
A PEOPLE'S HISTORY
of Recent URBAN TRANSPORTATION INNOVATION

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Foreword

What started as a straightforward and curious question – what were the human factors behind recent urban transportation innovations in the United States – turned into a wide exploration of civic action, governance, and the very meaning of innovation for transportation at this moment.

We were thrilled to be able to study cities and the leadership that have made such an indelible mark in recent years. But to keep the study manageable and useful, we had to make some difficult decisions and narrow the range of our investigation.

Where we might have started with a very broad conception of innovation, we found ourselves landing on a definition that encapsulated the ways that our street moved away from the territory of vehicles and returned to the realm of people. While this may not seem "innovative" in the technological sense, that cities would introduce bike lane networks, public plazas, mini-parks, and bikeshare wholesale onto American streets was inconceivable as recently as 2005. The most recent period of rapid innovation was genuinely unusual relative to the prior five to six decades during which the majority of cities could not make these changes even with significant federal policy changes. So while we started with nearly 30 possible case studies that demonstrated progress in urban transportation, we ended up focusing on the six that provided the strongest illustrations of the human actions behind urban transportation innovation. Even today, the majority of cities in the United States remain vulnerable to policies and practices established long ago.

In the end, our study is simply one perspective on what it takes to make change. We hope that our analysis will show that any city can take up the fight to bring their streets back to their people, as long as they have the leaders in place.

Executive Summary

Recent innovations in urban transportation in the United States have consisted of resident-led efforts to create more ways of moving around the city. Rather than the adoption of new technology, these advances have centered on reintroducing human vitality into streets that have been lost to cars for decades. Our analysis of the human factors behind implementing small-scale change in a wholesale way shows that engagement from three areas of society is required for a city to innovate.

First and foremost, a civic sector that is resident-led, non-elite, and outside government—yet able to persuade local politicians to take risks—is paramount to the success of any city. Citizen-led campaigns can pressure authorities to change direction, diversify the mix of transportation options, and also provide evidence of why that change would be beneficial. Without a civic sector that can direct public support, urban transportation innovation will not reach its potential.

Second, a bold mayor and transportation agency head who have both the courage to create the vision for a different kind of city and the management skills to compel their staff to do things differently are essential for the successful implementation of any change. Without the vision and mandate from the very top of city government, there is little chance of urban transportation reforms succeeding in the long run.

Finally, agency adoption is essential for the thorough implementation of new transportation practices. Without staff willing to challenge the existing culture and processes within city government, the city would only have pilot projects here and there to show for all its efforts. Without agency staff adopting new practices, wholesale change is not possible.

The following strategies can encourage more urban transportation innovation in the future:

> **Encourage** civic organizations to emerge and reframe transportation issues as quality-of-life issues.

> **Reinforce** public support through political organizing and leveraging technical expertise or data.

> **Bolster** the courage of leaders willing to take on reform by connecting them with visible public support and a compelling communications strategy.

> **Position** advocates on the inside to catalyze a reorientation of city agency and staff culture.

> **Perpetuate** new norms by changing agency standards.

> **Create** federal and state policies that recognize and reward small-scale urban transportation reform and tip the scales toward innovation.

Though much progress has been made in several cities, the human-oriented transportation changes examined here are not pervasive nationwide. Only a handful of cities have made lasting reforms that will stand the test of time, while the majority of federal and state transportation policies continue to support auto-oriented development. With the information here, we hope that more urban residents will take up the fight and continue to challenge the status quo and reclaim the streets that are the lifeblood of their cities.

Introduction

For much of history, the hallmark of thriving cities was the vibrancy of their streets. Streets not only facilitated the movement of goods and people, they were also where people exchanged products and ideas. The streets were where citizens carried out their public lives.

During the postwar years in the United States, the classical notion of the vibrant street was shattered for the average citizen. As the U.S. government embarked on building the Interstate Highway System, its national project to link regions and cities from coast to coast, it overturned the classical concept of strata for one that prioritized personal cars and movement. Significant dedicated federal funding directed to state departments of transportation, the creation of new federal and state policies, and the emergence of new design and engineering practices contributed to the assemblage of a massive policy and institutional superstructure that was persistently auto-oriented. Uniformity in those mono-modal practices, which were applied regardless of context, contributed to the homogenization of American streets. Many local leaders and citizens felt powerless to override the institutionalized bias for auto-oriented development.

These practices, supported by policy and funding mechanisms, normalized, then calcified. The hallmarks of the successful street of the past seemed to virtually vanish, and the classical use of the street evaporated. Over the next several decades, a preference for cars permeated state transportation plans and overpowered other local urban transportation needs.

But starting in the mid-2000s, a handful of cities accelerated progress in reorienting their streets toward people. City leaders reclaimed auto parking spaces for bike lanes, repurposed dead corners for public plazas, and built and expanded sidewalks throughout their cities. Because bike lanes, public plazas, sidewalks, and other human-centric street elements nearly vanished from the urban landscape under the dictates of twentieth-century transportation policy, these very elements, as basic as they may appear, comprise the major urban transportation innovations of the twenty-first century.

This report looks at several U.S. cities—New York, Chicago, Portland, Pittsburgh, Denver, and Charlotte—to better understand how they turned back to people-oriented transportation. We chose these cities because they are the strongest illustrations of effects of the human factors behind urban transportation innovation. Keep in mind that the prioritization of cars is still the most common and standard transportation practice throughout most of the United States. Each city has a current reputation for being a leader in urban transportation as we write this in 2015, but the initial catalyzation and paradigm shift may have taken place at different moments. Portland is illustrative because its moment of change took place in the early 1970s, when few peer cities were undertaking such changes. Two of our cities, Denver and Charlotte, are also younger cities, without the foundation of a compact urban form or street network with which to work. This led these cities to pursue change in slightly different ways than more mature cities such as New York and Chicago. Regardless of the differences, reforms in each of the cities we examined succeeded most when they were developed locally. Most changes were initiated without a state or federal policy mandate. Nor was significant additional funding available for these kinds of improvements. In spite of all these odds, the cities we studied found—and continue to find—ways to bring back livelier streets that can handle a mix of modes. We hope to inspire more cities to continue to challenge the status quo and so we include recommendations based on these lessons at the end of this report.

Postwar Transportation Status Quo

BEGINNING IN THE 1950S, THE MAJORITY OF TRANSPORTATION POLICY WAS ALMOST ENTIRELY AUTO-ORIENTED. WEST SIDE HIGHWAY, NEW YORK CITY, 1951. LIBRARY OF CONGRESS.

It is worth understanding the fundamental effects of today's transportation policy structure and culture in order to emphasize the significance of current innovations. Multiple policies contributed to the significant growth of car ownership and urban sprawl and to the decline of public transportation, walking, and biking in America. Such national policies resulted in two repercussions that contributed to the late twentieth-century status quo: the diminished ability of cities to retain a multitude of ways of moving around their own streets and the deepening influence of auto-centric planning, development, and design practices.

Beginning in the 1950s, the majority of transportation policy was designed by the federal government and targeted at state governments and most importantly were almost entirely auto-oriented. These top-down policies weakened urban authority over the entire transportation system within municipal jurisdictions. A preference for cars permeated state transportation plans and overpowered other local urban transportation needs. There was significantly more funding for road and highway building, and far less for mass transit and biking and walking facilities. Travel by walking, biking, or public transit within the city became less of an official concern. As a result, main-street retail corridors that once provided the social and economic cohesion of livable neighborhoods and managed a multitude of street cars, buses, pedestrians, and bicycles were slowly turned over to accommodate only cars.

Planning and design practices reinforced the federal dictates, overriding other modes that had adequately accommodated local travel. Transportation engineers and planners found ways to design streets to accommodate more cars, with less regard for land use. Land appeared to be relatively abundant in the U.S., and communities needed to make way for the new technology: cars. Designs for sidewalks shrank or disappeared altogether to allow for more vehicles in the public right-of-way, which Jane Jacobs described as "erosion" in *The Death and Life of Great American Cities,* her landmark book about the dynamism of neighborhoods in cities

JANE JACOBS IN 1961, THE YEAR SHE PUBLISHED *THE DEATH AND LIFE OF GREAT AMERICAN CITIES*.
LIBRARY OF CONGRESS.

In essence, innovative cities inverted postwar transportation policy with a large dose of bottom-up strategies to "get it done."

INTERSTATES NEAR CHARLOTTE, NC, EMBLEMATIC OF AUTOMOBILE-CENTRIC, MODERNIST PLANNING.
AUSTIN SWANGER/FLICKR.

and the negative effects of automobile-centric, modernist planning. She goes on to explain:

> "Because of vehicular congestion, a street is widened here, another is straightened there, a wide avenue is converted to one-way flow, staggered-signal systems are installed for faster movement, a bridge is double-decked . . . , an expressway is cut through yonder, and finally whole webs of expressways. More and more land goes into parking, to accommodate the ever increasing numbers of vehicles while they are idle."

As time went on, these practices became entrenched in design standards that are still in use. Thus, even if local authorities would like to widen or include a sidewalk in a new development today, engineering and planning standards disable the idea.

The body of performance indicators established by the federal government and state departments of transportation steadily began to reflect the federal bias toward cars over people. Instead of measuring the throughput of people, the government counted the number of cars. Instead of the level of human activity or retail sales generated by the street, streets that facilitated fast cars and no pedestrians were rewarded with funding. Indicators of local economic and social vibrancy became bereft of value.

It follows, then, that the cities we determined to be the most innovative in recent years were the ones that reversed this "erosion" of space for people on American streets. Local leaders in these cities had to cultivate bottom-up approaches to bring back walking, biking, and public transit to enliven the street, and make it a part of urban life again. These innovative cities created new standards and practices that reoriented the way their streets would be viewed, planned, designed, and managed. In essence, innovative cities inverted postwar transportation policy with a large dose of bottom-up strategies to "get it done," as so many of our interviewees related.

Human Factors in Urban Transportation Innovation

We examined six cities that have achieved significant, recent success: New York City, Chicago, Portland, Pittsburgh, Denver, and Charlotte. Although these cities have varied geographic, political, and socioeconomic contexts and are at different stages of economic development and maturity, they all exhibited similar human factors that worked in concert to make their reforms a reality.

