Scenario Management System

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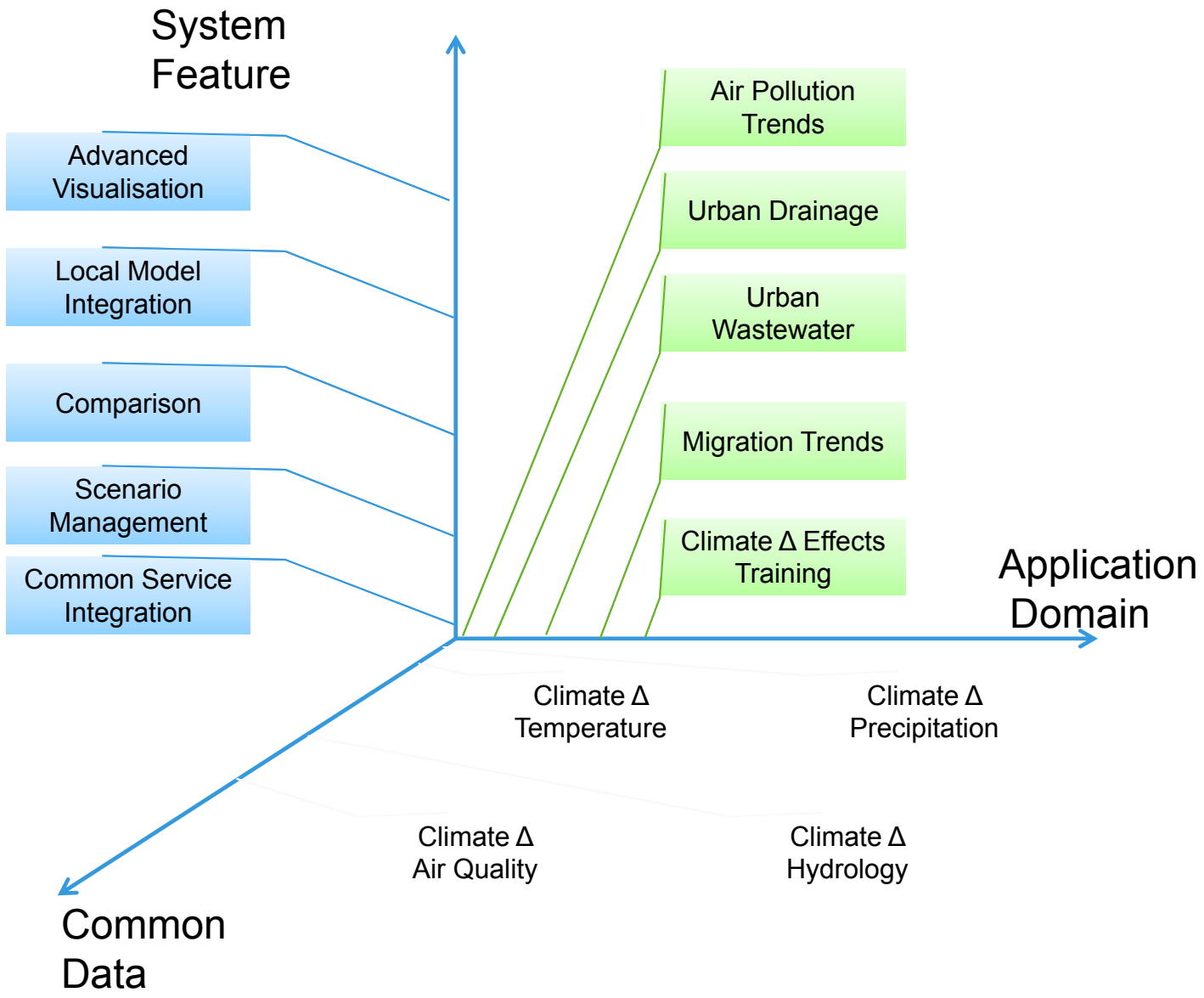
Topics

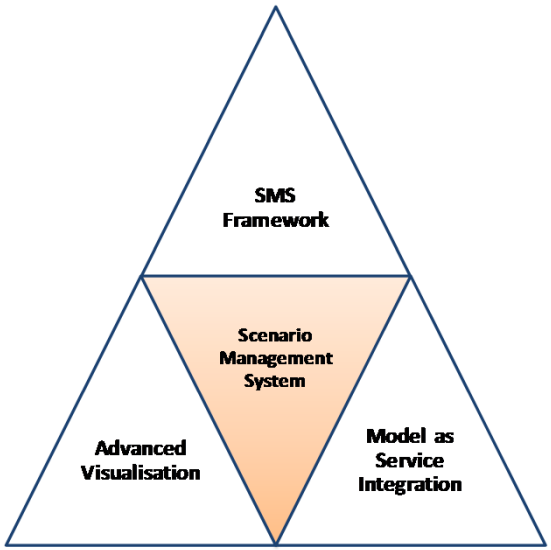
- SUDPLAN Scenario Management System
- Core Functionalities
- Potential Use
- Background

