



Landesbetrieb Geoinformation und Vermessung

Geoservices in Hamburg

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Landesbetrieb Geoinformation und Vermessung

FIG Commission 7 Symposium Celje 16 May 2006



Freie und Hansestadt Hamburg





Hamburg and the Metropolitan Area

▶ Hamburg

- 53°30' N, 10°00' E

<C:\Programme\Google\Google Earth\GoogleEarth.exe>

- 755 km²
- 1.7 M inhabitants

▶ Metropolitan Area

- 19 000 km²
- 4 M inhabitants



Hamburg facts

- ▶ One of the most dynamic centres in Germany
- ▶ GDP 78.8 bn EUR
- ▶ 300,000 commuters daily from the region
- ▶ Service industry (trade, logistics)
- ▶ Inter-state cooperation with neighbour states



Seaport

- ▶ EU expansion improved the economic geographical location



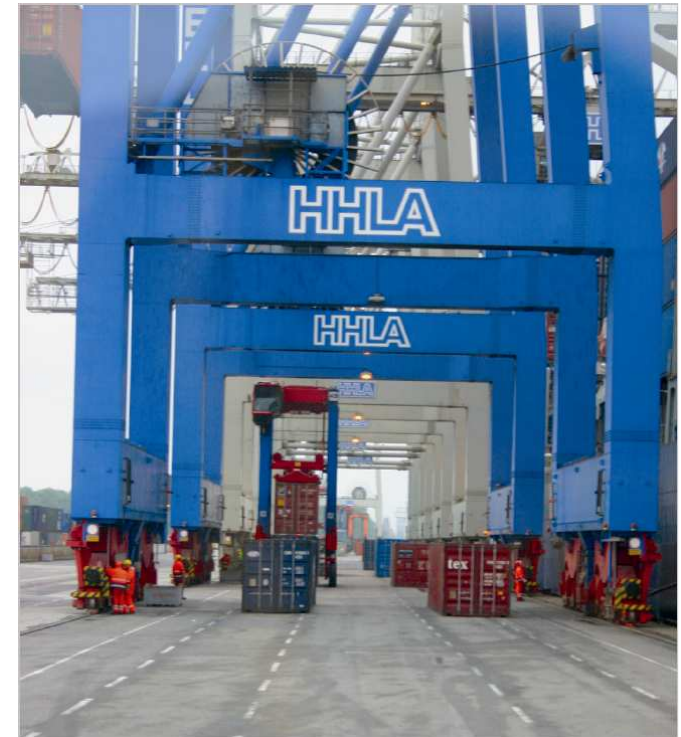
Seaport

- ▶ EU expansion improved the economic geographical location
- ▶ Container turnover more than 8 M per year



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Seaport

- ▶ Container turnover more than 8 M per year
- ▶ EU expansion improved the economic geographical location
- ▶ Container turnover will increase 3 times by 2020
- ▶ Structure of this area changes dramatically



HafenCity

- ▶ New urban district, designed for mixed residential, commercial, leisure, retail and cultural use on a 155-hectare area with a total gross floor space of **1.8 M m²** completed by 2020
- ▶ 5,500 residential units for 12,000 people and service areas capable of providing more than 40,000 workplaces.



Landesbetrieb Geoinformation und Vermessung

HafenCity

- ▶ will enlarge the size of the city centre by around 40 per cent.
- ▶ The cultural highlight is the new Philharmonic concert hall on top of an old warehouse.



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HafenCity

- ▶ New Subway-Line U4
- ▶ 2 new stations
- ▶ Construction starts 2007
- ▶ Ready by autumn 2011



Aviation Industry

- ▶ Hamburg's Airbus plant is responsible for major steps in the production of the A380
- ▶ large sections of the fuselage, cabin interiors, paintwork and delivery of the aircraft



Aviation Industry

- ▶ Hamburg's Airbus plant is responsible for major steps in the production of the A380
- ▶ large sections of the fuselage, cabin interiors, paintwork and delivery of the aircraft
- ▶ Enlargement of the production area and the runway



