

Assessing an SDI from an organisational perspective

Bastiaan van Loenen

b.vanloenen@tudelft.nl

Presentation based on:

Kok, B.C. and B. van Loenen, How to assess the success of national spatial data infrastructures? CEUS 19 pp. 699-717 (2005) &

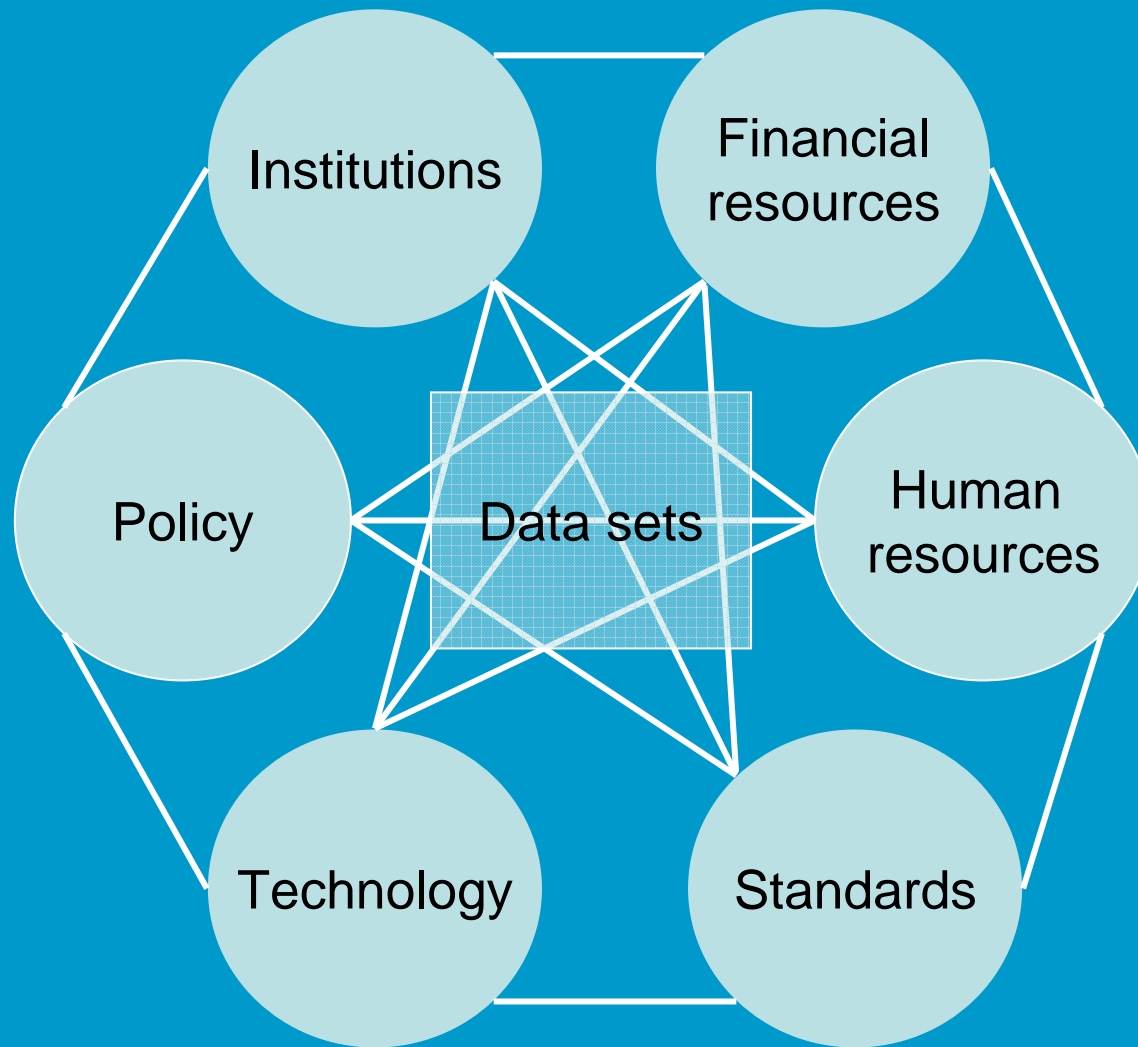
B. van Loenen, Developing Geographic Information Infrastructures; the role of information policies (2006)

