



CADASTRE 2034

Powering Land & Real Property

Cadastral Reform and Innovation for Australia -
A National Strategy

Presented by Bill Hirst, Surveyor-General Australian Capital Territory
and Sponsor Permanent Committee on Cadastre, Intergovernmental
Committee on Surveying and Mapping



Background	Looking to the Future	Enduring Principles	Goals and Actions	Enablers	Invitation to Comment
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Presentation Outline

- Background to Cadastre 2034
- Looking to the Future
- Enduring Principles
- Goals and Actions
- Strategic Enablers
- How you can shape the future



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What is Cadastre 2034

- A draft strategy that reflects the position and deliberations of ICSM
- Anticipates future community requirements of the cadastre in 2034
- Purpose of draft is consultative
- Broader community input needed
- Outcomes will require a collaborative effort



IMPORTANTLY: Cadastre 2034 builds on Cadastre 2014

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Cadastre 2014

- ‘A vision for a Future Cadastral System’ published in 1998
- Used as a reference in many countries; 25 languages (Stuedler, 2006)
- Demonstrates the need for direction

- Australia / New Zealand have developed as predicted by Cadastre 2014
- Cadastre 2014 success highlights a need
- Projecting best practice as attainable goals
- Need to be truly international
- Expanding the role of cadastral information beyond land administration

Cadastral 2014 Vision Statements

1. Cadastral 2014 will show the complete legal situation of land, including public rights and restrictions.
2. The separation between maps and registers will be abolished.
3. Cadastral mapping will be dead, long live modelling.
4. Paper and pencil cadastral will have gone.
5. Cadastral 2014 will be highly privatised. Public and private sector are working closely together.
6. Cadastral 2014 will be cost recovering.

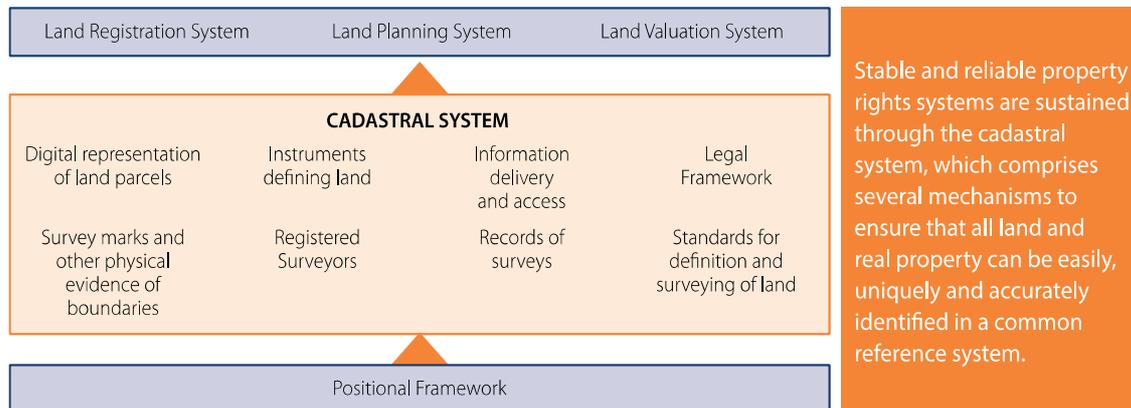
- Statements 1 & 2 refined but remain highly relevant – address all RORs with flexibility to accommodate different systems
- Statements 3 & 4 combined and adapted to include 3D and presentation of wider range of RORs
- (Statements 5 & 6 largely achieved in Australia)

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What is a Cadastral System

The cadastral system defines and records the location and extent of property rights, restrictions and responsibilities.



Why is the Cadastral System Important

- Foundation for land tenure transactions and securing the legal status of properties
- \$1.3 trillion of mortgages secured (2013)
- Total value of real property \$4.7 trillion
- Size of economy is \$1.5 trillion
- 1% improvement in ROI is \$4.7 billion



The cadastral survey and land registration systems allow people, businesses and government to leverage and manage this huge national asset base of \$4.7 trillion

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Why develop Cadastre 2034

- Meet future community expectations
- Investment certainty and economic sustainability
- Alignment of State, Territory and NZ strategies
- Consistent approach to policies, legislation, models and research
- Clear direction for sector as a whole
- Accelerate collective efforts in the national interest
- Accept each jurisdiction has own unique starting points



The modern cadastre we know today will not fulfill community expectations in the future; we can already see a gap emerging between what we have and what will be needed

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Anticipating 2034

- By 2034 the Cadastre will:
 - underpin new industries
 - leverage new technologies/capabilities
 - Manage our increasing vertical lifestyles
 - provide accuracy for personal positioning
 - be integrated with RRR
 - embrace crowdsourced data
 - Be integrated supply chains



Our tools will become smaller, faster and be more powerful and the cadastre will evolve as an integrated knowledge-base that can be leveraged creatively

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Vision

“A cadastral system that enables people to readily and confidently identify the location and extent of all rights, restrictions and responsibilities related to land and real property.”

