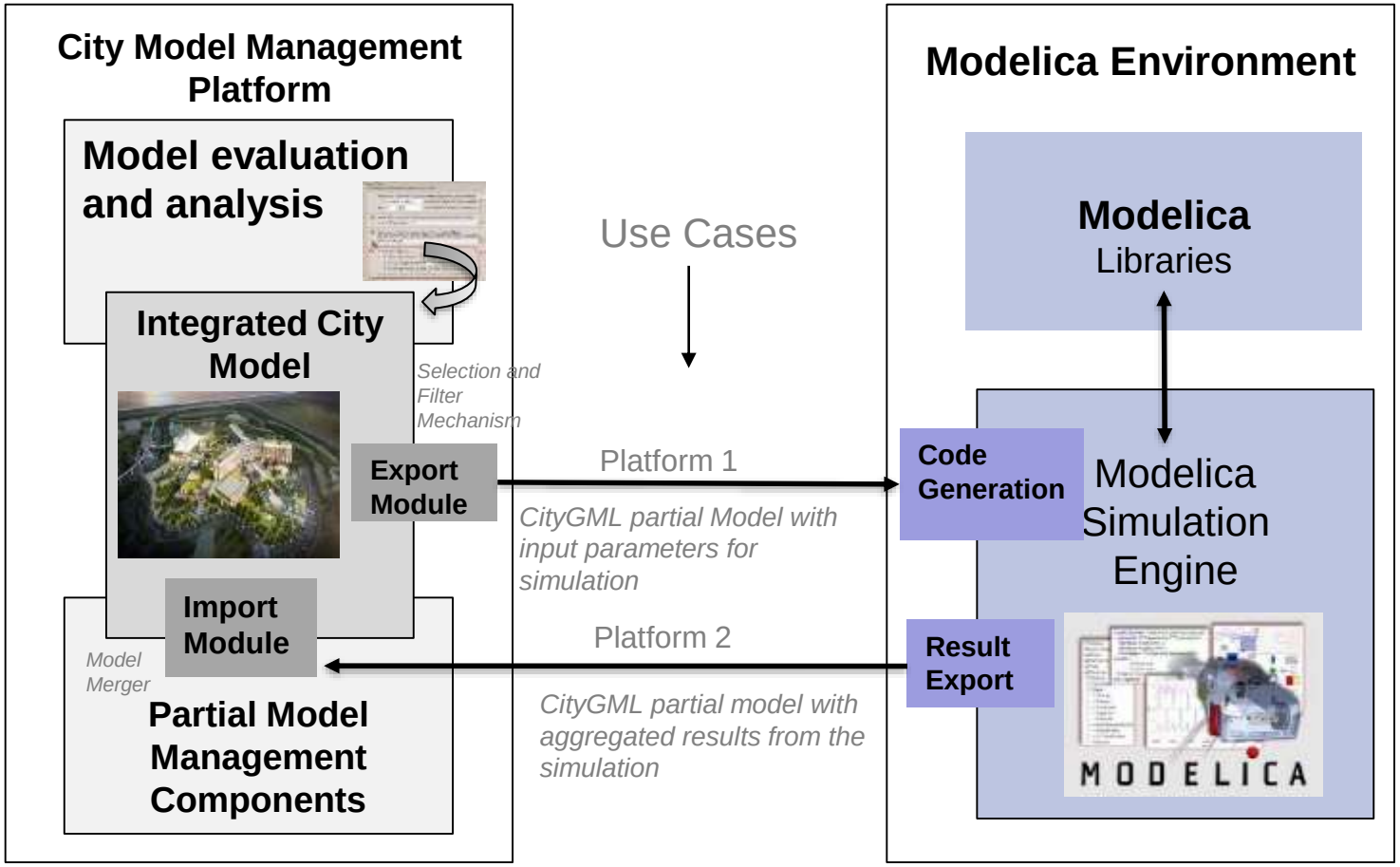
Project: ModelSIM
Development of a bidirectional interface for the model-based coupling of municipal planning, simulation and analysis processes

Funding: German Federal Ministry for Economic Affairs and Energy (BMWi)
01.11.2016 - 31.07.2019

