



Mainkai street showing high potential for cycling via high NACH value, complimenting the on-site intervention (left), Lakshya Pandit

Assessing street network potential for active mobility

Part of the multimodal accessibility study in Rhein-Main agglomeration

Lakshya Pandit

Project

The network of streets within an urban space showcase certain attributes which favour particular user-groups with their movement. Cyclists are a user-group which can transition from a pedestrian view-point of movement in space to a fast-moving group, often sharing the space with motorized vehicles in cities. Within the network of streets, there are certain routes which favour the cyclists with respect to least deviation of movement, and at the same time being the shortest route between an origin and a destination point. The NACH measure within Space Syntax theory, assists in producing a more visual perspective of routes having the potential of directness for cycling. Considering the nine urban areas in the selected cities forming the Rhein-Main urban agglomeration, the streets are mapped based on two perspectives i.e. small-scale and citywide scale. The citywide scale with 2.5-kilometre observation radius helps in understanding a larger network of streets. It showcases how the main network of potential cycling routes integrate on different scales for implementing long-term active mobility plans for a city.

For instance, the analysed maps through different Space Syntax attributes showcased higher potential of Mainkai street as a direct way for cycling and attracted more pedestrians (which was earlier dominated by car users). The research analysis via outcomes and recommendations were presented to the city in 2020. One of the recommendations included on-site intervention through the implementation of dedicated bicycle pathway (see Figure)

which reflected Mainkai street's potential for cycling (via NACH). The on-site frequency of user-groups supported the spatial analysis, and the installation of new cycle lanes in 2021 provided a pathway to meet the street's potential for supporting both cyclists and car users.

Coordination

Urban Design and Planning Unit (UDP)

Partners

City of Frankfurt am Main

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Publications

Pandit, L., Fauggier, G.V., Gu, L. & Knöll, M. (2021), How do people use Frankfurt Mainkai riverfront during a road closure experiment? A snapshot of public space usage during the coronavirus lockdown in May 2020, *Cities & Health*, 5:sup1, S243-S262, DOI: 10.1080/23748834.2020.1843127

Website

www.architektur.tu-darmstadt.de/urbandesign

Comments