



GVP Geo-Portal and Access to Project Data

**GLOWA Volta Project
Partners Capacity Needs Assessment Workshop
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Accra, Ghana**

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Overview

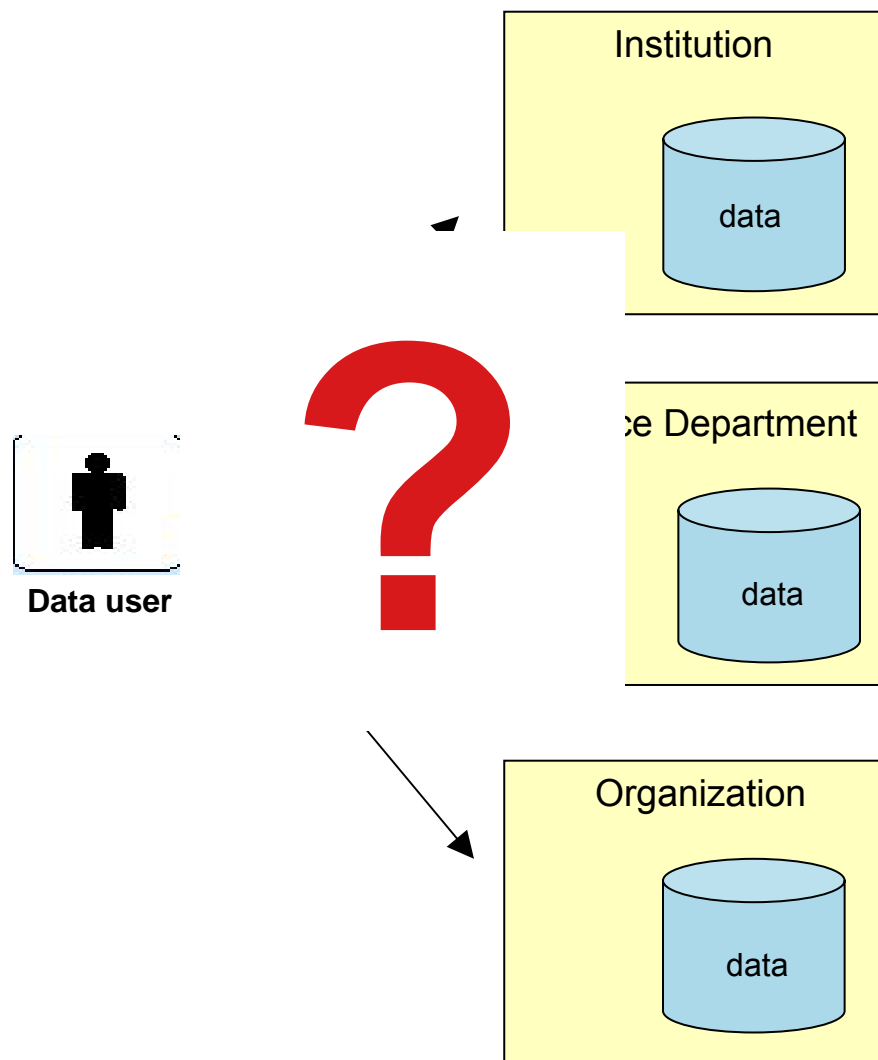


- **Problem**
- **Solution**
- **Data Management Definition**
- **Data Management in the GVP**
- **Project Data**
- **Access to Project Data: Meta Database**
- **Access to Project Data: GVP Geoportal**



Common questions encountered when searching for data

- Which data exist to serve my research / decision / information requirements?
- Where is the data available?
- How can I get the data without a huge amount of effort?
- What are the formats? Are they compatible with my applications / models?
- What are the data characteristics (e.g. time steps, units ...)?
- Who owns the data? Are there costs?





Data Management: Definition



- **Data Management** is the holistic background in which data access facilities are embedded

- Data Management in an organization is based on an ensemble of
 - ◆ **Technology**: hardware, software, interfaces ... → [data infrastructure](#)

 - ◆ **Methods for:**
 - ▶ Data description (meta data)
 - ▶ Data quality assurance
 - ▶ Data access and distribution
 - ▶ Security

 - ◆ **Standards**
 - ▶ global standards e.g for metadata, formats ...
 - ▶ internal standards as consensus inside the organization e.g. database models, file naming, data policy

 - ◆ **Workflows / Process Steps / Responsibilities**

and serves to ...



