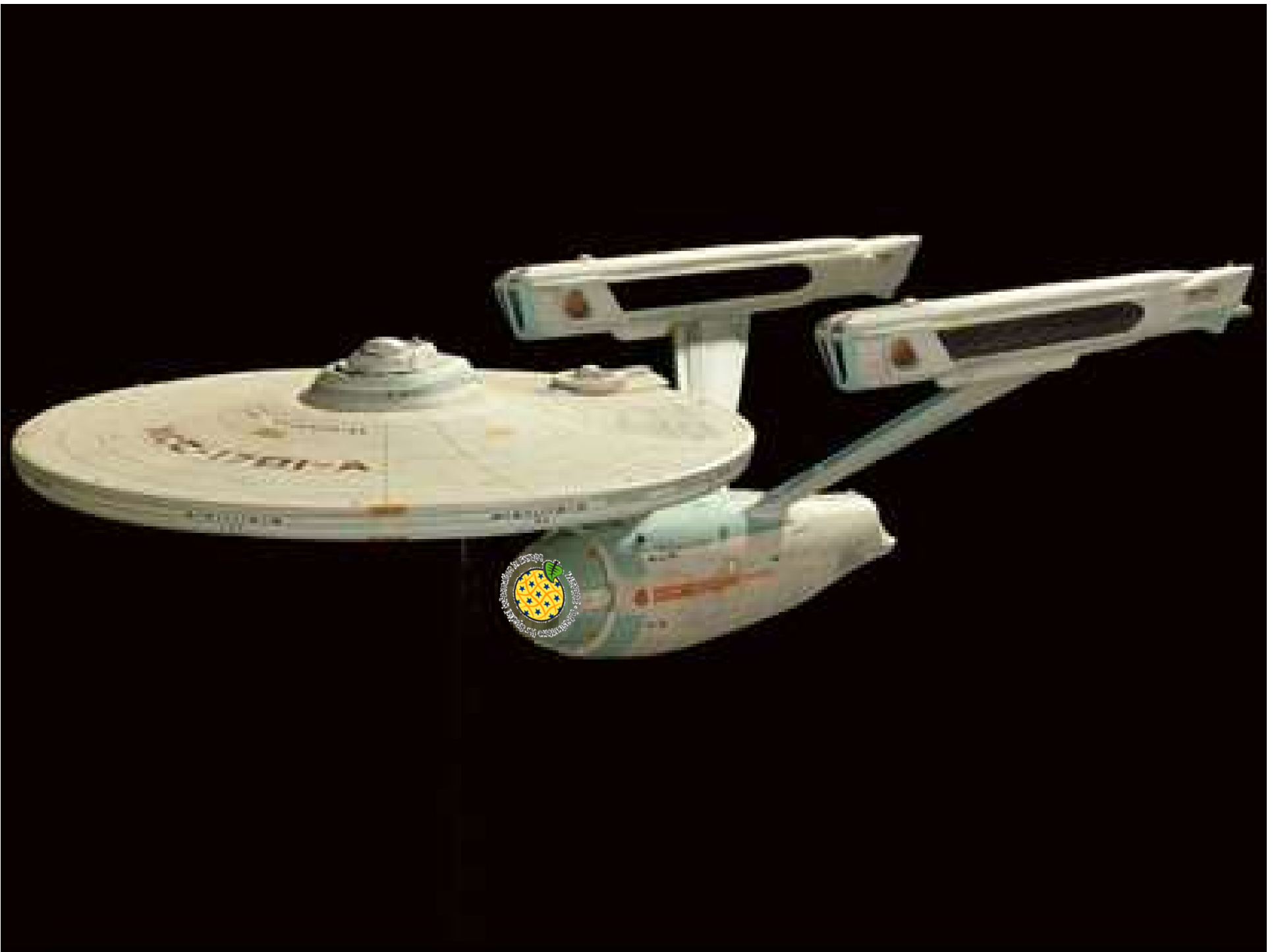


Starship INSPIRE encounters National SDI: Collision or Merger?

