

# Victorian Spatial Council

VSC December 2009 Forum Report

*Defining the vision for 'Spatially Enabled Victoria'*

The Victorian Spatial Council was established under the Victorian Spatial Information Strategy 2004-2007 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 coordinated approach to spatial information policy, development and management, and facilitating opportunities for greater partnership building, collaboration, cooperation and education



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December 2009

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## INTRODUCTION

### Description of Forum

On 3 December 2009, the Victorian Spatial Council hosted a public forum entitled *Defining the vision for 'Spatially Enabled Victoria'*.

The Victorian Spatial Information Strategy 2008-2010 describes 'spatial enablement' in terms of defining our relationships by place and seeking to add spatial capacity to ordinary information.

It sets out the levels of engagement that will be needed to create it, and describes what's required as modern frameworks, standards, clusters, a focus on delivery, and systems based designs.

But what does 'spatial enablement' really mean and what might it look like in 2010?

This forum will present a range of views on the definition of spatial enablement, and discuss what will be needed to develop the vision and architecture for a spatially enabled Victoria that is one of the priorities of the Strategy.

This document contains a summary of the proceedings of the Forum.

### Forum Program

<b><i>Opening Remarks</i></b>	Olaf Hedberg Chair, Victorian Spatial Council
<b><i>Spatially Enabled Victoria – global trends and challenges</i></b>	Associate Professor Abbas Rajabifard Director, Centre for Spatial Data Infrastructures and Land Administration, University of Melbourne
<b><i>Spatially Enabling Australia – CRCSI-2: The Next Decade</i></b>	Mike Ridout Communications Director, Co-operative Research Centre for Spatial Information
<b><i>Facilitated Discussion</i></b>	Moderated by Danny Broadbent Victorian Spatial Council

## FORUM PRESENTATIONS

### VSC Chairman's Opening

#### Remarks

#### *Why is spatial enablement important?*

Why are we talking about 'spatial enablement'?

Spatial information has the potential to be the medium that unifies all the disciplines that will be required to respond to the environmental, social and economic challenges we are all engaged in addressing.

And spatial enablement is already happening: there are numerous examples, such as these highlighted in the Victorian Spatial Information Strategy (VSIS):

- in delivering services and engaging with the community online through e-Government and e-Democracy
- in responding to emergency and security incidents
- in using sensors to manage health care by tracking patient movements
- in managing the impact of our activities on agricultural land using positioning and wireless technologies

#### *How is spatial enablement defined now?*

The Strategy describes 'spatial enablement' in the following terms:

Defining our relationships by place and seeking to add spatial capacity to ordinary information or, in other words, 'managing information spatially'.

By seeking to add 'spatial capacity' to ordinary information, we will have a significant opportunity to expand spatial information's reach to non-traditional users.

#### *What is needed to achieve spatial enablement?*

VSIS sets out the levels of engagement that will be needed to create spatial enablement.

It also says modern frameworks, standards, clusters, a focus on delivery and systems based designs are required.

VSIS also considers what is needed to deliver the conditions in which spatial enablement can be developed

A pre-requisite is a high level of engagement by all sectors.

The Strategy plays a critical role because it is creating the necessary frameworks.

When this engagement is in place,

- we will work together to implement the required frameworks and standards
- we will create clusters to build the critical integrating technologies
- we will bring policies and regulatory frameworks into the twenty first century and
- we will all be involved in working together to devise solutions or develop new products or services

Without such engagement, we will not be the ones setting the agenda.

The Strategy makes it clear that

If we do not create such an environment [for engagement], and there is no plan, only a few will enjoy the value and benefits of spatial information; ... and our capacity to create a spatially enabled society will be reduced.

This engagement must respond to the following challenges:

- being in a position to respond to the pace of change
- finding ways to encourage data managers to release their data to wider audiences
- encouraging partnerships between all sectors
- managing data so that it can be used and exchanged
- finding new ways to broaden the spatial information skills base
- establishing a governance model that facilitates participation and collaboration

In response to these challenges, VSIS is putting in place the right policy frameworks to support the creation of spatial enablement.

Together the examples highlighted above demonstrate how this is being done.

They are some of the ingredients for creating spatial enablement.

But can we use them to define what ‘spatial enablement’ means and what might it look like in 2010?

That is what we want to discuss today.

## **Spatially Enabled Victoria – global trends and challenges**

### *Setting the Scene*

Spatial information is an *enabling* infrastructure for modern society. Spatial *enablement* is the outcome of applying spatial information to the delivery of services or the development of solutions to problems.