Data Management: Goal



... providing an **easy access** to **well described data** on a **high quality** level, to be used for

- **Research Activities**
- **Decision Making**
- **(Public) Information**



Data Management in the GVP



GLOWA Volta at ZEF is going to

- improve its [data infrastructure](#)
 - ◆ **webserver** (www.glowa-volta.de)
 - ◆ **data server** (file system)
 - ◆ **web-based meta database**

- and to **extend** it via
 - ◆ **central geodata storage with improved functionalities**
 - ◆ **new search and access facilities within**
 - ▶ the **meta database**
 - ▶ the **GVP Geoportal**
 - ◆ **GVP-Geoportal, providing**
 - ▶ **Map based project information**



The data infrastructure is based on

- global standards for
 - ◆ meta-data (data about data): Federal Geographic Data Committee (FGDC)
 - ◆ WebMapServices (WMS): Open Geospatial Consortium (OGC)
 - ◆ formats: ASCII ..
- GVP-specific standards for
 - ◆ file names: encoding the thematic, spatial and time content of the file
 - ◆ internal file description in the table headers: means of parameters, data types used (e.g. ddmmyyyy for the datum, decimal degrees for coordinates)
 - ◆ data quality controlling: how is the data quality assured
 - ◆ data policy: specific owner and access rights on the files



Project data



- **Project data:** what can GVP provide?
 - ◆ **Hydrological** data: water discharge, groundwater (time series) ...
 - ◆ **Climatological** data: precipitation, temperature, air humidity, evapotranspiration, heat flux (time series and forecasts) ...
 - ◆ **Water use** data: agricultural (irrigation) / domestic / industrial (hydropower) / reservoirs ..
 - ◆ **Land use / land cover** data: agriculture, urbanization, soil, geology, vegetation ...
 - ◆ **Topographic / infrastructure / administrative** (basic) data: river networks, lakes, elevation roads, settlements, electricity, boundaries
 - ◆ **Socio-economic** data: demography, census data, economic activities (markets), surveys ...
 - ◆ in several **formats**: vector / raster (remote sensing), tables, documents, model specific formats ...



Access to project data: Meta-Database



How to access project data?

- **First approach: Meta Database** (web based), containing
 - ◆ **meta-data** (data about data)
 - ◆ **search facilities** using thematic/spatial keywords, sources, time coverage etc...
 - ◆ reference to **where** a dataset **can be obtained**
 - ◆ **download** facilities
 - ◆ a graduated **user access scheme** to avoid unauthorized access



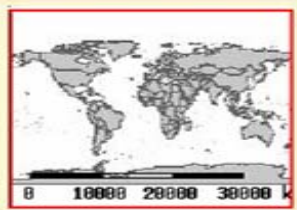
Access to project data: Geo-Portal



How to access project data?

