



INSPIRE

Infrastructure for Spatial Information in Europe

Member State Report: Netherlands, 2012

Title	Member State report, Netherlands, 2012
Creator	I&M / Geonovum
Date	2 May 2013
Subject	Report on the implementation of INSPIRE in the Netherlands
Status	Final
Publisher	I&M / Geonovum
Type	Accountability report
Description	This document reports on progress in the introduction of INSPIRE in the Netherlands
Contributor	
Format	Template for the INSPIRE country report
Source	
Rights	
Identifier	
Language	
Relation	
Coverage	

These are Dublin Core metadata elements. See for more details and examples <http://www.dublincore.org/>

Version number	Date	Modified by	Comments
0.1	12/3/2013	S. van Wijngaarden	First document.
0.2	13/3/2013	S. van Wijngaarden	Comments Y. Ellenkamp processed
0.3	20/3/2013	S. van Wijngaarden	Additions Y. Ellenkamp and B. Van Loenen processed. Version for dispatch to INSPIRE consultative group dated 26/3/2013
0.4	08/4/2013	C. Stroeven	Addition H 3 to 5, use cases and Annex and editing (production and full response in Dutch)
0.5	17/4/2013	C. Stroeven	Adaptations following Steering committee discussion 16 April 2013
1.0	26/4/2013	S. van Wijngaarden / Y. Ellenkamp	Last amendments made to texts
1.1	02/5/2013	C. Stroeven	Additions Noud Hooyman, editor

Table of Contents

1	INSPIRE REPORTING – OVERVIEW OF REQUIREMENTS	3
2	HOW TO USE THIS TEMPLATE.....	3
3	EXECUTIVE SUMMARY	5
4	ABBREVIATIONS AND ACRONYMS.....	6
5	INTRODUCTION	6
6	COORDINATION AND QUALITY ASSURANCE (ARTICLE 12).....	8
6.1	COORDINATION (ARTICLE 12(1)).....	8
6.1.1	<i>Member State contact point</i>	<i>8</i>
6.1.2	<i>The coordination structure</i>	<i>8</i>
6.1.3	<i>Comments on the monitoring and reporting process.....</i>	<i>10</i>
6.2	QUALITY ASSURANCE (ARTICLE 12(2)).....	10
6.2.1	<i>Quality assurance procedures</i>	<i>10</i>
6.2.2	<i>Analysis of quality assurance problems.....</i>	<i>10</i>
6.2.3	<i>Measures taken to improve the quality assurance</i>	<i>11</i>
6.2.4	<i>Quality certification mechanisms</i>	<i>11</i>
7	FUNCTIONING AND COORDINATION OF THE INFRASTRUCTURE (ARTICLE 13).....	12
7.1	GENERAL OVERVIEW DESCRIPTION OF THE SDI.....	12
7.2	INSPIRE STAKEHOLDERS	12
7.3	ROLE OF THE VARIOUS STAKEHOLDERS.....	13
7.4	MEASURES TAKEN TO FACILITATE SHARING.....	13
7.5	STAKEHOLDER COOPERATION.....	13
7.6	ACCESS TO SERVICES THROUGH THE INSPIRE GEOPORAL	14
8	USAGE OF THE INFRASTRUCTURE FOR SPATIAL INFORMATION (ARTICLE 14).....	16
8.1	USE OF SPATIAL DATA SERVICES IN THE SDI.....	16
8.2	USE OF THE SPATIAL DATASETS.....	16
8.3	USE OF THE SDI BY THE GENERAL PUBLIC	16
8.4	CROSS-BORDER USAGE	17
8.5	USE OF TRANSFORMATION SERVICES.....	17
9	DATA-SHARING ARRANGEMENTS (ARTICLE 15).....	18
9.1	DATA-SHARING ARRANGEMENTS BETWEEN PUBLIC AUTHORITIES.....	18
9.2	DATA-SHARING ARRANGEMENTS BETWEEN PUBLIC AUTHORITIES AND COMMUNITY INSTITUTIONS AND BODIES	18
9.3	BARRIERS TO THE SHARING AND THE ACTIONS TO OVERCOME THEM	19
10	COST/BENEFIT ASPECTS (ARTICLE 16).....	20
10.1	COSTS RESULTING FROM IMPLEMENTING INSPIRE DIRECTIVE.....	20
10.2	BENEFITS OBSERVED	21
11	CONCLUSIONS.....	25
	ANNEXES	26
11.1	LIST OF ORGANISATIONS – NAMES AND CONTACT DETAILS	26
11.2	LIST OF REFERENCES FOR THE COMPILATION OF THE REPORT	26

1 INSPIRE Reporting – Overview of requirements

There are five topics addressed in the Reporting chapter of the IR:

1. Organisation, co-ordination and quality assurance

The first part of this section is concerned with the way in which the contact point and co-ordinating structure for the infrastructure for spatial information are organised – the body responsible, its associated co-ordinating structure and some information about how this works. The second part offers the MS the opportunity to report on quality assurance processes within the infrastructure for spatial information (as required by Art 21 of the Directive).

2. Contribution to the functioning and coordination of the infrastructure

The second section asks for information about the stakeholders involved in the infrastructure for spatial information – including a description of their roles, how they co-operate, how they share data/services and how access is made to services via the INSPIRE geo-portal.

3. Usage of the infrastructure for spatial information

Having some or all of the various components of the infrastructure for spatial information in place is important, but equally important is if, or how much, the infrastructure is being used. This part of the report is intended to give MS the opportunity to comment and explain the results of the indicators on the usage of the different services, and to describe how spatial data and services are being used by public bodies and if possible (because it is recognised that this is difficult to observe) how they are being used by members of the general public. Because of the environmental emphasis of the Directive MS are particularly encouraged to find and describe examples of use within the field of environmental policy. The report should also describe examples of cross-border usage, efforts to improve cross-border consistency and examples of the use of transformation services.

4. Data-sharing arrangements

Chapter 5 of the INSPIRE Directive is concerned with data-sharing. It has not been possible to derive adequate indicators to monitor data-sharing – the subject does not lend itself to quantitative methods in a way that would provide meaningful output. It is a major part of the Directive however and so this Chapter is dealt with, in terms of monitoring and reporting, by asking MS to describe data-sharing arrangements in their 3 yearly reports. MS are required to provide an “overview” of data-sharing arrangements i.e. not all such agreements have to be listed and described (which would be very difficult and extremely onerous) – but MS are encouraged to provide sufficient description to enable readers to understand the main type or types of agreement that are used – both for sharing of data between public bodies in the MS and between those public bodies and the institutions of the EU. An important section also required is a description of known barriers that may be inhibiting the sharing of spatial data and services, and what steps the MS are taking to overcome those barriers.

5. Cost and benefit aspects

Finally, the Directive requires MS to quantify the costs and benefits involved in the establishment and maintenance of the infrastructure for spatial information that are directly attributable to the implementation of the Directive. The report should attempt to estimate the costs and to provide examples of benefits as described in the IR. As with other aspects of the report MS are responsible for deciding the depth/level of reporting that they find appropriate to satisfy the IR and to provide a suitable level of information for stakeholders.

2 How to use this template

This template provides a structure Member States can use to collect and transmit the reporting information to the EC.

This template mainly reflects the list of elements required by the Commission Decision 2009/442/EC on monitoring and reporting. These are the mandatory elements. For every chapter the relevant article of the implementing rules on monitoring and reporting will be reported.

Also some optional features, not strictly required by the relevant legislation, are included. These features can either contain a suggestion on what elements can be grouped under a certain topic foreseen by the legislation or they can contain additional elements that enhance the readability of the document. These features are optional.

You have full rights to deliver this report in your own language, we will then translate it internally. Of course if the report will be already in English, or accompanied by its English translation, that will be welcome.

Disclaimer: This document will be publicly available as a 'non-paper', as it does not represent an official position of the Commission, and as such cannot be invoked in the context of legal procedures.

3 Executive summary

Important steps taken

Since 2009, important steps have been taken in the implementation of INSPIRE. An INSPIRE portal has been developed and in the meantime delivery has been accepted. Furthermore, the 'as is' data sets for Annexes I and II have been provided with metadata. Finally, the number of network services has risen in the past year through the introduction of view and download services for Annex I and II data sets. In addition to a number of minor issues concerning formalities for some view and download services (without any impact on the use of the services), of all data sets coming within the scope of Annexes I and II, only 2 data sets are left for which the obligations concerning the view and/or download service have not yet been met (in full). This refers to the opening up of aviation data which – on the initiative of the Netherlands – were the subject of discussions within the INSPIRE Committee and the download service for cadastral data, for which reaching a solution for the present charges did not seem feasible within the deadlines set. Both issues are receiving the full attention of the responsible organisations and work is being carried out on solutions in order to be able to comply with the INSPIRE requirements.

To sum up, it can therefore be stated that the efforts over the past years have led to the Netherlands being able to report for the years 2010-2012 that it complies virtually entirely with the INSPIRE obligations for which the deadline has passed.

For Annex III, in preparation for the deadline in December 2013, it has largely been mapped out which data sets come under the INSPIRE guidelines and which organisations are responsible for opening up these data. Further steps still have to be taken only for the relevant data sets of municipalities.

