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Spatial Information Industry Joint  
Steering Committee

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**This document has been adopted by the Joint Steering Committee as a  
basis for further discussion.**

**DISCUSSION PAPER**

**RESPECTIVE ROLES AND CONDUCT OF RELATIONSHIPS BETWEEN THE  
PUBLIC AND PRIVATE SECTORS IN THE AUSTRALIAN SPATIAL INFORMATION  
INDUSTRY**

**Aim of this paper**

This paper has been prepared to engender discussion on the relevant roles of the public and private sectors in the Australian Spatial Information Industry (SII). As such, it is a resource that can be used to underpin formal linkages between public sector organisations and private sector companies at all levels: national, State, Territory, regional and local.

A primary purpose of discussion should be to develop a better understanding about respective roles. In turn, this understanding should be used to strengthen relationships and focus on using spatial information to improve the social, economic and environmental interests of Australia.

It is proposed that the outcome of discussion will be to develop an industry position (or implications) paper as envisaged in Action 5.4 of the Spatial Information Industry Action Agenda (SIIAA).

**Background**

ANZLIC – the Spatial Information Council defines the spatial information industry as:

*"Spatial information is information describing any location, or any information that can be linked to a location. The spatial information industry is engaged directly or indirectly in supplying spatial information products and services."*

The SII is comprised of a range of disciplines, which include remote sensing and photogrammetry, mapping and surveying, land administration and geographic information systems, together with related software development and provision of value-added services (SIIAA 2001). Its major product markets and user communities include environmental monitoring, mobile location-based services, customer relationship management and the management of natural resources, assets, land and emergencies (SIIAA 2001). It contains a wide range of commercial (private sector) entities; government agencies at national, State, Territory, regional and local levels; not for profit bodies in the academic sector and non-government organisations; and bodies falling among and across these sectors, such as commercialised government enterprises, joint ventures and research and development corporations.

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The public sector has been the dominant customer and supplier, as well as regulator, in the SII. Currently, the public sector dominates the supply and demand aspects of the marketplace for spatial information and accounts for a majority of expenditure in products, services and data. The commercial industry consists of the participants in the various product supply chains that are formed in servicing this spatial information marketplace. (ANZLIC 2000).

Historically there has been a disjunction and lack of cooperation between the private and public sectors that has worked to inhibit growth, due in part to differing objectives and requirements. The public sector has always had public interest as a key focus, while the private sector has, inevitably, maintained a commercial focus. Industry participants in both the public and private sectors are beginning to identify the significant potential benefits and value of spatial information. In particular, the potential for achieving significant benefits and forging new opportunities and areas of application at the national level is becoming apparent. Identification of these broader areas of application has emphasised the need for public and private sector partnering to form comprehensive supply and value chains.

During this period, the focus of private sector lobbying was advocating outsourcing by government, but there are signs that it is now moving to building industry capacity and capability in both the public and private sectors. The stance of government has also moved from resisting outsourcing to building capacity in the private sector, placing some functions on a commercial footing and reducing regulation in the economy (under a national competition policy). Therefore, the two sectors are closer than they have ever been to having a common position on capacity building in the SII.

### **Current Issues**

There is now a sounder public policy basis for discussing respective roles. Governments recognise that they cannot deliver economic prosperity or resource all industrial developments they might wish alone and must work in partnership with the private sector. Most governments have developed regulatory and fiscal environments aimed at enabling business to exploit competitive advantages. They are also working with business to improve capacity for economic growth.

Value chains, in essence, are relationship networks. These have developed, to some extent, in the industry informally. In the spatial information industry, they could play a key role in creating customer-orientation (the most significant impediment to industry development), reducing costs and maximising business efficiency (QSIIS 2001). Understanding value chains has significant potential to clarify where investment is needed and what its source should be. A value chain for the spatial information industry is shown in the SIIAA document and at <http://www.qsiis.qld.gov.au/documents/qbf01/qbf01.pdf>.

