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**Multiple standards: how to deal with
INSPIRE and national specifications**

Gianni Campanile

Esri Italia

gcampanile@esriitalia.it

Are YOU interested in this presentation ?



What it's about

- In some countries, national specifications for data and metadata may exist and they can differ from INSPIRE



INSPIRE
specification

Italian
specification

Our experience for Italy can be useful for other countries

Which is your case ?

*National
specification*

*INSPIRE
specification*



Relax and wait for next
presentation!

*INSPIRE
specification*

*National
specification*



Use the wider standard;
heavy but still easy.

...otherwise...

Metadata

- Italian profile: RNDT (Repertorio Nazionale Dati Territoriali)
- Based on ISO19115/19119
- Implementation Guidelines: version 1.2 (February 2013)
- All INSPIRE tags are included (IR rules 1.2)



...if guidelines are used!

Metadata: Esri Geoportal

- We added italian profiles in Esri Geoportal Server
- Same Metadata record can be validated on INSPIRE site **AND** on RNDT site

The screenshot displays the RNDT (Repertorio Nazionale Dati Territoriali) website interface. The main content area shows a metadata record for a WMS service titled "Servizio WMS per le immagini della Regione Autonoma della Sardegna". The record includes the following details:

- Lingua Dei Metadati:** Italiano
- Data Dei Metadati:** 2009-07-28
- Punto Di Contatto Dei Metadati:** Servizio informativo e cartografico regionale - Regione Autonoma della Sardegna, E-mail: eeil.urb.infocarto@regione.sardegna.it
- Parte Responsabile:** Punto di contatto: Servizio informativo e cartografico regionale - Regione Autonoma della Sardegna, E-mail: eeil.urb.infocarto@regione.sardegna.it
- Breve Descrizione (Abstract) Della Risorsa:** Il WMS permette di visualizzare le cartografie che la Regione Autonoma della Sardegna mette a disposizione. **Informativo Territoriale Regionale.**
- Localizzatore Della Risorsa:** (Empty field)
- Tipo Di Servizio Di Dati Territoriali:** Servizio di consultazione

On the right side of the interface, there is a navigation menu with "INSPIRE", "CONTATTI", and "GUIDA" options. Below the menu, a "Gestione Metadati" section contains a "Rapporto di validazione:" box with the message "Nessun errore da segnalare."

Metadata: conclusions

Highlights

- One single profile complies to both standards
- Users are satisfied and use metadata to find internal and web resources

Lowlights

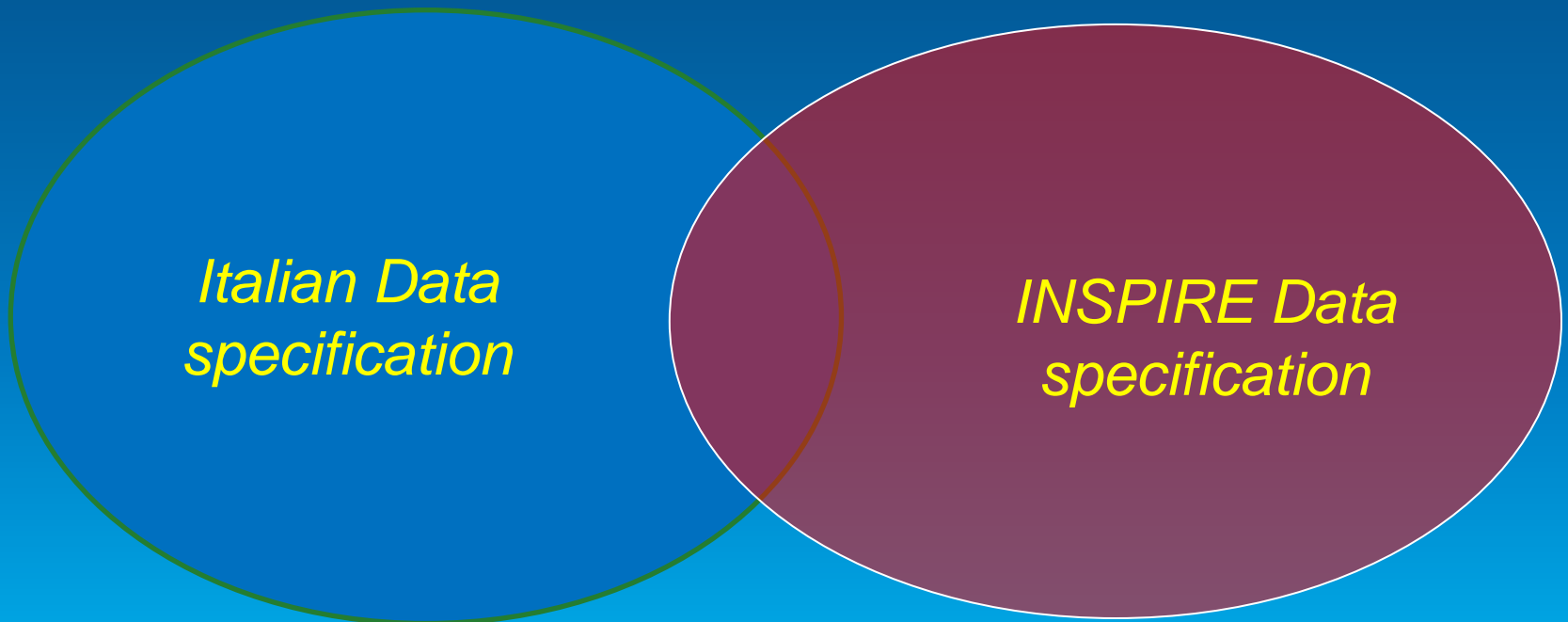
- Some implementing rules are still not strict enough
- Catalogue interoperability it's still ongoing

