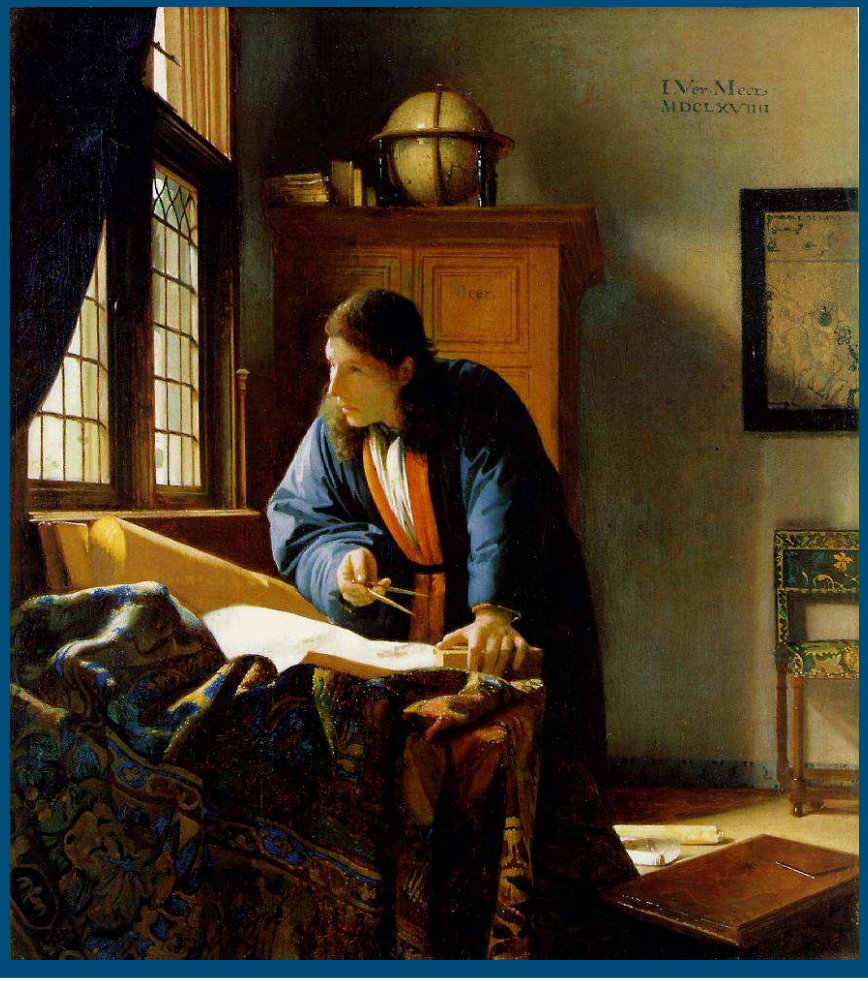
Multi-view framework to assess (National) Spatial Data Infrastructures



Workshop Introduction

Wageningen, 23 May 2007
Joep Crompvoets

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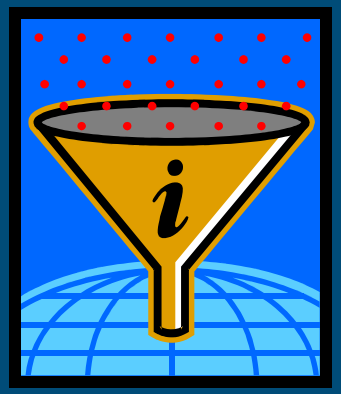
The C.T. De Wit Graduate School PE & RC
PRODUCTION ECOLOGY & RESOURCE CONSERVATION

Presentations overview

1. Personal presentation + expectation
2. Related Projects
3. Why assessing (N)SDIs?
4. What assessing?
5. How to assess?
6. Previous Workshop results
7. Introduction Multi-view framework
8. Program schedule
9. Logistics

Personal presentation + Expectation



Introduce yourself

- Name
- Country
- Background information (focussing on SDI-assessment)

Workshop Expectation

- What do you expect to gain from this Workshop?

Related Projects

1. Development of framework to assess National Spatial Data Infrastructures
   (Space for Geo-Information / RGI-005)

Top-ups

1a. Multi-view framework to assess National SDIs

1b. Measuring SDI-performance as a function of budgeting processes

2. Evaluating and strengthening spatial data infrastructures for sustainable development in Latin-America and The Caribbean
   (Iberian-American program of Science and Technology for Development (CYTED IDEDES)

Ruimte voor Geo-Informatie

COOPERACIÓN IBEROAMERICANA
CYTED
CIENCIA Y TECNOLOGÍA PARA EL DESARROLLO

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Why assessing? Why evaluating?