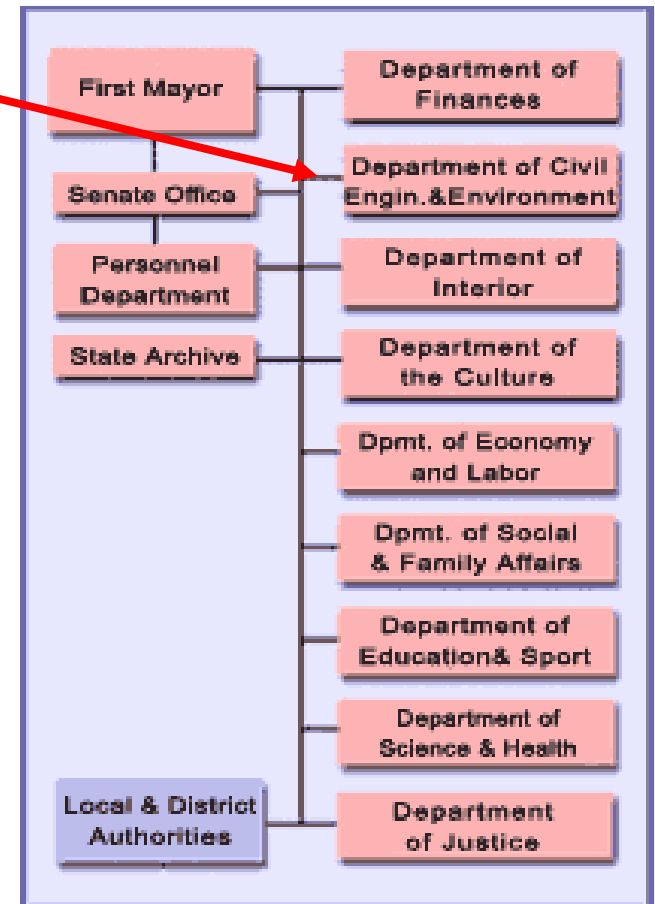
The city needs ...

- ▶ Cadastre
- ▶ Digital Maps
- ▶ Orthophotos
- ▶ Digital Terrain Model
- ▶ Digital City Model
- ▶ Surveying and planning
- ▶ Reference system ETRS89 and Satellite Positioning Service
- ▶ Geodata Infrastructure (SDI)
- ▶ ...



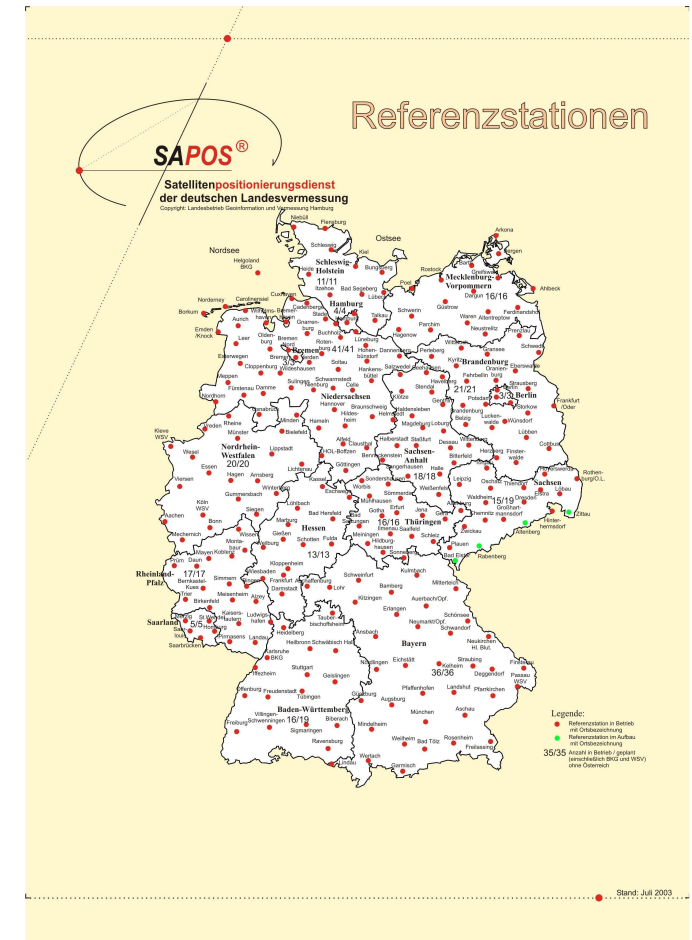
Organisation of LGV

- ▶ Part of the administration
- ▶ LGV has 4 sections
 - Administration
 - Geoinformation
 - Surveying
 - Geodata Services
- ▶ 400 employees
- ▶ Expenses 28 Mio. €
- ▶ Income 11 Mio. €
- ▶ Subsidy by the budget of Hamburg 17 Mio. €



Reference System ETRS89

- ▶ SAPOS service in Germany with 250 reference stations
- ▶ 4 reference stations in Hamburg
- ▶ Survey accuracy ± 2 cm by using RTK
- ▶ Control points are not in practical use anymore
 - 490,000 control points



Sapos.geonord.de

- ▶ Network of North German GPS Reference Stations
- ▶ RINEX data for post processing
- ▶ HEPS service for RTK online via GPRS or via GSM
- ▶ Register for Internet service NTRIP
- ▶ Payment
- ▶ Part of E-Government Program



