

**Policy Mobilities and Urban Change:
The Case of Bus Rapid Transit in Colombia**

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DEDICATION

This work is dedicated to all my family members, friends, colleagues, and professors who shared with me a piece of their knowledge and allowed me to learn from their unique perspectives and experiences. But especially:

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LIST OF ABBREVIATIONS

AMB	Área Metropolitana de Bucaramanga
BRT	Bus Rapid Transit
CCB	Cámara de Comercio de Bogotá
CIDEU	Centro Iberoamericano de Desarrollo Estratégico Urbano
DATT	Departamento Administrativo de Tránsito y Transporte
DNP	Departamento Nacional de Planeación
ECLAC	Economic Commission for Latin America and the Caribbean
EDTU	Empresa Distrital de Transportes Urbanos
FONADE	Fondo Financiero de Proyectos de Desarrollo
IADB	Inter-American Development Bank
IDU	Instituto de Desarrollo Urbano
INTRA	Instituto Nacional de Tránsito y Transporte
ITDP	Institute for Transportation and Development Policy
JICA	Japan International Cooperation Agency
SENA	Servicio Nacional de Aprendizaje
SITM	Sistema Integrado de Transporte Masivo
STT	Secretaría de Tránsito y Transporte
UMUS	Unidad de Movilidad Urbana Sostenible
UNDP	United Nations Development Programme

SUMMARY

Social connections and interdependencies have increased today to levels never previously imagined. Global connections continue to progress, creating relations and interactions that feed off each other in a constantly growing progression. In regard to urban planning and policy, the plans, programs and policies that worked in other cities and latitudes and were then tried elsewhere are especially important. Traditionally, operating under the modernist rational model, decision-makers focused on the search for solutions that could be applied to all times and places, regardless of unique social, political and economic contexts. Along these lines, Latin American nations adopted foreign practices, mainly from Europe and the United States, in the shaping of their cities and policies. But today, research has brought into question the universality of policies and plans, arguing that local realities are unique in many ways and policies and practices from other latitudes do not necessarily fit, at least not in ways they did elsewhere (Eugene McCann & Ward, 2011; Mccann, 2011).

Moreover, cities no longer look exclusively to Europe or the United States, the so-called "North," for solutions to their problems. Instead, they explore policies and solutions from other latitudes in the so-called "South." This dissertation examines one policy implemented in Bogotá, Colombia, which has become a major inspiration for cities both in the North and the South.¹ In particular, it studies what happens as policy moves from one place to another. This is a case study of policy mobilities, understood as the processes of moving ideas, people and resources from one location to another; this dissertation hopes to shed light on the processes and transformations taking place along the way by examining the implementation of a Bus Rapid Transit (BRT) system called *TRANSMILENIO* in Bogotá, following the policy's trajectory from the local to the national scene, and then by analyzing its arrival to Bucaramanga, another city in Colombia, where the BRT system was named *METROLINEA*.

¹ "Given that the most successful applications of BRT to date have been from cities such as Bogotá, Curitiba, and Guayaquil, developed nations have much to learn from the developing world." (Wright & Hook, 2007, p. iii)

SUMMARY (continued)

The dissertation pays special attention to strategies that are reshaping the role of public and private actors in the urban planning and policy arena in Colombia.

In other words, this work examines urban planning and policy transformations resulting from national BRT policy mobilities as multiple actors, processes, institutional arrangements and local conditions are impacted by the adoption of the policies. The dissertation uses a distended case approach, which is sensitive both to policy movement and to the experiences of embedding and transforming the policy in "downstream" sites of adoption/emulation (Peck & Theodore, 2011). For this, I traced the trajectory of the policy through primary documents and informant interviews, starting in Bogotá, then moving to the national level and finally landing in Bucaramanga. I conducted in-depth interviews of multiple individuals who operated at different scales and spheres during the process of policy mobilities in order to comprehend the processes and the subsequent impact of this policy on urban planning and policy. Along the way, I sought to understand neoliberal forms of allocation of capital from the private sector for the provision of public services in a context of national deregulation and inter-scalar urban management. The results illuminate the strategies and processes that are reshaping the role of private and public actors in urban planning and policy arenas in Colombia, and how these results may also be observed in other current cases in Latin America.

Although exploring only a single case, this dissertation hopes to contribute to the discussion of policy mobilities and deepen available knowledge of the tremendous complexities of policy replication. Indeed, as policies move from one context to another (even within the same country), they are modified to fit local contexts and do not produce the same results of the model inspiring them.

I. INTRODUCTION

1. Research context, interests and purpose

Over the past few decades, cities in Colombia have experienced vast transformations of their urban transportation systems, going from decentralized private operations within a weak regulatory framework to new systems including enormous investments, strong regulations, private concessions and centralized fare collection. A major component of this new approach was the Bus Rapid Transit¹ (BRT) and included large public investments in the development of a heavy infrastructure of support roads, stations, pedestrian bridges and public spaces complemented by private resources dedicated principally to operational aspects of these systems including bus fleets, fare collection systems and monitoring technologies.

The implementation of Bus Rapid Transit systems in Colombia, first in Bogotá (branded *TRANSMILENIO*) and later in various cities in the country, emerged from a series of events that included the experiences of cities, technical debates, trial and error, time constraints, "windows of opportunity", availability of funding and political negotiations. Rather than ready-made designs produced in the desk of some expert or agency, they evolved from seminal ideas into complex systems such as *TRANSMILENIO*. Implementation included multiple interactions at different scales and spheres in the pursuit of a solution capable of articulating different interests (public and private) with specific local conditions, demands and needs. Perceived

¹ Bus Rapid Transit (BRT) systems are defined as "a high-quality bus-based transit system that delivers fast, comfortable, and cost-effective urban mobility through the provision of segregated right-of-way infrastructure, rapid and frequent operations, and excellence in marketing and customer service." (Wright & Hook, 2007, p.1). Therefore, they are at the same time a specific urban transportation technology and an operational and administrative model.

and advertised as a remarkable success, TRANSMILENIO became an example to follow in contemporary urban transportation policy debates, first in Latin America and later around the globe. As a result, multiple observers consider it a "best policy practice," presenting it as a "rational choice" (because it worked elsewhere, it will work equally everywhere) that can be used as a template for implementation in other urban areas.

While acknowledging the relevance of these urban transportation initiatives, I have applied caution in their analysis. Rather than assuming off-hand that BRT policies are place and context neutral and transferable as they are, I decided to trace the policy to determine if this was actually the case. In fact, in my preliminary exploration of BRT systems, I felt the *best practice* narrative should be examined critically because implementation had to filter through local conditions and social relations to achieve its final form. With this in mind, I decided to explore broader analytical approaches that allowed me to trace the policy and determine the extent to which it moved universally or had to contend with local conditions. This effort implied leaving aside the rational choice model and incorporating instead the concept of complexity to analyze how the actual policy came to be, what happened when it was turned into a national policy, and what results it produced when it was applied in other locations.

Along these lines, this dissertation examines the social, economic and political processes through which contemporary urban planning and policies are shaped and implemented through the lenses of Bus Rapid Transit (BRT) systems in Colombia. Given my decision *to follow the policy*, the concept of

policy mobilities² emerged as central to my research dictating the analytical framework for understanding its actual trajectory. Although BRT systems have been and continue to be implemented in various Latin American, Chinese, Indian, African, European and American cities, this research is limited to the analysis of its trajectory from Bogotá to its elevation into a national program and to its later implementation in other Colombian cities, in this case Bucaramanga. This framework allows for the examination of developments, interactions and results as the policy traveled from one place to another.

Accordingly, this research aims to reconstruct and narrate the process of policy mobility of urban BRT programs in Colombia by analyzing the trajectory from the inception, design and construction in Bogotá to its implementation in Bucaramanga years later. Although the BRT policy mobility took place in various Colombian cities, this research focuses on only one application test that allowed me to observe its local development, territorial impacts and end results. For this, I adopted a methodology that helps to unravel the overall process by scrutinizing what happened at each stage and examining how the policy fared along the way.

Indeed, I observed not only mutations in the physical landscape mutate, but also in existing institutional arrangements. Along these lines, I depart from the premise that the processes of policy formation and mobility are socially produced. To understand them, research has to identify the factors that go into their production (from technical analyses, through agents and

² According to Eugene McCann (Urban Policy Mobilities and Global Circuits of Knowledge: Toward a Research Agenda, in *Annals of the Association of American Geographers*, Volume 101, Issue 1, 2011, p.109), policy mobilities can be defined as: "socially produced and circulated forms of knowledge addressing how to design and govern cities that develop in, are conditioned by, travel through, connect, and shape various spatial scales, networks, policy communities, and institutional contexts".

contexts, to politics). Therefore, the two guiding questions for this research are 1) how have urban areas in Colombia, under policy mobility scenarios, adapted their institutional capacities to adopt and implement new policies, and 2) how and to what an extent is this process determined—or constrained—by economic and political powers.

To examine this, I use a multi-scalar approach, which consists of exploring relevant processes at the global, national and local scales, and the interactions between these levels through the observation and documentation of specific events and conditions at each scale. First, from a global approach, I attempt to examine how worldwide capital expansion has engaged in major public investments, turning them into a major industrial niche through the development of public-private partnerships and international programs. At this level, multilateral banks, investment funds, commercial banks, and industrial corporations play the most visible roles facilitating BRT policy mobility and playing a central role in implementation. By observing their interaction with specific policy mobility aspects (such as BRT systems technology assimilation, operational and administrative models' development, and replication initiatives), their role and impact on the transformation of local institutional arrangements and policy-making is determined.

Think tanks also appear to play a major role in the development and consolidation of knowledge networks that promote BRT policies through conferences, experts' visits, professional and technical consulting, business and investment plans locally, nationally and globally. These knowledge-and expertise-based think tanks, in turn, develop relationships

with banks and industrial corporations that are interested in expanding their markets, while offering comprehensive solutions that address the what and the how of the policy. They can facilitate access to resources that local authorities normally consider difficult to get. Linkages between international agents and national policy-makers, meanwhile, are the result of matching interests that may constitute conscious strategies to find better options when solving local problems. These links may also be part of a complex framework imposed or proposed by powerful agents using a range of strategies, from voluntary to coercive in the process of policy mobilities. Although it is hard to affirm the most significant of these aspects, this research tries to determine which ones were present in the case of BRT implementation processes in Colombia.

The second scalar level refers to national policy agents and arenas that often operate as policy articulators, facilitators and diffusers; I trace them in this research while examining how they relate at this level and what role they play vis-à-vis the others. In this sense, the reproduction of the relatively successful case of Bogotá's BRT system in other cities came from the success of the policy in Bogota and the assumption that it could be easy to replicate. It also resulted from the interventions of actors interested in multiplying their earnings (monetary and non-monetary) by marketing the system at the national scale and beyond. Moreover, national actors involved in the framing of a national urban BRT policy had their own electoral interests or were seeking to use BRT to influence other governmental priorities, such as employment generation, investment promotion or economic growth, that are worth analyzing as policy mobility enticements.

Thus, I examine whether the motives for implementation of the systems are limited to transportation improvements or extend to other fronts. It appears that, rather than limiting themselves to developing specific urban BRT systems in local arenas, interests related with the bus building industry, the banking system, and infrastructure construction companies, among others, have sought to develop national policies that expand the potential implementation to a myriad of cities and businesses. Thus, examination of the national level will illuminate the complex power and business interests that delimited and structured the national BRT agenda in Colombia, particularly in a funneling role that the national government plays when applying a specific BRT policy in other scenarios.

The third and final scale is the local; at this level, research seeks to understand the emerging role of local planning authorities and local policy-makers in the adoption, implementation and benefits of BRT policy. In my initial exploration, local agents appeared to be passive participants in the BRT policy designs. They simply received guidelines to execute Bogota's TRANSMILENIO model according to national policy and expert advice. Presumably, local action was minimized by an inflexible national framework and bypassed by international financial arrangements and expertise (knowledge power), reducing the articulation of local demands with the prearranged solution. Further research suggested, however, that local entities may have underestimated the challenges of implementation of the policy, most particularly between expected and actual results and between projected and actual local capacity to sustain the system. Lastly, they

suggest that local agents managed to manipulate the policy for private and electoral gains.

2. Understanding policy mobilities

Recent urban transformations in Latin America, such as macro-projects and urban renewal plans, have put the region in the spotlight of international urban debates. Along the way, Latin American cities, and particularly their mayors, have emerged as agents of change and are pictured in some cases as local "heroes." These events can be observed and analyzed from different angles and perspectives. But rather than accepting triumphal representations, this research wants to observe from a prudent point of view and scrutinize in detail events on the ground guided by the emerging policy mobility literature and by frameworks that examines policy-making as a complex process. The policy mobility literature provides a general set of premises that guided this research. But before examining in detail this literature, I wish to point to the guideposts informing this research.

First, it is important to highlight that policies as social products are not conceived as the result of an "equal endowment game," where agents "rationally" interact searching for the "best policy" to guide their decisions and implementation agendas. Contrary to what is divulgated in the sales pamphlets of international agencies and think tanks as "best practices," I study policy mobilities as tied to relations of power that underlie and affect urban policy dynamics facilitating capital allocation (Mcfarlane (2010), Peck & Theodore (2010), Mccann (2011), McCann & Ward (2011)). In this sense, policy mobilities are the result of power relations,

rather than simple "rational strategies" as best-practice approaches suggest.

Second, power will be understood here as the capacity of an agent to make others pursue a desired course. In other words, it is the capacity of an agent to make an action agenda materialize through a range of interventions that include coercion and "soft" strategies such as influence and persuasion but that can also rely on the leverage of powerful institutions. In this sense, Michel Riau's definition incorporates parts of Foucault's argument on power, when stating that power "is the capacity of a person, a class or an institution to direct the whole social body towards their or its own profit. It goes without saying that political power is not always real power, and that in the final analysis, and for a sufficiently long period, power has belonged to whoever holds the fundamental means of production" (in Crampton & Elden, 2007, p.36).

The essence of this delimitation is that power cannot be reduced to "prohibition" or imposition, but it's a complex relational process that incorporates social dynamics and parameters resulting from historical and geographical forces in one direction or the other. Thus, power is used by those capable to organize social relations in order to fulfill their desires and needs, overcoming the simplistic idea of controlling but producing what they want to produce. This research assumes that power that underlies and affects urban policy dynamics within an uneven scenario in which capital allocation follows power techniques to distribute resources and is, thus, a form of capital expansion.

Finally, it is important to emphasize that the policy mobility literature is the result of academic discussions of the implications of reproducing policies in different locations once they have been applied in an initial site. The conversation began by observing simple cases where similar policies were applied while looking for convergent or divergent results in different contexts. Later discussions moved into a comprehensive observation strategy guided by the concept of policy transfers that enriched earlier discussions but was still heavily based on the assumption of neutrality/objectivity in these transfers. New approaches including sociological, political and economic arguments were finally organized under the label of policy mobilities providing a wider angle of observation that includes interdisciplinary approaches and critical perspectives. Next, we examine them in more detail.

a. Policy transfers literature: Early theories

Precursor literature on policy transfers can be tracked to academic efforts on lesson-drawing, policy convergence or policy diffusion. In his study of innovation diffusion between U.S. states, one of the initial authors, Jack L. Walker (1969) invited researchers to use rational choice to gather data that could help understand and replicate the process. The basic premise was that behavior is rational to the extent that it is goal-oriented, reflective, and consistent. Translated to the policy transfer field, this approach views policy transfer as a rational choice and, thus, as an objective and neutral process.

Walker's early invitation did not have much of an echo in terms of enticing others to join in the examination of policy transfer. The bulk of the literature dealing with policy transfers emerged decades later, during the 1990s. In the early years of that decade, Richard Rose (1991) defined lesson-drawing processes and Collin J. Bennett (1991a) discussed how nation-states utilize foreign evidence to benchmark, develop and implement their national policies. These works marked the beginning of an academic effort to explore policy movements in space and time.

Rose argued that situations that are unique to one society are exceptions and that authors should rather focus on commonalities. He affirmed (Rose, 1991, p.5) that the motive to seek lessons is dissatisfaction with the status quo combined with the hope that there are programs, already implemented, in other space or times that can satisfy decision-makers. He also mentioned the importance played by epistemic communities when transferring an idea and policy from one place to another. The same year, Bennett (1991b) published an article in the *British Journal of Political Science* discussing the causes of policy convergence. He advanced the idea that new forms of policy-making were emerging and that states had to learn how to deal with them without jeopardizing their autonomy. Bennett (1991b) introduced four major mechanisms through which policy convergence happens: (1) emulation, (2) elite networking, (3) harmonization, and (4) penetration, setting up the parameters for one of the most common debates among policy transfer scholars.

Many other scholars followed the initial studies exploring different cases and providing new elements to this emerging discussion. Schachter (1991)

and Wolman (1992) introduced a new dimension to the policy transfer scholarship. They argued that rational choice was not the only determinant of success and that other variables (such as culture or setting conditions) played key roles in concealing expected results of rational decisions. Bennett and Howlett (1992) tried to reconcile the theory of policy learning with policy change by exploring the idea of learning in the studies of policy change. But the seminal work on policy transfer literature was presented by Dolowitz and Marsh (1996). These authors introduced a conceptual framework for policy transfers that questioned the context that makes them possible and accelerates such transfers. Their review of previous works, particularly Bennett's work on policy convergence and case study articles from Walsh (1994) and Coleman (1994) became arguably the preeminent piece of precursor literature which has been used and cited by practically all subsequent works.

The core questions for understanding and describing the process of policy transfer summarized by Dolowitz and Marsh (1996) are (1) What is policy transfer? (2) Who transfers? (3) Why is there policy transfer? (4) What is transferred? (5) Are there different degrees of transfer? (6) What remains from the policies and what changes? (7) From where are lessons drawn? And (8) What factors constrain policy transfer? These questions guided initial explorations and are today's fundamental questions for any exploratory work. They operate as initial requirements for more complex analyses of policy movements. They, according to Evans and Davis (1999, p. 365), "have done a great service in organizing a fragmented literature into a coherent whole." Following Dolowitz and Marsh's article, Evans and Davis (1999) proposed a multi-level and multi-disciplinary perspective that made an effort to typify

actors involved in policy transfer processes, such as think tanks or epistemic communities. For them, policy transfer is not an explanatory theory but an analogical model. In this sense, they argue, policy movements should be discussed as a meso-level concept "which can provide a link between the micro-level of analysis, which deals with the role of interests and levels of government in relation to particular policy decisions, and the macro-level of analysis, which is concerned with broader questions concerning the distribution of power within contemporary society" (Evans and Davis, 1999). This insight is very applicable to this research, especially at the meso-level where urban transformation and contemporary global contexts meet.

Evans and Davis (1999) affirmed that policy transfer literature's only ability for continued growth depends on its ability to adopt a multi-level and multi-disciplinary perspective. First, they emphasize the need (or prerequisite) of the spatial dimensions for policy transfer analysis and point that there are five levels of political spatiality: (1) transnational, (2) international, (3) national, (4) regional, and (5) local. Their second claim points to a need for a better observation of policy transfer agents; particularly, there is a need to "specify the role played by agent(s) in the transfer and the nature of the transfer that the agent(s) is/are seeking to make." (Evans and Davis, 1999, p. 369)

Additionally, Evans and Davis (1999) highlighted the importance of contextualizing policy transfer processes in order to understand dynamics and intention. They state that "we must assess whether structural processes external to the process of transfer we are looking at have an impact

(directly or indirectly) upon the context, strategies, intentions, and actions of the agents directly involved. Conversely we must also run the counterfactual and assess whether the strategies, intentions, and actions of agents can constrain and/or enable structures." (Evans and Davis, 1999, p. 370) In this sense, they clarify how globalized dynamics like improved communications and market expansion stimulate the incremental process of policy transfer. At the same time, policy transfer allows convergence and therefore increases the potential of globalized trends; thus, there is a dual process of facilitation among the context and the process of policy transfer. In this sense, policy transfers must be understood within the context of the relationship between structure and agency in order to explore the existing links between local decisions and higher conditional levels.

Precisely in this context, they introduce the concept of state "hollowing-out" and mention Rhodes' (1994) key tendencies that explain this contemporary trend: (1) privatization, (2) the loss of functions by central government, and (3) the emergence of limits to the discretion of public servants. Under this novel context of governance with new forms of government, policy networks become central to explore the mechanisms through which hollowing-out emerges. Along these lines, Evans and Davies (1999) helped contextualize policy transfer literature and provide an interesting and relevant framework that locates the process of policy transfer in the middle of globalization and spatial transformation.

In their effort to propose an analytical framework for studying the agents involved in policy transfer, Evans and Davies (1999) compare three possible agent configurations: Policy Community (proposed by Marsh and Rhodes, 1992),

Epistemic community (Adler and Haas, 1992), and Policy Transfer Network (Evans and Davies 1999). The resulting conclusion from this comparison is that policy transfer networks will allow analysis for phenomena using the strengths of the other approaches, including elements to explore intentions and the role of agents. Subsequently, the authors present the stages of the process of voluntary transfer in a sequential model: Recognition - Search - Contact - The emergence of an information feeder network - Cognition, reception and the emergence of a transfer network - Elite and cognitive mobilization - Interaction - Evaluation - Decision enters policy stream - Implementation. These stages will frame future case studies (Evans and McComb, 1999; Diane Stone, 1999, Ladi, 1999) and allow observation of mechanisms that appear in each step related with agents' roles and transfer dynamics.

In this area of scrutiny, Diane Stone (1999) reviews the literature attempting to highlight methodological elements that will help future research. Stone's work can be tracked to earlier research focused on the topic of globalization and the role of think tanks. For Stone (1999), policy transfer is a broad concept that encompasses concepts of diffusion, coercion, and voluntarist activity of lesson learning. She also discusses the relevance of policy transfer and lesson-drawing scholarship, pointing out its relevance to enrich "global policy studies" with the study of globalization; in this sense, she argues that policy transfer complicates domestic and international divisions. She identifies circumstances and structures that aid effectiveness or hinder it.

Stone (2000, p.45) affirms that "the importance of think tanks to policy transfer is their ability to diffuse ideas by (1) acting as a clearing-house for information, (2) their involvement in the advocacy of ideas, (3) their involvement in domestic and transnational policy networks, and (4) their intellectual and scholarly base providing expertise on specialized policy issues." Stone analyzes think tanks and their roles as clearing-houses of information and expertise; advocates for policies, networking and learning arenas; and points to the complex dynamics that emerge from the interaction with actors in government, business, media or other non-governmental associations. Additionally, Stone identifies a reinforcing dynamic between think tanks and policy transfers; in this sense, while think tanks have supported the increase of policy transfers, their concurrent proliferation can be understood as an indicator of the acceleration of policy transfers in the context of globalization. In spite of the rigorous analysis and the inclusion of the relations between globalization and policy transfer, Stone (2000) assumes a certain degree of neutrality among think tanks and fails to notice how they can, in some cases, guard the interests of corporations and private concerns. Ladi affirms that think tanks are key agents for the dissemination of ideas and uses Evans and Davies (1999) conception of a "policy transfer network" concluding that "policy convergence is expected to occur between countries with a close cultural proximity, while policy divergence could occur in cases of cultural diversity" (Ladi, 1999, p.21).

Dolowitz and Marsh (2000) reappeared with an update of their model. It is interesting to see that they already labeled their former work as the "Dolowitz-Marsh Model" and rearranged the central questions for policy

transfer analysis for forthcoming research. Using five (sic but I counted six) of their original questions, they now include a new one around the idea of transfers of failures or failures of transfers; in this new dimension, policy transfers can be uninformed, incomplete or inappropriate. The original questions included in this new scheme (see table) are (1) Why do actors engage in policy transfer? (2) Who are the key actors involved in the policy transfer process? (3) what is transferred? (4) From where are lessons drawn? (5) What are the different degrees of transfer? (6) What restricts or facilitates the policy transfer process? And (7), the new one, how is the process of policy transfer related to policy "success" or policy "failure"? The inclusion of failure is interesting because it opens a new possible research area where policy transfers are not exclusive results of rational decision or rational contexts. Instead, they may emerge from other reasons that will explain potential failures or inappropriateness on their implementation. Additionally, there is an attempt to present possible methodological elements for research such as media, reports, conferences, and meetings among other related documentation that will permit the discovery of evidence of policy transfer processes.

A Policy Transfer Framework

Why Transfer? Continuum Want To..... Have To			Who Is Involved in Transfer?	What Is Transferred?	From Where			Degrees of Transfer	Constraints on Transfer	How To Demonstrate Policy Transfer	How Transfer leads to Policy Failure
Voluntary	Mixtures	Coercive			Past	Within-a Nation	Cross-National				
Lesson Drawing (Perfect Rationality)	Lesson Drawing (Bounded Rationality)	Direct Imposition	Elected Officials	Policies (Goals) (content) (instruments)	Internal	State Governments	International Organizations	Copying	Policy Complexity (Newspaper) (Magazine) (TV) (Radio)	Media Reports	Uniformed Transfer
	International Pressures		Bureaucrats Civil Servants	Programs	Global	City Governments	Regional State Local Governments	Emulation	Past Policies		Incomplete Transfer
	(Image) (Consensus) (Perceptions) Externalities	Pressure Groups Political Parties	Institutions			Local Authorities		Mixtures	Structural Institutional Feasibility	Conferences Meetings/ Visits	Inappropriate Transfer
	Conditionality (Loans) (Conditions Attached to Business Activity)		Ideologies					Inspiration	(Ideology) (cultural proximity) (technology) (economic) (bureaucratic) Language		
	Obligations	Policy Entrepreneurs/ Experts	Attitudes/ Cultural Values	Negative Lessons			Past Relations			Statements (written) (verbal)	
			Consultants Think Tanks Transnational Corporations Supranational Institutions								

Figure 1: A Policy Transfer Framework.

Source: Dolowitz & Marsh, 2000, p. 9

Dolowitz and Marsh (See Figure 1) portray a continuum between voluntary and coercive policy transfers. Moving from perfect rationality to bounded rationality, the continuum goes from voluntary decisions based on necessity or perceived necessity through conditional transfers to direct imposition. They present this heuristic device as a research tool to identify categories that can be used to frame empirical work and as a statement that most transfers involve a mix of voluntary and coercive elements that should be explored in order to understand different dimensions. In this sense, they are highlighting the existence of power relations among agents that modify the expected outcomes of policy transfers.

Rose (2001) reappears with an article for the Economic and Social Research

Council ESRC / Research Programme on Future Governance (which also supports Diane Stone's work), where he presents 10 steps for learning lessons from abroad. He states that "to market a lesson, proponents must tell a story that is attractive and compelling, claiming benefits that may go well beyond anything that could be justified by prospective evaluation" (Rose, 2001, p. 18); the idea of marketing aligns with the evidence that policies become references for what to do and what not to do in many cases, while also expanding the research scope to a whole new dimension where policy can be designed, offered, and implemented as a merchandise that other entities might be able to "buy." This element highlights the need of exploring the uses that decision-makers give to their implemented policies. This is relevant here because many policies can be promoted as successful, thereby facilitating their mobility.

Stone (2001) later presented a more detailed exploration of think tanks, expanding the scope to other non-governmental institutions and including the concept of policy network as her preferred analytical framework, while adding the non-neutrality hypothesis to the discussion. She first highlights that think tanks are not merely neutral information containers, but groups that act as entrepreneurs and advocates for policy transfer; in this sense, the radius of action of think tanks increases and their role can be perceived from an extended perspective that adds complexity to the analysis. Finally, she states that ideas, discourse, and arguments are flexible and can be enacted in many different ways.

Once the network approach is assumed by Stone (2001, p. 35), she argues that "political dynamics of networks entail that negotiation, compromise,

and persuasion are unavoidable, and these actors are dependent upon decision-makers and other power holders to see ideas selected for transfer and institutionalized in policy". Her expanded analysis includes consultancy, banks, foundations, universities, and scholars, allowing her to state that think tanks are more complex than mere information moderators and that their role becomes more political than the neutral image portrayed by them (her observation of the World Bank allows her to understand this position). Thus, she states that agents in the network of policy transfer can exercise their coercive power according to the particular conditions of each scenario; in this sense, she affirms that "knowledge is not apolitical [and] in many instances (but not always) the knowledge organizations described earlier are engaged in a form of 'indirect coercive transfer'" (Stone, 2001, p. 36). The resulting research is now closer to accepting power asymmetries and "mobilization of bias" in the selection of policies.

In the following years, several articles included novel elements and methodologies to analyze singular case studies. Among them, Peck (2001) states that current policymakers look for policy strategies and techniques abroad as a matter of routine. The places where they seek tend to be those with a certain degree of cultural, political, and linguistic affinities. In spite of an apparent "naturalization" of policy transfer processes, Peck argues that, even in the places where policy transfers are successful, they are implemented as hybrid versions of the original; along these lines, he highlights the mutation ability of policies and the outcome of social transformation while the policy is "being moved." Introducing the concept of "hollowing out" of nation-states, he argues that concepts of "deregulation" or "shrinkage" might not be properly reflecting the

transition in which the state power is "being extended under this neoliberal context" (Peck, 2001, p.455) His work uses the policy transfer conceptual framework for the analysis of policy rearrangement under neoliberal trends and also becomes one of the few that use policy transfer as its analytical framework and methodological tool.

Other authors included this emerging perspective into their work, engaging in the on-going construction of a reference framework. Benz and Fürst (2002) provided an interesting proposal for implementing network "management" as a potential institutional arrangement that will improve the quality of the learning process among regions. Malik and Cunningham (2006) discussed the European scenario for innovation based on policy learning approaches that have used national innovation systems to develop a network of exchanges and deploy tools (such as the Trend Chart project). Schüttpelz (2004) studies the European Employment Strategy transfer to the Czech Republic. She uses Dolowitz and Marsh's model to explore the main elements that describe the transfer process and is able to distinguish a certain level of coercive transfer along the European "hard law" and interests of convergence among member states.

b. Reframing and expanding the concept of Policy Transfer to Policy Mobilities

Critiques of the mainstream (later called orthodox approaches) started appearing in the literature after the 1990s. Stone (2004) claims that most of the policy transfer literature has focused on state policy transfers resulting in "methodological nationalism"; for her, previous works

prioritize national agents over a plethora of others that take part in the complex process of transfer. As expected, she encourages a broader perspective of transnational agents, particularly those that function as part of a global public policy network; in this sense, she emphasizes that policy transfer mechanisms result from "mechanisms embedded in markets and networks as in the hierarchies of the state" (Stone, 2004, p.8) and the research scope should be larger. This work is very helpful for my research because it shows the relevance of supranational institutions and their network dynamics. It also helps infer (because it is not explicitly presented) that the literature lacks subnational analyses of the meso-level dimension and the linkages between the global and local.

James and Lodge (2003) argue that the literature has failed to explain what makes "lesson drawing" and "policy transfer" different from other policy-making processes. They argue that the effect of lesson drawing includes elements of rationality while the policy transfer indicators of success and failure are not properly defined. Their critique begins by pointing out that this emerging literature has already consumed significant resources from the ESRC Future Governance Programme ["a major initiative costing around £3.5m and encompassing 30 projects (ESRC, 2000; Page, 2000)" (James & Lodge, 2003, p. 179)] and that words like "lessons," "learning," and "transfers" have inundated the literature and particular reports even if they don't deal directly with the policy transfer phenomena. Their central argument is that the policy transfer literature presents claims that are hard to measure and therefore hard to distinguish from other processes of policy-making. The authors then suggest the use of institutional approaches or theories focused on the power of ideas; they also affirm that "literatures

on various forms of globalization and internationalization processes draw on both ideas and institution-based accounts to offer various explanations for how policy-makers are influenced by forces beyond the domestic context" (James & Lodge, 2003, p. 186). In this sense, they argue that research should focus on the difficulties of introducing new policies into established institutional contexts and the outcomes that the process produces. Along with this, the critique from James and Lodge (2003) exposes that policy transfer approaches have not been able to provide a strong explanatory theory of policy development. They also have not been able to construct methodologies to explore the policy transfer process itself.

In short, the policy transfer literature has reached a high level of maturity in recent years. Policy transfer scholars have done this by producing several works discussing not only theoretical and methodological challenges, but also by producing case studies that explore the central inquiries of policy transfer approaches. Second, this literature has been able to penetrate multi-disciplinary debates and gain recognition among academic communities allowing for discussions and debates approaching a coherent framework. Third, they have left behind totalizing, simplistic rational frameworks to generate more applicable scenarios that allow for the explorations of different situations and the inclusion of new lines of inquiry.

This is reflected in publications such as Mark Evans's (2004) edited book, *Policy Transfer in Global Perspective*, that summarizes the recent literature on policy transfer in an attempt to delimit the scope of research and highlight the relevance of this scholarship for contemporary research. The

first novel element included in the document is the discussion of policy transfer among so-called "developed" countries and the relationship between them with so-called "developing" countries. Case studies of policies moving from developed arenas to developing ones help to show coercive or cooperation mechanisms of transfer while scale studies from developing countries permit the observation of interaction among similar countries and the case when policies are observed by developed countries as a new source of learning. Along with this, the publication presents an interdisciplinary perspective where economic theories, technological and innovational change, public management, and education interests are observed using the same analytical framework.

In turn, Evans et. al. (2009) special issue of *Political Studies* (2009), *New directions in the study of policy transfer*, presents the most coherent and cohesive literature review for policy transfers so far. In this work, Evans affirms that policy transfer analysis has three central challenges: (1) description, how policy transfer is made? (2) Explanation, why policy transfer occurs? and (3) prescription, how policy transfer should be made? The purpose of the special issue of *Policy Studies* was to explore the extent to which the policy transfer literature can respond to these core inquiries. Reviewing what the study of policy transfer includes, Evans et al. affirm that policy transfer should focus on the "movement of ideas between systems of governance through networks and the intermediation of agents of policy transfer" (Evans et. al., 2009); moreover, they highlight the need for multi-level models that provide "macro-level explanations of policy change, meso-level analysis of the role of policy transfer networks in mediating policy change, and micro-level analysis of the process of policy-oriented

learning in and between policy transfer networks'” (Evans et. al., 2009, p. 265). These debates and research inquiries provided the basis for the recent approach on mobility/mutation and the methodological approaches used currently to observe a particular process from the policy mobility scholarship perspective.

Along with this, the theorization of socio-spatial relations has introduced a new challenge for geographical analysis in the social sciences. Jessop, Brenner and Jones (2010) discuss new forms of approaching the complex intermingling between territories, spaces, scales, and networks. For them, socio-spatial theory is more powerful when it (a) refers to historically specific geographies of social relations, and (b) explores contextual and historical variation in the structural coupling, strategic coordination, and forms of interconnection among the different dimensions of social relations. There is an upsurge of literature dealing with these approaches which attempts to explore current social changes in terms of complex relations where multiple agents interact while staying away from deterministic behavioral dynamics.

Guggenheim and Söderström (2008) explore the impacts of mobility in the transformation of a new form of what already exists elsewhere. From an architectural perspective, they observe socio-spatial relations that refer to historically constructed geographies facing interconnection, coordination, and coupling interactions that transform their spaces with a strong influence of scales and territories. Although this specific body of work does not relate directly with the debate on policy mobility, it offers a contextual attitude when observing socio-spatial transformations. In

particular, an in-depth study of the transformation of Latin American cities under the new urban architectural type of BRT pairing seems very promising with what Guggenheim and Söderström (2008) mentioned that has happened with the "church," the "prison," the "villa," and the "stadium," among many others.

Policies may result from interactions between different governmental scales and connections with "knowledge" communities and foreign experiences but, according to Peck and Theodore (2010), "the socioeconomic outcomes of policies remain, to varying degrees, products of local politico-institutional contexts." This is relevant to this research effort because, although BRT policies are clearly defined and apparently universally applicable, they will have to respond not only to the geographical and urban morphological conditions of the local but also to existing institutional arrangements in place. McCann and Ward (2010) state that it is something of a truism that policy development and delivery are characteristically grounded processes and the impact of policies is likewise contextually specific.

The emergence of "models" that are nothing more than a synecdoche of urban transformation seems to have become the most common mechanism of transnational policy mobility. These metaphors are not only references to policy imitation, but they also incorporate networks that define, design, promote, and reproduce discursive narratives about the model. According to Peck and Theodore (2010), a model can only become a model, needless to say, if it has followers, but it will not enroll followers unless it holds the promise of extra-local salience. Models that travel reveal at least as much

about demand-side needs, imperatives, and anxieties as they do about supply-side inventiveness. Supranational institutions normally in addition to particular interest communities become knowledge databases; they promote policies or are used by promoters to support a particular idea or program.

Peck and Theodore (2010, p. 173) claim that, "in contrast to the policy transfer tradition, which invokes notions of rational diffusion and best-practice replication, critical approaches to policy mobility tend to explore open-ended and politicized processes of networking and mutation across shifting social landscapes." A special issue of *Geoforum* (2010, issue 41) presents case studies using the policy mobilities approach. McCann and Ward discuss the case of Business Improvement Districts (BID). Mahon and Macdonald compare the cases of Mexico and Toronto in implementing anti-poverty policies. They introduce a novel comparative analysis between South and North under the brand of policy mobilities. Larner and Laurie (2010) observe networks of engineers (as traveler technocrats) as a reflection of knowledge mobilities for the case of Britain and New Zealand. Sheppard and Leitner (2010) explore the question of development and observe policy mobilities elements through "Washington consensus" agencies. Finally, Peck and Theodore (2010) observe the South-North policy emulation related to working conditions and focus on conditional cash transfer programs. These articles are great sources of applied research for the study of policy movements from a critical perspective and provide elements for the construction of a research methodological framework together with the view of policy mobilities in terms of power relations.

c. Urban Policy Mobilities a theoretical approach from critical geography and complexity perspectives

The studies on movements of policies and subsequent theories have, thus far, focused mainly on the national level. A broader, more comprehensive theoretical attempt focusing on urban realms was presented in *Mobile Urbanism: Cities and Policymaking in the Global Age* by Eugene McCann (2011). This is the first compiled work that integrally explores urban policy mobilities. McCann affirms that his research topic is policy mobilities and that it "concerns how local policy actors engage with global communities by learning and teaching about models and 'best practices,' how these models are mobilized, how they are changed along the way, how these mobilities are socially conditioned, and how they shape specific places as well as regional, national, and global geographies" (McCann, 2011, p. 2). As a result of this general research interest, he has been trying to trace the flows of policies that move from one city to another and particularly the infrastructure that permits it (e.g., as networks) and the interest groups involved. The first new concept included in his work is the idea of assemblage, starting from the borrowed claim that policies "are 'parts' of elsewhere, representatives of professional authority, expertise, skills and interests drawn together to move forward varied agendas and [programs]" (Allen & Cochrane, 2007, p. 1171) and pretend to explore the mechanisms through which urban policies result from circulating "parts of elsewhere" (in this case cities) and more specifically urban policies as assemblages of global ideas and knowledge. Policies based on Bus Rapid Transit as a general concept constitute assemblages that take ideas and knowledge from

different cases and places and put them together for replication mutation, according to needs and demands of the cities implementing these policies.

McCann and Ward (2011) present the results of previous inquiries around the drug policies in Vancouver after discussing the case of "Vancouverism" as one of those "models" that has been selected to be implemented in other latitudes. Their work on this topic becomes an "empirical approach that holds in its sights a balance between the place-based politics of one city and the global relations that constitute a global network of cities with similar approaches to drug policy" (McCann and Ward, 2011, p. 115). This case appears to be an attempt to explore the potential of an assemblage approach and offer a specific overview of evidence for urban policies resulting from broader exchanges, rather than exclusively from local conditions. The study of urban governability, creative urban policies, BIDs, and airports complement studies providing observation of specific cases of policy assemblage and mobilities focused on urban scenarios and allow for the discerning of a dimension that has been normally eclipsed by national-scale approaches.

Urban policy mobility is not to be simplistically conceived as a good or bad process, but as a mechanism observable under current global conditions. It should be used as a process that transforms local relationships and ways in which urban decisions are made. Complexity increases when the amount of actors, interests and possible interactions increase and, therefore, generates new dynamics that influence the political and economic decisions. These new variables demand new institutional arrangements and potentiating or constraining possibilities for urban change. The study of urban policy

mobility and its impacts on urbanscapes are relevant in order to explore theories on reallocation of capital all over the world under the new economic configurations and as a mechanism to inform local policies that attempt to reduce the negative impact of this rescaling process. In this sense, this type of research is potentially well aligned with a theoretical framework, while also providing relevant insights for urban policy arenas. Studying urban policy mobility also implies a methodological challenge due to the difficulties to track the complex universe of flows of ideas and the mechanism through which these flows materialize and become tangible in space.

This particular trend has been one where ideas formatted as urban policies are moved to deliver solutions to existing problems demanding huge investments. At the same time, these policies are generating demands for particular goods (specialized ones, most often) and are promoted by specific companies, banks, corporations, and interest groups. Policies, if properly implemented, may bring benefits to the community that incorporates them while simultaneously reconfiguring preexisting institutional arrangements, a factor that makes them interesting and worthy of academic inquiry. As Smith (2001, p. 174) states, "the challenge is to develop an optic and a language capable of representing the complexity of transnational connections, the dynamics of cross-border networks, and the shifting spatial scales at which agency takes place." Connecting the elements of the transnational urbanism and the impact of transnational flows on urban space can be done through the scope of BRT systems due to their clear urban and local configuration together with the multi-scale complex relationships that cause and emerge with the implementation of the policies.

The general framework provided by the literature on transnational urbanism and the specific niche that policy mobilization establishes allow for a strong theoretical framework to study the exchange flows present at the transnational, national and local level. Additionally, the impacts that BRT systems have on land use, gentrification, and new modes of transportation or environmental policies generate an even more attractive field of study that will connect local transformations and also the concurrent policy exchanges that emerge from BRT policy implementations.

Exploring the implications of both neoliberalism and neoliberalization for urban and spatial analysis, Brenner and Theodore (2002, p. 342) pose two questions that I consider relevant for this research. (1) "Does the local really serve as a site of empowerment in the new global age, or do contemporary discourses of globalization/localization in fact conceal a harsher reality of institutional deregulation, regulatory downgrading, and intensifying zero-sum interspatial competition?" (2) "Have localities and cities really acquired new institutional capacities to shape their own developmental pathways, or are their fates now being determined—or at least significantly constrained—by political-economic forces that lie beyond their control?"

These questions effectively summarize my central inquiry and point to a particular research perspective in which power relations are inherent to emergent processes and mechanisms. Rather than reducing policies to a simple imposition from the top or the outside as dependency and imperialist explanations suggest (Prebisch (1963); Furtado (1969); Wallerstein (1979);

Vernengo (2004)) or viewing them as bearing some technical neutrality that in principle would allow them to be applied equally across the board as rational models indicate, the policy mobilities approach examines policies as a complex set of relations and processes unfolding differently in different localities. Although packaged into a product for sale across geographies, BRT policies have to adapt to national and local legislatures and *modi operandi* to fit within pre-existing transportation systems and local preferences and, hence, include the modification that each context calls for (Suzuki, Cervero, & Iuchi, 2013, p. 2). The policy mobility approach contributes to a theoretical view where multiple actors interact according to particular needs and interests generating specific arrangements as the global and the national interact with the local producing newer versions that, in turn, feed back into the general policy itself.

d. The implicit question of power in policy mobilities approaches:

From Power to Powers

Policy mobilities can be best observed as the result of complex social processes emerging from existing power relations within social actors. Referring to Marx, Foucault notes that "a society is not a unitary body in which one power and one power only exercises itself, but in reality it is a juxtaposition, a liaising, a coordination, a hierarchy, too, of different powers which nonetheless retain their specificity" (Crampton & Elden, 2007, p.156). This heterogeneity of power implies that power relations within a society should be observed as decentralized processes rather than as a single, unique, centralized mechanism. Moreover, Foucault affirms that the existing regions of these heterogeneous sources of power are an indication

of "society as an archipelago of different powers" (Foucault, 1977). In terms of the specifics of this dissertation, this statement becomes a fundamental element of the analysis, allowing observation of policy mobility processes as the resulting strategies of different powers interacting in pursuit of their respective interests. Thus, when tracing power as a socially heterogeneous characteristic and a socially constructed attribute, complexity emerges as its most descriptive characteristic. In this sense McCann and Ward (2011, p.30) affirm that:

"in a more general analytical vein, we could start from the premise that power is a complex and situated achievement - not a prior property of more or less powerful actors. With this in mind, urban policy initiatives are less able to be characterized as imposed from the outside; and it is probable that external ideas are more likely to gain purchase when they are seen to benefit local agents or when local agents purposefully seek them out. Even when policy initiatives are relatively coerced (e.g., through threats of withholding essential funding or the promises of substantial investments in expensive infrastructure in resource-poor contexts), local actors are nonetheless quite likely to be involved in shaping outcomes. The subtle power relations of policy adoption and adaptation in an international context clearly deserve close attention".

Consequently power, according to Foucault, cannot be defined just as a noun, on the contrary, "it is present everywhere... it insidiously uses every social fracture to infiltrate into the heart of people" (Crampton & Elden, 2007,

p.119); along these lines, Raffestin affirmed that power is "consubstantial to all relations" (Raffestin 1980, p.45). Traditionally, power has been perceived as a comprehensive variable due to the assumption and pretention of sovereignty that historically groups, families, cities and states have tried to claim. Nation states have tried, and in some cases succeeded, to become hierarchical and concentrated mechanisms of power but, other forces have stepped in to challenge them. Still, analysts have largely identified power with the nation-state making people believe that power is the main attribute of government. But recent research has questioned this premise showing the complexity of power and its omnipresence in social relations. The fact that nation-states are not unique mechanisms of power implies that there is a problem between the representation of power in policy analysis and its actual functioning.

Consequently, this research departs from the idea that national governments are not the only source of power and that any effort to study social transformation emerging from policy mobilities should include the functioning of power besides government powers. In this sense "the image of political-economic space as a complex, tangled mosaic of superimposed and interpenetrating nodes, levels, scales, and morphologies has become more [analytically] appropriate than the traditional Cartesian model of homogeneous, self-enclosed and contiguous blocks of territory. The tensions and crises implied by this "multiplex" and multiscale urban experience are objects of policymaking and politics" (Brenner, 2004, p. 66). Applying Foucault's idea of power as an archipelago, this research aims to understand the existing relations between centralized and decentralized spheres and

the subsequent national organization along with the corresponding international dynamics.

As mentioned before these powers do not aim only to control and prohibit, but from a Foucauldian approach, to shape. Along these lines, rather than assuming the absolute power of neoliberalism to push its interests over those of all others, this dissertation examines the intervention of different powers and their role in the transfer and implementation of policy. Similarly, I explore what has been defined as the facilitative, rather than regulatory, role of the state "behaving like a business to attract and support capital, rather than to promote welfare as understood under Keynesianism" (McCann and Ward, 2011, p. xviii).

Despite the recognition of the possibility that national-states are non-exclusive power apparatuses, it is important to highlight their efforts at a hierarchical concentration of power as well as the new ways in which special interests hierarchize and concentrate through their practice into "veritable networks of powers" (Jean-Michel Brabant, 1977, p.27). Informed by such insights, I observe the modus operandum of Colombia's nation-state and its governmental apparatuses as central diffusion mechanisms where power is heavily exercised and materialized; however, at the same time, I explore other dimensions of power represented by other agents involved in the transformation of society through projects such as BRT. Still, I will not attempt to answer the question, suggested by Foucault (1997), who has power? Rather, I use it as a starting point and as a mechanism to ask how existing power relations shape the resulting spatial relations through policy mobilization. Thus, the research focus is not on the "ownership" of power

but on to whom power serves. Accordingly and precisely from this perspective, one can start observing the relation between power and space.

e. Power, Space and Knowledge: Policy Mobilities, their territorial and knowledge diffuser dimensions

Space allows for the observation of 'meshes' of power and the questioning of the utopia of a total and unified power on the part of the national state. In this way the existing power mechanisms defended and exercised by nation-states can be questioned on the basis of the scale of the observation. Consequently, the observation at different scales in the process of urban transformation through policy mobilities and the effort to identify agents at different scales allows for the study of power from a systemic approach. The observation of these different scales where power mechanisms emerge is congruent with Coleman and Agnew's (2007) rejection of any type of structural approximation (binaries of power, à la Hardt and Negri, 2000) when referring to reterritorialization. For them "power does not get exercised over 'undifferentiated blocks of subjects fixed in absolute spaces' but as a series of overlapping and discontinuous spatialities of power" (Coleman and Agnew, 2007, p.321). This argument leads to the inclusion of complexity to the observation phenomena demanding multi-scalar and multi-agent theoretical approaches but also methodological efforts in order to observe the mechanisms through which power diffuses across society and highlight the multi-dimensional processes taking place.

Thus, the questions should not be based on an inside-outside perspective of power contained by national boundaries but as a dispersed social process

that is influenced by a social effort to build a concentrated and hierarchical order from a diffuse, disperse and decentralized arena where power actions emerges. The analytical model based on sovereignty and its implication on questions related to power, which is perfectly understandable from the national perspective, is not only obsolete, but probably was never valid. More to the point "place-making is shaped by conflict, difference, and social negotiation among differently situated and at times antagonistically related social actors, some of whose networks are locally-bound, others whose social relations and understandings span entire regions and transcend national boundaries" (Smith, 2001, p.107). So power is not exclusively centered on states and is becoming decentered by complex mobility networks that reterritorialize and rescale nation-state power as proposed by Brenner (1998, 2003) and Mansfield (2005).

Space controlling and organizing is one of the "pre-occupations of power" (Foucault, 1977); each power technique, responding to particular strategies, context and agents, has its own spatial dimension and the resulting practices of spatial domination are characterized by complex interactions that are to be observed and analyzed for the case of policy mobility as an emerging power technique through which capital is acting in response to neoliberal practices. The exercise of power by national states has tried, and failed, to design spaces contained within their boundaries where spatial practices are the absolute result of their sovereignty. The significance of economic forces in contemporary power techniques cannot be eclipsed by the traditional views of power as an exclusive political, and more specifically governmental, arena. So this research observes the mechanisms through which implementation of transportation systems (i.e., BRT for Latin America) can

also connote particular forms of appropriation on the part of current economic powers.

Decentralization processes that have occurred during the hegemony of national organizational techniques and have been reinforced in the post-cold-war era can be viewed as a strategy of national organization and production of space. The subdivision of the national space play a central role when exploring policy mobilities because it is through this multi-scalar organization of power that policies migrate and are transformed to fit particular needs and interests. Participation and democratically organized power in sub-national units has become one of the mechanisms through which policy mobilities allocate their ideas and therefore a specific power technique that arises when policy mobilities are practiced. In this sense, space can be viewed as an arena of power exercise and the result of the juxtaposition or interaction of national power techniques with regional and supra-national power dynamics.

What interests me for this research inquiry is that, according to Mills (2007), "each institutionally-sanctioned power relation is negotiated at a local level and can therefore be challenged overtly or covertly". Interestingly, Thornborrow (2002) affirms that although there are power techniques and well established power agents, there is a particular role of certain agents and scales in terms of decision making. Therefore there is clear evidence that there are different types of power and that the results depend most of the times on negotiation processes, positions, and the interaction among agents during the decision making process. Thus, one of the central tasks of this inquiry lies in observing and analyzing these

moments of decision and the emerging interactions that result in a particular outcome. Exploring moments of decision allows for examination of the mechanisms through which different types of power relations determine the spatial results according to their capabilities along the lines of relations building, in this case urban transformation through policy mobilities. Focusing on a particular case study, a city and the implementation of a BRT system, will allow to observe relations from a Foucauldian perspective, where "each relation is the place [le lieu] within which power manifests itself, as energy and information get manipulated, formed, accumulated, combined, and circulated" (Raffestin 1980, p. 46).

Transformations happening in urban scenarios are spatial materializations of power territorialities and imply power relations along multiple scales serving multiple particular interests. Diverse agents interact around a particular goal such as implementing a BRT system, but each one has its own agendas that converge in this particular effort and transform territories not only materially but also intangibly. Power relations emerging from policy mobilities transform the material form of cities and additionally affect the social structure, alter the forms of policy making and change the local economic dynamics.

Therefore these emerging power mechanisms can be considered as techniques that serve and allow for the expansion of capital under neoliberal approaches of spatial change. Policy mobilities are the result of procedures that emerged in a particular context but developed and got perfected through trial and error and have succeeded in their task of serving the interests of capital investors. Cities change "not only as a result of the requirements

of economic logics but also as a result of changing social and political relations at the local, national, and international scales" (Smith and Tardanico, 1985, p. 1987). The observation of these power mechanisms relates to one of the initial and naïve questions of why somebody that does not know (and is probably not interested on) how to pronounce Bucaramanga, allocates millions of dollars to improve its local transportation system. The answer is because capital allocation has become a technique to assure that power serves particular interests of powerful agents from a productive sphere. This insight implies that although there is not an explicit exercise of coercive power, there is power in place when policy mobilities allow the allocation of resources in different spatialities.

The impact of assuming power as heterogeneous is that any research effort has to attempt to localize the epicenters of powers contextualizing them historically and geographically. Each moment and context has its own technologies based on specific knowledge and therefore particular powers that determine the existing interactions and the actions that define power and its spatial mechanisms.

Henceforward one last item of power that touches the boundaries of this research is the relationship between knowledge and power, specifically knowledge serving specific power interests and the capacity of powerful agents to use knowledge as their most effective mechanism to support their actions (Flyvbjerg, 2003). According to Michael Peter Smith "existing social economic activities are necessarily embedded in culturally specific social processes and political relations. In the last instance, technical and economic development have no imminent logic apart from their relationship

to politics and society" (Smith, 1998) and the result is that scientific information can be used as a means to convince but also as a coercive tool to generate assumptions that will support a particular power interest. This is a commonly used strategy along the implementation of BRT systems circulating knowledge as the key argument to support policy agendas.

Policy mobilities circulate ideas that are well established, accepted and already tested in order to propose specific policies to a particular place. To a certain extent, policy mobilities, understood as a power technique, use knowledge as a strategy to support but also to convince agents to follow the proposed actions. Epistemic communities and networks such as think tanks or thematic experts become one of the most interesting objects of study under this type of research exploration. Haas (2003, p.4) affirms that epistemic communities:

"are one possible provider of this sort of information and advice. As demands for such information arise, networks or communities of specialists capable of producing and providing the information emerge and proliferate. The members of a prevailing community become strong actors at the national and transnational level as decision makers solicit their information and delegate responsibility to them... To the extent to which an epistemic community consolidates bureaucratic power within national administrations and international secretariats, it stands to institutionalize and insinuate its views into broader international politics".

These networks do not only produce and improve knowledge about a particular topic but also serve and are used by powerful agents to mobilize their policy agendas. Science, which has gained a central role in modern societies, becomes the strongest argument to support policy models that will end up serving particular interests along power relations.

In this sense, policy mobilities allow to practice power becoming in some cases a mechanism which at the same time controls social agents up to their finest details, returns value to capital investments, and transforms economic relations among involved agents. The result matches what Foucault (1980, p. 178) defined as "the dissemination of micro-powers, a dispersed network of apparatuses without a single organizing system, centre or focus, a transverse coordination of disparate institutions and technologies." Members of epistemic communities act on a particular local and national context but also diffuse their ideas through exchanges with their colleagues in "scientific bodies and other international organizations, during conferences, and via publications and other methods of exchanging lessons and information" (Haas, 2003, 379) and emerging power networks are able to transfer and mobilize their discourses into other spaces.

Consequently the concepts and hypothesis used in this inquiry constitute a relevant theoretical approach to the observation of urban transformation via BRT systems and its relation to power because it allows to contextualize the case to a particular geography but also emerges as a historically constructed process in which a multiple set of agents interact according to their interests, using knowledge as one of their finest strategies. In this sense, it follows Foucault's perspective:

"[P]ower in its exercise goes much further, passes through much finer channels, and is much more ambiguous, since each individual has at his disposal a certain power, and for that very reason can also act as the vehicle for transmitting a wider power. The reproduction of the relations of production is not the only function served by power. The systems of domination and the circuits of exploitation certainly interact, intersect and support each other, but they do not coincide" (Crampton & Elden, 2007, p.179).

