



## Safety, Mobility, Sustainability Powered by INSPIRE

In 2012 the first results of INSPIRE have become visible to a wide audience. Data such as addresses, transportation networks and protected areas are available as both view and download services. By the end of 2013 many more sources of data, such as human health, energy resources, and statistical units, must also be made available for view and download. Moreover, eventually the available data must connect across borders. INSPIRE thus leads to a rich source of easy to find, standardised spatial data from European member states. At the same time more and more (spatial and other) data becomes available in the slipstream of European and national open data policy.

### Four neighbouring countries

With the upcoming deadline for INSPIRE downloadservices, the value of cross border harmonisation of datasets and the increase of easily available datasources in mind, Belgium, Germany, The Netherlands and United Kingdom are organising this event, focusing on the user potential of the spatial data infrastructure. By organising this event as neighbouring countries, we aim to

- connect relevant projects/organisations that (could) benefit from (cross border) spatial data exchange,
- create a platform where opportunities that lie in the availability of data crossing borders can be explored (by both public and private sector),
- and of course inspire each other.

We welcome you to this conference and wish you inspiring days!

### Programme committee

Leen de Temmerman, AGIV | Nathalie Delattre, NGI-B | Daniela Hogrebe, GDI-DE | Haico van der Vegt, Kadaster | David Buck, Lisa Smith, Clare Hadley, UK Location | Sandra van Wijngaarden and Yvonne Verdonk, Geonovum



## Programme

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### March 5

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10:30-12:30 **March 4 | plenary**  
chaired by **Max Craglia | Joint Research Centre**

**Opening by Director General Karl Falkenberg, European Commission | DG Environment**

### Cleaner air, better health

*Olav Peeters | Belgian Interregional Environment Agency, Piet van Zoonen | National Institute for Public Health and the Environment, Laura Spinsanti | Joint Research Centre, European Commission*

The quality of the air we breath has impact on our health. The health effects of air pollution has both scientific and regulatory interest. How can INSPIRE support research, monitoring and reporting on air quality?

### Panel | Public and citizen benefit of sharing data

*Chair Max Craglia discusses with director general Karl Falkenberg, European Commission - DG Environment, Minister of Home Affairs and Local Government of North Rhine-Westphalia, Ralf Jäger, director-general of the National Institute for Public Health and the Environment, Andre van der Zande and geospatial and geospatial technologist Ed Parsons, Google*

### Geoscientific data: the cornerstone of EU policy

*Mart van Bracht | TNO*

Europe is facing many grand challenges: stimulating economic recovery, securing the supply of energy, raw materials, clean water and other natural resources, securing sufficient food, a clean and healthy environment, protecting citizens against natural hazards and the consequences of climate change. Europe has to deal with all these challenges in a changing global playing field. Making policy in these fields requires a solid European set of unambiguous geoscientific information. Politicians and policy makers however often do not realise that the provision of this information is hampering. For example there is no adequate European data set on raw materials. This means that it is not possible to predict the vulnerability of European industry for the import of raw materials. Mart will reflect on the strategic relevance of a well-organized geoscientific data infrastructure on the basis of some examples and will emphasize the importance of accelerated implementation of INSPIRE and more, since INSPIRE is only a first (small) step.

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12:30-14:00 **lunch**

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13:15 – 13:45 ground floor  
**Lunchdemo: Do we connect cross border?**

*Kees Schotten and Paul Giesen | Geonovum*

For a new user INSPIRE can be a gigantic maze. Finding data is a challenge and the usability of INSPIRE data varies quite a lot. During a special lunch session Kees Schotten and Paul Giesen will guide you through this maze. Shown is where INSPIRE data be found, which services are available and how a borderless map of several INSPIRE themes can be created.

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14:00-15:20 **Parallel session | Sustainability**  
chaired by **Marianne Linde, TNO**

**Reducing Environmental Risk through INSPIRE**

Stefan Carlyle | Environment Agency

In 2011 the Environment Agency began implementing an Integrated Data, Mapping, Modelling and Information Action Plan. The aim is to ensure that data from different systems, tools, and places will be much easier to link together and derive knowledge from, and our data will be more standardised and much easier to reuse. An integral part of this programme is the development of a spatial data infrastructure, based on delivering compliance with the INSPIRE Directive. The presentation will give the latest position in the Environment Agency in raising the quality of its data and information management to make the Agency an exemplar of INSPIRE, Open Data and Transparency. It will also show how the use of location data to visualise environmental impacts plays an integral part of modern environmental protection, and it will show how a spatial data infrastructure is vital to reducing risk to the environment by improving safety, increasing mobility and delivering sustainable environment improvements.

**Interoperable marine data and monitoring ecosystems**

Katja Philippart | NIOZ

As one of the most important tidal flat systems in the world, the Wadden Sea was added to the UNESCO World heritage list in 2009. Such a designation comes with the obligation to come up with optimal solutions to protect the natural values whilst considering the needs of the people living and working in this area as well. Long-term and cross-boundary monitoring information of ecologic and socio-economic parameters is needed to address this challenge. Under the umbrella of WaLTER ([www.walterproject.nl](http://www.walterproject.nl)), institutes and

organizations of The Netherlands, Germany and Denmark are presently working together to improve existing monitoring programmes, to fill the gaps in the current monitoring network, and to make new and existing data more readily accessible for all stakeholders.

