A European Community of SMEs built on Environmental Digital Content and Languages

D2.2: Training package available on the training platform

Work package	WP2 - TRAINING
Task(s)	Task 2.2: Training package
Deliverable number	D2.2
Dissemination level	PU (public)
Version/Status	3.1
Deliverable Author(s)	Giacomo Martirano (EPSIT)
Contributor(s)	Alessandra Vercillo (EPSIT), Roderic Molina (GISIG), Giorgio Saio (GISIG), Danny Vandenbroucke (KU LEUVEN), Catharina Bamps (KU LEUVEN)
Due date	31/10/2013
Actual delivery date	07/02/2014

This project is funded by the European Union under the grant n. 296307

TABLE OF CONTENTS

SME SPIRE
This project is funded by the European Union under the grant n. 296307

1 Document change log

Version	Date	Changed by	Changed Sections	Changes made
1.0	20.10.2013	Author	All	First version
2.0	18.12.2013	Author	All	Revision of all parts
3.0	06.02.2014	Author	All	Revision of all parts
3.1	07.02.2014	Author/ Contributors	All	Small text revisions

SME SPIRE
This project is funded by the European Union under the grant n. 296307

2 Introduction

The overall smeSpire training offer consists of the following three on-line resources, all accessible from the main page of the training section of the website (see figure 1):

1. The smeSpire training platform, containing training modules based on the smeSpire vocational training curricula, job profiles and business processes related to INSPIRE implementations, all identified and developed in the frame of task T2.1. From a technological and organizational point of view the platform is hosted and managed by the partner GISIG.
2. A series of seminars launched and physically hosted by the partner Spatial Applications Division of KU Leuven (SADL), based on the same above mentioned smeSpire vocational training curricula. Following the link showed in the figure 1 the user can access the SADL registration page of the planned seminars and the page where it is available the training material of the past seminars and an info-sheet of the planned seminars.
3. A series of smeSpire National INSPIRE Knowledge exchange events, organized in Italy as webinars. The Italian events are organized as webinars grouping together public authorities and private companies to discuss about operative solutions to harmonize spatial dataset at sub-national level in Italy, and to implement INSPIRE requirements. This third resource can be eventually integrated with similar national events which may be organized in other Countries.

