

Can vernacular knowledge adapt public space and optimize thermal comfort given the adverse effects of climate change?



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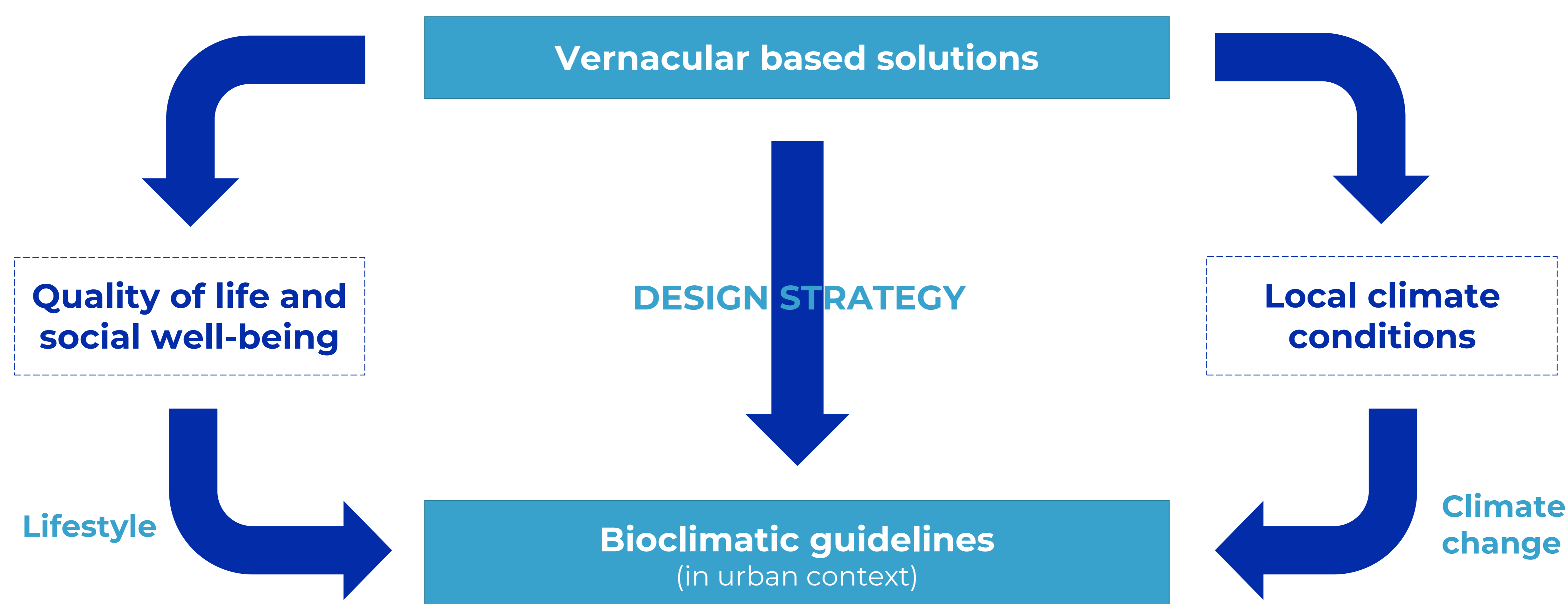
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1. Outline of the sustainability strategy in urban design



The evident change in people's lifestyles increasingly determines the need for the use of thermally comfortable outdoor spaces, bringing benefits in the environmental, economic, and social domains of the respective cities.

This type of approach does not prevent urban designers from seeking to integrate tradition with modernity, to define a hybrid system, in a fusion of intelligent materials with traditional materials, allowing the exploration of new aesthetic and functional concepts.

2. Guiding factors and key elements

Guiding factors	Key element
i. Surface reflectivity and color in architecture	Solar orientation and urban design
ii. Vegetation use and evaporative cooling	Plant species and water mass
iii. Multi-material construction elements	Materials combination
iv. Shading and ventilation	Sun protection and air circulation
v. Sun cathment/reflection areas	Openings influence and roofing

3. Expectations

The bioclimatic vernacular solutions that are more effective and efficient can be used as guidelines for the eventual creation of specific regulations, in terms of the measures to be adopted by municipalities in the building/rehabilitation construction licensing processes, leading to the preservation of the urban heritage.

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