

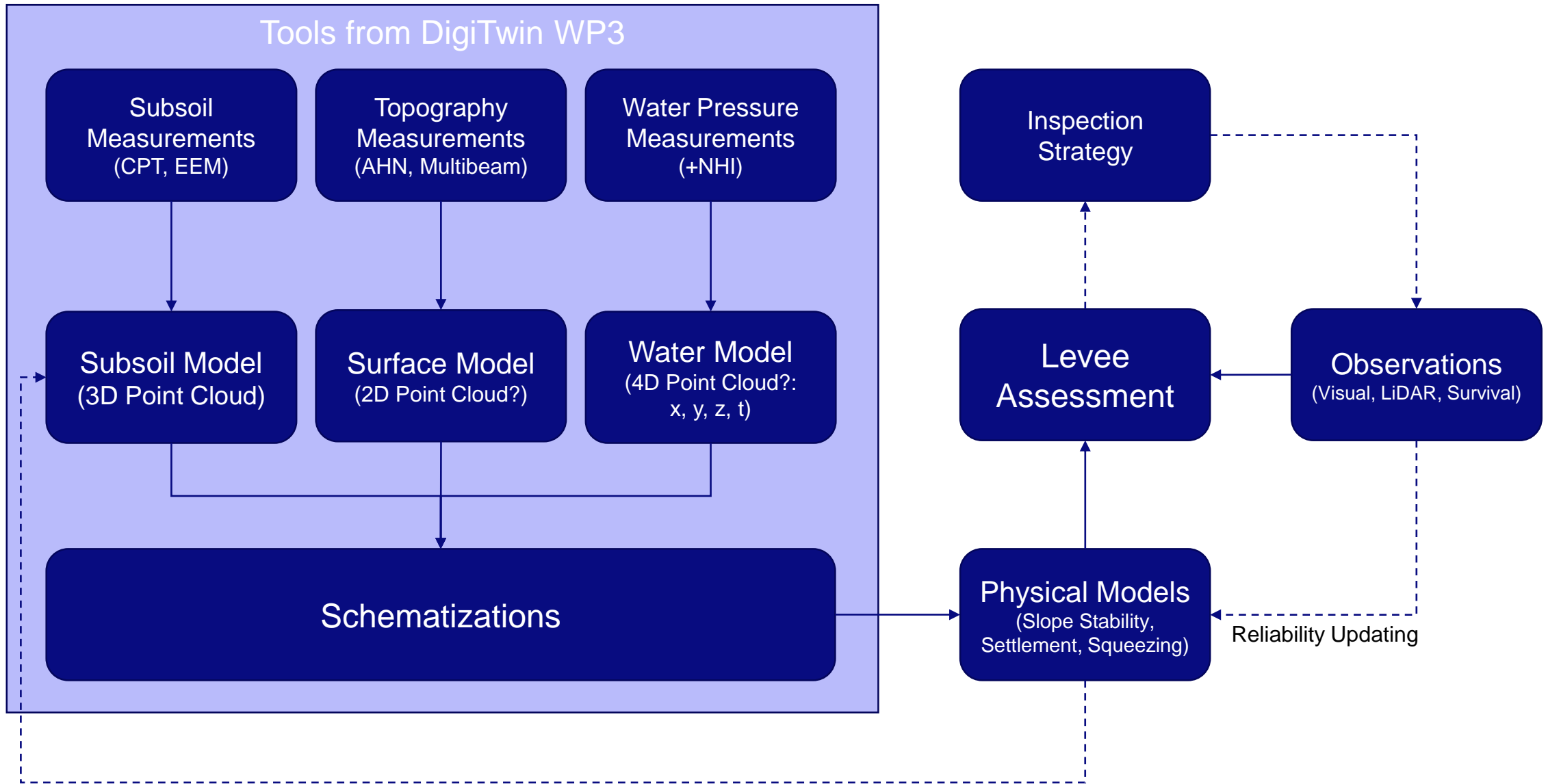


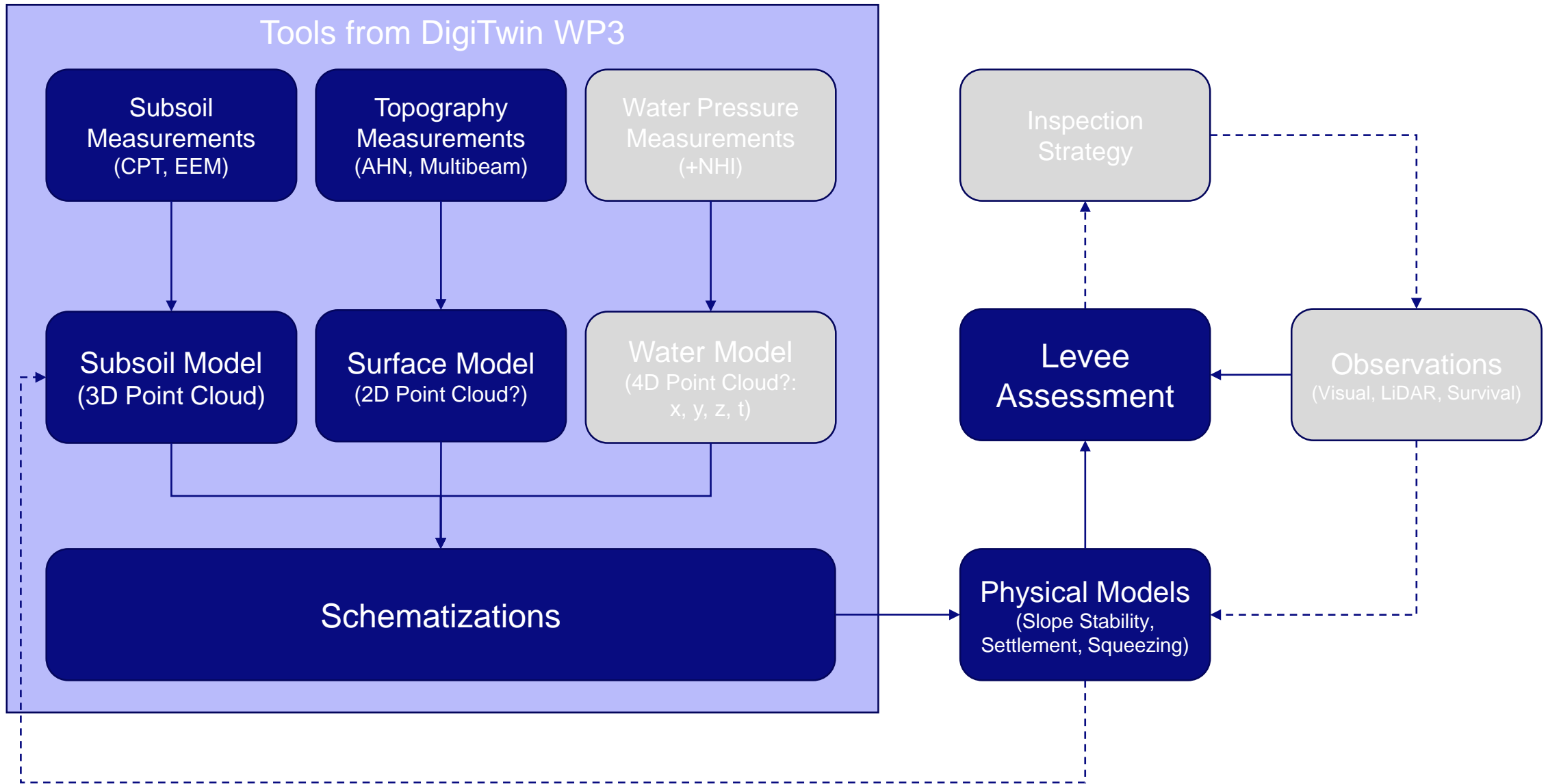
Deltares

**van Data naar inzicht in
Stabiliteit van de Dijk