Georgiadou et al., 2006. URISA Journal. Lance et al., 2006. IJSDIR.
Four evaluation/assessment orientations

1. Control
2. Learning
3. Sense making
4. Explorative practice

Grus, et al. 2006 GSDI-9 paper / Cheliminsky, 1997

1. Accountability
2. Development
3. Knowledge

Others

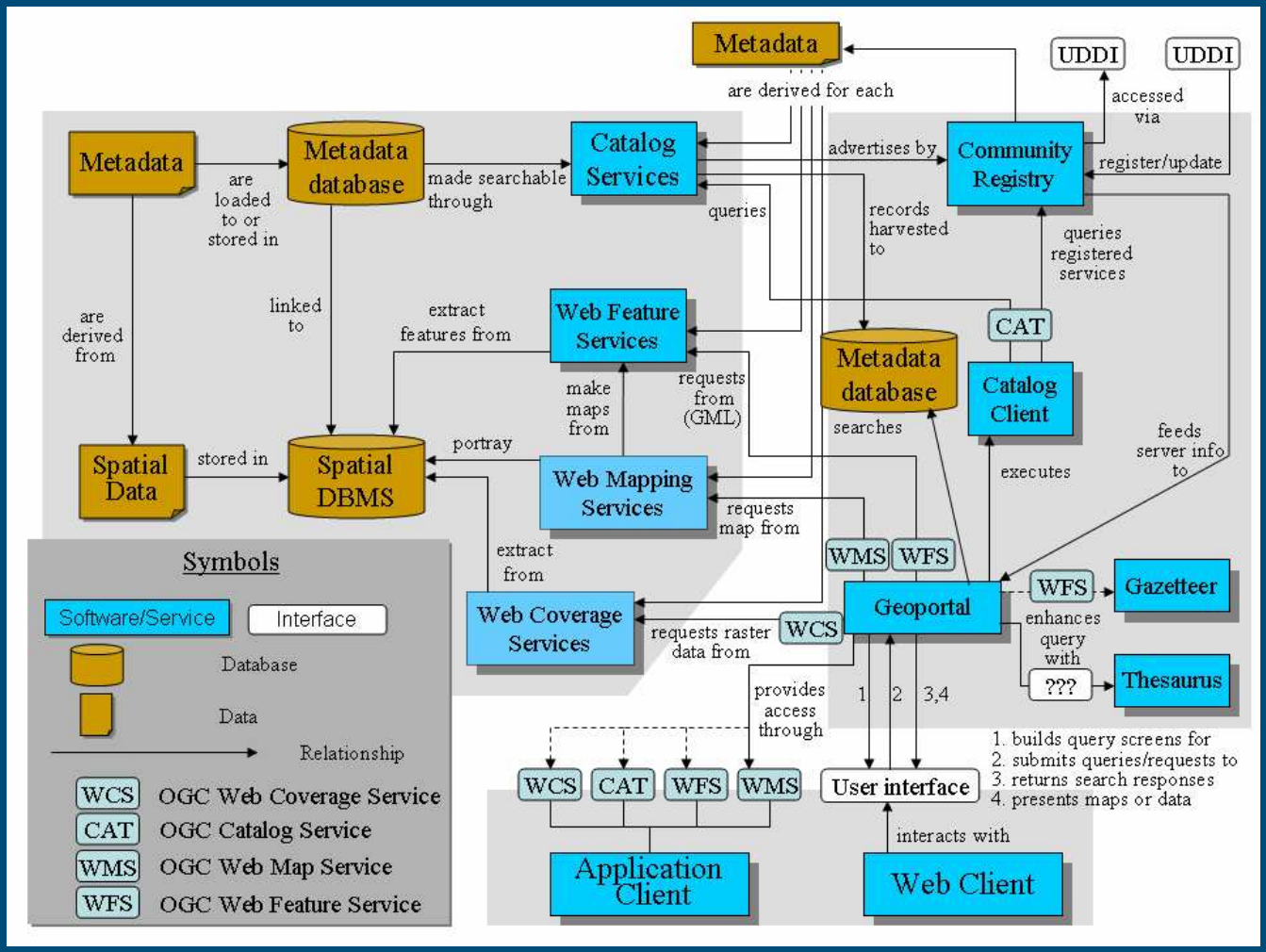
Improving performance, gaining explanatory insights, to strengthen institutions/sectors

What assessing?

National Spatial Data Infrastructures
Need of definition?
If yes, which definition?
New definition or one of the multiple existing definitions?