Overview

- Motivation
- Institutional GII development
- Institutional components explained
- Four stages of institutional development
- Suggested ways to assess other components

Motivation

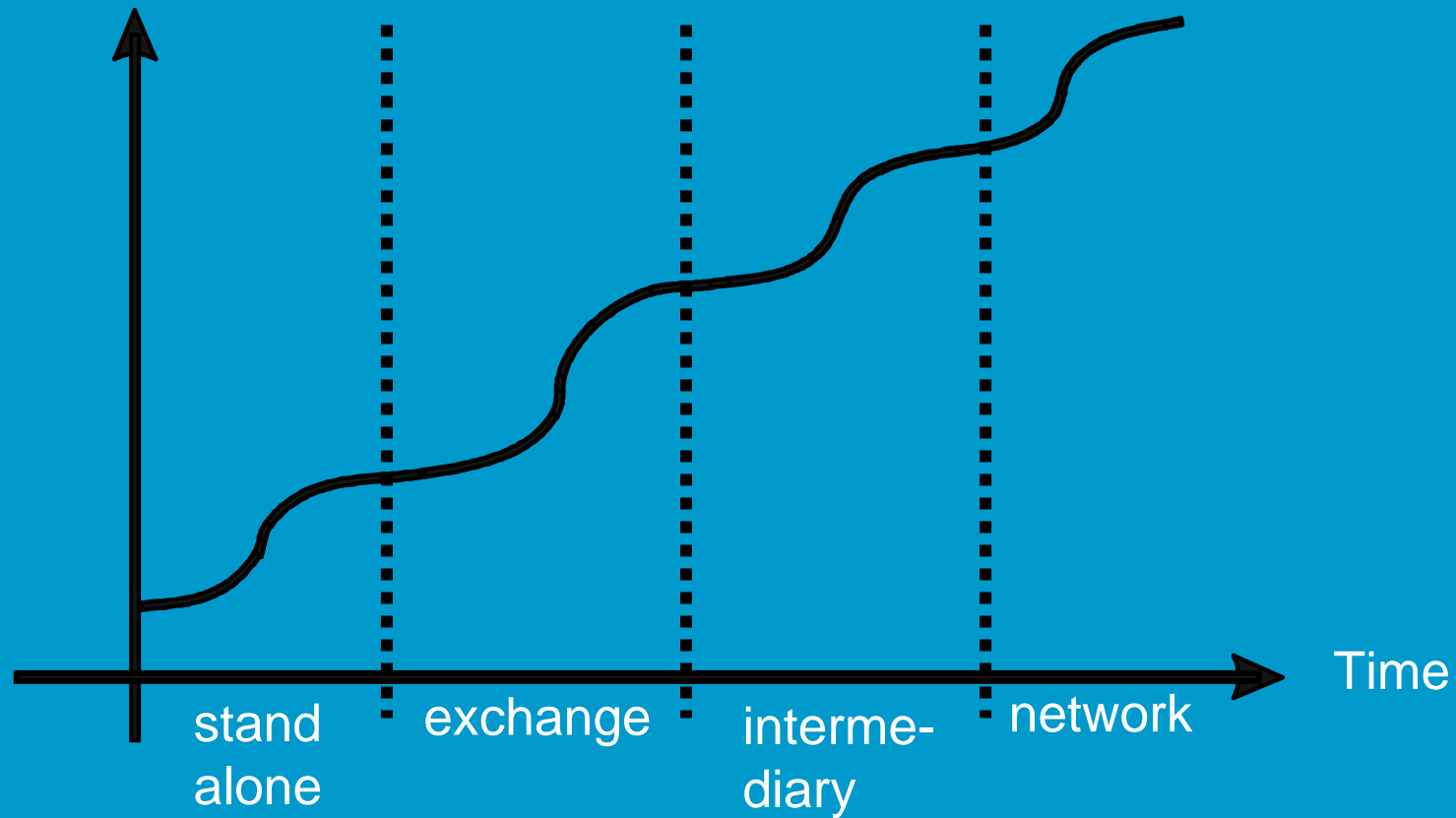
- Literature on organisational SDI assessment scant in 2002
- Technical oriented literature addressed organisation as a stable non-moving factor
- How to assess the success of an SDI from an organisational perspective?
- Developed a 'framework' to:
 - enable comparison between SDIs
 - better understand differences between SDIs