**iSPEX: Measure fine dust with your smartphone!**

Hester Volten | National Institute for Public Health and the Environment

An increasing number of people carry a smartphone with internet connection, a camera and considerable computing power in their pocket. iSPEX, a spectropolarimetric add-on with complementary App makes use of this opportunity, and instantly turns a smartphone into a scientific instrument to measure dust and other aerosols in our atmosphere. A measurement involves scanning the blue sky, which yields the angular behavior of the degree of linear polarization as a function of wavelength, which may be interpreted in terms of size, shape and chemical composition of the aerosols in the sky. The measurements are automatically tagged with location and pointing information, and submitted to a central database where they will be interpreted. Together with observations from other users at random locations, the data are compiled into a map. Through crowd sourcing, the general public will thus be able to contribute to a better assessment of the presence of different types of aerosols in the atmosphere. We will present the iSPEX add-on and App. We hope to convince you that iSPEX is not only a great outreach tool to engage the public in issues pertaining to atmospheric aerosols, but that it may also contribute to the solution of several urgent social and scientific problems.

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15:20-15:40 **short break**

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## 14:00-15:20 **Parallel session | Safety** chaired by **Jo van Valckenborgh, Agiv**

### **Flood risk management - collaboration in local cross border partnerships**

*Armin Müller | Ministry for Environment, Agriculture, Food, Winegrowing and Forestry of Rhineland-Palatinate*

Flood Risk Management Plans address all aspects of flood risk management with focus on Prevention, Protection and Preparedness, including early warning systems and flood forecasts. Coordination and information exchange between local Partners is required at all steps of implementation of the Directive. Transparency and access to environmental information is a necessary condition for participation, involvement and participation. A major challenge in Europe is to organize the wide range of environmental data and information, to make it - along with other data - freely available and disseminate it on site in an understandable manner.

### **Cross border Crime fight along the Gent-Terneuzen Canal**

*Johan van Schaaik and Peter Schaafsma | Netherlands Police Agency*

As a consequence of globalisation and the opening of the inner European borders in the past decades there has been an increase in cross-border flows of goods, funds and people. This also involves all manner of cross-border crime such as: human trafficking, human smuggling, drug trading, drug tourism, mobile banditry, arms dealing and the illegal transportation of waste. Despite the fact that when it comes to law enforcement there is already long standing strategic and operational cooperation at the national and European (Europol) and International (Interpol) level, there is still considerable room for improvement in the field of data and information exchange. If cross-border

criminal objects and activities, such as the locations of suspects, facilitators and movement patterns, etc., are to be spatially connected (i.e. on a map), it will be essential for all the police services involved to have access to a common operational picture. This picture can exist at various levels. It was decided to develop a fictional security use-case centred on the problem of human trafficking in the area around the Channel Ghent-Terneuzen, involving both the Dutch and Belgian police. This use-case shows which countries are involved in the human trafficking, such as Belgium, the Netherlands, Bulgaria, the Ukraine, Latvia, France, England and Canada, and which transport flows have been observed. The added value of INSPIRE to effecting a common operational picture for a cross-border analysis of the problem becomes obvious. At the same time the challenges for which solutions are needed are specified.

### **Prevent disaster and save costs: mapping cables and pipelines**

*Pieter Noens | AGIV and Ad van Houtum | Kadaster*

The main objective of both KLIC (Netherlands) and KLIP (Flanders)/KLIM (Belgium) is to prevent damage to cables and pipes due to mechanical excavations. This is done by organising and facilitating the exchange of information between excavators (e.g. contractor, agrarian) and the network operators. The presentation will explain the current information portals and the planned developments, also in regard to subtheme Utility Services of the European INSPIRE Directive. It also examines supporting legislation and similarities/differences in the adjacent information-systems. The presentation is interesting for every party involved in excavation works, namely: contractors, network operators, managers of public space and also for legislators.

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## 15:20-15:40 **short break**

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14:00-15:20 **Parallel session | Serving EU Directives**  
**chaired by Martin Salzmann, Kadaster**

**Waterquality reporting in international river basins: the same water (data) in several flavors**

*Willem Faber | Rijkswaterstaat*

Dealing with waterquality in the Netherlands is working with neighboring countries. All four river basins in the Netherlands are international river basins, so sharing information between countries and organizations is a must. The EU Water Framework Directive amplified this need. What kind of problems did we need to tackle towards the first electronic reporting of the River Basin Management Plans. Organizing data exchange between a lot of organizations within the Netherlands but also with our international partners wasn't easy. Every organization has its own timetable and ambitions on data standardization and harmonization. Progress was made, but possibilities for further improvement are available. The data formats used to report for the international river basin management plan of the Rhine, where different from that for the Meuse, and different from the data reported to the EC in WISE. Will Inspire help making the next generations of River Basin Management Plans?

**Greening the CAP**

*Wim Devos | Joint Research Centre, European Commission, and Frans van Diepen | Ministry of Economic Affairs, Dienst Regelingen*

The distribution of area aids to the European farmers imposed the use of a GIS before INSPIRE came into force. Although this GIS, the LPIS, was not encompassed by the Directive, its community worked hard on technical interoperability, applying INSPIRE components such as the Generic Conceptual Model, its code lists and exchange formats. It yielded better documentation of systems, exchange of know-how and tools and a better understanding of the common aspects of the databases. These developments led to better LPIS performance. The LPIS concept now offers a blueprint for the "green payment", the showcase of 2014 reform. This green payment operates on a series of environmentally relevant conditions based on the nature and use of land, quantified in area terms. Many of those conditions relate to INSPIRE themes such as land cover, soil, hydro geography or protected sites and their national datasets,

which are disclosed under INSPIRE and will play a key role in the correct implementation of the future Common Agricultural Policy.

In the Netherlands INSPIRE structures already helped to develop integrated information models for agriculture and e-messages, for farmers, the agri branche and governmental services. These models and messages not only support core agri production, but can also include information about environment, landscape and nature. It supports the reuse and update of data from different resources and databases, from farmer to government. An example is the updating of the national key registration for large scale topography, by reusing information send in by farmers for their CAP declarations, based on data produced by precision agriculture practices on the farm. The information models and messages supports the farmer and the National Common Agricultural Policy service agency to exchange information about requirements, measures practiced and the monitoring results for the "green payment".

