



Infrastructure for Spatial Information in the European Community

Towards the Initial Operating Capability of Network Services

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Initial Operating Capability

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- “Initial Operating Capability” means the ability of a Network Service to provide full functionality without guaranteeing
 - quality of service in conformity with the rules set out in Regulation, or
 - access to the service for all users through the INSPIRE geo-portal
- Not later than 18 months after the date of entry into force of the network services Regulation, Member States shall provide the Discovery and View Services with initial operating capability.



Initial Operating Capability Task Force

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- Purpose
 - to help and support the implementation of INSPIRE in the Member States
- Scope
 - architectural aspects and implementation of Network Services to ensure interoperability with the INSPIRE geoportal and among Member States
- Focus on
 - Update of the INSPIRE Discovery and View Services Technical Documentation.



Initial Operating Capability Task Force



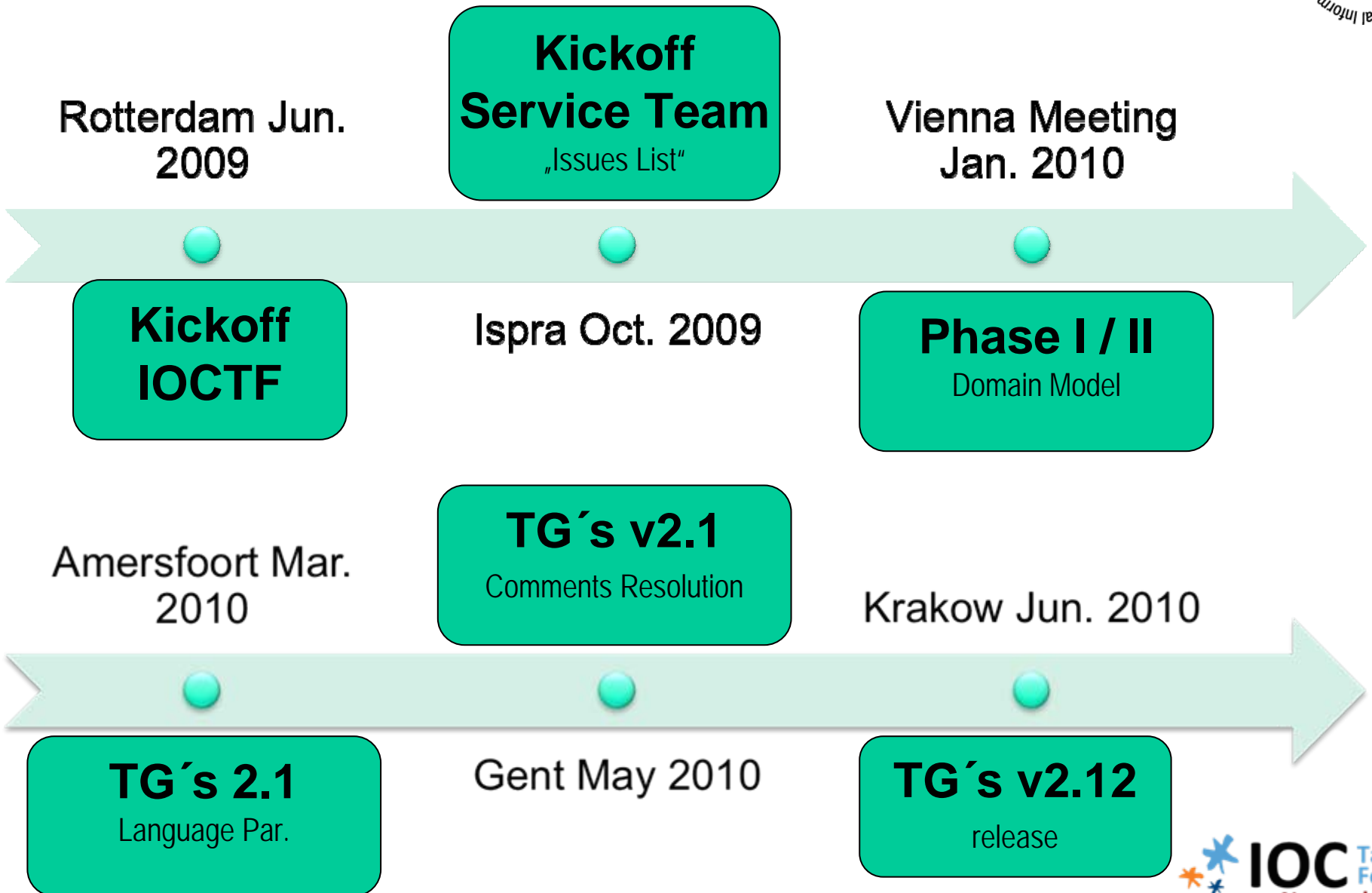
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- Produce unambiguous specifications, which minimize as much as possible diversity in interpretation for implementation
- Best Practices and preliminary implementations of INSPIRE services in the Member States
- Help promote exchange of experiences, according to National policies and the INSPIRE Directive and Regulations.