Sapos.geonord.de

SAPOS.GeoNord RINEX-Webserver

Bad Seneberg (0705)
Bungsberg (0711)
Fehmarn (0717)
Flensburg (0712)
HH-Mitte (0832)
HH-Nord (0835)
HH-Suedost (0837)
HH-West (0836)
Heide (0709)
Helgoland (0714)
Hörnum (0716)
Itzehoe (0708)
Kiel (0706)
Lübeck (0715)
Niebuell (0710)
Pellworm (0718)
Schleswig (0704)
Talkau (0713)

alle auswählen
Auswahl löschen
Detailinfo
existierende Jobs

Version 2006-09-20 11:47

Breite: N 53° 39' 24" Länge: E 9° 54' 14" Radius: 50 km selektieren

Language weiter >>

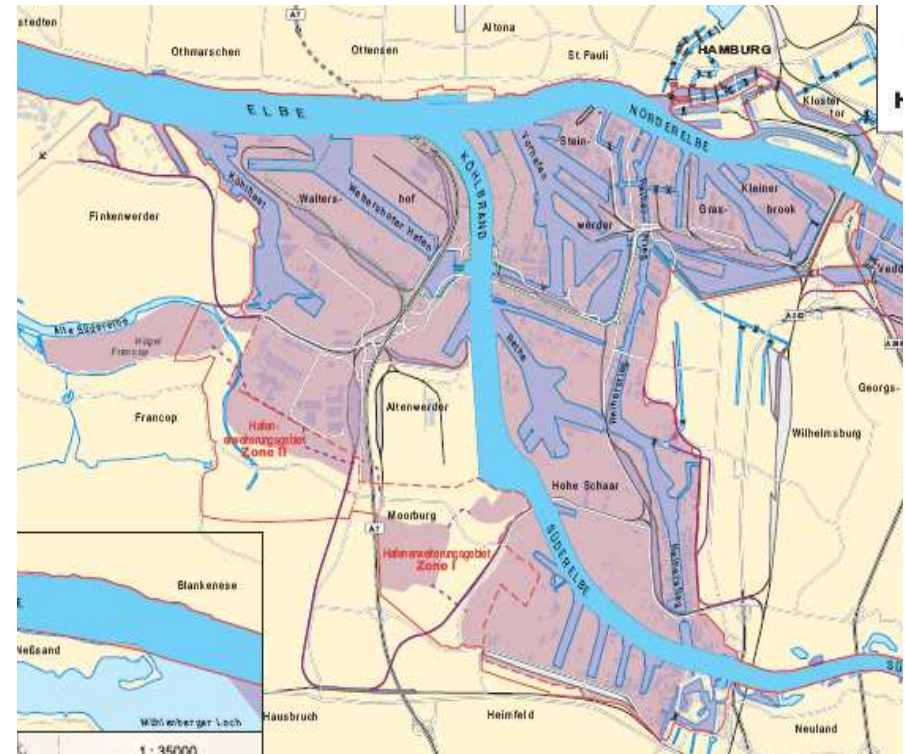
Applet: GNWEB started

Start | Posteingang - Mic... | 1 Erinnerung | Microsoft ActiveSync | 2 Microsoft Offic... | 5 Internet Explorer | DE | Desktop | 15:50



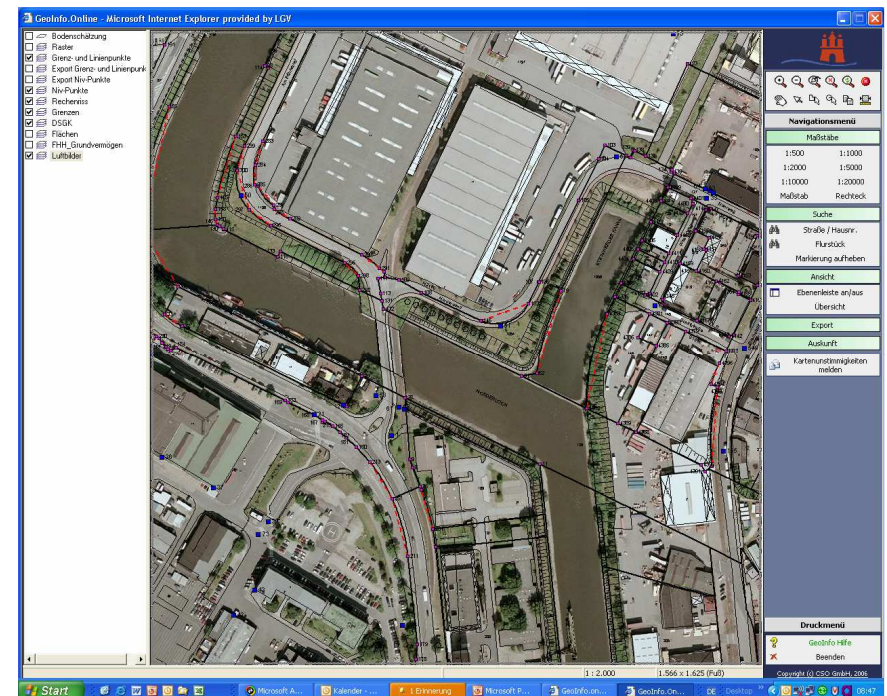
Port Authority

- ▶ Port Authority became private organisation
- ▶ Re-structuring of port area requires re-design of parcels
- ▶ Definition and establishment of new boundaries without field work
- ▶ Cadastral maps and orthophotos



