

hale

Create and Use Harmonised Spatial Data with HALE 2.6.0

Workshop at the INSPIRE Conference 2013
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Goals

- Explain **why** we develop HALE for INSPIRE
- Enable you to **create INSPIRE-compliant data sets** with HALE
- Inform you about **new features and capabilities** of HALE
- We want to learn more about **your** experiences & requirements!

Let's get started!

- Who has heard of HALE already?
- Who has used HALE before?
- Who would like to try it now?
 - Get the USB stick with data and software
 - Unpack the appropriate archive for your operating system*, preferably the 64bit versions
 - Start HALE

* unfortunately, no Android or iOS versions yet...

Agenda

- A Quick Introduction to HALE and the challenges we want to help resolve



Case Study 1: Converting the INSPIRE Planned Land Use data for the Trento Region of Italy

- Loading resources, analysing schemas and data
- The 3 R's of basic mapping: Retype, rename, reclassify
- INSPIRE Mapping Functions
- Dealing with references
- Data export and usage

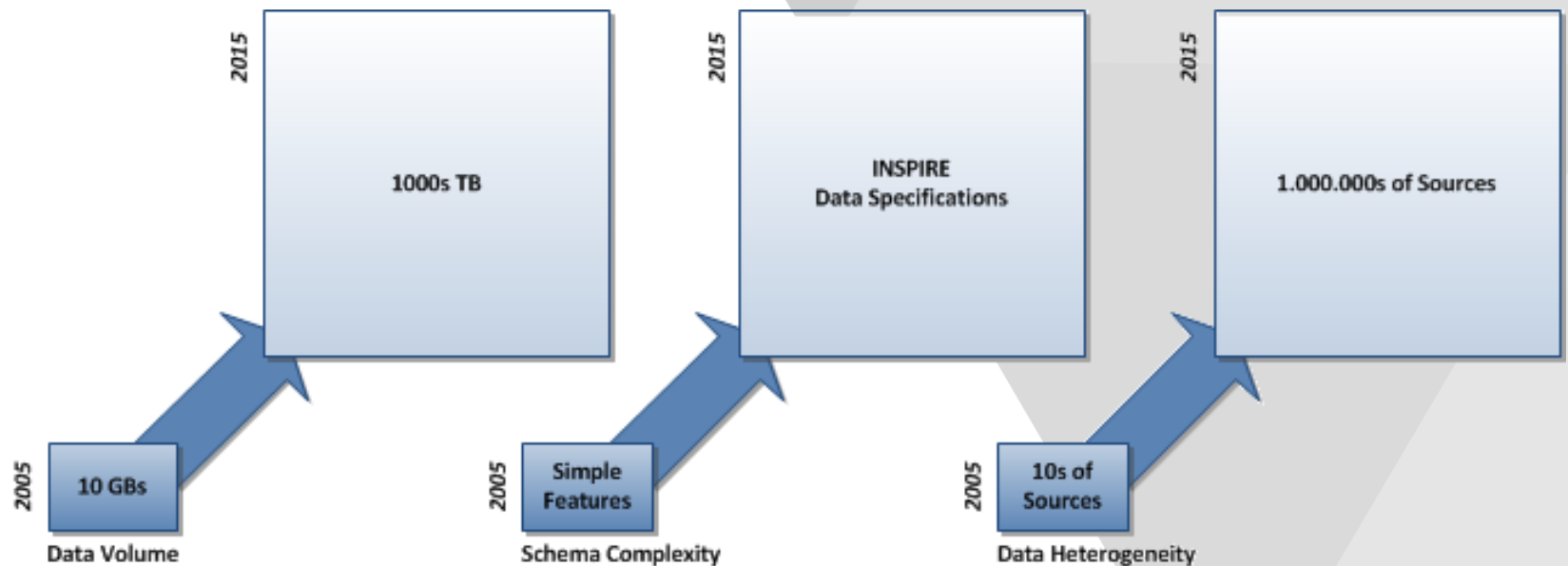


Case Study 2: MERIDIAN2 UK Open Government Data to INSPIRE Hydrophysical Waters Data

- Mapping inheritance
 - Functions and their documentation
 - Additional Export functions: HTML, XSLT, Excel (CSV/XLS)
 - One more thing...
-
- Q&A, Discussion

Data Harmonisation Challenges...

- Efficiency and Effectiveness
- Understanding and quality
- Re-use of data and harmonisation assets



... In INSPIRE

- Spatial harmonisation
 - Edge Matching, Reference Systems, Multiple Representations
- Structure
 - References, Aggregates & Composites, Inheritance
- Quality
 - Metadata, geometric quality, classification accuracy, ...
- Semantics
 - Code Lists, Feature Types

HALE Goals

- **Simplicity**
 - Use a basic approach that allows users to focus on the conceptual level
- **Understanding transformation consequences**
 - Provide (near-)instant feedback on any user action
- **Transparency**
 - Ensure Output Data quality is well-understood and documented
- **Scalability**
- **Specifically support INSPIRE activities**
 - Transformation Testing in Data Specification
 - Provision of INSPIRE Data Sets

HALE Approach

- Declarative
 - Identify correspondances and link them directly
- Interactive
 - Instant transformation
- Deterministic
 - Focused, task-based processes
- Driven by a Formal Quality Model
 - Validation against schema
 - Validation against mismatches

The HALE Canvas

HUMBOLDT Alignment Editor 2.6.0 - PLU Province of Trento - D:\haleworkspaces\testdata\planned_land_use\plu_final.halex