A Foucauldian perspective of power relations that underlie policy mobilities, according to McCann and Ward (2011), allows to observe that transnational policies - such as BRT strategies - are highly contingent, dependent on local circumstances, and that their specific form is the result of the range of influences and connections at work in any given instance. Returning to the initial discussion on prohibition as an attribute of power, policy circulation can be understood to "stretch across powers of seduction and persuasion, rather than, or as well as, domination and delimitation" (McCann and Ward, 2011). So the fundamental goal of this research effort is to understand that cities are a complex result of social interactions and power mechanisms that result not only from local dynamics but correlate with extensive networks of political and economic agents that operate in broader arenas.

f. Expected Contributions of this work

In sum, multiple scholars have contributed to the development of this analytical framework linking contemporary urban transformations with the spread of ideas around the globe for the specific case of BRT. Policy mobilities scholars have discussed the emerging complex scenarios where ideas flow and the subsequent process of packing and assembling ideas into policies occur according to specific interests. Thus, policy mobilities are critical for understanding how some policies are formed and how they move under current neoliberal arrangements, transforming urban landscapes and local institutional arrangements (and themselves). What makes it more relevant and pertinent is that "some" policies are growing in number and becoming a pattern in multiple topics and sectors within urban planning and policy arenas.

During the detailed exploration of BRT policy mobilities in Colombia, this aspect will be presented in the subsequent sections, with several of the policy mobility literature findings and statements observed in a specific, clearly defined manner. But most important, this case will be capable of informing and enriching via new evidences the existing body of literature on this issue. First, the exploration of the Colombian BRT policy case will enrich available information on so-called developing countries, most specifically within urban areas in developing countries. Interestingly this case is also relevant due to its impact on a worldwide scale moving from a local idea incubated in a city in a so-called developing country to a policy that's widely promoted and implemented around the globe. The literature will be enriched by the fact that the analyzed process is an intra-developing world urban policy mobility and also because it will set up the fundamentals for further inquiry on this front. This research will contribute with a

case of South-South and South-North policy mobility backing directionality analysis in terms of global trends and power tensions within neoliberal urbanism dynamics, specifically in terms of transportation topics in urban agglomerations.

The specific case of BRT policy mobility has already given birth to two hegemonic think tanks on transportation matters: EMBARQ - supported by the World Resources Institute - and the *Institute for Transportation and Development Policy* (ITPD). Both of these have a strong presence in Colombia and count on the support of the nation's experts that were involved in the original policy mobility as discussed throughout this dissertation. This work will then contribute to the exploration of epistemic communities, in this case urban transportation epistemic communities, particularly the inception and initial recognition process of expertise of freshly developed and packaged policies. Although the core question and the research itself does not focus on epistemic communities' development, some of the evidence can inform future studies on the conformation and consolidation of a worldwide epistemic community of urban transport experts after TRANSMILENIO and after the Colombian urban transportation program.

Lastly, this dissertation aspires to contribute to the discussion of the impact of policy mobilities of urban planning and policy at local scales. In this sense, it expects to discuss multiple issues that emerge at the local level when local institutions and actors interact with the instruments and mechanisms deployed with packaged policy. The local conditions intermingle with external processes that modify the initial goals and objective, which generate a new type of policy and a specific implementation

project. These processes have been highlighted and studied recently by policy mobilities scholars and labeled as policy mutations. Thus, this dissertation will contribute to the discussion of the types of policy mutations that emerge when mobility arrangements meet and are modified by conditions of local urban planning and policy arrangements.

3. Observing policy mobilities: methodological approach

This dissertation seeks to add to the understanding of policy mobilities through the study of the Colombian BRT program. Policy mobility refers to the process in which a set of plans, ideas and procedures that have been applied in a local arena are implemented in another location or locations, often following the original example and relying on many of the original agents.

Given the complexity of this effort, this inquiry requires the use of multiple methodological strategies in order to track processes that are not easily observed. Accordingly, the methodology selected for this research seeks to satisfy three main criteria: (1) Unravel the complexities and changing processes of policy mobilities; (2) Allow for the examination of the policy modifications and adaptations that occur as a policy is implemented in different environments; and (3) Illustrate what happens to policies as they move from one place to another. On these bases, I opted for the "follow the policy," distended-case study approach proposed by Peck and Theodore (2011), because it permits in-depth observation of a particular case while exploring wider networks and accompanying circumstances along with the relations taking place among the agents involved in the process.

As the name indicates, the "follow the policy" method (Peck & Theodore, 2011) via the use of a distended-case study approach traces the process taking place as the policy moves while relating or extending the case to include the most relevant factors and scales intervening in the process; in

this way it follows the policy and its possible modifications through the scales, agents and relationships that shape it and the process as it moves from one location to another, from one context to another, from one political economy to another. The common qualitative research method known as the case study, in which the researcher explores a process bounded by time and activity by collecting detailed information using a variety of data-collection procedures (Stake, 1995), is enriched by the challenges and inquiries of policy mobilities scholarship. Hence, the distended-case method adopted for this research project uses, as Peck and Theodore suggested, "a judicious combination of observations, documentary analysis, and in-depth interviews as a means of probing, interrogating, and triangulating issues around the functioning of global policy networks, the reconstruction of policy models, and the adaptation of policy practice—spanning an expansive 'causal group' of policy actors, advocates, and critics" (Peck & Theodore, 2011, p. 7). Rather than merely describing the case as self-contained and self-explaining or perhaps assuming that it may be a copycat of a best practice, this approach follows the policy from one place to another to let the process tell the story of the transfer through its particular relationships and the forces and interests involved. In this way, this research tries to capture the fluidity and possibly transformative process taking place as policies move. It also aims to explain the extent to which policy mobilities can be contained in single explanations or, rather, call for a flexible and complex methodology that can capture what remains and what changes in the process.

The selected case is a BRT system policy transferred from Bogotá to Bucaramanga in Colombia. In order to organize and guide the methodological

exploration, agents were theoretically categorized by scales and spheres under the assumption that policy mobilities may involve an intricate set of actors arranged on three main theoretical scales where the BRT system's implementation process took place: the local, the national, and the global. The most visible physical and material changes happen at the local scale, essentially within the cities where the transportation system is implemented. A complex institutional scaffolding and the vast amalgam of decisions that took place are less visible than these material transformations (See **Figure 2**). Additionally, there are three dimensions that directly and indirectly affect the material implementation of the policy: (1) a production dimension related to the goods and services needed for the construction and running of the project that includes all actors involved , (2) a financial dimension that encompasses all actors related with the allocation of resources such as loans or capital investments within a complex institutional infrastructure and pays attention to the logics and dynamics of construction of the artifact (in this case the BRT system), and (3) a knowledge dimension where ideas are exchanged on the basis of ideologies, expertise and accounts of actors that directly influenced the process, urban public transportation institutional arrangements, urban project design, and implementation. Although these scales and spheres are segregated on the diagram, they actually intermingle/overlap; most of this work consisted of observing how they are articulated, how they relate, and how they get transformed during the implementation of the program.

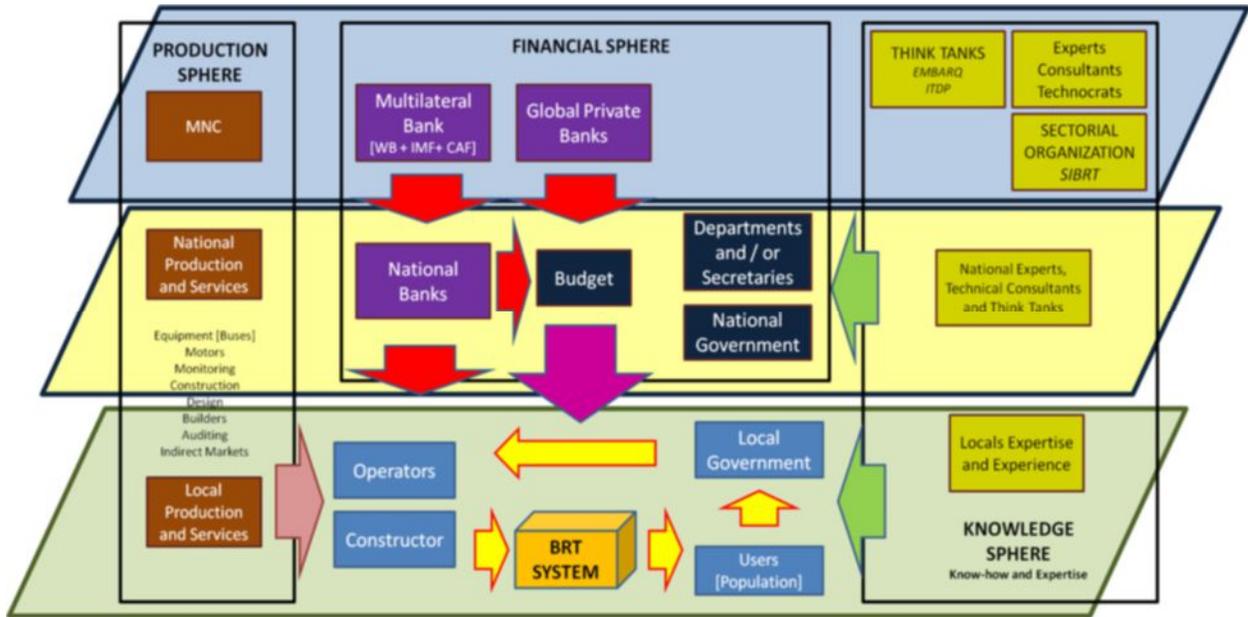


Figure 2: Scales and Spheres of the Colombian Urban BRT Program

All these actors interacted with and around the central unit of observation of this research, the BRT system that modified the material organization of urban public transport in the cities involved while reorganizing the arrangements used to provide the service, transforming the public instruments, and changing the user's urban mobility experience. This scheme is essential to explore and understand how urban institutional capacities adapted and how actors through their actions interacted during the process.

TRANSMILENIO in Bogotá and METROLINEA in Bucaramanga are the core agents of the research; the first is the origin of the policy and the latter one of its final destinations. The replication of the BRT system from the city capital of Colombia to another large urban agglomeration was a response to a national program applied between 2002 and 2004, designed after Bogotá's "success story" and adapted to fit the complex social, political and economic demands of the particular context, and the interests of the agents involved. So the journey was not a mere "best-practice" adoption, but rather

required a process of policy assemblage, mobility and modification. In this sense, the research examines each layer of policy interaction (local, national and global) for both cities and for the national program to understand the inherent complexity of the trajectory from Bogota to Bucaramanga.

The actual research proceeded as followed: first, archival sources were consulted to understand and describe the policy design process during the inception of Bogota's *TRANSMILENIO*; then research focused on the assemblage of the national BRT program/policy for large cities in Colombia along with the transmission mechanisms that arose afterwards; and, finally, the process of arrival and implementation of the program was studied in Bucaramanga's BRT named *METROLINEA*. The "follow the policy" method begins by using archival sources such as official reports, contracts, newspapers, and other relevant sources to understand the relations taking place during the policy journey, to identify policy mobilizers, and to understand the use of power instruments and mechanisms. The BRT policy mobility was documented via documents and press reports along with promotional materials and other policy mobility instruments that included conferences, consultancy reports, and business fairs. Finally, the process of implementation in Bucaramanga was tracked via legal documents, reports, media reports, and academic papers.

Once document assessment was finalized, I organized and prioritized the sources of information and tested and complemented them through in-depth interviews of policy-makers and important policy operatives; these interviews allowed for understanding their roles in the policy mobility

process from the source's point of view; at this point, I gathered information about the developments that took place while the BRT policy was being implemented in Bogotá, was turned into a national program, and was implemented in Bucaramanga. I conducted a total of 30 interviews³ many of them face-to face in Bogotá, Bucaramanga and others via internet because many of the experts and informants were in places such as New York, Buenos Aires, Boston and México. Interviewees consisted of urban planning experts, transportation experts, former and current local authorities and city planners, former and current national level officials, former and current transportation authorities and managing agency officials, think tank employees, and bus company managers. The information collected during the interviews was recorded, typed and codified for further processing.

Observing policy mobilities is difficult due to the inherent complexity of the process and agents' particular interests in hiding information. To address this, I triangulated the information with previously reviewed archival and manuscript information, processed it into final data, and used it as the main input for the definitive narrative. Summing up, the investigation relies on three primary sources of evidence suggested by Yin (1994) for case studies: archival records, documentation, and in-depth interviews.

In-depth interviews explored the presence of policy mobility agents (such as individuals, institutions, governmental units and others) in terms of those that promoted, advised, enforced, and complemented the complex decision-making process. The recognition of these agents and their

³ The interview Guide can be consulted in the appendix section.

operational forms provided enough information to understand the case of Bogotá, the development of a national policy, and the case of Bucaramanga. Hence, while historical research provided initial diagnostic information and ongoing complementary information, interviews played the most important role in understanding how policy mobilities happened.

Interviews were semi-structured conversations of one to one-and-a-half hours guided by a pre-defined set of questions (See Appendix 1) but carried out with flexibility to adjust to the role of the interviewee and to follow up on particular issues of his/her expertise. This semi-structured interview strategy allows commensurability of the samples, in the sense that responses for the same questions were compared according to the different interviewees' condition and role, making them comparable which may offer information difficult to get through other data collection methods. Additionally, although the focus of the conversation was the BRT systems policy mobility, unexpected issues emerging in the conversation were explored.

A challenge for this research and for the case study methodology is how to access and explore policy participants and decision-makers. This obstacle intensifies, because obtaining access can be more difficult and more complicated than with other research agents. In this regard, there is a call for "a degree of strategic circumspection, if not bounded conformity" (Peck & Theodore, 2011). As shown by Yin (1994), interviewing elites is challenging because of their experience as interviewees, time constraints, and challenges associated with follow-ups. Additionally, the information received from elite sources is often biased by their subjectivity,

defensiveness and the overall discourse (they defend); I sensed and verified this through triangulation while noticing that "conversations with demonstrably powerful policy actors may often yield exaggerated accounts of foresight, rationality, or creative entrepreneurship – what might be called 'agent inflation'" (Peck & Theodore, 2011). Thus, information provided by high-level officials demands careful analysis by contextualizing the biases that become apparent when applied to policy mobilities research.

Once interviews were finished, I spent time organizing, systematizing and summarizing the data collected. The information was organized by the three main components (Bogota, national BRT program, and Bucaramanga) and used in each case to understand the process taking place in each city; while obtaining in-depth information for Bogotá and Bucaramanga from these sources, I was able to also obtain a wider perspective of how policy mobilities took place during the implementation of the entire national BRT policy in Colombia.

The narrative uses a chronological order starting with the story of how a particular policy that emerged in Brazil "landed" in Bogota and became a reference model for other cities to then explore the transformation of the Bogota case into a national program, which was then reproduced in a set of Colombian cities; at this level, I focused on national guidelines and the interaction of transnational agents that served functions such as financing, constructing, design, and implementation of systems (e.g., monitoring and money collection). Lastly, observing the case of Bucaramanga allows me to analyze in detail the forms of articulation with the local setting in terms of regulation, budget and construction that is constrained by the general

political framework of decentralization of public investments present in more recent territorial arrangements in Colombia.

Overall, this methodological strategy allowed observation of complex systems as adaptive social systems composed by agents that interact within a context that includes other agents and institutions. For Miller and Page (2007), the research potential, challenge, and opportunities of the "science of complex systems" falls within the realm of topics such as globalization, sustainability, combating terrorism, or preventing epidemics. In this way, complex adaptive systems may become a greater part of people's understanding of how economic, social, and political processes actually function. This research observes the proliferation of BRT policies from a complex perspective that allows for proper context of interactions and mechanisms that take place during the urban policy mobility process. This strategy attempts to consolidate a specific methodological approach that allows for an understanding of the changing process taking place as policies move. As Peck and Theodore (2011) explain, this research demands methods that are sensitive to movement, flexible to the variability of the policy in different contexts, and capable of allowing the adoption, emulation, and transformation of policies. Accordingly, the distended-case study is a suitable method that includes elements that focus on the core problems and contemplates the complexity of the arenas in which the processes take place. Moreover, in terms of the relation between complex systems and policy mobilities, this methodological approach has the ability to observe the social phenomena as an interaction of network dynamics.

It also allows the observation of convergences and divergences that result from particular contextual situations while providing information about existing mechanisms of policy mobility and policy adaptation (mutation). Such seems to be the case of BRT implementation in Colombia that started with TRANSMILENIO in Bogota to become next a national policy that was adapted in a set of cities under the guidance of national authorities and transnational institutions, eventually resulting in the adoption of a continental dimension as a "good practice" by international forces.

4. Dissertation's Plan

This document has been organized into four major chapters. Chapter I, which is the introductory section, presents the theoretical approach and the methodological strategies that are used to explore the central question and goals for this dissertation. It discusses first the policy mobilities literature from its inception under the terms of *Policy Transfers* to the most recent debates under the *Policy Mobility* scholarship label. Following this is an examination of the role of power and its relationship with policy mobilities.

Chapter II presents the Latin American urban context and a general description of the transformations taking place in the last three decades as they impact urban planning and policy. It highlights the dynamics that emerged in the post-Cold War period, particularly the paradigm replacing traditional welfare state approaches that were dominant in the region. The complex task of allocating public services moved from a scenario overly controlled by the state to a more market-driven one where new institutional

arrangements were developed. The result was a set of multiple answers to the same questions that were shaped according to the specificities of each nation, and its cultural and social particularities following the direction of the most powerful groups.

Chapter III presents the core results of this research effort. It first describes in chronological order the national transportation program inception as a result of the success of the Bogotá program. This includes identifying key actors, key attributes and key expected outcomes of the policy. Following this, the chapter introduces the process of implementation of BRT in selected urban cores in Colombia to move next into the case of Bucaramanga case, discussed in far more detail.

Finally, Chapter IV discusses the overall findings, along with some notes on future research niches, while highlighting ways in which urban policy can be influenced by certain interactions. Lastly, it includes some considerations on the possibility of improving the quality of urban interventions of the BRT type in a neoliberal context and mitigating the risks associated with the paradigmatic approach guiding policy making as illustrated by BRT.

Altogether, this dissertation describes the journey of BRT from one place to another while observing and analyzing the social processes that facilitated such occurrences. Along the way, the discussion is an effort to describe the way in which cities are transformed under neoliberal economics and through intricate and complex power relations. Ultimately, it informs the process of transforming a basic idea into a complex set of arguments

for the purpose of better understanding urban planning and policy making as well as improving current day implementation in Colombian cities.

II. NEOLIBERAL URBAN TRANSFORMATION IN LATIN AMERICA: FROM INITIAL PRIVATIZATIONS TO PUBLIC PRIVATE PARTNERSHIPS

Over the last few decades, Latin American cities have experienced an exponential proliferation of BRT systems (Hermann & Hidalgo, 2004; Hermann, 2005). Inspired by a model implemented in Brazil during the 1970s, the new BRT developments have become one of the most important attributes of contemporary urban transformation in the region and clearly constitute a case of urban policy mobility. Cities like Bogotá, Lima, México City, Panamá City, Santiago, and Buenos Aires have implemented this type of urban transportation systems in their spatial reconfiguration initiatives. BRT development has become one of the most promoted and implemented solutions for the ever-growing demands on urban mobility⁴ as Latin American cities have been synonyms with traffic congestion and inefficient transportation systems.

BRT as the prevalent technology in the reorganization of urban transportation systems was first implemented in the Brazilian city of Curitiba during the '70s; this solution was eventually recognized as exemplar for other Latin American cities and, with the development of similar systems in Sao Paulo, became a benchmarking model. Although other technologies are in discussion, particularly rail-based ones, BRT has penetrated policy circles and established itself as the most seemingly efficient option among available regional solutions.

⁴ Special attention should be given to the difference between policy mobility and urban mobility as two different concepts. While urban mobility refers to the sphere of moving people and goods within a city normally associated with transportation issues, policy mobilities refers to the movement of ideas, programs and projects from one place to other mainly focused on policy arenas.

Due to the enormous amount of resources needed for implementing BRT systems at the urban scale and the limited budgets of most of Latin American cities, however, not many municipalities are able to implement a BRT system based solely on desire for improvement. Cities need strong institutional scaffolding that guarantees the allocation of resources (probably coming from the national scale as transfers and from the transnational scale as loans or investments) and the incorporation of technical expertise in the physical transformation of urban spaces. In this sense, the implementation of BRT systems is made possible by particular infrastructure technologies working alongside policy mobility, networks, and financial arrangements. In this process, not only is the physical landscape transformed, but also the institutional decision-making processes that exist within the city.

The accelerated process of implementation of BRT systems in Latin America and the fast diffusion dynamics that have emerged in the last years are not isolated or spontaneous processes. First, it responds to the fact that in Latin American "sprawling megacities, the majority of the poor and working class must rely on public transportation and non-motorized transport modes" (Irazábal, 2009, p. 123). In those cities, the poor and working classes are a big portion of the population; therefore, mass urban transportation solutions are persistently demanded. Second, these systems have been the product of model replication in the region and the introduction of neoliberalization processes through structural reforms that were designed in the second half of the '80s and have been implemented since the '90s. The neoliberal discourse permeated the reforms and began a process of

transformation of the nation-states' institutional structures while modifying the relation that governments have with private actors.

During the 1908s and early 1990s, existing arrangements for the allocation of public and private resources were profoundly modified. The role of nation-states was transformed while the role of capital and private resources was enhanced. It started with the neoliberalization of public policies at the national level, followed by neoliberalization of urban policies, and ending in the consolidation of neoliberal urbanism, which implied a vast prevalence of the neoliberal discourse in urban policy arenas. The following sections outline the process of transformation of public policies under neoliberal contexts in Latin America during the early '90s, including structural reforms that allowed the BRT policies in Colombia to emerge.

1. Model replication in Latin America and the transition period of the nineties

The process of adoption of an exogenous idea is not new in Latin America; actually, from the inception of most Latin American settlements (particularly those of colonial origin), models from other latitudes have been replicated resulting in a significant syncretism of urban processes. In this sense, it is not novel that the transformation of contemporary Latin American cities can be explained by observing the implementation of foreign policies; meanwhile, the speed of this process has recently increased, strongly influenced by global dynamics of large urban projects facilitated by the allocation of capital flows on a planetary scale. Replication as a

mechanism for providing answers to endogenous problems may not have changed; what seems to be changing are the ways and mechanisms used for policy movements and packaging; agents involved in policy arenas adjust to new contexts and conditions in order to develop new forms to exercise what in essence does not change, the replication process.

Worldviews, ideas and policy models have travelled from one location or society to another for centuries. Colonization in Latin America itself was an overwhelming process of transformation of places according to the European social and economic traditions and impositions. Thereafter, with the establishment of independent states in Latin America, national, regional, and local governments either continued evolving along the set path or introduced modifications responding to possibilities and constraints of their societies. Closely linked to colonial powers, even after independence, Latin American countries continued along the paths imposed on them by colonial powers and, thus, were highly limited in their choices. The resulting material and institutional arrangements were hardly influenced by social transformation in other latitudes.

Along the way, through trial and error, however, they developed endogenous strategies such as the mid-20th century ISI (Import Substitution Industrialization) models as an attempt to depart from such dependence or linkages. In spite of some endemic efforts to propose and implement home-made strategies and models, the linkages were never broken and current global dynamics have increased that interdependence; as a result, replication continues to dictate policy choices and policy implementation processes under the umbrella of updated ideals such as democracy, market

liberalization, and government reform. Ideas are nowadays produced, packed, shipped, delivered, and used as if they were ready-made merchandises for consumption; thus, more than ever, the process of implementing a policy has a clearly delimited spatial policy that has been commoditized under the terms of neoliberalization of the global scenario.

By the end of the 1980s, the world was facing a major structural adjustment: the bi-polar order that resulted after the Second World War was being dismantled as the Cold War reached a conclusion. In this context, Latin America started restructuring its political and economic institutions under the guidance or imposition of what was later labeled as the "Washington Consensus." It was not truly a consensus, but it included "10 policy measures about whose proper deployment Washington can muster a reasonable degree of consensus" (Williamson, 1990, p.7). National institutions that had prevailed in Latin America for more than five decades were radically transformed and new economic approaches emerged, replacing the former import-substituting industrialization (ISI) strategies. With limited exceptions or variations, over the past 25 years, Latin American cities have gone through dramatic changes as a result of national (neoliberal-leaning) structural reforms and the internal and urban arrangements of each nation. So "the Latin American cities assumed in a brutal manner the neoliberal discourse; they didn't achieve sustainable capital accumulation nor were they able to improve the life conditions of the population. Neoliberal cities are more contradictory than their capitalist predecessors: they kept their vices and lost their few virtues"⁵ (Pradilla Cobos & Márquez López, 2008, p. 25).

⁵ Translation from Spanish by the author.

Initially, privatization was the most widely implemented policy in Latin America following the 1990s influx of policy mobilities. Luigi Manzetti (1999) argued that learning "based upon the positive results of previous privatization experiences in other countries" provided further incentives for privatization and stated that, "although the Argentine and Peruvian presidents were far from being true believers [in privatization], they turned out to be quick learners." Denationalization was performed by selling assets to transnational agents and generating a regulatory framework in which concessions were the central actors of this restructuring wave. This, however, was not a book case of policy imitation but often the result of conditionalities attached to the renegotiation of foreign debt or the acquisition of new debt.

Following the privatization of airline carriers during the late '80s and '90s, demand for investment in and improvement of airports increased. The former national- and state-operated institutions were also affected by the influence of neoliberal actions and the emergence of new shareholders and stakeholders. Henceforth, "the airport sits in an interesting place in the intersections between territoriality and relationality" (McNeill, 2011, p.150), which implies enormous challenges of this infrastructure category at the local level, given the extended set of stakeholders (i.e., the traveling public and the emerging set of global shareholders). The airport is not only a physical place within the urban circumscription, but also one of the most relevant representations of the physical connection between individual Latin American urban spaces and other global urban centers. The result of this neoliberal shift is the broadening of this realm to a "globalized infrastructure equity market contributing to a scenario of

unbundled infrastructures placed in global infrastructure funds that are managed by specialized financial institutions" (McNeill, 2011).

2. Neoliberalization of urban policies: From the national to the local scale

Once national assets moved toward a neoliberal public-private trend, many urban assets started moving in the same direction. Cities such as Buenos Aires, Sao Paulo, and Mexico City, among others, became magnets of foreign investors attracted by: (1) potential profits of the transition to free trade markets, (2) the dismantling of the former import-substitution industrialization model, and (3) profit opportunities that these large markets offered to foreign companies. This reallocation of capital required the construction of previously non-existent urban districts and infrastructures to serve these new global interests.

The structural reforms that took place during the '90s, particularly the effort to reduce the burden of the national government, motivated decentralization processes that gave cities new levels of autonomy. In the resulting context, cities searched for new arrangements. They were aided by the strategic planning approach, as a relevant tool for planning. Inspired by decentralization processes in Spain (especially the experience of *Comunidades Autónomas*) and by City Development Strategies promoted by the World Bank (Robinson, 2011), municipalities in Latin America incorporated a set of new ideas in order to face their "adulthood." Puerto Madero in Buenos Aires and Santa Fe in Mexico City as spaces suitable for global business interests are good examples of emerging business districts under

the new economic and political order. Both efforts mimic the urban artifacts found in London, Paris, and New York.

Puerto Madero in Buenos Aires was an initiative for port recycling and reuse during the booming years of economic growth in Argentina, an effort to utilize increasing capital investments to improve infrastructure and meet the new economic demands of transforming urban land uses and spaces. Reconversion of former port spaces into office, commercial, and residential uses was promoted by the city of Buenos Aires to capture land rents from the new development and invest them in public transportation infrastructure. Following the models of business districts in Europe, these initiatives were developed by autonomous agencies that by-passed local regulations and generated the conditions necessary to transform land uses and rehabilitate historical buildings when that was the case.

The urban operation demanded for the "recycling" process of this area was not uniquely generated by city planners; the idea of reconverting the port area in order to make it a more accessible city space has been applied widely, and Buenos Aires used the experiences of other latitudes to rehabilitate this part of the city. Prévôt Schapira (2000) affirms that "these urban operations are only possible because of the new economic and political orientations that emerged during the '90s. The result was a city constructed by developers without municipal planning experience, and a spectacular relaunch of the real estate sector."⁶

⁶ Translation from Spanish by the author

On the other hand, Santa Fe in Mexico City was developed as a peripheral metropolitan enclave, a part of the capital expansion and investments that came to Mexico during the '90s. Santa Fe is a unique case of an extreme makeover. It was a conversion a former landfill and informal residential area into the urban symbol of Mexican access into the global economy. The new generation of spaces serving the global dynamics is most obvious in the 650 hectares dedicated to "shopping centers, upscale residential development, and buildings for global corporations' headquarters. This is the most radical transformation of land use and urban topography to affect the capital in recent decades: Where there had been precarious immigrant neighborhoods surrounded by garbage dumps, in less than a decade there has emerged a postmodern architecture of residential and consumer structures built to upscale First World standards." (García Canclini, 2000, p.209).

The process of transforming Santa Fe from a landfill into a contemporary city came, again, through an institutional arrangement that enabled agencies to by-pass local regulations and plan under "exceptional conditions." In this sense, Negrete (2009) affirms that the transformation from undervalued ground into prestigious, expensive private property has required changes in lands held by government authorities, in accordance with private initiatives. New institutional landscapes were necessary to construct these new spaces, serving multi-national corporations and the mechanism through; these projects demonstrated that the innovative institutional designs were not endemic, but the result of exploring the experiences of urban operations in other global cities. As Brenner (1999) stated, these state-financed mega-projects—the London Docklands is perhaps the most spectacular European example of urban infrastructure resulting from global capital—indeed,

exemplify a broader strategic shift in urban policy that can be observed in cities throughout the world. Latin American cities have experienced this shift as a result of neoliberal policy mobilities.

While airports and special business districts are the most recognizable places where the neoliberal discourse landed initially, rearrangements of public utilities are also representative of when neoliberal policies penetrated the city and region. While the first two cases have a strong relationship to this transformation on a national scale and its indirect impact on cities, public utility privatization directly affects urban landscapes and institutional arrangements throughout the region. The emerging conflicts between public efficiency, accessibility, subsidies, fees, and environmental sustainability, among others, remain central to the contemporary debate regarding regional decentralization and policy rearrangements.

Between 1990 and 2001, Latin America attracted 48 percent of all private infrastructure investment in developing countries (Harris, 2003) as a result of massive public bids of national public utilities. Although some governments implemented nationalist measures to avoid the elimination of national companies, multinational corporations still found a way to join this attractive investment, such as the case of gas stations in Mexico⁷. As discussed above, the majority of governments in the region opted for the

⁷ For many years direct private investment on Mexican gas stations has not been allowed. The only allowed brand to be used is PEMEX and registered investors have to fulfill certain nationality conditions. Multinational companies have not retreated from investments and they partnered with local to be part of the market following the rules at the same time that they bypassed the regulation.

withdrawal of state funding for national industries, partially a result of changing notions of government's role in public life.

Murillo (2011) identifies two main reasons for policy diffusion in the region: First, there was a competition for scarce capital, which created pressure for convergence; second, there were cultural similarities, which facilitated the spread of policy ideas. The outcome was that many of the nations designed similar frameworks based on this model and the advice of an insular group of consultants and think-tanks. Additionally, the region's cultural affinities (and the handiness of templates) led global observers to assume that the region was a homogeneous space where similar policies were to be implemented; this was emphasized by the presence of Spanish companies that were able to understand the context but also were interested in homogenizing spaces through their regional operations. Public utilities prepared the ground for development of more complex operations that would emerge later with the implementation of BRT systems in the region.

3. Strategic Urban Planning: The Return of the Spaniards to America

Although Strategic Urban Planning may be considered a simple planning tool, its development and spread throughout Latin-America matched with the period of expansion of the neoliberal agenda worldwide; in fact, Strategic Planning became a neoliberal ideas' carrier reaching a strong political connotation in spite of its origins as a modest method and tool. Although Urban Planning and Strategic Planning were not new, by the end of the 1980s, it reemerged as a powerful policy for local institutional reconfiguration under

decentralization dynamics that emerged with restructuring processes confronted by post-Cold-War nations-states.

From a broad perspective, Louis Albrechts defines strategic spatial planning as "a public-sector-led (Kunzmann, 2000) sociospatial (see Healey, 1997a for the emphasis on the social) process through which a vision, actions, and means for implementation are produced that shape and frame what a place is and may become" (Albrechts, 2004, p. 747). The twist that strategic spatial planning had during the 1980s when facing neoliberal reforms and nation-state shrinkage in Europe was basically a movement from conceptual-led planning to project-led plans⁸ epitomized by Barcelona and its pre-1992-Olympics transformation. Subsequently during the 1990s, Barcelona got a "privileged spot among 'best practices' for its effective combination of high-profile mega-events, massive urban regeneration, and innovative urban design" (Miranda, 2011, p. 1). A so-called 'Barcelona Model' became a mobile policy that mixed ideological attributes of the neoliberal discourse with the methods and tools of strategic urban planning. Right after Barcelona's Olympics, urban strategic planning reached a worldwide scale and Latin America became one of its most active experimental laboratories.

Strong cultural and historical relations between Spain and Latin America, together with the notable role played by Spain (including its government, public utility companies, and private companies such as banks, insurance, and telecommunication companies) in bridging European neoliberal initiatives with its former colonial territories were crucial for the promotion of Urban Strategic Planning in Latin America. Accordingly, the

⁸ The rejection of normative and centralized plans tended, in accordance with the neoliberal ethos, to favor instead the projects of 'strategic' planning (Almandoz, 2014, p. 158)

so-called 'Barcelona Model' and its replications took place in other European (mostly Iberian) cities. But most cases, specifically Barcelona's Strategic Plan, were actively promoted by *Centro Iberoamericano de Desarrollo Estratégico Urbano* - CIDEU (Ibero-American Centre for Strategic Urban Development) and by multiple bilateral agencies such as *CEPAL* (ECLAC) and *PNUD* (UNDP) (Steinberg, 2002) and the Inter-American Development Bank (IADB) encouraging urban transformation, both physical and institutional, in multiple urban agglomerations in Latin America. Thus, in a short period of time, Latin American cities were transformed following the approach of Iberian cities, "imitating the renowned examples of Barcelona, Valencia, and Lisbon-where urban competitiveness and marketing were capitalized. Rio, Bogotá, Medellín, Buenos Aires, and Santiago, among others, became exponents of the new trend from the late 1980s" (Almandoz, 2014, p. 159). Most importantly, urban strategic planning from Europe implicitly included competitive, market-driven and neoliberal ideas that had a strong influence in the changes that Latin American cities faced during the last years of the 20th century.

During the last decades, Urban Strategic Planning has been heavily implemented in the region and multiple experiences have emerged according to local contexts and specificities of the local political arrangements. Nonetheless for the case of Latin America, urban strategic planning meant a non-fulfilled promise (except for some exceptional experiences such as Rosario in Argentina) of higher public engagement and participation, multisector integrality and better government coordination within its numerous agencies and with the private sphere. Due to the absence of legal enforcement of the planning process results, along with a diffuse indication

of commitments and responsibilities, urban strategic planning has remained an insufficient manifestation of territorial desires and aspirations. Still, it has been a major influence in image creation and large project developments. Additionally, the immersion of neoliberal ideas within the urban strategic planning process has become a mechanism of identification of urban issues that are prone to be transformed to serve neoliberal interests by modifying the allocation mechanisms of some public goods and opening the door for private investment (privatizing earnings and collectivizing costs) in multiple areas such as public utilities, urban transportation, urban renewal, public education, and other issues.

In addition to the direct influence of Spain, agencies promoting the Washington Consensus such as the World Bank and the Inter-American Development Bank also got involved with multiple urban planning arenas promoting strategic planning and canalizing their efforts to prioritize areas such as "historic city center" renewal projects and transportation infrastructure. The World Bank and the Inter-American Bank had, until the early 1990s focused on housing issues (particularly slum mitigation/normalization) and basic water allocation within these communities. Later in the mid-1990s, their efforts started focusing on urban improvement projects, the strengthening of urban management and modernization, and urban transportation initiatives. The Inter-American Development Bank promoted historical downtown district improvement projects in cities such as Salvador in Brazil, Cartagena in Colombia, Panama City, Antigua in Guatemala, Quito in Ecuador, San Juan in Puerto Rico, and multiple cities in Mexico such as Guanajuato and Puebla; the experience accumulated in such interventions served as a new scenario for the identification of

strategic investment areas that was reinforced by the promotion of urban strategic planning. Multilateral banks have used urban strategic planning as a source of identifying needs and priorities at the urban scale (in some cases primarily focused on projects that are more prone to financial support) that will require new financial arrangements. This probably explains why in most cases, a bank's support of strategic planning is considered as technical cooperation (non-financial support) which may not charge to local arenas but serve as a mechanism for future financial involvement in identified strategic lines. Although initially reluctant to finance transportation initiatives, after the implementation of Bogotá's BRT system, multilateral banks became heavily attracted to this type of investments and promoted them in the region and worldwide as illustrated below.

4. BRT systems as an opportunity to advance neoliberal urbanism

The next phase on urban neoliberalization (after the introduction of urban strategic planning) in Latin America involved inter-scalar arrangements and the construction of institutional frameworks in order to facilitate new and more complex incursions of capital into the public realm; BRT systems are the most notorious examples of such assemblages and the most widely used mechanism changing both urban landscapes and institutional organization for urban policy. BRT system implementation has a special connotation because it spatially affects urban landscapes involving different policy scales and generating a new form on the neoliberal allocation of capital. Once successfully implemented in Bogota, BRT emerged as a clear public-private partnership and a fully developed model of contemporary neoliberal urbanism.

BRT systems have become one of the most common priority strategies assumed by Latin American cities to solve their transportation problems. The first well-known and documented case is the *Rede Integrada de Transporte* in Curitiba, Brazil, which became a model at the national and international levels. According to the U.S. Federal Transit Administration, "the bus system of Curitiba, Brazil, exemplifies a model Bus Rapid Transit system, and plays a large part in making this a livable city" (U.S. FTA, 2001, p. 10); it was actually labeled as a 'best practice' by NGOs such as Urban Habitat and Project for Public Spaces (PPS). Subsequently many other cities in Latin America started transforming their urban space by establishing BRT systems as a response to particular and well-defined local needs.

Moreover, BRT could be seen as a local (urban) transformation that results from the intervention of multi-agent and multi-layered power relations, where not only the local scale but national and transnational scales have played a fundamental and central role as the discussion below illustrates. The resulting scenarios are diverse and the mechanisms adopted vary from place to place; countries such as Colombia, Brazil and, in part, Mexico have established national transportation policies that include BRT systems as their priority, while in Buenos Aires and Santiago, national or federal resources have been allocated to implement a BRT system. In Lima and Panama City, the governments have become regulators of private investments within urban agglomerations. These mechanisms illustrate the role the national scale plays in implementing this specific transportation technology.

Additionally, a series of transnational agents have emerged around BRT systems performing roles that include consultancies, idea-diffusion, and provision of goods and services. Most noticeable among them are think-tanks, which promote sustainable urban environments or specific BRT technologies; development institutions seeking to allocate financial resources for infrastructure investments or that see this emergent 'industry' as another attractive financial investment; and industrial corporations that produce buses, parts, complementary goods, and services that are particularly interested in the expansion of their markets via BRT.

These events point to the establishment of an entire industry of urban policy mobilities, in our case, evidenced by the BRT process in Colombia that relates multiple agents in multiple scalar arrangements transforming specific urban spaces with their operations. Along these lines, this dissertation explored these policy networks and decision-making arenas in order to determine the powers involved within each scale and to understand the mechanisms through which urban policy is carried out in contemporary Latin American cities.

The BRT experiences have been diverse; some have succeeded at least in the short term as are the cases of Bogotá and Quito. Others have been traumatic and problematic, such as the cases of Santiago de Chile and Mexico City. Regardless, BRT policies continue to become more and more popular in the region (and the world), promoted by supranational institutions, international agencies, regional policy arenas, multinational corporations, and national governments, along with local actors that range from political institutions to individual citizens. The Colombian case, analyzed in this

dissertation, has two important roles in the policy's expansion: first, Bogotá was one of the initial (if not the first) major cities to succeed in solving a long-term transportation problem through the use of a BRT system and the associated institutional framework; and second, Colombia was the first Latin American country to embark on a national BRT implementation program and, thus, offers the opportunity to study the policy process and mobility including the roles played by different stakeholders and the new institutional arrangements involved as well as the diverse experiences of implementation as discussed in the following pages. We depart from the assumption that urban transformation in Latin America has resulted from interactions that surpass the local scale and in which both national and international scales have a strong economic and political influence via transnational flows, multinational corporations, and existing (and constantly changing) multilateral institutions. In the coming pages, a specific case of policy mobility on BRT systems will be presented based on theories and methods previously presented and as an immersed process of the currently developing urban neoliberalism in Latin America.

III. POLICY MOBILITIES IN PLACE: COLOMBIA'S BRT EXPERIENCE. FROM TRANSMILENIO IN BOGOTÁ TO METROLINEA IN BUCARAMANGA

1. THE MODEL AND ITS NARRATIVES: THE CASE OF BOGOTÁ

On November 8, 2006, Bogotá was awarded the *Leone d'Oro per le Città* during the *Biennale di Venezia*. The 10th *Mostra Internazionale di Architettura* at the *Corderie dell'Arsenale*, curated by Richard Burdett, included presentations on the urban experiences of 16 cities (New York, Los Angeles, Ciudad de México, Johannesburg, Berlin, Caracas, São Paulo, Tokyo, Shanghai, Cairo, Bombay, Istanbul, Barcelona, Milano, Torino, and Bogotá). The transformation of Bogotá presented on the exhibition "El Renacer de una Ciudad" (The Rebirth of a City) was recognized as a significant experience for poor and rich cities all over the world and was referenced as an integral urban change.

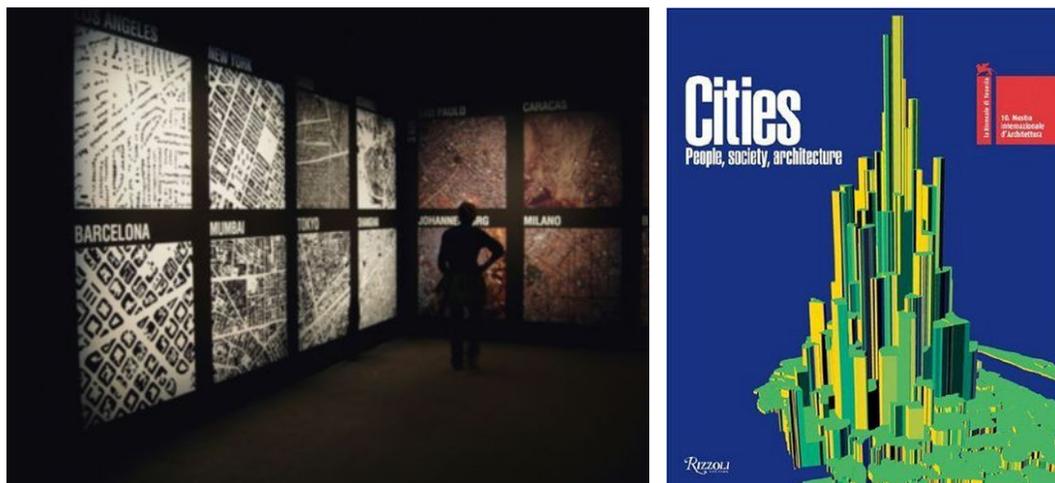


Figure 3: Mostra Internazionale di Architettura. Biennale di Venezia 2006
9,10

⁹ Image taken from: *Cities: People, Society, Architecture: 10th International Architecture Exhibition - Venice Biennale (2006)* Richard Burdett and Sarah Ichioka (Editors) <http://ecx.images-amazon.com/images/I/51G5HVS0PCL.jpg> 10th November 2015 5:25 pm

¹⁰ Image taken from: <http://architecturenorway.no/stories/people-stories/burdett-07/>

The *Leone d'Oro per le Città* may be, symbolically, understood as the result of a long-term process of political, economic, and social change in Colombia, and specifically in Bogotá. One of the multiple projects presented as a model for other cities was the implementation of a mass transportation system that radically changed urban transport. TRANSMILENIO, which started running in December 2000, was symbolically presented as a solution for the new Millennium. But TRANSMILENIO was a risky bet that luckily ended up succeeding and changing Bogotá's transport organization, becoming a paradigm for multiple cities in Colombia, Latin America, and the world. Urban Transport policies were not the only radical and comprehensive transformation of Bogotá, but were the topic this research has centered on. In particular, its initial success caused other cities confronting the same problems to imitate it, which is a unique opportunity to explore how policies are mobilized from one place to other—that is, how they are framed, moved, changed, and implemented. In other words, this is how they evolve in relationship to existing political, economic, and social frameworks.

a. The challenges of urban transport in Bogotá and the search for new ideas

Urban Transport has been one of the major problems of Latin American cities for the last hundred years, and Bogotá was no exception. As a result, constant political debates and academic discussions took place everywhere, but, for our case, we will examine them on local and national levels. During the decades preceding the implementation of TRANSMILENIO, the idea of improving urban mass transportation systems in the city mainly focused on

the construction of a "metro" (heavy rail) system; however, periodically, ideas—such as organized bus networks, publicly ran bus fleets, and light rail systems—came to the fore. The discussion was not only local: city mayors, city council, and local actors joined national politicians, including presidents, and governmental institutions in the debate. These discussions took place for a period of years and continue, despite the success of TRANSMILENIO. (The city is currently advancing plans for a metro system).

On April 9, 1948, Bogotá suffered massive damages caused by popular revolts reacting to the assassination of political leader Jorge Eliécer Gaitán, a major candidate for the presidency of the country. That day, the existing tramway was partially destroyed among many other structures of the small but quickly growing city. As a result, the rail-based transportation system was removed, causing new challenges. It took more than 50 years to finally achieve a consensus around the city's needs.



Figure 4: From ashes to splendor. Bogotá's urban transportation systems, 1948–2009^{11,12}

¹¹ Image taken from: <http://seecolombia.travel/blog/wp-content/uploads/2012/04/bogotazo1.jpg>

¹² Image taken from: <http://bluehaired.com/corner/wp-content/uploads/2009/09/>

In the aftermath of Bogotá's April 9, 1948, revolts, new demographic, economic, and social arrangements and Latin America's so-called modernization, industrialization and capitalist consolidation provided a new scenario as the city went from 700,000 inhabitants in 1951 to more than seven million in 2005. Demographic growth produced a physical explosion and the city expanded into surrounding rural areas at the same time that it grew vertically. This dynamic of urban expansion complicated the process of designing and implementing a coherent urban transport system. Additionally, the unwillingness and inability of national government to address local demands, insufficient resources, and the increasing role of private interests added more layers of complexity to an already challenging situation.

The tramway disappeared officially on June 30, 1951. But the Tram Company continued operating electrical buses, a system known as *Trolebus*, that had been previously implemented to expand the transport network and other bus companies filled the space left by the tramway with diesel and gasoline buses. Since then, discussions have not stopped and multiple actors and interests have influenced and modified the way urban transport has been perceived within the city. Meanwhile, the role of Bogota as its nation's capital influenced the debate in the rest of the country.

The transition from tramway to buses directly responded to the events of April 9, 1948, but also to subtle changes in the perception of urban transport. An authoritarian mayor, Fernando Mazuera, decided to replace the tramway system with pavement and a modern fleet of buses, proudly announcing many years later that he did not regret the decision nor the manner in which

he made it: "So pavement was put on top of the railways and white stripes, seen for the first time in Colombia, were painted in transit zones. Naturally it was not necessary that I went the following Monday to the Tramway Company Board meeting, because I had already won this battle. Citizens were already happy with this dictatorial act, which in fact it was, and that I do not regret and I feel today completely satisfied with"¹³. Multiple analysts have argued that the transition from tramway to buses was not only the unexpected result of the events of 1948 but also a new growing incentive for bus merchants, bus investors, and a growing oil-based urban transportation technology. Buses were promoted to be more flexible and could reach the neighborhoods of the growing city that the fixed infrastructure of the tramway could not. Additionally, the cost of rebuilding and expanding the tramway network was considered to be more expensive than paving and laying better roads with no exclusive lanes for public transport. But perhaps most importantly, it encouraged or facilitated the use of individual vehicles.

During the next decades, a new system of public transport was born. On the one side, the public transport company continued running the *Trolebus* network, which was based on electrical buses (brought initially from the U.S. and later from the former U.S.S.R. and Rumania) and continued increasing its fleet of gasoline buses to cover the less profitable zones of the city. On the other side, private companies increased the gasoline bus fleet, covering the most dense and profitable zones of the city and

¹³ Mazuera Villegas, Fernando. *Cuento mi vida*. Bogotá: Antares, 1972. Translation by the author. Original quote in Spanish: "Así fue: se echó pavimento, inclusive por encima de los rieles y se pintaron con líneas blancas, que por primera vez se veían en Colombia, las zonas de tránsito. Naturalmente que al lunes siguiente no era necesario que yo me presentara a la Junta de los Tranvías, pues esta batalla yo ya la tenía ganada. La ciudadanía estaba muy contenta con este acto dictatorial, que en realidad lo fue, y del cual no me arrepiento y me siento hoy sumamente satisfecho".

generating tremendous congestion as buses drove through the more dense employment centers, especially downtown Bogotá. The new system of public urban transport was the result of the decision of government to step back from offering a public transport system and letting private interests run the system. This system was officially called "*Transporte Automotor de Servicio Urbano Colectivo*" (Collective Urban Transport Service) and unofficially called "*La Guerra del Centavo*" (The Penny War) and subsisted until the end of the 20th century as the method way of public transportation within the city, along with private taxis.



Figure 5: Traditional Collective Transportation System, Bogotá ¹⁴

Existing regulations during that time were bare-bones, and national and local institutions in charge of regulating and controlling urban public transport were practically inexistent. Since 1942, the national *Dirección de Transporte y Tarifas* (Office of Transport and Tariffs) focused in interurban road transport and only when it was reconverted in 1968 into the *Instituto Nacional de Tránsito y Transporte - INTRA* (National Institute for Transit and Transport), a new set of institutional arrangements and

¹⁴ Image taken from: Documentary "*La Guerra del Centavo*". Ciro Durán. 1985. <https://www.youtube.com/watch?v=Am0cDCJypcY>

regulations emerged focusing on urban public transport. This new set of institutions aimed at changing urban public transport ended up adapting and including the traditional yet dysfunctional organization of public transport into the national legal system.

The system was a modern adaptation of the Spanish colonial franchise system that may be understood as proto-concession arrangements highly influenced by perverse private economic incentives. The system generated two negative externalities: the first a highly inefficient system with a large amount of running buses generating tremendous congestion, and the second an exploitative system based on power relations among electoral networks of politicians and public servants, private companies' owners, bus owners, and bus drivers. The outcome of this system was a terribly congested city, with a low quality of buses and services, unprotected bus drivers, unsatisfied users, and discomfort for all inhabitants.

During colonial times, Spaniards used the franchise system as a mechanism of giving (on a discretionary basis, grounded on the political decision of controlling through loyalties) certain public service concessions (e.g., boat river crossing) to individuals. These individuals owned the right to move merchandises from one side of the river to the other based on a Spanish Empire Title that was needed to get a boat fleet to provide the service. However, they decided to behave as the authorities that controlled the people and that were allowed to move merchandise and to avoid investing in the necessary equipment and the proper management and operation. The result was a system based on the franchisees who had the right to decide who, how, and when items crossed the river. Multiple boats and boat owners provided

the service and paid a portion of their earnings to the franchisees. The system was highly inefficient because the franchisee's incentive was to have the largest amount of boats serving the river without any concern for efficiency balancing supply and demand. The usual result was an oversupply of boats, unsatisfied users, exploited workers, and certainly wealthy franchisees.

The colonial franchise survived for centuries, enduring the change from the colonial regime to the Republic, and landed immutable into the mid-20th-century public transport in Colombia's urban agglomerations. The public urban transport system's main attributes were:

1. Weak or non-existent government regulation of passenger transport.
2. Weak or no publicly run urban passenger transportation system.
3. Companies or individuals that had received certain type or permission (or franchise) to operate specific routes on the basis of electoral-political arrangements.
4. Bus owners (companies or individuals, normally other than the franchisees) that had to pay, on a daily basis, a fraction¹⁵ of their collected income to the "route owners" for the right to operate in the routes the 'owners' assigned to them.

¹⁵ The proportion bus drivers gave to the bus and/or the route owners ranged between 85 and 90% of total fare collection and was used to pay the financial cost of buses, operational costs, their expected profit and the "route rights fee" to the "route owners" (which obviously included payment to the public officials or politicians that secured and guaranteed the route rights). Bus drivers got 10-15% of total fare collection which normally was not close to the minimum salary of the country, generating extended working hours, high incentives to cheat, stealing part of the fare collection, and low quality working conditions.

5. Bus drivers operating under terrible working conditions whose only incentive was to pick up as many passengers as possible to increase the total fare collection and therefore their own income.

The system was described in 1981 by Alvaro Pachón for a World Bank's document as follows:

"Colombia has a basic system of affiliating companies which coexist with state transport companies and cooperatives. In Bogota's system of affiliating companies, the state assigns the routes and gives some rights to the private company. In some cases, the company owns some of the buses, but generally bus owners affiliate with a company which distributes the routes and charges its associates a rolling charge for use of its routes. The managers of this type of organization are the strongest group in the system because they maintain a close relation with the official sector, through which they obtain operating licenses and route authorizations" (Tolley & Thomas, 1987).

The resulting system was highly inefficient and was characterized by congested roads and disorganized urban traffic. Once INTRA (*Instituto Nacional de Tránsito y Transporte*) came into existence, it basically incorporated these practices into the legal system (probably through cooptation of the political forces in power) and made more difficult to think of a possible way of improving urban transport services in Colombian cities. At the beginning of the 1980s, private companies covered around 80% of the total routes in Bogotá while the remaining 20% were covered by the still existing city public transport company which officially disappeared on August 15, 1991.