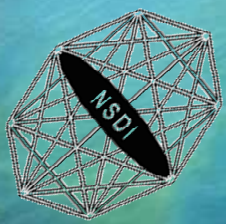
**'Data Modelling and Model Driven Implementation of Data Distribution'- workshop
Copenhagen, 28.-30. January 2015**

Paul Janssen - Geonovum (p.janssen@geonovum.nl)





NCC-1701-A





SDI up and running



Home Catalog PDOK About NGR

Online data Data for download No direct data access (contact point)

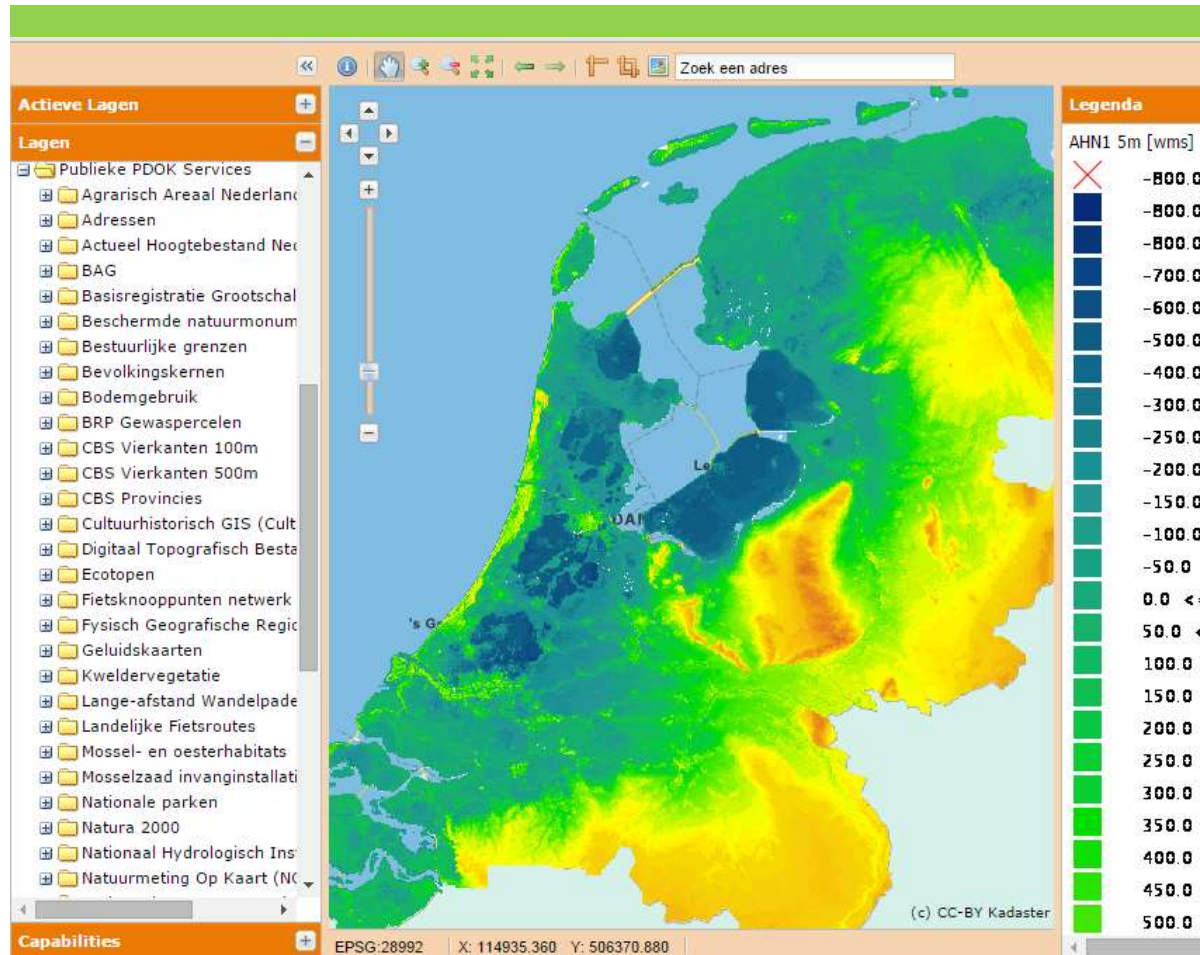
Latest

Welcome to the National georegister: the location of geo-information in the Netherlands. Via a search you get an overview of available data sets and services. These data sets are in many cases directly downloadable, you can view the services or use them in your own application. To learn more about searching in the National georegister? [See the instruction.](#)

Elevation(4523) Transport networks(4471) <small>Wegen(321)</small>	aardrijkskunde(4520) Popular <small>boundaries(412)</small>	Physiographic Map of North and Central Eurasia (Sample record, please) 	KNMI network of observation stations 	KNMI actual synoptic observations from NL land, coastal areas and North Sea stations per 	KNMI earthquakes Netherlands
elevation(4802) <small>environment(908)</small>	Physiographic Map of North and Central Eurasia (Sample record, please)	KNMI network of observation stations	KNMI earthquakes Netherlands	KNMI actual synoptic observations from NL land, coastal areas and North Sea stations per	