Overview over the meetings

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Phased Approach



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First decisions/solutions:

Phase I (2010 – May 2011)

- Use existing standards
- Language parameter
- Service Response Metadata
- Link View/Discovery Service
- INSPIRE metadata
- Need for testing => testboard

Phase II (June 2011+)

- Common GeoRM solution
- SOAP



Concept to extend standards for INSPIRE



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Standard Clients still work with INSPIRE Network Service

Clients may use additional functionality of INSPIRE Network Service e.g. INSPIRE-Geoportal (EU)



Client - Layer
Service - Layer

mandatory for each NS !

Technical Guidance based on ISO or OGC-Standards

INSPIRE requirements via Extension-mechanism: e.g. Language, metadata



Major changes in v2.12 Technical Guidance

- INSPIRE Profile
 - Based on ISO 19128:2005 (EN)
 - Extensions for
 - Metadata : ISO 19115:2003
 - Language : INSPIRE proprietary extension

- Binding & Protocols
 - HTTP GET binding as mandated by the ISO 19128:2005 (EN)
 - Support for other bindings (SOAP for example) can be documented in annexes to the guideline.



Discovery Service



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- Guidelines based on OGC CSW standard
 - OGC 07-045, CSW ISO AP, OGC Catalogue Services Specification 2.0.2 - ISO Metadata Application Profile for CSW 2.0, version 1.0.0
- Operations required by INSPIRE

INSPIRE operation	OGC CSW operation
Get Discovery Service Metadata	OGC_Service.GetCapabilities
Discover Metadata	CSW_Discovery.GetRecords
Publish Metadata	CSWT Manager.Transaction or CSWT Manager.Harvest
Link Discovery service	Combination of OGC_Service.GetCapabilities and CSW_Discovery.GetRecords OR using Publish Metadata operation: CSWT Manager.Transaction or CSWT Manager.Harvest



Get Discovery/View Service Metadata



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- 2 scenarios to choose from for publishing INSPIRE service metadata
 - **Scenario 1**
 - Discovery based
 - Reference to an INSPIRE service metadata record in a Discovery service
 - **Scenario 2**
 - (Extended) Capabilities
 - INSPIRE service metadata is described in the capabilities and extended capabilities



Get View Service Metadata operation



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■ INSPIRE service metadata mappings

- Resource Title (M) - **wms>Title**
- Resource Abstract (M) - **wms:Abstract**
- Resource Type (M) - **inspire_vs:ResourceType** (Extended Capabilities)
- Resource Locator (C) - **inspire_vs:ResourceLocator** (Extended Capabilities)
- Coupled Resource (C) - **wms:DataURL** (Layer property)
- Spatial Data Service Type (M) - **inspire_vs:SpatialDataServiceType** (Extended Capabilities)
- Keyword (M) - **wms:Keyword** ; **inspire_vs:InspireKeywords**
- Geographic Bounding Box (M) - **wms:EX_GeographicBoundingBox** (Layer property)
- Temporal Reference (M) - **inspire_vs:TemporalReference** (Extended Capabilities)
- Spatial Resolution (C) - **wms:Abstract**
- Conformity (M) - **inspire_vs:Conformity** (Extended Capabilities)
- Conditions for Access and Use (M) - **wms:Fees**
- Limitations on Public Access (M) - **wms:AccessConstraints**
- Responsible Organisation (M) - **wms:ContactInformation**
- Metadata Point of Contact (M) - **inspire_vs:MetadataPointOfContact** (Extended Capabilities)
- Metadata Date (M) - **inspire_vs:MetadataDate** (Extended Capabilities)
- Metadata Language (M) - **inspire_vs:Language** (Extended Capabilities)



Link Discovery/View Service operation



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- *“The Link Discovery Service operation allows the declaration of the availability of a Discovery Service for the discovery of resources through the Member State Discovery Service while maintaining the resource metadata at the owner location.”*
 - Recommended implementation using the Publish metadata operation of the Discovery Service, ie. CSWT:Transaction or CSWT:Harvest
 - Rationale: Services related to INSPIRE, form a "virtual" network of services: The publish metadata operation enables to link services into this network (publish-find-bind paradigm)
 - Service Metadata allows linking to the physical service through the resourceLocator (reference to service capabilities).