Project number 03ET1410B

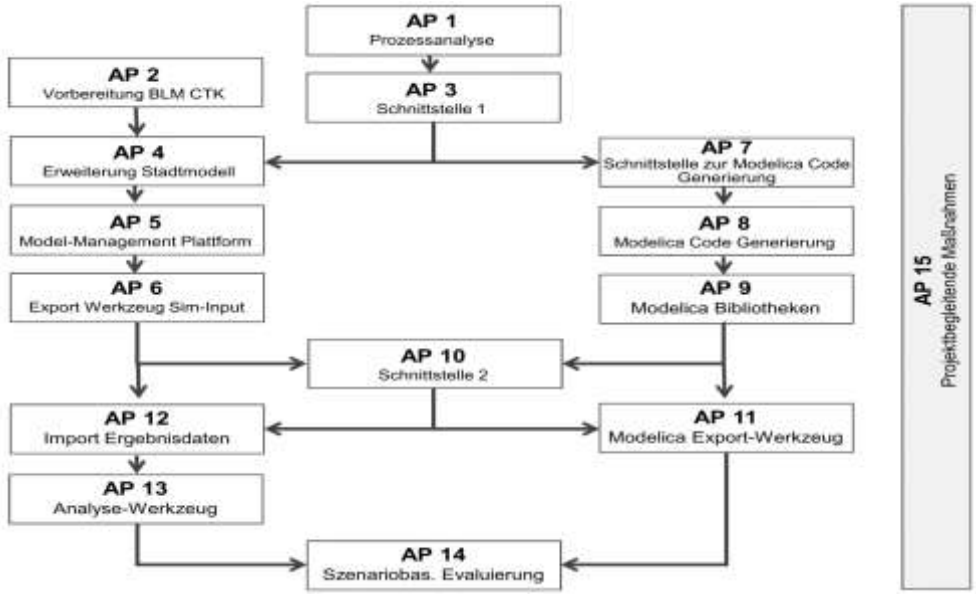
Bridging the city models to simulations



Execution

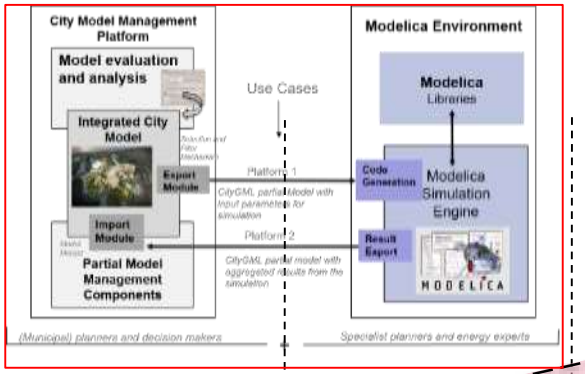
Interface Development | *Simulation Environment* | *Management side* | *Real time practices*

Academic Institutions + Industrial Partner



Bundesministerium für Wirtschaft und Energie

Prognosis (Energy and Heat Demand)



