Regional SDIs in Australia

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Overview

Australia is one of the very few countries in the world that has relatively mature regional SDIs. This is largely due to its institutional context. This paper describes some of the main features of Australia's institutional context and examines three data sharing partnership projects that have been developed in three Australian states. The last section discusses the relevance of the findings of research on Australia from the standpoint of the implementation of the INSPIRE initiative.

The Australian institutional context

Australia is very interesting from the standpoint of regional SDIs for the following reasons (Masser 2005, chapter 5)

1. Virtually all large scale survey and cadastral land registration responsibilities are devolved to the eight states and territories that constitute the regional level of government in Australia. Most states have their own Surveyor General, Registrar General and Valuer General to deal with matters relating to mapping, land registration and valuation.
2. The Australian states and territories pioneered the use of computer database management techniques to handle their state wide multi purpose cadastres from the early 70s. Consequently the regional SDIs have been built on the fruits of more than thirty years operational experience.
3. The Australia Land Information Council (now the Australia New Zealand Land Information Council or ANZLIC) was set up in 1986 to facilitate the collection and transfer of land related information between the different levels of government. Its membership includes members from each of the coordinating bodies in the states and territories as well as that of the Commonwealth government.
4. As a result of all these developments Australia has a relatively mature SDI environment. The state of Victoria, for example, recently published its fifth

SDI strategy, the Victorian Spatial Information Strategy 2008-2010. A comparison of this strategy with earlier strategies highlights the degree to which SDI is an evolutionary process where each new strategy builds upon the achievements of previous ones.

There are many similarities between the Australian states and territories. Land registration in all of them follows the general principles the Torrens system which was originally developed in South Australia in the mid nineteenth century. The requirements of the five year national census of population also impose a degree on conformity on the regional data holdings and most of the states have moved to a whole of industry approach to SDI development over the last five years. As a result there is an emerging hierarchy of SDI activities which is shown in fig 1 below.
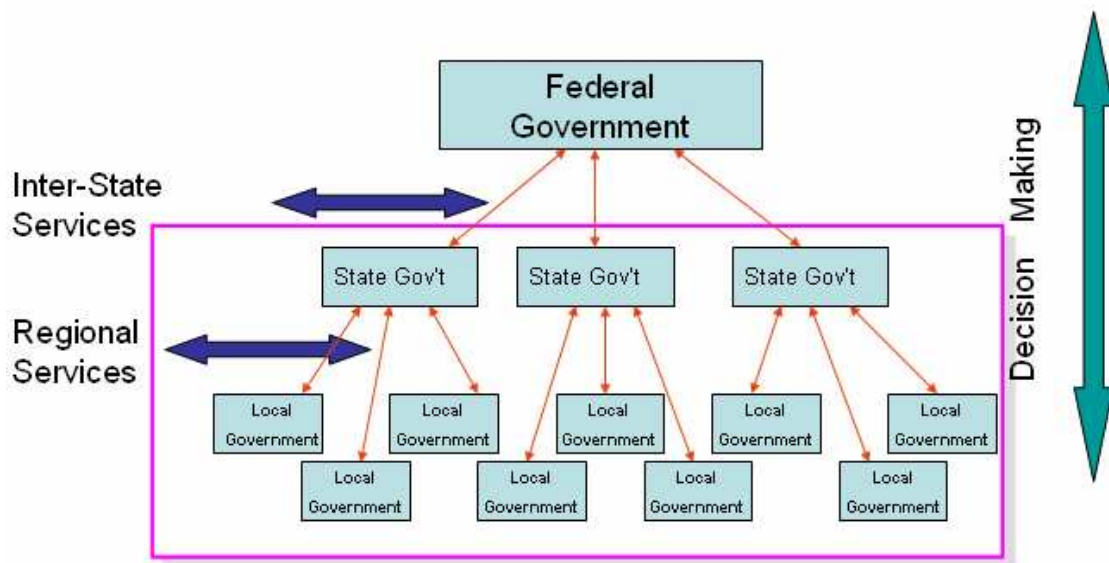
Despite these similarities there are many differences between the regional SDIs that are emerging in the Australian states and territories. These reflect differences in approach and management styles. For example some states are pursing cost recovery strategies with respect to the data that they hold while others charge little more than the costs of its duplication.

State - local governmental relationships in Australia

Kevin McDougall's PhD thesis on 'A local-state government spatial partnership model to facilitate SDI development.' describes in some detail the changing nature of the relationship between state and local government (McDougall 2006). In the past local government in Australia was in an unequal position when it came to bargain with state level bodies. The latter had the financial resources and the legal powers to require local governments to carry out their basic tasks. One consequence of the emergence of regional SDIs is that local government bodies have become equals of those of the state. The latter require data that is collected by the former and must increasingly think in terms of data sharing partnerships. The whole concept of partnerships between equals is also a new

one. In the past there have been various informal and usually ad hoc arrangements between the different levels of government but this is very different from the partnership notion of more formal and more permanent structures whereby each of them makes a defined contribution and expects to receive certain benefits.

McDougall(McDougall et al 2005, 2007) undertook three case studies of land and property based partnerships in three Australian states. As can be seen from the table below Queensland is the second largest state by area in the country after Western Australia while Tasmania is very small by comparison. Victoria (and Melbourne) is the second largest state in the country next to New South Wales (and Sydney). Generally the number of local governments in each state broadly reflects its land area rather than its population size.