**The foreseen usage of Statistical INSPIRE Geoservices**

*Pieter Bresters | Statistics Netherlands*

By the end of 2014, there will be statistical Geoservices from data sets as they are and by the end of 2020 they will be harmonized to the INSPIRE data specifications. So until 2020, only usage is expected within the countries for datasets as is in local coordinate systems and data models. Only after 2020 the real benefit could be reached for cross border use cases. In the data specification of Statistical Units, a number of use cases are foreseen: Statistical georeferencing, Aggregation, Risk exposure analysis, Evolution in time analysis, New facility location, Human health impact analysis (HH), Public transport, Flooding. Those are nice examples, but who are the real users? Looking at the difficulty one needs to explain what a geoservice is, one can only expect GIS-experts to become the real users. Since most statisticians are no GIS-experts, we can conclude that INSPIRE Geoservices will not directly be used by statisticians!

We need applications for non GIS-experts bases on geoservices. Next to this need many other user needs will be discussed.

## 15:40-17:00 **Parallel session | Linked Open Data** chaired by **Bill Roberts, Swirrl**

### **Linked Open Spatial Data and SDIs**

*Clemens Portele | Interactive Instruments*

We will have a look at the status of bringing together Linked Open Data and SDIs from two angles. First, we discuss how the INSPIRE implementing rules and technical guidance support or create issues with publishing INSPIRE data according to Linked Open Data principles. In particular, it will be discussed, what data publishers need to consider beyond the INSPIRE interoperability requirements in order to support Linked Open Data. Second, we will look at some practical experiences with spatial data in Linked Open Data. In the Netherlands, Geonovum has launched a pilot to analyse if and how Linked Open Data can give an comprehensive approach to publish free for reuse data stored in different government repositories uniformly on the web. One aspect of the pilot looks at spatial data and preliminary results from the pilot will be presented and discussed.

### **The concept of meta-SDI's**

*Joeri Robbrecht and Jef Van Bockryck | AGIV*

The decentralized nature of most SDI's raises a number of challenges relating to the design, the management and access of meta information about geographic information. Related items such as namespaces, code lists, coordinate reference systems, discovery services, etc. are an essential part of a Spatial Data Infrastructure and also have an impact on the technical infrastructure. These items require clear descriptions in registries and the possibility to be referenced through unique identifiers. The development of a meta-information

governance for the Flemish SDI - in short, Meta-SDI - includes a vision, a strategy for implementation and a test using a reference implementation. The Meta-SDI is being built based on INSPIRE guidelines and specifications. In this session the basic principles and functions of a Meta-SDI are outlined and discussed.

### **Using linked data and the semantic web**

*Alex Coley | UK Location*

With growth as well as savings being a particular concern at the moment the case for departing from historical business practices is very strong. From my work in bringing the Linked Data approach to the Environment Agency it's not hard to see how the savings and benefits that we have made, scale up across government. Advising a Linked Data approach in the background does not mean that everyone would be expected to use only RDF (Resource Descriptor Framework - one of the foundations of Linked Data). Instead, the approach that is emerging, is for ease of access through APIs that sit on top of that well-structured data. Vast data projects tend to have real problems in implementation especially if we deal with them as monolithic projects. One of the huge advantages of Linked Data approaches is that everything can be broken down into smaller parts and grown sustainably. Having the underlying threads of linked data in the information that lies beneath the surface will enable successful businesses to be built on top of open data. My presentation will go through some of this journey and highlight some examples such as the Environment Agency Bathing Water project and Local Government's approaches.

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## 17:00 **drinks**

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15:40-17:00 **Parallel session | Making business of data**  
chaired by **Rob van de Velde, Geonovum**

**The potential of cross border data harmonisation in Europe**

*Bart de Lathouwer | OGC*

If INSPIRE datasets connect cross border, what potential does that hold for the development of software and added value services in Europe? What is the relevance of INSPIRE to OGC? Which other developments in the world of standardisation can help to optimise INSPIREs potential for safety, mobility and sustainability (e.g. interaction inspire data with sensor data). And what does it take, both in the stage of implementation and in management, to optimally benefit from INSPIREs potential

**smeSpire – Turning the challenges of INSPIRE implementation into business opportunities for European geo-ICT SMEs**

*Danny Vandenbroucke and Glenn Vancauwenberghe | KU Leuven*

SmeSpire's purpose is to encourage and enable the participation of SMEs in the mechanisms of harmonizing and making spatial data available. Making data available according to the INSPIRE rules requires specific skills and knowledge that not all public authorities have. The management of these data represents an opportunity for SMEs active in this sector. SMEs can enable countries to fulfill the INSPIRE Directive, creating new market opportunities with increased potential for innovation and new jobs. One of the objectives of smeSpire is to assess the market potential for geo-

ICT SMEs in relation to INSPIRE, and to characterize the obstacles for geo-ICT companies to enter this market in terms of knowledge gaps and training needs. The presentation will provides insight into the current role of the private sector in the implementation and use of INSPIRE with a particular focus on geo-ICT SMEs and the innovation potential in the GI sector.

**Make your data speak!**

*Marianne Linde | TNO*

Stakeholders in cities strive for a good urban quality of life. Effective approaches to this challenge mobilise the knowledge, improve the interoperability of this knowledge (INSPIRE) and mobilise the social capital. The increasing accessibility and quantity of environmental data requires effective ways to analyse and communicate the information. TNO wants to contribute to the development of a new information infrastructure. We work on new (sensor) monitoringsystems, content management, models and Decision Support Systems for local initiatives. Our ambition is to bridge the gap between needs of local economy, strategies of innovative firms and national knowledge-infrastructure (within the contexts of shared societal values). We will present two examples of using our models in local discussions. In our work visualisation is an important component of presentation and communication due to its ability to integrate large amounts of data into effective graphics.

