

**Australian Government** 

Department of Resources, Energy and Tourism

**Office of Spatial Policy** 

The Australian Government response to the report by

Dr Vanessa Lawrence CB

on the

Investigation into the Spatial Capability of Australia

Prepared by the Office of Spatial Policy (April 2012)

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#### Foreword

Over the last decade, the proliferation of global positioning and space-based systems, applications and spatial technologies has resulted in the generation of vast amounts of available geospatial data and information. In parallel, there has been ongoing debate about how location-based information does, can and/or will contribute to the local, state, national and global strategic agendas. In Australia, the true value and potential of well-organised and effectively used geospatial information, and its impact on economic growth, public policy planning and decision-making, national security and government service delivery across all levels of government, is yet to be fully realised.

"Geospatial information influences nearly everything. Seamless layers of satellites, surveillance, and location-based technologies create a worldwide geographic knowledge base vital to solving a myriad of social, economic and environmental problems in the interconnected global community."<sup>1</sup>

A key indicator that location-based information is on the forefront of global strategic agendas is the pace at which the sector is growing at a time when most other markets are in a period of decline. The spatial discipline is a dynamic, responsive and multi-informational capability that is set to become the glue, or fabric, of any economy. The reality is that the fusion of information is best achieved in a context of location and time, and this level of fused knowledge delivers a decisive advantage to an expanding audience of key decision-makers, policy-makers and first responders.

Over the next two years, the Office of Spatial Policy (OSP) will be seeking to establish, in conjunction with ANZLIC—the Spatial Information Council, a spatial policy framework that will articulate the key role that Governments have in ensuring the provision of easy access, ubiquitous, relevant, standards-compliant, fundamental and authoritative datasets. Work within the Australian Government is underway to deliver this spatial policy framework, starting with the full definition and scope of the fundamental data themes both present and future. We will be striving for open access to a fundamental layer of spatial data, information and services, using, where practical, creative commons licensing – independent of which technology is deployed. Additionally, the Australian Government will provide leadership

<sup>&</sup>lt;sup>1</sup> *Geospatial Revolution Project*, A public service media project from Penn State Public Broadcasting, http://geospatialrevolution.psu.edu/project/index.html.

and support to the industry, academic, research and education sectors with the aim of encouraging Australia's spatial innovation and supporting continued growth in the spatial sector.

Ultimately, improving government's and business' ability to make sound, *evidence-based* business, economic and policy decisions, and the achievement of more targeted and effective service delivery to Australian citizens are key deliverables for our spatial community. The real potential to unlock the power that position gives to business and governments will rest with the spatial industry sector, which is primed to add value to the fundamental data layer, making the data more useable and targeted to customer needs more broadly. The Lawrence Investigation was an extremely important activity that has baselined the current state of the Australian capability to achieve these aspirations. The recommendations contained in the Report are comprehensive and there has already been progress against many of them.

The Report will be one of many inputs that will inform the future development of a greatly enhanced Australian spatial capability and I would like to formally thank Dr Lawrence for her significant and ongoing contribution to Australia's spatial community.

Dun Chi

**Drew Clarke** Secretary Resource Energy and Tourism

11 April 2012

## Background

In early 2010, Mr Drew Clarke, Secretary of the Department of Resources, Energy and Tourism (RET), invited Dr Vanessa Lawrence CB, Director General and Chief Executive, Ordnance Survey, Great Britain, to investigate Australia's current spatial capability in order to inform future spatial policy and capability developments.

In her final report, Dr Lawrence made 22 recommendations, a number of which outline the policy and frameworks that she believes are necessary to maximise the spatial capability of Australia, taking into consideration Australia's political and economic geography.

Dr Lawrence also recommends an implementation model to deliver these policies, and a governance structure that will ensure that the recommendations can be implemented and built upon as Australia's spatial capability evolves.

