

Diagnosis and Recommendations Executive Summary

Medium-sized cities BRTs – Technical Assistance - Colombia

(Project ID: P166117)

General Context

1. **Positive Balance:** After More than 20 years of implementation, Colombia and the National Urban Transport Program (NUTP) is a global example when it comes to articulation of national government support to urban transport. The program has evolved practices that have been implanted for decades and has addressed outstanding issues in many countries, such as supporting Strategic Public Transport Systems (SPTS) in middle and small cities, in addition to Integrated Massive Transit Systems (IMTS) in big cities.
2. **Areas of Opportunity:** As the program matures in implementation, the participating transportation systems generate lessons learned and opportunities for improvement. As shown in the table below, the demand for public transport in Colombian cities has a declining trend. In general, participating public transport systems:
 - a. Show a lack financial sustainability;
 - b. Suffer from a bad image and lack of engagement to complete its implementation on the subnational government;
 - c. Have low demand and generate less than expected benefits. The program can also generate better incentives for solution-targeted designs and be more flexible in its implementation.

	2005	2017 ^P	% cambio
Total general	4,072,840	3,874,154	-4.9%
Total sin Bogota y Medellín	1,968,511	1,304,252	-33.7%
Armenia	24,044	21,061	-12.4%
Barranquilla	433,116	273,276	-36.9%
Bogotá D.C.	1,657,366	1,901,686	14.7%
Bucaramanga	176,405	85,513	-51.5%
Cali	320,539	196,348	-38.7%
Cartagena	190,936	112,727	-41.0%
Cúcuta	130,738	74,440	-43.1%
Florencia	10,177	2,721	-73.3%
Ibagué	66,282	74,518	12.4%
Manizales	76,366	66,317	-13.2%
Medellín	446,962	668,216	49.5%
Montería	13,980	15,905	13.8%
Neiva	44,667	23,562	-47.2%
Pasto	34,280	33,361	-2.7%
Pereira	115,413	77,831	-32.6%
Popayán	41,296	32,158	-22.1%
Quibdó	16,502	11,142	-32.5%
Riohacha	4,341	571	-86.8%
Santa Marta	135,307	115,191	-14.9%
Sincelejo	14,033	4,896	-65.1%
Tunja	27,581	18,312	-33.6%
Valledupar	26,589	8,800	-66.9%
Villavicencio	65,919	55,605	-15.6%

Source: National Survey on Urban Public Transport, DANE

Diagnosis

3. **Actual demand lower than estimated.** Consistently, the systems demand data are below the estimates. There are external and internal factors that explain it:
 - a. External factors:
 - i. *Economic growth:* Economic growth generates an increase in the motorization rates and use of private vehicles.
 - ii. *Increased use of motorcycles,* which exacerbates the use of private vehicle and the growth of informal transport services (mototaxis/informality).
 - iii. *Demographics in Colombia.* Forced displacement of population inside the country together with few socioeconomic opportunities has exacerbated the phenomenon of mototaxismo/informality. This is shown by high informality rates in affected cities.
 - b. Internal factors:
 - i. *IMTS decreased service levels and increased of the Generalized Cost of Transportation.* The application of rationalization of services and designs based on trunk-fed corridors in systems where the gain of speed in the exclusive corridors does not compensate the perceived additional cost that the user has for transfers and higher waiting time translate in a net increase of Generalized Cost of Transportation, and diversion of demand to informal and private modes.
 - ii. *IMTS lacks appropriate integration with conventional public transport (TPC in Spanish).* This lack of integration generates lack of complementarity. In some cases, it creates adverse competition and perverse incentives when the same operators get remunerated by km in the massive system, and by passenger, operating TPC buses in the same route.
 - iii. *SPTS: Decreased service levels and increased Generalized Cost of Transportation.* The program conceives the systems from a diagnostic of oversupply that is not always the case. Restructuring a system aiming for a supply reduction in contexts where there is no oversupply creates an unnecessary reduction of level of services. The reforms propose vehicle typologies of greater capacity, reduction of frequencies and routes in a context of competition with an informal transport providing door to door services with higher speeds and frequency by which the user tends to be willing to pay more.

4. **High cost of investment and operation.** Higher investment and operating costs worsen the low operating income derived from the non-realization of the estimated demand. Again, this higher costs can be explained by external and internal factors:
 - a. External factors:
 - i. *Cost of formalization.* Operators under the traditional system incur new costs under a formal scheme, generated by higher maintenance requirements, compliance with labor standards and tax obligations, among others.
 - b. internal factors:
 - i. *Oversized technology requirements,* especially in the case of the SETP.
 - ii. *Lack of flexibility to incorporate cheaper used fleet*

- iii. *Private operator's high financing costs and lack of access to finance.* Private operators are responsible for the acquisition of fleet (exacerbated by the consistent overestimation of demand, which, combined with bearing demand risks, does not allow them to use project finance schemes).
- iv. *Limited competition in processes to select fleet and technological systems operators.* Lack of competition results in high prices and problems in quality of service (consistent overestimation of demand, which makes the business less attractive for the private investor).
- v. *Deficiency in legal structures.* Management of technological risk in systems concessions, and generation of mechanisms to stimulate operational efficiency.