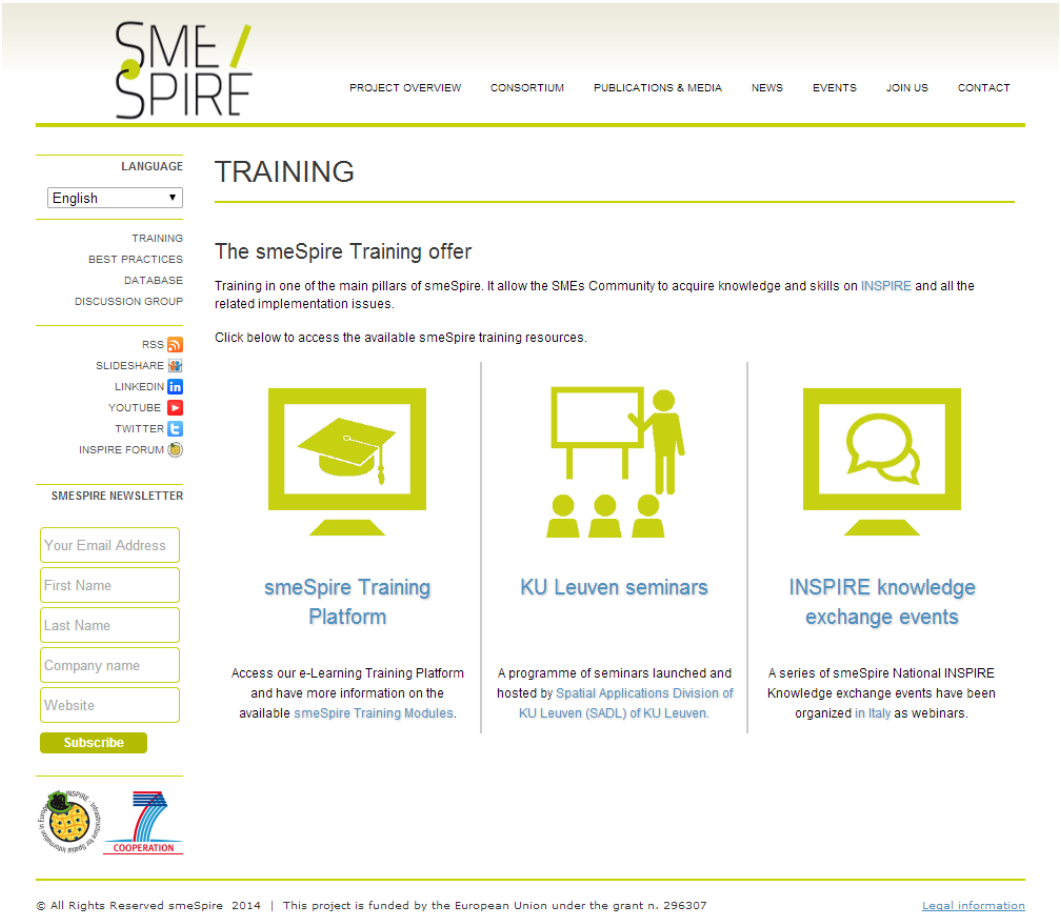

Figure 1 – smeSpire training resources

The content, accessibility and usability of the smeSpire training platform are described in more details in the following sections of this deliverable.

3 The smeSpire training platform

The smeSpire training platform contains modules which can be used in a very flexible way, coherently with the vocational training curricula developed, based on a series of job profiles and business processes related to INSPIRE implementations.[1]

The platform users can:

- follow the modules corresponding to the learning paths suggested by smeSpire for the three Job Profiles identified below:
  - INSPIRE non-technical expert (management)
  - INSPIRE spatial data technical expert
  - INSPIRE network services technical expert
- build their own self-customised learning paths, selecting the modules they find more appropriate in order to fill-in their own skill and knowledge gaps.

Each module contained in the platform has a set of metadata, which support the users to select/build their learning paths. The full set of modules metadata and training material is referred to as "training package".

Some modules are currently under revision, in order to incorporate the recent (mid-December 2013) updates of some INSPIRE legislative and/or technical documentation.
They will be made available in the platform as soon as they will be updated.

The list of modules which will be available in the training platform before the end of the project is provided in the table 2 below.
The different symbols and colors used in the table identity the different current status of availability:

symbol	current status
✓	metadata and training material already available
+	metadata available, training material under revision
♦	metadata and training material preparation in progress

Table 1 – Status of availability of training material

[1] The details about the vocational training curricula methodology, the business processes and the job profiles are contained in the smeSpire Deliverable D2.1 – Vocational Training Curricula.

SME SPIRE
This project is funded by the European Union under the grant n. 296307

Module Name	INSPIRE non-technical expert (management)	INSPIRE spatial data technical expert	INSPIRE network services technical expert
Introduction to INSPIRE	✓		
INSPIRE advanced	♦		
Introduction to costs/benefits of INSPIRE & possible opportunities	✓		
Introduction overview of Technological Geospatial Trends and potential opportunities/benefits for the geo-ICT market	♦		
Basics of INSPIRE Data and service sharing	✓		
INSPIRE Data and Service Sharing advanced		♦	
Basics of INSPIRE Data Specifications		✓	
Procedures for Data and Metadata Harmonization		+	
Metadata and Data validation for INSPIRE		+	
Hands-on training: How to publish data as Linked data		+	
Introduction to Sensor Web Enablement		♦	
Introduction to Business Process Modelling – BPMN		✓	
Basics of INSPIRE Network Services			✓
INSPIRE Network Services advanced			♦
Innovative Cloud Computing solutions			♦
Introduction to Semantic web technologies			♦

Table 2 – List of training modules

Additional modules, including modules created in the frame of other projects smeSpire has established/will establish liaison with, might be made available in the platform.

The format of the training material may vary for different modules. It mainly consists of power point presentations with voice, PDF documents and video registration of weblectures.
Some of the modules contain also training material needed to run practical exercises, such as datasets, metadata, tables and other tools.
All the training material of each module is directly accessible from the module metadata page.