GeoInfo.online

- ▶ Maps in different scales
 - Topographical maps
 - Cadastral map
 - Orthophotos
 - Land use planning
- ▶ Descriptive data
 - Land owners
 - Area
 - Parcel information
 - Boundary points
- ▶ Replaced by Geoserver as part of SDI

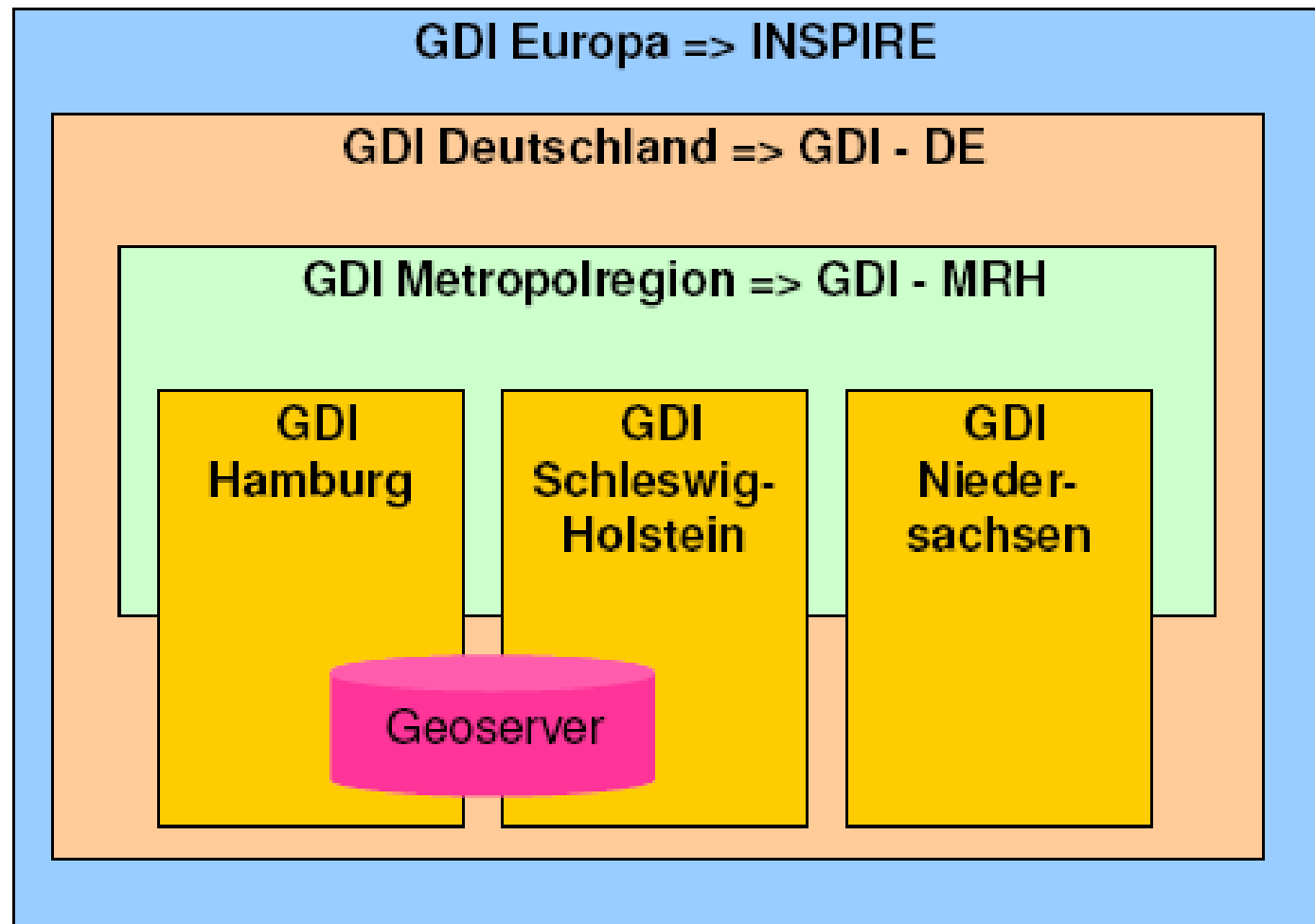


Geo Basic Data

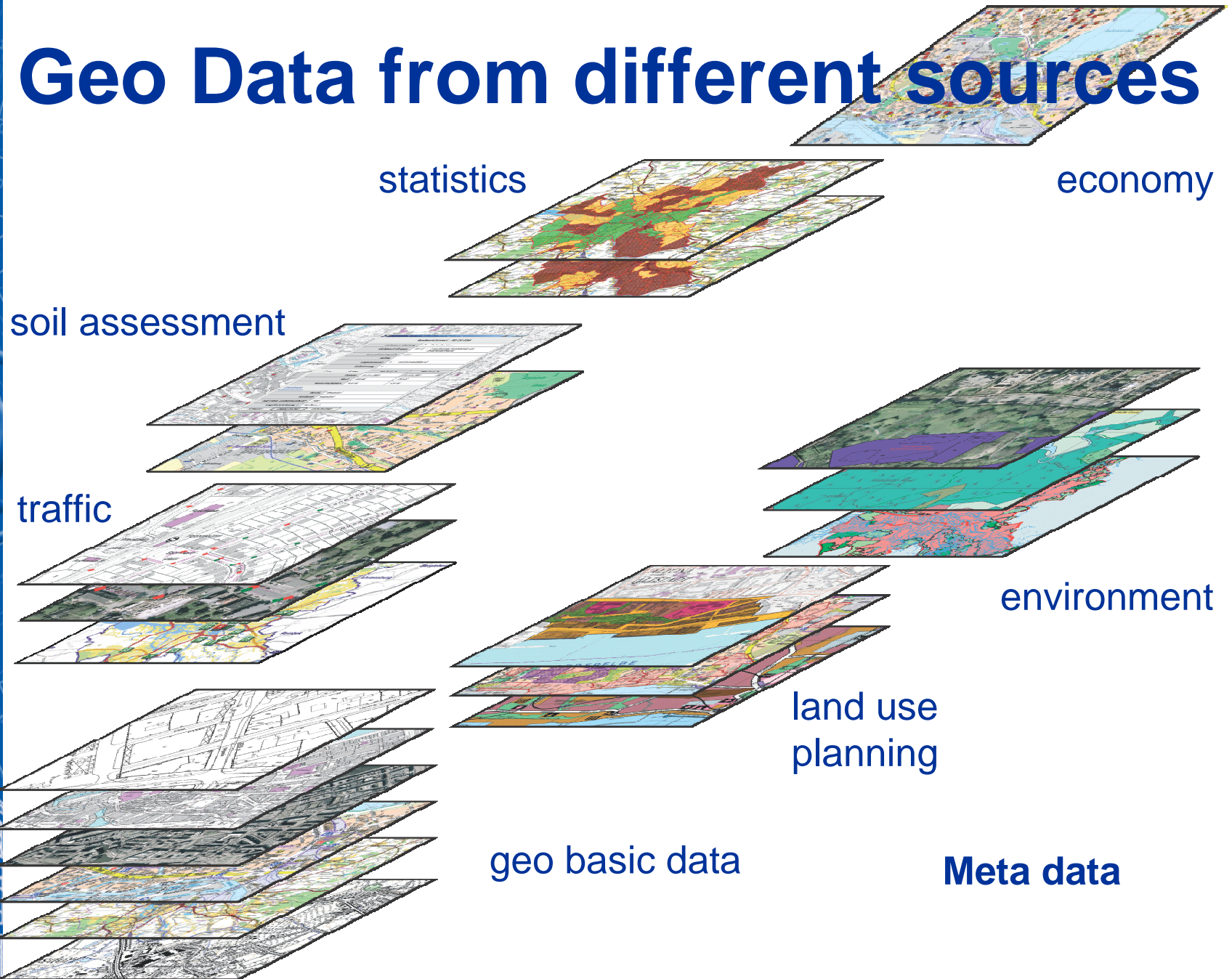
- ▶ since more than 10 years
- ▶ in all scales



Spatial Data Infrastructure



Geo Data from different sources



SDI in Metropolitan Area

- ▶ cross state co-operation
- ▶ Establishment of SDI is part of this project