In general, respective roles dovetail and can be defined within a value chain. A number of principles could be adopted to clarify roles and relationships:

1. Data capture and provision should be accomplished using the ANZLIC Spatial Data Management Principles (see Appendix 1), to ensure publicly-funded data is accessible and investment in data capture is optimised.
2. Government may chose to create data for public policy and operational purposes, but the means of its capture should be subject to application of competitive neutrality considerations.
3. Public sector agencies may act as a “wholesale” distributor to the private sector and to the community where there is a clear obligation for public policy purposes.

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4. Value-adding and distribution of resulting products and services should be seen as the province of the private sector, unless there are compelling reasons (such as equity of access or national security) in particular cases.
5. Provision of spatial information enablers such as consultancy services, technology platforms, software, research and academic facilities should be seen as an opportunity for collaborative activities between public and private sectors aimed at building industry capacity.

The issue is about making best use of existing investment through access to resources such as people and data and reducing impediments to new investment. There is an emerging view that government agencies should be supported by industry bodies in obtaining funds to create and maintain fundamental data, and that in turn, the private sector is given access to investment funds to develop and enhance capacity.

Who bears the risk is a key determinant to how investment funds are raised and managed. Without access to significant public and private investment, the private sector is exposed to significant risk in starting new value-adding ventures. Government would see public investment as a short term means of creating capacity, and private investment as the only way to sustain long term growth. From a whole of industry perspective, investment from all sources needs to be maximised and applied in fuelling growth of capacity in the SII where it is most needed. This directing of investment is both the greatest challenge for the SII and its greatest opportunity and is an issue for both public and private sectors.

Public and private sectors both have roles in providing investment in spatial data infrastructures and the services which will grow from them. For example, nearly all the potential nodes of the Australian Spatial Data Infrastructure (ASDI) are maintained and used by government. Improved understanding and use of this infrastructure by the industry to provide services will carry significant benefits.

### **Evolving arrangements and structures**

The culmination of developing a strategy common to both sectors was achieved by release of the SIIAA by the Commonwealth Government in September 2001. The key opportunity provided by the SIIAA is adoption of a common vision:

*“Australia will be a global leader in the innovative provision and use of spatial information”*

The SIIAA proposes a number of strategies aimed at building the capacity of the SII. The strategies are indicative of the breadth of action needed to achieve the vision:

- *Develop a joint policy framework between business and government, improve formal linkages;*
- *Improve data access and pricing;*
- *Increase effective research and development;*
- *Evaluate and reform education and skills formation;*
- *Develop domestic and global markets.*

The SIIAA has given a clear sense of direction for the industry. It has injected energy and a growing spirit of cooperation between the parties in the industry. It has been matched by rapid moves by Commonwealth (and now States) to reduce data pricing and facilitate access to government held data. It has also been accompanied by industry body mergers and industry consolidation, such as the creation of a merged spatial information agency in Geoscience Australia within the Commonwealth Government and the formation of the Australian Spatial

Information Business Association (ASIBA) to encompass business interests. There are also signs of business maturing in its approach to new markets and its relationship with governments. Likewise, it is the view of ANZLIC that a viable private sector spatial information industry provides a range of spatial information services to government, other industries and the community for improved decision making for business, social well being and environmental sustainability.

While there is still a strong focus on markets regulated or supported at State and Territory level, it is apparent that some markets are national, often with strong international dependencies. Therefore, while there has been advocacy for serving, and freeing up, markets at jurisdictional level, more and more emphasis is now being put on national marketplaces. This trend has significant implications for institutional arrangements between governments and the increased need for national advocacy by all sectors in the SII. Therefore, there is a common purpose to facilitate use of spatial information in all these emerging markets at both jurisdictional and national levels.

Effort has also been put into building strong and enduring institutions capable of supporting implementation of the SIIAA and representing the interests of governments, businesses and people making up the SII. Currently, these bodies are viewed as ANZLIC, ASIBA and the Spatial Sciences Institute which is currently being created.