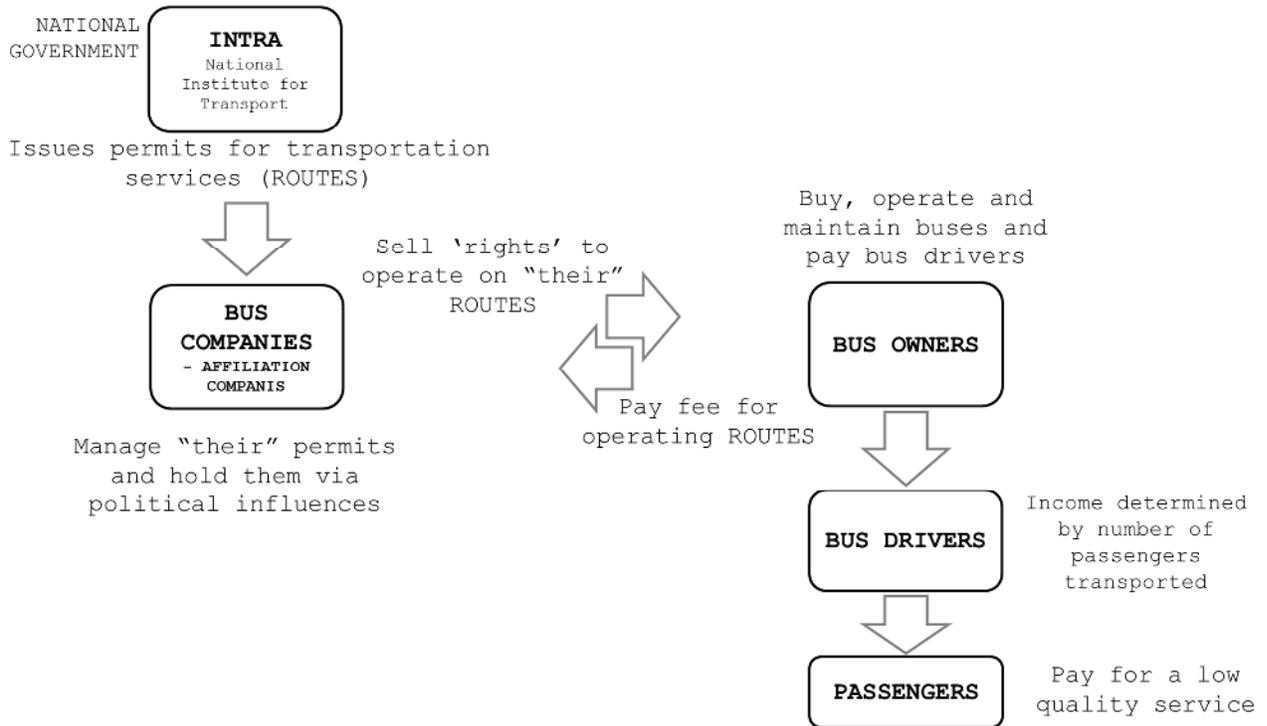


Figure 6: General operating scheme of Traditional Urban Collective Transportation Systems in Colombia.

It was under this complicated and complex context that created the need for new enticing multiple debates and discussions. A new idea, based on technical arguments and responding to the specific context of Colombia, was about to emerge.

2. IDEAS, DEBATES, AND DISCUSSIONS ON URBAN TRANSPORT IN BOGOTÁ

a. First generation of transport specialists and the Commission for the Study of Urban Massive Transport in Bogotá

The debates and discussions that took place in Bogotá initially revolved around the idea of implementing a heavy rail system (metro) in the city. Multiple cities around the world had them implemented such a system since the early 20th century and, by the early '70s, some Latin American cities

and other middle income countries around the world started to build them as well. Since 1963, Bogotá received several proposals for the implementation of a conventional subway from the governments of Germany and Japan to be financed under a concession scheme. However, Colombia and Bogota did not have enough resources to implement such an expensive urban intervention, and the country lacked the technical expertise or the industrial production facilities and capacity (due to the absence of a strong national railway system) to add the cost of expensive foreign technology, machinery, and expertise.

Bogotá had attempted during the post-World-War II period to implement European-based planning strategies (LeCorbusier (1949), Wiener and Sert (1953)) but for multiple reasons, these strategies were not completed. Moreover, the urban solutions of the North did not compare to the Latin American context of extreme inequality in the distribution of income, precarious industrialization processes, expensive transportation solutions, and the historical development of cities. Bogotá's urban development was the result of multiple good intentions, lack of capacity to match planning ideas and outcomes, complex economic and social conditions of the population, corruption, and mediocre implementations of foreign urban technologies. By the end of the 1960s, urban planning in Bogotá and Colombia was absent from the urban debate and there was no successful story to tell.

In the late 1960s, Lauchlin Currie, a former World Bank 'Missionary'¹⁶, came back to the country as an advisor to work in the administration of newly elected president Misael Pastrana Borrero. The new National Development

¹⁶ He participated in a World Bank Mission in 1949 as an Economic Advisor.

Plan he proposed, "*Las Cuatro Estrategias*" (The Four Strategies), included a new plan for urban intervention based on contemporary urban debates. The idea of "*Ciudades dentro de Ciudades*" (Cities within Cities) was presented as a strategy for economic development within fast growing cities but also as a mechanism for an organized and coherent urban planning process. This strategy mentioned for the first time the possibility of alternatives to the metro system, stating that good transportation systems for the new citadels may be provided by the use of adequate bus-based systems. The implementation of "Cities within Cities" took longer than expected, and the citadels that gradually developed did not include specific transport networks in their planning or implementation. But the concept of a transportation network tied to an urban housing policy had been introduced for the first time to the city and the country.

Around that time, a generation of transport specialists had formed including students graduating in overseas universities and local intellectuals who gained knowledge through the discussion of possible solutions for Bogotá's urban transport. One of them, Alvaro Pachón who studied and worked in the U.S., helped to advance the idea of BRT Systems in Colombia by translating a paper written by Professor John F. Kain, titled "How to improve urban transportation at practically no cost" for publication in a Colombian national academic journal in 1975. Even though transport planning in the U.S. was more focused on highway planning and its interaction with the complementary road network, Professor Kain presented some thoughts on the rational organization of public and private bus fleets into a collective transport system.

Kain's proposed focused on the reduction of highway congestion during rush hour periods related to the exclusive use of private vehicles through segregated lanes for mass transit. In his words, "If public transit vehicles were given priority access to the high performance and non- congested highways, it would be possible to achieve higher levels of average speed than the ones achieved by private vehicles during rush hours in congested areas" (Kain, 1972, p.385)¹⁷. Kain was attempting to formulate new ways of thinking about urban transport planning that would improve on the planning strategies used in the U.S., via (1) public transport networks by rail and (2) highway networks (free and toll). Translator Alvaro Pachón was part of the group that started proposing a bus rapid system for the city.

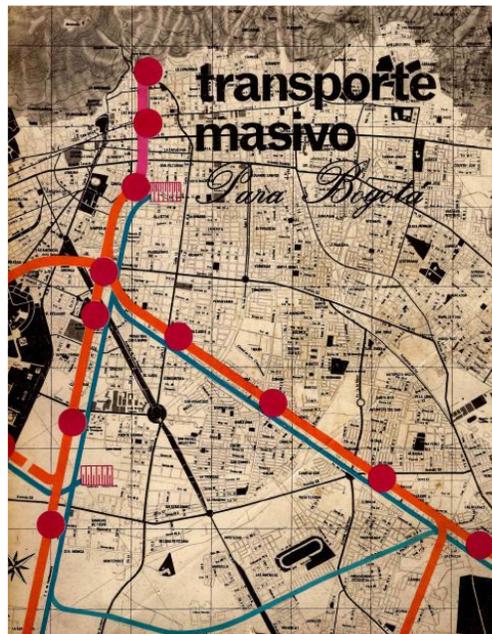


Figure 7: Report *Transporte Masivo para Bogotá*

Commission for the Study of Urban Massive Transport in Bogotá. 1975

¹⁷ In Pachón's translation: "Si se les diera a los vehículos de transporte público un acceso prioritario a estas autopistas de alto funcionamiento no congestionadas, se podrían lograr mayores niveles de velocidad promedio que los alcanzados por vehículos privados durante las horas pico en áreas congestionadas"

In February 1975 a Commission for the Study of Urban Massive Transport in Bogotá was organized by the City Council. Jorge Acevedo and Fabio Regueros Chosnek, other young transport experts from, overseas, chaired the Commission. The report's suggestions are summarized in this citations,

"Transport in Bogotá is one of the principal problems that the City Administration must face because it affects the totality of its inhabitants, with no exception. Its solution includes factors such as the education of the population, not only bus drivers but also pedestrians and citizens, to whom it is necessary to teach the adequate use of ways. It demands the design and implementation of a massive transport solution, fast and light, able to mobilize considerable amounts of passengers in reduced amounts of time, and contribute to decongest the existing road network"¹⁸.

The report included the analysis of a set of studies conducted by a group of transport experts together with policy makers and international advisors (Canada and The Netherlands¹⁹).

The commission called for adaptation of technological solutions in the specific case of Bogotá:

¹⁸ Translation by the autor. Original quote: "El transporte en la ciudad de Bogotá constituye uno de los principales problemas que la Administración Distrital debe afrontar porque afecta a la totalidad de las gentes que la habitan, sin excepción alguna. Su solución comprende factores que van desde la educación de la población, no solamente del conductor sino también del peatón o simple ciudadano, a quienes se hace necesario enseñar desde el uso adecuado de las vías, hasta el diseño y puesta en ejecución de una solución de transporte masivo, rápido y liviano, que pueda movilizar volúmenes considerables de pasajeros en reducido tiempo y contribuir de esa manera, a descongestionar las vías existentes". From: Transporte Masivo para Bogotá. Commission for the Study of Urban Massive Transport in Bogotá. 1975. page 1

¹⁹ Ontario Transportation Development Corporation (CAN) and Berenschot Bosboom (NL)

"solutions should be realistic for the city of Bogotá and Colombia in essence, using the Colombian mentality and not only importing solutions from abroad, this because other solutions, overwhelmingly expensive, that have been implemented in major world cities aiming to satisfy travel demands have been a real failure."²⁰

In addition, the report asked for a higher level of commitment and responsibility on the part of the national government in the promotion of massive transport systems not only in Bogotá but in other Colombian cities.

The report was actually based on various previous urban transport studies including *Estudio R.O.T.* (1969), *Estudio de Transporte y Desarrollo Urbano de Bogotá* (1970), *Organización y Administración del Transporte Urbano Colectivo de Bogota*²¹ that had been developed by the central government and the recently created INTRA with the support of the World Bank and the inclusion of international companies²² and local experts. These studies analyzed Bogota's current situation and explored the possibility of implementation for heavy and light rail, bus expressways, and a toll road network.

²⁰ Original in Spanish: Se debe buscar que las soluciones para el transporte masivo en la ciudad de Bogotá sean realistas y a la Colombiana, utilizando la mentalidad colombiana y no solamente importando soluciones del extranjero ya que las soluciones que con costos ingentes se han hecho en las mayores ciudades del mundo tendientes a satisfacer las demandas de viajes han sido un real fracaso. From: *Transporte Masivo para Bogotá*. Commission for the Study of Urban Massive Transport in Bogotá. 1975. page 17

²¹ *Organización y Administración del Transporte Urbano Colectivo de Bogotá*. Departamento Nacional de Planeación, 1974

²² FREEMAN, FOX, WILBUR SMITH AND ASOCIATES, LLEWELYN - DAVIES WEEKS FORESTIER - WALKER & BOR. COTES PEAT MARWICK & Co. COOPERS & LYBAND, CONSULTECNICOS LTDA., JORGE ACEVEDO, RESTREPO Y URIBE LTD

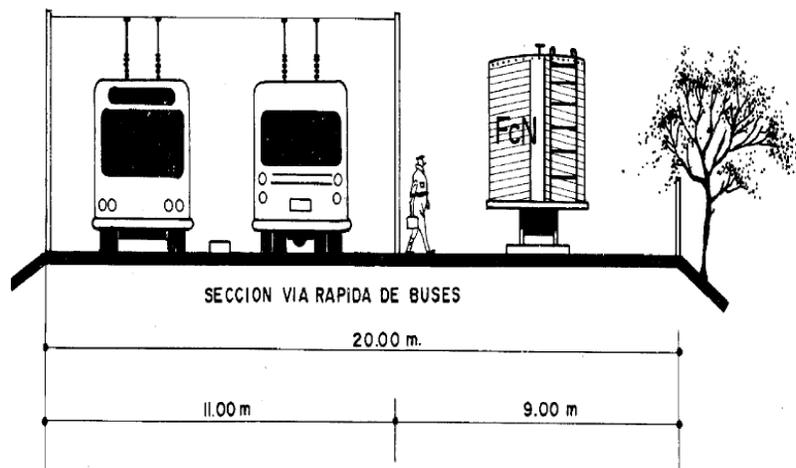


Figure 8: Massive Rapid Transit, bus lanes section from Report *Transporte Masivo para Bogotá*. Commission for the Study of Urban Massive Transport in Bogotá. 1975

Interestingly, the report mentioned BUSWAYS as a possible solution for the congested urban transport system (see Figure 8: Massive Rapid Transit, bus lanes section from Report *Transporte Masivo para Bogotá*. Commission for the Study of Urban Massive Transport in Bogotá. 1975.) and proposed the use of the existing railway corridors for implementing light rail routes without disruption of freight cargo movements. Including a third lane for bus usage was already discussed as a possibility to improve average operational times when buses needed more time for passenger pick up or offer express service. Remarkably, the report included environmental debates, particularly promoting the use of electrically operated buses over gasoline buses.

Addressing the organizational structure, the report analyzed different types of enterprise structures such as the cooperative companies of Israel, the private companies of Stockholm and the mixed companies in Massachusetts, United States. The existence of separate institutions at the local level was highly valued by the Commission, suggesting, on the one hand, a single entity in charge of traffic and transport operations (DAT) and, on the other hand an entity focused on planning, constructing and maintaining ways

and infrastructures (IDU). Moreover, it suggested the establishment of a local public authority capable of integrating and securing transport services either by directly providing them or generating the adequate incentives to promote operation by private companies. Finally, the report recommended feasibility studies based on route designs in order to compare potential alternatives, particularly rail systems and express bus lanes, and their implementation costs.

The idea of using bus-exclusive lanes and the possible locations and implementation requirements were already in the public debate in Bogotá. The Report presented by the Commission reflects the existence of technical knowledge, political will and a rigorous analysis of Bogotá's specific attributes. The Report was a roadmap for the implementation of a substantial change in the city. It was like a recipe that was ready for cooking. However, Bogotá had to wait other 20 years to see these ideas come to fruition; the conditions required for success were not yet in place.

*b. New urban transport policies and debates at the national level
and the role of local think-tanks on urban transport problems*

By the 1980s, recommendations from the Commission Report had not been implemented and the urban transport problem was deteriorating further. The center of attention of national debates was again the implementation of metro systems brought to the table by the presidential election. President Belisario Betancur, an attorney from the state of Antioquia elected for the period of 1982-1986, favored the construction of a metro for the capital city of that state.

Along with Bogota, the city of Medellín had been setting the stage for the development of a metro system, and presented a project to the National Department of Planning (DNP) in the 1980s that was approved by the new administration. The project was officially launched in 1984 and construction took 15 years due to delays caused by cost overruns. The decision to build Medellín's metro had a negative effect on national finances and, therefore, on the feasibility of a metro for Bogota or any other Colombian city. The financial crisis of Medellín's metro in the late '80s further damaged the options of other cities because it required the support of the national government to serve the acquired debt and to find new financial sources for the project. In consequence, the "*Ley de Metros*²³" (Metros Law) changed the legal framework for urban mass transport projects, limiting the role of national government and authorizing local taxes (such a gasoline tax) to raise funds.

In the interim, emerging think-tanks in Bogotá had continued analyzing the bus transport problem and became the advocates for such a system in the coming years. An example of this came from FEDESARROLLO, an economic and social policy think-tank established in 1970, that published the document, "*Buses y Busetas*," (Buses and Little Buses) in 1982 written by Miguel Urrutia. The report analyzed the situation of bus urban transport in Bogotá and presented a detailed list of ideas and incentives known as the INTRA model. Since 1971, FEDESARROLLO had been publishing a periodical on major policy discussions in the country titled *Coyuntura Económica*. During the

²³ Law 86 of 1989, which was later modified by Law 310 of 1996. Although known as the "Metro Law," it refers to urban mass transportation and was key for the future implementation of BRT systems first in Bogotá and later in other Colombian cities.

early '80s, multiple articles in the periodical discussed issues related to urban transport in Colombia including demand estimation and cost-benefit analyses for urban transport in Bogota

Similarly, Alvaro Pachón continued analyzing and writing about urban transport problems, publishing a general description of the situation of urban transport for cities such as Cali and Bogota, the impacts on redistribution of possible government interventions, pricing policy, and analysis on the impact of car usage on urban areas (Pachón, 1981). His work was published in 1981 by the *Corporación Centro Regional de Población* (Regional Center Corporation of Population), an incipient consulting company specialized in demographic and economic studies. Then he was invited by the World Bank in 1986 to be part of a group of transport experts; as part of this, he wrote "Urban Transport Policy: Colombia, a case study" included in a publication edited by Tolley and Thomas, *The Economics of Urbanization and Urban Policies in Developing Countries*. This publication marked the presence of a Colombian expert in the international debate on urbanization.

Another think-tank was INSTITUTO SER, which focused on bus transport solutions and was active during the 1980s in the definition and implementation of urban transport policies. Its director, transport expert Jorge Acevedo, worked jointly with Fabio Regueros in the development of strategies for national and local governments that included the idea of busways keeping the integrated bus systems idea alive. Jorge Acevedo was an advocate for transport institutional organization reform and repeatedly suggested that transport inefficiency in Bogotá was caused by the absence

of technical capacity and disorganization within the government's transport institutions (Ardila Gómez, 2004).

INSTITUTO SER closely observed the Brazilian experiences. In the early '80s, it had already sent a mission to observe the Curitiba experience and actively analyzed cases of other Brazilian cities such as Sao Paulo. This interest was influenced by a generation of urban planners that either studied in or actively observed Brazil and, most particularly, the proposals and projects of Oscar Niemeyer. They also were interested in the Brazilian experience in solving urban transport problems from a Latin American perspective that focused on the organization of bus fleets, while advancing the import substitution model that had a major impact throughout the region. For them, the Brazilian solution had more in common with the Colombian case than solutions from other latitudes; moreover, technological and communication constraints made a neighboring country more likely to influence Colombian planners²⁴.

INSTITUTO SER, particularly Acevedo, established a relationship with Brazilian technicians of the recently (1976) created *Companhia de Engenharia de Tráfego - CET* (Sao Paulo's Traffic Engineering Company). Experts such as Elmir Germani, Francisco Moreno Netto and Pedro Alvaro Szasz constantly provided inputs for potential solutions in Bogotá while developing their own solutions in Sao Paulo.

²⁴ This will change in the 2000s with the incursion of internet and the dramatic improvement in global connectivity.

*c. Benchmarking: The Brazilian experience and World Bank Guidelines
for Urban Transit Systems*

During the '60s and '70s, Brazil was focusing on heavy industrial development under a dictatorial government. Public officials, particularly those at the local level, focused their attention on the inclusion of "creativity" into their urban planning and transportation systems while taking advantage of the national agenda to promote further industrial development. Brazil, as the rest of the world, faced the consequences of the oil crisis in the late '70s and early '80s, and their protected national industry became a key agent in the development of new forms of collective urban transport. Meanwhile, a small city in south Brazil, Curitiba, had been working hard since the late '60s to implement an organized bus system. The city developed a busways network accompanied with urban development incentives whose positive outcomes started attracting the attention of other cities and think-tanks.

As part of its industrial promotion, during the 1970s, Brazil was contemplating the implementation of heavy rail and highway systems in the largest cities of the country as part of its mass transit policy. Meanwhile, in Curitiba, a group of urban planners, highly associated with the local and state government and the Worker's Party, committed to the city's transformation and had been working on their own urban revolution. Curitiba was prioritizing pedestrian zones while other cities focused on private automobile policies; at the same time, they were consolidating a bus system easy to implement based on busways, while the other cities were aiming for heavy rail systems; simultaneously, industrial development policies were

being developed to improve local production capacity. In 1974, a bus corridor running north-south opened and a zone-based irrigation network was organized with local bus companies; the network then continued growing in the coming years. The result was a coherent bus system integrated with a reasonable urban planning strategy (encouraging density and guiding expansion based on their transport initiatives) that solved most of the obstacles among local interests and generating a local consensus. Curitiba's particular experience was about to become a model that many other cities would pursue.

In addition to the ideas implemented in Curitiba, a new relevant actor emerged during the consolidation process in Brazil. In 1978, the World Bank signed a loan for 88 million dollars with the Brazilian government for capacity building within the *Empresa Brasileira de Transporte Urbanos* - EBTU (Brazilian Urban Transport Company) and the improvement of urban transport infrastructure in four metropolitan areas (Belo Horizonte, Porto Alegre, Salvador and Recife) and one city (Curitiba). The project had three main objectives²⁵: (a) to finance investments that would improve urban transport services, with emphasis on the provision of public transport, especially to the poor²⁶; (b) to promote and support the development and implementation of appropriate urban transport policies; (c) to strengthen municipal, state, and federal capacity to prepare, appraise, and execute sound urban transport projects. The agreement marks an important milestone as it implied the Bank's decision to participate actively in urban

²⁵ 1978 BR Appraisal Report

²⁶ The project includes the low-cost programs for the improvement of traffic management and public transport, paving of feeder roads and construction of selected urban roads in four metropolitan regions and in the city of Curitiba. 1978 BR Appraisal Report

transportation in Latin America, making it a key agent of policy mobility for the region and the world.

Following this first participation in a national program in Latin America, the World Bank has been an active agent financing urban transport systems around the world. The 1978 loan agreement provided a framework to improve technical capacity of federal level institutions in charge of the nationwide policies and in addition concentrated resources and efforts in specific urban projects that helped Brazilian cities to improve their urban transportation systems both physically and institutionally. This is a clear manifestation of a multi-level scheme of urban policy interaction that exhibited an international multilateral bank working together with national level institutions to implement specific local projects. This type of interactions would have a strong influence in the aftermath of TRANSMILENIO implementation and subsequent replication efforts.

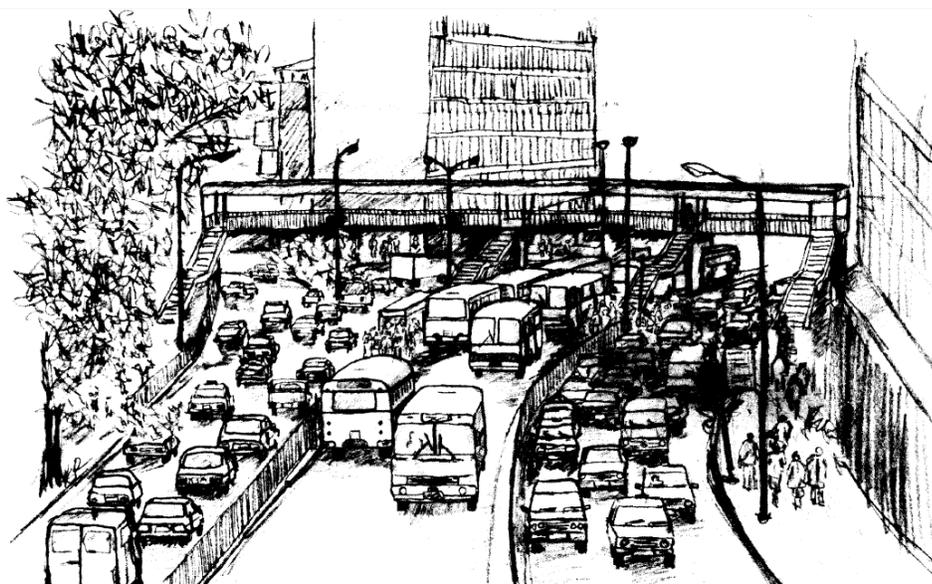


Figure 9: Urban Transit Systems Guidelines for Examining Options.
Alan Armstrong-Wright. World Bank Technical Paper. No. 52. 1986

The World Bank published in 1986 a benchmarking technical paper under the title of "Urban Transit Systems Guidelines for Examining Options" written by Alan Armstrong-Wright. Comparisons are presented among different urban transport modes (such as heavy rail, light rail, or bus systems) and among different transport systems in multiple world cities. In terms of bus-based systems as integrated networks or with the presence of busways, the cases of Bangkok, Hong Kong, Porto Alegre, Curitiba, and New York are mentioned. A dataset with detailed information for different cities included multiple Latin American cities and allowed for different types of comparisons. The document was part of the urban transport series of technical papers that included "Toward Better Urban Transport Planning in Developing Countries" and "Institution Building for Traffic Management," both published in 1983, and subsequent works with more detailed and deeper analysis such as "Bus Services Reducing Costs, Raising Standards," published in 1987. These documents clearly denote an interest of the World Bank on the circulation of different experiences and general conclusions on urban transport issues.

The document was used for benchmarking and, as the title denoted, was used as a guideline for examining options for making decisions on urban transport planning around the globe. One specific case of use of the reported information can be found in Colombia's publication REVISTA SEMANA, when Armstrong-Wright's study was quoted in an article published in May 1987 called "*Un Metro llamado deseo*"²⁷ (A metro named Desire). The World Bank's document was used to compare construction costs for Bogota's metro using the reference prices for metro construction per kilometer to calculate total

²⁷ <http://www.semana.com/economia/articulo/un-metro-llamado-deseo/8901-3>

costs and compare it with estimated costs presented by the government. It concluded there was a 300-million-dollar gap. In terms of bus systems in Colombia, the document was known by INSTITUTO SER and by Jorge Acevedo (quoted in their 1987 report to the president) and was used for the design and production of the first official proposal for a specific segregated bus corridor in the country. Thus the World Bank also became a diffuser of the idea to Bogotá's urban transport debate.

d. When the idea meets determinate policy makers: The window of opportunity.

The 'window of opportunity' metaphor was borrowed by Arturo Ardila (2006) from Kingdon (1995) to analyze the role of urban planning for the cases of Curitiba and Bogotá. Kingdon stated that a window of opportunity is "an opportunity for advocates of proposals to push their pet solutions, or to call attention to their special problems," and Ardila complemented it by affirming that "when the window of opportunity opens, actors who favor certain plans can start interacting with other participants in the process in order to call attention to the plan"²⁸. Since 1986, a window of opportunity opened for advocates of bus-based transport systems, and they did their best to use it in favor of a potentially definitive solution.

In 1986, given that the metro option had already been approved for Medellín, Bogotá had to accept that there were not enough resources for both projects; furthermore, the implementation problems already faced by the Medellín metro project forced the metro idea to be put on hold once again. Elected president

²⁸ Ardila (2006)

for the period 1986 to 1990, Virgilio Barco Vargas asked two of his closest advisors, Ulpiano Ayala and Ernesto Rojas, to find a feasible solution for urban transport. The president wanted another solution due to the obstacles that Medellin's metro was already facing and because Colombia had recently received electrical buses through an exchange of coffee between the U.S.S.R. and the *Colombian Coffee Growers Federation*. They contacted INSTITUO SER's Director Jorge Acevedo to help them with the task and proposed to Acevedo to analyze the possibility for a free bus service along the Caracas Avenue corridor, all while suggesting that he checked "what was going on in Brazil". The window of opportunity was now open and Acevedo again proposed strengthening institutional capacity through the implementation of a specific technological solution and presented an official proposal to the president, financed by the United Nations, in February 1987.

The document written by Jorge Acevedo and Walter Martinez was titled "*Análisis preliminar de un servicio troncal de transporte a lo largo de la Avenida Caracas en Bogotá*" (Preliminary Analysis of a trunk transport service along Caracas Avenue in Bogotá) and included both technical and institutional solution proposals. It encompassed a (1) technical pre-design with demand estimations, busways and stops location, bus fleet analysis, bus feeders and costs; (2) potential organizational schemes of private and public fleets for the main trunk lines and irrigation zones; and (3) institutional arrangement proposals for a unified transport authority for Bogotá, the future of the existing *Empresa Distrital de Transportes Urbanos - EDTU* (District's Urban Transport Company) and future management and contracting for Caracas Avenue. Additionally, the document included comments on the experience of Brazilian cities and showed evidence of the relations

between Colombian and Brazilian experts and the exchange of ideas and adoption to the local context.

INSTITUTO SER's proposal was a tangible materialization of the idea of a plausible solution for Bogotá's urban transportation system. The idea reached a new level of development and specifications when handed in to the president's office. At this moment, it was a matter of finding the adequate funding sources and continuing to have the political support for the final decision. Most of the key attributes of the future TRANSMILENIO were already present in this document and the process to accomplish it was carefully described. The document also included comments on the experience of Brazilian cities.

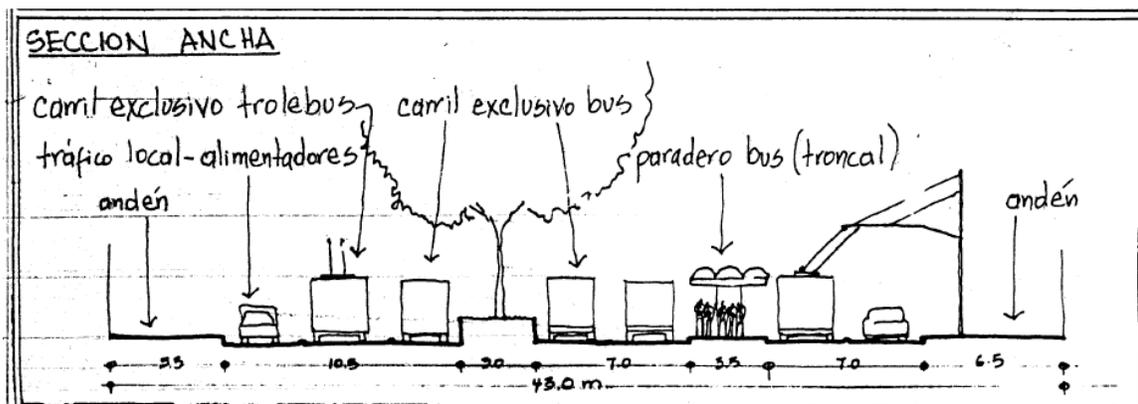


Figure 10: Proposed road cross-section. Source: Análisis preliminar de un servicio troncal de transporte a lo largo de la Avenida Caracas en Bogotá

The document discussed the possibility of implementing a service with no costs, but concluded it was not advisable to design a fully subsidized system. For INSTITUO SER, the Caracas Avenue trunk line should not be free and also included an analysis of the cost structure suggesting a range of possible fare values. The major arguments to reject a fully subsidized

system were: (1) It will promote incentives to the inefficient use of the trunk line, extending the travel time of some users due to savings derived from a zero cost fare, (2) operators will have an incentive to report incremental costs and use the subsidy as a mechanism to reduce service quality and still earn similar amounts, (3) subsidies do not match the willingness to pay of users and the actual costs; therefore users will not value the infrastructure generating incentives for not taking care of it, and (4) having a fully subsidized system will be perceived as an "acquired right," making future operational cost adjustments impractical. So the INSTITUTO SER argued to president Barco that the idea of having a free service along Caracas Avenue was not technically supported by the approach it offered.

INSTITUTO SER's document clearly discussed the possibility of a system with both types of bus fleets, electrical and gasoline, due to the existence of the Urban Transportation Company and its *trolebus* network. It proposed a mix system with an exclusive lane for *trolebuses* (electrical buses owned and managed by EDTU) and an exclusive lane for private buses. Nonetheless, there was an explicit recommendation to eliminate the Urban Transport Company (EDTU) and through it any public participation in the bus system operation. The transition to this arrangement included a proposal where a private company managed the *trolebus* operation and the fleet for a period of time to learn about its technicalities and then generate a proposal for its official takeover, based on a preferential kilowatt price previously accorded with Bogotá's electrical company (EEB for its acronym in Spanish). Interestingly, INSTITUTO SER proposed benchmarking the system with existing Latin American cases (Valparaiso, Chile, and cases in Argentina and Brazil).

The government's role should focus on the definition of service conditions, establishment and application of adequate regulations, partial delegation of control to users, and full assignment of the service to private companies ("to let them do what they know better: allocate services at low cost, amid their efficiency, watchfulness and wisdom"²⁹). This is clearly an evidence of contextual agreements based on the Washington Consensus and a spreading neoliberal spirit.

Furthermore, the main concession guidelines were also presented in the report. The government was asked to consolidate a unified transport authority to define the service attributes that are the basis for the contracts that will be subscribed by the bus companies providing the service. Moreover, it was advised to establish effective controls based on user feedback, measurements and inspectors, and honor derived contractual commitments³⁰. The document suggested that intervention should be led by the government, specifically by the Metro Company (which had no real function due to the lack of support of the metro idea by the time) as the project manager entity.

Concession contracts should be carefully designed in its operations, including fare collection and fleet maintenance. Then companies would bid according to their costs and the most favorable option based on costs would be selected. In order to avoid monopolies and take advantage of the

²⁹ The document states that government should not interfere service operation. The government role should be constraint to service's objectives definition, establishment of action rules and let the private sector do what can and knows to make with efficiency. Original quote in Spanish: "dejar en manos del sector privado lo que puede y sabe hacer con eficiencia, celo y sabiduría: producir el servicio a bajo costo.

³⁰ This may be interpreted as constructing and maintaining infrastructure, but was not explicitly expressed. For the case of TRANSMILENIO this will be one of the governmental major roles.

competition's positive externalities, the contract's terms should expire after 4 or 5 years in order to allow redefinitions, incorporate of cost reductions or increases, develop technological efficiencies, and preserve quality and fleet renewal. There was a suggestion to allow international operators' participation in the bidding process.

Interestingly, the report presented an optimistic estimate of 46,000 passengers per hour per direction capacity (if the system operated by convoy³¹ during the rush hour). The *trolebus* fleet would move around 13,400 and the rest would be covered by the private bus fleet. These designs were concordant with theoretical designs and expected results according to other spouirces. In spite of the potential of inclusion of other type of buses, estimates were based on the actual amount of passengers per hour per direction, which was 26,000. Later TRANSMILENIO would reach the theoretical amount of passengers, 46.000, but only by optimizing the operation through a couple of innovations that increased efficiency, discussed later.

Preliminary designs on complimentary service and routing clearly reveal the influences of the Brazilian innovations. The authors proposed a "similar

³¹ The idea of convoy probably came from the Brazilian experience. They had already tested the use of multiple and synchronized buses on a same corridor for rush hours in Sao Paulo. COMONOR - A bus convoy system covering nearly half of all trips in the metropolitan area of Sao Paulo, Brazil's largest city with a population of 8 1/2 million, are made by bus. The author describes the bus priority scheme designed to increase the peak capacity of the bus routes involving a total of 8,400 buses operated by 60 private companies and the municipal transport undertaking. The object of the coordinated bus company project (Comonor) was to increase the capacity of boarding passengers at bus stops in exclusive bus lanes. It was found that along one particular corridor a capacity of 300 buses per hour was required to deal with the afternoon peak. This bus stop capacity could only be achieved by spreading passengers over a 100 m length and operating a convoy which could reduce boarding time by half. Simulation of conditions showed that the most efficient convoy within physical and geometric limitations consisted of three groups (a, b and c) with the order being aa, bb, cc. Details are given of the bus marshalling area and police control needed to arrange the buses before entering the bus lane. A typical bus stop layout, with passenger waiting areas defined by group and color code used for each sub-group area is described in the report. (TRRL) <http://trid.trb.org/view.aspx?id=210534> <http://trid.trb.org/view.aspx?id=62572>
REPORTE DEL CET. 18.

strategy as the one adopted by the city of Sao Paulo in 1978." The recommended strategy begins by defining specific zones where only one private operator will provide transport services. Once the zones are defined, there is a compensation strategy among most attractive (or profitable) routes and less attractive (or profitable) ones. Additionally, the system was to be privately optimized according to a mechanism which begins with the proposal of new routes by a bus company, then the company is temporarily allowed for a testing period, and after that an evaluation and subsequent bidding process would open to all companies.

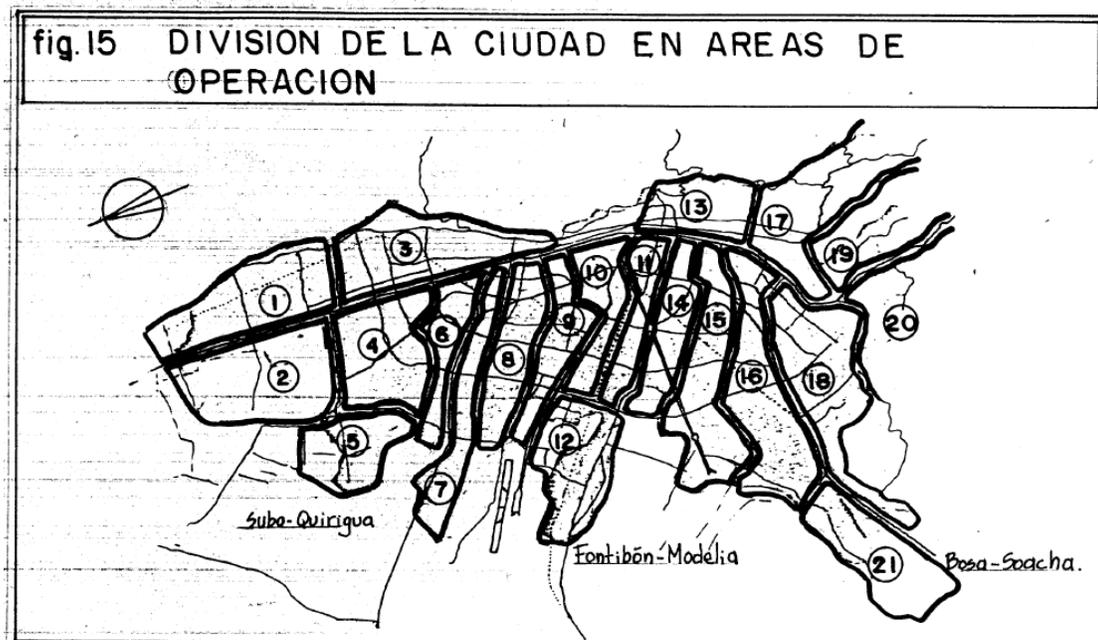


Figure 11: Preliminary zone distribution for Bogotá. Source: Acevedo, J. and Martínez, W. Análisis preliminar de un servicio troncal de transporte a lo largo de la Avenida Caracas en Bogotá. 1987

INSTITUTO SER argued that all technical and operational designs would not be feasible without an institutional rearrangement. Although it has previously insisted on this issue in reports such as one presented to FONADE (Colombia's National Development Fund) discussing transport problems in

downtown Bogota, a report presented to the consulting company PROSPECTIVA and submitted to the Commerce Chamber of Bogota (CCB) on urgent actions for Bogotá's Transport, and recommendations to the District Authorities about the content of Bogotá's Economic Development and Social Plan. The authors recommended the urgent creation of a unified transport authority for Bogota that would centralize all the disperse functions of current multiple institutions (they suggest a Transport Secretary) and would be in charge of program, execution and control of all transport infrastructure projects and all public ways use, assigning the public transport companies (EDTU and Metro) to it. Furthermore, INSTITUTO SER noticed the importance of approving an Organic Statute for Bogotá, which was being discussed under the decentralization process. This reform was understood as necessary for the new institutional arrangement.

For INSTITUTO SER it was a priority to complement the authority with a technical institute due to the lack of "analytical, technical and creative capacity"³² within Bogota's *Departamento Administrativo de Tránsito y Transporte - DATT* (Administrative Department for Transit and Transport). There was an urgent need for the creation of a public establishment "with sufficient agility and administrative independence, able to attract and retain a team of highly trained and motivated professionals that would become the analytical intelligence, would be permanent, creative and of high quality to analyze the daily problem of transit and transport, for project development (as the one discussed and proposed in this document - referring to *INSTITUTO SER's report*), for following up on those projects, and evaluate its results."

³² INSTITUTO SER. Acevedo, J. and Martínez. *Análisis preliminar de un servicio troncal de transporte a lo largo de la Avenida Caracas en Bogotá*

Again, Brazil served as a benchmark, and the experience of Sao Paulo was considered a "successful institutional solution." Facing similar institutional problems in 1976, the city of Sao Paulo created the *Companhia de Engenharia de Tráfego - CET*³³ (Traffic Engineering Company) as a mixed company with the majority of shares belonging to the local government and as a technical advisor for the local authority. CET's success story and excellent results suggested that it was important for Bogota to replicate Sao Paulo's example, and to consciously take advantage of this experience. Therefore, INSTITUTO SER proposed the creation of *Instituto Bogotano de Transporte - IBT* (Bogota's Transport Institute) as a high quality technical institution replicating CET's experience. It suggested³⁴ a cooperation agreement among national governments, technical assistance of high quality Brazilian experts, a training program for future Colombian transport technicians that would work for the IBT, and constant advising for analyzing and solving urban transport problems in Bogota. It would work during the implementation of the project for the Avenida Caracas trunk corridor, particularly during the production of detailed studies for its

³³ <http://www.cetsp.com.br/>

³⁴ Original quote in Spanish: "Debe buscarse prontamente la concertación de un programa de cooperación horizontal de gobierno a gobierno entre Brasil y Colombia que permita a- Asesoría de profesionales brasileños altamente capacitados y experimentados para estudiar y proponer una reestructuración institucional de la autoridad de transporte y tránsito de Bogotá incluyendo la creación de una entidad técnica de alta calidad que haga las veces del CET bogotano (el IBT). b- Un programa de entrenamiento para profesionales colombianos en el Brasil, mediante el cual puedan conocer de primera mano los distintos programas, proyectos y realizaciones de la CET, así como otras entidades o ciudades relevantes (v.gr. la experiencia de Curitiba) en el Brasil, con miras a su aplicación ulterior en Bogotá, como integrantes del IBT. c- Asesoría brasileña altamente capacitada y experimentada, trabajando en estrecho contacto con los profesionales colombianos que conformaran el IBT, para definir los problemas de mayor urgencia en el campo del transporte y tránsito de la ciudad, establecer los programas de trabajo, las metodologías y asignación de recursos, y dejar en plena marcha y funcionamiento el grupo mencionado. Ciertamente debería incluirse entre sus primeros deberes la colaboración con la entidad que administre el proyecto para la realización de los estudios que aquí se recomiendan para el dimensionamiento y organización definitivos de la troncal de la Caracas y por supuesto dejar las bases sentadas para su ejecución, coordinación, seguimiento, evaluación y control. d- Contacto entre el gobierno Distrital y la EBTU (Empresa Brasileira de Transporte Urbanos, organismo estatal dependiente del Ministerio de Desarrollo Urbano del Brasil.

implementation. In order to accomplish this strategic alliance, the authors recommended that the government of Bogota contact the *Empresa Brasileira de Transporte Urbanos* - EBTU (Brazilian Urban Transport Company). In addition, it encouraged the policy makers to apply to an IADB south-south cooperation fund and to take advantage of Miguel Urrutia's (former FEDESARROLLO Director and researcher on the bus problem in Bogota) place in Washington as Head of the Economic and Social Development Department.

Interestingly, the report presented by INSTITUTO SER identified several issues that were going to continue affecting future analysis on urban transport. First, it was required to propose policies as disincentives for the use of private automobiles, due to the already growing market, along with incremental use and dependence on cars in multiple Colombian cities. Second, a remark on old bus replacement schemes (known as "*chatarización*") was presented as necessary and urgent. In this sense, the low efficiency of the traditional system was demonstrated by arguing that existing buses will be able to move 9 million people daily, but they were only moving an average of 5 million (or close to 40% of installed capacity excess), which implied an urgent need for optimization. The report suggested a financial scheme for purchase and destruction of excess bus capacity as a replacement mechanism. Third, INSTITUTO SER discussed the needs of low income neighborhoods and communities and how they needed to be addressed to incorporate them into the urban transport system. In this sense, they discussed the increasing cost of providing transport services on inadequate road networks (as the one existing in low income neighborhoods) and demanded a rationalization of the existing non official and spontaneous solutions that had emerged in this areas. Interestingly, no subsidies (towards demand

or supply) were suggested, although it might have been the first idea to emerge when such distortions needed to be solved and when the president was requesting a subsidized system.

The project was never undertaken, mainly because president Barco and Bogota's Mayor Julio Cesar Sanchez ignored any metro proposal. The first window of opportunity was closed. The design for *Avenida Caracas* and the institutional arrangements proposal presented by INSTITUTO SER in 1987 was strong evidence of the idea's maturity. The idea reached a new level of maturity when proposing specific technical designs for a specific busway on a specific location (*Avenida Caracas*). The idea evolved under the influence of the Brazilian expertise and the local analysis of particular conditions of urban transport in Bogotá, such as the existence of a public bus company, the interests of private operators and the particularities of the Caracas Avenue. A solution for the urban transport problem was already framed and most of its elements had been taken into account. However, the city was not yet ready to accomplish such a transformation; as presented in INSTITUTO SER's document and as demonstrated in subsequent years, an institutional arrangement was needed before any profound transformation could take place. It is possible to affirm that the equation had been already framed, but additional effort and actions were still needed to solve it.

e. Direct election of mayors in Colombia: Decentralizing decisions to the local level

After many years of numerous debates, in 1986, Colombia's government reformed its administrative system empowering local authorities to make

multiple decision. Exactly 100 years after the last Constitution was written, Congress and the President approved and signed various laws and decrees reforming the State's territorial organization. These changes began a process of "decentralization," which changed the way in which local entities acted, giving municipalities the right to control their territories and modifying local scale planning and policy. Five years later, a new Constitution (1991) was written that incorporated these reforms into the Republic's structure.

Probably the most substantial reform was the establishment of direct elections of mayors and councilmen in all Colombian municipalities and in the District of Bogotá. On January 9, 1986, the ACTO LEGISLATIVO 01 DE 1986 modified the legal framework through which Mayors were selected as administrative officials by State Governors, who were appointed by the President of the Republic. This also introduced direct elections to select local authorities. Then on March 13, 1988, was selected as the day for the first direct election of mayors and councilmen in the country's history. This decision modified radically the way local problems are addressed and the capacity of local entities to figure out their own management and administration.

Two additional laws modified municipal organization and management, LEY 9 DE 1986 allowed municipal government to regulate and manage urban planning, public space, urban renewal projects, public housing and construction licensing, urban land property (land banks), and land use planning. This law decentralized multiple territorial decisions that were formerly made at the national level through national ministries and institutes. It allowed

municipalities to incorporate into their responsibilities the planning process and land use regulations. Then, LEY 11 DE 1986 established the Municipal Administration Statute and regulated local citizens' participation in municipal matters. In general terms, the law ruled on municipal management and organizational structure, administrative functions, council and councilmen regulations, selection conditions for officials and public servants, local public companies and decentralized institutions, contracting regulations, municipal finances administration, control entities and mechanisms, and community participation scenarios and mechanisms. The general guidelines for municipal statutes called for new administrative schemes that would facilitate and improve the local arenas' capacity to provide and implement solutions for their problems and set strategies to deal with local challenges. As the capital of the country, Bogotá was to have its own statute; yet, it had to wait until the 1991 Constitution provided the basis for the development of its own District Statute.

For the sake of this research, a particular Presidential decree is worth mentioning. On January 15, 1987, President Barco signed DECRETO 80 DE 1987, which assigned the urban transport function to municipalities. The decree transferred administration, control, and modification of urban transport functions to municipalities and removed them from INTRA (National Institute for Transport). Route definition, schedules, and bus operative licenses were now to be assigned and organized by municipalities (directly or through a specialized municipal secretary), decentralizing a role that had been controlled by INTRA with the advice of municipalities. The decree also ordered the dissolution of INTRA. Many of INTRA's personnel moved to local

transport secretaries or started their own bus companies by taking advantage of their power and political advantage³⁵.

I summarize next the sequence of Mayors of Bogotá as a navigation aid for the rest of the discussion.

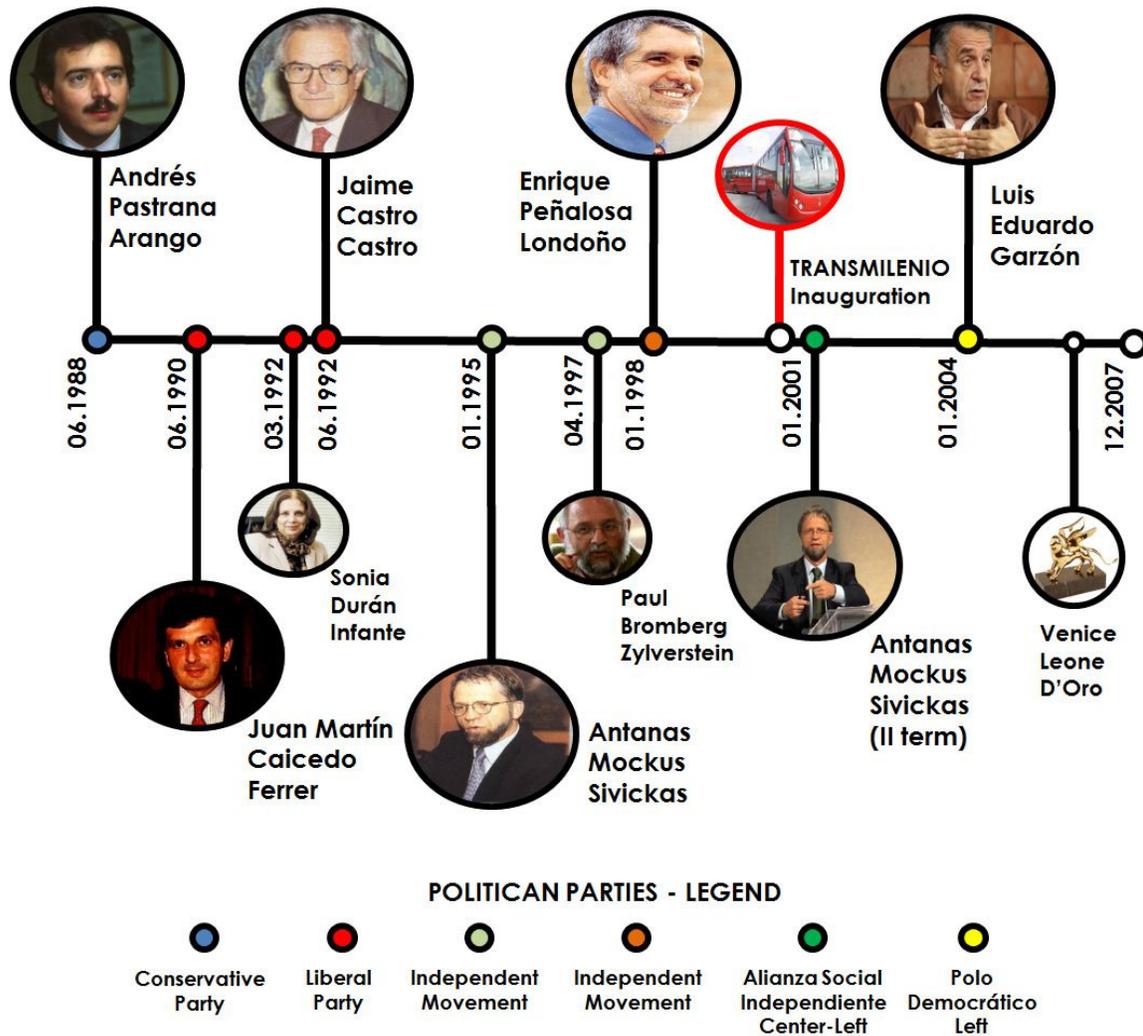


Figure 12: Timeline of popular elected mayors in Bogotá 1988–2007

³⁵ Multiple INTRA ex-officials continued involved with the urban transport scene. Some of them perpetuated their power now at the local level and continue making profit out of trading "routes" or assigning them discretionally. Some others used their advantage to acquire and monopolized "routes" that they will maintain, retain and claim as their economic rights for many years. Later they will use this claim on property rights over the "routes" to become key agents during the implementation of the BRT systems policy and many became BRT private operators and continue playing a crucial role within the urban transport system. Some have changed their mindset and properly become urban transport businessmen; some other continue capturing income without adding value to the value chain and retaining their position via political and power relations.

Andrés Pastrana Arango from the Conservative Party was elected first Mayor of Bogotá for a two-year period. Juan Martín Caicedo Ferrer from the Liberal Party was then elected and then removed three months before the end of his period. Sonia Duran Infante replaced him for three months and was the first woman to be mayor of the nation's capital. Jaime Castro was elected for a transition of period of less than three years (in order to re-establish a new three year period as determined by the 1991 Constitution indicating that mayors began their period in January 1st) and was succeeded by Antanas Mockus Sivickas, first independent Mayor of Bogotá. Mockus got elected after a peculiar campaign that promised to modify the traditional way of doing politics in Colombia and resigned nine months before his period ended to run for the national presidency. Enrique Peñalosa Londoño was elected for the period 1998-2000 and inaugurated the first BRT corridor less than a month before the end of his term. Antanas Mockus Sivickas was reelected for a three-year period and governed the District from 2001 to 2003. Luis Eduardo Garzón was elected for a four-year period (after a Constitutional reform that took place in 2003 and expanded mayoral periods). On November 8 2006, Bogotá got recognized for its urban renewal process, primarily explained by the profound transformations that this sequence of policy makers commanded after the national laws permitted decentralization of local decisions.

f. Decision making and policy implementation: When time is not enough

Andrés Pastrana Arango wanted to make a profound change in the city when he assumed his position as Mayor of Bogota in June 1988. Lacking a clear transportation program, one of his aspirations became to finally implement a properly designed bus corridor in *Avenida Caracas*. Through his infrastructure advisor (Jaime Ruiz, later appointed as IDU's (Institute for Urban Development) director), he contacted Jorge Acevedo, INSTITUTO SER director for many years. Believing that the implementation process would be plausible within a two-year period, Acevedo suggested that the Brazilian experts should be part of the project and insisted that the main issue to be addressed was urban transport institutional reform. Acevedo and Ruiz met with Mayor Pastrana and persuaded him to support the *Avenida Caracas* bus corridor instead of President Barco's metro idea. A second window of opportunity had opened.

Convinced by the experts, the mayor called Alvaro Pachón, a well-established transport expert previously involved in multiple transportation projects for Colombia, in Washington, and asked him to contact the World Bank about the possibility of financing the bus corridor³⁶. At that point, the Bank was lending money for urban transport projects throughout the world. Alvaro Pachón met with Graham Smith, who initiated the assessment process and suggested that they expand their visions from a mere issue of infrastructure and technical design into the three Es: Engineering, Education and

³⁶ Interview with Alvaro Pachón. July 2015

Enforcement.³⁷ The World Bank support did not arrive in time for Mayor Pastrana to implement it, due to the lengthy process of structuring financial projects within the political frictions that delay any decision of this magnitude in Colombia.

The decision was made and Pastrana wanted the project to be implemented but, of course, timing was the enemy. Acevedo and Ruiz worked with Rubiel Valencia, appointed by Pastrana as head of the DATT (Administrative Department of Transit and Transport), who had visited Curitiba and had joined supporters of the project (Ardila, 2004). I should clarify that the Curitiba system was in its infancy; although planned as an integrated network, it had only a barebones infrastructure at this point. It did not include enclosed stops or the fare collection innovations that TRANSMILENIO introduced. It was basically an organized bus system based on incentives to private bus operators. The idea of a public takeover of the bus fleet management and operation had run into major opposition.

Meanwhile, Bogota's support and planning group continued growing: "Valencia called Fabio Regueros, a recognized transportation consultant from Universidad Nacional, to tell him that Pastrana had decided the busway project would be the administration's flagship policy. Regueros had also visited Curitiba as well as Sao Paulo, Rio de Janeiro, and other Brazilian cities that had busway facilities" (Ardila Gómez, 2004, p. 218). The administration created the *Grupo Interinstitucional de Transporte-GIT* (Inter Institutional Transport Group) under the command of Jaime Ruiz, who became project manager for the busway project. The group included experts

³⁷ Interview with Alvaro Pachón. July 2015

from DATT, IDU, DAPD (City Planning Department), SISE (an information technology company owned by the City of Bogotá), INSTITUTO SER, and some Brazilian CET technicians who were hired as project advisors through the United National Development Program (UNDP) in Bogotá.

According to Ardila there was a generalized agreement that the project demanded strong institutional transformations. On the one hand, Regueros argued that they did not have to copy the Curitiba system (as expected by the administration) but to adapt it to the local conditions. He emphasized that a public and centralized fare collection would be positive for Bogotá's future system and that the supervision model of operation was worthy of replication. On the other hand, Acevedo had a good knowledge of the Sao Paulo experience due to his previous analysis and his contact with CET's experts. Institutional organization, the group agreed, was a priority for success. But time was again the enemy. Institutional change turned out to be difficult and mass support was not there. The team then focused on the infrastructure part of the project, which implied beginning construction even though institutional arrangements were not finalized, and as Regueros expressed to Ruiz and Valencia, "what we can do will not be similar to Curitiba. The most we can do is organizing the flow of buses with the construction of the busway" (Ardila Gómez, 2004). So, construction and negotiations with bus operators started on parallel tracks. There was no time for a radical transformation of the organizational model, therefore they made several attempts to convince the bus operators by generating participatory scenarios, but no consensus was reached. Only when they started meeting one by one, and according to Ardila after travelling to see the Brazilian cities' experiences, one bus company director "agreed to

accept the busway project and made his position public... gradually other CEOs began to join the coalition" (Ardila Gómez, 2004) .