17:00 **drinks**

## 15:40-17:00 **Parallel session | Benefits for the region** chaired by **Sven Robertz, x-border**

### **Open Government - Benefits of INSPIRE in the public sector**

*Andre Caffier | Ministry of Home Affairs and Local Government of North Rhine-Westphalia and Daniela Hogrebe | GDI-DE*

Hundreds of different bodies in the public sector in Germany are dealing with spatial information without knowing each other so far. Therefore INSPIRE is focusing on a transparent and user orientated process in context to Open Government efforts in Germany. Geodata from different levels are made accessible through standardized services and can be searched and found on Geoportal.DE. It is one of four central technical components which are operated by the Steering Committee of the German SDI (GDI-DE). INSPIRE also supports the cross-domain and cross-level collaboration in different use cases across local, regional, national and european level.

### **Base Service Webatlas.DE**

*Ulrich Puess | Working Committee of the Surveying Authorities of Germany*

In Germany, the tasks of official surveying and mapping – essentially the management of the real estate cadastre, the capture of geotopographic data and the provisioning of the geospatial reference data – is assigned to the Laender under constitutional law. In the context of this nation-wide execution of tasks, the Working Committee of the Surveying Authorities of the States of the Federal Republic of Germany (AdV) is responsible for coordinating and harmonising official surveying and mapping in Germany. The AdV is assigned to the Permanent Conference of the Ministers and Senators of the Interior, uniformly regulates the technical issues of fundamental and national importance for official surveying and mapping and sets the standards for modelling and provisioning the geospatial reference data. Under the Administrative Agreement of 8 December 2010, the collaboration of the surveying and mapping authorities in the operational field has been reinforced, especially in the development, production, provisioning and quality assurance sectors.

WebAtlasDE is the first service resulting from this cooperation. It will satisfy the need of industry and

the administrative units for a Germany-wide, official basic map. On the basis of the digital landscape model, the official house coordinates and the building polygons, and employing a web-capable signature key, Version 2.0 of WebAtlasDE has been used in the geoportals of the federal government and the Laender and integrated as WMS or WMTS in a broad range of geo-applications since October 2012. The conditions of use have been kept moderate. Charges are levied only when WebAtlasDE is used for business purposes. WebAtlasDE is an official basic map and as such makes an important contribution to the surveying and mapping authorities for geospatial data infrastructures.

### **The Benelux Cooperation: a facilitating platform for Geo based cross border cooperation**

*Peter Janssen | SG Benelux*

With the second Benelux Treaty in 2008, the 3 countries of Benelux continue a long tradition of cross border cooperation, in the framework of the European Union. Many cross border projects on safety, mobility or sustainability, where the Secretariat-General of Benelux is involved in, are confronted with specific challenges to create helpful and powerful geographical databases. For specific cross border issues, this task consumes a disproportionate amount of money and human resources. The lack of knowledge about the Spatial data in the neighbouring country and the specific combination of data sets from different countries, following their own 'national' standards, often hampers a fluent cross border cooperation. Moreover, cross border projects show the tendency to invent each their own specific solution, however creating new chaos and intransparency between all those 'solutions'. In order to harmonise and facilitate cross border use of geographical data, and taking profit of the 'move' created by the Inspire Directive, the Benelux platform aims at the dissemination of information and solutions for not-specialists, aiming at successful cross border projects. A specific brochure will be presented, answering the questions: What is needed?, Where can it be found?, What is available and useful?, How can it be achieved?, How can it be combined?. This tool will be presented at the Seminar.



## March 4, 2013 | Brussels, Belgium

### 9:00-10:30 Registration

10:30-12:30 Plenary | chaired by Max Craglia, JRC | ground floor 0A

10:35 **Opening** by Director general Karl Falkenberg, European Commission, DG Environment

10:40 **Cleaner air, better health** | with Olav Peeters | Belgian Interregional Environment Agency, Piet van Zoonen | National Institute for Public Health and the Environment, Laura Spinsanti | Joint Research Centre, European Commission

11:10 **Panel on Public and citizen benefit of sharing data** | with Director general Karl Falkenberg, European Commission, DG Environment, Ralf Jäger, Minister of Home Affairs and Local Government of North Rhine-Westphalia, André van der Zande, director-general National Institute for Public Health and the Environment, Ed Parsons, Geospatial technologist, Google

12:00 **Geoscientific data: the cornerstone of EU policy** | Mart van Bracht, TNO

### 12:30-14:00 Lunch

13:15-13:45 **Lunch demonstration | Do we connect cross border? Mixing and matching datasets** | Paul Giesen and Kees Schotten, Geonovum

### 14:00-15:20 Parallel sessions

#### Sustainability | ground floor 0A

chaired by Marianne Linde, TNO

14:05 Reducing Environmental Risk through INSPIRE | Stefan Carlyle, Environment Agency

14:25 Interoperable marine data and monitoring ecosystems | Katja Philippart, NIOZ

14:50 iSPEX: Measure fine dust with your smartphone! | Hester Volten, National Institute of Public Health and the Environment

#### Safety | 3<sup>rd</sup> floor 3A

chaired by Jo van Valckenborgh, Agiv

14:05 Flood risk management; collaboration in local cross border public private partnerships | Armin Mueller, Ministry for Environment, Agriculture, Food, Winegrowing and Forestry of Rhineland-Palatinate

14:25 Cross border Crime fight along the Gent-Terneuzen Canal | Peter Schaafsma and Johan van Schaaik, Netherlands Police Agency