Good progress has also been made with regard to quality assurance. The data providers are now in a position, with the help of validators, to check themselves whether the INSPIRE requirements are met.

In 2009, the main stakeholders were the Annex I and II data providers. In the meantime, they have been joined by the Annex III data providers. The users are also playing a more prominent role. In 2013 and 2014, the focus was placed on a specific domain with regard to use: the Environment Act.

INSPIRE is starting to achieve an ever more important strategic impact. The INSPIRE method is used to establish the connection to other sectors. Experiments are being carried out to gear other European legislative processes to INSPIRE. In the Netherlands, it is also being investigated how maximum synergy can be achieved through reuse of the INSPIRE infrastructure.

Concern about the complexity and efforts needed

The positive results above go hand in hand with greater effort for the coordination and guidance of data providers than expected. The technical complexity of the data specifications (thousands of pages in total) seemed greater than estimated in 2009. With the publication of the specifications, it appeared that the selection of which Dutch data sets and source holders must comply with the European Directive represented more work than was previously estimated. In 2009, the Netherlands undertook a cost-benefit analysis on the basis of which it was estimated that the costs for guidance and coordination would come to EUR 700 000 per year. However, the national costs for guidance and coordination, for the reasons referred to above, amounted in 2011 and 2012 to EUR 1 250 000 per year. For 2013 and 2014, these costs are estimated at an average of EUR 1 050 000 per year. These central budgets are necessary for the implementation in the Netherlands to take shape and to restrict the total ICT costs in the Netherlands to a minimum. The introduction costs for the data providers are not included in this. The Netherlands therefore wishes to express its concerns to the European Commission concerning the great complexity of the subject.

Furthermore, the Netherlands is concerned about the INSPIRE documentation, such as the final data specifications and the technical documentation concerning the download services, becoming available (too) late. The data providers for Annex III are supposed to ensure the full implementation this year in a very short period of time (metadata, view and download services) of all data sets considered as INSPIRE. This places enormous pressure on both the guidance and coordination of the

implementation and the implementation itself by the individual data providers.

It is important for the European Commission, together with the Member States, to monitor the practicability and to discuss it in the INSPIRE Committee.

4 Abbreviations and Acronyms

INSPIRE Directive	Directive 2007/2/EC
MS	Member State
SDI	Spatial Data Infrastructure
PDOK	Publieke Dienstverlening Op de Kaart (A la carte public service provision). PDOK is a central facility for opening up geodata sets of national interest.
VROM	Ministry of Health, Spatial Planning and Environment
I&M	Ministry of Infrastructure and Environment
EZ	Ministry of Economic Affairs
CBS	Statistics Netherlands
IPO	Association of the Provinces of the Netherlands

5 Introduction

Background

In 2001, the Directorate-General for the Environment (DG Environment), Eurostat and the Joint Research Centre (JRC) of the EC conceived the plan to establish a European geo-information infrastructure for the environment, the Infrastructure for Spatial Information in Europe (INSPIRE). The European Framework Directive of the same name came into force on 15 May 2007. This Directive forms the legal basis for the common geo-information system within the European Union.

The arrival of INSPIRE means that work is being carried out at European level regarding the availability and sharing of geo-information. The European INSPIRE Directive is intended to lead to a European geo-information infrastructure which will contribute to better provision of information in international policy and services processes. In order to achieve this, a number of implementing programmes have been started at national level. These are:

- The starting up of facilities for providing geo-information with metadata, including a national INSPIRE portal;
- Description, harmonisation and provision of geo-information together with metadata via a national INSPIRE portal
- Promotion of the use of the geo-information available via the INSPIRE portal.

To steer the introduction of INSPIRE in the right direction, a continuous process of monitoring and reporting is necessary. Monitoring and reporting concern the metadata, spatial data sets, network services and usage. Monitoring relates to the quantitative information and is carried out annually. Reporting takes place once every 3 years and relates to qualitative information. This report is part of the qualitative reporting.

Starting position in the Netherlands

The Netherlands is aiming for a pragmatic introduction of INSPIRE. The Lower House of the Dutch Parliament has laid down that the Netherlands should not do more than is really necessary for INSPIRE.

INSPIRE recognises 34 themes with geographical information. These themes are listed in Annexes I, II and III of the Directive. One INSPIRE theme consists of several feature types and one feature type consists of several attributes. A theme or feature type may be given shape with one or more Dutch data sets. There has been discussion with providers in the Netherlands as how to give shape to the INSPIRE themes with Dutch data sets. The aim is to clarify which Dutch data sets come under which INSPIRE theme and which organisations will supply these data in accordance with INSPIRE.

The starting point is that, for INSPIRE, the Netherlands should make maximum use of the key registers and its national facilities. As regards the other Dutch data sets which come within the scope of INSPIRE, agreements have been reached regarding which organisations will make the data available. Three conceptual models have been developed for this. These are the basic model, the node model and the collective model. The differences between the models relate mainly to the extent to which cooperation between INSPIRE data providers is or is not organised for each theme. The INSPIRE steering committee has opted to start with the basic model, in which each feature type in an INSPIRE theme is given shape by one Dutch data set. It is expected that this approach will be the quickest to produce a good result and that the other data sets will follow in its tracks.

The starting point here is that only the most appropriate data sets are regarded as INSPIRE data, instead of all available data sets within a theme. Together with the data providers, Geonovum investigated which Dutch data best matches the INSPIRE data specifications in Annex I. In each case, one data provider was considered for each INSPIRE feature type or attribute. The formal consideration of data sets for Annex I took place in 2010. According to the same system, at the beginning of 2011, the provisional consideration for Annex II took place and at the end of 2012 the first part of the provisional consideration for Annex III. The consideration is formalised by means of letters sent to the data providers by the competent Ministry of Infrastructure and Environment. The provisional consideration was based on the draft data specifications. As soon as the final data specifications and IRs are available, a last check will take place of the consideration in the light of these data specifications and the consideration will become final.

The INSPIRE approach is in line with the policy adopted in the Netherlands with regard to key registers. In recent years, the Netherlands has worked hard on eliminating duplications in the geo-data sets available within the administration. Data are collected once and used multiple times. The intention is, in time, to phase out data files which are virtually the same.

The three conceptual models as well as the process of how the consideration for Annex I worked out are described in the report 'Dutch INSPIRE data – Development of INSPIRE as a result of consultation rounds with Dutch data providers. The report has been coordinated with the INSPIRE consultative group and, following approval by the steering committee, has been submitted to the GI Council and DUIV consultation^(*) for ratification. Reports are also available on the consideration of Annex II and the consideration of Annex III.

Preparation of the report

This document was drawn up by Geonovum on behalf of – and in cooperation with – the Ministry of Infrastructure and Environment.

(*) Translator's note: *DUIV-overleg* refers to the consultation between the Directorate-General for Environmental Management, the Association of Water Boards, the Association of Provinces of the Netherlands and the Association of Netherlands Municipalities.

6 Coordination and quality assurance (Article 12)

6.1 Coordination (Article 12(1))

6.1.1 Member State contact point

Article 12(1)(a) the name, contact information, role and responsibilities of the Member State contact point;

Name and contact information

Member State Contact Point	
Name of the public authority	<i>Ministry of Infrastructure and Environment</i>
Contact information:	
Mailing address	<i>Plesmanweg 1-6 2597 JG The Hague</i>
Telephone number	<i>070-4560000</i>
Telefax number	<i>070-4561111</i>
Email address	<i>N.A.</i>
Organisation's website URL	<i>http://www.rijksoverheid.nl/ministeries/ienm</i>
Contact person (if available)	<i>Noud Hooyman</i>
Telephone number	<i>+31 (0)6 11351333</i>
Email address	<i>Noud.hooyman@minienm.nl</i>
Contact person - substitute (if available)	<i>Yvette Ellenkamp</i>
Telephone number	<i>+31 (0)6 11351334</i>
Email address	<i>yvette.ellenkamp@minienm.nl</i>

Role and responsibilities

6.1.2 The coordination structure

Article 12(1)

(b) the name, contact information, role and responsibilities, organisation chart of the coordinating structure supporting the contact point of the Member State

(c) a description of the relationship with third parties;

(d) an overview of the working practices and procedures of the coordinating body;

(e) comments on the monitoring and reporting process.

