Re3gistry version 2
Manage and share reference codes in a simple way

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Why do we need reference codes?

Text fields:

- Country: Italia
  Theme: Suolo

- Country: Deutschland
  Theme: Boden

- Country: Ελλάδα
  Theme: έδαφος

- Country: DE
  Theme: Boden

Same concepts

Different representations
**Why do we need reference codes?**

**Reference codes:**

- **Country:** countryCode/it  
  **Theme:** theme/so

- **Country:** countryCode/de  
  **Theme:** theme/so

- **Country:** countryCode/el  
  **Theme:** theme/so

- **Country:** countryCode/de  
  **Theme:** theme/so

**Why do we need reference codes?**

- **Same concepts**
  - **Country:** countryCode/de  
    **Theme:** theme/so

- **Same representations**
  - **Country:** countryCode/el  
    **Theme:** theme/so
Managing reference codes

- **Registry**: information system on which reference codes are maintained
- **Register**: set of files containing identifiers assigned to items with descriptions of the associated items
- Main operations
  - Create
  - Store/serve
  - Update
    - Clarification
    - Supersession
    - Invalidation
    - Retirement
Why do we need registries in INSPIRE?

**Key infrastructure components to**
- allow unambiguous references to items
- provide unique and persistent identifiers for resources
- allow their consistent management and versioning

**Central INSPIRE registry contains registers for**
- Themes
- Code lists and values
- Enumerations and values
- Feature concepts
- Metadata code lists and values
- Application schemas
- Glossary
- Reference documents
- Layers
- Media types
Central register federation

- Distributed federation of registers related to the INSPIRE Directive
- Central access point: Register of Registers

ISO 19135 workflow

Submitting organizations
https://ies-svn.jrc.ec.europa.eu/issues/2911

Control Body
Re3gistry Software

An open source solution for managing and sharing reference codes

**ARe³NA**

ISA Action 1.17

European Location Interoperability Solutions for eGovernment

ISA² Action 10
Re3gistry Software v1.3.1

XML, RDF, Json, ...

Re3gistry

Joint Research Centre
Re3gistry Software reuse

- INSPIRE registry service
- Slovakian registry
- Austrian (CCCA) registry
- Italian (AgID) registry
- Finnish registry
- Macedonian registry
- GeoSmartCity registry
- SEMIC Core Vocabularies registry
- SEMIC EU Budget Vocabulary
- ELISE Energy Pilot registry
Austrian INSPIRE Registry – CCCA Data Centre

Reuse experience [v1.2 & v1.3]

- Code list register, no issues for adding and maintaining the content
- Resolve issues with “Austrian data provider register” – not a code list, a new register item
  - Digits as label not accepted “0115”
  - Strong JRC support, v1.3.1 is running
- Data import module, needs experience to apply the correct order
  - Addition, Clarification, Retirement
  - Retirement (recursive – children items) not always comprehensible
- Data import difficult & complex, but designed by purpose

http://registry.inspire.gv.at
Contact: chris.schubert@ccca.ac.at
INSPIRE Italia Registry (Agenzia per l’Italia Digitale - AgID)

Reuse experience

- Easy implementation thanks to detailed software documentation and to prompt support from the JRC team.
- Provided feedback to improve the application, as e.g.:
  - support to numeric ID (included in the version 1.3.1);
  - management of 2+ hierarchical levels in the registers.
- Customisation of the interface to comply with Italian guidelines on design.
- Registry published under the coordination activities carried out by AgID, ISPRA and Ministry of the Environment.