SUDPLAN Dimensions



Scenario Management System

- DSS-environment (scenario management system)
- Users define, manage, execute & explore different decisions & simulate decision scenarios
- visualisation, comparison & documentation of different decisions



Core Functionality

- Common Service User Interface:
  - To access climate data,
  - Use downscaling functionality provided by CS
- Data Export and Import:
  - To connect with local systems
- Comparison Features: Time Series & Gridded Data
  - To evaluate the impact of climate change

Core Functionality

- Model Control Facilities:
  - Model Parametrisation, Execution, Result Management, Visualisation
  - to manage experiments

- Support Urban Planning:
  - Facilites that help to build an climate change enabled information system to support urban planning

Potential Use

- To access climate information
  - (projections of environmental parameters affected by climate change)
- To add the climate change aspect to you own data
- To evaluate the effects of climate change
- To export the results to be used in your own information system
- Or to build an climate change enabled information system to support your local urban planning problem

Required Level of Genericity

- Develop a Solution that can be the basis of a potentially **large number of concrete EIS and DSS** (transferability)

➔ Develop a platform that supports a large number of tasks in this context

➔ Cannot be built from scratch in a research project

➔ Basis for developments **cids** geointegration platform

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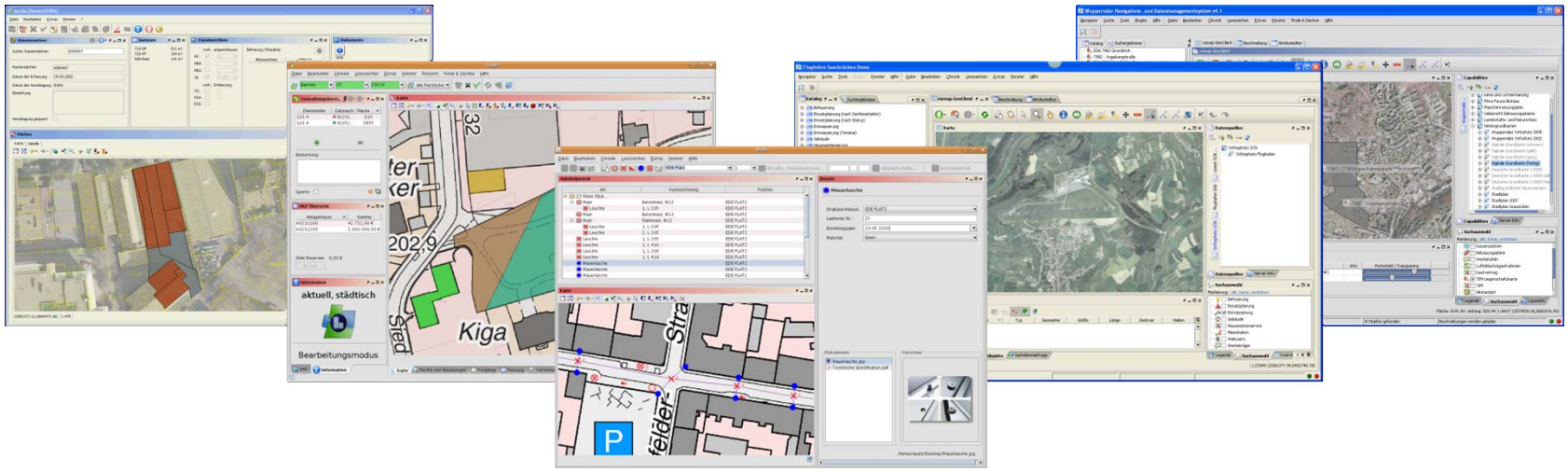
cids can be effectivly used to build

- Information systems with a spatial context
- Information systems for which the integration of legacy systems
- Information systems, to be built up iteratively due to their complexity or size