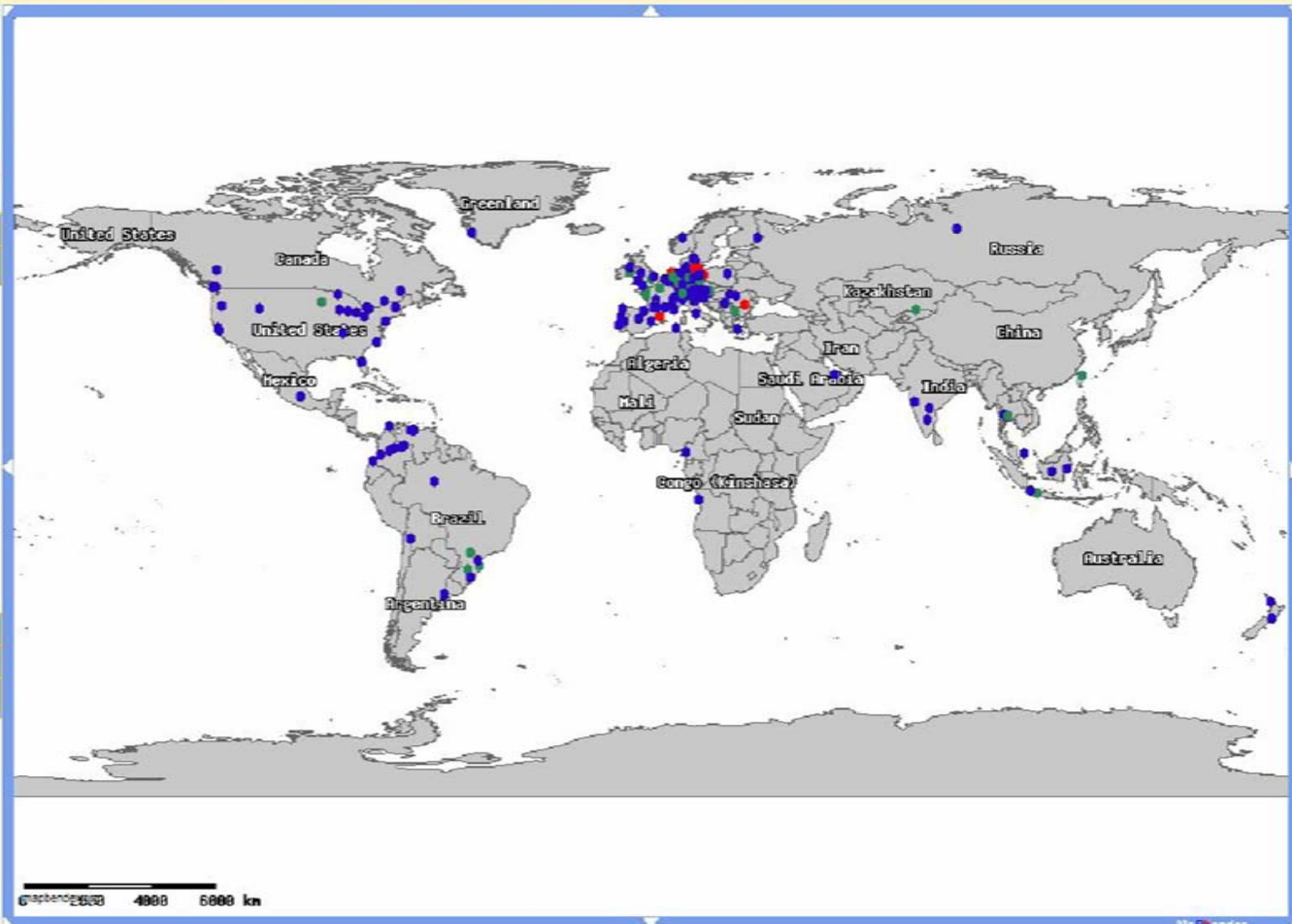
- **Second approach: Geo Portal**
 - ◆ **Access geo (=map) data via internet**
 - ▶ Easy access: display of complete maps
 - ▶ Standard internet access technologies, e.g. web browser
 - ◆ **Visual exploration of maps and data**
 - ▶ Zoom, re-center, layers on / off, show attributes
 - ▶ Spatial visualization of data
 - ◆ **Search facilities**
 - ▶ Map selection by topics and/or GVP-use cases
 - ▶ Search for data, maps, layers, attributes
 - ◆ **Download of original geo data for authorized users**

Mapbender

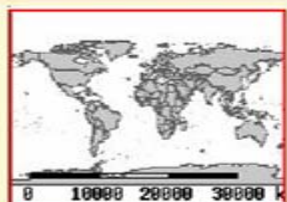


Beispiel Global

- Maps
- Legend
 - Germany
 - ALL countries
 - Company
 - Administration
 - University
- Print
- WFS Search
- Imprint



