

ROLE AND TRENDS OF AUTOMATION IN TRANSPORT:

Safety, efficiency, and sustainability

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AUTOMATION AND THE CHALLENGE OF ROAD SAFETY

Advanced Driver Assistance Systems as part of an integrated “safe systems” approach



Reduce risk exposure: local danger warnings, dynamic traffic management, road works warning;



Avoid / mitigate severity: emergency braking, blind spot monitoring, obstacle and collision warning, lane departure warning;



Learn and improve: probe vehicle data, accident recording;

What WB is doing:

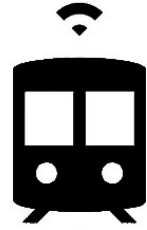
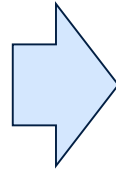
- “Big Data” initiatives to open up and use govt. information
- Accident tracking and reporting (inputs to automated systems)
- National vehicle and infrastructure standards

AUTOMATION AND EFFICIENCY

More than just saving on labor – allows for transformation of Transport business models

Example of Automation in Metro Operations

(using automation to transform business model)



Multi-skilled staff



▪ Drivers

- Stations chief
- Tickets sellers
- Customer service agent
- Station attendant

- Increased Job satisfaction:
- Autonomy & empowerment
- Client oriented services
- Flexible staffing
- Resilient operations

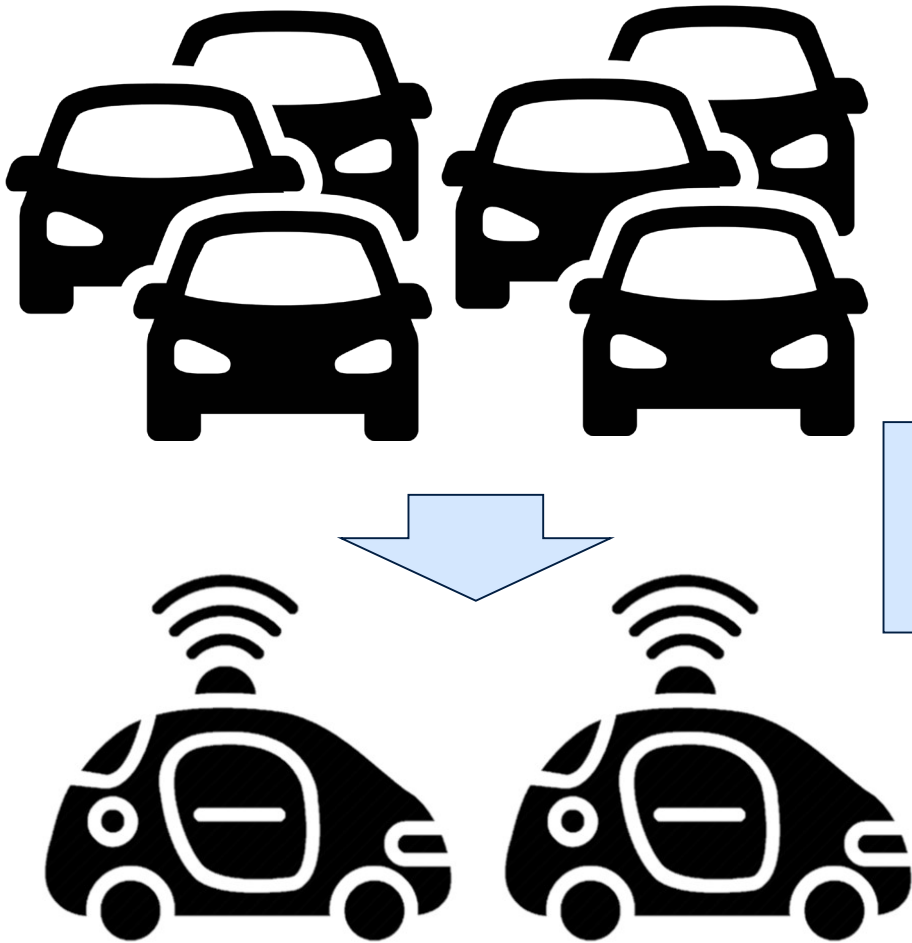
What WB is doing:

- Automation in public transport (ticketing, driverless / semi-driverless)
- Transformation of Operator business models using automation
- Electronic toll collection and payment systems

Acknowledgement: From WB case study of Transports Metropolitans de Barcelona

AUTOMATION AND SUSTAINABILITY

Direct and indirect benefits on offer with autonomous vehicles



*Potential **opportunities** that impact sustainability*

- Smaller shared fleets
- Reduced total vehicle kilometres
- Enhanced sector finances
- Reduced supply of parking and land use reallocation

*Potential **risks** to sustainability*

- Lower generalized cost of private transport
- May encourage sprawl
- Potential for exclusion of low income groups

What WB is doing:

- Transit Oriented Development & sustainable land use planning
- Travel Demand Management interventions
- Vehicle sharing for fleet reduction
- Transition to eMobility (complement to automation)

Thank you!



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