Present Situation

Reliability

Accuracy

Maximum

Optimal

Minimum

Evaluation

2016 2020 2025 2030 2040 2050

Extrapolation

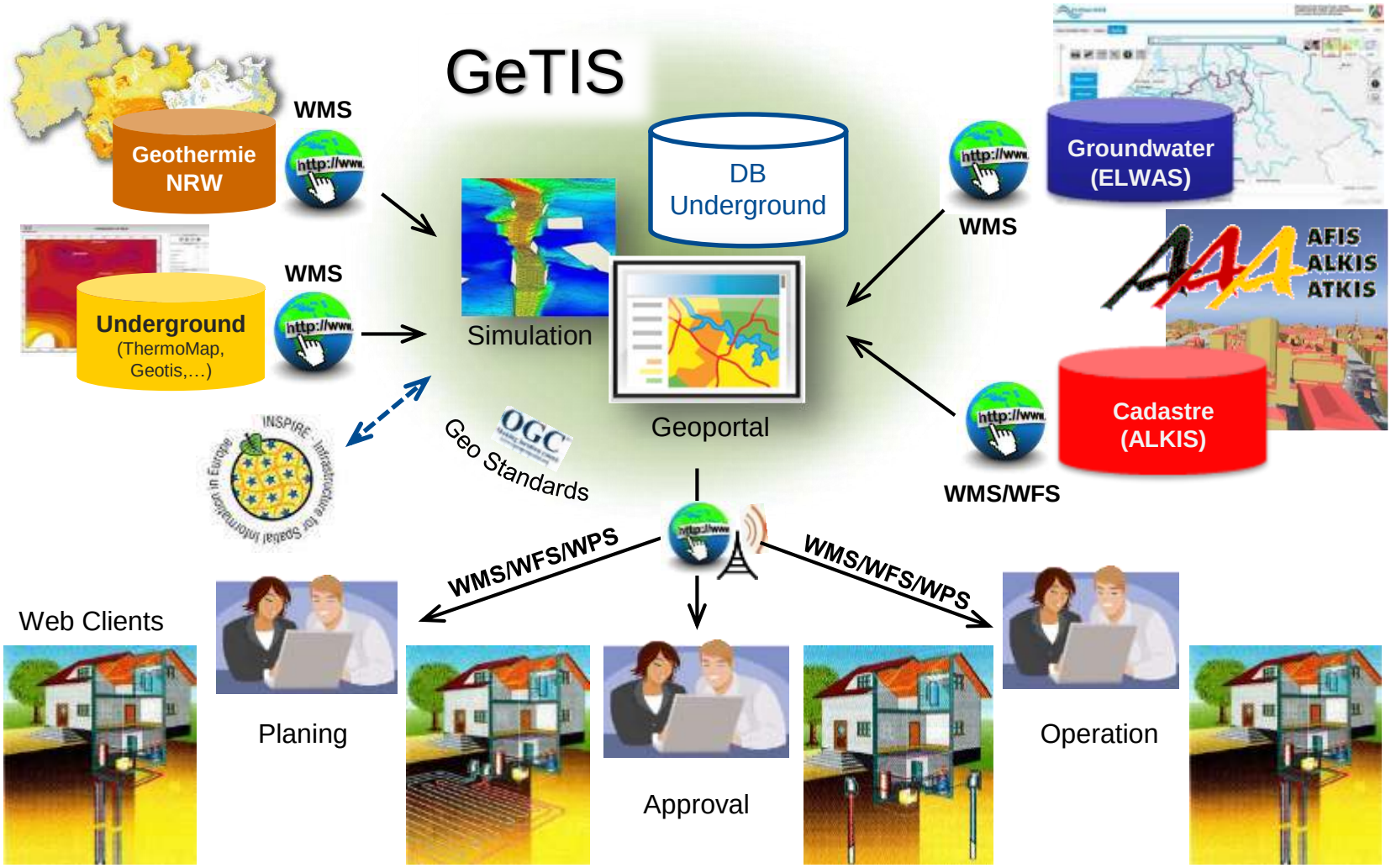
Interpolation

Project: GeTIS - Geothermal Information System

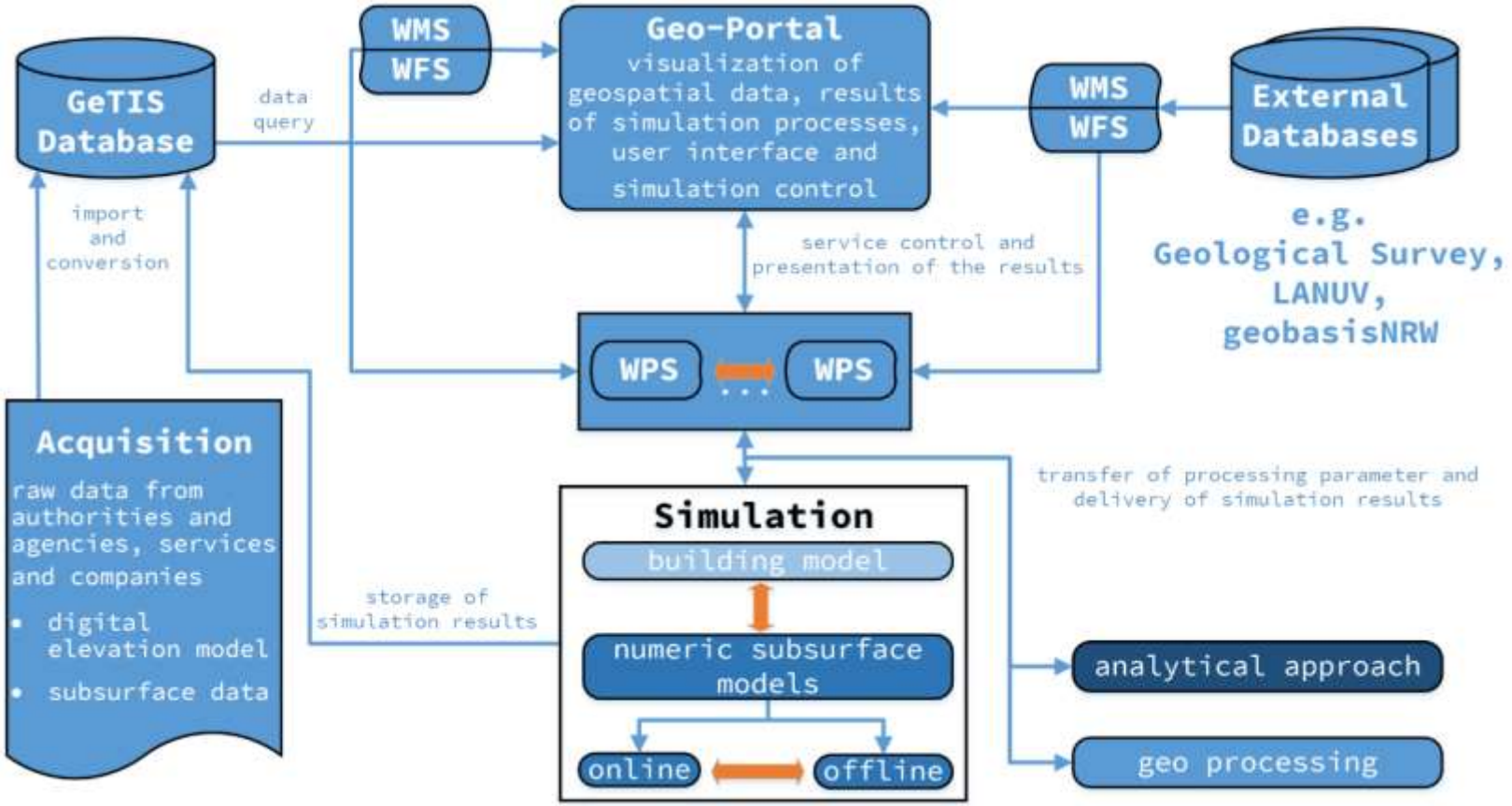
Funding: German Federal Ministry for Economic Affairs and Energy (BMWi)
01.01.2016 - 31.12.2018

GeTIS - Geothermisches Informationssystem zur Bemessung, Modellierung, Bewertung und Genehmigung vernetzter geothermischer Energiesysteme auf Gebäude- und Stadtquartiersebene (project number 03ET1357A).

GeTIS Solution Approach for Addressing Insecurities in Planning, Approval and Operation

