

Digitalisation as a tool for sustainable architecture?

# Greenpass

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Greenpass simulates the exterior space in order to achieve a measurable and improved impact in terms of climate adaptation - as the basis for holistic planning at property, district and neighbourhood level. The tool is offered by the company of the same name.

<https://greenpass.io/>

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# Background

Buildings and their exterior spaces influence the urban microclimate. Under these conditions, the microclimatic effects of gray, green and blue infrastructures must be recorded and mapped as holistically as possible. Greenpass achieves this with a simulation-based 3D analysis. Six urban topic areas (climate, water, air, biodiversity, energy and costs) and four bonus areas (biodiversity, resources, social issues, mobility) are covered. In addition, there are over 50 relevant indicators and four official certificate levels. A special feature is that Greenpass can display the costs in the simulation-based analyses in order to determine the optimum ratio between costs and impacts.

As a software-as-a-service solution, Greenpass enables practice-oriented, fact-based decision-making. The tools are used in different stages, which can be based on the HOAI service phases. The aim is to demonstrate climate neutrality at property, district and neighborhood level. Participation and transparency in communication play a decisive role when comparing and discussing variants.

## What?

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- Simulation of the existing and planned outdoor space
  - Climate change adaptation module that incorporates the local microclimate average of the last ten years
  - Climate resilience
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## Who?

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- Landscape architects
  - Urban planners
  - Project developers
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## When?

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- Ideally at an early stage (LPO or 1), but also in later planning phases if necessary
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## How?

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- Free use of the software; three-day training course for 1,500 euros
  - Simulation-based 3D analysis of the exterior space
  - Simulation of the costs
  - Technical requirements: 2D sufficient, 3D desirable, BIM not required
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