

# Passenger Transportation BMEKOKUM208

## 1. Task

*Introduction, evaluation, comparison of the passenger transportation systems and their recommendations for further development*

*Presentation of the results*

## Topics

1. location based car-sharing systems with public vehicle (same or different pickup and return places)
2. free-flow car-sharing systems with public vehicle (pickup and return places are undetermined)
3. car-pooling systems with private vehicle
4. bike-sharing (public bicycle) systems
5. electric (pedelec) bike-sharing (public bicycle) systems
6. ride-sharing systems
7. ride-sourcing systems
8. operation of electric vehicles (and light vans)
9. charging infrastructure of electric vehicles (according to deployment and capacity data)
10. hydrogen and fuel-cell technology in the transportation
11. taxi services
12. electric taxi services
13. chauffeur services
14. intermodal hubs
15. airports and terminals (terminal and car parking) connecting systems
16. automatized airport transportation systems  
(Personal Rapid Transit Systems, Automated People Movers)
17. workplace travel plans - Workplace Delivery Plans
18. BRT (Bus Rapid Transit) systems
19. modern urban public transportation ticketing systems (e-ticketing)
20. road toll collecting systems (depends on the volume traffic)
21. HOV (High Occupancy Vehicles) systems
22. two and three wheels one-person urban vehicles - Personal Mobility Vehicles (PMV)  
(Personal Transporter, Human Transporter, Personal Transport Robot)
23. foldable vehicles
24. operation of autonomous (driverless) private, road passenger vehicles
25. operation of autonomous (driverless) road freight vehicles (integration into the city logistic conception)
26. autonomous (driverless) public transport
27. cableways passenger transport systems - Cable Cars
28. urban water passenger transport systems

The assigned task should contain at least 3 different transportation systems based on the chosen topic.

The aspects of the assigned task (draft outline):

1. Relevance of the topic. Achieved results (historical reviews), development trends
2. Literature review – State of the Art
3. Introduction of the operating environment of the chosen passenger transportation system
  - *urban and geographical features,*
  - *demographic characteristic,*
  - *economic activities and income condition, etc.*
4. Introduction of the passenger transportation systems, processes
  - *operating company, operation features*
  - *financing, tolling features*
  - *attributes of the user groups*
5. Evaluation, comparison of the systems
  - *from passenger side*
  - *from operator side*
6. Elaboration and recommendation for further development
7. References with English-language scientific literature (at least 5)

Submitted assignment should contain app. 8 pages

Submission: in editable Microsoft Word format (.doc or .docx).

The results of assigned task should demonstrate at the Power Point presentation.

The documentation and presentation should be sent via e-mail to the teaching assistant's e-mail address. The name of the files should be your name (Firstname\_Familyname).

teaching assistant's e-mail address: [foldes.david@mail.bme.hu](mailto:foldes.david@mail.bme.hu) (Dávid Földes)