The Benefits of the PSMA Australia Data Network

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Key words: PSMA Australia, LYNX, PSMA Distribution, Government, Private Sector, Data Access

SUMMARY
PSMA Australia is an unlisted public company that is owned by the governments of Australia. It was established as a company in 2001 to coordinate the assembly of and facilitate access to, fundamental national datasets. A data network was formed to facilitate the key relationships required to achieve PSMA Australia's objectives including:

- LYNX;
- PSMA Distribution;
- The Governments of Australia; and
- Industry, being Value Added Resellers (VARs).

This is a complex Network that needs to be managed, and PSMA Australia has a core competency in relationship management. Each Network contributor has a vital role in the Data Network, with LYNX and PSMA Distribution serving as the conduit in accessing PSMA Australia data and services.

LYNX is currently being enhanced to become a cutting-edge web portal that will provide governments of Australia access to multiple geocoding engines, services and datasets. The first phase of LYNX, called the LYNX Pilot, was a web service that allowed users to validate street addresses against leading industry address validation engines. The future of LYNX is dynamic, with further web services, functionality and compliance systems being developed.

Another core component in the PSMA Australia Data Network is PSMA Distribution, which is a wholly owned subsidiary of PSMA Australia and was established in 2008 to manage existing, and promote new, access to PSMA Australia data.

This paper will discuss how PSMA Australia manages the Data Network and interacts with all Network contributors. It will examine the role of PSMA Distribution and LYNX, and how they are facilitating data access within the Australian Spatial Community. Further, this paper will discuss how the PSMA Australia Data Network is providing benefits to the community, government and private sectors.

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1. INTRODUCTION

The PSMA Australia Data Network consists of four key components that contribute to the success of the company and include:

1. An IT infrastructure called LYNX;
2. The PSMA Australia sales subsidiary PSMA Distribution;
3. The Government and Commonwealth agencies of Australia; and
4. Value-Added Resellers representing industry.

All of the components have contributed in different ways to the substantial growth PSMA Australia has experienced in recent years.

This paper will explore the background of PSMA Australia and will analyse how each of these components is an integral part of the Data Network. It will also discuss the importance of the management of these relationships and how, in the future, they will be critical to the strategic direction of the company.

2. BACKGROUND OF PSMA AUSTRALIA[1]

PSMA Australia is an unlisted public company. It was established under Australia's corporations' law and is wholly owned by each of the State and Territory Governments and the Australian Government. Each government holds an equal share despite their disparity in population and economic capacity.

PSMA Australia provides a mechanism for sovereign states to work collaboratively and yet is able to act independently within broad boundaries established by its owners – the Governments of Australia. PSMA Australia is a self-funded entity, thereby contributing to its independence, and allowing the focus to be on providing social and economic benefits through the provision of national spatial datasets.

[1] This section has been largely taken from Paull, D (2009), and Homes, M (2009).

PSMA Australia has developed six national datasets, consisting of:

- G-NAF® (Australia's authoritative reference for geocoded addresses);
- Transport & Topography™ (nearly 2 million kilometres of road centrelines and selected topographic information);
- CadLite® (a graphical representation of all 10.7 million registered land parcels in Australia);
- Administrative Boundaries (localities, suburbs, local government areas, state boundaries, electoral boundaries);
- Postcode Boundaries (established in collaboration with Australia Post); and
- Points of Interest (a collection of point features to add context and detail).

The role of PSMA Australia is to greatly simplify the arrangements under which standardised and aggregated data can be accessed. There is great consumer confidence and certainty as PSMA Australia is a single authoritative source for fundamental spatial reference data (see Figure 1). The removal of duplication that has historically been in place, frees up resources that can then be focused on core business and innovation. The ability to share the costs of data conflation across all users enables a higher quality of data at a lower cost per consumer. Additionally, as the cost barriers associated with access reduce, broader access to data results.

As the Australian population continues to grow, so does the quantity of data requiring management. This is further strained by the recognition by all sectors including private, government and general public, of the importance of spatial data. PSMA Australia is a dynamic company, and has historically been innovative in the development of national datasets. PSMA Australia sees its role as an industry leader being extended in the future, as it continues to innovate to provide new national datasets to the wider community.