Language Parameter

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- Extended Capabilities declare the
 - list of supported languages and
 - current language
 - default language
- Affected operations:
- WMS.GetCapabilities: ExtendedCapabilities
 - + translated natural language fields (title, abstract)
- CSW.GetCapabilities: ExtendedCapabilities
 - + translated natural language fields (title, abstract)
- CSW.GetRecord: already supported by CSW2.0.2AP_ISO1.0



The Domain Model

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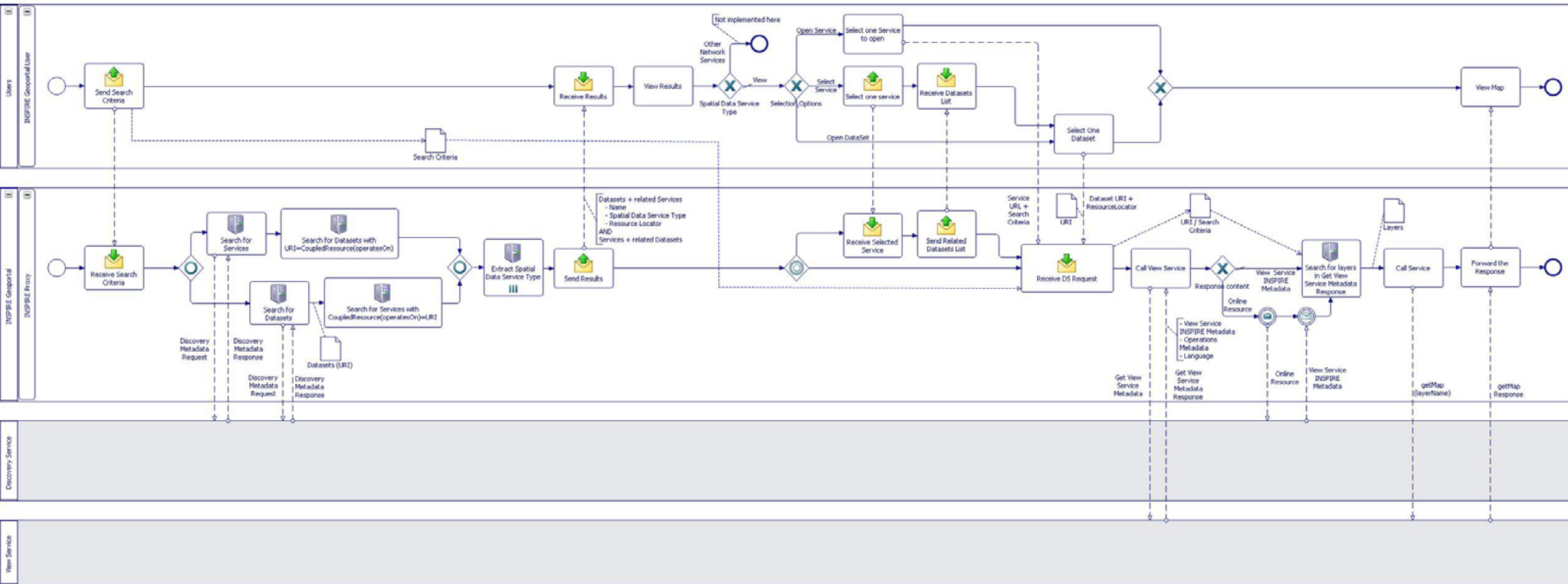


- Identify, describe, link and relate the technical components of INSPIRE together to...
- ...help understand the nature of technical components and the linkages, their purpose, context and how they could interact to realize **use cases** and **workflows**



Example workflow

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Status Technical Guidelines

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- Current version 2.12
- To be published on INSPIRE web site by end of June
 - <http://inspire.jrc.ec.europa.eu/index.cfm/pageid/5/list/0>
- These are not the final versions!!
- Changes will most probably still take place!



Forthcoming activities & Roadmap

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- Testing (till Sept/Oct 2010)
 - Validate Technical guidance (TG)
 - Clarity of TG
 - Compliance/interoperability Test suite
- Defined process submit requirements to the standards organisations (ISO-CEN-OGC)
- Update TG based on testing results (Oct/Nov 2010)
- Final TG (end 2010)



