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THE SMART MOBILITY SYSTEM AND ITS INFRASTRUCTURE EVALUATION FACTORS AND INDICATORS

Simona Zapolskytė

prof. dr. Marija Burinskienė

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One of the strategies for efficient transport service management is to implement advanced technologies for managing urban transport systems. Countries develop and exist under different socio-economic conditions. As a result, there is no universally accepted system of evaluation indicators for the smart mobility system and its infrastructure that can be applied in any country or city. Nowadays, there is a little research on comparing smart mobility systems in different cities. This presentation proposes a framework for comparing the smartness level of the mobility system and its infrastructure.

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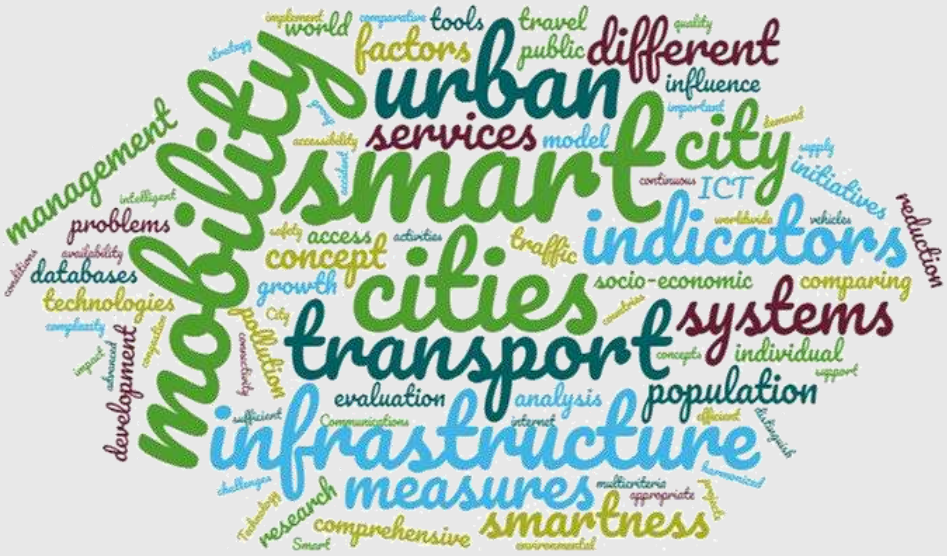
Rapid urban population growth has had a negative impact on the urban connectivity system, with the need to address the problems of improving transport services and increasing demand for public transport. However, the increase in transport supply is often accompanied by undesirable results. The cities are facing challenges such as traffic jams, rising property prices, environmental pollution, overpopulation and reliance on private vehicles. Thus, the right strategy to effectively manage urban transport services is a major concern for cities around the world. While the world population is increasing, it is declining in the Baltic States. Nevertheless, the number of cars is growing and cities are facing the same problems.



Despite various initiatives to promote smart transport systems in urban areas, little is known about how these systems work in cities. Therefore, it is necessary to formulate a proper concept of smart mobility system and to select the indicators of smartness describing it.