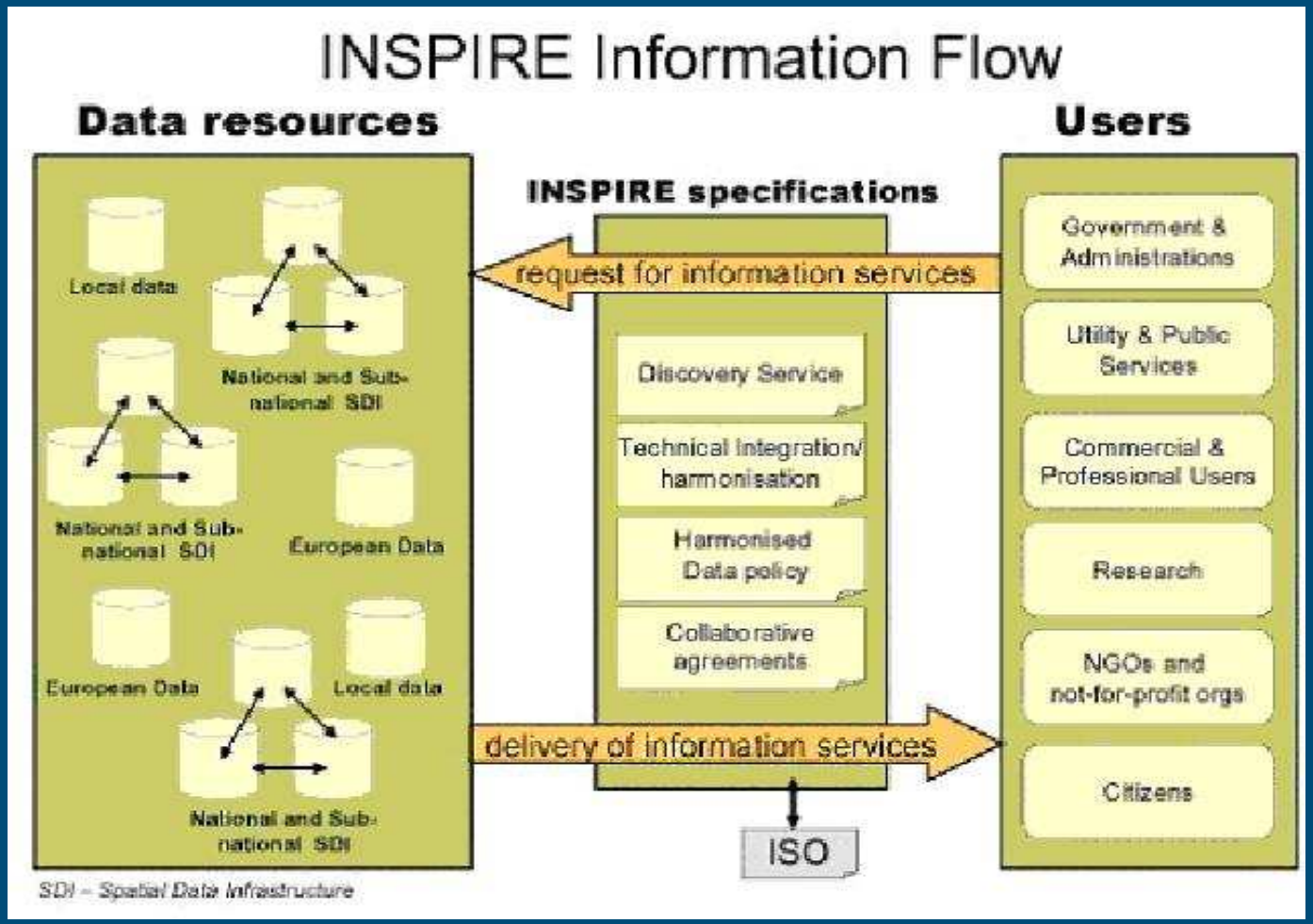
Not comparing apples with pears?
US SDI vs. Luxembourg SDI
National Data producer led vs. Not National data producer led

What are good SDIs?



