



Standardization in the Cadastral Domain

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Developing Cadastres to Service Complex Property Markets

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Developing Cadastres to Service Complex Commodities
9-10 December 2004

Centre for Spatial Data Infrastructures and Land Administration
University of Melbourne

Background

National Australian project

Incorporating sustainable development objectives into ICT enabled land administration systems

Funding Department of Education Science and Technology

Partners Switzerland, The Netherlands, Denmark and Germany

Primary goal Explain European cadastres



Perspective of Land Policy Adviser

Set context of framework, problems, trends and comparative solutions

Understand the issues and options

Advise on choices appropriate for national Australian LAS

Defend the selection



Dynamism in market, administration and research environments

Cadastral systems are robust and useful tools -

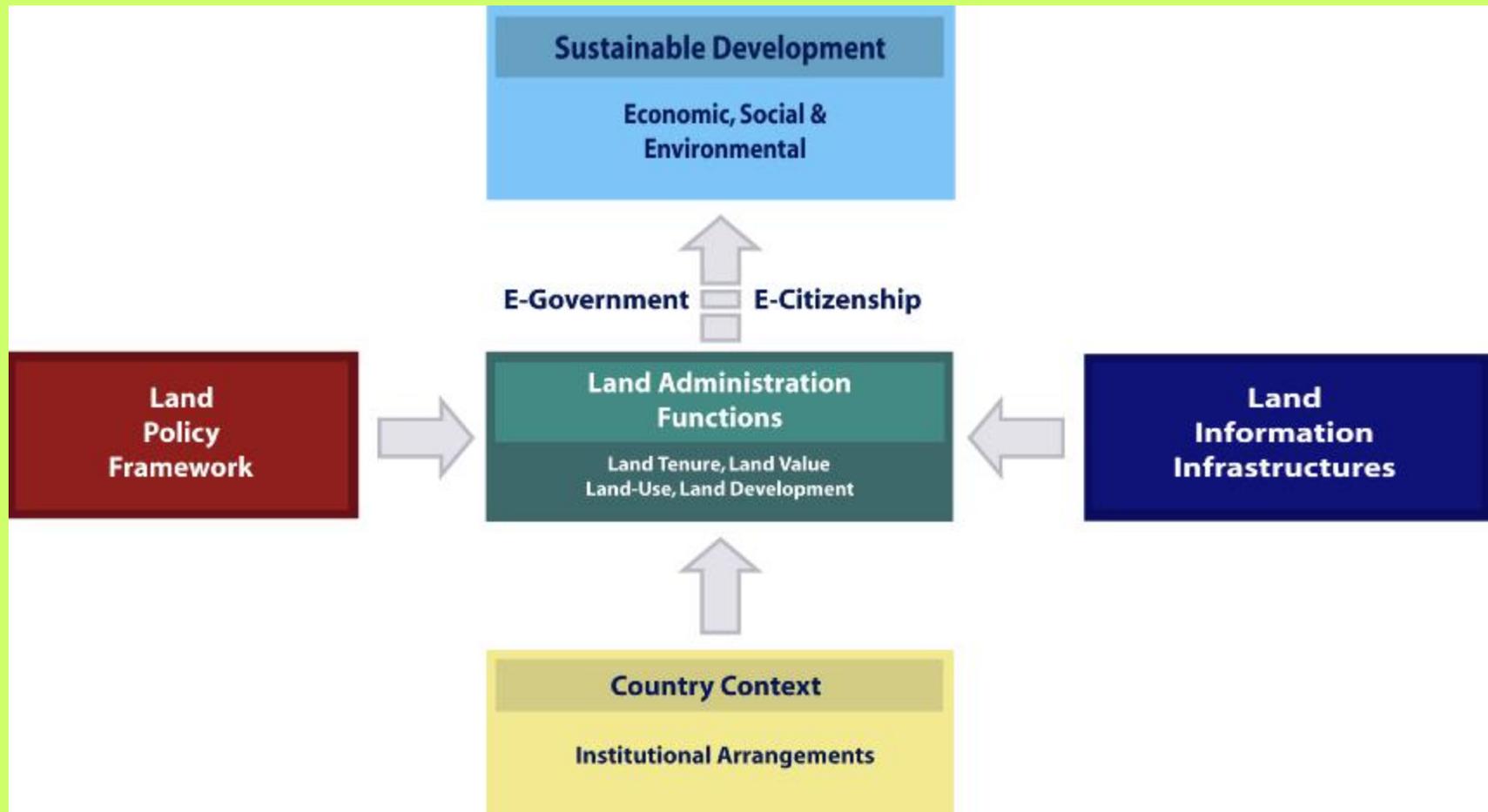
- Reflecting their countries of origin

- Changing to incorporate new demands

- Absorbing new technical opportunities



Universal Model of Land Management



Enemark, Williamson and Wallace, 2004



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LAND MARKETS

Land markets are dynamic and complex.