The distribution policy adopted by smeSpire is to have publicly accessible the part of the training platform containing the metadata and to restrict only to the smeSpire network members the access to the training material.
In order to encourage also the non-members to access the training material, a link in the training homepage to the smeSpire network adhesion form has been highlighted, allowing any interested user to complete the adhesion procedure in few minutes.

SME SPIRE
This project is funded by the European Union under the grant n. 296307

4 The training module metadata template

In order to harmonize the information related to each training module, in order to facilitate the training platform users to analyse each module and to select/build the most appropriate learning path, a template for the training module metadata has been defined. It is shown in the following table 3. Such a template has been agreed and discussed also in the context of other projects (LINKVIT and eENVplus) in a training clustering perspective and to allow interoperability of training modules within different project training Framework.

Module name:
Short Abstract
A summary of the module to be included in the list of the modules of the Training Framework. *This item is not part of the module metadata.* *(max. 10 lines)*
Source
It refers to the context in which the module has been created (most of the module are developed within a specific context or project).
Ownership
Name of author(s), copyright and other restrictions on the usage and license (for instance Creative Commons Attribution Share-Alike License (http://creativecommons.org/licenses/by-sa/3.0/).
Abstract
A written summary (abstract) of the module. What are the major topics of the module? In this section the major subject areas shall be specified. They should be overarching subject areas covered by the trainers to meet the overall aim of the module. Also ensure that the list is an indicative one rather than a precise list of lecture titles, to give the module coordinator the flexibility to keep them updated every year. It is expected that these indicative module contents will be update on a regular basis to keep the module at the cutting edge of the subject area. Please also indicate the major formats of the module and if the module is a self-learning module or if an instructor will provide feedback? *(max. 20 lines)*
Structure
Please indicate the structure of the module in terms of training components, chapters or building blocks, as more appropriate. The structure is an ordered list of learning units.
Learning outcomes
Please indicate what a learner is expected to know, understand and able to do after completing the modules, with reference to Annex 1 about the use of the Bloom's taxonomy (action verbs). Other verbs may be "distinguish between", "choose", "assemble", "adjust", "identify", "solve" "apply" and "list". The learning outcomes should be written from a learner's perspective.

SME SPIRE
This project is funded by the European Union under the grant n. 296307

Setting learning outcomes assists in the process of defining the expectations of module developer, and provides an effective way of communicating to participants what a module encompasses. Clarity in the expression and description of outcomes will help to improve communication with participants and help them to understand what it is they are trying to achieve. *(max. 15 lines)*
Intended Audience
Please describe the expected audience to which this module interested.
Pre-requisites
Please refer to previous knowledge that is required for the module.
Language
Language(s) of the training material.
Format
Different type of resources (i.e. ppt presentation, presentation with voice, video (<duration>), screencast, exercises, self-learning questions, teacher feedback etc.).
Expected workload
Expected workload for a learner to achieve the learning outcomes

Table 3 – Training module metadata template

The metadata of the modules available in the platform will be translated in the different languages considered in the project.

SME SPIRE
This project is funded by the European Union under the grant n. 296307

5 The metadata of the training modules available in the platform

5.1 Introduction to INSPIRE

Source

Earlier versions of this training module have been developed within the VESTA-GIS project in 2009 (http://www.vesta-gis.eu/), the Nature-SDIPlus project in 2010 (http://www.nature-sdi.eu/) and within the Educational Services Programme (EduServ) of EuroSDR in 2010 and 2011 (http://www.eurosdr.net).

Ownership

Abstract

The INSPIRE initiative was initiated by the European Commission in 2001 to enhance the sharing of harmonized spatial data and services between public authorities in order to assist environmental policy-making and activities that may have a direct or indirect impact on the environment. The INSPIRE Directive entered into force in May 2007. Member States transposed the Directive into national legislation and started to implement INSPIRE components: setting-up a coordinating structure, harmonizing spatial data, developing network services to access the data, maintaining metadata for spatial data & services, and putting in place measures to improve data & service sharing.

