



**INSPIRE**  
Infrastructure for Spatial Information in Europe

## **Member State report: Austria, 2013**

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## Abbreviations

AGEO	Österreichischer Dachverband für Geographische Information (Austrian Association for Geographic Information)
APOS	Real-time positioning system
ASFINAG	Autobahnen- und Schnellstraßen Finanzierungs AG (motorway and dual carriageway financing company)
ATOM	Standard for the exchange of web content (www.atomenabled.org)
BEV	Bundesamt für Eich- und Vermessungswesen (Austrian Federal Office of Metrology and Surveying)
BMLFUW	Federal Ministry of Agriculture, Forestry, Environment and Water Management
BMVIT	Federal Ministry of Transport, Innovation and Technology
CC-BY 3.0 AT	Creative Commons – Licence for Open Data in Austria (only reference obligation)
ECMWF	European Centre for Medium-Range Weather Forecasts
ECOMET	Economic Interest Grouping of the National Meteorological Services of the European Economic Area
EEA	European Economic Area
EGS	European Geological Survey
EK	European Commission
EU	European Union
GBA	Geologische Bundesanstalt (Geological Survey of Austria)
SDI	Spatial data infrastructure
GeoDIG	Spatial Data Infrastructure Act, Federal Act on a national environmentally relevant Infrastructure for Spatial Information ( <i>Bundesgesetz über eine umweltrelevante Geodateninfrastruktur des Bundes</i> ), BGBl. I No 14/2010 in the version BGBl. I No 109/2012
GEOLAND.AT	Spatial information portal of the Austrian provinces
GIP.at	Graph integration platform of Austria (common traffic graph)
GIS	Geographical Information System
GTS	Global Telecommunications System
INSPIRE	Infrastructure for Spatial Information in the European Community
INSPIRE Directive	Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE), OJ L 108 of 25 April 2007, p. 1
INSPIRE/AT	National preparation programme for the implementation of the INSPIRE Directive
IOCTF	Initial Operating Capability Task Force of the Commission under the INSPIRE Directive
ISO	International Standardisation Organisation
JRC	Joint Research Centre of the EU
LFRZ	Land-, forst- und wasserwirtschaftliches Rechenzentrum GmbH (Agriculture, Forestry and Water Management Computer Centre)
NCP	National Contact Point under Article 19(2) of the INSPIRE Directive
ÖBB	Österreichische Bundesbahnen (Austrian Railways)
OGD	Open Government Data
OpenData	Open data for free use without restriction
PROFIL.AT	Austrian metadata profile (ÖNORM ON A-2270)
SDS	Spatial Data Service
TWG	Thematic Working Group; Working group under the INSPIRE Directive on the harmonisation of spatial data themes regarding the INSPIRE Directive
WFS	Web Feature Service
WMO	World Meteorological Organisation
ZAMG	Zentralanstalt für Meteorologie und Geodynamik (Central Institute for Meteorology and Geodynamics)

# 1 Introduction

This report is Austria's second under Article 21(2) of Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE), OJ L 108 of 25 April 2007, p. 1. It is based on Decision 2009/442/EC implementing Directive 2007/2/EC as regards monitoring and reporting, OJ L 148 of 11 June 2009, p. 18, in the corrected version of OJ L 322 of 9 December 2009, p. 40. The report follows the INSPIRE reporting model provided by the European Commission. Essentially, the report describes the status quo of the construction and development of the INSPIRE Infrastructure for Spatial Information in Austria. It describes the coordination activity in Austria and the tasks, methods and objectives of those involved.

The report was compiled by Umweltbundesamt GmbH (Federal Environment Agency) on behalf of the Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW), on the basis of information from public spatial information centres and the National Coordination Office.

## 2 Coordination and quality assurance (Article 12)

### 2.1 Coordination

#### 2.1.1 National contact point

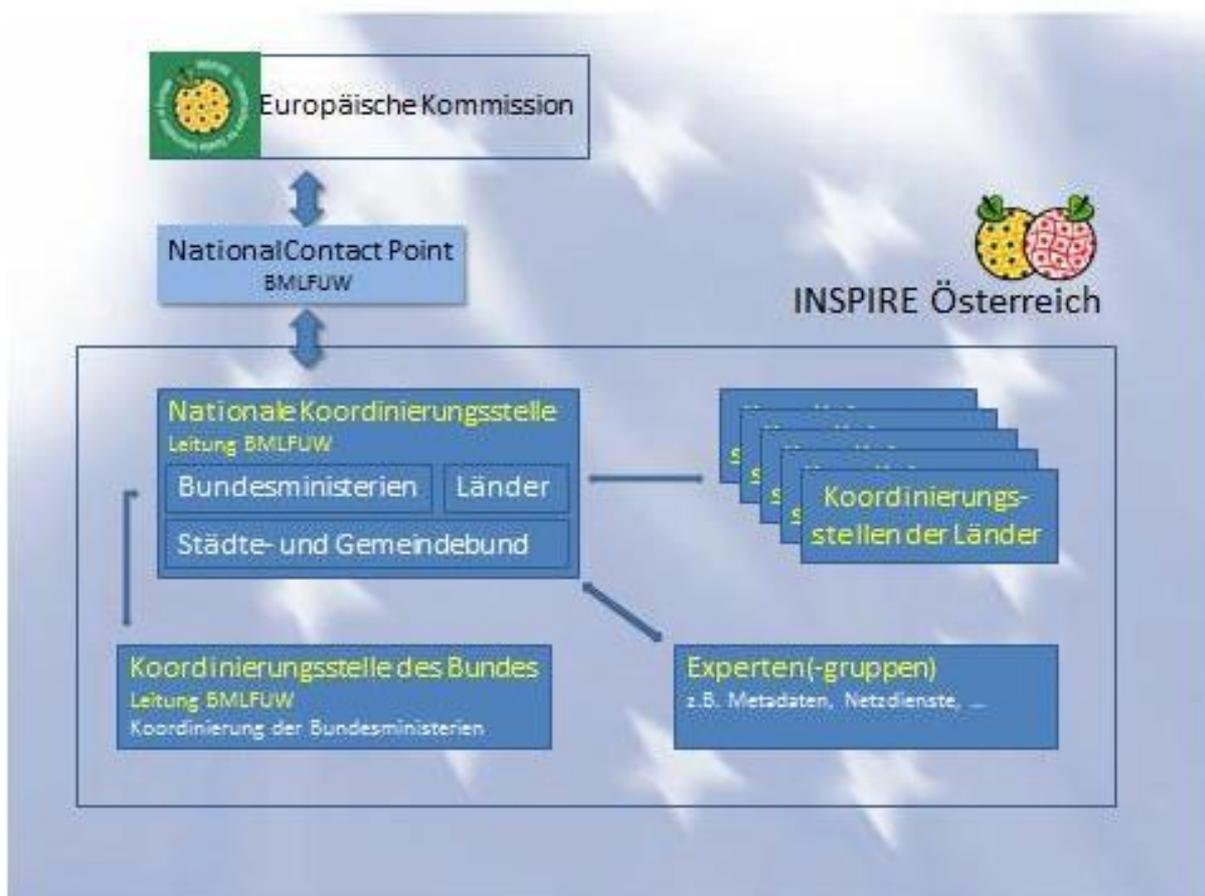
Name	National Contact Point (NCP) – INSPIRE
<b>Contact information</b>	
Address	Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) Department II/5; National Contact Point – INSPIRE Stubenring 1 1012 Vienna Austria
Telephone number	+43 (0)1 71100 6683
Fax number	+43 (0)1 71100 5198
E-mail address	<a href="mailto:wolfgang.fahrner@lebensministerium.at">wolfgang.fahrner@lebensministerium.at</a>
URL	<a href="http://www.lebensministerium.at">www.lebensministerium.at</a>
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#### Role, tasks, areas of responsibility

Pursuant to § 13 GeoDIG, the Federal Minister for Agriculture, Forestry, Environment and Water Management is responsible for communications with the Commission of the European Union in connection with the INSPIRE Directive. This task is performed by the NCP INSPIRE.

