



THE STRUCTURE OF SUCCESS

A PLAYBOOK FOR CITIES TO BUILD SUCCESSFUL TRANSIT PROGRAMS

Spring Street, SEATTLE
(photo credit: Mike Bjork)

Cities need better buses, and buses need transit streets.

Buses are the core of city transit systems, moving 14 million riders on streets each day and reflecting a decade of growth in transit and center-city population. However, between 2016 and 2017, bus ridership dropped across the US more than 5%,¹ subjected to worsening congestion and insufficient investment to meet demands for service. Cities are at an inflection point: without action, transit and car traffic will both slow down over time, at great cost to riders, drivers, and the public.

City transportation departments have a critical role to play in supporting effective transit, and must see transit as part of their mandate. When cities prioritize private motor vehicle throughput on streets, transit languishes in congestion. By contrast, in places and on corridors where cities prioritize efficient and reliable bus service, and make investments in transit service, bus ridership increases. Seattle's six RapidRide lines served 20.7 million rides in 2017, a 4% increase over the previous year.² San Francisco's MuniForward program pushed a 2% increase in citywide bus ridership between 2016 and 2017.³ Where cities have invested in on-street transit, riders have noticed and gotten on board.

Cities have the design tools to set the bus free; the most challenging barriers are often internal to city agencies. Delivering better transit means overcoming structural hurdles and committing to innovation and problem solving. Change requires building new knowledge and relationships across divisions and across agencies, and seizing opportunities where design and operational changes can substantively improve transit performance. People throughout both the city DOT and the transit agency can take tangible steps to collaborate on transformative projects that reveal the potential for transit to power the city.

Riders are waiting; the time to act is now.

BUILDING A SUCCESSFUL TRANSIT PROGRAM

This paper is a playbook for city transportation departments and transit agencies to incrementally build successful programs that improve transit quality and performance. These steps are meant to be iterative: agencies build momentum for transit by demonstrating successful projects, and successful projects empower staff to take on more challenging—and ultimately more impactful—efforts. Organized as a narrative in four parts, city DOTs and transit agencies can use this as a guide to catalyze durable institutional change that embeds transit as a core function in the city’s mobility system, and nurtures staff to recognize and solve problems continuously.

1 PICK EARLY WINS.

Early projects build the skills of existing staff and lay the groundwork for future projects. New projects test an agency’s ability to implement new and innovative projects, specifically revealing technical and resource needs.

Who: Project Manager with a “green light”

2 STRENGTHEN CRITICAL CONNECTIONS.

As the design and construction toolbox grows, target projects on core transit routes. Make visible investments that emphasize the value of the transit system and reinforce its importance to the city’s mobility network as a competitive mode. At the same time, deepen the partnership between the DOT and transit agency, and ratify the implementation toolbox.

Who: Program Manager or Senior Planner at Transit Agency

3 CHANGE CORE BUSINESS PRACTICES.

Don’t just build a factory—create a manufacturing ecosystem. Success at a large scale means applying expertise and creativity to the challenge of moving transit reliably on busy city streets. Quality transit relies on the orchestration of service planning, geometric design, signals, corridor traffic management, curbside regulations, passenger information, and any related capital construction, convening multiple practice areas and agency subdivisions. Internal reform at agencies removes barriers to potential projects, such as street performance measures, design standards, or procurement barriers that disfavor any change to the street.

Who: Agency Commissioner or General Manager, and Deputies

4 SET A CLEAR MANDATE FOR TRANSIT & MOBILITY.

Communicate a strong vision for citywide mobility and transit development. Local and regional governing authorities can set a clear direction, and they can dedicate funding and resources to ensure continued progress. City departments may be realigned to better deliver on a transit mandate. Whether restructuring the organization chart or chartering a new department to oversee transportation and mobility within the city, what matters most is creating an environment that nurtures innovation and prioritizes results. Technical and operational groups need clear direction and leadership, including instructions to favor bus reliability rather than private motor vehicle capacity, not just permission or public statements in favor of transit in general.

Who: Agency Directors, Civic Leaders, and Elected Officials



Market Street, SAN FRANCISCO
(photo credit: SFMTA)

PICK EARLY WINS

The goal of early transit street projects is to prove the concept behind transit priority. The best early transit investments in many cases are not major capital projects; while high-capacity rail and bus rapid transit can serve significant ridership and signal a commitment to quality service, quick-build street transformations and strategic operational interventions can be deployed to improve more transit trips and reach more people. In this stage, implementing effective transit priority projects requires strong communications between city departments and their transit agency partners, and support from department leadership to demonstrate a new kind of project.

