Market Situation

- **Several old-fashioned public sites**

- **Monolithic expensive GIS-centric platforms**

- **Scales costly (badly) – installation, performance, …**

- **Expert-oriented -> low usability and interactivity**

- **Demanding and specific development environments**

- **Compares badly with State-of-Art: Web 2.0 - SOA - Google**

- **Huge amounts of geographic data (country-wide)**

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To achieve – WebGIS 2.0

- **Web-based, no client installation**
  Must run in all modern web browsers

- **Service-based, SOA**
  Defined interfaces for distributed services

- **Integrated database, geography when needed**

- **Web 2.0, AJAX, REST**
  Usability, Interactivity, Performance and Scalability

- **Comply to relevant standards (ISO, OGC, …)**

- **Component-based functionality**
  3-level, no dependency between data sources and clients

- **OpenSource integrated with relevant commercial GIS**
 **Depending on customer situation**

WebGIS Platform

- **PostGIS, GeoServer, OpenLayers – Open-Geo stack**

- **PostgreSQL as OpenSource RDBMS**
  or proprietary (Oracle, SQLServer, MySQL) depending on customer

- **extJS   client JavaScript GUI**

- **WebApplication SessionHandler for business logic**
  identification, security, verification, logging, payment etc.

- **Deployed in Windows or Linux environments**

Client components are partly OpenSource as WebGIS Public:

http://code.google.com/p/webgispublic

WebGIS Platform

extJS

OpenLayers

Login

AJAX REST

WebApplication(s) with SessionHandler

Startup | WMS(-C) | WFS(-T) | SOA Services

WebServices

GeoServer

LoginDB
ConfigDB

Tiled Map Service

PostGIS

PostgreSQL

Other supported data formats e.g.: Oracle Shapefile

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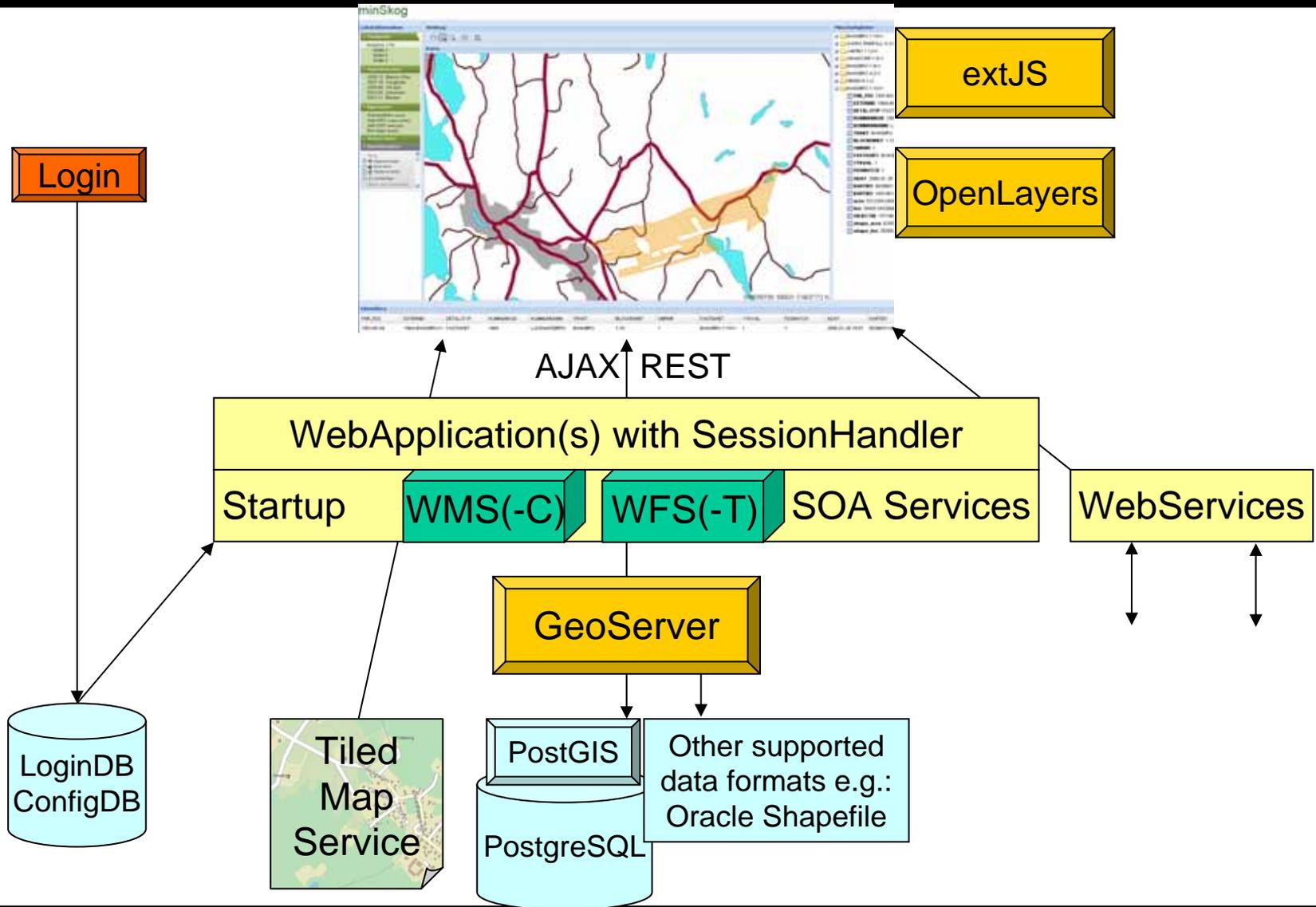
Projects