Lessons learned

- Avoid/solve conflicting rules and use wider standard
- Strict rules are **essential** for interoperability
- Free text must be used ***only*** when it's necessary

Data

- Italian Data Specifications: DBT (Database Topografico)
- Conceptual model defined using UML+OCL
- Themes and DB are different from INSPIRE



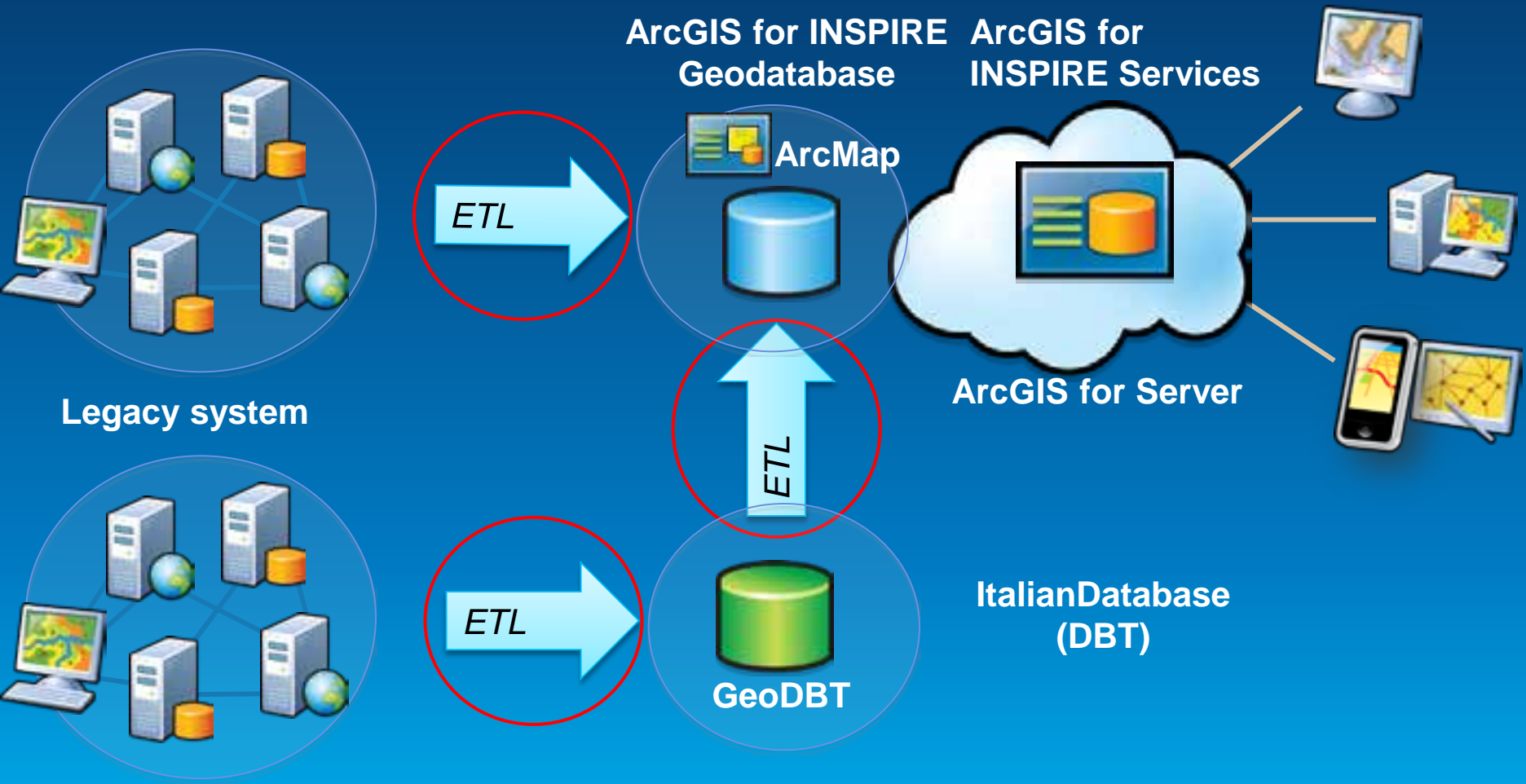
Why these differences ?