- ▶ Pilot projects
 - Nature
 - Environment
 - Statistics
 - Business development
 - Tourism



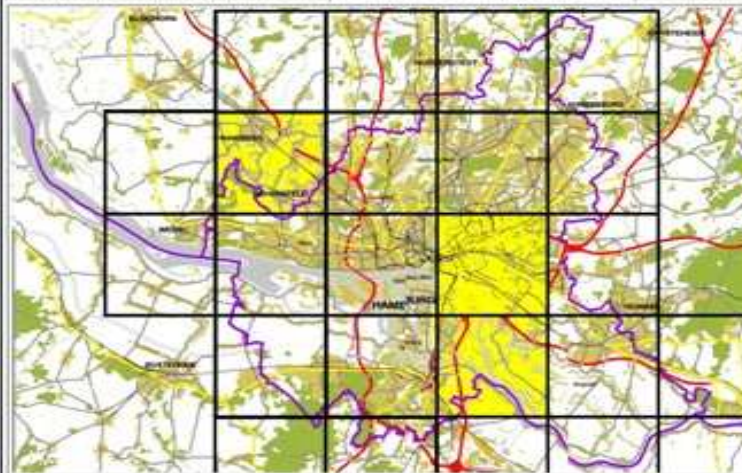
Geoserver

Produktbaum Suche (Text) Suche (Karte)

- Shop der staatlichen Vollzugsanstalt
- Shop der Landesvermessung
- Daten und Dienste
 - Geobasisdaten (digital)
 - Antliche Landkarten
 - Topographische Karten
 - DGK 5 Rasterdaten
 - TK 25 Rasterdaten**
 - Digitale Orthophotos
 - Verwaltungsgrenzen
 - Autom. Liegenschaftskarte
 - ALK-Auszüge
 - Online nutzbare Dienste
 - Geobasisdaten
 - DGK 5 Dienst
 - TK 25 Dienst

