

# THE DUTCH KADASTER GETS INSPIRED WITH

deegree

deegree day - nov 16, 2010

# ~~THE DUTCH KADASTER~~ EUROPE

## GETS INSPIRED WITH

deegree

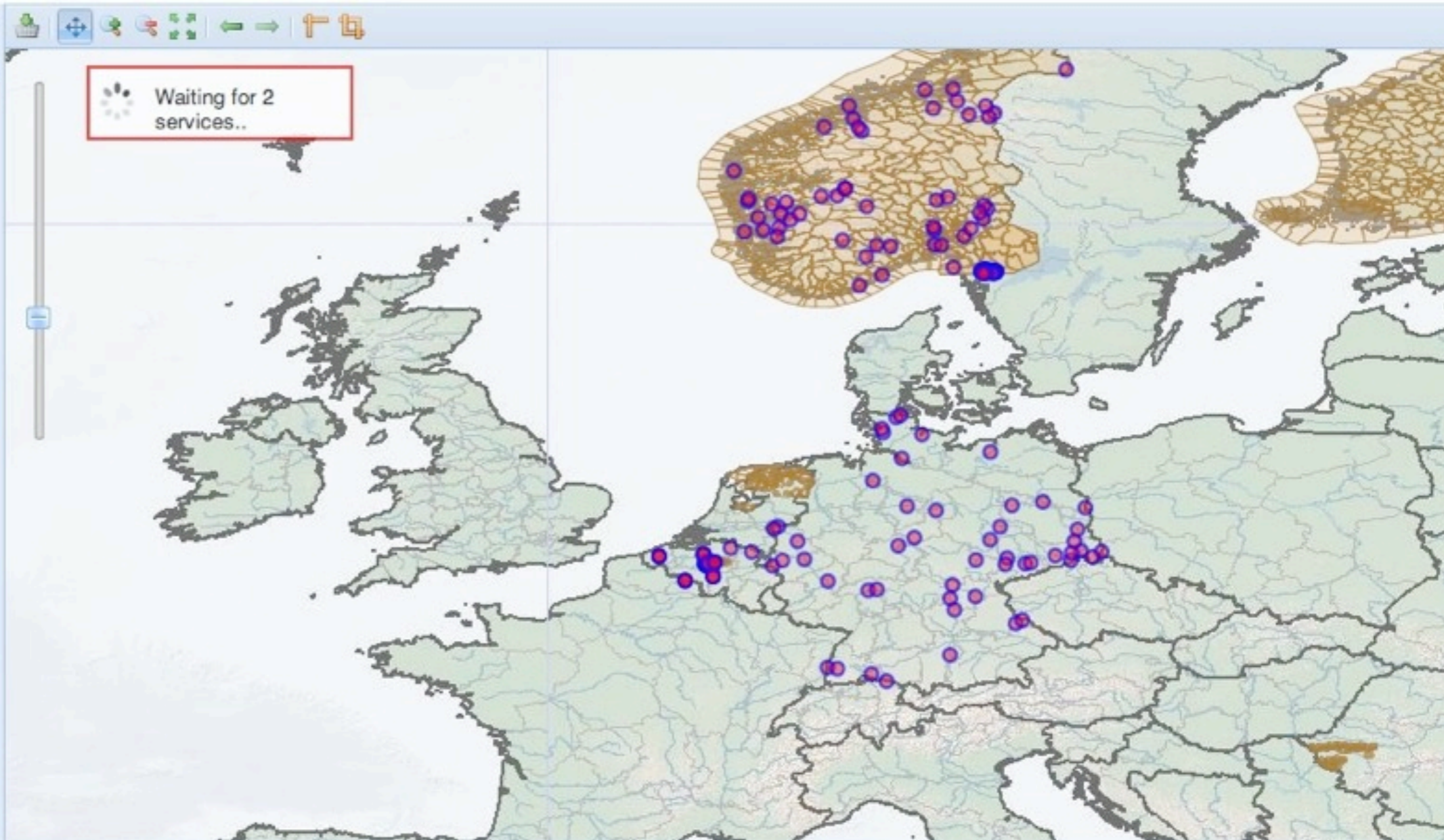
deegree day - nov 16, 2010



# Data Viewer

### Map layers

- Base layers
  - Euro Boundary Map
  - Euro Regional Map
  - Euro Global Map
  - World
- Geographical Names (GN)
  - NamedPlace
- Hydrography (HY)
- Transport Networks (TN)
- Administrative Units (AU)
  - AdministrativeBoundary
  - AdministrativeUnit
- Cadastral Parcels (CP)
- European topography (ExM)
  - AdministrativeUnit
  - NamedPlace
  - DamOrWeir
  - GlacierSnowfield
  - LandWaterBoundary



