

Designing Sustainable Urban Transport Networks: A Brief Report on Moroccan Cities,

A, m, a, l, E, l, A, m, r, a, n, i, ,, K, a, r, i, m, B, e, n, j, e, l, l, o, u, n, ,, O, m,
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| Abstract

Rapid urbanisation in African nations strains existing transport infrastructure, causing congestion, pollution, and diminished quality of life. Moroccan cities present a pertinent case of this challenge, necessitating engineered solutions for sustainable mobility. This brief report analyses key design principles and implementation strategies for sustainable urban transport networks, using the Moroccan context as a case study. It aims to identify effective engineering approaches suitable for rapidly growing cities. The report employs a descriptive, analytical approach based on a review of documented projects, policy frameworks, and infrastructure developments. It synthesises information on design interventions and their reported outcomes. A central finding was the critical role of integrated multi-modal design, particularly the introduction of Bus Rapid Transit (BRT) systems. The integration of a BRT corridor in one major city was associated with a notable reduction in private vehicle use along its route. Effective network design prioritises high-capacity public transit, dedicated right-of-way infrastructure, and pedestrian connectivity from the outset. The design of sustainable transport networks in this context is most effective when founded on integrated, multi-modal principles during initial planning phases. Future projects should embed these integrated design principles in master planning. Further engineering focus is needed on last-mile connectivity solutions and adapting sustainable technologies

to local operational conditions. urban transport, sustainable design, transport engineering, multi-modal networks, Bus Rapid Transit, Morocco

This report provides a consolidated engineering perspective on transport network design for African urban contexts, highlighting practical implementation lessons from a North African case.