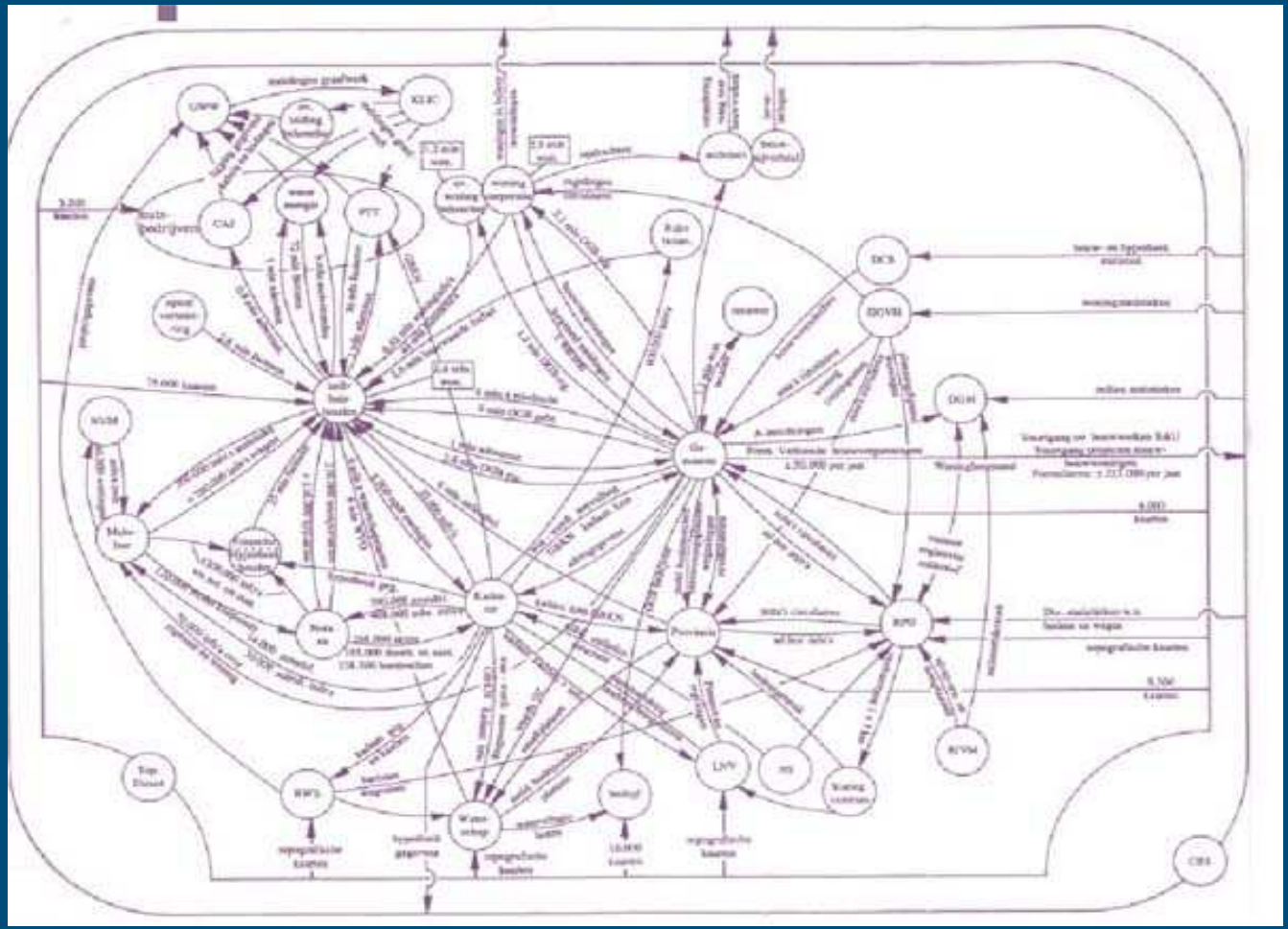
Nebert (ed.), 2004
SDI Cook book

Is this a good SDI?



INSPIRE, 2006

Is this a good SDI?



Structuurschets Vastgoedinformatie Voorziening, 1992

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Criteria for assessment?

Relevant
Efficient
Effective
Satisfactory
Sustainable
(social, economic, environmental)

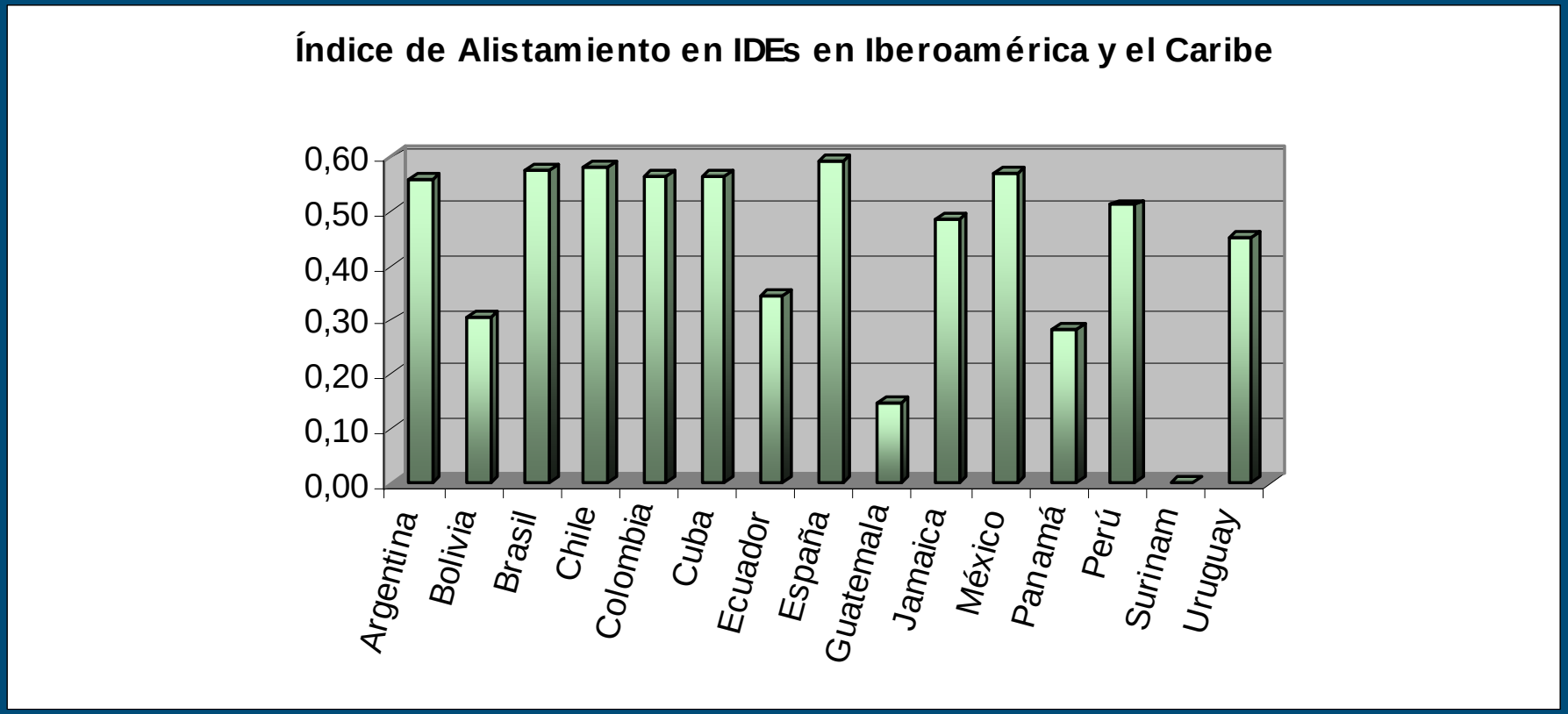
Compliant
Coherent
Well used

How to assess SDIs?