X: 18.370605 Y: 52.374023

**AU: AdministrativeUnit**      **GN: NamedPlace**

	Identifier: Namesp...	Identifier: Local ID	Name	Language	Status	Nativeness	Feature type
1	SE.LM.SE250.GN	F7AF88F2-4C57-...	Steneryr	SWE	official	endonym	populatedPlace
2	SE.LM.SE250.GN	F7B122D7-4C57-...	Västra Fjälla	SWE	official	endonym	populatedPlace
3	SE.LM.SE250.GN	F7B0ACD6-4C57-...	Lommelanda	SWE	official	endonym	populatedPlace
4	SE.LM.SE250.GN	F7AFA8CB-4C57-...	Fagerhult	SWE	official	endonym	populatedPlace
5	SE.LM.SE250.GN	F7ADC266-4C57-...	Stora Skällsäter	SWE	official	endonym	populatedPlace
6	SE.LM.SE250.GN	F7AD0F60-4C57-...	Vinnsäter	SWE	official	endonym	populatedPlace
7	SE.LM.SE250.GN	F7B0C9F9-4C57-...	Näs	SWE	official	endonym	populatedPlace
8	SE.LM.SE250.GN	F7B05504-4C57-...	Räse	SWE	official	endonym	populatedPlace

Information +  
 Help +

# ESDIN - STATUS - SEPT 2009

Country	Participant	Themes	Platform
		CP, GN	GO Publisher
		CP	Paper
		GN	XSLT, cascading WFS
		AU, GN, CP	SQL PL/PGSQL, <b>deegree</b>
		TN	FME, GO Publisher
		AU, HY, TN, CP	XtraServer
		CP	FME
		GN	SQL, <b>deegree</b>
		GN	<b>deegree</b>
		TN	FME
		GN, TN, HY, CP	SDD, XSLT, FME
		HY	XtraServer
		GN, TN, AU, CP	<b>deegree</b> , GO Publisher
		TN, CP, HY	Radius Studio

# ESDIN - STATUS - NOV 2010

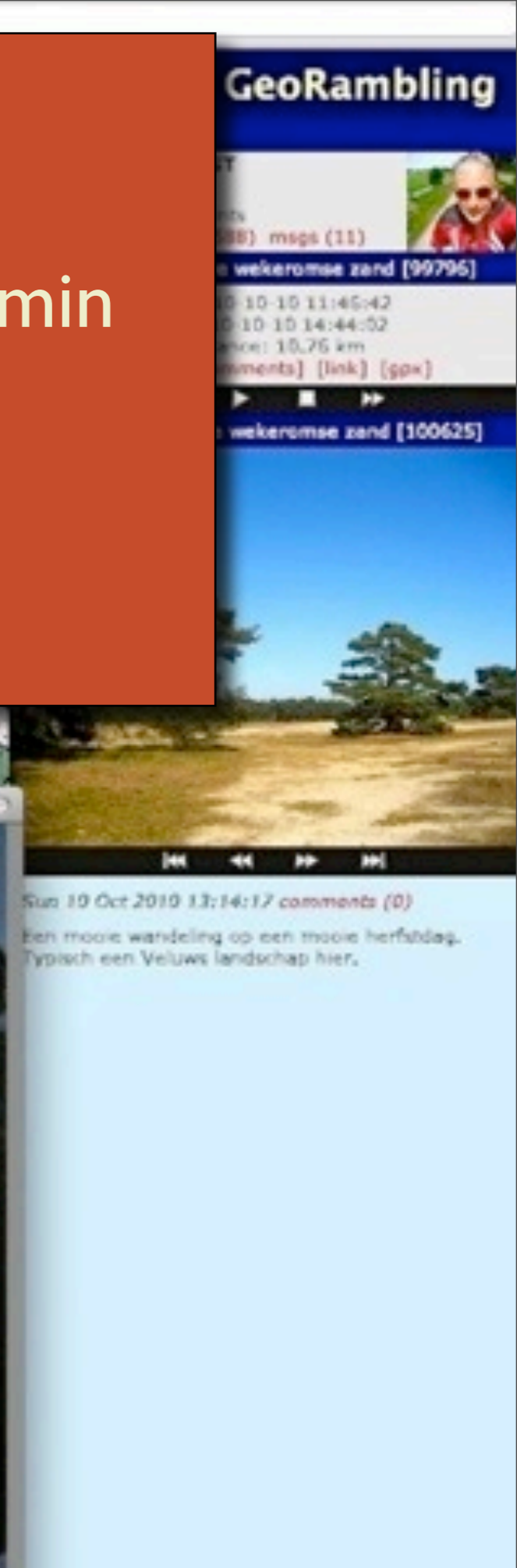
Country	Participant	Themes	Platform
		GN, AU, HY, TN	deegree
		GN, AU, HY	deegree, XSLT
		GN, AU, HY, TN	XtraServer
		GN, AU, HY, CP	deegree, XSLT
		GN, AU, HY, TN, CP	PostgreSQL/deegree
		AU, HY, TN, POP, VEG, MISC <sup>3</sup>	ArcGIS Server
		GN, AU, HY, TN	deegree
		GN, AU, HY, TN, CP	deegree
		GN, AU, HY, CP	deegree
		AU, HY	deegree
		GN, GN, AU, AU, HY, CP <sup>5</sup>	deegree
		GN, AU, HY, TN <sup>6</sup>	PostgreSQL/deegree