14:55 Prevent disaster and save costs: benefits of mapping cables and pipelines | Ad van Houtum, Kadaster and Pieter Noens, AGIV

#### Serving EU Directives | 3<sup>rd</sup> floor 3D

chaired by Martin Salzmann, Kadaster

14:05 Waterquality reporting in international river basins: the same water (data) in several flavors | Willem Faber

14:25 INSPIRE for Greening the Common Agricultural Policy | Wim Devos, JRC and Frans van Diepen, ministry of Economic Affairs

14:55 INSPIRE for Statistics | Pieter Bresters, Statistics Netherlands

### 15:20-15:40 Short Juice break

### 15:40-17:00 Parallel sessions

#### Linked open data | ground floor 0A

chaired by Bill Roberts, Swirrl

15:45 The concept of meta SDI and the advantages for users | Joeri Robbrecht and Jef Van Bockcryck, AGIV

16:10 Linked Open Spatial Data and SDIs | Clemens Portele

16:35 Using linked data and the semantic web | Alex Coley, UK Location

#### Making business of data | 3<sup>rd</sup> floor 3A

chaired by Rob van de Velde, Geonovum

15:45 The potential of cross border data harmonisation in Europe for added value services | OGC

16:10 smeSpire -Turning the challenges of INSPIRE implementation into business opportunities | Danny Vandenbroucke and Glenn Vancauwenberghe, Leuven University

16:35 Make your data speak! | Marianne Linde, TNO

#### Benefits for the region | 3<sup>rd</sup> floor 3D

Chaired by Sven Robertz, x-border programme

15:45 Open Government - Benefits of INSPIRE in the public sector | Andre Caffier, Ministry of Home Affairs and Local Government of North Rhine-Westphalia and Daniela Hogrebe, GDI-DE

16:10 Base Service Webatlas.DE | Ulrich Püß, Working Committee of the Surveying Authorities of Germany

16:35 The Benelux Cooperation: a facilitating platform for Geo based cross border cooperation | Peter Janssen, GIS-Geo Benelux

### 17:00 Drinks

### 18:00 Inspiring dinners

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## March 5, 2013 | Brussels, Belgium

### 9:00-9:30 Registration

9:30-11:00 Plenary | chaired by **Ruud Cino, Ministry of Infrastructure and Environment** | ground floor 0A

09:35 **From Inspire to railway business solutions** | Erika Nissi, International union of railways

10:00 **Serving public needs in environmental monitoring and emergency responses** - the Copernicus (GMES) experience | Daniel Quintart, GMES

10:25 **The keys to a succesfull use of INSPIRE** | with Maxime Flament, Head of Sector SafeMobility, ERTICO Europe, Janneke Hadders, Dacom and Henk Scholten, Geodan.

### 11:00-11:20 Coffee break

#### 11:20-12:30 Parallel sessions

#### European Location Framework opportunities | ground floor 0A

chaired by *Kees de Zeeuw, Kadaster*

- 11:25 Data harmonisation aspects in INSPIRE and beyond : use cases at pan-European level | Nathalie Delattre, NGI-B
- 11:45 Edge Matching of National INSPIRE Datasets at European State Boundaries | Marcus Bruehl, BKG
- 12:05 E.L.F. Project - One Reference Geo-Information Service for Europe, Annti Jakobsson, Eurogeographics

#### Added value services | 3<sup>rd</sup> floor 3A

chaired by *Dr. Andreas Mütterthies, AiR e.V.*

- 11:25 Real-time monitoring and reporting of the global Spatial Data Infrastructure | Kristian Jaakkola, Spatineo
- 11:40 INSPIRE and the Last Mile to the User | Christian Elfers, Conterra
- 11:55 Linked Open Data for cross-border environmental information exchange | Royal HaskoningDHV, Esri and Geodan
- 12:10 Challenges and opportunities implementing INSPIRE: a systems integrator perspective | Joep Luijten, Capgemini

#### Linked data in practice | 3<sup>rd</sup> floor 3D

chaired by *Joeri Robbrecht, Agiv*

- 11:25 Start to Link, a practical POI approach | Joeri Robbrecht and Jef Van Bockryck, Agiv
- 11:55 Open Data for Local Government Planning and Sustainability | Bill Roberts, Swirl

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### 12:30-14:00 Lunch

13:15-13:45 Lunch demonstration | how the Police is using cross border data to fight crime | Peter Schaafsma en Johan van Schaaik , Netherlands Police Agency

#### 14:00-15:20 Parallel sessions

#### Mobility | ground floor 0A

chaired by *Nick Illsley, Transport Direct*

- 14:05 Spatial data for the transport sector | Nick Illsley, Transport Direct
- 14:30 Intelligent Transport Systems: needs for accurate and updated map data from public authorities | Maxime Flament, ERTICO Europe
- 14:55 Organising the Olympics | Shaun Bennett

#### Sustainability | 3<sup>rd</sup> floor 3A

chaired by *Dr. Hartmut Streuff, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety*

- 14:05 Open source city – the power of INSPIRE for urban planning
- 14:25 ScheldeMonitor, the online data and information system on research and monitoring of the Scheldt estuary | Annelies Goffin and Nathalie De Hauwere, Flanders Marine Institute
- 14:55 X-border experience | Sven Robertz and Frans van der Storm, x-border programme

#### And more... | 3<sup>rd</sup> floor 3D

chaired by *ir. Ingrid Vanden Berghe, NGI*

- 14:05 Linked data journalism | Oliver Bartlett, BBC
- 14:30 "The Locator" The business site finder for economic development | Ralf Meyer, Agit, Rik Nelles, Agentschap Ondernemen Limburg, Wilbert Kurvers, Province Limburg
- 15:00 Geodata, Geoportal and INSPIRE in the Grand-Duchy of Luxemburg | Francis Kaell, Administration du Cadastre et de la Topographie