This module deals with the main elements of the INSPIRE Directive: its context and background, the scope and major chapters of the Directive, an overview of the related implementing rules, the conformity of spatial data and services, and the potential for new innovative solutions based on INSPIRE. The module also pays attention to the relationship between INSPIRE and other Directives such as the Directive 2003/98/EC on the re-use of public sector information (PSI) and Directive 2003/4/EC on public access to environmental information. The training material consist of presentations, supporting documents and a weblecture. The module is a self-learning module.

Structure

This seminar contains the following parts:

1. The use of geographic information in work processes and policy making: key challenges
2. Spatial Data Infrastructures to facilitate access and sharing of data
3. Overview of the INSPIRE Directive
4. The Implementing Rules
5. The conformity of data and services
6. The potential for new innovative solutions

Learning outcomes

This project is funded by the European Union under the grant n. 296307

After the training offer, the participant will be able to summarize the major challenges for spatial data access and sharing; to understand and explain the concepts and main components of a Spatial Data Infrastructure; to define and summarise the main chapters of the INSPIRE Directive; to recognise and classify who is who in INSPIRE and its most important stakeholders; to define and discuss the different Implementing rules (metadata, data specifications, network services, data and service sharing, monitoring and reporting) and technical guidelines; to list and illustrate the most advanced SDIs in Europe and best practices; and to describe and discuss the major opportunities for different sectors to contribute to the development, maintenance and exploitation of INSPIRE.

Intended Audience

This seminar aims at professionals seeking for an overview of the INSPIRE initiative (e.g. managers of SME's and public bodies). Also unemployed people seeking new job opportunities.

Pre-requisites

No pre-requisites are required for this module.

Language

English.

Format

PDF documents, presentations, Weblecture. The module is a self-learning module.

Expected workload

Expected workload is 4 hours.

SME SPIRE
This project is funded by the European Union under the grant n. 296307

5.2 Introduction to costs/benefits of INSPIRE & possible opportunities

Source

This training module has been developed within the context of the smeSpire project in 2013 (http://www.smespire.eu/).

Ownership

Abstract

The implementation of the INSPIRE Directive generates costs but also benefits and possible opportunities for the public sector (Administration) but also for the private sector (Business) and Citizen.

This module gives first a brief overview on how the thinking around a Spatial Data Infrastructure as a Business case has evolved (and INSPIRE is the SDI for Europe). Going from cost recovery, to the free and fee debate, cost/benefit analysis, return on investment and finally demand-side valuation: data/services that are not accessed or used, have no value (and thus no benefits), so value derives from utility (´consumption´ of the data/services), defined by the users (A, B and C);

Some examples and good practices of uptake/consumption of data and services in business processes and the benefits for A, B and C are shown (source: European Union Location Framework good practices).

Furthermore, the module deals with the INSPIRE implementing rule on Monitoring and Reporting and the guidelines for the Member States to report in detail on the cost and benefit aspects. These country reports contain information for B2A opportunities namely on how business can support the administration in achieving the INSPIRE benefits.

Furthermore, the modules pays attention to the business opportunities that come with the implementation of INSPIRE: ´setting up´ INSPIRE (B2A) and ´building upon INSPIRE´ (B2A, B2B and B2C). ´Setting up´ INSPIRE includes different business processes that are identified based on the INSPIRE Directive, implementing rules which also imply innovative activities like publishing data as linked data, augmented reality…

The training material consist of presentations, supporting documents and a weblecture. The module is a self-learning module.

Structure

This seminar contains the following modules/parts:

1. Costs & benefits of implementing INSPIRE
2. Examples of INSPIRE & SDI Business processes
3. Where are the business opportunities?

Learning outcomes

SME SPIRE
This project is funded by the European Union under the grant n. 296307

After the training offer, the participant will be able to summarise the thinking around a Spatial Data Infrastructure as a Business case, describe the main elements of return on investment and demand-side valuation. Illustrate the uptake/consumption of data and services in business processes and the benefits for A, B and C; briefly describe the requirements of the IR for Monitoring and Reporting regarding costs and benefit aspects and identify possible business opportunities that come along with the activities to establish INSPIRE and that are built upon the established INSPIRE.