# Dutch Kadaster

Dutch National Mapping Agency & Land Admin

Just van den Broecke - [www.justobjects.nl](http://www.justobjects.nl)

<http://inspire.kademo.nl>



# AGENDA

- INSPIRE - The Challenges
- INSPIRE - Implementation with deegree
  - Past
  - Present
  - Future
- Q&A

# WHAT IS INSPIRE ?

## TECH P.O.V.

- Spec for a European SDI
  - Services
  - Data
  - Metadata



**INSPIRE != an SDI Architecture**

# INSPIRE - WHAT



# INSPIRE - DATA THEMES

Annex I	Annex II	Annex III
<ul style="list-style-type: none"><li>• Coordinate reference systems</li><li>• Geographical grid systems</li><li>• Geographical names</li><li>• Administrative units</li><li>• Addresses</li><li>• Cadastral parcels</li><li>• Transport networks</li><li>• Hydrography</li><li>• Protected sites</li></ul>	<ul style="list-style-type: none"><li>• Elevation</li><li>• Land cover</li><li>• Orthoimagery</li><li>• Geology</li></ul>	<ul style="list-style-type: none"><li>• Statistical units</li><li>• Buildings</li><li>• Soil</li><li>• Land use</li><li>• Human health and safety</li><li>• Utility and governmental services</li><li>• Environmental monitoring facilities</li><li>• Production and industrial facilities</li><li>• Agricultural and aquaculture facilities</li><li>• Demography</li><li>Etc.</li></ul>

# INSPIRE - CHALLENGES

- Advanced ISO/OGC Standards
  - WFS 2.0 WMS 1.3.0
  - Complex Application Schemas: GML 3.2.1
- Transforming local source data



# INSPIRE Implementation with deegree



# DATA - KADASTER MAPPINGS

## Local Sources

## INSPIRE Themes - Annex I

**CIDB**  
Cadastral Parcels and Admin Borders

**Administrative Units (AU)**  
**Cadastral Parcels (CP)**

**BAG (ACN)**  
Buildings and Addresses

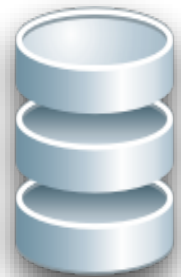
**Addresses (AD)**

**Top10NL**  
Topography

**Geographical Names (GN)**  
**Hydrography (HY)**  
**Transport Networks (TN)**  
**Large Scale Topography (ExM ESDIN)**

# GLOBAL APPROACH

Kadaster Data  
(Oracle)



Extract  
Transform  
Load (ETL)



INSPIRE Data  
(PostGIS)



