3rd Land Administration Forum on
Re-Engineering cadastre to support E-Government

SDI, Cadastre and Spatially Enabled Society

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Introduce a new Vision "Spatially Enabled Society" - A Scenario for the Future (explain SDI design, issues and trends and relationship between Cadastre/land Administration and SDI to support this vision).
Spatial Enablement – Experiences & Activities

- Centre for SDIs and LA
- Victorian State
- GSDI 11 Conference 2009, NL
- SEG Working Group
- Victorian Spatial Strategy 2008-2010
- UN Resolution 2006
- PCGIAP
- GSDI Association
- Convergence theme
- Victorian Spatial Council
Sustainable Development

LA

SDI
• Spatial Information can be a unifying medium – linking solutions to location.

• User demand has shifted to seeking improved services and delivery tools. This will be achieved by creating an environment so that we can:
  
  **Locate**
  
  people, places, services, businesses and points of interest
  
  **Connect**
  
  systems, services, businesses, partnerships and link with other industries
  
  **Deliver**
  
  quality services, standards, frameworks and what users want.

(VSIS 2008)
Ready and timely access to spatial information – knowing where people and assets are – is essential for the creation of wealth in any jurisdiction.

It is a critical tool for making informed decisions on key economic, environmental and social issues.
Spatial Data Infrastructure

...is an integrated, on-line mechanism to deliver spatial data and services and information for applications, better business and policy decision-making, and value-added commercial activities.

- **Components** - collection of people, policies, networked datasets and enabling technologies and services.
• Many groups working on same problem at different levels on the hierarchy.
• Success depends on intra- and inter- jurisdictional cooperation between individuals and agencies.
Significance of the Cadastre

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

(Cadastral engines...)

SDI: Mapping agencies and other data providers

Land management paradigm

Parcels
Properties
Buildings
Roads

Tenure
Value
Use
Development

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

(Upcoming book in LAS, Williamson, Enemark, Wallace and Rajabifard, 2009)
Incorporating sustainable development objectives into ICT enabled land administration systems

(Adopted from Enemark, Williamson and Wallace, 2004)
Continuum of SDI Development

1st Generation
- Developed Countries
- Emerging Economies
- Developing Countries

2nd Generation
- Developed, Emerging and Developing Countries

Towards the Next Generation
- Delivery of a Virtual Environment in support of spatial enablement of society as part of an e-government strategy

Product-Based SDI development model
- National/Federal Government Influence – Data Focus

Process Based SDI development model
- National, Sub-national Govt. and Private Sector Influence – Process Focus

Sub-national Govt. and Private Sector Influence – Strategic National focus

• **Increase effectiveness**
  – Better access (reduce barriers)
  – New services
  – Exploit data better
  – Get data on time
  – Avoid duplication of data

• **Increase efficiency**
  – Avoid duplication of effort
  – Avoid duplication of infrastructure
  – Commodity access arrangements
Spatial Information in Society

Spatial enablement of society and government

Spatial information policy

SDI & LA

Spatial Data layers

Objects
Spatially Enabled Society – A Scenario for the Future

The ‘spatial enablement’ can reshape our lives.
Spatial enablement can contribute to dealing with the challenges we face as a society. At the same time, however, it brings its own challenges.

- Expanding government services — ‘consultation & participation’
- Policy & Administration
- Public Safety
- Utilities
- Health
- Sustainability and our environmental footprint
- Land Administration
- The economics of production
- Consumption and choice
Spatial Information - past, current, future

Past
- Paper Maps
- Centralized archives
- Isolated Computing stations
- Lack of Collaboration

Current
- Digital data
- Web-based applications
- Distributed services
- Multi-disciplinary applications
- Computer networks
- Internet GIS
- Remotely-sensed data
- ICT advancements
- No standardization

Future
- Effective databases
- Integrated data management
- Others

Achievement

Time
Every country has its own journey.
The setting, application and enforcement of rules that determine how a group works together to achieve common goals.

The role is to **glue** together the technology, organizations and information that comprise an SDI.

Processes and institutions to define and manage agreed policies, technologies, standards, practices, protocols & specifications and to monitor the SDI.
Mapping Common Paths to achieve the Vision

To assist in collaborative mapping of possible re-usable common paths to a shared vision:

- Requires collective action
- Different groups working on different parts of the problem
- Together pieces provide potential paths to realising vision
- Knowledge managements is required
- Treated as integral part of SDI

Enables the past to be leveraged to achieve a future vision.
Roadmap to Effective eGovernment
The Connected Government Model

Stage 0
Content Everywhere
- Paper based
- Looking for content
- Time intensive
- High risk

Stage 1
Capture, Store, and Retrieve
- Federated search
- Digitize/scan
- Index
- Access security
- Archiving

Stage 2
Manage Process and Risk
- Workflow
- Integration
- Collaboration
- Dashboards/visibility
- Process management
- Compliance and archiving

Stage 3
Enabling Constituents
- Secure portal
- Electronic transactions
- Integrated processes and systems
- Output management
- Information rights management

Process Enablers
Physical
File Cabinets and "Z Drives"

Base
Content Repository

Enterprise
Shared Content Services

Extended
Citizens, Businesses, Employees, and other Government Entities

EMC Corporation (2009)
Thank you