Active modes of transportation, such as walking and cycling, will play a critical role in cities impacted by climate change. Active transportation (AT) can contribute to decarbonising cities and support adaptation to urban climate futures through supporting population health and urban economies. There is a role for digital technology to support AT by facilitating better communication of information and improving the experience of pedestrians, cyclists and other modes of AT. While the application of technology for AT has attracted attention from urban designers and authorities, little attention has been devoted to the main factors that need to be evaluated when designing and applying technology for people’s use. This is a critical gap in the knowledge since people are the final users of the digital technologies and smart services and their success depends on how they meet people’s needs and preferences. This research focuses on Active Transportation Infrastructure (ATI) as a central aspect of the transportation system. ATI refers to the physical features of AT mode (e.g. width and quality of pathway, cycle track, bike lane) and the related social and behavioural aspects of these modes of transportation. This paper reports on findings from semi-structured interviews conducted with transportation experts to identify the criteria that should be considered in designing and applying technology to inform a concept of smart active transportation.
infrastructure (SmATI). The interview findings indicate five key criteria that are essential to consider for enhancing SmATI: safety and security, simplicity, connection and integration, information, and prioritisation. The research outcomes provide new and updated knowledge for designers, urban planners, and decision-makers focused on designing SmATI to facilitate AT.

Keywords
Active transportation; smart cities; sustainability; cycling; walking; built environment; technology.

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