OCTOBER 2014

Getting to the Route of It

THE ROLE OF GOVERNANCE IN REGIONAL TRANSIT

Eno Center for Transportation

TransitCenter

About the Eno Center for Transportation

The Eno Center for Transportation (Eno) is a neutral, non-partisan think tank that promotes policy innovation and leads professional development in the transportation industry. As part of its mission, Eno seeks continuous improvement in transportation and its public and private leadership in order to improve the system's mobility, safety, and sustainability.

As the leader in its field for nearly a century, Eno provides government and industry leaders with timely research and a neutral voice on policy issues. Eno's Center for Transportation Policy (CTP) publishes rigorous, objective analyses of the problems facing transportation and provides ideas for and a clear path towards possible solutions. CTP's policy forums bring together industry leaders to discuss pressing issues and hear from top researchers in the field.

Eno's Center for Transportation Leadership (CTL) is a premier training resource for the transportation industry, offering courses and seminars to develop leaders across the career span- from emerging professionals to mid-mangers, senior leaders, CEOs and boards of directors. CTL connects people and ideas to enhance cross-industry knowledge and build stronger public- and private-sector organizations in the transport sector. Since its inception, CTL has instructed over 3,000 transportation professionals.

About TransitCenter

TransitCenter is an independent civic philanthropy dedicated to sparking innovations and supporting policies that improve public transportation. TransitCenter believes new approaches are needed to change the urban landscape and empower communities, policymakers, businesses, and riders to take action. TransitCenter works through research, convenings, collaborations, and publications that inform and improve the practice of planning, financing, and operating transit that bolsters the overall vitality of our cities.

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Acknowledgements

In 2013, Chicago's Regional Transportation Authority (RTA) found that it was again struggling to determine how to best allocate existing funds to support their three transit operators. As this was becoming a consistent challenge, RTA invited outside expertise to help explore and identify best practices for regional transit funding. The winning consulting team, including Delcan (now Parsons), TranSmart and the Eno Center for Transportation (Eno), teamed up to investigate the funding practices within the Chicago region and to compare and contrast those practices with others employed across the country. Through this work it became clear that RTA's largest barrier to redesigning their funding allocation process was the institutional structures of transit within the region, which discouraged innovation and collaboration. These findings were the catalyst for this more extensive report.

Recognizing the influence that institutional structures can have over the transit network and its usability, Eno asked what lessons could be learned from other regions across the United States. Through evaluating the institutional structures related to transit in large metropolitan regions, what stories could we tell and how could we use their lessons to create larger policy change and to develop effective transit governance structures that drive the economies of both those urban spaces as well as the economy on a national scale? Around the same time, TransitCenter, Inc., a civic philanthropy, identified regional governance as a pervasive issue in the industry and provided funding to enable this research. Not only did TransitCenter choose to fund this research, but David Bragdon, TransitCenter's Executive Director and formerly a regional government official in Oregon,became an essential partner, helping to craft and conduct interviews, and assisting with drafts of the report. Without David, Shin-pei Tsay, and the entire TransitCenter team, this report would not have been possible. We are incredibly thankful for their efforts.

To conduct this research, the Eno/TransitCenter team traveled to six regions across the country, speaking to transit operators, metropolitan planning organizations, city and state governments, advocacy organizations, academics, and other thought leaders. For anonymity purposes their names are not listed here, but we would like to extend a warm thank you to each person who spoke to us through this interview process. Our work would have not been possible without their authentic responses and insights.

We would also like to thank those who reviewed our final report, including Arthur Guzzetti, Robert Paaswell, Robert Puentes, Jarrett Walker, and Martin Wachs. In addition, we would like to thank those regional experts who reviewed our individual case studies, helping us to ensure neutrality to the best of our ability. A special thank you to Ratna Amin, Nancy Amos, Eric Bourassa, Alison Brooks, Adam Duininck, Eric Gleason, Steven Heminger, Brian Lamb, Arlene McCarthy, Michael Morris, Mitchell Moss, Richard Mudge, Charles Planck, Mary Richardson, Jeff Rosenblum, Elliot Sander, Mike Scanlon, Peter Skosey, Dave Van Hattum, and Jack Wiersig. Each reviewer's comments were invaluable to refining both our content and our recommendations. We also extend a great thanks to the Regional Plan Association for hosting the release event for this paper.

This work would also not have been possible without the insightful work that was conducted by our team in Chicago. We would like to recgonize Keith Jasper, William Ankner, Richard Mudge, Donald Schneck, Lindsey Carroll, Chuck Wade, and Rich Kedzior. The work of our team in 2013 was a critical precursor to the research we were able to conduct for this report. We also received critical help from Benton Heimsath, Eno's 2014 Thomas J. O'Bryant Summer Fellow, and Eno's Senior Fellow Emil Frankel. Thank you for your helpful and meaningful contributions.

With the help of the many, many minds that came together to produce this research, we believe that we have been able to create a product that can help to illuminate the various approaches that are taken across the country to provide effective transit governance, and to define common themes and best practices. We hope that this work will be useful to metropolitan regions across the United States.

Joshua Schank
Eno President and CEO

Executive Summary

In 2013, a group of researchers, including the Eno Center for Transportation, visited Chicago to analyze the region's transit issues and make recommendations that could help Chicago's Regional Transportation Authority (RTA) overcome recurrent challenges in the distribution of transit funds. It soon became clear that RTA did not actually have a funding distribution problem—instead RTA's problems were rooted in the institutional arrangements that governed the region's transit network. The study also revealed that flaws in RTA's governance structure impeded its ability to coordinate regional transit service and related investment decisions, and contributed to chronic underinvestment in Chicago's transit network.

This revelation led to an obvious question: could regional governance be at the root of problems faced by transit systems in other regions? Some regions have struggled to create universal farecards with updated technology. Other regions have targeted investment to new projects while neglecting the core network. Many regions struggle with coordinating service and interfaces between different operators or transit modes. If regions attempt to solve these problems without resolving their governance issues, they—like Chicago—may be fighting a losing battle.

To learn more about how governance affects transit performance outcomes, Eno partnered with TransitCenter to travel to five other complex, urbanized areas to study their transit systems and the structures that govern them. The aim was to explore how different regional governance structures help foster—or hinder—the ability of different transit systems to deliver improved service, mobility, and innovation. This report summarizes insights and conclusions drawn from the experience of these six regions. Its findings are qualitative and inherently subjective as they are largely based on interviews conducted with senior officials at numerous organizations in each of the study regions. The goal of the report is to provide a resource for local- and state-level policy makers interested in understanding the transit governance structures of other regions, and in exploring opportunities to improve performance and customer experience on their systems. While recognizing that each region is unique in its history, jurisdictional boundaries, and transit network organization, this report concludes with several recommendations for improving existing transit governance structures.

This study is framed around the relationships between regionalism, funding, and customer service. An effective governance structure must address the fact that most bus and rail lines do not end, and should not end, at a city, county, or state border. Like other regional networks, transit can be more effective when it is planned, organized, and operated with a regional perspective. This report not only examines the governance of individual transit agencies, but also the larger interactions between organizations and the influence of funding and governance on the way investments and decisions are made. Recognizing that the ultimate goal of regional transit is to add economic, social, and environmental value by efficiently moving residents and visitors, this study adopts a customer perspective when evaluating different transit governance structures and their ability to deliver the kinds of services that enable regional economies to succeed.

The case study regions are Chicago, Boston, Dallas/Fort Worth, Minneapolis/St. Paul, New York City Tri-State region, and the San Francisco Bay Area. As a group, they represent diverse geographic regions and distinct approaches to complex transit governance issues. Through conversations with experts in each region, the team compiled key themes and lessons from each region and supplemented this research with additional data where necessary. Every case study was evaluated independently to demonstrate the different approaches that regions have taken, with varying degrees of success, to foster regional connectivity.

The first and original case study, the Chicago metropolitan area, is home to three transit operators (the Chicago Transit Authority, Metra, and Pace Suburban Bus Service) that are all under the umbrella of the Regional Transportation Authority (RTA). RTA distributes funding to each agency but has limited political or statutory power, and as a result allocates available revenues based on outdated formulas. For the RTA to use its funding authority to effectively push the individual agencies toward regional goals, it would need much greater authority than it currently enjoys. In part due to RTA's current governance structure, the region has struggled to coordinate transit service and adequately preserve its infrastructure.

The second case study region, Boston, offers an example of thorough consolidation: the state controls the region's primary transit operator, the Massachusetts Bay Transportation Authority (MBTA), through the state department of transportation. This consolidation has the benefit of giving the state a vested interest in funding the Boston region's transit system, but it also has the drawback of diminishing the influence of localities. Due to the state's large financial role, localities also do not make a significant financial contribution to the transit system, further undermining their ability to play a meaningful role in regional planning and investment decisions.

Dallas/Fort Worth, the third case study region, is home to the large Dallas Area Rapid Transit (DART) operator, as well as a smaller Fort Worth Transportation Authority (The T) and the Denton County Transportation Authority (DCTA). The region's MPO, the North Central Texas Council of Governments (NCTCOG), plays a substantial role in that it brings together the three transit districts and develops regional plans. The State of Texas has decided to play a minor role in transit planning and funding. In fact, state caps on sales tax rates all but prohibit many cities from adding their own transit services or joining existing providers' coverage areas. Meanwhile, projections show that much of the growth in the region is taking place outside the boundaries of existing transit districts, but there is little that regional bodies can do to target transit investments to areas of population growth.

The Minneapolis/St. Paul region is served by a transit system that is uniquely operated by the region's metropolitan planning organization (MPO), the Metropolitan Council (Met Council). In addition to Met Council, the Counties Transit Improvement Board (CTIB), a separate regional entity with transit capital and operating funding authority, plays a significant role in shaping the future of the region. The region is currently expanding its rail network through a regional sales tax. CTIB was established by the state legislature for the express purpose of allowing counties to tax themselves for transit investment and to help insulate the metropolitan area from the governor-controlled Met Council. Working together, CTIB and Met Council have the ability to check any action taken at the state level that they do not support, and vice versa. The Twin Cities case demonstrates that there are potential benefits to a governance structure in which the MPO operates the transit system.

The New York metropolitan region has the largest transit network in the United States. The Metropolitan Transportation Authority (MTA) operates most of this network, including subway and bus service in New York City as well as much of the commuter rail system. The Port Authority of New York and New Jersey (PANYNJ), a bi-state agency, operates the PATH commuter rail service and a major bus terminal while New Jersey Transit provides urban rail, bus, and commuter rail to and from New Jersey. Relative to ridership, suburban areas are disproportionately represented on the MTA Board compared to urban areas. This creates a tendency to overinvest in suburban capital projects, such as the Long Island East Side Access project, and underinvest in city infrastructure. It also may contribute to higher operating subsidies for suburban commuters. From a customer and service perspective, the MTA remains fragmented. This makes

regional fare collection more challenging, allows dueling territorial systems, and has the effect of delaying important technological upgrades. System fragmentation may also be adding to costs. But importantly for the New York region, the transit system as a whole derives substantial governance benefits from its access to independent sources of funding, with significant revenue flows coming from MTA-operated toll roads, tunnels, and bridges.

The San Francisco Bay Area is the least consolidated of the case study transit regions with 26 independent operators providing transit service across seven counties. However, the region's MPO, the Metropolitan Transportation Commission (MTC), provides a measure of consolidation in that it serves as a coordinating body and distributes funding among the operators. The Bay Area example demonstrates the potential value of empowering an MPO with funding authority over capital investments and operations. For a region with 26 operators and varying needs, MTC appears to be effective at coordinating and distributing resources using performance measures without causing major political disruptions or depriving some agencies of funding. Much like the MTA in New York, MTC's access to independent sources of funding sources coupled with an appropriate geographic reach seem to have empowered the agency to promote better regional decision-making. But even with a strong MPO, an over-proliferation of transit agencies operating different portions of a single network can severely inhibit effective region-wide planning and coordination. Interest in greater consolidation is an ongoing theme within the region, and many stakeholders point to the efficiencies and benefits that could be achieved through a greater integration of regional transit entities and local agencies.

Experience in each of the case study regions forms the basis for several recommendations aimed at facilitating the creation of unified regional networks, promoting effective funding decisions, and bolstering accountability for governance actions.

An effective MPO can provide a valuable mechanism for regional transit coordination. An MPO offers a natural venue for regional planning and coordination. MPOs are multi-modal in nature and can cover large metropolitan areas—as such they are naturally inclined to think about services and networks from a regional perspective. In regions where MPOs have assumed a greater role and authority, their influence on regional transit coordination has generally been positive.

Access to an independent source of funding can benefit transit planning and operations. Two of the regions studied—New York and the San Francisco Bay Area—have strong agencies with their own sources of dedicated funding from toll revenues. In New York, both MTA and PANYNJ garner substantial revenues from tolled river crossings, while in the Bay Area, MTC operates the Bay Bridge. In both cases these toll authorities, embedded in the largest transit agencies, have yielded substantial benefits for transit investment. In Boston, the MBTA may also derive some revenues indirectly from tolls by virtue of being housed within the same agency as the Massachusetts Turnpike Authority. A dedicated source of funding, such as surplus toll revenues, can help give agencies some of the necessary independence to make wise investment decisions.

State involvement, with appropriate accountability for outcomes, can provide benefits for transit. Metropolitan regions generate a disproportionate amount of economic output for states and the nation. With so much of the economy dependent on the performance of transportation networks in major metropolitan areas, state governments have a role to play in ensuring the success of metropolitan regional transit systems. In a few of the case study regions, notably Dallas/Fort Worth and the San Francisco Bay Area, the state role in funding and governance is limited. The result is that these regions are left to fend for themselves despite their disproportionate contributions to the state economy. State involvement, however, is a two-way street. State involvement does not have to reside within the department of transportation, nor does it mean that the governor should have a majority stake. And while it may be beneficial for states to take some leadership, states must also be held accountable

for regional transit outcomes. When there is substantial state involvement but limited accountability—as in New York and historically in Boston—transit agencies can be handicapped by underinvestment and overdependence on state funding. This is why the introduction of regional performance measures for transit (described below) is so important.

Regions need a performance-based capital planning system. Capital planning decisions are always going to be, and ultimately should be, influenced by political considerations. But political influences also create well-known challenges to sound, long-term decision-making. These challenges can be mitigated, to a degree, by introducing regional goals along with performance measures for evaluating progress toward the goals. Performance measures provide a check against capital investment decisions that may be motivated by purely political considerations, rather than by an objective assessment of economic benefits for the region.

Board representation and selection is critical. Several of the case study regions were plagued by unbalanced representation in terms of the localities that had a seat on the governing boards of the largest transit agencies. This imbalance often led to poor decision-making, typically in favor of overrepresented localities. Regions need to develop ways to ensure that (1) board representation better reflects the geographic distribution of transit users; and (2) board composition is dynamic enough to change over time as the region's transit needs change.

Consolidation typically provides policy and service benefits. Boston provides one of the most cohesive regional transit networks of the six case study regions. This success is related to the fact that the entire transit network is housed under a single entity, the MBTA, and the MBTA is part of the state department of transportation. Not all regions can create a single unified organization, nor would this necessarily be desirable, especially in larger states with multiple metropolitan areas. On the other hand, in some regions the fragmentation and redundancy caused by multiple agencies creates undue challenges. The San Francisco Bay Area offers a clear example of excessive fragmentation, with over 26 operators and half a dozen regional agencies working alongside MTC. While the MTC as a powerful regional entity provides many benefits, some of which are enabled by the proliferation of smaller transit agencies, stakeholders in the region express widespread agreement that some consolidation would be an improvement over the current situation.

When it comes to creating transit networks that are useful and efficient from the customer perspective, regions across the United States struggle with a variety of challenges including the ability to implement technological advances, make investment decisions that benefit riders, and coordinate service and interfaces between different operators or transit modes. While it may appear that a region's inability to update its fare collection system or maintain its transit infrastructure in a state of good repair is the result of technological or funding barriers, the likelier cause is a governance structure that does not have the proper capacity to implement changes or make pragmatic investment decisions. As this research reveals, the greatest challenges for transit are often rooted in the governance of—and subsequent interactions between—regional entities. While every region is unique in terms of its history, geographic make-up, and political and legislative constraints, each can learn from the experience of others to improve its transit governance structures in ways that will generate substantial benefits for transit users and for the regional economy as a whole.


Warehouse District
Jun 26, 2008
7:17 AM
112A
Metro Transit

PART ONE:

Introduction and Context

In 2013, Chicago's Regional Transportation Authority (RTA) found itself in a familiar position. Yet again, RTA could not reach agreement on how to distribute available discretionary funding to the region's three transit operators. The agency had confronted a similar impasse in 2012. Realizing this pattern of gridlock was unsustainable, RTA solicited a team of researchers, including the Eno Center for Transportation, to analyze the region's transit funding issues and make recommendations that could help RTA overcome the recurrent challenge of distributing scarce resources to meet a host of competing needs.

Over several months the research team visited the Chicago metropolitan area and spoke with dozens of representatives from each of the region's transit operators, state and local government agencies, the metropolitan planning organization, advocacy organizations, academic institutions, and other stakeholder groups in the region. The team analyzed the distribution of transit funding in the region and explored the governance and financing structures of large transit systems in other major metropolitan areas. Its findings indicated that RTA did not actually have a funding distribution problem. Rather, the region's transit challenges were rooted in the organizational structures and institutional relationships that governed the transit network. The study also revealed that flaws in RTA's governance structure impeded the coordination of regional transit services, hindered sound investment decisions, and contributed to chronic underinvestment.

These revelations about Chicago led to an obvious question: Could governance issues be at the root of problems faced by transit systems in other regions? Some of these systems have struggled to create universal farecards with updated technology. In others, recent investments have targeted new projects while neglecting the needs of the core network. Many regions struggle with coordinating service and interfaces between different operators or transit modes. If transit agencies attempt to solve these problems without resolving their governance issues, they may find—like Chicago—that they are fighting a losing battle.

Around the same time, TransitCenter, Inc., a civic philanthropy, identified regional governance as a pervasive issue in the industry and provided funding to enable this research. To learn more about how governance affects transit performance outcomes, Eno partnered with TransitCenter to travel to five urbanized areas across the country in addition to Chicago. The aim was to study several complex regional transit systems to explore how different governance structures help foster or hinder usability, mobility, and innovation. This report summarizes the team's findings. It describes qualitative observations and conclusions based on extensive, and inherently subjective, interviews with senior officials at numerous organizations across each region. The goal of the report is to provide a resource for local- and state-level policy makers interested in understanding the governance structures of other regional transit systems and in exploring how different structures can support improvements in system performance. Recognizing that each region is unique in its history, jurisdictional boundaries, and transit network organization, the report concludes with several recommendations that hold promise for helping state and local transit officials across the country address a range of common governance challenges.

This report is organized in three sections. The first section provides a brief overview of the history of transit in the United States and reviews previous research on the subject of regional transit governance. The second part of this report describes the Eno/TransitCenter team's research methodology and presents case studies in transit governance from six metropolitan regions: Chicago, Boston, Dallas-Fort Worth, Minneapolis/St. Paul, New York City, and the San Francisco Bay Area. Each case study describes the government entities that have a prominent role in transit operations, planning, and funding; explores

how those entities interact with one another; and asks how successful they are at providing a coherent vision for transit services in their respective regions. The final part of this report discusses conclusions and lessons learned from the cases studies, and offers policy recommendations for transit governance across the United States.

Transit History and Existing Literature

In most regions of the United States, private companies originally designed and operated transit services—partly as a way to open access to new land for real estate development. Over time, private operators proved to be unprofitable and were mostly absorbed by the public sector. This absorption was necessary to sustain transit services in metropolitan regions. In addition, most regions and their transit networks expanded over time to accommodate larger geographic areas and a growing population. In some cases, cities redrew their boundaries to absorb smaller border municipalities, and in other cases, jurisdictions remained politically separate but became economically integrated. Each metropolitan area developed different structures for cross-jurisdictional governance based on their history, past policy decisions, and unique situations.

Today, while there are some similarities across regions, each major U.S. metropolitan transit system has a distinct governance structure, different sources of funding, different entities responsible for coordination and long range planning, and, in many cases, a variety of transit operators.[1] In part due to the legacy of initial competition and in part due to jurisdictional boundaries, multiple agencies and organizations are involved with transit operations and governance in many regions. For example, 26 independent operators provide transit services in the seven-county San Francisco Bay Area. Typically, public entities were created or adapted to provide regional-level oversight for multiple transit operators. In some regions, MPOs provide oversight (such as in San Diego); in other regions, multiple transit agencies largely oversee their own operations (such as in Los Angeles). Still other regions (such as Atlanta) have one primary transit operator. In summary, there is no one method for organizing and governing regional transit, and the uniqueness of each region poses a significant challenge for identifying best practices.

The existing research literature does not identify an "ideal" model for transit governance. A study published by the American Public Transit Association (APTA) points to the difficulty of defining and promoting a uniform set of best practices for transit governance given historic and institutional differences between regions and given that not all lessons are transferable or replicable from region to region.[2] However, the existing literature does discuss the common desire for "good" governance, which can translate to good customer service. There is a "widespread interest in finding new models of governance for transit agencies that will result in coordinated region-wide transit systems."[3] Aside from increasing public support for additional funding, improvements in governance can help build "public support for transportation investments by improving the credibility of those organizations responsible for implementation" and "allow[ing] for complex multimodal project implementation."[4]

While there are political and historical anomalies in every region, some regions are more effective at dis-

tributing and raising funds, and promoting coordination between agencies. In San Diego, the Federal Transit Administration (FTA) found that transferring long-range planning and capital investment power to the region's MPO could "improve the long-term prospects for transit investment despite a perceived reduction in authority for the transit [operating] entity."[5] The FTA also noted that many regions have integrated planning with highway modes, demonstrating that the "integration of transit, highway, and land use planning can lead to an increase in the role of transit in a region's transportation system."[6] Previous studies have attempted to identify the characteristics of regional entities that are important for achieving effective transit networks, and have sought to assess the governance of existing systems based on these characteristics.[7]

The existing literature on transit governance points to a number of conclusions that are directly relevant to the issues identified in this study:

- ***Inter-agency collaboration is important for successful governance.*** "Interdepartmental [and inter-agency] collaboration, and public consensus-building processes are crucial for establishing sustainable and successful transportation institutions."[8]
- ***A multi-modal approach that transcends individual modes produces better results.*** The benefits of including highway and transit planning capabilities in the same organization are well documented, providing broader sources of revenue and improved decision-making.[9]
- ***Political dynamics can result in instability.*** Several reports find that changing political leaders, particularly at the state level, greatly affects transit. "The state role in local transit can be beneficial, but can also result in fluctuations in the amount of commitment to the regional transportation vision with political changes or changes in available state financial resources."[10]

This study aims to build on existing research to the extent that this research addresses funding lessons and recommendations for regional transit governance. Most of the existing research on transit governance, however, examines specific agencies and evaluates the governance of these agencies based on a set of defined metrics. This study looks more broadly at the interactions and structures that affect how agencies work together to distribute funding and provide regional transit services. And because there is a substantial literature that discusses how to go about implementing institutional change, this study does not focus on overcoming barriers to governance reforms. With the help of case studies that focus on some of the most complex metropolitan regions in the United States, this study identifies concrete opportunities for improving transit governance, decision-making, and performance across the country.

PART TWO:

Methodology and Regional Case Studies

Methodology

The backbone of this research is comprised of case studies of six large U.S. metropolitan areas. The discussion that follows begins with a description of the context in which these case studies were developed. Examining every aspect of regional governance was beyond the scope of this research—rather the focus here is on governance specifically as it relates to regionalism. The case studies also focus on funding issues because of the unique relationship between "who pays" and "who governs." Finally, outcomes are analyzed from the perspective of customers and transit system users, rather than from the perspective of transit operators. These are inherently subjective choices, but they serve to focus the scope of this work on issues that are likely to be most meaningful to potential readers.