Mapbender



Beispiel Global

Maps

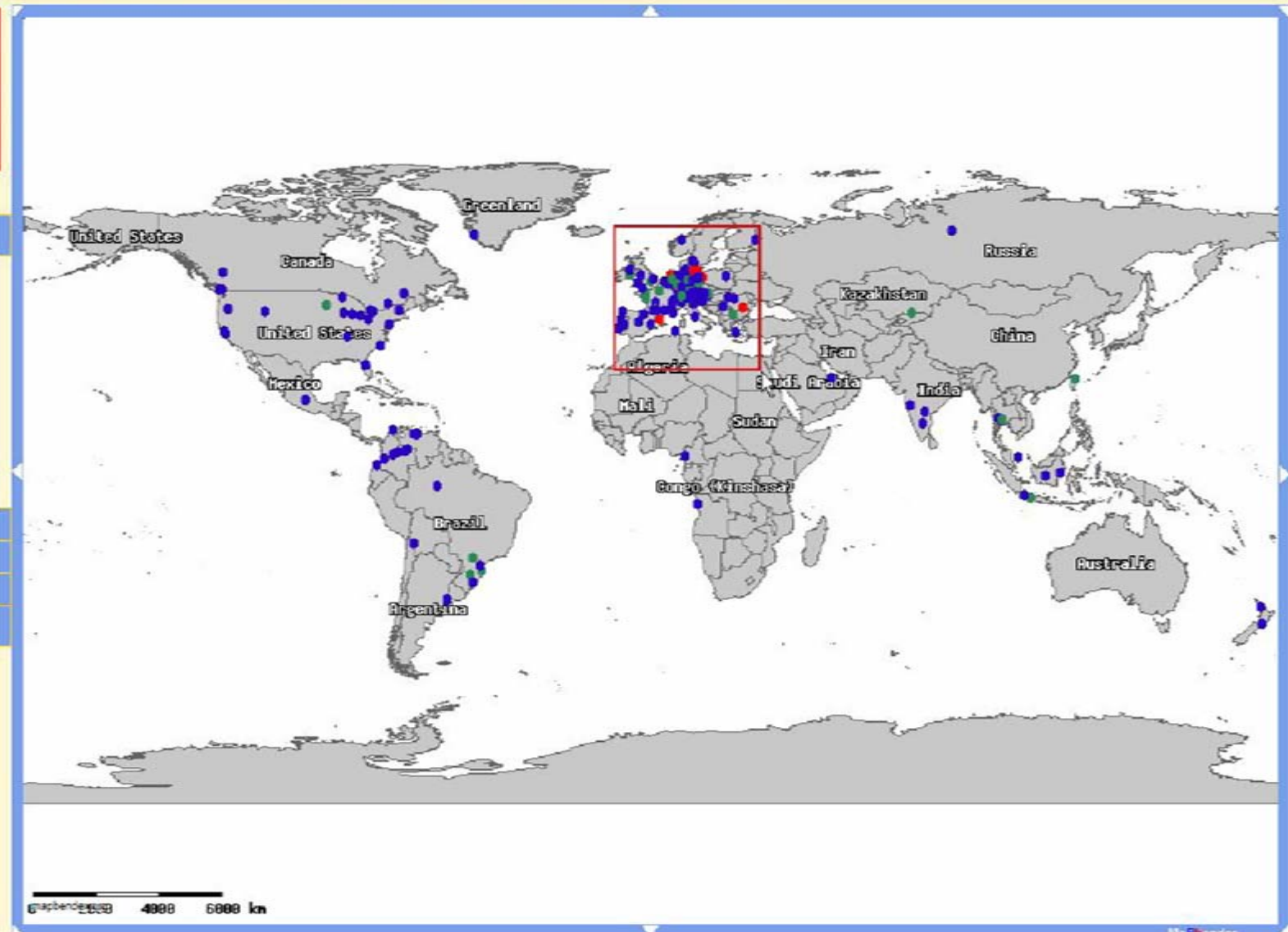
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Legend


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WFS Search

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Beispiel Global

Maps

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- Mapbender User
- Mapbender Info

