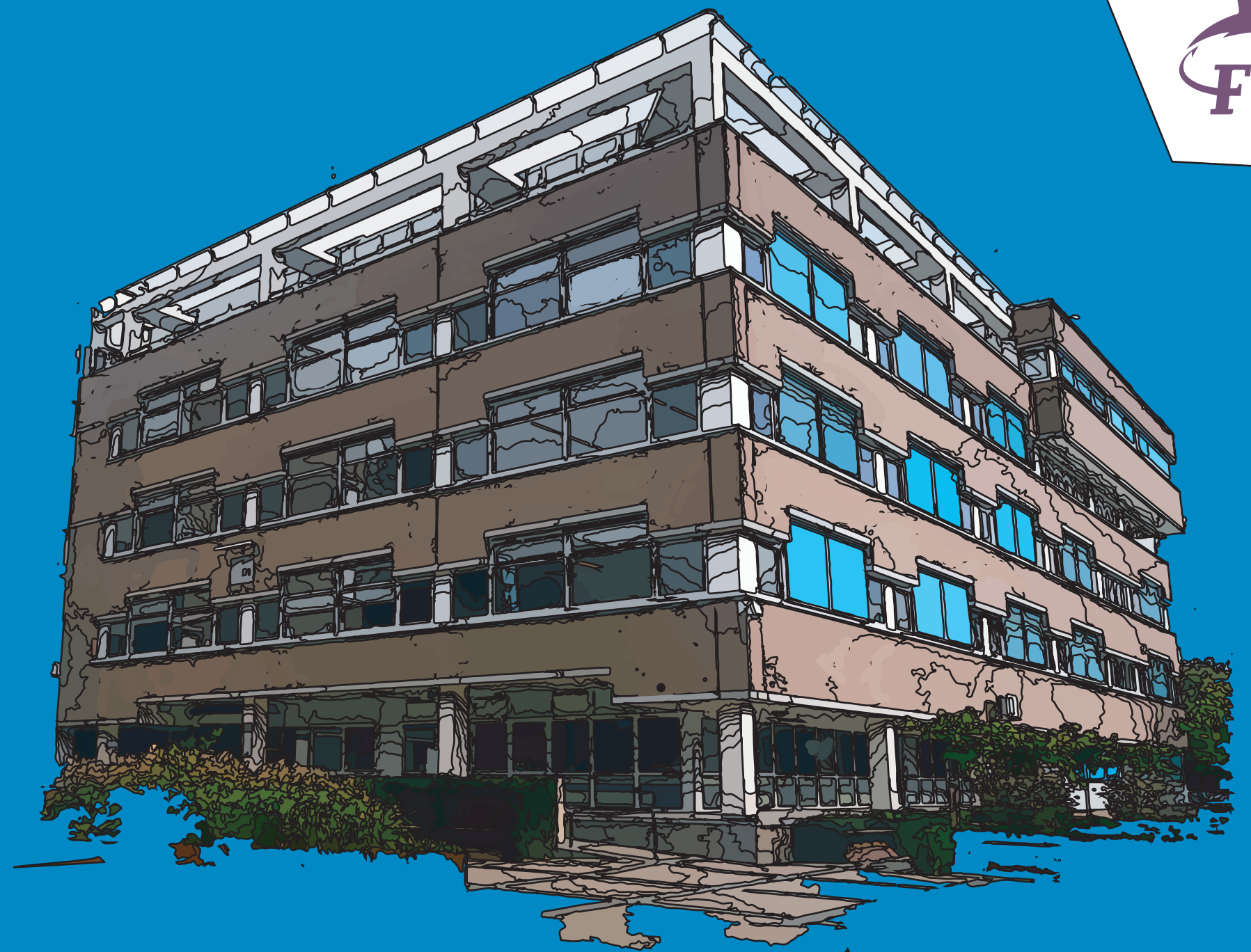


THE PROJECT

Due to the free form of education Fontys follows, it's has little to non insight in where students spend their time. If the school has this information it can invest better in the things that improve the learning environment and stimulate students.

Past september the school started a pilot which determines the number of students present, on level 3 & 4, based on wifi data received from the school's network.