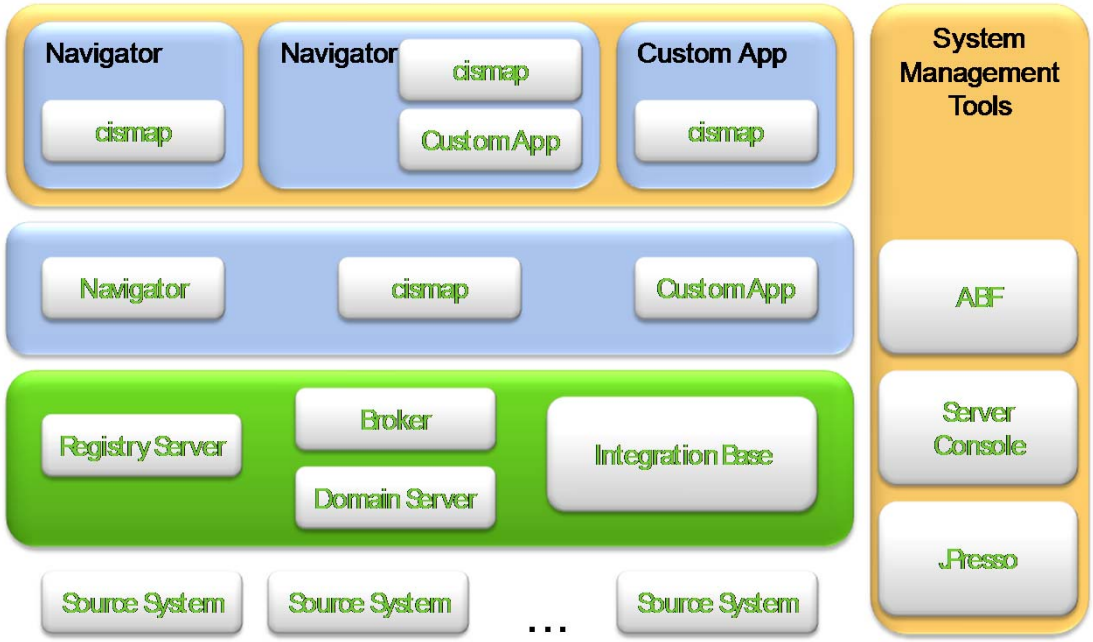
cids key features

- **cids** *lowers system barriers & provides cross system & topic data management, search, analysis, visualization & reporting functionalities*

- *It comes with:*
  - Data management & data integration
  - User Management & Access Control
  - Integration of standard based OGC map services (WFS, WMS)
  - Powerful search & research function with or without spatial context
  - **Extension Framework to build custom information systems**

cids core components

- cids service platform
- cids development and management tools
- cids Navigator
- cismap



cids is Open Source

- **cids** is completely based on Open Source Technologies & is available under an **Open Source license**. The application of the cids integration platform & its components does not cause any initial costs

- https://github.com/cismet

- https://github.com/cismet/cids-custom-sudplan

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Examples of information systems built with cids

- City information management
- Water body information system (WFD)
- Spatial Facility Management (Airport)
- Environmental Information System
- Scenario Management System

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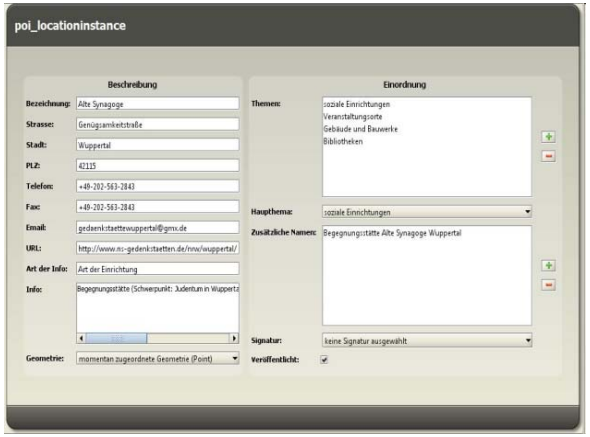
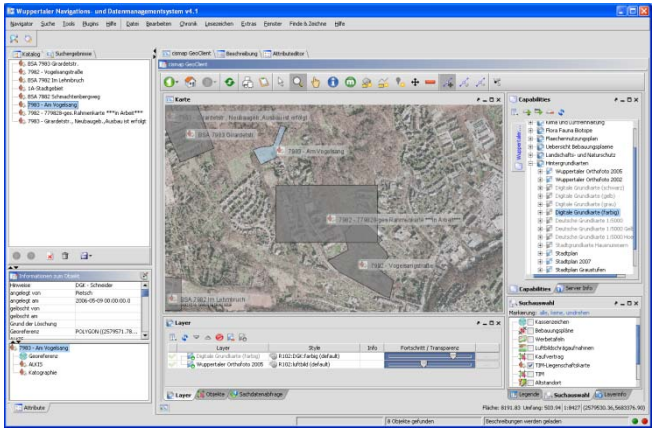
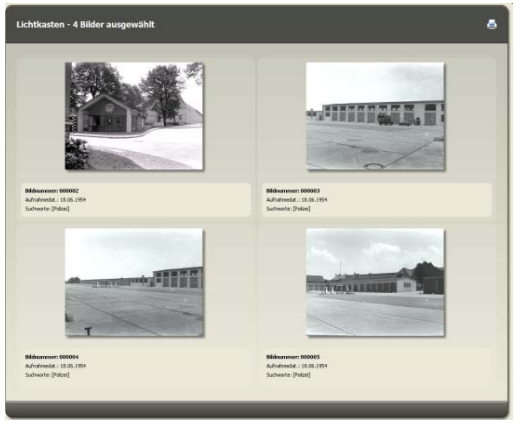
Example: City Information Management