#### Other Relevant Initiatives

Over the period of Dr Lawrence's Investigation, there were a number of other initiatives being led by the Australian Government that also had implications for the Australian spatial community. These initiatives, all of which will also inform the future development of Australia's spatial capability included:

- the APS200 Location Project Report: Linking Information to Location<sup>2</sup>
- the Strategic Review of Geoscience Australia (May 2011)<sup>3</sup>,
- spatial reporting requirements in the report on *Investing in Australia's Regions*<sup>4</sup>.

#### The APS200 Location Project

The APS200—a new leadership forum for the Australian Public Service to drive whole-ofgovernment reforms—identified 'location' as playing an integral role in all Australian

<sup>&</sup>lt;sup>2</sup> Summary of the APS 200 Location Report,

http://www.ret.gov.au/Department/osp/Pages/OfficeSpatialPolicy.aspx.

<sup>&</sup>lt;sup>3</sup> Commonwealth of Australia, Department of Finance and Deregulation, *Strategic Review of Geoscience Australia* (May 2011), http://www.finance.gov.au/publications/strategic-reviews/docs/strategic\_review\_ga.pdf.

<sup>&</sup>lt;sup>4</sup> Commonwealth of Australia, Budget 2011-12. *Investing in Australia's regions* (May 2011), p. 25, http://cache.treasury.gov.au/budget/2011-12/content/download/glossy\_regional.pdf.

Government departments and agencies. The APS200 Location Project sought to "develop options to address location information policy, governance and investment".<sup>5</sup>

As a consequence of this project, the Office of Spatial Policy (OSP) was established on 1 July 2011 with the specific aim of strengthening the whole-of-government spatial policy leadership in Australia, and to provide the necessary governance structure to achieve a collective capability. The establishment of OSP was also one of the key findings of Dr Lawrence's Investigation.

OSP is responsible for developing spatial policy based on seven Location Information Principles named in the APS200 Location Report. The Office is responsible for articulating the Australian Government's business requirements for the national framework data themes, which have been endorsed by ANZLIC (the intergovernmental spatial council for Australia and New Zealand).

#### The Strategic Review of Geoscience Australia

The *Strategic Review of Geoscience Australia* similarly identified the need for a lead policy office. The Review found that the policy function of the previously named Office of Spatial Data Management (OSDM) would be strengthened if it were located in a strategic agency, the Department of Resources, Energy and Tourism (RET), instead of Geoscience Australia, which is a more operationally-focussed organisation. The Review also found that moving the policy function to RET would provide more visibility across Australian Government departments and agencies.

#### **Spatial Reporting**

The profile of location information was further raised across the broader Australian Public Service in last year's budget. The report *Investing in Australia's Regions* stated that "for the first time, the 2011–12 Budget includes information on Commonwealth spending in regional Australia by including spatial reporting on where funding is delivered"<sup>6</sup>.

<sup>&</sup>lt;sup>5</sup> APS 200 webpage, http://www.apsc.gov.au/aps200.

<sup>&</sup>lt;sup>6</sup> Commonwealth of Australia, Budget 2011-12. *Investing in Australia's regions* (May 2011), p. 25, http://cache.treasury.gov.au/budget/2011-12/content/download/glossy\_regional.pdf.

#### Lawrence Report Recommendations

The findings in the Lawrence Report align closely with the findings of the other three Government-led initiatives. In simple terms, all four Reports converge on the need to strengthen and enhance existing governance and policy arrangements and deliver an authoritative and consistent national coverage of framework data themes at the lowest possible cost for the governments of Australia. The challenge will be how best to achieve this in the current financially-constrained environment.

A significant amount of work has already been done against many of the recommendations contained in Lawrence Report, which indicates that Dr Lawrence's views on the state of the Australian Spatial Capability already have a level of consensus. In order to achieve its goals, the Australian Government, through the Office of Spatial Policy, will work closely with the jurisdictions and key organisations such as ANZLIC—the Spatial Information Council, PSMA Australia Limited, the Cooperative Research Centre for Spatial Information (CRCSI), the Spatial Industries Business Association (SIBA), the Surveying and Spatial Sciences Institute (SSSI), the Geospatial Information and Technology Association (GITA) and the academic research community.