Name and contact information

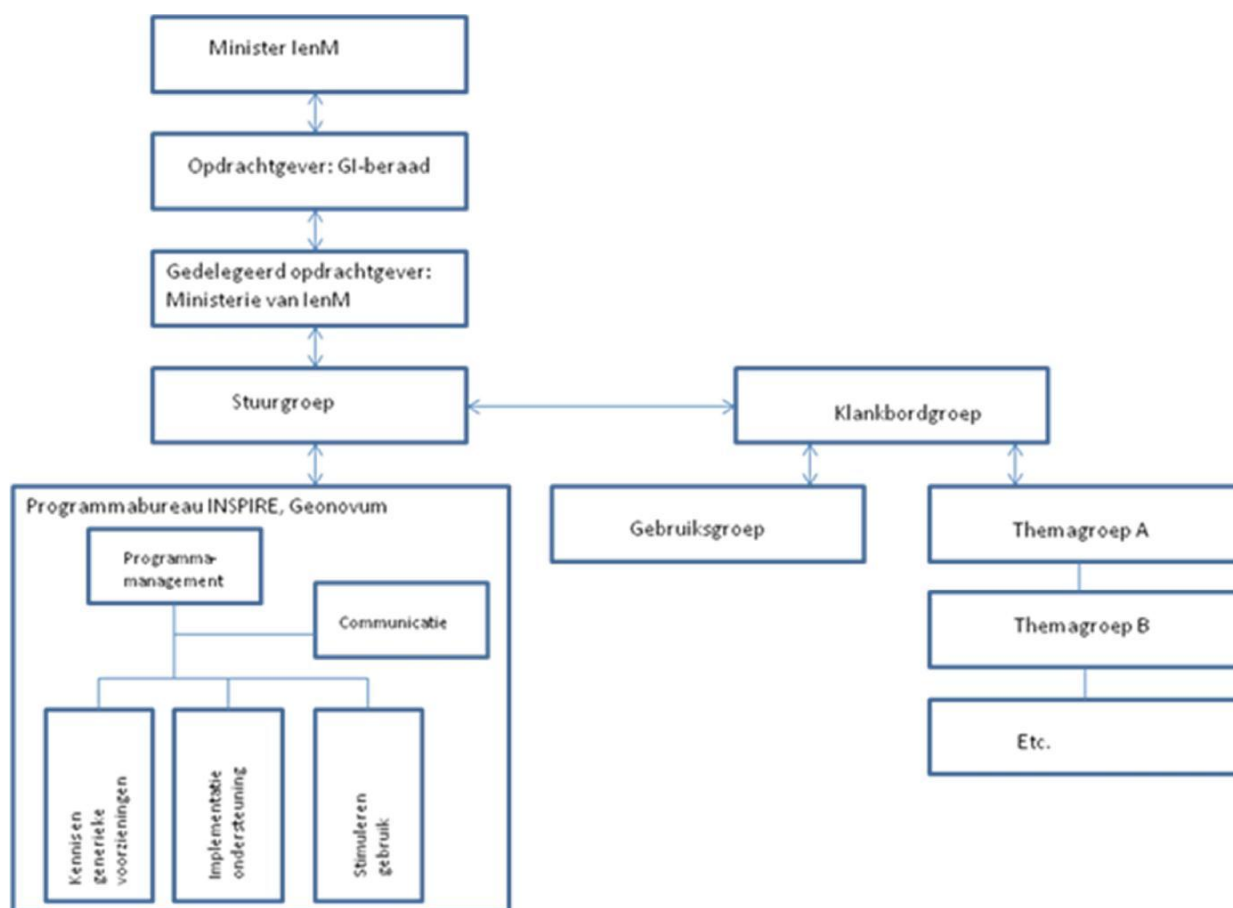
Coordinating structure supporting the MSCP	
Name of the coordination structure	<i>Geonovum</i>
Contact information:	
Mailing address	<i>Barchman Wuytierslaan 10 Postbus 508 3800 AM Amersfoort</i>
Telephone number	<i>+31 33 460 41 00</i>
Telefax number	<i>+31 33 465 64 57</i>
Email address	<i>info@geonovum.nl</i>
Organisation's website URL	<i>www.geonovum.nl</i>
Contact person (if available)	<i>Sandra van Wijngaarden</i>
Telephone number	<i>+31 (0)6 13640726</i>
Email address	<i>s.vanwijngaarden@geonovum.nl</i>
Contact person - substitute (if available)	
Telephone number	
Email address	
Date and period of mandate	<i>1 January 2009 – 31 December 2014</i>

Role and responsibilities

To provide for strategic control of implementation, the Ministry of Infrastructure and Environment has set up a steering committee, of which the main parties concerned are members. The steering committee is advised by a consultative group. The members of this consultative group likewise come from stakeholders with at least every data provider having delegated a member. The business community and some users also have a seat on the consultative group.

At the moment, consideration is being given to supplementing the present organisational structure. The plans are to set up thematic working groups and a customer panel. The final new structure has not yet been formally established, but is shown in the chart below.

Organisation chart



Key

Minister IenM = Minister for Infrastructure and Environment

Opdrachtgever: GI-beraad = Principal: GI Council

Gedelegeerd opdrachtgever: Ministerie van IenM = Delegated principal: Ministry of Infrastructure and Environment

Stuurgroep = Steering committee

Klankbordgroep = Consultative group

Gebruiksgroep = User Group

Themagroep = Theme Group

Programmbureau INSPIRE = INSPIRE Programme Office

Programmamangement = programme management

Communicatie = communication

Kennisen generieke voorzieningen = knowledge generic facilities

Implementatie ondersteuning = implementation support

Stimuleren gebruik = promotion of use

Relation with third parties

The strategic coordination with parties concerned takes place via the meetings of the consultative group and the steering committee. Geonovum also acts as helpdesk for the data providers and organises information meetings and communication material.

In the second half of 2012, the steering committee organised a strategy to define the future direction for 2013 and 2014. Various major stakeholders, including the (geo-)business community, were involved in this.

Overview of working practices and procedures

The Ministry of Infrastructure and Environment acts as principal of Geonovum. The job description is outlined in the terms of reference. This description is developed by Geonovum into a two-year programme plan and established by the steering committee after consulting the consultative group. This procedure is also followed for major products deriving from the programme plan. This could include, for example, establishing the list with the data providers, the specifications of the national INSPIRE portal or the present report.

6.1.3 Comments on the monitoring and reporting process

Geonovum and the Ministry of Infrastructure and Environment have drawn up this report together and it was subsequently adopted via the usual procedure through the consultative group and steering committee.

6.2 Quality Assurance (Article 12(2))

6.2.1 Quality assurance procedures

Article 12(2)(a) a description of quality assurance procedures, including the maintenance of the infrastructure for spatial information

Central to quality assurance of the INSPIRE programme in the Netherlands is the working of the consultative group. In addition to the INSPIRE data providers, (future) users, universities and the business community are represented in this group. The consultative group discusses expectations and coordination with regard to quality of the products to be delivered. The role of the consultative group is to examine the main results delivered by the programme and to advise the steering committee in this respect. Separate reviews are organised for assessments of specific products, for example where a great deal of technical knowledge is required. The programme office reports monthly to the principal on progress and the reaching of milestones in the programme.

Quality assurance relating to the infrastructure focused in the first instance on the INSPIRE access point. Quality assurance is provided by means of independent testing in relation to the specifications. The INSPIRE access point is administered at the land registry.

INSPIRE data providers and users are themselves responsible for managing their share of the infrastructure. In joint consultation, a management document has been drawn up with the generic requirements. Validators have been developed to check whether products meet the INSPIRE specifications and an accompanying protocol has been developed by which data providers report on whether or not the requirements are met. These results are published on the Geonovum website.

6.2.2 Analysis of quality assurance problems

Article 12(2)(b) an analysis of quality assurance problems related to the development of the infrastructure for spatial information, taking into account the general and specific indicators

The INSPIRE infrastructure will consist of various components, with various organisations being responsible for their management. However, the infrastructure will have to function as a whole, in which all its components have to make their contribution. For things such as performance, for example,

it will be difficult to determine how quality can be guaranteed. The infrastructure will certainly become more transparent through cooperation in the field of INSPIRE, for example through PDOK, provinces acting together, etc.

An analysis has been carried out as to where there may be vulnerable elements within the infrastructure. An administrative document describes these elements and their interrelationships especially in relation to change processes. Data providers use the document to organise their procedures so that necessary actions are taken in time in the case of changes, so that the risk of failure is reduced.

6.2.3 Measures taken to improve the quality assurance

Article 12(2)(c) a description of the measures taken to improve the quality assurance of the infrastructure

Apart from by means of drawing up the above-mentioned administrative document, no specific measures have been taken yet to improve the quality assurance of the infrastructure.

6.2.4 Quality certification mechanisms

Article 12(2)(d) where a certification mechanism has been established, a description of that mechanism

A number of validators have been developed as a certification mechanism. These can be used to examine whether products conform to the INSPIRE specifications. Data providers report on the results of this; this information is published on the Geonovum website.

7 Functioning and coordination of the infrastructure (Article 13)

7.1 General overview description of the SDI

- *Vision / policy / strategy (where applicable, reference could be given to existing documents, as well as a short summary within the report)*

The Ministry of Infrastructure and Environment (at that time: VROM) adopted the GIDEON policy document in 2008. This document describes how the Ministry intends to achieve a basic facility for geo-information in the Netherlands. This document is regarded as an approach and implementation strategy for the period from 2008 to 2012.

The Ministry of VROM formulates the following approach in this document. Through continuous improvement of services, within four years, the Netherlands will have a key geo-information facility, which all parties in society will use sustainably, successfully and intensively:

- the public and businesses will be able to retrieve and use all relevant geo-information about any location;
- businesses can add economic value to all relevant government-provided geo-information available for the purpose;
- the government will use the information available for each location in its work processes and services;
- the government, businesses, universities and knowledge institutions will cooperate closely on the continuing development and innovation of the key facility.