- WuNDa
  - Informationhub
  - 28 topics (incl. ALKIS-Frontend)
  - Webgis functionality







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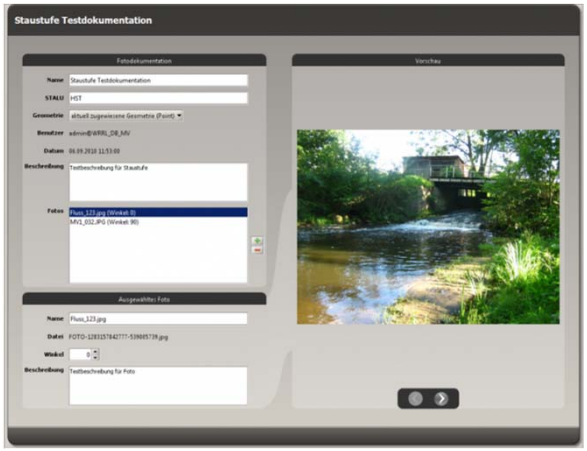
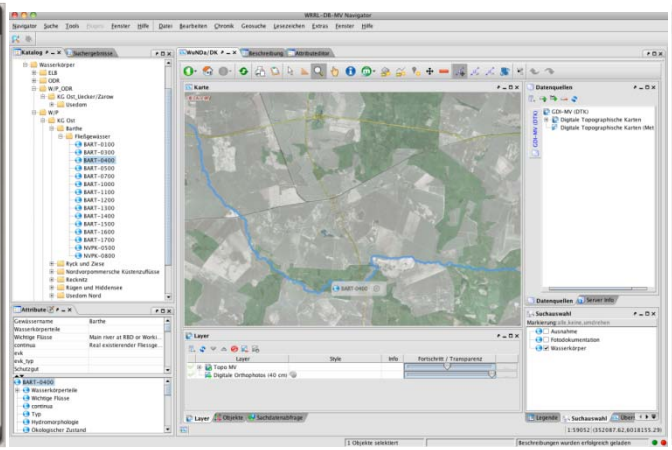
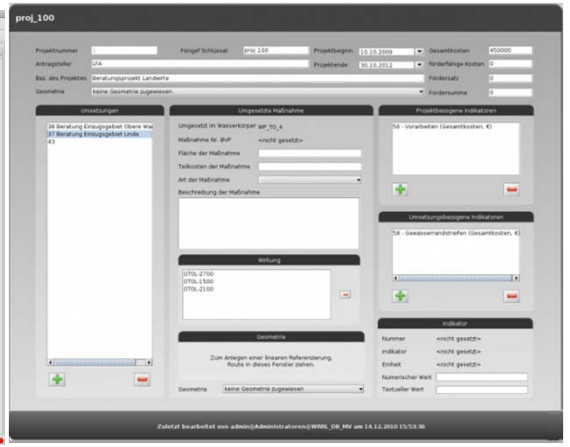
Example: Water Body Informaton System

- FIS Wasser
  - complex water body informaton system
  - highly interactive maps
  - reporting for the WFD







