INSPIRE as an effective tool for e-reporting: the EEA ‘EU Registry on industrial emissions’

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The EU Registry will collects identification and administrative data on European Pollutant Release and Transfer Register Regulation (E-PRTR) facilities, installations under the scope of the Industrial Emissions Directive (IED), large combustion plants (LCPs) and waste incineration and co-incineration plants (WI).
An INSPIRE - extended schema

[Diagram of INSPIRE feature types with a focus on Production and ProductionInstallation]
EU Registry - streamlined view
structure in which data are to be transmitted from MS to the EEA

Streamlined view of the data model

- From INSPIRE PF
- Added by extension
From an operational point of view, can EU Registry be considered a first example to demonstrate how development of e-reporting using the INSPIRE approach could lead to a significant efficiency and effectiveness gain over the coming years?
EURegistry - streamlined view

Streamlined view of the data model

- From INSPIRE PF
- Added by extension
From current DB tables and excels to EU Registry: the mapping table

<table>
<thead>
<tr>
<th>Source Type</th>
<th>Source properties</th>
<th>Target type</th>
<th>Target properties</th>
<th>Relation name</th>
<th>PriorityCell explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PF PF.PI_ID Status</td>
<td>EPRTR.mainActivity</td>
<td>ProductionFacility</td>
<td>EPRTRAnnexIACTIVITY</td>
<td>Join</td>
<td>normal</td>
</tr>
<tr>
<td>PF</td>
<td>EPRTR.mainActivity</td>
<td>ProductionFacility</td>
<td>EPRTRAnnexIACTIVITY</td>
<td>Rename</td>
<td>normal</td>
</tr>
<tr>
<td>PF</td>
<td>EPRTR.otherActivity</td>
<td>ProductionFacility</td>
<td>EPRTRAnnexIACTIVITY</td>
<td>Rename</td>
<td>normal</td>
</tr>
<tr>
<td>PF</td>
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<td>ProductionFacility</td>
<td>hostingSite</td>
<td>Formatted string</td>
<td>normal</td>
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<tr>
<td>PF</td>
<td>PF.ID</td>
<td>ProductionFacility</td>
<td>id</td>
<td>Formatted string</td>
<td>normal</td>
</tr>
<tr>
<td>PF</td>
<td>localId</td>
<td>ProductionFacility</td>
<td>InspireId .Identifier .localId</td>
<td>Rename</td>
<td>normal</td>
</tr>
<tr>
<td>PF</td>
<td>namespace</td>
<td>ProductionFacility</td>
<td>InspireId .Identifier .namespace</td>
<td>Rename</td>
<td>normal</td>
</tr>
<tr>
<td>PF</td>
<td>versionId</td>
<td>ProductionFacility</td>
<td>InspireId .Identifier .versionId</td>
<td>Rename</td>
<td>normal</td>
</tr>
</tbody>
</table>
BENEFIT n° 1

Same mapping table can be used to map site/facilities/installation/installation parts both towards EuRegistry schema and INSPIRE PF schema
From current DB tables and excels to EU Registry: the transformation project.
BENEFIT n° 2 - option 1

The transformation project used to obtain the Euregistry gml dataset needed for reporting obligation, can be re-used almost with no modification to get the INSPIRE PF gml dataset.
BENEFIT n° 2 - option 2

You can use a simple XSLT transformation to transform the Euregistry gml dataset needed for reporting obligation into the INSPIRE PF gml dataset for the same information.
<EUREg:ProductionSite gml:id="PS_1">
  <pf:inspireId>
    <base:Identifier>
      <base:localId>123456789.SITE</base:localId>
      <base:namespace>ES.CAED</base:namespace>
    </base:Identifier>
  </pf:inspireId>
  <pf:status xsi:nil="true"/>
  <EUREg:featureName>
    <EUREg:nameOfFeature>EXAMPLE SITE 1</EUREg:nameOfFeature>
  </EUREg:featureName>
  <EUREg:siteName/>
  <EUREg:location>
    <gml:Point gml:id="_d22b638f-2084-4046-8351-42778a300b87" srsDimension="2">
      <gml:pos>41.991925 2.104334</gml:pos>
    </gml:Point>
  </EUREg:location>
</EUREg:ProductionSite>
INSPIRE PF for the same example file


<gml:boundedBy>
  <gml:Envelope srsName="urn:ogc:def:crs:EPSG::4326" srsDimension="2">
    <gml:lowerCorner>2.104327 41.991925</gml:lowerCorner>
    <gml:upperCorner>2.104334 41.991932</gml:upperCorner>
  </gml:Envelope>
</gml:boundedBy>

<gml:featureMember>
  <pf:ProductionSite gml:id="PS_1">
    <pf:inspireId>
      <base:Identifier>
        <base:localId>123456789.SITE</base:localId>
        <base:namespace>ES.CAED</base:namespace>
      </base:Identifier>
    </pf:inspireId>
    <pf:status xsi:nil="true"/>
  </pf:ProductionSite>
</gml:featureMember>

<gml:featureMember>
  <pf:ProductionFacility gml:id="PF_1">
    <act-core:inspireId>
      <base:Identifier>
        <base:localId>000000002.FACILITY</base:localId>
        <base:namespace>ES.CAED</base:namespace>
      </base:Identifier>
    </act-core:inspireId>
  </pf:ProductionFacility>
</gml:featureMember>
Be aware that

The PF dataset obtained following the illustrated methodology, lacks most of the optional fields foreseen in the PF data model. Therefore, though being a valid INSPIRE PF dataset, for a true usability of the dataset, consider adding few steps to the transformation project to take into account those optional fields as well.
Providing industrial emission reporting according to an INSPIRE extended schema empowers the Member States to streamline their efforts to fulfil both INSPIRE and e-reporting obligations, since investments in implementing the EU Registry are building on their INSPIRE compliance.
Thank you!

Questions?

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