Administration systems are capable of supporting markets in more ways than we thought possible.

GIS and modelling will change the way we think.



Relationship between land, land administration and wealth creation

LAS is fundamental to the land market

De Soto and critics

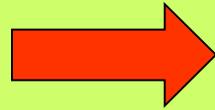
Modern LAS is supported by ICT, cognitive capacity of community and professional activity

Land objects in cadastral standardisation reflect simple commodities – *sale, parcellation, lease, mortgage*.

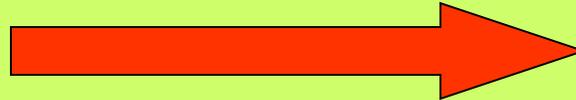
“owner-parcel-right” typology.

The challenge

Government
systems of
administration
support market
activities in



simple
commodities



highly geared and
complex commodities

Cadastral and LAS should support complex commodities with

- modeling of concepts
- dynamic ICT and
- open information access.

Land Market Stages

Stage

Preliminary Stages

Market Stages

1 →

Land

2 →

Land Rights

3 →

Land Trading

4 →

Land Market

5 →

Complex Commodities Market

Features

Societal Resources

Secure Tenures

Initial grants

Private Ownership

Land Transfer

Land securitisation

Dynamic Land Trading and Securitisation

Added Investment

Parcellation procedures

Financial Instruments

Dynamic trading in Complex Commodities

Secondary Securitisation

Corporatisation of Land Ownership

Wealth Acceleration

Result

Minimum Social Stability

Initial Resource Distribution

Resource Reallocation

Wealth Generator

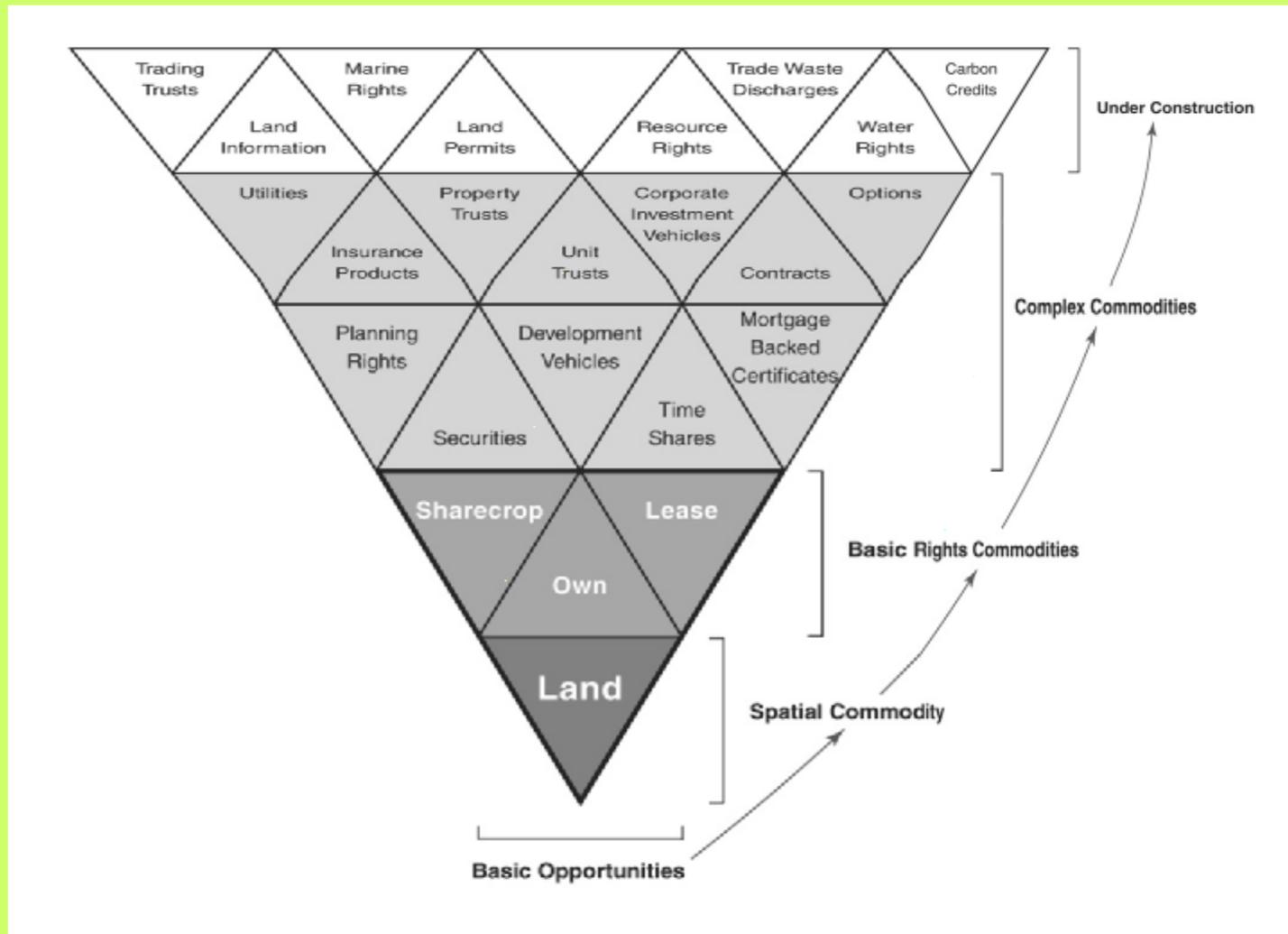
Multiplier Effect

Land Distribution

Simple Land Market

Mature Property Market

Development of Complex Commodities



Wallace and Williamson, 2004



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Concept modeling

is advanced for simple land objects.

The challenge is to ask what we really should be modelling?

The emerging commodities will not necessarily be physical objects.

Complex commodities may sit on top or outside of the model.
The relationship should be articulated.

The models should not close out capacity to service complex markets.



Benefits of using standardized data modelling techniques

- Capacity to deliver land information to government and business in organised way
- basis for flexible, efficient and comprehensive information systems