- Examples of existing assessment approaches
- Masser (1999), Rajabifard et al. (2003): Generational
- Steudler et al. (2003): Evaluation and Performance indicators
- SADL (2003/4/5): INSPIRE State of Play
- Kok, B. and van Loenen, B. (2004): Organisational/Institutional
- Delgado et al. (2005): NSDI-Readiness
- Rodriguez Pabon (2005): Theoretical framework to assess SDIs
- Crompvoets (2006): Clearinghouse Suitability Index
- Lance et al. (2006): SDI control evaluation
- Giff (2006): Performance based management

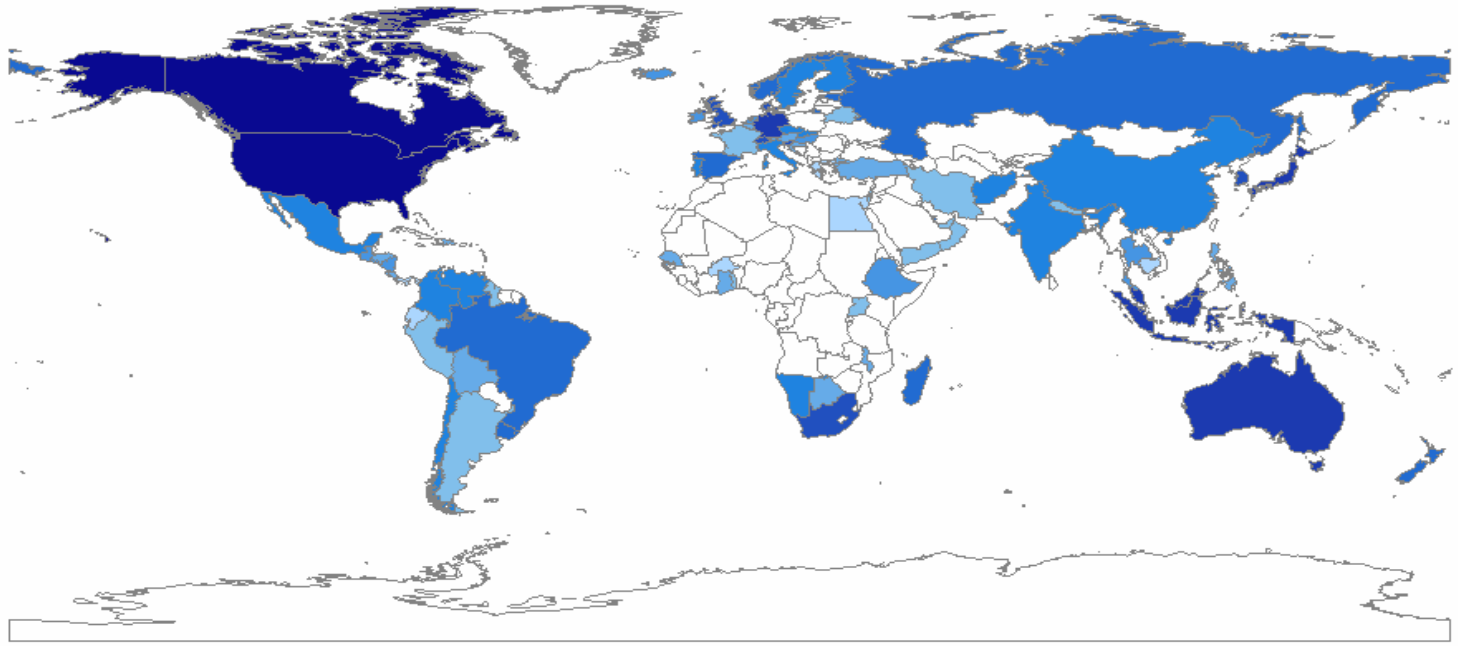
Different assessment orientation, different approaches, different sampling methods, different levels, different definitions