Implementation of INSPIRE forms an integral part of this approach. The GIDEON policy paper is currently under review. INSPIRE will continue to constitute an important component.

7.2 INSPIRE Stakeholders

Article 13(a) an overview of the various stakeholders contributing to the implementation of the infrastructure for spatial information according to the following typology: users, data producers, service providers, coordinating bodies

Stakeholders contributing to the implementation of the SDI could be classified according to the following typology: users, data producers, service providers, coordinating bodies

Many organisations are involved in implementing the INSPIRE programme in the Netherlands. Together they form the programme organisation. An organisational structure has been established for the duration of the programme, which reflects the complexity of the programme and the diversity of the parties concerned. Within this structure, people will cooperate to achieve the objectives of the programme together.

The Minister for Infrastructure and Environment is ultimately responsible for implementing INSPIRE in the Netherlands. The GI Council is the principal for the programme and has delegated this responsibility to the Ministry of Infrastructure and Environment. This Ministry in practice acts as principal and budget holder. The Ministry has assigned the task to Geonovum to implement the INSPIRE programme in the Netherlands. The field will together make the necessary efforts. The programme focuses on coordinating, encouraging and supporting the parties directly involved, such as the source holders of geo-information and the future users. They are responsible for their own input and the results obtained from this.

Data providers, users, service providers (brought together in GeoBusiness Nederland as the sector association for geo-companies) and knowledge institutes are represented in the consultative group. The consultative group provides advice, knowledge and experience for the programme office and the projects, on the one hand, and examines the (interim) results of the programme, on the other hand.

The steering committee is responsible for providing strategic guidance for the programme. So that it can act decisively, the steering committee has intentionally been kept compact, with representatives from the major users and suppliers. The chair of the consultative group is also a member of the steering committee and in this way represents the interests of all organisations which have a role in the INSPIRE programme.

In the future policy organised in the second half of 2012, it was decided to concentrate more attention on the user side. In this respect, the focus is specifically on one Dutch domain, i.e. the Environment Act, a dossier receiving a great deal of political attention. As a result of this choice, a new group of users will be involved.

The local authorities (municipalities) are an important stakeholder which is still insufficiently involved in INSPIRE. By emphasising the added value of INSPIRE in relation to the Environment Act, but also the formation of Regional Implementation Services and safety regions, we expect interest on the part of the municipalities to operate in compliance with INSPIRE.

7.3 Role of the various stakeholders

Article 13(b) a description of the role of the various stakeholders in the development and maintenance of the infrastructure for spatial information, including their role in the coordination of tasks, in the provision of data and metadata, and in the management, development and hosting of services

Central facilities, such as the INSPIRE access point and generic services, have been developed as part of the programme. Hosting and management of these have been assigned to the Land Registry. The individual data providers will themselves provide metadata, data and services. They are supported in this by the INSPIRE programme with regard to the provision of knowledge. Some data providers have assigned the hosting of the services to external parties.

7.4 Measures taken to facilitate sharing

Article 13(c) a general description of the main measures taken to facilitate the sharing of spatial data sets and services between public authorities and a description of how sharing has improved as a result

As part of the INSPIRE programme in the Netherlands, the 'Geo Gedeeld' framework has been set up which takes care of harmonisation of the conditions for use. The framework is based on the principles of creative commons and is based on a set number of standard conditions for use with an individual icon, layman's wording and a legally binding text. The data owner specifies which of these six conditions for use (one or more) is/are applicable to his data or services. This results in one of the standard licences. This licence or a reference to it is included in the metadata.

In practice, data-sharing is carried out mainly between Dutch parties. For the time being, few data are shared with other countries and the Commission. The framework provides for being able to lay down specific conditions for this. In practice, this has not yet been applied.

7.5 Stakeholder cooperation

Article 13(d) a description of how stakeholders cooperate

This could for example include the description of:

- *Written framework for cooperation*
- *Working groups (list of active working groups)*
- *Newsletters, other publications (references)*

- *Description of the National geoportal (including URL), and where relevant regional or thematic portals*

All organisations involved in implementation of the INSPIRE programme in the Netherlands work together towards common objectives in the organisational structure described above. Various other types of cooperation are being established alongside this. For example, the Ministries of I&M and EZ and the Land Registry are collaborating in the PDOK programme to provide improved access to their INSPIRE data sets jointly and to form a management organisation for the INSPIRE access point. In the meantime, the CBS has also joined in. The INSPIRE access point is to be found at: www.nationaalgeoregister.nl.

Umbrella organisations such as the IPO (Association of Provincial Authorities) and the Unie van Waterschappen (Association of Water Boards) act as coordinator for the provinces and water boards respectively. The business community is becoming more involved in INSPIRE by providing services and products.

Four times a year, Geonovum distributes the INSPIRE newsletter to a target group of more than 300 employees of about 180 organisations. The INSPIRE dossier containing news and relevant documents can be found on the Geonovum website.

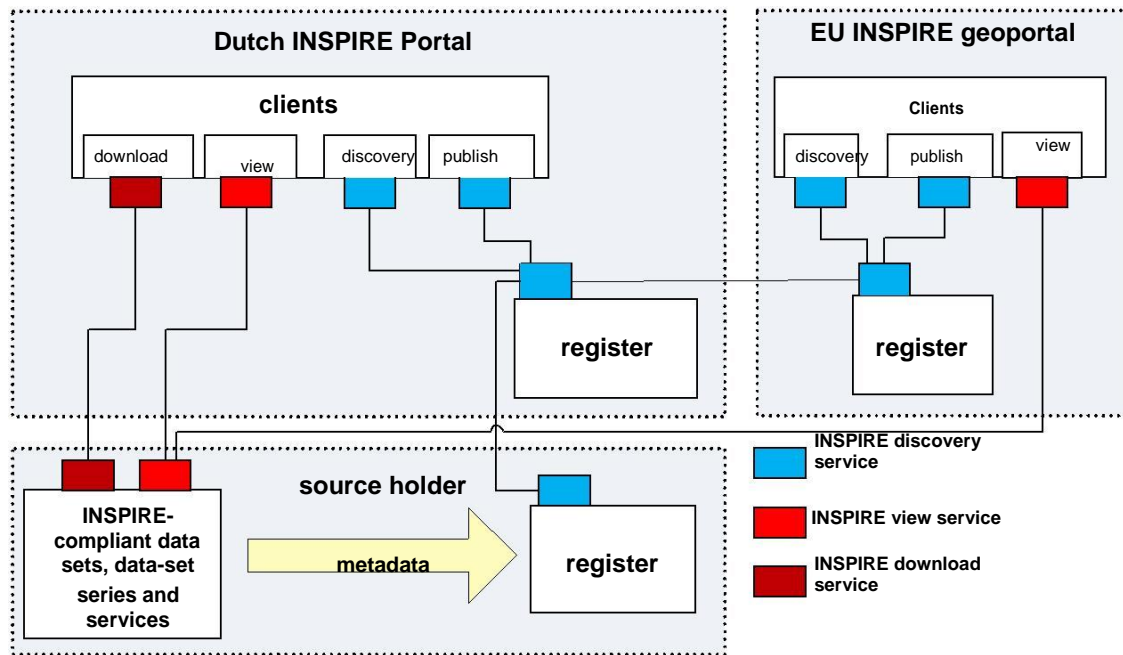
7.6 Access to services through the INSPIRE Geoportal

Article 13(e) a description of the access to the services through the Inspire geo-portal, as referred to in Article 15(2) of Directive 2007/2/EC

A European INSPIRE network, accessible via the Internet, has been set up for the purpose of making available ('providing') and using ('getting') geo-information and metadata. It is based on the 'data at source' principle and makes as much use as possible of existing infrastructure. For the purposes of INSPIRE, it must be possible to find and view the Dutch INSPIRE data sources via the EU INSPIRE geoportal. A link has been established between the Dutch data sources and the European geoportal for this purpose. The Netherlands has set up a national INSPIRE portal for this. The INSPIRE portal is an integral part of the National Georegister.

The INSPIRE portal includes INSPIRE-specific discovery, view and download functionality. The functionality of the portal is multilingual with a view to coordinating with neighbouring countries. The portal is compliant with the INSPIRE implementing rule for discovery, view and download services.

Dutch INSPIRE Portal and Network connected with EU INSPIRE geoportal



The Dutch INSPIRE portal, and, with this, the access to the INSPIRE data sets, works as follows. The source holder of geo-information has his/her own register, in which the metadata relating to INSPIRE data sets, data-set series and/or services are recorded. For inclusion in the Dutch INSPIRE portal, the source holder publishes his/her metadata in the central register of the INSPIRE portal. Metadata are published by supplying metadata in a standardised XML format, through 'harvesting' of a catalogue or via the online editor of the INSPIRE portal.