Another trip to Brazil will change the project's initial intention: this time the discussion was about the impact that the project would have on the urban fabric and particularly on its esthetics. Transport engineers had not considered the urban impact of the project and local stakeholders complained about it. Their limited perspective toward the transport issue itself kept their attention away from the broader impact of the project (an issue that continued after the construction of TRANSMILENIO). Ruiz went to Argentina and was impressed by Buenos Aires' magnificent avenues; then he travelled to Sao Paulo to assess its busways. When he returned he called for a meeting and said, "We have to do something. Sao Paulo's busways are horrible and we can't have the same in Bogota. Can't we have something like Buenos Aires?"³⁸ Yet, at the end, given the conditions of the corridor the route was figuratively closer to Sao Paulo than to Buenos Aires.

³⁸ ARDILA, 2004.



Figure 13: Avenida Caracas (ca. 1994³⁹). Infrastructure project completed but transportation organization remained the same as before due to the lack of institutional arrangements' improvements.

Construction was partially finalized and unveiled during Pastrana's period, but formal implementation had to be done by the incoming Mayor. Juan Martín Caicedo Ferrer, elected mayor for the period 1990 to 1992, was not totally decided nor interested in the project. He instead focused on the metro option. He wanted to support a former metro proposal of an Italian company that had been evaluated since 1988. After several evaluations, including one by Professor Kain, analysts reported weaknesses in demand estimations and cost underestimation. Mayor Caicedo reluctantly supported *Avenida Caracas* phase II, but his effort and commitment were limited. The result was, as warned by Acevedo and Regueros, if no institutional change was undertaken, the expected outcome of a project implemented with such time constraints and with no compromised continuity, was a big disappointment. For many years, people attributed the failures to Pastrana but, to the surprise of many, he was elected president for the 1998-2002 period.

³⁹ Image taken from: <http://hsbnoticias.com/noticias/bogot%C3%A1/cerradas-las-orejas-de-la-calle-26-con-avenida-ciudad-de-cali-106875>

The *Avenida Caracas* corridor Project was not accompanied by the institutional arrangement needed for its success. The "Penny war" continued along the corridor, and safety and security issues affected the quality of service and the perception users had of it. Buses were not replaced by better technology and average travel times did not improve. None of the success attributes of the future TRANSMILENIO were achieved during this first initiative. Again, the city had to wait for deeper changes before its urban transport problem could be properly solved.

Elected in 1992, Mayor Jaime Castro experienced debates between the metro and the bus alternatives. He hired Acevedo to continue exploring bus alternatives and they considered that *Avenida Caracas* should be complemented by intervening *Calle 80* (80th Street). The exploration of *Avenida Caracas'* future extension along *Calle 80* was not approved during Castro's administration, but the studies were crucial for future TRANSMILENIO's implementation. Subsequent debates resulting from initial balances and results from *Avenida Caracas* corridor demanded solutions that were not seriously addressed by Mayor Castro.

Nonetheless, Mayor Jaime Castro achieved a milestone when he got the District of Bogota Organic Statute approved by presidential decree. Bogota had been working on the new city statute since the enactment of the 1986 law authorizing it. Some years before, Mayor Castro, as a member of the National Constitutional Assembly, included a clause in the new 1991 constitution stating that if Congress did not approve an Organic Statute for Bogotá within a certain time, a presidential decree would have the force

of law⁴⁰. Thus, in July 1993, president Gaviria signed DECRETO LEY 1421 DE 1993 and finally Bogotá had its own regulatory framework granting the city autonomy on matters that it had asked for many years.

Another task accomplished during Castro's period was the dissolution of the *Empresa Distrital de Transporte Urbano - EDTU* (Urban Transport Company) resulting in the elimination of public participation in bus operation, ending the *trolebus* routes and the use of gasoline-operated buses; as a result, some *trolebuses* that arrived to the port of Santa Marta never rode on Bogota's streets. From that moment on, operation of any proposed bus system in Bogota was only possible if the city had no other options. Additionally, with no existing public transport company, social friction and political tensions were reduced and the system would be possible to be designed as a private initiative.

The initial results of the *Avenida Caracas corridor* were not positive and the debate continued. Then, in 1993, the National Department of Planning and the Ministry of Development organized a seminar on urban future development in the country. The discussion on urban transport was led by Jorge Acevedo and Professor Ralph Gakenheimer from MIT. Multiple presentations on urban topics were presented with transportation a central matter. During the seminar, the views of Colombian experts were for the first time considered better than those of international experts, as Alvaro

⁴⁰ Colombian National Constitution. 1991. Original quote in Spanish: "ARTICULO TRANSITORIO 41. Si durante los dos años siguientes a la fecha de promulgación de esta Constitución, el Congreso no dicta la ley a que se refieren los artículos 322, 323 y 324, sobre régimen especial para el Distrito Capital de Santa Fe de Bogotá, el Gobierno, por una sola vez expedirá las normas correspondientes. Ver el Decreto Ley 1421 de 1993"

Pachón⁴¹ argued on his newspaper opinion column published on a November 9, 1993. Specifically, he pointed to the fact that international experts' lack of knowledge of Colombia was a weakness when exploring possible solutions for the specific context. For one, the emphasis of urban transport planning in the U.S. was on the private automobile while Colombians knew more about collective transport. Second, the MIT expert affirmed that car users are stubborn and will never leave their cars; alternatively, Pachón suggested, car users face a cost-benefit scenario and will always try to look for the best option. For him, the problem was not the stubbornness of car drivers but the fact that private automobiles had lower costs and higher benefits than any other existing option, particularly in the U.S. Alvaro Pachón used a humorous anecdote to describe his feelings: In September 5, 1993, the Colombian soccer team defeated Argentina by a memorable 5-0 result. This happened some hours after world-famous soccer player Maradona had said that "students cannot beat their masters, history cannot be changed." For Pachón, as expressed in his column, it was clear that collective urban transport planning might face a similar destiny, where ideas would come from the countries that had tried to solve the issue for a longer time. This opinion would become reality once the equation got later fully solved for the case of Bogotá, as discussed later.

Castro's government faced a lot of pressure from metro construction companies, both directly and through stakeholders such as city councilmen, and decided to open a new bidding process for a metro construction. He decided to create a project team directed by Jorge Cook and Mauricio Cuellar, a transport expert and later World Bank staffer with a central role in

⁴¹Pachón, A. El transporte Urbano del Futuro. 1993. <http://www.alvaropachon.com/1993/11/el-transporte-urbano-del-futuro.html>

defining Colombian policy on BRT corridors. The project team received technical advice from Jorge Acevedo and Ernesto Guhl. According to Ardila (2004), they had different opinions on financial and operating attributes for urban transport projects. After several technical discussions, they agreed to suggest a bidding process with no explicit technology (the thought was to focus on the desired goals and let bidders propose what they considered best). The proposal with the highest impact on demand satisfaction and the lowest impact on public finances for the City would be selected.

After a six-month process, in June 1994 the government received nine proposals for a metro, one for a bus corridor, and one for a mixed transport system. Three proposals were excluded because they were mere letters of intention. Two of the remaining six were excluded because they did not represent a significant improvement of travel time averages. Three proposals (two of them for only a metro, and one that mixed metro with BRT corridors) were disqualified due to their negative expected financial flow. This decision is particularly important because it held the principle that the winning proposal would not compromise government resources, and because it consolidated the search for self-sustainable financial alternatives for the urban transport system in Bogota. This expectation will be crucial to understand not only TRANSMILENIO's future financial structure but also the impact on BRT corridors in other Colombian cities.

Second, it is interesting that the only proposal considered feasible was the one that proposed exclusively BRT corridors with "Curitiba Style 'tube' stations on the main corridors" (Ardila, 2004, p. 247); this proposal was

labeled METROBUS and included phases of implementation (two phases, a first one of 28 kms and a second one of 12 kms). The proposal was presented by a consortium between Transportation Finance Corporation (Colombian company that financed bus renewal projects) and four Colombian bus transportation associations with Volvo Bus Corporation and Stagecoach International Holding (Ardila, 2004, p. 247). This proposal enriched the process and added new elements with a strong impact on the future solution, TRANSMILENIO. In sum, participation of alliances including bus owners along with multiple companies involved in the urban transportation business and urban transport stakeholders reduced social friction, introduced designs for gradual implementation and convinced bus producers (in this case international firms) to take an active role in urban transport operations which can be marked as the return of international operators to the local urban transport system in Bogotá⁴².

The Castro administration decided to start negotiating with the consortium to implement METROBUS; this strategy was later labeled SOLOBUS (Only Bus) due to its proposed exclusive road use for buses and had a crucial impact on other local areas of debate such as Bucaramanga. To complete the process, the concession had to be discussed locally and required consensus with traditional bus companies (affiliates and owners). The discussions weren't successful and the contract conditions for METROPLUS changed dramatically during negotiations due to the consortium's interests and the administration requirements, conditions and interests. In the end, there were some clear results: (1) The social and organizational context would not favor collective urban benefits. According to Ardila (2004), a representative of

⁴² The first tramways were operated by international companies.

private bus associations stated that "the project is good for the city, good for the people, but very bad for the bus companies." This clearly reflects the conflict between social interest and the economic and political power of bus companies. (2) METROBUS would only be possible if new corridors were constructed by the consortium due to the obstacles that the bus companies would represent for the implementation of the *Avenida Caracas* corridor. Two new extensions were proposed for the future expansion of the system, the *Calle 80th* (80th Street) and *Calle 13th* (13th Street)⁴³. In the end, the project suffered so many modifications that international investment banks became reluctant and decided not to support the project, so the contract was cancelled.

Again, timing was against the full implementation of the idea. The project, conceptually, included most of the technical variables and required conditions, but it still had not taken into account the social, organizational and institutional transformations needed for its success. A weak financial package and the risk structure increased the inherent uncertainty of the project. The required institutional arrangement, constantly mentioned by the experts, was no longer subject of academic or advisors' opinions; rather, at this point, it became clear that without an institutional reorganization it was impossible to make any publically proposed solution for urban transportation attractive to private interests. A profound change was needed.

⁴³ Metro, troncales y solobus: la solución. <http://www.eltiempo.com/archivo/documento/MAM-234525>

g. Antanas Mockus and its peculiar way of dismantling decades of political traditions: the desired institutional change finally arrived

Antanas Mockus Sivickas, former president of *Universidad Nacional* and a philosopher famous for his unusual pedagogical methods⁴⁴, was elected for the first three-year period of the city, 1995-1997, after an unorthodox electoral campaign. His government team was composed of a group of academics and the City Hall positions were immediately filled by professors replacing traditional bureaucrats, a heritage of more than 50 years of malfunctioning democracy. Suddenly, a radical revolution happened through the softest method ever possibly imagined in a city and in a country characterized for high levels of violence. Addressing a politician with a traditional mindset, a team member said, "We have occupied the same position, but we have not done things the same way nor do the same things; don't get confused, we are not the same just because we sat on top of the same chair and occupied the same office."⁴⁵ Another member of the Mockus team told me during one of my interviews, "We were convinced that it was a matter of software and not hardware; the city needed a new software, and the new legal framework allowed us to develop it."⁴⁶ This was most likely the first time the city had a professional team in front of its government.

⁴⁴ The most famous event, which made him nationally recognized, was when he pulled down his pants and showed his butt to a fully occupied auditorium with student that did not let him address them.

⁴⁵ Interview. 004, August 2015

⁴⁶ Interview 006 August 2015



Figure 14: Photo still of Antanas Mockus before pulling down his pants at the National University in Bogotá⁴⁷.

The reasons why Antanas Mockus got elected Mayor can be summarized into two major points. First was a long term reconfiguration of the political and electoral legal framework that began in 1986 with discretionary and disarticulated decrees and laws that were later comprehensively organized and legitimated by the new nation's 1991 Constitution. The new constitution was a new script for public policies, especially the urban ones that facilitated the transformation of local level institutions. Second, a minor and even socially questionable event catapulted this public university professor and his team toward the most important political seat of the government among the country's capital. Antanas Mockus was the president of *Universidad Nacional de Colombia* (Colombia's National University). One day he decided to pull down his pants in front of an auditorium full of students when they did not let him talk. The impact of this event was so huge that many citizens started suggesting that he should be a mayoral candidate, so he decided to run without planning and eventually won the election. As one of his former advisors told me, "City Hall suddenly popped up on our way; we were heading somewhere else. Antanas just found it without any plans or

⁴⁷ Image captured from <https://www.youtube.com/watch?v=kIcIlg89iZlg>

intentions. Then we had to sit down and do the homework (as we were used to, we were professors) with no other exchange mechanism than the arguments.”

The team then used teaching, its main skill, to launch a pedagogical model for governing a city. The City Government Development Plan's motto "*Formar una ciudad*" (to form⁴⁸ a city) clearly reflected the intention of including pedagogical processes into the widely accepted idea of physical urban transformation. The Mockus administration faced the same debates and discussions between the metro and the bus alternatives. But it was clear the city did not have enough money and was not willing to commit to a major new investment. In terms of the bus corridor solution, the METROPLUS option had been rejected by both parts (the consortium and the city), and in this case the main argument was financial. One of the reasons why METROPLUS had not implemented during Castro's administration was the increasing uncertainty of the project after multiple modifications. The international members of the consortium were not able to raise the needed funds, particularly because the expected demand of the different corridors leading to *Avenida Caracas* was low and their financial models were not positive. The withdrawal of the Colombian members of the consortium increased opposition and opened the possibility for local competition, which was not the essence of a project that was leaning towards a monopoly structure. As a result, the risk of building their own corridor was too high for the consortium that agreed with the city to cancel the contract they had previously signed. New financial sources were needed and Mockus's Treasury Secretary, Carmenza Saldías, was about to start making her homework.

⁴⁸ Form as a verb has similar meanings in English and Spanish but *formar* as a verb can be used in the sense of educate which in English may be closer to shape, tutor or edify.

Bogotá had unbalanced fiscal accounts particularly due to a lack of quality public investments, generalized corruption and weak governmental enforcement that translated into a low rate of citizens paying their taxes. The Mockus administration needed to increase the city's revenues and made a huge effort to explain to citizens the importance of taxes for the provision and allocation of public goods (Montezuma, 2004; Pasotti, 2010). The only financial guarantees that Mockus had were his word⁴⁹ and his commitment to adequately spend Bogotá's public resources. Citizens trusted him and started paying their taxes, in some cases even voluntary taxes (Caballero, 2004), and the record and transparent expenditures of the team generated a positive sustainable spiral for public finances. To some extent the local administration converted the citizens into shareholders, a shift that turned millions of people into concerned citizens in support of local government's decisions (Secretaría de Hacienda, 1997).

The Mockus administration would be characterized as culture-changing and citizen-empowering; his focus and impact generated a more conscious and demanding city resident and increased the sense of belonging to the community, along with respect and affection for the city and its public assets (Montezuma, 2004; Pasotti, 2010; Heller, Patrick; Rao, 2015). A major move of his administration was the elimination of an inefficient and highly politicized *Secretaría de Obras Públicas - SOP* (Public Works Secretary), which absorbed a large proportion of the budget with a low positive impact on the infrastructure needed by the city to adequately function. SOP had been a tool of powerful construction companies supported by powerful members

⁴⁹ Interview 006. August 2015

of the traditional local elite to make millions by executing mediocre infrastructure projects and not maintaining them⁵⁰. The damage was twofold. On the one hand, there were costs overrun and the financial burden they placed on the city. This led to the production of an incomplete and poorly functioning infrastructure.

Secretaria de Obras was eliminated and all of its functions were transferred to *Instituto de Desarrollo Urbano - IDU* (Urban Development Institute). Better use of scarce financial resources was one of the first strategies to improve urban development efficiency and quality of the outcomes. This decision was crucial for the implementation of future TRANSMILENIO due to the existence of an efficient public works company that would focus its effort on infrastructure construction while another entity would design, plan and execute the system's transportation operation. Although, 12 years later, IDU itself was engaged in a series of corruption scandals, initially, it operated as expected at least during the early phases of the project.

In addition, the Mockus administration launched initiatives to strengthen the financial autonomy of the city. As part of this, the city was promoted in multilateral and private global banks, and ratings agencies were contacted in an effort to increase its credit potential. As a result, multiple financial agents started looking at Bogota and the resulting improvements on the city's fiscal accounts made it even more secure to start trusting the city's financial capacity.

⁵⁰ Interview 006. August 2015

One of the key elements of Mockus's first and second terms was continuity of former administrations' programs⁵¹. It was probably the first time that a mayor was fully convinced and committed to support most of the programs of the former mayor—within his own brand, the "*Formar una Ciudad*" development plan. Thus, it was during this time that the lengthy process of obtaining a World Bank's urban transportation loan, which began with Pastrana, was finally ready to be approved. On July 16, 1996, the first loan of 65 million dollars for urban transportation that a Colombian city directly signed with the World Bank was approved.

Bogota's loan agreement with the World Bank had these objectives: "(a) to improve major transport corridors by rationalizing vehicle flows and upgrading environmental conditions for users; (b) to promote the use of public transport and of non-motorized transport modes; (c) to facilitate public transport access to areas with low-income population; (d) to extend the life of the road infrastructure; and (e) to strengthen the Borrower's institutions in charge of planning, managing and maintaining transport infrastructure" (The World Bank, 1996). These objectives meshed with prior diagnostics of the urban transportation problems faced by the city.

⁵¹ Interview 007. August 2015



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**"TODOS PONEMOS
PARA FORMAR CIUDAD"**



TRONCAL CALLE 80

Figure 15: Community sensibilizing campaign for Calle 80's project. "Todos ponemos" (we all contribute, referring to tax payments). IDU

The two main subprojects included on the Agreement Loan were (1) physical improvements of technical features and attributes of *Avenida Caracas* and the further exploration of possible reorganization of urban transport over the corridor, and (2) the previous government suggested extension of the corridor over *Calle 80* (80th Street) carefully analyzing the local impact on inhabitants and the subsequent relocation projects (see Figure 15). World Bank best practices on contracting and urban renewal impact mitigation were brought into Bogota's public policy arena and would become determinant for the future development of projects in the country. An interviewee who was a former city official affirmed that "the city learned a lot from World Bank's contracting good practices (in contrast with the traditional non-sancta Colombian ones) and the project was so adequately built that it did not require interventions deeper than regular maintenance and has not faced the alleged technical problems that future corridors encountered."⁵² In

⁵² Interview 018. September 2015

short, Colombia's decentralization process gave local arenas the ability to autonomously manage land use and regulation and the World Bank's emphasis, knowledge and experience on safeguards and resettlement social programs made a combination that was successfully tested in the construction of *Calle 80* bus corridor.

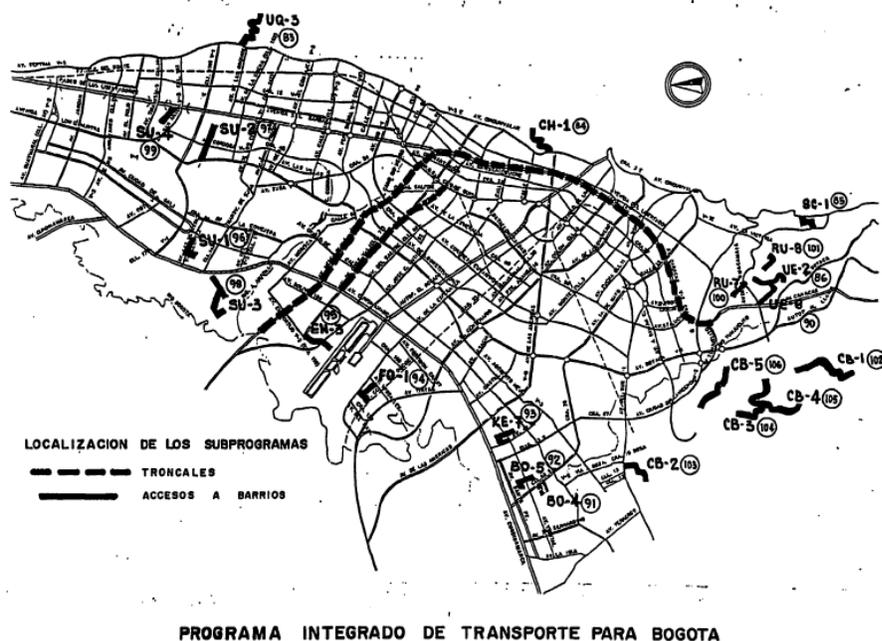


Figure 16: Proposed bus corridor for *Calle 80* to be constructed with World Bank funding

Bus corridors were planned and designed as per the technological capacity of the time and were highly influenced by the Brazilian experience. Decades of debate had finally produced a specific urban transportation project with most of the required variables included. Somehow the equation was coming close to a solution but another issue needed to be addressed. A radical transition was still needed from the traditional operational scheme (Collective Transport Service) that had been proven to be a dysfunctional form of transport services to a modern, efficient and regulated operational

scheme. In other words, there was still a profound need for a consensus with existing bus companies and their multiple share- and stakeholders. This challenge was not fully addressed by the Mockus administration, although negotiations with bus companies, owners and drivers took place. In this way, for the specific case of bus corridors and particularly *Calle 80*, needed hardware was constructed before software could be developed.

The city would still have to wait for a new group of decision-makers to finally organize its urban transport system. In the interim, the bus corridors were built. Mockus and his governing team had generated positive institutional changes. The resulting institutional rearrangements were crucial for the proliferation of urban change initiatives during the next decade. The so-called Bogotá's rebirth can mostly be attributed to this institutional reconfiguration promoted during the Mockus administration period. In this sense, a new software had been developed for a city that later and gradually will change its hardware.

h. Comprehensive Urban Transportation Planning: The JICA Study, its importance and unrecognized legacy.

In December 1996, the Japanese International Cooperation Agency - JICA, The City of Bogotá and Colombia's National Government presented "*Estudio del Plan Maestro del Transporte Urbano de Santa Fe de Bogotá en la República de Colombia*" (Bogota's Urban Transport Master Plan Study). The relationship had been developing since Mayor Castro's government and was supported by the national government (due to the fact that, at that point, international cooperation operated through the national arena but was also tied to the

interests of the national government for a plausible solution). The Mockus administration formalized the agreement, embarked on the work and presented the results of the study. The JICA Study (as it will be known) was an integral and comprehensive study of the city's urban transport system and included a 25-year proposal for its gradual improvement (1997-2020).

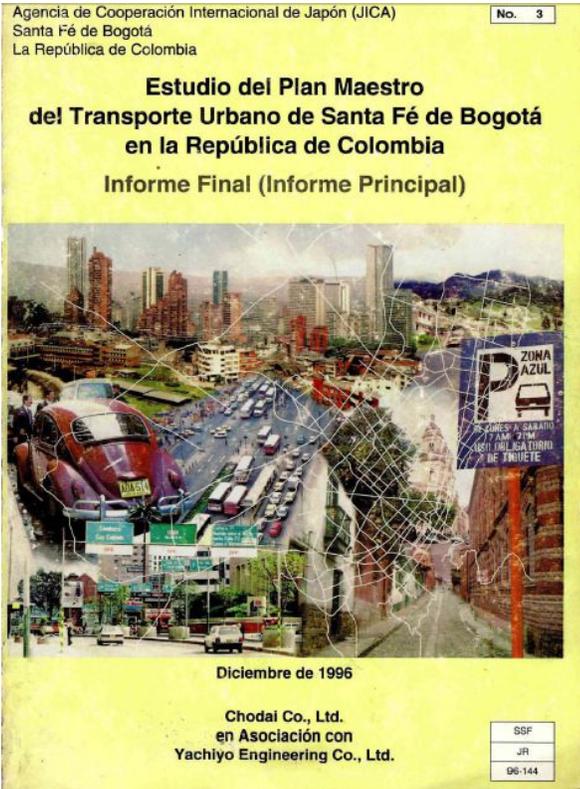


Figure 17: JICA. Bogota's Urban Transport Master Plan Study

The JICA Study (JICA, 1996) technically summarized all transportation topics and debates that had been under discussion during the last decades, professionally and rigorously analyzed each of the urban transport categories, and proposed a detailed incremental implementation plan to reach an integrated and coordinated multi-mode urban transportation system. The study discussed the current situation of Bogota's urban transport (including demand needs, existing road network, and public transportation systems),

presented the results of surveys and the forecast for a rigorous technical transport proposal including a detailed analysis and proposal for each of the following topics: road network, bus corridors, rail network, urban highways, suburbia road network, traffic control, parking, pedestrian zones, bike routes network, environmental issues, congestion fees, public transport concession conceptual modeling, and institutional organization. Finally, the document presented a detailed project implementation timeline, describing each of the stages, its required conditions, and its expected results to successfully achieve a solution by 2020.

The JICA study was one of the first rigorous and meticulous summary and instance of gathering urban transport data in Bogotá. Although many attempts to accomplish such a study had been done, none of them was as successful as this one due to the scarcity of resources for in-depth data collection and the participation of sufficient technical and expert professionals capable of undertaking such a complex project. The Japanese Cooperation brought together both considerable financial resources and a group of Japanese transport experts working together with many Colombian professionals familiar with Bogotá's urban transport complexity. One of my research interviewees commented, "During this time, Colombia had not enough resources nor will have them in the future to undergo such a technical enterprise. When we realized that the Japanese wanted to help us, we focused on the potential that data can bring to the debate; we didn't know if the proposal or the implementation would be possible. But at least we would get the data that we had wished for such a long time." Indeed, the JICA study was a useful source of information due to the rigorous studies conducted⁵³.

⁵³ Newspaper information about JICA finishing and presenting the report. EL TIEMPO, 19 de Junio de 1996, Original quote in Spanish: JICA entregó estudio inicial de transporte. "JICA

Rather than a focalized solution for urban bus transport, JICA was a comprehensive study of urban transport, with bus transport as one of the discussed topics. It's necessary to pause to briefly comment on some elements that will be essential to take into account for the future BRT policies implemented in Bogota and in other Colombian cities.

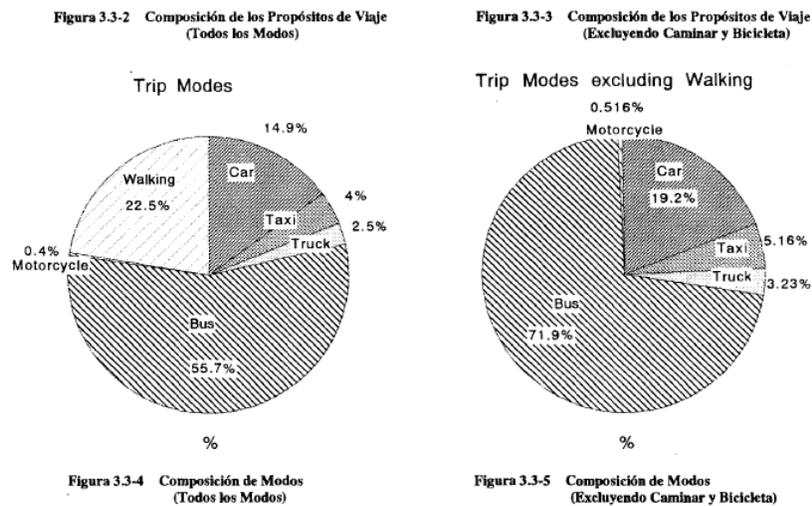


Figure 18: Bogota's modes of transport share on total trips. (JICA, 1996, p. 39)

One of the results to bear in mind is the fact that Bogota was a city with a high dependency on bus transportation. In this sense from all possible modes, bus trips were 55% of total trips and from motorized options it constituted 71% of total trips (see Figure 18). Due to the high cost of motorized vehicles (caused by former restrictions on imports and a devaluation policy of the peso currency to favor coffee exports) and low

estuvo a finales del año pasado haciendo estudios cartográficos de la red vial, de los volúmenes de tráfico y encuestas de destino hacia qué zonas se estaba transportando la población, en varios sectores de la ciudad. Además, hicieron análisis de la población de Bogotá en cada una de las 108 zonas en que fue dividida la ciudad, y de los municipios vecinos." <http://www.eltiempo.com/archivo/documento/MAM-317503>

income conditions of the vast majority of the population, the bus had become the most used transport mode in the city. This is important to understand Bogota's distinctiveness in comparison with other cities, the future operational success on the amount of transported passengers, and the potential to reach financial self-sustainability. Bogota has been, and probably will continue to be, a mass-transit-oriented city.

The JICA study generated a contemporary origin-destiny matrix for the city (see Figure 19). Having a detailed O-D analysis would permit the formulation of potential bus corridors and the decision would be based on technical arguments of people's demands and needs rather than just on deciding on the most heavily used roads, as had been the dominant practice. Main corridors and routes can be prioritized and if the study is constantly updated, re-routing and integration with other feeder bus systems can achieve better levels of efficiency. Unfortunately, Bogota did not establish a rigorous program for collecting information afterwards and similar effects of this type of studies on other cities did not occur.

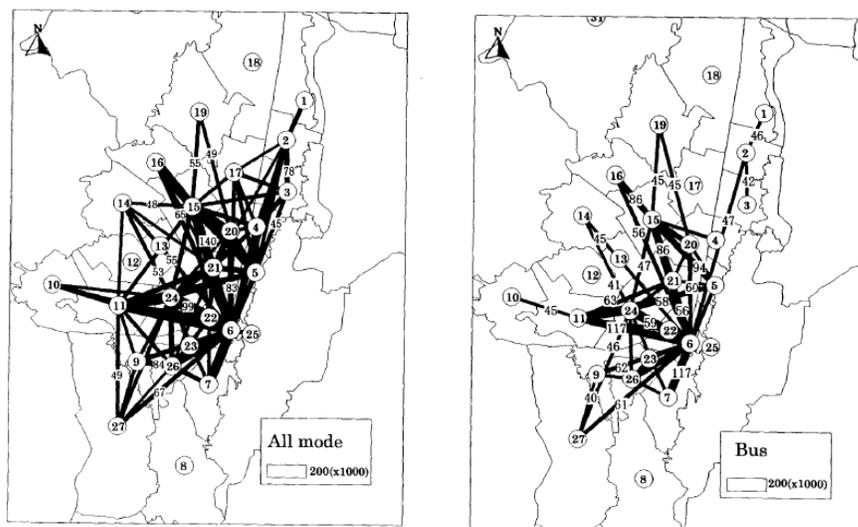


Figure 19: JICA study's All modes and Bus origin-destiny matrixes (JICA, 1996, p. 47)

The study was explicitly aware that private automobile solutions were not sustainable. At the same time, any comprehensive transport strategy needed to contemplate the private car as a relevant factor. The study presented what is called the "infinite circle of transport supply and demand"⁵⁴ (see Figure 20) in order to encourage thinking and programming alternative mass transport strategies for the city. Infrastructure was proposed to be improved and updated alongside a well-structured mass transport program.

En la Figura a continuación aparece el Diagrama de Flujo del Manejo de la Demanda de Transporte.

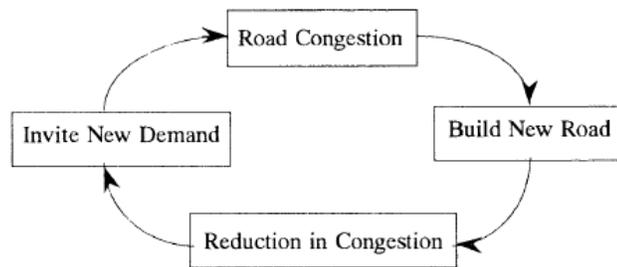


Figura 16.1-1 El Círculo Infinito de la Oferta y la Demanda

Figure 20: The infinite circle of Supply and Demand (JICA, 1996)

The first strategy to reduce congestion and increase the efficiency of the urban transport system was the construction of an integrated network of bus corridors. This proposal responded adequately to current city's needs and recognized the solutions already underway. The study proposed segregated lanes for buses also highlighted the need for improvements on intersection and traffic management. Based on the O-D matrix and complementary analysis, there were specific proposals for other bus corridors responding to actual demand of people's travels.

⁵⁴ This term means that road congestion stimulates building new roads, but new roads and the subsequent congestion reduction stimulates increases of road use and therefore congestion again.



Figure 21: Bus main corridors scheme and designs. (JICA, 1996, p. 295)

As presented in former proposals for *Avenida Caracas*, the bus corridors would segregate private vehicles and stops would allow passengers to board buses easier. The design had certain similarities with the existing system for Curitiba at the time that was considered an adequate solution and therefore proposed. It is important to observe that the proposed plan had stations on the margins of the corridor, occupying more space than using a unique central station such as the later one proposed by TRANSMILENIO. This solution demanded less space but created a public debate due to the impact on the existing trees on the central lane for *Avenida Caracas*.

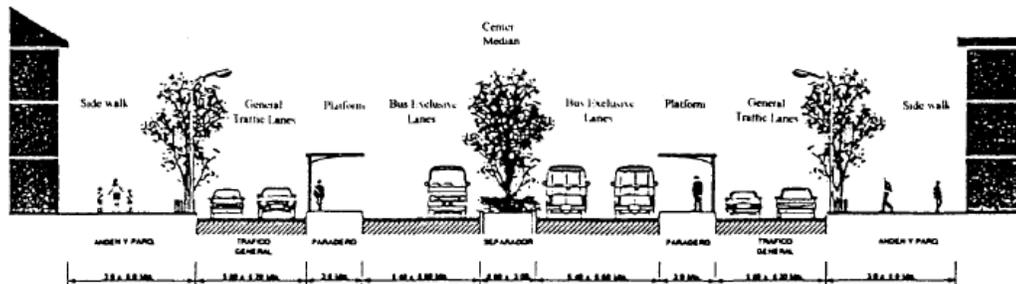


Figure 22: Avenida Caracas bus corridor's design (JICA, 1996, p. 83)

The comprehensive study of Bogotá's urban transport also analyzed finances and demand sustainability of the proposed solution in the long term. The

incremental demand due to population growth and due to public transport growth would require further investments in more effective transportation options such as the Express Bus and, later, rail options such as a metro or a subway. The bus corridors and their feeder bus network were presented as a preliminary initiative that needed to be complemented with other types of interventions. In the future, this would demand an upgrade to satisfy growing demands. Figure 23 presents the incremental process proposed by the study and the gradual process of moving from traditional bus system to trunk and later to express systems, which at the end will require a rail-based solution.

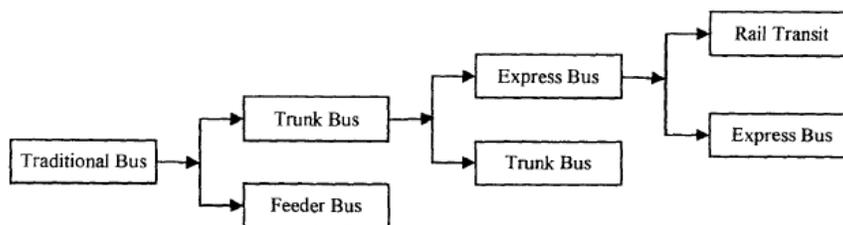


Figura 12.3-4 Escenario del Desarrollo de Transporte Público

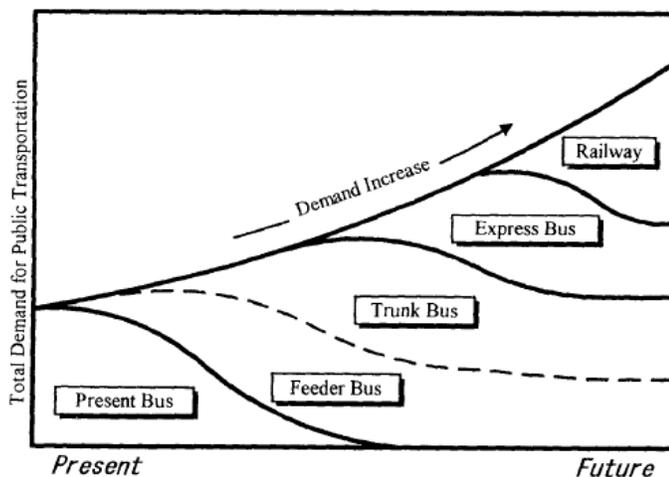


Figure 23: Schematic Diagram for Public Transport Evolution in Bogotá. (JICA, 1996, p. 312)

Interestingly, the study also proposed a complementary network of bike lanes that would extend for more than 80 kms connecting Bogota's parks, National

Park, Bolivar Park, Timiza Park, and El Tunal Park, providing an option for north-south connectivity and generating west-east corridors. The proposed network considered dense areas in central Bogota as the core area of the network but also took into account the fact that most of bike users were low income inhabitants. The plan proposed connecting lines for low income neighborhoods. This idea and proposal is interesting because it later became a parallel complement of TRANSMILENIO's interventions.

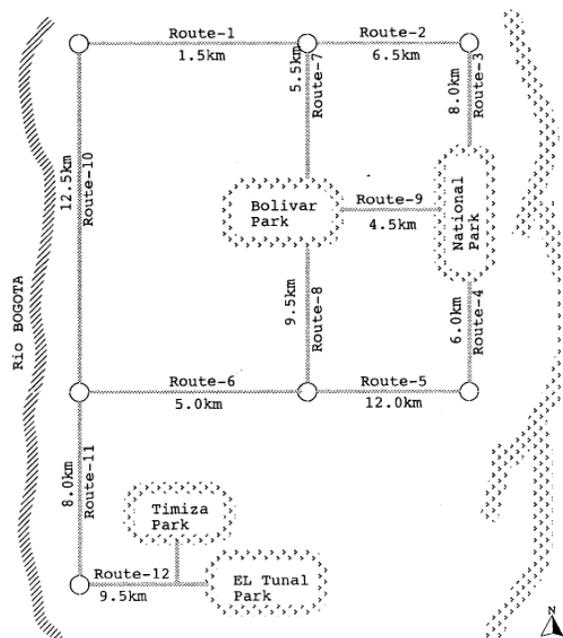


Figura 13.4-1 Concepto de Localización de Ciclovías

Figure 24: Bike routes and network proposed by the study. (JICA, 1996)

One of the key elements of the debate had been the complicated existing operational model derived from INTRA's licensing system and the resulting need for a new institutional arrangement. In this sense, the JICA study proposed a transition from the former scheme, where a licensed company or cooperative sold bus owners the right to operate a route and the owners translated the risk to the bus drivers, toward a more organized system where

a bus holding company would cover the routes but drivers would be hired by the company in order to reduce low labor conditions (Figure 25). Additionally, the proposed new institutional arrangement included the *Secretaria de Tránsito y Transporte* - STT (Bogota's Transit and Transport Secretary) as the central coordinator of the interactions and the transport authority for the city. Thus STT should coordinate the interactions among New Bus Routes planning, New Bus Operators and the needed New Tariff System.

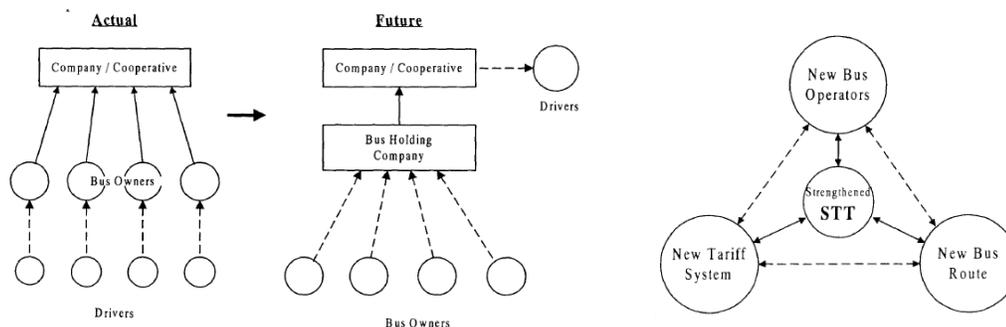


Figure 25: Proposed transportation service schema transition and new organizational structure. (JICA, 1996, p. 373)

The study proposed a gradual implementation of multiple urban transportation solutions and prioritized interventions for the coming 30 years based on the effectiveness of the solution and cost implications. It proposed for the short term (initially five years, see red box on Figure 26) an implementation phase that should emphasize traffic management projects, bus corridor construction, and existing road network improvements. Then, for the midterm, the study proposed that new roads, mainly highways, should be constructed while continuing with existing road improvements. Finally, for the long term, the study proposed expressway projects mixed with rail-based mass transit (see green box in Figure 26) that would satisfy the growing demands and the need to analyze feasibility options during a 20-year span for the final decision.

Sección 14: Programa de Ejecucion del Plan Maestro Global

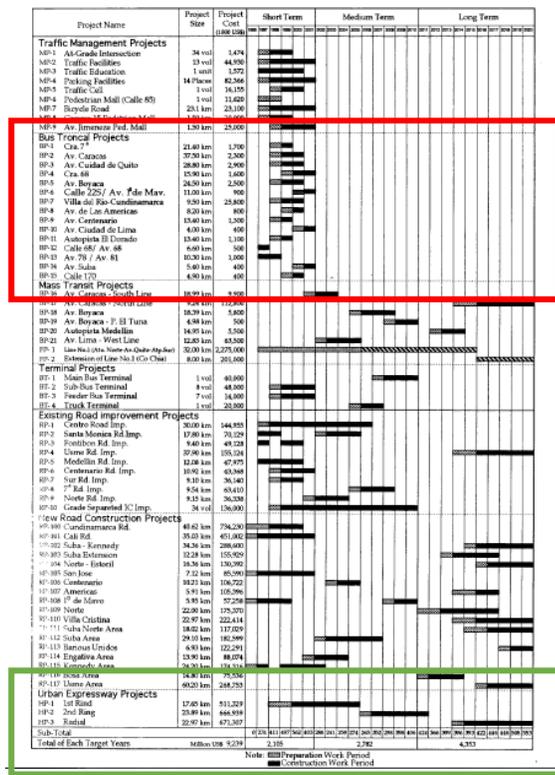


Figure 26: Urban transportation project's timeline proposed by the JICA study (1996, p. 388)

As a result of the JICA study, Bogota had a comprehensive diagnostics and a contemporary information database to support any urban transport proposal. The study's proposed interventions constituted a cohesive policy program that would begin with the most urgent interventions and a radical change on the organization of the bus system, and would gradually increase the proposed intervention arenas generating an array of possible solutions for a 25-year period. As planned by the study, Bogota would have improved maintenance of its road network and intersections, constructed a main bus corridor network and its feeder system infrastructure, a bike lanes network, and a peripheral expressway ring by the end of 2001; then new road construction would complement road improvement and grade-separated intersections; express buses would be implemented and an urban expressway would be constructed by 2010; finally, new road construction and express

buses would support the urban expansion towards the north and a railway mass transit system would be implemented by 2020.

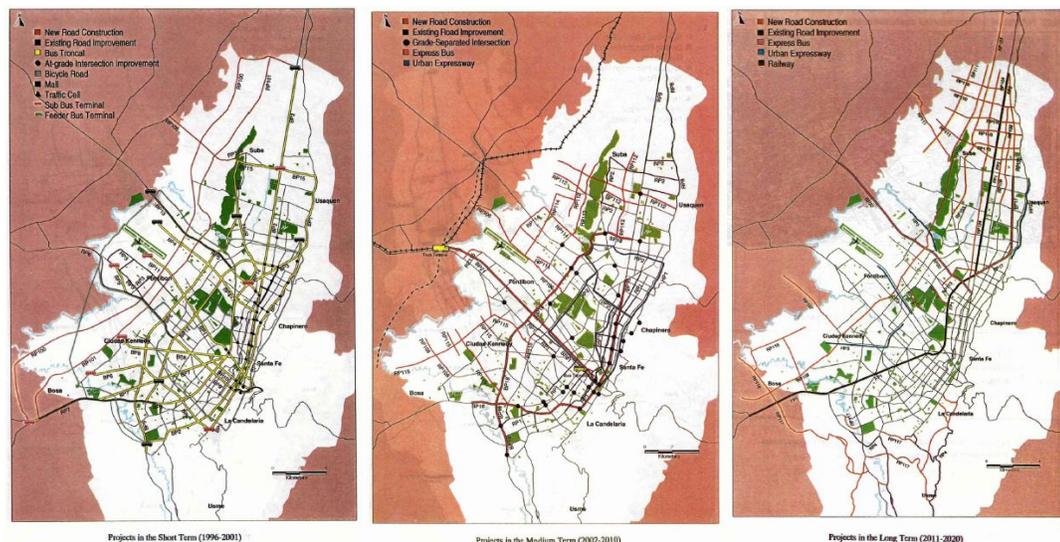


Figure 27: Proposed expansion phases for Bogotá's urban transportation systems. Short, Medium and Long term (JICA, 1996, p. 390,392,394)

To sum up, the JICA study consolidated a comprehensive road map for urban transport intervention in Bogota. It summarized most of the problems discussed during the last decades and approached them from a technical and rigorous information-based perspective. In terms of the development of the bus corridor, it included the corridors previously discussed (*Avenida Caracas and Calle 80*) and proposed an integrated network of bus corridors complemented by a cohesive bus feeder system. Additionally, it sketched a possible institutional rearrangement for the bus operational and institutional organization. These two ideas would be the essence of future developments of TRANSMILENIO.

The JICA study has been characterized as the only one that proposed highways for Bogota and that did not take into account local conditions. In this

sense, Enrique Peñalosa has constantly claimed that “a Japanese study proposed elevated highways for Bogota, but I decided to make bus corridors.”⁵⁵ Analysts such as Ricardo Montezuma claimed that “the study by the Japanese agency proposed solutions completely mismatched to the economic realities of Colombia and placed emphasis on automobile transport, with plans for elevated, multilevel roads” (Montezuma, 2004). In response, one of the persons I interviewed as part of this research stated that Enrique Peñalosa did not read the study and neglected to analyze it. But I think that he or his team members probably did read the study, because most of what they accomplished was already presented on it—they just did not want to acknowledge it.

i. Political will and social reorganization: When an idea gains support and finally becomes a reality

Enrique Peñalosa Londoño was elected Mayor of Bogota for the period 1998-2001 and his program did not mention any specific type of transport technology, but it made development of more “comfortable, efficient, and clean transport systems” one of its program goals to achieve happiness in the city, which clearly acknowledged the need without any compromise. Nonetheless, in February 1998, after less than two months in office, Mayor Peñalosa and President Ernesto Samper went to the top of an iconic pilgrimage mountain in Bogota, *Monserate*, and signed a national-local agreement to build the Metro of Bogota. The news⁵⁶ reported specific dates for designs to be finalized, bid process to be opened, and construction to be initiated.

⁵⁵ Video extract Peñalosa for World Bank. <https://www.youtube.com/watch?v=SRGoketbIZE> December 2015.

⁵⁶ Newspaper article. EL ESPECTADOR. February 1st 1998.

President Samper stated that the agreement finally ended the perverse debate where national and local governments never agreed, and Mayor Peñalosa made the commitment to start construction by June 1999 and affirmed that the project would be finalized by 2005. Clearly a decision had been made.

The decision of building a metro was clearly magnified by the media. The two politicians used that "historical moment" for their own interests. Nonetheless, any decision of this size needed to pass the financial test and the construction of this project was estimated to cost more than 2.4 billion dollars. The presidential term was to be finalized in August 1998; therefore, support diminished as the months passed and a high expenditure four-year presidential term emptied the public coffers. Additionally, Colombia's economy was entering an uncertain phase that ended with one of its most serious economic crisis of the 20th century. Thus it seemed that 1998 was not going to be the year of a firm national-local alliance for local urban transport in Bogotá as mentioned in the event in *Monserate*. Instead, it may only be a political move. Later in June, President Samper asked for a direct participation of the national level in the decisions of local transport policy in Bogota, which would take the process back to the past; from a technical perspective, it is hard to understand, this but from the perspective of Colombia's traditional political practices, it was perfectly understandable that mayor Peñalosa would not accept the sun setting on the agreement months before a new president took office in August 1998.

Although it seemed that Peñalosa had bet on the metro, his government's development plan approved by the City Council in May 1998 had something

different in mind. The mobility chapter encompassed the construction of the first line of a metro, but also included bus corridors with operational redesign, bicycle lanes, traffic control, and improvement of the road network, which was similar to what the JICA study had proposed. Additionally, Peñalosa's government Development Plan⁵⁷ included the creation of two transport companies for the city, one in charge of the metro project (*Empresa de Transporte Masivo de Bogota - Metro S.A.*) and the other in charge of the bus system (*Empresa de Transporte Tercer Milenio - TRANSMILENIO S.A.*). This gives the impression that Peñalosa was strategically playing both sides. Furthermore, his intentions were emphasized in a chapter named *Megaproyectos* (Megaprojects), where consolidation of *Sistema Integrado de Transporte Masivo - SITM* (Integrated Massive Transport System) was considered strategic and included both initiatives. The challenge was expressly addressed to four key institutions (1) *Secretaria de Tránsito y Transporte - STT*, (2) *Instituto de Desarrollo Urbano - IDU*, (3) *Empresa Metro* and (4) The future company that would be created for the bus system management⁵⁸ (TRANSMILENIO).

As observed in the official documents, the Mayor was convinced that a profound change in transportation had to occur as quickly as possible and all requirements needing profound transformations had been already satisfied by the processes taking place during the last decade. The mayor's conviction was followed by the establishment of the legal framework and the search for resources. Everything seemed to be on the right track when the president signed an agreement, and a subsequent Economic Policy Document (CONPES 2999 1998) secured resources for the metro by the National Planning Department;

⁵⁷ ACUERDO 06 DE 1998. POR LA BOGOTA QUE QUEREMOS.

⁵⁸ ACUERDO 06 DE 1998. Artículo 32. Megaproyectos.

moreover, both projects (metro and bus corridors) were included in the 1998-2001 local government development plan. But in this case the nation had no resources and a financial fiscal crisis was approaching. Thus, despite the commitments, no resources were truly available despite the words written.

The idea was in such a stage of development that it was not only about bus corridors but was considered an integral system. The JICA study had comprised most of the existing ideas for urban transport into one integrated proposal that included bike lanes, road improvement, and a metro system. Meanwhile, reflecting the JICA study, Peñalosa constantly spoke of an Integrated Mass Transport System - SITM (present in his campaign documents, local development plan, national agreement, and related documents), probably taking advantage of the fact that, in the so-called "Ley de Metros⁵⁹", the nation was in charge of providing resources for this type of projects to a maximum value of 70%. The 70%-30% ratio of resources is on the agreement with the president and on subsequent supporting documents and would have a profound impact on the future BRT systems in other Colombian cities. The SITM seems to reflect that Peñalosa was acting according to what was proposed by the JICA study (despite the absence of any reference to the document) and was trying to have both the reorganization of the bus corridors and the metro⁶⁰ system.

National support clearly vanished by mid-1998 and the fact that this was not a governmental decision but a generalized fiscal finance crises gave no

⁵⁹ Law 310 of 1996

⁶⁰ Although it can be thought that metro was a priority, its inclusion may have been strategic considering the fact that a metro project would take longer than any other projects. So securing national support for the metro would permit to focus on the other strategic investments needed.

hope for the new national government that would begin in August 1998. Political will was not sufficient, resources were absent, and time was against Peñalosa. (His first year in office was already gone and no project had begun). But there was a well-kept secret on the table: Bogotá's Electrical Energy Company privatization. Although labeled as capitalization rather than privatization, Mockus had sold part of Bogotá's Energy Company to private capital, according to him, both in order to solve a financial crisis faced by the company and as a natural response to a neoliberal context and pressure of capital on public services that took place in Latin America during the 1990s. Whatever the reasons for the decision were, Bogotá got 2 billion dollars for the transaction that it used to balance its financial accounts and pay debts, while designating the remaining resources for public investment. Mockus left office during the process and it was during Peñalosa's term that the city received these resources⁶¹. Bogotá had one of the highest amounts of resources to spend in its history, while the nation was about to face one of its worst financial crises of the 20th century.

Finally, the amount going to public investment was less than a billion dollars and, hence, there was not enough money for the metro; still, it was a substantial amount of money to spend on urban improvements. The idea was again modified and reached its final iteration, an interconnected bus corridor system with a profound change in the way bus operators provided

⁶¹ According to Astrid Martínez, Bogotá received a billion of pesos that were allocated for infrastructure investments. She argues that without these resources Peñalosa would have not been able to fulfill its development plan actions. Original quote in Spanish: "El Distrito recibió casi un billón de pesos que fueron a infraestructura en un 53.7 por ciento, y que financiaron al proyecto Transmilenio, la malla vial, el espacio público, las alamedas y los puentes peatonales, entre otros, sin lo cual el alcalde Enrique Peñalosa habría tenido dificultades para cumplir su plan de gobierno. MARTINEZ, Astrid. La capitalización de la Empresa de Energía. Razonpublica.com"

services. The Metro discussion was archived and TRANSMILENIO was about to be born; Peñalosa had two years to cut the ribbon and he of course wanted to cut it himself.

3. THE MAKING OF TRANSMILENIO

So far, the idea of implementing a comprehensive and integrated urban transportation system based on buses for Bogotá had been profoundly discussed; some actions that had been implemented (dedicated bus lines along a major artery) had been unsuccessful, but now the context seemed a little different. The city had enough resources to invest in urban infrastructure; the debate about the metro system had been shelved due to the lack of national resources; the BRT idea had produced specific proposals that materialized in the interventions on *Avenida Caracas* and *Calle 80* during the Mockus administration; and the new mayor was ready to implement the BRT idea by including the required conditions into his government plan because he was convinced that negotiations with private companies and relevant actors were in the final stages needed to accomplish a successful implementation.

Curitiba was already a successful story and the experience was analyzed by Peñalosa's team; along with it, his team explored the experiences of Sao Paulo and invited Brazilian experts to help the team. Included in their visits was Quito, Ecuador, where Mayor Cesar Arias had engaged in a barebones experience of the approach. Thus, the first step was the consolidation of a group to direct the implementation of an urban transportation project labeled TRANSMILENIO as a potential transport solution for a new millennium.

A new company controlled by the public sector (in this case, the local government) was to lead the effort but the private sector was to be included as well. It was not a privatization strategy because the transportation system was already in private hands with low levels of regulation. The new proposal was to organize private participation under the guidelines of a strong technical entity, TRANSMILENIO.

TRANSMILENIO was going to become the MANAGEMENT AGENCY (in Spanish ENTE GESTOR) and would coordinate the allocation of public transportation services with existing local transport authorities (Transport Secretaries). This idea would carry significant weight and would be later incorporated in the national BRT policy. Former attempts to organize a strong government authority had failed and did not properly include private incentives in the allocation of the transportation service, a factor that was blamed for the failure of previous attempts. Peñalosa's team was fully aware of the importance of making it attractive for private operators to be part of the system and spent a lot of time designing a strong incentives model involving government, the private operators, and the users to achieve a win-win situation for all the involved parties.

The first action that Peñalosa undertook was to hire a strong group of international experts on transportation, financing, project structuring, legal frameworks, and audits. Companies such as Steer Davis Gleave (British), McKinsey (American), and experts such as Paulo Custodio and Pedro Alvaro Szasz (well-known Brazilian urban transport experts) together with local experts on legal topics and transportation were part of the designing team of the new public transport policy under the umbrella of a project

labeled TRANSMILENIO. Quietly, the recently created Metro Company directed by Dario Hidalgo supported the initiative by generating studies on urban transport particularly those needed for demand estimations. This role of the Metro Company is important to mention due to the fact that Dario Hidalgo later became one of the key proponents for BRT policies. It is important to highlight that during this initial attempt for the design of TRANSMILENIO, the World Bank was not part of the project because it was already financing the intervention project on *Calle 80* and will be only active in part of the project when the new designs resulting from TRANSMILENIO will demand some modifications of the initial designs for *Calle 80*.