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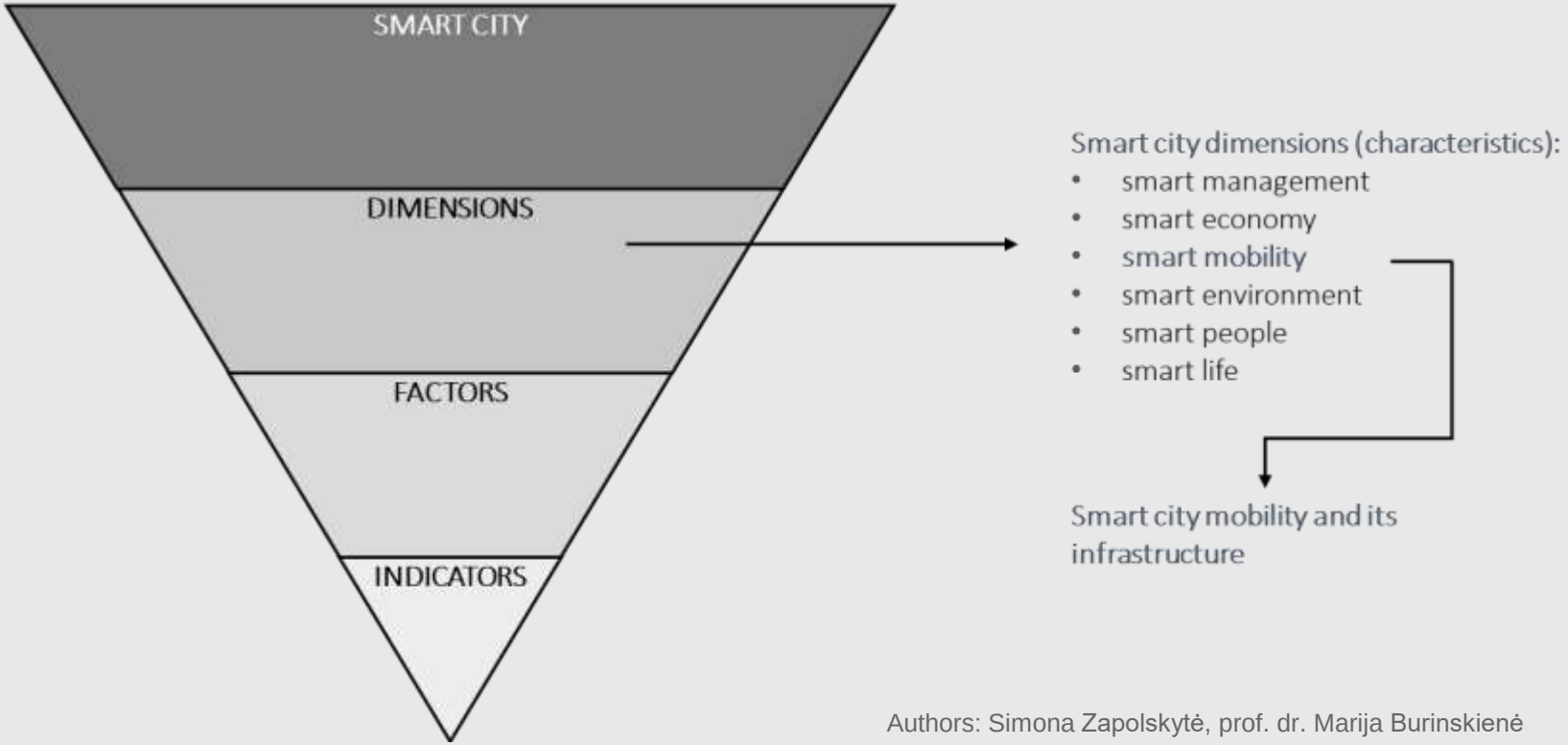
Smart cities around the world are quite diverse in their characteristics, requirements and components. After examining smart city models, six dimensions of a smart city are highlighted: smart management, smart economy, smart mobility, smart environment, smart people and smart life.



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More than 20 scientific papers with one or another classification of indicators have been analyzed in order to select smart mobility system and its infrastructure indicators. More than 90 different indicators were found describing the smartness of the urban transport system. Twenty-three indicators were selected using the exclusion method.

ANALYSIS OF SCIENTIFIC PAPERS → **INDICATORS SELECTION USING EXCLUSION METHOD** → **EVALUATION MODEL CREATION**

The selected indicators are grouped into five groups (factors) according to their influence on the mobility system. The model for evaluation of the smart city mobility system and its infrastructure was created.

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Frequency of recurrence of indicators selected by various researchers

