Lessons for federated countries that have state land registries

the Australian experience

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While an important part of my message is about a vision for state land registries, my main message is much more than this.
My message concerns the growing importance of spatially enabled AAA land information (accurate, authoritative, assured) at a national and federal level.

I believe access to AAA land information nationally is a key innovation towards sustainability.
THE PROBLEM

Australia’s land registries or land titles offices focus on *state and territory processes*. They struggle to provide the integrated information needed by policy makers, government, businesses and community stakeholders at a *national* level. The objective is integration of state and territory based information to meet *national needs*.
National needs for land information

- Taxation
- Human services
- Federal governance including monetary policy
- Adherence to national treaties
- Banking and insurance
- Natural resource management including water
- National law enforcement, disaster management and emergency responses
- Land and property markets including complex property markets
- Government scheme implementation and compliance
- ....and many more
My key message concerns understanding

- the needs of modern information societies

- What is AAA land information (accurate, authoritative, assured), particularly in countries that are federations of states

- the role that AAA land information plays nationally within a modern information society

- a vision to capitalize on spatially enabled AAA land information nationally in support of government, business and wider society
At a practical level my message also includes

- A better understanding of land information and large scale people relevant spatial data
- Current land registry activities
- The role of land administration in supporting sustainable development
- Awakening the sleeping land registry giants
- A multipurpose vision for our land registries

For practical reasons I will draw on Australian experiences to highlight my message
I believe it will be very difficult for any modern country, and particularly countries that are federations of states, to promote economic growth, environmental sustainability, social justice and good governance, unless they can *access and manage spatially enabled AAA land information at a national level*.
To put my message in context,

to my knowledge no country that is a federation of states has access to or manages AAA land information in an effective manner. This certainly is the case for the USA, Canada, Australia, China and Germany to name a few.
Importantly it is the land professionals (surveyors, valuers, building surveyors, planners and land administrators) who create, maintain, manage and provide access to this information.
The needs of a modern information society

- National drivers - the economy, the environment, a just society, defence, governance, emergency response ........
- The ability to model and manage both the natural and built environment
- This includes creating, recording and managing all RRRs (rights, restrictions and responsibilities) relating to land
- a virtual model of any jurisdiction or country
What is “spatial enablement”

- The power of place and location
- GOOGLE Maps etc
- The “Crown Jewels” - a geocoded national address file (G-NAF) based on land registry data and a national cadastre linked to a national valuation file
- In Australia every land parcel is shown in GOOGLE Maps based on the government cadastres, but more importantly based on G-NAF
- Every address now submitted or put in a form, to government, business, emergency services etc can be verified automatically
- Every government and business transaction has ability to be recorded and tracked spatially
Aerial Photo and the Cadastre
Spatially enabled society (SES)

- An evolving concept where *location, place* and other spatial information are available to governments, citizens and businesses as a means of organising their activities and information.

- Simply, SES is about *managing information spatially, not managing spatial information*.

- *Transparent or ubiquitous* use of spatial information. The vast majority of users do not know they are “spatially enabled” - and don’t care!
Spatially enabled government (SEG)

- Same principle as SES but applied to management and delivery of government services - part of e-government initiatives

- Requires a “whole of government” approach

- Applies to all levels of government. Local, county, state or provincial and federal (where countries are federations of states)

- Particular challenges where large scale parcel level data is managed at either local, county or state level
Remember spatial enablement is about managing information spatially, not managing spatial information.
The key to SES is the property base

or for the initiated...

“the cadastre”

The property base connects people to land
The Cadastral Concept

- The traditional view of the cadastre (buying, selling, leasing and mortgaging interests in land).
- The new approach makes the cadastre central to spatially enabling government.
The significance of properties

Property engines...
1. Multipurpose Cadastre (German style)
2. Title or deeds tenure style cadastres
3. Taxation driven cadastre (Latin /Spanish / French)

SDI
Mapping agencies and other data providers

Tenure
Value
Use
Development

Land Management Paradigm

Spatially enabled LAS

Incorporating:
- Land policy
- Spatially enabled government

Better Decision Making

Sustainable Development
- Economic
- Environmental
- Social
- Governance

Integrated functions
Parcels
Properties
Buildings
Roads

Better Decision Making
Spatially enabling land administration systems

- Land administration (and particularly the core cadastre) generates information about places (parcels, street address, values, land use, buildings)

- SDIs organise spatial information.

- Together they provide information about unique places people create (built) and use (natural).
A holistic approach is to integrate cadastre, land administration, G-NAF and SDI.

The cadastre is the core of large scale SDIs.
OPPIT information
- the business of land registries

- **Owner, parcel/property, interest and transaction** information generated by land tenure functions in land administration systems.

- This information concerns attributes to a parcel/property and relates to the space in the parcel, but it is not spatially enabled at registry levels.

- In most countries, including Australia, OPPIT information is AAA land information.
So what is AAA land information?

- **Accurate** - on ground truthing
- **Authoritative** - created within a regulatory legal environment
- **Assured** - government guaranteed

- Importantly provides an *authoritative audit trail* for other land information data sets and services
- Add the power of spatial enablement
Today in Australia many players are not getting timely access to accurate data relating to tenure, value, planning, and development.