Intended Audience

This seminar aims at professionals seeking for a more in depth insight in the challenges of the INSPIRE initiative and want to build further on the opportunities INSPIRE offers (e.g. managers of SME's and public bodies). Also unemployed people seeking new job opportunities.

Pre-requisites

Participants should know the basics about INSPIRE or have followed the Introduction to INSPIRE.

Language

English

Format

PDF documents, presentations, Weblecture. The module is a self-learning module.

Expected workload

Expected workload is 3 hours.

SME SPIRE
This project is funded by the European Union under the grant n. 296307

5.3 Basics of INSPIRE Data and service sharing

Source

This training module has been developed within the context of the smeSpire project in 2013 (http://www.smespire.eu/).

Ownership

Abstract

The INSPIRE initiative was initiated by the European Commission in 2001 to enhance the sharing of harmonized spatial data and services between public authorities in order to assist environmental policy-making and activities that may have a direct or indirect impact on the environment.

This module pays attention to the European legislation on data access, re-use and sharing namely the Aarhus Directive on public access to environmental information, the Directive on the re-use of Public Sector Information and the requirements (Implementing rule) of the INSPIRE Directive on data and service sharing. The module focuses furthermore on INSPIRE, the Sharing regulation and what data providers have to do to comply, the guidance on the regulation, the framework INSPIRE agreement and the terms and conditions of the basic and specific INSPIRE license and different examples of good practices.

The module also touches the subject of the state of the art in data and service sharing, if the INSPIRE legislation is working, open data, data sharing in a services environment and Digital Rights management, machine readable licenses and European projects and initiatives like EULF, ELF, ARE3NA.

The training material consists of presentations, supporting documents and a weblecture. The module is a self-learning module.

Structure

This seminar contains the following modules/parts:

1. Setting the scene – data and service sharing in the EU and in the INSPIRE Directive
2. INSPIRE IR on data and service sharing and guidance
3. Practical implementation – Data Provider Perspective
4. Gaps, issues, and 'where do we go from here?

Learning outcomes

After the training offer, the participant will be able to summarize the context in which the INSPIRE Directive chapter on data and service sharing was drafted; to understand and explain the main elements of the INSPIRE Directive (objective, principles) chapter on Data and Service Sharing; to define and summarize the main requirements of the INSPIRE Regulation harmonising access to data and services; do describe and discuss the state of the art of INSPIRE data and service sharing and exemplify how to

This project is funded by the European Union under the grant n. 296307

report on data-sharing agreements; to describe and discuss the issues relating to the implementation of the legislation by a data provider; to explain how the current legislation and its implementation impacts on third parties and to illustrate and comment on the success of the current legislation in achieving its goals.

Intended Audience

This seminar aims at professionals seeking to understand the European legislation on data access, re-use and sharing with the main focus on the requirements of the INSPIRE Directive regarding the sharing of data and services.

Pre-requisites

No pre-requisites are required for this module.

Language

English

Format

PDF documents, presentations, Weblecture. The module is a self-learning module.

Expected workload

Expected workload is 4 hours.

SME/SPIRE
This project is funded by the European Union under the grant n. 296307

5.4 Basic of INSPIRE Data Specifications

Source

Earlier versions of this training module have been developed within the context of the EnviSDI Summer School on SDI for environmental datasets in 2010 and 2011.

Ownership

Abstract

One of the major goals of INSPIRE is to create harmonised spatial data sets that can be used seamlessly in cross-border applications. In order to reach this goal it is necessary to agree on common definitions for the different themes covered by INSPIRE. An approach has been agreed upon between all the INSPIRE stakeholders based on a series of international standards, i.e. the ISO 19100 series of geomatics standards. This common approach should guarantee that spatial data from different themes are defined and described in the same way and therefore can be easily exchanged and used for different purposes. If necessary, existing spatial data can/should be transformed into those agreed specifications for use in cross-border contexts.

