondly, **Adopting an inclusive approach to the management of spatial information** ie, engaging others in improving the quality and currency of information.

The third direction is **Developing the spatial information community through collaboration and partnerships** by encouraging

- Creation of clusters and networks to build additional capacity, and
- Entering into alliances outside the traditional spatial information industry

Finally, we aim to **Maintain the foundations for spatial information management by articulating and promoting standard principles for data management.**

You can find out more about each of these in our new Strategy, which is now available on the VSC web site.

What does success look like?

Before I conclude, I'd like to say a few words about what I think have been the key ingredients in enabling the Council to achieve as much as it has.

Firstly, all participants need to be prepared to engage. None of us alone has the answers, but it is by collaborating that we can capitalise on each others' strengths and share our expertise.

The three examples I highlighted earlier are clear demonstrators of that.

Next, look for opportunities to contribute, whether through initiatives or

speaking engagements or in framing policy. For the VSC, taking such an approach has raised our profile.

And it means we are now being sought out for our contributions.

We have also benefited from having a very close relationship with the Department of Sustainability and Environment.

DSE not only provides our Secretariat, but as the lead agency in the Victorian Government for spatial information, it also has a critical role in delivering capability for the whole spatial information community.

We have been able to work with the DSE team to initiate a number of important projects and investigations, most notably our custodianship project and our investigation into introducing spatial information related legislation.

As result, together we have been able to make the most of the skills and limited funding available to us to achieve significant progress in key areas.

In turn, that success is now being translated into a number of major national developments. Products that started life in Victoria, such as the Victorian Mapping and Address Service, NES and the newly developed Vicmap API, are all now being turned into national ones.

Conclusion

To end, I would like to leave you with three key messages:

- An objective such as ‘spatial enablement’ requires a joint effort – so relationship building is essential
- A range of solutions are required – and they should be both top down

and bottom up, and

- The framework is central to providing the common goal which we all aspire to achieve, and showing everyone how and where they can play their part

It is a multi-sectoral coordinating group such as the VSC – and TASSIC – that has the key role in holding all these elements together so that this goal can be achieved.

I am pleased to have had the opportunity to outline how the Victorian Spatial Council is encouraging the whole spatial information community to work together to create a spatially enabled Victoria.

I encourage you to look at our web site to find out more about how we are doing this, including our new Strategy.

And I welcome the opportunity now to answer any questions you may have.

Thank you