To view the geo-information in a map or to download it, source holders must themselves set up INSPIRE-compliant view services and download services on the Internet. By publishing the metadata in the register, source holders make their INSPIRE data sets, data-set series and services clear and easy to find. The INSPIRE portal is thus chiefly an index on the Internet, where INSPIRE source holders make known (publish) the INSPIRE-compliant metadata relating to their INSPIRE data sets and services to the EU INSPIRE geoportal and thus to the entire European INSPIRE Network. The INSPIRE discovery service plays an important role in this.

The INSPIRE discovery service operates behind the screens. It is a web service with an INSPIRE-specific interface (protocol), which can be invoked by other discovery services and applications. The INSPIRE view client is a web-mapping client, who invokes INSPIRE-compliant view services and can transform them into a single map image in the web-mapping client. The INSPIRE download client is a client which invokes INSPIRE-compliant download services and can transform them into a download of data sets.

8 Usage of the infrastructure for spatial information (Article 14)

8.1 Use of spatial data services in the SDI

Article 14(a) the use of the spatial data services of the infrastructure for spatial information, taking into account the general and specific indicators

This could include an explanation of how this information was collected, and how it should be interpreted/understood.

Most providers of network services of Annex I and II have made (automated) arrangements to measure the use. This is used in particular for internal work processes within the organisations concerned and not systematically collected centrally. This refers in particular to numbers and not to the purpose for which the information is used.

8.2 Use of the spatial datasets

Article 14(b) the use of spatial data sets corresponding to the themes listed in Annexes I, II and III to Directive 2007/2/EC by public authorities, with particular attention to examples in the field of environmental policy and/or policies and activities which may have an impact on the environment (air and emission policies, waste-related policies, inland-coastal-marine policies, biodiversity-related policies, horizontal policies such as public access to environmental information, environmental liability, environmental and strategic impact assessments,...) – 'greening' of the Common Agricultural Policy, energy and transport policies, security policies with an environmental dimension (for example maritime security).

Examples could cover the use made for:

a) the implementation of measures and programmes as laid down in various elements of the EU environmental acquis;

b) the monitoring of such measures, the monitoring of pressures, the state-of-the-environment, impact assessments.

Examples could demonstrate the added value of INSPIRE measures with regard to use of the spatial data sets for policies above. Examples could also provide a state-of-play of progress achieved and problems still outstanding. In this respect, examples could be provided of multi-purpose use of spatial data sets collected for a particular policy which may have an impact on the environment (for example Land-parcel Information / cross-compliance – LPIS related to agricultural subsidies contains real-world spatial data covered by INSPIRE – land-use/cover etc.)

The Netherlands is experimenting with this through its participation in the Air Quality project, together with Belgium and the JRC. The results so far were presented at the 'Powered by INSPIRE' conference on 4 and 5 March 2013: <http://www.poweredbyinspire.eu/documents/airquality.pdf>.

8.3 Use of the SDI by the general public

Article 14(c) if available, evidence showing the use of the infrastructure for spatial information by the general public (where possible with clear reference to applicable EU policies such as public access to environmental information, in the context of dissemination to – consultation of – the public as required in various environmental legal acts.

The general public mainly make indirect use of the infrastructure for spatial information, via applications on the government website. Examples are:

- Environmental atlas: <http://www.atlasleefomgeving.nl/>
- Land-use plans: <http://www.ruimtelijkeplannen.nl/web-roo/roo/>
- Announcements: <http://www.overheid.nl/overheidsinformatie/bekendmakingen>
- Housing information: <http://www.kadasterdata.nl/kadaster-online>

8.4 Cross-border usage

Article 14(d) examples of cross-border use and efforts made to improve cross-border consistency of spatial data sets corresponding to the themes listed in Annexes I, II and III to Directive 2007/2/EC. Examples with regard to policies requiring cross-border collaboration and information exchange are of particular interest (floods, marine strategy directive, water framework and daughter directives, etc.)

In 2012, work was carried out on two cross-border use cases and one Dutch use case:

- Combating cross-border crime and INSPIRE (Netherlands, Belgium)
- INSPIRE as a basis for monitoring the Wadden (Netherlands, Germany, Denmark)
- Direct insight into provincial policy thanks to INSPIRE (Netherlands)

The results of this are described in Annex 1.

8.5 Use of transformation services

Article 14(e) how transformation services are used to achieve data interoperability

Transformation services, such as coordinate transformation systems, are currently not yet in use or to a very limited extent. The data harmonisation deadline lies in the future for most data sets. In general, the data are transformed into a harmonised data set, which is opened up as a second data set. As a result, there is no question of 'on-the-fly' transformation.

9 Data-sharing arrangements (Article 15)

9.1 Data-sharing arrangements between public authorities

Article 15(a) requests an overview of data-sharing arrangements that have been, or are being, created between public authorities inside the country.

In order to facilitate correct understanding of the report, the overview and examples should at least cover the following two items:

- *Overview and examples of existing or being created data-sharing arrangements that provide open and free data access, without any further restrictions or conditions for use and free of charge for commercial and non-commercial use?*
- *Overview and examples of existing or being created types of data-sharing arrangements, such as framework agreements, one-time licences, using widely known licensing schema, etc.?*

Additionally, answers to the following questions would be helpful:

- *Is there a need for a specific legislative basis to provide open spatial data? What is already adopted or planned to adopt?*
- *Are licences available in electronic and machine-readable forms?*

A framework for conditions for use, Geo Gedeeld, has been developed to make existing conditions for use more transparent and consistent. This framework is based on the principles of creative commons, public domain mark and CC0 declaration.

The Geo Gedeeld framework is based on a number of standard conditions for use. Each condition for use has an individual icon, layman's wording and a legally binding text. The data-owner determines which of these conditions for use is/are applicable to his/her data or services. This is recorded in the National Georegister. Data providers can produce standard licences by means of a licence-generator, by combining various components. The end-result can be expressed in pdf or xml format.

Access to the data is at present not yet by definition always unconditional and free of charge. In the Netherlands, however, considerable efforts are being made to achieve this by means of the open data policy. As a result of the Digital Agenda and the review of the Public Sector Information Directive, the Ministry of the Interior is working on an amendment to the Government Information (Public Access) Act (*Wet Openbaarheid van Bestuur*), through which the basic principle for data of public organisations becomes 'open, unless'. The intention is to limit the 'unless' to, in short, the security of the State, the Crown and respect of privacy. In anticipation of this legislation, the Minister for the Interior already informed the Lower House in 2011 of his plan to eliminate bottlenecks to reuse of public data and, together with the Ministry of Economic Affairs, announced the launch of the 'open data' programme (as announced in *Digitale Agenda.nl*). In the meantime, as part of this programme, the Dutch Open Data Portal (data.overheid.nl) has opened in which a large number of open data sets are already included. The 4000+ open data sets from the National Geo Register can also be found by means of a link in this open data portal. The Minister for Infrastructure and Environment has also declared that he will be making every effort to open the public data coming under the Ministry of Infrastructure and Environment by 2015 at the latest.

An example of a data set which is not freely accessible is the parcel registration of the Land Registry. Charges are still made for this. A separate service exists for academic use, which is freely available via the Dans portal (Data Archiving and Network Services).

9.2 Data-sharing arrangements between public authorities and Community institutions and bodies

Article 15(b) requests an overview of data-sharing arrangements that have been, or are being, created between public authorities and Community institutions and bodies, including examples of data-sharing arrangements for a particular spatial data set.

In order to facilitate correct understanding of the report, the overview of data-sharing arrangements between public authorities and Community institutions and bodies should include answers to the following three questions, including examples of particular spatial data set and services, or categories of spatial data set and services, for example based on the Annexes to the INSPIRE Directive:

- *Can any spatial data sets and services be accessed by the Community institutions and bodies without any arrangement?*

See answer above on open data policy.

- *Which arrangements provide free and open access to spatial data sets and services to the Community institutions and bodies?*

See answer above on open data policy.

- *Which arrangements require payment from the Community institutions and bodies that use the spatial data sets and services (Article 17(3) of INSPIRE Directive¹)?*

The data set with Cadastral parcels requires payment.

Commission Regulation (EU) No 26/2010² – on spatial data sets and services – provides additional context to access under harmonised conditions. The Guidance on the Regulation³ suggests an INSPIRE licence model. Please indicate how the INSPIRE licence could be implemented with regard to the legislative system and the existing or being created licences in the country.

The Netherlands uses its own licensing framework, Geogedeeld, in combination with that of creative commons. There is currently no reason to extend this framework to include an INSPIRE licence.

9.3 Barriers to the sharing and the actions taken to overcome them

Article 15(c) requests a list of barriers to the sharing of spatial data sets and services between public authorities and between public authorities and the Community institutions and bodies, as well as a description of the actions which are taken to overcome those barriers.

Commission Regulation (EU) No 26/2010 – on spatial data sets and services – again provides additional context. It requests an overview of procedure to provide the conditions applicable to the Community institutions and bodies in compliance with this Regulation in metadata element 8.1, referred to in part B of the Annex to Commission Regulation (EC) No 1205/2008⁴ (procedure for updating metadata for spatial data sets and services). We strongly encourage providing related information in this section of the country report.