Select and implement one or two projects on an expedited timeline to show the value of transit-supportive street design, and that the city can deliver.

Choose projects on existing productive transit routes, especially where transit is frequently delayed by motor vehicle traffic, loading and curb access, or uncoordinated signals. If buses are delayed at stops and intersections, roll out the red carpet beneath the bus and organize the street. Justify assigning a general purpose travel lane to exclusive transit in terms of total person throughput, or provide signal priority and queue jump lanes strategically.

Use early projects to build new neural pathways within and between agencies. Implementing new kinds of projects requires overcoming technical obstacles and building new connections within and between partner agencies, ranging from communicating the importance of novel design details to testing and understanding the life cycle of new construction materials. For instance, New York and Denver have implemented projects with multiple markings types and materials to experiment with durability, skid resistance, and private vehicle compliance.⁴ Early outcomes deliver crucial information for better design and procurement.

Build quickly using interim materials. Markings, inexpensive materials, and signal timing can be used to change the way the street works, demonstrating the operational benefits. While building “twice” may appear to cost more, building community support and working through challenges in the more flexible, interim materials stage can relieve pressure on the capital process, preventing late-stage delays and saving money in the long run. Leverage in-house crews to implement street projects when possible, or utilize existing service contracts (sometimes called “on-call” or “where-and-when”) for striping and engineering work to facilitate fast implementation. Contract crews who are able to deliver on engineering and construction needs without requiring a larger capital project are a powerful resource for cities, especially when testing new strategies.

FORDHAM ROAD SBS, NEW YORK CITY



Credit: Adam E. Moreira

The Fordham Road Bx12 Select Bus Service (SBS) project set the stage for the fourteen rapid transit routes that have since been implemented in New York City. The project upgraded a 6-mile route using dedicated transit lanes, in-lane stops, off-board fare collection, and transit signal priority, costing approximately \$10 million. A year after opening, the new service had achieved a 20% improvement to total travel time and a 10% increase in ridership.⁵

Responsibilities for implementation were divided between partner agencies, with NYC DOT (the city) leading right-of-way treatments and MTA New York City Transit (NYCT, the transit operator) leading service changes. While NYC DOT was responsible for selecting and testing materials, such as red epoxy paints for the transit lane, NYCT oversaw changes to fare payment and enforcement to enable faster all-door boarding.

Implementation was strengthened by collaboration: for example, when NYCT needed to procure fare boxes for off-board payment, NYC DOT was able to repurpose parking meters already on-hand for collecting cash fares and printing proof-of-payment receipts. Project success was driven by nimble problem-solving and commitment to project goals.

By delivering an ambitious but cost effective project, the two partner agencies (NYCT and NYC DOT) proved how on-street transit could be improved quickly. Since 2008 with the Fordham Road Bx12 project, New York City has implemented thirteen additional rapid bus routes across the city, and has cultivated a programmatic approach to improving bus speed and reliability on congested corridors.

Appoint a transit project manager to act as champion, and empower that person to deliver. Form a working group with partner agencies to open direct lines of communication.

All cities need a person or people responsible for the city's street-related work on transit—either the head of a transit program, a part-time job for the senior engineer or planner, or a key staff member with a combination of design, outreach, and coordination skills. This staff person can identify the city's priority streets for transit work, serve as an internal checkpoint on street design, and take responsibility for transit project delivery.

The project manager must act as internal champion, gathering support and momentum from internal technical staff, agency commissioners, division heads, and civic and advocacy groups who can propel the project. The project manager often acts as the design lead, and generally needs to have a heavy hand in every step from conceptual design to detailed engineering to construction supervision. Even if they are working with other staff, these are tasks that cannot be fully delegated.

When there is no existing protocol, selecting a project manager with the skills to serve as an internal champion is a key ingredient in successful projects. This person elevates important issues, and activates the capabilities of each relevant division or office.

Early projects are learning opportunities and are often easier to implement by using existing staff and agency capacity, rather than committing to entirely new resource pools or capacity. Early projects build internal consensus, as well as relationships among staff. Future projects, often more complex, can benefit enormously from early lessons learned by working through implementation problems in simpler or lower-profile projects.

Collect data to demonstrate project benefits, and use that to build momentum.

