

## Equipment and Operational Aspects: Matrix problems – policies – strategies – need for further investigation

Key challenges	Recommendations		
	Policy (objective, need for action)	Strategy (measures, concrete actions)	Further investigation
<p><b>Area 1:</b> <b><u>Effectiveness</u></b></p> <p>Need for public funding for PT too high in relation to available financial resources (due to a lack of effectiveness)</p>	<p>Reduction of operational and maintenance costs by optimising costs for fleet in order to reduce investments</p>	<ul style="list-style-type: none"> <li>• Optimisation of number of needed vehicles (and corresponding manpower and investments) by increasing the <u>commercial speed</u>:               <ul style="list-style-type: none"> <li>○ First: Upgrade of the infrastructure (after lack of investments), with focus on line-by-line in order to realise first improvements faster                   <ul style="list-style-type: none"> <li>§ Increase track quality</li> <li>§ Increase quality of energy supply</li> <li>§ Increase dedicated space for PT</li> <li>§ Increase PT prioritisation</li> </ul> </li> <li>○ Secondly: Upgrade of the fleet by:                   <ul style="list-style-type: none"> <li>§ Upgrade of own existing vehicles</li> <li>§ Buy of second hand rolling stock</li> <li>§ Buy of new vehicles</li> </ul> </li> </ul> </li> <li>• Optimisation of maintenance process and workshops               <ul style="list-style-type: none"> <li>○ Harmonisation of the fleet</li> <li>○ Improvement of reliability of vehicles in order to decrease the number of reserve vehicles</li> <li>○ Choice of fuel</li> </ul> </li> </ul> <p>Use Computerised Operational Control Systems</p>	<p>Analysis of LCC of upgraded and retrofitted Rolling Stock (Tram, Trolley Bus, Diesel Bus).</p>

		(COCS) and Automatic Vehicle Monitoring (AVM)	
<p><b>Area 2:</b></p> <p><b><u>Attractiveness</u></b></p> <p>Need for public funding for PT too high in relation to available financial resources (due to a lack of attractiveness)</p>	<p>Improvement of attractiveness and the public demand for PT services in order to increase the fare revenues</p>	<ul style="list-style-type: none"> <li>• Increase of <u>travelling speed</u> <ul style="list-style-type: none"> <li>○ <i>See above (increase the commercial speed)</i> and in addition to this: Measures for accelerated accessibility <ul style="list-style-type: none"> <li>§ Extension of timetable offer (frequency, frame, flexible demand)</li> <li>§ Optimisation of interfaces and interchanges as well as of interoperability</li> <li>§ Dedicated measures for handicapped people</li> </ul> </li> </ul> </li> <li>• Increase the travelling comfort <ul style="list-style-type: none"> <li>○ Upgrade infrastructure and fleet (see above)</li> <li>○ Improvement of punctuality by upgrading the system (<i>infrastructure and fleet; see above</i>)</li> <li>○ Optimization of (Dynamic) Passenger Information Systems</li> <li>○ Improve technical safety of vehicles</li> <li>○ Introduction of low floor vehicles or low floor compartments</li> </ul> </li> </ul>	<p>Economical analysis of the need for the adaptation of technical and operational rules on WEC standards in order to avoid under- or over-regulation</p>