Dr Lawrence made 22 recommendations, which are summarised in Chapter 7 of the Report. Many of the recommendations refer specifically to PSMA Australia, where the Australian Government is one of nine shareholders, and ANZLIC—the Spatial Information Council, which has ten jurisdictional members, of which the Australian Government is one. In some cases, the response is the Australian Government's position or a comment on activities that PSMA Australia or ANZLIC are currently undertaking. Where recommendations refer directly to third parties over whom the Australian Government has limited or no direct control, the recommendations are referred to the appropriate body.

The following is the Australian Government's response to these recommendations.

# Australian Government Response to the Lawrence Report Recommendations

The following recommendations appear as they are referred to in Chapter 7 (Summary of recommendations) of the Lawrence Report. A section reference to the Lawrence Report is also provided *in italics* for each recommendation.

Australian Government response
All developments under the APS200 Location Project (the Project) will be compliant with appropriate International and Australian Standards. A series of guidelines to assist agencies apply a consistent approach to the implementation of these standards is also proposed. OSP is liaising with Australian Government departments and agencies to align spatial development programs with the Project and the Spatial Reporting Agenda. The implementation plan will also include provisions for engagement with the remaining agencies to assist them in understanding the importance of, and the mechanisms for, geotagging and publishing appropriate information products derived
from their data.

Lawrence Report recommendation	Australian Government response
Consideration should be given to reforming	ANZLIC Council is currently considering a
the role and powers of ANZLIC and	revised Strategic Objective Statement and
redefining ANZLIC's role in relation to	Terms of Reference. Revising the Strategic
PSMA Australia Limited.	Objectives will include consideration of the
	appropriate forms of interaction with PSMA
Also see section 3.7.9 of the Lawrence Report.	Australia Limited.

Lawrence Report recommendation	Australian Government response
The Shareholders of PSMA Australia Limited	PSMA Australia develops an Annual
should give clear signals to the PSMA	Program that takes account of the current
Australia management as to the activities that	environment and the outcomes being sought
PSMA Australia should be focusing upon and	by its Shareholders.
undertaking.	
	PSMA Australia has invited ANZLIC—the
Also see section 3.8.12 of the Lawrence Report.	Spatial Information Council to provide input
	into the development of its Annual Program,
	which sets down PSMA Australia's planned
	activity for the coming year.
	The Annual Program can only be approved
	by a unanimous vote of Shareholders at
	PSMA Australia's Annual General Meeting.

Lawrence Report recommendation	Australian Government response
The membership of the PSMA Australia	PSMA Australia Shareholders are solely
Board should be reviewed at least biennially	responsible for the appointment of Directors
to check that it adequately represents both the	to the PSMA Australia Board.
appropriate range of skills and also the	
community of users from both the public and	PSMA Australia's Corporate Governance
private sectors.	Charter identifies the importance of
	Directors' skill appropriateness and diversity.
Also see section 3.8.15 of the Lawrence Report.	

Lawrence Report recommendation	Australian Government response
Quality requirements for each PSMA	PSMA Australia's strategic plan includes a
Australia dataset should be set and regular	focus on the continual improvement of all its
audits of the quality of each dataset should	national datasets. The Australian
take place.	Government would encourage PSMA
Also see section 3.8.18 of the Lawrence Report.	Australia to widely publicise the availability and quality of national datasets.
	The Annual Program sets down investments
	in activities aligned with this outcome based
	on market-driven priorities and within the
	constraints of the company's financial
	resources.

Lawrence Report recommendation	Australian Government response
A business case should be built and assuming	The governments of Australia collect
its payback is valid then common standards	geospatial data to support core government
should be introduced in the processes that	activities. The processes employed are
involve the collation and supply of data to	aligned to the internal requirements of each
PSMA Australia.	government so as to maximise efficiency.
	External delivery of the data that results from
Also see section 3.8.19 of the Lawrence Report.	this process so as to build national datasets
	requires standardisation and integration of all
	these data.
	To facilitate participation and collaboration and to minimise the costs to jurisdictional custodians, this activity (for a number of fundamental national datasets) is undertaken by PSMA Australia, which in turn delivers standards-compliant, authoritative national datasets for Australia at no additional cost to any government.
	OSP has identified the importance of
	establishing a business architecture defined
	by the recognised standards for all national
	data themes.
	Fundamentally, there is now an
	understanding that all national coverage
	datasets should conform to appropriate
	national and international standards.