Examples of approaches: NSDI-Readiness



Delgado et al., 2007

Example: Nat. Clearinghouse suitability index



Legend

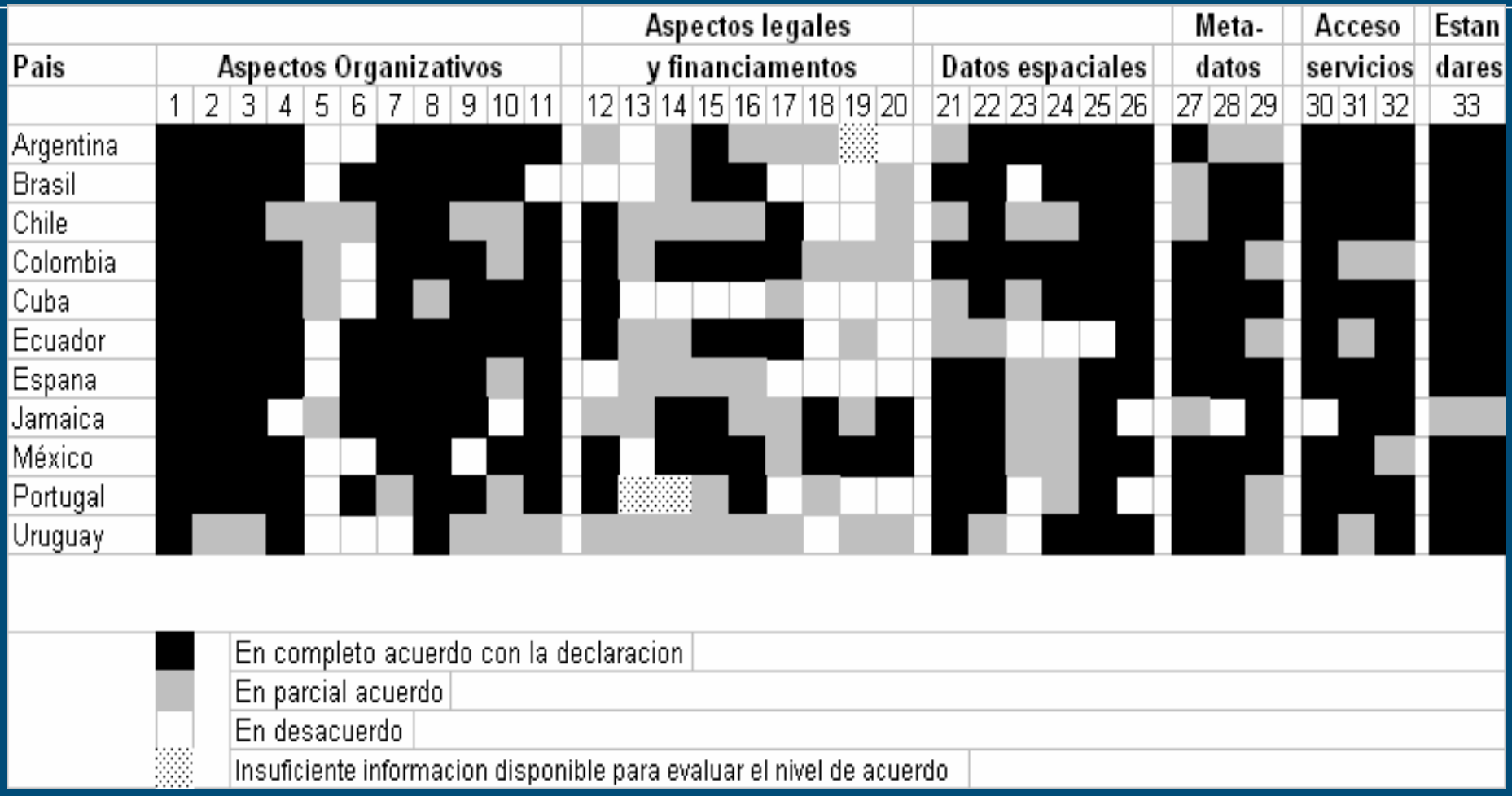
Clearinghouse index 2005

INDEX2005

- No clearinghouse
- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- 71 - 80
- 81 - 90
- 91 - 100

Crompvoets, 2006

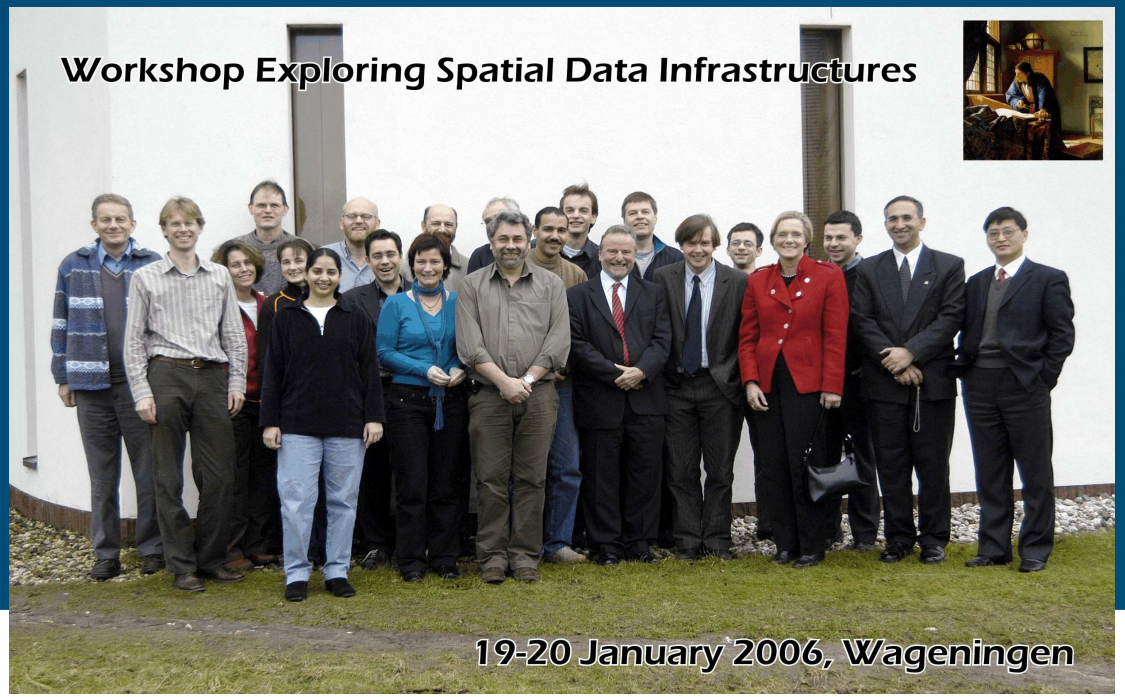
Example: (INSPIRE) State of Play



Spatial Application Division of KU Leuven, Danny Vandenbroucke, 2003-2005

Previous Workshop

- Workshop “Exploring SDI-assessment” 19-20 January 2006
  Foundation of the conceptual Multi-view framework
- Many (international) experts (USA, NL, BEL, SVK, India, Egypt
  PoI, China, AUS, UK -> many opinions)



