

Scientific insights translated into practical design principles for urban green infrastructure

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Municipalities in Europe are rediscovering the value of green spaces in their urban areas. The main societal functions for which municipalities design green spaces (including surface water elements) are the aesthetic value of green spaces and recreation. There is a growing awareness that green infra can do more to society. For example, the municipality Utrecht (one of the four largest cities in the Netherlands) is interested in making more use of green infrastructure in the search of measures that can help to achieve a healthy city. Landscape architects want to take the capacity of green elements for regulating temperature, air quality, water storage and drainage and noise reduction into account. In order to be able to do so, there is a need for translation of scientific knowledge on functionality of green infrastructure into practical design principles. It also requires practical guidelines for how to integrate these principles into the design of multifunctional green infrastructure. Most research is focussed on single functions but for optimizing the design of green infra in order to make it more functional, there is a need for integration of the most crucial design factors for the desired functionalities.

Four Dutch research institutes have collaborated in a first attempt to formulate practical design principles for optimization of green infrastructure. In this presentation we will demonstrate the results of our effort and the pilot project to test the design principles in a case study in the city centre and a residential area in the city of Utrecht. The development of the design principles and our lessons learned from the cooperation with designers and other stakeholders involved from the municipality will be interesting for the discussion on how to bridge the gap between science and application.

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