INSPIRE Geoportal



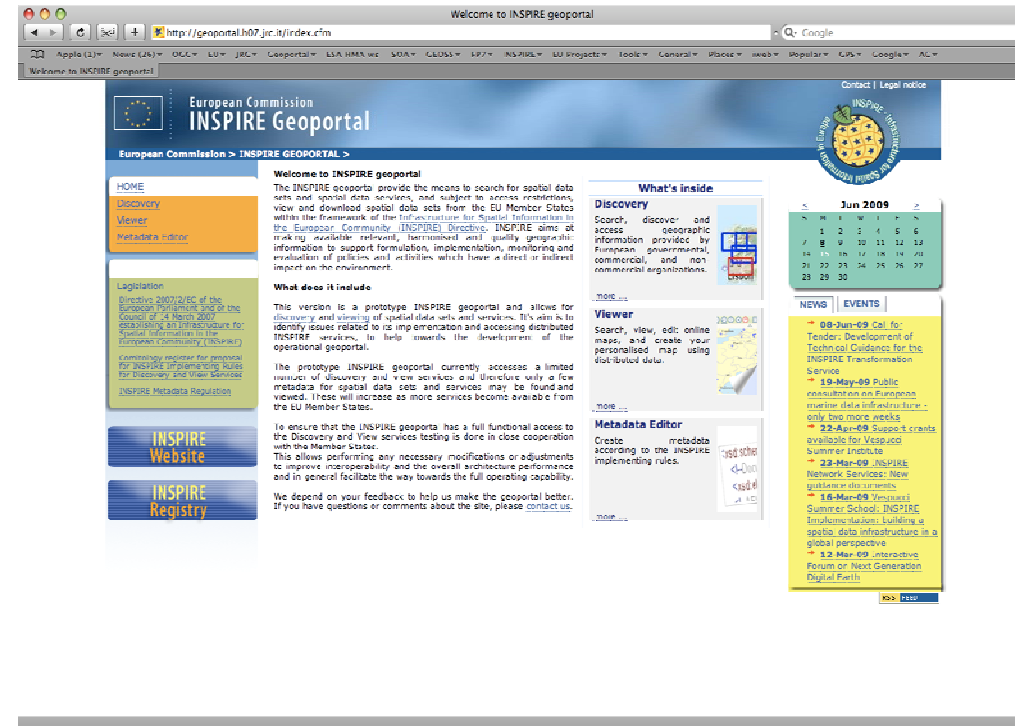
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- **Prototype**

- Tests with Discovery and View Services in the IOC context
- Initial steps for download and transformation services

- **Operational**

- Public procurement will be published within the next few weeks



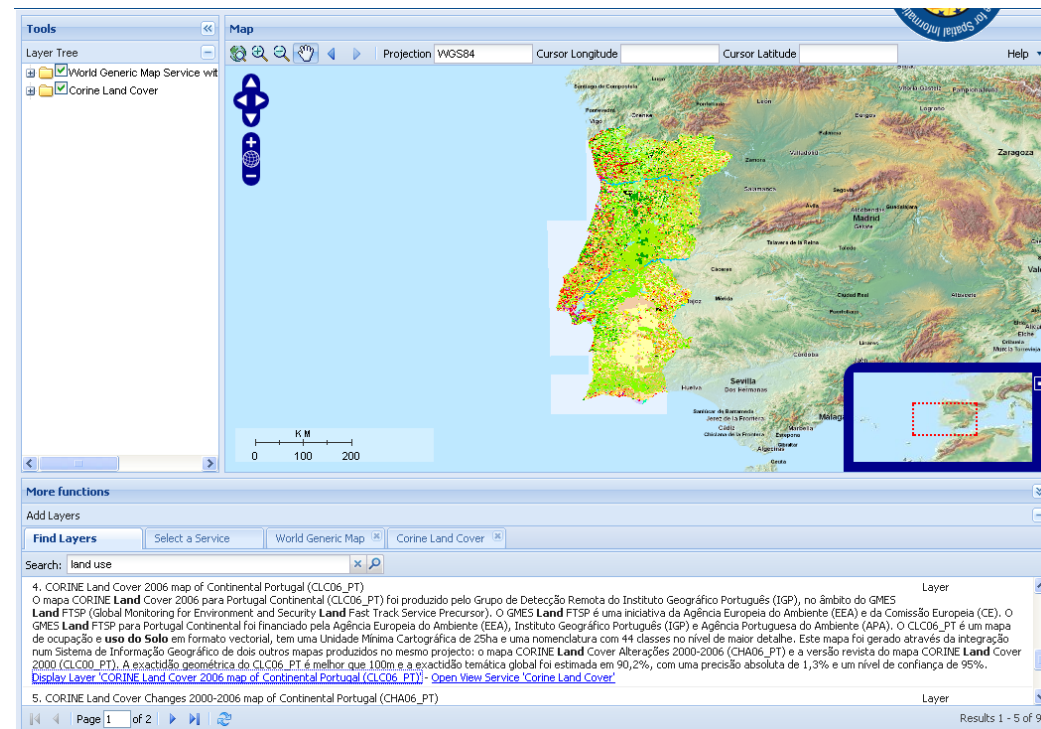


INSPIRE Geoportal



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- Prototype based on Open Source S/W
- Will be released under the EUPL
- Metadata Validator already released under EUPL in osor.eu
- INSPIRE OS Metadata Editor under development (EUROGEOSS project)





Questions



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IOC Technical Documents: <http://inspire.jrc.ec.europa.eu/index.cfm/pageid/5/list/0>
Prototype INSPIRE geoportal/Metadata Validator: <http://www.inspire-geoportal.eu>