National Georegister:

- Metadata catalogueservice
- 8000 datasets



- View services
- Download services
- Now 71 datasets
- 37 Inspire datasets
- National coverage
- 7X24 (>99,5%)
- 5 milion map requests/month

Standardisation on Publish Find Bind principles

- ISO 19000 suite of standards as backbone
- INSPIRE as guidance, laboratory, framework
- European wide community
- Aligned with societal demands. eGovernment, open data, informed society

Some observations

- SDI deals with datasets (Domain Solutions)
- SDI approachable from object detail, is difficult
- INSPIRE is harmonized over 34 themes
- National data are not yet (fully) harmonized
- How do National Datasets relate to Inspire ?
- How do national semantics relate to Inspire?
- How?

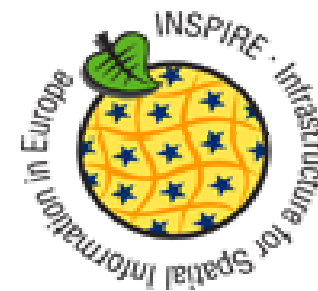
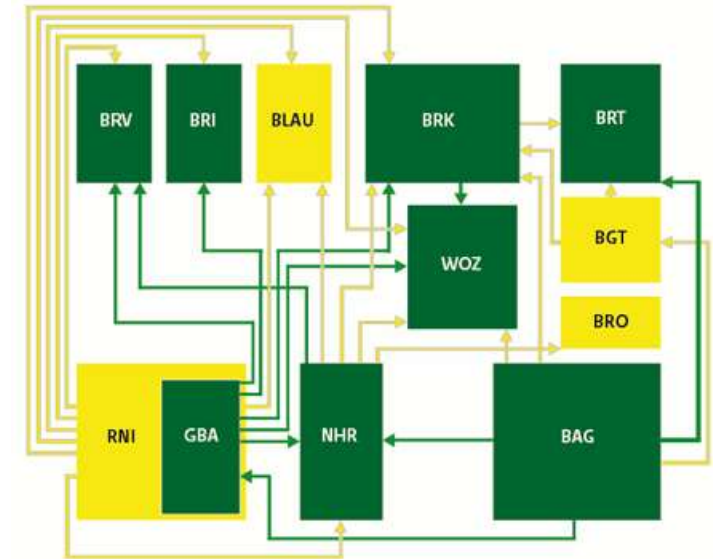


National Base registers



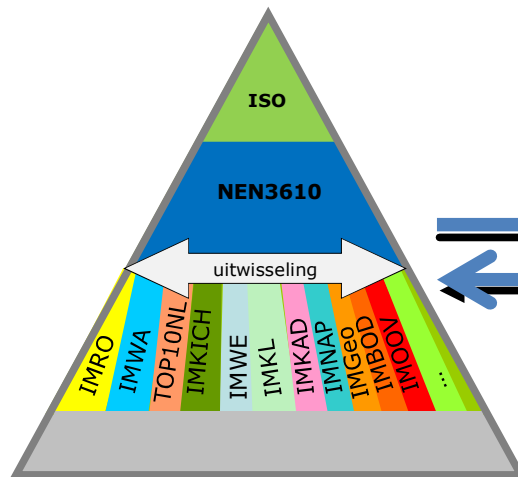
Cadastral
Topography
Land Use
Soil and underground
Under ground infrastructure

How does this relate to INSPIRE dataspecifications?