#### 2.1.2 The coordination structure

Coordination structures were introduced on the basis of the federal structure of Austria at both federal level and at the level of the provinces.



**Figure 1: National INSPIRE coordination structure in Austria**

Key

Europäische Kommission = European Commission

Nationale Koordinierungsstelle Leitung BMLFUW = National Coordination Office headed by BMLFUW

Bundesministerien Länder, Städte- und Gemeindebund = Federal Ministries, Provinces, Association of Towns and Municipalities

Koordinierungsstellen der Länder = coordination bodies of the provinces

Koordinierungsstellen des Bundes Leitung BMLFUW = coordination bodies of the Federal Government, headed by BMLFUW, coordination of the Federal Ministries

Experten(-gruppen) z.B. Metadaten, Netzdienste = Expert groups, e.g. metadata, network services

## Role, tasks, areas of responsibility

### A) National Coordination Office

§ 12 GeoDIG established the legal basis for a new national coordination structure – the National Coordination Office.

Name	National Coordination Office
<b>Contact information</b>	
Address	Federal Ministry of Agriculture, Forestry, Environment and Water Management Department II/5; INSPIRE National Coordination Office Stubenring 1 1012 Vienna Austria
Telephone number	+43 (0)1 71100 6683
Fax number	+43 (0)1 71100 5198
E-mail address	wolfgang.fahrner@lebensministerium.at
URL	<a href="http://www.lebensministerium.at">www.lebensministerium.at</a>
<b>Contact person</b>	DI Wolfgang Fahrner
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E-mail address	<a href="mailto:wolfgang.fahrner@lebensministerium.at">wolfgang.fahrner@lebensministerium.at</a>
<b>Representative</b>	Ing. Johann Sammet
Telephone number	+43 (0)1 71100 6680
E-mail address	<a href="mailto:johann.sammet2@lebensministerium.at">johann.sammet2@lebensministerium.at</a>

In accordance with this provision, the Federal Minister for Agriculture, Forestry, Environment and Water Management set up a Federal coordination centre, featuring one representative of each Federal Ministry, with INSPIRE-related spatial data sets or services within its scope. With representatives of the provinces, the Austrian Association of Towns and Cities and the Austrian Association of Municipalities, this centre also serves as National Coordination Office. A list of the members of the National Coordination Office is given in Annex 1.

The National Coordination Office has the following tasks with regard to Austria's Infrastructure for Spatial Information as created, applied or made available on the basis of the Acts implementing the INSPIRE Directive:

- 1) To coordinate contributions from public spatial information centres or third parties, infrastructure for spatial information users and other interested bodies or persons
  - a) describing spatial data sets or services relevant according to this Act and the related user requirements,
  - b) concerning existing procedures and
  - c) giving feedback on the implementation of this Act;
- 2) To assist the Federal Minister for Agriculture, Forestry, Environment and Water Management in performing the tasks of the National Contact Point, monitoring and reporting to the European Commission and
- 3) where necessary, make recommendations on the establishment of the Infrastructure for Spatial Information to public spatial information centres or third parties, users of the Infrastructure for Spatial Information and other interested bodies or persons.

The presence of more than half the members is essential for Coordination Centre discussions and decision-making. Decisions must be unanimous. Abstention is inadmissible.

### **B) Coordination in the Provinces**

The Provincial Acts implementing the INSPIRE Directive, provide for the following coordination bodies:

1. Burgenland: In the Burgenland Spatial Data Infrastructure Act (*Burgenländisches Geodateninfrastrukturgesetz*), LGBl. No 8/2011, no provision is made for a coordination centre of its own. The Provincial Administrative Office, GIS Coordination Unit, at the Burgenland Provincial Government Office undertakes such tasks with the cooperation of the departments concerned;
2. Carinthia: Spatial Data Infrastructure – Coordination Centre of Carinthia at the Carinthian Provincial Government Office (§ 19I of the Carinthian Information and Statistics Act (*Kärntner Informations- und Statistikgesetz*), LGBl. No 70/2005, as last amended by LGBl. No 64/2010);
3. Lower Austria: The coordination is based on the existing organisational structures and distribution of responsibilities at the Lower Austrian Provincial Government Office; support for the national contact point by the Provincial Government, which is represented at the National Coordination Office;
4. Upper Austria: No provision is made for a coordination centre of its own at provincial level in the Upper Austrian Spatial Data Infrastructure Act (*Oö. Geodateninfrastrukturgesetz*), LGBl. No 79/2010. However, according to the catalogue of competencies of the OÖ Provincial Administration, the Spatial Information and Property Department (GeoL) is responsible for performing the tasks under the Oö. GeoDIG with the cooperation of other task groups otherwise concerned;
5. Salzburg: The INSPIRE Directive was transposed by the Act on the duty of disclosure, document reuse, data protection, provincial statistics and spatial data infrastructure (*Gesetz über Auskunftspflicht, Dokumentenweiterverwendung, Datenschutz, Landesstatistik und Geodateninfrastruktur*), LGBl. No 60/2011. The task of acting as coordination centre was assigned to the Spatial Planning and SAGIS Department, as public spatial information centre, of acting as coordination centre by the distribution of tasks of the Salzburg Provincial Government Office, LGBl. No 86/1993, as last amended by LGBl. No 19/2013;
6. Styria: Coordination centre at the Styrian Provincial Government Office (§ 14 of the 2011 Styrian Spatial Data Infrastructure Act (*Steiermärkisches Geodateninfrastrukturgesetz*), LGBl. No 35/2011);

7. Tyrol: Coordination at provincial level is not explicitly regulated in the Tyrol Spatial Data Infrastructure Act (*Tiroler Geodateninfrastrukturgesetz*) (TGeoDIG). So far, coordination tasks have been undertaken under the organisation of the Tyrol Spatial Information System, *tiris*; in 2012, the coordination was regulated clearly under the distribution of tasks of the Tyrol Provincial Government Office;
8. Vorarlberg: Coordination is based on the existing organisational structures and distributions of tasks at the Vorarlberg Provincial Government Office; support of the national contact point by the Provincial Government, which is represented at the National Coordination Office (§ 16 of the Vorarlberg Provincial Spatial Data Infrastructure Act (*Vorarlberger Landes-Geodateninfrastrukturgesetz*), LGBl. No 13/2010);
9. Vienna: Coordination centre at the Vienna Provincial Government Office (§ 12 of the Viennese Spatial Data Infrastructure Act (*Wiener Geodateninfrastrukturgesetz*), LGBl. No 37/2010).