GII maturity matrix

- Four stages
- Four key aspects

GII-development



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Institutional key aspects

- Identification of stage of GII development through characteristics of institutional components:
 - leadership
 - vision
 - communication channels
 - self-organising ability of sector

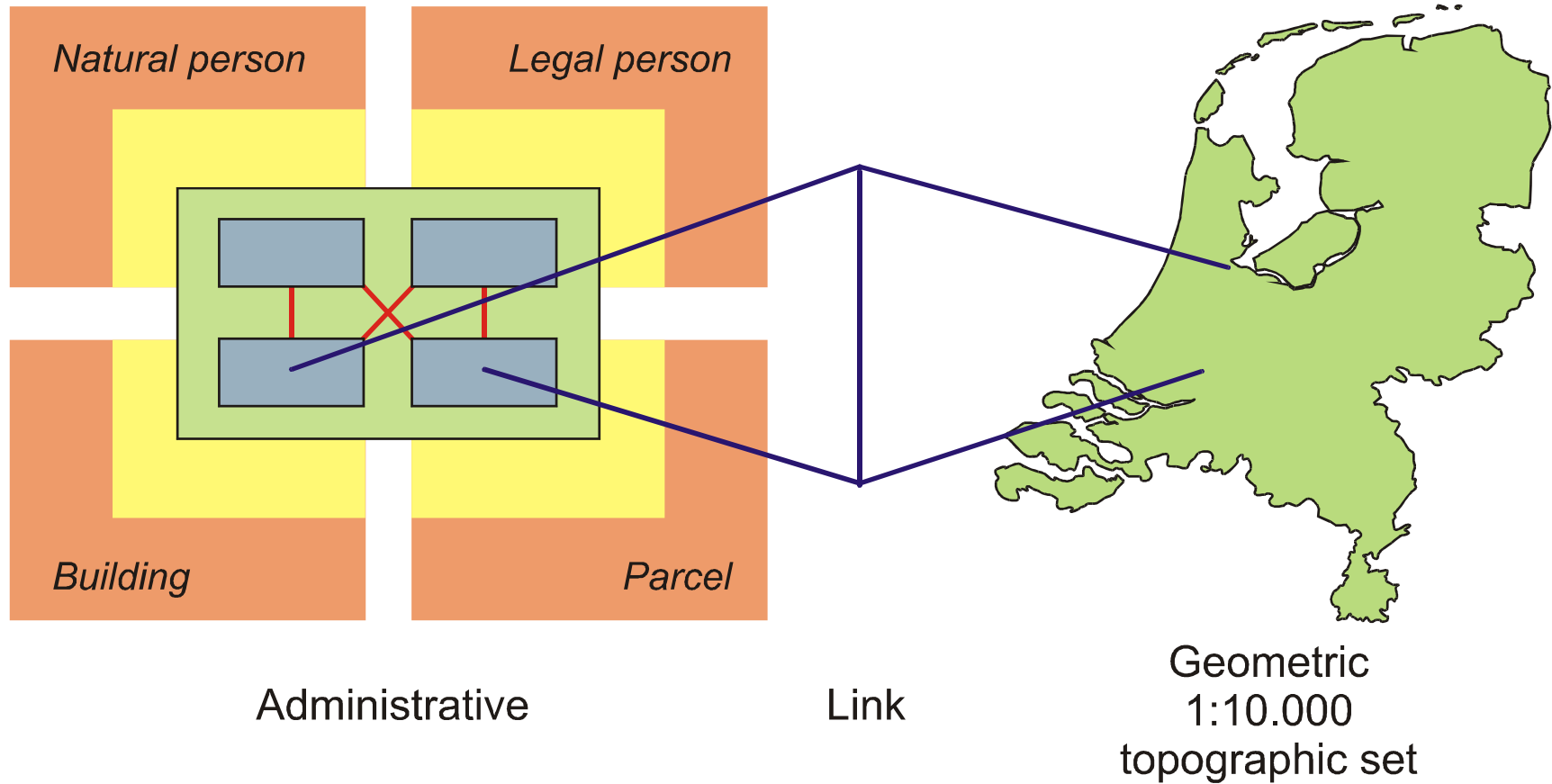
Leadership

- An entity which promotes and coordinates the development of a GII
- A 'problem' owner, or a champion

Vision

- A needed or beneficial future situation

Structure Plan Land Information (1992)



Communication channels

- The means that enable “the exchange of thoughts, messages or information” (Webster)
- Non-technical: who is part of/ contributes to the SDI ‘community’

Self-organising ability

A process in which parties in a system spontaneously interact, communicate, give interpretation to events, and through cooperation create new solutions
(Boonstra, 2000)

Four stages of development

- Stand-alone
- Exchange
- Intermediary