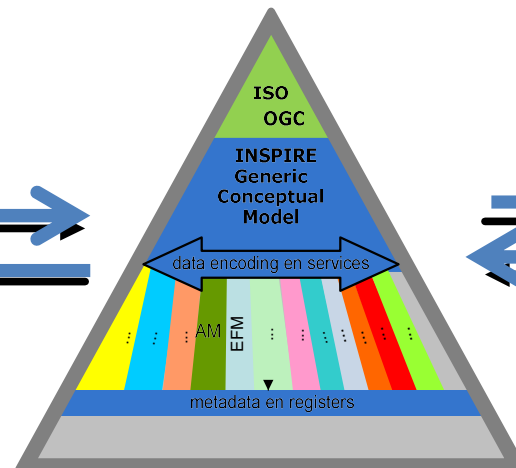
NEN 3610

15 domains



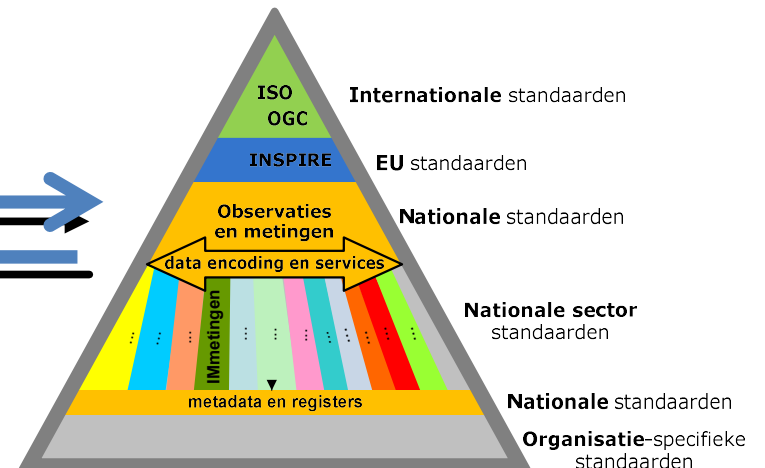
INSPIRE Theme's

34 domains



INSPIRE Observation & Measurements

15 application domains (?)



Over 800 feature types

All relevant in the Dutch context

What about harmonisation? Is this managable?

Handling SEMANTICS by OVERVIEW

What does a model editor need?

Use-case analysis and overview of used and existing vocabulary.

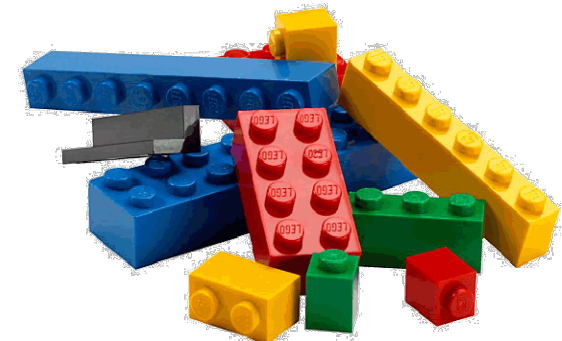
Define and re-use of vocabulary: harmonising and re-using.

We need a semantic Register



The screenshot shows a web interface for a semantic register. At the top right is the GEONOVUM logo. Below it is a navigation bar with a home icon, the text 'IMGEO NEN3610 IMBRT', and a search input field. The main content area displays the title 'Geonovum Beelden - DBRT (publicatum 2014/10/02/08/17/25)' and a list of letters 'a b c d e f g h i j k l m n o p q r s t u v w x y z alle beelden'. Below this is a table with the heading 'Eigenschappen'. The table has two columns: 'Naam' and 'overig'. The 'Naam' column contains 'DBRT'. The 'overig' column contains a list of terms: 'Inrichtingsplan', 'Waterdial', 'Wegdial', 'FunctioneelGebied', 'Gebied', 'GeografischGebied', 'TaalInhoud', and 'ElastischeGrafiek'. At the bottom of the table, it says 'Gewijzigd op 2014/10/02/08/17/25'.

Naam	overig
DBRT	Inrichtingsplan Waterdial Wegdial FunctioneelGebied Gebied GeografischGebied TaalInhoud ElastischeGrafiek





Handling SEMANTICS by GOVERNANCE

Organising a process around harmonisation.

Geonovum as
Organizer

NL-dataproviders and Inspire-dataproviders in
one harmonisation arena

Governance by participation and evolution????

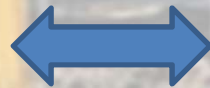
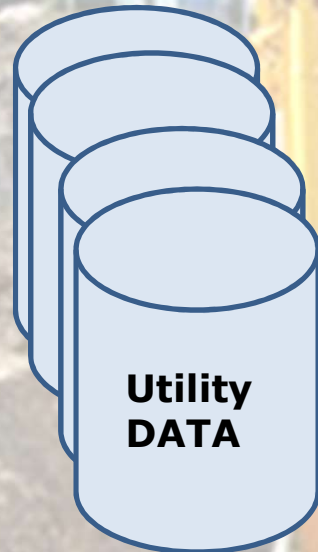


Dial before Dig

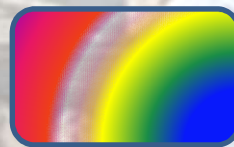


One service for Inspire and National law on network utility information

Extending Inspire Utility Network



IMKL
exchange
interface



IMKL2015



Data products

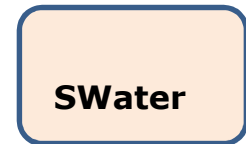
Information models



INSPIRE US



IMWION



IMSW



IMBevB



IMEC61

Data – Data products - Informationmodels

Current approach for extending

- Multiple inheritance and mixin constraints.
- Looks like ADE
- Research and experience needed