	Land area (sq km)	Population (million)	Local auth (number)
Queensland	1,731,000	3.57	125
Tasmania	68,400	0.89	29
Victoria	227,000	4.77	78
Australia	7,692,000	19.20	684

The research focussed upon Queensland's Property Location Index, Tasmania's Land Information System and Victoria's Property Information Project. The table below gives some indication of why the partnerships were established in the first place. This highlights the extent to which Queensland differs from the other two initiatives in this respect.

Reason Why	Victoria	Queensland	Tasmania
Gain Control of Data		✔	
Organisational Goals (reciprocity)	✔		✔
Organisational Uncertainty (Change)	✔		✔
Mutual Business Need	✔		✔
Necessary Legal or Regulatory Requirement			
Resource Scarcity	✔	✔	✔

A further table gives a more detailed summary of the main findings of the three case studies with reference to direction setting, operation and maintenance, and governance. In the case of Queensland the goals were unclear and the project was hampered by poor institutional arrangements and inadequate channels of communication. To some extent this was due to the large number of local governments involved in this case. Generally the project struggled to gain support because of poor initial funding and the constraints imposed by a restrictive policy framework. Both the other initiatives appeared to be more successful than that of Queensland. The Tasmanian one benefited from a high level strategy and clear policy goals in a small and relative homogenous state. It also had strong leadership and a reasonable level of resources at its disposal. Victoria's initiative also started out with a clear common goal and well managed negotiation processes. Despite some resource limitations overall communications between the partners has been positive.

Collaborative Stage	Victorian Property Information Project (PIP)	Queensland Property Location Index (PLI) Project	Land Information System Tasmania (LIST)
Establishment and Direction Setting - Goal setting - Negotiation - Agreements	A clear common goal for the project. Well managed process of negotiation and development of policy and institutional structures.	Business case for the project was limited. Goals unclear and policy framework worked against data share agreements.	High level strategy and clear overall goals. Policy and negotiations strategy well structured. Agreements very detailed
Operation and Maintenance - Project management - Maintenance - Resources - Communication	Project management has been good since inception, maintenance infrastructure developed progressively, some resource limitations. Communication with stakeholders and partners has been positive.	Poor institutional arrangements led to poor resourcing and project support. Culture of inter-jurisdictional sharing only now emerging. Confused channels of communication due to dispersed organisational structure.	LIST started with strong overall leadership and project support. Project generally well resourced and technology focussed. Issues of local government communication and data maintenance now starting to emerge.
Governance - Governance structures - Reporting - Performance management	Early project efforts focussed on negotiation and data exchange. Performance management now part of the process. Improved governance arrangements emerging.	There appears to have been little performance management or reporting. No governance structure in place which includes the key stakeholders.	Initial governance and reporting structures were appropriate, but as project matures new governance models are required.

The findings of this research highlight the need for clear strategic goals and responsive negotiation structures in partnerships of this kind. They also suggest that an important motivator for local government in the early stages is the financial incentives offered. Without such incentives many local governments are unlikely to be in a position to participate in the critical early stages (McDougall et al 2005, 11). Once the relationships have been established interaction between the partners becomes easier within a trusted and cooperative framework. In many respects, organisational partnerships such as these

are not so different from personal relationships in that they need to be constantly nurtured and frequent communication between the partners is essential.

In overall terms the findings suggest that local governments in Australia have the capacity to contribute to data sharing. They typically have mature data holdings and clear business needs but want to engage with the states as equal partners in such activities. Generally, however, they have limited development capacity and usually rely upon or follow state led initiatives. However, while most local governments have a good level of ICT infrastructure the diversity of systems present technical challenges in terms of interoperability. It is also worth noting that the experience of previous cost recovery strategies in some states has had a negative impact on intergovernmental relations.

Discussion

The findings of the three case studies highlight some of the issues that are likely to be encountered in building partnerships between the regional and local levels of government in a relatively mature SDI environment. In essence they support Nancy Tosta's (1999) dictum that

> 'successful SDIs will be local in nature. This is as much a function of practical matters such as the challenges of coordinating large numbers of people over large areas, as it is recognising that all geography is local and issues, physical characteristics, and institutions vary significantly across nations and the world.

When considering these findings it is important to bear in mind that they are based on the analysis of regional - local government partnerships in the institutional environment that surrounds SDIs in Australia, particularly the extent to which land and property related administrative responsibilities are devolved to the states and territories in Australia. It is also worth noting that the research focuses on these issues which are important building blocks in the development of SDIs but they do not constitute fully fledged SDIs in themselves. It is worth noting that one of the most interesting findings of an evaluation Victoria's Property Information Programme relates to the need for it to be seen as part of an integrated State Land Information Strategy (Tomlinson 2006).

Given these qualifications, it is not clear how far the lessons from this experience can be transferred to circumstances within Europe where the relations between regional and local governments are often quite different from Australia. However, there are some obvious parallels with European experience. The National Land and Property Gazetteers/National Street Gazetteers in England and Wales has much in common with these initiatives (NPLG 2008). This project which is led by the local government Improvement and Development Agency and a private sector company, Intelligent Addressing, began in 1999 and now includes all 376 local authorities. For this reason, it can be argued that the broader outcomes of the three Australian case studies lead to a better understanding of the issues involved which is likely to be very useful in the context of the implementation of the INSPIRE Directive.

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