

FLIAT

Flood impact assessment tool

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The flood impact assessment tool is developed to calculate the socio-economic impact due to floods. An analysis is made for the casualties and economic damage caused by floods with a variety of return periods for the current situation and for the projected situation in the future.



FLIAT is written in Python and Rand uses the advanced open source database PostgreSQL/PostGIS.

DATA MANAGEMENT SYSTEM

Data is well-structured in the data management system of FLIAT. There is no need to download a large amount of data. FLIAT is a cloud computing technology.



ENDLESS STORAGE CAPACITY



Even for the largest impact assessment project, storage capacity of the server can always be extended.

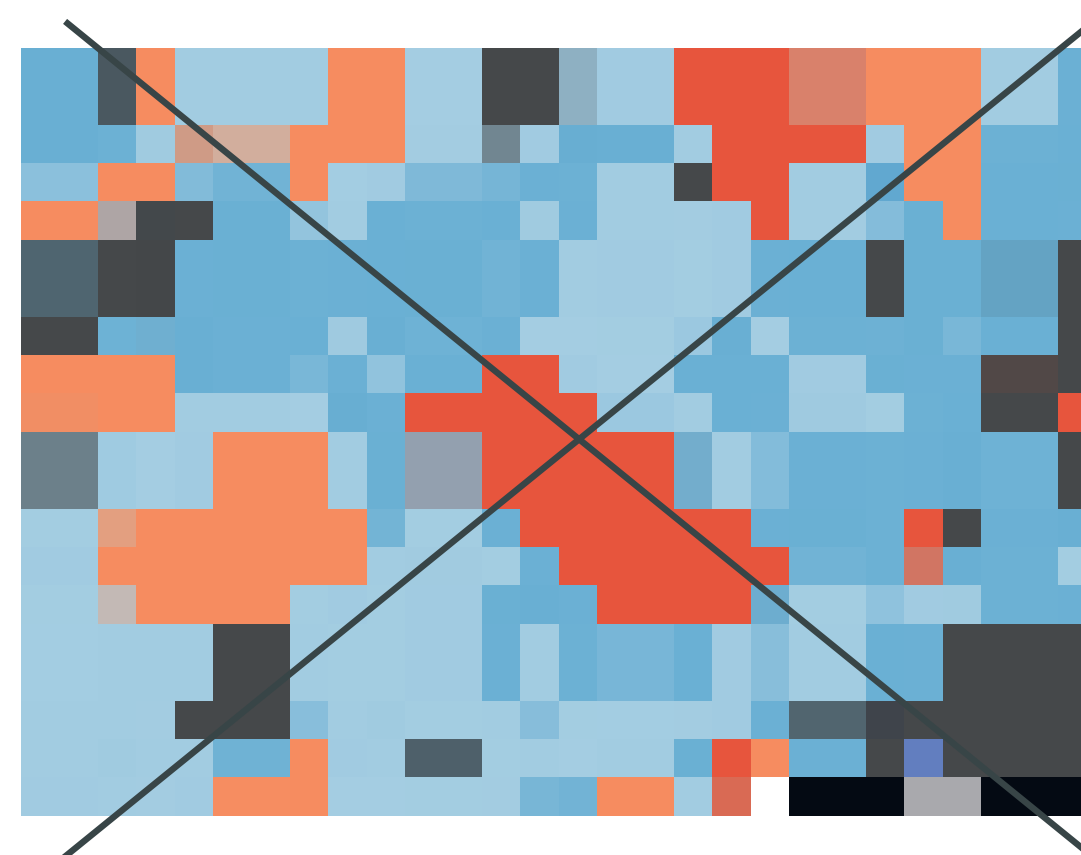
SOURCE DATA IS ALWAYS UP-TO-DATE

The FLIAT database is always up-to-date. In this way, it is a gain in time for the user to collect up to date data.