Victoria’s efforts are occurring in the context of a world-wide focus on spatially enabling *society, government, health, response to climate change, the land-sea interface*, etc, etc.

The creation of spatial enablement must occur in the context of society’s needs and the social system in which it will be introduced.

The meaning of spatial enablement and how to realise it is the subject of increasing analysis and debate. In the last year alone, it has been the subject of major conferences and meetings – internationally (GSDI 11, UN initiative on Global Geographic Information Management), nationally (spatial@gov, SSC2009) and locally (this Forum). In 2010, it will be a major theme of the FIG 2010 World Congress and the GSDI 12 World Conference.

### *Definition*

A definition of ‘spatial enablement’ is:

*A government or society can be regarded as spatially enabled when location and spatial information are common goods available to citizens and businesses to encourage creativity and product development.*

### *What does it look like – vision*

The future vision for spatially enabled society is one that uses spatial information in a ubiquitous manner.

### *What is needed to realise spatial enablement*

- Data and services that are accessible and accurate, well-maintained and sufficiently reliable for use by the majority in society who are not spatially aware
- A focus on what society needs
- Spatial information and location incorporated into problem solving

### *How do we deliver spatial enablement*

#### *Requirements*

The implementation of spatial enablement will rely on a number of conditions being met, such as:

- Broader audience reach
- Sound institutional processes
- Licensing arrangements that support use of spatial information
- Standards, including metadata
- Research and education
- On-demand discovery and access
- A seamless platform that bridges the terrestrial and marine environments

#### *Who needs to be involved*

The implementation of spatial enablement requires collective action from many participants, all working on different parts of the problem – government, the private sector, academia and the community.

#### *Enabling Platform*

An enabling platform will provide the technical, governance and legal structure to link data, services, products and real world objects underpinning a Spatially Enabled Society and Government.

It should include the following characteristics:

- Participants working as a collaborative network
- Common standards and business understanding as the basis
- Structure and management as a single enterprise

### *Governance*

Governance is the setting, application and enforcement of rules that determine how a group works together to achieve common goals.

The role of governance in achieving spatial enablement will be as the glue that binds together the technology, organisations and information that will comprise the enabling platform.

## **Spatially Enabling Australia - CRCSI-2: The Next Decade**

The CRC is focusing on creating spatial enablement through its response to three challenges:

- Creating a new infrastructure for Australia – precise positioning
- Automating the generation of information – feature extraction
- Creating a Spatial Marketplace – unlocking data potential

Spatial enablement needs to be user driven, so these three research areas are being applied to 5 market sectors – health, defence, energy and utilities, agriculture, natural resources and climate change; and sustainable urban development.

It involves collaboration across all sectors, as well as a range of international collaborations.

Spatial enablement, as represented by these three research areas, can be effected across the whole value chain, ie *access, distribution, value adding, data integration, and business integration.*

The CRC is creating conditions in which spatial enablement can be advanced by:

- Undertaking research critical to the delivery of products and services by a range of end user sectors
- Providing opportunities for a wide range of participants across all sectors to come together to perform research and development
- Covering all types of users, interests, concerns

## DISCUSSION SESSION

The discussion session was moderated by Danny Broadbent, member of the Victorian Spatial Council.

The following pages summarise the key points made by the participants.

Implementation of spatial enablement elsewhere

Are there examples where spatially enabled society has been achieved? If so, what have been the ingredients for success?

There are examples where progress is being made, such as Malaysia, Singapore and Japan, but nowhere has it been fully realised.

Is spatial enablement already here?

Doesn't the widespread use and growth of Google and technologies such as GPS mean that we are already spatially enabled?

Where does that factor into the strategic thinking about realising spatial enablement?

Who is setting the standards?

Without the standards and framework provided by the strategy, the spatial industry will be outpaced by the likes of Google, who will set the standards.

Aren't they already?

At present, no.

How do we reach decision makers, who are generally 'non-spatial'?

Decision makers are not spatially enabled – those who control the funding of spatial information development. Does this mean we are not good at selling the benefits and opportunities, ie what spatial information does (not what it is) and how it can save money?

Who are we talking to? The conferences referred to earlier are primarily attended by like minded professionals – we are still talking to ourselves.

The CRC is approaching the kinds of issues referred to above by

- Turning attention to the ways in which web 2.0 can have an impact.
- Giving attention to interoperability and standards
- Looking at how to respond to the interest in visualisation tools
- Considering the link between policy and place

Spatial enablement takes time

It has taken 15 years to develop the kind of platform we now have.

