

PARAMETRIC URBAN DESIGN

CONTRIBUTORS

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SHORT SUMMARY

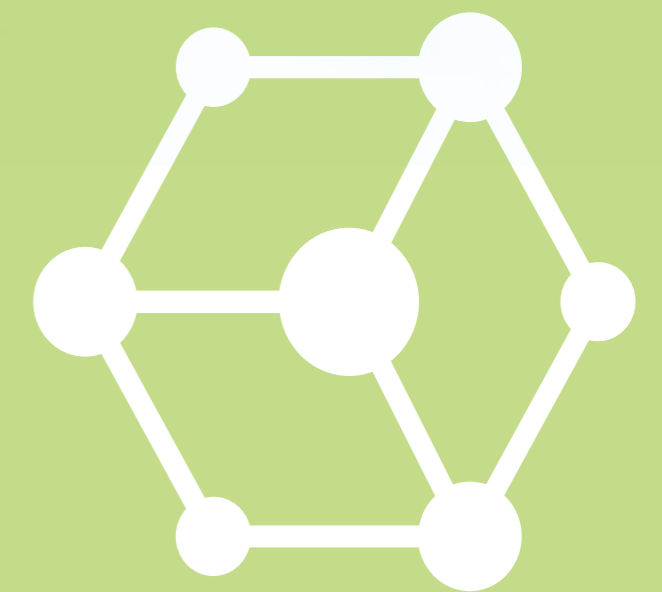
Automation is often seen as something unnatural when it comes to design. After all, how can a computer contribute to a creative process? But instead of seeing this development as a danger, we would like to explore the possibilities of automation in design. How can it help us to spend more time on the creative side of our jobs and less time on repetitive tasks and time-consuming adjustments.

We are currently developing a number of tools that will aid urban - and landscape designers with collecting and connecting data as a means to enable parametric design. This ensures that our spatial designers can easily and quickly choose and optimize a preferred alternative that is integrally assessed, together with stakeholders!

1 Data collection

Instead of visiting 10 different websites to retrieve data about your planning area, we would like all data to be available from 1 standalone cloud-based webapp. By selecting a certain planning area through a map of the Netherlands all available open source data will appear. One can then select the required datasets and download this in different formats such as dwg. pdf. gml. etc...

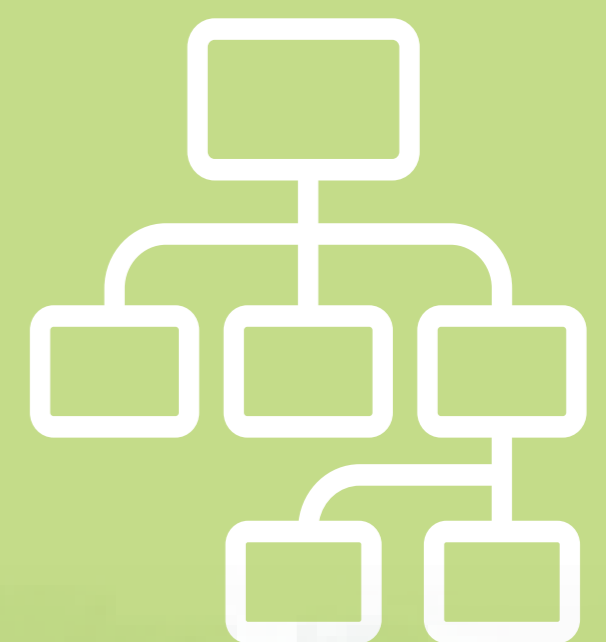
Preferably we can also link RHDHV projects to this webapp, so that data from for example a traffic study can be included immediately.



2 Scenario generator

The tool generates an x number of alternatives based on parameters. These parameters were extracted from the data collected during phase 1. In addition, extra parameters can be added based on wishes from the client or expert judgement from the designer.

Using the tool the alternatives can be assessed based on the parameters. Allowing the user to further research the alternative that is for example the 'greenest', most profitable or experiences the least nuisance from noise.



3 Design & analyse

The tool aids the designer in perfecting a chosen alternative and gives real time feedback to ensure that certain criteria are met. For example when increasing the number of housing units the tool calculates the necessary amount of parking spaces, green space and space for rainwatermanagement and delivers warnings when requirements can't be met.

The tool allows the designer in analysing effects from wind, noise, shadow, revenue.