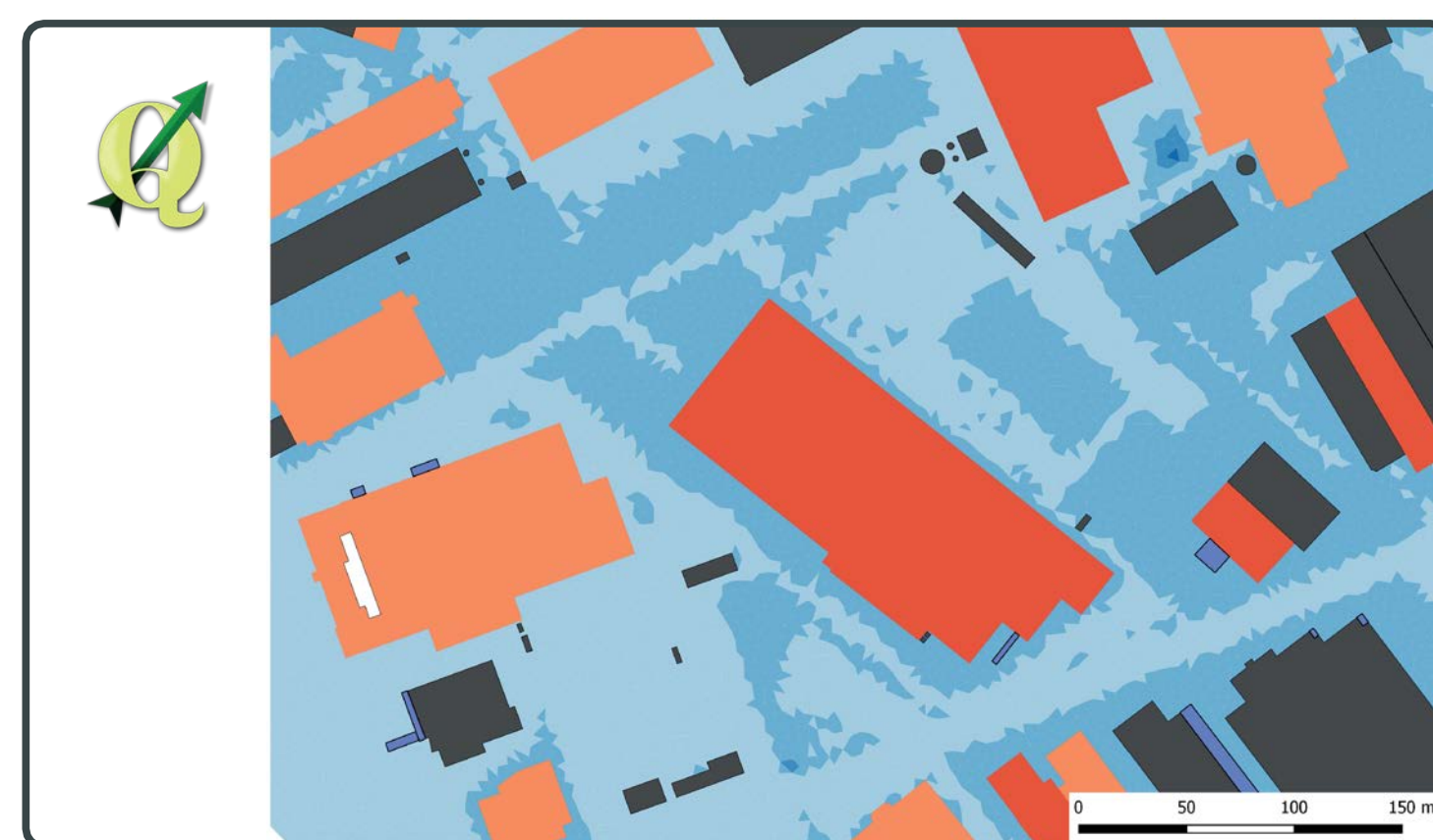
NO LOSS OF ACCURACY

Because FLIAT can handle all kinds of data types, there is no need to convert vector data into raster files. As a result, there is no loss of information and the source data stays accurate.



VISUALISATION VIA QGIS PLUG-IN

The output of the impact analysis can be directly visualised in QGIS by using the FLIAT QGIS plug-in. QGIS is a free and open source geographic information system.