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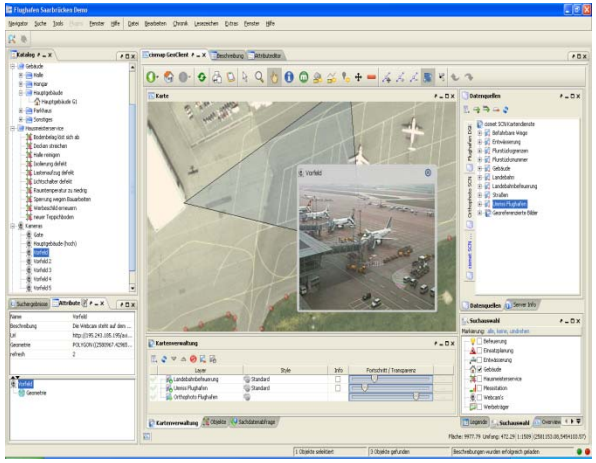
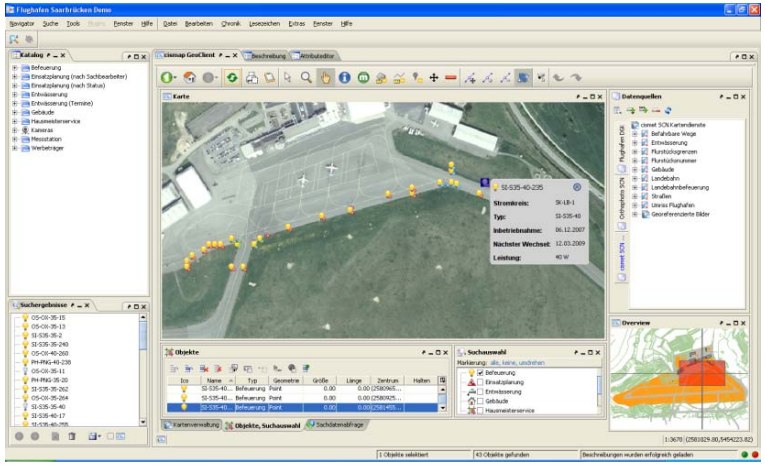
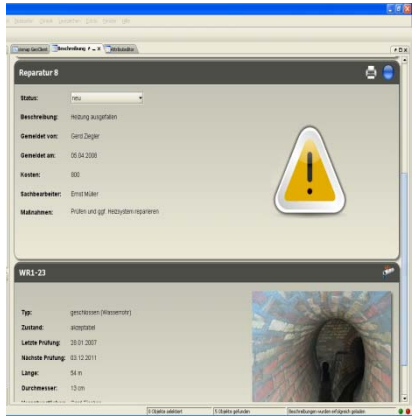
Example: Spatial Facility Management

- Airport maintainace
- Map/CAD integration
- Ad hoc business processes







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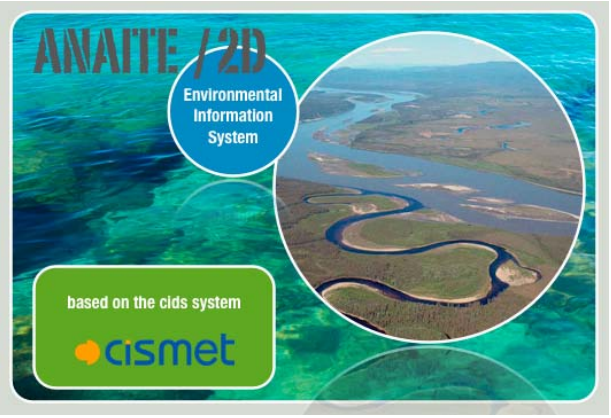
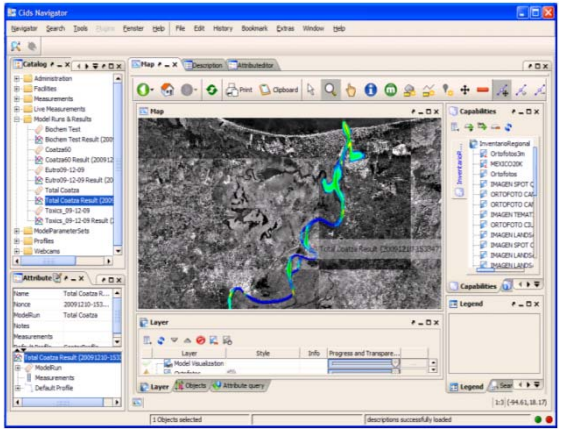
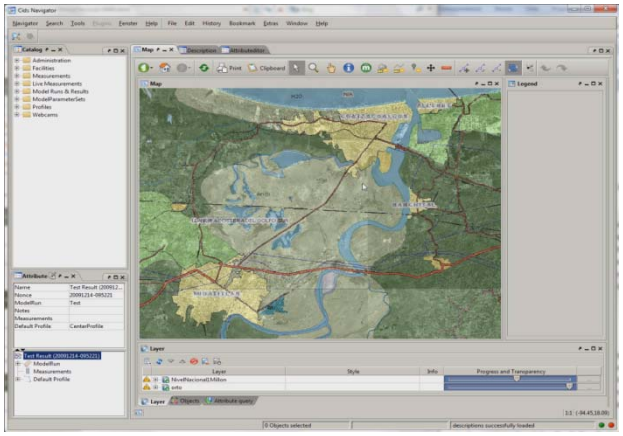
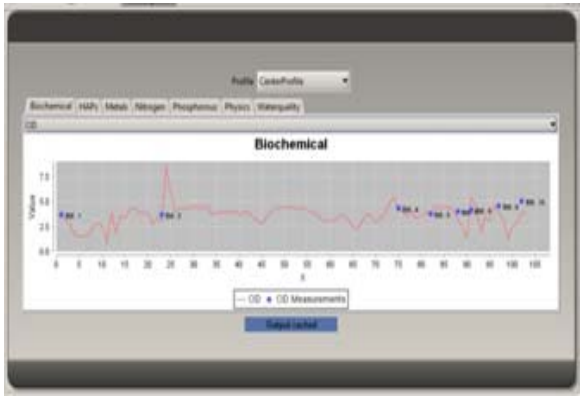
Example: Environmental Information System