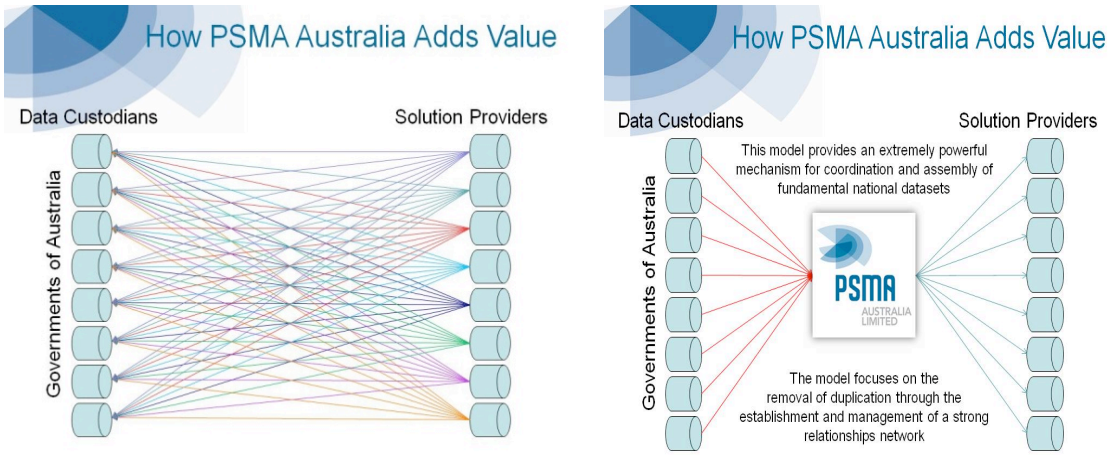

Figure 1: How PSMA Australia Adds Value

The governments of Australia established PSMA Australia Limited to ensure that the substantial value inherently held within national spatial datasets could be readily accessed so as to deliver economic, social and environmental benefits to Australia.

It is captured in the Company's mission statement, which has changed little since it was first crafted over a decade ago. It relates to the strong and consistent focus of the organisation on this task.

> *"The return of social, environmental and economic benefits through the provision of authoritative national location information, knowledge and services."*

Data is valuable. Spatial data has always been more difficult to handle and more difficult to put a value on. Nevertheless, it inherently contains great value. PSMA Australia does not obtain government data at a nil cost. PSMA Australia pays licensing fees to access data provided by the States, Territories and Government agencies of Australia, and also pays shareholder dividends in the form of royalties. Our shareholders measure their return by the value received by all Australians via access to and utilisation of these national datasets.

Like the mission, the vision has remained reasonably consistent and still accurately describes what it is that PSMA Australia is striving to achieve.

> *"To be recognised nationally and internationally as providing the authoritative foundations for enabling and shaping location based business solutions."*

The means by which PSMA Australia achieves the long-term outcomes sought by its shareholders is already evident in some of the previous discussion. It is by forming and managing a crucial data network between creators of fundamental spatial information and users of this information through aggregating, standardising, integrating, distributing and assisting with the utilisation of national spatial datasets.

The requirement to be financially self sustaining forces the organisation to focus on the customers, their requirements and the value of the proposition to them. Competition (and the threat of competition) drives increases in efficiency and innovation ultimately delivering to customers greater levels of value from spatial information which can be extracted with greater ease.

3. KEY FUNCTIONS OF THE PSMA DATA NETWORK

To distribute and provide access to the national datasets developed by PSMA Australia, an innovative, reliable, and cost effective data network had to be established. In this section, the core components of the PSMA Australia Data Network will be explored:

- LYNX;
- PSMA Distribution;
- The Governments of Australia; and
- Industry.

The four components form the key links within the PSMA Australia Data Network and are critical to the company's success.