### **Role of the Public Sector**

Government depends on spatial information. Figures coming from the United States Federal Geographic Data Committee indicate that around 80% of government data is spatially referenced.

The current level of pervasive government involvement in spatial information processing stems from an historical need by Governments for spatial information to underpin functions such as land administration systems, national development programs, environmental monitoring and defence. Growing maturity in the emerging private sector diminishes the need for government involvement in supply activities, but this is difficult for governments to do because of their institutionalised supply structures. However, the public sector does and may continue to play a role across the spatial information value chain in cases of 'market failure' and/or where there is an overriding public interest.

The key roles of government within the SII can be summarised as:

- Developing policy and frameworks;
- Promulgating and mandating use of standards and assessing compliance;
- Specifying and developing products and services to meet public interest needs;
- Providing infrastructure, fundamental data and basic services;
- Competitive purchasing and quality control of particular services, such as data collection, infrastructure provision and access;
- Ensuring equity of discovery and access to information;
- Delivering broad societal outcomes, such as inter-generational equity, effective use of public resources and protecting rights of consumers.

The key tests for involvement of the public sector are:

- A public interest need is to be met; and
- A public agency is sole provider; or
- The private sector is unable to provide a particular product or service; or
- Based on national competition policy measures, use of a public sector provider is the most cost efficient use of resources.

Weighed against this are the broader outcome measures, such as;

- Is there an opportunity to use an investment to grow capability of industry;
- Under an agreed measurement system, does use of public sector resources provide the best return on investment;
- Does use of a mix of public and private resources offer an opportunity for skills and knowledge transfer.

### **Role of the private sector**

Private sector interests are more focussed on commercial outcomes affecting profitability, sales performance and company growth. Investment and access to resources are key factors in growth.

A viable private sector can provide a range of spatial information services to government, other industries and the community for improved decision making, social well-being and environmental sustainability.

The key roles of the private sector within the SII are:

- Input to policy, legislation and framework development (generally through government committees or direct lobbying);
- Providing goods and services, based on consistent, reliable and usable information, within a competitive market;
- Developing and marketing new applications to meet customer needs;
- Exploiting niche markets by applying scalable resources depending on need.

The key tests for involvement of the private sector are:

- A private good is being created; or
- A public good is being created; and
- Use of the private sector is the most appropriate (in optimising social utility) and cost efficient means to provide particular goods or services; or
- Investment capital is provided by the private sector; or
- The major risk in providing a particular product or service is taken on by the private sector.

### **Models for interaction**

Each sector has its specific roles. However, these roles are not mutually exclusive. In some cases they overlap at the margin, for example in the case of government business enterprises.

Evolution is still taking place, which at times makes it difficult to strictly define respective roles. New structures and interests to meet real needs are being created that straddle public and private sector interests. A good example is the formation of a company called PSMA Australia. PSMA has Australian governments as its shareholders. Its charter is to facilitate the aggregation, integration and supply of national framework datasets (such as topography, cadastral boundaries and geocoded address) based on data provided by the State, Territory and Commonwealth mapping agencies and other public agencies. The PSMA uses the private sector extensively in the generation of these national framework data sets. The private sector has developed significant new value-added products and services from the PSMA data sets. The performance of PSMA in facilitating the assembly and delivery of multi resolution national digital spatial data has been a harbinger of the significant benefits and value available to the spatial information industry through partnership with government.

There are also roles shared by both sectors. In fact, it has been argued that innovation and growth can only happen if they are done jointly. These common roles include:

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- Institution building, as witnessed in the growth of inter-disciplinary multi-sector coordinating bodies at national and jurisdictional levels;
- Capacity building, such as raising and directing investment, research and development, developing education and skills formation programs, industry promotion and overseas marketing;
- Industry restructuring (merging disciplines, larger private sector, developing economies of scale, lessening dependence on public sector, moving resources between sectors).