- Network

Stand-alone stage

- Islands of organisations: internalism/ departmentalism



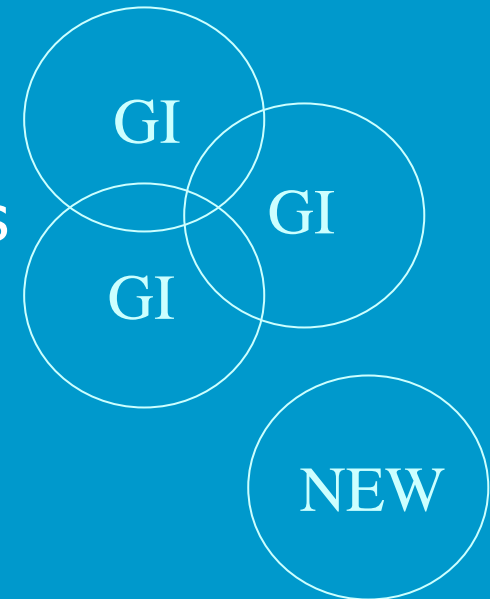
Organisational maturity matrix

Stage \ Aspect	Stand-alone	Exchange	Intermediary	Network
Leadership	Focus on individual organisation			
Vision	Focus on individual organisation			
Communication	Focus on individual organisation			
Self-organising ability	Passive problem recognition			

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Exchange stage

- Technology/ dissatisfaction with current situation:
 - efficiency (outsourcing)
 - multi-disciplinary solutions
- Cooperation = interdependency increases



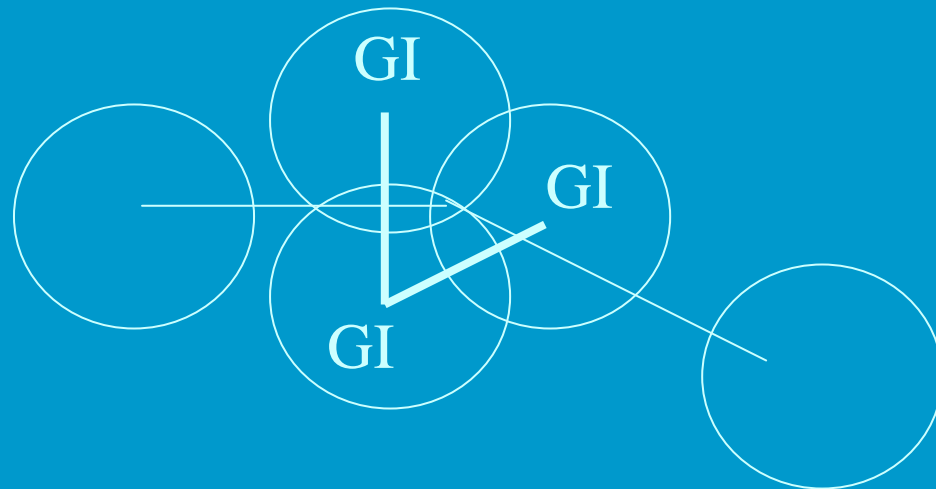
Organisational maturity matrix

Stage \ Aspect	Stand-alone	Exchange	Intermediary	Network
Leadership	Focus on individual organisation	Questioned		
Vision	Focus on individual organisation	Developed		
Communication	Focus on individual organisation	Open between public parties		
Self-organising ability	Passive problem recognition	Neutral		

