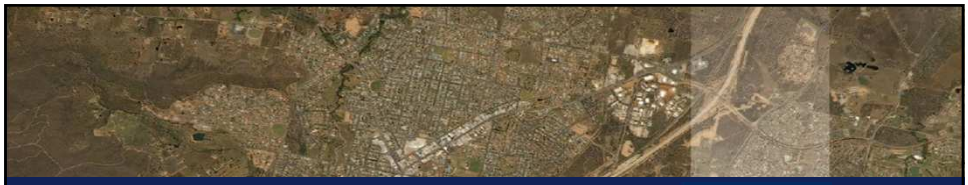


Towards Spatially Enabled Societies

The impact of "Cadastre 2014" in relation to Spatial Data Infrastructure (SDI)

Abbas Rajabifard
Director, Centre for SDIs and Land Administration
Head, Department of Infrastructure Engineering
The University of Melbourne

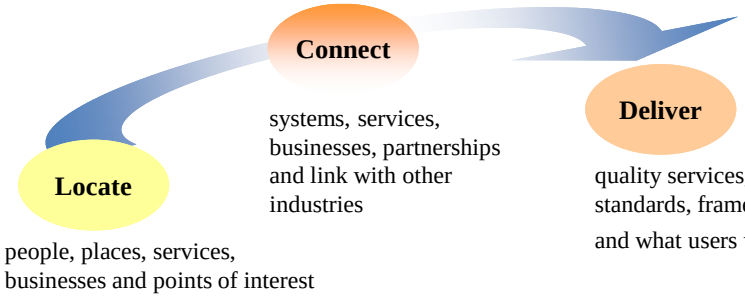
Cadastre 2014

…Cadastre 2014 provided a **simple** yet **effective framework** for supporting the evolution of cadastral systems for the future. It established a set of universal principles that all countries could work towards.

On the event of its **twentieth year** since conception, I wish the driving team the very best and continued success in its endeavours.

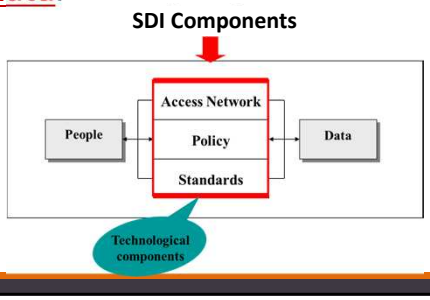
A Value Chain Enabled by an SDI

SDIs have emerged as both a **fundamental network infrastructure**, as well as an **enabling platform** to help achieve the vision of a spatially enabled society as it aims to connect **people** to **data** to facilitate decision-making.



SDI and Cadastre 2014

- **Bogor Declaration**, it was inevitable that ***Cadastre 2014*** would impact upon **SDIs** as well.
- The emphasis of ***Cadastre 2014*** on **information integration** and shifts in **collaboration dynamics** across stakeholders carved a greater role for **SDIs** in connecting **people** and **data**.



SDI and Land Administration

SDIs together with **land administration**, can provide the unique ability to produce important and fundamental information about the **places people create and use** –