Legend

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WFS Search

Imprint

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Mapbender User

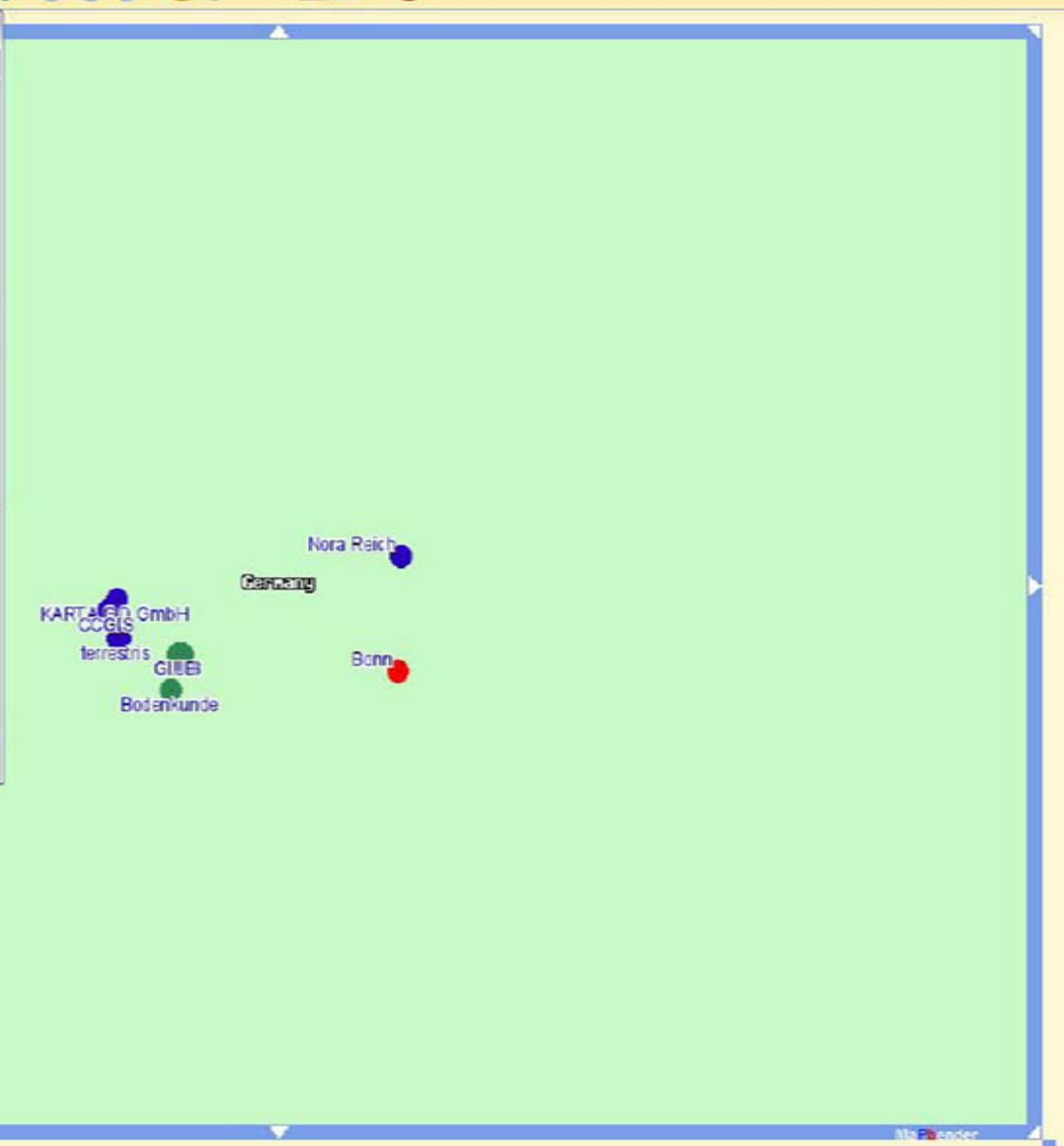
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city	Bonn
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homepage	http://www.giub.uni-bonn.de/otto/
email	j.otto@giub.uni-bonn.de

send data delete user cancel

Mapbender User

firstname	Marin
name	Geilhausen
usertype	3

Done



gmapbenderg 1.8 2.7 km

Mapbender



Next Steps in Capacity Building



... so actually we would like to ...

- get an first **overview** for **evaluate** your interests / needs basicly
- build up a **communication structure** between GVP data management and stakeholders

for ...

- planning and organizing further **consultations** and **workshops!**



To fill out the questionnaire is a
first step!!