Robust Civic Vanguard

Cities that innovate in urban transportation have a robust environment of civic organizations outside government that are in favor of more walking, biking, and public-transit use. These organizations force the public and government leaders to engage with their proposals. Usually there are myriad organizations, and these organizations are the bedrock of the bottom-up approach that encourages urban transportation innovations. A robust civic sector is the single most prevalent factor among all the cities we studied.

NEW YORK CITY REGIONAL PLAN ASSOCIATION ASSEMBLY, BIG IDEAS SESSION, 2014.
NANCY BOROWICK.

First and foremost, civic organizations such as advocacy groups, grassroots organizers, policy think tanks, and research institutions have more freedom than elected officials to explore and launch ideas that might appear out of the ordinary and politically risky. A vacuum of civic-minded planning professionals was filled by the Allegheny Conference on Community Development in Pittsburgh, the Metropolitan Planning Council in Chicago, and the Regional Plan Association in New York City, creating plans that would be neutral enough to represent a group of major business stakeholders yet still palatable to elected officials and the voting public. The Downtown Denver Partnership and Charlotte's Center City Partners are also business-led civic organizations focused on planning issues. Over time, these organizations have not only coordinated local stakeholder interests toward common civic goals, they have often become research institutions that have developed long-range plans. What is essential is that local civic leaders can develop ideas free from bureaucratic constraints and show how these ideas can be applied in the local context.

These organizations, however, may not be the ones that create the ground strategy. Armed with good ideas, other civic organizations can persuade reluctant elected officials to consider those ideas. Ideas that may have fallen out of political favor, in spite of their merit, also benefit from civic organizations continuing to keep those ideas alive in public debate. Advocacy organizations, playing roles different from those of the civic planning organizations mentioned above, draw attention to good ideas by creating political campaigns. Some organizations can fulfill both planning and advocacy roles, but this is rare. Nearly all the advocacy organizations we interviewed, such as Transportation Alternatives (New York), the Active Transportation Alliance (Chicago), Bike Pittsburgh, and the Bicycle Transportation Alliance of Oregon, were created to advance an agenda of increasing pedestrian and bicycling space in cities. Without the civic sector continually pushing the importance of an idea and connecting it to the public vote, very few innovative ideas are implemented.

A robust civic sector is the single most prevalent factor among all the cities we studied.

PEOPLE FOR BIKES, DENVER.
PAUL TALBOT/23RD STUDIOS/ FLICKR.

Civic organizations of all kinds raise the profiles of new ideas by finding new ways of communicating them. They often reframe ideas to attract additional supporters. Activists might start with the goal of clean air or neighborhood revitalization and then land on transportation reform as a means to achieving their original objective. Portland activists, for example, did not set out to build an extensive light rail network; they were concerned about saving their neighborhoods. With an orientation toward broad public benefit, not narrow bicycle interests, civic organizations can significantly augment support. In 2005, bicycle activists' priorities were transformed into family-friendly quality-of-life issues in New York City by the New York City Streets Renaissance campaign created by Transportation Alternatives, Project for Public Spaces, and Open Plans.

To prove that their ideas are helpful to a wide group of people, successful civic organizations created physical demonstrations that anyone could experience to highlight the benefits of their new ideas. Literature and the gathering of secondhand research is useful, but firsthand evidence from a pilot project that shows how implementation can be accomplished, coupled with an evaluation of the pilot project, can be particularly effective. The Active Transportation Alliance pioneered ciclovias—streets closed to cars to make space for cyclists and pedestrians—in Chicago as a public health initiative. Evaluation of this pilot program showed that more people benefited from physical activity after the launch of these test ciclovias. The positive results of this Active Transportation Alliance test program then prompted the city to create a ciclovia. In New York City, Transportation Alternatives connected community impact, vulnerable pedestrians, and street design in its pioneering Safe Routes to School project in the Bronx and Safe Routes for Seniors in Upper Manhattan, both of which evolved into federal- and city-funded programs.

Demonstration projects not only win over the public, they also challenge the municipality's operational procedures and industry design standards. The Active Transportation Alliance challenged the idea that people would prefer to drive when given the opportunity to bike or walk. The Safe Routes for Seniors program challenged the federal standard for the speed at which pedestrians walk. The federally mandated 3.5-feet-per-second walking speed was proven to be faster than the real average speed of senior and young pedestrians. Yet this "design speed" is what currently guides the timing of signals and the width of crosswalks.

But providing evidence is not enough. Civic organizations must convert innovations birthed in the advocacy realm into ideas ready for adoption by politicians. Often this happens through the hard work of gathering public input, integrating various opinions, and baking those views into politically palatable programs. More pedestrian space was enshrined into mayoral agendas by transportation advocates on Rahm Emanuel's and Bill de Blasio's transition teams in Chicago and New York, respectively, by focusing on increasing safety. Bike Pittsburgh's bike map

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traced the most popular routes already taken by cyclists in the city, making the previously invisible bicycle community much more legitimate. The Safe Routes for Seniors program was created as a political strategy to engage a major voting block: senior citizens. It is critical that civic organizations are connected to and can deliver political supporters for elected officials to ensure political saliency in urban transportation innovations.

The numerous roles played by residents and civic organizations described here highlight the many kinds of organizations that must exist in order to turn a good idea into actual change. Think tanks specialize in collecting evidence, developing policies, and publishing reports. Advocates craft political strategies and engage decision-makers and voters. Grassroots organizers pound the pavement, collect signatures, and can often be the noisemakers. Business elites can also be helpful, but they are often in support of large infrastructure projects and usually work in a manner similar to that of highway coalitions. Without grassroots activist organizations, small-scale street designs are too easily overlooked. They either do not happen or they might happen in singular ways: one intersection improvement here, one bike lane there. While some groups may fill many roles, the more diverse the civic ecosystem's organizations and skills, the greater the likelihood that a new idea launched into the public sphere will evolve into a political mandate.

Bold Leadership

While we found that remarkably little reform originated with elected officials—and that most of the mayors who ultimately became champions of reform did not enter office with transportation high on their agendas—they were critical to the adoption and then advancement of the agendas thrust upon them by civic organizations.

Prioritization of transportation by a city's mayor sets two important dynamics into motion. As a leader, the mayor articulates a vision and political rationale for the transportation reform agenda. As the head municipal manager, the mayor directs the city staff to execute changes and creates a sense of urgency. All of our interviewees pointed to empowerment and urgency as two critical cultural changes that stemmed from the leadership of their mayors and commissioners. While many ideas may have floated around the civic environment for years, it was the prioritization of transportation by the mayor and transportation agency head, as leaders of the city and managers of the city's civil servants, that made implementation possible.

Often the mayor cast a city's transportation vision in different terms and then assigned it to new people to signal a change in governance. Mayor Michael Bloomberg used PlaNYC, a long-range city sustainability plan, as a backdrop for transportation reform. The transportation benchmarks included in PlaNYC were created for environmental-protection purposes. For its implementation, he hired Janette Sadik-Khan, a reform-minded transportation commissioner who had the courage to move boldly. Mayor Emanuel in Chicago followed suit with his pick of Gabe Klein, an entrepreneur who first tried out his strategies as head of the Washington, D.C., Department of Transportation but who had no professional training in transportation or public-sector management. Klein's relative lack of government experience was a welcome departure from the DOT's history pattern of cronyism, which led to stagnation.

Having a clear plan, as Mayor Bloomberg did, helps strengthen public support by first describing a broad vision and then laying out ways

FORMER NYC DOT COMMISSIONER JANETTE SADIK-KAHN. GETTY IMAGES.

DANI SIMONS, FORMER NYC DOT DIRECTOR OF STRATEGIC COMMUNICATIONS. ASSOCIATED PRESS.

BILL PEDUTO, MAYOR OF PITTSBURGH. ASSOCIATED PRESS.

of achieving that vision in tangible terms. Both Gabe Klein and Janette Sadik-Khan issued department of transportation strategic plans—Chicago Fast Forward and NYC DOT Sustainable Streets—to outline their visions for their respective cities. Chicago had a complete-streets policy and a bicycle policy before Klein took office, but little of it resulted in change on the ground until Klein developed Chicago Fast Forward, a unifying strategy. Chicago Fast Forward clarified the vision and goals, articulated how transportation would affect the city at large, and created a mandate for city staff. Marking out the milestones for improvement made the department's activities more transparent, earning public trust.

Bold leaders inaugurated new management strategies to empower staff. Most significantly, leaders created a culture of "getting things done" even if it meant upending past practice and would not accept anything less. To achieve this change in culture, some transportation agency heads filled key staff roles with reform advocates who were well versed in local politics. Commissioner Sadik-Khan's agenda for change benefited from like-minded advocates, such as Jon Orcutt, her choice as head of her strategy office; Andy Wiley-Schwartz, from Project for Public Spaces, as assistant commissioner for public space; and Dani Simons, formerly at Transportation Alternatives, as director of strategic communications. In Pittsburgh, Scott Bricker, executive director of Bike Pittsburgh, the bicycle advocacy organization, was nominated in 2014 by Mayor Bill Peduto to the Southwestern Pennsylvania Commission, the planning organization responsible for setting transportation funding for a ten-county area. Decades earlier, Mayor Neil Goldschmidt of Portland took a similar step when he entered office in 1973, hiring like-minded planners who had traveled to

Europe and strolled and biked its boulevards to supplement the transportation department.

The leaders signaled a new culture as they took the reins and unleashed new management styles. As Orcutt described the environment in NYC, for years "people got used to not seeing things done." To signal change, the commissioner rewarded new ideas with support and encouragement, and badgered those who did not fall into line. The sense of complacency that tended to infiltrate large agencies dissipated as these bold leaders took charge.

In another example of a different style of management, bold leaders pursued incremental staging of new ideas, instead of "all in one" delivery. Painting bike lanes and widening sidewalks with temporary plastic bollards became common in New York, Chicago, and other cities. These temporary-looking redesigns of the street acted as proofs-of-concept, spotlighting benefits more quickly than the average transportation construction project. As Gabe Klein said, "I was more concerned with moving quickly and improving safety than I was in getting every little thing right." The secondary benefit was that staff members, who had formerly faced opposition to any new idea, could experience immediate gratification as a result of incremental changes. "People could see that they were getting things done, and felt good about it," said Jon Orcutt.