## Relationships with third parties

### 1. Relationships with third parties:

- **Publicity:** the website [www.inspire.gv.at](http://www.inspire.gv.at) provides information for the public (and for communication between the spatial information centres). This contains relevant information for the public and spatial information centres, such as, for example, links to the relevant legal texts, the monitoring and reporting results or information on the implementation of INSPIRE in Austria;
- Information exchange with AGEO, GEOLAND.AT, etc. in the context of presentations and events;
- There is often informal exchange of information with third parties where circumstances require.

### 2. Relations with third parties requesting access to the network under Article 12 of the INSPIRE Directive:

Contributions from third parties wishing to offer their spatial data sets or services via the INSPIRE geoportal within the meaning of Article 18 of this Directive are to be coordinated by the National Coordination Office.

Such third parties may link their spatial data sets or services with the above-mentioned network under § 7(2) of the GeoDIG provided that, for the duration of the link, they agree with the public spatial information centre providing the network services for the link, to ensure that

- a) the metadata, spatial data sets or services and network services meet the INSPIRE standards,
- b) the technical and legal parameters for the link and hence the data provision are in place,
- c) the costs of the link, including any charges agreed, are met by the third party.

Similar provisions are also contained in some of the above-mentioned provincial Acts.

No third parties have so far participated in INSPIRE as suppliers of spatial data.

## Coordination centre working practices and procedures

Rules of procedure were agreed at the constitutive meeting of the National Coordination Office of 18 June 2010. These regulate the composition, tasks, communication, decision-making, etc.

The National Coordination Office may be assisted in its work by experts or groups of experts.

The coordination at provincial level concerns the provincial and municipal administrations. Within the provincial administration, the content of coordination of the GIS activities is based on the INSPIRE requirements. In many cases, fairly long-term data exchange agreements already exist with the municipalities, which also cover the content requirements of the municipalities in accordance with INSPIRE. In this respect, provision is often made for automation of the interaction of the provinces with the municipalities concerning the use and publication of spatial data (e.g. electronic land destination plan).

### 2.1.3 Comments on the monitoring and reporting process

#### 1. Monitoring

In 2009, the former core programme team INSPIRE/AT drew up a first list of INSPIRE-relevant spatial data sets in Austria. This first version of a monitoring list was completed at a workshop in October 2009.

In February/March of each year, the respective updated list is sent to all identified public spatial information centres for revision and supplementing with monitoring information.

The survey results are used for the monitoring and by the Federal Environment Agency, commissioned by the BMLFUW, to calculate the required indicators.

The list of INSPIRE-related spatial data sets and services is subject to continual further development.

The list of spatial data sets is sent to the European Commission using the Excel template provided and published annually as part of the monitoring results on the Internet on the website of the National Coordination Office ([www.inspire.gv.at](http://www.inspire.gv.at)).

For Austria as a whole, the monitoring report for the year 2012 covers a total of 5 discovery services, 42 view services and 21 download services. 3 view services are not network services within the meaning of the INSPIRE Directive. 8 view services and 4 download services do not yet comply with the Technical Guidance. The services of 16 spatial information centres are offered. In some cases, service providers are used by 'smaller' spatial information centres.

#### 2. Reporting

The Federal Environment Agency was commissioned by the BMLFUW to compile the 2010 INSPIRE report and the present 2013 report. The report is based on the one hand on internal working papers and records of the National Coordination Office and on the other hand on a mailing to all public spatial information centres with a request for feedback.

Furthermore, written and telephone consultations and an editorial consensus meeting also took place with key players. The report was finally agreed with the members of the National Coordination Office.

## 2.2 Quality assurance

Each public spatial information centre, or 'third party' within the meaning of Article 4(1)(c)(ii) of the INSPIRE Directive, is responsible for the quality of its own data and services and their metadata description. Questions of the quality of network services are dealt with by the Network Services Expert Group. The concern is firstly that the services on offer comply with the requirements of the implementing rules and secondly that they comply with the IOCTF agreements for the sake of optimum interoperability.

The quality assurance of the services is defined by quality of services aspects regarding performance, capacity and availability. Performance and capacity can be achieved by corresponding IT architectures. For the required availability of 99% of operating time – this corresponds to failure of only 3.6 days per year – in Austria's interpretation, a reference figure of at least one year is used.

The LFRZ, under a contract from the BMLFUW, takes care of the technical implementation of the BMLFUW network service. In this capacity, the LFRZ deals with the dimensioning of the EDP systems for the network services. The LFRZ solutions are presented in the form of self-service applications in which spatial information centres can establish their services themselves. In this respect, these spatial information centres are themselves responsible for the appropriate data preparation as a basis for the compliance with the performance criteria, for example. In addition to BMLFUW departments, the self-service solution is also used in synergy by outside bodies.

### **2.2.1 Quality assurance procedures**

Data and services of the respective spatial information centres are examined and processed in accordance with the required guidelines/standards in the respective field. There is no knowledge of any further quality assurance procedures.

### **2.2.2 Analysis of quality assurance problems**

In the context of achieving conformity of the metadata, the monitoring of the spatial coverage of the spatial data sets, the monitoring of the conformity of the spatial data sets, the implementation of the network services, the creation of accessibility of the network services and the monitoring of the conformity of the network services, at least no fundamental quality assurance problems have arisen. As a result of comprehensive scheduling in the field of the implementation of the obligations referred to, all problems which arose in the course of the development are resolved with the help of the validation possibilities concerning metadata of the European Commission's Geoportal and communication with other public spatial information centres.

The lack of testing tools recognised by the European Commission is perceived as a general problem.

### **2.2.3 Measures taken to improve the quality assurance**

The following measures should be taken to improve quality assurance:

- Internal use of tools for automatic monitoring of services;
- Use of tools for automatic structural testing of spatial data;
- The European Commission should make tools available for quality assurance of data and services which allow an authoritative statement concerning conformity.

A transparently conducted discussion with all persons involved in the implementation enables an improvement to be achieved in the quality assurance of the infrastructure. Furthermore, the use of specialised software programs guaranteeing compliance with the implementing rules for the INSPIRE Directive, can provide a key contribution to quality assurance.

### **2.2.4 Quality certification mechanisms**

Data, services and the underlying processes are examined and processed at the respective spatial information centres where appropriate in accordance with internal or external specifications. There is no knowledge of any more extensive certification mechanisms especially for INSPIRE.

## **3 Functioning and coordination of the infrastructure (Article 13)**

### **3.1 General overview description of the infrastructure for spatial information**

Austria has no comprehensively defined national spatial data policy, nor does it have a coordinated national infrastructure for spatial information. All attempts to create one over the past decade have failed and were ultimately abandoned in view of the INSPIRE Directive which was being drawn up at that time.

Austria has national, regional and local spatial information infrastructures which have developed on the basis of public administration and are now being adapted and extended to meet the requirements of the INSPIRE Directive.

One of the joint initiatives achieved in the SDI field is the spatial data network GEO-LAND.AT of the Austrian provinces (see Sections 3.5 and 6.2).