### 15:20-15:30 Break

#### 15:30 -16:05 Closing | ground floor 0A

featuring professor Euro Beinat: **Collective sensing: the human side of big data**



9:30-11:00 **March 5 | plenary**  
chaired by **Ruud Cino, ministry of Infrastructure and Environment**

**From Inspire to railway business solutions**

*Erika Nissi | UIC - International Union of Railways*

Railways companies are spatial data provider - capturing their own information to set up a railway transport system - as users of external data in the domain of sustainability - as they are investigating the impact of railways transport and railways infrastructure on the environment-. Currently, the European railways are submitted to a EU law, which requires railway undertakings to publish and annually update a register of infrastructure (RINF) that corresponds to the Technical Specifications for Interoperability (TSIs). That technical specifications refer also to spatial information. A railway data modelling task force has been set up with four experienced railway companies: Infrabel (BE), ProRail (NL), Network Rail and RFS (FR), with the idea to standardise their data models throughout Europe. UIC has shown a willingness to investigate INSPIRE but also in combination with the Register of Infrastructure. The interesting point is that INSPIRE is not the only Directive dealing with spatial data and then how to consider the interference with the others Directives. The second point is that some Companies are developing programs for studying the impact of the railway infrastructure and transport on the environment,

like RFS (FR).

**Serving public needs in environmental monitoring and emergency responses - the Copernicus (GMES) experience**

*Daniel Quintart | Commission européenne | GMES*

Copernicus (GMES) is entering into operation phases with two major services : emergency management and land monitoring. These cross-border operational activities depend on the access to quality data in order to deliver added-value information. The implementation of the INSPIRE directive is therefore a important enabler for the success of Copernicus services and the fulfilment of important public missions.

**Panel | The keys to a successful use of INSPIRE**

*Ruud Cino discusses with dr. Maxime Flament | ERTICO - ITS Europe and Janneke Hadders | Dacom and Henk Scholten, Geodan what it takes from both public and private sector to make an infrastructure succesful.*

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11:00 – 11:20 **Break**

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## 11:20-12:30 **Parallel session | European Location Framework Opportunities**

chaired by **Kees de Zeeuw, Kadaster**

### Data harmonisation aspects in INSPIRE and beyond : use cases at pan-European level

*Nathalie Delattre | IGNB*

The presentation will describe which kind of data interoperability is considered in the INSPIRE Directive and data specifications and what are the data harmonisation aspects to be considered for achieving suitable cross border data harmonisation. These aspects will be illustrated with use cases and best practices example at pan-European level.

### Edge Matching of National INSPIRE Datasets at European State Boundaries

*Marcus Bruehl | BKG*

The merging of different national data sources to seamless and interoperable INSPIRE databases with pan-European coverage is challenging. The presentation will describe the creation of a multipurpose State Boundaries of Europe Dataset, meant to be the "definitive" description of all European state boundaries in medium scale. This includes also a concept for edge matching of national objects at connecting features as anchor points at the state boundaries.

### E.L.F. Project - One Reference Geo-Information Service for Europe

*Annti Jakobsson | Eurogeographics*

The E.L.F. project will, during the next 36 months, deliver the first implementation of the European Location Framework (E.L.F.) - a technical infrastructure which harmonizes national reference data to deliver authoritative, interoperable, cross-border geospatial reference data for use by the European public and private sectors. Today, access to authoritative geo-information is mostly national. The INSPIRE Directive will set up services that may be used for creating cross-border and pan-European services. However, in the ESDIN project this scenario was examined and the conclusion was that there is a need for setting up geo-tools (data transformation, validation, generalization and edge-matching) and additional specifications for creating working cross-border and pan-European services. The E.L.F. project will deliver these services and specifications. The project will provide a critical mass of content and coverage as 15 Member States' national INSPIRE data will be made available from a single point connecting the E.L.F. platform to the European Commission INSPIRE geo-portal and other portals (public and commercial).

## 12:30 – 14:00 **Lunch**

### 13:15 – 13:45 **lunchdemo | how the police is using cross border data to fight crime**

*Johan van Schaaik and Peter Schaafsma | Netherlands Police Agency*

In a fictional security use-case centred on the problem of human trafficking in the area around the Channel Ghent-Terneuzen, involving both the Dutch and Belgian police use-case we demonstrate the added value of INSPIRE to effecting a common operational picture for a cross-border analysis of the problem.

11:20-12:30 **Parallel session | Added value services**  
chaired by **Andreas Mutherthies, AIR ev**

**Real-time monitoring and reporting of the global Spatial Data Infrastructure**

*Kristian Jaakkola | Spatineo*

INSPIRE legislation sets strict quality, availability and reporting standards on geospatial web services. In this context it's vital to be able to show the availability of the service / data, standard compliance, the real usage of the data and the actual performance of the service under stress. Spatineo has created an innovative real-time virtual bot network that covers the global spatial data infrastructure. Spatineo performance real-time monitoring of all public spatial web services around the world. The approach Spatineo has taken to use the global spatial data infrastructure in a new way is to promote the usage of open data in Europe and has created a new and innovate way to support the implementation of INSPIRE in the member states.

will provide rapid ideas, thoughts and possibilities that can be used to build efficient, problem-solving and entertaining solutions apps.

**Linked Open Data for cross-border environmental information exchange**

*Royal HaskoningDHV, Esri and Geodan*

Inspireservices is a joint venture of Royal HaskoningDHV, Esri and Geodan. This collaboration enables offering a broad range of services to both INSPIRE data providers and INSPIRE users. Inspireservices ensures that INSPIRE becomes an opportunity rather than imposing an obligation. A number of standard services and products are offered. INSPIRE does not have to feel like an obligation. Inspireservices can help to turn it into an opportunity for improved information sharing ([www.inspireservices.eu](http://www.inspireservices.eu)) as we will illustrate with an actual case from the Netherlands Environmental Assessment Agency.