DigiTwin Waterkeringen - Case Purmer**

Anton van der Meer

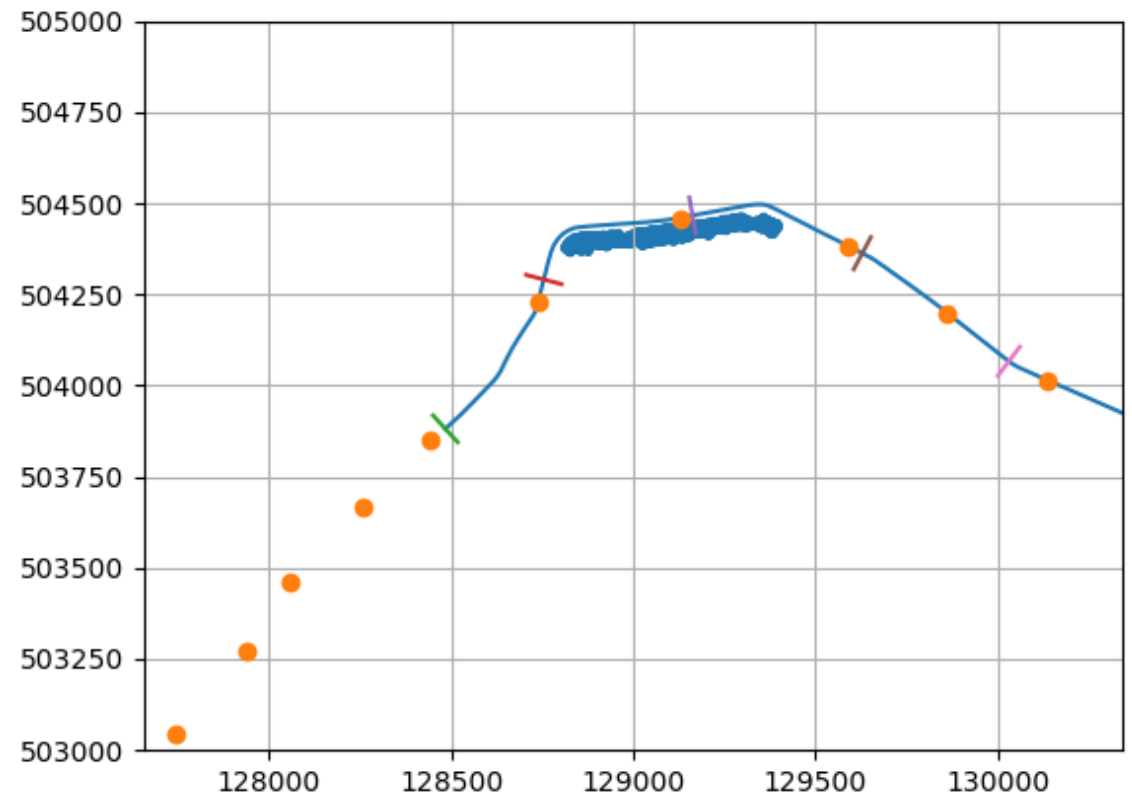
28 september 2022