File Transformation Edit Map Window Help

Schema Explorer

Source

- type filter text
- 8 CODCSG (0.1) ×500
- 8 CODESO (0.1) ×500
- 8 CODVAL (0.1) ×500
- 8 DISCARICHE (0.1) ×500
- 8 PERIMETER (0.1) ×500
- 8 PESOF (0.1) ×500
- 8 PESOPOL (0.1) ×500
- 8 PESOTOT (0.1) ×500
- PLAN_NAME (0.1) ×500
- RISPOL_ (0.1) ×500
- 8 RISPOL_ID (0.1) ×500
- 8 the_geom (0.1) ×500
- 8 UPDATE (0.1) ×500
- 1 **uso_pol_part2 ×1000**

Target

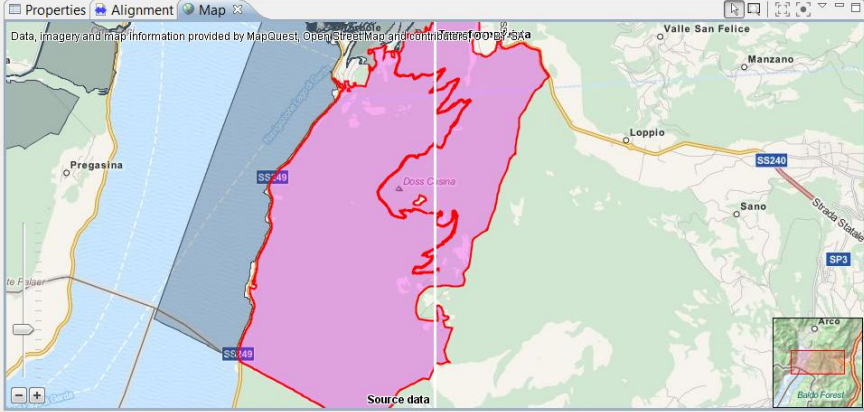
- type filter text
- identifier (0.1)
- inheritedFromOtherPlans
- inspireId ×500
- metaDataProperty (0..n)
- name (0..n)
- name (0..n)
- officialDocument (1..n) ×500
- plan ×500
- processStepGeneral
- regulationNature ×500
- specificRegulationNature
- specificSupplementaryRegulation (1..n) ×500
- supplementaryRegulation (1..n) ×500
- codeSpace (0..1)
- validFrom (0..1) ×500

Source Data

uso_pol_part2

| uso_pol_part2 | 1 | 2 |
|---------------|---|--------------------------------------|
| uso_pol_part2 | + | + |
| AGGIORN_6 | 2013-02-27 | 2013-02-27 |
| AREA | 5.1500684378582E7d | 1.4219851184854E7d |
| COD_TOT | 5 | 9 |
| PERIMETER | 108174.22488301 | 48404.735750712 |
| PESOPOL | 0.02 | 0.15 |
| PLAN_FROM | 2006-02-15 | 2006-02-15 |
| PLAN_NAME | PGUAP | PGUAP |
| the_geom | {CRS=WGS 84 / UTM zone 32N} MULTIPOLYGON {CRS=WGS 84 / UTM zone 32N} MULTIPOLYGON | |
| USO_POL_ | 30949 | 33372 |
| USO_POL_ID | 30948 | 33371 |
| Metadata | + | + |
| Identifier | 495e272e-54c7-4050-9523-548fd7d48f12 | f1ba9021-e975-4260-8c14-7eb41f214411 |

Properties Alignment Map



Transformed Data Report List Mapping

18:36 2013-06-23

- ✓ HALE XML project export 18:37:33
- ✓ Instance validation 18:37:25
- ⚠ Instance transformation 18:37:24
- ⚠ Instance validation 18:36:40
- ✓ Instance transformation 18:36:36
- ✓ Load data into database 18:36:34
- ✓ Shapefile import 18:36:34
- ✓ Shapefile import 18:36:33
- ✓ Load data into database 18:36:32
- ✓ CSV file import 18:36:32
- ✓ CSV file import 18:36:32
- ✓ CSV file import 18:36:32
- ✓ Load data into database 18:36:30
- ✓ Shapefile import 18:36:30
- ✓ Load data into database 18:36:28
- ✓ Shapefile import 18:36:28
- ⚠ XML schema import 18:36:26

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681M of 916M



Silvia Franceschi

PLANNED LAND USE IN THE TRENTINO PROVINCE

Simon Templer

HYDROPHYSICAL WATERS PROVISION FORM UK OPEN GOVERNMENT DATA

The HALE Experiment

- Help us in our research!
 - Do one or both presented mapping projects yourselves, starting from the „start“ halex projects
 - Send your completed project file(s) + logfiles by the 5th of July to tr@xsdi.org or pass by the dhp booth.
 - ...and/or fill in the online evaluation questionnaire: <http://www.dhpanel.eu/q>
- For each submitted project or evaluation questionnaire) you get a chance to win a great wine from tuscanly.
- Please distribute this to others, especially domain experts in the hydrography and Land Use domains.

Happy end

- *hale* is Open Source Software and licensed using the **LGPL 3.0**.
- Find out more about the data harmonisation panel:
<http://www.dhpanel.eu>
- HALE community site:
<http://www.esdi-community.eu/projects/show/hale>
- Public user and developer mailing list:
dev@esdi-humboldt.eu
- Contact the hale team: info@dhpanel.eu