The beta version will be on line at the end of September at the URL [http://www.registry-inspire.rndt.gov.it](http://www.registry-inspire.rndt.gov.it)
Re3gistry version 2

User feedback

- Backward compatibility with Re3gistry >= v1
- User friendly editing interface
- ISO 19135 workflow
- Better handling of the service (Solr instead of static files)
- API (direct calls)
- Simple software installation (also via Docker)

Registry survey
Backward compatibility with Re3gistry $\geq 1$

Database address: 127.0.0.1
Database port: 5432
Database name: inspire_registry
Database username: username
Database password: **********

Start migration

Re3gistry V.1.x → Migration tool → Re3gistry V.2
User friendly editing interface

- Create, edit, update registers, items, fields
- Handle localization of each field and the related field’s label
- Manage the ISO 19135 workflow in a visual way
- Manage users, roles and groups
## Mock up

<table>
<thead>
<tr>
<th>Register Label</th>
<th>Total Items</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSPIRE applications scheme register</td>
<td>24</td>
<td>View, Edit, Remove</td>
</tr>
<tr>
<td>INSPIRE code list register</td>
<td>124</td>
<td>View, Edit, Remove</td>
</tr>
<tr>
<td>INSPIRE thematic register</td>
<td>0</td>
<td>View, Edit, Remove</td>
</tr>
</tbody>
</table>

### Add register

<table>
<thead>
<tr>
<th>Unique Identifier</th>
<th>in</th>
<th>Source identifier</th>
<th>Data quality criteria</th>
<th>Register manager</th>
<th>Contact body</th>
<th>Contact point</th>
<th>License</th>
<th>Time limit specification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Flows

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Order Label</td>
</tr>
<tr>
<td>2</td>
<td>Definition</td>
</tr>
<tr>
<td>3</td>
<td>Description</td>
</tr>
<tr>
<td>4</td>
<td>Application schemes</td>
</tr>
</tbody>
</table>

### Available fields

<table>
<thead>
<tr>
<th>Order</th>
<th>Label</th>
<th>Type</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>String</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>String</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>String</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Reference</td>
<td></td>
</tr>
</tbody>
</table>
## Mock up

### Pending items

<table>
<thead>
<tr>
<th>Label</th>
<th>Status</th>
<th>Actions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td>Submitted</td>
<td>View</td>
<td>40%</td>
</tr>
<tr>
<td>Item 2</td>
<td>Need review</td>
<td>View</td>
<td>30%</td>
</tr>
<tr>
<td>Item 3</td>
<td>Proposed</td>
<td>View</td>
<td>30%</td>
</tr>
<tr>
<td>Item 4</td>
<td>Accepted with changes</td>
<td>View</td>
<td>20%</td>
</tr>
<tr>
<td>Item 5</td>
<td>Changes completed</td>
<td>View</td>
<td>20%</td>
</tr>
<tr>
<td>Item 6</td>
<td>Accepted</td>
<td>View</td>
<td>20%</td>
</tr>
</tbody>
</table>

### History items

<table>
<thead>
<tr>
<th>Label</th>
<th>Status</th>
<th>Actions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 7</td>
<td>Not accepted</td>
<td>View</td>
<td>100%</td>
</tr>
<tr>
<td>Item 8</td>
<td>Withdrawn</td>
<td>View</td>
<td>100%</td>
</tr>
</tbody>
</table>
User friendly installation

• Install wizard
• Automatic initialization
• Option to install the system using docker
Extensibility

• Adapt your model with any custom fields you need

<table>
<thead>
<tr>
<th>Available fields</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Order</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

• Easily adapt the service User interface to fit your branding
• Create your own persistence driver by just implementing the described interfaces
Other important features

- New Apache Solr™ based service handling (no more static files export)
- Restful API
- ISO 19135 Workflow
Re3gistry version 2 – Development status

- New architecture
- Definition of roles and workflows
- Database
  - Migration
  - Solr handler
- Editing interface
- Service frontend
- APIs

... available soon ...

Beginning 2018

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https://inspire.ec.europa.eu/news
Thank you

Come to the INSPIRE booth to ask questions and see a demo

Re3gistry Survey: we need your feedback!

http://europa.eu/!Bn84Ct

Wed, 6 Sep  15:30 - 16:00 Re3gistry demo
Thu, 7 Sep  10:30 - 11:00 Register federation
Fri, 8 Sep  10:30 - 11:00 Re3gistry demo

Contact us at inspire-registry-dev@jrc.ec.europa.eu