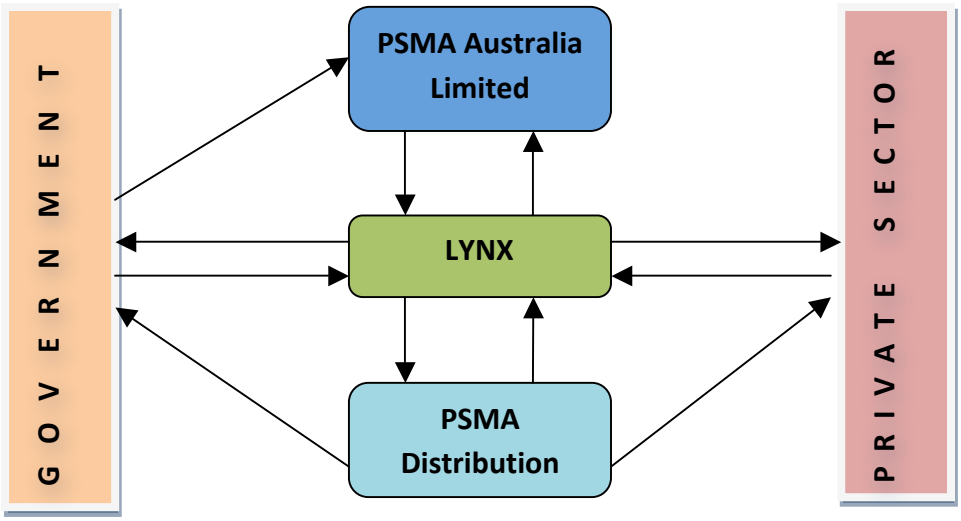

Figure 2: PSMA Australia Data Access Network

3.1 LYNX

The best way to describe LYNX is a series of linked initiatives focussed on improving the efficiency and effectiveness of PSMA Australia's end-to-end supply chain processes.

LYNX is without doubt the most ambitious project that PSMA Australia has attempted. It involves practically every stakeholder associated with PSMA Australia and the re-engineering of the entire data management and delivery processes within the organisation. It is a complex task in an intricate and dynamic environment. It involves new technology to deliver a world-leading information management and distribution environment. It is bold and ambitious but a natural evolution from the achievements of

the past. Its success will come not from the combinations of technology that will be implemented to achieve this outcome, but on the strength of the relationships that have been developed over the last 17 years and the certainty and security for stakeholders in the governance arrangements and business model underpinning PSMA Australia.

LYNX was originally launched in 2006, and was developed to provide a storage environment for PSMA Data. This environment also enabled the establishment of a secure web portal for the provision of data reports and product information, data manager deliverable acceptance and VAR data requests that could be fulfilled by automated DVD burning and mailing, email or FTP delivery.

During 2009, PSMA Australia commenced a new project to redevelop and enhance the existing LYNX infrastructure. The project was named the LYNX Redevelopment and Enhancement Programme. The LYNX Redevelopment Programme, is a critical component of the PSMA Australia Data Network. LYNX, through this redevelopment and enhancement programme, will streamline PSMA Australia's end-to-end data supply chain, with its core functions being:

- Assisting Data Contributors, through providing a gateway to efficiently supply PSMA Australia with data;
- Allowing external technologies to process contributor data to store the conflated data through a single point of access;
- Assisting with the provision of services that Contributors and End Users can use to enhance their data use experience. This includes services to certify NAMF (National Address Management Framework) compliance; and
- Providing a mechanism for feedback to be registered and passed to Data Contributors. This enables the source data to be updated and improve the quality of data retained by the Governments and Agencies of Australia.

The redeveloped LYNX infrastructure will provide much value to the PSMA Australia supply chain through the following benefits:

- Data and services can move in any direction within the network with ease. This enables the consideration of user feedback to data contributors and the ability to consider data capture through crowd-sourcing;
- Web services required by multiple shareholders can be shared, therefore reducing the cost of development and hosting. Furthermore, this capability promotes consistency and, importantly, delivers a core-business benefit to Data Contributors; and

- New opportunities arise for industry in the delivery and development of products and services through LYNX In the long term, LYNX will become a vibrant marketplace for spatial resources.

The key benefits provided with LYNX will assist in supporting the valuable relationships PSMA Australia has developed, and the core business of data maintenance and management. LYNX is a programme that will support PSMA Australia into the future. It is needed, due to the changes in technology and market conditions, to support the continuous growth being experienced within the spatial industry.

3.2 PSMA Distribution

To expand and support the PSMA Australia data distribution network, a sales division called PSMA Distribution was established in 2008. The outcomes sought by PSMA Australia from the establishment of a subsidiary were:

- Identification of new markets;
- Support for Value Added Resellers (VARs);
- Management of Licensing and Access to PSMA Data;
- Training of knowledgeable Sales Staff;
- Increased Market Awareness of PSMA Datasets; and
- Extension of the distribution network.