Projects lowered political costs by appearing experimental and impermanent; politicians did not have to expend all their political capital on a single, permanent project. New York City initially marked out the pedestrianization of Times Square with traffic barrels and cheap lawn chairs, inviting people to sit. The true pilot projects for Times Square, however, were the smaller, less visible, temporary public plazas in lesser-known neighborhoods. When public use increased and benefits accrued in those sites, the city was able to secure more permanent fixtures and move to bigger, more visible sites. Times Square is now slated for capital funds to replace the temporary bollards and road paint with a permanent redesign. Small, quick, and affordable steps make movement toward a bigger project possible. Instead of a single ribbon-cutting ceremony after months of construction hassles, a mayor and transportation agency head can claim credit as the project progresses.

Agency Implementers

While we found that advocacy from residents was an essential first step and that the embrace of an elected official is essential, without the support of the staff in city agencies—the policy directors, operations managers, planners, and engineers—advocates' and leaders' visions for lively streets will not last. It is agency staff who find new paths to make ideas into operational realities and create new standards to institutionalize innovations as part of the agency's culture.

Advocates-turned-staffers can be instrumental in ensuring that change occurs quickly. As policy director and a key leader behind the scenes at the NYC DOT (he has since left the department), Jon Orcutt was described as "perhaps more important than [Commissioner] Sadik-Khan." Orcutt began his career in grassroots organizing in 1989, first as executive director of Transportation Alternatives and then as a founding staffer and executive director of the Tri-State Transportation Campaign, a nonprofit dedicated to reducing car dependency in New York, Connecticut, and New Jersey. With his decades-long knowledge of neighborhood politics and local motivations, Orcutt aptly developed policies and strategies that were responsive to local political hurdles.

Breathing new life into an agency can serve to liberate and

Advocates-turned-staffers can be instrumental in ensuring that change occurs quickly.

empower staffers who are reform-minded. Luann Hamilton, a director in the Chicago Department of Transportation with more than twenty years of agency experience, was instrumental in ensuring that the agency could implement the ideas laid out in Gabe Klein's Chicago Fast Forward plan. She knew how to steer the projects through the right channels and how to avoid pitfalls within the institution. Wendy Feuer, a longtime advocate of public art, had stints in Washington and at advocacy organizations before becoming an assistant commissioner of the NYC DOT. Her experience in public art and urban design allowed her to steer and increase the public plaza and art programs there, elevating the work of the department beyond that of transportation.

Agency staffers are crucial to the development of new standards that institutionalize innovations and ensure that those new practices endure even when the first generation of reformers leaves office. Because transportation agencies habitually "do things by the book," reformers found it effective to literally create new books. NYC DOT staff published an urban street design manual, a direct challenge to the "Green Book," the longstanding, federally mandated engineering design guidelines published by the American Association of State Highway and Transportation Officials (AASHTO). The process of developing design standards also creates an internal knowledge base that enables agency staffers to continue to carry out the practice. Finally, as we saw from the cities we studied, bottom-up approaches can be standardized. The National Association of City Transportation Officials, a membership organization of agency staff, has met this demand by publishing its Urban Bikeway Design Guide and Urban Street Design Guide, with other design manuals in progress.

Durability

Strong alignment between civic organizations, political leadership, and agency staff is essential to spark a major burst of innovation. In the cities we studied, informal partnerships between the civic sector and a reform-minded city agency allowed for the alignment of activities and enabled innovations to take hold. BikeDenver worked with the city council and public works staff to keep bicycle and pedestrian priorities high on the agenda when momentum slowed during the turnover between Mayor Hickenlooper's and Mayor Hancock's administrations. Scott Bricker of Bike Pittsburgh and Mayor Bill Peduto struck a similar relationship to build out Pittsburgh's bicycle network. During Portland's period of significant innovation in the early 1970s, it was Mayor Neil Goldschmidt's strong relationship with neighborhood civic activists and the employment of activists in key city roles that propelled Portland's period of change. The partnership between civic activists and progressive city leaders not only made Portland's 1972 Downtown Plan possible, but also enabled its execution. The significance of the civic sector–government leadership relationship, however informally developed, was publicly acknowledged when the Jane Jacobs Medal for New Ideas and Activism was awarded in 2010 jointly to Paul Steely White, executive director of Transportation Alternatives, and NYC DOT Commissioner Janette Sadik-Khan for their dedication to the livability of New York City's streets.

All three human forces for change—civic groups, political leaders, and agency staff—are necessary for innovation, even if they are all capable of making some progress on their own. In the 1990s and early 2000s, Mayor Tom Murphy of Pittsburgh also pursued an urban development agenda that included sustainable transportation. He supported transit expansion, updated zoning codes,

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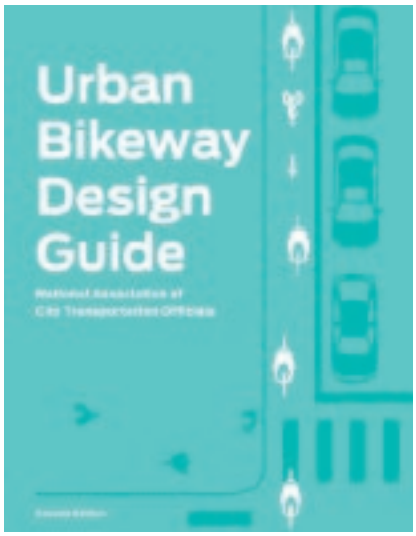


It sounds obvious, but without local engagement, local execution of state and federal policies is much more limited.

provided urban design guidelines, and created a development fund to encourage reinvestment in Pittsburgh. However, lack of alignment with the county executive and city council and a lack of capacity among the civic organizations to support sustainable transportation made it difficult to expand pedestrian and bicycle infrastructure despite the Mayor's intentions.

Furthermore, without people advocating and coordinating at the local level, what few reform-oriented state and federal policies there are do not necessarily take hold. North Carolina has had a statewide bicycle policy since 1973, but many of the state's cities lacked the bicycle planner and agency buy-in to implement the policy. Reform-minded Pennsylvania Department of Transportation Secretary Allen Biehler created a local competitive grant program in 2010 to compel regional land-use and transportation planning. But without civic and political alignment in Allegheny County, where Pittsburgh sits, the region won only one grant of $25,000, a small sum considering that it is the second-largest metropolitan region in Pennsylvania and that there was $59.4 million available in the first round. Lack of local support and coordination can render higher-level policy much less effective.

When high-level, supportive policy is enacted in cities with thriving civic organizations, innovations are made more durable. Portland stands out as a city that has taken a different urban transportation path from the majority of cities in the United States because of a twist of policy fate. Starting in the late 1960s and early 1970s, the city had the trifecta of civic activism, bold political leadership, and agency reorientation that our other study cities have experienced more recently. It turned a riverfront road into a public park. It fought plans for more automobile parking with a downtown revitalization plan. The changes Portland set in motion then have endured in the following decades.

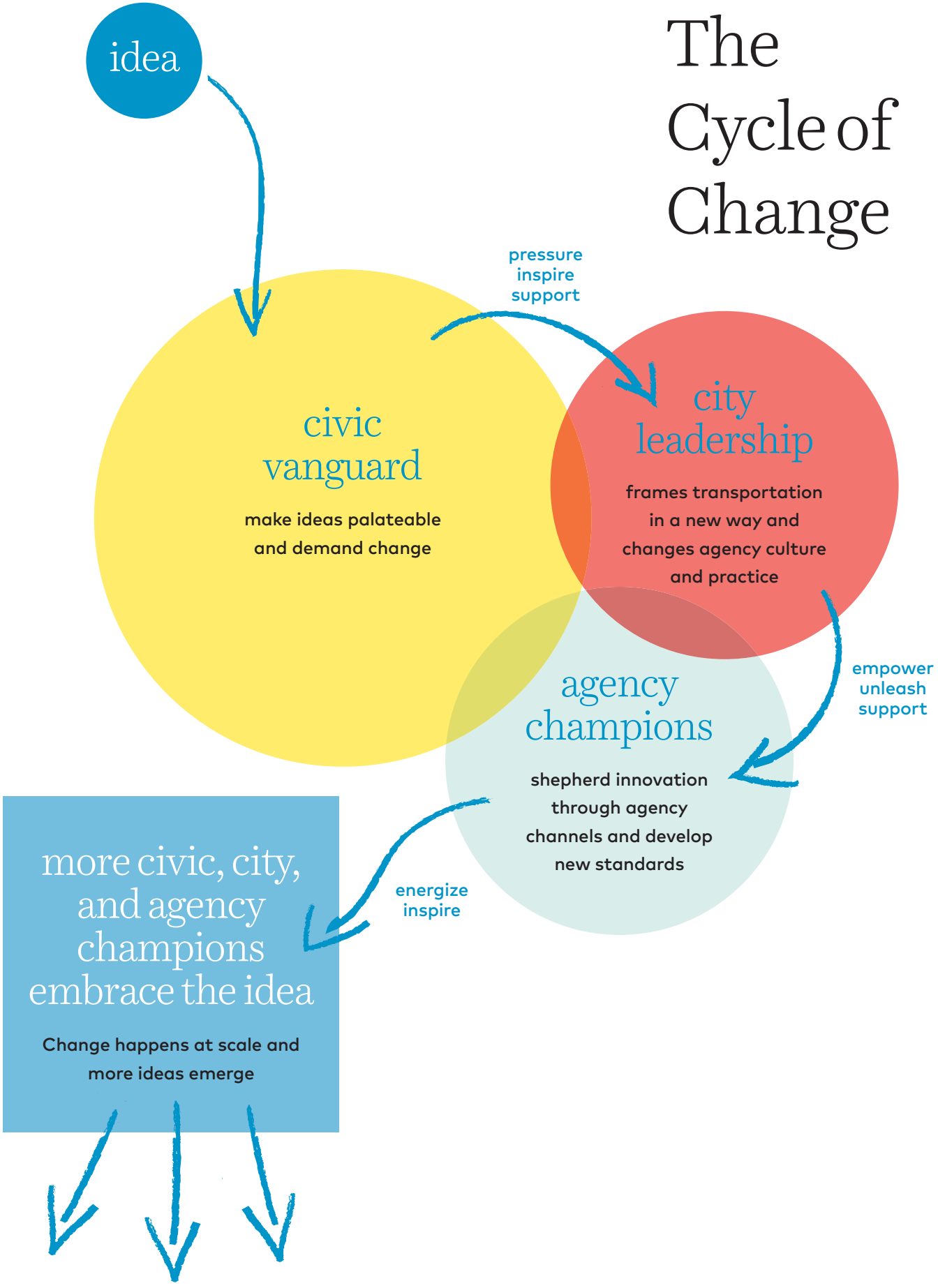
Two top-level policy changes made the 1970s urban transportation innovations part of Portland's DNA. The first was the city and state decision to take advantage of a new (as of 1973) federal policy change that allowed for the trade-in of highway funds for transit. By trading in the cancelled Mount Hood Highway for yet-unknown public transportation and arterial road projects, Portland secured a capital source for the first installment of its transit future. The second major policy change was the legislature's enactment of Governor Tom McCall's recommended statewide farmland protection policies in

FORMER DENVER MAYOR JOHN HICKENLOOPER LEADS A GROUP OF BICYCLE ADVOCATES. FREEWHEELIN BIKER/ FLICKR.