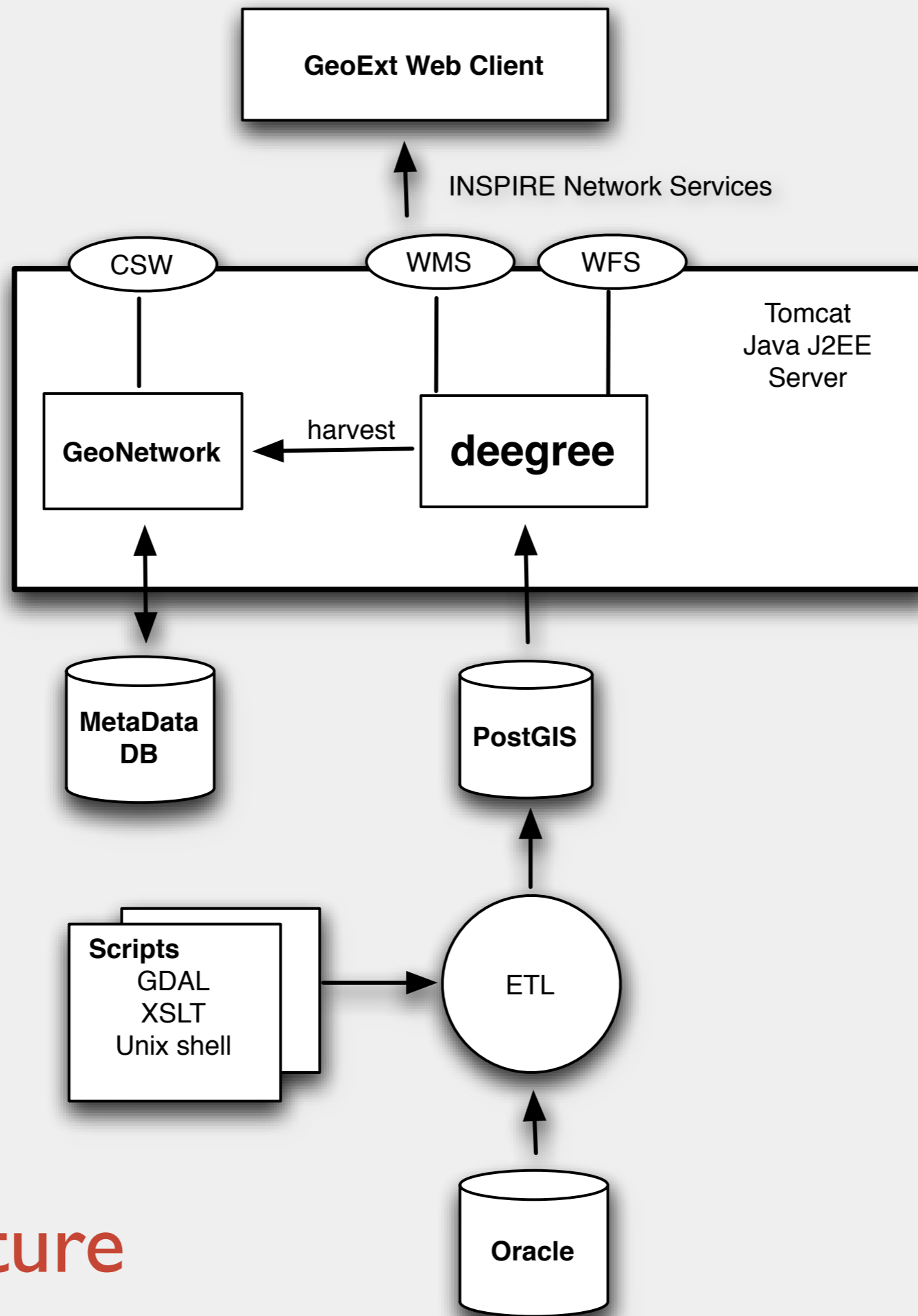
Web  
Services:  
WFS,  
WMS,  
[WPS]