The role of PSMA Distribution is integral to the PSMA Australia Data Network. Their dedicated sales and distribution support enables PSMA Australia to focus on the development of data products.

PSMA Distribution manages a network of 25 VARs, which is growing each year. Currently, PSMA Data products are being utilised in the following industries:

- Transport;
- Vehicle Tracking and Personal Navigation;
- Real Estate;
- Government;
- Telecommunications;
- Banking, Finance and Insurance;
- On-line Maps and On-line Web Services;
- Manufacturing; and
- Retail.

Through PSMA Distribution's activities, PSMA Data is now also being utilised internationally with the establishment of relationships with international VARs.

The role of PSMA Distribution in the future will be the promotion of the PSMA brand and increased awareness of PSMA Datasets. Through a number of key initiatives being implemented, it is evident that this is already being undertaken and PSMA Distribution will continue to be a core component of the PSMA Australia Data Network

3.3 Governments of Australia

The States, Territories and Commonwealth governments of Australia interact with PSMA Australia in multiple forms: as Data Contributors, Shareholders and through company support. These roles are quite diverse, and each requires specialised relationship management by PSMA Australia.

3.3.1 Data Contributor

On a quarterly basis, the States and Territories, Geoscience Australia, the Australian Electoral Commission, Australia Post, and the Australian Bureau of Statistics provide PSMA Australia with spatial data to be included in PSMA Australia's suite of national datasets.

The data is provided in point, line and polygon formats, and is used for Transport, Cadastre, Address, Points of Interest, Greenspace, Hydrology and Administrative Boundaries themes.

3.3.2 Shareholders

To make up the PSMA Australia governance model, each of the States, Territories and Commonwealth of Australia hold one equal share in PSMA Australia. This share entitles them to representation on PSMA Australia's Board of Directors. In line with the requirements of Australia's corporations law, the Directors are required to act in the best interest of all shareholders, which in the case of PSMA Australia means the overall focus of the company is on the provision of benefits to Australia as a whole.

3.3.3 Support

The governments and agencies of Australia are supporters of the PSMA Australia Data Network. It is primarily through this Network that national datasets are made available to the Australian community. The governments also use the PSMA Australia Data Network as a means to engage with industry and identify new opportunities for collaboration.

The governments of Australia are instrumental to the PSMA Australia Data Network. PSMA Australia is investigating new opportunities for collaboration, and identifying new distribution channels to assist government products enter new markets. The many roles

that they provide contribute to the ongoing operational and strategic success of PSMA Australia, and the products that are developed. In the future, it is envisaged that PSMA Australia will continue to work closely with these governments and agencies to continue to provide national datasets to the Australian community.

3.4 Industry

PSMA Australia's distribution network is managed by PSMA Distribution. The VARs are PSMA Australia's direct link to industry. The relationship between VARs, PSMA Distribution and PSMA Australia is quite complex and requires a high level of relationship management.

Through the use of commercial Licence Agreements, VARs are able to access PSMA Data through PSMA Distribution. The VARs then value-add to the PSMA Data to create their own VAR products, or in some cases may choose to directly on-sell the PSMA Data. The VARs use PSMA Data to create a myriad of products that include:

- Address Validation and Geocoding Engines;
- On-line Web Services;
- Personal In-car Navigational Products; and
- Databases tailored to Industry.

The VARs are a key component of the PSMA Australia Data Network. This is not only because they form a part of the distribution network, but because they supply PSMA Australia and PSMA Distribution with valuable market information and analysis. The relationship between the parties has assisted in providing key information regarding market activity, potential product opportunities, collaboration prospects and product feedback. Without the VARs, the Data Network would be ineffective. PSMA Australia and PSMA Distribution are working to further develop these relationships.

4. THE BENEFITS OF THE DATA NETWORK

The benefits of the PSMA Australia Data Network are more intangible and qualitative, than quantitative. The benefits are directed towards the creation of environments, relationships, and opportunity development, all of which are two-way benefits between the parties involved in the Network.

The PSMA Australia Data Network enables an environment that fosters innovation, creativity and ingenuity. Through collaboration and strategic relationship management, new products are in the pipeline for PSMA Australia, Government and Industry. This special environment has enabled new business opportunities to be discussed, and a level of business transparency that is not usually seen within the spatial industry.