Several projects has been started using (parts of) the WebGIS Platform in 2008. The most important projects are:

- GP2008   Forest GIS platform

- Heritage Agency of Denmark

- MinSkog (MyForest) for private forest owners

- VindGIS   planning of wind power locations

GP2008 - Forest GIS Platform

GP2008 Project Responsibilites:

- **PostgreSQL, PostGIS, GeoServer**
  Data storage and handling of country-wide bases

- **No client components in GP2008**
  Existing clients communicates with defined interfaces

- **Integrates with existing platform GP2003**
  ArcIMS, ArcSDE and FME
  Mapping of: AXL to WMS
  "own code" to WFS

In Use by StoraEnso and Sydved

Heritage Agency of Denmark (KUAS)

4F Project Responsibilites:

- **Keeping track of archeological findings**
- **Handle the documentation for all findings**
- **Controlling reported data**
- **Maintain the central database for all findings in Denmark**
- **Make information available for:**
 - **Professionals**
  - **Agencies**
  - **Public domain**

Go Live in Summer 2009

4F System Overview

Public Users

Kulturarvsstyrelsen

Public Client

Registration/Administration Client

Archeological museums

External systems

Web Services

Web Services

Protected Heritage maintenance application

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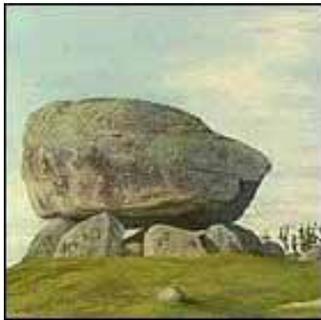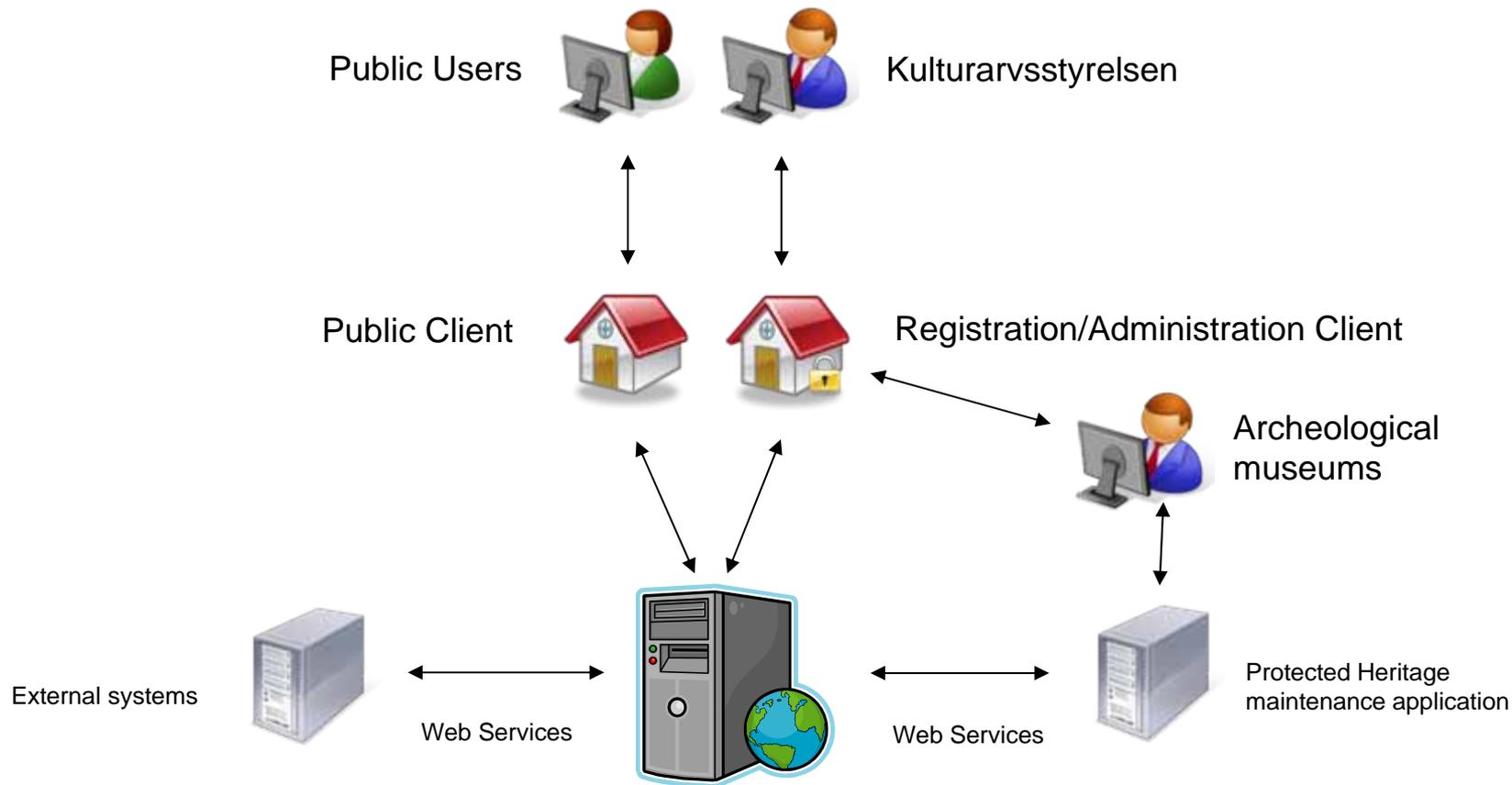
4F Functionality – Registration Client