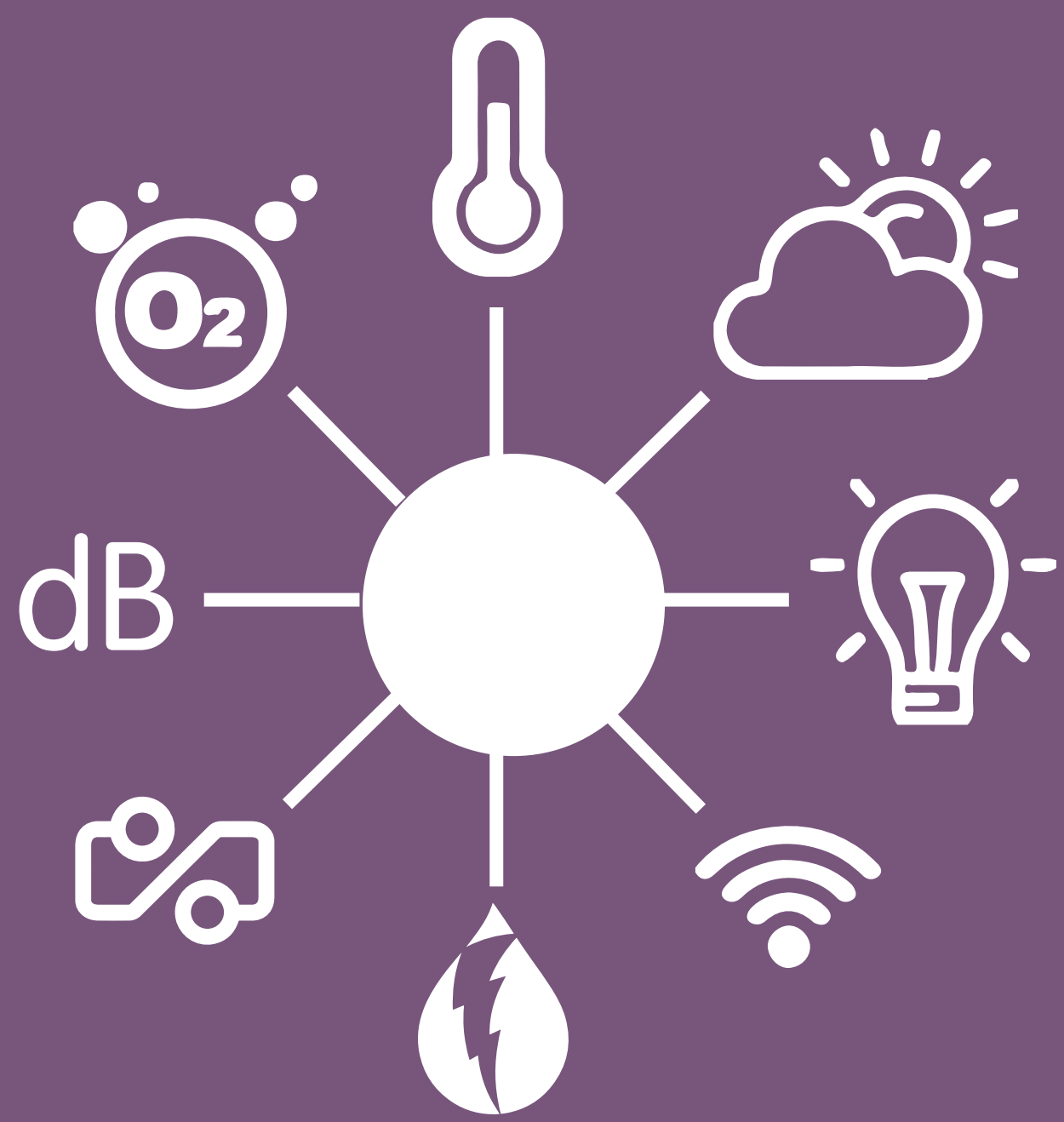
Currently only having one simple visualization of the number of students of each floor per time window. This isn't ideal so the task they gave to stripe-solutions is to expand the use of the current data



THE FONTYS BUILDING R1
IS LOCATED ON CAMPUS "RACHELSMOLEN"
AND HOUSES 3 DIFFERENT STUDIES.

MAIN RESEARCH QUESTION

How can WIFI data and external data be combined to create valuable information?



The data which Fontys has set available is already tidied up and anonymized.

We will be using both internal as external data and datasets to look for significant correlations between changes in a particular variable.

Within the R1 building, there are multiple sensors installed to measure various variables: temperature, oxygen levels, LUX level, UV exposure, decibel level and more. Combine this with the wifi data and you may find small correlations, but to get an image of the greater field of variables, external data is essential. There are several open source data sets available regarding many subjects. 2 of those datasets that may be useful are the Darsky real-time weather dataset and an open source Dutch public transport dataset which includes data about real-time delays and change in travel times.

Before the work in the dataset starts, a literature research precedes this. This research is used to sketch an image about the reason students want or do not want to work in a school building and what the motives are to work at home instead of at school.

- 1 literature research, interviews, EDX courses and workshops
- 2 Data analysis and research by using tools as R, SQL and Azure
- 3 Data combination to look for correlations
- 4 Visualization by using PowerBI

THE DATA

THE SOLUTION

Our goal is to transform the data and add external and, other internal variables to find correlations between student show up and various changes within those variables. This information will be used by Fontys to determine which direction to go regarding any renovations or optimisations of current workspaces. It also gives the school better insight in where their students are. Many are doing a minor, internship or other activities outside of the school buildings, and there is currently no insight of this. This eventually leads into having no distinction between students who dropped out or the ones that are enrolled but are not physically in the building for a longer period of time.

PowerBI is going to be used to visualize all the data and create a dashboard that shows the relevant data at the right time in the right place. The information that is going to be put out needs to be relevant both for the ICT departments and officials from Fontys as well as for the students.