This module discusses the scope and objectives of the INSPIRE data specifications. The module discusses the generic conceptual model which is based on the ISO 19100 series of standards in detail and provides examples of UML class diagrams for some of the INSPIRE data themes. The different types of metadata for spatial data sets are discussed as well as the general rules for transforming existing data sets into INSPIRE conformant data sets.

The training material consist of presentations, supporting documents and a weblecture. The module is a self-learning module.

Structure

This seminar contains the following modules/parts:

1. Scope & objectives of INSPIRE data specifications
2. The modelling framework for INSPIRE data specifications/li>
3. Development of INSPIRE data specifications
4. Understanding the implementing rule and guidelines
5. Transforming data into INSPIRE data
6. Best practices for data transformation

Learning outcomes

After the training offer, the participant will be able to explain why INSPIRE requires data specifications (interoperability); identify the main elements of the INSPIRE architecture; explain the development process of INSPIRE data specifications; understand the main elements of the INSPIRE modelling

This project is funded by the European Union under the grant n. 296307

framework (generic conceptual model); explain how data specifications have been modelled; read & understand the Technical Guidance documents including UML class diagrams; identify and describe the different levels of metadata (discovery, evaluation, use); and to understand the process of data transformation and start using data transformation tools to transform data into INSPIRE compliant data.

Intended Audience

This seminar aims at GI professionals, ICT professionals and managers who need to understand the process of transforming data conform the requirements of the INSPIRE rules and guidelines.

Pre-requisites

Prior knowledge: no explicit pre-requisites are required. However, participants should have a basic understanding of the INSPIRE directive or Spatial Data Infrastructures (Introduction to INSPIRE).

Language

English

Format

PDF documents, presentations, Weblecture. The module is a self-learning module.

Expected workload

Expected workload is 4 hours.

SME/SPIRE
This project is funded by the European Union under the grant n. 296307

5.5 Introduction to Business Process Modelling – BPMN

Source

This training module has been developed within the context of the smeSpire project in 2013 (http://www.smespire.eu/).

Ownership

Author: Monique Snoeck (Research Center for Management Informatics – KU Leuven).

Abstract

The implementation of the INSPIRE Directive involves different Business Processes that can be identified using the INSPIRE Directive and the Implementing Rules e.g. BP Monitoring and reporting: reporting of indicators. Business Process Modelling helps to better understand, monitor and improve the events, decisions and activities that are part of INSPIRE.

This module deals with the definition of business processes and their outcomes, with business process identification and business activity monitoring, the identification of the core elements of a process and modelling of agents.

Furthermore, the module focuses on how to apply business process modelling notation with different examples and exercises and also deals with advanced concepts for Business Process Management.

The training material consist of presentations, supporting documents and a weblecture. The module is a self-learning module.

Structure

This seminar contains the following modules/parts:

1. What is a Business Process
2. What is Business Process Management
3. Business Process Modelling Notation

Learning outcomes

After the training offer, the participant will be able to position and understand the role of business process modelling in the general domain of business process management; Identify business processes and their main components; create high level process diagrams using the BPMN notation (knowledge of basic BPMN-notation and the use of events).

Intended Audience

This seminar aims at people with a interest in IT-related aspects. The seminar will be given from a non-technical perspective. Nevertheless, general knowledge of information systems and interest in

SME SPIRE
This project is funded by the European Union under the grant n. 296307

information system architecture is advised as prior knowledge to follow this course.

Pre-requisites

No pre-requisites are required for this module.

Language

English

Format

PDF documents, presentations, Weblecture. The module is a self-learning module.

Expected workload

Expected workload is 4 hours.

This project is funded by the European Union under the grant n. 296307

5.6 Basics of INSPIRE Network Services

Source

Earlier versions of this training module have been developed within the context of the KU Leuven Summer Schools, 2010-2011-2012 (KOI-VLIR) and the smespire project, 2013 (http://www.smespire.eu/)

Ownership

Abstract

The INSPIRE initiative was initiated by the European

The INSPIRE Directive defines 5 types of web services called network services that provide access to spatial data resources according to the publish-search-find-bind paradigm. Users can find data according to specific search criteria (or geographic coordinates), view the metadata and the spatial data themselves, and download them on their own computer for further use. The INSPIRE network services build further on existing international standards from W3C, ISO and OGC.