Artikelauswahl

Raumauswahl (dynamisch) Raumauswahl (statisch) Artikelliste



Räumliche Suche

Flurstücke

Suchbegriff

Suche starten

Treffer 1-10/53

Flur 342/453
Flur 341/453
Flur 340/453
Flur 339/453
Flur 338/453

zeigen

zentrieren

Auswählen

Klicken Sie in den Kasten vor dem Artikel, dann auf „Auswählen“

Ausgewählte Artikel

- Datenauszug TK 25 [Polygon Fläche 43231 qm]
- Datenauszug TK 25 [Polygon Fläche 5256 qm]

Löschen

Klicken Sie in den Kasten vor dem Artikel, dann auf „Löschen“

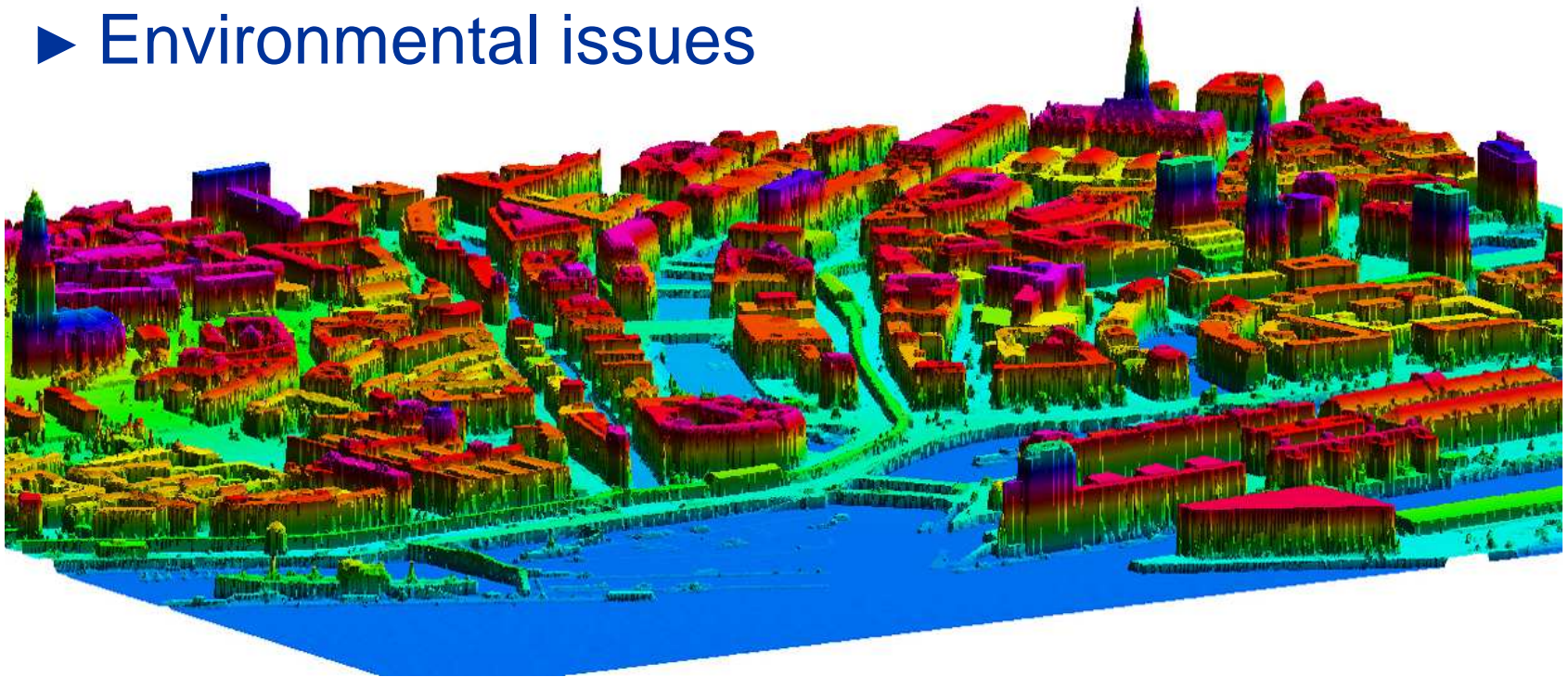
Weiter >>

Hilfe

Abbrechen

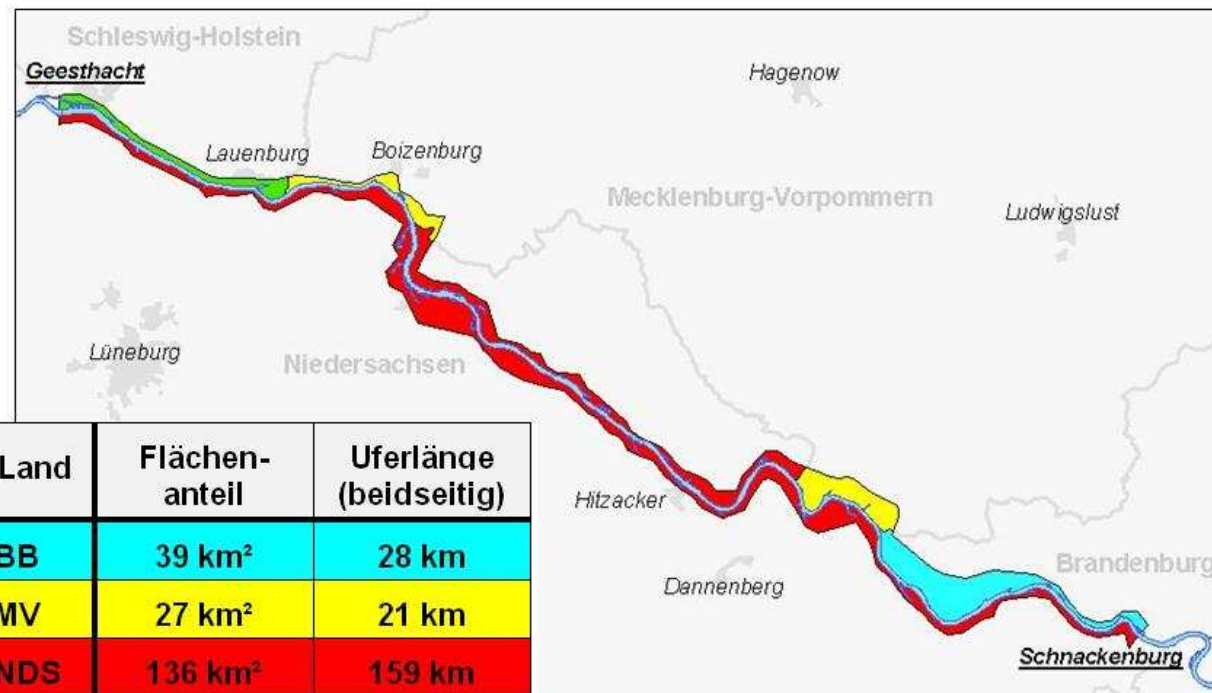
3D information DTM

- ▶ Land use planning
- ▶ Flood protection
- ▶ Environmental issues



Elevation models for flood simulation

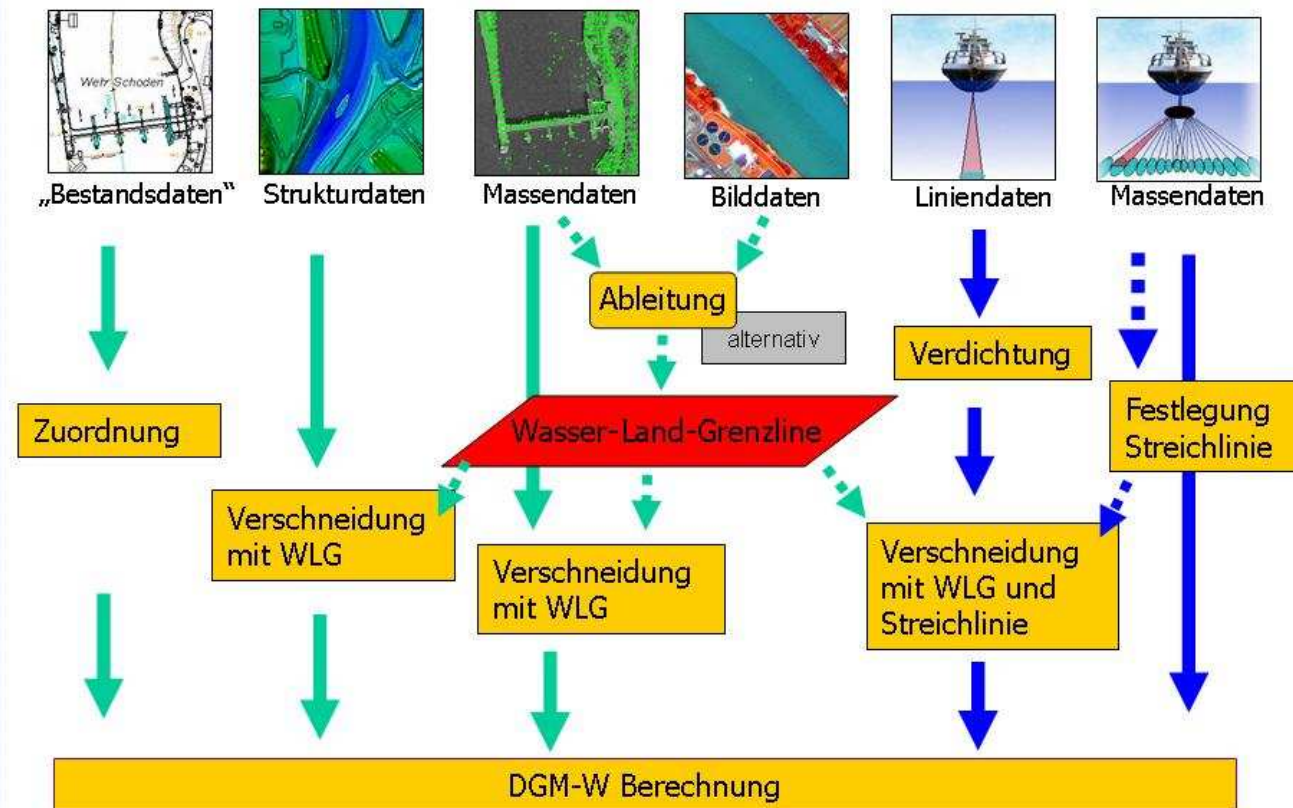
Aufnahmegebiet Elbe-Nord (km 473 – 588)