Governance and the Value of Regionalism

This study is concerned with the concept of *governance*, which is distinct from the concept of *government*. "Government" has been defined as "the formal institutions of the state and their monopoly of legitimate coercive control... [and is] characterized by its ability to make decisions and its capacity to enforce them."[11] In contrast, the concept of "governance" can be defined to include "elected and nonelected government officers, nongovernmental organizations, political parties, interest groups, policy entrepreneurs, ... [and other] relevant actors in the decision-making processes that produce government action."[12] The literature on governance is premised on the understanding that governance includes public and private players who collaboratively guide public policy and decision-making.

For this study, the term "government" is used to describe elected officials, and official local and state governmental administrative entities. "Governance", on the other hand, encompasses the interactions between various players within a region where those players include, and are not limited to, transit operators, government officials at the local and state levels, the metropolitan planning organizations, advocacy organizations, academics, and other thought leaders. Interactions between each of these entities ultimately lead to decision-making.

Transit is inherently a regional operation. An effective governance structure for transit therefore needs to address the fact that most bus and rail lines do not terminate—and should not terminate—at a city, county, or state border. Unlike many government services that operate mostly within a jurisdictional boundary (such as garbage removal and fire protection), the purpose of transit is to efficiently move passengers throughout a metropolitan economy. Like other regional services, transit can be more effective when it is planned, organized, and operated with a regional perspective. As large metropolitan regions with high transit dependence are the primary generators of goods and services in the U.S. economy, a regional focus on transit is crucial from an economic perspective. This study examines not just how individual transit agencies are governed, but also the larger interactions between organizations and the way investments and decisions are made.

Funding As It Relates to Governance

Exploring the flow of funding for transit operations and capital investments is critical to understanding regional governance, and is therefore a focus of this study. Funding for transit typically comes from a mixture of sources, including federal, state, and local dollars in addition to farebox revenues, and in some cases can include tolling or other dedicated sources. When it comes to understanding how transit services are governed in a given region, it is vital to understand who has the authority to distribute funds, select projects, and make decisions. For example, all regions are required by federal law to have an MPO to distribute federal dollars to transportation projects. Though significant amounts of funding technically flow

through MPOs in every region, only some MPOs have real authority to make decisions and implement plans. In many regions, transit providers or other governmental entities hold the power to make those decisions and plans because they have more power over funding. Additionally funding for capital investments is often under a different purview than funding for operations, and these different funding streams can sometimes be controlled by completely different entities.

Customer-Oriented Service

This study judges the effectiveness of transit networks from the customer perspective. The goal of transit is to add economic, social, and environmental value to a region by efficiently moving its residents and visitors. Goals such as building new rail lines, raising more funding, or merging entities are useful only if they help to provide the kind of service that meets the needs of system users. When customers utilize a transit network, they are not directly concerned about jurisdictional boundaries, board representation, funding distribution, or an elected official's priorities. What matters is having a transportation option that is as seamless and efficient as possible. This study looks at the effectiveness of transit governance structures in terms of whether they deliver the kinds of services to customers and users that regional economies need to be successful.

Research Framework

The six case study regions detailed in this report were selected from a larger group of 16 candidate regions following a preliminary review that considered several qualitative and quantitative criteria, including regional population, complexity, innovation, and geographical distribution. The regions that were ultimately selected, in addition to Chicago, are Boston, Dallas/Fort Worth, Minneapolis/St. Paul, New York City, and the San Francisco Bay Area.

Each of these regions is large, geographically diverse, and offers distinct lessons for transit governance. In Chicago, three independent operators provide overlapping and uncoordinated transit services under a single administrative umbrella. Boston is served by a single, unified transit system that is directly governed by the Commonwealth of Massachusetts. The San Francisco Bay Area, by contrast, has 26 transit operators, no state administrative control, and a robust MPO working within a strong policy framework provided by the state. In the New York metropolitan region, a state public authority with separate operating divisions governs most of the regional transit network. Within the Twin Cities, an MPO operates the transit system but capital investments are made in concert with a newly created funding agency. Dallas/Fort Worth is a fast growing region with a large rail transit system, but it confronts a set of state regulations that create barriers to expanded service. Transit systems in each of these regions have been shaped by a unique history and by different institutional arrangements, but together they weave a story of transit governance in the United States that can provide useful lessons for other regions. Additional findings from the initial review used to identify these case study regions can be found in the appendix, available online at www.enotrans.org/publications.

To conduct this research, the Eno/Transit Center team travelled to each region and spent substantial time conducting off-the-record interviews with numerous individuals at more than 70 organizations. These conversations with experts and practitioners were the primary source for information for each case study. The off-the-record nature of the meetings allowed interviewees to candidly detail their experiences and insights. The findings included in this report are based on consistent information from multiple sources, though in some instances a single source was deemed sufficient. While this methodology generated a set of findings that is inherently subjective, it also provided a level of insight not often found in the existing literature.

In seeking insights on each case study transit region, the Eno/Transit Center team took time to identify the correct organizations as well as the most valuable personnel

in each organization. The resulting interviews were not limited to operators of transit services, but also included other groups that have direct and indirect input to the governance of regional transit networks. Specifically, interviewees included senior level representatives from the following types of organizations:

- Transit operators
- Transit oversight agencies, where applicable
- Metropolitan planning organizations (MPOs)
- City governments, including planning departments and officials in select cities
- State government, including officials from state departments of transportation
- Other regional authorities, where applicable
- Academics with specialized knowledge in transportation and an understanding of the region
- Advocacy organizations and think-tanks, including riders' unions, business groups, chambers of commerce, and other nonprofits
- Former transit and government officials with specialized knowledge in transportation and an understanding of the region

In each interview, the Eno team asked questions that targeted specific themes related to regionalism, funding, and outcomes for riders:

- Coordination of capital investment decisions
- Coordination of service planning decisions
- Ways that primary sources for capital and operating funding influence decisions
- Roles for municipalities, counties, and state governments
- Roles for regional bodies, such as MPOs or other organizations
- Accountability to riders
- Coordination of transit planning and land use planning
- Major achievements or shortcomings of the regional system

Each of the case study descriptions provided in the remainder of this report summarizes key themes related to regional transit governance based on conversations with individuals in the study region. In each case, the focus is on identifying successes and challenges with respect to the specific objective of achieving a regional network. This includes parsing out which challenges and successes are related to governance, and which are related to broader forces and other factors that cannot be changed by improving governance. The final section of this report draws on lessons learned from experience in each of the case study regions to develop a set of broader themes and findings that could be applied in any city or region looking to improve its transit governance structures.

Chicago

As one of the largest metropolitan regions in the country, the Chicago metropolitan area boasts the third largest transit system in the United States in terms of ridership, with an extensive network of elevated rail, buses, and commuter rail and bus. Like many other regions over the last several decades, the Chicago metropolitan area has experienced strong growth in its suburban areas, often termed "collar counties." Over decades, this growth has resulted in changing transportation needs for the region's residents.

Three major transit operators provide the vast majority of service in the region: the Chicago Transit Authority (CTA), Metra, and Pace. CTA operates rail and bus services in the City of Chicago and some close-in suburbs, while Metra operates suburb-to-city commuter rail, and Pace operates suburban bus. Figure 1 shows CTA and Metra rail lines in the region. CTA and Pace operate buses within the region but notably there are no available maps featuring all three services. Each of these entities is independent of one another, but all of them are part of the Regional Transportation Authority (RTA). The RTA, however, has very little political or statutory power and its primary functions are to provide funding based on fixed formulas and approve budgets.

In 2013, the RTA found that it was facing a challenge that was becoming all too familiar: it was on the verge of missing deadlines for determining how to distribute discretionary funding. While the majority of the RTA's funding is distributed by a statutory formula, about 22 percent is "discretionary" and the Board is theoretically free to distribute this money as it sees fit.[13] Historically, however, this funding has almost entirely been allocated to CTA; Metra had not been appropriated any discretionary funding since 2003, while Pace has received negligible portions.[14] Because CTA has received the bulk of RTA's discretionary funds year after year, it has begun to depend on this distribution. When in 2013 Metra argued for additional discretionary funding, the result was a stalemate and inability to approve a budget.

Chicago Region Governance Summary

Chicago Transit Authority (CTA) (rail and bus)

- Chicago Transit Board has 7 members, 4 appointed by mayor of Chicago, 3 by governor of Illinois

Metra (commuter rail)

- 11-member Metra Board of Directors, made up of members representing the six-county Chicago metropolitan area

Pace (suburban bus, paratransit, and vanpool)

- 13-member board of directors, Cook County Board of Commissioners, chairmen of 5 counties, and Commissioner of the Mayor's Office for People with Disabilities for the City of Chicago.

Regional Transit Authority (RTA)—umbrella coordinating agency

- 16-member board of directors. 15 directors are appointed from within the six-county region: five by the mayor of Chicago; four by the suburban members of the Cook County Board; one director is appointed by the president of the Cook County board (from Suburban Cook County); and one director each is from DuPage, Kane, Lake, McHenry and Will counties (these members are appointed by the chairman of their respective county board. The chairman of the board holds the 16th seat and is elected by at least 11 of the 15 appointed members.

On the other side of this funding gridlock is a large deficit of available capital resources for all of the transit service agencies. Since 2002, the boards of all three have become accustomed to transferring money from capital accounts into operations accounts to make up for operational shortfalls.[15] While RTA has had to approve each of these transfers, there has been an acknowledgement that these practices are unsustainable and that the region's transit agencies need to come up with a new capital funding stream.

The transit funding challenges in northeastern Illinois stem from a history of fragmentation and decentral-

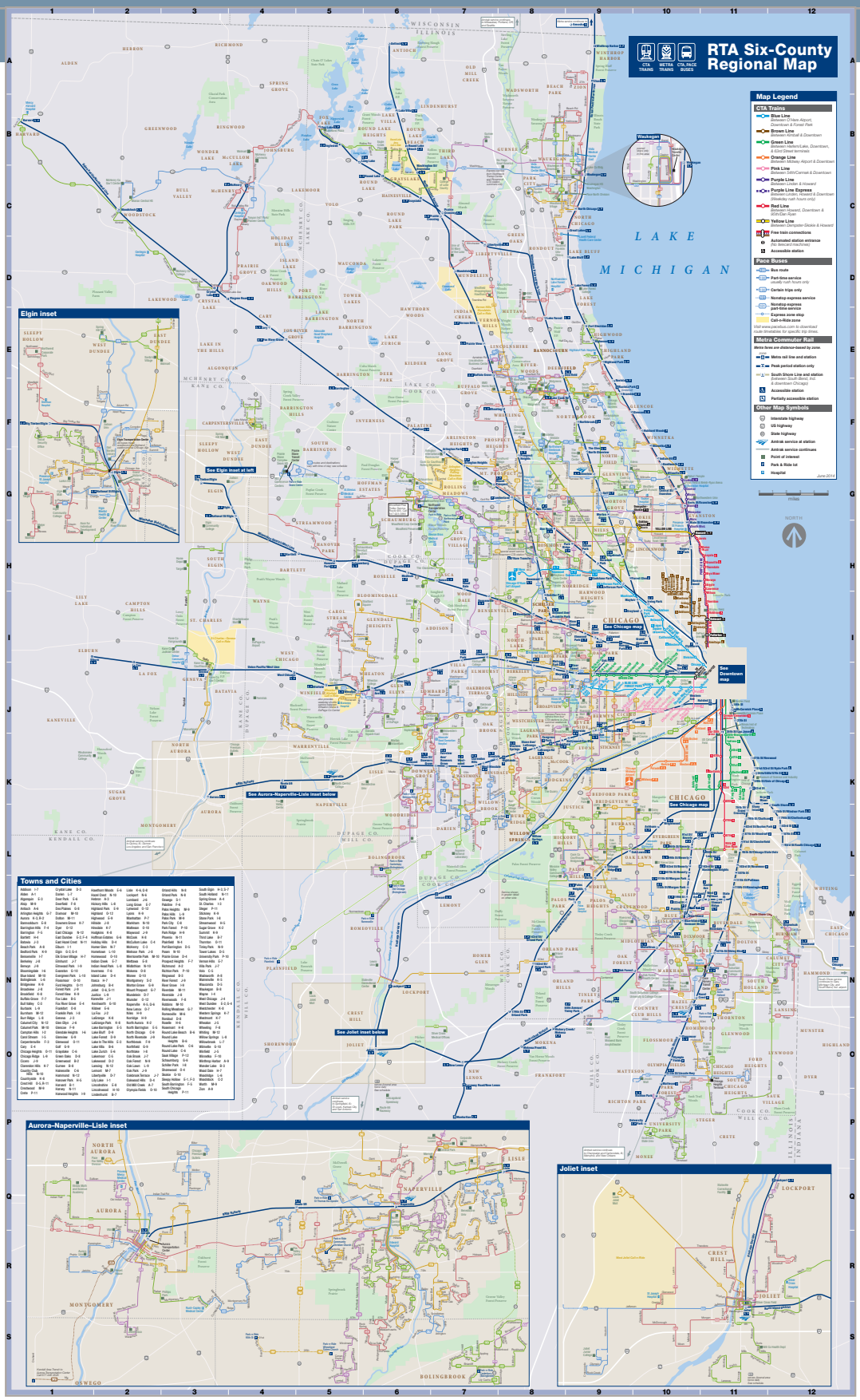


Figure 1: Map of Six-county regional transit network (including CTA, Metra, and Pace routes). Map courtesy of RTA.

ization in terms of the governance of transit services, tension (and distrust) between the urban center and the suburban collar, and a lack of engagement on the part of the State of Illinois. The region's continual transit funding deficits have in part been the result of its governance structure. A culmination of circumstances has led to political gridlock that has rendered the region unable to effectively maintain, coordinate, and fund its transit network.

The Chicago Metropolitan Area: Themes in Governance

The Chicago Metropolitan area's current institutional challenges are intrinsically linked to the region's transit history. As a major hub of regional and national freight transport, Chicago has been laying down rail since 1848.[16] Private companies developed transit in the region, and many of these companies were able to stay financially solvent much longer than private transit systems in other parts of the country. The "L" lines of the CTA transferred to public ownership in the 1940s, while the commuter rail and bus service entered the public sphere by the 1970s.[17]

In the early 1970s, the CTA was facing substantial financial challenges and suburban rail and bus services, still privately held, were on the verge of going out of business. Recognizing the need to intervene, the Illinois legislature created RTA through legislation—a step that was approved by referendum in the state's northeastern counties.[18] The original legislation gave RTA the ability to levy taxes and distribute revenues to existing transit operators; subsequently, RTA's role grew to include the acquisition and operation of some of those assets.[19]

Soon thereafter transit fare hikes went into effect while the population of Chicago continued to shift toward the suburbs. Constituents became dissatisfied with the transit system and its governance structure, and reform became a popular topic.[20] Ultimately, a consensus formed around the concept of introducing two new entities: Metra to provide commuter rail service and Pace to provide commuter bus services. Under the 1983 RTA Act, RTA relinquished its operating role and became an umbrella agency and parent of the boards of CTA, Metra, and Pace.[21]

With the passage of the 1983 RTA Act, the Chicago region began pioneering a new approach to transit governance. While transit agencies across the country were consolidating, Chicago took a different tack and devolved its system by creating separate agencies, each operating different but related types of transit service, in different geographies of the same region, and with very different constituencies.

The idea in theory was to have RTA coordinate among the three agencies, with power to approve budgets, but this has never actually been achieved. Instead, CTA and/or the suburban agencies retain effective veto power over any RTA action. What was intended to be a regional agency has evolved into a battleground between city and suburbs. The CTA views RTA as protecting the suburban service boards, and the suburban service boards see RTA as favoring CTA. According to most interviewees, RTA has been too weak to corral its service boards under a cohesive mission and has accomplished very little.

When the 21st century brought significant funding challenges, these flaws in the governance structure of Chicago's transit systems were brought to the fore. In 2003, CTA realized that FY2004 would bring significant funding shortfalls, due to declining public funding and other challenges.[22] Since that time the region has continued to face substantial transit funding shortages, leaving service boards to fight amongst themselves—and with RTA—for the limited dollars that remain.

Tension Between Organizational Missions

One of the underlying reasons for Chicago's substantial transit governance challenges is that its three transit operators vary substantially in size, mode, and mission. On the one hand, they are expected to remain independent and on the other, they are expected to work together under the RTA umbrella.

The CTA is by far the largest of the three providers. With more than 957,000 bus riders and 726,000 rail riders each weekday, it alone represents the nation's third largest transit agency.[23] The Chicago mayor effectively controls the CTA Board, so even though it is not technically a city agency, it typically functions as if it were one. CTA operates aging infrastructure and its capital needs are enormous. In a traditional model of a major city agency, it functions both as a provider of social services for citizens without vehicles, and as a transportation mode of choice for residents of a high-density city with major traffic problems. As ridership has grown over the last decade (rail ridership has increased by 50 percent and bus ridership has increased by eight percent) CTA has strained to meet demand.[24] This is due in part to years of neglect and in part due to insufficient funding. CTA does have the ability, however, to issue bonds to pay for capital improvements. The other RTA agencies either do not have this ability and or must rely on RTA to issue bonds. This is one reason why CTA does not see value in being a part of RTA.

Metra is exclusively a commuter rail operator and has seen substantial ridership growth in recent years. Since 1996, Metra's ridership increased by 11 percent as traffic into Chicago grew worse and the value of commuter rail increased.[25] Metra sees its mission primarily in terms of taking cars off the roads by providing a high-quality transportation alternative for suburban commuters.

Pace differs from both CTA and Metra in that it grew out of an amalgamation of former municipal bus systems in suburban Chicago (some of these systems still operate independent of Pace). At present, Pace is more of a traditional transit agency in line with other transit agencies elsewhere in the United States—a bus-only service designed primarily to provide transportation to those who cannot afford cars. It has few choice riders and tends to operate low-frequency suburban services. While Chicago's other transit agencies saw their ridership increase in the last decade, Pace lost 15 percent of its ridership during the same period.[26]

It is no surprise that these agencies, given their very different missions, modes, and constituencies, face challenges working together. CTA, which dwarfs its fellow RTA agencies in size, is desperate for capital funding, believing it must find any scrap of funding available to keep up with demand. It has little use for RTA's planning or coordination efforts, but it is dependent on RTA's funds to survive. Meanwhile, RTA, despite holding the purse strings, has been unable, due to its governance structure, to force CTA to do anything.

Meanwhile the suburban service areas have had substantial population growth and want to accommodate that growth, but lack the resources to do so effectively.[27] They look to RTA to provide them with resources, but see a system that gives virtually all regional funding to the much larger CTA. The bottom line is that the RTA works well for none of the agencies, leaving them all dissatisfied. This leaves the region without a cohesive public transit system.

The Lack of State Level Power

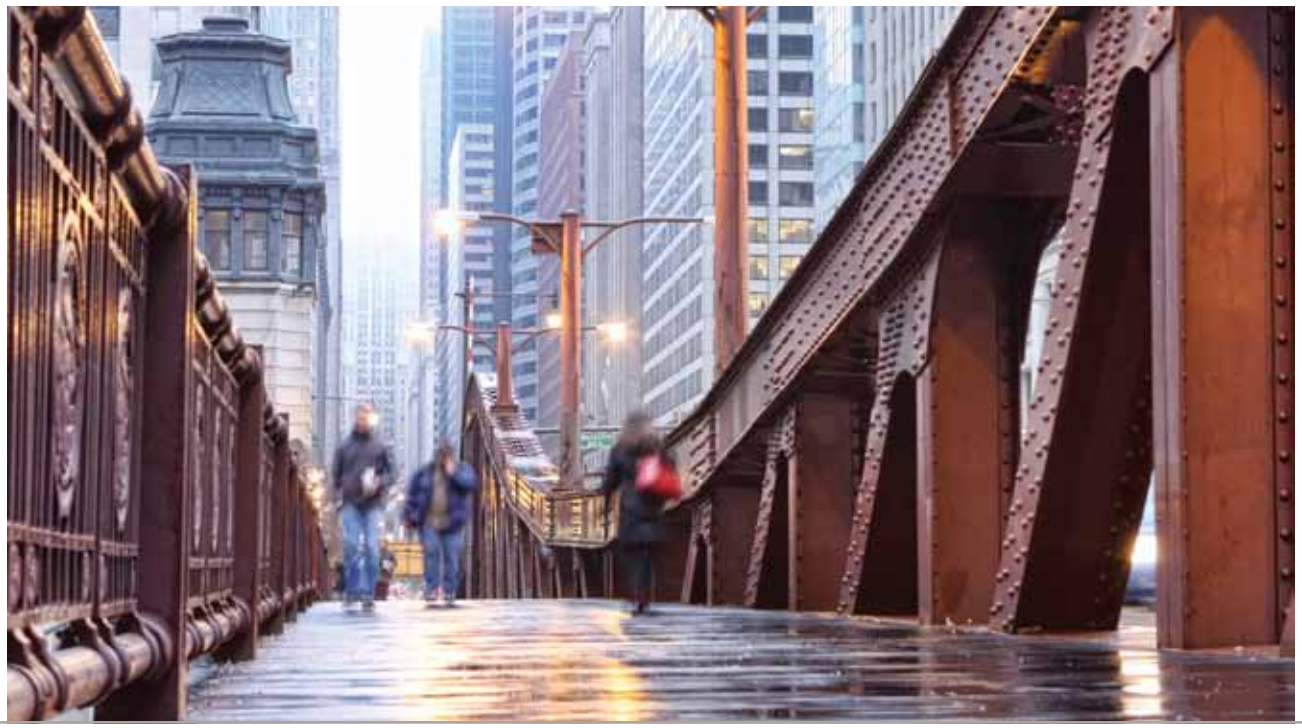
The Chicago regional system is unusual among older transit systems in that the role of the state in transit funding, planning, and operations is quite limited. While

state agencies own and operate transit infrastructure in their biggest cities in many other states, Illinois has very little to do with transit in Chicago. From an outsider's perspective this may be surprising given the substantial role that Chicago plays in the state economy. In addition to containing 65 percent of the population, the Chicago region also generates about 70 percent of the state's economic output.[28] Given this prominence, Illinois might be expected to seize a larger role in Chicago's public transit system, but the culture of the state has not allowed its legislature or the governor to play this type of role.

Within Illinois, there is a major upstate/downstate divide. "Upstate" generally refers to the entire Chicago metropolitan region—that is, the city and its suburbs. "Downstate" encompasses the remainder of the state. While upstate has a strong economy and the third largest metropolitan area in the country, downstate remains primarily rural.[29] While other states with large metropolitan regions have a similar divide (New York, for example), Illinois is slightly different in that it has no major metropolitan area in the downstate region. The second largest independent metropolitan area in the state is Rockford (which is near Chicago) and it has less than half a million people compared to more than eight million people in the Chicago metropolitan region. This helps explain why the state legislature could have a strong rural bias, and why Illinois governors do not necessarily see political benefit to taking ownership over Chicago transit.

The Illinois Department of Transportation (IDOT) is primarily a highway agency. It provides some pass-through funding for transit capital investments in the region, but attaches little to no accountability or requirements for those funds. There is no clear mission for IDOT with respect to transit in the Chicago region. The Illinois State Toll Highway Authority (ISTHA), a state agency, operates several hundred miles of toll roads in the region but has no role in public transit. But unlike comparable agencies in other cities, its revenues are not used to support public transit.

