

# Abstract

## “Soft space - space for permeability & interaction”

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Research question With a pressure on public space due to a predicted increase of users, the changing climate and an non-supporting existing urban structure with a focus on space for vehicles, there is need for improvement of public space in the neighbourhood Oude Westen in Rotterdam. The research question guiding this design research is:  
"In the context of densification, what are the synergies of the urban microclimate and usability for the public space of Rotterdam?"

Design goal From the perspective of usability and microclimatic design, the design goal leading from the research question is stated as:  
"What interventions within the street scape can improve the public space by an integrated approach of the urban microclimate and usability in relation to densification for Rotterdam Oude Westen?"

The research is focused on the added benefit of public space design, optimized to the urban microclimate and usability. The key climate issues affecting the usability and quality of public space in the Oude Westen are water nuisance and heat stress. Added to that, there is a trend of privatisation of open space and an inside-oriented urban lay-out. With a high percentage of interest in participation among the residents and numerous successful local initiatives, the neighbourhood leaves opportunities underused for becoming the attractive and liveable neighbourhood its location enables.

This design research proposes two neighbourhood structures for improving spatial and experiential legibility with the focus on slow traffic. Secondly, four small scale design locations visualise the spatial and non-spatial interventions for creating great quality public space with conditions for inviting and encouraging use & natural processes.

Key words Urban microclimate - usability - water nuisance - heat stress - public space design