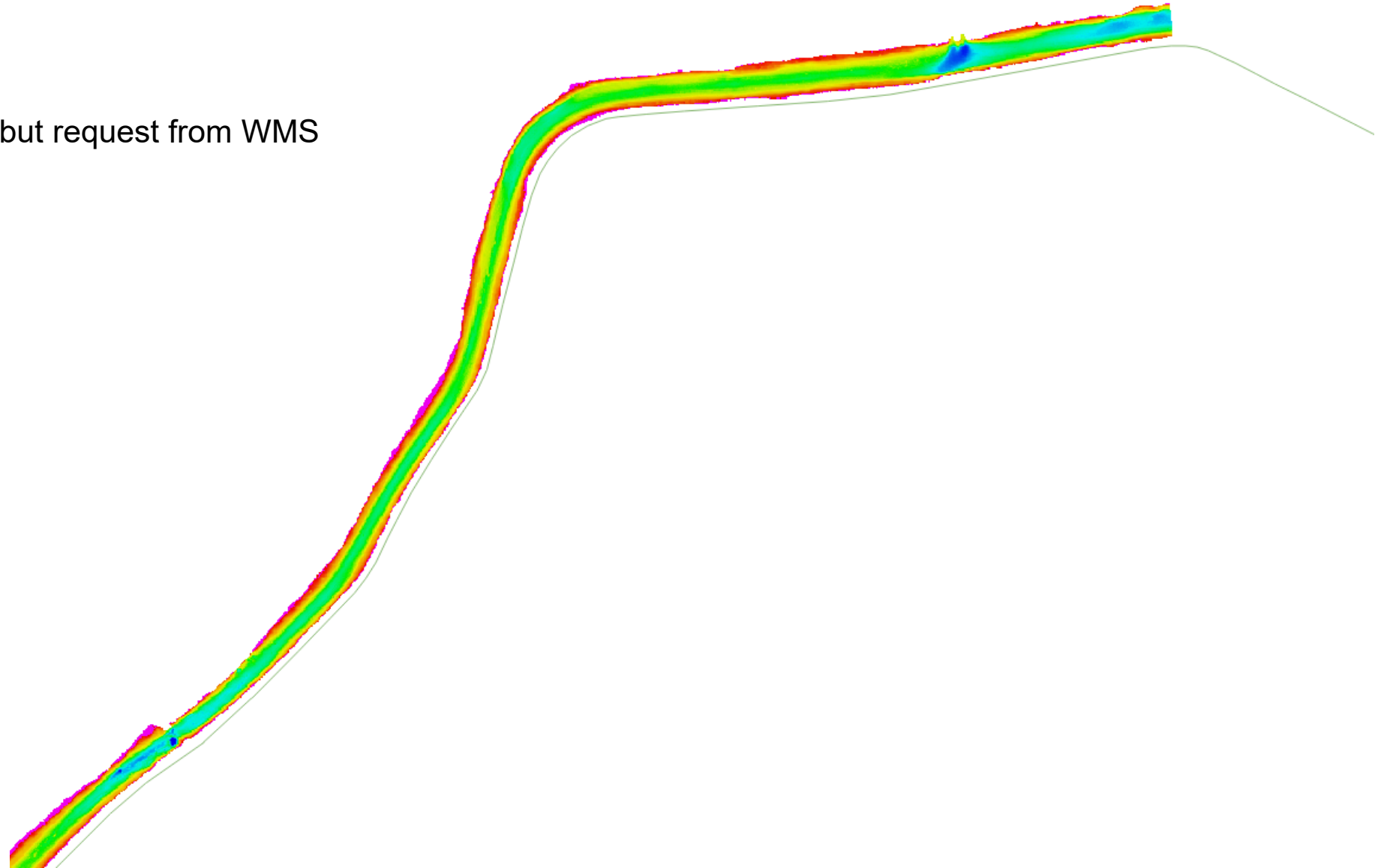
Subsoil Model

- CPTs:
 - Interpret with *GEOLIB+* (<https://pypi.org/project/d-geolib-plus/>);
- EM;
- Procedure:
 - Save data in measurement points;
 - Interpolate cross-sections when needed;
 - For example IC-value;