Select project metrics that will build a strong case for future work, especially outcomes that improve safety and mobility or make transit easier and more cost effective to operate. Successful programs tend to emphasize their performance evaluation and metrics, documenting the success of early projects to make a strong case for future work. Transit programs on streets have focused on outcomes that matter to

TRANSIT PRIORITY WORKING GROUP, AUSTIN

In Austin, project engineers and planners who have become adept at implementing street transformations through the City's bikeways program have begun to apply these project delivery lessons to improving transit speed and reliability. Initial transit projects capitalized on adopted transit service and downtown vision plans: the Austin Transportation Department (ATD) and Capital Metro Transportation Authority (Capital Metro) partnered to implement transit only lanes for MetroRapid bus service on Guadalupe and Lavaca Streets while installing enhanced bikeways on those streets.

To build from the successes of early projects and improve identification, development, and collaboration, ATD and Capital Metro formed a staff-level Transit Priority Working Group to strengthen connections between these two agencies, meeting regularly and coordinating on forthcoming transit speed and reliability efforts. Staff from both agencies convened the group to develop internal stewards within each agency, coordinate on projects, and identify resourcing and agency needs. These discussions are being translated into active planning initiatives, including the Austin Strategic Mobility Plan, and Capital Metro's Project Connect.

These efforts have resulted in changed business practices for both agencies. This is evidenced by the interlocal agreement that was passed by the Austin City Council and Capital Metro Executive Board in April 2018 to commit staff time for design and capital funding for construction of high-priority projects. The Interlocal Agreement will be instrumental in helping implement Capital Metro's upcoming *Cap Remap* June 2018 service change overhaul and a pipeline of projects that is continuing to grow. Additionally, both agencies are hiring fulltime project managers to give focused attention on delivering future projects identified by the Transit Priority Working Group which will enhance transit speed and reliability and bringing on dedicated design and project delivery resources.

riders, to other neighborhood stakeholders, and to institutions and city decision-makers: measures of the quality of the street—and simply reporting the amount of work being done to make the street a better place—are crucial to demonstrating the value of that work.

STRENGTHEN CRITICAL CONNECTIONS

As the team gains confidence, prioritize improvements on challenging routes and segments where projects can make significant impacts. Cities may choose to strategize around high-delay segments, demonstrating the benefits of street design changes where they are especially powerful. After proving internally and publicly that street design and service changes can measurably improve transit, use early wins to build momentum for transit improvements, and grow from single projects to a dedicated transit street program.

Invest in more valuable, and more challenging, network routes and corridors.

Seek projects where the city and transit agency can work together to make bigger impacts on more riders. As project managers gain confidence from early (and relatively simple) projects, move to implement more complex but more valuable street transformations on productive transit routes suffering from delay and congestion issues. Projects may be selected to untangle significant sources or segments of delay.



Credit: Metro Transit

In June 2016, the Twin Cities' Metro Transit opened its first of up to 12 planned bus rapid transit routes: the 10-mile Snelling Avenue A Line. Metro Transit led the development and implementation using a project manager model: a project lead within the transit agency oversaw each phase of design, public outreach, construction, and fleet procurement, resulting in fast implementation from initiation of project planning in 2013 to the start of revenue service in 2016. The A Line project solidified the toolbox for future BRT routes, including a new branded fleet, frequent service, enhanced stations with off-board fare payment, real-time arrival information, and improved station areas.

Metro Transit coordinated closely with partner agencies to make changes to both the street and traffic signals. The project saw ridership increase nearly one-third in the first six months of service over the previous local route. By proving the efficacy and scalability of rapid transit projects on the A Line, Metro Transit is building momentum toward forthcoming rapid transit improvements.

Ratify the design toolbox for transit streets, and adopt proven treatments into the city design manual.

Once a city has tested and determined best local practices for design treatments, incorporating treatments into city engineering guidance and standard drawings eases implementation, and sets clear specifications for in-house construction crews and contractors.



Give leaders and stakeholders a language to talk about and understand transit street improvements. Residents and civic partners who feel confident in the city's ability to make changes are more likely to be supportive and active partners. Cities such as Portland and Denver have published transit toolboxes, including relative implementation costs, to engage residents in the process of selecting and balancing street designs to support transit.

Refine design and construction techniques. As cities implement more and more projects, implementation will become faster and easier. Selecting preferred materials and construction techniques will allow for capturing scale in procurement, potentially reducing per project costs. Designers will also be better equipped to develop and combine more sophisticated and cutting edge designs with operational improvements.

