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Re-engineering the Cadastre to Support E-Government
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Using the Cadastre to Spatially Enable Government

Jude Wallace
OVERVIEW

• What is Spatially Enabled Government (SEG)?
• The role of cadastres in SEG
• International trends
• Key strategies to achieve SEG
We have moved from clay tablets to computers......

Mesopotamian City Plan, Nippur 1500 B.C.E.
(Clay tablet 18 x 21 cm)
Clay or computers – images have one remarkable feature:

a picture tells a thousand words.

*IMAGES COMMUNICATE ACROSS LANGUAGE AND CULTURAL BARRIERS.*
Spatial enablement uses

• Pictures to describe places
• Digital system to add information to places
• Place or location to organise information
What is SEG?

• We are not talking about organisation of spatial information. This is the first step.

• SEG involves spatially organising non-spatial information. This is the second step.

• Then allowing people to see the results.
What is SEG?

• Location or place is used
  – initially to organise government information
  – then to re-engineer government processes to deliver better policy outcomes

• Place is used in a transparent manner. The vast majority of users do not know they are “spatially enabled” – and don’t care!
Who understands spatial?

- Less than 1% of people are specialists
- Less than 5% understand the technology
- 95% do not understand the technology
The challenges

- Lack of understanding
- Cost of the tools (SDI, cadastres)
- Difficulty of persuading national leaders, business and the public to adopt the tools of SEG.
The key to SEG is the property base -
“the cadastre”

A good cadastre connects people to land
• Cadastres are not understood
• Google is understood
• MAKE THE CONNECTION
• The Australian experience shows how a legally determinative parcel identification system can be added to satellite images. A simple, remarkable, clever visual result.
A GOOD CADASTRE

- People scale information
- About how we use, think about and develop land
- Understandable by strangers
- Authoritative – built from scientific activities
- Engineered relationship between information in computers and on-ground
- Sometimes legally determinative of information
- Updated efficiently
- Built to service LAS
- Multi function
- NOW HAS A NEW FUNCTION.
The significance of properties
Cadastre is the official parcel map. Its geocodes are powerful and authoritative. The geocoding always refers back to places with all the accuracy of a surveying profession.

Thus addresses tied to the official map are more powerful.

- Can be used by agencies with official functions and legal standards
- Pensions, health, education, tax

Across whole of government – national, regional and local
Health services

Connect on screen

• Demographics
• Health practitioners’ places of work
• Health services, and
• Transport

POWERFUL TOOL FOR HEALTH POLICY
Medical fraud management

Drugs are subsidised so poor can afford medicine.

People cheat the system.

Spatial enablement of the computer system managing drug benefits allowed distribution patterns to be quickly visualized so fraud was easily tracked.
Example: Spatially Enabled Tax Offices in 2015

The new spatially enabled cadastre (SEC) authoritatively identifies parcels with owners, interests and transactions and prices and values through coordinated geo-coding of information sets and seamless integration.

The SEC provides national, provincial and local tax offices with real-time, accurate information including images, owners, interests, land identity, market prices, values, address and transactions as these occur, and as they are lodged (because the land registries use the SEC).
The VALUE of SEG

Create pictures that connect -
People, activities, time, places and decisions.

Communication, knowledge and governance are vastly improved.

IT COSTS BUT IT IS WORTH THE PRICE
Every country has its own journey

Two immediate tasks:

- Spatially enabling key national registers dealing with transactions, valuations, and developments
- Building the infrastructure to facilitate Spatially Enabled Government
Steps for implementation of SEG

- Authoritative registers (properties, addresses, people, businesses)
- Acceptance of concept of SEG and role of place as part of whole-of-government e-strategy
- Reliable up-to-date property layer as fundamental layer NSDI
- Inter-active mapping/GI and LA/cadastral organisations, ideally merged
- Facilitation of private sector and wider society
- R&D, education and capacity building
Thank you