The module introduces the concepts of the World Wide Web (WWW) and of a Service Oriented Architecture (SOA). It describes and illustrates the 5 types of INSPIRE network services (discovery, view, download, transformation and invoking). It explains the link to existing standards of ISO and OGC (e.g. CSW, WMS and WFS) and also discusses the INSPIRE implementing rules that are applicable including conformity aspects.

The training material consist of presentations, supporting documents and a weblecture. The module is a self-learning module.

Structure

This seminar contains the following parts:

1. Introduction to the concepts of the WWW, webservices and SOA
2. The link to relevant W3C and OGC Standards
3. INSPIRE conformant Metadata as basis for network services
4. INSPIRE Network Services
5. Software to set-up network services & test suites
6. INSPIRE Geoportal
7. Performance Capacity

Learning outcomes

After the training offer, the participant will be able to identify and describe the principles and concepts of web service technology and the main characteristics of web services; list and describe the

This project is funded by the European Union under the grant n. 296307

specifications of the OGC standard for a (Catalogue Service for the Web (CSW), a Web Map Service (WMS) and a Web Feature Service (WFS) and provide examples for each of them; identify some good examples of WMS/WFS Clients and Servers and give examples for each of them; make the link between the INSPIRE network services and those international standards; identify and describe the main elements of INSPIRE conformant metadata for services; identify and describe the main elements of the INSPIRE geoportal; identify and describe the performance and capacity guidelines and some test tools/suites.

Intended Audience

INSPIRE stakeholders that need to implement INSPIRE network services but are the initial stage of such activities.

Pre-requisites

No specific pre-requisites are required for this module but basic knowledge about INSPIRE is a must (Introduction to INSPIRE).

Language

English.

Format

PDF documents, presentations, Weblecture. The seminar includes demonstrations. The module is a self-learning module.

Expected workload

Expected workload is 4 hours.

SME SPIRE
This project is funded by the European Union under the grant n. 296307

5.7 Procedures for Data and Metadata Harmonization

Source

Earlier versions of this training module have been developed within the context of the NatureSDIplus project (www.nature-sdi.eu), 2010, and of the smeSpire project, 2013 (http://www.smespire.eu/).

Ownership

Abstract

This self-learning module gives an overview on the procedures used to transform heterogeneous source datasets and metadata according to the relevant INSPIRE target schemas.

It outlines the principles of data and metadata harmonization related to INSPIRE and describes the steps needed in an harmonization process.

The module explains how to analyse the data models (source and target) and how to utilize matching tables in order to perform the mapping between source data and INSPIRE target schema elements. It gives an overview of some transformation tools in order to help the selection of the most suitable one.

The module introduces the principles of validation, as a necessary step to check/claim the compliance of the harmonized data and/or metadata to the relevant specification.

Practical examples of data transformation and validation are provided in the LINKVIT modules “Data Remodelling: Practical Experiences” and “Metadata and Data Validation for INSPIRE” respectively.

Structure

1. Principles of Data and Metadata Harmonization
2. Source and Target Data models
3. Matching tables
4. Transformation of Data and Metadata
5. Principles of validation of transformed data and metadata

Learning outcomes

After the module, the participant will be able to identify and describe the steps needed to perform a data/metadata harmonization, identify the applicable regulations/guidelines needed in an harmonization and/or validation process, identify the suitable transformation tool(s), evaluate the complexity of a data/metadata harmonization process.

SME SPIRE
This project is funded by the European Union under the grant n. 296307

Intended Audience
GIS and ICT professionals, who aim to understand the principles of an INSPIRE harmonization. Non technical staff belonging to organizations aiming to implement INSPIRE.
Pre-requisites
Basic knowledge of the INSPIRE directive.
Language
English
Format
PDF documents, presentations, Weblecture. The module is a self-learning module.
Expected workload
2 hours

SME SPIRE
This project is funded by the European Union under the grant n. 296307

5.8 Examples of Data Transformation

Source

Earlier versions of this training module have been developed within the context of the NatureSDIplus project (www.nature-sdi.eu), 2010, and of the smeSpire project, 2013 (http://www.smespire.eu/).