Hire transit program staff, and grow agency capacity to design and implement projects.

While the first transit street project (or projects) may have been appended to an existing program—such as including a transit lane as part of a protected bikeway implementation—growing a robust street transformation program requires allocation of resources dedicated to transit to support and sustain implementation.

Build knowledge and capacity in-house, and avoid over-reliance on external experts as a long-term strategy. Project managers will become program managers, ultimately doing less hands-on project management and design, and assuming greater oversight and quality control responsibilities. Staff with planning, engineering, and cross-agency coordination skills are essential to growing the transit program, whether the city or the transit agency leads the charge.

Strong intra- and inter-agency relationships are the most important organizational infrastructure. Agency partners that build trust and share responsibilities save time and money, and deliver better projects. Some responsibilities will cleave very neatly along agency lines, but coordination and robust knowledge-sharing means that agencies can identify synergies and implement more effective treatments. Getting staff at each level of project delivery from across divisions and agencies into the habit of meeting regularly to coordinate and build relationships is essential to growing any program. Draft and adopt formal agreements to define the parameters of inter-agency relationships, including construction, maintenance, and operational responsibilities. However, these agreements should not limit the functional ability of either agency to be proactive and implement street and service improvements that benefit riders, operators, and street users.

Expand & deepen outreach and progress reporting.

Dedicate staff to lead and improve public engagement. Seat outreach staff near project managers to draw a direct line between outreach and project delivery. Go beyond the community meeting to engage those who are commonly missed. New York City DOT and SFMTA that have successfully used “Street Teams” to engage people about new projects on the street, at the bus stop, and in their communities, and have used in-the-field feedback to hone designs and build public support for more ambitious projects.



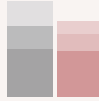




Credit: NYC DOT

Collect better data to understand where transit can gain speed & reliability improvements. Develop a more sophisticated protocol for regular data collection, and integrate that data collection and analysis into the regular course of business. Determine which agencies and divisions are responsible for collecting which data, and ensure a process is in place for reporting and publishing data that makes the case.

Develop a robust strategy for communicating transit improvements. Use previous successes to build support for new initiatives. Determine the most important metrics that are relevant to policy goals and communicate transit work as solving discrete and important problems. Delivering concise and powerful statements on ridership trends, changes in delay at traffic signals or dwell time, or passenger satisfaction are crucial to making the case and gathering program momentum (see NACTO's [*Making Transit Count: Evaluating Street Projects and Measuring Transit Performance*](#) for additional discussion).

SELECT BUS SERVICE PROGRESS REPORTS, NEW YORK

Upon completion of each of New York City's Select Bus Service projects, NYC DOT and the NYCT publish a one-year progress report for each route.⁶ Progress reports restate project goals and implementation process, and then collect data and communicate using powerful and relevant metrics to show project impact:

-  » Transit travel time and reliability, with components of delay separated to show how speed and reliability progressed.
-  » Route ridership, relative to the borough average to control for macro trends.
-  » Safety and corridor injuries, especially on high-injury corridors.
-  » Rider satisfaction surveys.
-  » Before & After photography.

Progress reporting is not only important for establishing public accountability and trust, but for illustrating efficacy and building momentum as agencies take on more complex and politically challenging projects. As NYC DOT and NYCT grow their portfolio of SBS projects, planning and design staff developing new projects can draw from more examples to demonstrate locally relevant past successes.

CHANGE CORE BUSINESS PRACTICES

Making the jump from one-off route or street improvements to a continuous and incremental effort that improves the transit network quality and function requires support from the Agency Director, Commissioner, or CEO of both partner agencies to make significant investments in the on-street transit system. As the city DOT and transit agency move from projects to program, the challenge evolves from manipulating streets and corridors to achieving bigger policy goals, including shifting trips to transit and making transit operations more continuously productive and useful to riders.

Implement solutions that improve transit efficiency & reliability at a network or district scale.