The fact that the state has a strong role in Chicago area highways, but plays almost no role in public transit, creates a strong divide between those two modes. Transit is treated as an urban core phenomenon, dominated by the



central city operator (CTA), with some limited application in the suburbs. With a weak and fragmented RTA and no state role, the region is unable to make transit capital planning or service decisions on anything beyond a parochial basis.

This leaves the Chicago Metropolitan Agency for Planning (CMAP), the region's MPO, as a potential coordinating force. CMAP, however, has virtually no control over transit funding, which is in the hands of RTA and therefore is actually in the hands of the RTA's service boards. There is substantial overlap between the constituencies of CMAP and RTA, and some in the region have proposed combining the two agencies.

The absence of a major state role presents a serious problem with respect to funding. As the state is virtually absent from transit decisions in the region, it is also absent from any effort to fix the larger funding problem. When the Chicago transit system faces a funding crisis, the Chicago metro region has little choice but to look inward, despite its disproportional contributions to the Illinois economy.

The Chicago Metropolitan Area: Analysis

While RTA and its service boards were specifically designed to be separate from, but accountable to the state government, this fragmented governance structure has had an unanticipated effect. Instead of providing accountability, CTA, Pace, and Metra are each more focused on operating, maintaining, and expanding their own services, instead of thinking from a more regional perspective. In a sense, fragmentation has directly led to the region's inability to make adequate investments in necessary transit improvements. Several lessons can be drawn from Chicago's experience:

1. ***Choose independence or choose consolidation—you cannot have both.*** The RTA is a peculiar hybrid of a regional transit organization and a quasi-MPO. Like a regional transit organization, it controls transit funding for the region. But like most MPOs, it actually winds up having very little power to enforce funding decisions. The inherent problem is that RTA occupies an ambiguous middle ground where it is powerful enough to create challenges and bureaucracy, but not powerful enough to be productive in pursuing regional goals.

   Numerous interviewees in the Chicago region agreed that RTA either needs to be strengthened or eliminated. Either one would be preferable to the current situation where RTA is just strong enough to be an obstruction, but too weak to have any real planning influence over the region. The existence of multiple service boards, plus an RTA

board, is one layer of governance too many. Given the battles engendered by RTA, it is likely that the individual transit agencies could work together better and do a better job of coordinating service and even planning capital investments if they and their funding streams were completely separate from one another. Similarly, if the service boards were eliminated and RTA operated all three transit providers, there would likely be much better coordination, planning, and funding allocation. Based on the experience in Chicago, it is clear that the middle ground does not work.

2. ***It is shortsighted to have no state involvement in transit when transit has such a large impact on the economic success of the state.*** The lack of state engagement in regional transit issues is detrimental to both Chicago and the state of Illinois. A lack of state involvement also brings with it a dearth of state funding, and contributes to Chicago's perpetual transit funding crises. Moreover, the state seems to believe that its role is to reorganize the transit agencies' governance structures, instead of actually working towards improving performance outcomes or funding. This unusual state role contributes to the many challenges facing Chicago transit.

3. ***Having one entity holding the purse strings is a necessary, but not sufficient means of bringing regional transit entities together effectively.*** Having a regional agency control the purse strings for transit makes sense, but that is not sufficient to ensure regional coordination or effective capital planning decisions. RTA controls funding, but most of that funding is provided to different area transit agencies using statutorily determined formulas set by the state legislature. What little funding the RTA does control is fought over bitterly by agency service boards, to the point where it is almost impossible for RTA to exercise leadership in this regard. For the RTA to be able to use its discretionary funds to push individual agencies toward regional goals, it would need much greater autonomy than it currently enjoys.

Boston Region

Boston Region Governance Summary

Massachusetts Bay Transportation Authority (MBTA)

- Governs, funds, and operates bus, rail, commuter rail, paratransit in Boston.
- State agency, controlled by MassDOT

Seven-member board of directors governs both MassDOT and MBTA

- Board members are appointed by governor to 4-year staggered terms
- Members must have transportation, finance, or engineering experience
    - Secretary of Transportation is ex-officio director

Boston's subway, which opened in 1897, is the oldest subway system in continuous operation in the United States.[30] Boston was also one of the first urban areas to transition to public ownership and operation of the transit system: the Boston Elevated Railway became publicly owned in 1918 and most of the remaining urban components of the transit system followed suit in 1947.[31] The Massachusetts Bay Transportation Authority (MBTA) governs, funds, and operates nearly all public transit services in the Boston region, including rail, bus, commuter rail, and paratransit services. The MBTA system provides service to 175 cities and towns, and its service extends into the neighboring state of Rhode Island.[32] Figure 2 shows a map of Boston's rail and key bus network.

Two factors make the MBTA unique from a governance perspective. First the MBTA is a state agency, not an independent public authority—it is directly controlled by the Massachusetts Department of Transportation (MassDOT). The MBTA also dwarfs all other transit agencies in the region. While smaller cities on the fringe of the metropolitan area operate some weekday local bus service, their roles are minor compared to the MBTA. For comparison, Worcester, the second largest city in Massachusetts, has just fewer than 14,000 weekday transit trips on the local system, while the MBTA accounts for 1.3 million transit trips per weekday.[33]

Second, funding for the MBTA flows almost entirely from the state. Many other transit systems, by contrast, incorporate a substantial amount of local funding. This feature has direct impacts on the governance of the MBTA system.

The fact that a single agency is in charge of transit planning and operations within the entire region greatly simplifies the governance structure and strengthens the MBTA's regional focus. Though this unified structure has some limitations, transit users interact with just one system, and fares and user information are accessible from a single source. From a customer perspective, regional accessibility on transit in the Boston region is probably the most integrated and seamless of the six case studies investigated in this report. On the other hand, strong state control has left localities and users with limited representation on the MBTA board, and little influence over its operations and planning decisions.

Complete state control of the regional transit system developed over several decades and provides an instructive example of how state leadership and funding can play a role in building and operating a comprehensive regional system. As part of an initiative launched by the governor and state legislature in response to significant funding shortfalls and growing debt burdens, the MBTA was restructured in 2009. This case study examines how the MBTA operates, which stakeholders contribute to its planning decisions, and how the 2009 restructuring changed the system in terms of financial stability and regional accountability.

Boston: Themes in Governance

In July 1918, through the "Public Control Act", the Commonwealth of Massachusetts took control of Boston's elevated rail network to provide the fixed fares that the public was demanding.[34] Setting the stage for state involvement, this early transit entity was governed by five public trustees appointed by the governor. Following World War II, the Massachusetts legislature expanded this agency and created the Metropolitan Transit Authority

Figure 2: MBTA System Map, showing urban rail, commuter rail, and key bus lines. (Courtesy of MBTA)

(M.T.A.) in 1947. The M.T.A. absorbed much of metropolitan Boston's existing transit system. It was governed by three trustees who were appointed by the governor.[35] At this time, however, several privately owned transit and commuter rail companies continued to operate in the greater region.

The 1950s and 1960s brought financial hardships for the greater region's transit system and for privately held commuter rail lines. Recognizing that the M.T.A did not have the capacity to absorb all the region's transit functions, the MBTA was voted into existence in August 1964. This new entity expanded service to 78 municipalities;[36] with later expansions the system eventually grew to include 175 cities and towns. During this time the MBTA suffered from perennial funding shortfalls, which were closed with annual state appropriations.[37] Later reforms sought to solidify the MBTA's funding sources; these reforms culminated in a recent overhaul that included a change in the MBTA's governance.

Prompted by interagency feuding and perpetual funding crises at the MBTA and the Massachusetts Turnpike Authority, the Massachusetts legislature created the Massachusetts Department of Transportation (MassDOT) in 2009 by merging the Executive Office of Transportation (which had been serving many of the functions of a state transportation department), the Massachusetts Turnpike Authority, the Massachusetts Highway Department, and the Registry of Motor Vehicles. Per the legislation, the MBTA and other smaller regional transit authorities, were also placed under the direct oversight and budget authority of the MassDOT. The aim of this consolidation was to bring better modal coordination and financial stability to the affected organizations.

Concentration of Power at the State

The new MassDOT is governed by a seven-member board of directors. Board members are appointed by the governor and are subject to four-year term limits.[38] The

board oversees MassDOT and its divisions (including MBTA), and its members must demonstrate expertise in transportation, finance, and/or engineering.[39] In addition to an Office of Planning and Programming, the MassDOT board oversees four divisions: highways, mass transit, aeronautics, and the Registry of Motor Vehicles.[40] When these entities were merged into the MassDOT, the executive leadership was also restructured so that the MassDOT Secretary, who is appointed by the governor, also serves as CEO of the MBTA and as the head of MassPort. This restructuring increased state control over the MBTA, in part because it brought new state revenues into the agency, which had been plagued by recurrent annual budget deficits.

With power concentrated in the governor's office and the state legislature, MassDOT is responsible for transit expansion and other planning decisions that affect the capital development and operations of the system. The MBTA retains a small planning staff and generally implements the plans handed down by MassDOT. Other regional bodies are similarly governed by the state: the MPO for the Boston region is essentially part of MassDOT; in addition, MassDOT chairs the board of the MPO and holds five of its 22 voting seats.[41] Other regional transportation authorities (RTAs) operate limited bus service in the smaller Massachusetts cities—typically through service contracts with private operators. The relative success of the MBTA and of future transit planning initiatives more generally depends to a large extent on gubernatorial support.

The Commonwealth of Massachusetts is able to justify its direct control over the MBTA for several reasons. First, Boston is the center of the state's economy and is vital to the economic performance of the state as a whole. Three-fourths of the state's population lives within the MBTA service boundaries;[42] by contrast, even the larger cities in the western part of the state are substantially smaller than the Boston metro area. Second, the state government is located in Boston[43] so the governor and members of the legislature interact with the transportation system on a daily basis. This makes them directly aware of, and sensitive to, the condition and performance of the system. In other states with a dominant city, the state capital tends to be located elsewhere. Finally, state resources play a significant role in funding the MBTA, which further justifies the state's direct role in transit planning and the MBTA's incorporation into the MassDOT.

Power from Funding

An ongoing concern for the MBTA is its annual operating deficit and managing the capital needs of an aging system. Funding for operations is primarily derived from four sources: a dedicated regional sales tax; contributions from local governments; farebox revenue; and contributions from annual state appropriations. Included in the state grants is a transfer from the Massachusetts Turnpike Authority's surplus toll revenues. As part of MassDOT, surplus toll revenues are incorporated into a transportation fund, which are then distributed in part to the MBTA. Since 2009, the annual state appropriation has been held at $160 million. Contributions from local governments, each of which chooses to be a part of the MBTA network by contributing funds, make up only nine percent of the MBTA's operating revenues and were not increased under the recent restructuring. The following chart shows major revenue sources from the MBTA's 2013 operations.[44] Capital funding consists almost entirely of federal and state grants.

Table 1

2013 Operating Revenues ($, millions)[45]		
Farebox Revenue	$630	36%
Dedicated State Sales Tax	$787	46%
State Appropriation	$160	9%
Local Contributions	$156	9%
TOTAL	$1,733	100%

The funding structure of the MBTA has included state assistance since the agency's inception, but several changes have occurred over the past several decades that have increased the proportion of state support. Prior to 2001, the MBTA made up its annual operating deficit through the annual state appropriations process by essentially sending a bill to cover the shortfall to the state. The state consistently filled the budget gap, but relying on annual appropriations proved unsustainable because the MBTA could never be fully sure that its needs would be funded.

"Forward Funding", passed by the legislature in 2001, dedicated 20 percent of all sales tax collected in Massachusetts to the MBTA. The aim was to take the MBTA out of the annual appropriations process and provide a stable source of transit funding that could be projected years into the future.[46] While this was initially heralded as a positive step for the MBTA, it also became problematic when sales tax revenues did not grow as expected and the agency found itself again in the position of using its borrowing capacity to keep the system running.

Looking for another more sustainable solution, the Massachusetts legislature addressed the funding problem again through a further restructuring in 2009. This change consolidated the MBTA within the MassDOT, bringing reform to the governance structure before committing further state funds to the system. At the same time, the MBTA received an additional state appropriation of $160 million, which has been consistent since 2009 and has helped to fill the budget gap. While this infusion improved the funding situation, the MBTA still struggles to balance its budget while maintaining an aging system and there is no guarantee that the state will continue to appropriate funding to MBTA at the same level.

Given substantial state-based funding, there is relatively little debate over whether the distribution of state funds for transit projects is equitable. Many states, including Illinois and New York, regularly have to address equity issues, particularly with respect to transit funding, in terms of trading off urban versus rural interests. In Massachusetts, these debates are not as prevalent because the western part of the state generally recognizes the need for the MBTA and its essential role in the state's economy. Thus, stakeholders outside the greater Boston region do not pose a substantial obstacle to state funding for the agency.

Meanwhile the local assessment, a mandatory, annual, population-based assessment fee that the 175 cities and towns in the MBTA service territory must pay to be part of the MBTA system (through whatever means they see fit), has increased at a rate much slower than the rate of increase in MBTA costs. The assessment is a fixed annual amount, currently set at about $156 million, which is divided among the 175 cities and towns via population formula. The local assessment increases at the rate of inflation (with the maximum annual increase capped at 2.5 percent), and it contributes a shrinking portion of the total MBTA budget.[47] It is considered to be too politically challenging, and not worth the effort, to approach cities and towns to increase their share of the system's cost. While localities have benefitted from this calculation in the sense that their tax dollars can be spent elsewhere,

their shrinking contribution (in real terms) has also left them with a diminishing influence over the MBTA's service and operations.

The MBTA's budget challenges are exacerbated by the fact that its farebox recovery ratio is significantly lower than that of peer regions such as New York. This is in part due to relatively low fares on the MBTA system, including a monthly pass that allows unlimited local bus and subway travel for $75 (in contrast, a 30-day unlimited pass for the NYC MTA costs $112).[48] Commuter rail fares, however, are not fully integrated into the system, do not accept the contactless card system used on buses and subways, and are based on a zone system using paper fare cards.[49]

Voices of the Cities, Towns, and Riders

The MassDOT board of directors is composed entirely of the governor's appointees. These appointees are responsible for approving all important decisions for transit and transportation in the state, including decisions concerning the MBTA annual budget, the capital investment plan, and other long-term issues that have direct effects on the users of the system. With a governor-appointed board, the opportunity for direct community and rider input into the MBTA system is limited to nonvoting actions.

This lack of representation was exacerbated by the restructuring that occurred in 2009, which severely diminished the power of the MBTA Advisory Board. The Advisory Board was established as part of the initial creation of the MBTA in 1964 as a way to provide representation for the cities and towns that participate in the system. The Board included at least one voting member from each of the 175 towns in the MBTA system.[50] It used to hold final veto power over the MBTA budget and capital plan. While the Advisory Board still exists, it has been stripped of its veto power and can now only voice concerns to the MassDOT board. With the MBTA now a part of MassDOT and without its own board, the MBTA Advisory Board and its veto power did not fit into the MassDOT governance structure. Nonetheless, the Advisory Board continues to provide local activists with an organized voice and direct line to the MassDOT board.

In general, towns and localities did not oppose the loss of the Advisory Board's veto power. This may be because they recognized that they pay relatively little into the MBTA system relative to the benefits the system provides in regional connectivity. Also, with the state capital located in the heart of the region, several community, rider, and business interest groups have organized to lobby for their interests. For example, groups such as Transportation for Massachusetts have successfully blunted the impact of fare increases and service cuts. Interest groups have claimed some responsibility for recent funding measures passed by the legislature that have helped to close the MBTA's budget gap in the face of service cuts. While these groups do not have any direct voting power,

localities and interest groups have found a way to compensate for their lack of institutional power.

On the other hand, the MBTA's current governance structure limits the ability of localities to participate in planning decisions that affect the system. This includes a city's ability to increase the level of MBTA service they receive, even if the city is willing to absorb associated costs. For example, the City of Cambridge has expressed interest in paying for added bus service, but there is no legal vehicle by which the city can reimburse the MBTA for the additional buses and maintenance facilities required to expand service. The best Cambridge can do is make requests and hope the MassDOT board approves service improvements.

The lack of input from riders and localities is evident in the new capital projects planned for the region. New expansion initiatives come directly from the governor's office, and the state political calculus in part explains a focus on commuter rail expansion projects such as South Coast Rail. Local newspaper editorials have criticized the nearly $2 billion South Coast Rail project as too expensive in light of its expected daily ridership of 5,000 commuters, especially when the core network is in need of significant repair.[51] From a cost-benefit perspective, state funds are likely better spent on bringing the aging core system, which handles nearly a million passengers per day, up to a state of good repair. Regardless, Governor Deval Patrick has devoted a greater share of the transportation capital budget to urban core transit projects, including a Green Line extension and new cars for the Red and Orange lines.[52]

Boston: Analysis

The consolidation that brought the MBTA into MassDOT was catalyzed by perpetual deficits in the MBTA budget due to shortfalls in projected sales tax revenues, low farebox recovery, budgetary challenges at the other agencies, and a growing debt burden at the agencies. The creation of the new MassDOT was prompted by a sense of necessity, both in terms of financial challenges and in terms of the inability of the former modal agencies to properly function individually. As the state took more responsibility for funding, it also increased its governing authority.

Of all the case studies included in this report, Boston has one of the better-organized and cohesive transit systems from a rider perspective: it has low fares, is relatively seamless, and provides a practical means for getting around the region. However, the MBTA's governance structure has shortcomings and several lessons can be drawn from the Boston area's transit experience:

1. ***Complete state control can work under certain circumstances.*** Massachusetts is an unusual state in that almost all of its population and economic activity is concentrated in one metropolitan area, which is also home to the state capital. Accounting for this unique aspect, there are several insights from the Boston experience. First, state control also means that the state has a vested interest in the financial viability of the organization. This has not always resulted in positive outcomes for the MBTA, which is saddled with debt and continues to be blamed in the press and by state officials

for financial mismanagement. But the state has consistently bailed out the MBTA with new funds, recognizing its importance in providing needed mobility for the region's economy. The state has also stabilized its funding contributions over time, but could still do more to give dedicated revenues that are sufficient to invest in and expand the system.

Additionally, a single, unified agency, such as the MBTA, does not have to deal with competing plans and goals on the part of other regional bodies. This has facilitated the development of a relatively seamless system from a user perspective, as the well-branded "T" is a ubiquitous presence throughout the area. However, state control has also resulted in a system where localities have a diminished voice, and where gubernatorial priorities may take precedence over regional priorities. This can result in sub-optimal capital investment decisions. Further, as the governor is accountable for fare increases, pressures to keep fares low have resulted in a system that has a low fare recovery ratio, which on the surface is good for riders but not the best outcome for financial stability.

2. ***Local governments and riders need a voice.*** The largest governance mechanism that appears to be missing is a way for the riders and localities to have direct input into the operating decisions and capital plan of the MBTA. To remedy this situation, either reviving the veto power of the MBTA Advisory Board or expanding the MassDOT board to include representatives for riders and localities is worth considering. This would provide riders with power to truly influence the system that they use on a daily basis. But even an Advisory Board with veto power allows for only limited rider and locality input. Few other regions have ceded control of their transit systems to the state with so little input from localities and users.

3. ***Local governments and riders also need to pay.*** If localities and riders want a greater influence over the future of their system, and if a governor is going to agree to devolved authority, it is reasonable for them to expect to pay more. Nearly every other transit system relies substantially more on local funding for its operating and capital budgets. Comparable systems in New York City and Chicago have higher fares, and in Washington, D.C. the system is able to charge based on mileage and time of day. Increased assessments and fares pose a challenge for local governments, but they could be used to address the funding gaps and state-of-repair issues that the MBTA is currently facing. The Boston region is fortunate in that it does not have to contend with the intense suburb-city fights that dominate many regions' transit funding debates, though arguably capital investments are not being made in proportion to ridership demands. But increased funding from localities and riders could help improve system quality and give a greater voice to the 175 cities and towns and their riders that rely on the system as part of the region's transportation network.

Dallas/ Fort Worth

The Dallas/Fort Worth region is one of the nation's largest in terms of geographic size and population. It is also one of the fastest growing metropolitan areas in the country. In 2010, Dallas/Fort Worth was the fourth largest Metropolitan Statistical Area in the United States, with over 6.37 million inhabitants,[53] and is expecting to add an additional 1.58 million residents over the next decade.[54] The city of Dallas is the region's primary economic hub, but other cities in the area, including Fort Worth, Plano, Arlington, Irving, and Denton, are also substantial centers of employment and housing.

As the region has expanded over the past few decades, so has its investment in transit. Since its first line opened in 1996, the Dallas Area Rapid Transit (DART) light rail network has grown to 90 miles, making it the longest light rail system in the country.[55] The region is also home to two commuter rail lines and a network of urban bus systems that spread across three operating agencies: DART, Fort Worth Transportation Authority (The T), and Denton County Transportation Authority (DCTA).

The North Central Texas Council of Governments (NCTCOG) plays a significant role in planning and coordinating within the 16-county region, and is one of the largest MPOs in the country, encompassing 12 counties that make up most of the Dallas/Fort Worth region.[56] Figure 3 shows the current service areas and the existing and proposed rail network (notably, there is no regional bus map). Gaps in service area indicate cities that have not joined a transit district and currently have no transit service. Despite substantial investments in new rail service, transit ridership in the region remains significantly lower than other metropolitan areas of similar size, the existing transit districts do not cover the majority of the region, and most of the region's projected population growth is expected to take place on the edges of the geographic region, outside of the existing transit districts.

The Dallas/Fort Worth region is unique and challenging from a transit governance perspective, in large part because of its relatively unconstrained and rapid growth, coupled with a transit system that is funded almost entirely through local revenues. Each of the three area transit providers operates within boundaries that were defined through agreements with adjoining localities. Many large municipalities in the region do not have any transit services. For example, until a pilot bus line was put in place in Arlington (population 379,000) in 2013, that city had the distinction of being the largest city in the United States without any transit service.[57] The unwillingness and inability of many cities to welcome transit services creates a substantial challenge in creating a functional region-wide system for users.

Texas law discourages jurisdictional taxation, which makes it very difficult to form or expand transit agencies in an era of rapid population growth. Dallas/Fort Worth differs from many major metropolitan regions in other states in that the State of Texas has no real role in funding or planning

Dallas/Fort Worth Governance Summary

Dallas Area Rapid Transit (DART) operates 90-mile light rail network

- 15-member board of directors appointed by member jurisdictions

Fort Worth Transportation Authority (The T) operates buses in Fort Worth

- 9-member board of directors appointed by member jurisdictions
- DART and The T jointly plan, operate, and maintain Trinity Railway Express (TRE) commuter rail line

Denton County Transportation Authority (DCTA) operates buses and A-Line commuter rail between downtown Denton, TX and DART terminus.

