Geo Standards
Geonovum
GWF 2021

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Geonovum | Algemeen
Agenda

- Scope of geo-information
- Role of Geonovum
- Standardisation on the move
Realworld

Registries/GIS/SDI

scope of geo-information
Spatial Data Infrastructure

interoperability in technology and semantics
Priority User Sectors for the Netherlands Geospatial Industry

Source: Netherlands Geolocation Economy Report (Geospatialmedia)

- Infrastructure (Urban Development and Smart Cities) 23%
- Defence and Intelligence 19%
- Utilities (inclusive of Telecom, Water, etc.) 14%
- Governance 14%
- Transport Infrastructure 11.5%
- Disaster Management 9%
- Supply Chain and Logistics 7%
- Agriculture 2.5%
Geonovum process chain
International Standardisation is International Cooperation
International Friends

Are you compliant?

Spatial Data on the Web Working Group Charter

INSPIRE KNOWLEDGE BASE
Infrastructure for spatial information in Europe
Standards on the move

White paper
Vision Upgrade Dutch SDI

Setting new standards for the future
Idea behind the white paper

**Geonovum vision 2021-2023**: “the Dutch SDI needs an upgrade”

White paper elaborates on this statement:

- How to transform into a truly demand-driven SDI?
- How to unleash the power of location to major challenges (climate, energy, etc)?
- How do current developments relate and which (new) standards are needed?
- How to position the Dutch SDI in relation to ideas for a National Digital Twin Infrastructure?
Topics addressed

**Data distribution**

- API’s (including when to use – who benefits?)
- Linked open data (including when to use – who benefits?)
- Light encodings
Topics addressed

Relation SDI and National Digital Twin Infrastructure

• NDTI = SDI 2.0 and more

• Enabling an ecosystem of public and private services (offering static and dynamic data, models and visualisation) in which DT’s can be utilised in an ethical way
Into the web.

Semantic web technologies.
Pyramid of specialization
Silos extending common rules
Stack of profiles and extensions

Use case defines universe of discourse
Domain defines vocabulary – domain standard

Pyramid of reuse and reference
reuse and references of ontologies

The Universe is the Universe of discourse
Anybody can say anything about anything
Linked data revelation

Opening up the data Silos
About Digital Twins

A smart, dynamic, digital representation of the physical environment with user friendly visualisation of surface and sub-surface.

A DT is not a goal by itself...

• Helps in optimising the usage of the physical world;
• Depicts the physical world;
• Shows conflicting interests;
• Simulates alternative solutions and helps in balanced actions;
• Stimulates participation of stakeholders and helps achieving accepted decisions.
• Is being created by adding the 3D component to existing 2D datasets in a standardized procedure
Fieldlabs cover our major challenges

The Netherlands has five major challenges

- Social challenges
- Physical Living
- Environment
- Climate adaptation
- Energy transition
- Agricultural transition
- Housing
- Infrastructure repair and renovation
Our approach to develop the national digital twin infrastructure

**Programmatic approach**

1. Fieldlabs will work on the major social challenges and contribute reusable building blocks for a national adoption impuls by stimulating access to calculation, predictive and simulation models.

2. Adoption and upscaling to a national level requires a national digital twin infrastructure.

3. In a public-private partnership - together with all existing stakeholders – create an ecosystem of digital twins for the social challenges in the physical living environment.
About Digital Twins – Standard Wise

*Digital Twinning is about integration and complementary use of GI-standards (as is SDI)*

- Data modelling;
- Data encoding and publication;
- Metadata;
- Data presentation (visualisation);
- Open API;
- **Sensor Web Enablement Standards**;
- **IoT (OGC SensorThings API)**.
Access and distribution of information is shaping society
Geo-information is a large part there-off
Think of navigation, location based services, the power of where....
So we do have an impact on human and social affairs
Understand human and social affairs

**technical framework** – **social framework**
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