Pursue more complex improvements to efficient transit operations and quality passenger experience, like individual route rationalization or bus network redesign. Transit networks that suffer from “death by a thousand route modifications” (networks that have been modified incrementally over time) may be politically complex to change, but can confer benefits to riders and attract greater use, while eliminating many culprits of delay and simplifying operations, such as straightening circuitous routes and cumbersome turns or segments. A complete bus network redesign by Houston Metro reformatted a radial network into a grid network and generated a 6.8% gain in transit ridership between the years before and after the network change, while many similar US cities are seeing falling bus ridership.⁷

The transit agency can also upgrade the bus fleet on productive routes to meet increased demand and grow capacity. Replacing standard 40-foot buses with articulated buses (or even high-capacity light-rail) can dramatically increase route capacity without requiring additional frequency. However, large procurements like fleet replacement (or major capital reconstruction) require greater coordination and long-range planning.

The city can directly dedicate funding and resources to development of the transit system, in addition to support through street design and traffic operations. Many cities find residents willing to support ballot measures to gather new revenue to fund infrastructure. Having discretionary budgets for small and mid-size capital projects empowers agencies to implement strategic changes quickly. Additionally, funding can be directly applied to purchase transit service—as detailed at right, the City of Seattle purchases transit service from its partner agency, King County Metro, to increase transit frequency and reliability, and extend hours of operation to include late night and weekend service.⁹

SEATTLE TRANSIT PROGRAM



Credit: Seattle DOT

SDOT and King County Metro are systematically improving throughout the city using a combination of tools: adoption and implementation of a Transit Master Plan; creation of a Benefit District to expand and improve service and operations; investment in seven rapid routes; and spot improvements to untangle sources of delay.

In 2014, four years after City Council voted to create a Transportation Benefit District, Seattle voters approved a vehicle license fee and 0.1% sales tax increase to purchase transit service for the City. SDOT and King County Metro use this revenue to increase transit frequency, extend transit hours, and implement street improvements that increase bus speed and reliability on 85% of city routes.

The agencies are achieving this through an emphasis on strong staff relationships and collaboration, along with a cultivation of skills and internal capacity to implement capital projects quickly and cost-effectively. The two agencies have reoriented their core missions around delivering mobility and multi-modal streets, and have dedicated staff to project delivery to manage from initiation to implementation.

This investment is paying dividends: between 2010 and 2017, bus ridership across King County increased by 16%, and Seattle’s center city transit mode share has increased from 42% to 48%, while the drive-alone mode share fell from 35% to 25%.⁸ By focusing on network improvement and delivering street projects to power the network, Seattle is shifting users toward more efficient and sustainable trips.

Inventory agency practices and assets—from procurement to existing hardware & software capabilities—to clear barriers to implementation. Invest in supporting organizational infrastructure to support new practices.

Implementing more complex system-wide improvements requires more efficient coordination of an agency’s moving parts, which requires more effective project management and delivery. As its work changes or expands, the DOT or transit agency may need to implement new project tracking and IT systems to support coordination across divisions. From clarifying project delivery roles and responsibilities and reducing change orders, to tracking and maintaining new types of right-of-way assets, transit programs should fundamentally change the way a DOT controls and manages its streets.

Grow capacity of construction crews to implement “mid-size” capital construction projects. Most city streets departments have existing capacity to complete small or standard projects—like repaving and restriping streets—while many cities and transit agencies have well-defined processes for delivering large capital projects. However, many transit speed and reliability improvements can be delivered with mid-sized projects—such as installation of bus bulbs and boarding islands, painted transit only lanes, and signal retiming or active priority—but require nimble procurement of new materials, and flexible implementation capabilities from construction crews. Hiring or training internal or on-call construction crews to deliver these mid-size projects can improve implementation speed and quality.

Off-board fare payment and all-door boarding may be piloted in early implementations, but system-wide implementation requires procurement and coordinated installation of modern fare collection equipment. As discussed on page 4, early Select Bus Service projects in New York City repurposed municipal parking meters for fare collection. As the program evolved, those meters have been replaced by fare collection machinery procured by New York City Transit, which are now implemented as a standard component of rapid transit projects.

In order to broadly implement transit signal priority, upgrades to signals and connected infrastructure must correspond with upgrades to the transit fleet. Hardware, software, and roadside cabinetry upgrades require significant investment and coordination by both agencies to guarantee effective operation, including more considered traffic planning and integrated operations. However, the potential benefits of implementing these investments are far ranging for both agencies.

Reform performance measures to shape transit operations and traffic operations in line with policy goals.

Select and implement metrics for agency performance management that suit the new challenges of an expanded transit system. For instance, moving from schedule-based line management to headway-based management can achieve better reliability on frequent routes, but requires buy-in from a large number of service planners, schedulers, and ultimately operators.

