

## **Getting around the smart city**

September 9 2021, by David Bradley



Credit: CC0 Public Domain

Smart cities will not be truly smart until they have sustainable transport systems. New work published in the *International Journal of Shipping and Transport Logistics* has used fuzzy logic to look at the options.

Chenghua Wang of the School of Public Affairs at Chongqing University, in Chongqing, China, and colleagues Oscar Sanjuán Martínez and Rubén González Crespo of the School of Engineering and



Technology at the Universidad Internacional de La Rioja in Spain, suggest that current expansion of transportation is having an increasingly detrimental effect on environment at the local and global levels as well as reducing the quality of life for many people. They suggest that governments and those running our cities must invest in clean, safe, efficient, economic, and sustainable transport networks to address this growing problem. This is even more pressing given the demands of the citizens living and working in technologically rich cities, which we might refer to as <u>smart cities</u>.

The problem facing policy makers, planners, and stakeholders in transportation is how to define what is meant by sustainable transport and how to select the appropriate systems to fulfill the demands of such a system.

The current team has introduced what they refer to as an improved hybrid <u>fuzzy logic</u> system (IHFLS) for the generation of aggregate values for the sustainable evaluation of hybrid fuzzy <u>logic</u> to allow the decisions to be made more effectively. In the first step, they define the sustainability evaluation criteria for transport. In step two, experts provide language ratings against selected criteria for potential alternatives. Finally, the IHFLS generates aggregate results for the evaluation of sustainability and the choice of the best alternatives. The approach allows the social, economic, and environmental considerations, to be balanced equitably, viably, and in a way that stakeholders can bear. Optimally, all of these criteria will mesh together to enable a sustainable solution to be found for a given <u>city</u>.

**More information:** Chenghua Wang et al, Improved hybrid fuzzy logic system for evaluating sustainable transportation systems in smart cities, *International Journal of Shipping and Transport Logistics* (2021). DOI: 10.1504/IJSTL.2021.117295



## Provided by Inderscience

Citation: Getting around the smart city (2021, September 9) retrieved 5 May 2024 from <u>https://techxplore.com/news/2021-09-smart-city.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.