

Big Data Applied to Air Quality Issues

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THE AQA-PM PROJECT

The AQA-PM project (co-funded by the ASAP 7 program) aimed at **improving air quality forecast assimilating satellite data and on-ground measurements into chemical weather prediction models**

AQA-PM TOOLS

- Chemical Weather Prediction models
- Physical-based pollution retrieval from satellite data
- Geo-statistical tools for data fusion (SVR)
- Optimal Interpolation assimilation schema
- Data visualization GUI

THE 4 (+1) Vs

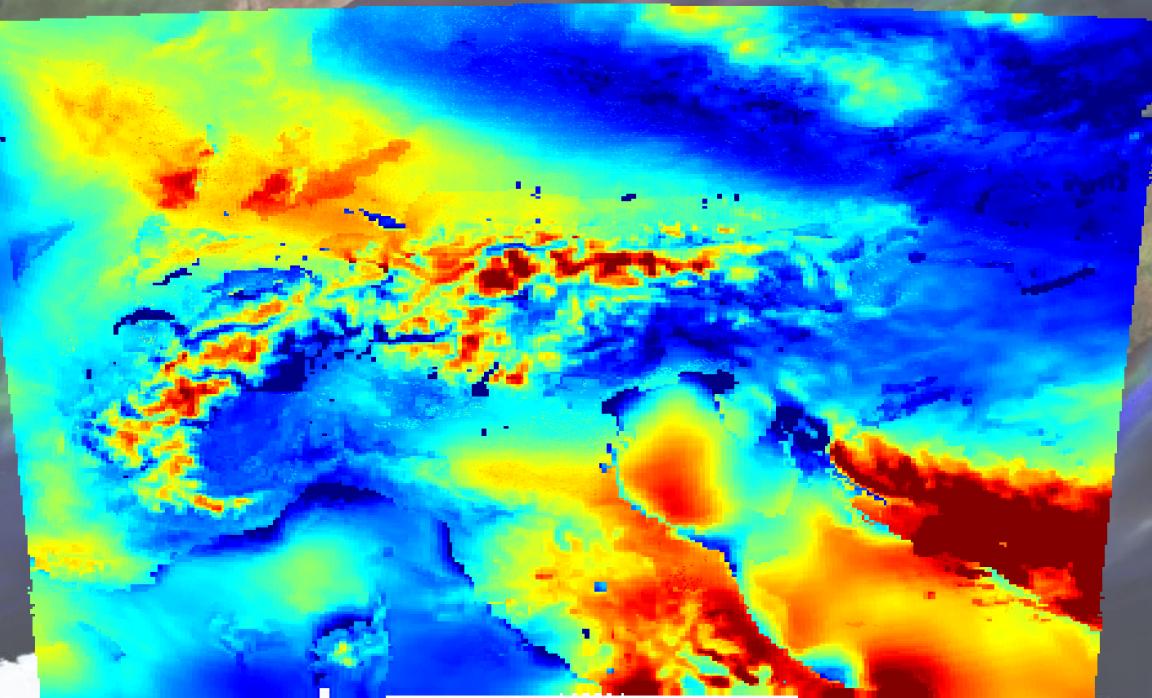
Volume

Variety

Veracity

Velocity

