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**SESSION I: Role and trends of Automation in Transport:
Safety, efficiency and sustainability**

The way to Sustainable, Integrated Automated Urban Mobility

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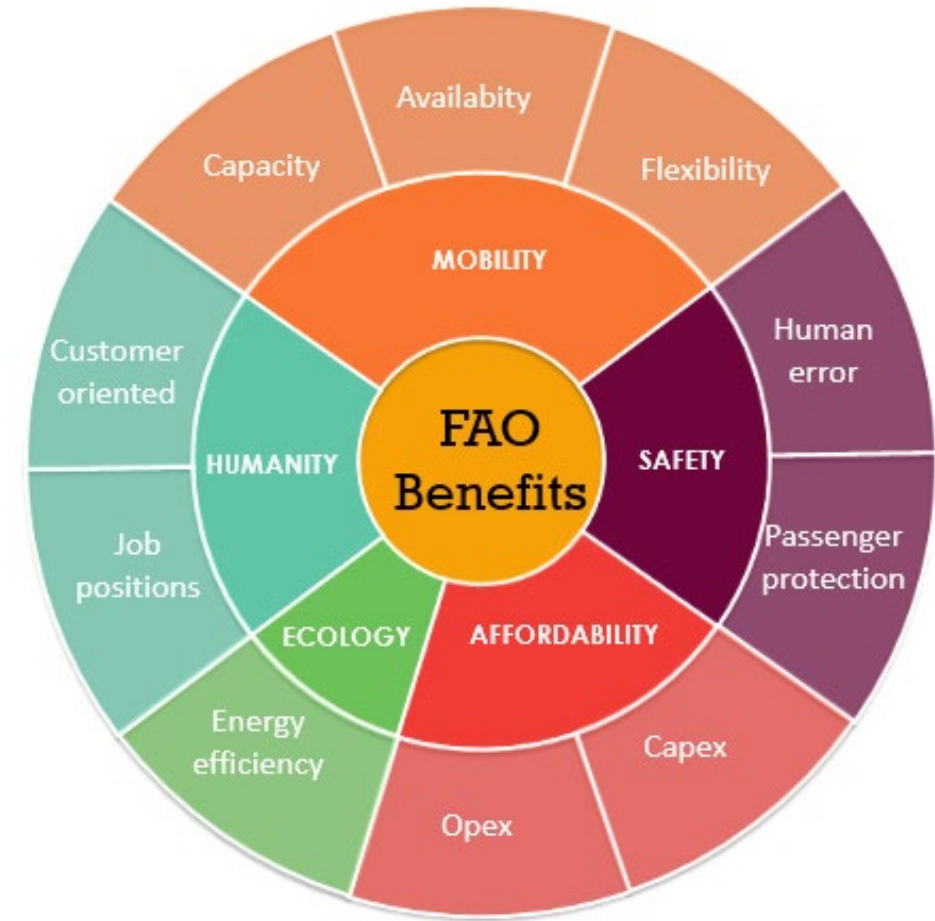
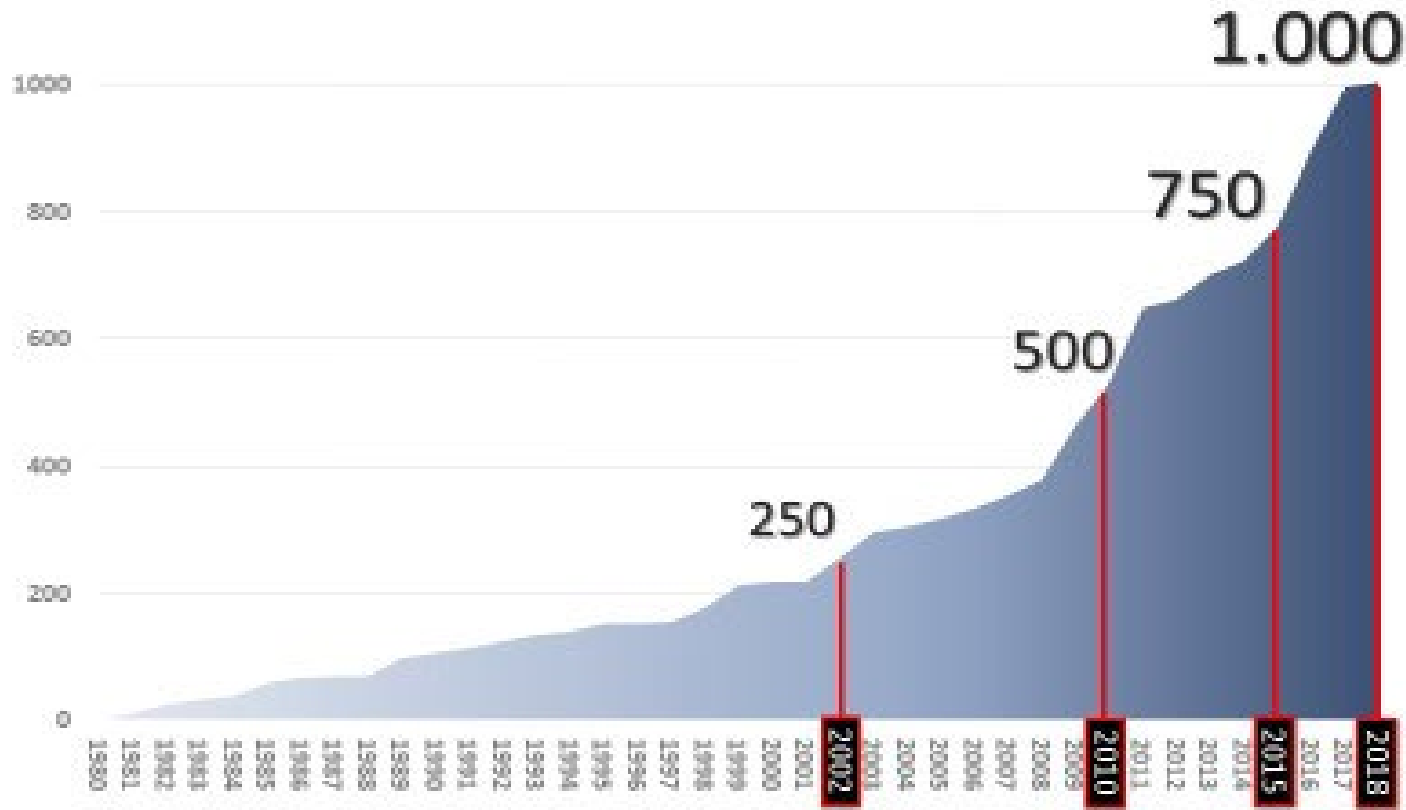
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FULLY AUTOMATED METRO: AN EXPONENTIAL DEVELOPMENT SINCE MID 80IES