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Elevation models for flood simulation

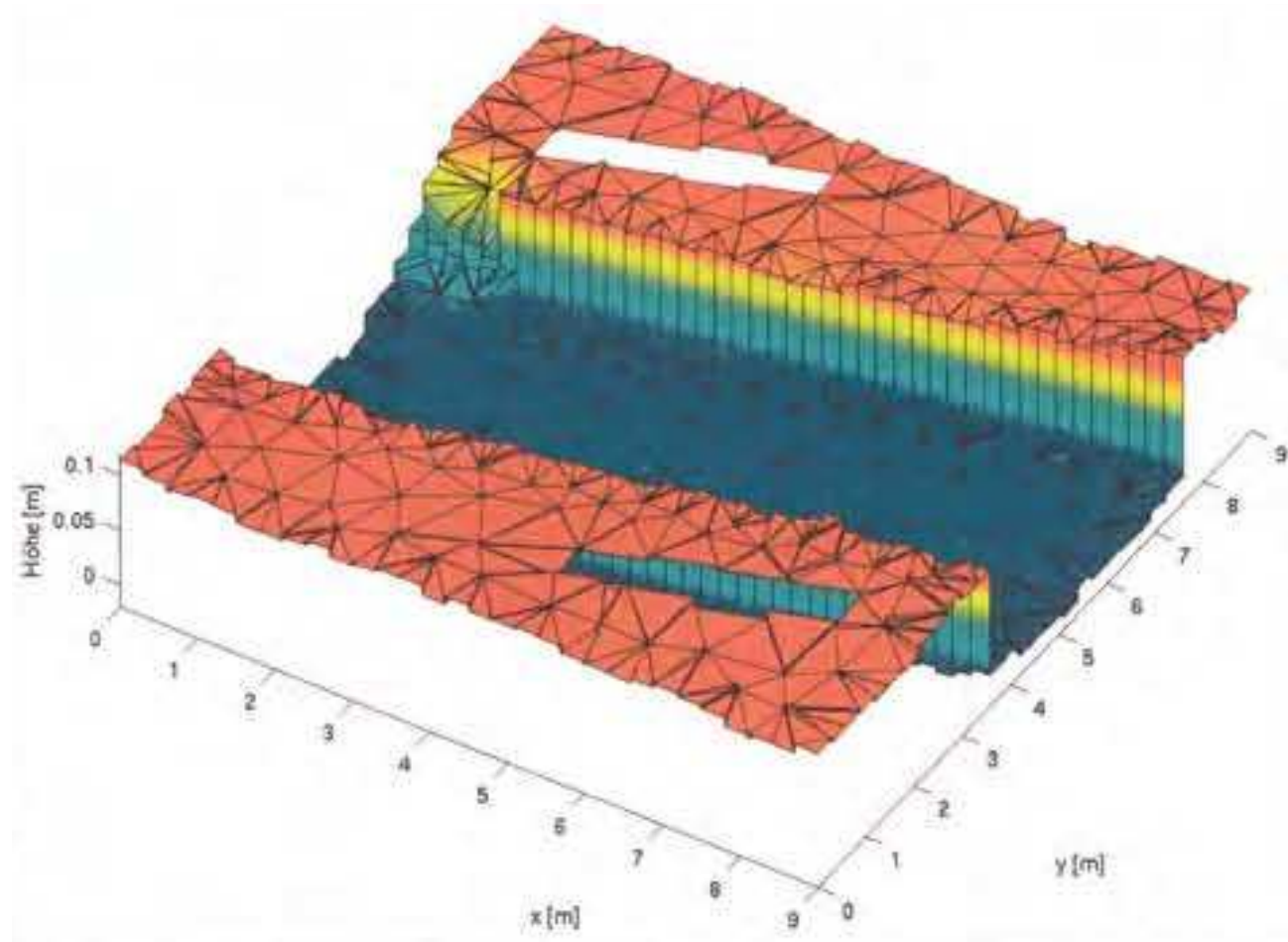
Relevante Bearbeitungsschritte



15



Elevation models for flood simulation





3D city model