| | DBT | INSPIRE |
|--------|---------------------------------|--|
| Scope | Italy | Europe |
| Themes | Mainly cartography | Mainly environment |
| Use | Data exchange | Accessed using View/Download services |
| Goal | Build a unique Italian Database | Data interoperability through services |

What to do

- When specifications are dramatically different then two DBs are necessary
- If a legacy database is already operational, then there is an additional DB
- ETL (Extract Transform Load) procedures are needed
- Specialized software must be used to reduce complexity, especially for service publishing

The overall picture



ArcGIS for INSPIRE Geodatabase

ArcGIS for INSPIRE Services

ETL

ArcMap

Legacy system

ArcGIS for Server

ETL

ETL

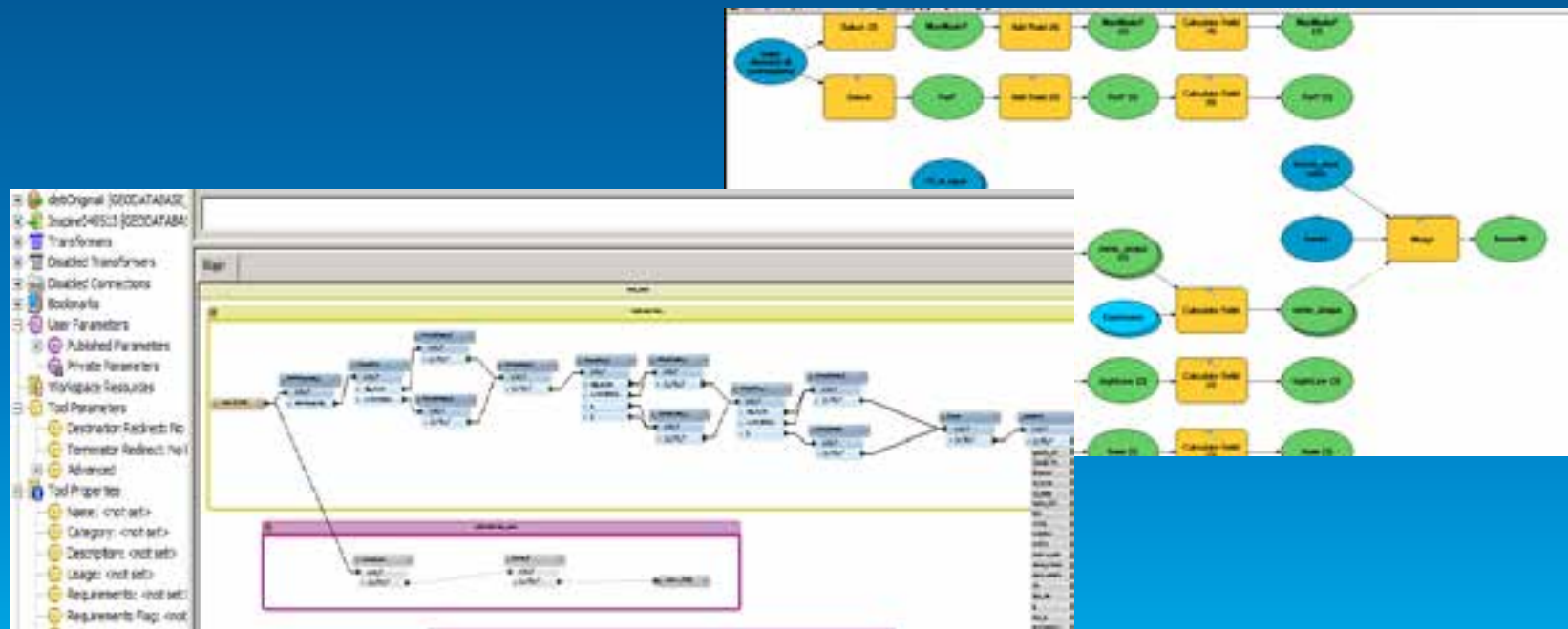
GeoDBT

ItalianDatabase (DBT)

Legacy system

Define ETL Workflows

- ArcGIS Desktop + Data Interoperability
- The use of ArcGIS Model Builder and FME gives the maximum power and flexibility



Data: conclusions

Highlights

- Rehearsal projects showed the feasibility of the solution presented
- There is suitable SW for Data conversion and service publishing

Lowlights

- Effort to convert data is still quite BIG
- INSPIRE themes broad and overlapping with national data specifications are likely

Lessons learned

- INSPIRE is an overall design: metadata, data and services
- A good workflow design is important
- Powerful SW tools are needed to perform data conversions/publishing

Conclusions

- We managed to handle different standards at the same time (metadata) and with some intermediate steps (data) even when very different
- A clear architecture and workflows must be designed to ensure data consistency
- The use of specialized software (Esri Geoportal Server, ArcGIS for INSPIRE, ArcGIS Desktop, Data interoperability) was a key for success

Final thought...

What it seems like now...

What we feared when
we started



Thanks!

Gianni Campanile
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gcampanile@esriitalia.it

Any questions ?