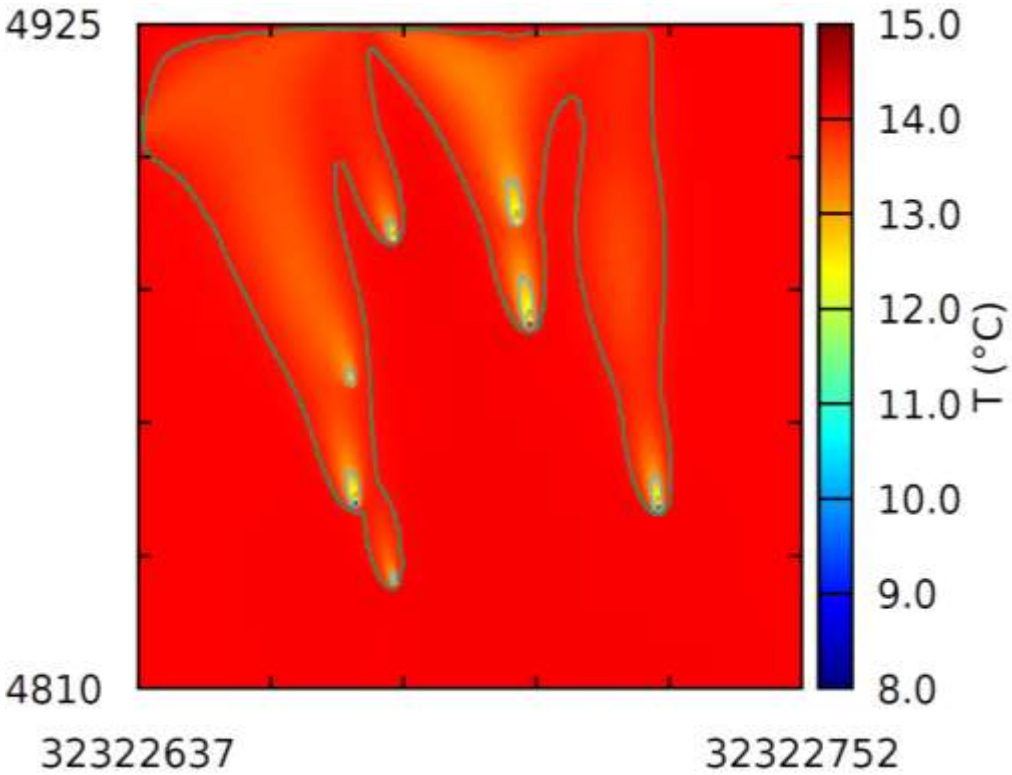


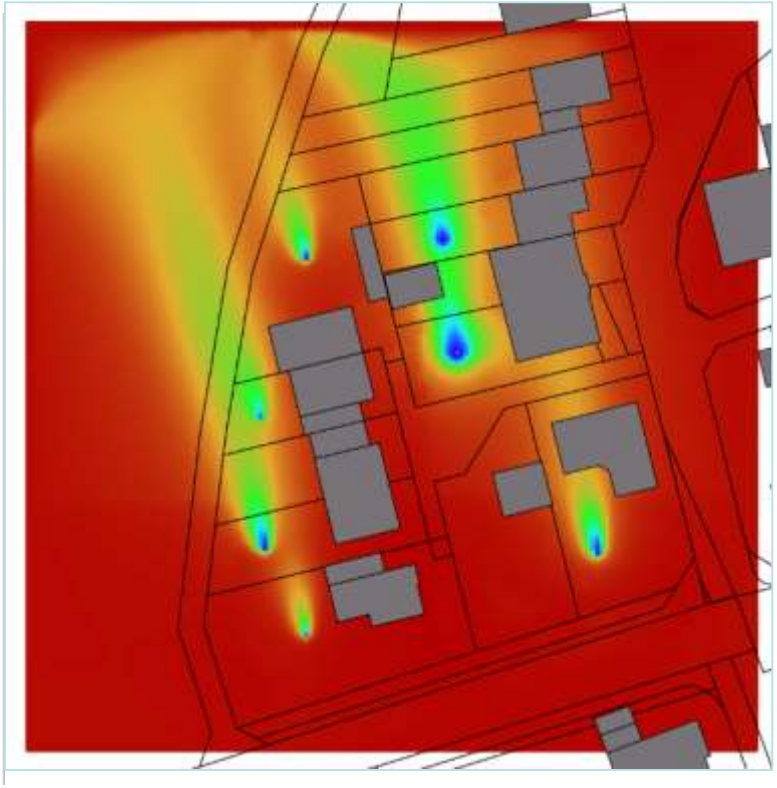
Internal Flowchart of GeTIS



Sample Subsurface Simulation Results

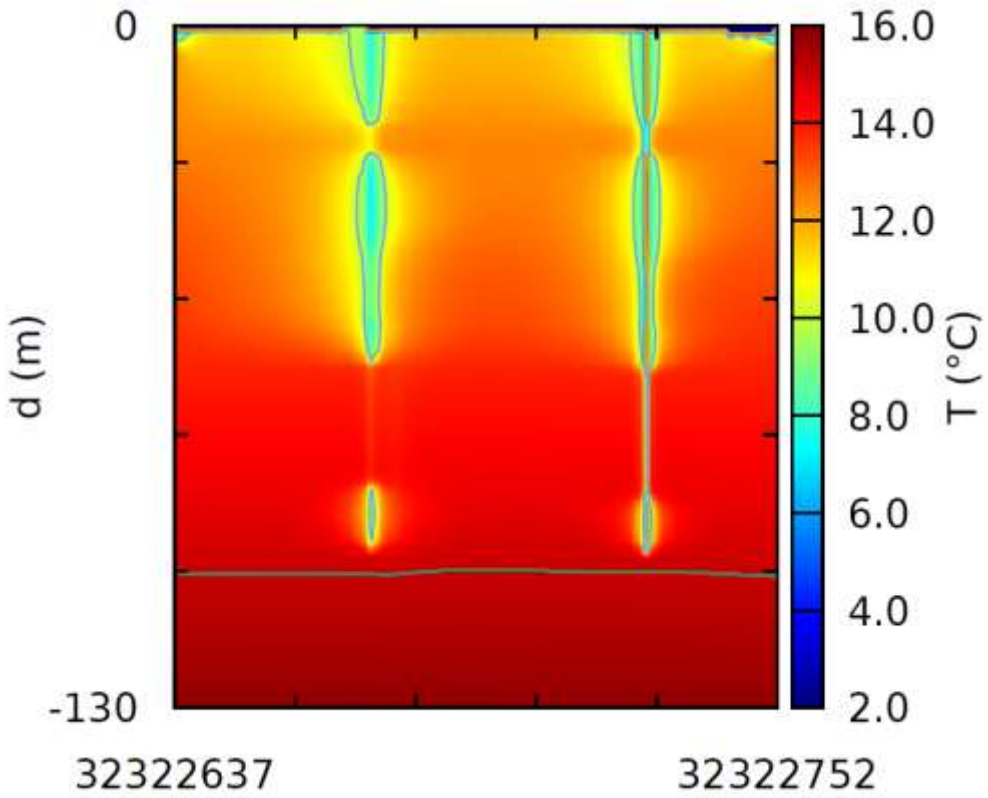
- Subsurface heat distribution simulated after 25 years for entire city quarter





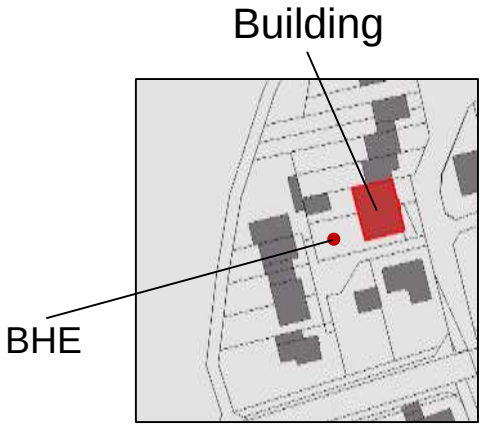