A further infrastructure used in synergy was created in the LFRZ on behalf of the BMLFUW. An infrastructure was established for the independent configuration of view and download services, and of metadata records for the national discovery service of the BMLFUW, in each case through authorised spatial information centres in Austria. These are the departments and subordinated services of the BMLFUW, but also spatial information centres of other departments, which use the self-service infrastructure of the BMLFUW. In addition, part of the infrastructure is operated jointly with the BEV. In this way, there is joint LFRZ and BEV technical and organisational implementation of the discovery service. Operation takes place with daily data reconciliation and is secured against failure. The BEV-LFRZ example shows the added value of open, synergetic partnerships at national level.

## 3.2 INSPIRE stakeholders

The Federal Minister for Agriculture, Forestry, Environment and Water Management directs both the Federal coordination centre and the National Coordination Office.

The National Coordination Office comprises one representative of each Federal Ministry with INSPIRE-related spatial data sets within its scope, and one representative of each province and the Association of Towns and Municipalities.

Given the constitutional competencies in Austria, the INSPIRE Directive has to be implemented by both the Federal government and the provinces. Transposition occurred through the Federal Spatial Data Infrastructure Act (*Geodateninfrastrukturgesetz* - GeoDIG) and through provincial Acts of the nine provinces.

The main public spatial information centres and principal suppliers of spatial data and spatial data services are:

- Provinces
- Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW)
- Austrian Federal Office of Metrology and Surveying (BEV)
- Geological Survey of Austria (GBA)
- Central Institute for Meteorology and Geodynamics (ZAMG)
- Bundesanstalt Statistik Österreich (Statistics Austria)
- Land-, forst- und wasserwirtschaftliches Rechenzentrum GmbH (LFRZ)
- Network operators in which the public sector has a majority holding.

On account of the extensive lack of infrastructure in the municipalities, their INSPIRE transposition obligations are fulfilled by the respective provinces.

There are currently no known 'third parties' wishing to participate as suppliers of spatial data under INSPIRE.

## 3.3 Roles of the various stakeholders

Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW)

- Legal implementation at Federal level
- National Contact Point (NCP)
- National Coordination Office
- Federal coordination centre
- Operation of the primary access points (discovery service-access nodes)

Provinces

- Legal implementation in their own territory
- Members of the National Coordination Office

- In some cases members of the Network Services Experts Group  
Federal Ministries

- Members of the National Coordination Office  
Association of Towns and Cities, Association of Municipalities
- Members of the National Coordination Office

#### Austrian Federal Office of Metrology and Surveying (BEV)

- Member of the Network Services Experts Group
- Member of the IOCTF Network Services of the European Commission
- Operation of the secondary access points (discovery service-failsafe nodes)

#### Geological Survey of Austria (GBA)

- Contributions to the testing of the Geology data specification under the umbrella association EGS (European Geological Surveys)

- Cooperation in the INSPIRE Expert Group of EuroGeoSurveys

#### Land-, forst- und wasserwirtschaftliches Rechenzentrum GmbH (LFRZ)

- Assigned the technical implementation for the BMLFUW and other spatial information centres
- Member of the IOCTF Network Services of the European Commission
- Direction of the national Network Services Experts Group
- Cooperation as technical expert in the National Coordination Office

#### Federal Environment Agency

- Assigned the reporting for Monitoring & Reporting
- Member of the Network Services Experts Group
- Cooperation as technical expert in the National Coordination Office
- Cooperation in the TWGs
  - Land Cover (LC)
  - Utility and Governmental Services (US)
  - Environmental Monitoring Facilities (EF)
  - Bio-geographical Regions + Habitats and Biotopes + Species Distribution (BR, HB, SD)

#### Central Institute for Meteorology and Geodynamics (ZAMG)

- Cooperation in the TWG Atmospheric Conditions + Meteorological Geographical Features (AC, MF)
- Represented in international organisations/alliances in the field of data exchange.

In total, about 40 public spatial information centres are involved with their spatial data sets and services in the implementation of INSPIRE in Austria.

### **3.4 Measures taken to facilitate data exchange**

No specific measures for promoting data exchange, extending beyond the implementation of the INSPIRE Directive, are known at present. However, often spatial data – in some cases also as INSPIRE services – are made available as open data.

### **3.5 Stakeholder cooperation**

As already mentioned in Section 3.1, Austria has no nationally coordinated spatial data policy or infrastructure other than the National Coordination Office now set up under INSPIRE.

The Austrian provinces have formed a spatial data association, known as GEOLAND.AT, to coordinate their GIS activities and to run a joint geoportal, through which the INSPIRE services can also be reached.

According to a decision by the Provincial Government Office Directors Conference, GEOLAND.AT is to play a key role in the implementation of INSPIRE by the Austrian provinces and especially to support a coordinated procedure, economic on resources, for the network services.

An exchange of information concerning the implementation of INSPIRE takes place during the regularly held meetings of the GIS and surveyors conference of the provinces.

The Austrian Association for Geographic Information (AGEO) is an umbrella association for GI users in Austria which represents them both in Austria and in international organisations. Active information for the public on geographical data and the promotion of technical and methodological development initiatives should, with the help of best practice, make Austria a leading geoinformation centre.

A regular exchange of information takes place between the Geological Survey of Austria (GBA) and the Central Institute for Meteorology and Geodynamics (ZAMG). A possibility for cooperation is under discussion.

For the operation of the national discovery service, the BEV cooperates closely with the BMLFUW – with the LFRZ as service provider. An extension to the joint use of software for the operation of individual modules of the download service is planned for 2013.

Intensive cooperation also exists between the experts of the BEV and the LFRZ in its function as Austrian delegate to the IOCTF of the European Commission. The technical issues arising in this respect are worked on jointly and the ensuing measures and procedures are developed with due regard for the assignment by the National Coordination Office.

### **3.6 Access to services through the INSPIRE geoportal**

Information on access to the spatial data sets and services of the public spatial information centres is given in the metadata and published via discovery services.

A harvesting concept covering all spatial data providers and laying down the harvesting hierarchy between provider nodes has been created for Austria. The top of this hierarchy consists of the primary access point at the Federal Ministry of Agriculture, Forestry, Environment and Water Management – the National Contact Point (NCP) – and a secondary access point – its failsafe device – at the Austrian Federal Office of Metrology and Surveying. These use harvesting processes to obtain all information on Austrian spatial data sets and services and make this information available to other discovery services.

The European Union discovery service harvests metadata from the Member States' access points and makes them available to the public via the INSPIRE geoportal.

Diverging from the agreed operator model (see Section 4.1), currently 3 of the 4 Austrian discovery services are harvested; the GEOLAND discovery service of the provinces is registered directly with the EU discovery service.

## **4 Usage of the infrastructure for making spatial information available (Article 14)**

### **4.1 Use of spatial data services in the infrastructure for spatial information**

According to analysis and assessment of various models, the service model cited below was defined for the implementation of the INSPIRE/AT network services.

- Under the service model, the major spatial data providers implement and run some or all of the INSPIRE network services for their own spatial data or make other organisations' services available.
- Small spatial data providers can use the services run by the major producers and link in their own spatial data.

The main objective is for all types of network service (discovery, view, download) to be implemented in Austria at least once in accordance with the INSPIRE Directive.