Lawrence Report recommendation A comprehensive Australia-wide market study should be undertaken to confirm the market requirements for national datasets. From the study, clear indications of the requirements for quality, currency and accuracy of datasets will be able to be published. The processes within PSMA Australia should be adjusted as a result of the findings.

Also see section 3.8.21 of the Lawrence Report.

Australian Government response

The Australian Government recognises that market requirements need to be gathered from a broad range of users in industry, all levels of government, academia and the community. Consideration will be given to how best to undertake a comprehensive market study.

While ANZLIC will initially undertake consultation with the State, Territory and Commonwealth governments to identify the specifications for the framework datasets, OSP will work with Australian Government departments and agencies as key users of the framework datasets, to identify their specific business requirements. The APS200 Location Project and the requirements of Spatial Reporting will also confirm some of the Commonwealth's need for a spatial data infrastructure (SDI) delivering national datasets.

The findings from these consultations will be fed back into the definition of aspirational goals for these datasets and this, in turn, may advise PSMA Australia's future work plans.

Adoption of any findings by PSMA Australia would be a matter for the Shareholders and Board of PSMA Australia.

There is also a key role for Industry in this area. The Spatial Industry Sector has the capability to take the framework data themes and add value to them in order to meet specific market or Government needs. The Australian Government recognises that the provision of the fundamental datasets is Government's role, but that the key to unlocking the full potential and, possibly, impacts of spatial information rests with the private sector, which is primed to make the data useable to targeted customer sets.

#### **Recommendation 8** Australian Government response Lawrence Report recommendation The processes within PSMA Australia and This recommendation will be addressed their inter-relationship with their data through the development of an Australian Spatial Linked Data Infrastructure Business suppliers should be mapped to ensure that Architecture and Reference Model. It is they are optimised to meet the market need. intended that this work be conducted as a Also see section 3.8.26 of the Lawrence Report. joint effort between OSP, ANZLIC and PSMA Australia, and will be informed by CRCSI, SIBA, SSSI, GITA, academia and other key stakeholders. **Recommendation 9**

Lawrence Report recommendation	Australian Government response
Standardised data improvement processes for	This is a matter for the PSMA Australia
all datasets conflated by PSMA Australia	Board, and their data suppliers in the
should be set up between the jurisdictions and	jurisdictions, to address.
PSMA Australia.	
Also see section 3.8.28 of the Lawrence Report.	

Lawrence Report recommendation	Australian Government response
If PSMA Australia is to take a major role in	The Australian Government recognises the
coordinating, assembling and delivering	role that PSMA Australia has in the
national products from jurisdictional datasets	aggregation of spatial data from multiple
then a business plan, including sufficient	sources. PSMA Australia's current business
investment, should be created so that the	model as a for-profit company may impose
datasets can achieve the widest use and	some initial limitations. Greater levels of
become part of the spatial infrastructure of	collaboration will be central to a successful
Australia.	partnership between PSMA Australia and the
Also see section 3.8.31 of the Lawrence Report.	Australian Government.
	OSP will continue ongoing discussions about
	suitable business process methodologies
	which will be mutually beneficial for the

Commonwealth, ANZLIC and PSMA

Australia alike.

Lawrence Report recommendation	Australian Government response
PSMA Australia's product portfolio should be reviewed against the market requirements and from these findings, changes should be made to existing products and new products should be introduced. For all datasets, accuracy standards and maintenance schedules should be published. <i>Also see section 3.8.36 of the Lawrence Report.</i>	It is the intention of the Commonwealth Government, as a major customer of PSMA data, to more clearly articulate the Commonwealth's spatial data requirements in order to facilitate more targeted collection. This will require a full review of requirements which will be undertaken over a phased period in consultation with agencies. This work will also provide a means of feedback for defining the required product portfolio that PSMA Australia develop into the future.