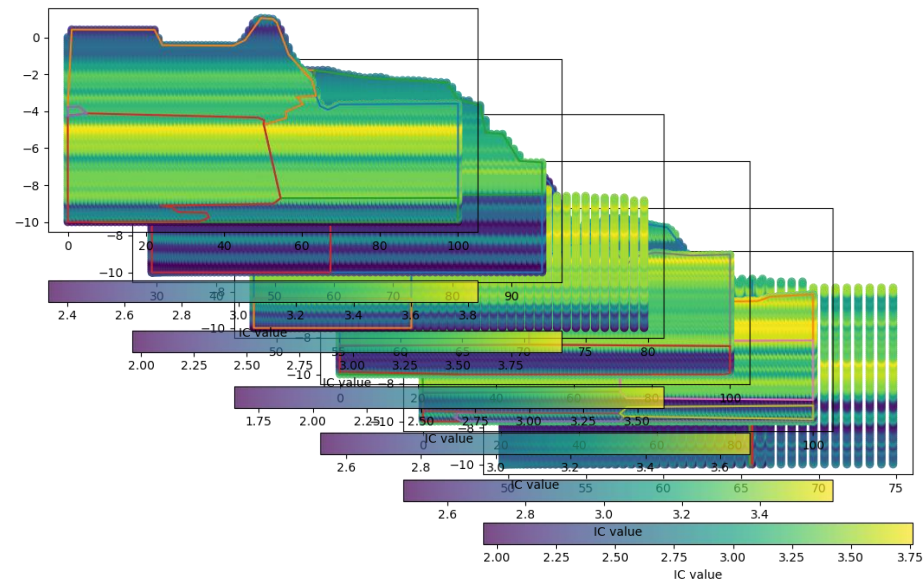
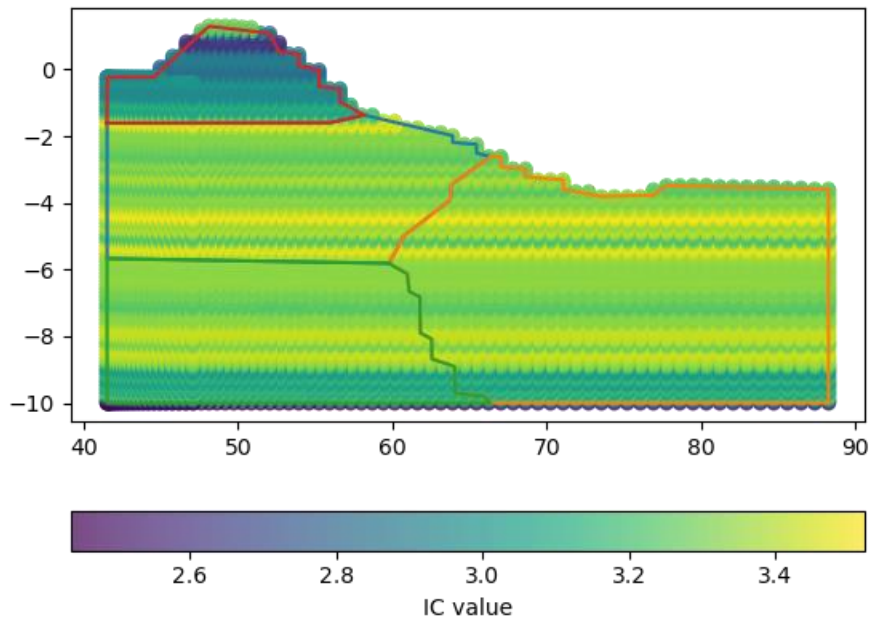
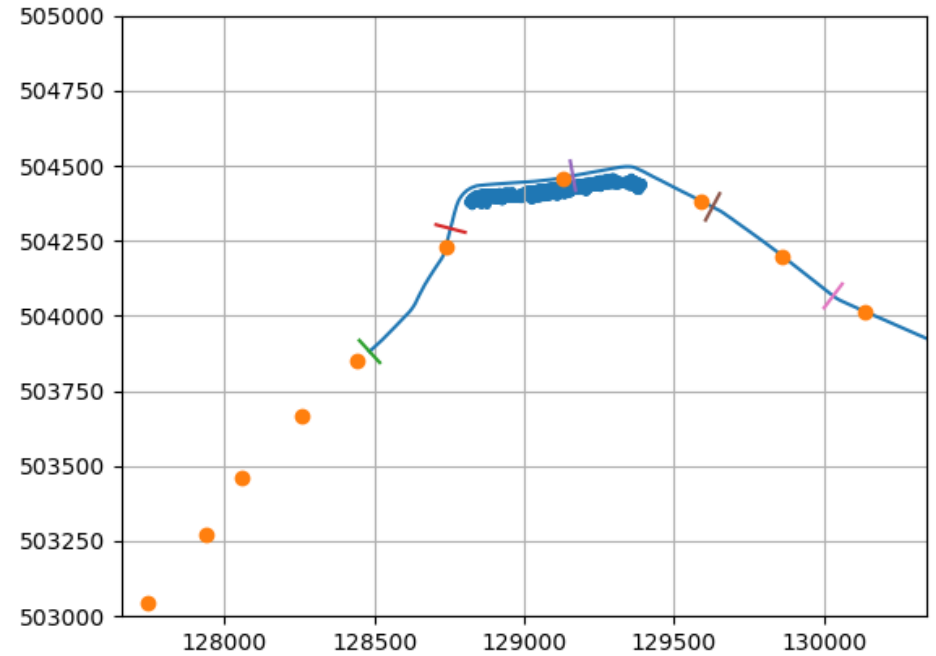
Surface Model

- AHN;
 - Don't save data, but request from WMS
- Multibeam;