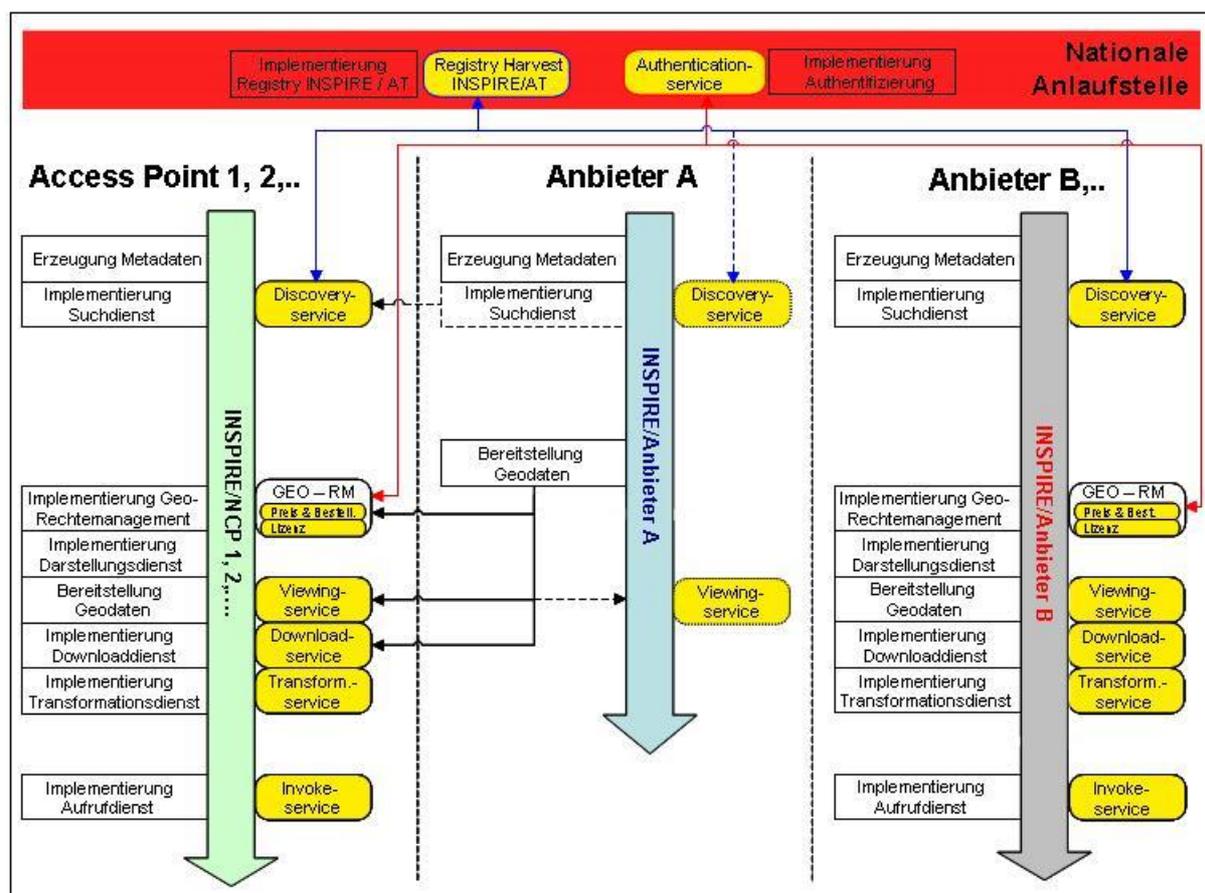


Figure 2: INSPIRE/AT. service model [For key please see next page]

Figure 2 gives examples of the service or operational model, with the arrows showing the time sequence of the implementation projects. This service model ensures that all network services required by the INSPIRE Directive are implemented and made available to all registered users in accordance with the geo-rights management.

- The major spatial data providers (access points) implement the INSPIRE-compliant network services giving access to their spatial data sets. Smaller spatial data providers can also use these services to incorporate their spatial data sets (coupled resources).
- Other A providers (organisations/authorities) produce the metadata for their spatial data sets and services covered by the INSPIRE Directive and make this information available either via their own discovery service or via that of another organisation.
- Other B providers (organisations/authorities) implement and run INSPIRE Directive services autonomously and make them available to registered users free of charge or via a geo-rights management arrangement.

According to the GeoDIG (§ 6(1) and § 7(1)), the public spatial information services are required to create and operate network services, interlink them via an electronic network and give access to these services via the European Commission's INSPIRE geoportal.

They may also call on the services of service providers or other suitable bodies, such as other public spatial information centres for example, to meet these obligations.

The legal basis thus exists for network services for spatial data sets and services of various public spatial information centres to be used in accordance with the service model described above.

Currently, discovery, view and download services are in operation. Subject to the implementing rules (concerning the network services), a very wide variety of realisations of the INSPIRE specifications are used for the view and download services. In principle, the view services follow the proposals of Technical Guidance 3.2. The approach of the ATOM feeds, the direct access download service (WFS) and download services embedded in e-commerce are used as download services.

## Key to Figure 2

Implementierung = implementation

Authentifizierung = authentication

Nationale Anlaufstelle = National Contact Point

Anbieter = provider

Erzeugung Metadaten = production of metadata

Implementierung Suchdienst = implementation of discovery service

GEO – RM = geo-rights management

Implementierung Geo-Rechtemanagement = implementation of geo-rights management

Implementierung Darstellungsdienst = implementation of view service

Bereitstellung Geodaten = provision of spatial data

Implementierung Downloaddienst = implementation of download service

Implementierung Transformationsdienst = implementation of transformation service

Implementierung Aufrufdienst = implementation of invoke service

Preis & Bestell = price & order

Lizenz = licence

Many data providers already made their spatial data available before the entry into force of the INSPIRE obligations, or independently of them, to the public authorities, the business community, the academic world and to private interested parties. Product portals as well as spatial information services are used as distribution channels. The data are sometimes sold as a product and are sometimes offered free of charge, often in the context of the OGD initiative.

No comprehensive statements can be made concerning INSPIRE-related use of the spatial data or changes in use under INSPIRE. Usually separate recording of INSPIRE and OGD services is not even possible, which means that these figures have to be estimated. In the case of separate recording of INSPIRE and OGD services, however, usually distinctly higher access figures are to be observed for the latter.

## 4.2 Use of the infrastructure for spatial data by the general public

A series of Federal agencies, all provinces and many towns and municipalities operate web-based GIS applications via which the general public can use the authorities' spatial data.

Examples of this include the digital State geographical maps in the form of the Austrian Map-online Internet portal of the BEV, the comprehensive spatial data portfolios of the provinces on the provincial websites and the spatial data portal [GEOLAND.AT](http://GEOLAND.AT) or the data sets and weather and climate products of the ZAMG. These services are usually to be used free of charge, but are sometimes subject to a charge, and have come into being independently of the obligations under the INSPIRE Directive.