Sample Subsurface Simulation Results

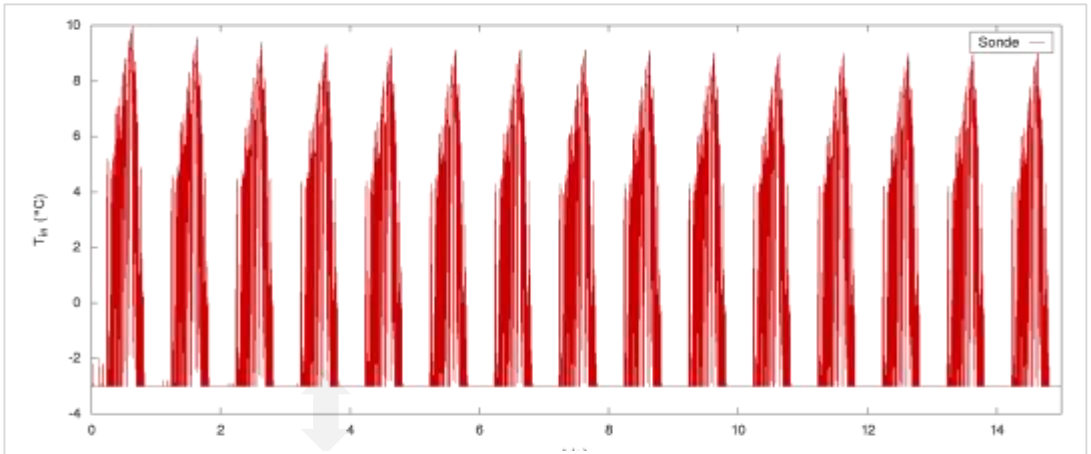
- Subsurface heat distribution (cut through borehole heat exchanger)



Sample Subsurface Simulation Results

- Simulation over 15 years for one building with heat demand and one BHE





Temperature distribution of refrigerant in heat pump

Extracted Power [kW]