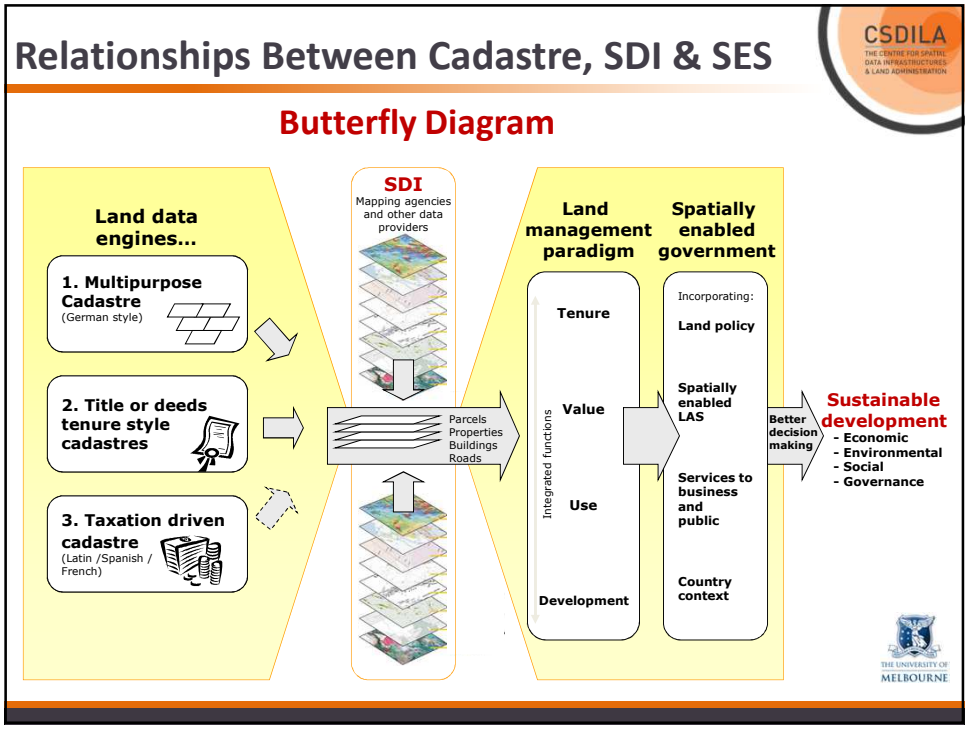
the cornerstone for supporting the development of a **spatially enabled information environment**.

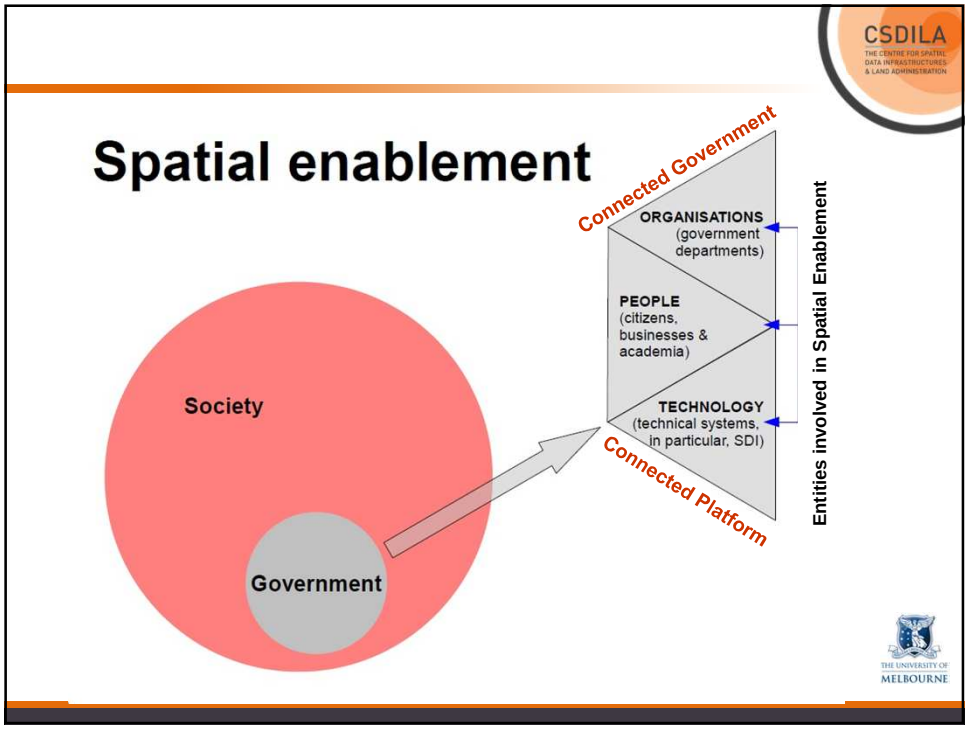
Spatially Enabled Societies

Spatially Enabled Societies has been driven by -the **cadastre** providing a foundation in land and property information and

SDIs providing an enabling platform for facilitating location-based information and services;

..together, they present a powerful paradigm for building capacity for addressing the global agenda and achieving sustainable development goals.