The Federal Chancellery and the cities of Vienna, Linz, Salzburg and Graz have together founded the 'Cooperation Open Government Data Österreich'. Federal government, provinces, towns and cities and municipalities wish, in cooperation with the open data communities, the academic world, the culture sector and the business sector to lay the basis of the future of open government data in Austria. By agreeing on common standards, effective framework conditions are to be created which are to the benefit of all interest groups. The portal [www.data.gv.at](http://www.data.gv.at) offers a list of open data sets and data services from the public administration, in some cases even without spatial dimension which are based on open data principles. These are available free of charge for personal or commercial use.

## 4.3 Cross-border usage

The Austrian Federal Office of Metrology and Surveying (BEV) already has data exchange agreements with most of Austria's neighbours (for example for the cartographic models and the real-time positioning system APOS). These regulate the mutual provision free of charge of the data sets within the scope of the shared national boundary for updating and for further use. These agreements are currently being overhauled with a view to introducing uniform procedures and conditions for all neighbouring countries. From the technical point of view, for the purposes of updating the data, the data are in the meantime not only exchanged, but in the case of cartographic data also included directly in the BEV systems.

The surveying authorities of all countries or provinces/Länder bordering Lake Constance (Baden-Württemberg, Bavaria, Austria and Switzerland) are working together on the project 'Bodensee-Geodatenpool' ([www.bodensee-geodatenpool.net](http://www.bodensee-geodatenpool.net)). The aim was to store cross-border spatial data on the Lake Constance economic area in a pooled databank. The Bodensee-Geodatenpool provides grid data from the 1:50 000 topographical map, terrain elevation data, vector data on the administrative boundaries and digital orthophotos with a uniform structure and uniform projection (ETRS89/UTM reference system/projection) on uniform terms. The Baden-Württemberg Land Survey Department handles enquiries and marketing. The Austrian contributions to this project are made by the Austrian Federal Office of Metrology and Surveying (BEV).

The Bodensee-Geodatenpool began as an Interreg IIIA project and has now been completed.

The Central Institute for Meteorology and Geodynamics (ZAMG) is engaging with the European Centre for Medium-Range Weather Forecasts (ECMWF) and other meteorological and geophysical organisations, in a worldwide exchange of meteorological data under WMO Conventions by means of the Global Telecommunications System (GTS). Data exchange and commercial use between the countries of the European Economic Area (EEA) are regulated in ECOMET (also see Section 5.2).

Under the eContentplus project OneGeology-Europe, the Geological Survey of Austria (GBA) is running a spatial information service on the harmonised geology of Europe on the scale of 1:1 million.

#### **4.4 Use of transformation services**

No transformation services are planned at present, since the data sets are available in the necessary coordinates systems. No transformation services are currently planned either with regard to the production of the interoperability of the spatial data, since the spatial data sets would probably first have to be harmonised.

A pure coordinate transformation service is offered via [www.geoland.at](http://www.geoland.at). User statistics are not known, however.

### **5 Data-sharing arrangements(Article 15)**

#### **5.1 Data-sharing arrangements between public authorities<sup>1</sup>**

According to the INSPIRE Directive, public spatial information centres are required, *inter alia*, to operate network services. To comply with this obligation, they may also use a service provider or another appropriate body.

Both the Federal government and the provinces have availed themselves of this possibility, in accordance with the agreed service model. On the basis of agreements, individual institutions also make network services available for spatial data sets and services of other public spatial information centres, which on account of limited spatial data are affected only slightly by this Directive, and for which running their own network service would be too costly.

Establishing the reference versions of the spatial data sets has contributed to improved coordination in matters of direct Federal administration, primarily in the field of environmental themes.

In several provinces, there is an institutionalised exchange of spatial data with the municipalities and other public spatial information centres.

The project 'GIP.at' of the graph integration platform of Austria, promotes the national exchange of province-related traffic graph data and data of the ÖBB (Austrian Railways) and the ASFINAG (motorway and dual carriageway financing company) for further use in Austrian traffic information.

In the 'basemap.at' project, the provinces work together with other Austrian authorities and partners from the academic and business worlds on the first basic Internet map of Austria, based on permanently up-to-date administrative spatial data.

A further initiative is the cooperation between the BMLFUW, the BEV and the provinces on drawing up and regular maintenance of high-resolution digital orthophotos (12.5–25 cm). As a result of this cooperation, all relevant bodies in Austria together ensure that the orthophoto database in Austria is up to date.

Similar cooperation concerning the elevation models from the laser scan data exists between the provinces and the BMLFUW (represented operationally by LFRZ). Agreements have been concluded on cost-sharing for torrent and avalanche control and the water section of the BMLFUW with the provinces. The data files produced can be used by both sides with different conditions for use.

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<sup>1</sup> Public authority within the meaning of Article 3(1)(9) of the INSPIRE Directive.

An immissions data network exists between the provinces, the Federal Environment Agency and the ZAMG, in which the current pollutant and meteorological data are made available.

In some cases, cooperative establishment of an infrastructure for spatial data has been agreed with regional and local tourist associations at provincial level for the exchange and use of spatial data sets and services and are in the process of being implemented.

## 5.2 Data-sharing arrangements between public authorities<sup>2</sup> and Community institutions and bodies

Agreements exist between the Central Institute for Meteorology and Geodynamics (ZAMG) and:

- European Centre for Medium-Range Weather Forecasts (ECMWF)
- European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)
- Economic Interest Grouping of the National Meteorological Services of the European Economic Area (ECOMET)
- Network of European Meteorological Services (EUMETNET)
- Informal Conference of Eastern European Directors (ICWED)
- Informal Conference of Central European Directors (ICCED)
- European Cooperation in the field of scientific and Technical Research (COST)
- European Seismological Commission (ESC)
- Observatories and Research Facilities for European Seismology (ORFEUS)

## 5.3 Barriers to data-sharing and actions to overcome them

Austria's federal structure means that differentiated competence structures also exist in the GI sector. The national spatial data landscape has accordingly developed unevenly and largely as a function of the requirements of the requirements of various data producers, which has had a negative impact on multiple usability of the data files.

Above all in the basic spatial data area, however, awareness of the need to compile and manage metadata was growing well before the INSPIRE Directive, so that today all significant providers of such data stocks have online metadata with spatial-data search and location functions. The metadata, still to some extent disparately structured and thus hampering rapid searches of Austria-wide data, are being converted to compatible systems during the implementation of the INSPIRE Directive.

There are no essential obstacles to the availability and usability of these spatial data. The data stocks are available under disparate charges and conditions depending on the public spatial information centre concerned. Bodies using the data are interested in using spatial data from other sources and being able to pass them on free of charge, while the public centres producing the data are usually obliged to obtain, or reliant on obtaining, returns from their data provision. This leads *inter alia* to economically inefficient parallel data collections and duplications.

Thematic spatial data describing special (environmentally relevant) circumstances may differ widely, depending on the producer and holder. Metadata of disparate quality are available and structures adapted to individual requirements, often making multiple use at least more difficult and more costly. The introduction of interoperability through INSPIRE should bring synergistic improvements in this field.

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<sup>2</sup> Public authority within the meaning of Article 3(1)(9) of the INSPIRE Directive.

The implementation of the INSPIRE requirements calls for considerable extra effort in terms of human, technical, infrastructural and financial resources. Substantial technical and scientific knowledge is required to implement the interoperability provisions. These additional charges have to be borne by the public spatial information centres often without additional resources, as a result of which in several cases the performance of the actual tasks is impaired. High financial expenditure and lack of human resources are also barriers to increased joint data use.