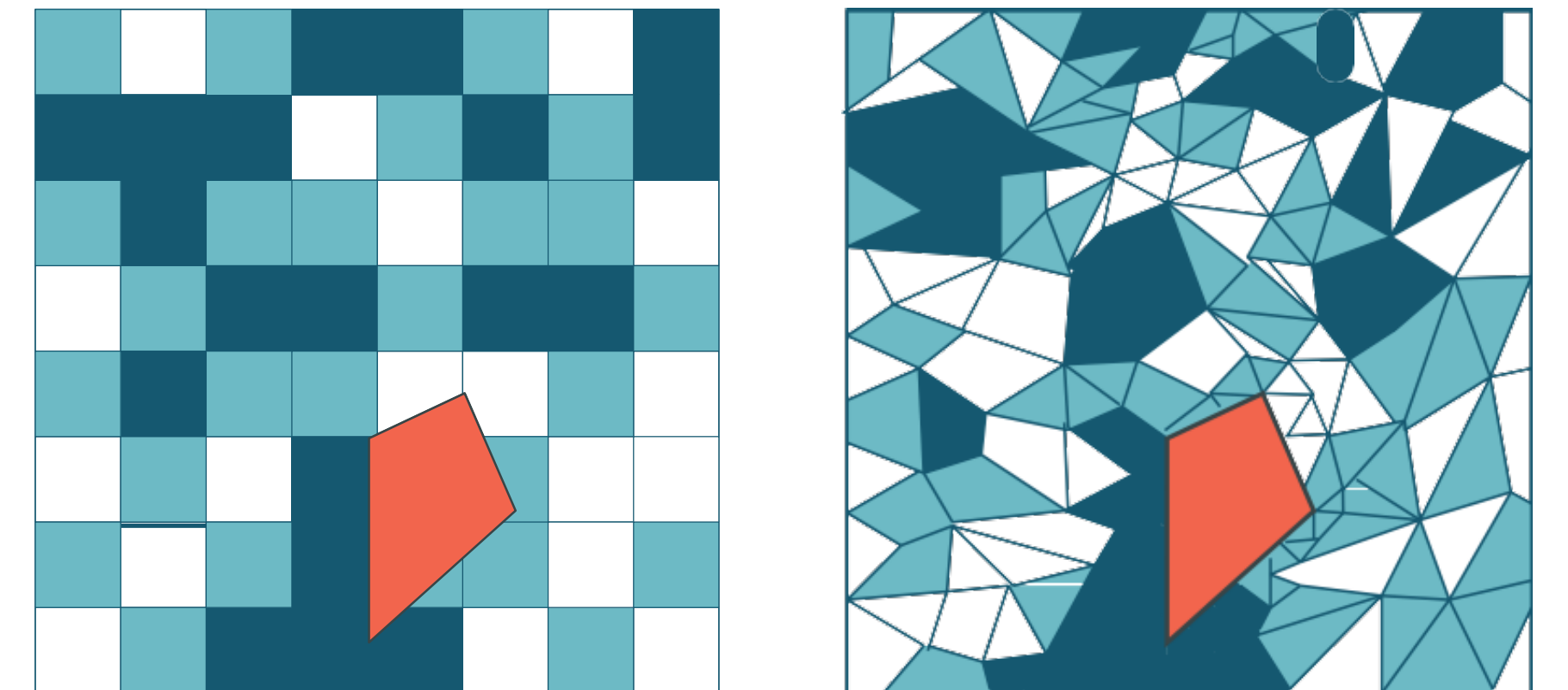
CALCULATION ON POWERFUL SERVER

FLIAT operates on a powerful Linux server, so no powerful desktop is needed to get the job done. Every basic laptop with Internet connection can execute the impact assessment calculation process.



HANDLES A VARIETY OF DATA TYPES

FLIAT can handle vector data as well as raster data to calculate the impact due to floods.



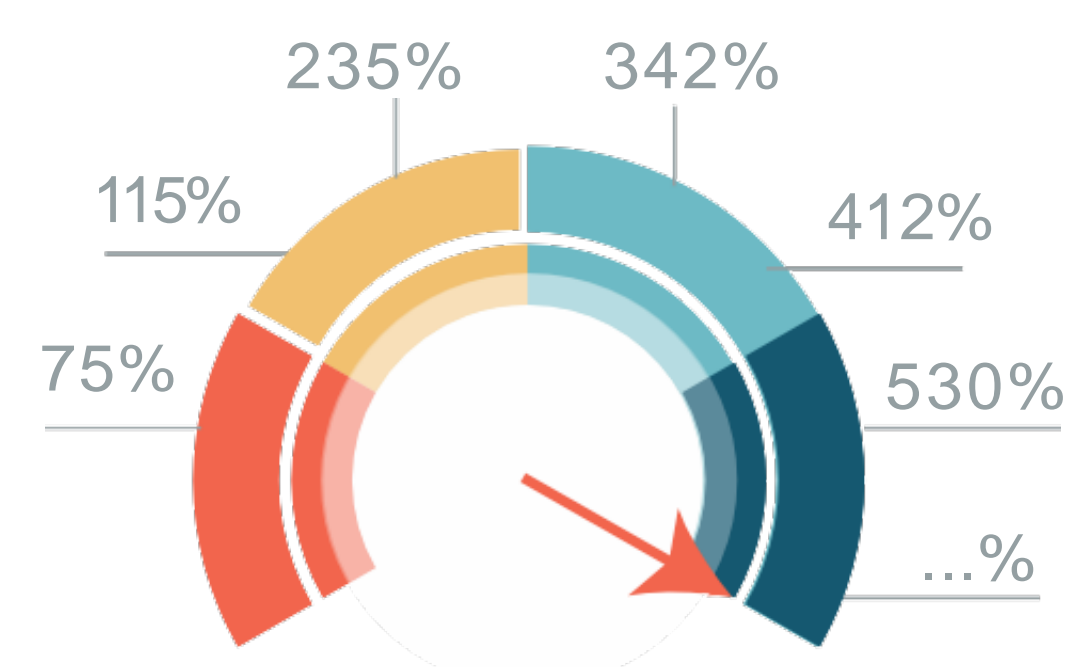
LOCAL OR CONNECTED TO THE SERVER

It is possible to install FLIAT on your local desktop or laptop, download the source data and calculate the flood impact without the need of the powerful server.

