

Regulation and Self-Policing: Cross-comparison - Quality of Service



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	NYC		Miami		SJ		AC	
Safety								
vehicle and driver fitness	Y		Y		N	No annual vehicle inspection	Y	
Integration								
Connections	feeder to subway/ no duplication of bus routes		30% duplication restriction		Some connections		Rail and bus connection	
schedules	Y	24 hr service		N		N	Y	24 hr service
fares		N	Y	Conchita's		N	Y	Rail
In vehicle Time	Fast		Fast		Slow	Heavy traffic congestion	Fast	
Reliability/ Frequency	Y	24 hr service/ regular dispatch during off-peak hours	Y	Regular dispatch during off-peak hours	N	difficult to change driver practices - demand drops in afternoon hours	Y	24-hr service, at least 10 vehicles, rotating shifts
Information Access	Some	Signage at some route destinations	N		Some	Signage at some terminals	Y	Required signage/ Association provide service information
Passenger Comfort	N		N		N	Average vehicle age 13.6 yrs	Y	ADA compliant vehicles with A/C and radio



- Profitability:
 - Its low level impacts negatively on service
 - Subsidies may not be avoided
 - Transfer fare penalty as a stumbling block
- Service Quality:
 - Fleet needs dramatic upgrade
 - Liabilities: Lack of proper scheduling, reliability, information and adequate hours of service
- Governance:
 - Neither *laissez faire* nor overregulation
 - Both Gov't regulation and self-policing needed



- Fleet renewal
- Improved hours of service (peak, off-peak, weekends)
- Scheduling coordinated with TU
- Use of HOV lanes
- Tied-in with improved profitability:
 - Govt subsidies
 - Multi-drivers per vehicle

Recommendations: *From vans to minibuses*



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Fleet renewal



ADA compliance



- Regulations:
 - Multiple drivers per vehicle
 - Fleet characteristics
 - Schedules and user information
 - Associations for service self-policing
 - Associations for economies of scale
- Enforcement - Most critical requirement
- Creation of Multi-Modal Agency:
 - Planning, regulation, enforcement...
 - Checks and balances



- *Público* lines feeding to TU
 - New authorizations as an opportunity:
 - To compensate lines parallel to TU alignment
 - To design user-side subsidies:
 - Critical to upgrade service quality
 - Transfer fares to be eliminated or mitigated
 - Fleet renewal assistance
 - Apply new regulations (eg: multiple drivers)
 - Strict enforcement of new service quality criteria: schedules, hours of service...



- Público lines not feeding TU
 - Assistance for fleet renewal
 - Access to HOV lanes
 - Provided agreement on:
 - New schedules and hours of service
 - Self-policing rules
 - Enforcement by Government officials

Service Connectivity: A most critical issue for the success of Tren Urbano



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- Other than Públicos, buses too have to be coordinated with Tren Urbano





- Methodological Approach:
 - System view:
 - Fare policy (cost, fare media, validation)
 - Service Information (pre-trip, in-vehicle)
 - Facility view:
 - Weather protection + comfort + safety
 - Information on transfers
 - Amenities
 - Service view:
 - Transfer wait time
 - Matching service hours of connecting lines



- Methodological Approach:
- Compare:
 - Costs (capital, operation, maintenance)
 - Benefits (revenue, social)
 - For each element of:
 - System options
 - Facility options
 - Service options
- Ranking and prioritization
 - Payback period for a given passenger demand



- System Elements:
 - Transfer fare cost to be minimized or eliminated, using a general fare hike to cover potential losses
 - Importance of payment media
 - Information equally critical:
 - pre-trip (transit planners, call centers)
 - en-route (real-time announcement)



- Service Elements:
 - Scheduling:
 - Match of service hours
 - Buffer times for connections
 - Criteria (eg no transfer more than $\frac{1}{2}$ headway)
 - Standardize headways to coordinate Xfers
 - Network design to turn transfer points into terminals so as to provide slack times



- Facility Elements:
 - Bus shelters policy
 - Proper pathing for the transfer movement
 - Information:
 - Maps
 - Schedules
 - Real time information
 - Amenities:
 - Concessions in or around stations and bus stops



- System management options to deal with service disruptions
- More efficient scheduling methods
- A cost-effective deployment of BRT components on bus services
- Real-time information in transit from a user and an organizational perspective
- Deployment of other ITS technologies
- Improvement and development in and around stations, value capture mechanisms...



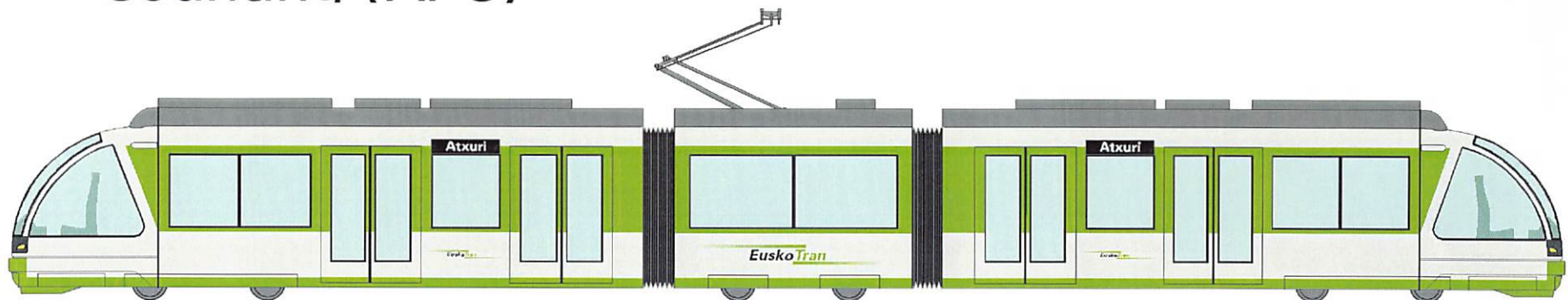
Client side:

- Waiting *anxiety*
- Expected arrival time
- On-board information
- Transfer possibilities
- Level-of-Service (LOS)





- Supply side:
 - Priority
 - Priority enforcement
 - Payment systems
 - Automatic Vehicle Location (AVL)
 - Automatic Passenger Counting (APC)





- Analytical tools:
 - To evaluate actual demand response
 - To improve service integration and effectiveness
 - To guide service expansions
- Data repository:
 - G.I.S.-T + Transit Network Models + Metropolitan Demand Model + Simulation
- To support the Research and Development Unit in charge of research to improve understanding and performance of Tren Urbano
(as per Arturo Ardila's thesis recommendation)