**INSPIRE and the Last Mile to the User**

*Christian Elfers | Conterra*

One of the most important goals of INSPIRE is to make better decisions and to solve environmental problems. For this, knowledge is required. Knowledge is gained through applied information, information is derived from data with applied tools. The INSPIRE infrastructure in particular is focusing on the technical plumbing and the legal regulations. These are required prerequisites, but as such they are not enough to reach the goal. It is required to bridge people and their problems/tasks with the INSPIRE infrastructure to realize the benefits of it. It is the solution applications that are needed to cover this last mile between users and infrastructure. This last mile can be long. Proper solutions app's need to be easy to use and they need to be efficient. They need to be very focused on the problem/solution fit. They need to inform and they also need to entertain. This presentation

**Challenges and opportunities implementing INSPIRE: a systems integrator perspective**

*Joep Luijten | Capgemini*

Compliance with the INSPIRE directive forces organizations to make changes on both a technical architecture level (information, application and infrastructure) and an organizational level. INSPIRE can be leveraged by organizations to advance in a broader area than what's strictly required by INSPIRE. Capgemini provides strategic advice on basic INSPIRE compliancy and implements technical solutions for clients in EU member states. What exactly is an organization required to do? What data are within scope? What architectures are needed? And how can an organization leverage the investments to be made to benefit other parts of organization and to advance collaboration? We will share our vision on the challenges and opportunities related to the implementation of INSPIRE.

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12:30 – 14:00 **Lunch**

13:15 – 13:45 **lunchdemo | how the police is using cross border data to fight crime**

*Johan van Schaaik and Peter Schaafsma | Netherlands Police Agency*

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## 11:20-12:30 **Parallel session | Linked Data in practice** chaired by **Joeri Robbrecht, Agiv**

### **Open Data for Local Government Planning and Sustainability**

*Bill Roberts | Swirrl IT Limited*

Local government currently finds itself facing a range of pressures: budgets are being cut, but citizens expect a high level of service. The internet generation expects local government to be more open than before, to provide more detailed and timely information and to provide services 24x7. There is a trend for services to be provided by a range of agencies working together, introducing a need for effective exchange of information between organisations. Open data, and in particular linked open data, can help address these challenges: it offers the possibility for better information sharing, improvements in efficiency and creation of innovative new approaches in local government. Good reference data, and geographical data in particular, is an essential component of this. This talk explores how these new technologies and new approaches can help to get the right information to the right people in a cost-effective way and describes some examples of where it has been

implemented in practice.

### **Start to Link, a practical POI approach**

*Joeri Robbrecht and Jef Van Bockryck | AGIV*

In this session we stay away from more specialized concepts like RDF and N3 notations. The case discussed shows a step-up model for implementing linked data based on URI's. At the same time the case acts as reference implementation for the Flemish Meta-SDI. To facilitate the use and access of geographical information, a POI model based on the draft W3C POI Core is used to publish data from the Flemish government. Within this POI model, unique and meaningful URI identifiers are used to identify the POI resource and reference data related to this POI resource. Based on this simplified and straightforward approach towards linking data, we discuss the idea of a resource-oriented resolver service that resolves restful requests to different flavors of web service interfaces.

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14:00-15:20 **Parallel session | Mobility**  
chaired by **Nick Illsley, Transport Direct**

**Spatial data for the transport sector**

*Nick Illsley, Transport Direct*

**Intelligent Transport Systems: needs for accurate and updated map data from public authorities**

*Dr. Maxime Flament | ERTICO - ITS Europe*

Intelligent Transport Systems will contribute to smarter, safer and sustainable road transport. In order to facilitate the deployment, efficient ITS map data exchange between public authorities and third parties is needed. The current recommendations formulated within the ITS Directive propose TN-ITS data specifications under the INSPIRE data infrastructure. The talk summarises the process to accelerate the exchange of public map data appropriate for ITS applications.

**Organising the Olympics**

*Shaun Bennett | Olympics organising committee*

Making information available for consumers, third parties and stakeholders to assistance in their games planning. A review of the lessons learned. Parallels and comparisons of the different approaches used for providing data for London 2012.

Shaun Bennett oversaw all mapping production for spectators, athletes, press and media and for the support LOCOG functional areas in their operational planning. He lead a team of GIS Analysts, CAD technicians, cartographers and graphic designers producing spatial datasets, detailed designs and mapping for public communications to support the delivery of the Olympic and Paralympic Games in London.

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15:20 – 15:35 **short break**

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14:00-15:20 **Parallel session | Sustainability**  
**chaired by Dr. Hartmut Streuff, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety**

**Open source city – the power of INSPIRE for urban planning**

*Gerjan Streng | The Cloud collective*

With Open source city, information previously exclusively available to experts and policy makers now becomes available to the wider public. It is possible to generate insights in the field of spatial planning by combining large amounts of geographic, demographic and economic (open) data. Our research project aims at indicating shared interests - the commons - in our cities and regions. These involve accessibility, energy, water, health care, self-organization and shared problems of large scale vacancy of offices and the shrinking cities. Well-known spatial queries and analyses are capable of detecting patterns in abstract data sets related to these commons just as well. Combinations of demographic and spatial data sets allow us to pinpoint and gather stakeholders connected to these shared interests and tells us which combinations of information are relevant to their case. It also offers the tools needed to fully utilize the creative capacities of private parties (businesses and citizens) in spatial-economic challenges. Knowledge of local initiatives feeds back into the system as analyzing them will reveal patterns that are scalable. Other locations can be scanned for their specific characteristics to see if they have similar potentials. This can truly turn local initiative into a full alternative to traditional planning, urbanism and architecture. By taking away most of the uncertainties of current planning processes, it facilitates these new forms of spatial planning based on the strengths of the commons and the community. It can turn a nanny state into a fully functioning grown-up society.