1973. Though the law was created to protect natural resources, the creation of urban-growth boundaries limited the outward expansion of urban areas, focusing local planning efforts on more efficient uses of urban land. By fostering compact land-use planning practices that inherently supported sustainable urban transportation, Oregon essentially built durability into urban transportation innovation. The key is that the state policies were passed at the moment the civic sector was fully engaged and local politicians were aligned. It sounds obvious, but without local engagement, local execution of state and federal policies is much more limited.

The durability of new practices can be reinforced by cities learning from one another once one city proves the viability of a new concept. When Janette Sadik-Khan took office, she and New York City Planning Commissioner Amanda Burden visited Copenhagen with key staff to learn about sustainable transportation practices. Later on, Denver bicycle advocates arranged to have city planner Emily Snyder and traffic engineer Justin Schmitz visit New York, leading to the creation of their city's first buffered bike lane. When Mayor Bill Peduto and County Executive Rich Fitzgerald prioritized bus rapid transit for the city of Pittsburgh, they took a cohort of business leaders, advocates, city staff, and other stakeholders to Cleveland to learn about the success of that city's HealthLine bus rapid transit project. Stakeholders often credit study tours with widening their horizons, leading to solutions to their local problems. These study tours offer an intense form of peer-to-peer learning and firsthand experience that is often critical for mayors and agency heads in reorienting governance for more livable streets.

The Cycle of Change



Conclusions and Recommendations

That resident-led approaches are necessary to combat unwanted projects is not a new idea; citizens have led the redirection of governments throughout history. New York City and Portland owe today's presence of local civic organizations in part to the burgeoning environmental and social movements that swept the country in the 1960s and 70s and to the environmental laws that gave residents' challenges legal standing. Shifts in attitudes about urban planning took place at a time in which a willingness—and legal basis—to challenge authority and critical views of the establishment were growing: Jane Jacobs's *The Death and Life of Great American Cities* was published in 1961, and Rachel Carson's *Silent Spring,* which was instrumental in launching the modern environmental movement, was published in 1962. Citizens were further empowered to challenge governmental decisions regarding their local environment through the National Environmental Policy Act and the Clean Air Act, enacted in the 1970s. These social movements translated into a renewed focus on neighborhoods decades ago, stopping many infrastructure projects from destroying cities.

What is new during the recent history of urban transportation innovation is that bottom-up approaches have been more often applied by multiple sectors working in concert toward similar goals. More energy is spent saying yes to "good" projects than no to "bad" projects. In today's process, more municipal leaders and city agency staff have adopted bottom-up approaches akin to civic organizing. City leaders at the top of the pyramid have pursued incremental "tactical urbanism" projects. They have evaluated each phase before pressing on, just as advocates did when measuring the benefits of new innovations. City leaders have even embedded advocates or other people outside conventional power structures in their city staff. In effect, municipal leaders have taken a page out of the civic activists' playbook.

Yet the success of the resident-led approaches behind the urban transportation innovations examined in this report is an aberration in the current landscape of American urban development. The existing auto-oriented policies and institutional structures remain strong. Multiple beneficiaries including construction labor unions continue to defend them. Most metropolitan regions in the U.S. continue to widen roads and infrastructure that cater to the automobile, in line with the overall policies and goals of the federal government as set forth in the 1950s. Examples abound: Cleveland, Ohio, is reconstructing its inner-belt freeway, which is a confluence of I-90, I-71, and I-77, although automobile trips are diminishing and population is stable or declining; Michigan State Highway planners want to expand Interstate 94 through Detroit, demolishing eleven pedestrian bridges in the process; and Louisville, Kentucky, is still considering adding another highway ring. Nationwide, there continue to be more examples of highway expansion than there are of successful urban transportation innovation.

Many federal and state policies continue to hinder urban innovation rather than encourage it. Some state highway departments, despite being called departments of "transportation," hold to design standards and practices that inhibit innovation within the entire range of options for moving people and goods through places, and they prioritize the assets they own – state highways – over serving the broader mobility needs of their constituents.

The longstanding and current obstacles that citizens and government leaders still face should not be discounted. Nor should we assume that all cities are on the cusp of change. Looking for an ideal window of opportunity in any city where there

More energy is spent saying yes to "good" projects than no to "bad" projects.

might be well-organized grassroots actors to introduce an idea, a high-ranking official with the authority to adopt it and challenge others in power, and finally, an empowered city staff to carry out and standardize the innovation, shows that the effort is great indeed. Only a handful out of tens of thousands of cities stand out as having experienced that moment of change. Yet the swiftness by which visionary civic, government, and agency leaders have positively affected the streets and urban life in our key case studies shows the importance of this often-frustrating pursuit.

To increase the prospects for urban transportation innovation, supporters must do a combination of the following:

Encourage civic organizations to emerge and reframe transportation issues as quality-of-life issues. Being able to move around the city is a worthy goal in its own right. Many civic and grassroots organizations made tremendous headway, however, when transportation was not their ultimate goal or when transportation goals were purposefully reframed to support another goal with broad appeal, such as cleaner air or economic opportunity.

Reinforce public support through political organizing and leveraging technical expertise or data. Grassroots organizations have the most power to instigate change, whether through catching the attention of an elected official or through building demand with the majority of a population. Demonstration of technical expertise and providing evidence of wide benefits can persuade elected officials who need to consider the impact of a reform and craft a political argument. For example, technical capacity can debunk established forecasting norms that inevitably purport to demonstrate the "need" to widen highways, regardless of realistic demand and fiscal resources.

Have the courage to take on reform, and **be prepared**. While the ideas for reform often originate at the grassroots level, a bold, high-ranking political figure who is willing to take risks and endure short-term criticism is necessary for reform to take root and grow. But everyone can prepare for such conflicts. Leaders are more willing to take unpopular stands when they have the support of a committed band of voters, such as the Riverfront for People coalition in Portland or Transportation Alternatives in New York City, even if that committed band does not represent the majority of the population. Sometimes, a strong, unexpected leader can be recruited from outside the conventional structure to accelerate and inspire reform.

Position advocates on the inside to catalyze a reorientation of city agency and staff culture. Durability of new transport policy paradigms materializes when bureaucratic structures adopt reform. The ability of former activists, like Jon Orcutt in New York City, to reform an agency depends on the leader's ability not only to understand how the bureaucracy and local politics work, but also to appeal to employees and insist on a new way of getting things done.

PORTLAND'S TOM MCCALL PARK AT NIGHT.
GETTY IMAGES.

Perpetuate new norms through changing agency standards. For reforms to outlast mayoral terms, they must eventually be codified into agency practice—that is, its standards, processes, performance measurements, and day-to-day operations. Leaders at all levels need to push for new practices to be officially adopted and carried out. Successful reformers must redefine how the success of a transportation system is measured so that all subsequent practices meet the same standards and achieve a similar reformist goal. Groups like the National Association of City Transportation Officials have an important role to play in this step.

Create federal and state policies that recognize and reward small-scale urban transportation reform and tip the scales toward innovation. Although policies from broader levels of government still require smart implementation by local leaders, these policies should push cities toward innovation. At the very least, states should keep the door to innovation open, rather than obstruct it. States can require integrated land-use and transportation planning, as in California, or limit urban growth to encourage compact development, as in Oregon. States can also create competitive funds to reward sound regional coordination, as Pennsylvania did. The federal government can commit more funding toward sustainable urban transportation and adopt performance metrics that recognize urban vitality over vehicle throughput.

Meaningful and durable change takes hold when all levels of society—residents, leaders, and the middle bureaucracy—take up the cause. Any single level can create change. But the overarching lesson is clear: the potential and success for urban transportation innovation is greatest when citizen activists and top-level local government officials are working in tandem on bottom-up approaches to challenge the current transportation policy structure.

Abrupt change in direction in 1970s continues to inform Portland's progress today.

1

Portland

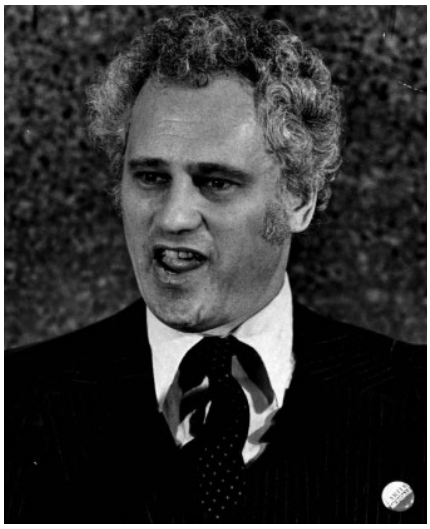
Portland's culture of planning has received accolades and been the subject of much analysis, so our analysis of its story from the late 1960s and early 70s is an interpretation based on our theory of change in transportation. We sought to understand how Portland's citizens, its council members, mayor, and overall governance departed from common transportation planning practice in the United States. No one living in Portland in 1969 would have guessed that the city would become the exemplar for sustainable transportation forty years later. At mid-century, Portland had adopted cars as early and quickly as every other city in the United States, and it had dismantled its streetcar and transit system back in the 1920s, before many other cities. As happened in other American cities, by the late 1960s, Portland's elected officials and regional authorities, along with its civic elite—businessmen and property owners—had disinvested from the transit system to make way for cars and regarded the dismantling of old neighborhoods as necessary for modernization. In a few short years, the direction had changed significantly. Perhaps the most remarkable part is that the abrupt change in direction that occurred between 1970 and 1975 continues to inform Portland's progress today. We found that it was a rare and unusual alignment of circumstance and leadership during the 1970s that set the city on its political and cultural path toward sustainable transportation, a path still being followed today.

