A Queensland Perspective
in the context of the LAS Model

EXPERT GROUP MEETING ON INCORPORATING SUSTAINABLE DEVELOPMENT OBJECTIVES INTO ICT ENABLED LAND ADMINISTRATION SYSTEMS
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INTRODUCTION

This paper represents an overview of Queensland’s land administration systems in the context of the LAS model. A detailed sketch of the State of Queensland is presented to provide an indication of the size and rate of growth which sets Queensland apart from the other Australian States.

The review highlights that Queensland is a leader in automated land administration systems but lacks the capability to easily discover all interests in land to enable planning and decision making for sustainable growth. Much of the information about interests in land is held in separate, unconnected databases, additionally the fundamental reference layer for spatial information systems in Queensland, the Digital Cadastral Database (DCDB) is parcel based while a number of the interests in land, such as Native Title and mining rights are not parcel based. The lack of a 3D cadastre also has planning and development implications.

Significant effort is underway to address the above issues. Queensland is pursuing a collaborative approach to its sustainability issues with significant incentives for land owners to partner with the Government in developing sustainable approaches to land, vegetation and water management and use. Whole of Government technology initiatives are enabling data sharing and new integrated service delivery options and continual improvements are being made in the availability, access and quality of data.

QUEENSLAND STATE DESCRIPTION (SKETCH)

| Area (source: Geodata 100k Coastline database) | 1,730,648 SqKms – 22.5% of Australian land area |
| Population (ABS June 2004) | 3,882,037 |
| % Share of Australia’s Population (ABS June 2004) | 19.3% |
| Population growth | 2.1% (12 months to June 2004. Highest in Australia) |
| Population increases by LGA (ABS June 2004) | Brisbane City and Gold Coast City Councils rank respectively 1 and 2 in Australia |
| Brisbane Statistical Division Population as % of Qld population | 45.7% (Second lowest of Capitol cities in Australia – Hobart 41.9%) |
| Local Government Authorities | 157 (125 Local Councils plus 15 Aboriginal Councils & 17 Island Councils) |
| Rateable properties (as at 30 Sept 2005) | 1,445,319 |

DCDB Total parcels = 2660941
Lot parcels = 1946543
DCDB Freehold Tenure = 1838037 Lots
(21.2% of State by area)
DCDB Leasehold Tenure = 45094 Lots
(68.4% of State by area)

DCDB New parcels since Jan 2005: 45281 parcels, 36727 Lot parcels

DCDB USL tenure = 22251 Lots (0.5% of the State by area)
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POSITIVE ASPECTS OF STATE EXPERIENCE

The Queensland Department of Natural Resources and Mines (NR&M) leads the State in the stewardship of natural resources. In undertaking this role the department has a portfolio responsibility to balance current demands on our natural resources with the sustainable needs of future generations.

The department works closely with other government agencies, industry and the general community to develop and implement programs to achieve common goals for the management and maintenance of Queensland's natural resources. Strategies implemented by the department include consultation, cooperation and partnerships with the community, other agencies and industry to develop and implement policy and planning frameworks, and provide natural resource information, monitoring and evaluation services.

Positive aspects of the Queensland State experience in land administration and land management focus on the three key elements of investment, integration and access. These three elements will be discussed using the following examples:

1. the significant investment that the State has in its land administration systems and the level of maturity and integration of those systems;
2. the robustness and integrated character of Queensland’s legislative planning framework.
3. access to integrated Government information through the Information Queensland initiative.

Queensland’s investment in data and land administration systems

An integrated approach is taken by the department to the sustainable management of the state’s land, water, mineral, petroleum and vegetation resources to support Queensland’s economic and social development. This integrated approach is evidenced in the department’s significant investment in the land administration systems that underpin the department’s capability to sustainably manage land based on accurate and comprehensive data.

A number of these systems such as the titling system, cadastral database and land asset management system are mature systems with a long history of data capture and maintenance. However the systems were developed independently over a period of time and contain some inconsistencies in the way that they hold elements of data. Work is underway to rectify these inconsistencies.

Integrated Titles Registration

Land and water registrations are held on the department’s automated titling system, providing a definitive “point of truth” for ownership, tenure and other interests. However not all parcels are held in the titles register and a project is planned to integrate some categories of currently non-registered land parcels, such as unallocated State land, Commonwealth land, national parks and state forests into the titles registration infrastructure.

Information in the land registry system is used by/shared with:

- Local government for rating purposes
- Office of State Revenue for land Tax purposes
- State Land Asset Management for rentals on State land
- Queensland Valuers for valuation purposes
- Digital Cadastral Database for graphics.