Planning for TRANSMILENIO's project demanded multiple studies and designs and the mayor and his team wanted to have high international standards. The local government opened bidding and the British Steer Davis Gleave⁶² company was selected for the technical and operational designs, the American McKenzie Management Consulting for the management designs, the Colombian Capital Corp for financial designs, Colombians Guia Ltda, Esguerra Associates, and Montenegro & Bueno for legal architecture and urban land use designs, and *Universidad de los Andes* for technical requirements. All of them were to work under the direction of a specialized group with direct contact with Mayor Peñalosa. The auditing process also was undertaken by a joint venture between the Colombian consulting company GGT directed by Jorge

⁶² Steer Davis Gleave was hired on December 4th 1998 and its role described as follows: "In 1998, Bogotá decided to build a BRT network to help tackle the city's congestion. They had ambitious plans to build the system and contract private bus operators over the following two years. Needing technical advice to support the design and implementation, the Secretaria de Movilidad, the transport arm of the government, brought Steer Davies Gleave on board as technical consultant with direct responsibility over both the operational and engineering designs of the system, as well as providing demand forecasts. In addition we supported other consultancies working in the financial, architectural, legal, and construction areas. Working to extremely tight timescales, we were able to see Transmilenio begin operations in 2000. <http://www.steerdaviesgleave.com/casestudies/bogota%E2%80%99s-bus-rapid-transit-system>

Acevedo (long-term urban transport expert and highly involved in the consolidation process of the idea) and the Brazilian *TTC Engenharia de Trafego e de Trransportes Ltda* directed by Emir Germani.

The advising team members visited Quito (Ecuador), Curitiba, Sao Paulo and Goiania (Brazil), Santiago (Chile), and Ciudad de México and Puebla (México) to benchmark international experiences and be able to include new trends and innovations into Bogotá's new urban transportation system. Most of the benchmarking strategy can be understood by the experience of Paulo Sergio Custodio⁶³, the Brazilian expert from LOGIT (*Logistica, Informatica e Transportes Ltda*), the company hired by GSD to help them with the operational designs for TRANSMILENIO. Later GSD and LOGIT will continue partnering for other designs around the world. All studies were completed during 1999 and by November 5, 1999, the final designs were given to the city. TRANSMILENIO was ready to start rolling as soon as infrastructure construction was completed and private operators got their concessions and bus fleets.

Political commitment, technical meticulousness, and international benchmarking were important but not sufficient. TRANSMILENIO's implementation process was complemented by a group well versed in urban transport with skills, knowledge, and desire to make the project a reality. A group of academics, most of them educated at the *Universidad de los Andes* (where Jorge Acevedo and Alvaro Pachón had taught), had recently returned from their postgraduate studies in U.S. universities. Many of them were

⁶³ Paulo Sergio Custodio is a Brazilian international consultant with 40 years of experience in planning, design and implementation of sustainable urban transportation projects. Throughout his career Mr. Custodio has worked in Asia, Africa, and Latin America and is recurrent consultant for the World Bank, the ITDP and the World Resources Institute. In: <http://www.sdu.ac.cn/tepinzhuanjia/Paulo-Sergio-Custodio1.html>

hired by the multiple companies working on the designs but also some of them got positions at the local government and at newly created institutions and were able to provide their technical knowledge to the development of the project but also were able to make decisions. This group of experts was able to guarantee professional and technical management along with a strong commitment to the project.

In February 1999, Bogota's City Council approved the creation of TRANSMILENIO by *Acuerdo 4 de 1999*. Now the road was ready for a new beginning in urban transportation in the city. Infrastructure was already being built but changes needed to be made and the new public company was in charge of organizing modifications for *Avenida Caracas* and *Calle 80* taking into account the final designs for TRANSMILENIO. Meanwhile, the operational model was established and multiple negotiations were to be done in order to achieve the organizational scheme proposed by the new system. The project required a strong strategy on "hardware" but also a lot of efforts on "software," which implied strong commitment of private operators and bus owners. The final assignment was about to begin.

In order to understand TRANSMILENIO's operational model, which will heavily influence future projects in Colombia and around the world, it is necessary to briefly describe the proposed structure for the urban transportation system (see Figure 28). First, the project needed strong investments in infrastructure to be managed by *Instituto de Desarrollo Urbano - IDU* (strengthened by Mockus after the elimination of the Public Works Secretary). The newly created Transport (BRT) Management Agency TRANSMILENIO was to focus its attention on bus operators by regulating and establishing

the concession contracts, the establishment of a fare collection system, and the financial mechanisms to organize the money flow within the system. Two innovations were included into the TRANSMILENIO model: (1) Fare collection will be completely isolated from all service providers and all resources will go to an independent trust fund that will first pay the banks and later give the remaining money to the service providers. This arrangement guaranteed that banks would not be concerned about debt default, a constant practice by bus operators in the past. (2) The fare collection system was going to be run by an independent company (none of the bus operators or owners was allowed to be business partner of the company) in charge of installing state of the art technological devices for money collection, control, and monitoring of the system.

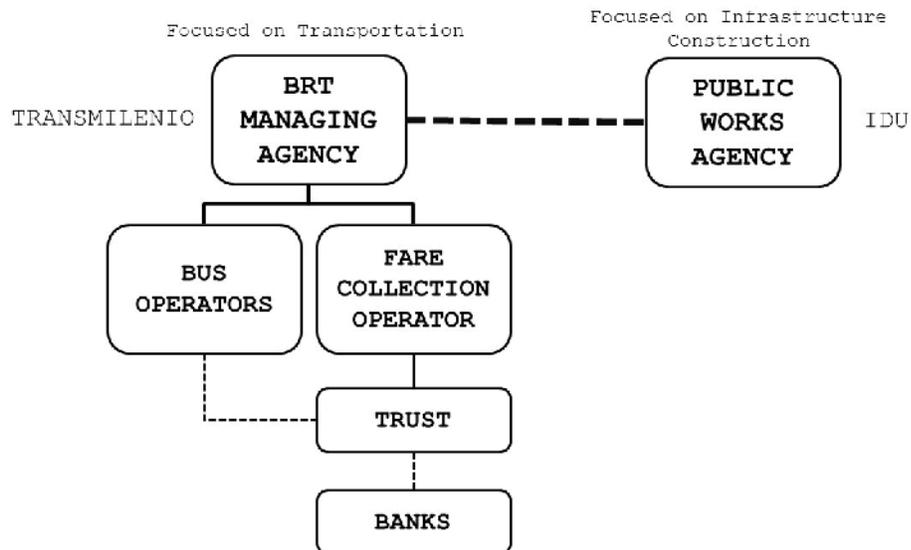


Figure 28: General Operational Scheme for TRANSMILENIO

The most challenging task to make TRANSMILENIO a reality was to convince bus operators and bus owners to support the project. Support meant changing their traditional mindset of daily collection and make an effort to convert their archaic transportation system into a modern enterprise and corporate-

type business model. Additionally, support meant investing a lot of resources in renewing the bus fleets in order to satisfy the technical requirements of the new system. This was not an easy task but it was a requirement to make TRANSMILENIO possible. This was a task that was assigned to a peculiar policy promoter, Ignacio de Guzmán.

Convincing traditional urban transport system operators and bus owners was not an easy task. So far they had maintained their monopolies under the franchise scheme. The system's main driver had been revenue rather than public welfare. The BRT system promoted by the TRANSMILENIO required a new entrepreneurial mindset, collective coordination under a new regulatory framework, and new investments that would probably upset the status quo. After more than 30 years of different types of negotiations that were unfortunately unsuccessful, there was potential to come up with a final agreement. Negotiations were led by Ignacio de Guzmán⁶⁴ and were assisted by multiple actors under the supervision of Mayor Peñalosa.

From my interviews, I learned that Ignacio de Guzmán was the "engineer" of the framework that would succeed with traditional bus operators and bus owners. He was described as a "business man" and as the person in charge of the most difficult negotiations with the traditional bus operators and owners. He is not mentioned in official reports or academic documents and his role seems to have taken place behind the scenes. The interaction and final outcome may be subject to a future in-depth analysis of urban policy transitions and how they are accomplished; for the scope of this research

⁶⁴ During my field work it was not possible to interview Ignacio de Guzmán. In order to get information of his role I constantly asked others about his role in multiple interviews that I conducted.

it is important to mention that there was a lot of work done in order to achieve consensus among status quo private interests and public concerns.

Negotiations began with a collective strategy presenting the project to multiple bus operators and owners at the same time. Collective negotiation, as attempted before, made agreements impossible and the resulting outcomes didn't meet expectations or the required consensus. There was strong opposition during the first round of negotiations; some opponents lied to lessen the project's attributes, such as affirming that the intention was to take old *trolebuses* and use them again.

The strategy changed and negotiations were undertaken one by one with the bus operators and owners. Some of them began to understand the project and saw a business opportunity. Some decided to learn more and visited some of the international benchmarking cities. As a result, a group of supporters emerged that became the promotion task force. A consensus was slowly built and many others joined the initiative until there were enough to start designing the a financially feasible system, while the ones that remained in the opposition realized that they had no choice and changed their line of business when they got the opportunity to sell their buses. The work was done, so the new phase was implementation.

TRANSMILENIO became the managing agency and designed the concession contracts for BRT system operation, fare collection, and the financial mechanisms such as the trust for collection distribution among system agents. Additionally, it hired a selected group of transport experts and enthusiasts able to work together with the consulting firms and design each

detail of the new urban transportation model. TRANSMILENIO was an agency completely focused on the transportation system's design, thanks to the fact that all public works were to be undertaken by IDU. In this sense, there was no overlapping functions and, while IDU focused on infrastructure construction (and all what it implies such as financing, bidding, auditing, and dealing with traditional political interests), TRANSMILENIO was a small public entity focused on the technical details of the new transportation system. This separation of functions will become very important for the analysis of other cities' experiences and Bogota's future development as well.

In terms of infrastructure, some adjustments to the initial designs of the ongoing projects on *Avenida Caracas* and *Calle 80* were called for. There was a need for the interventions to fit the model proposed by TRANSMILENIO, which implied stations were located in the central lane and not at the right margins, along with other requirements on public space and pedestrian bridges. The World Bank, the financier of the interventions, was first reluctant but later able to accept these requirements. It became a partner of the new idea. The works went as estimated; Mayor Peñalosa was satisfied with the advance and now the World Bank became a partner of the project, although contributing only a small fraction of the total resources allocated. Later, the positive results of the project attracted the World Bank to promote the future implementation of similar projects in other latitudes. Peñalosa's TRANSMILENIO project prioritized another main road for BRT development, the *Autopista Norte* (North Highway) and, after a public bid, hired a team to do the construction work. This intervention was going to become the most criticized decision of Mayor Peñalosa and TRANSMILENIO's

Achilles Heel, due to the selection of a new type of concrete that did not meet the resistance requirements; explanations of this failure range from corporate corruption to unexpected technical mistakes, but the debate is still open. With the completion of work in *Avenida Caracas, Calle 80* and *Autopista Norte*, the hardware demands for a new urban transportation system were already on the right track and the efforts should focus on the software side.

Once concession contracts were approved and assigned⁶⁵, and newly created bus companies were ready to invest, new actors came into the scenario: bus makers and financial institutions. TRANSMILENIO was planned to be one of the first BRT systems in a large urban agglomeration, in this case in a city that surpassed seven million inhabitants. The bus fleets needed to operate the system demanded large investments while providing a new business opportunity. Although I intended to examine the influence of bus makers on urban transport public policy, I could not find evidence that they had actually influenced the policy design. Nonetheless, bus makers were highly active during the decision process of the new bus operating companies. Multiple marketing strategies such as visits to cities with modern bus fleets in Latin America and Europe, visits to Volvo factories in Göteborg, Sweden, and discount or sales commissions were reported in many of my interviews. The bus operating companies had a decision to make once the urban transport policy was designed and the concessions were made: their decision was based on the analysis of costs and benefits. Consequently, a

⁶⁵ S.I.T.M. S.A. Ciudad Móvil (Serie A) for Autopista Norte. Express Del Futuro (Serie M) for Calle 80. SI99 S.A., (Serie U) for Avenida Caracas-Sur and Metrobus (Serie T) for Ramal del Tunal.

final decision was made and the new bus fleets included buses built in Brazil in the production sites of Volvo and Mercedes-Benz.

The project required a huge amount of resources and financial incentives for bus companies to agree to invest. TRANSMILENIO as a unique and pioneering project had a high risk valuation and high levels of uncertainty. As a result, multilateral banks were reluctant to finance private companies with their purchases of bus fleets, and local private banks had no intention to finance such an uncertain project after so many years of complicated relations with bus operators and owners. Nevertheless, financing was required by the new companies without sufficient resources for the enormous investments required. Two solutions were found to generate incentives for the allocation of financial resources.

The first solution was to mitigate the risk for bus companies by including in the concession contracts high and attractive rates of returns for the bus operators. Following a traditional business principle, risk takers would have higher returns the higher the risk involved. Due to the high level of uncertainty of TRANSMILENIO, risk was high and so high returns were included in the initial (phase I) bids. These high return rates were criticized but critics are often insensitive to the high level of uncertainty faced by the first operators. The subsequent contracts (phase II and phase III) received reduced return rates due to the lower risk of investments inherent in an already successful project.

The second solution came by the active role that the industrial promotion financial bank of Brazil (BNDES for its acronym in Portuguese) had. Due to

the fact that Brazilian factories were possible being used to produce buses, the BNDES actively financed the purchase of buses fabricated in Brazil. As stated by the BNDES, financing purchases by private companies for TRANSMILENIO "was an opportunity for Brazilian bus and bus parts makers to consolidate its market share in South America, and to promote maintenance service exports, direct and indirect employment generation, and in a long-term economic growth perspective, consolidation of Brazilian external competitiveness and its establishment as an exports platform for MNC in the industry."⁶⁶ BNDES saw an opportunity on the TRANSMILENIO's project and assumed part of the risk aiming for an economic positive impact on the Brazilian industrial sector together with the inherent expected returns of the project. Having addressed this issue, the equation was finally solved and a new urban transport system for Bogota was about to become a reality.



Figure 29: First TRANSMILENIO map. 2000. Copy owned by the author

On December 18, 2000, TRANSMILENIO was inaugurated with one running line along *Avenida Caracas* and *Calle 80* with 14 buses. This was the initial stage

⁶⁶ <http://colombiabuses.blogspot.com.co/2011/10/bndes-financiara-exportaciones.html>

of the vast urban transportation project that TRANSMILENIO would become. But Mayor Peñalosa needed to cut the ribbon before finalizing his government period on December 31, 2000. That day can be considered the moment when Bogota finally got an appropriate solution for its enduring urban transport problems. A BRT system designed with segregated corridors and a feeder system implemented a solution for a long lasting problem through a complex urban policy that included the consolidation of a regulatory and legal framework, allocation of financial resources, interaction with existing stakeholders, and a final agreement with powerful groups. The policy on urban transport implemented under TRANSMILENIO was the solution of an urban policy equation for the case of Bogotá. The subsequent results, valued as positive by many, will be replicated in other cities, a phenomenon that will be analyzed from the Policy Mobilities perspective.

4. TRANSMILENIO becoming a "best practice": Packing urban policy

The Urban Mobilities literature (Cook, 2008; González, 2011; McCann, 2011; McCann & Ward, 2010; Peck & Theodore, 2011) highlights the process of consolidation of a policy and its subsequent process of benchmarking as a requirement for movement from one place to another. Once a policy has been properly implemented in a place, and many attributes can be presented as positive at the same time that it matches specific interests of stakeholders (such as environmental preservation, profits, esthetic attributes, and social impact), there is a great incentive to mobilize it to other places. Examining the policy as documents, narratives, templates, and knowledge is essential to understanding it, adopting it, and adapting it to the new contexts where it will be implemented. In this section, I present briefly

the attributes of TRANSMILENIO that made it suitable for potential world-wide mobility.

TRANSMILENIO was, as stated by one of the interviewees of this research, "a risky bet that worked out well, though it could have been a misadventure." The risks of implementing TRANSMILENIO were really high but, after several years of examination, it was time for implementation and all conditions were right for action; Mayor Peñalosa was a key player in making it possible. Bogotá's history, economic and urban development, and its urban transport legacy made it a city highly dependent on public (collective) transport. The weakness of its road system, the income conditions of the majority of its inhabitants, and the relatively high prices of private automobiles and gasoline made it a city, as many in Latin America and in other places in the world, that demanded public transport solutions based on buses due to the high costs of railway systems. After many years of inefficient allocation of bus services, an initiative like TRANSMILENIO that focused on efficiency increases had a lot of potential to be successful but uncertainty was unavoidable.

The project's scale, planning, resources, and expectations were humble. TRANSMILENIO was designed with a strong sense of discretion, although the expected outcome was ambitious in hoping for a comprehensive and integrated transport system to follow. The project began operation in December 2000, a couple of weeks before Peñalosa left office; then, within months, the number of users rose at an exponential rate and its subsequent expansion was a reflection of its success. TRANSMILENIO generated a number of positive effects for public urban transport in Bogotá; users felt the benefits that

came from the quality of the service and reductions in their commuting times; private companies felt they had done good business, reflected in their profits.

CORRIDOR CAPACITY OF DIFFERENT MODES OF TRANSPORTATION							
	 Mixed Traffic	 Regular Bus**	 Cyclists	 BRT single lane	 Pedestrians	 Light Rail	 Suburban Rail
1) Corridor capacity (people/hr)*	2,000	9,000	14,000	17,000	19,000	22,000	80,000
2) Energy intensity (MJ/p-km)	1.65-2.45	0.32-0.91	0.1	0.24	0.2	0.53-0.65	0.15-0.35
3) Fuel	Fossil	Fossil	Food	Fossil	Food	Electricity	Electricity

* on 3.5 m wide lane in the city.
 ** Regular bus lower values correspond to Austrian buses, upper values correspond to diesel buses in Mexico City before introduction of BRT system.

Figure 30: Corridor Capacity by modes of transportation⁶⁷

TRANSMILENIO became a demonstrative case for transport experts. A model applied in a large urban agglomeration now existed. The actual numbers of users started to surpass expectations. Particularly, *Avenida Caracas* became a world marvel when surpassing the technically and academically well-known statistics of 40,000 thousand passengers per hour on one-way, doubling the expected 20,000. Multiple transport academics and experts wanted to see TRASMILENIO as an interesting case study that was going to be able to compete with railway technologies in terms of capacity and, at the same time, cost a fraction to implement when compared to railway investment. BRT systems, with TRANSMILENIO as the example, became an interesting and

⁶⁷ Source: <https://thegreatermarin.wordpress.com/2015/02/16/what-do-driverless-cars-mean-for-suburban-planning/>

relevant option for fast growing cities in the developing world; its technical peculiarities also made it intriguing for several cities in developed countries. The success was explained by incorporated innovations, namely the surpass lanes⁶⁸ at stations that allowed for the development of express routes and the implementation of access cards⁶⁹ and its GPS location and monitoring systems.

a. Subsequent effects: Unexpected spillovers

TRANSMILENIO constituted a profound change for public urban transport in Bogotá but also became the materialization of an idea, a theoretical concept, that took decades to mature. The focus of this research has been the development, evolution, transformation, and mobilization of ideas; therefore, it is important to highlight the subsequent impact of this specific policy at the local, national, and international levels in order to analyze the resulting dynamics of policy mobilities that later occurred.

TRANSMILENIO was observed by multiple cities as a model that could be implemented back home. Multiple urban planners, urban policy makers, transport experts, politicians and multiple other urban transport stakeholders visited Bogota and were keen to learn from its experience. TRANSMILENIO has shared its experience with several agents worldwide, particularly Latin American policy makers, academics, experts, and the general public that saw in the BRT system that could be implemented in the cities they came from. In November 2001, Bogotá held the first International

⁶⁸ Surpass lanes are additional lanes in the proximity of bus stations that allow express buses to surpass stationed local buses increasing time efficiency.

⁶⁹ TRANSMILENIO was the first comprehensive BRT transport system to use contactless cards for fare collection and access to the system to users.

Urban Transport Exposition, which received more than 400 delegations from countries such as Germany, Argentina, Bolivia, Cuba, Brazil, Spain, Costa Rica, Chile, San Salvador, Guatemala, Mexico, Ecuador, France, England, Nicaragua, Panamá, Dominican Republic, United States, and Venezuela. It was the perfect scenario for the exchange of ideas. Since then, the exposition, held every two years, has become a meeting place for BRT policy enthusiasts.

b. TRANSMILENIO knowledge as an exportable and tradable good

TRANSMILENIO mobilized a large amount of experts and attracted actors ranging from quantitative analysts to policy designers, including experts in transportation, legal, financial, and other areas. The successful results of the project generated a critical mass for the consolidation of an "intelligentsia" which is basically is a cadre of experts on BRT SYSTEMS implementation particularly in policy design, finances and fare collection, institutional and organizational arrangements. Later, as the project grew in sophistication, it was complemented by technical and operative knowledge strengths. Many agents learned before and during the implementation process, then gained experience while the project was developed. They could then finally use their knowledge elsewhere.

At the beginning, Colombian transportation experts where scarce and a group of pioneers presented and defended multiple ideas for more than 30 years. Some of them, mentioned in this document, were highly influenced by U.S. transport experts focused on the Latin American public transportation systems based on buses and by Brazilian experienced technicians. TRANSMILENIO generated a new group of experts in multiple areas such as the

policy makers directly involved with the project that included Edgar Enrique Sandoval (TRANSMILENIO's first CEO), Fabio Gordillo in charge of TRANSMILENIO's fare collection system design and implementation, Oscar Diaz, Dario Hidalgo, and many others. Today, they continue to work in consulting scenarios for BRT systems around the globe. Many companies were created or strengthened during TRANSMILENIO's project: INGETEC, GSD+, TRANSCONSULT or the Mexican CAL Y MAYOR, and many others used the opportunity of an emerging niche for business. Additionally, financial companies gained experience and sold their services to other projects for financial structuring on both sides, the BRT agency offered designs for financial models for concession bids or operators financial models and their bid offers. Companies such as AKIRIS, SAIP, IKON, and EQUITY gained knowledge and were ready to start selling their services in other latitudes. Peñalosa himself became a promoter of BRT policy worldwide and joined the Institute for Transportation and Development Policy in New York City after completion of his mayoral terms.

In this sense, TRANSMILENIO became a new source of knowledge and experience and an incubator of companies mostly related to consulting, advising, and project development on urban mass transport. Private consulting companies, think tanks, and experts grew in numbers and most played a key role in the subsequent implementation projects in other Latin American cities, the shaping of Colombia's BRT National Policy, and then in other latitudes such as Africa and Asia. The Colombian example and its developers became strong, capable, technical and rigorous voices in the world of mass urban transportation, have been highly active in forums and conferences, and became key actors in convincing others to imitate the case of Bogota.

Multiple international alliances would be developed using Colombian experts and the case of Bogotá as a reference.

c. The role of private companies: The consolidation of bus urban transport enterprises

TRANSMILENIO was able to finalize years of bus hegemony in the city characterized by the route trade and the high amount of buses working under an inefficient system of incentives. Many bus owners and bus operators (route owners) retired from the business, but some of them decided to join the initiative and played a key role during the project's implementation. The project presented a lot of risk due to the uncertainty of its outcome, but the city's government invited bus owners and operators to move from a short-term perspective of the business to a long-term one with the possibility of becoming professional transport enterprises and companies. As mentioned before, some decided to accept the challenge and therefore received some incentives (such as a high return rate, which will be modified in phase II when risk and uncertainty were reduced) and during the next years became robust urban transportation companies.

One of the key actors during this process was Victor Raul Martinez, a former business man involved in the traditional system, who founded the company SI99 to operate within the TRANSMILENIO system. During the one-to-one negotiation phase, Victor Raul Martinez was attracted by the project and traveled to other cities to observe how the system might function. He decided that it was a good business opportunity, so he helped city officials promote the system among other bus operators and owners and decided to take

part of the system. The system had a successful result on his first phase; therefore, the companies that assumed the risk were also successful and were active in the expansion process in the coming years. TRANSMILENIO has provided the institutional framework and has made possible the generation of new urban bus transportation companies that grew with the system and expanded their operations in the coming years in TRANSMILENIO and across the world.

New urban bus transportation companies had to comply with the conditions of a contract signed with TRANSMILENIO, which basically involved providing transportation services to the routes established by TRANSMILENIO programming. In order to comply with the contract, they needed to buy a new fleet of buses and therefore needed to structure a financial project to find resources from the banking system; as mentioned before, the Brazilian Industrial Promotion Bank made it possible and the project's success got other banks interested in financing bus operating companies.

New bus companies were required to improve employment quality standards for bus drivers and other employees involved with the bus systems operation. This implied a profound change in the traditional system where bus companies had for many years no direct employment relationship with buses, due to *de facto* relation between bus owners and drivers (which was a daily collect and pay system, as explained earlier). Thus new companies provided relatively good employment packages, trained bus drivers (with the aid of bus producers such as Volvo or Mercedes-Benz), and gave their employees welfare benefits that drastically changed the way bus drivers related to

the transportation system. The now would have a regular monthly salary, instead of depending on the number of passengers and the collection system.

d. The production sphere: linkages resulting from an urban mass bus transportation system

New urban transportation systems demanded bus operation companies as their most important input in order to solve the existing problem and generate a new allocation mechanism. Multiple other resources were needed either directly and indirectly by the project and several production companies were attracted by it. The initial phase of TRANSMILENIO was rapidly implemented, meaning it was a fast pace process with no time for strategic marketing or completion among production companies related with bus transportation systems. Existing pressures to unveil the system during Peñalosa's mayoral term reduced interactions with the productive sector. However, subsequent expansion phases demanded more buses along with several goods and services that were provided by multiple companies generating new market opportunities and attracting companies that offered services from bus fabricants to sliding doors or metal pedestrian bridges. The subsequent expansion of TRANSMILENIO and the multiple projects that will emerge in other Colombian cities and abroad will experience the impact and active role of providers on this new business arena for urban transport projects.

First, buses were needed and specifications for the system required certain attributes. Fortunately, Brazil had already experienced this challenge and the demands for Sao Paulo's and Curitiba's systems had convinced European bus manufactures to place factories in the country and produce their buses

according to the system's specifications. TRANSMILENIO's standards were fulfilled by the bus manufacturers and the concessionary transport companies were able to find the product they needed and required to comply with their contracts in Brazil. Later VOLVO and Mercedes-Benz explored the local market and were able to articulate their production with Colombian bus producers. Thus BUSSCAR, FANALCA, and SUPERPOLO among others became important providers of buses resulting from the enterprise synergies of European manufactures with Brazilian and Colombian bodywork companies.

The role of bus producers was tied to the project of TRANSMILENIO. Policy makers needed a product with certain specifications and the companies provided it when the market conditions were positive. There is no evidence that these companies actively influenced the development and implementation of the policy for the initial phase of Bogotá. Later, they will eventually find mechanisms to promote their goods and will start having an important role among concessionaries, but during my field work, I was not able to find any trace of direct influence on the policy design or the implementation. The model established by TRANSMILENIO directed all the decision making to the private sector once the contracts were assigned to private operators, which reduced the possibilities for corruption. Nowadays, there has been some accusations of lobbying, particularly on technologies that the big corporations do not produce such as electrical buses and Peñalosa⁷⁰ has been accused of receiving support of the big bus manufactures as a lecturer and advisor, but most of it occurred after his period as mayor. Links among bus fabricants and operating bus companies have been

⁷⁰ EL ESPECTADOR. August 8th 2015. <http://www.elespectador.com/opinion/palabras-de-penalosa>

easy to track and transparently presented by actors involved in the policy during the interviewing process and available in multiple documents.

Bus producers had strong relationships with private companies that earned the contracts to operate TRANSMILENIO. In order to sell their buses, they used all possible marketing strategies they had at hand. Once the technical requirements were satisfied and their buses complied with the established standards (international standards, specifications, and specific designs for the Bogota case) they invited BRT officers to visit their plants and see their products (Sweden, Germany, and Brazil) or the cities where they operated (Sao Paulo, Curitiba, and Quito, among others). They also offered financial services both directly or indirectly through institutions abroad and offered assistance, training, and maintenance services. Some of the bus producers expanded their offices and workshops in Colombia and considered opening production facilities in the country; but this will have an impact later, during the implementation of the national policy.

As mentioned before, TRANSMILENIO produced one of the largest bus fleets of the world, due to the lack of alternative systems and income levels of Bogota's inhabitants. The success of the project made the city attractive to bus and bus parts producers, and slowly the city became a world bus sales showcase. Multiple companies brought private investors and policy makers to observe the experience of Bogota and a biannual show known as "*Feria Internacional de Transporte Masivo*⁷¹" has become an obligated stop for the world market of buses and is one of the events in Colombia that attracts

⁷¹ Mass Transport for this case has been particularly focused on buses. Which is one of the most common critics to TRANSMILENIO, which to certain extent eclipsed the complexity of mobility and reduced it only to buses.

the largest amount of international companies, visitors, and high-level government representatives. To a certain extent, Bogota's TRANSMILENIO was not only a rebirth of a city but also the rebirth of the bus industry worldwide.

Although buses are key elements of the system, there are many other types of goods and services required for the system to work. During an interview, one of the policy makers affirmed that a connection with the production sphere was absent due to the effort to avoid any type of incentives for corruption, but he considers it a mistake because several opportunities were missed (if managed appropriately) such as good Transport Oriented Development projects. Nonetheless, the production sphere played an important role during implementation due to the fact that BRT projects demanded a lot of connections with companies that were incubated during TRANSMILENIO's first phase and became key actors for the future replication of the model in other Colombian cities.

Another sector directly involved with TRANSMILENIO was construction. The system required the building of an extensive road infrastructure; although some of this work had been completed, as in the case of *Calle 80*, TRANSMILENIO demanded new public works and therefore the city's government set up bids for them. Some companies were selected for the *Autopista Norte* and the upgrade of *Avenida Caracas*; thus, construction was intrinsically required by the project and was a key element for its future replication in other cities. For now, it is important to mention the case of CEMEX (Mexican Concrete Company) and ASOCRETO (Colombian Association of Concrete Companies), two companies that directly participated in the project and

years later became centers of criticisms due to their use of a new concrete technology that failed and generated cost overruns to TRANSMILENIO and the city. The emerging tension between construction contractors and the project will become a relevant issue in the replication process that will be later analyzed.

Additional links with other private companies emerged during the first phase of TRANSMILENIO. The range is wide and includes companies such as tire distributors, pedestrian bridge fabricants, bus stops, advertisement companies, fare collection, technology companies for fleet control or safety monitoring, software companies, electrical companies, and several more. The scope of this research does not focus in analyzing the particular role of each sector. It also does not focus on understanding their future relationship with other projects in other cities, although it will become an interesting and relevant future research topic subsequent to my work. The key element I pursued is the fact that the policy implemented in Bogota, through TRANSMILENIO, had a lot of direct and indirect connections with the productive sector that will become key agents for the future multiplication of the idea. In this sense, this type of project has a direct impact on the market and the firms generating lobbying throughout the world on behalf of BRT system and encouraging such projects everywhere, each one according to their capacity and interest. In the end, the idea promoted not necessarily due to the core impact of the project, which is urban mass transport and mobility improvements. This is a fascinating topic as the sales pitch may blind people to its actual potential in different places.

One interesting field for future research is the relationship between the BRT policies and private sector companies. During TRANSMILENIO's implementation, the governmental authorities and public sector did not rigorously propose nor work with private companies to design win-win scenarios. The presence of a certain level of precaution (aiming to reduce corruption practices) prevented officials from exploring in detail the ability to develop projects directly with private enterprises (such as TOD developments) that might increase the project's urban impact and encourage industrial and economic development. For example, knowing that a BRT system will demand thousands of auto parts in future years, the national government could have promoted industrial policies for national producers to become providers of the system. This type of initiative could have generated incentives and opportunities to local industries to expand markets and take advantage of economies of scale making this interaction an interesting direct and indirect project's impact.

e. Multilateral Banks: A new model to promote and to finance

BRT projects, in this case TRANSMILENIO, demand a huge amount of financial resources and, in this case, it was a long process to fulfill this requirement. The TRANSMILENIO case was supported by local resources due to the selling of the electrical company and the fact that Mayor Peñalosa's tenure coincided with the availability of those local resources. Additionally, convincing private investors and finding financial options for an uncertain investment project helped the project reach the final stage. Initially, multilateral banks had a marginal participation; yet, once the project succeeded, they became strong proponents and active

financiers of this type of project in Colombia and around the world. I expand next on the new role on the part of multilateral banks in urban mass transportation processes.

Prior to TRANSMILENIO, the World Bank was involved in multiple urban transportation projects throughout the world. In Colombia, it had been involved in the studies of metro systems in Medellín, Bogotá, and Cali. In Bogotá, the Bank had a minor involvement during the 1990s when it participated in the design and construction of infrastructure for bus corridors (specifically funding the *Calle 80* project). But once TRANSMILENIO was on the table and resources for its design and implementation were needed, the Bank did not actively participate. It only marginally was involved through the redevelopment of dedicated bus lines for *Calle 80* (its on-going project) which began during the Mockus administration. The World Bank agreed to changes in the original designs (for instance, moving bus stops to the central lane) but did not assign significant extra resources for TRANSMILENIO. In the end, the World Bank allocated some resources for TRANSMILENIO as part of the required redesigns, but they were a minimal fraction of the total costs of the project. Given the country's financial crisis, the project became the responsibility of city, at which point the interest of the Bank to finance the project decreased. Still, despite its absence during the initial stages of TRANSMILANIO, the World Bank later became a strong actor in the expansion phases of TRANSMILENIO via the national BRT policy.

Responding to the lack of tangible achievements of his administration after his first year in office, Mayor Peñalosa abandoned the metro initiative and

focused the city's available resources and efforts on the bus rapid project, specifically on TRANSMILENIO (phase I). The financial resources invested for TRANSMILENIO came directly from the city's sale of its electrical company. The participation of other actors was marginal⁷² during the initial implementation phase. Peñalosa knew the project was greater than his term in office and made efforts to guarantee the financial sustainability for the coming years (phases II and III). He promoted the involvement of the national government and multilateral banks to develop an initiative that would secure investments during the coming years.

On the one hand, the national government had already issued a law to promote mass transportation, known as the "*Ley de Metros*" (Metros Law) that was smartly used by Bogotá to build TRANSMILENIO; but the national government had no institutional capacity, nor a specialized urban transportation unit in its *Ministerios* (National Secretaries) capable of supporting future investments. The Ministry of Transport was more a public works institution focused on the inter-municipal road network. The resources from the national government would only come after a required reorganization of the Ministry of Transport and TRANSMILENIO became highly influential for the institutional rearrangement that happened some years later.

On the other hand, once the risk was lower (certainty emerged after the initial investment phase), multilateral banks needed to deploy a strategy that would allow them to become relevant actors for future financing needs of TRANSMILENIO. Once TRANSMILENIO was a reality and a success, the World

⁷²By the end of year 2000 mayor Peñalosa inaugurated a system with a total investment cost of \$1.216.745.922.426 out of which \$955.680.200.675 were directly allocated by the local government.

Bank signed an agreement to support its expansion phases. At that moment, the World Bank became an inherent actor in the expansion of TRANSMILENIO and therefore part of its successful story.

Indeed, TRANSMILENIO was a strong incentive enticing the World Bank to engage in the consolidation of a national program while supporting its multiplication around the world. The World Bank allocated the required resources for phases II and III, which guaranteed the continuity of the program after Peñalosa. The World Bank later supported the national policy and the Inter-American Development Bank - IADB - supported the initiative in Cali and in other cities, as examined in the next chapter. Multilateral banks, the World Bank, IADB, and CAF among others followed closely the TRANSMILENIO experience and, based on its success, decided to support many TRANSMILENIO-inspired projects⁷³.

⁷³ World Bank. PROJECT APPRAISAL DOCUMENTON A PROPOSED LOAN TO THE REPUBLIC OF COLOMBIA FOR THE INTEGRATED MASS TRANSIT SYSTEMS PROJECT. May 14, 2004 The World Bank identified lessons for other cities from Bogotá's experience as follows: "The Bogota transport policy, specifically the implementation of the TransMilenio BRT System, has clear equity and poverty alleviation elements that have resulted in positive impacts on poor segments of the population. The main lessons of the process are summarized as follows: (1) Simultaneous intervention on several elements of sustainable transportation: Non-motorized transportation (pedestrian, bicycles); restriction to indiscriminate use of automobiles; and integrated BRTS. (2) Create awareness on the transport system that the city needs for current and future generations. (3) Promote cultural exchanges and generate a sense of belonging and pride. (4) Incorporate improved accessibility to the periphery, using a flat fare structure. (5) Generate mechanisms to mitigate negative effects on certain sectors of the society. (6) Create methods to facilitate the participation of transit vehicle owners and transportation companies and populations displaced by road widening. (7) Incorporate the adequate institutional and management mechanisms. (8) Coordination mechanisms with several local and national agencies; (9) contract knowledgeable consultants in order to solve technical, financial, legal and management issues to achieve quality and credibility and facilitate the participation of national and international investors; and form a local team working with the consultants to generate knowledge and technology transfer. (10) Review and get to know other cities' experiences. (11) Visit other cities with sustainable transportation programs, especially BRT, adapting to local conditions and not repeating negative elements. (12) Do not save on projects' preparation; make detailed studies based towards implementation, especially to estimate demand and costs. Have a very responsible financial planning (good cost estimates and finding definitions)".

f. Think Tanks: An unexpected consequence that will spread the idea around the globe

TRANSMILENIO was able to generate enough incentives for the private sector to participate, the public sector to focus on, the financial institutions to fund, and various other incentives for other key actors. But probably one of the most important impacts of TRANSMILENIO was the fact that it generated a new set of actors that would disseminate the story and promote BRT along with the innovations taking place in Bogota around the globe, most important, think tanks. The experience of many policy makers and actors involved in TRANSMILENIO would lead to the establishment of think tanks that formalized and defended the policy and practice. Think tanks will become key actors for the ensuing explosion of mass urban transport projects based on BRT around the world, first in Latin America, later in Asia and Africa, and then in the United States (to a certain extent as a novelty, despite the fact that some ideas and projects of this sort had been implemented at the beginning of the 20th century) and Europe (where bus systems were redesigned and improved through the agency of the new technological capacities developed by the bus industry in Latin America and Asia). Among these think tanks are ITDP and EMBARK.

The Institute for Transportation and Development Policy (ITDP) was created in 1985 by Michael Replogle as an "umbrella organization for several worldwide peace and development initiatives and advocacy efforts."⁷⁴ Today ITDP is an organization concerned with urban transport policies particularly those reducing car dependence through non-motorized modes and BRT systems

⁷⁴ Taken from: <https://www.itdp.org/who-we-are/history-of-itdp/>

and is mainly funded by the Climate Works Foundation⁷⁵, the Rockefeller Foundation, and the Hewlett Foundation. For many years, ITDP proposed multiple strategies in the developing world but it was after TRANSMILENIO's success that the organization became a relevant worldwide actor. Once Peñalosa finished his term as Bogotá's mayor, he moved to New York City and became a transportation consultant and lecturer in multiple scenarios. The success story of TRANSMILENIO together with Peñalosa's charisma and the fact that he was living in New York were enough arguments for ITDP's CEO, Walter Hook, to invite Peñalosa to join. Peñalosa became a member of ITDP's Board of Directors and has been its president for many years.

As acknowledged by ITDP⁷⁶, TRANSMILENIO was highly relevant in the history of this think tank that actually claimed that it had influenced the system's design. With the expansion of the system and its successes, as the main policy diffuser, ITDP intensified the message. As stated by ITDP in 2001, "building off TRANSMILENIO's success, ITDP sponsors and organizes workshops and presentations on Bus Rapid Transit in over 15 cities, winning support for BRT projects in many and laying the groundwork for future projects."⁷⁷ Once diffusion was done, multiple projects emerged such as those in Guangzhou, China, and Jakarta, Indonesia, partly funded by the U.S. Agency for International Development (USAID). In this way, ITDP became a world reference in BRT systems, promoting multiple projects and growing exponentially. In 2005, it created the Sustainable Transport Award and Bogotá's TRANSMILENIO was the first award recipient; then, in 2007 ITDP published *The BRT Planning Guide*, based on TRANSMILENIO's experience. As

⁷⁵ Created by Hewlett Foundation and Packard Foundation

⁷⁶ Taken from: <https://www.itdp.org/who-we-are/history-of-itdp/>

⁷⁷ Taken from: <https://www.itdp.org/who-we-are/history-of-itdp/>

ITDP's diffusion efforts influenced the implementation of BRT in Johannesburg in South Africa; Pune, Indore, Jaipur, Bhopal and Ahmedabad in India; Lanzhou in China; México City, and Rio de Janeiro. In this way, ITDP exemplifies the ways in which best practices are created, diffused, and reinforced by think tanks. ITDP also exemplifies how best practices are used by global infrastructures to multiply an idea in multiple areas. As former ITDP CEO Walter Hook stated about ITDP, "Mostly what we do is just collect best practices from Europe and we bring them to developing countries."⁷⁸

Another relevant think tank highly influenced by the TRANSMILENIO's experience is EMBARQ, an initiative located in Washington D.C. with branch offices in Mexico, Brazil, Turkey, India, and China that promotes implementation of BRT systems in large urban agglomerations. EMBARQ is supported by the World Resource Institute - WRI, an organization created by the MacArthur Foundation in 1982, and initially funded as the Center for Sustainable Transport - CTS in Mexico and Brazil, aiming to reduce gas emissions in the world. Once TRANSMILENIO became one of the best example of the BRT system, it was presented as an efficient way of investing resources and improving quality of urban transportation while reducing urban CO₂ emissions. The WRI was attracted to BRT policy. Dario Hidalgo, who has been EMBARQ's Director of Integrated Transport, was a former transport planner in Bogota and director of the Metro Company during Peñalosa's administration. He became a key actor promoting the experience of Bogotá via EMBARQ and together with multiple Colombian experts became part of Latin American initiatives. CTS strategy was later enhanced in order to expand

⁷⁸ Taken from: <http://cities-today.com/interview-walter-hook-ceo-institute-for-transportation-and-development-policy/> February 2nd 2016.

worldwide and it was renamed EMBARQ. Created in 2002 as a sustainable urban mobility initiative, EMBARQ grew parallel to the expansion of TRANSMILENIO's network of expertise and has been able to convince multiple cities around the globe to implement Bogota-inspired systems. Today Mexico and Brazil are the main hubs of the network in Latin America and the implementation of the BRT of Istanbul allowed the consolidation of a branch office in Turkey, allowing for a later expansion to India and China.



Figure 31: EMBARQ's Global network⁷⁹

The actions of EMBARQ and ITDP have centered on identification and allocation of experts, studies, technical documents, media education, and benchmarking as policy diffusers focused in promoting systems around the world. In both cases, the most common quoted "best practice" model and benchmarking project have been Bogota's TRANSMILENIO, making it and Colombia's expertise major forces in the multiplication of BRT systems.

Other supplementary groups with clear roles in the diffusion of BRT have emerged in the last 15 years, some resulting from financial institutions

⁷⁹ Image taken from: Shell Foundation. <http://www.shellfoundation.org/Our-Focus/Partner-Profiles/Embarq/Achievements>

such as the World Bank or the Andean Financial Corporation (CAF, today Latin American Development Bank), others from national cooperation offices such as the Sustainable Urban Transport Project led by the German GIZ and its interests in replicating the model in South East Asia, others as global partnerships such as the Global Environment Facility interested in reducing gas emissions, others from the bus industry such as the BRT Center of Excellence, Across Latitudes and Cultures - Bus Rapid Transit (ALC-BRT) funded by Volvo in Santiago de Chile, and others as benchmarking alliances of existing BRT systems in Latin America such as the Latin American Association of BRT systems (SIBRT). Although the BRT boom in the 21st century resulted from an ongoing development idea, it wasn't until the success of TRANSMILENIO that the policy was fully considered a best practice for replication. For instance, the World Bank stated in 2003 that "following pioneering experiences in Curitiba and São Paulo and a recent successful implementation of the TRANSMILENIO system in Bogotá, Colombia, the bus-based rapid transit (BRT) mode has emerged as a great hope for cities interested in high-quality public transport services at a moderate level of capital and operating costs. Similarly, the potential of all public transport modes featuring partially exclusive tracks is now much better understood. Including such modes in the agendas of city-specific planning studies has become common."⁸⁰

But these think tanks and their influence in developing cities have also raised many eyebrows and attracted many criticisms. The first argues that they have focused on BRT systems as the only plausible solution for urban transport in the developing world, and have not seriously and rigorously

⁸⁰<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTTRANSPORT/EXTURBANTRANSPORT/0,,contentMDK:20247053~menuPK:1393723~pagePK:148956~piPK:216618~theSitePK:341449,00.html>

analyzed the possibilities that rail-based systems have in high-demand corridors in the intervened urban agglomerations. Second, the think tanks and their claims have been deemed biased by the fact that they represented the interests of funding sources and donors of these think tanks, mostly foundations of companies related to certain level with the automobile and oil industry.

Although, the BRT concept has not been the exclusive product of Bogota, the approach of TRANSMILENIO turned it into a model for replication - acknowledging the need to adjust it to other environments. It offered a comprehensive package that saved others many headaches and gave them a solid guidance. Think tanks have helped to promote the approach and also to articulate multiple interests and place them together in a package that allows for easier mobility and replication in other places. Policy makers such as Enrique Peñalosa and Jaime Lerner (former Mayor of Curitiba)⁸¹ have become key promoters as mayors of cities that successfully implemented the basic idea. They have been important and necessary to convince other decision makers to implement the project.

Think tanks have also become adequate articulators of technical knowledge; they know the experts are able to contact them in order to expedite designs and technical studies and are depositories of the knowledge gained in the last 15 years; in this way, they guarantee to certain extent the technical attributes of the project will reach a high level of quality. Think tanks are able to keep track of what is happening in the world and echo the

⁸¹ Notice that all credit is usually given to the Mayors of these cities when the actual system resulted from a long process of trial and error in which many participated.

outcomes worldwide; in this sense, they accumulate, facilitate, and disseminate knowledge among policy makers involved in BRT systems.

5. TRANSMILENIO's and its legacy

TRASMILENIO was the result of years of policy discussion, design and implementation among multiple stakeholders. By the end of the 20th century it developed a solution based on segregated corridors and a new organizational model that transformed Bogota's urban transport system and was able to solve a long-lasting problem in the city, at least for some time. The new urban transport model for the new millennia, TRANSMILENIO, was able to eradicate a perverse spiral of incentives that seemed impossible to end replacing it with an efficient system based on articulated buses, segregated corridors, and well-defined bus stops. The results were hard to believe: The passenger per hour per direction index was higher than what was forecasted, and efficiency was achieved at a relatively low cost.

As mentioned before, TRANSMILENIO had a global, regional (Latin American), and national impact becoming a reference for multiple cities when proposing a new form of allocating urban transport investments and organizing urban mobility within large urban agglomerations. The success of the project was to finally integrate knowledge, ideas, and project management that had been discussed for many years. Its capacity to integrate with other urban transformation projects (such as public spaces, bike networks, car use reduction) proved capable of proposing a change within an urban agglomeration. The internet was growing as a communication device during that time and became the best channel to observe, admire, and promote it.

TRANSMILENIO was able to propose and generate a profound transformation of a city and was able to do it peacefully. (Giving an express lane to buses and not causing social disruption was a success by itself.) Finally, it was a project that was able to generate success for most of the stakeholders involved, which basically implied that the project secured legitimacy and won multiple promoters.

TRANSMILENIO was a project implemented rapidly with similar efficiency than other technological options but at a much lower cost. No other city has been able to make it so massive in such a short period of time and this made it a reference for the world. Nonetheless, not much thought went into the discussion of whether these outcomes were part of Bogota's particularities and if it was really possible to replicate it throughout the world. BRT systems inspired by the TRANSMILENIO experience were highly attractive for developing countries' large urban agglomerations. The success was such that many decided to replicate the model aiming to achieve similar results in other places. Its success led Colombia's national government to implement similar solutions in other Colombian cities becoming the first national government totally committed to a national BRT policy.

6. THE NATIONAL BRT POLICY: From a successful story to multiple and diverse stories.

During the 2002 presidential campaign, candidates used Bogotá as a case to promise urban change was possible and that other Colombian cities deserved analogous transformations. At that point, TRANSMILENIO had been deemed a success story and candidates included the replication of urban transport

systems based on buses for other Colombian cities in their proposals. TRANSMILENIO was considered an interesting and replicable model to solve a long-lasting problem that has affected Colombian cities for more than 40 years. In May 2002, Alvaro Uribe Vélez was elected Colombia's president for the period of 2002-2006. He decisively promoted mass urban transportation systems in the country as promised during his campaign.

In his government plan (resulting from his campaign proposal), Uribe promised a reactivation program for the construction sector⁸² as a strategy to mitigate unemployment. As part of this, he proposed the development of *Sistemas Integrados de Transporte Masivo - SITM* (or integrated mass transportation systems) for four cities (including Bucaramanga); as far as Bogota is concerned, he committed to TRANSMILENIO's expansion. Later, the National Development Plan expanded the program to seven cities (including Medellín, despite the existence of a Metro in that city), established specific requirements for implementation, and named the program Promotion of Strategic Transport Infrastructure. President Uribe emphasized that the scarcity of fiscal resources required the inclusion of incentives to promote private investment. Remarkably, Uribe's plan did not include mass urban transportation systems as part of a specific urban strategy; rather they were described as construction initiatives and part of an employment mitigation policy. So the national policy for BRT was, since its inception, designed as a "hardware" policy focused on infrastructure construction, rather than on a comprehensive urban transportation policy including hard and soft transport policies.

⁸²http://www.terra.com.co/elecciones_2002/candidatos_presidencia/alvaro_uribe/programa_de_gobierno/26-03-2002/nota52893.html

The national government explicitly decided to support *Sistemas Integrados de Transporte Masivo* (Integrated Mass Transport Systems based on high capacity buses) using the "Ley de Metros"⁸³ that allowed co-financing and capital participation at the national level of a maximum of 70% of the total costs, while requiring local entities participated with a minimum of 30% of the project's costs. On the one hand, the program continued supporting the on-going projects of Bogotá and Cali. On the other, it added new cities to the list: Barranquilla, Bucaramanga, Cartagena, Ibagué, Pereira-Dosquebradas, Soacha, and Valle de Aburrá (Medellín). The requirements for local entities to access receive national support were:

1. Technical feasibility studies.
2. Proof of fiscal capacity and financial resource availability to co-finance the project.
3. Guarantee of the project's sustainability during the construction and operational phases.
4. A signed agreement with the national government

Furthermore, overtly promoting the participation of private capital, the national government encouraged BRT project financing and regulatory policies that protected users' costs and service quality; fares would be regulated in order to avoid abuses related to power and monopolies. The national government also stated that small and medium transport companies would be included through policy mechanisms in order to mitigate the political cost of transition. Finally, it announced that BRT projects would promote the use of alternative low pollutant fuels such as gas.

⁸³ Ley 310 de 1996.

Uribe was aware of the positive perceptions that TRANSMILENIO had generated and recognized the opportunity that BRT systems provided to be included in his rural and conflict-laden agenda. Uribe also identified potential benefits on the generation of incentives for private investors, the intervention and modernization of the Ministry of Transport on urban topics, and the mitigation of unemployment risks by encouraging economic growth. The former secretaries of Peñalosa and Mockus joined Uribe's ministerial team. Former Bogota's Planning Secretary Carolina Barco Isakson, Education Secretary Cecilia Maria Vélez White, and the Director of the Botanic Garden and Institution for Recreation and Sports Maria Consuelo Araujo also joined Uribe's government in positions that included the Foreign Affairs and Education Ministries. Political or personal reasons for the promotion from local government to national government have been hard to track during this research, but multiple interviewees answered that it is an evidence of Bogotá's public service transformation and the influence of the actors involved in that change.

Thus, TRANSMILENIO was promoted by the national government, via the national BRT policy, as a suitable solution and as a policy capable of replication. Peñalosa and many of his team members, as indicated previously, started exploring new horizons in international consulting but did not directly get involved in the design of national policy and implementation. They supported the process via sporadic consulting services. Nonetheless, the complexity of the project demanded numerous policy makers, strong technical teams, and a new institutional arrangement capable of making possible the policy mobility from the local experience of Bogota to multiple cities in the

country. The promoter of the policy was clearly the national government but now many other actors joined in, including multilateral banks, several investors, new local actors, and a growing number of urban transport, urban planning, and urban transformation stakeholders.

The urban transport policy implemented in Bogota was part of a profound change in urban policy making in Colombia. Former national policy making was moved to the local level thanks to the decentralization process inspired by the experience of Bogota. Once the national government decided to replicate the rapid bus-based urban transport system, the "window of opportunity" for urban planners and urban transport experts open widely and new possibilities for urban transformation were on the table nationwide.

a. Setting up institutional arrangements

By 2002, the country was still experiencing the consequences of the macroeconomic crisis that occurred at the end of the 20th century. Uribe saw in TRANSMILENIO's success a strong urban policy that could positively impact the country's economy via large infrastructure investment; thus, replicating the model in large Colombian cities was perceived as a good countercyclical employment policy. Furthermore, TRANSMILENIO had demonstrated it was possible to radically change the perverse incentives of the existing traditional urban transport scheme and was an adequate local strategy capable of reducing the errors emanating from a national centered, inefficiently operated, poorly regulated system. Once TRANSMILENIO became a valid alternative to solve the situation of the country's capital, it was

expected to eradicate the existing scheme from the rest of the country and replace it with the new model.

The urban transport situation was similar in the rest of the country. The legacy of INTRA's (*Instituto Nacional de Tránsito y Transporte*) permissive model was a private, inefficient model of permits and route owners who "rented" their rights to bus owners, which incentivized exploitation as the mechanism to increase profits and reduce the quality of service received by the users. By 2002, the permits were granted by municipal (local) authorities, a role that was assumed by municipal secretaries since INTRA's elimination in 1992, which continued the practice of route rights now granted by local rather than national power. Congestion, inefficiency, and low quality of services were the attributes of existing collective transport systems (as they were called) throughout the country that had resulted in the so called "Guerra del Centavo" (Penny War), where buses aggressively fought for passengers on the streets generating chaos and disorder. As was the case before in Bogotá, it was estimated that most Colombian cities had more buses than were required. Thus, the problem to solve was oversupply with new institutional arrangements in the form of legislation, regulation, and authority.

Colombia's national BRT policy was designed and implemented as a top down strategy: The national government provided the major guidelines and requirements, and local entities decided if they wanted to be part of the project but could not engage in fundamental alterations (a take it or leave it scenario). Using TRANSMILENIO's model and due to the necessity and interest of rapid implementation, the policy was framed as "one size fits

all." All municipalities were to be included under the same model without analyzing specific particularities and attributes of their urban configuration; still, modifications called for during the implementation process generated complications and difficulties. The decision of a top-down strategy can be assumed from at least three different perspectives: (1) traditional and long-lasting centralized national organization of the Colombian government, (2) the imperative of rapid implementation to agree with the political period of four years and the need for results for electoral purposes, and (3) a simplistic and mediocre approach to policy design under the assumption that if TRANSMILENIO worked then there is no need for further efforts. It will work in the other cities. In this case, pragmatism and tradition played central roles, together with the interest of high investments on infrastructure that would reinvigorate a harmed economy and would be legitimized via contracts and resource allocation.