## **6 Cost/benefit aspects (Article 16)**

### **6.1 Costs resulting from implementing the INSPIRE Directive**

Under the INSPIRE Directive, reporting and monitoring obligations have to be met in relation to the European Commission which give rise to a considerable financial burden. Operating the required coordination structures and the associated coordination and information processes also represent extra costs, especially for human resources.

In the early years of the INSPIRE implementation, the focus was on the organisation and planning of the necessary processes and above all the development of the necessary network services. For spatial information centres with data files covered by Annexes I and II to the INSPIRE Directive, data and metadata are already to be offered via the network services. However, the major task of data harmonisation will become a significant cost factor only in the coming years.

The overall costs for the implementation of INSPIRE in Austria for the years 2010–2012 came to a total of about EUR 7.5 million. About 60% of this was incurred by the Federal government and 40% by the provinces. For the provinces, the costs were shared more or less equally among the 9 provinces (with a certain dependence on the size of the province); at Federal level, most the costs were borne by BMLFUW, BEV, GBA, ZAMG and BMVIT.

The municipalities have incurred few costs, since their tasks are largely assumed by the provinces.

Detailed drawing up and breakdown of the costs incurred for INSPIRE in the years 2010–2012 is not possible, since in many spatial information centres there are no precise records of the personnel and hardware and software costs incurred, to be attributed to INSPIRE, or no precise demarcation from other tasks.

The main cost factor was the personnel costs for setting up the INSPIRE services and processes and investments in the IT infrastructure. In future, the focus will be on the harmonisation of the data and operation and maintenance of the infrastructure built, not least from the point of view of the required high availability of the data and services.

### **6.2 Benefits from implementing the INSPIRE Directive**

In the short term, no direct benefits are discernable for most spatial information centres. In the medium to long term – especially with availability of the data files covered by Annexes I and II – an improvement in the data supply and, as a result of the download services, a reduction in expenditure from the supply of data are expected.

With the start of the talks between the public spatial information centres on joint planning of the technical implementation of the Metadata and Network Services Regulation, positive effects have arisen in communication and subsequently also in cooperation between the spatial information centres. This has led to new or intensified cooperation in other fields of spatial information too.

The INSPIRE Directive has also opened up access to spatial data via interoperable network services to the business community too. This can facilitate the reuse of spatial data of the administration with the aim of activating the wealth-creating potential of these data. In addition, businesses are fundamentally able to improve the exploitation of their spatial data sets and services by making them available to EU-wide users through links with the national infrastructure for spatial data.

Although not initiated by INSPIRE, the spatial data association GEOLAND.AT represents an example of the benefits of coordinated spatial data administration.

### **GEOLAND.AT – Improved utilisation of spatial data – process optimisation in public administration**

The founding of the spatial data association of the Austrian provinces was a first specific step towards implementing the agreed aims of Austrian spatial information policy. The aim was to provide open, free, Austria-wide access to spatial data and services of the provinces, based on international standards. All domains – citizens, business, education and above all public administration (Federal government, provinces, municipalities) can thus consult country-wide geographical data at <http://www.geoland.at>. These data are therefore no longer confined to each province individually, but can now be viewed and printed as online national maps. The spatial data association of the provinces is also an important basis or preliminary step for eGovernment solutions to be built on this and thereby contributes to boosting administrative efficiency.

The main benefit arises particularly for the competent experts and field specialists, above all in the district administrative authorities.

Qualitative benefits:

- rapidly available spatial information
- drawing up of individual maps
- legal reporting requirements met
- decentralised availability to external users
- inter-province data available in the event of emergencies

Quantitative benefits:

- reduced development and maintenance costs
- shorter contracts or saving on outside contractors
- reduced costs through citizens' own research
- time savings for other authorities
- cost savings for external users

GEOLAND.AT has existed since 2004 and is currently being brought in line with the specifications of the INSPIRE Directive.

## **7 Conclusions and outlook**

The INSPIRE Directive has been implemented in law by one Federal and nine provincial Acts and coordination structures have been set up for the coordinated implementation of the Directive in Austria. Information on INSPIRE in Austria is to be found in particular on the website [www.inspire.gv.at](http://www.inspire.gv.at).

After the introduction of the required discovery and view services, the focus of the work is currently on gathering experience in the operation of the download services and the preparation for the operation of the network services for the spatial data sets of the spatial data themes listed in Annex III to the INSPIRE Directive. Furthermore, the impending interoperability implementing rules for the spatial data of the spatial data themes of Annexes II and III and the emergence of the up-to-date Interoperability Regulation are being monitored closely.

At European level, Austria was represented in the preparation process for data harmonisation of the spatial information themes of Annexes II and III of the INSPIRE Directive in several Thematic Working Groups (TWG) and in the Initial Operating Capability Task Force (IOCTF) on the coordination of the implementation of the network services.

At the 10th meeting of the INSPIRE Committee in April 2013 – despite the continuing concerns – the draft implementing rules concerning the interoperability of the spatial data themes of Annexes II and III to the INSPIRE Directive were adopted. Minutes on this subject, which were tabled together with Germany, refer to the fact that many practical difficulties will arise only on the direct application of the data models and the European Commission is expected to show increased willingness to examine the practical feasibility of the implementing rules and where necessary to adapt them rapidly.

Many of the public spatial information centres in Austria operate not only INSPIRE services, but also non-INSPIRE-compliant data services, for example under the OpenGovernmentData (OGD) initiative. Under this initiative, public authorities' data are made available for free use.

These offers, often in contrast to the INSPIRE services, are very popular. This is thought to be attributable on the one hand to the aggressive advertising and on the other hand to the setting of widespread (*de facto*) standards and the lack of restrictive specifications concerning data model or performance. A very important point, however, is the simple licence model CC BY 3.0 AT (free use subject to naming the author/right holder).

The costs-benefit ratio of INSPIRE is at present considered to be very unfavourable. High implementation costs are matched by virtually no current benefits. However, this is considered to be a typical problem in the initial phase of a major (infrastructure) project. Significant benefits can arise only when a larger number of harmonised data files are available. In the meantime, processes and tools are to be expected which can make good use of the data offered, even though it is also to be assumed that the public authorities subject to INSPIRE, which make the data and services available, in many cases cannot draw any of the benefits corresponding to the expenditure incurred.

Nevertheless, it is assumed that the implementation of the INSPIRE Directive in Austria will contribute to improving the national infrastructure for spatial data. The regular communication among the actors within the coordinating bodies and the necessary cooperation in the technical implementation of the INSPIRE Directive should contribute to this.

