

City and Public transport stakeholders view and needs



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SOL+ Africa Regional Training

Unit 5: A case for electrified public transport



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Fleet operator needs

The ASSURED project



The Public Transport market



Balance three main pillars

- High investment costs of the PT network and infrastructure
- Providing the service to the largest amount of people
- Ensuring accessibility by providing the service at a low cost



The Public Transport market

Relationships among actors of the Public Transport Market

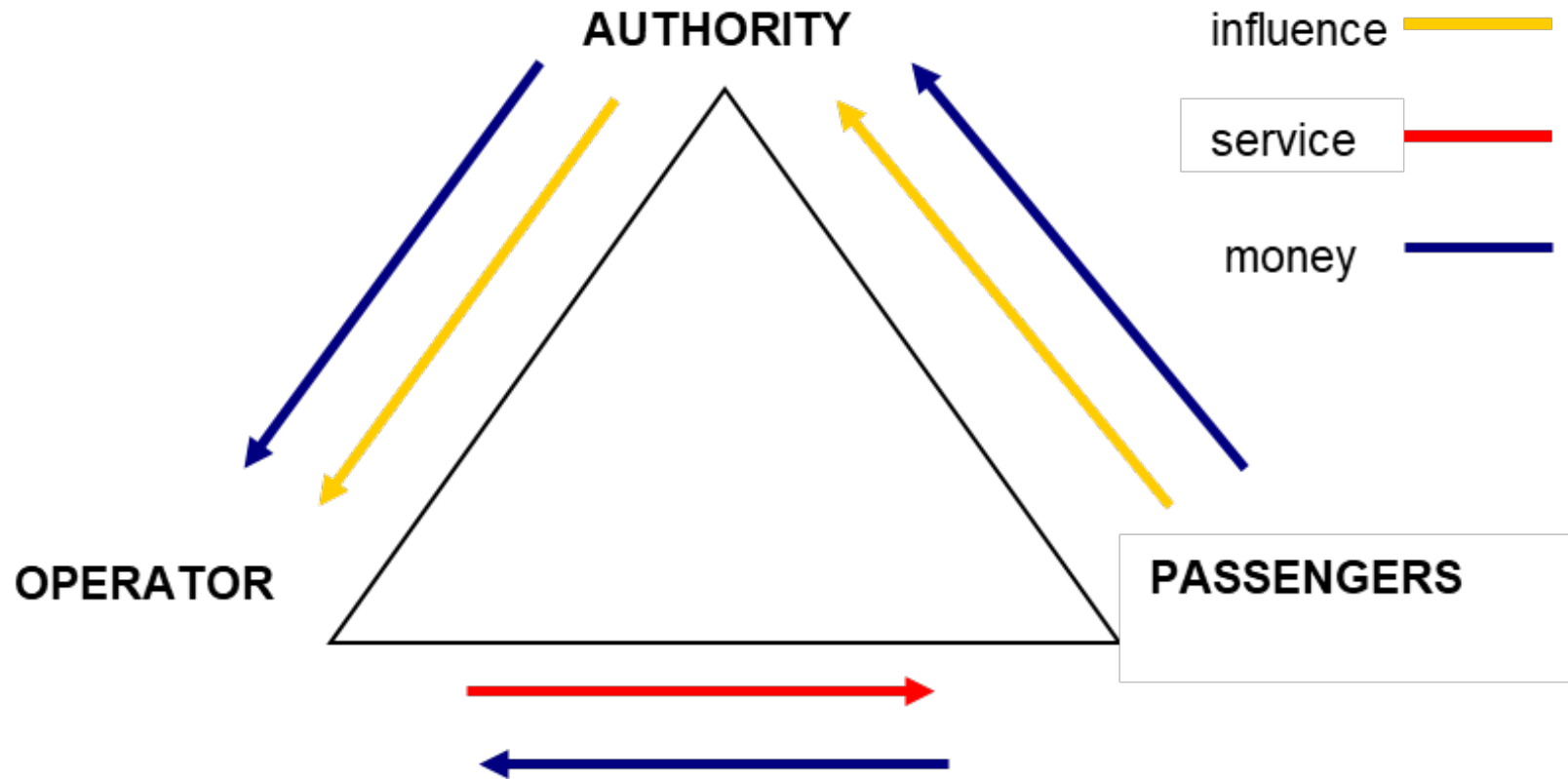


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The Public Transport market



Breakdown of stakeholders involved in PT systems

- Public Transport Users
 - The regular users
 - People with special needs (elderly, disabled, children, students)
 - Occasional users
- The Public Transport Operators
 - Management
 - Drivers
 - Maintenance personnel
- The Public and Transport Authorities
- The other road-users
- The industry



The Public Transport market



PTA

- Strategic and tactical tasks

PTO

- In charge of operational functions

In Europe, two models of operation

- Direct relation between a public authority and the PTO
- Relationship is taken over by a PTA which mediate between the local authority and the PTO

Needs and requirements of PTAs and PTOs



Identified following a pattern of 11 areas of investigation

1. Safety and security
2. Service performance
3. Comfort, cleanness and quality feeling/perception
4. Accessibility to vehicles and infrastructures
5. Information to passengers, relational and behavioural issues
6. Modal integration and additional/flexible services
7. Environmental issues
8. Maintenance
9. Pricing and commercial policies
10. Economic and operation issues
11. Urban development and quality of life



Needs and requirements of PTAs and PTOs



Impact of the use of electric powertrains on PTO/PTA Needs

Need	Stake-holder	Area of Competence
Analysis of opportunity for exchange parking areas (P&R) and other shared infrastructure	Authorities	Authorities
	Operators	Management
Safety and security provisions in maintenance	Operators	Maintenance Staff
Continuous training of maintenance personnel	Operators	Maintenance Staff