Civic Environment: "We start with our block"

So said Bill Scott, an early activist in Portland's story, "We realized that there were things that we could do to start building the better world that we realized would be a lot harder on the national and international level." Portland would have gone the way of many other places were it not for citizens and neighborhood groups that instigated a movement to reclaim the city in the late 1960s and throughout the 70s. Many citizens in Portland challenged the establishment and its vision of the city using the organizing tools they had learned in the antiwar, feminist, and civil rights movements in the mid-1960s. Disillusionment with national politics made these idealists return home. This shifted to a desire to create neighborhoods where families could comfortably raise children. They were just "people who wanted a better neighborhood and a better place to live."

Close to home, the business elite, the city council, the state highway department, and other large institutions were still following the standard course of planning. Portland State University and Good Samaritan Hospital were planning campuses in the suburbs. Long-range transportation plans approved as late as 1969 still showed how new highways would crisscross the entire city. Historic buildings seemed doomed for the wrecking ball to make way for parking lots. The assuredness by which these plans

PORTLAND DOWNTOWN, SURROUNDED WITH FREEWAYS AND A SURFEIT OF PARKING, 1968.
CAFEUNKNOWN.COM.



NEIL GOLDSCHMIDT, FORMER MAYOR OF PORTLAND, 1980.
GETTY IMAGES.

It was a rare and unusual alignment of circumstance and leadership during the 1970s that set the city on its political and cultural path toward sustainable transportation.

were discussed drew the ire of those who had participated in movements elsewhere. Keen activists could see on the city's proverbial drawing table that there was a "conversion threat" to the city, where the powers that be were turning outwards toward the suburbs, without regard for existing neighborhoods or the desire of the people. Determination to preserve the natural environment and a reaction to the negative effects of road building and sprawl in other metropolitan areas across the country (such as those recounted in *Rites of Way*, the story of a neighborhood that defeated the Boston freeway plans) prompted some Portlanders to identify downtown revival and the defeat of the Mount Hood Freeway as their main goals.

A leading strategy for Portland citizen activists was to reframe their opposition in terms that could draw support from the general public. Support for the removal of Harbor Drive, the highway that cut the downtown area off from the waterfront, gave rise to Riverfront for People. A longstanding perception about the lack of auto parking—a perception that led to parking structure proposals—was converted into one about increasing access for people to the downtown core. The framing of access developed into one about downtown revival as a civic space for the middle class.

The rallying language was only the cover on top of robust activism that built political support for city livability. The aforementioned Riverfront for People, formed in 1969 by stay-at-home mom Allison Belcher, architect Robert Belcher, and fellow architect Jim Howell, held gatherings, often in the form of picnics along the waterfront, to renew citizen interest in waterfront development and in the downtown area. Riverfront for People joined forces with Ron Buel, chief of staff to then-City Commissioner Neil Goldschmidt, to form the group Sensible Transportation Options for People, or STOP, which soon became a leader in the region's anti-freeway movement.

Top on STOP's agenda was to defeat the proposed Mount Hood Freeway, submitted by the Oregon Highway Department without citizen consultation and scheduled to receive hefty federal funds as part of the 1956 Federal Highway Act. The freeway would have cut a five-and-a-half-mile swath through historic residential districts and destroyed 1,700 homes and many businesses in southeast Portland. In 1969, the freeway was considered a "done deal," with the federal government providing 90 percent of the funds and the state setting aside a 10-percent match; the city's government seemed to have little say over the matter. STOP joined the Southeast Legal Defense Fund, founded by activist Betty Merten (who successfully led the fight against a proposed parking garage above a parking lot, a space that is now Pioneer Courthouse Square) and Charlie Merten, a prominent public-interest lawyer, to fight the Mount Hood Freeway.

The actions of STOP were just some of the many instances of Portland citizens inserting themselves into the planning process, in effect

redefining this process. The focus of their work was not on picketing, but they demanded an environmental impact statement for the Mount Hood Freeway, as was their right thanks to the recent passage of the National Environmental Protection Act. STOP members sat on the Oregon Highway Department's Citizens Advisory Committee, went to county, city, and neighborhood meetings about the matter, and essentially evolved into citizen planners, armed with technical knowledge about the highway but advocating on behalf of the neighborhoods. Notably, members of STOP were also involved with campaigning for political candidates they felt would support their mission, one of whom was Neil Goldschmidt.

The collective efforts of citizens built momentum for neighborhood preservation and downtown renewal that resulted in a culture of working together. The reactivated public interest in revitalizing the city's core ultimately coalesced into the 1972 Downtown Redevelopment Plan, which represented a "critical return to public life" (Peirce and Guskind 1993). Further, the idea that downtown is "everyone's neighborhood" was emblematic of the citizen activists' overall emphasis on neighborhoods. An in-depth participatory planning process was conducted for the Downtown Plan, one that arrived at "doable" guidelines that were shorn of obtuse technical language. Citizens working alongside planners, business leaders, and city government all developed a common language and understanding that made the vision for the city more tangible (Hovey 2003). The 1972 Downtown Plan marked the start of Portland's tradition of thinking practically about goals and outcomes as well as its culture of demystifying planning, and it showed Portlanders that the hard work of getting everyone on board could "result in action, not paralysis" (Peirce and Guskind 1993). Critically, the 1972 Downtown Plan was "an opportunity for the citizens of Portland to say: Let's first decide how we want to use our Downtown and then determine what tools are necessary to achieve our land use decisions" and everything else—including transportation—would follow (City of Portland, 1972). At that moment in 1972, Portland turned toward its city center and neighborhoods while the rest of the country seemed to turn away. And in 1972 another thing happened which triggered the second element of the reform formula: an election was held for Mayor.

Advocates Become Politicians

In 1969, the Portland City Council was composed entirely of white males whose average age was 61, most of whom had been in office for multiple terms. The adopted transportation plan for the region called for multiple limited-access highways slicing through existing neighborhoods. By 1974, both the composition of that council and the contents of that plan had changed dramatically.

The late 1960s and early 70s were a fluid moment for Portland politics, as power passed between the good ol' boy network who had stood guard for decades and new leaders who embodied the ethos of social justice gleaned from movements sweeping the country. Three longstanding city council members retired after the 1970 election, making room for new members, who happened to be young and passionate, including Neil Goldschmidt. Goldschmidt, who later became mayor of Portland in 1973, adopted the STOP coalition's goal of defeating the Mount Hood Freeway and thrust the issue into the political arena. As Goldschmidt recounted it, "timing is everything." At thirty-two, he was roughly half the age of his predecessor Terry Schrunk.

PORTLAND DOWNTOWN.
STUART SEEGER/FLICKR.

Portland's civic movements fit nicely with Goldschmidt's political style and priorities; not coincidentally, those citizen activists were the very ones who campaigned for his election. Previously a legal-aid attorney, he first learned about the growing sentiment against urban freeways when he canvassed neighborhoods while campaigning for the city council in 1970 (Thompson 2007). When Goldschmidt won the 1972 mayoral election, he set out to navigate the conflicting desires of the city's citizen advocates and the Oregon Department of Transportation. He capitalized on the energy and momentum already ignited by activists and "rode it like a skillful surfer on a wave" according to Betty Merten. The 1972 Downtown Plan was also strongly aligned with Goldschmidt's goals for the city; while its development predated his election he served as a figure who could navigate the political shoals for implementation.

Political leadership for urban transportation reform also came from the state in the early 1970s—an Oregon aberration that did not occur in Illinois or New York. Governor McCall, a conservationist, viewed Portland residential reinvestment as a means of protecting exurban resource lands from sprawl. McCall not only championed farmland preservation policies, which indirectly helped preserve inner-city neighborhoods, he also directed the chair of the highway commission, Glenn Jackson, to accede to Portlanders' desire to limit urban highway expansion. McCall and Goldschmidt—a Republican with rural interests and a Democratic with urban interests—also collaborated on strengthening the Portland region's transit system and regional planning mechanisms. The early 1970s in Oregon were one of the few instances our study found of a state government actively assisting urban innovation.

While the activists were adept at community organizing and political campaigns, they asserted new technical prowess. New knowledge strengthened the citizen campaign against the Mount Hood Freeway project. A sympathetic expert working with the Oregon Highway Department on the National Environmental Policy Act (NEPA)–required Environmental Impact Assessment (EIS) leaked the results of the EIS, which made it clear that the project would produce undesirable consequences for downtown Portland and home and rental prices surrounding the freeway. Assertions by activists and City Hall about the project's detrimental effects were confirmed (OTREC 2010).

A change in federal transportation policy gave the locals the positive argument they had previously lacked. Under the 1973 Interstate Transfer Provision of the Federal Highway Act, a result of a compromise stemming from congressional disagreement over the level of state control of federal transportation funding, the city and state could for the first time transfer the set-aside federal funds intended for the Mount Hood highway project to other regional transit and highway projects. Previously, saying no to an urban highway also meant saying no to hundreds of millions of federal dollars. For the first time, a

The early 1970s in Oregon were one of the few instances our study found of a state government actively assisting urban innovation.

region could say no to the project but still say yes to the money. Backed by his constituents, Goldschmidt easily convinced Governor McCall. In a series of additional political moves, Highway Department Commissioner Jackson finally agreed, and with that, the Mount Hood Freeway project was deleted from the plan. Yet approximately $500 million (1974 dollars) stayed in the region for other road and transit projects.

But the 1972 Downtown Plan coupled with the Mount Hood Freeway reversal meant much more than stopping a highway—it led to Portland's continued sustainable development, in which transportation plays a key role. As Elsa Coleman, a prominent anti-freeway activist and member of STOP, attested ". . . it wasn't just about stopping the Mount Hood Freeway; it was trying to organize support for a different way in Portland." More tangibly, any roads that were built in the region further conformed to the advocates' agenda because of the required compliance with the state's land-use laws, passed in 1973 by the legislature to balance urban interests with the state's vast agricultural interests. The densification that is critical to successful transit systems was bolstered by the requirement that all cities in the state limit the geographic extent of their growth with urban-growth boundaries. The 1972 Downtown Plan provided further guidance on how the city's core would accommodate more growth with fewer cars. Though the region ultimately submitted a combined list of transit and road projects to the Federal Highway Administration in the late 1970s, the main victory that defined the region's break from the status quo was its control over its own transportation system through its "flexing" of federal funds.