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Previous Workshop results

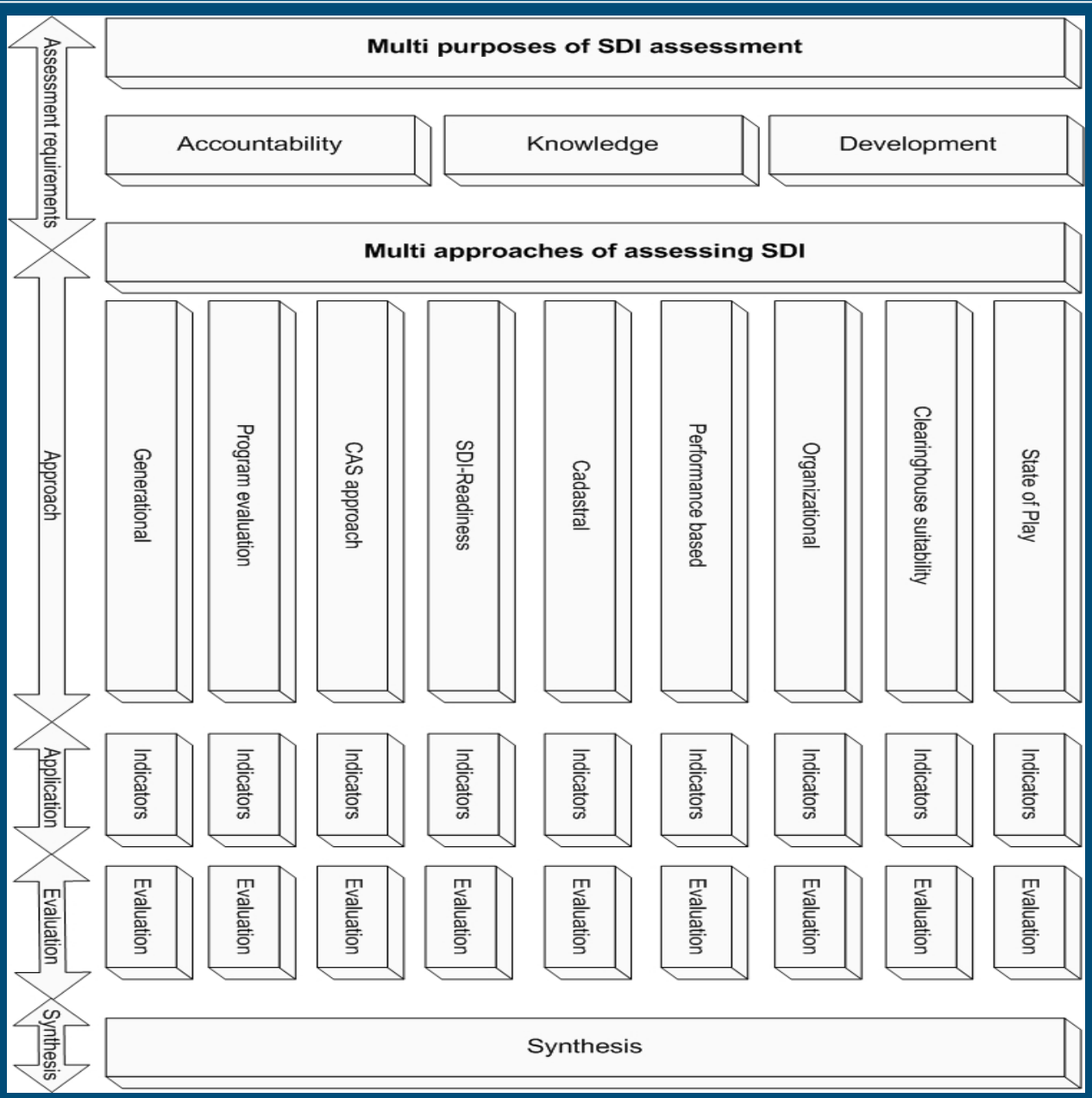
Assessment framework

- NSDIs are complex, dynamic and multi-facetted
  -> Obstacles for assessment

- NSDI as evolving target -> specific strategy needed to assess
- NSDI as complex systems
  -> complex systems' assessment strategies

- assessment based on user's appreciation
- Flexible

Multi-view framework (Lukasz Grus)



Conceptual model of framework

Others:
INSPIRE State of Play
Clearinghouse Suitability Index, Global Survey of SDIs

Evaluation by key users

Determination critical factors

Wednesday Morning program:

Introduction to Multi-view framework to assess NSDIs

9:00 – 10:30 AM

- Introduction	*Joep Crompvoets*
- More governance, Less SDI: Implications for evaluation research	*Yola Georgiadou*
-The multi-facetted nature of SDIs and their assessment	*Erik de Man*

Coffee Break (10:30 – 11:00)

11:00 – 12:30

- Monitoring and assessing (N)SDIs: some general questions	*Ian Masser*
- Behavior of Complex Adaptive Systems	*Wiebe Aans*
- Multi-view framework to assess NSDIs	*Lukasz Grus*
- *Plenary debate*	

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Introduction to Multi-view framework to assess (National) SDIs

Plenary debate

“(N)SDIs are complex, multi-facetted, and dynamic. Therefore, the multi-view framework is an appropriate approach to assess (N)SDIs”

What is your comment to this statement?

Logistics

Coffee 8:15; 10:30: 15:30
Lunch 12:30 – 13:30
Workshop Dinner Wednesday "Hotel De Wereld": 19:00 - ????
5 Mei Plein 1, Wageningen (PE&RC funded) Who will participate?
Dinner Thursday "Eetcafé de Kater": 19:30 - ????
Markt 8, Wageningen
Working forms Presentations, Presentation specific questions,
Group activities, Plenary debates
Presentation procedure
± 15 min. Presentations, ± 15 min. Questions
Bus WICC <-> GAIA
*Bus tickets (*Strippenkaarten) -> Joep

Additional funding

C.T. de Wit Graduate School for Production Ecology and Resource Conservation (PE&RC) of Wageningen University

Thanks for your attention

Questions????