In addition to the above, we recommend including an overview of other ways how and where the Community institutions and bodies can access up-to-date information on data-sharing arrangements between public authorities and Community institutions and bodies.

See replies above and the metadata in the Dutch Geoportal. Furthermore, the requirements under Implementing Regulation (EU) No 268/2010 have been taken into consideration and it has been decided to extend the requirement of transparent conditions for use to all user groups.

The main barriers to the use of information are tackled by means of the Dutch government's open data policy (direct access without costs and without restrictions on use).

¹ 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).

² COMMISSION REGULATION (EU) No 268/2010 of 29 March 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards the access to spatial data sets and services of the Member States by Community institutions and bodies under harmonised conditions.

³ [Guidance](#) on the 'Regulation on access to spatial data sets and services of the Member States by Community institutions and bodies under harmonised conditions'.

⁴ COMMISSION REGULATION (EC) No 1205/2008 of 3 December 2008 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards metadata.

10 Cost / Benefit aspects (Article 16)

10.1 Costs resulting from implementing INSPIRE Directive

Article 16(a) requires an estimate of the costs resulting from the implementation of Directive 2007/2/EC for the period 2010-2012.

In order to facilitate correct understanding of the report, please indicate what is included in the estimation of costs (e.g. hardware, software, staff time) and how you have approached the estimation (e.g. indicate what proportion of the costs are attributed to INSPIRE or related initiatives such as eGovernment).

Please indicate either monetary costs (e.g. on hardware or staff) and/or staff time (days, months) related to the items listed below.

IT Infrastructure (Hardware and core software components)

- Set-up costs (one-off costs)
- Maintenance (recurrent yearly costs)

Metadata for data and services falling under INSPIRE Directive and that are indicated in the Monitoring Tables.

- Set-up costs (one-off costs)
 - Software (adapting software, creating new software, setting catalogues)
 - Production
 - Creation of metadata for discovery
 - Creation of metadata for evaluation and use (new metadata elements required by Data Specifications Implementing Rules)
 - Testing for compliance
 - Participation of national experts into INSPIRE development process
- Maintenance costs (recurrent yearly costs)
 - Software (adapting software, creating new software, setting catalogues)
 - Production
 - Maintenance of metadata for discovery MD
 - Maintenance of MD for evaluation and use
 - Testing for compliance

Data interoperability/harmonisation for data falling under INSPIRE Directive and that are indicated in the Monitoring Tables

- Set-up costs (one-off costs)
 - Development (mapping of concepts, setting up tables, setting up registries)
 - Software (adapting software, creating new software) for data transformation
 - Production
 - Creation of INSPIRE compliant dataset and related support services
 - Testing for compliance
 - Participation of national experts into INSPIRE development process
- Maintenance (recurrent yearly costs)
 - Software for data transformation including maintenance of registries
 - Production
 - Maintenance of INSPIRE compliant dataset and related support services
 - Testing for compliance
 - Maintaining coherence cross domains that evolve

Network services falling under INSPIRE Directive and that are indicated in the Monitoring Tables

- Set-up costs (one-off costs)

- *Development Software (adapting software, creating new software) for network services (Discovery, View, Transformation, Download, Invoke)*
- *Production:*
 - *Set-up of INSPIRE compliant services*
 - *Testing for compliance*
 - *Participation of national experts into INSPIRE development process*
- *Maintenance (recurrent yearly costs) of INSPIRE-compliant network service*

Monitoring and reporting

Development: refining of tools e.g. online tools, registries etc.

Production: Collection of monitoring data and filling of templates by stakeholders

Reporting: Coordination activities to collect examples of good practice and as well as difficulties in implementation, cost and benefit consideration, assessment together with stakeholders

Coordination and horizontal measures

Setting up coordination structures, national contact point activities

Activities that relate to the data and service sharing obligations

Supporting activities:

- *Training and education organised by different stakeholders in the public and private sectors.*
- *Development of Guidance document to support implementation of INSPIRE and use.*
- *Participation in INSPIRE-related workshops/seminars/standardisation activities.*
- *Coordinating mechanisms at different levels of government.*
- *Outreach, Counselling and Support.*
- *Awareness-raising in the private sector and at different levels of government.*

10.2 Benefits observed

In choosing the examples, the following may be worth considering:

- 1) *Choose examples that have quantitative measures (e.g. increase in data use, more data-sharing, savings in time and money, better policy outcomes, etc.).*
- 2) *Distinguish between:*
 - *Core benefits for public authorities in improving environmental policies and policies that affect the environment (primary objective of INSPIRE)*
 - *Broader side effects of implementing the Directive (e.g. benefits of increased interoperability across environmental information systems, and between environmental and other sectoral policies (e.g. agriculture, transport, regional policy, etc.).*
- 3) *Identify who are the main beneficiaries (public administrations, business and citizens).*
- 4) *Cross border examples could include reporting on data-sharing arrangements with neighbouring countries.*
- 5) *Consider whether any undesired side effects of implementing INSPIRE are also worth reporting.*

An alternative way of considering benefits is to organise them into three main categories:

- 1) *Efficiency*
- 2) *Effectiveness*
- 3) *Broader Socio-economic benefits (or democratic benefits)*

Examples of elements that can be considered under each heading are:

Efficiency

- *Efficiency gains due for example to increased data availability, ease of use, better data-sharing:*
 - *Time saved in internal queries*

- *Time saved in internal processes*
- *Time saved in serving the public*
- *Reduced cost of integrating data*
- *Better re-use of existing datasets (reduced need for new data collection)*
- *More motivated employees e.g. because they are able to respond better to work demands, and see increased opportunities to develop in their profession.*
- *Better organisational structures and interoperable IT architectures leading for example to cost savings for information management.*

Effectiveness

- *Reduced administrative burden (e.g. in reporting on environmental legislation)*
- *Increased intra-institutional collaboration (across different departments in the same institution)*
- *Increased inter-institutional collaboration (across different organisations and levels of government from local to national).*
- *Increased awareness in different levels of governments of the benefits of delivering services on a spatial basis.*
- *Improved policy implementation, monitoring, and evaluation.*

Broader Benefits

- *More inclusive services (e.g. online accessibility of services reduces divide between large/urban and small/rural administrations and improves services to citizens and businesses.*
- *Greater transparency and accountability*
- *Greater participation by the public*
- *Greater opportunities for business to innovate and build new services and applications based on INSPIRE data.*

As indicated at the beginning of this Section, the headings above are not intended to be prescriptive, but only as an aid to Member States in the preparation of their reports.

An extensive cost-benefit analysis was carried out in 2009. Barring a few costs which turned out higher (coordination and guidance costs turned out higher), this cost-benefit analysis is still considered to be up to date. The results of the cost-benefit analysis are to be found at: http://www.geonovum.nl/sites/default/files/kba_engelse_vertaling.pdf.

The cost-benefit analysis looked at the differences between the project alternative (implementation of INSPIRE) and the zero alternative (the situation without the implementation of INSPIRE). The starting point for the zero alternative was that the GIDEON objective of harmonisation, the outlook and implementation strategy with regard to geo-information in the Netherlands, would not be achieved without INSPIRE. This does not mean that nothing happens at the level of geo-information. Developments are already in progress, separate from the INSPIRE Directive, in which cooperation is already taking place between Member States in some themes. Furthermore, it is assumed that, even without INSPIRE, the National Georegister (NGR) would have been established in time.

The results of the cost-benefit analysis have been arrived at on the basis of the information supplied by various relevant parties (both data providers and users) from a number of (theoretical) use cases. The use cases play a role in explaining the costs and benefits resulting from implementation of INSPIRE.

Basic model and collective model

Three conceptual models have been developed for opening up and harmonising geo-information in conformity with INSPIRE. Two of these models have been worked out as variants of the project alternative in the cost-benefit analysis:

1. **Basic model.** The government transposes the Directive into national law with the target of minimal impact for organisations managing geo-information which is subject to INSPIRE. Only the most suitable data sets are opened up and harmonised.

2. Collective model. The government transposes the Directive into national law, but every organisation managing geo-information which is subject to INSPIRE must harmonise and open up the metadata, data and services in a standard way.

The basic model tallies with the objectives in the Netherlands, i.e. to limit the implementation costs through the efficient introduction of INSPIRE.

The balance of the costs and benefits of implementing INSPIRE in accordance with the basic model shows that, over the total time horizon of the cost-benefit analysis, the benefits exceed the costs by EUR 34.0 million (net present value). The costs come to EUR 32.1 million and the benefits total EUR 66.1 million. This means that implementation of INSPIRE in accordance with the basic model results in a benefit for society and that it is attractive to invest in INSPIRE.

The following table shows the main results of the cost-benefit analysis for the whole of society, for both models.

Costs and benefits	Basic model	Collective model	Difference
Cost	32.1	40.9	8.8
Benefits	66.1 + PM (+)	63.7 + PM (+)	-/- 2.4
Balance (benefits -/- cost)	34.0 + PM (+)	22.8 + PM (+)	-/- 11.2

The PM items are the benefits resulting from the strategic effects.