Along with state and regional policies, the trade-in funding created a deep well of financial resources for arterial streets as well as for transit, pedestrian, and bicycle facilities in the region, cementing a culture of regional coordination that has since become a hallmark of Portland's transportation governance. The agreed-upon transit plans resulted in light rail for the Portland region. Construction began in 1982, and the first line of the metropolitan area's extensive light rail network opened in 1986. Plans for the region's light rail system also inspired an overhaul of the city's bus network, changing it to a gridded system rather than one solely serving downtown Portland. Portland's neighborhoods were woven into the transportation plans.

Change Within

Change inside city government helped to maintain momentum from the defeat of the highway and build on the goodwill and guidance that resulted from the 1972 Downtown Plan. Mayor Goldschmidt had stripped transportation planning responsibilities away from the city engineer's office and formed a new transportation planning office that he staffed with reform-oriented professionals, many of whom had visited Europe and experienced a wholly different kind of development. The planning department ballooned from a handful of individuals to thirty-three overnight, and this team, with its execution of public transit and pedestrian spaces, demonstrated to the public that the arduous planning process resulted in benefits. This type of change from within happened again in 1993, when City Commissioner Earl Blumenauer (who had been in the 1973 state legislature which approved land use planning) hired bicycle advocate Mia Birk as a staff member in Portland's Bureau of Transportation.

The founding members of STOP and other reform advocates continued to take engaged roles in city and regional administrations, grassroots organizing, and elected office. Elsa Coleman, who fought the parking structures downtown, eventually

Since the 1970s, Portland has charged forward on a different path based on its expanded transit system, pedestrian and bicycle infrastructure, and measured land-use policies.

became the downtown parking manager, making sure that any additional development adhered to parking guidelines. That the "guerrilla planners" in the early 1970s became professional planners and local elected representatives kept the city on a steady path for decades to come.

State Policies Reinforce Local Change

It is worth noting that at the time of the Mount Hood Freeway fight, the anti-freeway movement in Portland was not pervasive, and the young mayor's outspoken opposition to the project was unpopular. Goldschmidt barely won reelection in 1976, when Frank Ivancie ran against him on a platform of reviving the highway project. Each step of the fight against the freeway was a narrow victory, as citizens and government officials alike had to employ a range of policy tools to keep the opportunities for change relevant.

State policies and new regional institutions played key roles in implementing Portland's vision for land-use and transportation planning long after the civic battles. Statewide land-use laws mandated urban-growth boundaries (UGB) for urban areas and were regulated by the Land Conservation and Development Commission established in 1973. In 1977, the state also established the Metro Council, a regional governing body to oversee the land within the Portland metropolitan area UGB. Metro would adopt and enforce regional plans and make all the region's transportation decisions in collaboration with TriMet, the region's transit agency, itself also created in the fertile ground of the late 1960s and early 1970s. The Metro Council serves as the region's metropolitan planning organization (MPO), but unlike other MPOs, it has a home-rule charter and councilors are directly elected by citizens, ensuring that the body reflects the citizen demand to create a region-wide vision for the metropolitan area (Cotugno and Seltzer 2011). TriMet was initially a relatively weak agency with very little capacity, but a 1969 state law allowed transit districts to raise taxes through the payroll tax, building capacity within the agency and establishing it as a partner with Metro. TriMet builds and operates transportation infrastructure and services, while Metro evaluates and plans corridors. These regional regulations and agencies embodied the new direction of the Portland metropolitan area and have succeeded because of the high level of inter-jurisdictional cooperation.

Continuing a dramatic path of innovation feels uncertain today, with several individuals characterizing Portland's planning practices as "ossified." In 2015, controversy rages over whether or not Portland will allocate resources simply to maintain its streets at a state-of-good-repair standard, and the TriMet expansion which continued steadily apace for decades has slowed. A recent Oregon Department of Transportation proposal to widen Interstate 5, which would have benefited auto commuters to suburban Washington State and harmed inner-city residential neighborhoods in north Portland, was defeated only as recently as 2013, showing that even the Portland region must fight some rearguard actions against the conventional auto-dominant practices of the past. That said, dramatic innovation seems unnecessary. Since the 1970s, Portland has charged forward on a different path based on its expanded transit system, pedestrian and bicycle infrastructure, and measured land-use policies. Subsequent updates to the Downtown Plan, such as the Central City Plan in 1988, did not reject the 1972 Downtown Plan but, rather, built on the central tenets of the earlier plan and lessons learned from the

TILIKUM CROSSING, THE "BRIDGE OF THE PEOPLE," WILL CARRY LIGHT RAIL TRAINS, BUSES, CYCLISTS, PEDESTRIANS, AND STREETCARS, BUT NOT PRIVATE VEHICLES. ASSOCIATED PRESS.

defeat of the Mount Hood Freeway project: start with land-use decisions and provide guidance for practical "doability" rather than prescriptive solutions. Portland has had the benefit of financial resources for these projects since the beginning of its transformation, but strains are showing now that those federal funds have run their course. Portland's elected leaders, its citizens, and its culture of planning have helped the city progress through economic and policy peaks and troughs. While today's progress may not be as dramatic as tearing down highways, what makes Portland stand apart is that for decades after its initial burst of innovation in the early 1970s, it has carved out a wholly different path of urban development.

Street re-design advances from the margins to become a core economic and livability issue.

2

New York City

Since 2007, New York City has transformed its streets with the installation of hundreds of bike lanes, dozens of public plazas formed from underperforming street space, and the passage of legislation to enforce publication of traffic crash data, to allow bikes into office buildings, and in 2014, to lower the citywide speed limit from 30 to 25 miles per hour. The city also launched improvements to its transit system with Select Bus Service, a version of bus rapid transit, and Citibike, a 6,000-bike, 330-station bike-share system, with plans for future expansion. The city weathered the 2008 recession as it pursued these transformations, and for the first time, the wild streets and unbridled traffic of New York City began to be tamed.

Distinctive as it is, the New York City story perfectly illustrates a universal model of how ideas started with civic activist groups, were then embraced by elected and appointed leaders, and were ultimately institutionalized by staff in the bureaucracy.

Advocates Lay the Groundwork

There may be no better example of how an advocacy group got a city to adopt its agenda in recent history than the story of Transportation Alternatives and its role in New York City's transformation.

One of the oldest sustainable transportation advocacy organizations in New York City, Transportation Alternatives (T.A.) formed in 1973, a time of heightened environmental consciousness. It initially advocated for bicycles as the best form of transportation to counteract the negative effects of oil consumption and environmental degradation. Though it was first known for attention-grabbing street-theater stunts—such as partnering with bike messengers to stage a ride/protest in response to Mayor Koch's 1987 ban on bicycles on Fifth, Park, and Madison Avenues—for years, many of its actions had minimal effect on the city and were unpopular with the public. In the case of Koch's bicycle ban, for example, the city backed away from the ban only when the state declared it invalid on a technicality. The group's original reputation seemed marginal to mainstream concerns.

As T.A. matured, built its policy expertise, increased its membership, and expanded its mission to include more than cycling concerns, it gained momentum and became a political force. Its successes include gaining 24-hour subway access for bicycles in 1993, a Bicycle Master Plan produced by the city with T.A. consultation in 1997, and even funding from the New York State Public Health Department to improve walkability for senior citizens in 2003, a savvy political move because senior citizens as a demographic vote at higher rates than the rest of the population.

T.A.'s base further expanded as it built coalitions with organizations that sought the same goals, though often from different starting points. For example, it started to partner with public health, senior citizen advocacy,

PLANTERS AND CHAIRS MARK A NEW PEDESTRIAN AREA ON A MANHATTAN STREET. BILL DEERE.

environmental justice, and food justice organizations that shared the goal of a more livable city. Bonds with other transportation organizations were strengthened through the well-coordinated use of tactics based on organizational strengths. T.A. could tap the Regional Plan Association for questions about long-term policy planning but would turn out its members for neighborhood-scale proposals—such as a bike lane on a specific street—in front of City Council.

All of these benchmarks point to T.A.'s burgeoning expertise in transportation policy and its nascent ability to position what started out as an urban cycling issue as an urban livability issue. By no means was T.A. the only organization in New York City advocating for these changes. Regional Plan Association, Tri-State Transportation Campaign, and many other organizations also focused on transportation reform, but T.A. may have benefited from its more radical beginnings, which gave the organization more room for proposing unusual ideas. T.A. was one of many organizations that laid the groundwork, but it was only when there was change and alignment in the political leadership and environment that T.A. was able to advance its agenda in a meaningful way.

But that failure at the state capital convinced the Bloomberg administration that its energy was better spent on transportation issues over which it had full authority, such as street design, biking and walking.

Political Environment

Several external events in the mid-2000s allowed New York City's advocacy community to accelerate change. In 2007, Mayor Michael Bloomberg published New York City's first urban sustainability plan, called PlaNYC. The plan developed sustainability targets for several sectors, including transportation, but really grew from an interest in economic development for the city in response to its estimation that it was on target to add one million people by 2030. Then-Deputy Mayor Dan Doctoroff spearheaded the development of the plan, seeing its rising prominence as a way of promoting the citywide economic development that slipped out of grasp with the loss of the 2012 Olympic bid. To broaden its appeal, the authors of PlaNYC sought input from numerous advocates in many fields and adopted some of the goals that T.A. had refined over the years. PlaNYC would become Mayor Bloomberg's legacy as he began his second term and thus brought with it a sense of urgency.

It was no accident that the mayor, an experienced corporate executive, placed other non-governmental professionals in his administration to effectively carry out PlaNYC. He created the Office of Long-term Planning and Sustainability and appointed Rohit Aggarwala, a former McKinsey management consultant who had contributed to the plan's development, to head the office. Bloomberg also hired a new transportation commissioner, Janette Sadik-Khan, to meet his administration's transportation goals. While the most talked-about feature in PlaNYC's transportation chapter was the idea of emulating London's congestion pricing program and charging a fee for autos entering the core area, that proposal required the approval of the state legislature. The legislature balked – not the only example in our study of a state government thwarting urban transportation reform - in spite of support from the mayor, city council, local business, labor, and environmental advocates, and major newspaper editorial boards. But that failure at the state capital convinced the Bloomberg administration that its energy was better spent on transportation issues over which it had full authority, such as street design, biking and walking.