Lawrence Report recommendation	Australian Government response
The licensing conditions exerted on PSMA	ANZLIC is in the process of developing
Australia products should be reviewed to	agreed policies on access, price and licensing
ensure that they make the products accessible	for a broad range of jurisdictional spatial data
to customers whilst at the same time affording	supplied both direct and through PSMA
the data custodians the protection over their	Australia.
source datasets that they require.	
	The Australian Government is currently
Also see section 3.8.41 of the Lawrence Report.	undertaking an audit of expenditure on
	G-NAF <sup>®</sup> licences which will inform the
	development of an ANZLIC-agreed future
	access, pricing and licensing policy.
	Research into an access, cost and licensing
	policy framework will be commenced
	approximately mid 2012.

Lawrence Report recommendation	Australian Government response
The channel strategy should be reviewed to	The Cooperative Research Council for
improve market penetration for PSMA	Spatial Information (CRCSI) is currently
Australia products whilst being mindful that	reviewing the Research and Development
PSMA Australia requires market feedback	agenda for Program 3 – Spatial Data
and market insight so that its products can be	Infrastructures. Supply Chain Management
improved, to meet ever-changing market	has been identified as a key area of focus.
needs.	
	Additionally, OSP's work on developing an
Also see section 3.8.44 of the Lawrence Report.	Australian Linked Spatial Data Infrastructure
	Business Architecture will seek to define
	Government's data requirements and then
	map current and possible future supply
	chains. This work will be informed by the
	CRCSI research.

Lawrence Report recommendation	Australian Government response
A clear set of guidelines as to how data	The ANZLIC policy development program is
should be collected, maintained and	currently being developed and will draw on
disseminated should be put in place	existing best practice jurisdictional, national
throughout the Australian public sector. Clear	and international policy.
framework guidelines should be drawn up in the following policy areas:	OSP, in collaboration with ANZLIC, will produce a 'best practice' set of policies and
• an information policy	guidelines.
<ul> <li>a spatial policy; which could also be known as a location data policy</li> <li>a geospatial policy</li> </ul>	OSP is consulting with the Office of the Australian Information Commissioner to ensure alignment of spatial policy with
In addition, the current status of national	national information policy.
policy for data interoperability, data publishing and data linking should be reviewed, taking into account similar international initiatives such as the EU INSPIRE Directive and Linked Data initiative.	OSP is aware of the INSPIRE Directive and the Linked Data initiative and has the lead role in developing the national policies some of which are detailed in this recommendation. This work will be undertaken over the course of the next two years.
Also see section 4.1.14 of the Lawrence Report.	

Also see section 4.1.14 of the Lawrence Repor

Recommendation 15	
Lawrence Report recommendation	Australian Government response
The new policy office should provide	The Office of Spatial Policy (OSP) was
direction at a 'whole of government' level to	established on 1 July 2011. The office is
all departments and agencies for the creation,	located in the Department of Resources,
management and dissemination of spatially-	Energy and Tourism (RET) and reports
enabled data.	directly to the Secretary of RET.
Also see section 4.1.18 of the Lawrence Report.	OSP is working closely with the APS 200

Steering Committee and other Commonwealth agencies which are currently in early development stages with their dissemination capabilities.

OSP is considering the possibility of updating a previous Project called the "Spatial Interoperability Demonstration Project", which was a workshop program that provided guidance and direction for agencies that were in the process of building a spatial capability. There is great potential to leverage from the good work that has already been completed.

## **Recommendation 16**

Lawrence Report recommendation	Australian Government response
The new policy office should articulate the	As per recommendation 8, this work will be
specification required for geospatial data to	directly linked to the articulation of the
facilitate the effective running of the	Australian Spatial Linked Data Infrastructure
Commonwealth and better governance of the	Business Architecture and Reference Model.
'whole of Australia'.	

Also see section 4.1.18 of the Lawrence Report.