Duplication is rife and citizen access in many cases is non-existent, partial and not spatially enabled.

Many of the important restrictions that alter use of land or impose penalties for non-compliance with a legislated standard require diligent and frustrating enquiries.
Simply AAA land information is underutilized both in its source state and territory governments and through the vertical tiers of governments, especially at a national level.

*It is an under-utilised public good.*
Awakening the sleeping land registry giants
Are we using our land registries to their full potential?
Land registry information is different

- Essential for land markets and the wider economy
- Legally authoritative
- Insured by government
- Spatially accurate (cadastral verification)
- Highly dynamic
- Maintenance intensive
- Large scale
- Central to the business model of the registry
- Sensitive in terms of privacy
- In high demand
These characteristics make SDI involvement challenging for land registries

...but, some are taking on the challenge
The Netherlands - Kadaster

- **Particulier**
  - Onderwerpen op alfabet
  - Kennisgeving
  - Huis kopen
  - Huis verkopen
  - Wonen
  - Vrije tijd
  - Veelgestelde vragen
  - Online producten kopen

- **Zakelijk**
  - Onderwerpen op alfabet
  - Mijn Kadaster
  - KIK
  - KLIC
  - BAG
  - Basisregistraties en LV
  - Veelgestelde vragen
  - Inloggen Mijn Kadaster

- **Het Kadaster**
  - Vastgoedcijfers
  - Pers
  - Kwaliteit
  - Kadaster International
  - Rijksdriehoeksmeting
  - Ruimte en Advies
  - Veelgestelde vragen
  - Werken bij het Kadaster

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**Nieuws**

- [Kadaster actief op Carreerevent] - oktober 2010
- [Terz@ke september 2010] - september 2010
- [Vastgoedbericht augustus 2010] - september 2010
- [Terz@ke augustus 2010] - augustus 2010
- [Vastgoedbericht juli 2010] - augustus 2010
- [Kadaster publiceert halfjaarbericht 2010] - augustus 2010

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**Kadaster**
The ‘Key Registers’ Concept - EU context

1. Natural Persons
2. Legal Persons
3. Buildings
4. Addresses
5. Basic Register Cadastre
6. Maps [Topographical Base Map (TBM)]
7. Registration Numbers (for vehicles)
8. Wage, Employment and Benefit Relationships and
9. Income and Assets

And possibly:
  the Large Scale Base Map of the Netherlands and subsoil geo-data (DINO)

10. WOZ (tax) value of real properties

Linking the ‘Key Registers’

Traditional land registries

- Land administration functions of registration and parcel identification yield AAA standard information.

- Land information is not spatially enabled. The tools to spatially enable nationally (G-NAF and CadLite) are not key tools in land registry administration.

- Owner information in land data must be improved - name changes, address changes and identity checking are poor and need to be thoroughly upgraded on a national scale.

- Land information is an underutilized public good.
A multipurpose vision for our land registries
Australian land registries need a coherent national vision of information functions

• National eConveyancing is a starting point

• What comes next?
  - More shared services and standards?
  - The Key Register Concept?
  - Spatial Enablement?
A possible vision?

Key registers (land registry to deliver tenure and potentially others)

- People
- Buildings
- Value
- Tenure
- Address (G-NAF)

Economic Management

- Land conveyancing
- Land taxation
- Land development
- Interest Rates

Environment Management

- Infrastructure
- Natural Resources
- Planning

Social Management

- Social services
- Crime
- Education
- Emergency Services

Traditional land registry functions

New roles for land registry information
Example of spatially enabled land administration - the big one!

- Would a world’s best practice spatially enabled LAS in the USA have lessened the impact of the global economic collapse?

- How can spatial enablement, particularly related to LAS, contribute to ensuring this does not happen again?

- See paper by Buhler and Cowen “The United States Mortgage Crisis and Cadastral Data” at FIG 2010
Spatial Enablement *in action*

A GFC Early Warning System

The real world...

Build a cadastre...

Add a mortgage layer (grey)

Monitor spatially for clustering

Record foreclosures spatially (red)

Aggregate nationally and respond promptly...

...most countries, including the US, do not have this capacity yet

Who wants a national tax cadastre?

- The Federal taxation authority!
- “Privacy” is an argument for non action
- The need for an authoritative basis for audit
- Three principles
  - Use the best possible information - AAA land information
  - Build from inevitable processes - the land registries
  - Build once - use many times
Conclusions...

- Australia has achieved a great deal but there is much more to do
- The National eConveyancing System is only a first step - more national initiatives will follow
- Australia’s land registries must develop a coherent national vision
- Management of RRRs could be a driving application
- The power of land registry information must be unleashed
Every country has its own journey

But most countries have three key challenges

- Spatially enabling and creating key national registers (and making land information a national commodity)

- Integration of natural (topographic) and built (property or cadastral) data as part of a national SDI that includes a national cadastre and G-NAF

- Building the infrastructure to facilitate spatially enabled government and society (national policies, business models, G-NAF, national cadastre, accessible national AAA land information)
Thank you