Relationships Between Cadastre, SDI & SES
CSDILA
Butterfly Diagram
Land data 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
Parcels
Properties
Buildings
Roads
Land management paradigm
Tenure
Value
Use
Development
Integrated functions
Spatially enabled government
Incorporating:
Land policy
Spatially enabled LAS
Services to business and public
Country context
Better decision making
Sustainable development
- Economic
- Environmental
- Social
- Governance
THE UNIVERSITY OF MELBOURNE


CSDILA
Spatial enablement
Connected Government
ORGANISATIONS
(government departments)
PEOPLE
(citizens, businesses & academia)
TECHNOLOGY
(technical systems, in particular, SDI)
Connected Platform
Entities involved in Spatial Enablement
Society
Government
THE UNIVERSITY OF MELBOURNE

Enhanced Evidence Based Decision Making

25 Smith Street = -35.5676, 135.6587

Address	25 Smith Street
Purpose	Residential
Damage	75%
Date	10/01/2011
Event	Flood
Floor Height	0.8 metres
Value	$210,000
Population	4
Assistance	Required

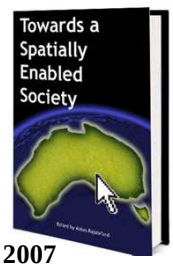
Detailed evidence base to inform decision making

Targeted Government assistance

Fundamental location data

(Pigram & Scott 2011)

Spatially Enabled Societies



2007

2010

2012

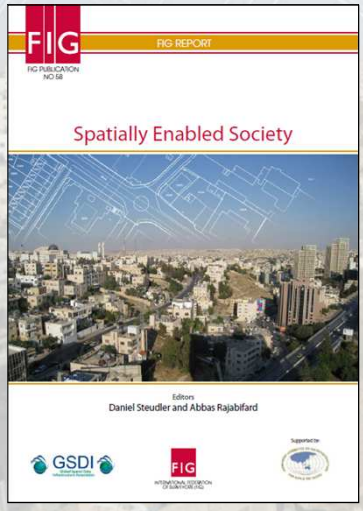
2013

SES is now part of the objectives of governments in many countries, highlighting the importance of spatial information and strategies in policy development and decision-making in the public sector.

SES and Cadastre 2014

«Spatially Enabled Society»

Steudler and Rajabifard, editors, 2012 FIG Publication **no**. **58**



Editors and Contributing Authors

Daniel Steudler, Switzerland
Swiss Federal Office of Topography swisstopo.

Abbas Rajabifard, Australia
Professor and Head of Department of Infrastructure Engineering and Director of the Centre for SDIs and Land Administration at the University of Melbourne.

Serene Ho, Australia
PhD candidate at the Centre for SDIs and Land Administration, University of Melbourne, Australia

Jürg Kaufmann, Switzerland
senior advisor in cadastre, land management and NSDI, active in Switzerland and abroad.

Paul van der Molen, The Netherlands
professor of cadastre and land administration at the University Twente Faculty ITC, former head of Kadaster International.

Jude Wallace, Australia
property lawyer active for global and national policies to support land information and administration systems.

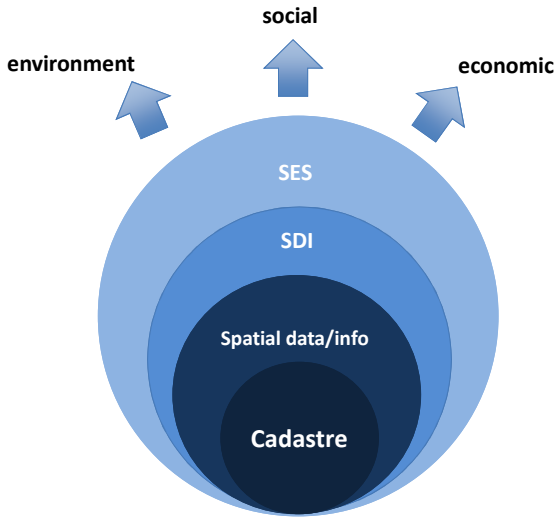
Matt Higgins, Australia
Manager of Geodesy and Positioning, Department of Environment and Resource Management, Queensland Government.