- 14-member board of directors from large cities, small cities, and at-large members

North Central Texas Council of Governments (NCTCOG)

- Regional Transportation Council (RTC) is responsible for distributing federal transit funds and oversees regional planning process at NCTCOG
- RTC has 44 members representing local jurisdictions and 3 transit providers

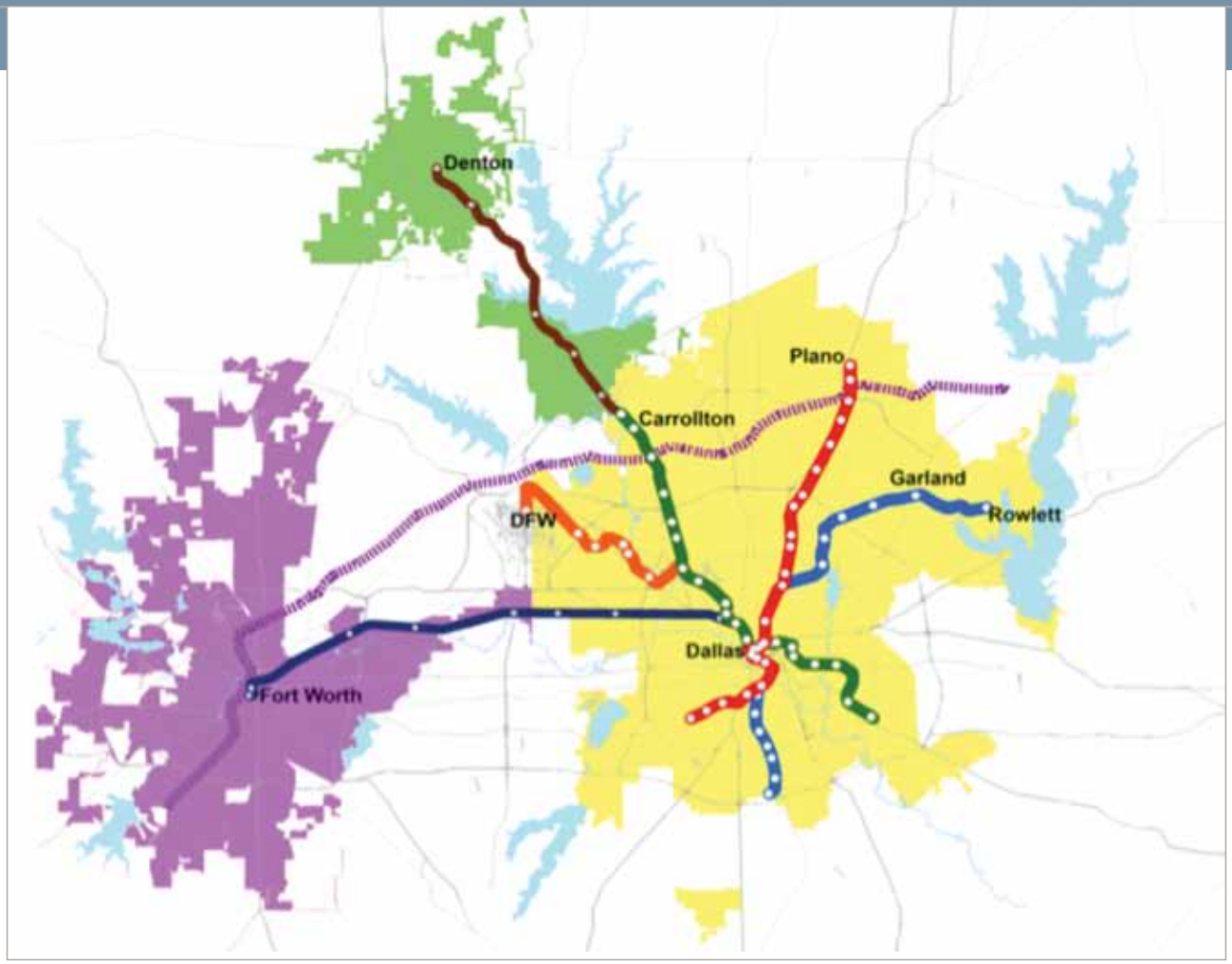


Figure 3: Map of transit service areas in the Dallas/Fort Worth region (Image courtesy of DART)

transit networks. Instead laws regulating tax increases all but prohibit many localities from generating the revenues to join a transit provider.[58] Efforts by the NCTCOG have helped to foster relationships between and beyond the three transit districts, but transit projects are generally focused on new commuter rail investments and some targeted land development near rail stations. When it comes to providing a regional transit network for the Dallas/Fort Worth area, explosive population growth, a highway-focused transportation network, and resulting land use patterns have created both opportunities and challenges for achieving a modern, user-friendly transit system.

Dallas/Fort Worth: Themes in Governance

The Dallas/Fort Worth region is polycentric, with job centers around Dallas, Fort Worth, Plano, Denton and other cities. Table 2 provides summary information about the size and scale of each of these transit agencies, which are based primarily in their respective central cities. Governance of the regional system is defined by local control and interactions with the NCTCOG as well as by the limited role of state funding.

NCTCOG is one of the largest and most influential MPOs in the country, encompassing a land area and population that are larger than the state of Maryland.[59] Due in part to its size, and also because there are three separate transit districts, NCTCOG is a relatively powerful entity when it comes to creating and implementing strategic visions for transit in the region. As part of NCTCOG, the Regional Transportation Council (RTC) is tasked with guiding the development of multimodal regional transportation plans. The RTC includes 44 members from around the metropolitan area as well as members from each of the transit providers.[60] NCTCOG, through RTC, is responsible for highway, transit, and other regional infrastructure projects and also takes the lead on larger cross-

Table 2: Transit Agencies in the Dallas/Fort Worth region

Agency	Annual operating budget (millions) (a)	Average Weekday Unlinked Trips (all modes) (b)	Number of Participating Municipalities	Modes Operated (not including paratransit)	Primary Funding Mechanism
Dallas Area Rapid Transit (DART)	$450	237,516	13	Bus, light rail, commuter rail (jointly through partnership with The T)	1% sales tax on participating cities
Fort Worth Transportation Authority (The T)	$60.4	26,511	3	Bus, commuter rail (jointly through partnership with DART	0.5% sales tax on participating cities
Denton County Transportation Authority	$19.2	11,377	3	Bus, commuter rail	0.5% sales tax on participating cities

(a) National Transit Database, 2012
(b) National Transit Database, 2012

regional initiatives. NCTCOG is responsible for distributing federal transit funds, as well as other state revenues for highways, to help implement its regional plan.

DART, which operates bus and rail service, is the regional heavyweight. It was founded as a regional agency in 1983, taking control of city-operated bus lines and inheriting a service area that has since expanded to include the City of Dallas and 14 of its suburbs.[61] Since DART's creation, two of its initial member cities have left the system. As a result, the current coverage area includes a total of 13 cities.[62] Using revenues generated by a one percent dedicated sales tax (which member cities are required to impose to be part of the system) and several federal grants, DART began an ambitious project to create the largest light rail network in the country. [63] Its light rail system now includes five lines and 90 route miles that feed into a downtown corridor. This includes the newest extension, which as of August 2014 connects the light rail network from downtown Dallas to DFW airport.[64] DART enjoys a healthy relationship with NCTCOG, but tensions exist over mandates, planning power, and other funding decisions as both agencies have large budgets and regional planning authorities. This is partly explained in their different missions, as DART is responsive to concerns within its district and NCTCOG has responsibilities to the broader region.

The second largest transit operator in the Dallas/Fort Worth region is The T, which is based in Fort Worth. The T was created at the same time as DART, in 1983, to replace existing city-operated services. Three cities, including Fort Worth, are served by The T's bus network. In 2001, through a joint venture with DART, The T initiated the Trinity Railway Express (TRE) commuter rail line between downtown Dallas and downtown Fort Worth.[65] Both The T and DART are responsible for half the planning, operation, and maintenance costs associated with the TRE. System operations are performed under a contract with a private company, Herzog.[66]

The most recent addition to the regional transit system is the Denton County Transportation Authority (DCTA). The three-city system, located north of Dallas and Fort

Worth, was created in 2002[67] and operates buses and the 21-mile A-train commuter line between downtown Denton and the terminus of the DART light rail green line.[68] When it comes to regional cooperation, the two smaller agencies, DCTA and The T, are generally appreciative of NCTCOG's work and feel like the region is treated fairly.

Each of the three transit agencies is governed by boards that consist of appointed members from the represented cities, with some cities having multiple appointees based on population. The local nature of the boards has an important influence on the governance of the transit system as members are likely to be concerned about their home city interests and are not necessarily incentivized to use their own funding to create a regional system.

Despite the gaps in service areas, the three agencies have made headway in creating a regional network with direct connections via the A-train and TRE commuter rail services and with a single fare system.[69] It is notable that the fare coordination in this region is in many ways better than other legacy transit networks, such as New York, that do not have a single fare system within their own network. Some of their efforts at regionally focused planning and fare cooperation have been facilitated by the NCTCOG, which in addition to assisting in creating a unified fare card has attempted to increase transit-oriented development (TOD) and infill around rail transit stations in the region.

However, land-use controls in Texas are very limited, and NCTCOG projections of population growth show significant residential growth in fringe communities and much less growth in areas that are served by light rail or bus networks.[70] Aside from providing incentives for TOD, no agency has much ability to shape land use around transit. This dramatically limits the effectiveness of new transit lines in terms of improving access to jobs and housing within the region. Though this is true in many other cities, the extent to which the Dallas region is sprawling and focused solely on the automobile does not bode well for transit.

Unlike many other large metro areas in the United States, the state plays essentially no role in funding or governing the region's transit networks. Aside from providing some funding assistance to rural providers,[71] the state views transit in the larger metro areas as an entirely local issue. There are only a few examples where state funding was flexed to build transit infrastructure. In fact, the Texas Transportation Code prohibits gas tax funds from being dedicated transit projects or operations,[72] and inhibits the

expansion of transit districts in new and developing cities by restricting their power to use taxes to fund transit.

State-Imposed Funding Limitations

As is the case in many regions, funding challenges are at the root of many of the governance problems that afflict the regional transit system. The system's reliance on local tax dollars and federal grants directly influences many of the decisions made by the COG and the transit agencies.

Funding for the three transit operators in the Dallas/Fort Worth region comes primarily from dedicated sales and use taxes imposed in the participating cities. Texas collects a statewide 6.25 percent sales tax,[73] and then allows cities to impose an additional one percent tax for city operations and an optional one percent tax for other services such as economic development, crime prevention, and/or transit services.[74] Texas law prohibits cities from increasing sales taxes above a total of 8.25 percent, even if a majority of city residents support an increase.[75] Efforts within the state legislature to loosen the sales tax cap have been unsuccessful.

The cap on sales taxes creates several problems. First, as Texas does not impose an income tax, the state and localities have to rely on sales taxes and property taxes to fund public services. And because property taxes are relatively high to account for the lack of a state income tax and fuel taxes are dedicated for highway funding via the TXDOT, sales taxes offer the only politically acceptable means for funding transit. This leaves cities with a one percent sales tax to fund transit as well as other programs. The resulting funding limitations are evident with The T, which currently relies on a dedicated 0.5 percent sales tax to fund its operations.[76] The other 0.5 percent is dedicated to a crime prevention program,[77] so in order to increase funding for transit, voters in The T's service area would have to either end their crime program or further increase property taxes. Neither of these options is politically feasible, leaving The T with no way to access additional funding. Many other cities have dedicated their full one percent sales tax to economic development bonds that are used to fund things such as corporate tax breaks or sports stadiums, all but sealing up this potential funding for many years.

The 13 cities that participate in the DART network dedicate the full one percent sales tax to the system. This helps explain DART's ability to expand to the 90 miles of light rail that it operates today. Extending DART to more cities is challenging, however, despite DART's efforts to initiate pilot bus service in neighboring cities that would like service, often with lines that connect to light rail stations. Board policy requires that these cities must begin preparations to join DART within two years and must join within four or they lose these services.[78]

The current policy is intended to "prevent cities that have not paid DART's one-cent sales tax for more than two decades from gaining inexpensive access to its network."[79] In Arlington, for example, DART is providing pilot bus service that connects the University of Texas campus to a TRE commuter rail station. The pilot, which is a joint venture with The T and DART, would need more commitment from Arlington to continue. Continuing this service, however, could prove challenging since Arlington has committed nearly its full one percent sales

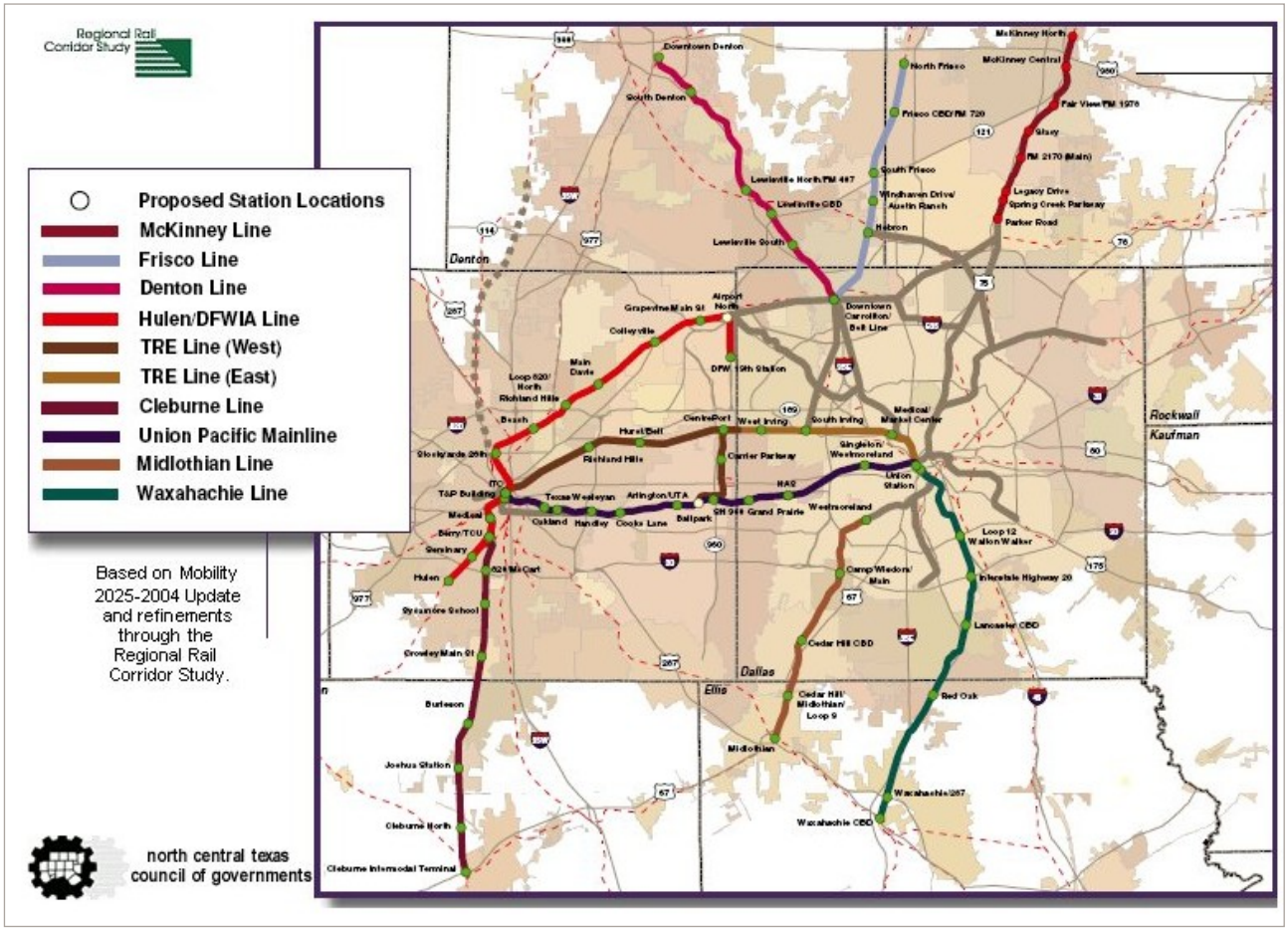


Figure 4: Proposed Plan as a Result of Regional Rail Corridor Study.
Image courtesy of NCTCOG (Source: http://www.nctcog.org/trans/transit/planning/rrcs/index.asp)

tax for the next several years in part to help pay for the construction of sports entertainment complexes like the Dallas Cowboys stadium.[80]

The limitations of the sales tax as a transit funding mechanism are also evident in the park and ride nature of DART's rail division. Most of the suburban DART stations include free parking lots to encourage riders, but a significant portion of those users are driving in from jurisdictions outside the DART coverage area. Stakeholders have complained that these users are benefitting from the DART system without paying the sales taxes needed to construct and operate it. Though commuters almost certainly pay sales tax at some point within the DART service area, the majority of purchases will be closer to home. A parking fee was established at some stations in 2013 to help ameliorate this situation, but due to a significant drop in ridership, free parking was reinstated in April 2014.[81] Per the DART press release: "Free parking will be available at all DART rail stations and bus park & ride facilities without regard to residence of the motorists using the lots."[82]

Regional Rail Focus

Transit in Dallas/Fort Worth is decidedly rail-focused in its capital investment, boasting the longest light rail network in the country. The City of Dallas has launched a new initiative to construct a 40-mile downtown streetcar network,[83] and NCTCOG's current transit initiative aims to create a 300+ mile network of new regional rail services to help provide a "reliable transportation system" for the region.[84] Unfortunately for the majority of the

region's transit users, of which more than 60 percent use the bus, improvements and investment in the bus networks were not discussed during interviews.[85]

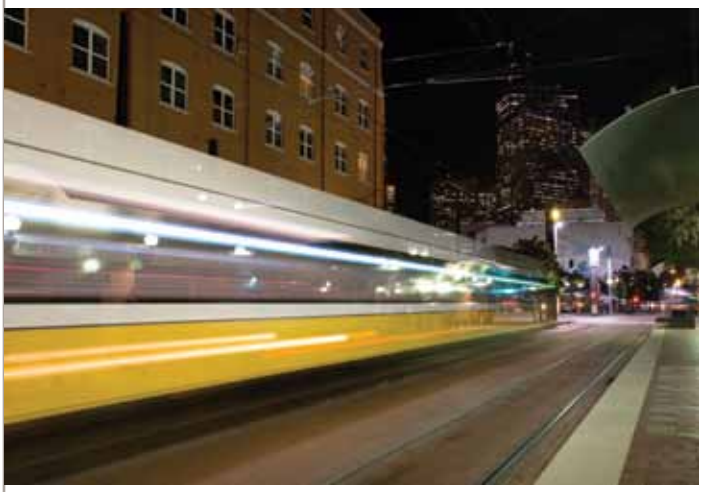
Some of the region's focus on rail comes from a desire to have an extensive rail network and from the competition within the region. For example, DART recently completed a 4.7 mile light rail extension to the DFW airport at a cost of approximately $150 million, which is expected to carry 1200 people daily to and from the airport.[86] The CEO of the DFW airport has emphasized the importance of the rail connection by saying that "every renowned, world-class airport has rail service to the city center."[87] The extensive commuter rail network tends to emphasize service expansion rather than increasing mobility for users by providing new ways for them to move around the city. Figure 4 illustrates the prospective commuter rail plan, which will likely operate at frequencies similar to those of the A-Train and TRE—i.e., twice hourly during peak times and hourly at off peak times.

The T is focusing on the construction of the commuter rail line from downtown Fort Worth that also connects to the Dallas/Fort Worth airport (highlighted in Figure 4 as the northern portion of the Hulen/DFW Line). This is in part to demonstrate that the Fort Worth side of the region has the same amenities as Dallas.

Though most of DART was constructed using local revenues from the one percent sales tax, the proposed regional rail networks will need outside funding. With the help of NCTCOG, the three agencies involved have been successful in obtaining significant federal grants. Aside from the annual formula funds for capital investments, which are primarily distributed through NCTCOG, the FTA New Starts program and the TIGER program have contributed over $1.1 billion in capital funding for new light rail, commuter rail, and streetcar lines in the DART service area over the past two decades.[88] Through TxDOT, DCTA was awarded nearly $250 million in flexed tolling revenues for the operations of the A-Train[89] and its 2,700 daily riders.[90] The Dallas streetcar received a $23 million TIGER grant, nearly 50 percent of its initial capital cost.[91] Other commuter rail projects are counting on winning federal grants to complete their funding packages.

What seems to be lacking in the regional plan for rail is a viable effort to bring the kind of development near stations that will actually drive ridership, reduce auto dependence, and increase regional accessibility. The region's leaders have recognized the coming problems with sprawl and increased traffic congestion: "NCTCOG and its regional partners are working to address escalating air quality, congestion, and quality of life issues."[92] Importantly, NCTCOG has created a plan with $120 million in funding to help target more development rail stations as well as other initiatives to reduce automobile dependence.[93] The T, in a partnership with the Fort Worth Housing Authority, is creating a two-acre apartment and retail complex close to a downtown commuter rail station.[94] DART has also encouraged some development near light rail stations. But actual progress toward implementing the kind of land-use patterns that could bring less of a park-and-ride focus to the rail network is limited. Nearly all future growth is expected to happen at the fringes of the metro region, often completely outside of an existing transit district, and there does not seem to be any governance mechanism available to channel this growth where transit already exists.

There may not necessarily be a connection between the regional rail focus and governance. On the one hand, NCTCOG must be responsive to board members that represent suburban and more rural areas, and these members are often outside of one of the three existing transit districts. This probably increases the focus on rail expansion over improvements to the existing bus network. Even within DART, The T, and DCTA, the rail focus is partially explained by the desire to spread investment to all areas within the transit district, and with state tax restrictions slowing the expansion of transit districts to growing municipalities, the region may find that the easiest way to bring transit to these areas is through commuter rail lines. On the other hand, much can be explained simply by a cultural preference for rail, and the region's desire to create a "world class city" in part through a rail network that can be highlighted on a regional map.[95]



Dallas/Fort Worth: Analysis

The transit governance structure in Dallas/Fort Worth could be improved in several ways. Agencies could merge to create a single board and single planning office that is more focused on the entire region rather than on particular districts. Another possibility that is discussed in the region is creating a regional agency focused on rail operations, or potentially operating the regional rail network through NCTCOG, while leaving bus operations to local districts and cities. But state laws are the largest impediment to expanding the network to areas of high growth. Without an ability to raise revenues and with no state help, most cities in the region are not going to be able to fund a transit network and become part of the regional system.

In part because of the existing governance structure, the region is developing in a way that is not easily amenable to transit services, whether bus or rail. The existence of multiple transit agencies, limited land-use controls, and a weak state role will continue make it challenging for the region to gain substantial economic benefits from transit. To take full advantage of the existing and planned system, particularly the high-capacity light rail network, the region needs to find ways to encourage or mandate denser development around stations and within transit districts. There is no governance structure available to do this effectively, however anti-transit sentiments are strong in many fringe communities and transit boards appear to be more concerned with creating lines on a map rather than building a transit system that provides efficient and useful connections throughout the region, an objective challenge that could possibly be better achieved through the use of improved performance metrics.

Several findings emerge from the Dallas/Forth Worth case study, particularly for cities that are growing rapidly:

1. ***A complete lack of state involvement can be problematic.*** When the state is absent from the transit planning and funding process, and when localities are prevented from raising their own revenues, it becomes difficult to create a regional focus. State-imposed funding limitations can inhibit system expansion, and even the effective operation of the existing network. And involvement from a state level can help take a regional focus and assist in overcoming jurisdictional and parochial interests. This is not to say that the state should take over, nor is the proper vehicle necessarily the Texas Department of Transportation, but

at least the governor might want to consider the effectiveness of transit within the largest region of the state. State involvement in both funding and network could help expand the coverage area and also improve investment decisions to target high value projects.

2. ***Expansion without land-use authority severely diminishes the potential effectiveness of transit investments.*** More governance authority for land-use planning will be necessary to help the region grow more efficiently. The Dallas Fort/Worth region is experiencing explosive growth, but beyond a few incentive programs it has no way to control sprawl. Most leaders in the region recognize that this is a major concern, and that continued sprawl will add to already-congested roadways and poor quality of life. However there is no mechanism to contain growth and encourage transit oriented development as Texas gives substantial power to individual landowners. Most DART and TRE stations are primarily serving park and ride customers; if local residents want to take advantage of their rail investments, this needs to change.