While significant advances have been made and continue to be progressed in the provision of integrated land interest data by NR&M, a number of interests in land are not recorded in the titling register. These interests include among others:

- Native Title
- Commonwealth heritage listings
• State heritage listings
• Vegetation
• Local Government Planning requirements; and
• Contaminated land (currently registered in the Queensland Environmental Protection Agency’s Environmental Management Register (EMR) and the Contaminated Land Register (CLR)).

Other NR&M systems using integrated approaches
Current projects are also underway for the integration of water management & use licensing and billing systems. The new integrated system will support the Council Of Australian Government’s (COAG) National Water Initiative to encourage the expansion of water markets & trading and the Smart Service Queensland program for delivering online services.

Another departmental system using an integrated approach is the Native Title claims system (QNTIME) which holds a number of datasets that can be overlaid on top of the DCDB’s cadastral property boundaries. QNTIME is also able to link to other NR&M information systems such as ATS, the Computerised Inventory of Survey Plans (CISP), Queensland Valuations and Sales database (QVAS), & the Tenure Administration System (TAS) and quickly retrieve information that can assist in identifying the current tenure of an area of interest and historical plan and tenure information.

Natural resource management (NRM) data is also being made available through the NR&M Environment for Natural Resource Integrated Information (ENRII).

The DCDB- A foundation data set for integration
The department’s Digital cadastral database is a continuous spatial dataset defining all State land, freehold land and non-property parcels within the State. It is a fundamental reference layer for spatial information systems in Queensland, recording the property boundaries and related descriptive information of the State’s cadastre. Digital cadastral data is used by a variety of organisations as an asset management tool and is an ideal base for searching, planning and analysis of land related information. Most Local Governments in Queensland use digital cadastral data to assist them in their activities.

The DCDB is continuously updated by inputting metes and bounds descriptions from registered plans and from any attribute updates from government gazettes and other administrative notifications. Plans are also in place for electronic lodgement of survey plans.

Selected areas of the dataset are being upgraded for an improved positional accuracy, this is an ongoing process affected by data sharing agreements with Local Governments or by internal projects.

The Integrated Planning Process
The Integrated Planning Act 1997 (IPA) forms the foundation of Queensland’s planning and development assessment legislation. IPA provides a framework for achieving ecological sustainability through integrated planning and managing of development and its effects on a ‘whole of Government’ basis. The legislation established a simple step by step process for making, assessing and deciding development applications in Queensland. This process is called the Integrated Development Assessment System (IDAS).

The Act allows private certifiers to conduct code assessments and to inspect and certify certain works, and it streamlines development approvals by implementing a process under which development applications are considered by a single assessment manager (usually the local government) rather than several State and local government agencies. The planning assessment system has been designed to remove the arbitrary barriers to the submission and assessment of applications, which were a common feature under the previous system.
Information Queensland (IQ) – Access to integrated information

Information Queensland (IQ) is a program in which a number of agencies are collaborating to give users fast and easy online access to Queensland Government information. IQ will lay the groundwork for agencies to deliver integrated information services via a one-stop Queensland Government web portal providing benefits such as:

- Faster and easier access
- Time and cost savings
- Better interactions with government.

Through IQ access will be provided to government-held information on land, resources, demographics, and statistical information; as well as satellite imagery, topography, property and land use information.

By 2008, access will be extended to include all appropriate information held by departments and agencies – from population trends to community facilities and services. The initial access mechanism used by IQ is a web based atlas containing information from 10 Government agencies which allows Queenslanders to search for their properties on the internet, look at satellite pictures of their suburbs, discover local facilities, and learn more about their regions.

NEGATIVE ASPECTS OF STATE EXPERIENCE

Three key factors negatively influence Queensland’s capability to effectively and sustainably manage its natural resources – land, water, vegetation, minerals and petroleum. These key factor are:

1. the complex interests of the three tiers of government, Local, State and Federal.
2. The fact that Queensland does not have a 3D cadastre to facilitate planning.
3. Queensland’s regulatory approach to land management is being challenged by land owners.

Roles & relationships between the 3 levels of Government

Queensland has a history of relatively strong local government with 158 Local Government Authorities (LGAs), including 15 Aboriginal and 17 Island Councils. This situation reflects a number of factors:

- Queensland is Australia’s most decentralised State, with a smaller proportion of the population in the capital city metropolitan area (although this has now become contiguous with the Gold Coast metropolis), a number of quite large regional centres remote from the capital both inland and along the north coast and a strong rural tradition
- Brisbane City Council is the largest local government authority in Australia, with a population of around 850,000 and a budget of well over $1 billion
- Throughout Queensland, local government not State government retains responsibility for water supply and sewerage, and continues to exercise considerable autonomy in planning
- Politically, local government in Queensland is well organised with an effective local government association (LGAQ)

Despite this strong local government base Queensland Local Authorities face a number of significant issues with funding and their relationship with the other two levels of government seen as perhaps the most critical.