Table 1 – social costs and benefits of INSPIRE (net present value, in EUR million)

If the collective model is used as a basis, the balance of the costs and benefits falls to EUR 22.8 million (net present value), a decrease of EUR 11.2 million. The costs increase to EUR 40.9 million (present value), an increase of EUR 8.8 million (present value). The benefits fall to EUR 63.7 million compared to the basic model, a decrease of EUR 2.4 million.

Cost recovery period

The cost of the investment is recovered after 8 years with the basic model. Up to 2013, the annual costs exceed the benefits and the negative cumulative balance of the two increases. From 2014, the benefits are greater and the negative cumulative balance falls. This is shown in the figure below.

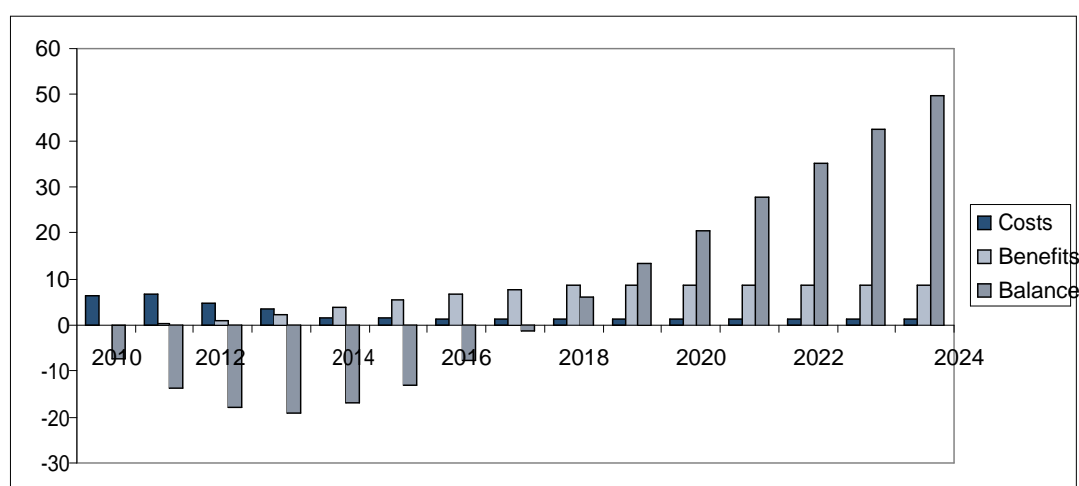


Figure 1 – Phasing of the costs and benefits over time in the basic model (amounts in EUR million)*

* Figure 1 shows the values for the costs and benefits, as well the cumulative balance of the costs and benefits. These values relate to the costs, benefits and balance for the years concerned and vary from the present value.

From 2018, the cumulative difference between costs and benefits is positive and the costs incurred for INSPIRE have been recovered. As a result, INSPIRE has a cost recovery period of 8 years. In the collective model, the cost recovery period is 9 years.

To sum up, the main conclusions are:

- in the basic model, the benefits of implementing INSPIRE more than offset the costs;
- in the collective model, the benefits still just offset the costs;
- the costs in the basic model are recovered after 8 years;
- implementation by means of the basic model is emphatically more efficient than the collective model, because the costs incurred should be lower and more benefits are generated;
- for the most part, the benefits are gained by the users.

The cost-benefit analysis confirms that the Netherlands has made the correct choice by applying the basic model.

As stated above, there is no reason to review this document and the implementation in the Netherlands is undertaken in accordance with the basic model. There is a rise in the costs of guidance and coordination. This is attributable to the technical complexity of the data specifications (thousands of pages in total). With the publication of these specifications, it appeared that selection of which Dutch data sets and which source holders must comply with the European Directive represented more work than estimated in advance. For these reasons, the national costs for guidance and coordination in 2011 and 2012 came out at EUR 1 250 000 per year instead of the estimated EUR 700 000 per year. For 2013 and 2014, the costs are again forecasted to be higher than in 2009, i.e. EUR 1 050 000 per year. These budgets are necessary to maintain the basic model that we use in the Netherlands and to restrict the total ICT costs in the Netherlands to a minimum. The Netherlands is therefore forced to incur extra costs to maintain the advantages of the basic model. On the basis of the above, the Netherlands wishes to express its concerns to the European Commission regarding the complexity of the data specifications.

In 2013 and 2014, the use is to take shape within one domain, namely the Environment Act. One of the key questions is whether the opening up of possible extra data sets from use is so attractive that it offsets the costs.

The benefits are starting to be reaped. This is to be seen, for example, at provinces and water boards that use INSPIRE to organise internal coordination between provinces and water boards respectively.

In general, it can be stated that the reaping of benefits is not yet fully under way, since the first services were delivered only recently. Old facilities, for example, have not yet been phased out, and use of the services is increasing, but is still far from maximum.

11 Conclusions

Important steps taken

Since 2009, important steps have been taken in implementing INSPIRE. An INSPIRE portal has been developed and in the meantime delivery has been accepted. Furthermore, the 'as is' data sets for Annexes I and II have been provided with metadata. Finally, the number of network services has risen in the past year through the introduction of view and download services for Annex I and II data sets. In addition to a number of minor issues concerning formalities for some view and download services (without any impact on the use of the services), of all data sets coming within the scope of Annexes I and II, only 2 data sets are left for which the obligations concerning the view and/or download service have not yet been met (in full). This refers to the opening up of aviation data which were also discussed in the INSPIRE Committee and the download service for cadastral data, for which reaching a solution for the present charges did not seem feasible within the deadlines set. Both issues are receiving the full attention of the responsible organisations and work is being carried out on solutions in order to be able to comply with the INSPIRE requirements.

To sum up, it can therefore be stated that the efforts over the past years have led to the Netherlands being able to report for the years 2010-2012 that it complies virtually entirely with the INSPIRE obligations for which the deadline has passed.

For Annex III, in preparation for the deadline in December 2013, it has largely been mapped out which data sets come under the INSPIRE guidelines and which organisations are responsible for opening up these data. Further steps still have to be taken only for the relevant data sets of municipalities.

Good progress has also been made with regard to quality assurance. The data providers are now in a position, with the help of validators, to check themselves whether the INSPIRE requirements are met.

In 2009, the main stakeholders were the Annex I and II data providers. In the meantime, they have been joined by the Annex III data providers. The users are also playing a more prominent role. In 2013 and 2014, the focus was placed on a specific domain with regard to use: the Environment Act.

INSPIRE is starting to achieve an ever more important strategic impact. The INSPIRE method is used to establish the connection to other sectors. Experiments are being carried out to gear other European legislative processes to INSPIRE.

Concern about the complexity and necessary efforts

The positive results above go hand in hand with greater effort for the coordination and guidance of data providers than expected. The technical complexity of the data specifications (thousands of pages in total) seemed greater than estimated in 2009. With the publication of the specifications, it appeared that the selection of which Dutch data sets and source holders must comply with the European Directive represented more work than was previously estimated. In 2009, the Netherlands undertook a cost-benefit analysis on the basis of which it was estimated that the costs for guidance and coordination would come to EUR 700 000 per year. However, the national costs for guidance and coordination, for the reasons referred to above, amounted in 2011 and 2012 to EUR 1 250 000 per year. For 2013 and 2014, these costs are estimated at an average of EUR 1 050 000 per year. These budgets are necessary for the implementation in the Netherlands to take shape and to restrict the total ICT costs in the Netherlands to a minimum. The Netherlands therefore wishes to express its concerns to the European Commission concerning the great complexity of the subject.

Furthermore, the Netherlands is concerned about the INSPIRE documentation, such as the final data specifications and the technical documentation concerning the download services, becoming available late. The data providers for Annex III are supposed to ensure the full implementation this year in a very short period of time (metadata, view and download services) of all data sets considered as INSPIRE. This places enormous pressure on both the guidance and coordination of the implementation and the implementation itself by the individual data providers.

12 Annexes

12.1 List of organisations – names and contact details

12.2 List of references for the compilation of the report

Annex 1 – Use cases

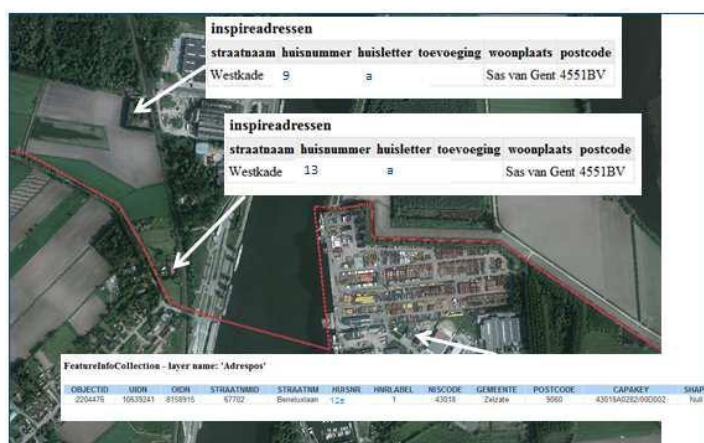
Use case 1: Combating cross-border crime and INSPIRE

An interesting pilot project for the use of cross-border INSPIRE data is the application for combating international crime. By mapping reported activities, not only the nature and scale of the criminal activities can be clarified, but also the patterns. Combination with geographical data also makes it possible to make spatial links. With INSPIRE data, this is also possible cross-border. Finally, spatial information is important to give all organisations and persons involved a common picture when intervention ultimately occurs.