Design limiting number of builder-specific parts/ admitting generic spares	Operators	Management
Optimization of vehicular flow and parking in depot	Operators	Maintenance staff
Cost-effective infrastructures (build and exploitation)	Authorities	Authorities
	Operators	Management
Development of new procurement / tendering schemes	Authorities	Authorities
Efficient fleet management, also through collaboration bus manufacturers	Operators	Management
System data access for remote diagnostic and predictive maintenance	Operators	Management
Optimisation of the investment	Authorities	Authorities
Special provisions for energy supply tenders	Operators	Management
Special contracts for energy generation, feeding and / or storage at PT facilities	Operators	Management
Improved commercial speed	Operators	Management
Improved management of traffic lights and priorities for PT (green wave)	Authority	Authority
	Operators	Management
Disposal and recyclability of the vehicle and of its parts	Operators	Management

Needs and requirements of PTAs and PTOs



Needs for the deployment of large fleets of electric buses

Needs	Stakeholders	Area of competence
Interoperability & adoption of standard protocols in the adopted charging technologies	Operators	Management
Control of recharging time	Operators	Management
Flexibility for the introduction of alternative propulsion system (availability of fuel selection tools)	Authority	Authority
	Operators	Management
Reduction of greenhouse gas emissions and pollutants (SO ₂ , NO _x , PM _x , etc.)	Authorities	Authorities
	Operators	Management
Renewal of the fleet with vehicles eco-sustainable	Authorities	Authorities
	Operators	Management
Storage of enough power to perform the entire daily service	Authorities	Authorities
	Operators	Management
Safety and security provisions for charging operation	Operators	Maintenance Staff
		Driver
Monitoring on-road charging infra	Authority	Authority
	Operators	Management
Management of on-road charging access	Authority	Authority
	Operators	Management
Maintenance of on-road charging access	Authority	Authority
	Operators	Maintenance Staff
Financial trade-offs for e-buses and related infra procurement	Authorities	Authorities
	Operators	Management
Planning of charging infrastructure	Authorities	Authorities
	Operators	Management

Thank you!



Questions?

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