The intent of the SIIAA is to identify and advocate action in these common roles. It is important that all sectors maintain the momentum created by the SIIAA by focusing on the common vision and constantly seeking common ground. In undertaking this task, the roles of particular SII industry players are already clear:

- ANZLIC – key advocate for the public sector and core partner in implementing the SIIAA;
- Public sector agencies at Commonwealth, State, Territory, regional and local levels – dialogue with the private and academic sectors regarding implementation of value chains to provide efficient and effective public services and pursuit of increased industry capacity;
- ASIBA – key advocate of business interests and core partner in implementing the SIIAA;
- Businesses – pursuing opportunities within value chains;
- Professional associations – key advocate for professional practice and people issues and through the SSC as core partner in implementing the SIIAA.

However, there are many other players, such as associations, academic institutions and community bodies. Each must assess their role within the industry, especially as it restructures.

### **Next Steps**

Note that this paper does not deal with relationships with the academic sector in any detail. While the academic sector is an important part of the SII, the consideration of relationships between the public and private sectors is deemed to be a short term first order issue and a significant work in its own right. Roles of the academic sector could be addressed in separate papers on education, skills formation, research and development.

Jurisdictions and the private sector should test and assess the paper against their own roles and relationships, perhaps using a “scoreboard” approach against the roles set out in this paper.

However, the definition of clear cut roles which are mutually exclusive cannot be achieved in all situations. There will be times when it will have to be agreed to disagree. In these cases, there may need to be some form of mediation mechanism applicable to the relevant jurisdiction(s). These situations will test the robustness of institutional arrangements and their ability to work around these disagreements without damaging the fabric of the SII. In the end it will always come down to using the accumulated goodwill between representative bodies and the commonsense of individuals.

This paper is written at a point in time. All parties need to recognise that strictly defined roles cannot be locked in forever. There will be a continuing evolution of roles and relationships, and again, it will come down to representative bodies recognising and acting on these changes through continuing dialogue.

## **Acknowledgements**

A number of existing documents have been used in preparing this paper and their use is acknowledged. Sources include An Australian Spatial Information Industry: Development of a viable, robust, national private sector spatial information industry for Australia (ANZLIC 2000); the Spatial Information Industry Action Agenda: Positioning for Growth (SIIAA 2001); and the Queensland Spatial Information Industry Development Plan (QSIIS 2001). Other ideas have been provided by members of ANZLIC – the Spatial Information Council, Australian Spatial Information Business Association (ASIBA) and the Spatial Sciences Coalition (SSC). There is also further reading in a number of strategy documents prepared by other jurisdictions that expand on these ideas or propose other frameworks for defining roles and relationships.

## APPENDIX 1

### Spatial Data Management Principles

#### PRINCIPLES

ANZLIC believes that the adoption of the following Principles will ensure that management practices for fundamental spatial data are nationally consistent to achieve the benefits of the Australian Spatial Data Infrastructure.

- 1 Access** All sectors of the community should have easy, efficient and equitable access to fundamental spatial data where technology, data formats, institutional arrangements, location, costs and conditions do not inhibit its use.
- 2 Conformity and Quality** Custodians of fundamental spatial data should ensure that these data sets conform to agreed global and national standards where appropriate to achieve a consistent level of quality that can meet the needs of the various users in the community.
- 3 Content** The fundamental spatial data needed by all sectors of the community to support economic, ecological and social development and well being should be available.
- 4 Industry Engagement** Partnerships between industry and government should be promoted to develop industry skills, maximise the use of spatial data resources in both public and private sectors and encourage the development of an innovative and competitive value-adding industry in Australia.
- 5 Avoidance of Duplication** Organisations and jurisdictions should actively identify and exploit the many opportunities that exist for cooperation and sharing of fundamental spatial data to avoid duplication and maximise benefits of investment.
- 6 Sensitivity** Management of fundamental spatial data will include arrangements to preserve confidentiality, privacy, security and intellectual property rights which will protect the rights of data custodians and all sectors of the community.

Extracted from “Policy Statement on Spatial Data Management”, ANZLIC, April 1999.