- ANAITE
  - Model integration
  - Visualisation
  - Risk Assessment



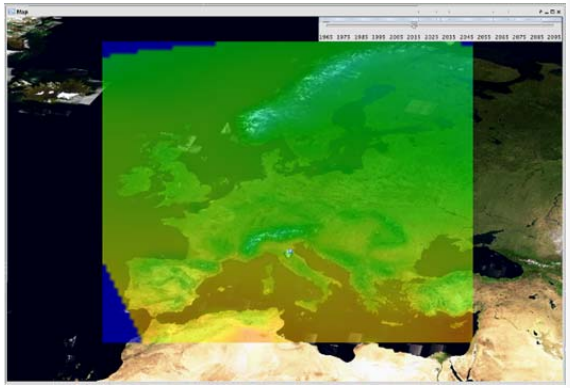


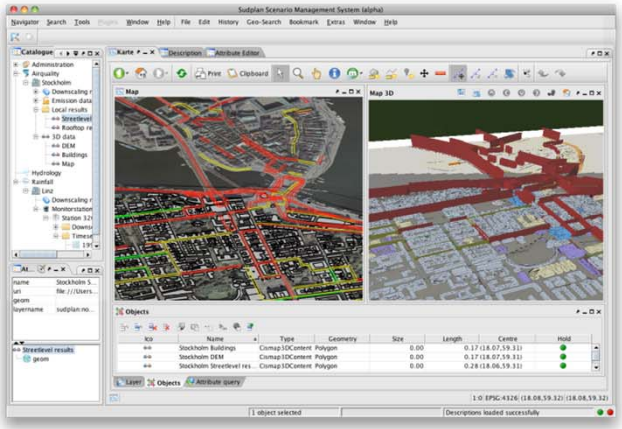


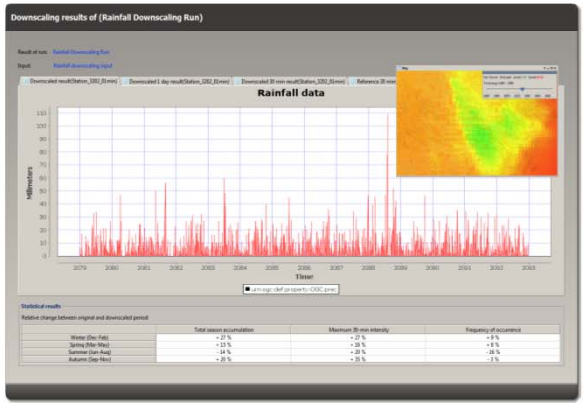


Scenario Management System

- SUDPLAN
  - Model coupling
  - Model control
  - Advanced visualisation



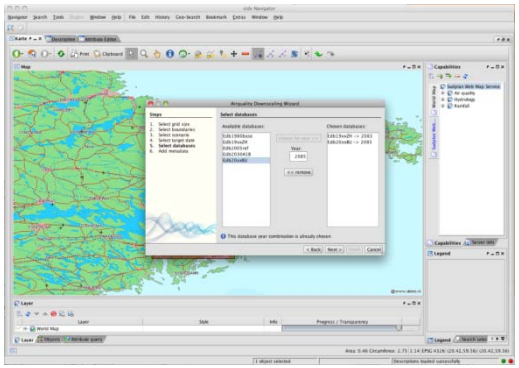


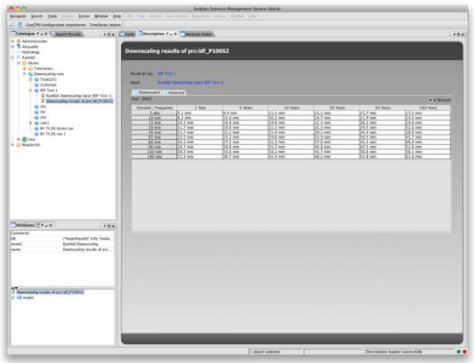


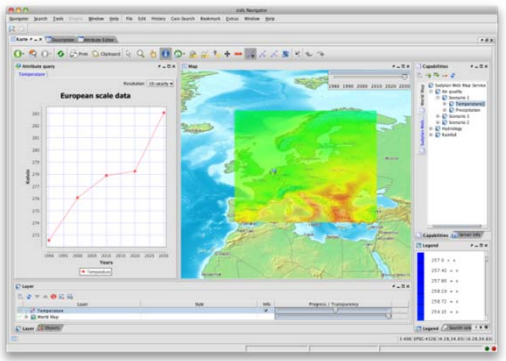
Integrated Scenario Management System

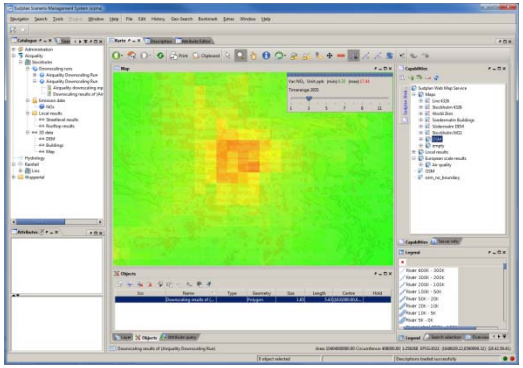
- Common Service integration and user interaction support