- data and information exchange across different systems without information loss, interpretation or specialist IT
- basis for system-independent tendering process (product- rather than method-oriented)
- quality checking and assurance
- long-time archiving
- especially suitable for federated states

Steudler 2004



Case Studies

Australian issues –

Water

Secondary Mortgage Market

Restrictions and Responsibilities



Water

Scarcity drives commodification.

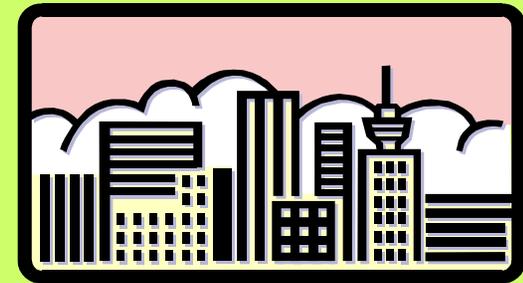
Australian attempts to create marketable water rights -

- **Conservative attempt:** Victoria
- **Aggressive attempt:** national vision for tradeable water rights separated from land and water use.

Management of commodity trading in Torrens registers ???

Secondary mortgage market

Abstract and detached commodification of securities by financial instruments

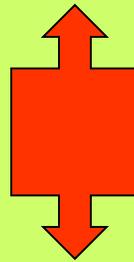


New standardisation techniques could allow cadastres and information they contain to be organised to support these markets.

Restrictions and Responsibilities

Land registries

traditional focus on **private rights**



Growth of public law

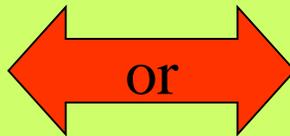
government controls over land

Restrictions and Responsibilities

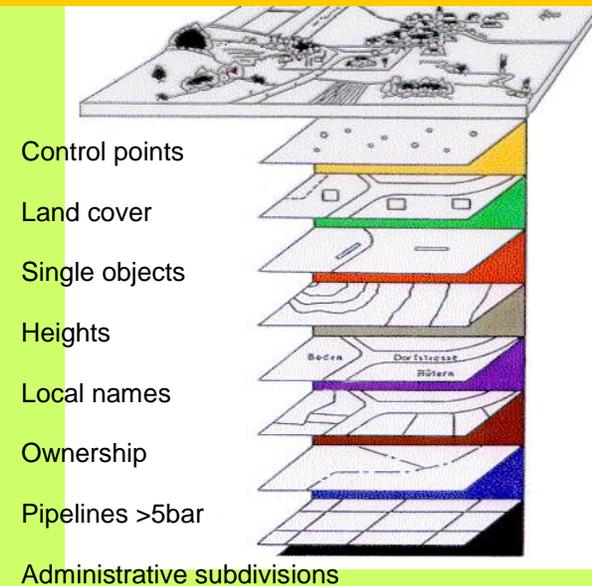
Range of solutions under development

**Inclusive
cadastre/land
registry**

Mixing public and
private interests



**Layering of information
using GIS and other
technology ...**



Stuedler, 2004

For policy makers

Technological opportunities are rapidly improving.

GIS focus is on matching people/activities/locations and presenting these in visually exciting and original ways.

Land registration systems contain vital information for government, and also for private sectors.

Conclusion -

Focus on management of narrow trading in simple commodities will change as technology meets the new markets.



For professionals

We need to assist the policy makers to understand why the cadastre as the vital layer of spatially enabled systems.

We must be prepared to use the cadastre in new and exciting ways.



We look forward to your continued assistance in building a national ICT enabled LAS for sustainable development

And applaud your vision for modular standards

Thank you

