Integrating e-scooters in urban transportation: why sustainable transport policies failed

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Abstract: The integration of innovative mobility solutions based on electric vehicles, such as electric cars, electric scooters, and electric cycles, into urban transportation systems may provide several social advantages, including environmental and economic benefits to improve quality of life. In this paper, we examined what policy regulations should be introduced at the government level to facilitate the integration of electric scooters into urban transportation. First, we reviewed what regulations are currently in place for electric scooters in Hungary and conducted seven focus groups with several user types between 2022 and 2023 to understand the pain points faced by today's users. For this we used quality function deployment (QFD), to analyze the user's needs and legislation to determine the appropriate priority level. Finally, we conclude that e-scooters only have the potential to become a disruptive niche invention with the capacity to alter urban transportation networks, if an unwanted public image is avoided, and governments can play an important role in this endeavor. According to the findings, users are eagerly anticipating new laws governing the usage of e-scooters, such as regulating maximum speeds, designating the usage of e-scooter infrastructure, and appointing dedicated parking places. With this study, the government will have a reference point in the future when developing e-scooter legislation, as well as a basic understanding of the significance of taking into consideration the emergent behavior of society in the construction of rules.

Points for Practitioners: The usage of Quality Function Deployment (QFD) is not so widespread in the service sector. However, as this study illustrates, this framework can help identify and address stakeholders' needs and expectations and help public administrators prioritize their resources and efforts to provide better services to the community and improve the overall quality of life.

Keywords: electric scooter, regulation of electric scooters, focus group, quality function deployment, QSML