- Comparison Framework to support Scenario Comparison
- Model Management (Asynchronous Model Execution Framework)
- Integration Support for Local Models and Data
- Globe based 3D Component
- Visualisation Wizard for end users to select visualisation techniques

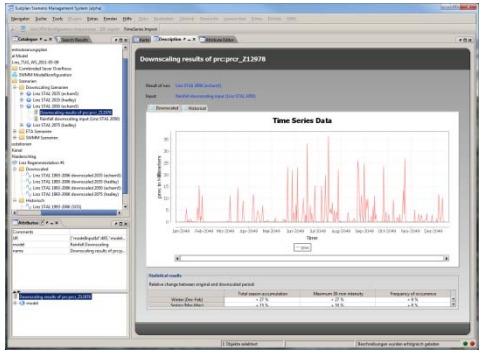
Common Service Integration

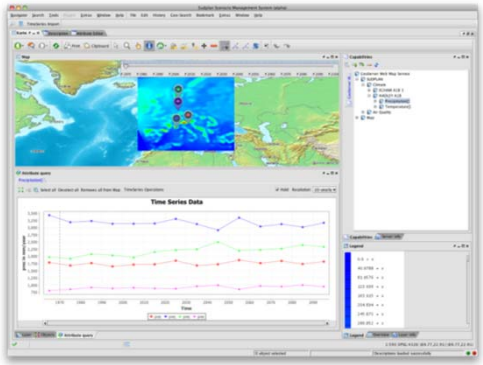












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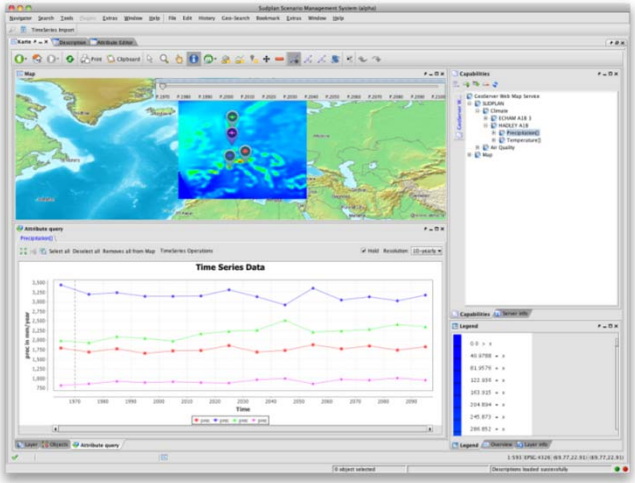
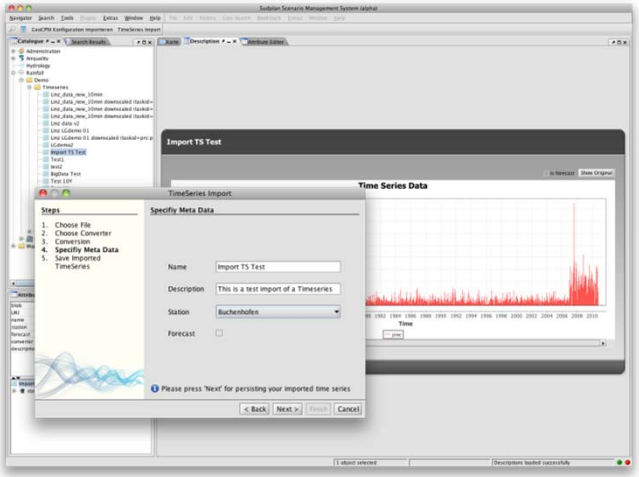
Scenario Comparison