3. ***Improper measuring sticks can result in a focus on capital over operations.*** The region maintains a focus on low frequency regional rail networks instead of focusing on improved mobility or accessibility. This may be in part due to its governance structure and in part due to a misguided investment focus and cultural norm that places very high value on rail transit. From a structural perspective, the absence of state leadership, or strong regional leadership, may lead to a focus on spreading transit investment throughout the region. With limitations on the coverage areas of the current transit districts, one of the few ways to give the entire region transit is by creating a commuter rail system. If local level decision-making were to shift focus to providing the best service and mobility for local customers, instead of focusing on capital investment in rail, the real reach of the transit network could be much broader. Currently, the governance structure provides no impetus toward a larger role for transit in effectively channeling regional economic development and growth.

Minneapolis/ St. Paul Region

Twin Cities Governance Summary

Metropolitan Council (Met Council) is the region's MPO

- Governed by a 17-member board; 16 members represent specific geographic areas with one at-large member. Members are appointed by the governor.

Counties Transit Improvement Board (CTIB) is a separate regional entity with transitway capital funding and operating authority, which distributes revenue from 0.25 percent sales tax

- Each of the 5 counties has 2 voting board members and one alternate. The Metropolitan Council also has one member and one alternate.

The Minneapolis/St. Paul region, often referred to as the Twin Cities, is the largest metropolitan region in Minnesota. It covers seven counties and accounts for 62 percent of Minnesota's total population.[96] The Metropolitan Council (Met Council) is both the Twin Cities regional MPO and the region's primary transit operator. In addition to Met Council, the Counties Transit Improvement Board (CTIB), a separate entity that represents five of the region's counties and has transitway capital and operating funding authority, plays a significant role in shaping the region's transit system. Figure 5 shows the light rail and commuter rail routes in the Twin Cities region—buses are not included on any available official map. The Twin Cities region's experience offers lessons in terms of the challenges and benefits that have resulted from a governance model that includes redundancies as part of an attempt to develop a balanced power structure.

The largest of the two transit operating arms of the Met Council, Metro Transit, operates the majority of the region's network of buses, commuter rail, and light rail system, accounting for 90 percent of the regional ridership.[97] In 2012, serving a population of 3.4 million, Metro Transit provided an average of 254,000 weekday trips.[98] Its service area includes seven counties, 90 cities, and covers 907 square miles.[99] Twelve suburban towns have opted out of receiving transit services from Metro Transit and instead provide their own transit.[100] A portion of the suburban providers' budgets, however, still flows through Met Council.

CTIB was created in 2008 upon the introduction of a new sales tax. Notably, it is intentionally independent from Met Council. CTIB consists only of a board of directors which, unlike Met Council, does not have a staff and is the designated arbiter of a quarter percent sales tax that is levied county by county (within five counties in total) to support transitway capital expansion and operating costs; the tax generates about $110 million in revenues each year. The five most populous counties in the Twin Cities' region have chosen to levy the tax: Anoka, Dakota, Hennepin, Ramsey, and Washington. It invests in projects of regional significance, including light rail, bus rapid transit, and commuter rail.[101] CTIB was created to provide greater local control over decisions about how to spend new tax revenues.

The dueling nature of the funding and governance structure of the region has implications for regional planning. The Met Council's budget for operations is cobbled together from a number of sources, but most funding flows from the state.[102] Its capital budget, on the other hand, is mainly from CTIB allocations and the federal government. With CTIB and the counties playing a significant role in the selection of major capital projects that receive their funding, the operators and regional planners must act in collaboration with CTIB and cannot be autonomous.

The Met Council and CTIB have effectively worked together and with other regional authorities to provide transit and to expand services. Metro Transit operates a bus network, and since 2004, it has built (with the help of CTIB funding), and now operates, two light rail lines, and one commuter rail line.[103] It also owns one bus rapid transit line that is operated by a contract provider. Further, while there are apparent differences between the priorities of the central cities and those of the more suburban and rural areas, the region (through the state legislature) has struck a compromise by allowing cities and counties to opt out of Metro Transit's services and CTIB.

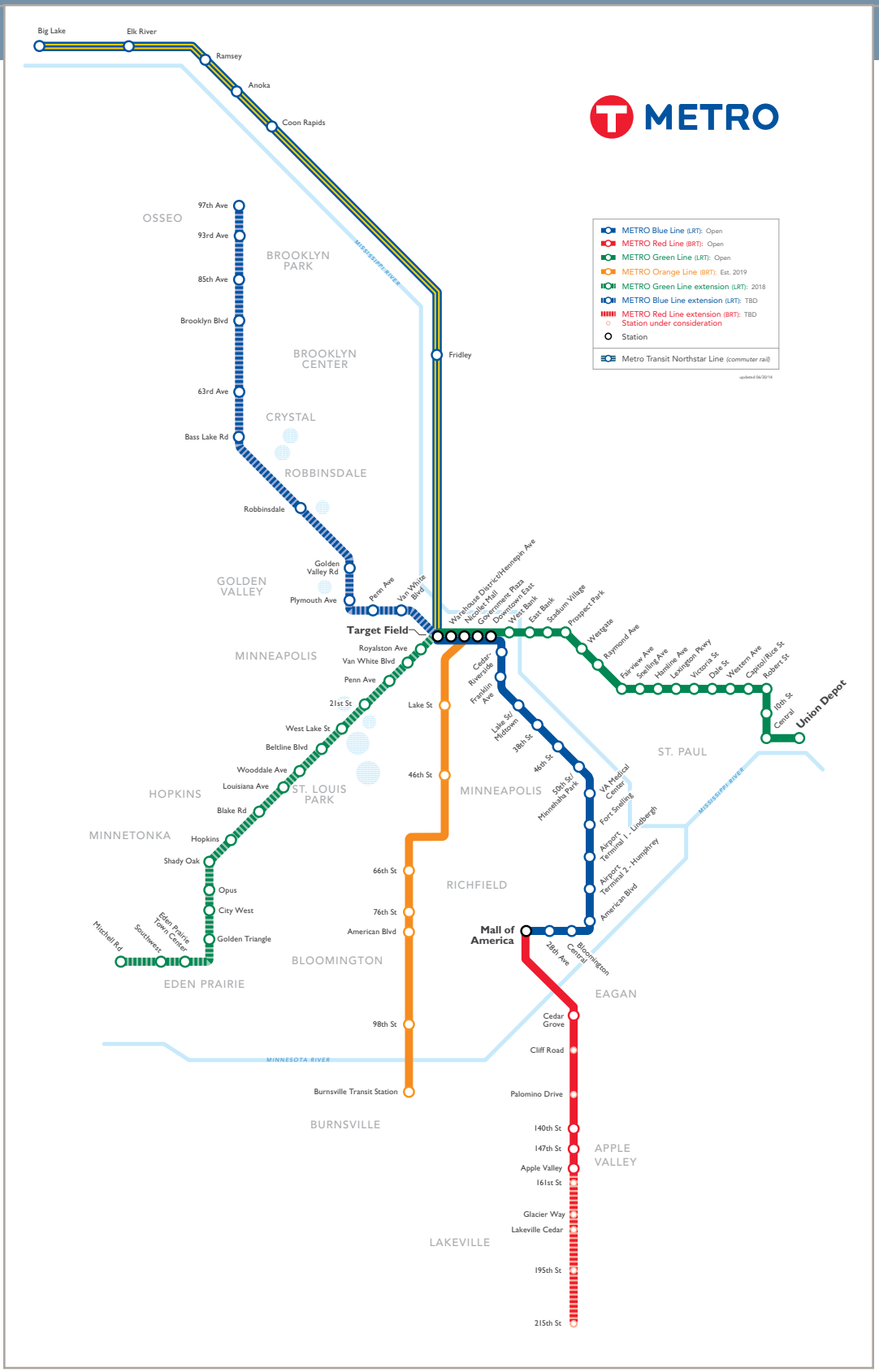


Figure 5: Built and proposed commuter rail and light rail lines in the Twin Cities Region (Image courtesy of Met Council).

Additionally, the region's institutional structure has redundant levels of bureaucracy that could be viewed as hindering effective regional planning. However, these redundancies could also be viewed as providing a measure of insulation from changing political leadership and a means for democratic decision making through engaging and soliciting local governments to contribute to the region's future development.

Twin Cities: Themes in Governance

The Twin Cities region has two powerful bodies that are responsible for overlapping aspects of the creation, coordination, and operation of the regional transit network. The Met Council is unusual in that it is both the region's designated MPO as well as the primary operator of transit and other regional services. No other large-city MPO in the United States shares similar responsibilities. CTIB, with its ability to distribute about $110 million annually to transit projects, works as the primary funder in the expansion and improvement of the regional transitway network.[104] These two entities and their respective roles are the focus of this case study.

The Council is governed by a 17 member-board; 16 members represent specific geographic areas while the 17th seat is held by an at-large member. The governor wields significant power over the composition of the Met Council board. A committee, created by the governor and comprised of seven citizens (including at least three elected officials), nominates the board.[105] This committee compiles a list of nominees for appointment that is submitted to the governor for consideration. The governor, however, is not required to appoint members from the list.[106]

Because the governor appoints the Met Council's board, and based on the fact that they are not elected officials, federal requirements prohibit the board from distributing federal transportation dollars. Therefore, a separate Transportation Advisory Board (TAB) alongside the Met Council provides specific oversight of federal transportation expenditures.[107] The TAB is partially composed of elected officials, ensuring that the Met Council is in compliance with federal regulations for MPOs.

The Met Council, unlike many other MPOs, operates regional services including transit, wastewater treatment, coordination of regional parks, and affordable housing. As a result it has become a powerful force in the region, with an annual operating budget of more than $890 million.[108] Metro Transit's operations account for $352 million of that total. Funding for transit operations is primarily from state revenues through appropriations, and to a lesser extent from other sources, as summarized in the table below.

Table 3

Operating revenue Source ($, millions)	Total ($, millions)	Percentage
Federal	$24	7%
State	$201	57%
Local	$23	7%
Farebox	$96	27%
Other	$8	2%

CTIB, created in 2008, plays a significant role in funding operations and capital investments for the region's transitways. Its primary function is to distribute proceeds from the transit sales tax for the "development, construction, and operation of transitways serving the five-county area".[109] As noted previously, the five county 0.25 percent sales tax brings in approximately $110 million annually for transit system expansion, but CTIB's mandate requires the agency to carry half the ongoing operating costs of projects it constructs.[110] For example, as it completes new commuter rail, light rail lines, and bus rapid transit, CTIB will be reimbursing Metro Transit for 50 percent net operating costs of those lines. Over time, CTIB funds are expected to cover a growing share of Metro Transit's operating costs.

Each of the largest counties in CTIB's service area—Anoka, Dakota, Hennepin, Ramsey, and Washington—is represented on the CTIB board. The two counties that chose not to participate in the sales tax initiative, Carver and Scott Counties, have non-voting seats on the board; in addition, the Met Council has a seat on the board with five votes.[111] The remaining 95 votes allowed on the board are divided among board members based on the five counties' population and sales tax generation. To ensure that the largest counties do not dominate the board's decision-making, three of five voting counties must agree on project selection.

Playing a smaller role, each county also has a regional railroad authority. These authorities work with CTIB and Council to plan potential corridors for rail and bus rapid transit expansion. Additionally, the rail authorities lead and fund the initial planning activities for corridor development, including feasibility and alternative analyses. The rail authorities have the authority to levy property taxes and have contributed to a portion of the capital costs for a number of light rail, bus rapid transit, and commuter rail projects in the region. Each county's board of commissioners serves as the board of its rail authority.[112]

The actual project selection process involves Metro Transit, CTIB, and the regional railroad authorities. Importantly, counties and the regional railroad authorities are responsible for the planning phase of transitway projects that are identified in the Council's transportation policy plan. Working with project partners (cities, the Met Council, and Metro Transit), counties lead the early planning stages for potential light rail, commuter rail, and bus rapid transit projects; then, based on an assessment of economic merits and technical readiness, CTIB can choose to fund between 30 to 80 percent of the capital costs of proposed projects.[113] Remaining funds are cobbled together through CTIB-designated county railroad authorities, the federal government, and the State of Minnesota.[114] Ultimately, Metro Transit takes on the asset and is responsible for operations and maintenance, with the promise of ongoing 50 percent net operating assistance from CTIB.[115]

The Met Council's Governance Structure

The Met Council's governance has a large scope and is complex. First, its MPO organization structure is more complicated than most. Per federal and state regulation, a portion of an MPO's board must be comprised of appointed elected officials. However, the Met Council's board

members are appointed by the governor, and are not elected officials. To meet federal and state requirements, the state legislature created a separate board: the Transportation Advisory Board (TAB). Elected officials sit on the TAB (along with appointed officials), which provides a forum for regional elected officials to discuss decision-making and to make investment decisions for federal dollars. For most operating and funding decisions that do not involve federal funds—the governor-appointed board of the Met Council remains the ultimate authority.

A perceived challenge within the Met Council's structure is that there is significant turnover of the Met Council's members, which some believe indirectly results in greater authority for the Met Council staff. Under current statute, the Met Council's members serve four-year, non-staggered terms that coincide with gubernatorial terms. Because the entire membership of the council can turn over at once and because the terms of service are relatively short, it can be difficult for the Council to develop and execute long-term plans. While this issue applies to many councils or boards across the country, stakeholders in the Twin Cities region raised it as a subject for concern.[116] The result is that the Met Council's staff ends up shouldering much of the responsibility for following through on the Council's plans. Further some interviewees suggested that there is not enough staff support for councilmembers, who receive a small stipend but also hold outside, full-time jobs. Moreover, the appointed Chair of the Council has been a part-time position, which some view as insufficient to lead such a large agency. This situation means that the soundness of Council decisions is often called into question. Prompted by these concerns, the state's legislative auditor has called for a restructuring of the Met Council board.[117]

Met Council also has an unusual role for an MPO in the sense that it directly operates the transit network. While this helps facilitate coordination, many view the Met Council and Metro Transit as being two separate agencies. Within the region, many stakeholders are very supportive of Metro Transit but tend to be slightly more skeptical of Met Council. Another perceived issue is that Met Council allows Metro Transit to compete for funding, particularly for federal grants, with suburban transit providers. Because Met Council and Metro Transit are two arms of the same organization, some have seen this relationship create a conflict of interest. Metro Transit does, however, command 90 percent of the regional ridership.[118] While there are challenges, Metro Transit's system is generally regarded as high functioning in terms of its operations and usability. Its success helps explain the limited number of transit providers in the region, which in turn has allowed resources to be invested into the primary system.

The Role of (and Skepticism of) the State

The state plays a significant role in transit planning for the Twin Cities region through its influence on the Met Council and its control of substantial financial resources. The current transit governance structure has been in place since 1994 when the Metropolitan Reorganization Act consolidated a set of transit services under the single umbrella of the Metro Council.[119] The result is a state-run public corporation, and political subdivision for the state, that serves as the region's MPO and transit provider.[120] This centralization was functional for more than a decade: the Twin Cities trusted in the governor's leader-

ship and there was general satisfaction with regional transportation decisions at both the local and state level. That satisfaction turned to skepticism, however, after the I-35W bridge collapse, in part based on political tensions with the state government. In response to a demonstrated need for increased transportation investment, the state's legislature sought to increase investment for surface transportation as well as allow counties to levy sales taxes to invest in fixed rail transit through new legislation. The state's governor vetoed this legislation, which was ultimately overridden. Through this legislation counties within the Twin Cities region were newly able to levy a sales tax to be dedicated to transitway expansion and CTIB was created. [121]

After efforts to construct the first line of light rail encountered significant funding challenges, the region recognized that it needed a specified transit funding source. Because the first line was received well by locals, the legislature allowed the region's seven counties to choose to tax themselves to expand the network. CTIB was introduced to impose the tax, at each county's consent, and to give counties control over the allocation of revenues generated by the 0.25 percent sales tax. At the time the state legislature region did not want that power to solely reside with the governor-controlled Met Council; in addition, there was a belief that the counties were increasingly capable and that their leadership would help to ensure responsible investment.[122] The legislature's judgment proved correct, and the multi-county led CTIB has been effective in expanding the region transitway network.

However, the creation of CTIB and the authority it enjoys have also led to multi-layered decision making. Planning and analysis for capital investment decisions is not centralized—rather, investment decisions are made on a collaborative basis and must be approved by CTIB then transferred to Met Council, which takes on ownership and operation. This structure has been viewed as beneficial in the sense that it helps foster regional balance in terms of investment and democratic decision making, while also promoting diffuse accountability. However, CTIB's and others' role in capital investment decisions sometimes produces conflict and may result in projects or other transportation investments that do not necessarily advance regional objectives. This challenge has, in part, played out in the divisive decision to build the Southwest light rail line. This line had political support from the community, on the basis of its perceived jobs benefits, but others argued that it was poorly placed for fixed transit and would not generate the ridership needed to support the investment required to build it.[123]

Further, political leadership at the state level has shifted from Republican to Democrat since CTIB's creation in 2008. In 2011, Democrat Mark Dayton replaced Republican Tim Pawlenty in the governor's mansion. The urban core, which tends to vote Democratic, has been more supportive of Governor Dayton, and some urban stakeholders have begun questioning the need for CTIB, lamenting that it perhaps just adds another bureaucratic layer. On the other hand, CTIB provides a mechanism to engage more intimately with local interests and to avoid investment that was not supported at the county level. It also creates a separation between capital decision-making, which tends to be very political, and decision making for system operations. This partisanship is just one contributor to the complex political relationships within the region.

Tension Between the Twin Cities and Collar Counties

As with the other case study regions, the Twin Cities have not escaped the governance challenges that arise when an urban city center is surrounded by more rural counties. Met Council is separated into 16 districts, with roughly equal population size, and each district is represented by one councilmember.[124] In the early 1980s, the state legislature gave localities a one-time option of "opt out" of Metro Transit services if they believed that they could provide services that better fit their needs. As of present, 12 localities have opted out of Metro Transit service while six suburban areas meet their own transit needs.[125] Met Council, however, financially supports these transit providers. Met Council has also helped these transit agencies participate in a common fare system and has assisted in creating connections to the smaller suburban systems. CTIB has taken a similar approach to Met Council in that counties within its jurisdiction likewise have the ability to "opt-out." Carver and Scott counties have chosen not to levy the quarter percent sales tax and are not part of CTIB's investment district, but occupy non-voting seats on the CTIB board.

The political tensions that arise in the Twin Cities' transit system are often parochial as well as partisan. The city of Lake Elmo provides an example of this parochialism. Lake Elmo is located about 10 miles east of St. Paul and has a population of a little over 8,000.[126] In 2003, the city sued the Met Council over its transit system plan, which included a projected increase in the population of Lake Elmo.[127] While Met Council ultimately won this battle when the Supreme Court of Minnesota determined the plan fell within Met Council's authority, the suit was illustrative of a larger problem. That problem is a drastic difference of views in terms of what the region's future should look like. While much of the Met Council prioritizes economic growth and a robust transportation network, some nearby

areas have a vision of maintaining the suburban and rural feel that they have already cultivated, with lower population density than the central urban area.

In general, the region's current institutional arrangements allow for communities that share the vision of Met Council and CTIB to participate in developing and maintaining their transportation network, while also allowing those who do not share this vision to pay less. This compromise has been beneficial for the region in some ways, mitigating potential battles over investment decisions. Long term, however, it is unclear if this structure will have staying power. As the region develops and prospers, the areas that have currently opted out may be forced, or may choose, to consolidate their transit services with those of the central cities. This evolution is arguably demonstrated by Lake Elmo's new growth plans, which embrace many of the changes the city was fighting a decade ago.

Twin Cities: Analysis

The Twin Cities region faces challenges that can be identified in most urban transit systems, including an urban-rural divide, vacillating sentiment with regard to the role of the state, and uneasiness about the primary institution's organizational structure. However, the region has demonstrated an ability to transcend these barriers, and has created a transit system that is growing and responsive to customers' needs. Three broad lessons emerge from the experience of Minneapolis/St. Paul to date:

1. ***The urban and rural divide is inevitable, but effective political compromises are possible.*** The Twin Cities region, through the legislature, made a decision to give suburbs a one-time option of buying into centralized transit services or controlling their own systems. While 12 cities chose to provide their own services, the majority chose to be incorporated. This model could potentially be used in other urban areas to accommodate divergent visions. A similar compromise also exists in Boston, but in that region the localities are not paying much into the central system, and opting out is therefore less attractive and beneficial. On the other hand, the long-term sustainability of the Twin Cities' approach is uncertain. At some point the lack of incorporation may create a barrier to system expansion and informed decision-making. Further, it may inhibit some areas from developing a robust transit network, to the detriment of regional connectivity.

2. ***Governance structures that have redundancies can help ensure a democratic decision-making process.*** CTIB was created by the state legislature and had the effect of insulating the urban center from the control of a governor with whom the majority of lawmakers did not agree with in terms of transportation investment. A subsequent change in the governor's mansion has since spurred debate over whether this isolation is still necessary.

But the continued existence of CTIB remains an option for insulating the urban center from political shifts at the state level. With CTIB and Met Council working together, the counties have the ability to check state actions they do not support, and vice versa.

From an operational standpoint, separating the politics of capital investment decisions from system operations may also provide benefits, such as the case with the existence of CTIB, allowing Metro Transit to focus on ensuring that its system is functioning at a high level. Under the current structure, the politics of determining how to invest available funds and which part of the region gets the next light rail line are a collaborative effort between CTIB, Met Council, and regional rail authorities. Meanwhile, tying performance measures to funding decisions could facilitate better and easier decision-making, regardless of the governance structure.

3. ***On the other hand, it is unclear if creating a separate entity provides a better alternative than limiting the power of the governor*** in terms of appointing members to Met Council's board. For example, staggering the terms of board members, or allowing the cities to appoint a select number of councilmembers may provide equally useful insulation. Several interviewees in the region suggested that Met Council could increase accountability through directly electing councilmembers. However, this option should be carefully considered as other regions' experiences, such as BART and AC Transit in the Bay Area, indicate the directly-elected boards for operating agencies have significant challenges.

4. ***Having the MPO operate the transit system offers potential benefits.*** The Twin Cities are unique in the sense that the MPO both plans for the region and operates transit. Based on the Twin Cities' experience, allowing planners to have an influence in operating the system appears to have customer service benefits for bus service and light rail service. Further, the region has only one major transit operator. For the suburban transit operators that do exist, Met Council has ensured that services are not redundant and that they are connected. This helps to bolster the usability of the system.

However, many interviewees did not necessarily view the fact that transit planning and operations were housed under the same organization as beneficial. In fact, many had the misperception that operations and the MPO were separate entities. Further, there was worry about an inherent conflict of interest insofar as the MPO, as the arbiter of federal grants (among other funding sources), allowed its own operations arm (Metro Transit) to compete for funds that were open to all regional transit providers.

New York/New Jersey/ Connecticut Metropolitan Area

New York Governance Summary

New York Metropolitan Transportation Authority (MTA) (urban rail, bus, commuter rail)

- 17-member board. Members are nominated by the governor, with four recommended by the New York City mayor and one each by the county executives of Nassau, Suffolk, Westchester, Dutchess, Orange, Rockland, and Putnam counties (the members representing the latter four cast one collective vote).

Port Authority of New York and New Jersey (PANYNJ) (PATH commuter rail and bus terminal)

- Governors of New York and New Jersey each appoint six members of the agency's board of commissioners, subject to state senate approval.

New Jersey Transit (urban rail, bus, commuter rail)

- 14-member board. Seven members are appointed by the governor, four members from the general public, and three are state officials.

When it comes to public transportation in the United States, there is the New York metro region and then there is everywhere else. With more unlinked transit trips in 2013 than the next 16 largest systems combined, the area encompassing New York City, its suburbs, northern New Jersey, and southeastern Connecticut simply dwarfs all other U.S. regions.[128] At just over 30 percent of the population, the region also has the highest share of commuters who rely on public transportation to get to work.[129]

The region's transit network is not only large, but it is also complex and heavily rail-intensive, with three separate—and extensive—commuter rail systems, two subway systems (one of which is among the largest anywhere in the world), and light rail. The bus network is also the nation's largest, with one dominant operator and numerous smaller ones. The system's transit options also include ferries and an aerial tram. Figure 6 demonstrates the extent of the rail network in the tri-state region. Notably, it is not an official MTA map—there is no official map showing the regional rail network.