Use case cross-border crime and INSPIRE

For the INSPIRE neighbouring country day in March 2013, a use case was devised in which the use of INSPIRE data was examined to combat cross-border crime. By positioning a fictitious case of people-smuggling in the neighbourhood of the Ghent-Terneuzen Canal, the availability and usability of the Belgian and Dutch INSPIRE data were evaluated and the connection of spatial information for land and water applications was also examined.

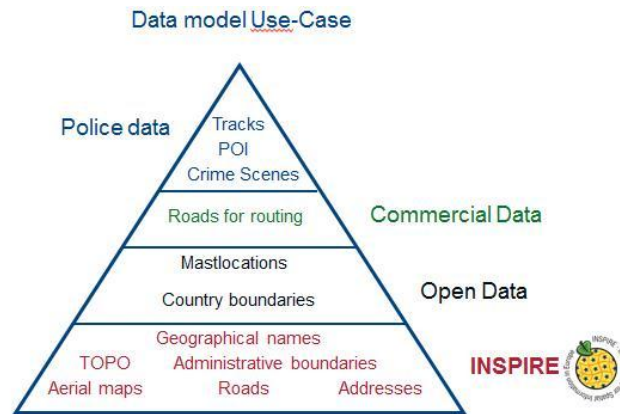
The use case focuses on the application of spatial information in the entire search process, from the earliest possible stage. Mapping the problems reported was the start to obtain a clear idea of the nature and scale of criminal activities and to make spatial patterns visible. In this respect, the INSPIRE address data available for Flanders and the Netherlands appeared to be very user-friendly.



INSPIRE address data of Flanders and the Netherlands in the border area near the Ghent-Terneuzen Canal

Then INSPIRE data and supplementary geographical data were used to establish causal links. In order ultimately to arrive at a 'common operational picture' of all cooperating services when action is taken to arrest the persons involved.

From the data model, drawn up for this use case, it appears that the added value of INSPIRE data lies mainly in making accessible the basic data of both the Netherlands and Flanders. This refers to data on administrative areas, roads, addresses and aerial photos.



In the cross-border crime use case, INSPIRE data form the basis, but supplementary (geo)information is also of importance.

In addition to INSPIRE data, other (geographical) information is also necessary. Part of the necessary data come from the investigation or from the police themselves. In addition, some information required is not (yet) available as INSPIRE data and has to be acquired in another way. Also a great deal of the INSPIRE data offered at the beginning of 2013 is usable only for specialists to carry out analyses and it appears that harmonisation of cross-border information is essential.

The cross-border crime use case clearly shows the added value of spatial data. INSPIRE data form the basis for this. To be able to use the full potential of INSPIRE, it is of great importance to make INSPIRE data easier to find and more usable to carry out analyses and to harmonise data cross-border.



« waakzaam en dienstbaar »

POLITIE

A contribution was made to the case above by the National Police Force (including Infrastructure Service, Water Domain), the Hydrography Service, AeroVision, Geodan and Geonovum.

Use case 2: INSPIRE as a basis for monitoring the Wadden

The Wadden region is an impressive international wetland. To follow the developments in the region, hard work is being carried out on a sound, integral monitoring network for the Wadden region. The basis of the monitoring network also includes digital map material from the Netherlands, Germany and Denmark. INSPIRE provides access to these data.

Monitoring of the Wadden region

The Wadden Sea is a unique wetland. The WaLTER project was launched to clarify which processes and human activities influence the ecological and the socio-economic system of the Wadden region. The project aims to set up an integrated monitoring network for the important themes of importance in the Wadden region (e.g. rise in the sea level, fisheries policy, recreation and new industrial establishments).

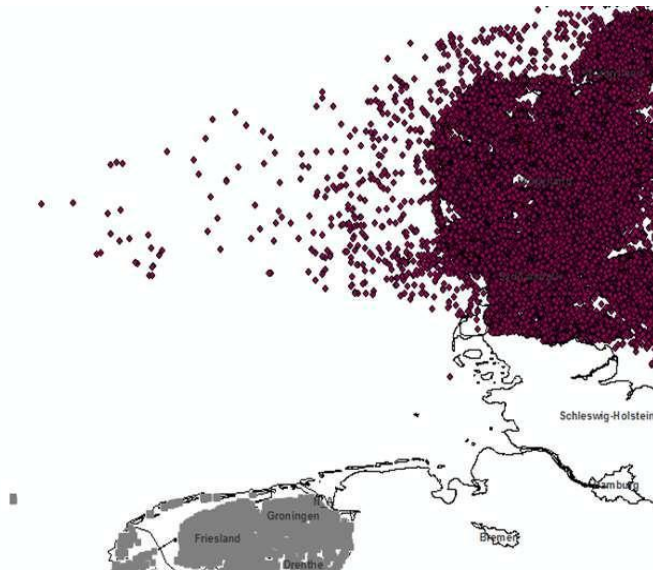
Available INSPIRE data

In the meantime, the investigations have been carried out for the research and monitoring issues. In the field of spatial data, there is a need for digital map material from the Netherlands, Germany and Denmark. There are various laws, directives, treaties and agreements relating to the Wadden region. The INSPIRE theme Protected Sites includes the spatial elaboration of part of these directives and treaties: e.g. RAMSAR wetlands and World Heritage sites, the European Water Framework Directive and the Birds and Habitats Directives, but also policy of the three countries concerned such as the National Parks.



**Borders of two international treaties relating to the Wadden region included in INSPIRE:
World Heritage Wadden Sea (green) and Ramsar wetlands (red)**

Other spatial data included in Annex II to INSPIRE relevant for the Wadden region are the overview of Protected Monuments in each of the three countries and the aerial photos available from the German Länder and the administrative divisions.



Archaeological and national monuments in Denmark and the Netherlands

Linking of portals and supplementary data

One of the aims in the monitoring project is to set up an easily accessible portal that opens up all the data for the Wadden region. INSPIRE data can form the basis of this portal. Through intelligent linking, relevant basic data can be retrieved simply from the INSPIRE portal.

In view of the integral nature of the monitoring programme, it is mainly the data from Annex III to INSPIRE which are of interest for the Wadden region. Data considered in the context of themes such as Oceanographic geographical features, Bio-geographical regions, Habitats and biotopes contain a great deal of information about the ecology in the region, whereas the data made available in themes such as Demography, Agriculture and aquaculture facilities and Industrial facilities help when mapping the human activities in the Wadden and their impact on the region.

In addition to INSPIRE data, the data made available from the European Earth monitoring programme Copernicus are also of interest for monitoring ecological and human activities in the Wadden region.

The case above was based on the workshop organised by WaLTER (Wadden Sea Long-Term Ecosystem Research) and Geonovum to clarify demand and supply of spatial data for the Wadden region and the presentation from the WaLTER project on the INSPIRE neighbouring country day.

Use case 3: Direct insight into provincial policy thanks to INSPIRE

The website Compendium for the Living Environment makes available substantiated facts and figures to support the social discussion and choices in the field of environment, nature and space. A number of indicators on the spatial elaboration of provincial policy shows this by means of a map which is directly linked to INSPIRE services. Through this direct link, no time-consuming analyses are necessary any more. Moreover, the map is kept permanently up to date by the various provinces which are the source holders of these INSPIRE data.

Facts and figures on the environment, nature and space

The Compendium for the Living Environment is a website with facts and figures on the environment, nature and space in the Netherlands. It is a publication of Statistics Netherlands (CBS), the Netherlands Environmental Assessment Agency (PBL) and Wageningen University and Research Centre (Wageningen UR).

The Compendium contains more under other indicators which clarify provincial policy. For instance, the Compendium contains indicator pages in which protected sites are described, in most cases supported with a map.



The map with Sanctuaries in the Compendium for the Living Environment makes direct use of the INSPIRE service of the Provinces

A number of protected sites, included in the Compendium, are made available by the Provinces as a web service under INSPIRE. This refers, inter alia, to Sanctuaries and National Landscapes.

By linking the map in the indicator page directly to the INSPIRE web service, it is no longer necessary to retrieve, process and analyse the data from the provinces. Moreover, the map is kept permanently up to date by the various provinces which are source holders and administrators of these INSPIRE data.

The one-off adaptation of the map symbology of the INSPIRE view service is necessary though, so that it links up with the specifications of the Compendium.



The map symbology of INSPIRE services – e.g. National Landscapes – still has to be adapted to comply with the specifications of external websites

By including INSPIRE services directly in websites such as the Compendium for the Living Environment, INSPIRE is also used outside the traditional geo-domain. The time-consuming processing and analysing of data is no longer necessary, only the one-off adaptation of the map symbology is necessary. A condition is that the INSPIRE data are up to date as at the provincial INSPIRE services.

Compendium
voor de Leefomgeving

The Netherlands Environmental Assessment Agency implemented the application of INSPIRE services described above in the Compendium for the Living Environment.