Systematize performance reporting, and emphasize measures that clearly and legibly demonstrate how riders experience transit, and how efficiently agencies operate. Planning for and conducting annual multi-modal counts that better communicate total person throughput, rather than motor vehicle throughput, may require new staffing or equipment, and more regular coordination between partner agencies. Automated Passenger Count (APC) data that transit agencies collect can give DOTs information on transit throughput if it is shared regularly. Agencies that collect data reliably and consistently, and share progress openly and clearly, are able to make a stronger case for sustained investment in transit service and higher-performing streets.

For further information on transit performance measures, refer to NACTO’s Making People Count: Evaluating Street Projects and Measuring Transit Performance.

SET A CLEAR MANDATE FOR TRANSIT & MOBILITY

As each agency's team evolves and their portfolio of transit work grows, both the city and the transit agency may need to confront the question of whether their current organizational structures are conducive to scaling up and delivering transit projects systematically in pursuit of completing the network. Restructuring internal chains of command can create a clearer structure for identifying, implementing, and evaluating projects, but requires action from leadership (and sometimes local government). In some cases, forming a new agency focused solely on mobility as a mission statement allows cities to dedicate time, funding, and internal momentum to thinking holistically about the network, resources and assets, and long-term goals for mobility and development.

Set a bold vision for transit & mobility, from agency leadership to civic leadership. Set policy to support that vision.

Set a bold vision for transit and mobility, and appoint strong leadership to enact that vision. Regardless of agency structure or responsibilities within the right-of-way, the task of leadership is to set the direction of everyone within the city and transit agency, and make transit a core function and growth strategy. Technical and operational groups need clear direction and leadership, including instructions to favor bus reliability rather than private motor vehicle capacity, not just permission or public statements in favor of transit in general.

Link the work being done to policy goals and key initiatives. Adoption and support for pro-transit policies by agency leadership and local elected officials girds transit street programs. Cities that adopt policies establishing transit priority in planning and street design (like San Francisco's *Transit First* policy, or Chicago's modal hierarchy within its *Complete Street Design Manual*) are able to justify reassigning street space to transit more confidently.

Assess strategies for more effective coordination of policy objectives. Formalizing regular coordination among leadership can set the tone for collaboration throughout partner agencies. If the transit agency is governed by board, consider developing a role for the DOT Commissioner or Transportation Director to serve on the Transit Agency Board, allowing the city to offer guidance and support for agency initiatives and challenges.

Conversely, partner agency directors may be aligned within government to serve at the same level and answer to the same governing authority. In Chicago, for instance, both the commissioners of Chicago DOT and Chicago Transit Authority (CTA) are cabinet-level positions in the Mayor's office. Because the leaders of both agencies answer to the same person and sit at equal levels, they have strong incentives to collaborate and coordinate.

Coordinating transit service development with land use decisions is essential to making the transit network sustainable and vibrant. Changing policies and practices around development review and land use planning, like the City of Oakland's reforms of required parking minimums, or use of *Vehicle Miles Traveled* rather than *Vehicle Level of Service* in reviewing development projects, are essential to ensuring transit connects thriving urban places.

Address legislative and other regulatory blockages. In many cities, transit effectiveness strategies—like automated enforcement of transit lanes, fare collection policy, and project contracting requirements—may be undercut by local ordinance or state legislation. Agency staff and local elected officials responsible for legislative and policy strategy can maximize the impact of design changes by clearing legal barriers that undermine transit effectiveness.

Finally, leadership can strengthen the connection between public engagement and agency mandate. Forming and strengthening transit advisory committees or task forces to provide input on policy, service investments and guidelines, and other transit quality and service issues guides strategic direction. Appoint representatives to these committees who ride the bus, who understand the relationship between streets and transit, and can act as strong advocates for the city and region.

Civic groups advocating for change on the street, or having an interest in such changes—as varied as transit riders, crash survivors' groups, transit unions, advocates for accessibility, civil rights groups, business groups, and active transportation groups—can tip the balance or guide policy to address key blockages.

Personnel is Policy.

City leaders can signal a commitment to transit reliability by directing, hiring, and promoting staff in both engineering and planning groups in a way that rewards a commitment to better transit.

Creating vertical career paths for talented technical staff is essential for retaining staff over time and enabling them to advance through the agency. Engineers and planners who have the opportunity to grow their design and implementation skills will deliver better, more impactful projects, and can help to nurture a manufacturing ecosystem.