Three national institutions played central roles during the process of design, structuration, and implementation of the policy: the Ministry of Finance, the Ministry of Transport, and the National Planning Department. They were in charge of articulating a new regulatory framework and funneling the project down to the local arenas. Each institution played a specific role and the policy was summarized in a mechanism known as *Documento CONPES* (National Economic and Social Planning Council Documents), which became the major instrument for the future BRT policy development.

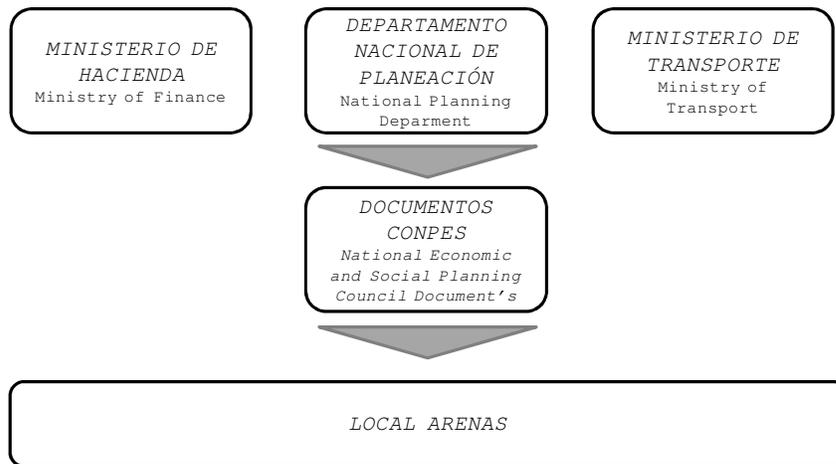


Figure 32: Administrative organization for public policy design and implementation (author's rendering)

The Ministry of Transport required specialized officials on urban transport; consequently, it created a specialized unit (*Unidad Coordinadora del Proyecto SITM*) in charge of responding to the existing challenges in Colombian cities and assuming the Ministry's role in urban policy. During the 20th century, the Ministry of Transport had focused on road infrastructure provision with a strong emphasis on Public Works (formerly known as *Ministerio de Obras*); but the state of urban transport in several Colombian cities and the expectations raised by TRANSMILENIO's success demanded a renovated role. In 2002, the Vice-Minister of Transport and the specialized unit on urban transport (part of the Ministry of Transport) received the task of defining the guidelines for BRT projects and were charged with supervision of the BRT policy implementation process. The national government required financial and technical issues be harmonized and articulated between the National Department of Planning and the Ministry of Finance in order to determine feasibility, scope, requirements, resources execution, and financial sustainability of the projects. Accordingly, both

the Vice-Minister and the Specialized Unit of Urban Transport became strategic agents of the BRT policy implementation process.

The Ministry of Finance, as its mission states, was in charge of guaranteeing financial resources for the projects and to follow the projects budget execution in order to evaluate and revise project progress. National mid- and long-term financial scenarios, international loans (with the World Bank and the Inter-American Development Bank) required by the projects, resources demanded by the national policy, and local project finance structures were in the desk of the Ministry of Finance who had to focus on maintaining financial equilibrium between capital loans and expenditures during the execution balancing the projects, particularly due to the fact that the nation would invest circa 70% of the total cost of each project and would have to proportionately address imbalances.

The National Department of Planning was in charge of articulating both sides of the national BRT policy, technical and financial, with local arenas. Due to its established role within the government, the National Department of Planning had to approve the resources necessary for the projects in the mid- and long-term fiscal national scenario and provide the instrument to canalize the resources towards local entities. Accordingly, the CONPES documents first described the national transport policy and the national BRT programs, and later presented each urban project (according to the municipalities' pace) and assigned resources once feasibility and structuring had been conducted. Additionally, the National Department of Planning had the mission to "incubate" the implementation process while

municipalities made the necessary arrangements and deliver responsibilities once the local arena was ready to fully manage the project.

Once the institutional arrangement was set for the national BRT policy, the national BRT program was designed linking other relevant agents such as local arenas in charge of project management, private concessionaries, and international financial institutions. The next section will briefly describe the established program.

b. National Urban Transport Policy

In order to replicate the model in other Colombian cities, the national government worked on guidelines that each urban project had to follow. The first CONPES document issued in May 2002 was based on TRANSMILENIO, the general guidelines provided by the National Development Plan, and the BRT projects for other cities. CONPES 3167/2002 summarized the general elements and attributes of the national policy for urban passenger transport service improvements⁸⁴. The document was divided into a section that diagnosed the national urban transport situation, presented the case of Bogotá, and framed the general attributes of the national policy for intervention in municipalities with more than 600,000 inhabitants, municipalities with 300,000–600,000 inhabitants and municipalities with less than 300,000 residents. It also presented general requirements for application to national funds and general guidelines for private concessions.

⁸⁴ CONPES 3167. Mayo 2002. POLÍTICA PARA MEJORAR EL SERVICIO DE TRANSPORTE PÚBLICO URBANO DE PASAJEROS

CONPES 3260 was issued in December 2003 and framed the national policy for urban mass transport in Colombia. Both CONPES were crucial to organize the general guidelines of a national BRT policy and were used by the national government and multilateral funding institutions such as CAF, IABD, and World Bank to set up the terms of subsequent loan agreements.

The World Bank signed a loan agreement with the Colombian government in May 2004 for the amount of 250 million dollars to support the National Urban Transport Program - NUTP. The estimated total cost of the national program was 464 million dollars, therefore making the World Bank's participation close to 53% of the total invested resources. So the BRT policy was already framed, and the necessary resources to implement it already secured. The excellent financial results of TRANSMILENIO had given the program a good financial standing and high expectations for future projects; therefore, it was possible to leverage future projects with borrowed resources for the remaining investment requirements. The interest was such that several multilateral financial institutions such as CAF, IABD, and the World Bank actively participated in the program and divided their market participation in different urban areas.

The Inter-American Development Bank provided resources to support studies on private investment participation in infrastructure and concessions. The financial loan for investments in Cali's BRT Project, MIO, were financed exclusively by the IADB. The interaction with the IADB demanded improved managing teams at the Ministry of Transport which resulted in the creation of the Deputy Direction for Transport and a Technical Implementation Unit, which initially improved the capacity of the institution but later fell

short in accomplishing its goals as project requirements became larger and more complex.

The interaction with multilateral banks had a positive impact in terms of improving contracting practices in the country. Working together with multilateral banks provided technical improvements for project management and improved relationships with investors, execution units, and government officials. The rigorous contracting methodologies of multilateral banks eliminated informality and flexibility from contracts (which can lead to corruption) and the resources were only allocated once the works advanced as planned. Although credit and financial resources were not necessarily demanded by the country, many interviewees reported that multilateral financial accompaniment gave some fiscal relief, while simultaneously bringing technical supervision conventionally used by multilateral banks that resulted in a positive impact on project implementation processes. Additionally, new topics and focus areas were added to the project once the multilateral banks requested them; for instance, environmental concerns and safeguards for relocation procedures were explicitly included in BRT projects as a result of the World Bank's requests.

The BRT policy in Colombia interested multilateral banks due to TRANSMILENIO's financial success but also because it was an opportunity to test a national BRT policy including multiple projects and, hence, expediting reproduction dynamics⁸⁵. Multilateral banks are always interested in successful cases capable of reducing the risk of their investments and as "best practices" to sell around the world (in other words, a strong

⁸⁵ Later, expansion will be promoted via national BRT policies such as the ones deployed in China, India and Brazil.

incentive for policy diffusion). Colombia was the first attempt to implement an urban BRT policy nationwide and the World Bank was aware that sharing the experiences would improve the chances of replication; a promotional video read "the program (*referring to the Colombian BRT program*) has been designed by Colombians to address the unique needs of Colombian cities presenting as a model for other developing countries. Since its inception, delegations from more than 20 countries, including China, India, Vietnam, South Africa, Kenya, Finland, and the U.S., have visited Colombia to learn about the program."⁸⁶ Later, many of these countries would implement similar national policies supported by the World Bank or the Inter-American Development Bank. Thus, Colombia once again became a worldwide display as it went from a BRT bus technology for a large urban agglomeration to a national transportation program based on buses.

As described in CONPES documents, the national BRT policy was a comprehensive urban transport policy (including regulations, alternative transportation methods, and soft policy schemes), but in practice was focused mainly on buses and infrastructures. The program was presented as an integral process that focused on different types of strategies for small, medium, and large urban agglomerations, but in practice only focused on large urban agglomeration projects; the other projects had to wait some time. The national policy focused on BRT projects that it labeled *Sistemas Integrados de Transporte Masivo - SITM* (Integrated Massive Transport Systems), in which both the national and the local had responsibilities explicitly stated in the policy.

⁸⁶ World Bank & Colombia - National Urban Transport Program Source: https://www.youtube.com/watch?v=_HzUjAZvviU

Local entities were responsible for conceptual studies and technical, legal, and financial feasibility analyses (although funded with national resources), and the specific design of bus corridors, bus feeder networks and control, and collection and operation systems. Later, once approved via a specific CONPES for the BRT project, the local entities were required to create an *Empresa Gestora* (Managing Agency), later called *Ente Gestor*, to manage the implementation process starting with construction of the required infrastructure and moving into the operation of the transport systems. (This dual task was basically assigned to the Managing Agency due to the inexistence of local entities such IDU in Bogotá and the lack of other trustable institutions for infrastructure provision.) Finally, once the resources were allocated, the local administration via the Managing Agency was in charge of signing all concession contracts including bus operators, fare collection, and maintenance.

The following chart summarized the institutional arrangement of the NUTP:

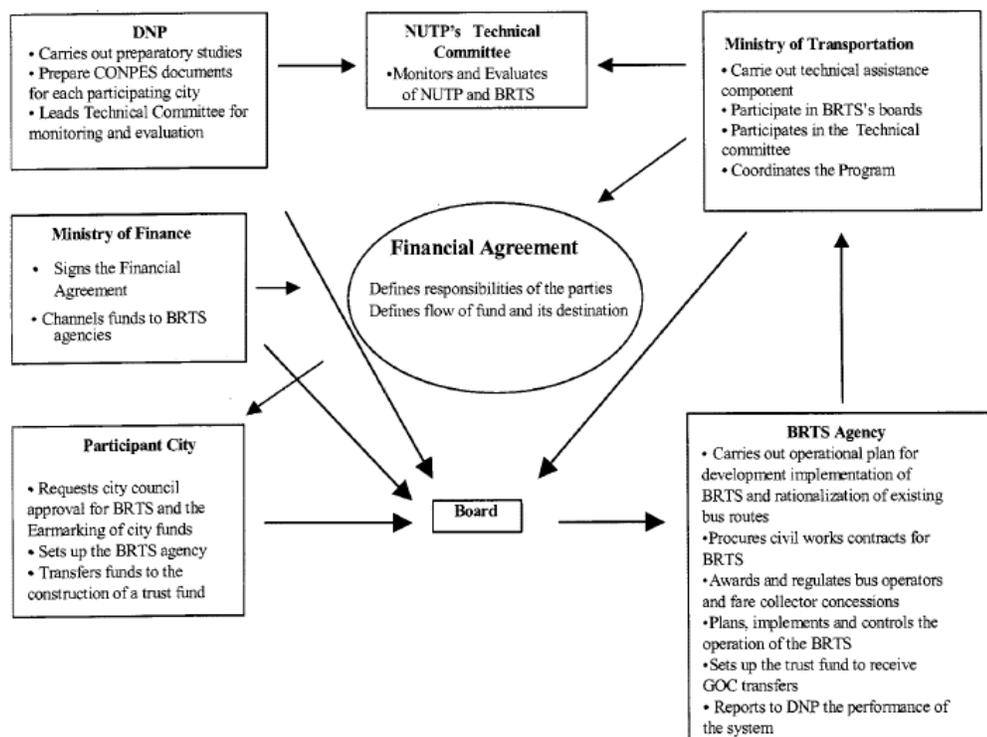


Figure 33: Colombia's National Urban Transportation Program organizational framework scheme. World Bank. Loan Agreement 2004.

The national government, meanwhile, was in charge of financing preliminary feasibility studies and facilitating the exchange of experiences among the different BRT projects taking place in the country. Once a BRT project was approved, the national government co-financed it through its own and multilateral credit resources to a maximum of 70% of the total cost of the project (specific participation values were defined on the final agreement between the national government and the local entity). Due to the multiyear scope of the projects, the national government was responsible for assigning future resources to the project via a budget instrument known as *vigencias futuras* (approved future commitments). In addition to the multiyear fiscal

financial strategies, the national government was also responsible for international loan agreements funding the BRT projects.

The policy was fully established in 2004 and resources guaranteed through an agreement with the World Bank. The next section describes the overestimation of TRANSMILENIO's results and its impact on the national policy.

c. The overestimation of TRANSMILENIO and its impact on the Colombian national BRT policy

As described before, TRANSMILENIO became the reference model for the national BRT policy design. Most of its attributes and assumptions were included in the requirements for future implementation projects in the country. Many of the project design components also replicated the ones used for TRANSMILENIO, and often there was an overestimation of the potential results. The most relevant attribute of TRANSMILENIO (constantly repeated and presented as the only possible way) was that a BRT system was more cost-effective than rail-based options such as metro systems. For the Colombian experience, the World Bank affirmed that "in the past, following the experience of Medellin, Bogota, and Cali pursued a metro system that would require very large subsidies from central government. But the successful example of TransMilenio proved that BRT systems are an affordable, cost-effective solution" (World Bank-Colombia Loan Agreement, 2004). Additionally, numbers supported the affirmations. TRANSMILENIO demanded less than an eighth of the investments demanded by Medellin's metro. When TRANSMILENIO's phase I was finished, both reached 12% of the

total amount of trips within the city, implying that the same was achieved with fewer resources. Moreover, TRANSMILENIO was expected to reach 80% of the total trips within the city when investments reached 50% of the total amount of investments for Medellín's metro.

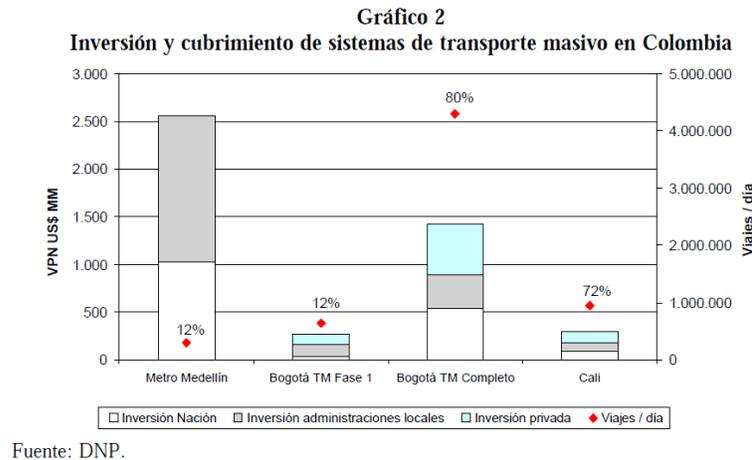


Figure 34: Investment and Demand coverage of transportation systems in Colombian cities. Source: CONPES 3167. P.3

Another attribute included in the national BRT policy was the paradigm of self-sustainability. Enthusiasm around TRANSMILENIO increased due to initial results that suggested it was self-sustainable. TRANSMILENIO's phase I was such a success that bus operators' profits were higher than expected and subsequently risk expectations decreased while interest in investment increased for phase II and III. The subsequent result was that BRT systems' capacity for self-sustainability was directly included into future BRT projects and their financial structuring parameters. The expected results were so positive that even additional expenses such as infrastructure construction, discarding of old buses, and future improvements and upgrades of the system were included into the project's own income flow.

But later experiences showed that this was not the case across the board. In fact, TRANSMILENIO was a unique case. Analysts have argued that Bogotá's case is peculiar due to its dense urban configuration, the high dependence on public transport of the majority of the inhabitants, the concentration of jobs in the central areas of the city, and the relative short distances of travel within the city. Instead of having a multi-centric urban configuration that demands strong network connectivity, the corridors strategy worked adequately in Bogotá. Instead of deconcentrating the city, it increased its concentration. In short, TRANSMILENIO arrived into a city with a large demand for public transport and with capacity for higher rates due to the cost of using other transportation methods. Furthermore, multiple decades of abandonment made any improvement highly valued, even more so after the improvement was better than expected as in the case of TRANSMILENIO. All these factors were not included in the initial analysis for replication in other cities.

Another attribute included into the national BRT policy was the short time of execution. The existence of an enthusiastic group of experts and the desire of Mayor Peñalosa to finalize the project before the expiration of his term made it possible to implement TRANSMILENIO in such a brief period of time. (Many forgot that only a portion of TRANSMILENIO's project was finalized during the first two years, and it was basically due to the ongoing project on *Avenida Caracas* and *Calle 80*). Nonetheless TRANSMILENIO needed more than a few years of expansion to fulfill its total network, carried out during Mockus' second term and Garzón's mayoralty. But overestimation was included in the national policy and the timeframe for infrastructure construction in other cities was expected to be shorter than

actually feasible; many projects demanded more time than planned and generated higher costs than initially planned; in some cases, inefficient dynamics and specific local obstacles caused this, but still timeframes were simplified due to TRANSMILENIO's success. In addition, none of the other Colombian cities was able to consolidate a group of enthusiastic policy makers and technical experts capable of accelerating the implementation process.

TRANSMILENIO was not initially designed as an integrated urban massive transportation system; neither was the national BRT policy. Infrastructure and the operational system covered only part of the total demand for transportation; furthermore, the bus corridors required modification of arteries and development of a feeder system that needed to be complemented with the existing bus fleets. Meanwhile, the replacement ratio between new and old buses was expected to generate decreases in the amount of old buses in the city allowing for a future integration process of both systems. TRANSMILENIO was not conceived as a comprehensive network due to the complexity of the existing problems; its marketing as a replication model excluded the possibility of including it off hand into a comprehensive plan; lastly, the intervention focused primarily on the infrastructure required for corridors rather than on encouraging integral urban transportation systems for the other cities.

TRANSMILENIO's success was isolated from the discussion of comprehensive solutions and viewed as the one and only model to replicate in other Colombian cities. The complex process of policy design, consensus with stakeholders, and incorporation of local demands were underestimated as

both think tanks and the national policy reduced BRT to an apparently self-contained artefact: new bus corridors and new bus fleets with a novel operational system. Priorities were given to the product and not to the process generating expectations that demanded sturdier and longer efforts which will become an obstacle for diffusion and implementation of the policy elsewhere.

The World Bank affirmed this in a document that supported the 2004 Loan Agreement: "Bogota's experience could not be transferred directly to other cities without careful adaptation to local conditions." The national policy makers were probably aware of this, but the process of moving from awareness to conscious actions is difficult and the national BRT policy used excessive references to TRANSMILENIO. Only during the implementation stages did people realize the need for flexibility to accommodate the specific attributes of each city. Slowly, policy diffusers and policy makers realized the need to address specific local conditions and develop strategies to respond to them in order to guarantee long-term sustainability, generate local coordination mechanisms, include the specific local stakeholders, and provide design elements that responded to the specific attributes of each urban agglomeration.

d. Implementing the national BRT policy: One top down policy and multiple cities attempting to implement a single model

Once the National BRT policy was approved, the triad of the Ministry of Transport, the Ministry of Finance, and the National Planning Department was in charge of making it happen in the majority of the previously approved

cities in the shortest amount of time. Financial resources and budgets were carefully managed by the Ministry of Finance and no direct transfers to the Ministry of Transport took place; in this way, the Ministry of Transport focused on technical issues while promoting capacity building processes in the cities to reduce the likelihood of losing scope. The triad was meant to keep a system of checks and balances in order to guarantee long-term sustainability of the program.

The first step to implement a BRT program in an applicant city was the elaboration of feasibility studies. The Ministry of Finance and the National Planning Department jointly funded these feasibility studies together with designated teams put together between them and the interested municipal governments. Once studies were completed, they became the structural input for a Co-Financing Agreement's draft between the national government and the local entities (municipalities) that was presented to the National Institutions and the Municipal City Councils in order to secure resources and future commitments. The Co-Financing Agreement documents established the participation shares of each of the partaking institutions and presented the flow of finances along with the projects' execution time.

In a second stage, municipal councils were required to approve Co-Financing Agreements to secure financial resources for the project and make a commitment to hand them over to the *Ente Gestor* (Managing Agency). This process was challenging due to the inherent complications of requesting a public institution to allocate resources to another public institution. Moreover, once an institution in Colombia, a municipality in this case, has its budget allocated, it has a difficult time responding to new demands on

its budget. If there is a petition for specific purposes and/or specific resource destination, the municipality will demand paybacks in order to give up part of its budget and future revenues as part of its political negotiation mechanisms. For the national BRT policy implementation process, this was not the exception and political bargaining was required to fulfill policy goals.

The national government was highly committed to the BRT policy, not only through its inclusion in the National Development Plan (general governmental policy guidelines), but also through the allocation of resources and the appointment of public officials at the highest managerial level in charge of making the national BRT policy a reality in the largest Colombian cities. President Alvaro Uribe Vélez was active during the negotiation with municipalities. His visits were expected by mayors, and he was capable of compensating the allocation of municipal resources into the project via prioritization of national projects with direct impact in the municipalities or via allocation of resources to the municipality through ministerial policy programs or direct transfers for project execution. Political will was clearly demonstrated by the constant interest of President Uribe Vélez.

Furthermore, the president instructed the Minister of Transport Andrés Uriel Gallego Henao to fulfill the expectation of the national BRT policy and to improve the role of the Ministry in terms of urban passenger transportation (aiming for a change of scope on a traditionally infrastructure-focused Ministry). The Minister of Transport Gallego became a key policy promoter and, together with the Vice-Minister of Transport Juan Ricardo Noero, decisively worked on implementing the policy in the country. Once the

political will was clearly defined Vice-minister Noero was the one in charge of assuming the leadership of the Ministry of Transport.

The triad (Ministry of Finance, National Department of Planning and Ministry of Transport) presented the CONPES 3167 with the title *POLÍTICA PARA MEJORAR EL SERVICIO DE TRANSPORTE PÚBLICOURBANO DE PASAJEROS* (Policy for improvement of Urban Public Passenger Transport Service) on May 23, 2002. The document contains a general diagnostic on the Bus Urban Transportation situation and presented the general guidelines for institutional arrangements and a transition to BRT systems under the public-private partnership model for other Colombian cities (initially included Ibagué, Bucaramanga, Cali, and Pereira) and the expansion of TRANSMILENIO in Bogotá.

Although the policy was not fully designed as an integral urban mobility policy and only focused on bus corridors for a BRT system covering a fraction of the total urban transportation demands, the policy promoted *Sistemas Integrados de Transporte Masivo - SITM* (Integrated Massive Transport Systems). The document proposed a transition from the old model of transport service allocation to a new one similar to TRANSMILENIO as a solution for other Colombian cities.

CONPES 3167 established the policy and the main strategies in charge of the national government and the ones in charge of the municipal governments. The general guidelines were given to initiate the implementation of a national BRT program and there was an explicit recommendation to the national government to allocate future commitments for the years 2003-2005 (*vigencias futuras*) to fund the program with an estimated value of 3.5

billion dollars. Additionally, it requested authorization to run credit operations to fund the remaining costs of the program that would allow for participation of international and multilateral financial institutions. Furthermore, the document encouraged the participation of private investors and the separation between the regulatory roles of government entities and private responsibilities on contracts for service provision. Finally, it stated that direct responsibilities should be given to local authorities and that the national government should maintain only the general regulatory obligations in order to increase the participation and involvement of local governments. This document became the initial step in implementing a national BRT policy; it is evidence of the teamwork of national level institutions while setting up the policy concept for implementation on the different sites.

For a year, the government worked on initial studies, modified administrative units and processes, improved the legal national framework (almost inexistent previously), and made efforts to communicate with the local governments in order to accomplish the tasks required for the success of CONPES 3167. In December 2003, a new document was presented containing the results of previous work which specified the BRT policy in more detail. CONPES 3260 was presented in December 15, 2003, under the title *POLÍTICA NACIONAL DE TRANSPORTE URBANO Y MASIVO* (National Policy on Urban and Massive Transport). The document focused on the implementation of SITM in Colombian cities and presented a diagnosis of the urban transport situation concluding that there was oversupply, excessive travel times, obsolete bus fleets, and overlapping routes. CONPES 3260 further delimited the BRT policy and

presented specific requirements for the implementation process while proposing new institutions to be involved in the process.

The solution for urban transport conditions in Colombian cities was, according to CONPES 3260, the implementation of SITM with emphasis in buses. By December 2003, Bogotá, Cali, and Pereira (Metropolitan Area) had already national funds available for co-financing agreements for more than 1.6 billion dollars and other cities were on the planning stages; those cities⁸⁷ were Barranquilla (Metropolitan Area), Cartagena, Bucaramanga (Metropolitan Area), and Soacha y Valle de Aburrá (Metropolitan Area of Medellin). As a result of negotiations between national and local governments in previous years with the general guidelines provided by CONPES 3167, a generic model of the planning process for a SITM was presented in CONPES 3260, as follows:

The document highlighted the positive impacts of BRT projects by emphasizing the reduction of travel times and operational costs, employment generation, reduction in road accidents, safety improvements, social and environmental benefits, public space upgrades, and the strengthening of regulatory frameworks. In addition, the document established the conditions for fare composition, which should be set up in order to cover: (1) Bus fleet supply, operation and maintenance, (2) fare collection equipment and operation, (3) operation of *Empresa Gestora* (BRT Managing Agency), (4) infrastructure maintenance, (5) oversupply reduction, and (6) certain infrastructure components required for coverage increase. For multiple experts, the amount of elements included as potential components to be paid by fares was

⁸⁷ Cities do not exist in Colombian legal framework. So this refers to municipalities and groups of municipalities (under the legal figure of Metropolitan Areas). Some municipalities participated independently while others joined with neighborhood municipalities, normally responding a specific conditions of their urban growth.

excessive and evidence of the huge expectations placed on the systems (as an extrapolation of initial TRANSMILENIO results by 2002-2003).

CONPES 3260 included a detailed list of responsibilities of all involved public institutions. In this sense, on the one hand the national government's triad was asked to strengthen institutional capacity at the national level, majoritarian presence at the ruling boards of *Empresas Gestoras* (Managing Agencies) and guaranteed funding for the different project's demands. On the other hand, it included the general guidelines for municipal governments and *Empresas Gestoras* to follow. Furthermore, it included directives for other national institutions; the Ministry of Mines and Energy was ordered to define policies and practices that better matched the established requirements for energy use and reduced the environmental impact of the systems; in turn, *Servicio Nacional de Aprendizaje - SENA* (National Learning Center) was required to support the transition of manpower from one system to another and to provide training and support to drivers and operators during the transition.

Thus, by the end of 2003, the policy guidelines were concluded and municipalities were instructed to align their agendas and procedures with the generic implementation model promoted by the national government. The policy required three main steps: (1) prefeasibility studies (then the urban area will be included into the BRT policy potential), (2) final designs that included conceptual design, legal and financial structuring, and funding commitments (then a specific CONPES was approved for the urban area with municipal and national funds; this included the creation of the managing agency - *Empresa Gestora*), (3) construction and operation, which

included bidding processes for required infrastructure and operation processes such as fare collection, control and monitor systems, and bus fleet and transport service provision. The idea of a BRT system had found a set of generic mechanisms for multiplication in other cities and the pace of implementation was expected to respond to specific conditions and challenges of municipal arrangements and its interaction with the national level policy implementers.

Once national BRT policy guidelines were completed, each city developed its application according to its specific conditions resulting in different timelines. Each city followed the generic model according to its specific demands and developed a strategy together with the national government to fulfill the SITM project. The first two cities to get a specific CONPES document and a co-financing agreement were Pereira and Cartagena. Pereira's MEGABUS started partial operation in August 2006 and became an efficient implementer that gradually adjusted until achieving total operation in 2008; meanwhile, Cartagena's TRANSCARIBE had not begun operation by 2015. Cali was a special case because it had resources from a metro project of the 1990s that was reformed into a BRT system with its own CONPES in 2005. Cali's MIO system began operations in 2009. Barranquilla, Bucaramanga, and Medellín got their specific CONPES documents in 2004 and signed a co-financing agreement in 2005. Bucaramanga's METROLINEA began operations in 2008 while Barranquilla began its operations in 2009. Medellín was a special project designed to complement the existing metro system and began operations in 2011. Bogotá's TRANSMILENIO used the national BRT policy to complete its additional phases.

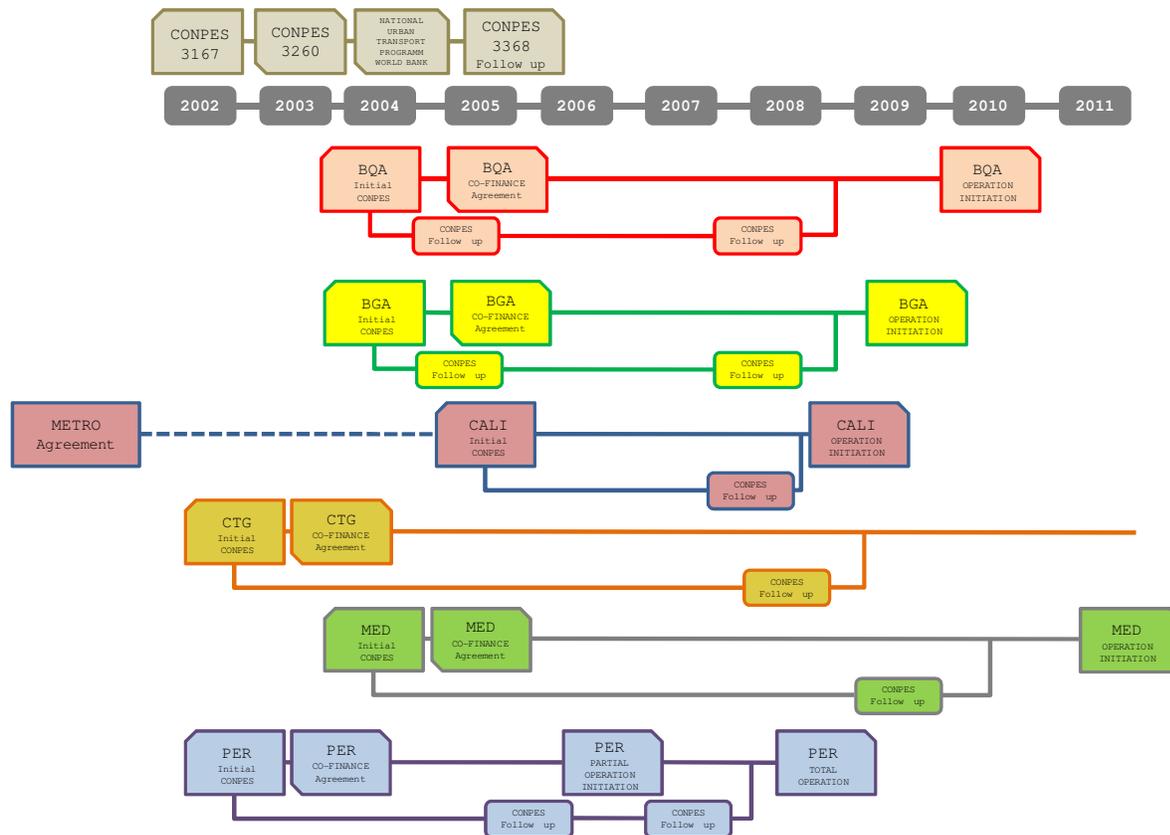


Figure 35: Timeline of BRT Projects in Colombian cities

The national BRT policy generated an incentive to promote BRT systems in other Colombian cities following the model of TRANSMILENIO. Strengthening the Ministry of Transport was a major priority during Uribe's first term. While each city that applied to the program was creating its own managing agency (*Empresa Gestora*), the national government and particularly the Ministry of Transport were strengthening its coordinating unit, starting with a coordinating unit for the projects and establishing later a specialized unit called *Unidad de Movilidad Urbana Sostenible - UMUS* located at the Vice-Ministry of Transport office. This unit began with a strong team focused on establishing the national BRT policy and supporting applicant cities and has been converted into a regulatory body for future urban transportation challenges in cities with a running SITM and in cities

with other type of urban transport policies that were later designed and implemented.

The tangible result of the national BRT policy was the implementation of SITM systems in six additional cities and the expansion of Bogota's TRANSMILENIO. Each urban area responded to its own particularities and the national government financed, on average, 61% of the programs while territorial entities (municipalities, metropolitan areas, departments, and other public institutions) funded an average of 39% of the program. The distribution varied by projects ranging from a 70%/30% ration in Bucaramanga's Metropolitan Area to a 58%/42% balance in Pereira's Metropolitan Area. Most of the resources (more than 60%) of the total amount of funds were allocated for Bogota's TRANSMILENIO, which is the result of the size of the project but also a reflection of traditional national allocation asymmetries.

TOTAL PUBLIC INVESTMENT FOR BRT SYSTEMS (SITM)					
Colombian Pesos (2008 constant prices)					
Municipality / Metropolitan Area	National Budget	%	Local Budget	%	Total Budget
Met. Area PEREIRA - MEGABUS	\$ 132.132.000.000	58%	\$ 96.128.000.000	42%	\$ 228.260.000.000
Met. Area BUCARAMANGA - METROLINEA	\$ 346.102.548.000	70%	\$ 148.882.920.000	30%	\$ 494.985.468.000
Met. Area MEDELLÍN - METROPLUS	\$ 388.064.000.000	61%	\$ 248.412.000.000	39%	\$ 636.476.000.000
BELLO	\$ 35.531.100.000	68%	\$ 16.926.528.502	32%	\$ 52.457.628.502
CARTAGENA - TRANSCARIBE	\$ 253.349.441.492	64%	\$ 139.608.682.948	36%	\$ 392.958.124.440
BARRANQUILLA - TRANSMETRO	\$ 294.954.597.203	69%	\$ 130.289.448.610	31%	\$ 425.244.045.813
BOGOTÁ - TRANSMILENIO	\$ 3.620.571.091.138	59%	\$ 2.526.246.084.279	41%	\$ 6.146.817.175.417
CALI - METROCALI	\$ 986.796.107.663	60%	\$ 652.989.092.028	40%	\$ 1.639.785.199.691
SOACHA - TRANSMILENIO	\$ 78.056.037.763	69%	\$ 34.333.370.109	31%	\$ 112.389.407.872
TOTAL BRT SYSTEMS (SITM)	\$ 6.135.556.923.259		\$ 3.993.816.126.476		\$ 10.129.373.049.735

Source: Coordinating Unit Ministry of Transport. 2009

Figure 36: Total Public Investments for BRT Systems. 2009

Most of the BRT projects began without a specific legal framework and part of the national BRT policy's goal was not only to create a legal agenda but also to consolidate an institutional arrangement capable of supporting the

projects. The emphasis of the projects was building infrastructure, and many of the operational challenges were postponed for the future managing agencies (*Empresas Gestoras*). To a certain extent, these delays occurred with the expectation that new governmental officials would deal with them. According to a former project leader, "first the infrastructure that was needed and later the operational concern." This might have become the projects implementation's Achilles heel due to delays in infrastructure construction and lack of enough operational resources to fulfill an adequate operation at early stages.

The national BRT policy was primarily funded with national government funds, specifically future commitments for the period 2002-2015 that will fund approximately 60% of the national program. Municipalities funded the BRT projects with future commitments as well mostly coming from the gasoline tax which is one of the most important local revenue sources. Additional expenses were funded with multilateral financial resources, mainly a loan agreement with the World Bank signed in 2004 for 250 million dollars that will be complemented with a 2007 loan agreement for 207 million dollars and an extra 2009 loan agreement for 300 million dollars used to cover the national commitments for 2009 and 2010. The total amount of multilateral bank funding with the World Bank reached 757 million dollars by 2010 when most of the projects began operation. Additionally, the Inter-American Development Bank funded Cali's SITM with a 200-million-dollar loan to the national government, and CAF and UNDP facilitated additional funds for studies and extra investments via the national government.

The role of the multilateral banks was to facilitate financial resources to the National Urban Transportation Program particularly those that were part of the national government commitment. Multilateral banks also provided a rigorous scrutiny to infrastructure construction contracts, particularly focusing on safeguards to help people and businesses that needed to be relocated as a result of the infrastructure projects. Colombia's national BRT policy was the first comprehensive program after TRANSMILENIO's success and was used by multilateral banks as a benchmark for future similar projects in Mexico, Brazil, and Asia, specifically India and China.

The national government initiated a program for implementing BRT systems in Colombia with a weak legal framework in terms of urban transport but also under a context of recent law implementation for metropolitan areas, territorial management, and urban mobility plans. The efforts during implementation conducted to an initial establishment of a general and to certain extent coherent regulation that, although was not accomplished effectively during the period of construction of BRT projects, did provide a new ground for future policy development. With a trial-and-error dynamic with strong political will, the national government accomplished two goals: (1) to set up an institutional organization to regulate urban transport, and (2) a certain level of responsibility and commitment of local governments with the provision and organization of modern urban massive transport systems. Outcomes of the first BRT policy iteration served as experience for future urban transportation systems that were later labeled as *Sistemas Estratégicos de Transporte Público - SETP* (Strategic Public Transport Systems) promoted in later years by the national government for urban areas under 600,000 inhabitants.

e. *National government's conditions for local arenas: Delegating responsibilities, national transfers and the role of the private sector.*

One of the most desired goals of the national BRT policy was strengthening local areas under a decentralization of governmental functions in process since the 1980s, deconcentrating investment resources, and encouraging more local responsibilities for local challenges. Consequently, the national BRT policy requested that infrastructure construction, operation concessions, and fare collection contracts, among others, became a total responsibility of local arenas via *Empresas Gestoras* (Managing Agencies). The policy implied a supervised delegation where local arenas make decisions and assume the consequences and responsibilities; but these decisions required a previous approval on the part of national government entities (trust was not fully in place, but it was a good mechanism to start building it).

In this sense, although the majority of funds for BRT projects came from national sources and the collateral for loans contracted with multilateral banks was again the national government, there was a political will to make local governments aware of their responsibilities in terms of local problems, and efforts were made to empower municipal governments around the emerging BRT projects.

First, there was the requirement for co-financing that became a direct commitment with the project and was a condition, despite the complicated political agenda to get local government approvals. Each project demanded

a threshold of locally collected funds (most of them from gasoline taxes and future commitments) that needed to be presented as a counterpart for the national funding. Although most municipalities agreed, they used the opportunity to request more resources via negotiation and got them via presidential decisions to allocate other projects in the municipal realm as a compensation mechanism.

Second, the establishment of a local managing agency (*Empresa Gestora*) was a mechanism to focalize funds and responsibilities in one public, locally owned entity. This was another requirement for gaining access to the BRT program. These managing agencies were established and funded from different local sources (municipal governments, metropolitan agencies, or state governments) depending on specific local conditions, and their boards were composed by a mix of national and local government representatives. As a materialization of supervision, boards were composed of three members appointed by the national government (normally one member of each institution from the triad) and two members appointed by the local government. In this way, the governing boards became a mechanism for consensus and for follow up and supervision of local decisions.

Third, municipal governments and *Empresas Gestoras* were to become fully responsible for their decisions via contracting. In this sense, all contracts were required to be fully established by the local managing agencies through feasibility studies, bid structuring, bidding processes, concession contracting, and subsequent contract supervision. As a result, there was a direct responsibility of local government in terms of transparency and commitment to their stakeholders. In the long term,

citizens will request managing agencies and local governments to respond to their needs and demands.

Many interview respondents reported that local responsibility was and is not mature enough. The national BRT policy was a good effort with an intention to generate a new situation, but some work still needs to be done to accomplish expected goals in this area. Local politics are still biased by individual and collective corruption networks. Leadership to accomplish efficient public resource allocation is still weaker at the local level than the national. Additionally the role played by the national government representatives at the managing boards was not initially expected; there was a certain "absent responsibility" where national government representatives did not notice what was happening within *Empresas Gestoras* and, if they were conscious of what was happening, they avoided playing an active role in order to reduce their likelihood to "get in trouble." In contrast to the case of TRANSMILENIO, it is hard to identify a clear group of enthusiasts and there was a weak leadership of the projects due to the diffuse commanding line. For many of those involved, it was not completely clear if it was a national or a local project and many local actors decided to play a passive role.

The national BRT policy was a project that aimed to allocate an amount of resources into local government control that had no precedents. The top-down policy design was inspired on a centralized decision-making process where national institutions controlled central decisions in the form of a generic model. The model was not in question; no local government had ever implemented a transportation system in such a scale or ever had experience

structuring a project of this magnitude. If local governments wanted to receive a bulky cash transfer, they had only one option: to accept conditions and sign the required documents. National transfers became the central driver of the BRT policy diffusion, on one side strengthening the national government power while encouraging certain type of decentralization and deconcentration of the public realm and on the other side becoming an opportunity for local governments to match funds and duplicate the value of their investments, without taking into account parallel negotiations that increased even more the size of their investments.

In the absence of specialized infrastructure institutions at the local level, such as the *Instituto de Desarrollo Urbano - IDU* in Bogotá, the newly created *Empresas Gestoras* were empowered to manage infrastructure investments. The lack of experience in contracting and weak capacities for managing large amounts of public funds on the part of recently created *Empresas Gestoras* generated a space for inefficiencies. In some cases, the lack of capacity and/or corruption generated complex dynamics and reduced the impact of the invested resources via delays, poor concessions, and favoritism for traditional or politically selected local contractors. Megaprojects such as the ones included in the national BRT policy had the capacity to generate pharaonic political recognition, while providing enough space for corruption in a weak institutional organization. Contracting and particularly infrastructure projects generate political loyalties and a double sided incentive array that made BRT projects attractive for national and local officials in similar ratios. In this sense, government was interested in unveiling such projects as a political electoral strategy. Infrastructure construction also became one of the most attractive

mechanisms to privately grab resources through multiple corruption strategies. It was a big carrot with a minor stick.

In this sense, Colombia's BRT policy proposed a blending process between national and local government's interests. In this way, the urban transportation policy based on BRT systems became a political discourse, and was internalized by key political actors where specificities and technicalities of the projects are used as a legitimizing strategy while other complex dynamics take place behind doors. For many politicians, the project was not necessarily an urban transport project but rather an infrastructure one; they therefore behaved accordingly. Gradually, the focus was concentrated in the product and not in the process that took place to achieve Bogota's TRANSMILENIO. In this sense, the policy in place and the original idea were mobilized as a mechanism to accommodate other interests; to a certain extent it was an excuse to fulfill other political agendas.

The policy and its potential were so attractive due to the allocated resources and the optimistic expectations that the national government would not let it pass and none of the urban agglomerations would reject (only Medellín hesitated but Uribe was capable of making it happen in spite of the lack of interest by the local transportation authority). Collateral incentives may explain why most of the projects were approved with not so rigorous preliminary studies, with weak demand and fare analysis jointly with mediocre operational models; follow-up CONPES documents became the mechanisms to solve ongoing issues and to allocate extra resources to solve emerging financial unbalances. These considerations partially explain why

the other cases did not fulfill the expectations that Bogota's TRANSMILENIO generated

Contrary to Bogota's initial success, most BRT systems in other cities began with a lot of difficulties and have thus far not produced similar impacts. The national government was attracted by a successful model and attempted to replicate it without in-depth analysis. The idea of self-financing sustainability was attractive enough for a government that did not have an urban agenda in its priorities; investments were therefore allocated toward infrastructure projects targeting economic impacts while expecting privately run operations to guarantee positive results in both financial and transportation demands satisfaction arenas.

7. POLICY LANDING: THE ARRIVAL OF A BRT POLICY TO THE METROPOLITAN AREA OF BUCARAMANGA

Previous sections have described the inherent complexity of the long journey of the BRT concept from Bogotá to Bucaramanga. This section discusses the arrival of the BRT policy in Bucaramanga as an example of policy mobilities dynamics that emerged around BRT policies in Colombia, then in Latin America, and finally globally.

a. One city, four municipalities: Describing the local scenario

The metropolitan area of Bucaramanga has its own particularities including its own mechanisms for public policy that differ significantly from those of Bogotá. Bogotá has a centralized local government under the legal figure

of district. The district manages the vast majority of the urban agglomeration and does not have strong alliances with the neighboring municipality of Soacha (which is an integral part of the city) nor with commuting municipalities around Bogotá. Contrary to the case of Bogotá, Bucaramanga is a small municipality with only around 500,000 inhabitants at its urbanized core but is an integral part of an urban area of more than one million inhabitants distributed into four municipalities (Bucaramanga, Floridablanca, Girón and Piedecuesta). Figure 37 shows the territory of each municipality and the urban form of the city. Each municipality is in charge of the administration of the territory (urban and rural) within its boundaries. Each municipality has an urbanized area that together with the other urban parts constitutes the larger city. Thus, there is only one urbanized area but four different municipal administrative units and there is a common semi-administrative institution named *Área Metropolitana de Bucaramanga* - AMB in charge of metropolitan issues, such as urban transport.

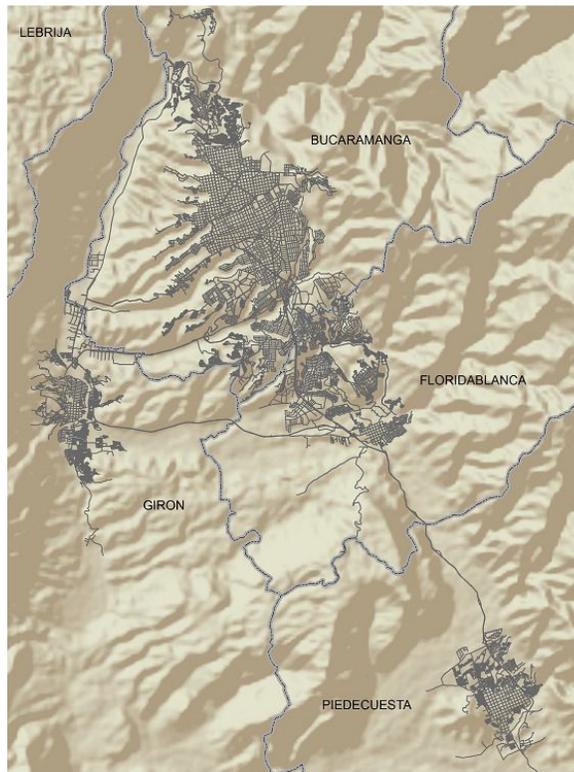


Figure 37: Municipalities, Urban cores and metropolitan area. Bucaramanga, Floridablanca, Girón and Piedecuesta. Elaborated by the Author

The AMB is a public institution created in the 1980s to manage metropolitan matters, particularly public works that demanded comprehensive treatment. AMB was initially an association between Bucaramanga, Floridablanca, and Girón, and some years later included Piedecuesta. Although the metropolitan board and funds are shared by all municipalities, Bucaramanga as the core municipality is responsible for the majority of the expenses and has the leadership role. This is the result of the hierarchical primacy that Bucaramanga's city core had in the 1980s but does not reflect the contemporary weights for inhabitants, land value, or economic dynamics. This asymmetry in participation percentages at the AMB will be replicated by the Empresa Gestora METROLINEA that will be later explained.

In practical terms, the metropolitan area of Bucaramanga has four mayors and four city councils. There are also four transit authorities, one per municipality, with no direct interaction among them. In addition, AMB has been endowed with some metropolitan responsibilities such as environmental urban policy, public works, and some general planning tasks. Nonetheless, the territorial administrative organization of Colombia constrains AMB operability because the power and the decision making process are still mainly in the municipalities. This issue is fundamental to the analysis of the BRT project as Colombia's national BRT policy did not address local territorial administrative contexts, although the project had a clear metropolitan scale and scope.

Although the BRT project affects the entire metropolitan area, the national government interacted mainly with Bucaramanga's mayor during preliminary studies. Hence, this municipality was in charge of its articulation with the three other municipalities. In order to understand the political context and the discussions that emerged while organizing local urban massive transportation in city, it is important to briefly present a timeline with Bucaramanga's mayors and briefly describe political aspects of local governments (see Figure 38).

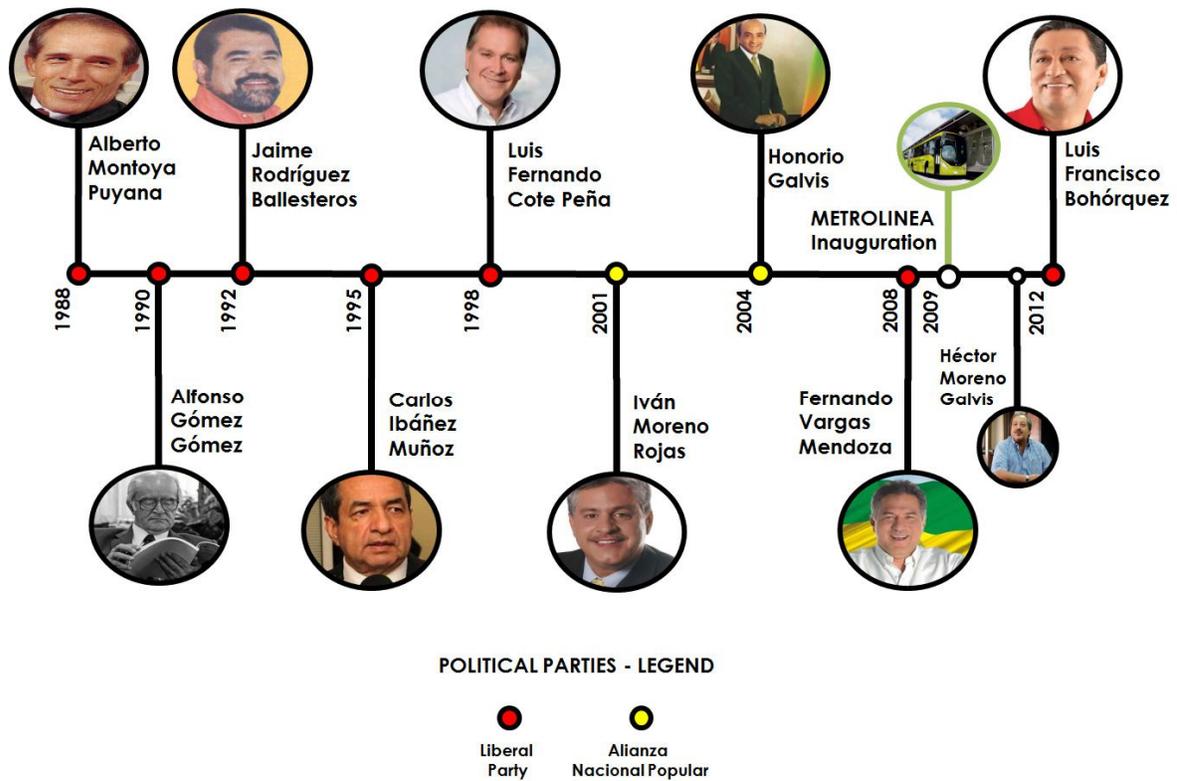


Figure 38: Timeline of popular elected mayors in Bucaramanga 1988–2012

Bucaramanga, as all municipalities in Colombia, started electing its mayors in 1988; the first elected mayor was Alberto Montoya Puyana in 1988, who was followed by Alfonso Gómez Gómez in 1990, Jaime Rodríguez Ballesteros in 1992, and Carlos Ibañez Muñoz in 1995. All of these officials were affiliated with the Liberal Party, which had been traditionally the principal political force not only in the city but in the Departamento de Santander (the subnational administrative unit or state). In 1998, once elected, Luis Fernando Cote Peña initiated discussions for the reorganization of urban passenger transport that had become rather urgent. Cote Peña was influenced by the Brazilian bus corridor ideas and by Andrés Pastrana's Avenida Caracas project in Bogotá. He labeled his initiative SOLOBUS. The SOLOBUS project intended to reorganize 103 existing routes operated by 12 transportation companies by reducing the congestion generated as they crossed the main

central road artery, Carrera 15. His idea generated the opposition of powerful transportation interests (companies, operators, bus owners, and route "owners") and became the key discussion issue during the next campaign that resulted in the election of Iván Moreno Rojas, from Alianza Popular Nacional, who ended the hegemony of the Liberal Party.

Iván Moreno Rojas was openly opposed to the project and agreed with urban transportation interests against implementation of the SOLOBUS project. But, despite his alliances with the transportation sector and the commitments of his electoral campaign, Moreno Rojas decided to support the national BRT program by the end of his term and made efforts to facilitate the inclusion of Bucaramanga in the preliminary list of eligible cities in CONPES 3167/2002. Then, in 2004, newly elected mayor Honorio Galvis carried out the majority of the project; yet, his successor, Fernando Vargas Mendoza (2008-2012) was the one that introduced the system in December 2009.

The Mayors of Floridablanca, Piedecuesta and Girón did not participate in the implementation phase. The national government focused on Bucaramanga as the core municipality and the other cities and their mayors were merely part of the project. The narrative and the scope of the process that will be presented will focus on Bucaramanga and its subsequent interaction with the other municipalities.

b. Bucaramanga's prior urban transportation system and its problems: A matter of scale

In 2002, Bucaramanga's urban transportation system was the result of the same regulatory and administrative models applied to other Colombian cities. Transit authorities (previously INTRA and later local government) authorized companies to provide the services in specifically assigned routes. These companies traded the allowances granted to them with bus owners allowing them to operate "their" routes in exchange for monetary payments. Hence, bus owners paid a daily fee to "bus route owners" and requested bus drivers to collect as much as possible in order to increase their earnings. The result, as previously presented for the case of Bogotá, was the so-called *Guerra del Centavo* (Penny War) where buses competed for passengers, congesting high-demand arteries, reducing their speed in order to pick up more passengers, and providing low quality transportation services.

Although services were provided on a metropolitan scale, each municipality (Floridablanca, Piedecuesta, Girón, and Bucaramanga) had specific companies that transported people mainly from their core urban areas to the city's urban core (i.e., Bucaramanga's downtown). The most congested artery was Carrera 15 where more than 50 routes concentrated their operations (see images) and other streets such as Carrera 33, Carrera 27, and Calle 36 that presented high levels of congestion.

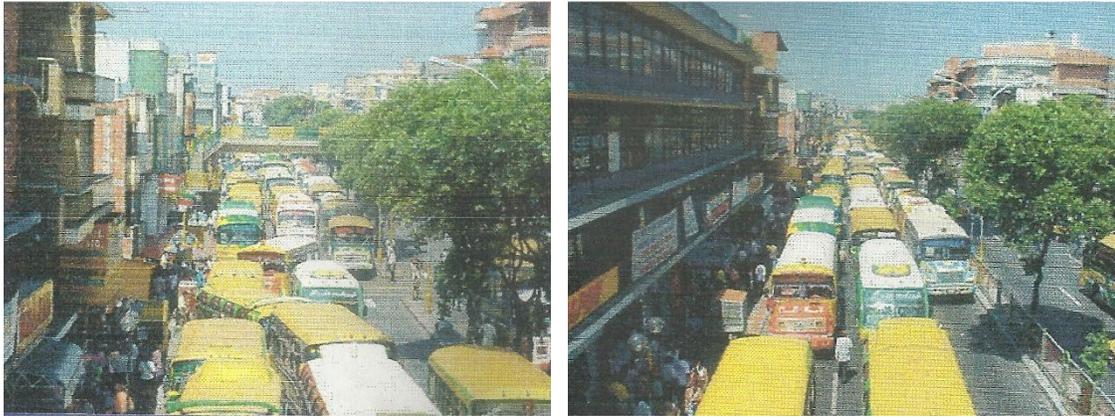


Figure 39: Carrera 15 Bucaramanga 2001. *Movilidad Urbana Presentation. Preliminary studies. 2002.*

In 2002, Bucaramanga and the metropolitan area had a total of 1,858 vehicles. Some 1,511 were buses (large chassis), 257 *busetas* (short chassis) and 90 *ejecutivos* (vans). There were 12 major companies with 102 assigned routes, 70% of which crossed Carrera 15. Companies that provided the service were mainly family businesses or cooperatives. Although Bogotá's system was controlled by families that were considered "mafias," Bucaramanga's metropolitan area had not reached the oligopoly stage of Bogotá. Nonetheless, the system had internalized the same incentives and was evaluated as inefficient due to the oversupply of buses; analysts established that a better service could be provided with a smaller bus fleet operating more efficiently.