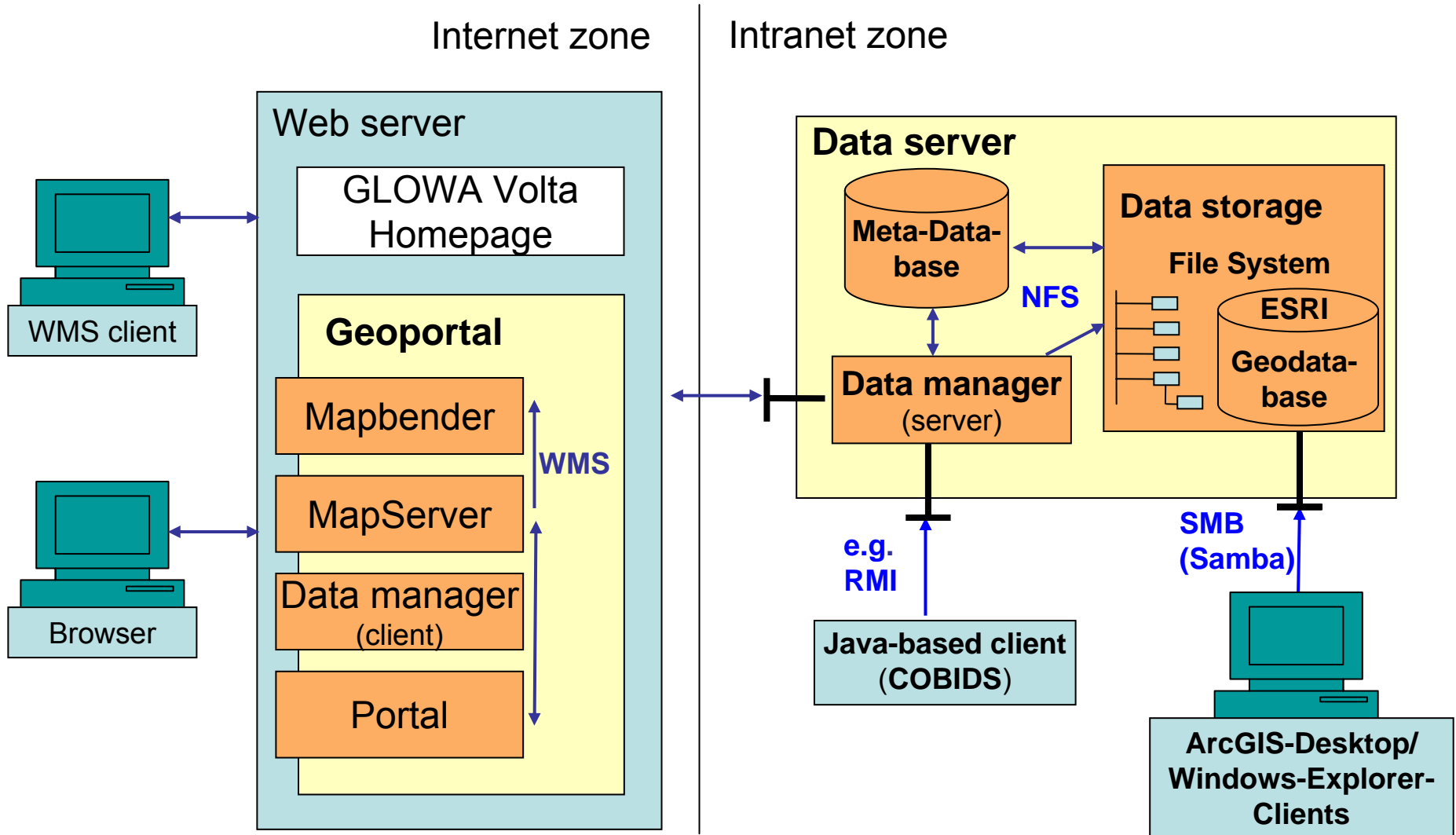
Thank you!!



Thank you
for your attention!



Data Infrastructure at GVP





Conditions



- For giving you support and capacity actually we need knowledge about
 - ◆ data you **need**
 - ◆ data you are **working** with
 - ◆ **conditions** of your data (access rights, costs)
 - ◆ your current **data management**
 - ◆ your **problems**
 - ▶ with your own data (management)
 - ▶ with external data (access)

**To fill out the questionnaire is a
first step!!**