Around this time, T.A. encountered a patron who shared its goals in Mark Gorton, a financial services entrepreneur who further strengthened the campaign. Angered by having to fight cars on his bike commute from his home on the Upper West Side to

his office in Tribeca, Gorton endowed Transportation Alternatives as well as Project for Public Spaces, another nonprofit organization that specializes in civic engagement, with the financial resources to develop a vision that would redefine New York City's transportation future. In his view, the compelling argument would not be how one traveled, but how people's quality of life and their neighborhood

PAUL STEELY WHITE, EXECUTIVE DIRECTOR OF TRANSPORTATION ALTERNATIVES. BRIAN VERNOR/FLICKR.

vitality could be improved. Accordingly, the New York City Streets Renaissance campaign was launched in 2006 and charged with choosing iconic places in the city in which to demonstrate the potential of streets as public space. The changes that T.A. sought in urban transportation were reframed as a livability issue.

Gorton strengthened the advocates' efforts by launching *Streetsblog*, a blog that became a means of disseminating information about city transportation policy and events. He had become frustrated that the press paid little attention to issues that, in his mind, should be as important as crime. Indeed, since 2000, more people in New York City have died annually by traffic fatalities than by gun wounds. *Streetsblog* was one of the first media vehicles to politicize local transportation matters, and it gave the impression that sustainable transportation issues had a growing constituency. Politicians paid attention.

With the introduction of the new transportation commissioner, the leadership of the mayor, financial resources, growing political prowess, and a reframing of desired transportation changes, New York City's moment of opportunity opened wide. On the advocacy side, T.A. and its members attended hundreds of community board meetings, testified at dozens of city council hearings, and sent thousands of letters of support to elected officials. T.A.'s more sophisticated research and deepening technical knowledge expanded its role to the extent that community boards and City Hall would often call upon T.A. representatives to serve as technical experts at community meetings. Similar to the citizen-hosted picnics along the Portland waterfront in 1969, T.A. helped neighborhoods host block parties and play streets from Soundview, Bronx, to East New York, Brooklyn, to Jackson Heights, Queens. Neighborhood by neighborhood, it reinforced its message that transportation is a livability issue. Support for the livable-streets agenda grew.

Changes within the DOT

Commissioner Sadik-Khan adopted the framework of livability and sought urban transportation reform through many changes in her agency and throughout city government by first retooling her department. In 2008, the city adopted a fully developed Safe Routes for Seniors Program (which was seeded by that earlier, small New York State funding for T.A.), making it a part of the DOT's safety unit. The NYC DOT installed its first physically protected bike lanes—an exception to the design of streets throughout the United States and a 180-degree turnaround from the days of Koch's bike ban. To reset the work of the DOT's traffic engineers, the city created its own design standards with the publication of the New York City *Street Design Manual* in 2010. Most

important, the department received sanction for these changes from the city's legal department and the Office of Management and Budget, which have for decades relied on highway design standards as the guide by which to judge the city's liability for its streets. In doing so, the DOT overcame an enormous bureaucratic obstacle.

Additional DOT-led programs reinforced the advocacy community's goal of a livable city, not just more biking. Tens of thousands of regular citizens, not limited to bicycle advocates, visited the city's first Summer Streets (New York City's version of Latin America's *ciclovia*-style street openings) in 2009. Play Streets, a program that promoted street closures as a stimulus for more physical activity in dozens of neighborhoods, become an officially sanctioned program by the Department of Transportation and the Department of Health in 2010. The DOT commissioned Jan Gehl Architects, a longtime proponent of human-scale street design, to analyze priorities for livability and publish its findings in a 50-page report, *World Class Streets*. All of these initiatives demonstrated to the public that change on the street is indeed possible.

Finally, regulatory changes supported by the commissioner and advocates, such as the Bikes in Buildings law in 2009 and the 2011 law that requires the New York Police Department to publish a monthly record of traffic crashes and summonses, ended decades-old practices of disregard for bicyclists and pedestrians on New York City's streets. New York City was experiencing momentum like never before.

The initial window of opportunity, the resultant regulatory reforms, and the changes in practice built capacity in the city for more ambitious innovations with fundamental lasting power. New York City launched a 6,000-bike, 330-station bike-share program in 2013, with plans for expansion. But there was more to come, when Mayor Bill de Blasio, Mayor Bloomberg's successor, committed to transportation improvements initiated during the Bloomberg years. This continued commitment was all the more stark when compared to his disavowal of his predecessor in most other arenas. Mayor de Blasio backed T.A.'s demand from New York State legislature to lower the speed limit in New York City as a part of the city's commitment to Vision Zero, a program to eliminate traffic fatalities. At each crucial moment in the political process, introduction of the reform was backed by T.A. and thousands of its members. The majority of city-led reforms in urban transportation succeeded with direct or indirect support from T.A., whether in the form of turning members out to community meetings or giving input on the framing of issues or even contributing to the development of design manuals before their release.

Each of the bigger wins in New York City represents tens of smaller, itinerant struggles, such as a multiyear campaign to close one entrance to Prospect Park so that cyclists and pedestrians could enjoy the park without the intrusion of cars. But once the advocacy group consolidated its support and paired it with mayoral and commissioner leadership that instilled reform throughout the city governance structure, urban transportation innovation appeared to be unleashed. Gains in urban transportation improved New York City overall.

NYC DOT STREET SAFETY CAMPAIGN, INITIATED IN 2012. AGENT J/FLICKR.


CHASE
CHASE
LOOK!

Innovation in much of the rest of the state-controlled MTA is rare.

New York City's Transportation Innovation Future

Mayor Bill de Blasio, who took office in January 2014, has continued the momentum with the groundwork established by New York City's advocacy community. An early sign of potential is Mayor de Blasio's endorsement of and the city's adoption of Vision Zero in February 2014, a citywide goal to reduce traffic fatalities to zero by 2025. A program initially created in Sweden, Vision Zero takes a comprehensive approach to quelling traffic chaos through design as well as through enforcement and education. This entails a NYC DOT partnership with the New York Police Department (NYPD), which would be a first for New York City.

Our study found that success in one area leads to success in others and that reform can gather momentum as it progresses, even when elected offices turn over to new occupants, as long as the civic advocacy sector continues to thrive. The adoption of Vision Zero and its first win, the decrease in the citywide speed limit from 30 to 25 miles per hour, follows the same trajectory as innovations in the previous administration, but this reform happened much faster. A new lobbying organization, Families for Safe Streets, formed in January 2014 after pedestrian fatalities spiked in 2013 and early 2014, when more than 30 percent of the victims were children. Victims' families banded together in their grief and decided to seek a reduced city speed limit as their first goal.

This goal involved going outside city authority and asking state legislators for permission to change the city's speed limit because of arcane regulations from the 1970s. Additional resources were needed. T.A.'s then-director of campaigns, Caroline Samponaro, and its then-legislative director, Juan Martinez, who had formerly served as a legislative director for the state senate, shaped the newly formed organization's political strategies.

The city also took on reform-minded staff around the same time in relatively short order. Mayor de Blasio hired Wiley Norvell, a former communications director for T.A., and appointed Polly Trottenberg as the NYC DOT commissioner. Commissioner Trottenberg, a former legislative director to Senator Daniel Moynihan and former chief of staff to Senator Chuck Schumer, was a transportation reformist and was serving as under secretary for policy at the U.S. Department of Transportation when she received the call from New York City. Mayor de Blasio adopted Vision Zero as the primary strategy for NYC DOT, and Commissioner Trottenberg was recruited specifically to oversee the complex legislative initiatives that it would require from the state while continuing on the trajectory established during the Bloomberg years. Once the state legislative session ended in June, she hired T.A.'s Juan Martinez to lead the NYC DOT's strategic initiatives to oversee her programs. With persistent campaigning, the support of NYC Transportation Commissioner Trottenberg, and a reframing of the issue of "traffic fatalities" in stark personal terms, advocates were able to quickly win a campaign to lower the speed limit in June 2014.

Throughout this process, the city demonstrated that it holds the key ingredients for transportation innovation: an overarching vision, well-planted reformists in the mayor's office and the NYC DOT; the backing of politically savvy advocates who offer powerful, personal perspectives on the need for safer streets; and many reform-minded NYC DOT staff that stayed on under the new administration. Commissioner Trottenberg and Mayor de Blasio have

PEDESTRIANIZED ZONES NEAR TIMES SQUARE, NEW YORK. BILL DEERE.

demonstrated they want to continue on the path of change that defined the Bloomberg/Sadik-Khan era.

Given that this next phase of innovation involves the cooperation of the NYPD, this campaign will not only need leadership from the NYC DOT to find tangible ways of showing the public that progress is being made, it will also need strong, steady support from Mayor de Blasio to find common ground and foster interagency cooperation.

A second challenge is how subjugated the city is to state or even regional powers. The dramatic progress a committed vanguard of activists could make on street redesign is a stark contrast to the continued political stalemates which stymie progress for NYC's subway and bus system. Since transit riders in NYC are far more numerous than bicyclists, the political system's seeming indifference to the former and responsiveness to the latter can only be explained as a failure of governance: that the Governor and legislature in distant Albany control the buses and subways, while the Mayor and City Council have more authority over the streetscape. If state and agency leadership adopt a fresh view of transit in New York City, it is not impossible that it would undergo a similar kind of transformation.

Hudson Yards, a major real estate development on top of the Hudson rail yards, is another exception: the city government realized the No. 7 line extension as an economic development project (it was originally part of Doctoroff's Olympic-bid master plan). Although it is an MTA project, it was not instigated by the MTA.

Although there has been reform that required state involvement, city-focused initiatives will always have a smoother launch. Regardless of the mayor and commissioner, reformers will need to rally constituents to shake the regional authorities and state elected officials out of their old ways. New organizations continue to agitate for change; in addition to Families for Safer Streets, the Riders Alliance, formed in 2011 to organize transit riders, has reinvigorated the community-level political constituency for improved transit service. The civic community's ability to develop creative strategies that test outdated thinking will contribute to more departures from the status quo. So far, their impact has endured the transition from one mayor to the next and, hopefully, will continue for many years to come.