The 2002 investigations of the House of Representatives Standing Committee on Economics, Finance and Public Administration inquiry into local government and cost-shifting chaired by the Minister for Regional Services, Territories and Local Government represented an important opportunity to openly debate the financial and budgetary issues and the roles and relationships between the three tiers of government in Australia.
One of the recommendations from that Inquiry involved the development of Intergovernmental Agreements (IGAs) between the different levels of government which could assist with clarifying roles and responsibilities improve financial security, and reduce potential cost shifting to local government.

**A 3D-Cadastre for Queensland**

The NR&M Digital cadastral database (DCDB) is an abstraction of the information recorded on cadastral surveys, together with some ancillary location data. The primary purpose of the DCDB is to provide an overall picture of the spatial extents of land over which interest are held.

Typically data is entered into the DCDB 5-7 days after the conveyancing process has been concluded and the registration has been processed. While this means that no data is shared by NR&M until the survey is legally registered it is possible for utilities for example to gain access to and be working from, pre-approval plans that were submitted to Local Government Authorities by property developers.

While 3D descriptions of properties are maintained in the titling register the DCDB only includes the footprint of these 3D parcels The 3D geometry is not available in the cadastral geographical data set, and therefore it is not possible to query the 3D situation from the DCDB, nor is it possible to see if two volumetric parcels overlap.

A market need has been identified for additional cadastral data to be made available to support new uses associated with planning and investment. Three dimensional spatially accurate information covering rights, restrictions and obligations needs to be available with merged built and natural data.

NR&M operates within a mature legal and organisational framework and has considerable technical expertise. These factors indicate that NR&M is well positioned to implement a 3D cadastre in the future.

**Rights, obligations & restrictions**

Over the past two decades law governing land use in all Australian jurisdictions has changed markedly in an attempt to urgently balance land sustainability with the equally pressing need for development. Practices which formerly encouraged and / or subsidised land development and were even a major condition of becoming landholders are now prohibited.

This situation has been exacerbated by the fact that over the last 20 years, and particularly over the last seven, the Federal Government has been taking a much higher profile/interest in the environment and in sustainable land use. This has challenged the historical situation of rights, obligations & restrictions and their administration as the responsibility of the States and Territories while Local Government has administered development rights, generally under guiding State Legislation.

A number of pieces of Federal legislation, particularly those with environmental implications - the Environment Protection and Biodiversity Conservation Act 1999 and the Native Title Act 1993 have impacted significantly on rights, obligations & restrictions in land.

State legislation, such as the Water Act 2000 and the Vegetation Management Act Amendments of 2004 have also imposed a new regulatory regime on all landholders, resulting in landowners having to significantly change the way that they manage land. Landholders are increasingly required to undertake conservation work from which they perceive little or no immediate benefit, and only limited long term benefits. Figures released recently by Property Rights Australia indicate that as many as 4,000 Queensland landowners may have infringed the vegetation management Act 2004 or the Water Act 2000.
As a result, landholders overwhelmingly believe that they had been economically adversely affected or are having difficulties in pursuing better conservation outcomes on their properties. Many landholders consider it unfair that they should undergo public good conservation activities when they derive only limited benefits and often do not possess the financial capacity to carry out the works required.

BUILDINGS IN THE CADASTRE

Responsibility for the Built environment
Local Government Authorities (LGAs) in Queensland are responsible for town planning, building approvals, local roads, parking, public libraries, public toilets, waste removal, domestic animals and community facilities. In addition, Queensland LGA’s provide a wider range of utility services such as water and sewerage compared to other states. This has a major impact on LGA finances. All LGAs are required to provide building certification services for domestic buildings. This includes providing general advice on building applications and issuing building permits.

While recent initiatives such as the State Government South East Queensland (SEQ) Regional Plan have been developed in consultation with the LGAs of South East Queensland to guide growth and development in SEQ over the next two decades there is still a significant level of disconnect between the two levels of Government with regard to the planning and development of the built environment.

Addressing
A number of important addressing initiatives have recently been implemented nationally and in Queensland. These initiatives make it possible, for the first time, to locate the exact position of all physical addresses in Australia. These initiatives include the Geocoded National Address File, or G-NAF, developed by PSMA and the rural addressing and the Property location Index (PLI) initiative being coordinated in Queensland by the Queensland Spatial Information Council (QSIC).

