

01 WHO IS BRINK MANAGEMENT / ADVIES?

We just love real estate. Brink is a firm with offices in Rotterdam and Eindhoven and delivers consultancy, management and software for the real estate sector in the Netherlands. The company has employed 230 fte and is 100% owned by us.

Brink Management / Advies helps government, municipalities, social housing organisations and commercial companies with real estate questions. Among our clients are:

Rijksvastgoedbedrijf, Gemeente Eindhoven, Nationaal museum Paleis Het Loo, Mauritshuis, KLM Real Estate, Chemelot Campus, Tweede Kamer, Rijksmuseum, International Criminal Court and Nationale Politie.

There are multiple links between Brink and TUDelft. For years we hire lots of TU Delft students, in their final thesis and as our colleagues. Two of our colleagues are working at TU Delft.

- ▶ Prof. ir. Hans de Jonge CEO of Brink Groep, leestoeel Real Estate Management TU Delft
- ▶ Prof.dr.ir. Marleen Hermans Managing partner Business development: Publiek opdrachtgeverschap.

What do we offer?

The vakgroep you are joining is Portefeuillesturing. We develop policy simulation models for all kind of real estate challenges. This group of 9 university graded (mostly young) enthusiasts deal with large amounts of data. We are familiar with programmes like QGIS, R, KNIME.

For students we have standard internship compensation arrangements.

Who are we looking for?

We are looking for students and judge them as possible colleagues. We like a positive and active vibe, a puzzler, someone who persists, someone who likes the complex puzzle and solve with a team. You will need to have experience with programmes like R, QGIS and python programming language.

Brink is, simply said, a Dutch oriented company, you'll have to keep this in mind. Although everyone speaks English, everything is written in Dutch. You will have to be able to find your way in Dutch.

Who to contact?

First contact can be made with Joost van der Werf (partner Vastgoedsturing Strategic Asset Management) preferably by mail: j.van.der.werf@brink.nl. He will bring you in contact with the right person(s).

02 BUILDING MEASUREMENTS

We want to know all the dimensions of the real estate in the Netherlands. This should be done with BAG, BGT, AHN lidar data. The more information we can get, the better it is.

We need to relate this information to the specific object according to the BAG ID.

We want to know about roofs, main building, extensions of buildings, roof orientation, size, overstep of the roof of not, chimneys, dormers, etcetera. And characteristics: is it attached, detached, semi-detached, appartement, etc.

First step is to make a proof of concept. When the algorithms work fine we can extrapolate it to The Netherlands.

For this job, we have created an Azure environment (cloud computing).



We are looking for students who like to solve complex puzzles. Experience with LiDAR data and the logic of databases is required.

Contact: Joost van der Werf

03 BUILDING MATERIALS

In 2016 Nan LianLiang published about “Large Scale Asset Extraction for Urban Images”. This direction is what we want to execute to practice. Image recognition is an addition to “building measurements”. The goal is to know more about the assets a building is made of, and to measure them.

Windows, gutter, brickwork, etcetera. What is a building made of, how many square meters, what materials are used? We are also inspired by the research field of “semantic segmentation” [link](#).

Ultimately we want to score defaults on materials: bad paint, rot in wooden frames, leaking gutters.

Contact: Joost van der Werf

04 DASHBOARDING

Dashboarding ([link BrinkBI](#)) is a way of communicating data. We develop lots of dashboards at a high standard: maintenance quality of real estate, cashflow predictions for real estate developments, revenue reports etcetera. To present the information we have already collected in our (Brink Data Lake) databases we want to explore the idea of presenting the information internally on a dynamic map. The work done by the municipality of Amsterdam is inspiring to us <https://data.amsterdam.nl/>. Or using a plugin like Qgis2web.

You need a smart eye for design, a little bit of OCD is appreciated ☺.

Contact: Bart van Moll

05 TRAVELLING IN THE NETHERLANDS

Brink wants to know more about the accessibility of positions in the Netherlands. In our data lake we have lots of information about our country. Herefor we divided the country into ‘pixels’ of 100x100 meters. We want to develop a method on how to operationalize “bereikbaarheid” per pixel.

Bereikbaarheid/accessibility is in our vision a combination of:

- ▶ How far can one travel from this pixel by car, by public transport, by bike (km’s / isolines)
- ▶ This is different on a working day from 8am-9am versus 1:00-2:00pm
- ▶ What can one reach: number of houses, number of schools, hospitals, offices, factories)

The result can be a map, a tool, a database. This is to be discussed.

Specific Data to be used: Ndw.nl, Ndovloket.nl

Contact: Carolien van Hout/Joost van der Werf