The Network has allowed for PSMA Australia to be in a strong market position, and this is due to the key components involved in the network. There is a level of business security that has been created from the Data Network, which is a result of the relationships that have been built. The strong market position is enabling product development and innovation, plus encouraging collaboration between all parties involved. This is benefiting the Australian community by improving the distribution network of government data, allowing for better access.

Finally, the PSMA Australia Data Network is both flexible and extendable. The Network has the ability to transform and to extend, particularly in the area of distribution and new product development. Currently, the relationships within this network are enabling sound strategic decisions to be made. This is encouraging for new opportunities to be undertaken and new technologies to be investigated. PSMA Distribution is already looking at new avenues for the distribution of spatial data and identifying new markets.

The benefits of the PSMA Australia Data Network are extensive, and benefits all parties involved. It is a strong network that sees all components grow and develop, and is an asset to PSMA Australia that will continually be developed.

5. THE FUTURE OF THE PSMA AUSTRALIA DATA NETWORK

The future of the PSMA Australia Data Network is positive. As already discussed, there are already initiatives underway to capitalise on the key components involved in the network: LYNX, PSMA Distribution, Governments of Australia and Industry.

Over the coming 12 months, the LYNX Programme will be implemented, with new services being offered to the Australian community and industry. This is an exciting time for PSMA Australia as it is a result of much relationship building, technological planning and government consultation.

PSMA Distribution is embarking on a fact-finding exercise to examine the current data market, and identify new channels for distribution. This undertaking will benefit all parties involved in the PSMA Australia Data Network, and will result in the generation of new opportunities and relationships, and renewed strategic direction.

PSMA Australia is working closely with the governments and agencies of Australia to identify how both parties can enhance the mutual support they offer each other. This is a critical undertaking, considering the importance of the relationships and the strategic impact of the discussions.

Finally, the VARs of PSMA Distribution will be a part of exciting initiative that will be derived from the Data Network. New product development, product enhancement and the use of innovative technologies will help support the VARs and their distribution channels. Further to this, PSMA Australia and PSMA Distribution are undertaking initiatives to better engage with the VARs and understand their business needs.

6. CONCLUSION

Overall, it can be concluded that the PSMA Australia Data Network is an extensive relationship that facilitates innovation, collaboration, and the creation of new opportunities. Over the coming years, this Network will be of significant importance to PSMA Australia, as new products are developed, and new markets are entered.

This Data Network is a core component of what makes up PSMA Australia. From data infrastructures and distribution channels, to data contributors, these parties involved in this Data Network are all key components. It is fair to say that if one of these components was removed, PSMA Australia might not continue the success that it currently has. Therefore, it is clear to see that relationship management and communication are important to the ongoing life of the PSMA Australia Data Network and the company itself.

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BIOGRAPHICAL NOTES

Nick Littlewood is the Chief Operating Officer of PSMA Australia. Nick is responsible for the overall operational management of PSMA Australia, and provides strategic support to the Chief Operating Officer. Nick has a Bachelor of Arts (Agriculture), Bachelor of Agricultural Science, and is currently undertaking a Graduate Certificate in Management.

In his previous roles, Nick Littlewood has been the Faculty Manager of the University of Queensland, Manager of DMO Education with the Department of Defence and was the Business Manager of the University of Canberra.

Sarah MacDonald is the Relationships Business Manager of PSMA Australia. Sarah is responsible for the Marketing and Communication activities of the company, which includes liaison with PSMA Distribution. Within her role, Sarah also works closely with the Data Management Unit in managing the product lifecycle of PSMA Australia Datasets. Sarah has a Bachelor of Business Management (Marketing and Communication), Diploma of Project Management and Diploma of Frontline Management.

In her previous roles, Sarah MacDonald has been the National Training Manager for the Australian Institute of Management Queensland, Business Support and Contract Manager for the Caribou Contract at Australian Aerospace, and has previously been a Registered Project Manager with the Australian Institute of Project Management (AIPM).

Gerry Stanley is the Contracts and Compliance Manager of PSMA Australia. Gerry is responsible for the management of business contracts, which include Jurisdiction data contracts. Within his role, Gerry works closely with PSMA Distribution and the VAR network in managing the licensing of PSMA Data. Gerry has bought a wealth of experience to PSMA Australia. In his previous role, Gerry Stanley was the Business Manager of Master Builders Australia.

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