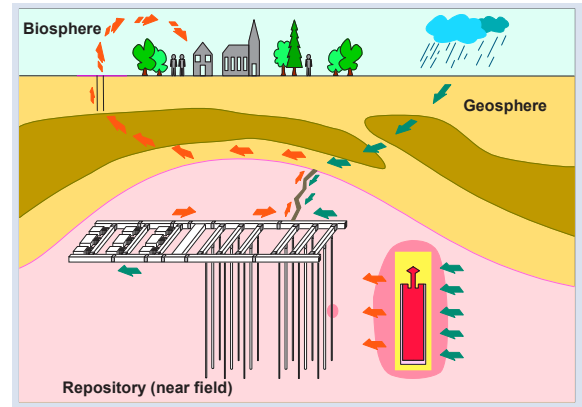
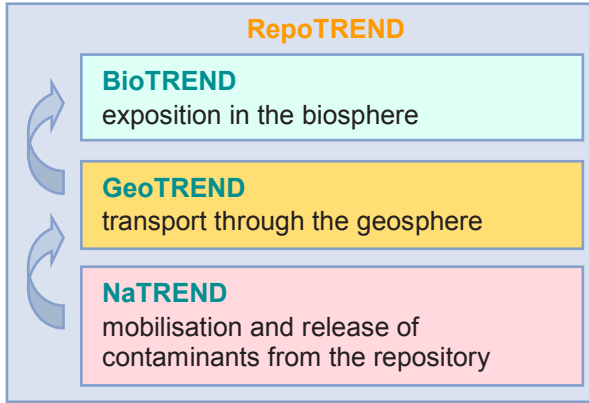


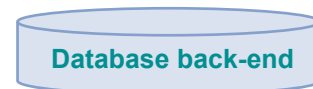
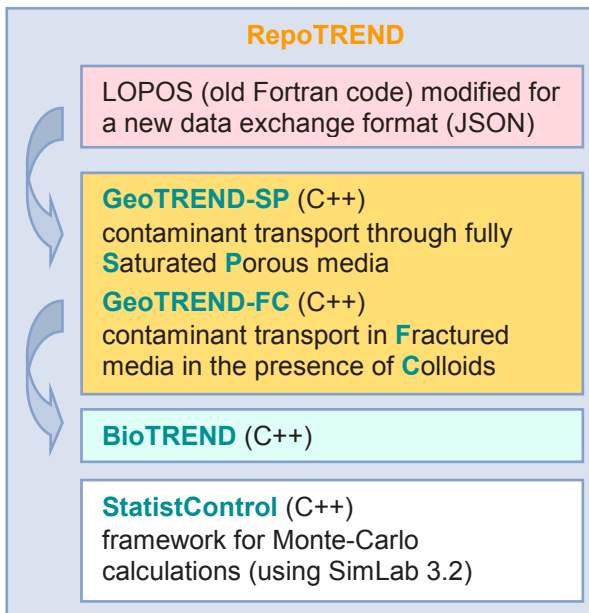
# RepoTREND – An Advanced Modelling Tool for Performance Assessment of Radioactive Waste Repositories

T. Reiche

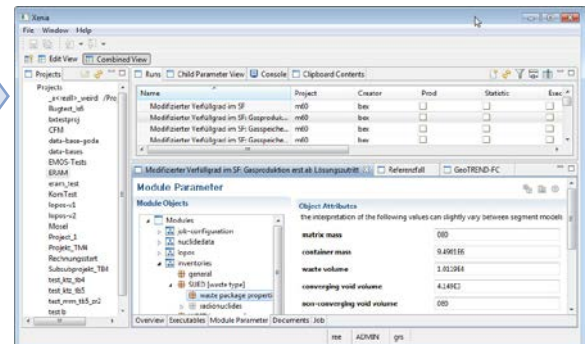
## Processes to implement



## Already implemented



**XENIA (Java)**  
flexible configurable GUI for input



## Next to implement

- NaTREND** processes in the **Near field** of a repository in rock salt considering two phase flow (replacing LOPOS)
- GeoTREND-F** contaminant transport in **Fractured porous media**
- GeoTREND-C** contaminant transport in porous media in the presence of **Colloids**
- ClayTREND** contaminant transport through a **Clay barrier**

## Details to RepoTREND

- C++, Object Oriented design
- Parallel computing: cluster computing of Monte-Carlo simulations and multithreading design of algorithms
- Reference: Reiche, T., Becker, D., Buhmann, D., Lauke, Th.: Anpassung des Programmpakets EMOS an moderne Softwareanforderungen ADEMOS – Phase 1, GRS-A-3623, 2011

Gesellschaft für Anlagen- und Reaktorsicherheit, Abteilung Langzeitsicherheitsanalysen,  
Theodor-Heuss-Str. 4, D-38122 Braunschweig, E-Mail: Tatiana.Reiche@grs.de, Tel.: +49-531-8012-208

## Acknowledgement

This work was funded by the Federal Ministry of Economics and Technology of Germany under grant No. FKZ 02 E 10367