INSPIRE  
Download  
&  
View  
Services

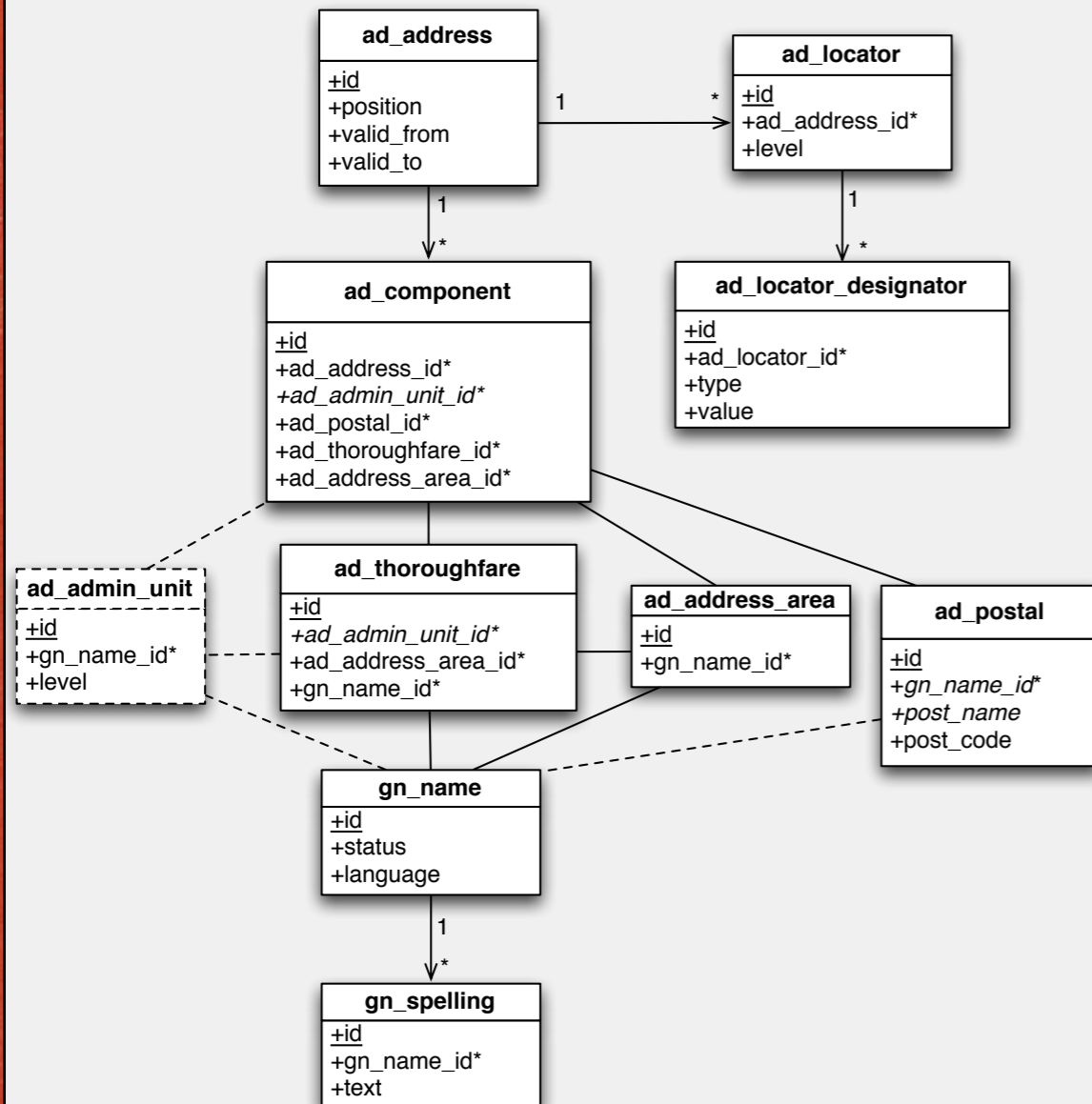
Offline Transformation  
(Model+Coordinates)

