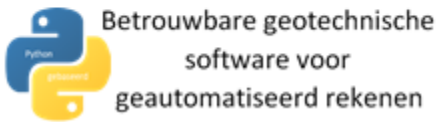# DEL119 - GEOLIB

Reliable geotechnical and geohydrological Python software for automated calculations

Background

Many contractors and engineering firms are currently actively automating design and assessment processes. Automation speeds up the process, prevents errors and enables optimization. The automation applied is partly project-specific. However, to be able to trust the numerical result, it must be linked to accepted software, with a quality stamp.

Deltares therefore took the initiative for a geotechnical and geohydrological software library that supports the automation process. GEOLIB has been developed and is maintained by a community of users and developers. The first release (Summer 2020) included the calculation hearts of the D-Series, including Python shell, suitable for unlimited parallel use. In addition, Python scripts for accessing and interpreting geotechnical data, including CPTs and lab tests are now available. The quality of the components is guaranteed by testing and documentation. The D-Series part is made available with flexible subscription options. The rest of the library is open source.

Network

Development was lead by Deltares, and was carried out with the support and direction from a consortium, consisting of:

- Antea
- Arcadis
- Ballast Nedam
- BAM
- Bosalis
- CRUX
- Dura Vermeer
- Fugro
- Heijmans
- Lievense
- Mobilis
- Movares
- RHDHV
- Sweco
- Van Oord
- Volker Wessels
- Waternet
- WSRL

Results

The project was completed in November 2021

The results (software) is available for download here:
https://download.deltares.nl/en/download/geolib/