Lawrence Report recommendation	Australian Government response
A 'whole of government' licence should be	As per Recommendation 12, the Australian
negotiated to facilitate access, usage and	Government is currently undertaking an audit
sharing of geospatial and spatially-referenced	of expenditure on $\operatorname{G-NAF}^{\mathbb{B}}$ licences, which
data across the Commonwealth public sector.	will inform the development of an ANZLIC
A business case should be built over time to	agreed future access, pricing and licensing
consider whether efficiencies of operation can	policy. Research into an access, cost and
be found to enable this licence to be extended	licensing policy framework will be

for use by the jurisdictions and also the	commenced approximately mid-2012. As part
regional management groups such as the	of this research an analysis of the economic
Murray Darling Basin.	impact and return on investment of freely
Also see section 4.1.19 of the Lawrence Report.	available fundamental spatial datasets will be undertaken.
	Consideration has been given to this in the long term objectives of the OSP program.

Lawrence Report recommendation	Australian Government response
Lawrence Report recommendation A comprehensive training programme should be initiated across the Commonwealth public sector that increases the understanding of (a) how the spatial and geospatial infrastructure can be used to facilitate improved decision-making, and (b) why rigorous collection, maintenance and dissemination processes must be put in place within departments and agencies. <i>Also see section 4.1.20 of the Lawrence Report.</i>	Australian Government response As the policy framework is developed and reaches a stage of greater maturity these training programs will be developed and conducted and a series of implementation guidelines will be published. As per Recommendation 15, it is likely that this can be achieved by a simple revision of the "Spatial Interoperability Demonstration Project". The <i>spatial@gov®</i> conferences provide a secondary means of getting these messages out to the wider community. Some State and Territory jurisdictions also have mechanisms in place, such as government spatial councils or committees that promote the value and use of location information across the public sector.

Lawrence Report recommendation	Australian Government response
An appropriate operational mechanism should be put in place with feedback loops. It is important that this takes place in order to ensure that only one version of spatially- enabled data is used throughout the process and also to ensure that all datasets are generalised from that definitive entity. <i>Also see section 4.1.18 and Figure 7 –</i> <i>A [suggested] new implementation model for</i> <i>Australia's geospatial and spatially-enabled data</i> <i>of the Lawrence Report.</i>	The Australian Government acknowledges that PSMA Australia is well-positioned to develop consistent, national coverages from jurisdictional data. This is a matter for PSMA Australia; however, it is acknowledged that PSMA Australia is already building tools to support user feedback into their domain.
Recommendation 20	
Lawrence Report recommendation	Australian Government response
A pricing and licensing mechanism should be put in place that permits some of the outputs of the geospatial and spatially-enabled infrastructures to be licensed at zero price and others to be licensed at market price. This mechanism can only be enacted once a	As per Recommendation 12, ANZLIC is in the process of developing agreed policies on access, pricing and licensing for a broad range of jurisdictional spatial data supplied both direct and through PSMA Australia.

sustainable funding model is in place to create, conflate, maintain and disseminate these datasets.

Also see section 5.3.3 of the Lawrence Report.

ANZLIC will also leverage from the good work being undertaken in this area by the CRCSI through its work on the Australian New Zealand Spatial Marketplace Demonstrator Project supply chain management research.

Lawrence Report recommendation	Australian Government response
Sales and marketing activities between the	This is a matter for the PSMA Australia
jurisdictions and PSMA Australia should be	Board to address.
reviewed in order to identify whether there is	
a valid business case to streamline these	
activities, as doing so has the potential to	
reduce both cost to market and also market	
confusion.	
Also see section 5.3.6 of the Lawrence Report.	

Lawrence Report recommendation	Australian Government response
The ANZLIC Council should ensure that it	ANZLIC is currently developing a joint work
operates within the frameworks of the	program for the development of national and
information policy, spatial policy and	jurisdictional policies and guidelines for the
geospatial policy. It should in the first	creation, management and dissemination of
instance drive the performance of the	spatially-enabled data.
geospatial infrastructure and, if appropriate, the spatial infrastructure of Australia.	This recommendation is closely linked to all of the other activities detailed in this
Also see section 6.1.11 of the Lawrence Report.	response.