Given that the region has such a large and complex system, includes portions of three states and numerous layers of state and municipal government, and has been in operation for over a century, it would be surprising to find a governance structure that lacked challenges. While the current governance structure certainly offers room for improvement, the region's major transit issues do not necessarily stem from jurisdictional turf battles. Conflicts do exist between different governing bodies, but the real problems revolve around service coordination and funding. Both of these issues could potentially be improved through stronger regional governance structures, but some improvements can only be achieved with more effective leadership from elected officials.

Private entities originally constructed much of the transit system in the New York region for purposes of real estate development.[130] When these providers were no longer able to sustain themselves financially, the public sector took them over.[131] In contrast to many metropolitan regions where municipalities took control of transit services, state authorities eventually assumed these services in New York. Three large public authorities—the New York Metropolitan Transportation Authority (MTA), New Jersey Transit (NJT), and the Port Authority of New York and New Jersey (PANYNJ—a bi-state agency)—operate all rail service in the region. This means that though New York is a very large state and has a substantial population and geographic area outside the New York City region, the state government plays an unusually large role in the metro area's public transit system. Connecticut and New Jersey likewise play a major role in providing transit services—primarily commuter rail—from their states to the New York City area.[132]

New York Region: Themes in Governance

Though the New York metro region extends into three states, New York City inarguably constitutes the core; in addition, most of the region's population resides in New York State. New York City contains 37 percent of the region's population, and New York residents account for 59 percent of the region's population.[133] MTA is the largest and most powerful public transit provider in the New

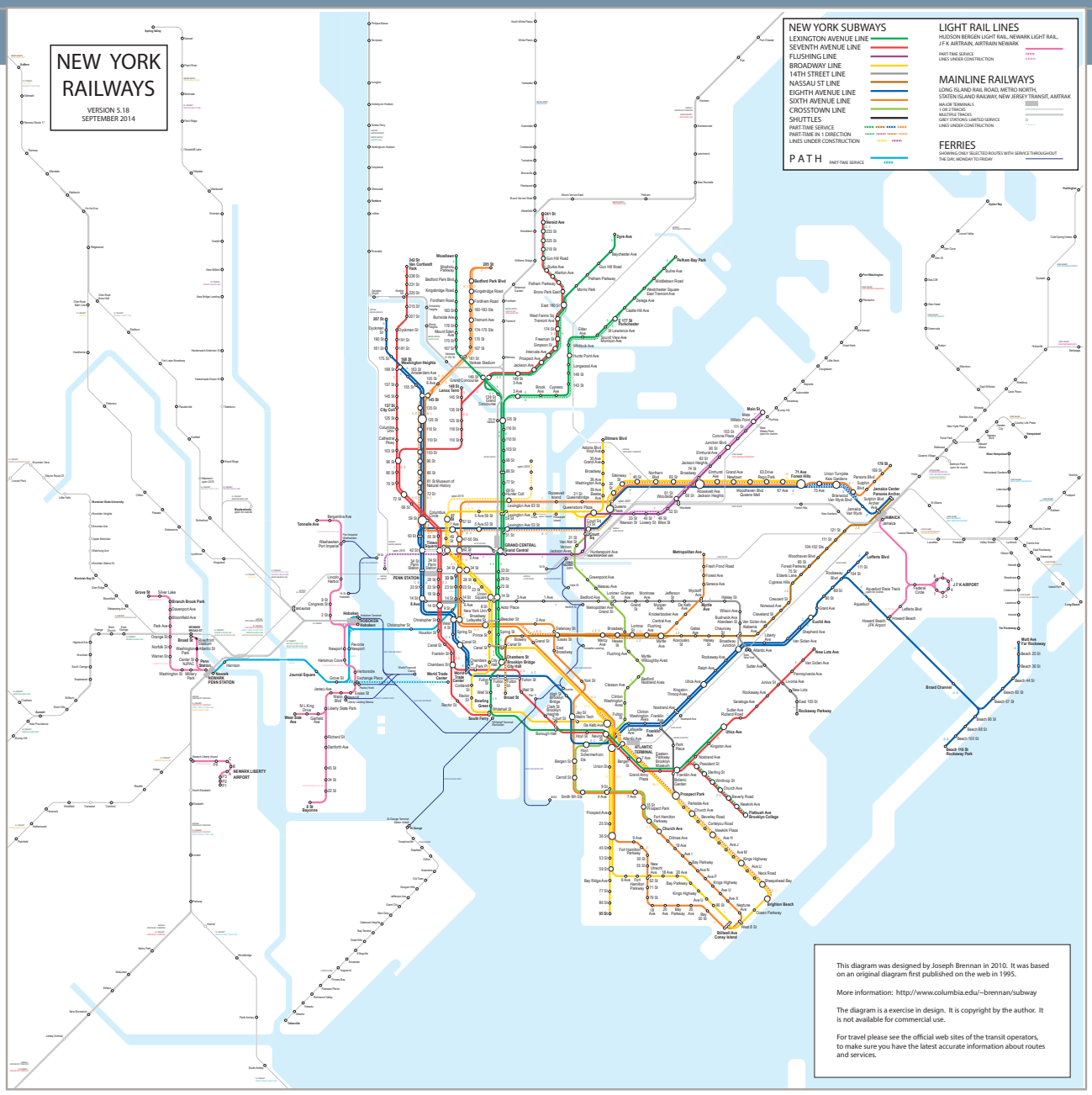


Figure 6: Built and under construction rail transit in the New York City Metropolitan Region (http://www.columbia.edu/~brennan/subway/SubDia.pdf)

York City region, and is the focus of this case study.

The MTA is a public benefit corporation within the State of New York; it is responsible for developing and implementing a unified transit policy for New York City and the seven surrounding counties within the state.[134] The agency was created in 1968 and has operated without much structural change since then.[135] MTA has seven subsidiary and affiliate agencies that are responsible for providing transit services:[136]

- NYC Transit Authority
- Long Island Railroad Company
- Metro-North Railroad Company
- Staten Island Rapid Transit Operating Authority
- MTA Bus Company
- MTA Bridges and Tunnels
- MTA Capital Construction

MTA's strength in regional governance is aided by the fact that roadway tolls provide it with a stable and effec-

tive stream of revenues.[137] The entity formerly known as the Triborough Bridge and Tunnel Authority (TBTA) was absorbed into MTA and is now known as MTA Bridges and Tunnels.[138] TBTA was created and led by master builder Robert Moses; it operates numerous tolled crossings in the region.[139] This source of revenue, largely within the control of MTA, provides an element of financial stability for operations.[140]

One consistent theme with respect to MTA and other large agencies in the region is that while they were created to act as relatively independent public authorities, they have become, in practice, highly politicized creatures of the state. Most of these agencies were created under the classic public authority model and while certainly subject to state control, they were not actually intended to function as agencies or departments of the state and therefore did not receive regular direct general fund appropriations as a typical state agency might.[141] Yet this has not prevented governors from exercising substantial control over the agencies.

Beyond this specific issue, the case study interviews revealed a number of other power tensions within the region that have an impact on how funding for transit is provided, how service is operated, and how capital investments are planned.

Tension Between City and Suburbs

Several mayoral candidates in New York City, including in the most recent election, have argued for taking New York City Transit, the agency within MTA that operates buses and subways exclusively in New York City, out of MTA and putting it in the hands of the city.[142] Notably, no mayor has actually tried to implement this change once in office. The primary reason for this is that while local control makes for a good talking point, the prospect of the city actually funding its subways and buses without state assistance, bonding capacity, and toll revenues turns out to be rather daunting.

Nonetheless, there is some evidence that the existing structure is biased against New York City residents. For one, the board structure of MTA is inherently tilted towards suburban areas. The governor, with the advice and consent of the state senate, appoints all of the board's 17 voting members, including the chairman.[143] Only four of

these voting members are recommended by the mayor, whereas the rest are either from suburban counties or directly appointed by the governor.[144] The governor represents the entire state and has no particular incentive to directly appoint individuals partial to the city's interest.

This governance structure contrasts with the city-centered use of the system. By any measure, services within New York City are dominant. The vast majority of MTA employees work for New York City Transit (NYCT), the vast majority of riders use MTA services, and the vast majority of money is spent maintaining and providing MTA's infrastructure.[145] From this vantage point it certainly seems that the current governance structure is misaligned.

New York City has never really mounted a challenge to this structure in part because if the city were to take full ownership of its transit services it would also be taking ownership of a huge financial headache. Based on a decades-old compromise, portions of the bridge and tunnel tolls collected by MTA are used to subsidize transit operations.[146] While NYCT only gets 50 percent of these funds—far less than its ridership or expenses would seem to justify—this is still far more than zero, which is what NYCT might get if it was a separate city agency. In fact there is no guarantee that a city-owned transit system would receive funding from any state-imposed taxes. NYCT currently benefits from numerous regional taxes imposed by the state and collected by MTA.[147] If independent, NYCT would have to create new tax mechanisms within the city to fund itself, and even these taxes would have to ultimately be approved by the state.

The current governance structure's inherent bias toward suburban interests shows in the MTA's investment decisions. A classic example is the East Side Access project, which provides a new route for Long Island Rail Road riders to go directly to Grand Central Terminal on the East Side of Manhattan. This is an improvement for the 162,000 customers who are projected to ride this line each day.[148] However, the percentage of those riders who currently go into Penn Station on the West Side and then have to double back via subway will receive the greatest benefit.[149] The cost of the project, which is still ongoing, has grown from an initial estimate of $3.6 billion to an expected cost of more than $10 billion when the project is complete.[150]

The East Side Access project offers a useful contrast to the long-awaited 2nd Avenue subway project. The latter project involves replacing an elevated line that was originally planned in 1929 and closed in 1942.[151] It is intended to relieve congestion on a parallel line and, even a small portion of the subway would carry 200,000 riders per day.[152] The cost to build the currently funded portion of the line is approximately $4.4 billion.[153] Virtually any fair cost-benefit analysis would have prioritized this project

over the East Side Access project, but the governor at the time when both projects were being considered favored the commuter rail expansion. In part as a result of his efforts, the East Side Access project received funding first.[154] Meanwhile, the city has opted to construct an extension of an existing line, the #7 train, entirely on its own in part to bypass the MTA's process.[155]

A similar dynamic exists with respect to fare structures. Analyses of the MTA agencies' fares and costs consistently indicate that NYCT covers more of its operating costs through farebox revenues than the commuter railroads do.[156] This means that suburban commuters enjoy a higher subsidy per rider than do riders of the city system.[157] However, given that the board is disproportionately composed of suburban representatives relative to ridership and population, any attempt to recoup a greater percentage of commuter rail operating costs through fare increases would likely be met with stiff resistance by the MTA board.

Challenges Within MTA

The MTA was created with the intention of integrating the various transit agencies in the New York portion of the New York City metropolitan region into one cohesive entity. In many respects that effort has been successful, the MTA board functions with limited interference from sub-agencies, funding for all sub-agencies flows through MTA, and planning is centralized at MTA.[158] In other respects, however, the sub-agencies act independently, as demonstrated by the fact that many of them still maintain their own cultures, identities, and structures. This fragmentation can lead to resistance to MTA direction, and have an impact on customer service and network operations.

FUNDING

Funding is the first issue discussed by virtually anyone concerned about transit service in the New York region. The MTA has struggled for years to secure effective funding to maintain and improve its facilities. In the 1970s, the system was neglected to such an extent that it became a symbol of urban decay.[159] The graffiti-covered trains of that era not only served as visible symbols of the city's lawlessness and crime, but they also broke down and caught fire on a regular basis.[160] As the MTA continued to defer maintenance and the infrastructure continued to deteriorate, there appeared to be no possibility for improvement.

A series of capital investment plans ultimately rescued the regional transit system from this maintenance backlog. While state and federal funds helped, borrowing against future farebox revenues raised much of the funding.[161] Even today a substantial portion of the MTA's capital budget comes from bonds that are backed by future fares.[162]

This approach has been effective in reducing the capital investment backlog at MTA and bringing the system closer to a state of good repair. On the other hand, numerous regional stakeholders are concerned that the borrowing capacity of the MTA may not be limitless, and that the agency may eventually need to find other sources of revenue for what promises to be a never-ending series of infrastructure upgrades for an enormous, and aging, system.

The problem is that the MTA is in the challenging position of being controlled by the state government and yet having no mechanism to hold the state government accountable for its finances. If the MTA needs more money, the state's response may be to blame MTA management despite the fact that the state effectively controls MTA management. This dynamic stands in the way of a sensible dialogue about real funding needs and about how transit funding could be spent most effectively. Instead, MTA has to engage in a continuous cycle of threatening to raise fares or cut service, or both, to get funding.

The inherent tension is that many members of the legislature, and sometimes the governor—though they may recognize the importance of the New York City metro region—do not represent that region alone. In fact, the

state not only has large rural interests, it also has many other large cities and urbanized areas that demand funding and attention. When a state government that serves 19.3 million people is in charge of a large urban area with over 8 million people within the city limits,[163] some conflict is inevitable. That conflict plays out in the MTA's continuous funding challenges.

FARE COLLECTION

From a customer perspective, the largest obstacle to a more integrated regional system remains the absence of modern fare technology that works easily across all existing transit agencies. Interestingly, while the Port Authority Transit Hudson (PATH) trains operated by the PANYNJ use the same fare media as the city division of MTA—the Metrocard—the commuter railroads, which are within MTA, do not (though the MTA has devised a combined Metrocard/commuter rail pass).[164] Part of the explanation for this lies with the fact that the commuter railroads are fundamentally different systems, they do not have physical barriers to entry into the system and can charge fares based on time of day and distance. This is very different from the subways and buses, where riders typically cannot board without paying a fare, and that fare is fixed no matter what the time of day or length of trip.[165] Nonetheless, this is one issue that could likely be overcome if the agencies were fully integrated. At a minimum, the region's two commuter railroads could share fare media, as they do in virtually all other cities.

The MTA has also been delayed in upgrading its existing fare collection technology. The Metrocard, which was introduced in the 1990s,[166] is now old technology. Many modern transit systems have transitioned to a smartcard that does not require a "swipe" but can simply be waved. This is even true in older systems such as Chicago, which recently introduced a new, more modern farecard. However, even these technologies may be outdated soon as systems begin enabling payment through smartphones and credit or debit cards, thus eliminating the need for additional media specific to the transit system.[167]

The fact that MTA is far behind the curve with respect to the development of new fare media and integration across all sub agencies may be due at least in part to its governance structure. The commuter railroads are resistant to changing their fare collection methods. Similarly, the city is likely to resist any change to the fare structure for buses and subways that might impose distance or time-based fares, or really anything besides "one city–one fare" (which was the slogan of mayoral candidates in New York for decades).[168] A more integrated agency, at least within New York State, could potentially accelerate improvements in fare media and realize the benefits of fare integration sooner.

SERVICE IMPROVEMENTS

Another hindrance in the existing structure is the MTA's inability to fully integrate its two commuter railroads. While disappointing, the difficulty of fully integrating New Jersey Transit—the rail system that brings New Jersey commuters into Manhattan—with the Metro-North Railroad (MNR) and Long Island Rail Road (LIRR) systems is also understandable. Crossing state borders creates obvious jurisdictional challenges. However, it may be difficult for an outsider to understand why there are two separate commuter rail agencies operating within MTA, in the same agency, in the same state, with two very different structures and a complete lack of service integra-

tion. In fact, the two MTA sub-agencies do not agree even on spelling, with the LIRR spelling "Rail Road" as two words and MNR spelling "Railroad" as one word.

The LIRR and MNR have very different histories and politics. LIRR was originally chartered in 1834 as a means of getting New Yorkers to Boston, via train and then ferry, and is the oldest continually operated railroad in the United States.[169] MNR, by contrast, was created in 1983 to take over the operations of Conrail (which itself was an amalgamation of other, formerly private railroads) in the New York region. Thus MNR represented much more of a clean break from its institutional past.[170] The politics of Long Island, typically seen as representative of older working-class suburbs, are very different from those of Westchester County in New York and Fairfield County in Connecticut, which are wealthier and more upscale. For these and other reasons, the railroads operate with very different cultures.

The two railroads currently focus service at different locations in Manhattan—MNR in the Grand Central Terminal (GCT) and LIRR in Penn Station.[171] However, the East Side Access project will change this by providing access into Grand Central Terminal for LIRR trains. A similar project to allow MNR access to Penn Station is also under discussion. The fact that these railroads have had different hubs also helps explain some of their continued separation.

Virtually everyone interviewed in New York agreed that integrating the railroads was a good idea in theory, but cautioned that in practice it would create a huge

cost *increase* that MTA cannot afford. This is somewhat counterintuitive since one would assume that consolidation could potentially create some cost savings due to economies of scale. But the consistently expressed fear was that labor costs for the LIRR are higher than those of MNR, and any merger would require a compromise that would lift MNR labor rules and compensation to the levels of the LIRR rather than vice versa. Few interviewees expressed confidence that any governor would take on a fight with organized labor in this regard, even if a merger were to move forward.

This analysis implies that a lack of political will or leadership is one reason for the region's failure so far to integrate its two commuter railroads. While integration could offer significant improvements from the customer perspective, and perhaps even greater benefits from an economic perspective for the region as a whole, integration would require a level of political leadership that has so far been absent in the history of MTA. Aside from potential cost savings, merging the two rail systems could provide a more seamless ride for commuters (including through-running trains) and better information and marketing about transit options, thus boosting transit ridership in the region. Even short of a merger, however, considerable potential exists to reduce barriers between the two railroads. Much of this potential has yet to be realized.

There is some disagreement about whether the East Side Access project was made more expensive and less effective due to arguments between the two commuter railroads. However, there is little doubt that capacity at Grand Central Terminal is not going to be allocated in a way that maximizes benefits for the region. Instead capacity at Grand Central has been, and will continue to be, divvied up between the two commuter railroads based on their competing interests, rather than in a way that maximizes regional benefits. A combined commuter railroad could potentially reduce this friction and perhaps even enable through-running service from one railroad to the other.

Struggles With a Tri-State System

Perhaps the greatest governance challenge for transit in the New York region involves overcoming the institutional barriers posed by state boundaries. New Jersey, which is separated from New York City by the Hudson River, is closer geographically to the city's central business district (CBD) than most of the city itself. Connecticut, while further away, is still a significant economic component of the region with its own large CBD of Stamford as well as over 60,000 residents commuting to New York.[172] Some have even argued that Pennsylvania is a component of the region, as numerous residents commute from that state to New York City.

The idea of making strategic capital investment decisions in the interests of the region, or integrating operations among transit agencies across state lines may be appealing, but it has proven difficult to achieve in practice. While the different state agencies profess an eagerness to work together, there are limits to what they can accomplish in the existing environment. Two potential structures could potentially facilitate transit governance across state lines—each is discussed below.

The PANYNJ, created in 1921, is a bi-state agency intended to coordinate between New York and New Jersey.[173] The agency operates the seaports, airports, a large bus terminal, the Hudson River auto crossings, and the PATH

trains. However, the PANYNJ is unique in that it is the only transportation agency in the region with the power under a congressionally approved interstate compact to coordinate across state lines.[174]

One the one hand, the PANYNJ experience has often been positive for transit. The inclusion of major transit facilities—PATH and the bus terminal—within PANYNJ has enabled these facilities to benefit from outside funding sources.[175] The tolls collected by the PANYNJ on river crossings help, in part to subsidize transit operations and preserve some level of autonomy for the agency.

Unfortunately, the experience of the PANYNJ also demonstrates the challenges of coordinating across state lines. One issue for the last decade has been that the governors of New York and New Jersey divide up their appointments to the PANYNJ to the point where the agency functions more like two separate state entities than like one bi-state agency. Various governors have colluded over who gets to appoint the chair, executive director, and deputy executive director—all in an attempt to stake claims to power over portions of the agency. While the promise of an interstate compact is an increase in bi-state cooperation, that promise can be realized only when the governors involved are willing to work together collaboratively. This has not been the case in recent history.

Despite these challenges, the PATH train system has benefitted from substantial investment in recent years.[176] Beyond the existence of toll revenues, this has been possible because of the PANYNJ's quid pro quo spending paradigm, which dictates that equal expenditures need to be made on both sides of the river regardless of actual economic impact for the region. This has also meant larger subsidies for PATH and the Port Authority Bus Terminal, both which of are seen as largely benefitting New Jersey residents, relative to other transit in the region.

Meanwhile the PANYNJ has not insulated the region from poor decisions based on political calculations. New Jersey Governor Chris Christie's decision to cancel an additional rail tunnel across the Hudson River was widely seen as politically motivated and counter to all economic logic with respect to regional benefit.[177] The PANYNJ also could have led efforts to promote a regional fare card or effective planning across state lines, but it has been so highly politicized that these are not realistic possibilities.

In this context, an effective MPO that could work across state lines could be an improvement. Prior to 1982, there was an attempt to maintain a tri-state planning agency that would include the governments of all three states in investment decisions. This agency eventually collapsed when the three states could not work together.[178] Now multiple MPOs within the region may or may not collaborate.

The lack of an effective regional MPO makes it inherently challenging to coordinate regional services between agencies, develop new and more innovative services across state lines, or make effective capital programming decisions on a regional basis. Even the MPOs that exist are limited in their scope and power by the existence of far more powerful transportation authorities like MTA and PANYNJ. For example, the New York Metropolitan Planning Council (NYMTC), which encompasses much of the New York side of the region, is not involved in service or fare policy coordination and has a limited impact on investment decisions within its jurisdiction.

New York Region: Analysis

The New York region is exceedingly complex. It has a very old transit system with numerous operators and varying histories. It includes three states and countless layers of public authorities and municipal and county governments. And it is the largest metropolitan region in the nation, with the highest transit ridership and the most miles of rail.

Given this environment, any governance structure would likely experience significant challenges. Like most transit systems with aging infrastructure, New York must overcome barriers to rally political support for effective maintenance and upgrades. The biggest challenge for MTA, the region's largest transit operator, is securing adequate funding. MTA has also fallen behind in upgrading its fare collection system and has not done enough to integrate its operating agencies. Despite these challenges, the MTA has made substantial progress over the last several decades in reducing its maintenance backlog, upgrading infrastructure, and improving performance. The improvements in the system as compared to several decades ago are impressive by any measure. The current governance structure has, at a minimum, enabled this transformation.

The region, however, is severely lacking in its ability to make effective decisions that cross state boundaries. While governors wield strong power over transportation investment within each state, they have shown limited ability to work together in pursuit of regional interests. Attempts to collaborate effectively, such as the Port Authority and the Tri-State Planning Commission, have failed to produce the trust and give-and-take needed to focus on regional rather than state goals. These attempts illustrate the challenges of interstate collaboration on transit.

The experience of the New York City metropolitan region offers a number of lessons concerning transit governance that are likely to be applicable even to smaller and less complex systems:

1. ***Governance structures, however well intentioned, cannot trump human nature.*** The MTA and the PANYNJ are regional and bi-state agencies that were created to foster cooperation across political jurisdictions. At times they have worked effectively in this regard. However, their success remains contingent on leadership from individuals who want to collaborate and solve regional and multi-state problems together. Without this leadership, the governance structure alone cannot assure agency effectiveness in regional planning, capital investment, or operations.
2. ***The public authority model of transit governance can be problematic if responsibility is disconnected from accountability.*** The state, and leadership from state government, is critical

to making the connection between responsibility and accountability. In the case of New York State, the political leadership both owns and/or disowns MTA when convenient. Either the MTA should be a true independent public authority, accountable to elected officials primarily within its jurisdiction, or it should be a state agency. The current middle ground approach does not work effectively because the state claims ownership for MTA successes but ducks responsibility for its problems. Nonetheless, the fact that the state is involved—and not just the city—has proven invaluable to MTA throughout its history from both a fiduciary and multi-jurisdictional standpoint. A governance structure that links state involvement to state accountability is crucial to success.