The main urban transportation problems that supported the inclusion of Bucaramanga in CONPES 3167/2002 were (1) concentration of several routes in a few roads, (2) inappropriate occupation of public space and road network's saturation, and (3) accelerated growth of circulating vehicles including private cars and taxis. In compliance with CONPES 3167/2002 and as a result of existing relations between Bucaramanga's Government and the National

Department of Planning, the analysis of the existing system using the same criteria supported a BRT system as a possible solution—as it did in other Colombian cities due to the application of the same model to different urban agglomerations.

c. SOLOBUS. An initial policy mobility initiative, spontaneously mobilized and weak due to the absence of strong policy mobilizers. Bogota and Brazilian ideas come into the debate.

During the 1990s, Bucaramanga had not seriously confronted the challenges emerging from its urban transport dynamics. During the 20th century, urban transport planning had been a spontaneous process mainly led by private bus companies. In 1994, Bucaramanga commissioned a study for road and traffic organization that included information and diagnostics on urban transportation. The study was conducted during the government of Jaime Rodríguez Ballesteros and, although the analyzed areas transcended the urban passenger transportation systems due to its focus on all modes of urban transportation, it set up the bases for future public urban transportation debates. Titled *Estudio de Reordenamiento Vial y de Tráfico en la ciudad de Bucaramanga*, the study examined urban travel in and between 34 identified transportation zones. Using a metropolitan approach, the study conducted 4,200 household surveys or 3% of all existing households (estimated at 139,975). The study identified total daily trips, means of transportation, trip motivations, trips time, and average speed. The most surprising result was the average speed for public transportation was 16.5 km/h, which clearly supported the growing hypothesis of oversupply and system inefficiencies.

During Mayor Luis Fernando Cote Peña's term, there was a strong influence of Bogota's bus corridors debate (first intervention on Avenida Caracas during Pastrana's administration) and Brazilian experts that were advising Colombian government's entities. Cote Peña was interested in improving local urban transport systems and labeled his initiative SOLOBUS. Since the SOLOBUS project required technical approaches, taking advantage of the Brazilian expertise and its interest in advising Colombian government, *Geotécnica* was hired in 2000 to conduct a study for Bucaramanga. The result of the consultancy was a conceptual design and technical pre-designs for a transportation system in the city presented in the document *Transporte Masivo para el Área Metropolitana de Bucaramanga - Estudio para el Diseño Conceptual y Prediseño Técnico - 2000*.

The study used the 1994 results as input and updated the information for the origin and destination matrixes. The main conclusion was the oversupply of buses in multiple urban corridors (especially Carrera 15, Floridablanca Highway, Carrera 33, Calle 56, and Autopista Girón) (see Figure 40). The difference between supply and demand for all corridors was excessively high (three to five times more passenger capacity than demanded trips).

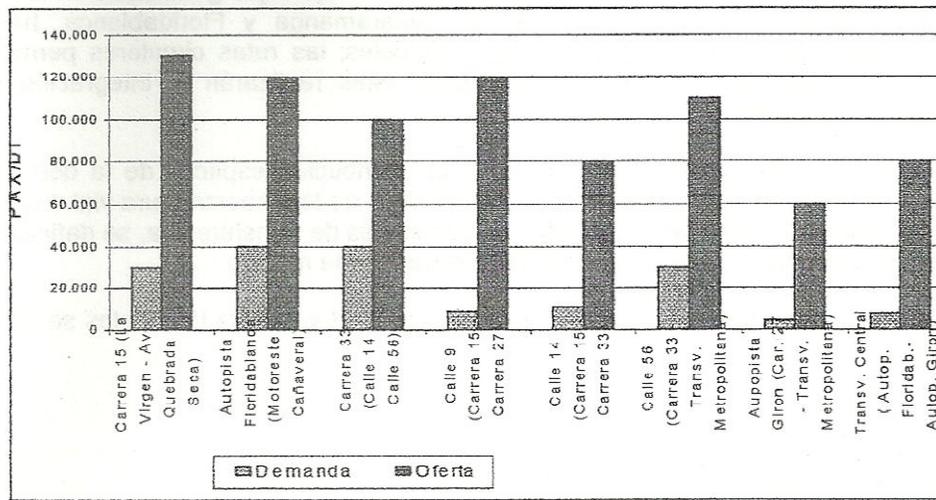


Figure 40: Urban Transportation Supply and Demand by street corridors. Transporte Masivo para el Área Metropolitana de Bucaramanga 2000. p.12

Additionally, the study concluded that the system's inefficacy emanated from a decentralized authority and regulation along with the fact that the system was the result of spontaneous organization rather than an integrated transport system. Furthermore, it recommended a reorganization of fare collection and proposed three alternatives (A, B, and C) using three types of bus corridors: *troncales*, *alimentadores* (feeders), and *circulares* (loops). The alternatives were quite similar but included modifications that responded to land use availability and environmental impact; costs for the three alternatives were quite similar but deeper studies were requested to allow for more detailed decision making.

The importance of the 2000 study for the scope of this research effort is that the city experienced the influence of external debates, discussions, and ideas. A proactive mayor encountered in the existing debates in Bogotá a clearly defined policy that proposed a transformation of the local urban transportation system. SOLOBUS used available knowledge and hired recognized

experts that had been advising government institutions during the previous years. They acted as early idea mobilizers. Geotécnica used its methodology and for the first time proposed a bus corridor system for Bucaramanga. In their recommendations, there were several operational and managing modifications that would influence the emerging BRT system in the city.

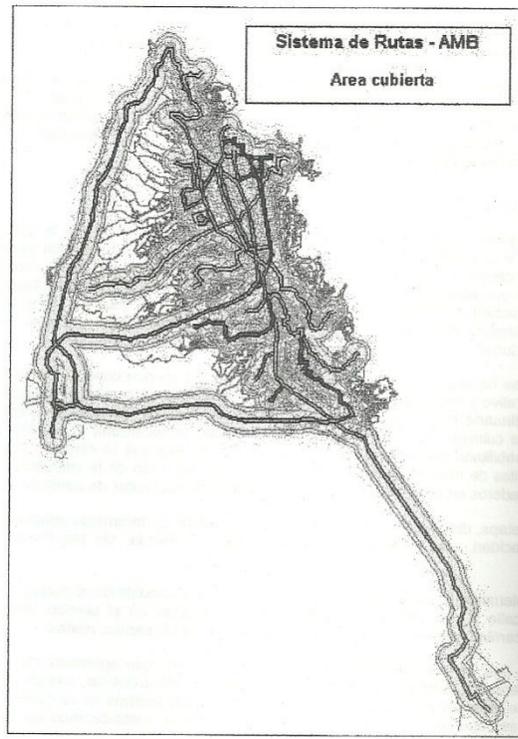


Figure 41: Proposed routes system for AMB

Source: *Transporte Masivo para el Área Metropolitana de Bucaramanga 2000.*

Later in 2001, new studies were commissioned to complement and design Geotecnica's recommendations, particularly the specific design of routes for a new transportation system. Consulting company *Hernando Salazar y Asociados* was hired by the municipal government to update the information of previous studies and to design the operative and technical elements of the newly proposed system. A new O-D-Matrix was constructed allowing for the design of specific routes responding to existing transportation conditions within the city. The final proposal was a reorganization of the

exiting 102 routes into 34 new routes that would increase the efficiency of the system and optimize the use of the road infrastructure while reducing the problems of oversupply.

The proposed system was the result of analyzing origin and destination flows within the city (using a metropolitan approach, which meant surpassing municipal boundaries) and identifying major corridors for future allocation of bus corridors and bus feeder zones. The identification of major corridors together with an updated knowledge of trips between zones in the city allowed for the selection of definitive designs. Once general designs were concluded, other operational and system management recommendations were included in the study.

The proposed BRT system included infrastructure modifications such as the corridors and enclosed stations. The system was initially proposed to be operated with existing bus fleets that implied that stations would be located on the right side of the road. The study proposed a second phase with stations located in the center lane for the use of buses with doors on the left side that should be incrementally acquired. The system included two main corridors, one line would connect Bucaramanga's urban core with Girón and the other would connect Bucaramanga with Floridablanca and Piedecuesta. Moreover, the study presented specific designs for feeders' networks that would satisfy demands on different zones of the city (see Figure 42).

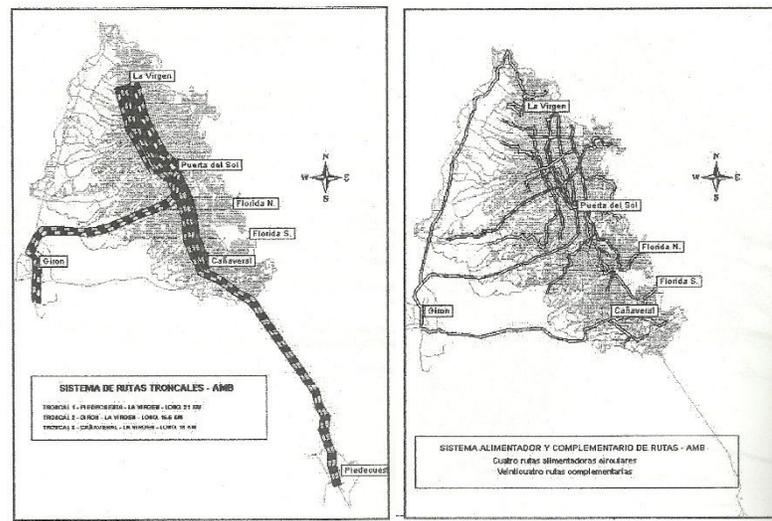


Figure 42: Proposed Main Corridors and Feeder Network.
Source: Hernando Salazar y Asociados. 2001.

Additionally, the study proposed a centralized fare collection system and a reorganization of the urban transportation planning, operation, control, and finance. Although there is no explicit reference nor evidence of direct influence of Bogota's TRANSMILENIO (it was under construction and people did not know the exact details of the system), there is enough evidence to consider that the specific details suggested by Hernando Salazar y Asociados were already part of the technicalities discussed for the future system in the capital. The SOLOBUS proposal for Bucaramanga already included a set of ideas that had been discussed in the transportation community in Bogotá and were introduced into the Bucaramanga's urban transportation discussion via Hernando Salazar y Asociados.

Despite the "window of opportunity" for an urban transportation policy in Bucaramanga, Mayor Cote Peña was not capable of attracting and convincing local actors to support the project. Instead, the idea generated the opposition of local transportation companies and bus owners that together

with the City Council members vetoed any implementation attempt coming from the mayor. As a result, SOLOBUS became a campaign's discussion item and the candidate that opposed the idea got elected with the support of opposition sectors. Given local opposition and lack of national support, SOLOBUS remained a paper initiative based on ideas from other cases. Although the idea managed to enter the local scene, it was a failed first attempt that actually started sensitizing the community.

d. Setting up the scenario: Preparing initial requirements for inclusion of Bucaramanga into the National BRT Program

The discussions and tensions generated in the local area during Cote Peña's SOLOBUS project were used by Iván Moreno to get elected and also caused concern on the part of the national government that threatened to leave Bucaramanga out of the national policy. Still, Bucaramanga was included in CONPES 3167/2002. Reopening the issue in December 2002, the City Council approved the participation of the city in the program allowing the mayor to create a BRT managing agency. The mayor asked engineer Eliseo Osorio to be in charge of the project and to start working on fulfilling the national requirements for future participation in the project.

On February 28, 2003, Mayor Moreno sent Eliseo Osorio's preliminary feasibility study to the National Department of Planning allowing Bucaramanga to start the process of inclusion into the national program. Subsequently on March, 2003, METROLINEA S.A. (*Sociedad Anónima de Transporte Masivo Metrolinea*) was created as an autonomous municipal company that would act as the managing agency (*Ente Gestor*) fulfilling the national policy

requirements. Mayor Moreno signed the creation of the company together with the Minister of Transport Andrés Uriel Gallego and affirmed that the first phases would be completed by December 2003. It is important to mention that 2003 was an electoral year and citizens would have to wait longer to see the first phases completed and that Moreno finalized his government by approving a project that was completely opposite to the platform that got him elected.

The process of elaborating on feasibility studies in accordance with CONPES 3167/2002 was accompanied by the national government and other actors involved with TRANSMILENIO. The development of the national policy took place during the inception phases in other Colombian cities. For the case of Bucaramanga, benchmarking with Bogotá was undertaken when Eliseo Osorio met with TRANSMILENIO and IDU official in order to learn from their experiences. Technical studies were conducted by *Sistemas Andinos de Ingeniería y Planificación* - SAIP Ltda- a transportation consulting company directed by Fabio Regueros and Guillermo Ramos, who had been active during the BRT debate in Bogotá and had advised the National Planning Department on urban transportation issues. Financial and economic studies were conducted by Equity Investment S.A. and, later, IKON, a consulting company that advised some bus operators in Bogotá and steered the final financial studies for Bucaramanga⁸⁸. In addition to these technical consulting companies, Volvo sales representatives visited Eliseo Osorio during the

⁸⁸ CONPES 3298/2004 states that SAIP conducted operational designs for Bucaramanga and presented it via the *Estudio de complementación y actualización del diseño operacional del Sistema Integrado de Transporte Masivo de Bucaramanga. SAIP Ltda. , Diciembre 2003*. The financial and economic model was developed by Equity Investment S. A. and presented on *Evaluación financiera y económica del Sistema de Transporte Masivo para el Área Metropolitana de Bucaramanga. Equity Investment S.A., December 2003*.

<http://www.ikon.com.co/proyectos/servicio-1-estructuracion-de-proyectos.html>

design phase but the project did not have any type of relation with bus builders at this stage. Osorio said that "when the time comes, you will be able to talk with the selected bus operators, for now we are working on other things."⁸⁹

During 2003, Eliseo Osorio and his team prepared all documents and undertook all actions demanded by the national government to include the city in the national BRT program. The goal was to subscribe a specific CONPES between the national government and local entities that would guarantee the implementation of a *Sistema Integrado de Transporte Masivo* - SITM (Massive Transport Integrated System). Despite efforts to maintain a certain level of confidentiality, the information that the local government was working on a BRT project became public and critics did not wait to respond.

For existing local transportation companies and bus owners, the implementation of a new system meant the end of a business that they had controlled for years. There were 1,800 legally registered buses and other informal ones and businessmen were not interested in the implementation of a new system. They constantly complained that private operators from other cities were a threat for local interests. The national government, and specially President Uribe and Minister Gallego, identified this shortcoming in the policy and began suggesting it was necessary to organize local existing actors to include local expertise clauses in the bidding process that would assign higher valuation to local experience. As a result, the merging of national policy with local tensions began as discussed next.

⁸⁹ Interview 037. October 2015.

In addition to the challenges emerging from local tensions and criticisms, the project had some other challenges that needed to be adequately addressed. First, there was a strong requirement that bus companies acquired new bus fleets, that the implementation be privately financed, and that obsolete buses should be removed and destroyed. But bus operators ("route owners") and bus owners lacked the means to fulfil such requirements; this issue was not included in the first CONPES discussion. Second, there was the challenge on metropolitan governance due to the specific urban configuration of a city with four municipalities. There were four city councils that would have to assign resources to the management company (METROLINEA) and would demand compensation with extra investment projects from the national government. The discussion was not fully solved but the national government committed to the project and the municipal governments agreed to join the specific CONPES for Bucaramanga.

CONPES 3298/2004 with the title SISTEMA INTEGRADO DEL SERVICIO PÚBLICO URBANO DE TRANSPORTE MASIVO DE PASAJEROS DEL ÁREA METROPOLITANA DE BUCARAMANGA was approved on July 24, 2004, by the national government, the *Departamento de Santander*, and the four metropolitan municipalities. The document constituted the materialization of the policy mobility. After Bogotá, the debate moved to the local arenas via the national BRT program, which articulated national interests and provided a generic template with the local conditions⁹⁰. Thus, CONPES 3298/2004 established the general guidelines for Bucaramanga's METROLINA project and became the reference

⁹⁰ CONPES 3298/2004 explicitly states that the design is base on TRANSMILENIO and adapted to local conditions "Este diseño se basa en los conceptos de operación aplicados en TransMilenio de Bogotá, adaptados a las condiciones particulares del AMB"

document that would articulate multiple actors to mobilize the idea under a nationally designed BRT program.

CONPES 3298/2004 described Bucaramanga and its metropolitan area as the fifth largest urban agglomeration in the country, one that presented the same problems in urban public transportation as other large cities in the country. The main problem was an operational scheme of disorganized competition among multiple transportation concerns generating congestion, inefficiency, and high financial and environmental costs.

The policy document identified principal policy actors and their responsibilities within the project. The national government would assign financial resources for the infrastructure construction that would be matched by the *Departamento de Santander* (State government), the *Area Metropolitana de Bucaramanga - AMB* (Metropolitan Planning Agency), and the four participating municipalities. Municipalities, AMB, and the *Departamento de Santander* would be responsible for infrastructure maintenance. METROLINEA S.A. (*Ente Gestor* or transport managing agency) would be in charge of urban public transport service planning, supervision and control. Finally, bus operators, with a concession contract, would be in charge of bus acquisition, operation and bus maintenance, and the acquisition, installation and operation of a fare collection system.

Cuadro 1
Distribución de Responsabilidades para el Desarrollo del SITM del AMB

Actividad	Ejecución	Financiación
Construcción de Infraestructura	Municipios y AMB	Aportes Nación Aportes Municipios, AMB y Departamento Tarifa a Usuarios (Pacios y Talleres)
Mantenimiento de Infraestructura	Municipios y AMB	Aportes Municipios, AMB y Departamento Tarifa a Usuarios
Programación, Supervisión y Control de Servicios (Incluye Suministro y Operación Centro de Control)	Metrolínea S.A.	Tarifa a Usuarios Aportes Municipios y AMB
Adquisición, operación y mantenimiento de buses	Operadores Privados bajo contrato con Metrolínea S.A	Tarifa a Usuarios
Adquisición, instalación y operación sistema de recaudo	Operador Privado bajo contrato con Metrolínea S.A.	Tarifa a Usuarios

Figure 43 BRT project's responsibilities distribution among project's actors. Activity, Execution and Funding. Source CONPES 3298/2004

As shown in Figure 43, CONPES 3298/2004 assigned distinct responsibilities for project implementation and for project funding. The central actors in implementation were local governments and, for the case of Bucaramanga, the AMB. On the financial side, the national government and local actors were responsible. One element that required special attention was the inclusion of "users fare" as one of the funding sources. The initial designs already included the expectation that users would finance not only system operation but also infrastructure construction, maintenance, and all other costs of future operation. This, as mentioned before, is the result of high expectations generated by the initial results of TRANSMILENIO that clearly matched neoliberal precepts of financial "auto sustainability" of public investments. At this stage of the project, this seemed adequate due to the observed results of the Bogota model being replicated but, at later stages, it would become one of the major obstacles for financial sustainability of BRT systems in Colombian cities.

METROLINEA was planned as a metropolitan urban transport system using a BRT approach connecting Floridablanca, Piedecuesta, and Girón with Bucaramanga and consolidating a bus feeder system to connect other areas with the main bus corridors. The system was designed with two central exclusive corridors and two mixed corridors linking Piedecuesta and Girón. The use of non-exclusive corridors was a response to demand studies together with an interest in reducing investment costs and using of a third type of bus (not used in Bogotá) called *padrones* (mid-size buses that would be able to transport a high number of passengers comfortably but solving the demand constrains that peripheral areas had in terms of demand). Figure 44 shows initial designs for bus corridors in Bucaramanga and its metropolitan area.

Gráfico 1
Corredores Troncales Exclusivos y Mixtos

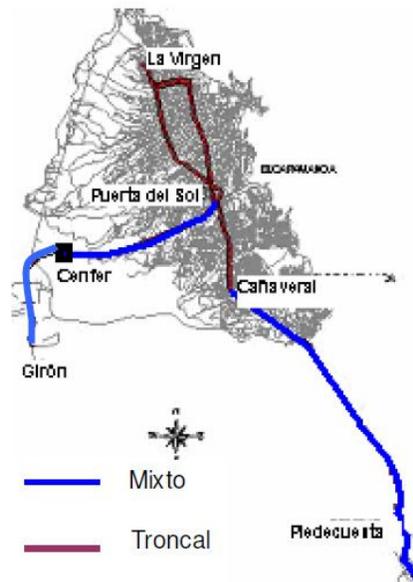


Figure 44: Final bus corridors designs for AMB.
Source: CONPES 3298/2004

In terms of project funds, CONPES 3298/2004 established that the national government would allocate 66.5% of the total, the *Departamento de Santander* would allocate 3.1%, AMB 0.8%, and three municipalities 30.6% (Bucaramanga

21.7%, Floridablanca 5.7%, Piedecuesta 3.2%). Figure 45 presents the distribution across time by actor of the \$242,676 million pesos assigned to the project by CONPES 3298/2004. Disbursements were distributed along a timeframe of 11 years—a more realistic implementation calendar than the one euphorically proposed by Mayor Moreno. Legal arrangements and contracting would be done during 2005, works would begin in mid-2005, and the system would be operating by the second half of 2006.

Cuadro 4
Programación de aportes (COL\$ MM de 2003)

Año	Bucaramanga	Floridablanca	Piedecuesta	Santander	AMB	Nación	Total
2005	2.000	204	160	2.500	1.000	29.460	35.324
2006	3.000	208	500	2.500	1.000	36.409	43.617
2007	6.600	510	800			35.449	43.359
2008	6.600	985	800			32.000	40.385
2009	6.600	1.044	800			28.000	36.444
2010	6.600	1.106	800				8.506
2011	6.600	1.480	800				8.880
2012	6.000	1.568	800				8.368
2013	6.000	1.662	800				8.462
2014	2.600	1.762	800				5.162
2015		1.868	800				2.668
2016		1.500					1.500
Total	52.600	13.898	7.860	5.000	2.000	161.318	242.676

Fuente: Equity Investment

Figure 45: Contributions chronogram by funding sources 2005–2016
Colombian Pesos Millions. Source CONPES 3298/2004

Due to the financial commitment of the national government with the multilateral banks, requirements to comply with multilateral banks' contracting and acquisition procedures were included in the CONPES documents. The final recommendations included in the CONPES documents exhorted the national government to include Bucaramanga as a priority urban area for urban public transportation policies and requested that municipalities and METROLINEA satisfied all requirements for the immediate implementation of the project. Once CONPES 3298/2004 was approved, Eliseo Osorio left the project to join a new administrative team within METROLINEA.

Now that guidelines had been already drafted, he stated that his mission was already accomplished. The newly elected mayor, Honorio Galvis (from the same political party as Ivan Moreno), led the implementation of the BRT system in Bucaramanga's metropolitan area.

e. Bus Rapid Transit system for Bucaramanga: The national urban transportation program in place

The establishment of METROLINEA in 2003 as a requirement for inclusion in the national policy and the subsequent CONPES document in 2004 approving the BRT project for Bucaramanga and establishing the general guidelines for its implementation were milestones in the policy mobility process. Both events noticeably denoted the arrival of the national urban transportation policy in the form of a national BRT program for major cities; the urban public transport debates placed Bucaramanga under the label of METROLINEA via a national government-led initiative that wanted to allocate vast resources to urban transportation projects within a clear commitment and shared responsibility between national and local governments.

The general goal was to organize the chaotic state of urban public transportation services by reducing the bus fleet (estimated in approx. 1,800 vehicles) to 400, organizing routes in ways that guaranteed efficiency, improving commuting times, and establishing a unified fare collection to finish the "Penny War." The expected benefits were congestion reduction, environmental impact moderation, improvement of bus drivers' labor conditions, and substantial enhancement of user's service quality and safety. The "what" was perfectly outlined and the general guidelines were

appropriately written; now the challenge came from the "how." Next, I describe the processes that emerged during the policy mobility and the subsequent transformation that the idea experienced during the process of implementation in the new local arena.

But before we move into that, it is necessary to describe initial conditions of existing local public transportation system in order to understand the impact that the BRT policy had once implemented. Although the existing bus service was perceived as chaotic due to the congestion levels in the main arteries, it was, as stated by one of the interviewees, "an organized chaotic system with its logics and its purposes." After several years of "fine tuning" (it's important to bear in mind that central planning had always been absent), private bus companies had developed an informal and organic strategy to provide transportation services in the city amounting to an auto-regulated scheme. First, the service was provided in the vast majority of city neighborhoods. (Companies grew by offering the service at communities located in the city outskirts; therefore, they were their most valuable to clients that emerged during the rapid urban expansion of the seventies and eighties; as reported by an interviewee, it was a kind of parochial system, where "parents told the bus driver to drop their kids in a specific location.")

Second, there was a clear business approach in which companies respected each other's "turf" within politically assigned routes, that later became commodified, which added another layer of complexity to the phenomena. Additionally, the search of profits had led to a system of informal

monitoring and reporting to bus owners⁹¹ that allowed them to increase their returns. This precarious system was a solution for urban dwellers' transportation needs but generated, based on the perverse "franchise system," incentives for exploitation of bus drivers and bus owners due to the role of "bus route owners" that based their market power on political relations and used it to absorb the largest portion of generated profits. Fare collection was also done on the buses and cash flow went directly to the owners' pockets, bypassing tax collection, which was an obvious result of an almost non-existing, co-opted transportation authority. The previous chaotic system generated an informal solution for local demands while it worked perfectly for those benefiting directly from it.

Contrary to the prevailing bus service, METROLINEA aimed to establish a centralized organization of transportation service allocations, following the already tested model of TRANSMILENIO. The system organized major commuting flows in corridors, classified into main-corridors and pre-main corridors⁹², using central stations with elevated platforms for boarding large articulated buses known as "articulados" and mixed use buses (doors on both sides) known as "padrones." This system was complemented by a feeder network that connected neighborhoods with the main corridor using smaller buses known as "alimentadores" (feeders). In terms of operational organization, the infrastructure was to be constructed using public funds, but actual operation would be assigned to private companies under the legal

⁹¹ Basically the system consisted of employees in the street reporting which buses had recently drive their routes, and buses will decide accordingly if they speed up or slow down, obviously most of the time the election was to slow down in order to pick up more passengers, their only income source

⁹² Troncal-corridors had a central lane exclusive for buses, segregated for mix use lanes by concrete bollards while pre-troncal corridors had mix-use lanes only with painted lanes separating buses from mix use lanes.

figure of concession. METROLINEA would be in charge of route planning and private operators would allocate the buses according to the requirements and be paid for that service. Additionally, fare collection was to be eliminated from buses and a private operator would collect all the money and split it among the different actors following established distribution rules.

In this sense, in terms of form and function, METROLINEA meant a transition toward a system with a certain level of inflexibility and stability that competed with the previous organic, flexible transport organization. While the previous system was highly sensitive to population demands, variations depended on population changes, dates or special events, and was based on the decentralized decision of bus owners and drivers, METROLINEA implemented a fixed corridor system with a fix feeder route system organized by a centralized supra-organizational structure. This transition from a relaxed systems based on informal relations to a centralized operational organization meant that many power relations were to be altered; as a result, tensions arose.

The first tasks to be accomplished were the internal organization of METROLINEA and development of a timeframe for required actions for BRT system implementation. METROLINEA, according to the national policy, was to be the local *Ente Gestor* (BRT managing agency) in charge of project implementation while *Area Metropolitana de Bucaramanga - AMB-* was the local transportation authority in charge of regulation the BRT routes and the remaining traditional transportation services. This arrangement was basically due to the fact that METROLINEA, as planned for the national BRT

policy, was not designed as an integral transportation solution (the same as in Bogotá's TRANSMILENIO) but as a corridors intervention using BRT technology (covering 66% of the expected demand) while the rest of the city (the remaining 44% estimated demand) was to continue being served by the traditional service system. This was the main conceptual error in explaining many of the obstacles that the projects faced later, which continue to threaten the success of the systems. Thus METROLINEA will only focus on corridors operation and its feeder network and target the three main project areas: infrastructure construction, operation design and private operators' concessions, and fare collection concession design and award.

METROLINEA was initially instructed to accomplish the construction of the necessary infrastructure for the operation of a BRT system in the city. The first appointed director for METROLINEA was Félix Francisco Rueda, who had no direct experience in urban public transport but who had worked at the inter-municipal bus terminal. Rueda needed time to organize the physical requirements of a new institution and the subsequent human resources to start full operations. Initial contracts of METROLINEA included office rent, equipment acquisition, and professional contracting, among others. Once this stage was satisfied, the next step was to initiate infrastructure construction. Specific designs were contracted in December 2004 with GEOMATICA Research Group lead by Professor Hernan Porrás at Universidad Industrial de Santander and specific technical, operative, and financial studies were required for subsequent bidding processes, infrastructure construction, and concessions design and awards.

While studies were conducted and finalized, METROLINEA demanded resources for further activities. CONPES 3298/2004 established that such resources would come from the national government, the *Departamento de Santander*, AMB, Bucaramanga, Floridablanca, and Piedecuesta; yet, such resources were not received by METROLINEA as planned leading to financial problems. Basically Floridablanca and Piedecuesta, for multiple reasons but primarily due to lack of consensus in their Municipal Councils, had not been able to honor their commitments and had not allocated the resources to the project. The legal conditions did not allow the national government to assign resources if one of the actors failed in their commitments; thus, a new CONPES was necessary to solve the emerging articulation problems between the various agencies. The metropolitan conditions of Bucaramanga and the lack of a clear articulation and consensus strategy in the initial CONPES discussion hindered the fulfillment of initial plans demanding a new arrangement. Additionally, Girón had manifested its interest in joining the project and when specific studies by GEOMATICA were finalized, a new CONPES document was agreed to.

On August 1, 2005, CONPES 3370/2005 was approved by the national government with a new approach that aimed to solve the initial funding challenges faced by METROLINEA. First, a module strategy was recommended in order to allow different possible outcomes according to the financial resource allocation; in other words, if a municipality did not allocate resources, it would be eliminated from the project and the national government would be able to continue allocating resources to accomplish the project with the remaining municipalities. Technical and financial studies were conducted by GEOMATICA for different possible participation scenarios and were included in the

CONPES document. Girón was also included in the project affecting initial investment costs and agreed to contribute 8.2 billion pesos. The national government contribution was increased to 177.8 billion pesos (68% of the total project's cost) which was still under the 70% allowed by law. The operational design changed with the inclusion of Girón METROLINEA, requiring 461 buses and covering 63% of the total local demand while the traditional bus systems would cover the remaining 37%. Figure 46 presents the final financial flow established by CONPES 3370/2005.

Cuadro No. 5
Nueva Programación de Aportes
(Millones de pesos constantes de 2003)

Año	Bucaramanga	Floridablanca	Piedecuesta	Girón	Santander	AMB	Nación
2005	2,000	204	0	0	2,500	1,000	29,460
2006	3,000	208	160	900	2,500	1,000	36,409
2007	6,600	510	500	900	0	0	35,449
2008	6,600	985	800	800	0	0	38,000
2009	6,600	1,044	800	800	0	0	38,471
2010	6,600	1,106	800	800	0	0	0
2011	6,600	1,480	800	800	0	0	0
2012	6,000	1,568	800	800	0	0	0
2013	6,000	1,662	800	800	0	0	0
2014	2,600	1,762	800	800	0	0	0
2015	0	1,868	800	800	0	0	0
2016	0	1,500	800	0	0	0	0
Total	52,600	13,897	7,860	8,200	5,000	2,000	177,789

Fuente: Universidad Industrial de Santander, Municipio de Bucaramanga, Área Metropolitana Bucaramanga

Figure 46: New contributions chronogram 2005–2016. Source CONPES 3370/2005

With these adjustments, the project received a new breath of life and METROLINEA was ready to start constructing its infrastructure. But a new problem related to the absence of a careful analysis of metropolitan particularities emerged. The existing transportation authority was the *Area Metropolitana de Bucaramanga* as a result of delegation of this competence by member municipalities; therefore, the example of Bogotá did not fit the

specific case of Bucaramanga; instead of two participating entities⁹³, Bucaramanga had three major actors with specific roles and requirements that demanded its own articulation. The national government probably did not carefully analyze the situation but this research tracked a political reason for the emerging tension. During that time, AMB was controlled by a political group that did not see eye to eye with the national government that responded by centralizing the project leadership in METROLINEA; at doing this, the national government failed to comply with the requirement that a Transport Authority could be assigned to a publicly traded company governed by private law (*Sociedad Anónima*); indeed, METROLINEA was not officially a government institution.

f. Infrastructure construction: The first task and the first incentives tension

Building infrastructure was obviously required for any type of BRT system but it was also a national government priority as a policy instrument. As mentioned before, the national BRT program was not only a priority transportation policy, it was also conceived as a tool for employment generation and economic development via infrastructure development; it was also an electoral strategy. Infrastructure, with its juicy contracts and administrative positions, became a priority once the legal framework and guidelines were in place. Time was running out and 2006 was an election

⁹³ For the case of Bogotá, the district owned TRANSMILENIO and the Transport Secretary which was the Transportation Authority was part of the district government. In contrast, in Bucaramanga METROLINEA was mainly controlled by Bucaramanga due to its financial participation, but AMB was the Transport Authority for the city; so Bucaramanga's government, METROLINEA and AMB had to agree in multiple issues that added a new layer of complexity to the project that still remains today.

year crucial for Alvaro Uribe Vélez, who wanted to be reelected President of the Republic and used projects such as this to gain the local vote.

At this point, final designs for a BRT system in Bucaramanga were reduced to one major-corridor and several pre-major routes and feeder routes. Large works were to be executed along the street corridor from downtown Bucaramanga in a site known as *La Virgen* to Floridablanca in an intersection known as *Papi Quiero Piña* - also known as PQP⁹⁴. The project required adaptation of existing arterial streets with the inclusion of a segregated lane for buses. Public space needed to be modified for stations, pedestrian bridges and spaces for pedestrian movement. GEOMATICA finalized the technical studies and defined, as illustrated in Figure 47, the operational routes of the system that would then be used for all public bidding processes. Final designs established main corridors, central stations, and complementary routes to the system and described the phases for its implementation.

⁹⁴ Toponymy that emerged from the name of a traditional pineapple merchant, became heavily used by city inhabitants due to a stop of inter-municipal buses and curiously was later "bureaucratized" to the acronym of PQP that was reported to me by national governmental officers during my interviews.

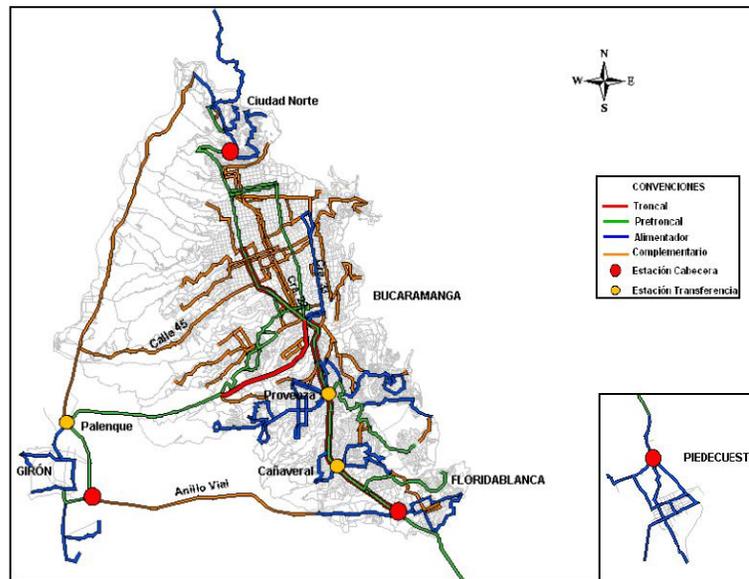


Figure 47: Definitive operational routes for METROLINEA.
Source: Technical Operative Designs from GEOMATICA.

Contrary to Bogotá, there was no public agency specialized in infrastructure construction in Bucaramanga; therefore, METROLINEA was the institution in charge of bidding processes, contracting, and supervision of works. Although AMB had enough experience executing infrastructure projects, the national government preferred that METROLINEA carry out these functions. But METROLINEA had only recently been created and lacked experience in bidding or in executing public works; this situation resulted in complications and obstacles that reduced the efficacy of the contracting processes. Additionally, the first director did not have professional experience in contracting public works that could facilitate the institutional learning process. The direct implication of the decision was that METROLINEA as a public company created to operate a new urban transportation system model would have to concentrate its initial efforts in infrastructure construction, which diminished its efforts in the operational designs front. Former national government representatives I interviewed revealed that infrastructure construction was the central priority and efforts for

operational designs and groundwork were set aside. As a result, the operational sphere was abandoned and many of the subsequent problems emerged from the lack of planning and organization of non-material issues of the projects. For many of the interviewees, the operational sphere could have been planned differently by delaying deadlines, which may have been positive for the project but as one of them stated "political times are most of the times shorter than technical ones." For METROLINEA's implementation political time won.

In spite of these logistical problems, it was clear that METROLINEA was in charge of infrastructure construction and it became the priority for the national government and therefore the project. Once definitive studies were finished, the first step was to select construction companies for the central corridor because this was going to take the longest time to complete and came with a specific requirement for any BRT operation. The corridor's 14.5 kms were segmented into six construction fronts, illustrated in Figure 48; in mid-2005, three of these segments were bid and awarded.

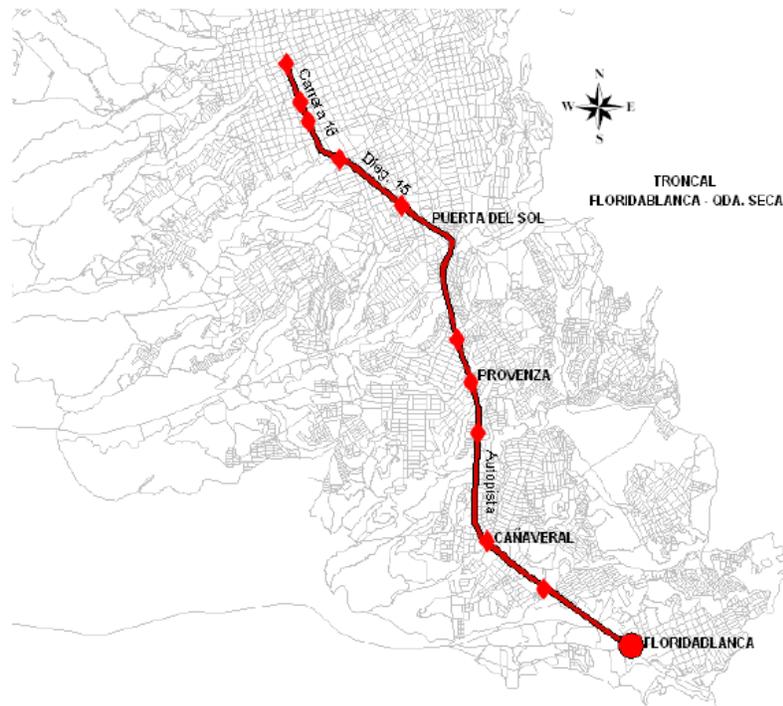


Figure 48: METROLINEA's main trunk corridor and sections
Source: Technical Operative Designs from GEOMATICA.

The awarded segments and selected construction companies or consortiums were (1) *Quebrada Seca* to *San Andresito* awarded to CONSORCIO CONCOL CROMAS, (2) *San Andresito* to *Puerta del Sol* awarded to UNIÓN TEMPORAL CONEXIÓN VIAL METROPOLITANA, and (3) *Puerta del Sol* to *Provenza* awarded to UNIÓN TEMPORAL CONEXIÓN VIAL METROPOLITANA. Once construction began, METROLINEA faced a new resource shortage that delayed further bidding by one year. In August 15, 2006, the remaining sections of the troncal-corridor were bided and awarded as follows: (1) *La Virgen* to *Quebrada Seca* was awarded to PAVIGAS, (2) *Provenza* to *Cañaverál* to VARGAS VELANDIA LTDA, and (3) *Cañaverál* to *Papi Quiero Piña* to UNIÓN TEMPORAL SOLUCION VIAL METROPOLITANA, and (4) complementary street modification in *Calle 10*, *UIS*, and *Quebredaseca* to CONSORCIO CONCOL CROMAS. Construction began during the first half of 2006 and faced several problems that delayed works and demanded the cancelation of the contract of *Autopista* between *Cañaverál* to *PQP*, resulting in a new

bidding process that selected VERGEL Y CASTELLANOS to finish the works. Additional works were bid and contracted in October 2007 for *Carrera 27* with ESGAMO LTDA and *Provenza* station in May 2009 with BM3 OBRAS Y SERVICIOS. Along the way, the timeline was delayed and works were only partially finished for the unveiling of the system on December 22, 2009, several years later than the expected completion date generated by Mayor Moreno in 2003.

Construction also faced multiple problems related to the slow allocation of financial resources for the project. Once resources were assigned, METROLINEA was capable of contracting construction companies through standard public bidding processes and works finally began. Although established deadlines were missed, most of the contractors met their commitments and the problems presented in *Autopista* were solved with the cancelation of a contract and a new bidding process. Technical requirements and engineering designs included in the bidding process guaranteed quality (most of the works have lasted as expected and no significant problems in terms of construction quality have emerged as was the case in Bogotá). The contracting standards enforced by the World Bank in their loan agreement with the national government had the same impact as in Bogotá, that is, they resulted in better bidding and contracting practices that assured that works were adequately finalized.

g. Private Concessions: local conditions and actors matched with national requirements for a new public-private partnerships scheme

Bus companies and bus owners in Bucaramanga had not paid attention to contemporary urban public transportation debates in other latitudes or in

Colombia. When the idea of SOLOBUS arrived, they opposed it because it meant a real possibility of losing a monopoly that they had been theirs for decades. Bus companies and owners were outdated and "abandoned to their own idiosyncrasy," an interviewed local transportation expert stated. There was a lack of knowledge of current urban public transportation debates by bus companies and owners as they had focused on the "routes market" and associated benefits. Oversupply of buses was profitable for them while detrimental to the local public transportation system and to service quality. So, the transportation urban debates were not part of the agenda and did not concern local bus companies and bus owners.

The second arrival of the idea for organizing public urban transportation was not as local as was the case of SOLOBUS; this time it arrived as national policy for BRT projects in major cities and was supported by the national government as one of its crucial intervention strategies. Local bus companies and bus owners again tried to oppose the project, but this time the national government used several instruments for project diffusion and, when needed, some credible threats. President Uribe constantly affirmed that local bus companies and bus owners would be incorporated into the project and their participation would be carefully tailored during the bidding process for operational concessions.

Key actors visited Bogota during the implementation phase in an effort to persuade local bus companies and owners to support the project. Similarly, Ignacio de Guzmán, who led the discussions with local bus companies in Bogotá, and Victor Raúl Martínez, a former bus owner who became a successful bus businessman with TRANSMILENIO, visited Bucaramanga to convince local

actors by using their own experiences as a main argument. Later, bus producers such as Volvo invited some of the local bus companies to visit its plant in Brazil and observe the successful experience of Curitiba. They also visited Chile, Bogotá, and Japan as part of the bus manufacturers' promotion strategy to gain the support of local bus companies for the implementation of the BRT systems. The national government knew that local support was fundamental for policy implementation. Nonetheless, the project ran into new threats coming from already large bus companies in Bogotá that were interested in expanding their investments in other BRT systems; similarly, Transport Minister Andrés Uriel Gallego threatened local actors by confirming that he would bring non-local investors in if they decided not to participate. But the national government knew that having local actors immersed in the project would break the opposition and hoped that responsibilities remained local (which implied profits would be locally held or losses would be locally solved). So policy diffusers used private meetings, seminars, conferences, workshops, and local media to persuade local bus companies to give their support to the national project. And they succeeded.

Once the project received local support, the next step was the formulation of bidding conditions that would guarantee local companies would win the concessions. First, President Uribe had recurrently promised that local actors would not be excluded of the new system⁹⁵; second, in Pereira, one

⁹⁵ In September 2005 President Uribe stated at Bucaramanga's Chamber of Commerce that "once again I commit to include in the bidding conditions that this new system will not replace local transport actors but on the contrary they will be the principal participants on the system's operation. "Reitero mi compromiso para que en los pliegos de condiciones a fin de seleccionar el operador, se garantice que este sistema no va a desplazar el transporte local sino que el transporte local va a ser el principal participante en la operación del sistema". Source:http://historico.presidencia.gov.co/prensa_new/sne/2005/septiembre/29/12292005.htm. Consulted: June 14th 2014

of the companies that was awarded a concession lacked the resources to deliver its obligations and the national government wanted to make sure the experience did not repeat; lastly, the national government was convinced that some battles were not worth fighting and did not want to get involved in this particular debate. Guaranteeing that local traditional actors become part of the new systems was then the final decision.

Consequently, the Ministry of Transport played a crucial role during the bidding process by assigning teams and resources to advise *Entes Gestores* in order to have a unified contracting structuring in all cities. Despite the fact that President Uribe's statements conflicted with existing contracting laws prohibiting partialities or previous selections during public bidding processes, the Ministry of Transport experts were able to do so. The final result meant existing bus companies and bus owners were awarded some of the new concessions⁹⁶.

A concession contract is defined as an instrument to promote private investment to provide a public service with efficiency due to the alleged inefficiency of the public sector. The public sector allows a private company to provide a service with specific conditions for a period of time, and the private concessionary has the right to receive economic benefits from its operation. Although presented as a mechanism to reduce public expenditure and reinforced by selected historical experiences of failed public projects, the concession model is one of the most important instruments used under neoliberal approaches of public management to

⁹⁶ When interviewing bus private companies that participated in bidding processes in multiple cities they affirmed that requirements were similar in all cities and in most cases the concession were awarded to local actors. They felt that bidding process documents were a kind of copy-paste from a general model.

separate the costs of investments from profitable operation resources. The national BRT policy established that the public resources were to be used for infrastructure construction while private operators would be the ones in charge of running the business. The cities had to organize their systems accordingly.

METROLINEA established that the system's operation would be provided through a concession for 30 years, split into two contracts to be awarded in the second half of 2007. Both concessions required bidders to demonstrate urban transportation experience within the metropolitan area of Bucaramanga and establish a set of conditions that allowed the participation of bus companies (that normally had no bus fleets and only "owned their routes permits"), while also demanding participation of small bus owners. The system's operation would be distributed as a concession in charge of 59% of the routes and the other would operate the remaining 41%. Bidding conditions perfectly matched the attributes of the emerging joint ventures between existing transportation companies and bus owners that were the only proponents during each bidding process. I will briefly describe this next.

The bidding process was tailored to the existing companies, bus owners, and to a certain extent the organization schemes that were required for the new system. Complex political and business articulations were required and, finally, companies agreed to organize under these new schemes in order to control the new urban transportation system. The Ministry of Transport, the World Bank, and the local government were passive observers of the process, yet probably had an active role behind the scenes by perhaps designing the strategy that accommodated all variables in place. More profound research

on the complex contracting relations can be a subject of future work, but due to the complex judicial implications and ongoing investigations was not considered for this dissertation. Finally, concessions were awarded as follows.

Concession 1 (the one that included 59% of system's share) was awarded in November 27, 2007, to METROCINCO PLUS S.A., a company that was created on December 27, 2007, by a group of companies that owned 60% of the existing buses, namely (1) UNITRANSA S.A. with 29% of the company's share, (2) TRANSCOLOMBIA S.A. with 18%, (3) COTRANDER LTDA with 16%, (4) TRANSGIRÓN with 8%, (5) COTRAUSAN with 8%, and (6) several small owners with the remaining 21%; the majority of these companies were bus owners. METROCINCO PLUS was advised by CAPITAL ADVISORY PARTNERS (represented by Carolina Suárez and Rudolf Hommes, former Minister of Finance and presidential economics advisor at the time of national BRT policy designs), AKIRIS DE COLOMBIA (represented by Ignacio de Guzmán, former TRANSMILENIO's promotion leader and a policy diffuser for Bucaramanga's BRT system and by Juan Carlos Díaz), and Samuel Chalela's legal team. METROCINCO PLUS S.A. claims in its website that its "economical and technical proposals were ranked as the best ones and the concession was awarded 60% of the system's operation."⁹⁷ They do not state that they were the only proponent/bidder.

Concession 2 (the one including 41% of the system's share) was awarded on February 5, 2008, to MOVILIZAMOS S.A. after an initial bid with no offers

⁹⁷ Durante todo el proceso licitatorio METROCINCO PLUS S.A. obtuvo las mejores calificaciones tanto en las propuesta técnica como económica lo que llevó a que el 27 de diciembre de 2007 Metrolínea S.A. adjudicará la concesión de operación de transporte del 60% a la sociedad. Source: <http://metrocincoplus.com/> - Información Corporativa - Reseña Histórica visited 11.12.2014

and required a proposal modification by the only proponent, and later bid winner. MOVILIZAMOS S.A. was owned by bus companies TRANSPORTES LUSITANIA S.A., FLOTAX S.A. METROPOLITANA DE SERVICIOS S.A., COOTRAGAS C.T.A., TRANSPORTES PIEDECUESTA S.A., TRANSPORTES SAN JUAN S.A., ORIENTAL DE TRANSPORTES S.A., and TRANSPORTES VILLA DE SAN CARLOS S.A., led by the owner of LUSITANIA, Alfonso Pinto Afanador; these firms operated as affiliates based on their "route ownership" and had no bus fleets. In order to qualify as a proponent for the bidding process, the company owners were required to own bus fleets; to comply, they created new companies under the title of *Sociedades de Propietarios de Transporte - SPT* (Transport Owners Societies); all of them were registered on the same day, with the same notary, with the same office address and exhibiting multiple overlapping names that included general managers and even board members. In spite of the (claimed and sued) irregularities and still under investigation by fiscal and judicial institutions, the SPT strategy satisfied bid requirements and MOVILIZAMOS S.A. became the operator of Concession 2 controlling 41% of the system. (The registered bus fleets accounted for 41% of the existing buses reported as owned by the companies.)

Once operation concessions were awarded to MOVILIZAMOS S.A. and METROCINCO PLUS S.A., they had to acquire new bus fleets while discarding the old buses in a process known as *chatarización* (bus 'scraping'). Both actions demanded expensive investments and expenditures: the concessions contract required the purchase of buses while an additional fee was to be paid to METROLINEA. *Chatarización* required operators to indemnify old bus owners in order to destroy their buses. Operators did not have the total amount of required resources but secured them from national banks. BANCOLOMBIA and DAVIVIENDA,

two of the largest national banks, easily approved solicited loans due to the national government's backing and the profitability expectations of the projects after TRANSMILENIO's experience.

The operators decided to organize their finances via credit leverage that actually grew to more than 80% of their investments. Any project that begins with this type of financial structuring will face a situation where interest payments will exceed operational utility, therefore delaying the necessary time to reach financial equilibrium. The first years will be used to pay mainly interest and operation; later they will be able to start paying equity and operation, and profits will only arise in the last years of the project. But operators did not care much about this issue at the beginning because they were paying more attention to the sales commission that they would receive from the bus producers for enormous purchases that surpassed 100,000 million pesos (around 50 million dollars at the exchange rate for the time). Many small operators claim that sales commissions were retained by a few actors and not evenly shared with all companies' shareholders.

Only some years later they realized their financial situation and have argued since that their business is not producing the expected results. Only half of the old buses have been retired, none of the initial three proposed main stations have been constructed, and only one of the three transfer stations is in operation. Concession operators will sooner or later claim that their businesses did not function due to the non-fulfillment of METROLINEA's infrastructure construction commitments, a traditional outcome of non-adequately structured concessions.

The system may be modified in the future in case corruption practices are discovered and the companies involved are sanctioned; meanwhile, the impact of this arrangement is reflected in the dual and reverse incentives of the controlling companies of public urban transportation in Bucaramanga. In fact, all former bus companies continued operating and controlled 37% of the total urban trips under the same historical conditions as the traditional system (*Sistema de Transporte Colectivo*), while those same companies operated and controlled the new BRT system (*Sistema de Transporte Masivo*)⁹⁸. The problem emerged from the fact that in the traditional system (which serves 37% of the total demand) bus companies continue receiving their income per passenger, while on the BRT system they receive their income per kilometer served; this implies that there is still a perverse incentive within the system, where bus companies and bus owners maximize their profits if buses run empty in the BRT system while all passengers use the traditional system. Hence, there will be high incentives to boycott the BRT system while promoting or defending the traditional system. This is strange but true, a new kind of Colombian magical realism.

Although BRT national policy was promoted as an initiative for Integrated Massive Transportation Systems, none of the systems was designed as an integral one (covering 100% of the passenger trips) due to investment constraints reflected in costs (both public and private) and, of course, because the initial model (TRANSMILENIO) was not designed as an integral system due to political tensions and partial negotiations. This is further evidence that the national BRT policy used the model as a template without

⁹⁸ The reduction of oversupply was though achieved by a replacement strategy of old buses and new buses in which certain amount of old buses must be destroyed for each new bus purchased for the BRT system.

evaluating it and improving its shortcomings when designing the national program. But it speaks to the issues that emerge when a policy conceived as a one-size-fits-all solution navigates the uniqueness of local political-economic and social realities on the ground. Profound analysis of local conditions and the subsequent adaptations are then critical components for the success of a policy as it moves from one place to another.

The other concession that METROLINEA had to bid included fare collection, communication, and control-center construction. The concession was bided and later awarded on September 24, 2007, to CONSORCIO RECAUDAR, a joint venture created on September 7, 2007, by a local businessman and three Brazilian engineer companies. On one side was CAMPOLLO S.A. with a 70% share and DANIEL FERNANDO ARENAS LEÓN with a 20% share, and on the other side DIGITAIS LTDA with a 5% share, PROBATA LTDA with a 2.5% share, and ENGENHARIA E TECNOLOGIA LTDA with the remaining 2.5% share. Since this contract began, fare collection, communication, and control centers have been provided by CONSORCIO RECAUDAR, later called TRANSPORTE INTELIGENTE S.A. - TISA. Nonetheless, on December 13, 2010, the *Procuraduría General de la Nación* (analogous to the General Attorney Office in the U.S.) decided to remove Félix Francisco Rueda, METROLINEA's director for contracting irregularities. The reason for the verdict was that CAMPOLLO S.A. was a company with several years of experience in the poultry industry with absolutely no business experience in the provision of an urban transportation fare collection service; the company and his owner have 90% of the company's share while the technical companies only have 10% of the company, an irregular situation under Colombian contracting laws and

regulations. Although the scope of this dissertation does not allow for the detailed examination of the wheeling and dealing involved, this is clear evidence of the complex scenario under which decisions and contracts in METROLINEA were conducted.

The last important issue to mention in this section relates to fares and their relationship with the overestimation of expected financial results due to TRANSMILENIO's perceived success. As indicated by CONPES 3298/2004, fares will be an essential financial instrument that together with the other main financial sources will provide resources to (1) infrastructure construction and its maintenance, (2) METROLINEA operation including planning, supervision, and control of the system, (3) acquisition, operation, and maintenance of bus fleets, and (4) acquisition, operation, and maintenance of fare collection systems. In other words, users' fares were responsible for financing all the system's costs. For many interviewees, the systems' expected returns were overestimated due to the lack of a deep analysis of TRANSMILENIO's exceptional attributes and conditions and the assumption that they would hold everywhere else.