National Cooperation Initiatives
The national agenda is driving a number of key activities at State level in Queensland. These national initiatives have significant policy and resourcing issues at State level and impact on State planning and development activities. Key examples include:

1. The Council of Australian Governments (COAG) water agenda which seeks to establish integrated and consistent approaches to water resource management, including water trading throughout Australia. Queensland’s response to the COAG reforms is the Water Act 2000 which converts an existing water license into a transferable water allocation – an entitlement created within a 10 year Water Resource Plan (WRP) which is legally enforceable, as subordinate legislation.
2. ANZLIC and the PSMA are driving a number of State resourced activities in land management such as the land administration reforms under the ANZLIC Standing Committee on Land Administration and the spatial data activities undertaken to support the PSMA.
3. The National Action Plan for Salinity and Water Quality (NAP) and the Natural Heritage Trust (NHT) are jointly delivered by the Australian and Queensland Governments through bilateral agreements and commit the Queensland and Australian Governments to working with the regions to assist them to develop better representational and structural arrangements to implement fully integrated natural resource management plans.
4. Counter-terrorism is a major national agenda that is driving State activities. In Queensland separate projects have been undertaken to address Government agency preparedness and identification of Critical infrastructure. Disaster recovery planning and business continuity
planning are well advanced. Practical exercises have also been undertaken to test the response in the event of a major terrorist event.

THREE KEY IMPROVEMENTS IN THE NEXT DECADE

1. **Data access/quality /Coverage**

The Department of Natural Resources & Mines is leading a number of initiatives to improve community access to land related information and to improve the quality of the data and information made available to the community. Key initiatives include the IQ project, a Strategic Data Capture Plan and a revised access and pricing policy for data. These recent initiatives will be refined and enhanced over the next decade to better reflect changing market trends.

Concurrent with these initiatives NR&M has recently undertaken a review of its data custodianship to ensure ongoing responsibility and accountability for data management through a whole of lifecycle approach. The implementation of custodianship across NR&M involves a significant culture change and is expected to take some time to fully implement. A key element of the new custodianship regime is a focus on user needs and requirements and a cyclical approach to custodianship with annual reviews and regular reports on activities that support custodianship.

A whole of Government standard on custodianship is currently in draft format and when endorsed will provide added impetus to custodians for better data management processes.

2. **E-business – integration, connectivity**

The 2005 Queensland Government Smart Directions statement highlights the importance of providing easily accessible and seamless Government services to all Queenslanders whether they live in Brisbane, regional or island communities. The Smart Directions statement is aimed at ensuring that the Government invests appropriately in ICT, supports the delivery of efficient and effective business operations of Government, and works collaboratively with the ICT industry.

Implicit in the Smart Direction statement is a whole of Government technical platform & collaboration between agencies to provide better integrated services and exchange information.

The Smart Directions Statement has five key focus areas:

- Government as a single enterprise
- Enabling the business priorities of Government
- Improving value for money
- Increasing public sector capabilities
- Partnering with the private sector

Key examples of initiatives supporting the focus areas include:

- Integrated Justice Information Strategy (IJIS)- exchange of information through the justice system
- TRANSLink – integrated ticketing
- **Smart Service Queensland (SSQ)**- planning and facilitating integrated service delivery
- Information Queensland (IQ) – integrated information delivery.

3. **From regulation to cooperative partnership models**

The negative perception from landowners over the erosion of their property rights, particularly in land and water, through implementation of recent legislation has been a challenge for the Queensland Government. Ensuring that the requirements on landholders and community were fair and equitable, that landholders had access to the necessary information and financial resources to make transitions in land use and ensuring the sustainable future of the State’s resources is a complex balancing act.
The solution has been to try to move from a highly regulatory, compliance and penalty driven regime to a cooperative partnership model between landowners and government. This model is being achieved, and will be refined in the future, through working with landowners on a blueprint for progress at the individual property level using planning instruments that achieve sustainable outcomes for the environment, the landowner and the Government. A recent example of the new collaborative approach is the new $12 million Vegetation Incentives Program (VIP), giving landowners the opportunity to enter into partnership with the State Government to help preserve areas of regenerating natural vegetation.

Conclusion

The brief Queensland review documented in this paper supports in generalised terms the proposed LAS model but suggests that the main challenges related to sustainability are in the areas of land management. In particular the need to manage the increasing complexity of land, water, mineral, vegetation, cultural (etc) activities. Difficulties will arise in continuing to extend the ‘land’ administration system model to cover these other areas.

The model must also better reflect the realities of different policy/legislative levels and responsibilities eg. Local/State/Federal. Rarely will there exist a ‘one size fits all’ land policy framework or where the policies are readily integrated/complimentary.

An important principle, from a Queensland perspective, that should underpin any LAS model is the essential requirement for availability and access to LAS information by landowners/policy makers to ensure decisions are based on reliable and comprehensive data and information.

REFERENCES


Deaprtment of Natural Resources & Mines (Queensland) Property Location Index (PLI) http://www.nrm.qld.gov.au/products/access_pricing/dig_data/prop_address_info.html