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Wednesday afternoon Multi-approaches

Lunch 12:30 – 13:30

13:30-15:30

- Introduction to indicators — *Arnold Bregt*
- Plenary activities “Key indicators”
- NSDI-Readiness — *Tatiana Delgado, Rafael Espin*
- Generational approach — *Lukasz Grus*

Coffee Break (15:30 – 16:00)

16:00 – 18:00

- Assessing an SDI from an organization perspective — *Bastiaan van Loenen*
- Blazing the trail or follow the yellow brick road? On geo-information and organizing theory — *Henk Koerten*
- A legal approach to assessing SDIs — *Katleen Janssen*
- INSPIRE State of Play — *Danny Vandenbroucke*

***Workshop dinner* 19:00 “Hotel De Wereld”**

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Thursday morning — Multi-approaches

8:30-10:30	
- Assessing the Impacts of SDIs	*Max Craglia*
- SDI Effectiveness from User Perspective	*Nama Raj Budhathoki* *Zorica Nedovic-Budic*
- Cost – Benefit Indicators to assess SDI-Impact	*Roger Longhorn*
- Designing Performance Indicators to Assist in SDI Evaluation	*Garfield Giff*
Coffee Break 10:30 – 11:00	
11:00 – 12:30	
- SDI Performance measurement as a function of budgeting processes	*Kate Lance*
- Towards key variables to assess NSDIs in developing countries	Lyande Eelderink
- Quality management in Dutch SDI	Peter Laarakker, Floris de Bree
- Plenary debate	

Multi-approaches

Plenary debate

How to integrate the assessment results of the different approaches in order to have a comprehensive SDI-assessment?

What is your suggestion?

User demands

- Who are the users of the assessment results?
- Why do users need these results?
- What are the usability demands to NSDI-assessment? Simple? Comprehensive? User-friendly? Understandable? Communicative? (Fully) automated?
- What are their demands to the assessment results? Qualitative? Quantitative? Index value? Monetary terms?
- What are the key user demands to these results?
- What are the key (critical) user indicators?

Thursday afternoon User demands

Lunch 12:30 – 13:30

13:30-15:30

- Global Spatial Data Infrastructure Association	*Harlan Onsrud*
- UNSDI: an UNGIWG initiative	*Jan Cees Venema*
- INSPIRE Directive: specific requirements to monitor its implementation	*Danny Vandenbroucke*
- CYTED (Latin-American and The Caribbean)	*Tatiana Delgado*
- Africa	*Kate Lance*

Coffee Break (15:30 – 16:00)

16:00 – 18:00

- GeoNovum	*Ruby Beltman*
- Performance Evaluation for GeoConnections and the Canadian Geospatial Data Infrastructurte	*Rebecca Last* *Paula Rojas*
- CIDERC	*Tatiana Delgado*
- Demands of SDI – Connecting worlds	*Jacqueline Meerkerk*
- *Plenary debate*	

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19:30 **Dinner Eetcafe De Kater**

User demands

Plenary debate

What are the key user demands to NSDI-assessment (and indicators)?

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Friday morning

Matching user demands with assessment approaches in order to assess NSDI?

8:30 – 10:30
Introduction Arnold Bregt

Group activity

Plenary debate

Coffee Break (10:30 – 11:00)

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Matching user demands and assessment approaches

Group activity + Plenary debate

1. How do you match user demands and the existing assessment approaches in order to assess NSDIs?

2. What are the main conclusions of this matching?

3. Are you able to determine key indicators? If yes, what are they?

Application of Multi-view framework

Purpose for applying

- Identifying biases of assessment results
- Analyzing a variety of approaches to estimate their importance
-Confirming the validity of the approaches and the assessment framework

Application of Multi-view framework

Questions

- What is the best strategy for applying the Multi-view framework?
- Is it necessary to use all the approaches?
- What are the key data to be collected? Key (user) indicators?
- What is the best method for collecting the needed data?
- Would the initiative of the GSDI Global Survey of SDIs be a good opportunity to collect the needed data?
- How many (N)SDIs do we need to evaluate in order to assess the validity? Which (N)SDIs do we need to evaluate?

Application obstacles

- **Timing of application**

  Preference: Simultaneous application of the multi-approaches -> Setting times for collecting data and applying the approaches
- **Data availability for various assessment approaches** Different countries
- **Integration of multiple approaches**

  Possibility of conflicting approach results

Application of Multi-view framework

11:00 – 12:30
- Introduction
- Assessing SDI Initiatives: A Ten-Year Retrospective *Harlan Onsrud*
- Group activity

Lunch (12:30 – 13:30)
13:30 – 15:15
- Plenary debate
- Inventory of contact organisations
- Online questionnaire
- Time planning: Survey + Application

Coffee Break (15:15 – 15:30)

Application of Multi-view framework

Group activity + Plenary debate

1. What is the best sampling strategy for GSDI Global Survey of (N)SDIs using the multi-view framework concept?

2. What are the key questions to be asked?

Conclusion session

15:30 – 17:00
- Plenary debate
- Conclusions
- Book Logistics
- Further steps

Conclusions

Plenary debate

What are the main conclusions of the Workshop Multi-view framework to assess National SDIs?