On-the-fly Transformation



# Architecture

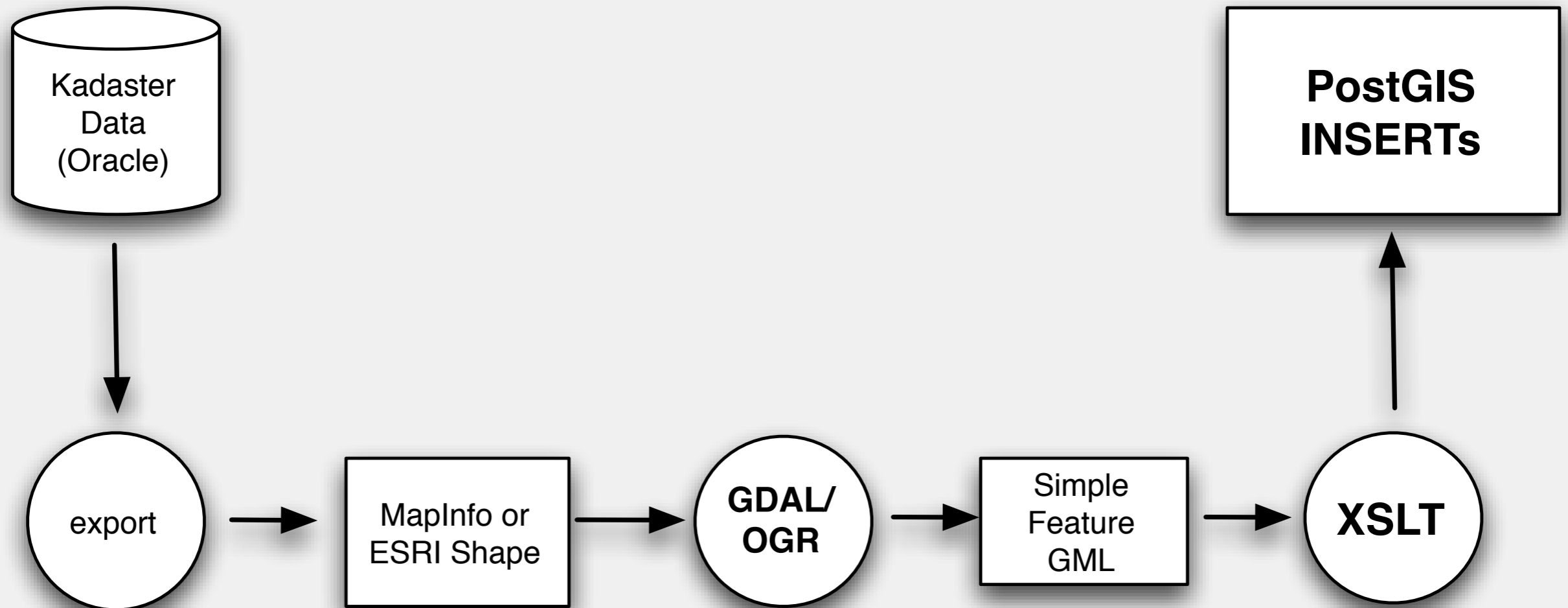
# PAST - DEEGREE V2 - DB + MAPPING



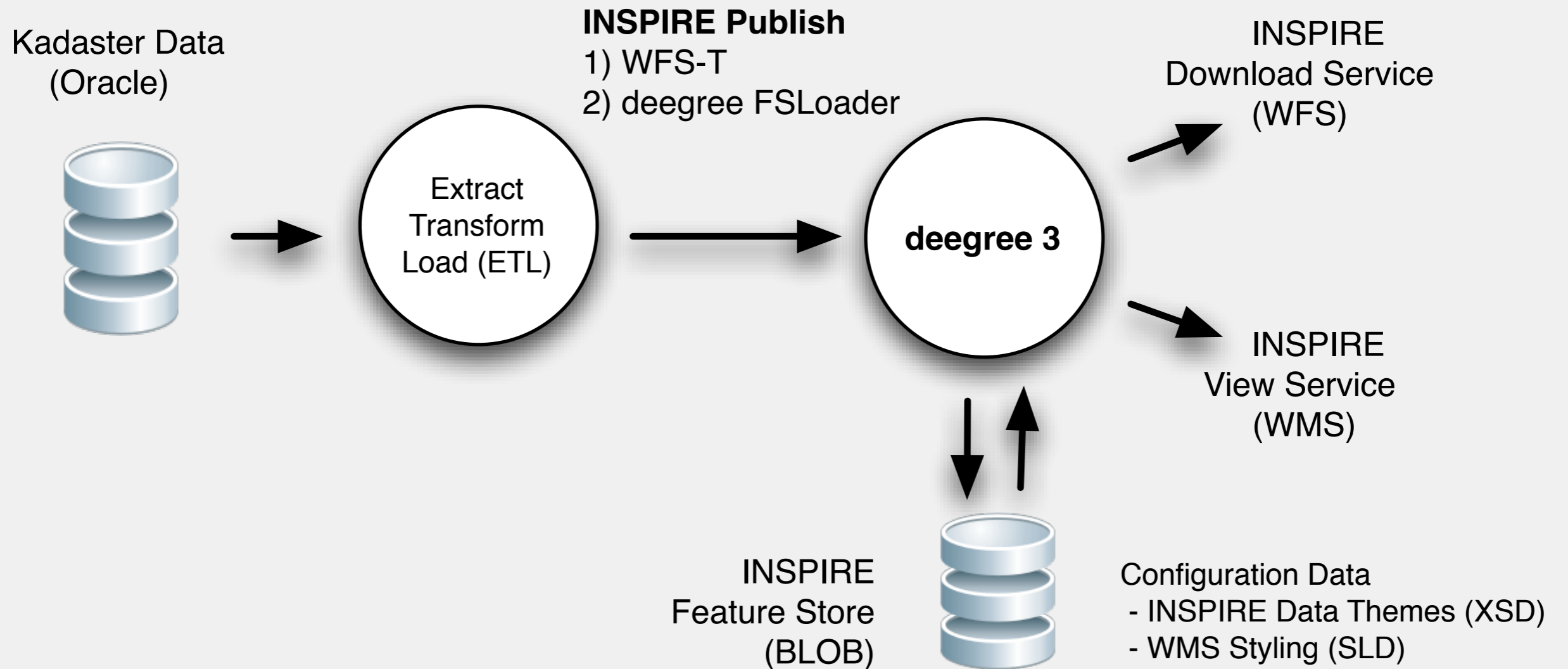
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        </deegree:Relation>
      </deegree:Content>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
  
```

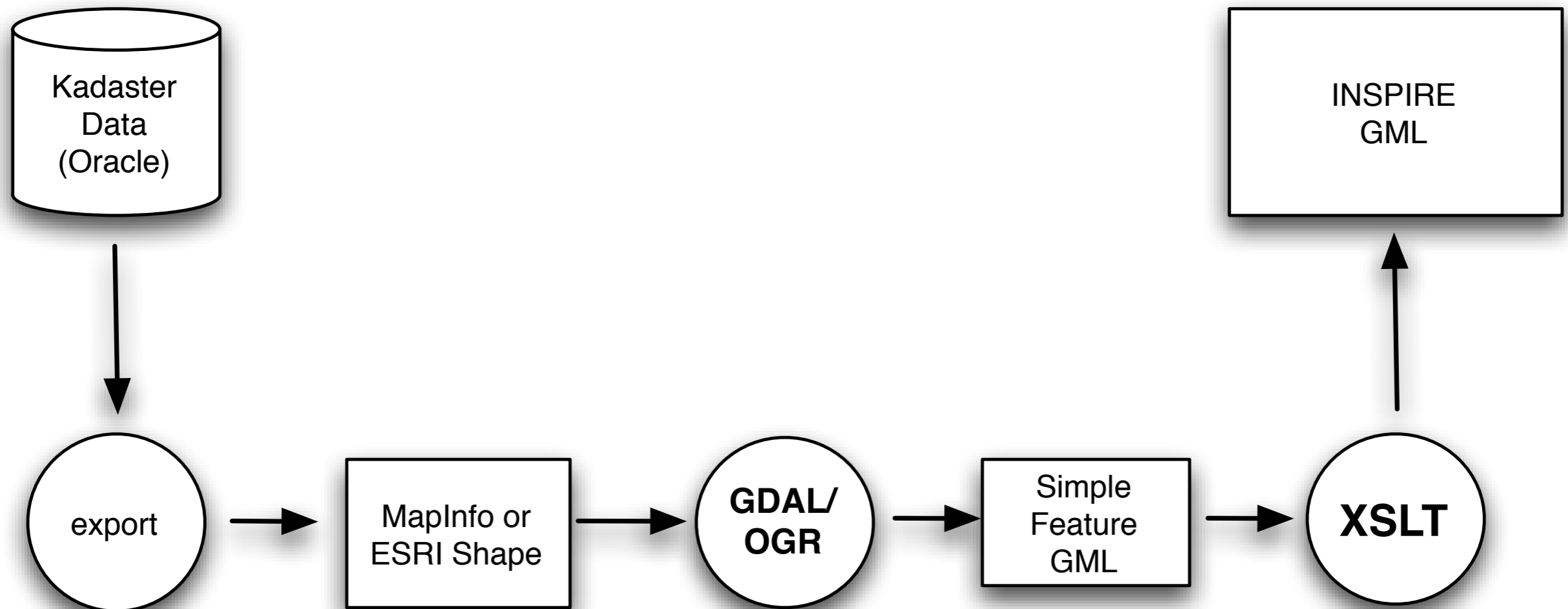
# PAST - ETL PROCESS



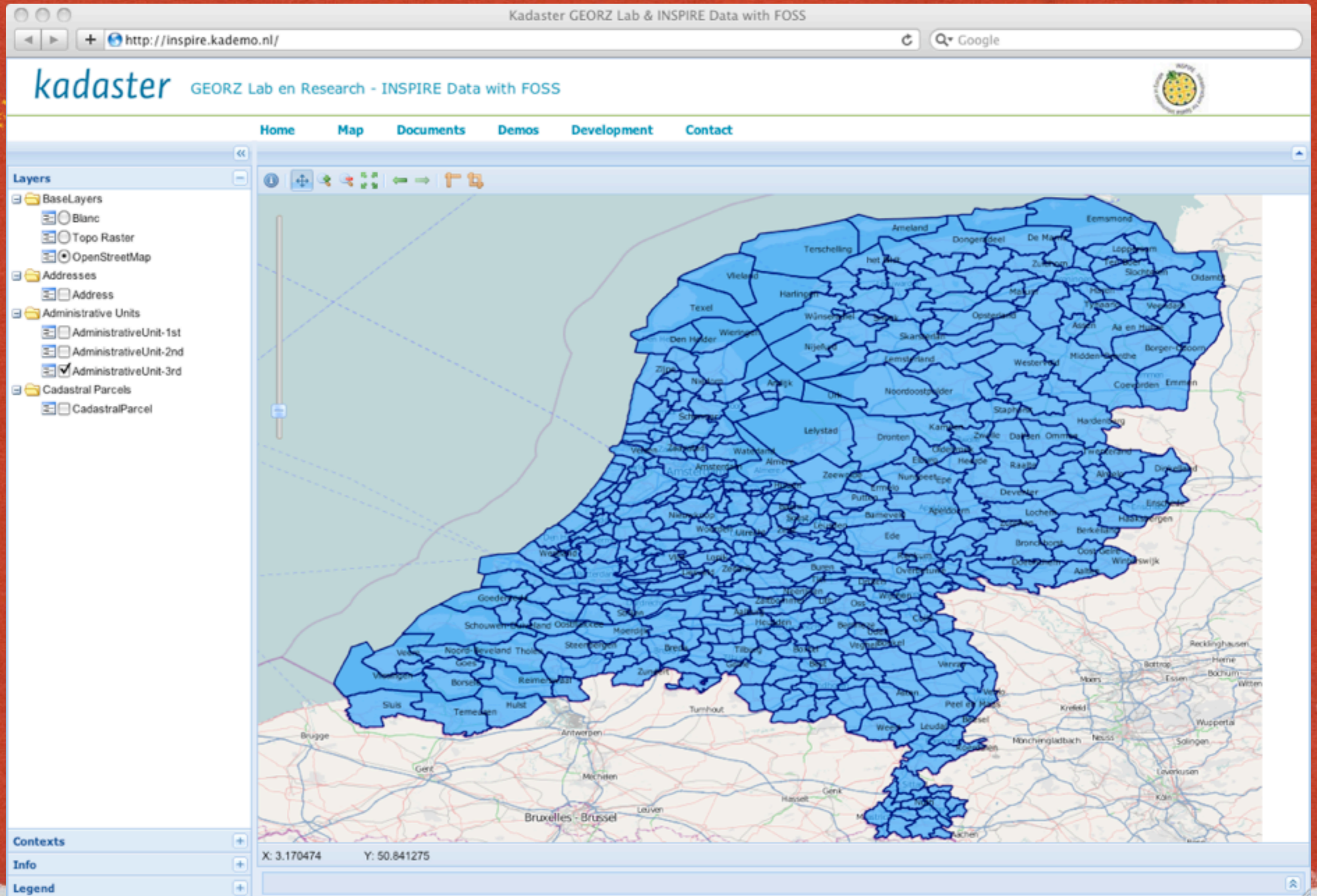