3. ***The composition of a board should correlate to the services it provides.*** In the case of the MTA board, suburban areas are disproportionately represented compared to urban areas relative to their ridership levels. This creates a tendency to overinvest in suburban capital projects, such as the Long Island East Side Access projects, while underinvesting in city infrastructure. It also may contribute to higher operating subsidies for suburban commuters relative to their city counterparts.

4. ***Maintaining divided sub-agencies can reduce the focus on customer service.*** The MTA has never fully integrated its transit and commuter rail operators, and this creates challenges for customers and inhibits regional service innovation. Most prominently, the MTA has put obstacles in the way of a regional fare collection system, allowed dueling territorial systems, and delayed important technological upgrades. It may also be adding to costs.

5. ***Independent sources of income can confer substantial governance benefits.*** Both the MTA and the PANYNJ own and operate tolled river crossings that help to subsidize their transit operations. This revenue stream is essential for transit in the region, and reduces potential conflicts with the state over funding. Reliable revenue streams also enable better cross modal planning and thinking across the region.

6. ***The role of the MPO can be severely diminished by larger and more powerful public authorities.*** The New York region has several MPOs but they are small players in the transit planning process. This is because there are several large public authorities with far greater resources that are in much better positions to perform planning functions for the region. Unfortunately, these authorities can be more narrow-minded than an MPO could be in terms of looking out for the larger interests of the region.

San Francisco Bay Area

Bay Area Governance Summary

Bay Area Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating, and financing agency for the Bay Area.

- 21-member board (18 voting), some board members also serve on transit provider boards.

26 other transit providers, including the "Big 7":

- Bay Area Rapid Transit (BART) (regional rail rapid transit)
  - » BART board of directors has 9 members who are directly elected to 4-year terms
- San Francisco Municipal Transportation Agency (Muni/SFMTA), (City of San Francisco)
  - » 7-member board of directors is appointed by SF mayor
- Alameda-Contra Costa Transit District (AC Transit) (Several East Bay Cities)
  - » Board members are directly elected, 5 members and 2 at large
- Santa Clara Valley Transportation Authority (VTA)(South Bay area)
  - » 18-member board, members are elected officials appointed by the jurisdictions they represent
- Caltrain (Peninsula commuter rail)
- SamTrans (San Mateo County)
- Golden Gate Bridge, Highway, and Transportation District

The San Francisco Bay Area is home to more than seven million people and spans the nine counties surrounding the cities of San Francisco, Oakland, and San Jose.[179] The area's fixed rail infrastructure dates back to the Civil War and its development continued well into the 20th century. Construction of the Bay Area Rapid Transit (BART) heavy rail network began in the 1960s.[180] This dense, polycentric region is home to a complex transit network and 26 transit operators. Figure 7 shows some of the primary rail, ferry, and bus routes within the region.

While there are an uncommonly large number of transit operators in the San Francisco Bay Area, the region refers to the "Big 7" as the primary operators, as they account for 96 percent of the region's ridership.[181] These larger agencies include BART (regional rapid rail), the San Francisco Municipal Transportation Agency (Muni/SFMTA, which operates within San Francisco), the Alameda-Contra Costa Transit District (AC Transit, which provides bus service in the East Bay), Santa Clara Valley Transportation Authority (VTA, which in the South Bay), Caltrain (commuter rail on the San Francisco Peninsula), SamTrans (San Mateo County), and the Golden Gate Bridge, Highway, and Transportation District (GGBHTD). Most of the other transit agencies in the region operate smaller bus and ferry systems. Figure 7, prepared by an independent mapmaker, shows many of the regional rail, bus, and ferry lines that operate in the region.

History and state funding laws have contributed to the multitude of transit agencies in the Bay Area. Geographical features functioned to separate different parts of the region, resulting in a patchwork of local agencies that over time have expanded to create better regional connections. Further, state funding for county transit agencies created many new operators when it was introduced in the 1970s. The resulting proliferation of transit agencies can and does create some level of chaos in the region.

However, the region's MPO, the Bay Area Metropolitan Transportation Commission (MTC) has managed to exert significant control over the transportation network, particularly over public transit, due to powers that have been statutorily handed down from the California legislature. Passed in 2006 and 2008 respectively, AB 32 and SB 375 are California laws aimed at reducing greenhouse gas emissions through transportation planning that give planning and funding power to MPOs. Specifically, the MTC wields authority to distribute significant funding to transportation projects, particularly for transit investment. While this power is handed down from the state legislature, the State of California plays a relatively minor direct role in funding, coordinating, and planning transit within the region.

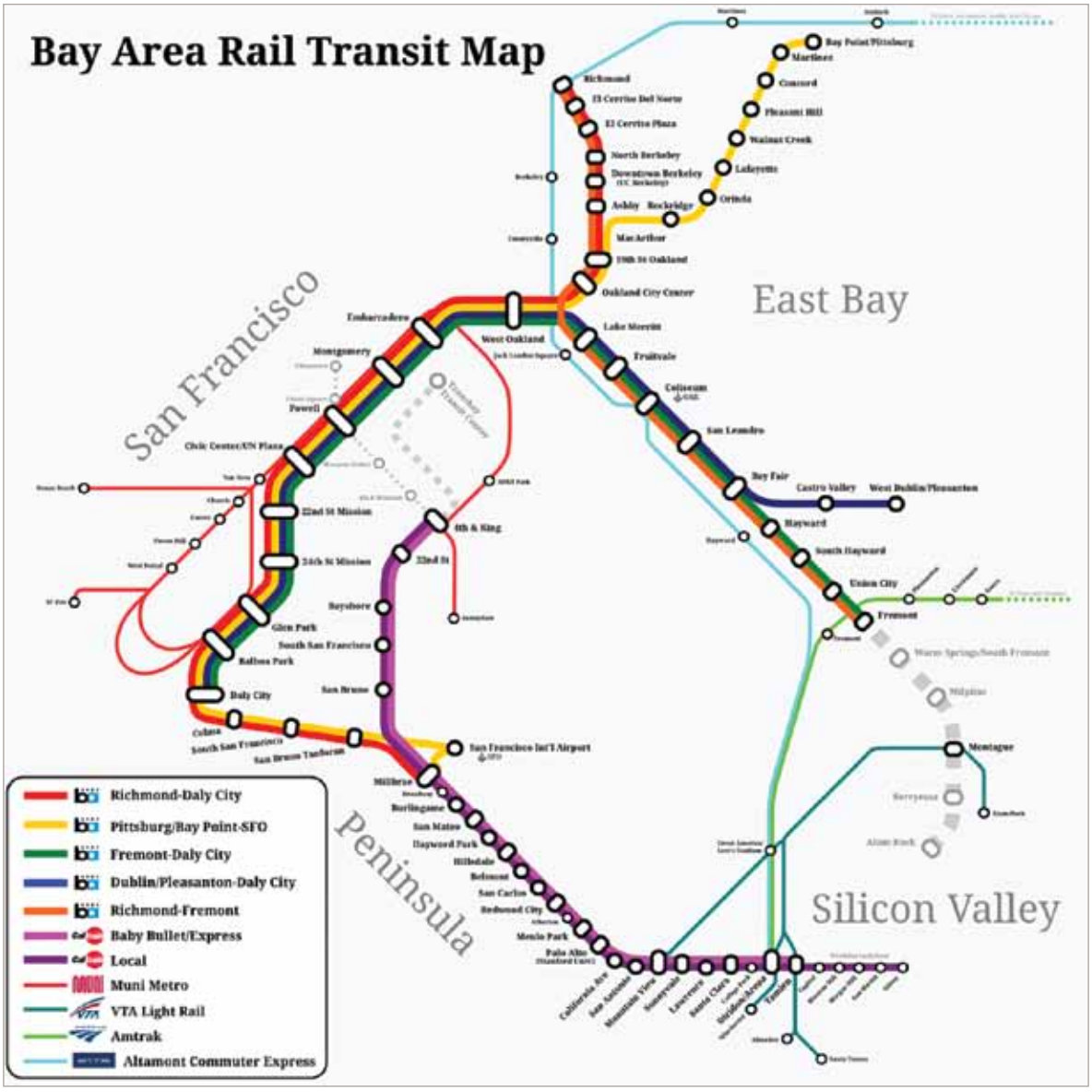


Figure 7: Map of the existing rail networks in the Bay Area

Even considering just the seven large transit operators, users and transit operators admit that the network can be fragmented and unorganized. This can be particularly challenging for users in terms of understanding routes, learning how to transfer from one network to another, and accessing other important user information. In spite of the complexity of the region's governance, MTC was able to create and implement a regional fare card that operates on the major systems (albeit with differing fare structures for each operator). MTC has also effectively created regional criteria to evaluate new capital investments, along with some ability to enforce these criteria. While these are impressive feats, the region still struggles to effectively coordinate all services, and suffers from a lack of direct state involvement terms of funding and planning.

Bay Area: Themes in Governance

Unlike other large metro areas, such as Boston and New York, there is no single dominant transit operator in the San Francisco Bay Area. At approximately 223 million unlinked trips annually, the Muni/SFMTA system, which is based solely in the City of San Francisco, has the largest ridership of any of the regional systems.[182] BART, on the other hand, boasts five lines that cover 104 miles, making it one of the most extensive rail networks in the country.[183] Other regional transit systems include commuter rail lines, ferries, and numerous local bus operators that provide service primarily within jurisdictional boundaries, often connecting suburban and rural cities and towns to regional rail systems.

Each of these systems is controlled by a separate board of directors, with varying degrees of complexity, made up of appointed local officials within the county or city jurisdictions that the agency serves. The boards of AC Transit[184] and BART[185] are directly elected by voters in their respective service regions—a governance structure that is used by only one other major transit operator in the country (the Regional Transportation District in Denver).[186] Many in the region believe this selection process results in boards that are more difficult to work with because board members are more likely to be more concerned about parochial issues and elections than about issues that affect the performance of the regional system as a whole. Most other transit boards in the region are comprised of appointed officials from within each service jurisdiction, which can be subject to parochial interests. In general, each independently governed agency creates its own routes, schedules, and fare structures within their own jurisdictional boundaries.

While each agency has internal independence, MTC plays a coordinating role across all 26 Bay Area transit entities. Serving as the federally designated MPO, MTC has a crucial role in creating and implementing regional plans and ensuring regional cohesion between all agencies. This is not a typical role for an MPO, in general MPOs coordinate plans that are created at the city or agency level, and only submit these plans to the federal government to obtain federal funding. MTC, on the other hand, not only serves as the arbiter of federal funds, but also effectively consolidates the region's tolls with state and regional funding streams, and serves as the region's fiduciary agent for transit empowered in part by California state law AB 375. Because MTC has the role of regional transportation planning and funding, it is the primary focus of this case study.

An MPO With Significant Power

The California state legislature created MTC in 1970 to be the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area.[187] A 21-member board governs MTC; 18 of these members have voting power. Local elected officials in each of the nine counties appoint 16 of the board members and counties with larger populations have more than one representative on the board. Some MTC board members also serve on the boards of regional transit agencies, though not all transit agencies are represented on MTC's board. Two voting members are from the other regional planning agencies: the Association of Bay Area Governments (ABAG) and the Bay Conservation and Development Commission (BCDC).[188] There is one non-voting state representative from the California State Transportation Agency (CalSTA) on MTC's board.

The MTC's board structure spreads decision-making power around the region, while tipping the balance slightly toward more densely populated areas, which are more likely to have representation on the board. Although some of the more rural and suburban areas feel they deserve more planning attention and funding, conflicts are generally relatively minor when compared with the city-suburb tensions in Chicago or New York. And for MTC board members who by chance also serve on the board of a transit operator, there is a general recognition that they are able to fairly represent the interests of the region's transit operators as a whole.

MTC's authority and scope of responsibility have grown since the agency's inception, primarily as a result of its multimodal operating ventures that increased funding streams under its discretion. MTC currently operates the Bay Area Toll Authority (BATA) and the Service Authority for Freeways and Expressways (SAFE).[189] BATA provides excess toll revenues of approximately $150 million annually that MTC is able to use on transit projects, primarily for capital improvements.[190] But the scale of the excess toll revenues is more limited than in other mixed-mode agencies such as New York's MTA, where excess annual toll revenues exceed $1 billion.[191]

MPOs in California tend to have greater influence over transportation investment decisions than MPOs in other states because of specific state legislation that gives California MPOs more funding power than is granted by the federal government. MTC wields significant transit-planning authority in the region, in part because it controls a substantial amount of funding—more than $1 billion annually.[192] Each transit agency has its own dedicated local funding source, which varies from agency to agency. Transit operators often use these dedicated sources to support bonding capacity, while MTC is responsible for distributing most federal, state, and regional tax subsidies to the regional transit authorities.

In 1971, California's Transportation Development Act (TDA) created both the Local Transportation Fund (LTF) and the State Transit Assistance Fund (STA), both of which are distributed by MTC for the Bay Area. The LTF is a quarter percent general sales tax that is levied statewide; the STA, which is also levied statewide, is a tax on diesel fuel.[193] MTC must distribute LTF funds back to the county from which they originated, but—importantly—MTC retains discretion over which agency within the county receives the funds. STA funds are distributed based on a formula that is 50 percent based on population, and 50 percent based on operating revenues from the prior fiscal year.[194] Of the total revenues collected under the TDA, MTC retains 3.5 percent for administrative support.[195]

While strict guidelines govern the distribution of both LTF and STA funds, substantial funding flexibility exists as a result of the large number of transit agencies within the region. For example, while LTF funds go back to the county they came from, each county has more than one transit agency so the MTC can use discretion in deciding how much funding to allocate to individual agencies within a county. Transit agencies that want MTC funding

must cooperate with MTC plans and initiatives. Thus, MTC has considerable leverage to coordinate and plan transit activities region-wide, despite its lack of direct statutory control over individual transit agencies.

While MTC plays a much larger role than most regional MPOs, the State of California plays a smaller and less direct role than many other states. Some funding (i.e., TDA funds) technically flows through the state, but the state has not taken a role in determining how this funding should be distributed. Instead, California has devolved funding responsibility to the state's MPOs, and has focused on highways and high-speed rail. The California Department of Transportation (Caltrans) takes a direct role in transit only if a transit system crosses one of Caltrans's highways. While the state has developed crucial legislation empowering its MPOs and creating transportation funding streams, transit continues to face challenges, such as a proliferation of agencies. Many interviewees suggested that the state could assist in overcoming the challenges of a fragmented region. In 2013, the state legislature created CalSTA as an umbrella agency to help consolidate state transportation initiatives and agencies, including Caltrans. CalSTA has taken initial steps in being more involved locally, and has a non-voting seat on the MTC board.

Capital Planning for Transit

Although MTC is the regional planning authority, each of the 26 transit operators in the San Francisco Bay Area has an independent governing board and dedicates its own funding toward projects and plans of its choosing. MTC authority keeps this independence in check by serving as a significant financial resource for transit capital throughout the region. Not including federal allocations and $300 million distributed for transit operations, more than $200 million annually flows out of MTC for transit capital projects—primarily from surplus toll revenues.[196] Though these funds are not sufficient to cover all the region's capital needs, the sum is large enough that few projects move forward without MTC approval and funding. Through this funding stream, MTC has solidified its role as the primary coordinator of capital funding for transit projects in the area.

MTC has used its capital planning authority to help promote projects that have significant benefits for the Bay Area region. Through the application of data-driven economic analysis and other performance-based considerations, MTC's board tends to select projects that produce broad-based benefits.[197] This includes declining proposals to fund projects that do not meet performance criteria, an important prerogative that MTC has exercised in the past. MTC does not have a rigid project selection process, and the board does select some projects based on regional equity considerations. But in general the decision-making process is one that reflects a regional outlook and seeks to tie funding to outcomes.

Nonetheless, some capital projects can and do move forward without MTC approval. For example, the Sonoma-Marin Area Rail Transit is a commuter rail line that connects several of the smaller cities in the North Bay area to ferries bound for San Francisco. This project was independently funded through a voter-initiative in Marin and Sonoma counties, but would not likely have

been chosen as a top regional funding priority. MTC initially declined to support the project based on performance criteria. While MTC did eventually allocate some funding to the project, it did so only reluctantly and after the sponsoring counties decided to move forward with construction on their own.

Inter-Agency Disputes

Much of MTC's funding is apportioned on a discretionary basis rather than through set formulas. As a result, the allocation is often subjected to scrutiny. While most of the agencies in the region view MTC as a fair and necessary arbiter, its funding distribution is not always perceived to be equitable by all parties. Generally, this skepticism is aimed at the funding appropriated to the larger operators. BART, the largest rail operator, draws the most federal formula funds due to its size and ridership. But BART is also one of the agencies with the most robust local tax revenues, so MTC compensates by providing additional funds to other agencies that have greater needs, and less funding to BART.

For example, AC Transit, the bus operator in the Oakland region, is chronically underfunded from a local tax base standpoint. As a result, MTC allocated $115 million to AC Transit in 2012, but only $33 million to BART, even though BART has more than double the ridership.[198] MTC views its role as balancing regional equities. However, this does not prevent the smaller agencies from continuously complaining that BART receives preferential treatment, as it has one of the best tax bases and is inherently regional in nature. These disputes illustrate how challenging it can be to distribute funding across a large number of transit agencies.

Regional equity issues also play into MTC funding decisions. For example, much of the region's funding for new capital expansion goes to projects that extend BART service to suburban counties. To satisfy the political requirements of the entire region, BART extensions (or other transit projects) in one part of the region are often balanced by projects for other operators on the other side of the region. Other parts of the region, particularly with VTA and smaller operators in the area surrounding San Jose, cite a lack of regional funding to develop their own transit networks and complain that MTC does not include enough representation from the South Bay area.

Too Many Agencies

The main governance challenge in the Bay Area is the excessive number of transit entities with decision-making authority. While everyone in the region agrees that this is a problem, consolidation into one super agency is not seen as realistic or desirable. Instead, consolidation to a little over a dozen operators appears to be the most appealing alternative. Some interviewees suggested merging the regional, cross-jurisdictional operators into one unit and letting counties operate their own bus networks. Others suggested merging several of the bus operators that currently have overlapping districts. Although there are significant barriers to consolidation that would need to be overcome, some consolidation was repeatedly suggested as a way to reduce the region's current complexity.

So far, however, the San Francisco Bay Area has been unable to facilitate consolidation and instead has created multiple new agencies in an effort to encourage coordina-

tion. This in part explains why there are numerous other regional bodies beside MTC that play a secondary role in regional planning for transit, including the Association of Bay Area Governments (ABAG), the Bay Area Air Quality Management District (BAAQMD), and the Bay Conservation and Development Commission (BCDC). In the early 2000s efforts to merge ABAG and MTC, which were created to perform very similar functions, were unsuccessful and the region ended up with yet another agency, the Joint Policy Committee (JPC), to serve as a unifying entity between ABAG, MTC, BAAQMD, and BCDC. This redundancy in entities charged with promoting regional coordination further exacerbates the challenges of coordinating 26 transit operators. The redundancy and confusion that results from having multiple agencies with similar missions creates extra costs and does not appear to have improved coordination.

Difficulties With Regional Coordination: The Clipper Card

One of the most visible successes of MTC and the regional transit network is the recent implementation of a regional fare card, the Clipper Card. Now available on all of the large systems, the Clipper Card represented an important step toward creating a regionally unified system. BART was originally considered as the lead agency for creating the regional card, but lacking trust in other agencies that would be responsible for returning fare revenue BART transferred responsibility for implementing the card to MTC. But implementing the card was a monumental task, managed by MTC, which took a lot of time and caused a great deal of anxiety and inter-agency tension before it was put in place. Many of the smaller operators are not yet included in the Clipper system, and not all of the functionality problems of the card have been resolved.

Along with initiating a card that works on several systems, MTC also had the challenging task of creating a unified fare system and negotiating agreements between agencies concerning fares, transfers, technologies, and funding distributions. According to critics, some of the problems with the rollout of Clipper stemmed from the fact that MTC is not an operating agency and did not have direct experience in setting up and managing complex systems. But coordinating a fare system between multiple agencies is a monumental task for any organization.

Clipper also highlights some of the limitations of the region's current governance structure and overall transit network. Though all the systems have a single fare card, there is still no unified fare structure or system-wide transfer agreement. The cost of a ride on an AC Transit bus is different than the cost of a ride on a Muni bus, and age cutoffs for youth and senior fares differ from system to system. 511.org is MTC's single source of information for routes, frequencies, and schedules for the region as a whole, but these cannot be found on individual operators websites or at transit stops. With the current level of system disaggregation, MTC has limited ability to create a more unified system. MTC's leadership and perseverance ultimately made Clipper successful, but this was possible in spite of (not because of) the regional governance structure.

Bay Area: Analysis

The Bay Area has had many transit successes despite a challenging governance structure. The region has reasonably well maintained infrastructure, especially compared to its East Coast peers, a strong independent regional planning body, and a fare card that can be used on nearly every mode and every transit system throughout the region. MTC, in particular, provides a single forum for strategic planning and implementation to deliver a unified system from the customer perspective.

But the governance structure does have some shortcomings that are evident in interagency disputes, a proliferation of agencies, the difficulties encountered in rolling out the Clipper Card, and funding challenges. Several lessons can be drawn from the Bay Area case:

1. ***An MPO with planning and funding authority can improve regionally focused decision-making.*** MTC demonstrates the potential value of giving significant capital and operating power to an MPO. MTC has gained primary control of regional coordination through its ownership of revenue-generating tolls, and through state and local initiatives that give MTC the authority to handle the disbursement of transit funding. While MTC does not exercise budget power or direct oversight over local transit authorities, it has substantial leverage to promote regional coordination and cooperation. For a region with 26 operators and a spectrum of transit needs, MTC appears to be effective at coordinating and distributing funds for capital investments and operations without causing major political disruptions.

2. ***Independent funding sources coupled with appropriate geographic reach can help empower an MPO to push better regional decision-making.*** Surplus toll revenues give MTC a funding source that it can leverage to exercise discretion over the selection of transit capital improvements. Many MPOs have limited federal funds and often have little choice but to fund requests from larger, more powerful transit agencies. But with its own revenue source, MTC can exercise leadership in selecting projects of regional significance and guiding transit agencies toward a regional vision of the transit system. Though an MPO is not always the best place for regional decision-making, MTC has been one of the few regional agencies in the country to use performance metrics to tie funding to project selection.

3. ***Even with a strong MPO, the proliferation of transit agencies within a region can severely inhibit effective planning and coordination.*** Consolidation is an ongoing theme within the Bay Area region, and would appear to offer significant

potential efficiencies and benefits. Too many transit players, all with their own boards and directions, make a regional system much more complex than it needs to be. Fewer agencies and a clearer delineation of responsibilities between MTC and other operators might help streamline the system from the customer point of view. The region still has a long way to go until it can agree on a system-wide bus fare or even a single venue for providing integrated maps and schedule information.