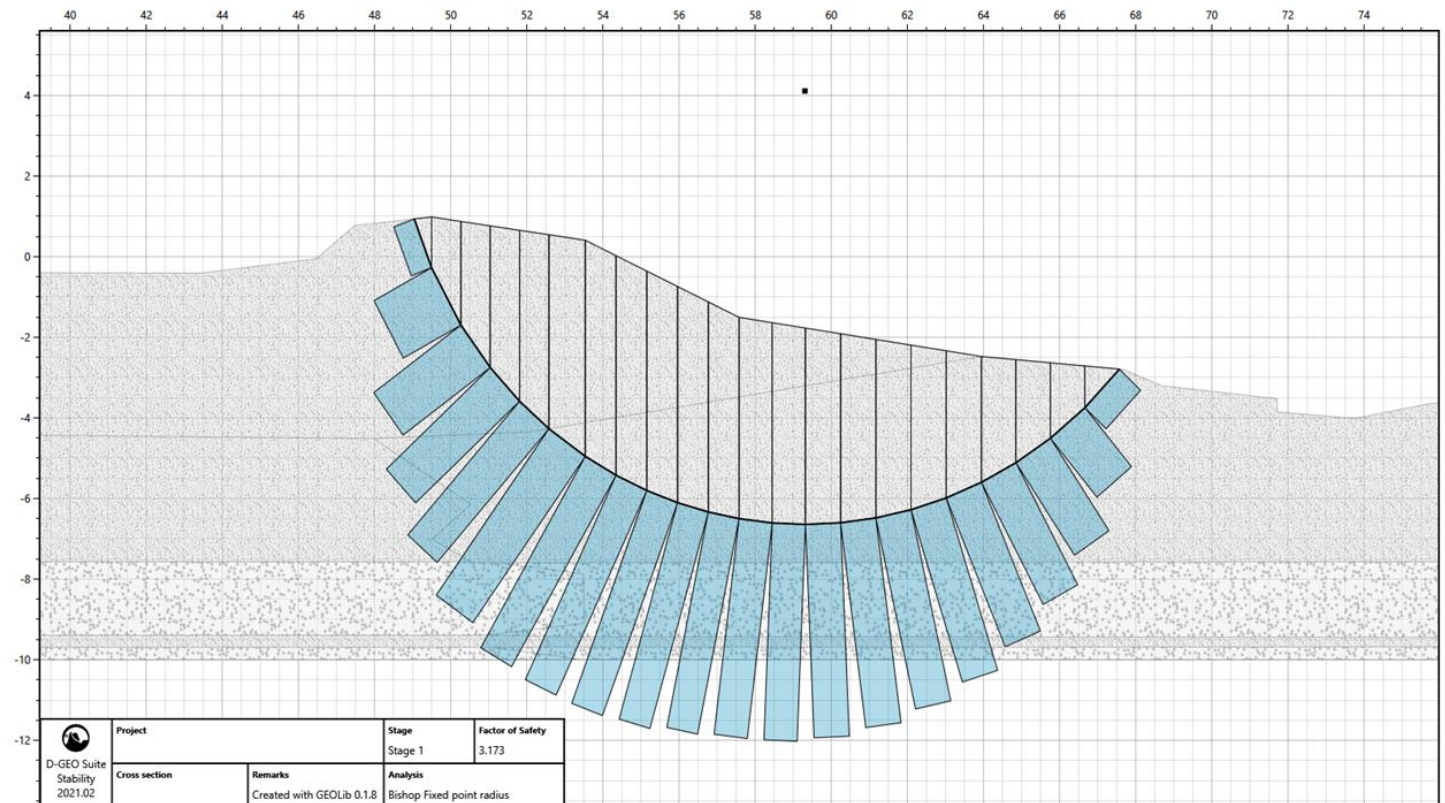
Extract Schematizations (2D)

- Interpolating data (IC) to locations of interest;
- Cluster IC;
- Couple clusters with soil layers;
- Characteristics of soil layers from “*proevenverzameling*”



Physical Models

- Stability (D-Stability):
 - *GEOLIB* (<https://pypi.org/project/d-geolib/>);
 - *DataFusionTools.d_series_parser*;
- Squeezing;



Next Steps (to be prioritized)

- Improve data fusion tools;
- Water Model:
 - Use assessment schematization of water pressures;
 - Connect with case study HKV;
- Include Multibeam:
 - Possibility of extra data source for Surface Model in *DataFusionTools* to overwrite the *AHN*;
- Gather experience with different interpolation models;
- Gather experience with different cluster models;
- Include squeezing;
- Include indirect measurements (in example settlement) to update soil strength parameters;
- Include coupling with probabilistic tools (python interface of probabilistic toolkit):
 - (<https://www.deltares.nl/en/software/probabilistic-toolkit-ptk/>).

Discussion

- Suggestions on prioritization?
- Dataflow;
 - No input from user yet;
- ...

Contact

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