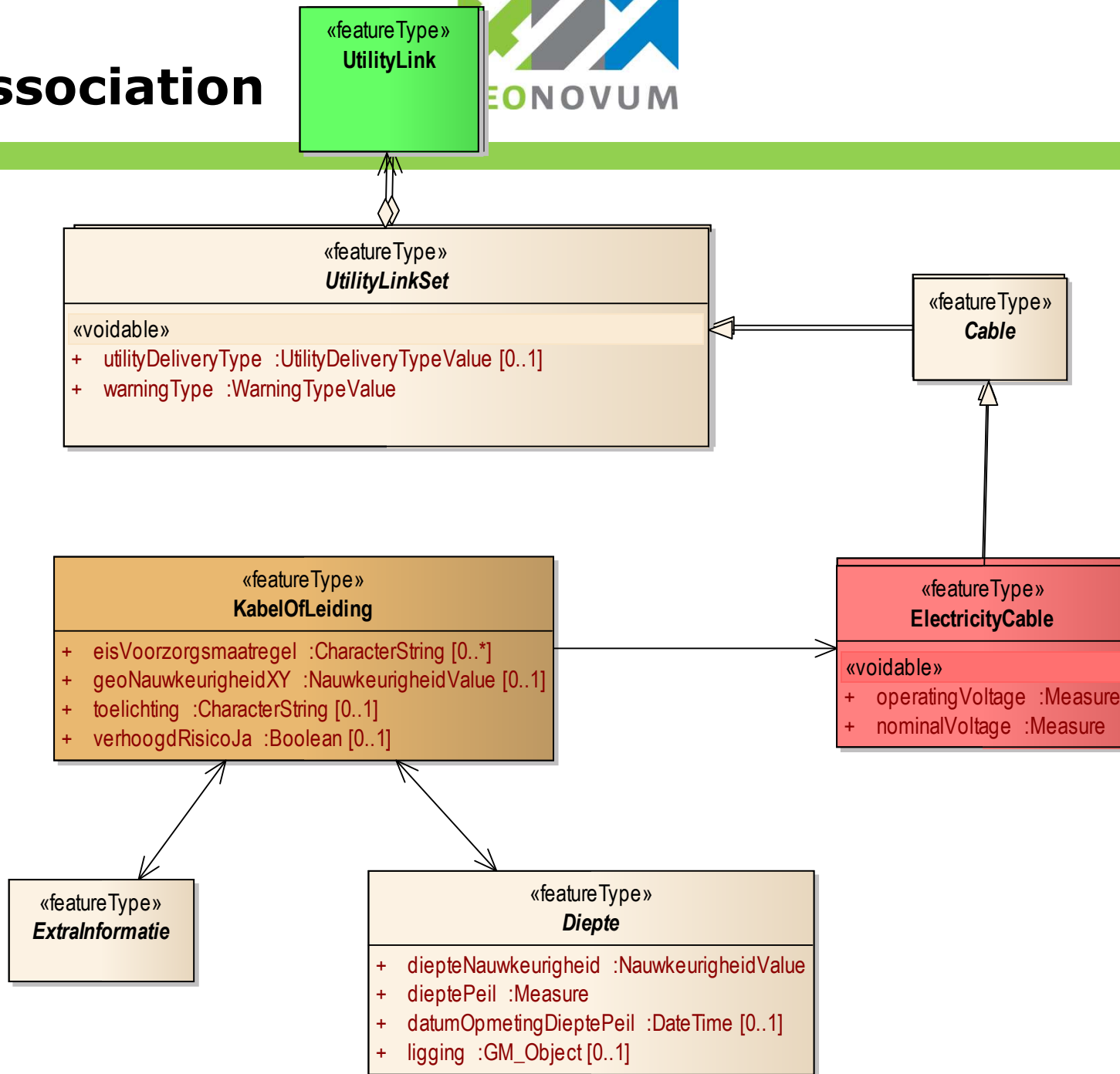
Four extension options



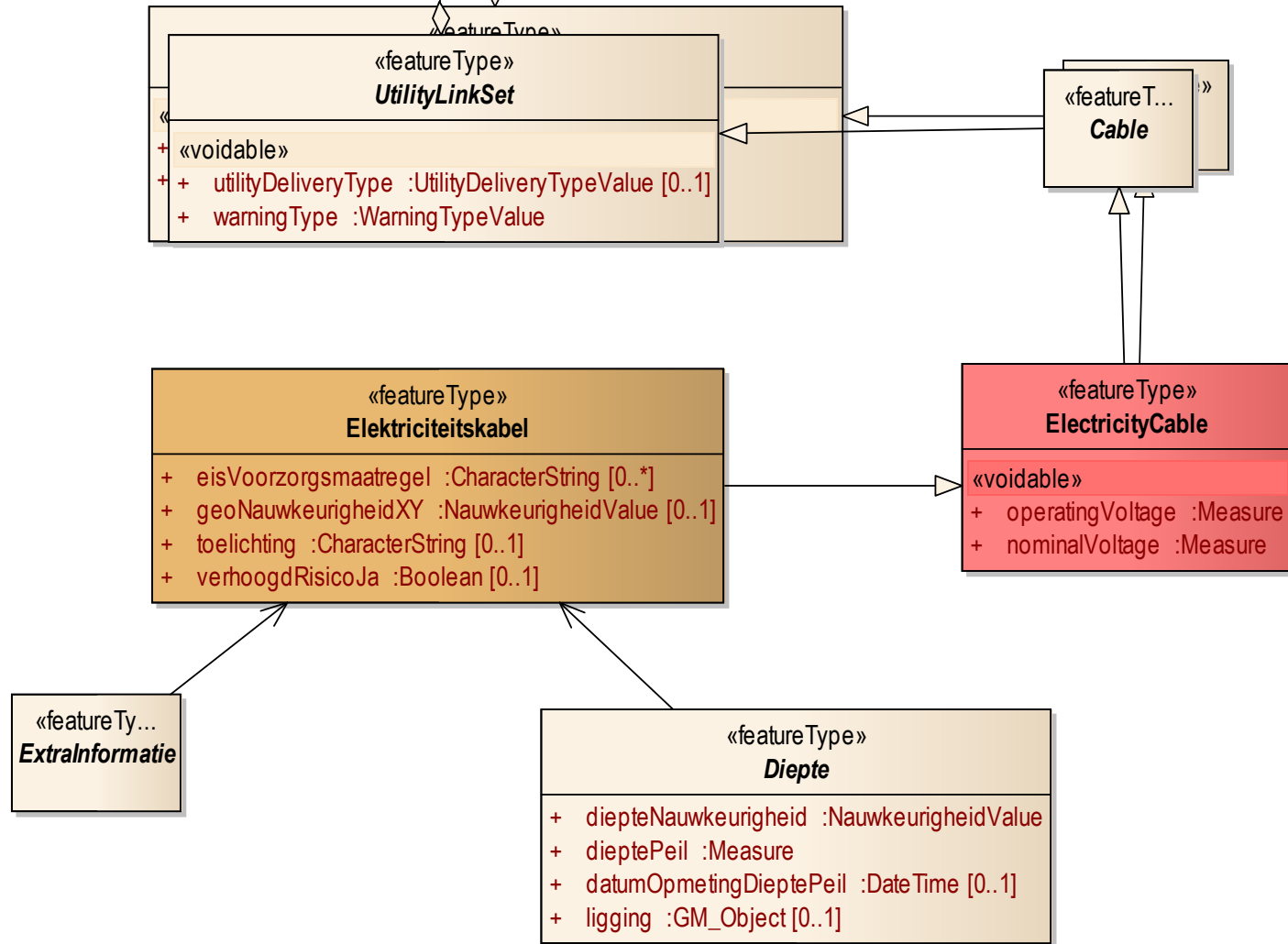
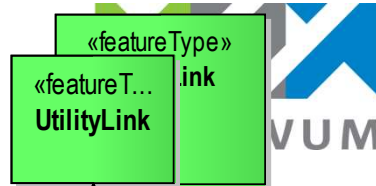
Credits to Belgium!! – AGIV - KLIP