Visibility / Visualization





EOX

BOKU-Met

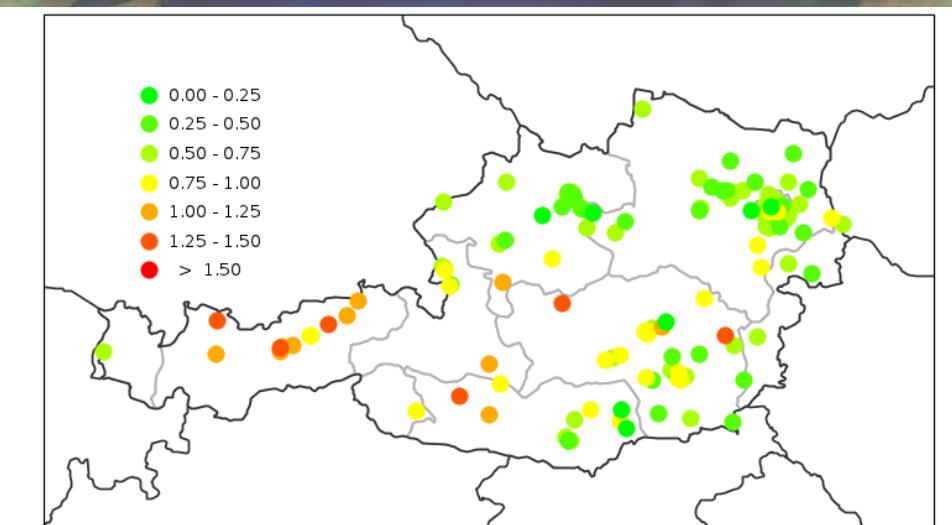
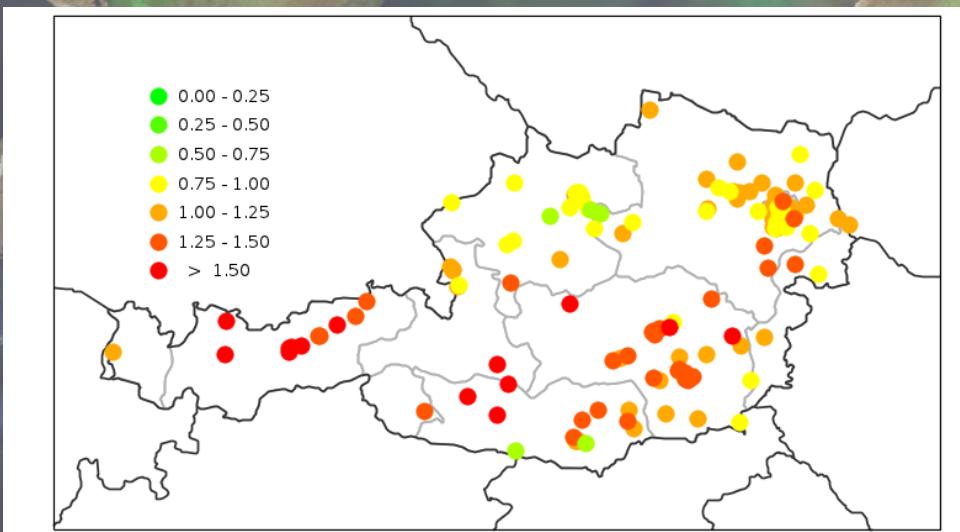
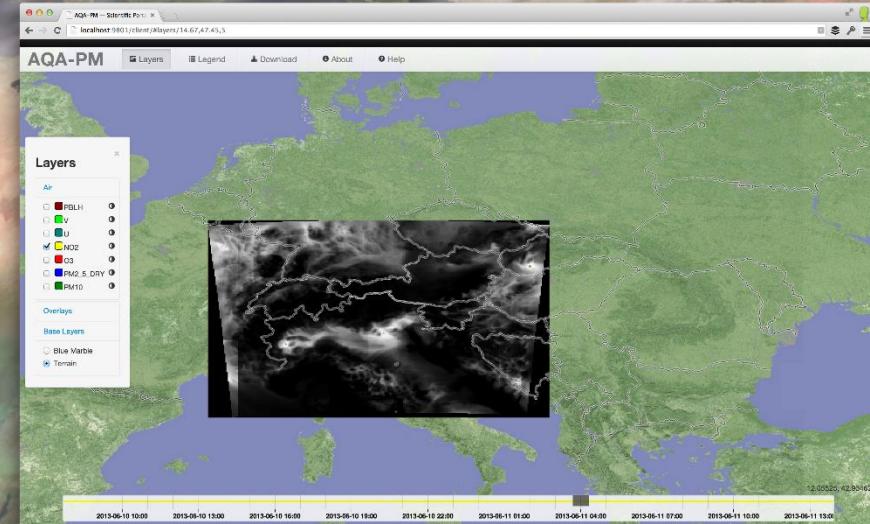
ZAMG

BIG DATA ISSUES

When the domain gets larger:

- Orchestration complexity
- Computational resources
- Data storage
- **Visualization (large multi-dimensional datasets)**

VISUALIZATION



QUESTION

How to advance in **multi-dimensional data visualization**

allowing:

- **Large** multi-dimensional datasets visualization
- Dataset **interaction**
- On the fly data **manipulation**
- **Multiple** dataset analysis



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