

Green Street:

Street as the basic building block for constructing circular city of the future

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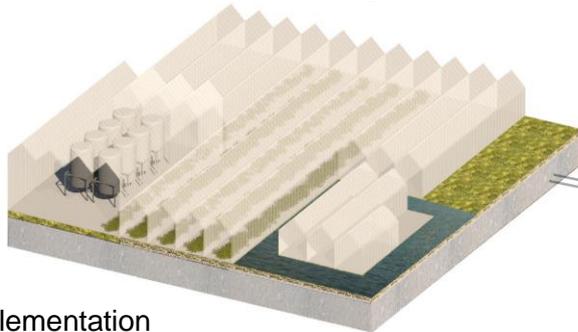
Promotor
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Motivation

Street is an ideal building block for constructing a circular city of the future. Infrastructures are intensively clustered in streets to provide essential urban services like several types of traffics (vehicular, bicycle & pedestrian) and waste(water) & rainfall discharge. Moreover, street level is more attractive, than the household level, for implementing renewable energy production & storage as well as reuse of nutrient from waste in urban farming, due to its larger supply and demand. Streets also catalyse the social interactions within the neighborhood. The path towards a sustainable city should, therefore, start at a sustainable street, which we called “Green Street”.

Technological Principle

The core idea is to re-design the street functionality and morphology. A co-creation with multiple stakeholders is emphasized. Involving multiple stakeholders from the beginning of this revolutionary project will guarantee the impact and sustainability of Green Street concept.



Implementation

The city of Almere is preparing for the up-coming Floriade 2022, the biggest horticultural exhibition in the world, with the theme “the feeding city”. Together with Amsterdam Metropolitan Solutions

(AMS), ETE will design and build a prototype of “Green Street” that is tailor-made for the city of Almere. The Green Street prototype aims to demonstrate the potential of integrating existing/emerging environmental technologies for a circular “street” metabolism and the impact of co-creation. The experience we learn during this prototype will be applied to other cities that also strive for a sustainable urban development.

Research challenges

- Review emerging & existing technological/social approaches for achieving circular use of water, energy & nutrient in urban street level
- Design by selecting & integrating the reviewed technological/social approaches (case study in several cities available)
- Develop indicators & applicability assessment for supporting evaluation & implementation of the generated designs
- Identify potential stakeholders to be involved for implementation of Green Street (in Almere and potentially other cities in the world)



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