# PRESENT - ETL WITH DEEGREE V3



# PRESENT - EXTRACT + TRANSFORM



# RESULTS - ADMIN UNITS (AU)



# RESULTS - CADASTRAL PARCELS (CP)

Kadaster GEORZ Lab & INSPIRE Data with FOSS

http://inspire.kademo.nl/ Google

**kadaster** GEORZ Lab en Research - INSPIRE Data with FOSS

Home Map Documents Demos Development Contact

**Layers**

- BaseLayers
  - Blanc
  - Topo Raster
  - OpenStreetMap
- Addresses
  - Address
- Administrative Units
  - AdministrativeUnit-1st
  - AdministrativeUnit-2nd
  - AdministrativeUnit-3rd
- Cadastral Parcels
  - CadastralParcel

Contexts Info Legend

X: 7.006622 Y: 52.293754

# FUTURE

- **Standards Conformance**  
WFS 2.0 WMS 1.3
- **WFS Optimization**  
storage: Hybrid, NoSQL (?)  
filter query handling
- **Additional INSPIRE Services**  
WPS ?
- **“Spread the deegree Word”**

# FINDING OUT MORE

## DOCU DEMOS AND INFO

<http://inspire.kademo.nl>

## TRANSFORMATION & SERVICES

<http://code.google.com/p/inspire-foss>

## WEB CLIENT

<http://code.google.com/p/geoext-viewer>