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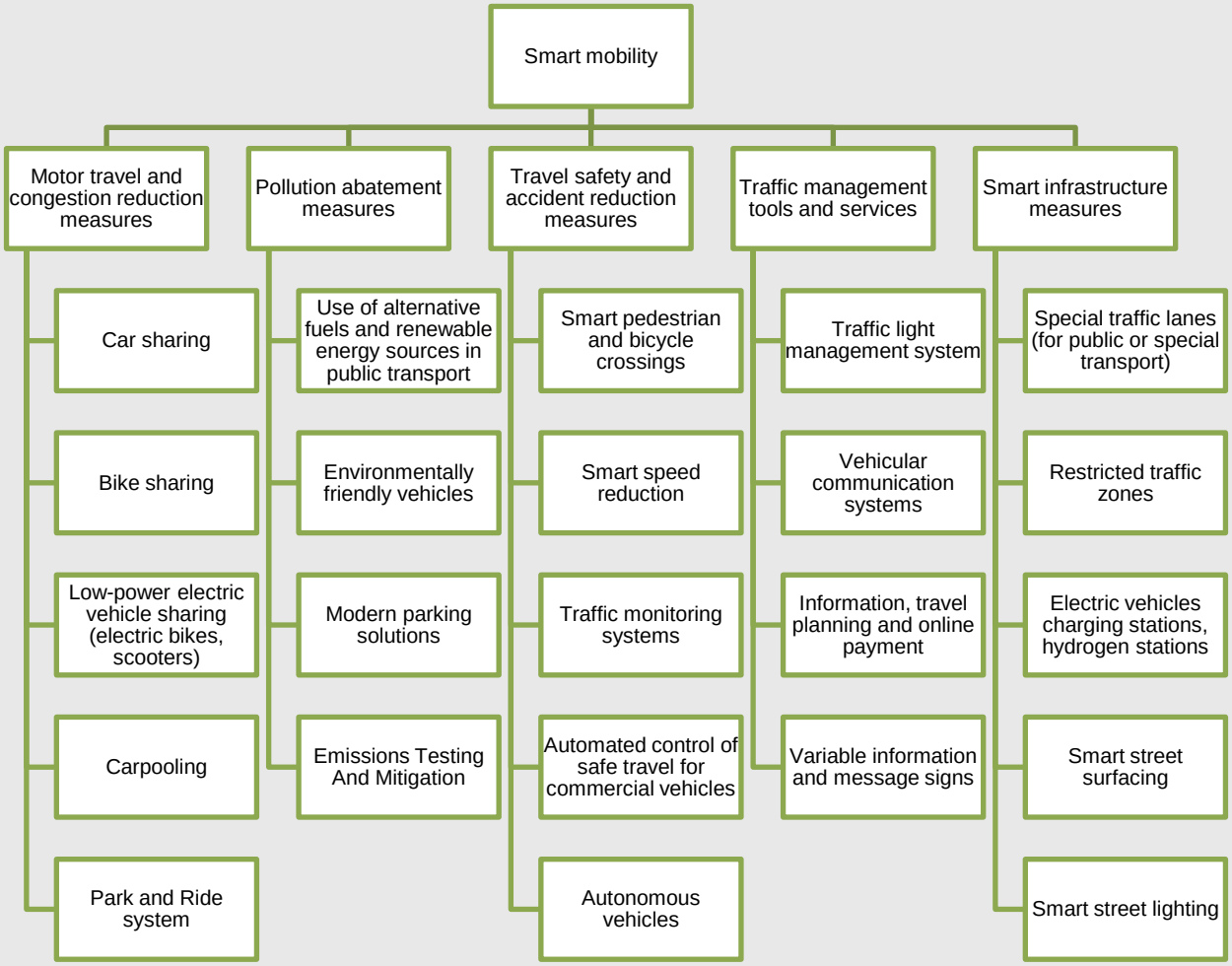

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CONCLUSIONS

- The goal of a smart city is to promote a sustainable environment that is safe and comfortable for citizens. A smart city is primarily about people, not technology.
- The implementation of Intelligent Transport Systems in cities can be considered as one of the ways to solve the problems of the mobility system. This would ensure an effective reduction of congestion and accidents, traffic control and help solve public transport problems.
- It can be assumed that the lack of appropriate harmonized concepts and indicators may be the reason for the lack of comprehensive comparative research on ITS in cities. In order to carry out comprehensive comparative studies of smart mobility systems in cities, it is necessary to develop appropriate benchmarks to describe the smartness level of the smart mobility system.
- The developed hierarchical model of smart mobility system evaluation will be used in expert research for further analysis and evaluation of smart cities.

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THANK YOU FOR YOUR ATTENTION!

ANY QUESTIONS?

Simona Zapolskytė
simona.zapolskyte@vgtu.lt