



An overview of SDI activities

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Presentation

- Considers

- The NSDI phenomenon
- The nature of NSDIs
- The evolution of the NSDI concept
 - From first to second generation
 - Toward a hierarchy of SDIs
- Some key strategic issues associated with NSDIs

The NSDI phenomenon - 1

■ Landmarks

- 1986 Australian ALIC set up
 - To coordinate the collection and transfer of land related information between the different levels of government
- 1990 US FGDC set up
 - To coordinate the development, use, sharing and dissemination of surveying mapping and related spatial data
- 1993 MSC report on ‘Toward a coordinated spatial data infrastructure for the nation’

The NSDI phenomenon - 2

■ Landmarks

- 1993 Creation of EUROGI
- 1994 Clinton Executive Order 12906
 - Coordinating geographic data acquisition and access: the National Spatial Data Infrastructure
- 1996 First Global Spatial Data Infrastructure (GSDI) Conference in Bonn, Germany

The NSDI phenomenon - 3

■ Landmarks

- 1999 My first generation of NSDIs paper
 - 11 nations identified up to 1996 as implementing NSDIs
- 1998-2000 53 countries respond to GSDI survey
- 2002 120 countries considering SDI projects (ie more than half the countries in the world)

GSDI survey findings

- 53 countries(?) reporting NSDI progress
- Geographical spread
 - Europe - 13
 - Americas - 21
 - Asia and the Pacific - 13
 - Africa - 6

What is a SDI?

- The GSDI definition

- “The Global Spatial Data Infrastructure supports ready global access to geographic information. This is achieved through the coordinated actions of nations and organisations that promote awareness and implementation of complimentary policies, common standards and effective mechanisms for the development and availability of interoperable digital geographic data and technologies to support decision making at all scales for multiple purposes.”

Four main components

- Overriding objective to maximise the use of national geographic information assets
- This requires some form of coordinated action on the part of government
- It must be user driven 'to support decision making at all scales for multiple purposes'
- This involves a wide range of activities including technical and institutional matters and human resource development

The first generation 1986-1996

- Australia Australian Spatial Data Infrastructure
- Canada Canadian Geospatial Data Infrastructure
- Indonesia National Geographic Information Systems
- Japan National Spatial Data Infrastructure
- Korea National Geographic Information System
- Malaysia National Infrastructure for Land Information Systems
- Netherlands National Geographical Information Infrastructure
- Portugal National System for Geographic Information
- Qatar National Geographic Information System
- U K National Geospatial Data Framework
- US National Spatial Data Infrastructure

Common features

- Explicitly national
- Refer to geographic information, geospatial data or land information
- Use terms such infrastructure, systems or framework

All shapes and sizes

- Variations in size and population
 - US 1000 times the size of Qatar
- Differences in wealth
 - Both developed and less developed countries
- Contrasting systems of government
 - Federal systems with varying degrees of devolution of responsibilities for GI
 - Non federal systems where most of GI responsibilities dealt with centrally

Driving forces

- Growing importance of geographic information within an information society
- The need for governments to coordinate data acquisition and availability
 - ‘GI is crucial to promote economic development, improve our stewardship of resources and to protect the environment’(Clinton Executive Order)
- Other factors
 - Opportunities created by recent technological developments eg WWW and LBS
 - Need to modernise government at all levels

Key elements

■ Co-ordination

- Given the large number of data sets produced by different producers at different times for different purposes

■ Core data sets

- Given the need for a common framework of core reference data sets

■ Metadata

- Given the need to be able to find out what data exists and what format is used and what is its currency

NSDI status and scope

■ Status

- Legal mandate - Portugal and the USA
- Outgrowth of existing coordination activities - Australia and the Netherlands

■ Scope

- Range of interests - broad (USA) narrow (Malaysia)
- Stakeholder representation - central government (USA), public sector (Australia), multi sector (Canada)

The second generation 2000-

- Shift from product to process model
 - From data producers to data users
 - From database creation to data sharing
 - From centralised to decentralised structures
- Shift from formulation to implementation
 - From coordination to leadership
 - From single to multi level participation
 - From existing to new organisational structures

Towards a hierarchy of SDIs

- Global and regional SDIs
 - Global and regional forums for collaboration and the exchange of ideas and experiences
- National SDIs
 - Strategic initiatives concerned with the management of national information assets
- Local SDIs
 - Municipal and provincial initiatives concerned with the operational needs of day to day decision making

Strategic questions

- How long will it take to create an effective SDI?
- How much will it cost and who is going to pay for it?
- What is the connection between NSDIs and eGovernment?
- What cultural barriers must be overcome during NSDI implementation?

How long will it take?

- A long term rather than a short term task
- An exercise in capacity building and organisational cultural change
- An evolving process: major changes likely over time - the British experience
- Dependent on the national institutional context - facilitates implementation in Australia, inhibits it in the USA

How much will it cost?

- Vary considerably from country to country
 - Relatively self financing in Australia because of close links between mapping and cadastral activities at the state level
 - Shared costs model in the Netherlands
- Costs of coordination and metadata services relatively small by comparison with core database creation

What is the connection between NSDIs and eGovernment?

- NSDIs an important component of eGovernment
- Economic potential of public sector information increasingly recognised
- Geographic information policy increasingly part of national and international information policy - eg EU Public Sector Information Directive

What cultural barriers must be overcome?

- Data producers
 - Shift from natural monopolies to competitive markets likely to require regulation to ensure a level playing field
- Data users
 - Data sharing requires organisations operating collectively with others at both the horizontal and vertical levels

Summary

- Presentation considered
 - The NSDI phenomenon
 - The nature of NSDIs
 - The evolution of the NSDI concept
 - From first to second generation
 - Toward a hierarchy of SDIs
 - Posed some key strategic questions associated with NSDIs