2018

- 1026 km in operation
- 64 lines
- 42 cities
- 19 countries
- 7% of total metro length



Road Autonomous Vehicles

Privately owned cars



- ⊖ No effect on car ownership
- ⊖ No effect on number of parked cars (cars unused most of the day)
- ⊖ No effects on costs /km
- ⊖ No effects on mobility for people that do not own a car
- ⊖ Even more car traffic (as it is even more comfortable and attractive to go by car)

> **Unsustainable, even more car traffic**

Shared fleet of vehicles

- + Strong reduction in number of cars (reduced car ownership, effective use of cars as they operate most time of the day)
- + Drastically improved mobility for people that do not own a car

Fleet cars **COMPETING** with traditional public transport services



- + Street reclaiming (less parked cars)
- + Improved access to public transport
- + Improved mobility for people that do not own a car
- ⊖ More traffic (strong increase in Vehicle Miles Traveled - VMT)
- ⊖ Inefficiency (small vehicles replacing buses and trains)
- ⊖ Passenger loss for traditional public transport walking and cycling

> **Better mobility, less efficiency**

Fleet cars **INTEGRATED** with traditional public transport services



- + Large scale street reclaiming
- + Highly improved access to public transport
- + Highly improved mobility for people that do not own a car
- + Strong decrease in VMT
- + High gain of efficiency (large and small vehicles perfectly mixed)
- + Low costs/km

> **Sustainable, better mobility and equity**