Cultivate an environment that rewards innovation. Empower staff to elevate their projects and access the resources they need to deliver, and enable staff to take calculated risks to solve problems. Technical staff are often willing to take on efforts that are complex or potentially controversial if they feel supported by senior staff and management. Leadership that works to clear roadblocks for technical and program staff can fuel innovation and speed implementation. Whether designers and planners are developing transit improvement projects, or department managers are seeking to improve program delivery, focusing efforts on solving well-defined and articulated issues is essential to getting results.

Consider realigning divisions or restructuring city departments. Structure the agency to deliver transit as a core mobility function.

As the agency expands its transit work, ensure transit performance is integrated into all DOT projects and decision-making. If the city's DOT is led by a commissioner, consider seating the transit program leader in the commissioner's office to oversee and report directly on planning and project efforts that support transit effectiveness. Identify clear pathways to elevate transit issues up and down the management structure.

Define clear roles and project management processes to avoid delay and dilution of key project and program goals. Build consensus around intent and the basic design early in the project, and minimize project hand-offs. Define clearly understood processes for transit operations, civil design and engineering, construction, and maintenance staff to provide input and sign off. Empower transit project managers with authority to oversee implementation through detailed design and

PROJECT DELIVERY ADMINISTRATION, WASHINGTON, DC



Credit: Dan Malouf, BeyondDC

In 2014, the District Department of Transportation (DDOT) restructured itself to better deliver projects. The existing six administrations that reported to DDOT's Director were reorganized into four administrations, including most notably a single Project Delivery Administration, bringing together Planning, Design, Construction, and Transit Delivery Division. Additionally, the department shifted from matrix management to a simpler reporting structure.

While the matrix organization had intended for staff across the project development spectrum to cross-collaborate, project managers struggled to resolve issues where multiple deputies needed to hand off projects. Project managers often sought the path of least resistance while difficult but transformative projects couldn't build momentum. Now, under the Project Delivery Administration model, a single business unit fully "owns" responsibility for delivering projects, and is tasked with managing project design and implementation start to finish.

construction to limit costly project changes and ensure that final implementation matches the initial intent. No matter where a single staff person sits within the agency, organizational structure must first and foremost be navigable; staff must be able to find and leverage the internal capacity and resources of the agency.

In cities where responsibilities for streets are split among departments, appointing a director or commissioner to lead departments with overlapping purview can set a coherent vision and align inter-departmental processes. In Boston, a Mayor-appointed Chief of Streets oversees both the Transportation and Public Works departments, who have separate but intertwined scopes and missions.

In some US cities, city governments have chartered a new department of transportation to bring all of the moving parts of building and operating the city's mobility network under one roof. Creating a

THE COMBINED MOBILITY AGENCY, SAN FRANCISCO



Credit: SFMTA

San Francisco Municipal Transportation Agency (SFMTA) is a single, combined agency that houses both the DOT and transit agency under one roof, with a mayor-appointed board, and a director who oversees both management of streets and transit operations.

SFMTA uses a matrix management structure for project delivery—project managers leading delivery of transit street improvements engage technical staff in other divisions, such as civil engineers and capital project delivery, traffic and signal engineers, and service planners and schedulers to coordinate and deliver project work through completion. Within SFMTA, this horizontal structure works because the single agency has a strong mandate to deliver and improve mobility continuously, and all of the staff are accountable to providing transit-supportive operating conditions that support strong ridership.

Perhaps nowhere is this structure more evident than in MuniForward, a transit effectiveness program that identifies key routes both for improving speed and reliability, and for providing equitable and accessible service to residents across the city. Within each corridor project, transit service planning can identify route adjustments and stop consolidation while street designers and traffic engineers give transit its space in the cross-section and adjust signals to give transit priority.

mobility or transportation department to house all or most street functions—such as planning, street design and engineering, street and signals operations, maintenance and construction, parking and right-of-way enforcement, and even in some cases transit operations and service planning—can codify coordination of planning and operations activities, deliver better policy outcomes, and more effectively leverage and allocate funding that achieves desired results. However, creation of a new agency requires significant planning and resources to hire and train many new staff quickly, and a considered rationale for how the new organization's structure will improve program delivery and leverage greater value from the city's mobility system. In successful examples, the organizational structure draws a clear line across divisions and practice areas to connect planning and policy functions to project outputs and daily maintenance and operations.

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