5. Opportunities to improve the design and management of PNTU.

- a. Improvement in the incentive generation of the program: The design of the policy promotes a specific technical solution for IMTS (BRT) and STPS (rationalization of routes and fleet) without considering the context. In addition, focusing the support from the central government on infrastructure interventions support the oversizing of infrastructure and requirements in the designs. Finally, the support is linked to the implementation of outputs (especially of the infrastructure) rather than to the operation of the system and generation of results.
- b. UMUS Budget Improvement: UMUS is the entity in charge of managing the program in the Ministry of Transport. The instability of UMUS's budget affects execution of technical assistance and ability to retain talent in UMUS. Budgetary instability impedes the efficient execution of technical assistance resources by UMUS, which tends to hire studies once it has secured the minimum operation by covering staff costs after receiving new resources in the middle of the year, which must be executed before the end of the year. In addition, the instability generated by this situation in the personnel of the UMUS generates a high staff rotation. The ministry loses the opportunity to have in UMUS a solid technical body that supports the systems and becomes a world-wide reference.
- c. Lack of capacity in management entities. The high staff rotation and the reality of some sub-national governments is reflected in a lack of capacity that results in inefficiencies in the design, implementation and supervision of the programmes.
- d. Rigidity of UNTP budget management: Other studies have shown rigidity of standards program-related budget prevents reacting to different execution speeds in the projects.
- e. Lack of definition of internal processes and interinstitutional coordination: Other studies have shown the lack of definition of internal processes and institutional coordination, which generates inefficiencies in the management of the program. The study generated recommendations, which implementation is pending.

Recommendations

6. **Increasing demand by designing better services:**

- a. Improve estimates and demand modeling considering (a) Impedances for transfers and waiting time, (b) Demand elasticity to frequency reduction (to increase waiting times); (c) Update demand projection with feedback when drafting operational plan; (d) Better understanding of cross-elasticity and modal choice processes.
- b. Improve project designs. Flexible program requirements as for operational models. Adapt the design to the context. Design by service levels, not by levels of demand (which is not captive). Increase frequencies by increasing fleet and proposing fleet of lower capacity if needed. Analyze the suitability of open exclusive corridors, reduce number of transfers. Promote the complete integration of the systems with the TPC in SITM.
- c. Improve service quality. For example, including air conditioning in the fleet in cities of hot weather, implementing low cost technology systems for information to the user, improve the quality of service (evaluate drivers, companies, etc.), or collection. Encourage private initiatives to implement these systems.

7. **Discouraging motorcycles, informality and mototaxism.**

- a. Discourage motorcycling with new national regulation (Increase insurance requirements, prohibitions) and/or sub-national (requirements, limitations).
- b. Design Social programs to generate alternatives to vulnerable people who practice mototaxismo.
- c. Improve law enforcement. With the support of the national government.
- d. Regulate the phenomenon of mototaxis or integrated in public transport system. (E.g. Monteria's operators agreed with rickshaw operator a last-mile feeding service).
- e. Generate Incentives in subnational governments to enforce the law. Incentive can encompass bearing the demand risk of the projects Guarantee Demand To operator O (b) Include incentive/program requirements to turn the nation's resources. Saw Design systems with exclusive streets for public transport (SITM and SETP)

8. **Increase the funding available for the systems.**

- a. Alternative sources of funding. Support further analysis for identification and support for the implementation of alternative funding mechanisms.
- b. Articulate Supply or demand subsidies in an efficient manner. Recognize and quantify the needs of subsidies, and support in the design of efficient systems of supply or demand subsidies.

9. **Reduce costs associated with systems.**

- a. Reduce fleet financing costs.
 - i. Assigning the responsibility of the fleet provision to a subject with a better ability to achieve financing than the operator (e.g. fleet provision concessionaire, public-private fund for vehicle leasing);

- ii. Reducing the operator's risk profile by absorbing demand risk or reducing commercial risk with automatic fare setting mechanisms
 - iii. Providing financial support (direct subsidies, partial guarantees) for the acquisition of Fleet.
 - iv. Exploring new fleet financing schemes (e.g. equity fund, public partial guarantees).
- b. Reduce capital costs associated with fleet acquisition.
 - i. Generate economies of scale in the purchase of buses (to associate several systems or subsystems, national or metropolitan scheme).
 - ii. Allow the incorporation of used fleet under certain parameters.
- c. Reduce capital and operation costs associated with technological components in SETP. Postpone the implementation of technological components and explore the possibilities of much lower cost solutions, which can be implemented by the public or the private operators.
- d. Implement low-cost transit management measures: Exclusive routes with schedules, only bus tracks, segregated runners (no stations Prepaid), private vehicle restrictions.

10. Improve the design and management of NUTP

- a. Flexibility for technical solutions. The program should allow for the design of transport solutions consistent with the context of the city.
- b. Re-evaluating international experiences in national urban transport programmes. Complement discretionary/project based contributions with formula based/compulsory contributions (subject to compliance with requirements and indicators, which would allow better alignment of incentives through financing based on results)
- c. Ensure stability and adequate funding for the UMUS, assigning an appropriate budget from the beginning of the year that allows you to plan and execute technical assistance efficiently and Retain talent.
- d. Support capacity building, talent retention and attraction in national and subnational implementing entities. Continue supporting capacity building in national and subnational entities. Promote staff retention stability of the personnel. Allow for the transition of subnational entities responsible for implementing infrastructure towards a key figure responsible also for the operation.
- e. Improve the financial management processes and requirements of the NUTP. Continue the implementation of the recommendations made by the World Bank-financed study on the definition of processes and reforms in the financial management of the programme.