## Annex 1: Members of the National Coordination Office

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Province of Burgenland	Burgenland Provincial Government Office	DI Thomas Zalka	Area Planning and Residential Development Department of the Provincial Administrative Office GIS Coordination Unit	+43 (0)2682 600-2839	thomas.zalka@bgld.gv.at	7000 Eisenstadt, Europaplatz 1
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Province of Lower Austria	Lower Austrian Provincial Government Office	DI Kerstin Placer MSc.(GIS)	Hydrology and Geoinformation Department	+43 (0)2742 / 9005-12916	kerstin.placer@noel.gv.at	Landhausplatz 1, Haus 13, 3109 St.Pölten
Province of Upper Austria	Upper Austrian Provincial Government Office	DI Kurt Pflieger	Road-building & Traffic Directorate Geoinformation and Property Dept. DORIS Group	+43 (0)732 / 7720-12604	Kurt.Pflieger@ooe.gv.at	Bahnhofplatz 1 4021 Linz
Province of Salzburg	Salzburg Provincial Government Office	Mag. Michaela Rinnerberger	Department 7 – Spatial planning, 7/01 Land planning and SAGIS Unit	+43 (0)662/8042-4542	michaela.rinnerberger@salzburg.gv.at	Michael-Pacher-Straße 36 5020 Salzburg
Province of Styria	Styrian Provincial Government Office	DI Markus Jernej	Dept. 7 – Provincial and municipal development	+43 (0)316 / 877-4847	markus.jernej@stmk.gv.at	Stempfergasse 7 8010 Graz
Province of Tyrol	Tyrol Provincial Government Office	DI Manfred Riedl	Spatial planning-Statistics Dept.	+43 (0)512 / 508-3650	manfred.riedl@tirol.gv.at	Heiliggeiststraße 7 – 9, 6020 Innsbruck
Province of Vorarlberg	Vorarlberg Provincial Government Office	DI Martin Seebacher	Provincial Office for Surveying and Geoinformation	+43(0)5522 / 75482-60210	martin.seebacher@vorarlberg.at	Johannitergasse 6 A-6800 Feldkirch
Province of Vienna	Vienna Provincial Government Office	Mag. Wolfgang Jörg	Municipal Department 14, Vienna GIS Coordination	+43 (0)1 / 4000-91611	wolfgang.joerg@wien.gv.at	Rathausstraße 1, 1082 Vienna
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BMVIT	Federal Ministry of Transport, Innovation and Technology	DI Roman Kirnbauer	Dep. V / Infra5	+43 (0)1 / 7116-651105	roman.kirnbauer@bmvit.gv.at	Radetzkystraße 2, A-1030 Vienna



Body	Title	Contact person	Sector	Telephone	E-Mail	Address
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BMeiA	Federal Ministry of European and International Affairs					
BMI	Federal Ministry of the Interior	Manfred Gruber	IV/8/a	+43 (0)1/90600-88190	manfred.gruber@bmi.gv.at	Türkenstraße 22 1090 Vienna
BMLFUW	Federal Ministry of Agriculture, Forestry Environment and Water Management	DI Wolfgang Fahrner	Dept. II/5	+43 (0)1 / 71100-6683	wolfgang.fahrner@lebensministerium.at	Stubenring 1 1010 Vienna
BMJ	Federal Ministry of Justice	Mag. Verena Cap		+43 (0)1 / 52152-0	kzl.b@bmj.gv.at	Museumstraße 7 1070 Vienna
BMLVS	Federal Ministry of Defence and Sports	Mag. Werner Heriszt	BMLVS/KdoFüU/IMG/RefLtrMIGIS	+43 (0)50201 / 1033270	werner.heriszt@bmlvs.gv.at	Stiftgasse 2a 1070 Vienna
BMUJKK	Federal Ministry of Education, Arts and Culture	Christian Mayer	National Heritage Agency	+43(0)1 / 53415-261	christian.mayer@bda.at	Hofburg, Säulenstiege, 1010 Vienna
BMWF	Federal Ministry of Science and Research	Liane Lippsky	Dept. II/4	+43 (0)1 / 53120-6395	Liane.Lippsky@bmwf.gv.at	Rosengasse 2–6 1014 Vienna
Gemeindebund	Österr. Gemeindebund	Christian Schleritzko MSc	Austrian Association of Municipalities	+43 (0)1 / 5121480 +43 (0)664 / 3086318	christian.schleritzko@noel.gv.at office@gemeindebund.at	Löwelstraße 6, 1010 Vienna
Städtebund	Österr. Städtebund	DI Stefan Dürauer	Vienna Provincial Government Office, Municipal Dept. 41	+43 (0)1 / 4000-89151	stefan.duerauer@wien.gv.at	Muthgasse 62, Riegel F, 1190 Vienna

## Annex 2: List of references for the compilation of the report

Overall concept network services – INSPIRE/AT:

[http://www.inspire.gv.at/dms/inspire/dateien/Dokumente\\_INSPIRE-AT\\_Netzdienste/Gesamtkonzept\\_INSPIRE-AT\\_Netzdienste\\_v2-0.pdf](http://www.inspire.gv.at/dms/inspire/dateien/Dokumente_INSPIRE-AT_Netzdienste/Gesamtkonzept_INSPIRE-AT_Netzdienste_v2-0.pdf)

ÖNORM ON A-2270: Geoinformation – profil.AT, Metadatenprofil für Geoinformation – Regeln zur Umsetzung der ÖNORM EN ISO 19115; Austrian Standards Institute/Österreichisches Normungsinstitut

[www.ageo.at](http://www.ageo.at): [Website](#) of the Österreichischer Dachverband für Geographische Information (Austrian Association for Geographical Information) (AGEO)

[www.austrianmap.at](http://www.austrianmap.at): BEV national maps

[www.bev.gv.at](http://www.bev.gv.at): Website of the Bundesamt für Eich- und Vermessungswesen (BEV) with access to the webshops

[www.bodensee-geodatenpool.net](http://www.bodensee-geodatenpool.net): Website of the 'Bodensee-Geodatenpool' project

[www.data.gv.at](http://www.data.gv.at): Catalogue of public data sets and services from the public administration

[www.geoland.at](http://www.geoland.at): Spatial information portal of the Austrian provinces

[www.inspire.gv.at](http://www.inspire.gv.at): Website for information on the INSPIRE Directive and its implementation in Austria (run by LFRZ-GmbH on behalf of the BMLFUW)

### Legislation

Federal: Geodateninfrastrukturgesetz – GeoDIG (BGBl. I No 14/2010 in the version BGBl. I No 109/2012): Bundesgesetz über eine umweltrelevante Geodateninfrastruktur des Bundes (Implementation of the INSPIRE Directive at Federal level)

Burgenland: Burgenländisches Geodateninfrastrukturgesetz, LGBl. No 8/2011

Carinthia: Amendment to the Kärntner Informations- und Statistikgesetz, LGBl. No 64/2010

Lower Austria: Amendment to the NÖ Auskunftsgesetz, LGBl. No 60/2010

Upper Austria: Öö. Geodateninfrastrukturgesetz, LGBl. No 79/2010

Salzburg: Amendment to the Gesetz über Auskunftspflicht, Dokumentenweiterverwendung, Datenschutz und Landesstatistik, LGBl. Nr. 60/2011

Styria: Steiermärkisches Geodateninfrastrukturgesetz 2011, LGBl. No 35/2011

Tyrol: Tiroler Geodateninfrastrukturgesetz, LGBl. No 54/2010

Vorarlberg: Landes-Geodateninfrastrukturgesetz, LGBl. No 13/2010

Vienna: Wiener Geodateninfrastrukturgesetz, LGBl. No 37/2010