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# Final Conference

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SMART PEOPLE – SMART ECONOMY – SMART CITIES



## Experiences with piloting a robobus in Helsinki

14/09/2022

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 731297.



# General info of the Action

- mySMARTLife mobility Action 23. Autonomous Electric bus pilot to address Urban last mile mobility issues
- Seasonal (~ 6 mo./yr.) automated electric last mile small bus (robobus, shuttle) pilots in Helsinki during two years, 2018 & 2019
- An automated bus operated on open roads among mixed vehicle traffic
- Studying especially the overall usability of automated buses as part of public transport as well as environmental friendliness
- First automated bus trials in Finland with fixed schedules and integration to public transport authority's, Helsinki Regional Transport (HSL), systems



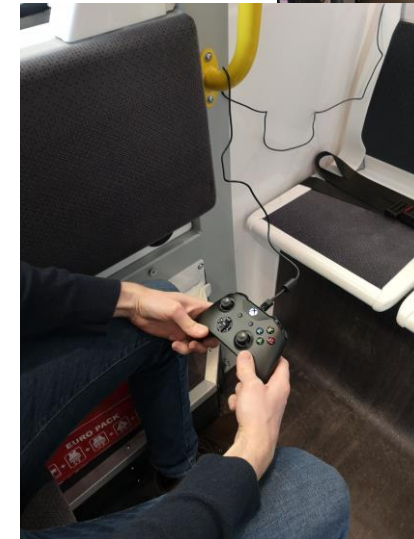
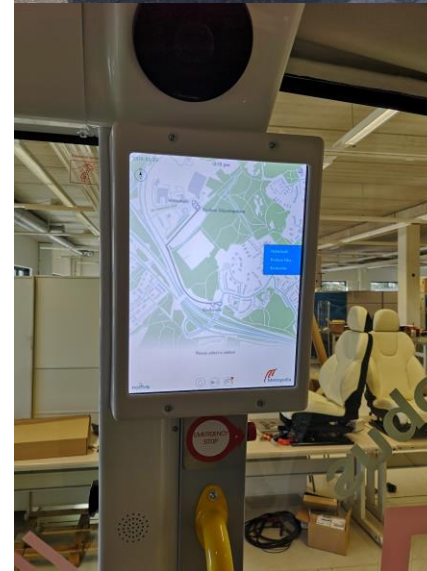
# Why robobuses/automation?

- Cost savings and improvement in safety
- Increase of public transport coverage and service level
- Lowering of CO2 emissions through electrification and decrease of passenger car usage



# Vehicle that was used

- Navya Autonom Shuttle
- Complementary public transport service for first/last mile of the travel chain, designed for 15 passengers
- Operates on predetermined routes on low speed areas (max 30 km/h)
- Operator (responsible person/driver) on-board
- Registered in Finland with test plates as a passenger vehicle → 8 passengers + 1 operator





## Kivikko 2018, line number 94R

- Worked as a last mile solution for connecting HSL trunk line buses to a sports park
- Route length: 1 km to one direction
- Total distance travelled: 2681 km
- Passengers: 1150
- 2 bus stops
- Speed limitation 50 km/ -> lowered to 40 km/
- “Operator”: Metropolia



# Kalasatama 2019, line number 26R

- Serving parts of the district where normal HSL bus line did not operate
- Route length: 900 km round driven
- Urban district
- Distance travelled: Total 1325 km
- Passengers: 3584
- 3 bus stops
- Speed limitation 30 km/h
- "Operator": Rolan and Metropolia



# Experiences of the pilots

- Still various situations, where the operator had to intervene manually
- In Kivikko notable problems were caused by the speed difference in comparison to the other vehicles
- Energy consumption of the bus were surprisingly high
- Where is the actual need for a robot bus service?
- Passengers are ready to use an automated bus service



# Conclusions

- A quick conclusion is that the future is here, but needs refining
- The robobus works, but has its limitations and still needs an operator
- We need to be careful not to adopt technology for the sake of new technology
- Cities play an important role in serving as a testbed for developing automated vehicle solutions







More information: [D4.15 AUTONOMOUS  
LAST MILE PILOTS IN OPERATIONS](#)



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# Thank you for your attention!

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