Relationships are critical to achieving spatial enablement

It also takes an integrated response – but we still face challenges with integrating and sharing information.

Spatial enablement is not just a technical creation

It's a *socio-technical* exercise – a culture of sharing is needed. This requires a change of mindset.

Opportunities for participation by a wider range of people through web 2.0

Our social system is about participation – the future will be on making that participation simpler – eg through Web 2.0.

**Release developments quickly**

While access to information, standards, and interoperability are important, we've got to get on with creating spatial enablement – be willing to use trial and error – otherwise we will be too late.

**Engaging the sectors/users**

The CRC specifically engaged its user stakeholders by seeking a champion organisation and having them present the value proposition to others in the same sector.

Their model is: find a champion – get them in – then have them emulated by others.

**Spatial enablement needs accessible spatial information**

A key plank in spatial enablement is accessibility of spatial information.

For example, SLIP in WA is now encouraging industry to access the information to create new products and services. Victoria doesn't yet have that level of sharing and accessibility.

While the SLIP Developers Program has been a success, the key is to make it simple for non-traditional users. Focus on them, the benefits to them and achieving their outcomes.

**Being prepared to invest**

How much do funding and the preparedness to invest impact on our ability to become spatially enabled? How will we measure that?

**Focus on practical outcomes**

Being pragmatic, keeping it 'small', focusing on practical outcomes are all influences on the potential for successful spatial enablement.

**Having the 'right' skills to make best use of spatial enablement**

Is there a risk that spatial enablement and making it 'easy' will build a dependency on the technology? Should it be backed up by educating potential users to understand how to navigate before giving them GPS, ie skill them up before giving technology?

This question is related to training in spatial skills in general – and going beyond science to basic survival skills such as being able to recognise where we are. This needs to be done early on in life. But making a tool simple is hard work – it needs expertise and training – in a nutshell more students at all levels.

Hume Council has found that to do what it has been able to has been built on:

**Practitioners need to be 'multi-skilled' to sell spatial enablement**

- technical and communication (promotion) proficiency
- creating a successful demonstrator – both graphically and visually

**One success can be a catalyst for further development**

Success can open the floodgates for more investment.

**Quality data underpins successful spatial enablement**

The fundamental requirement is having the resources to manage data spatially – working together to keep data quality high. Low data quality can be an inhibitor to releasing data – the desire might be there but without resources to maintain it, it is difficult to make the decision to release lower quality data.

## KEYNOTE SPEAKERS' BIOGRAPHIES

### Associate Professor Abbas Rajabifard

Dr Abbas Rajabifard is an Associate Professor and Director of the Centre for Spatial Data Infrastructures and Land Administration at the University of Melbourne's Department of Geomatics.

Among his current positions, he is:

- President of the International [GSDI Association](#),
- Vice Chair of the Spatially Enabled Government Working Group of the UN [Permanent Committee on GIS Infrastructure for Asia and the Pacific](#)
- and member of the Victorian Spatial Council

He has published widely on SDI, land administration, GIS and spatial data management.

In recent years he has focused on the design and development of SDIs, including spatially enabled platforms and virtual jurisdictions.

He provides academic and research leadership in the Centre for SDIs and Land Administration; and is currently working on projects including natural and built environment data integration as part of a National SDI, and development of a Seamless SDI model.

Abbas has over ten years of teaching experience in different areas of the spatial data disciplines and in particular on SDI and GIS

He has also been consulted widely on SDI, GIS applications and spatial data management to many national government agencies and ministries

### Mike Ridout

Mike Ridout is the Communications Director for the Cooperative Research Centre for Spatial Information.

His primary role is to manage the relationships amongst the 80 plus shareholders and participants of the CRCSI.

He is also responsible for the SME alliance of the 43 Pty Ltd members; coordinating the Education Program; and the corporate web sites and related promotional activities.

Mike joined CRCSI in April 2003 from the CRC for Renewable Energy where he was Executive Officer - Business Development.

He set up and was responsible for the operations and research investment management and was company secretary for the incorporated entity.

Prior to this Mike worked for commercial arms of universities, establishing commercial ventures based on academic technology and expertise

He was a company director of EcoCarbon Inc from 2001 to 2003 and advisor to the WA Legislative Assembly *Select Committee on Science and Technology* in 1993 and 1994.