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Enduring Principles

- Certainty in the spatial extent of ownership
- Uniquely defined land (property) that is common to all registers
- Integrity and security of the parcel boundary system
- Strong relationship between regulators and the industry
- Appropriate regulatory standards



These enduring principles are the lens through which ICSM will view new innovations

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Goals

Goal 1: A cadastre that is fundamental to land ownership and managed sustainably

Goal 2: A cadastre that is multipurpose, accessible, easily visualised and readily understood and used

Goal 3: A broader cadastre integrated with legal and social interests on land

Goal 4: A digital representation of the cadastre that is 3-dimensional, dynamic and survey accurate

Goal 5: A federated cadastre based on common standards

The goals encompass how we design, organise, access, operate and leverage the cadastral system of the future.

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Goal 1: Sustainably Managed

To increase the efficiency and effectiveness of the cadastre and preserve it as a resource for future generations.



Actions:

- Optimise supply chains and automate processes
- Keep abreast of new technology
- Develop sustainable business models
- Invest in public private partnerships
- Engage with the community

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Goal 2: Accessible and Easily Leveraged

Maximise the potential of the cadastre by creating more options for its use.



Actions:

- Enable use in multiple environments
- Customer-centric value streams
- Serve direct to portable devices - anyone, anywhere, anytime
- Improve discoverability with semantic web
- Make data reliability clear for informed use
- Investment framework to stimulate new industry

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Goal 3: Integrated RRR

Integrate the cadastre with land-related rights, restrictions and responsibilities so that people can make wise decisions about land.



Actions:

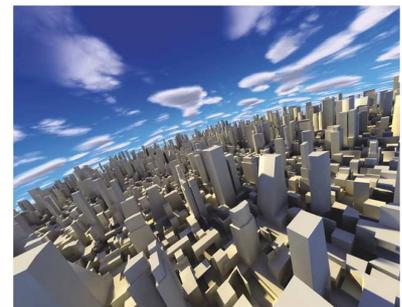
- Include *de facto* and *de jure* rights and interests
- Develop standards to:
 - Capture fuzzy boundaries
 - Accurately depict RRR
 - Describe the dynamics of RRR
- Develop automated tools for vertical theme integration

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Goal 4: Represents Real World

Incorporate survey accurate, time series, and height data to capture the complexity of our environment



Actions:

- Develop tools and standards to manage, transfer and visualise 3-4D data
- Improve positional accuracy of digital cadastre
- Align legislation with 3D cadastre
- Improve integration of vertical datum
- Professional Development

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Goal 5: Unified Operation

Operate in the national interest to deal with local, cross-jurisdictional and global challenges



Actions:

- Data Access Framework for consolidated view of cadastre
- Agreed policy direction and governance
- Harmonised data management
- Standards to facilitate discoverability
- Better understand industry and community needs, nationally

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Strategic Enablers

- Unified vision
- Foundation Spatial Data Framework
- Geodetic strategy for dynamic datum
- National Collaborative Framework
- Adoption of standards and guidelines
- Industry and community partnerships
- Strategic approach to research



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University of Melbourne

- Enabling 3-dimensional cadastres through world class research



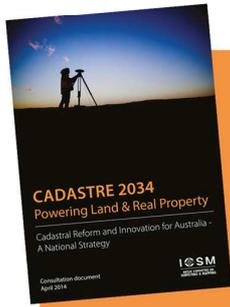
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Shaping the Future Together

- Invitation to Comment
 - Do you agree with our view?
 - Do you support the enduring principles we espouse?
 - Are we moving in the right direction?
 - Do our goals and objectives reflect your own aspirations?
 - What can you (or your industry) contribute?
 - Do we have your support?



Find Out More



Download the document
www.icsm.gov.au



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Thank you
 I look forward to your involvement

Questions



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