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Intermediary stage

- Public sector focused on core tasks
- Increased interdependency
- Potential of information for value-added use acknowledged



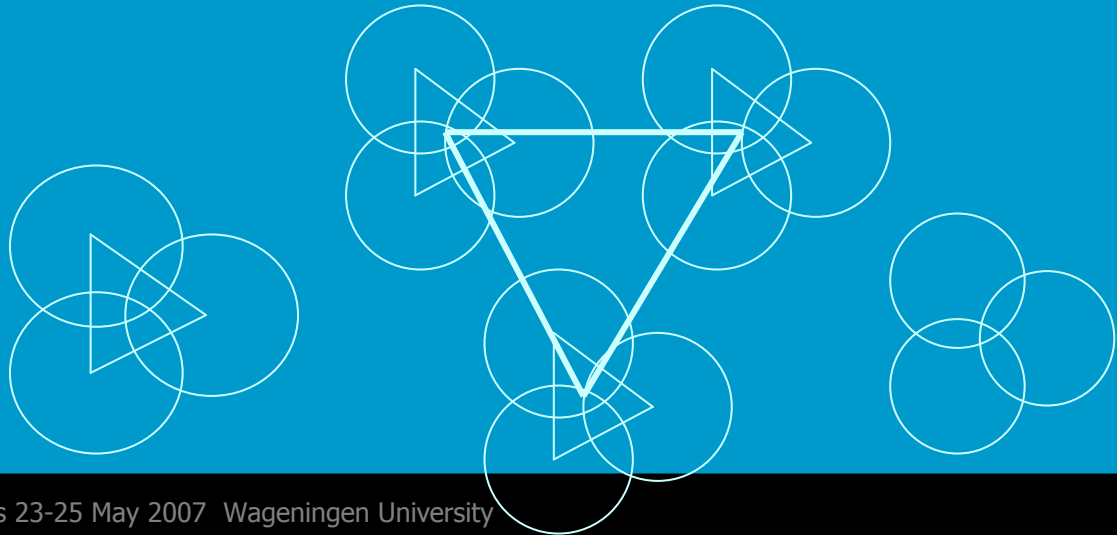
Organisational maturity matrix

Stage \ Aspect	Stand-alone	Exchange	Intermediary	Network
Leadership	Focus on individual organisation	Questioned	Accepted	
Vision	Focus on individual organisation	Developed	Implemented	
Communication	Focus on individual organisation	Open between public parties	Open between all stakeholders	
Self-organising ability	Passive problem recognition	Neutral	Actively addressing identified issues	

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Network stage

- Institutionalisation of the interdependencies
- Broad support for GII
- Driver is use: virtual organisations which temporarily build on the framework the GII provides



Organisational maturity matrix

Stage \ Aspect	Stand-alone	Exchange	Intermediary	Network
Leadership	Focus on individual organisation	Questioned	Accepted	Respected
Vision	Focus on individual organisation	Developed	Implemented	Commonly shared
Communication	Focus on individual organisation	Open between public parties	Open between all stakeholders	Open and interactive between all
Self-organising ability	Passive problem recognition	Neutral	Actively addressing identified issues	Actively working on innovation

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Additional institutional indicators

- Level of awareness for GI(I)
- Sustainability of resources

Assessing the access network

Stage \ Aspect	Stand-alone	Exchange	Intermediary	Network
Delivery mechanism	Project	Product portal (geo-portal)	Clearinghouse	Clearinghouse with service provision
Publication of a dataset	Not	Limited metadata on provider's website	Metadata in a clearinghouse	Information and services directly available from clearinghouse

Critiques

- SDI strategy to move from one stage to another unaddressed
- When does one stage end and the other start?
- Stages have vaguely described

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