METROLINEA distributed the total fare collections as follows: (1) 11.75% for infrastructure construction, specifically a transfer station at *Papi Quiere Piña* - also known as PQP⁹⁹, (2) 6.85% for METROLINEA, (3) a 5 pesos fixed value for the Transportation Authority, AMB, (4) 13.5% for the fare collection concession, and (5) the remaining resources, around 67%, for operation concessions. The distribution of fares clearly reflected the

⁹⁹ In April 28th 2009 METROLINEA awarded a contract for the construction of a transfer station, bus parking spaces and maintenance workshops to ESTACIONES METROLINEA LTDA. Required investments exceeded by almost ten times available resources so the contract assigned 11,75% of total fare collection until December 30th 2027.

overestimation of the financial capacity of the system, which not only included the expected possibility of auto-sustainability but also expected resources for additional investments. This expectation was attractive to decision makers due to lower investments required for the initial phases and reinforced by short-term planning where subsequent exceeding costs were put off to the future when current officials would be out of office. Additionally, fare distribution reflects metropolitan arrangements and the final results of concession contracts awarded by METROLINEA.

h. Metropolitan tensions and the role of the national government

METROLINEA as an intervention to Bucaramanga's urban public transportation system in the 21st century was a project with a clear metropolitan scope. The urban expansion had surpassed Bucaramanga's municipal boundaries decades ago. Urbanization had expanded over other municipalities without an administrative organization comprising all municipalities that could preside over development of a synchronized metropolitan infrastructure. The complex case of Bucaramanga and its metropolitan area reappears in other major Colombian cities such as Medellin, Pereira, Barranquilla, Cucuta, and Cali, but the national government has not agreed on an efficient administrative and institutional organization for these cases. Municipal boundaries continue to be the exclusive territorial unit of policies. The national government did not consider existing differences and challenges of different urban areas in Colombia and, by implementing a project that was metropolitan by definition using the "municipal bias," made a decision that resulted in a lot of misguided efforts while preventing careful assessments of the feasibility of implementing national policies at the local level -

or, better, the framework to make needed adjustments to fit the conditions of each of them.

Bucaramanga's METROLINEA project became a challenge for the national government policy mobilizers. The National Department of Planning and the Ministry of Finance ran into major roadblocks in the identification and articulation of financial resources; moreover, when they finally agreed on a financial structure, they faced new roadblocks related to the synchronization of payments and contributions from the multiple actors involved. For the Ministry of Transport, the challenge was even more complicated due to its involvement with technical details such as designs, operations, bidding, contracting, and construction. During my interviews with national actors, I learned that Bucaramanga ranked as one of the most, if not the most, complicated cases.

The absence of a comprehensive and coherent body of laws for metropolitan areas, the political complexities associated with AMB, having to deal with four mayors and four city councils, the multiple transportation companies, and the many more bus owners, among other factors, made negotiations, agreements, and implementation more difficult and more complex than in other cities. Efforts to transfer Bogotá's strategies became a major problem as local conditions were vastly different, calling for innumerable adjustments.

Meanwhile, in its drive to solve a long lasting urban transportation problem of perverse incentives while trying to make sure local authorities and governments reformed the ways in which they had traditionally handled public transportation, the national government ran into a major system of

corruption and patronage that was an integral part of local politics. As the national government tried to replace existing institutions with a new *Ente Gestor* (BRT managing agency) without such constraints, it challenged entrenched practices and local actors who were not willing to collaborate unless the new arrangements were under their absolute control. In the end, to advance a program that was high in the re-electoral campaign of President Uribe, the national government had to make concessions and include existing local interest in the system, which compromised efforts to take BRT out of patronage politics and turn it into an independent entity.

Overall, the national BRT policy appeared to be a good deal to mayors for a number of reasons. Cities would receive investments that surpassed existing municipal capacities and they would have to contribute only 30% of the cost. Furthermore, local actors, mainly mayors, would have certain level of control while receiving all the acknowledgement and recognition for the project's implementation. Still, mayors were caught between their constituencies' interests and uncertainties and their ability to obtain more resources from the national government. Moreover, they used the national government's investment in BRT as a negotiating tool. Once municipalities realized the policy was a priority for the national government, they tried to get as much as possible during negotiations. For the case of METROLINEA, Piedecuesta and Floridablanca decided to actively oppose the project in order to reduce their contribution and to ask for additional projects and benefits. President Uribe understood the challenge and negotiated directly with them, offering support for other projects (e.g., roads, schools, subsidies among others) within their municipal boundaries if they contributed to the BRT managing agency. One of the

interviewees told me that they used to refer to these negotiations as "decorating the Christmas tree." As a national policy based on a successful experiment, BRT emerged as a highly political project with limited consideration of local circumstances and the expectation that one-size would fit all.

i. The conflict between local conditions and the arriving ideas and policy requirements

When policies are mobilized, they face major challenges if the template or model does not have the flexibility to adjust to local conditions; as such, they often require alterations that often do not produce the expected results. For the case of METROLINEA, many of the initial diagnostics were simply transferred from TRANSMILENIO, preempting analyses of local conditions that might question the idea itself. In Bucaramanga, local conditions showed to be completely different from Bogotá. The assumption that what succeeded in Bogota (after a long process of trial and error and multiple iterations) would succeed elsewhere did not appear to hold for the city. Unfortunately, the application of the same premises to the situation of Bucaramanga blinded promoters to local realities and, most importantly, to the feasibility of the project as a whole.

METROLINEA constituted a drastic transition from a flexible, organic and informal service to a rigid corridor system that required an efficient network of feeders all working as the model intended. As such, it ignored local realities and possibilities. Conceived as a predominately technical matter, it ignored the realities of the local political culture and factors

such as the willingness and ability of the private sector to participate as expected. Even the logic and timing of the various constituent pieces proved questionable. As the project focused on the main corridor, the feeder routes were delayed, causing problems to users that had to find alternative ways to satisfy their transportation needs.

A major development nobody could have predicted came from residents' decision to turn to motorcycles; access to credit and low import prices allowed for this transportation mode to become quite popular. The number of motorcycles went from circa 30,000 in 2003 to nearly 250,000 by 2013. When METROLINEA finalized the central corridor, people did not have the option of connecting to it from their houses and motorcycles became a preferred option. Another option came from innovations in the taxi system, such as ride-sharing and, later, pirate taxis that provided a low-cost option. The absence of feeder routes also made space for carpooling and the use of private vehicles to bring people from their neighborhoods to the main corridors for a fee (an illegal operation that bypassed permit fees and taxes). Then, the increase of motorcycles led to their use as moto-taxis. These unexpected strategies reduced the amount of potential users of METROLINEA.

BRT systems had been conceived as highly specialized urban transportation systems requiring new support systems. As they moved from Bogota to Bucarmanga, they ran unto new, unexpected obstacles. First, technical expertise related to BRT was scarce in the country: there was a limited number of transportation experts and that existed were in high demand after TRANSMILENIO's implementation. Multilateral organizations, foreign

countries and cities, Bogota operators, and emerging consulting companies monopolized the expertise, so they were hardly available to support systems in other cities in Colombia. Second, used to 'historically corrupt' political practices, local government viewed new companies (e.g., BRT managing agencies) with suspicion because they did not include their electoral bureaucracies; then, when pressured, they filled the new job positions with political appointed individuals rather than specialized professionals. In this way, the newly created specialized companies departed in major ways from the initially imagined professional outfits. The fact that in the first years of operation, they were redirected to the development of infrastructure further delayed and complicated the process. They had to focus on these priorities, while neglecting their other duties.

The shortcomings in technical capacity also affected development of optimal system designs. To reduce costs, promote public knowledge, and fill the void of local expertise, the national government turned to a local research group at the civil engineering department of *Universidad Industrial de Santander*, GEOMATICA, with little or no experience in urban public transportation or financial designs. GEOMATICA made an effort to understand the challenges and provide adequate designs, but it subcontracted studies that did not fall into its knowledge, a decision that was highly criticized.

In spite of the long-lasting debate about studies and designs, two additional factors stood in the way. First, studies were assumed as a static product (probably due to budget constraints or based on the expectation that METROLINEA would become a technical company) and were not constantly monitored, adjusted, and updated. They were a snapshot of the transportation

conditions of the city around 2005 and did not monitor or include ongoing follow-up. Therefore, the system began operations in 2010 with and designs that were five years old, which could have been adjusted if proper recommendations had been included to monitor changes. Second, GEOMATICA and its director, Hernán Porras, had constantly argued that it was impossible to obtain the expected results if the original studies were modified during implementation or were executed partially. Meanwhile, results were highly impacted by political dynamics in the implementation process, reducing the possibility of a rigorous comparison between initial designs and final outcome.

Contrary to the case of Bogotá, where a group of enthusiastic experts wanted to change the city's administration and the traditional transportations systems, Bucaramanga did not grow its own team or launch its own efforts. Instead, it was one of the sites selected by the national government for implementation of BRT. Furthermore, political interests or even individual business interests distorted the potential of urban change inherent in the project. Absent a local group invested in the initiative or even a local clique adopting it, the project was dropped on the municipality by the national government. Meanwhile, although aware of the problem, neither the national government nor multilateral agencies such as the World Bank found a way to promote local ownership of the project. Add this to all the other problems, one can understand why the project actually created other problems that forced people into alternative solutions that reduced the impact and probability of success of Bucaramanga's BRT.

In spite of the partial implementation of METROLINEA, once the basic works were finalized and operators had the minimum required capacity to operate the system, the Ministry of Transport put pressure on BRT to begin operation. One of the interviewees reported a Ministry of Transport official once had said to him, "they should assume it as when one moves to a new house, improvements and adjustment would be gradually executed." On December 22, 2009, Mayor Fernando Vargas Mendoza opened METROLINEA, which ran for a month with no cost for users as a pedagogical period. Full operation began in January 2010.



Figure 49: METROLINEA main bus corridor connecting Bucaramanga with Floridablanca¹⁰⁰.

¹⁰⁰ Image from: <http://www.gentedeconaverl.com/2011/10/residentes-hablan-del-servicio-que-presta-metrolinea-en-canaverl/>

j. General impact of METROLINEA on Bucaramanga's metropolitan area urban public transportation system

Despite the shortcomings and challenges mentioned above, METROLINEA introduced to the city the debate of urban public transportation. It later contributed to other discussions, such as the availability of public space or bike routes. Not only did it challenge a system in the hands of drivers and bus owners, it made the population aware of the possibility of a sophisticated and efficient service.

Although not fully accomplished, at least from this perspective, it allowed citizens to think and analyze urban public transportation systems from a technical and specialized approach, rather than from the traditional trial-and-error dynamic. Dismantling a traditional and strongly rooted system proved to be rather complicated. Most of the obstacles that emerged through the implementation process came from an opposition and those agents that had profited from the status quo. Contrary to Bogotá's TRANSMILENIO, Bucaramanga (and the rest of Colombian cities implementing BRT projects) has not reached the threshold that can guarantee its sustainability or at least make it a success.

The arrival of METROLINEA made public urban transportation, and in a broader spectrum urban traffic, a central issue in planning, both nationally and locally. Since the beginning of the project, urban public transportation started to be discussed in the context of new urban planning tools such as the *Planes de Ordenamiento Territorial - POT* (Territorial Arrangement Plans), which demanded specialized urban traffic studies and plans that

were absent before. Although not consciously analyzed nor incentivized, the project opened the possibility for transport-oriented development, particularly due to the increase in land values around METROLINEA's stations.

The national government was capable of maintaining its commitment in spite of the obstacles and adversities it ran into every step of the way. Its main flaws arose from a policy that did not consider local conditions and did not foresee adjustments to fit the different contexts. Unforeseen problems such as depriving people of services in the transition from the previous to the new system caused citizens to turn to other options that affected the project tremendously. Still, the incorporation of a centrally regulated system may allow for the future coherence of local transit and related policies. It may provide support for smooth growth and the associated challenges of increasing demand in the coming years.

Today, METROLINEA faces huge challenges before it can guarantee its operation, financial health, and long-term sustainability. The initial studies expected the system to move more than 500,000 passengers daily, but so far the amount of daily passengers is only slightly above 200,000. Once the infrastructure is finalized, coverage will likely increase and more passengers can be served, but this is not guaranteed and many people doubt that the system will achieve the number used in financial projections. METROLINEA also will have to engage in new efforts to consolidate an integrated system that covers 100% of the demand and fully replaces the traditional system that still operates on the side and that shows no signs of weakening.

Local authorities need to increase their control of parallel transport practices such as piracy and moto-taxis to reduce siphoning of passengers or they need to incorporate such alternatives into a fully integrated public system. A comprehensive assessment of the multiple components, attributes, and problems of urban traffic in the city and metropolitan area can help more realistically determine the potential and capacity of METROLINEA to offer an accepted and interesting transportation mode.

Although former mayors and directors of METROLINEA did not foresee the potential that the system had to transform the city, and mishandled the opportunity while defending their own individual interests and corruption practices, the system has the potential to lead to urban change. Awareness that local commitment is needed in order to maintain and improve local urban services has been increased and opportunity remains. Despite the fact that powerful agents continue controlling the system, the modification allowed public participation and converted a highly privatized good into a public topic of discussion.

IV. ANALYSIS OF FINDINGS

The exchange of ideas has been a major process in the development of humankind throughout history. Societies have shared their thoughts using multiple means, in some cases imitating, in some others learning the lessons of an application for their application elsewhere, and in other cases by requirement. Examining a recently developed and diffused policy, BRT, this dissertation examined the ways in which an idea was developed, packaged and then moved within a neoliberal context of devolution, privatization, and financialization. In particular, it traced influences and institutional interactions that led to their modification.

As Peck (1996 and 2001) claims, policies are embedded in the contexts in which they emerge and, although aspects of them can be transported to other localities, outcomes differ substantially. Thus, rather than examining their moves as policy transfer (implying the wholesale transfer of a policy), this dissertation followed them by examining their changes as they went from one milieu to the other and from one scale to another. Along with this, the dissertation traced the ways in which policy impacts existing arrangements in the spaces they enter. As this analysis suggests, rather than coming ready-made from the desk of policy makers and applied singlehandedly everywhere, policies result from the intervention of multiple actors and forces in their design, mobilization, and implementation—a process that gets re-enacted each time they move. Along the way, they undergo mutations that reflect the interests of the actors involved, the environments they enter or in which they are implemented, and so forth. Meanwhile, in the same way as they change to fit local conditions, they

generate transformations in local structures and institutions. In other words, the experience is one of change both on the part of the receiving environment and the policy package itself.

As the BRT case suggests, rather than an apolitical, neutral, and objective process, the process of policy development and implementation responds to a mix of forces that range from local interest in policies to external impositions or conditional enforcement. Indeed, the process is shaped by economic and political powers that interact in complex ways within complicated environments.

By following the policy, this extended case study illustrated such issues that were developed in detail in the previous chapters. At this point, to close, I want to highlight the main contributions of this research to the literature and to other researchers engaging in this discussion.

1. From Policy Transfer to Policy Mobilities

The trajectory of the BRT policy discussed here speaks to the actual impossibility of wholesale policy transfer. Although not examined in detail, the trajectory of the policy from Curitiba to Bogota involved multiple parties, forces, and exchanges while requiring major adjustments to the point that Bogota pretty much took over the "best practice" label from Curitiba in the world of transportation. Similarly, for the specific case of Colombia, the effort of the national government to transfer the policy wholesale from Bogota to other major cities in the country proved inadequate; not only did it show the impossibility of such undertaking

(theoretically and practically) but showed the need for caution and flexibility both in assessing the potential of the policy and embedding it in the local context. Despite the commitment of Colombia's national government to making the policy a success, each experience has been different and results differ from those obtained in Bogota. Whereas successfully designing and embedding BRT in Bogota took various decades, involved multiple political actors, promoters, and included myriad debates, trials and errors and adjustments, the "quick fix" approach in other cities of Colombia fully revealed how different local milieus are, how differently they respond to the same stimulus, and how different the outcomes are (even if forcefully pushed down the throats of localities).

2. The interactive and transformative character of policy mobilities today

As cities become increasingly connected across the world, they get restructured and re-accommodated as do their policies' interactions at all levels, from the municipal through the national to the international. I pointed, for instance, to the ways in which local debates branched out into other cities of Latin America; the ways in which national changes in urban statutes and roles (e.g., decentralization, redistribution and de-concentration of national functions and responsibilities, direct election of mayors, and enactment of new legislation for cities) shifted responsibilities and gave cities more control over local plans; in which the electoral agendas of national and local politicians opened and closed doors; in which public-private partnerships rearranged processes of policy making while engaging new parties (e.g., the Inter-American Development

Bank, the World Bank, think tanks, and independent technical assistance providers); and the emergence of what amounts to a new industry of policy mobilities involving these and other parties.

By the same token, these transformations introduced new hierarchies and scales in the process of policy making, policy packaging, policy mobility, and policy implementation. Whereas Bogota presided largely over the process that led to the construction of TRANSMILENIO, the national government took the initiative for other cities in the country, each of which did not have much of a role in designing its BRT systems and indeed did it under pressure ("take-it-or-leave-it, but you better take it"). The cities were largely limited to the role of implementation and had to follow guidelines designed by the national government with international assistance. Still, the BRT policy changed in major ways in its implementation producing very different outcomes in Bogota and Bucaramanga. Meanwhile, these cases show how the local context can hurt the intentions of the policy and produce questionable partnerships; as indicated in the discussion, first in Bogota and then in Bucaramanga, government had to make major concessions to bring the policy to fruition by reincorporating the private forces traditionally controlling public transportation at great cost to the model that ended up retaining the patronage of the past and could not eliminate many pre-existing arrangements.

Still, the model introduced alternatives to prior urban public transportation policies and practices. In fact, it forced former bus companies away from the renteerism associated with "routes permits" and discouraged political connections with investors and participants in the

emerging system. The end product was a syncretic mix or hybrid of traditional and new BRT system practices that modified the local equation but did not transform it fully. This is yet another example of the accommodations and alterations of policies, in this case related to politics and power interests.

Similarly, BRT introduced significant changes in infrastructure, city operations, and public transit. As one of the most recognized transportation planners in the country confided to me, "all cities changed; they are all now different, and that is a big change." The system also reduced some negative externalities (e.g., contamination levels dropped, bus fleets were renovated, and environmental standards were introduced), while functioning as a powerful pedagogic instrument that challenged citizen behaviors and engaged them in the discussion of public space and transportation.

As part of the implementation of BRT systems all cities were required to have their Public Space Manuals updated, while infrastructure works had to fulfill the new urban standards for public spaces. In this way, changes were not limited to the streets of operation of BRT lines but included many proximal areas such as sidewalks, pedestrian bridges, and public open spaces.

Along the way, citizens learned about the potentially transformative role of mega-projects such as BRT becoming part of a debate that included more and more participants as projects get implemented. Moreover, urban transportation assumed multiple methods of engaging citizens in the discussion, supporting or active opposing publicly funded (and even private)

projects. As a result of these adjustments, the quality of service improved substantially, at least initially. Along with debates and improvements came citizen demands for pedestrian protection, historical patrimony, and alternative transportation modes.

Another transformative element resulting from this was the move from traditional "urban solutions" based on political arrangements to the incorporation of technical forces and mechanisms of accountability. Indeed, BRT brought to the table experts from multiple professions along with planners and public debates forcing the political process to include them and seek technically sound and high-quality solutions. Participation of financial entities (i.e., the World Bank and the InterAmerican Development Bank) was critical for accountability because they introduced and required new systems of negotiation and standards of quality tied to the financial support of the projects. Still, echoing Winston Churchill's statement that "urban transportation systems are too important to leave in the hands of engineers," citizens and politicians stepped in to the mix.

Although urban planning and policy has a long traditions in Colombia, politics of patronage often pushed them to the side assigning them a secondary if not marginal place in urban development. BRT and new national legislation, however, moved public policy to the center stage in urban development. Indeed, transportation was included in the *Planes de Movilidad Urbana* (Urban Mobility Plans) required of all municipalities making transit a critical element, while calling for comprehensive and integrated programs for road network expansion and maintenance with multiple modes of transportation.

The national BRT policy demanded major improvements in local technical capacities and institutional settings. This was a major role of *Entes Gestores*. Unfortunately, local politics prevented the full realization of this aspect as they absorbed these entities into the bureaucracy of traditional political practices. Although entities such as universities are trying to fill this void, this aspect of the policy remains in the "to do" list.

Meanwhile, the policy had to adapt to the structure of municipalities. Although public transit affects the entire metropolitan area of cities, municipalities have resisted attempts to establish authorities to assume primary responsibility for metropolitan-wide issues. Along these lines, rather than challenging the existing order, the national BRT policy was designed from a municipal perspective and the completeness and integrity continues to be subjected to the wishes and possibilities of different municipalities. This is a major factor because the competitiveness of cities and their regions may be functions of their synchronization. In short, while forcing changes and adaptations, the policy had to be also changed and adapted to fit local conditions and powerhouses. Similarly, rather than replacing ancestral systems of patronage and special interests, the policies often had to include them.

3. The Scalar Dimensions of Policy making

As previously discussed, President Uribe turned BRT into a national policy taking the initiative away from municipalities despite major efforts at

decentralization preceding the policy. To a large extent, as is often the case with policies of this sort, paraphrasing Peck (2001: 247), the practical achievements were probably "less important than the political and ideological messages... convey[ed]." Announced with great fanfare, the policy's actual impacts were never assessed against the claims or the goals.

Still, the BRT national policy caused a major stir up in urban transportation policy. In fact, the policy movement from Bogotá to other Colombian cities via a National BRT program made urban transportation a critical priority of local and national government. Not only did it transform the national system presiding over public transit, but it also introduced new relationships and new institutions to coordinate the work between national policies and local areas. In this way, the country that had gone from centralized to decentralized a decade earlier got recentralized in a new way in which national government set national urban policies and municipalities implementing them. This process introduced a new system of accountability in which municipalities were either required to operate within particular parameters (e.g., mandatory development of POT's to guide local development) or had to implement national programs as a condition to receive funds (in this case for their transit systems).

In this way, the national BRT policy reduced the ability of municipalities to engage in ad hoc, corrupt interventions as the national government watched over their shoulders conditioning revenue transfer to compliance.¹⁰¹

¹⁰¹ This is not to say that corruption was removed. In fact, as indicated throughout this analysis, it was re-inserted in new ways. Still, to an extent, it was forced to operate within a new framework of accountability and technicality.

For the first time, a local issue became a major national priority improving the capacity of municipalities to carry out large projects via co-financing. Moreover, BRT introduced a new partnership between national and local governments in which the former provided funds and guidelines and the latter was required to change many of its ways. In particular, it introduced partnerships based on the articulation of interests and revamping of traditional ways of doing things behind the scenes.

Most importantly, the BRT model introduced new actors into the policy-making process and new possibilities for cities in the neoliberal form of public-private partnerships with multi-scalar actors. Public transit in Colombia had always been in the hands of the private sector, but BRT introduced new ways of doing business with government for the purpose of making systems and investments more efficient. Furthermore, it brought in international firms and institutions improving the capitalization of transit systems and bringing in new technologies and logics, while transforming roles and modus operandi of governments and linking experts and systems across borders.

Starting with technical expertise, it gave many Colombians the opportunity to expand their reach beyond the local and national levels, and it also inserted experts from other latitudes into the process. Whereas Brazilian transportation and urban planners dominated the field prior to 2000, TRANSMILENIO launched its Colombian experts into the international scene, becoming part and parcel of the policy mobilities entourage. Named "the TRANSMILENIO generation" (by an interviewee), TRANSMILENIO's experts and even politicians partook in international think tanks, marketed BRT throughout the world staffing agencies such as EMBARQ and the World Resource

Institute, became fare collection advisers, were invited to help design and implement BRT systems throughout the world, were appointed to multilateral institutions such as the World Bank, and helped revolutionize the discussion and search for transit solutions. Still, this was not a one-way street as they joined forces with experts from other latitudes that had jumped onto the BRT bandwagon early on.

A second major party was the business sector. The national scale of BRT in Colombia attracted many private investors, both national and foreign, in a context of private-public partnership arrangements. It forced former transportation businesses to reconfigure while also attracting new ones to generate transportation companies with a major stake in market expansion. Indeed, the demonstrative effect of TRANSMILENIO among early investors caused them to seek participation in other Colombian cities. In this case, however, political agendas gave preference to local companies that would eventually grow while seeking also opportunities beyond their cities. Eventually, the companies BRT helped expand or form participated actively in BRT projects in other cities throughout Latin-America (e.g., Santiago de Chile, Lima, and Ciudad de Panamá). In turn, this development was facilitated by the agenda of neoliberal globalization to open borders to investors and expanding markets beyond the local. This is an example of the multiplier effects that policy transfer and policy mobilities research has paid little attention; meanwhile, it has invited researchers to explore the ties between neoliberalism and policy mobilities, especially as the industry that formed around BRT became a major force in the diffusion of such policies.

The third major effect relates to the division of labor between government and the private sector. While government assumed the full financial responsibility for infrastructure development, construction, and maintenance, and regulation, the private sector assumed the profitable aspects of the system. Perhaps motivated by issues such as improvements in service quality, efficiency, sustainability and worker's accountability, changes included private transport companies' operation, tax payments, professionalization of the work force, labor regulation compliance, and the introduction of strict technical and safety standards. Along the way, BRT intervened to formalize what had been a highly informal and corrupt transportation sector.

This division did not eliminate but actually generated major tensions between the public and the private spheres, as traditional beneficiaries of public transit resisted changes and managed to reintroduce many of their old ways of doing business into the new arrangements. While advocates of government ownership of natural monopolies called for arrangements that produced returns to the public coffers, neoliberal opponents argued that the role of government was to create markets for the private sector and assume responsibility for those aspects that are not profitable. The discussion will not fade in the foreseeable future, as debates associated with public transit and BRT have captured the attention of citizens that want to oversee more carefully the ways in which their taxes are used. At the same time, local traditions and arrangements have introduced variations in this divide. This is the case of Medellin where the BRT system is operated by the same public company that runs the (public) METRO system.

Ultimately, the national BRT program molded the urban public transportation system to the demands and needs of private local transportation actors, rather than tying it to the demands and needs of the urban system itself. In this way, the transportation businessman is the central figure and priority; this arrangement would prove particularly challenging in the long run for TRANSMILENIO. For instance, facing extreme overcrowding in peak hours, BRT has reached an impasse with private operators benefitting from it. This is a critical issue as once again businessmen continue profiting while users confront the nightmares of overcrowding and diminishing quality of service. A further matter has come from BRT systems in other cities where businesses claim that their profitability has suffered and that government should compensate them or pay back their investments.

A fourth major party in the development of BRT in Colombia consists of multinational entities, particularly the World Bank and the Inter-American Bank. While reluctant at the beginning, these entities jumped fully on the bandwagon once TRNSMILENIO showed its profitability and feasibility. With them came new requirements and dynamics. As mentioned earlier, World Bank participation enhanced the bidding process and introduced practices and requirements that increased the accountability of participants. It also insisted on the profitability of the systems and made sure investors would be paid.

Somewhat justifying the early reticence of such institutions to participate, profitability and sustainability became the Achilles's heel of BRT. The expectation that demand would generate enough resources to cover the private operation of bus fleets and fare collection, to retire the debt, and to pay

for operation design, control and expansion while generating funds for infrastructure and its maintenance turned out simplistic and overoptimistic. This expectation and the promotion of the system globally, indeed, attracted the involvement of investors of all sorts. But results did not live up to expectations—how could they?—and the system is starting to suffer financially; as a result, banks are not extending credit as easily; the case of Cartagena is a major example because the system started with limited support, implementation came to halt, and only recently began operations. To a large extent, this problem can be attributed to the expectation that BRT would produce the same results it did in Bogotá. Some blame shortcoming on the dominant role of businesses and profit. Others argue for a heavy-hand directing all public transportation or for heavier subsidization and incentives to the private sector.

4. Global scenarios, the larger scale and the remaining questions

One of the initial questions I raised in the early stages of this research referred to the arena in which urban policies, under contemporary neoliberal arrangements, are defined and shaped. This research points to the local as the major scenario in this front. But my research also pointed to the growing role of national arenas and global forces in determining local agendas. The question barely explored here is the extent to which localities benefit and the distribution of positive and negative impacts.

TRANSMILENIO is a great example of a locally born initiative that achieved a global dimension facilitated by new communication technologies and new international arrangements. It also illustrates the increasing role of

policy diffusers in this outcome, most particularly in the production of what could be called a global industry of public transit. Perhaps we could blame business considerations for a process that focused too much on the product while neglecting the process. This analysis revealed how this success can turn perverse as product packaging discounts the feasibility and profitability of projects in different contexts and the complex process of policy fitting. While TRANSMILENIO was the product of a long term journey of exchanges, trial and error, local debates, and policy implementation, the policy industry marketing the actual outcome and trying to force BRT systems everywhere failed to acknowledge the complexities of policy mobilities and the critical importance of embedding for their success.

This situation points to the need to turn away from simplistic "best practice" recipes. The soft factors of success associated with complex local processes should be researched carefully.

The central question for BRT systems is the extent to which the recipe was possibly oversold or the extent to which different local experiences inform a process of policy mobility that transports the idea but needs to embed it in each specific context. As it appears, BRT is no panacea but it can be a critical component of a system that synchronizes different models of development within an integrated urban transport system (as Japanese Consultants viewed it). Now that BRT has been tried in different contexts and scales and in smaller and larger cities, researchers can examine the extent to which it can contribute to different arrangements and types of cities.

The experience of Bucaramanga, for one, shows the creativity of users and providers in the development of alternatives of their own. Rather than trying to discourage them, say, to guarantee the success of BRT as has been the case in Bucaramanga, cities should encourage and include other forms in the public transit package in the production of flexible and ever-adapting systems. While citizens demonstrated great resourcefulness to manage the uncertainties and delays of BRT in Bucaramanga, packaged systems seem to rely on highly inflexible and expensive systems that place additional burdens on public budgets and users. Meanwhile, the neoliberal ways in which responsibilities are divided between the public and the private sector hold systems such as BRT hostage to private sector interests to the detriment of users. Hence, there is a great need to keep the door open for other arrangements that hold the private sector accountable while better distributing responsibilities and impacts.

5. Contribution to existing literature and subsequent research possibilities

One of the most relevant contributions of this dissertation to the literature on policy mobility is the in-depth study of a particular policy mobility that is not traditionally observed or analyzed, that is one that moved initially within the so-called South and then developed into a worldwide policy. In this way, this dissertation examines the global scope proper of policy mobilities under contemporary neoliberal scenarios in which capital moves within a global network of nodes and connections indifferent of traditional geographical taxonomies.

For the case of BRT policy in Colombia, this dissertation demonstrated that the policy is not the result of "rational choice" mechanisms but the result of long-term complex power relations that were already proposed by McFarlane (2010), Peck & Theodore (2010), McCann (2011), and McCann & Ward (2011). Rather than reducing the analysis to its technical aspects, this dissertation traced the power structures through which capital got allocated into the BRT projects moving from the local to the national level and connecting local, national and international forces and interests. According to McCann and Ward (2011, p. 30), urban policies have been tied closely to international arrangements and rearrangements (policy mutations) changing and shifting in their interactions with local actors. This dissertation demonstrates that, although the case of BRT in Colombia has a lot to do with international investors, multinational corporations, and global trends, the policy was not imposed. Rather, it was the result of complex relations resembling Foucault's "power archipelago." As McCann and Ward (2011, p.30) stated, "external ideas are more likely to gain purchase when they are seen to benefit local agents or when local agents purposefully seek them out". This dissertation clearly demonstrates the benefits that accrue when local transportation systems incorporate foreign ideas on their own -rather than merely buying into foreign packages and approaches developed in and for other latitudes and environments. It also shows how local actors were capable of embedding them in specific local arenas.

This dissertation is a major example of the modifications and assemblages of general policy concepts when implemented in and by local actors. The idea of a BRT for Bogotá mutated for more than half a century according to existing technologies, social and economic contexts, and political

arrangements until it was finally packaged under the label of TRANSMILENIO. The idea became, in the words of Peck and Theodore, an "open-ended and politicized processes of networking and mutation across shifting social landscapes" in Bogotá and later in Bucaramanga as the idea became a national policy.

The research presented within these pages is capable of demonstrating that policy assemblage and alterations are a good, interesting and relevant perspective for understanding complex policy scenarios such as the BRT policy transfer from Bogotá to other cities in Colombia (Bucaramanga, for the case of this dissertation). Foucault's ideas of the power archipelago were particularly useful as they showed that power is not monolithic or concentrated at any level but rather diffuse and changing. Differently, the case of Colombia points to a multi-agent arena with multiple parties and arrangements. While exposing the complexity of policy formation and implementation, it seems to actually profit from the effective participation of multiple parties and forces. Not only is power diffused but it is also a heavily territorialized as Brenner (1998, 2003), Smith (2001), and Mansfield (2005) had already suggested. Place-making is the result of tensions among agents who sometimes act as partners but others as enemies while they are looking after their own interests. This complex tension is rather the norm than the exception suggesting that policy is the product of negotiation and adjustments among social actors. The territory becomes the arena where power negotiations became plausible, re-territorializing the policy mobility as it moves from one place to another.

This dissertation adds to the body of literature of the South while at the same time challenging orthodox theories and practices of policy formation and transfer. It illustrates one of the ways in which policy operates in today's neoliberal world challenging researchers to contextualize their analyses and enrich them with case studies. Despite significant advances in the policy literature in Latin America, most policy transfers remain unexplored depriving the world of policy of the multiple possibilities and scenarios in today's multi-directional world. The development of new cases and new forms of inquiry incorporating the types of factors included in this dissertation can be extremely useful to understand the increasing field of policy mobilities and, for our case, the future expansion of BRT systems in other cities in the region. The detailed study of Local cases such as those of Santiago, Lima, México City can shed new light into the process particularly if inserted in the context of policy mobilities across cities, countries and regions. Furthermore, the expanded study of the Latin American region might be a great opportunity to observe how capital finds new ways of allocation within massive investments in urban public transport as well as the relationships that form between public and private concerns and the possibilities of win-win processes.

As much as I tried to include all actors and forces, I could not possibly explore them in the required depth and scope. A case in point is the role of think tanks in policy mobility. This research pointed to the role of EMBARQ and ITDP have played in the mobility of BRT policy within Latin America and other parts of the world (mainly Asia and Africa). Indeed, both have emerged as command centers for the BRT policy operating, as clearing-houses for information (Stone (2000) and as advocates of BRT projects and programs.

Involved in domestic and transnational policy networks, they have been bringing together the multiple concerns involved in the design and implementation of the BRT policy and providing expertise on its various aspects. Both have developed projects inspired by TRANSMILENIO in places such as Guangzhou, China, and Istanbul, Turkey, that have been replicated in other cities within a certain degree of proximity to the initial BRT project city. At the same time, however, think tanks may be tied to concerns more interested in selling the system than in examining carefully the possibilities and limitations of the policy. Hence, there is a need to examine them and other parties involved in the discussion and diffusion of policy packages such as BRT from a critical perspective, exploring the extent to which they operate as disinterested nodes of ideas interchange. Documents, reports, conferences, meetings, reports, and multiple other sources can provide information to study the role of these think tanks in promoting and mobilizing the BRT policy. Similar inquiries can examine political agendas such as the expansion of TRANSMILENIO to other cities of Colombia and the issues associated with transnational firms and concerns more interested in selling a product than a solution.

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APPENDIX

1. INTERVIEW GUIDE

POLICY MOBILITIES AND URBAN CHANGE IN COLOMBIA: REMAKING URBAN LANDSCAPES AND RETHINKING URBAN PLANNING THROUGH IMPLEMENTATION OF BRT POLICIES

Principal Investigator: Diego Silva Ardila
Doctoral Student at CUPPA
Professor at Universidad Industrial de Santander

Date: January 2015

NATURE OF STUDY: This interview is part of research on the implementation of a national policy for BRT systems in Colombia; specifically, I am studying how policies move and are transformed or adapted as they get applied to different contexts. For this, I will follow actors, processes and outcomes in the implementation of BRT in Colombia paying attention to how physical landscape and institutional arrangements were modified in order to achieve transportation improvements.

CONTEXT: Development of improved urban public services has become one of the most significant tasks of urban planning today. For this, new strategies such as indirect subsidies, private-public partnerships or direct private investment are being developed by the day. Along with them, cities have been embracing tools and approaches developed elsewhere. In this way, the process of moving ideas, people and resources from one location to another is becoming a critical force that needs to be carefully explored both to understand how it works and to determine issues of adaptability of policies to different environments. As part of my study of these issues, I am interviewing people like you who have participated in the implementation of Colombia's BRT policy.

PROPOSITION TO BE EXPLORED: My research is guided by these propositions:

Proposition #1: Global capital has found a major opportunity of investment in large public undertakings such as dams, historical centers and transportation concepts. To bring opportunity to fruition, it has relied on actors such as think tanks, banks and industrial corporations to sell, package, finance and oversee them. This is the case of BRT

Proposition #2: The reproduction of the relatively successful case of Bogotá's BRT system in other cities resulted not only because it was a model easy to replicate but also because there was already a set of actors interested in expanding their operations and the national scale was the appropriated arena to facilitate it.

Proposition #3: Local arenas did not actively participate in the BRT policy design; rather they received guidelines in the form of national policy that were then packaged by a set of actors and experts; still, they were charged with the responsibility of the running of the systems.

INTERVIEWS: I am conducting a series of semi-structured interviews of relevant participants to gather their experiences by both asking core questions and engaging in more informal exchanges about their participation and the process and results.

CORE RESEARCH QUESTIONS:

- Background (nature and extent of participation in the implementation of BRT systems)
- Participant entities and their respective roles
- Process of policy transfer/mobility (how BRT moved from the national policy to the local level, what, if any change/adaptations it underwent and why were they needed)
- How or to what extent did the implementation of BRT introduced new forms of urban investment and project development? Specific examples
- How would interviewee assess the entire process in terms of challenges, positive and negative experiences?
- What would have they changed had they had the knowledge or the opportunity to do it?
-

OUTLINE OF TOPICSTO BE ADDRESSED IN THE INTERVIEW:

PART A. Issues regarding global dynamics and international influences of policy ideas, design and implementation

- How did international / global actors participate in the different stages of BRT project development?
- What type of international and global links can be traced for the different phases of BRT project implementation in Colombia?
- What type of actors where involved during BRT project development in Colombia?
- Were there any formal international or global events and scenarios such as conferences, missions, or agreements prior to or during design and implementation stages?
- Were there any informal international or global links and scenarios that may have influenced the implementation of BRT projects in Colombia?
- How international/global dynamics did influence national and local actors during BRT project development?

PART B: The role of "Bogotá's BRT model" and National Institutions in the development of a national program.

- Why and how did Bogotá's BRT project (Transmilenio) become a reference for future projects? What were its strengths and weaknesses?
- How did media, academics and political actors viewed Bogotá's BRT when developing a national policy?
- What stakeholders were part of the design, discussion and presentation of the National BRT Policy?
- How did stakeholders interacted with each other and what types of interaction scenarios were developed?

PART C: Articulation of BRT projects spatial, economic and political constraints at the local level

- How were local arenas perceived and considered within national BRT programs? Was a role assigned to local actors? Which roles?
- How did local actors understand BRT projects and how did they interact with the National Policy?
- What types of scenarios (conferences, missions, agreements) emerged during the implementation process regarding the interaction among international/global and national agents with local actors?
- What was the role of international/global actors and national level policy makers during the design, planning and implementation stages of BRT projects at the local level?
- How (or did) national and international/global actors did reframe their role while BRT projects were finalized?

Interviews will adapt to each respondent according to his/her position, role, time in the process. Each respondent will have different backgrounds and experiences in the implementation process; therefore their knowledge will be limited to such factors. The main goal will be to capture vast amounts of information that allow me to understand the dynamics that took place among the different governmental and interaction levels and to reconstruct the process on the basis of the information they provide and the other sources of information used.

2. RECRUITMENT MATERIALS

The research "Policy Mobilities and Urban Change in Colombia: Remarking Urban Landscapes and rethinking Urban Planning throughout implementation of BRT Policies" will be conducted as a requirement for graduation for the Doctoral Program in Urban Planning and Policy. Research design involves interviews with multiple actors involved in the process of planning, design, implementation and completion of the BRT project in Bucaramanga Colombia. interviewees will be identified through the review of documentation, written reports and media cover of the project followed by snow-balling. For recruitment I will use the following text in emails, letters or phone calls; this text will be used only to contact potential interviewees.

++++

Dear Mrs./Mr./Dr.

My name is Diego Silva Ardila; I have completed my PHD work in urban planning at UIC and am currently working in my dissertation. My research explores the implementation of the BRT system in Colombia. I learned that you have been involved in the process and would love to meet with you and learn from your experience and insights on the planning, design and implementation process; our conversation will be absolutely confidential as required by research protocols unless you decide otherwise; I will send you a consent form that describes this and the nature of my research in more detail. I would me meeting you at a location and time of your choice. Your contribution is critical for documenting the initiative, gathering lessons and hopefully applying them towards the improvement of such undertakings.

I truly appreciate your collaboration and am looking forward to the interview at your earliest convenience.

Diego Silva Ardila
Economist / Historian
Doctoral Candidate in Urban Planning and Policy
University of Illinois at Chicago

3. CONSENT FORM

University of Illinois at Chicago
Research Information and Consent for Participation in Policy Research
Policy Mobilities and Urban Change in Colombia

You are being asked to participate in a research study on policy mobilities and urban change in Colombia. Any Researcher is required to provide a consent form such as this one to explain the research at stake, to guarantee that your participation is voluntary, to describe the benefits and risks of participation, and to help you make an informed decision. Please feel free to contact the researcher for any further clarifications you may need.

Principal Investigator: Diego Silva Ardila
Doctoral Student (PhD Candidate)
Department of Urban Planning and Policy, University of Illinois at Chicago
412 S Peoria St., Chicago, IL 60605
dsilva4@uic.edu

Why am I being asked to participate?

You are being asked, along with nearly 30 others, to participate in this research because of your work or experience in the field and your relationship to the implementation process of Bus Rapid Transit projects in Colombia.

Your participation in this research is critical but voluntary. Your decision whether or not to participate will not affect your current or future dealings with the University of Illinois at Chicago. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

What is the purpose of this research?

This research project studies the implementation of Colombia's national BRT policies and the ways in which they are changed or adjusted in the process of implementation. The guiding question is: How policy mobilities are reshaping urban policy dynamics in Colombia and how these policies, in this case BRT National Policy in Colombia, have worked as instruments of new forms of urban investment and project development. With the information collected from interviews, reports, news, and other public sources, I will comply with the last requirement of my PhD studies. I expect that this research will be of useful to urban policy makers, planners and researchers and will be a possible source of improvement for future urban policy projects.

What procedures are involved?

If you agree to be in this research, I would ask you to participate in an interview with me as the Principal Investigator of the research project. The interview will take approximately one hour and will be at an agreed upon location. I would like to record your interview on audio tape but you are free to decline, in which case, I will take notes of the interview. Recordings will be transcribed excluding any information that may tie the

responses to you and then destroyed. Transcriptions will be kept in a safe, locked space for the period stipulated by IRB.

What are the potential risks and discomforts?

To the best of our knowledge, the information you will provide has no more risk of harm than you would experience in everyday life professional conversations on the topic. You may feel uncomfortable sharing your insights or issues related to the BRT implementation process and the policies involved. However, the confidentiality of the information will protect you against any harm that might come from your opinions or the information you provide. A risk of this research is a loss of privacy (revealing to others that you are taking part in this study) or confidentiality (revealing information about you to others to whom you have not given permission to see this information). However, as mandated by research protocols, I will keep all documents under my surveillance and make sure that this does not happen. In processing the information, I will use anonymous identifiers and destroy any evidence linking you to the responses. However, if for some unexpected reason your identity is revealed, the data may impact your relationship with the people or agencies involved in the process.

Are there benefits to taking part in the research?

This study is not designed to benefit you directly. This study is designed to learn more about how policy is implemented drawing lessons from other cities and how they impact urban change. The study results may be used to help and improve policy implementation projects in the urban realm and beyond. In this way, you will be contributing your experiences and insights to perfect the process.

What other options are there?

You have the option to not participate in this study.

What about privacy and confidentiality?

I am the only person who will know that you are a research subject; other than me, only the members of my dissertation committee would be able to know in case they wish to verify that I completed the interviews. Otherwise information about you would only be disclosed to others with your written permission, or if necessary to protect your rights or welfare or if required by law.

When the results of the research are published or discussed in conferences, no information will be included that would reveal your identity -unless you explicitly choose to have your name attached to your responses.

All data will be stored in a secure facility. Digital audio files and transcripts will be held on a secure, password-protected computer system that is only accessible to me until they are destroyed.

What are the costs for participating in this research?

There are no costs to you for participating in this research.

Can I withdraw or be removed from the study?

If you decide to participate, you are free to withdraw your consent and discontinue participation at any time by telling the researchers. You may also refuse to answer any questions you don't want to answer and still remain in the study. The Researchers also have the right to stop your participation in this study without your consent if they believe it is in your best interest.

Who should I contact if I have questions?

Contact Diego Silva Ardila at +57-310-2969481 or by email at dsilva4@uic.edu if you have any questions about this study or your part in it, or if you have questions, concerns or complaints about the research.

What are my rights as a research subject?

If you feel you have not been treated according to the descriptions in this form, or if you have any questions about your rights as a research subject, including questions, concerns, complaints, or to offer input, you may call the Office for the Protection of Research Subjects (OPRS) at 312-996-1711 or 1-866-789-6215 (toll-free) or e-mail OPRS at uicirb@uic.edu.

Remember :

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University. If you decide to participate, you are free to withdraw at any time without affecting that relationship. Research depends on the participation of people like you but respects your willingness to participate or not

Signature of Subject or Legally Authorized Representative

I have read (or someone has read to me) the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction. I agree to participate in this research. I will be given a copy of this signed and dated form.

Signature

Date

Printed Name

Signature of Person Obtaining Consent

Date (must be same as subject's)

Printed Name of Person Obtaining Consent

VITA

Diego Silva Ardila

diegosilvaardila@gmail.com

Tel: +57-310-2969481

Economist and Historian (*Universidad de los Andes*, Bogotá, Colombia) with a Master's degree on Economics at *Universidad de los Andes* and Masters in Political, Economic and International Affairs at *Universidad Externado de Colombia* with interests on public economics, local development and urban planning. Advanced computer skills on statistics, information processing, econometrics, geographic information systems (GIS) and agent-based modeling. Work experience on the private sector, government and public affairs both at a national and local scale with strong academic skills particularly on research. Doctoral Candidate on *Urban Planning and Policy* at University of Illinois at Chicago. Professor and Researcher in the School of Economics at *Universidad Industrial de Santander* in Bucaramanga, Colombia. Former Deputy Director of Colombian National Statistical Office (DANE) and former Board President for Colombian National Geographic Institute (IGAC).

EDUCATION

UNIVERSITY OF ILLINOIS AT CHICAGO

Chicago, EEUU

FULBRIGHT SCHOLAR

Ph.D. (c) *Urban Planning and Public Affairs*

Dissertation: Policy Mobilities and Urban Change in Colombia: Remaking Urban Landscapes and rethinking Urban Planning through implementation of BRT Policies

UNIVERSIDAD EXTERNADO DE COLOMBIA

Bogotá, Colombia

Maestría en Análisis de Problemas Políticos, Económicos e Internacionales Contemporáneos

Dissertation: City and Globalization - Graduation: May 2010

DIPLOMACY ACADEMY SAN CARLOS

Bogotá, Colombia

MINISTERIO DE RELACIONES EXTERIORES (Foreign Affairs Office)

Diplomatic Course (One Year) - National Selection

UNIVERSIDAD DE LOS ANDES

Graduation: March 18 de 2006

MASTER IN ECONOMICS (PEG)

Bogotá, Colombia

Dissertation: City and Industry: Agglomeration and Industrial Localization in Bucaramanga

UNIVERSIDAD DE LOS ANDES

Graduation: September 18 de 2004

ECONOMIST

Bogotá, Colombia

Majoring: Macroeconomics, Microeconomics y Econometrics

Tutor on: Econometrics, Game Theory, Monetary Policy, Project Evaluation

UNIVERSIDAD DE LOS ANDES

Graduation: April 9 de 2005

HISTORIAN

Bogotá, Colombia

Majoring: Research, Sources, History of Latin America and Colombia

Tutor on: General Geography

FUNDACIÓN COLEGIO UIS

Graduation December 4 de 1999

BACHILLER (HIGH SCHOOL)

Bucaramanga, Colombia

Honor degree, High Score in National Tests (ICFES)

WORKING EXPERIENCE

Professor School of Economics August 2006 – Present
UNIVERSIDAD INDUSTRIAL DE SANTANDER

- Design, Management and Teach for research seminars at final career semesters
- Research projects participation mainly in Urban Economics Topics.
- Teaching basic career cycle courses for Economics Undergraduate program

Deputy Director National Statistics Office December 2013 – July 2015
DEPARTAMENTO ADMINISTRATIVO NACIONAL DE ESTADÍSTICA (DANE)

- Management and coordination of technical directions and special project leadership (Data Revolution Agenda, OECD access, DANE modernization strategy, National Agriculture Census)
- Horizontal teams and strategy articulation for multiple strategic projects
- Participation on principal decision making committees: Directing Committee, Technical Committee, Statistical Reserve Committee, Communication and Data Dissemination Committee.

Board President National Geographic Institute January 2014 – July 2015
INSTITUTO GEOGRÁFICO AGUSTÍN CODAZZI

- Preside directing board meetings bimonthly
- Decision making process support for main planning, management and execution decisions
- Coordination with board members for actions and decisions follow up.

Information Systems Consultant June 2012 – December 2013
ECONOMETRÍA Project Director Arturo García

- Geographical Information System construction for urban/rural analysis
- Database processing and analysis for economic and social variables for disaggregated geographical levels (urban scale) for Colombian National Cities Planning Strategy
- Reports and Document writing presenting final research results

International Cooperation Advisor January 2006 – June 2006
MINISTERIO DE RELACIONES EXTERIORES (FOREIGN AFFAIRS OFFICE)

International Cooperation Office

- International Cooperation Projects Follow up. North-South and South-South Cooperation.
- Support on Foreign Affairs Policy design on International Cooperation
- Institutional coordination with National Government Agencies for International Cooperation.

Economic Advisor January 2004 – May 2004
CÁMARA DE REPRESENTANTES (House of Representatives)

Honorable House Representative Gina Parody

- Follow up to principal structural economic reforms
- Analysis of economic related law projects
- Advising and support on economic topics for the Legislative Support Unit

Statistician and Econometrics May 2006 – August 2006
PROCTER AND GAMBLE October 2003 – April 2004

- Statistical models construction for principal company's variables
- Data Analysis and Data Mining for distribution channels and investment returns
- Multivariate models to understand company's outcome volume dynamic

RESEARCH EXPERIENCE

- Project:** *Land Market Dynamics in Latin American Urban Peripheries*
Teaching Assistant at the Urban Data Visualization Lad
- Institution:** UNIVERSITY OF ILLIONOS AT CHICAGO
- Director:** Prof. Moira Zellner and Max Dieber
- Research project on Latin America urban peripheries and Informality on land markets
Two years work experience Geographic Information Systems and Agent-based modelling
- Project:** *City Center of Bucaramanga - History and Future*
- Institution:** CITU - Colectivo Interdisciplinario en Temas Urbanos
- Director:** Diego Silva Ardila
- Financial:** Universidad Industrial de Santander, Chamber of Commerce and City
- Historical research and Urban Planning on Economic and Social areas
- Project:** *Development Urban Plans: An Evaluation -Metropolitan Bucaramanga*
- Institution:** Bucaramanga Chamber of Commerce
- Director:** Félix Jaimés
- Evaluation of the Development Plans for the Metropolitan Area of Bucaramanga and
Design and Development of a permanent evaluation for future administrations.
- Project:** *Urban Developmnet - Bucaramanga City Parks*
- Institution:** CITU - Colectivo Interdisciplinario en Temas Urbanos
- Director:** Germán Alfonso
- Financial:** Cámara de Comercio Bucaramanga and Corporación de Espacio Público
- Development of an intervention Project for Bucaramanga City Center. Analysis of
city parks system and the potential for the re-building of the city center.

ACADEMIC CONFERENCES

- UAA Annual Conference** Pittsburgh, Abril 20 de 2012
- *Urban Land Markets and Informality in Latin American Urban Peripheries: An Agent Based Model Approach*
- AAG :: Association of American Geographers Conference** New York, Febrero 24 de 2012
- *Mobilizing Mobility: A taxonomy of Urban Policy Mobility for the case of Bus Rapid Transit (BRT) Systems in Latin America*
- ICA-ISPERS Joint Workshops on Geospatial Analysis and Modeling**
Complex World: Representation, Analysis and Modeling
Simon Fraser University Vancouver, Canada, Agosto 11 de 2011
- *Land Market Dynamics in Latin American Urban Peripheries*
- II Congreso Internacional de Gobernabilidad Áreas Metropolitanas**
Bucaramanga, Marzo 24 de 2011
- *Necesidad de cohesión y coherencia en la Economía urbana*
 - *Los arreglos metropolitanos en Estados Unidos, una mirada a la ciudad y a la planeación*
- GLP :: Global Land Project 2010 Open Science Meeting**
Tempe, Arizona Octubre 17 de 2010
- *Informal Land Markets in Urban Peripheries in Latin America*
- ACSP Annual Conference** Minneapolis, Minnesota, Octubre 10 de 2010
- *The Latin-American Urban Network: Complexity and agent based modeling*
- EUURA :: European Urban Research Association Conference 2010**
Darmstadt, Septiembre 25 de 2010
- *Spatial reconfiguration in Latin-America: From Nation-states based strategies to Urban Networks dynamics*

AAG :: Association of American Geographers Conference

Washington, Abril 15 de 2010

- *The city as a possible answer to the 'state question'. An approach from the Latin American case*

UAA :: Urban Affairs Association Conference

Honolulu, Hawaii

Marzo 12 de 2010

- *Complex Urban Networks through the Lens of Agent-Based Models*

TEACHING EXPERIENCE

ECONOMICS SCHOOL

UNIVERSIDAD INDUSTRIAL DE SANTANDER

UNDERGRADUTE COURSES: Urban Economics Seminar, International Economics and Politics Seminar, Planning in Colombia Seminar, Economic History and Introduction to Economics

MASTERS COURSE on Public Policy Planning Strategies

TERRITORIAL PLANNING MASTERS

September / October 2014

Professor Urban Expansion and Urban Growth Seminar

UNIVERSIDAD SANTO TOMÁS - BUCARAMANGA

NATIONAL ACREDITATION COUNCIL (MINISTRY OF EDUCATION)

Peer Reviewer

Professor Economics for Business and Microeconomics

August 2006 - May 2006

UNIVERSIDAD AUTÓNOMA DE BUCARAMANGA

Juan Carlos Hederich

Adjunct Professor Game Theory

January 2005 -

December 2005

UNIVERSIDAD EXTERNADO DE COLOMBIA

Luis Jorge Ferro Casas

Adjunct Professor Macroeconomics II/Macroeconomics III

August 2005 - December 2005

UNIVERSIDAD DE LOS ANDES

Fernando Jaramillo

Adjunct Professor Introduction to Economics

August 2004 - December 2004

UNIVERSIDAD DE LOS ANDES

Juan Carlos Echeverry

OTHERS

LANGUAGES

Good Level English and German

Basic Level Portuguese and French

Foreign Exchange Student

1998-99

AFS Aprendizaje Intercultural

Erlangen, Germany

- 11^o Grade at Emil-von-Behring Gymnasium
- German Couses at VHS (Volks Hoch Schule)
- Test Zertifikat Deutsch als Fremdsprache (Basic Level) - Puntaje: 1
- Test Zentrale Mittelstufeprüfung - Puntaje: 89/120

English Test

1994-99

CENTRO COLOMBO-AMERICANO

Bucaramanga, Colombia

- Michigan Test - Puntaje: 90%

- TOEFL - Puntaje: 567