Ownership

Abstract

This self-learning module provides examples of transformations of a source dataset into a dataset compliant to the technical requirements of the applicable Implementing Rules and Technical Guidelines of INSPIRE.

It shows, step by step, an schema transformation process, starting from the analysis of the source dataset and of its data model and the study of the applicable INSPIRE Data Specification.

The module shows the use of the matching table as useful tool to document the mapping process between the elements of the source dataset and the INSPIRE data model elements and explains how to identify and solve some common matching problems.

Through the use of a selected tool, the transformation process is practically explained, showing also the "live" validation of the mapping being performed against the relevant INSPIRE application schema. At the end, a demonstration is given of how to generate a harmonized GML dataset.

Structure

1. Analysis of the source data model
2. Identification and analysis of the target data model
3. Use of the matching table
4. Analysis and solution of the matching problems
5. Execution of the transformation
6. Export of the transformed data

Learning outcomes

After the module, the participant will be able to identify and understand the source and target data models, to fill in a matching table, to perform a data transformation from a non-harmonized source dataset into an harmonized one and to export a harmonized GML dataset.

SME/SPIRE
This project is funded by the European Union under the grant n. 296307

Intended Audience
GIS and ICT professionals aiming to harmonize their datasets against INSPIRE Data Specifications.
Pre-requisites
Basic knowledge of INSPIRE. LINKVIT module **"**Procedures for Data and Metadata Harmonization".
Language
English
Format
PDF documents, presentations, Weblecture. The module is a self-learning module.
Expected workload
2 hours

This project is funded by the European Union under the grant n. 296307

5.9 Metadata and Data validation for INSPIRE

Source

Earlier versions of this training module have been developed within the context of the smeSpire project, 2013 (http://www.smespire.eu/).

Ownership

Abstract

This self-learning module provides examples of metadata and data validation against the requirements of the applicable Implementing Rules and Technical Guidelines of INSPIRE.

Using different tools, examples are given on how to validate existing metadata and/or create compliant metadata according to INSPIRE Implementing Rules for Metadata (Commission Regulation (EC) No 1205/2008).

Examples are also given on integrating the six additional metadata elements for interoperability required by INSPIRE Implementing Rules for interoperability of spatial data sets and services (Commission Regulation (EU) No 1089/2010).

This module shows how to assess the degree of conformity to the requirements specified by Commission Regulation (EU) No 1089/2010 relevant to a GML dataset belonging to INSPIRE Annex II/III data themes.

Conformity is assessed through an Executable Test Suite (ETS), i.e. physical implementation of the Abstract Test Suite (ATS) defined in the Annex A of the Data Specifications.

Structure

1. "Discovery Metadata" validation
2. "Metadata for interoperability" validation
3. Data validation: from ATS to ETS

Learning outcomes

After the module, the participant will be able to validate existing metadata, create and validate INSPIRE compliant metadata, assess the conformity of an INSPIRE GML dataset.

Intended Audience

GIS and ICT professionals aiming to validate their metadata and datasets against INSPIRE

requirements.
Pre-requisites
Basic knowledge of INSPIRE. LINKVIT module: **“**Procedures for Data and Metadata Harmonization”.
Language
English
Format
PDF documents, presentations, Weblecture. The module is a self-learning module.
Expected workload
2 hours

This project is funded by the European Union under the grant n. 296307

6 The users' feedback

In order to get the training platform users' feedback an on-line questionnaire is made available at the end of each module.
The questionnaire is structured in 10 questions:

- 6 closed questions (the user has to select one of three possible options: Yes, Sort of, No):
  - Were the learning objectives achieved?
  - Was the quality of the training material sufficient?
  - Was the workload too much for you?
  - Was the length of the module appropriate?
  - Was the e-learning platform easy to use?
  - Could you monitor a progress in your learning using the platform?
- 4 open questions:
  - What did you like about the module?
  - What didn't you like about the module?
  - Do you have any suggestion to improve the module?
  - Do you have any suggestion for further topics presently not existing in the platform?

SME SPIRE
This project is funded by the European Union under the grant n. 296307