Robin McLaren, United Kingdom
director of consulting company Know Edge Ltd.

Six Key Elements for a SES

- **Legal framework** for basic geoinformation;
- **Common Data integration concept:**
  - legal and institutional independence of information (to allow for independent responsibilities);
  - common geodetic reference framework;
  - standardized data modelling concept;
- **Positioning infrastructure** for the common reference framework;
- **Network infrastructure** to enable integration and sharing of spatial data through the spatial data infrastructure SDI;
- **Landownership information** as one of the basic information topics;
- **Data and information:**
  - official, authentic, complete, comprehensive, updated;
  - accessibility of data i.e. public sector information initiatives;
  - volunteered geographic information (VGI), web 2.0 possibilities.

Sustainable Development

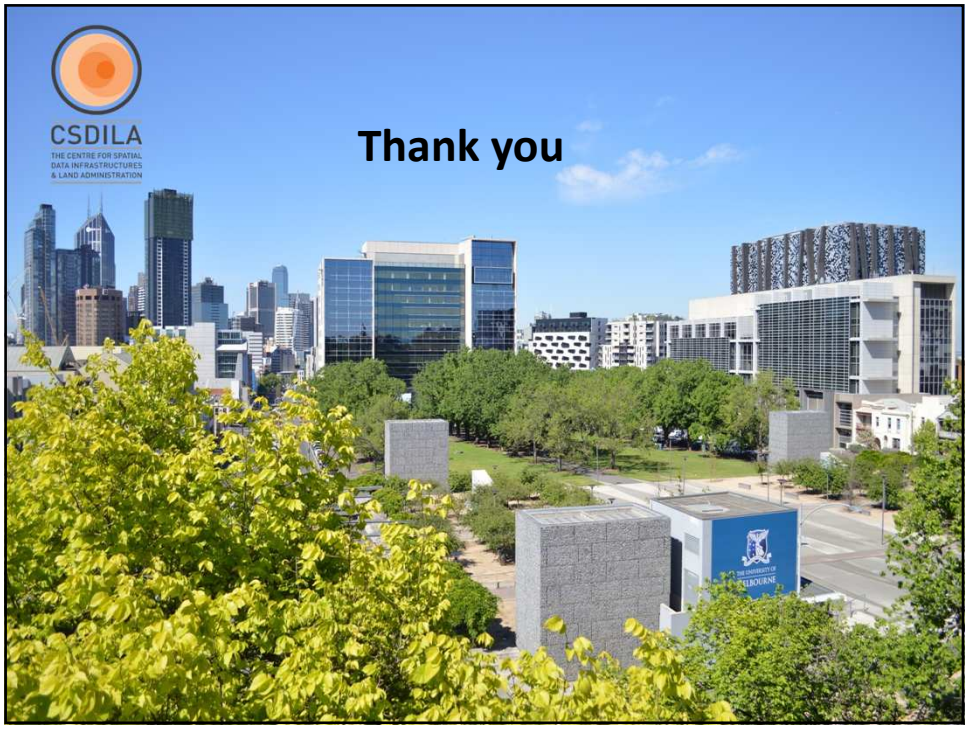


Conclusion

Cadastre 2014 has been an important platform in **helping to shape the future of SES**;

.. in particular, in shaping the **cadastre as a foundation** for modern **LAS** and as an important component for **SDI** and the basis for the delivery of **SES**.

www.csdila.unimelb.edu.au


CSDILA
THE CENTRE FOR SPATIAL DATA INFRASTRUCTURES & LAND ADMINISTRATION
Thank you