

Digital Transport Days

What role of infrastructure and technologies like AI for self-driving shuttle services?

The FABULOS project

9 October 2019

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Photo: Lauri Rotko

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Forum Virium Helsinki: innovation company of the city

Build Helsinki into the most functional smart city in the world in collaboration with companies, the scientific community and residents.

- Smart mobility, robotics, data, Internet of Things
- A non-profit limited liability company owned by the City
- City from authority to enabler: importance of “living labs”



FABULOS

FUTURE AUTOMATED BUS URBAN
LEVEL OPERATION SYSTEMS

FABULOS 2018–2020

- Aim: developing and testing of an off-the-shelf service that can operate fleets of autonomous shuttles in mixed traffic, without steward on board and in regular speeds
- Not on the market yet: R&D done now to answer to cities' needs
- Smart mobility / autonomous transport first time as a Pre-Commercial Procurement

Big data in FABULOS

A white quadcopter drone is shown in flight against a background of a cloudy sky. The drone is positioned in the lower right quadrant of the image, with its four propellers visible. The sky is filled with soft, white clouds, and the overall lighting is somewhat dim, giving it a moody atmosphere.

Data from lidars, sensors, cameras, road infrastructure feeds machine learning algorithms

Need for collaboration between vehicles and interaction between physical and digital infrastructure

Photo: Pexels

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A crucial role for AI in FABULOS

Remote driving platform uses AI to make decisions

Photo: Justus Hirvi/Bontzu & Muji



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Examples of AI in FABULOS

- Designing an optimal transit network for a neighbourhood
- Image processing for traffic data collection
- AI-based decision support systems for (on-demand) route planning
- Decision-making on diverting to an alternative routes
- Dynamic route guidance
- Automatic incident detection
- Incident and disruption simulation

AI-related challenges for automated shuttle buses

- Data quality
- Data volume
- Data privacy issues

AI in action: April 2020

- Field tests in all procuring cities: Apr. - Jun. 2020 in Helsinki, Tallinn, Gjesdal and Aug.- Oct. 2020 in Helmond, Lamia, Porto
- During Transport Research Arena 27-30 April 2020 in Helsinki: **welcome to see AI at work!**
- Crucial to build CAD ecosystem and increase knowledge among stakeholders. Also on AI in self-driving shuttle services



Thanks for your attention!

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