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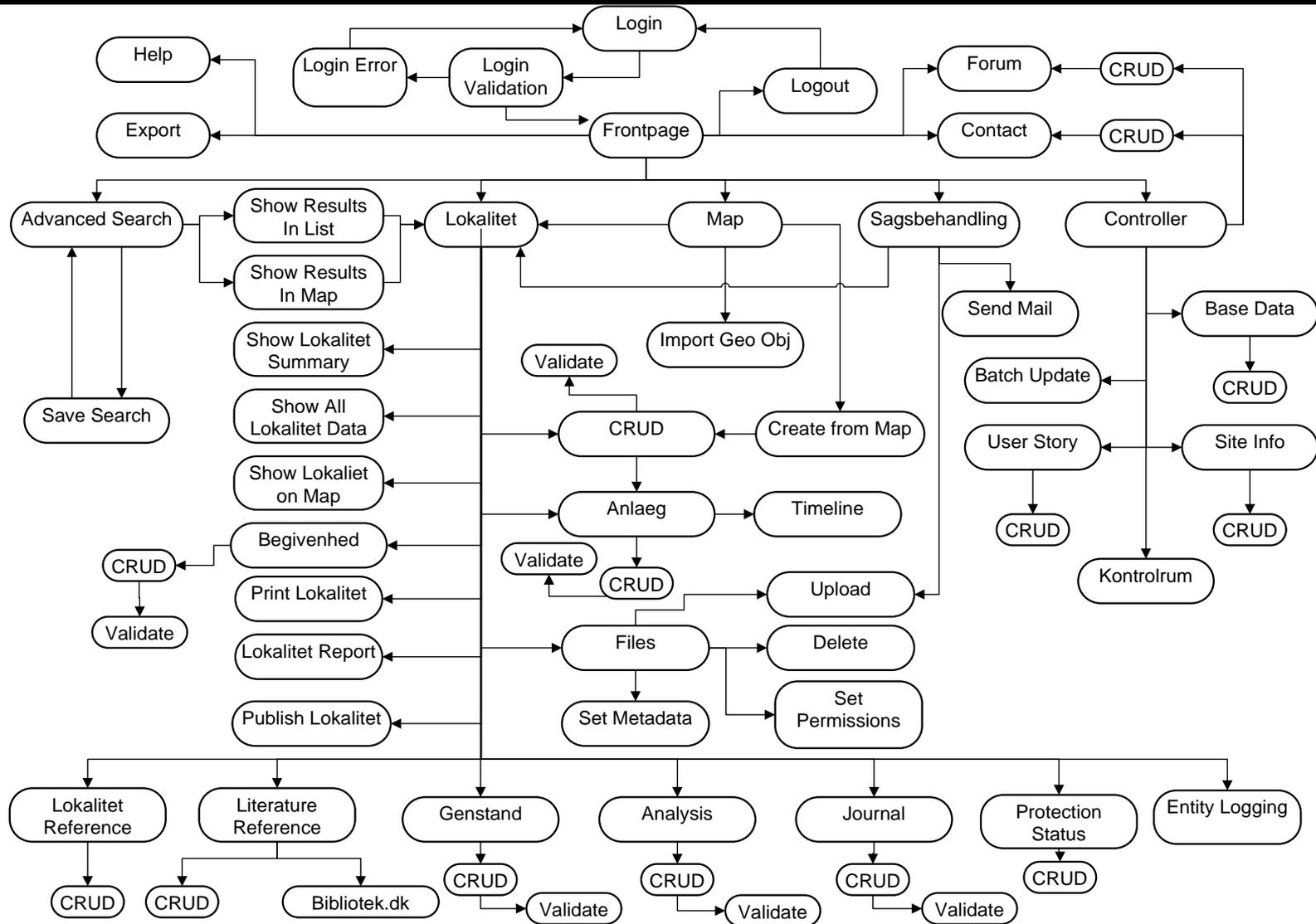
Swedish Forest Agency

MinSkog (MyForest) Project Responsibilites:

- **Support Private forest owners**
  Login with BankIdentity

- **Limit display (access) to real estates with access rights**

- **Apply for forest cuttings**

- **Handle (create and update) forest data**

- **Handle sensitive data, like marshes and wildlife places**

- **Advanced (for GIS) interaction design performed**

- **Up to 100 000 users**
  Initially expected 10 000 cutting applications per year