- Time Series Comparison Framework to support Scenario Comparison
  - Flexible, interactive visualisation
  - Comparison by visualisation
  - Comparison by operation
  - Maintain spatial context

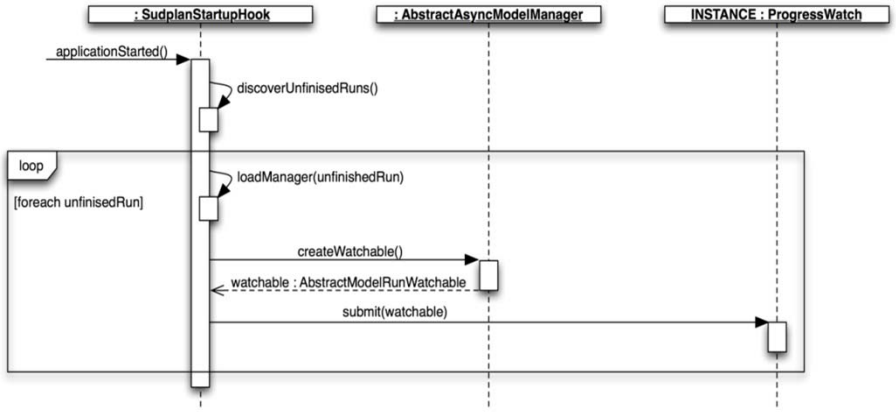


- Enhance Integration Support for Local Models and Data
  - OGC SOS and SPS service and client counter part
  - Local data import facilities



Model Management

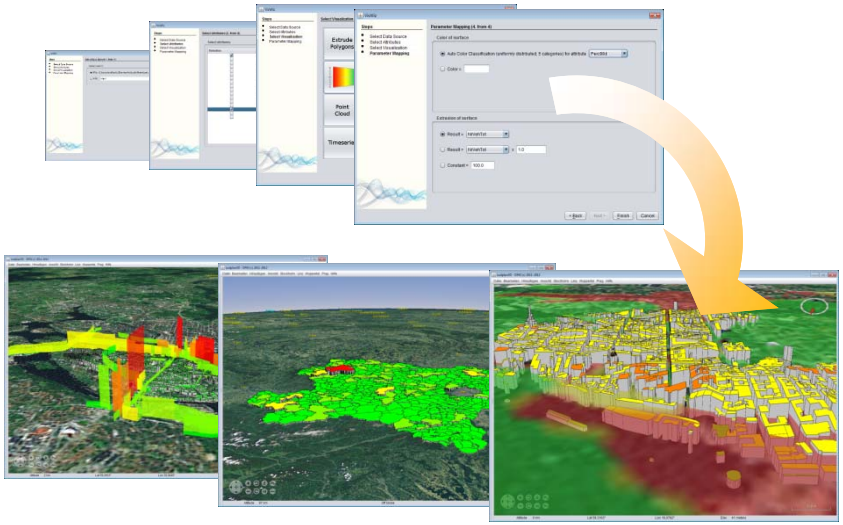
- Enhanced Model Management (Asynchronous Model Execution Framework)
  - Quick & easy integration of models supporting status polling and user notification
  - execution recovery & continuous model status monitoring



Integrated 3D/4D Visualisation

- **Globe based 3D Component (using World Wind SDK)**
  - provides many standard GIS features
  - Geospatial service support
  - Comfortable navigation

- **Visualisation Wizard**
  - select suitable visualisation techniques
  - Independence from data source
  - Extendable visualisation collection
  - Intelligent proposal
  - Simple user interaction



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Pilot Development Support

conclusions

- *Scenario Management System is based on* open source and freely available geointegration platform cids
- *Scenario Management System provides user interfaces to services that offer projections of environmental variables affected by climate change*
- *It can support you to access, visualise, compare and export this data*
- *It can even support you to build your own climate change enabled application to support you in urban planning*

Thank You

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