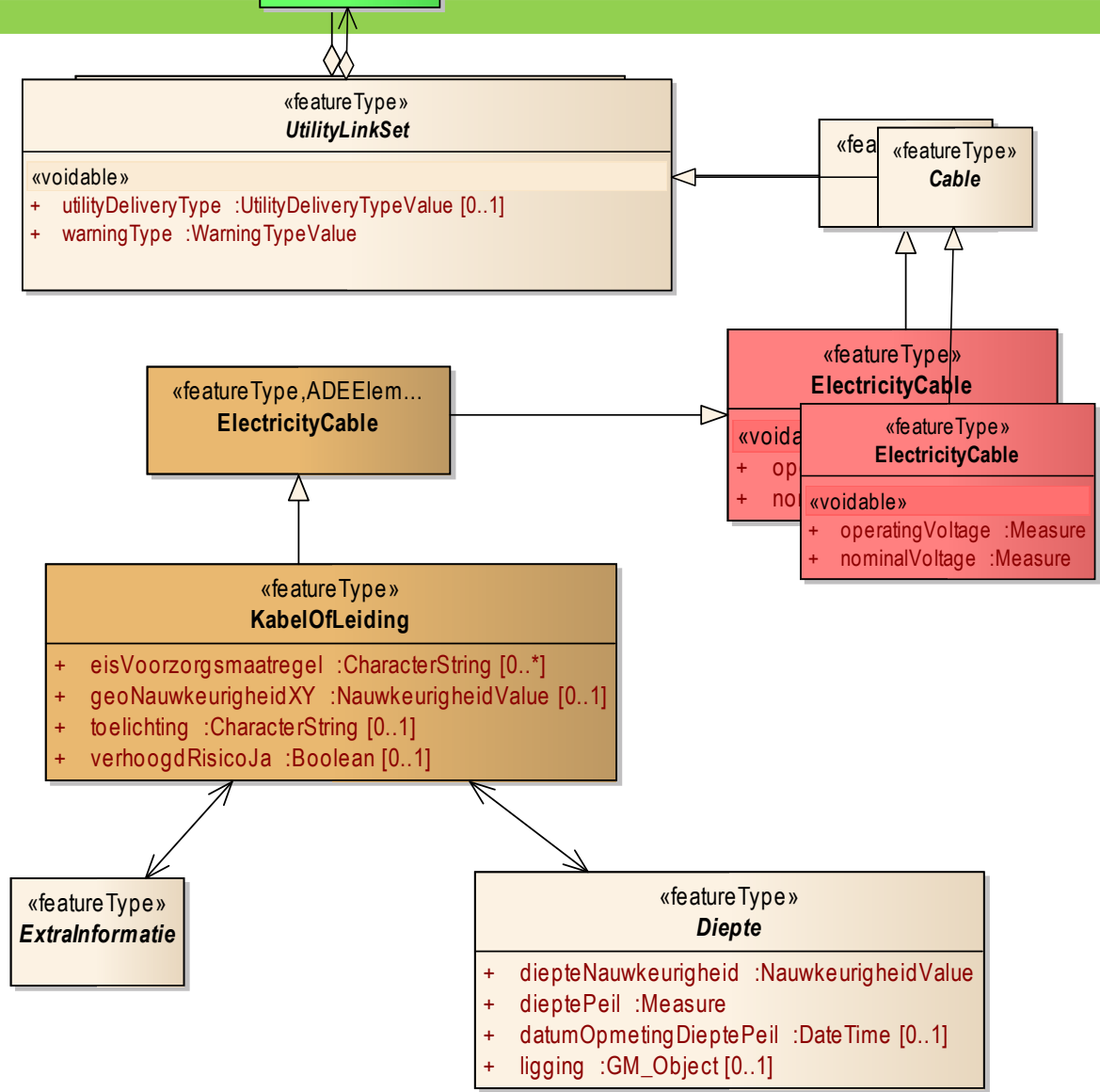
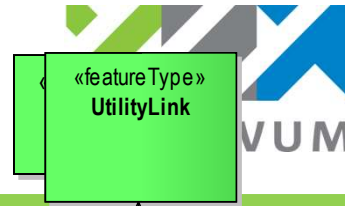
By association