Go Live in January 2009

MinSkog System Architecture

extJS

OpenLayers

SOA WMS(-C) WFS(-T) REST

WebServices

ConfigDB

plugin

GeoServer

PDF Shape

Internal data estates

ArcGIS ImageServer

ArcSDE

Images

Shape files

OpenSource

Official GeoData

Ortho photos

SQLServer

Commercial

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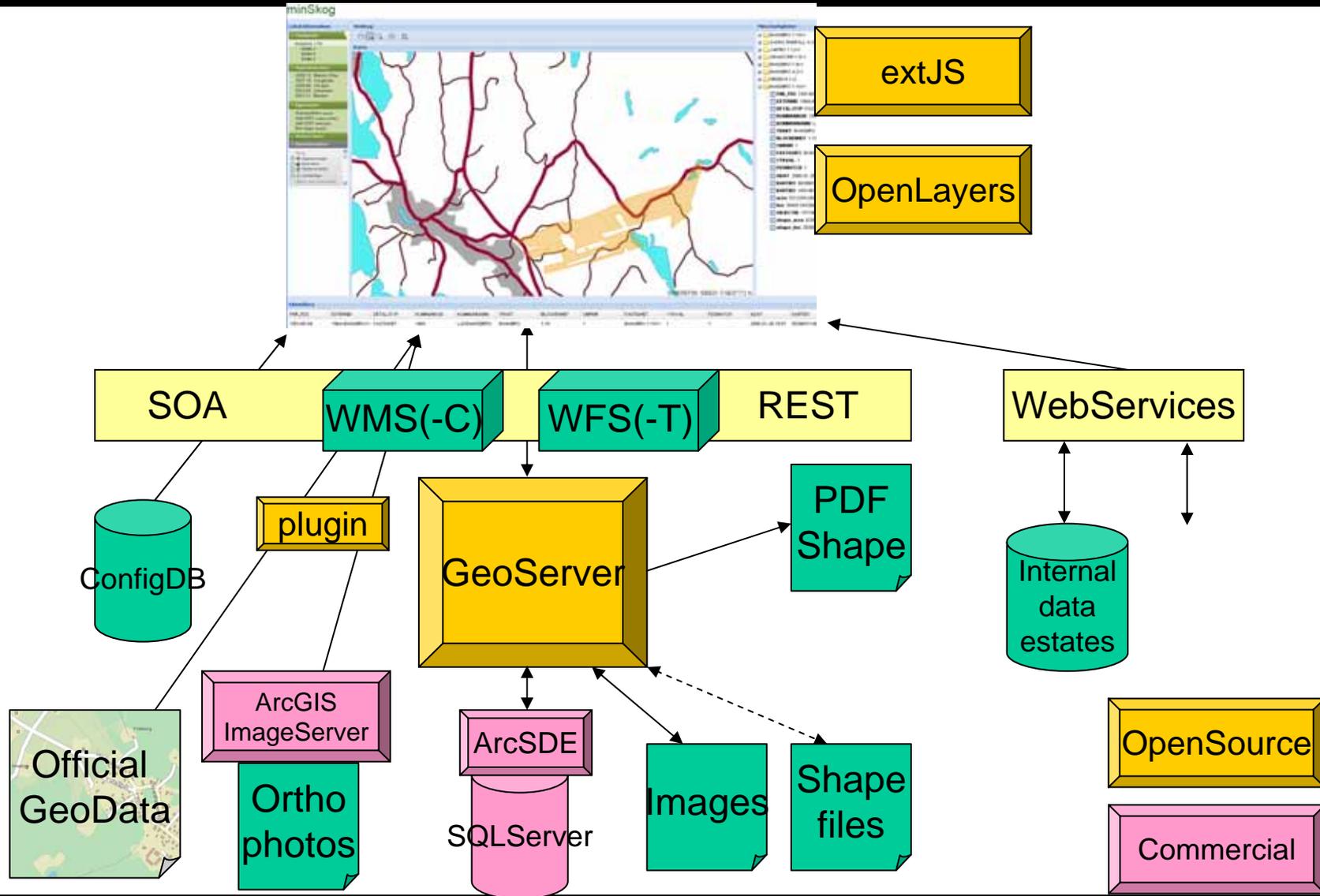
VindGIS

- **Interactive map for the physical planning of wind power locations**

- **Rich client with drawing, search and analysis functionality**

- **Based entirely on various web services from the governments responsible for each data layer (WMS, WFS, etc)**

- **Components, aimed to be integrated with case management system**

In Use

VindGIS – WMS-client with draw functions

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Other Projects

- **Varbergs municipality** The map is integrated in several parts of the web site and currently supports functionality to search addresses and cadastral information

- **Business Region Göteborg** Search for available industrial land based on both attributes and proximity to features like harbours, highways and airports

- **Vattenkartan** Interactive map for presentation of water characteristics based on demands from the EU. Uses also ArcGIS Server on the server side.

- **Bergskraft** Publish information about closed mines in the Bergslagen region, incl. over 20 000 documents dating from the 17th century to the 1980's

- **Dalatrafik** Web map for displaying and searching bus lines and bus stops

- **Örebro municipality** Citizen-driven web site, e.g. generate points of interest

If signed …

Questions?

WebGIS Platform
- a commercial succesful OpenSource-based concept in Scandinavia

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FOSS4G 2008