4. ***The scarcity of a direct state role can hinder funding and coordination.*** States have a vested interest in the performance of their largest metropolitan areas, and California's approach has been to devolve responsibility to the MPO and other regional bodies, albeit within strong state-mandated performance frameworks. California has mostly removed itself from direct influence over public transit issues. Though this devolution has created some benefits, a greater state role could help fill funding gaps and encourage targeted investment from a more regional and customer-oriented point of view. Because the perspectives and interests of state government representatives are likely to be less parochial than those of county-level members on the MTC board, greater state involvement could encourage more effective capital investment. California has begun this process through the newly created CalSTA and new state funding though Cap and Trade, but their voting power and influence on transit planning still does not exist. It is not to say that CalSTA should take a controlling stake in the regional transit network, but a greater voice might help the region overcome its current obstacles.

5. ***There is a benefit to giving MPOs added power through state-level legislation.*** While the State of California could play a greater direct role in regional transit, the state has empowered MPOs to provide stronger leadership and distribute transit funds. This additional funding power has enabled MTC to pioneer regional performance metrics, encourage transit-oriented development, and target funding to broad regional plans. These real and tangible benefits are a direct result of the statutory and financial power that has been handed down to MTC from the state. Though the state could and should take a greater role, the fact that the primary planning and funding authority is a regional agency makes sense.

PART THREE:

Case Studies—Summary Findings and Lessons Learned

The Eno/Transit Center team travelled to six metropolitan regions across the country to examine how different regional governance structures help to foster or hinder usability, mobility, and innovation. While each region is unique in its history, jurisdictional boundaries, and transit network organization, as indicated in Table 4, there are common themes in transit governance that emerged through the included case studies. This section explores the common themes that were identified through the case studies and, building on these themes, provides a set of lessons that could be incorporated into governance regional transit governance structures in the United States to help optimize their performance.

Each region has developed mechanisms to control the coordination of transit services and operators, with varying results. For example, Boston chose to consolidate all transit agencies in the state into the state's department of transportation, whereas in New York, the largest transit providers operate as subsidiaries of the state-established MTA. Other metropolitan regions, including the San Francisco Bay Area, Dallas/Fort Worth, and Minneapolis/St. Paul, have given their MPOs significant authority to coordinate between agencies. Meanwhile the MPOs in the Chicago, Boston, and New York City regions play secondary roles to other regional coordinating bodies. Regional coordination is least effective in Chicago, where the RTA lacks statutory authority to manage the boards of the three main transit operators.

For the agency that holds the most planning authority in the region, ***the method used to select members of the board of directors often drives regional priorities.*** This is because board selection strongly influences board priorities and determines which constituencies board members see themselves as serving. For example, board members who are appointed directly by a governor, as is the case in Boston and New York, are likely to follow gubernatorial rather than metropolitan or local priorities. Minneapolis/ St. Paul, by contrast, created CTIB to help distribute a regional sales tax using local representatives based on population—in part to address concerns about the priorities of the governor-appointed Met Council. In the San Francisco Bay Area, the MTC's board is more diversified and, though far from perfect, its members appear to work together to balance regional priorities.

For boards with local representation, ***disproportionate board composition tends to exacerbate the city-suburb tensions that often dominate transit-planning debates.*** City-suburb tensions are often perceived as stemming from ideological conflicts that are political in nature. But in most regions with locally appointed boards, these conflicts are rooted in parochial interests. Where members are locally appointed, board membership is typically proportional to population or geographical area, which often over-represents suburban interests with respect to transit ridership. This explains in part why the Metra commuter rail network in Chicago is much better funded per rider than the Chicago Transit Authority (CTA), despite the fact that CTA has dramatically higher ridership. Board composition of regional bodies also helps to explain the

Table 4: Governance Summary

Region	Primary Agencies	Coordinating Agency	State Role	Primary Funding Source	Remarks
Boston	One (MBTA)	MassDOT	Power is generally centralized at the state level, with minimal role for localities.	Dedicated state taxes	The MBTA, which is the single transit operator in the region, is a branch of MassDOT, the state transportation agency.
The Chicago Metropolitan Area	Four (CTA, Metra, Pace, and RTA)	RTA	RTA was created under state statutory authority, but state influence is limited.	Local sales tax	RTA is an umbrella agency, providing funding to three regional operators. Its statutory power and funding flexibility is very limited.
Dallas/Fort Worth	Four (DART, The T, DCTA, and NCTCOG)	NCTCOG (region's MPO)	The state maintains no direct power or influence over transit agencies or MPO.	Local sales tax	NCTCOG covers a large area and wields influence over DART and the two smaller operators in the region.
Minneapolis / St. Paul	Two (Met Council and CTIB)	Met Council (region's MPO along with TAB) and CTIB	State control over transit operator and MPO; more localized influence over capital expansion.	Local and state taxes	The region has two regional bodies that coordinate transit planning and investment, with Met Council taking primary responsibility for operations and CTIB funding capital projects.
New York	Several, including NYCT, LIRR, Metro North, and others under MTA, New Jersey Transit, Port Authority	MTA	Primary agency under state control, with some localized influence.	State-imposed local taxes	The MTA acts as coordinator for several subsidiary operators in New York State. Other agencies, such as NJT and the Port Authority, are not included.
San Francisco Bay Area	26 independent operators (seven large ones), MTC, other regional coordinators.	MTC (region's MPO)	Under state statute, most direct control over transit has devolved to regional MPOs.	Local taxes distributed through MTC	MTC, the region's MPO, distributes a large amount of discretionary funding to the 26 transit operators. MTC also serves as regional coordinator and manages the regional fare card.

focus on commuter rail expansions in Dallas/Fort Worth and in the Twin Cities instead of updating the core network. In Boston, on the other hand, where funding and planning authority resides at the state level, city-suburb conflicts are less prevalent.

The widely varying role of state government in regional transit planning, funding, and operations is a recurring issue in many major metropolitan regions. The state role, if it exists, comes either through cooperation with the state DOT or through governor appointees on a governing board. Boston's transit system, for example, is under direct oversight of the state department of transportation and a governor-appointed board, though admittedly Massachusetts is a state dominated by one large metro area, which is also its state capital. In the Chicago metropolitan area and Dallas/Fort Worth, which

are in bigger states with multiple large and medium-sized metropolitan areas, the state government has minimal involvement in transit services or planning. In the Twin Cities region, the state plays a direct governance role through the governor-appointed Met Council, but has no influence over the capital funding decisions of CTIB. And while the governors of New York and New Jersey have significant influence over the Port Authority and the MTA in New York, responsibility for transit in California has been devolved to the MPO level. In the San Francisco Bay Area this means that most transit planning and funding decisions—including the distribution of state-based taxes—have been delegated to the MTC through a state statute mandating the use of performance measures.

Different approaches to funding transit operations and capital improvements also have important implications for governance. Aside from farebox revenues and federal dollars, transit agencies tend to rely on a blend of local and state sources to meet their funding needs. In most cases, greater reliance on local funding correlates with greater local board representation and greater reliance on state funding results in greater state representation. This is true for Dallas/Fort Worth and the Chicago metropolitan area, where funding sources match the board structure in the sense that both transit funding and board representation are local only. Boston's transit system is primarily funded by state taxes with a smaller contribution from local taxes, which lends itself to a governance structure where the state has complete control. New York's transit system receives substantial funding through state-authorized taxes levied entirely within the region; its board is dominated by state appointees. Meanwhile, though the state of California played a significant role in creating regional transit entities in the San Francisco Bay Area, funding control is exclusively local.

Another important revenue source for regional agencies is cross subsidies derived from toll facilities. New York's MTA and the San Francisco Bay Area's MTC are directly responsible for several tolled facilities in their regions and they use some of the surplus funds generated from tolls to provide regional transit services. In Boston, while the link between tolling and public transit is not as explicit, the MBTA shares the same board with the Massachusetts Turnpike, which generates extra toll revenues that are indirectly used for transit. Even in Dallas/Fort Worth, which has minimal state support, there was an instance where the NCTCOG was able to direct revenues from a tolling concession to a new commuter rail project. Tolling not only has the potential to bring important revenues into the system, it also creates an incentive for regional bodies to think strategically about the overall transportation network. Toll roads and parallel transit systems can function in a complementary way, and a single agency that manages both can take a broader and more integrated approach to regional transportation issues. Transit systems in Chicago and the Twin Cities have never been linked in any way to toll revenues.

A final issue that frequently emerged in the case studies concerned the number of players involved in providing regional transit services. The regions examined in this report spanned the spectrum, from Boston, where transit planning and operations are effectively controlled by a single agency, to the San Francisco Bay Area, where control over the transit system is fragmented across 26 operators and several regional coordinating agencies. Though the Bay Area MTC has performed well in terms of regional coordination, most networks tend to operate better when there are fewer regional actors. Geographical boundaries such as the San Francisco Bay and several mountain ranges help to explain the fragmentation in the Bay Area, but history, not the geography, in Chicago or New York accounts for the fragmentation in those areas. Users of public transit are generally not interested in who is on the board of directors, who is operating the trains, how much the drivers are being paid, what the gauge of the track is, and where maintenance facilities are located. What matters to transit riders is mobility, as well as convenience, cost, and other system attributes. Multiple institutions typically make it harder to operate a unified, efficient network.

Transit Governance Lessons Learned

The case studies included in this study reveal several potential approaches for improving transit governance. While the recommendations discussed here are based on the six metropolitan regions described in the preceding sections, they are applicable to regional transit systems of all sizes and structures across the United States.

An Effective MPO Can Be a Valuable Mechanism for Regional Transit Coordination

MPOs often provide a natural venue for regional planning and coordination. They are multi-modal in nature and have jurisdiction over most of a metropolitan area, and are therefore generally inclined to think about services and networks from a regional perspective. In regions where MPOs have assumed a greater role and have more authority, their influence on regional transit coordination has generally been positive.

Three of the case study regions discussed in this report—the San Francisco Bay Area, the Twin Cities, and Dallas/Fort Worth—had MPOs with significant planning authority. The most influential of these is MTC in the Bay Area, which is responsible for distributing over $1 billion in annual funding to transit agencies. In part because it has significant funding authority, as well as revenues from its own toll roads, tunnels, and bridges, the MTC was able to overcome substantial obstacles to bring most of the region's major transit agencies and develop the Clipper Card, which is a regional farecard. In the Twin Cities, the MPO is the regional coordinator, planner, and the operator of the primary transit system. And in Dallas/Fort Worth, the NCTCOG plays a vital role coordinating the three operators that provide transit services throughout the region; the NCTCOG also helped implement a unified fare medium.

In many other parts of the United States, however, the MPO's primary function is to distribute limited federal funds and integrate multiple regional plans into a single document without a strong unifying vision of its own. In New York, Boston, and Chicago, which are dominated by one large transit agency, the MPO plays a less significant role. In these regions, transit agencies take the lead in creating a regional transit network. The problem with this approach is that internal divisions often challenge agencies' efforts to coordinate, and transit agencies are not inherently multi-modal in their transportation planning. In Chicago and to a much lesser extent in the New York metro area, the large transit agencies have to con-

tend with internal differences across sub-agencies that make coordination more difficult.

To have a greater role in regional transit coordination, it is important the MPO be structured effectively and apply meaningful performance measures. In some cases, just like transit authority boards, MPO boards can misrepresent the region and governance structures can have flaws that do not encourage regional cooperation.

Access to an Independent Source of Funding Can Benefit Transit Planning and Operations

Two of the regions studied—New York and the San Francisco Bay Area—have dedicated transit funding from toll revenues that contribute significant resources to transit investments. In New York, both MTA and the Port Authority garner substantial revenues from tolled river crossings, while in the Bay Area, the MTC operates the tolled Bay Bridge. In both cases, the authority to collect tolls is embedded in agencies with regional scope, which yields substantial benefits for transit planning. In Boston, the MBTA also indirectly derives some revenues from tolls simply by being in the same agency as the Massachusetts Turnpike Authority.

In the New York metropolitan region, toll revenues help to insulate both public authorities from political influences, providing a steady source of revenues. Importantly, toll revenues allow the transit agencies to take a multimodal approach, giving them a broader transportation perspective and promoting more holistic planning decisions. As a result, both the Port Authority and MTA can coordinate more effectively across modes in planning and operations. Similarly, San Francisco's MTC has used toll revenues to encourage regional thinking with regard to capital planning decisions. In Boston, control of transit and highway systems is completely centralized under one roof. Though this change is recent, it is expected to lead to more effective multimodal planning.

By contrast, financial problems persist in regions where transit agencies are completely dependent on federal, state, or local tax revenues instead of tolls. In the Chicago metropolitan region, the minimal state involvement coupled with regional infighting has created an untenable funding situation for transit—as a result, transit is treated as a completely separate part of the regional transportation network for the largest city in the Midwest. This problem could be alleviated if the Illinois State Toll Highway Authority, which operates several toll roads in the region, were integrated with the RTA or a similar regional transit body. Similarly, in the Dallas/Fort Worth area, the NCTCOG is a strong MPO that could operate toll roads and bring funding that is able to be spent on multimodal projects, including transit, to the region.

State Involvement, With Appropriate Accountability for Outcomes, Can Provide Benefits for Transit

Transit is inherently a regional operation. Like other regional networks such as highways, transit can be more effective when it is planned, organized, and operated with a regional perspective. As large metropolitan regions are the primary generators of the U.S. economy, a regional focus on transit is crucial from an economic perspective. With so much at stake in terms of the performance of transportation networks in major metropolitan areas, it is essential that state governments play a role in the success of regional transit systems. Importantly, state control does not necessarily mean direct involvement with the state DOT, but governor appointees on boards can be a means of direct state involvement. Unfortunately, some states still treat transit—even in their largest metro regions—as an afterthought, while some states take overwhelming control.

The level of variation in state-government involvement in transit across the case study regions is striking. In Boston, New York, and Minneapolis/St. Paul, the state is heavily involved, all with governor-appointed boards managing regional transit systems. On the other hand, the Chicago metropolitan area, Dallas/Fort Worth, and the San Francisco Bay the state role is much more limited. While overly aggressive state control can cause problems, as is evident in the New York and Minneapolis/St. Paul regions, the case studies overall indicate that an active state role, when compared with an inactive role, is a positive development for transit.

Three considerations suggest that state involvement in regional transit may have benefits. The first is that state help is needed to raise revenues and improve regional governance. State governments that are not involved in governance typically have no financial stake in the transit system, leaving regions to support themselves with their own tax dollars and whatever funds they can get from the federal government. In the case of Dallas/Fort Worth, lack of state involvement may have contributed to poor capital decision-making as the region has focused on expanding its rail system, with little regard for whether this expansion is producing significant economic benefits for the region, the state, or the base transit ridership. It is possible that if the state were

more engaged, these investment decisions might reflect a greater recognition of the importance of coordinating transit expansion and helping to better manage land use development. In the San Francisco Bay Area, if California were to be more engaged it might direct more funding to regional transit in its major cities instead of high-speed rail projects as state policymakers would be more aware of the challenges facing metropolitan regions. State policymakers might also be able to push for a more rational consolidation of transit agencies.

The second consideration is that states can serve as a neutral party in disputes between regional transit agencies. Local interests often exacerbate city-suburb divisions that are already problematic in regions like Chicago. Although governors and legislatures sometimes have their own biases, they are likely much more concerned with the overall performance of the region rather than with a specific locality. Of course, strong state involvement hardly guarantees optimal investment decisions, as New York and Boston demonstrate; in both these metro regions, suburban rail expansion has been favored over investments in the core system. But in general, active state involvement appears to strengthen regional coordination and dampens parochial concerns. Specifically, states should be represented, along with other stakeholders, on the boards of agencies in charge of regional planning. Board representation would give states the direct ability to influence and be aware of regional transit issues and challenges, while also providing accountability and an appropriate degree of independence for transit agencies. This does not mean that the state should have overwhelming voting power in every region, but at a minimum they should have a stake in the decision-making.

Finally, active state involvement is beneficial in that it pushes states to recognize transit as an essential component of their transportation networks. In Texas, Illinois, and California, where there is limited state involvement in transit funding or operations on an ongoing basis, state departments of transportation focus almost exclusively on highways, and governors are concerned with other transportation issues. States and governors that are directly involved in transit planning, by contrast, are more likely to adopt a multimodal perspective and promote effective coordination across modes, as has been the case in New York and Boston.

State involvement, however, is not a uniform prescription for every state in the United States. States vary drastically in terms of population and geographic size. By no means should the role of the State of California, a very large state geographically and by population with multiple large metropolitan areas, mirror the role of Massachusetts, a small state geographically with only one major metropolitan area. In addition, the structure of a state's involvement should be a response to the political factors and needs within the state and within the metropolitan region. State involvement does not necessarily mean involvement of the state department of transportation, but as in New York can mean appointees from the governor as well as involvement of the state's legislature. Each type of state involvement comes with its own potential benefits and pitfalls. Regardless, greater state participation must also mean that state authorities are held accountable for outcomes. When there is substantial state involvement but

limited accountability—as in New York and historically in Boston—transit agencies can suffer from underinvestment and overreliance on state funding. This is why the introduction of regional performance measures for transit, described below, is so important.

Regions Need a Performance-Based Capital Planning System

Capital planning decisions will always be, and ultimately should be, influenced by political considerations. But the potential downsides of political influence can also be mitigated to a degree by introducing regional goals along

with performance measures for evaluating progress toward those goals. Performance measures provide a check against the possibility that capital investment decisions will be driven by purely political, rather than economic, or other, considerations.

The MTC in San Francisco is one of the only regions studied that is taking clear steps toward directly tying funding to performance. For example, the MTC questioned funding a commuter rail line in the North Bay area that did not meet a defined benefit-cost ratio of 1.0. Though the agency ultimately committed some funds to the most worthwhile stations, this example demonstrated that the MTC's board was committed to performance standards and would not necessarily back lower-priority projects for political reasons.

Experience in other regions, by contrast, serves to illustrate how the lack of performance standards can lead to a suboptimal allocation of transit funds. In the case of the East Side Access project in New York, the regional rail system in Dallas, Metra improvements in Chicago, and commuter rail extensions in Boston, transit agencies prioritized lower-value projects, from a cost-benefit and funding per rider perspective, while underinvesting in the core transit network, which serves a disproportionately high number of users. Of course, the personal priorities of agency board members, or of the governor, can always subsume effective planning. But these priorities are harder to justify if they are evaluated using agreed-upon performance metrics, such as the results of a cost-benefit analysis.

The federal government has an important role to play here. While recent federal legislation has introduced the concept of using performance measures to evaluate and prioritize transportation infrastructure investments, federal policy has not yet gone so far as to link funding to performance outcomes. Just as California law required MTC to introduce performance metrics, if the federal surface transportation program moves in this direction, growing numbers of states and regions are likely to follow suit as they seek to maximize their share of federal transportation funds.

Board Representation and Selection Is Critical

Several of the regions included in this study were plagued by an imbalance in the representation of localities, residents, and riders on the governing boards of the largest transit agencies. This imbalance, not surprisingly, appears to lead to poor decision-making, and typically favors those interests or localities that are overrepresented. Regions need to ensure that the balance of representation on agency boards reflects the composition of transit users. Regions also need to ensure that the process used for selecting

board members is dynamic enough to allow for shifts in representation over time as transit needs change.

New York provides an example of this governance problem, as the board of the New York MTA over represents suburban concerns relative to the amount of transit use that occurs within New York City limits. This has led to underinvestment in the core network, where the opportunities to improve accessibility are greater. Further, the governor of the State of New York directly appoints the Chairman of MTA, and there is no measure for riders or other stakeholders to confirm or reject this nomination. This results in a board that not only favors the suburbs, but one that may consider the preferences of a single elected official representing the entire state, the governor, over the interests of the primary ridership of the system.

In Chicago, the power of appointment is also a crucial element to the behavior of the boards. The board of RTA is inconsistent with the ridership of the system as a whole and does not have clear state representation. This is demonstrated as the different needs of the city's large transit operator versus those of its suburban counterparts has created an inability to effectively make regional decisions. A strong regional agency with board representation that is reflective of ridership—unlike the existing Chicago RTA—could potentially improve the situation.

Boston faces a very different problem, as the state controls the transit agency and localities and riders are underrepresented in the board structure. With governor-appointed board members and executive leadership, the governor's priorities control the direction of planning. On the other hand, localities in the greater Boston region also benefit because they pay less into the system. Over the long-term, Boston's transit governance structure could be improved with increased direct rider and resident input to increase the economic benefits from regional transit. In general, voting members should be represented in transit system decision-making based on ridership as well as their financial contribution.

There is no simple formula or structure that can solve the issues of board representation. The Twin Cities Met Council board, which many interviewees suggested had an urban bias, demonstrates that board representation and priorities are complicated to determine. Of the 16 governor-appointed members that serve on the Met Council board, only five represent areas that are within the borders of Minneapolis and St. Paul. In addition there is a wholesale turnover of the Met Council board that coincides with gubernatorial elections. While some in the community may view the board as being decidedly urban, its board representation might suggest otherwise. Within each region, ensuring that the board structure strikes the proper balance will take finesse. The structuring should allow for some amount of flexibility as the region changes and grows over time.

Consolidating Agencies Typically Provides Policy and Service Benefits

As demonstrated through its case study, Boston is able to effectively provide one of the most cohesive regional

transit networks of the six case studies examined. Boston's success likely owes much to the fact that the entire transit network is housed under a single entity—the MBTA—and the MBTA is part of the governor-controlled state DOT. Not all regions can create a single unified organization, nor would this necessarily be desirable. On the other hand, in some regions with multiple agencies the fragmentation and redundancy of the existing transit governance structure creates unnecessary problems. The San Francisco Bay Area is the extreme example in this regard, with more than 26 transit operators and half a dozen regional agencies working alongside the MTC. While the MTC, as a powerful regional coordinator, provides many benefits, including some benefits that are linked to the ability to have discretionary funding power over several operators within the same jurisdiction, there was nonetheless widespread agreement among interviewees that some consolidation would improve the transit situation in this region.

In Chicago, fragmentation in the delivery of transit services—even under one RTA "umbrella"—is likewise detrimental to good governance. The RTA's lack of control over its Service Boards results in limited regional coordination and chronic underfunding. Even New York City's MTA might operate more effectively if its sub-agencies were better integrated in terms of governance.

Redundancy and fragmentation also affect transit performance in the Dallas region, where three distinct agencies connect only through low-frequency commuter rail. The NCTCOG has been effective in coordinating fare structures, but gaps in the network severely diminish mobility at the regional scale. Minneapolis has a powerful MPO in the form of the Met Council but ultimately needed to create a separate entity, CTIB, to help distribute revenues from regional sales taxes for transit improvement. Given that CTIB undertakes many of the same planning activities as the Met Council, a better approach might have been to provide some checks and balances to the state-appointed board of the Met Council so that it was more representative of local concerns.

Conclusions

When it comes to creating a regional transit network that is useful and efficient to users, regions across the United States struggle with a variety of challenges including the ability to implement technological advances, make investment decisions that benefit the riders, and coordinate service and interfaces between different operators or transit modes. While it may appear that a region's inability to update its farecard or to maintain a state good repair is the result of technological or funding barriers, it is often a result of a governance structure that does not have the proper capacity to implement change or make effective investment decisions. As this research revealed, the biggest challenges of regional transit are often rooted in the governance of and subsequent interaction between regional bodies.

This research was the result of extensive interviews with senior level officials from a range of organizations in each of the case study regions. Though it is primarily qualitative, and inherently subjective, the discussions with stakeholders nonetheless revealed several insights as to how regions might improve their governance approach. The lessons learned from the examination of all the cases together provides a resource for local and state level policy makers to aide in their understanding of how governance is structured in other regions, and to explore how various structures can help support the usability of the system. While each region is unique in its history, jurisdictional boundaries, and transit network organizations, there are common themes and lessons that can be drawn from the diverse experiences included in this report. By applying these lessons to regions across the country, regional transit within the United States can perform better and provide a service that is more usable for riders.

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