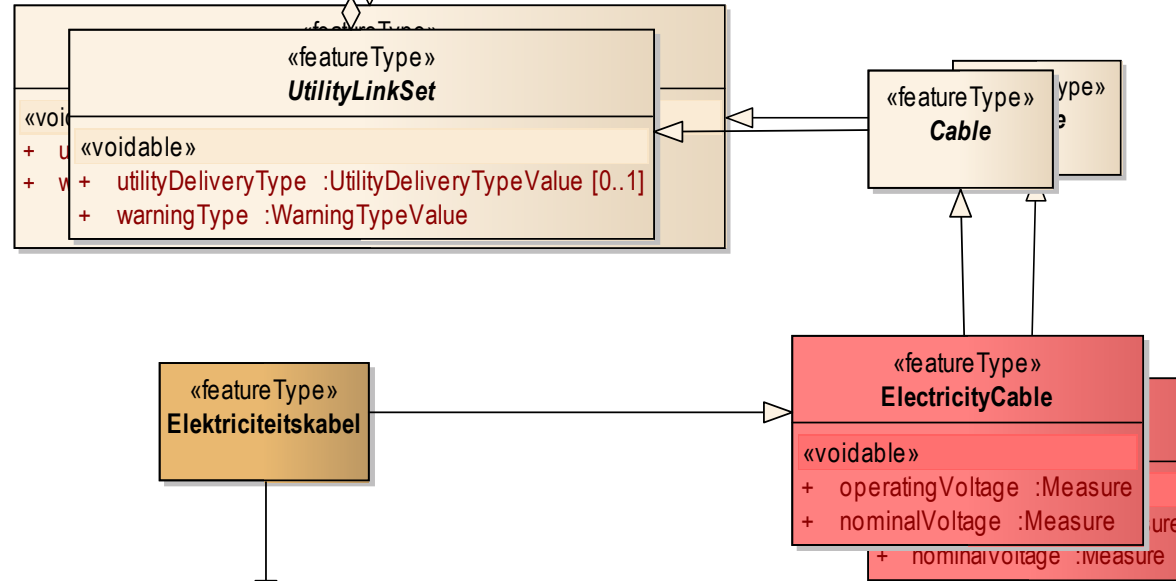
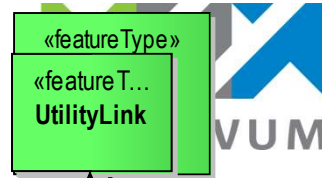
Subtyping



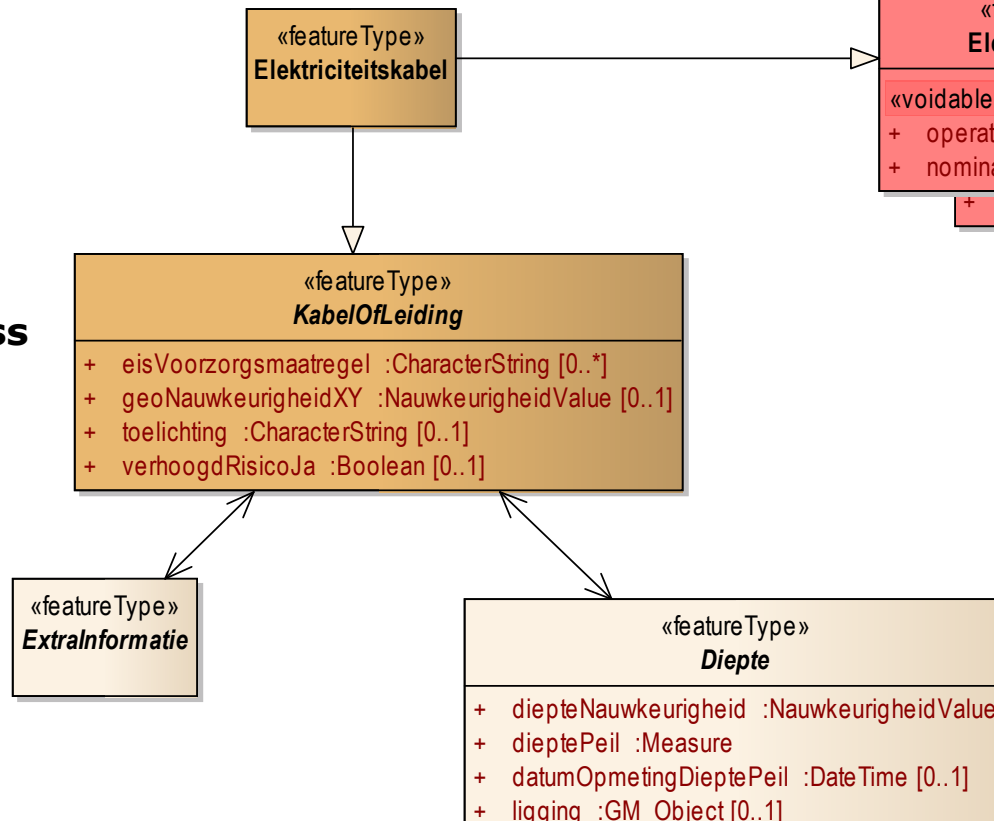
ApplicationDomain Extension



Mixin – multiple inheritance



Mixin class



Research and sharing of experience

- Make registers or catalogues: objects, codelists
- Linked data helps to integrate and re-use
- URI-strategy is being developed
- Extending models using ADE
- What about our General Feature Model?
- What about UML modelling?



Thank you!

Paul Janssen (p.janssen@geonovum.nl)