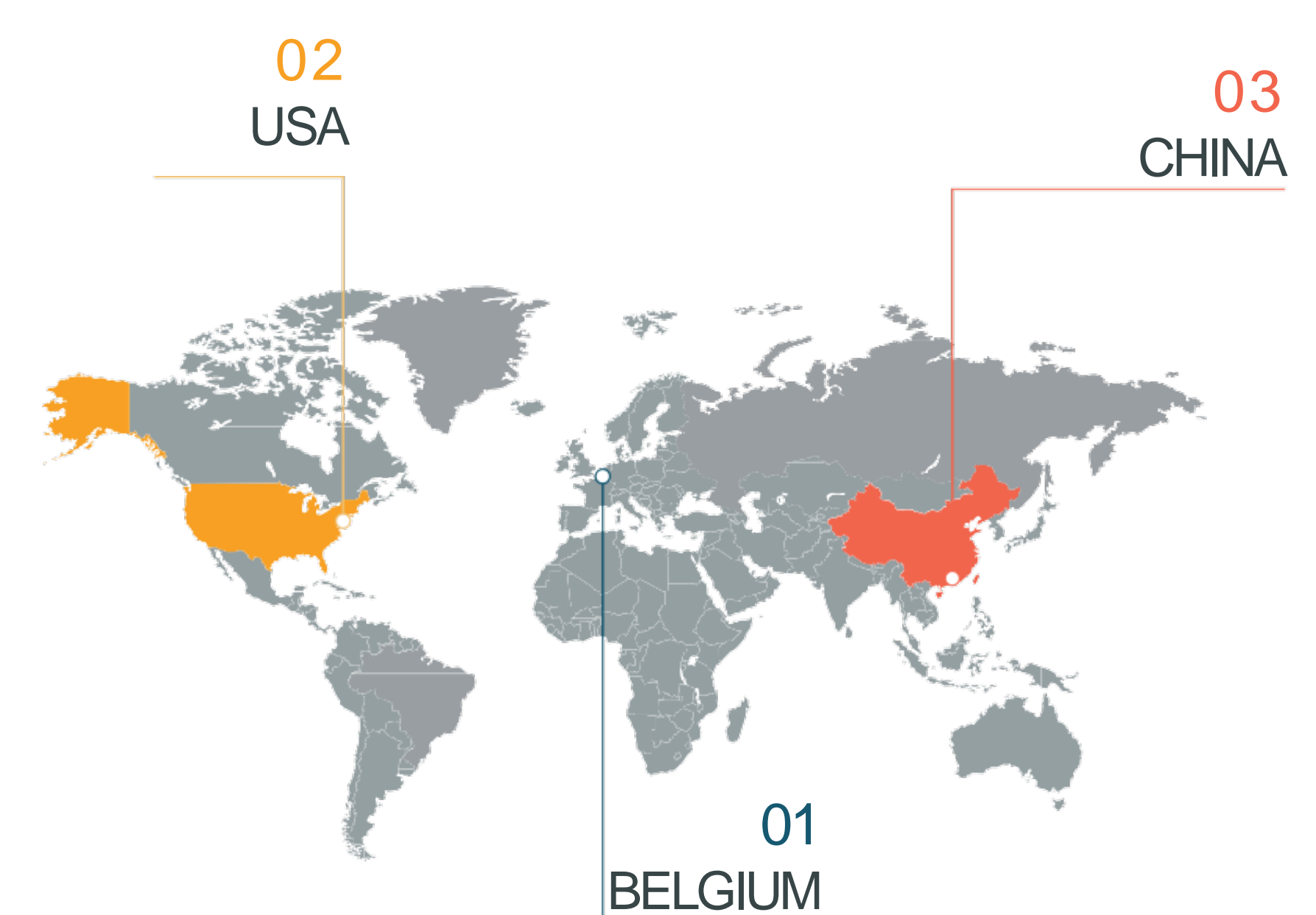


SPEED UP BY PARALLEL COMPUTING

Parallel computing is a type of computation in which the execution of processes are carried out simultaneously by different processors. As a result, calculations are much faster finalised.



CURRENT TRY-OUTS



- ☐ GHENT - a vulnerability study is carried out by using the FLIAT software
- ☐ BELGIAN COAST - a vulnerability study will be carried out by using the FLIAT software
- ☐ NEW YORK - a scooping study is ongoing
- ☐ HONG KONG - a scooping study is ongoing

METHODOLOGY