**ScheldeMonitor, the online data- and information system on research and monitoring of the Scheldt estuary**

*Annelies Goffin and Nathalie DeHauwere | VLIZ: Flanders Marine Institute*

In the framework of the common Flemish-Dutch long-term vision of the Scheldt estuary, VLIZ

constructed a portal to centralise information, data and products on monitoring and research of the Scheldt estuary. ScheldeMonitor gives access to a considerable amount of information on research activities, persons and literature that is gradually increasing. Since 2008 ScheldeMonitor is an online data portal that centralizes and visualizes data and GIS layers from different sources and research activities. Publicly available datasets can be downloaded and in case of restriction the user is redirected to information on metadata or data provider. All data can be visualized on a map. Users can plot multiple datasets as well as different GIS layers on the same map. GIS layers are stored using Geoserver, if possible WMS services are used. Metadata of GIS layers are stored in Geonetwork and will be made INSPIRE compliant.

**X-border experience**

*Frans van der Storm and Sven Robertz | x-border gdi programme*

X-border GDI is a programme with the aim to develop and implement a structure for the supply of cross-border geographic information in North Rhine-Westphalia, Lower Saxony and the Netherlands. This will help to ensure the long-term co-operation between North Rhine Westphalia, Lower Saxony and The Netherlands in the area of spatial information.

The cross border programme X-border GDI has developed an infrastructure to support in various practical location-related issues, amongst which the dataportal <http://www.x-border-gdi.org/> This portal contains INSPIRE data, data from the Dutch Provinciaal georegister and data of North Rhine Westfalia and Lower Saxony. There is quite some experience now with the use of this infrastructure to answer different user questions. Sven and Frans invite participants to take part in an interactive session where they will experience the power of spatial data in answering various questions, but also the difficulties that need to be overcome when trying to answer questions using the infrastructure.

15:20 – 15:35 **short break**



14:00-15:20 **Parallel session | And more...**  
chaired by **Ingrid Vanden Berghe**

**Linked data journalism at the BBC**

*Oliver Bartlett | BBC*

Oli Bartlett is the Product Manager for the BBC's Linked Data Platform. He has had 8 years' experience developing online products for the BBC and most recently was Product Manager for the BBC's Olympic Data Services and, prior to that, BBC Food. He has 4 years' experience in implementing linked data approaches and technologies in the BBC in products such as Wildlifefinder, Food and Sport.

The BBC have been using semantic technologies to power the Sport website for a few years now. In this short presentation Oliver Bartlett will show how linked data has been a key component to the BBC Olympics online coverage, and how the technology is going to change the way BBC content is published online in the future.

accessible and comparable based on the data at the source concept. Therefore information about industrial parks on the different sides of the borders has been gathered and harmonized, joined into a common information model and made available in the portal application. Besides an inventory of the industrial parks, also the real estate information for companies is featured. Further information to add are: Company Data (bases on the NACE-Code) and Settlement information. Moreover, it will allow the region to present itself to companies as one potential place of Business, so that companies may see at a glance where they may find the best spot for their operations.

**Geodata, Geoportal and INSPIRE in the Grand-Duchy of Luxembourg**

*Francis Kaell | Administration du Cadastre et de la Topographie*

This presentation gives an overview of the activities of Luxembourg's public geodata services, from the first projects implemented, through to the current state of the Spatial Data Infrastructure, the national geoportal of Luxembourg. An important aspect are the numerous projects of collaboration between different public sector bodies aimed at creating, managing, integrating and publishing new geodata sets using the national geoportal. Also, the impact the INSPIRE directive has had on the geoportal in terms of compliance, how the directive has raised the government's geodata awareness, and the resulting national geodata policy impacts, will be discussed.

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**"The Locator" The business site finder for economic development**

*Ralf Meyer | AGIT, Rik Nelles | Agentschap Ondernemen Limburg and Wilbert Kurvers | Provincie Limburg*

The border region between Belgium, The Netherlands and Germany, known as the Technology TopRegion, has the ambition to develop itself to one economical area. Hence the importance of a project that will map all industrial parks within the EMR region, showing the free premises and the existing companies in an industrial park. The main objective was to develop and realize a distributed information system on industrial parks which makes cross boundary data

15:20 – 15:35 **short break**

## 15:35-16:05 **Closing**

Chair Ruud Cino will introduce an inspirational closing key note by Euro Beinat and launch the **video flashback** on two days **Powered by INSPIRE**

### **Collective sensing: the human side of big data**

*Euro Beinat | Professor of Location and Context Awareness, Salzburg University - Chairman Currentcity Foundation and Vice President, Location Solutions at Zebra Technologies*

What if an entire city could be visible in real-time? Not the physical spaces but the collective activity of people, their movement patterns, choices, mood and preferences. What if we could do this for small neighborhoods as well as for entire countries? All sorts of new services would be enabled, some incredibly powerful and useful, others stretching our imagination and raising ethical questions. Collective Sensing uses design concepts and big data techniques to model the digital footprints of our activities in space and time, and map out our collective human behavior. Through examples and early experiences the presentation explores Collective Sensing in relationship to big data. It discusses how it can provide fundamentally new evidence on complex phenomena such as tourism or mobility, as well as challenge data.

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## 16:05 – 17:30 **drinks**

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**Colofon**

Powered by Inspire  
March 4 and 5 2013  
Brussels, Belgium

**This conference is organised by**

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