Economic reinvention and new leadership prompt new approaches to transportation.
PIRATES

3

Pittsburgh

ROBERTO CLEMENTE BRIDGE, PITTSBURGH. KRZYSIEK/FLICKR.

As in many other innovative urban transportation cities, the gains in Pittsburgh are best understood as a departure from the city's past, and in this case, it is a break with the city's long history of partnerships between the business elite and politicians. Pittsburgh's deindustrialization brought decades of systemic economic challenges and depopulation. With a weak city government, a jurisdictionally fragmented region, and a lack of state and city funding, the city did not coalesce around sustainable transportation until very recently.

Recent complementary forces—Pittsburgh's reorientation away from manufacturing and toward higher education, medicine, and technology in the early 2000s and its desire to retain highly educated, young professionals—gave rise to new approaches and new leadership that started to challenge the longstanding political mechanics behind the region's economic development agenda. Progressive politicians who previously had to engage with longstanding party politics were no longer so beholden. Additional political changes have created an alignment of leadership and a regional vision for transportation at the same time that state-level transportation policy and funding solutions have come into play from above. This is an enormous opportunity.

Civic Vanguard

Much of Pittsburgh's urban development and transportation system resulted from a top-down approach controlled by large institutions. As early as the 1930s, civic elites—often the chief executives and managers of major steel, construction, financial, natural resource extraction, and other companies headquartered in Pittsburgh—drove the city's development agenda. Executives partnered with government to successfully eliminate the blight, smoke, flooding, and pollution that marred the downtown area. This resulted in some ironic turns, such as the 1940s ban on coal-burning furnaces in downtown Pittsburgh by Mayor David Lawrence. More significantly, though, Lawrence pioneered the formal organization of private business interests, and it was during this period that Pittsburgh's centralized approach to economic development solidified.

Influential institutions represented both private and public interests, but participation was limited and supported an overarching economic development agenda geared toward industry and big labor. Centralization on the private side was best encapsulated by the creation of the Allegheny Conference on Community Development (ACCD), a nonprofit that conducts planning for the region and bundles local projects to present to and negotiate with the state. On the public side were the mayor, the city council, the county executive, and the county council. Even as the partnership added

regional heavyweights such as Carnegie Mellon University and the University of Pittsburgh through Strategy 21 in the 1980s, participation was limited to those big players who would bolster the main agenda, which typically consisted of pursuing a mega-project or major company that could reverse the region's decline. Some big projects were successful and many others failed, but this business-political dynamic calcified after decades of practice, limiting the infiltration of new ideas or the type of bottom-up movements we found in other cities in the 1960s and 1970s.

The city's economic development strategies, as a reflection of its business interests, often overlooked center-city transportation. This became especially pronounced during the Interstate Highway build-out, as the power of state transportation departments grew with federal funding. That, combined with the fact that the City of Pittsburgh had little control over its own transit system, which was largely controlled by the county, justified an abdication of transportation planning in the city. Control over urban transportation was ceded to the county and state seats of government. The city soon found itself constantly fighting to fund its own plans. Any city-led effort required corporate backers. Mayor Tom Murphy negotiated the North Shore Connector with help from corporations: the Steelers football team, major developers, and other business interests all had a hand in the project. A system-wide approach to transportation that encompassed walking, biking, and transit continued to be viewed as secondary to the overall economic development concerns of big industry and big labor.

In the mid-2000s, though, new organizations surfaced to challenge the hold of big business (which was itself declining) and added new perspectives. Efforts starting in the 2000s to orient the city's economy toward education, health services, and finance started to draw populations back to Pittsburgh, including younger people. One of the earliest organizations on the scene was Bike Pittsburgh, which was incorporated in 2003. Perhaps because of its independence from the existing civic infrastructure, executive director Scott Bricker speculated, "no one knew what to do with us [the bicycle advocates]." The organization acted quickly on opportunities, as small as those ideas might have seemed at the time.

The organization fueled its budding mission with incremental change, starting with items that "other cities took care of thirty years ago," such as bike-rack installations. Because Pittsburgh has a robust network of off-street trails and comparatively low vehicular traffic, having deflated from a city of over 675,000 in 1950 to one of around 305,000 in 2010, cyclists were active in spite of the lack of on-street cycling facilities. Before the city had a bicycle master plan, Bike Pittsburgh published a bike map that literally put Pittsburgh's cycling agenda in front of City Hall and caught the attention of then-Mayor Luke Ravenstahl. Ravenstahl, who became mayor at twenty-six, shared the view that multimodal streets should be part of a city trying to reinvent itself as a tech and innovation hub. Mayor Ravenstahl's sustainable transportation initiatives were backed by then–city council member Bill Peduto (later elected mayor in 2013).

Once the cycling community discovered that it had political allies, it picked up significant momentum. Starting in 2007, advocates pressured the city to add more than fifty street miles of Class 2 and 3 bike lanes. Bike commuting in Pittsburgh has increased by 408 percent since 2000, and the city is currently eleventh in the U.S. for its share of bicycle commuters. As the cycling community grew, it became more technically attuned and could demand

The bicycle advocacy community's wins were simply one facet of the city's developing sustainable transportation agenda.

improvements of greater complexity. In 2013, the group crafted a "road shift" concept and worked with Pittsburgh's Department of Public Works to redesign Pocusset Street from a vehicular road into a bicycle/pedestrian way that could be maintained by the city.

The bicycle advocacy community's wins were simply one facet of the city's developing sustainable transportation agenda. A multitude of other organizations started to focus on public spaces, placemaking (a people-centered approach to creating public places), and street-reclamation projects, especially around 2008, when Pittsburgh most intensely felt the national recession. Their work reoriented perceptions about the city's transportation system, not necessarily entirely away from the all-encompassing transit funding crisis, but toward the idea that streets could be designed for people and that such treatments did not have to be expensive.

Reformers also built on existing assets in the city. As it did for cycling, the underlying fundamentals of the city's geography worked in the street reclaimers' favor. Pittsburgh is geographically compact, with numerous neighborhoods that are each a capsule of livability with sidewalks, local stores, and schools. It has a very high percentage of pedestrian commuters, at 11.4 percent in 2013. Every neighborhood has some kind of neighborhood association, and though they may not have contact with adjacent neighborhoods, there is strong pride of place and local identity.

With these assets, it is not surprising that numerous organizations, from the small, Garfield neighborhood–focused cityLAB to the Pittsburgh Downtown Partnership, found success in their micro-local experiments. CityLAB sponsored the Garfield Night Market, a street closure where local vendors created an evening shopping event, and the business-oriented Pittsburgh Downtown Partnership's Project Pop-Up took street space for lunchtime café tables and seating for its downtown constituents. It is no accident that this happened under the watch of Pittsburgh Downtown Partnership executive director Jeremy Waldrup. Waldrup joined the Pittsburgh Downtown Partnership in 2011 after working for New York City's Department of Small Business Services, which piloted pop-up programs for business improvement districts struggling to find ground-floor tenants.

Pittsburgh's civic organizations, having now demonstrated several tangible benefits of changing the city's transportation system, provided some additional muscle in the 2012 battle to find sustainable funding from the state for the region's troubled public transportation program. These organizations joined the established coalition consisting of the Allegheny Conference on Community Development and grassroots activist organizations such as Pittsburghers for Public Transit. The efforts of advocacy groups in the Pittsburgh area represented the only real, structured transit-advocacy effort in the state, but the overall coalition reflected Pittsburgh's historical pattern: it was a part of the larger Keystone Transportation Funding Coalition and largely industry-driven (Masciotra 2013).

Nonetheless, the accomplishment of securing long-term transportation funding for the region will undoubtedly alleviate long-standing concerns that have stood in the way of innovation. In 2015, we are seeing only the start of a challenge to the centralized and top-down method of urban change that has dominated Pittsburgh for decades. Recent political developments in the city, county, and state governments, as well as within the public transit agency, have created more alignment in progressive transportation than ever before.

Fresh Perspectives and Regional Alignment

Disparate and uncoordinated leadership efforts have historically weakened Pittsburgh's progress toward widespread transportation reform. The city serves as the county seat for Allegheny County, a county that includes 130 different municipalities, yet the urbanized area around Pittsburgh includes more than one county. Thus, priorities often clash. Efforts to annex and consolidate cities and municipalities over the years, due in large part to the demand for greater regionalism from the business and civic communities, were unsuccessful. Allegheny County took steps toward regionalism when it restructured and adopted a home-rule charter in 2000, placing the county under the leadership of an elected at-large county executive. While this model may have helped suburban residents feel more included in the decision-making processes of the county, for the most part it did little to help coordination between the City of Pittsburgh and the county. The area within county boundaries remains the focal point of mass transit under the management of the Port Authority of Allegheny County (PAT). These conflicting governance structures dilute the seat of power and, thus, control over transportation.

Fragmented local governance additionally made it difficult to overcome state regulations that, at times, negatively affected transit operations in the county. As the county experienced depopulation and a reduction in its tax base, a 1997 deregulation of utilities statewide whittled away real-estate taxes paid by utilities, a tax that made up the majority of dedicated funding for transit improvements. The Port Authority was forced to respond by raising fares, but the agency's purse continued to come up short throughout the 2000s.

An unlikely partner threw the first lifeline to revive the region's transportation system. Faced with declining funds and local DOTs clamoring for more road capacity, Allen Biehler, secretary of the Pennsylvania Department of Transportation from 2003 to 2011, updated the Transportation Improvement Program (TIP) to require better involvement from local governments and communities in transportation planning. The resulting Smart Transportation Program contextualizes road designs with land use in addition to offering guidance for increasing the coordination and involvement of partners at all levels: metropolitan planning organizations (MPOs), elected officials, counties, municipalities, legislators, the Federal Highway Administration, and the Department of Transportation. It also resulted in a design guidebook for engineers, developed in partnership with the New Jersey Department of Transportation. This type of collaboration was highly unusual among state DOTs and demonstrated Biehler's commitment to regional planning and integrating land-use and transportation practices. He and NJ DOT Commissioner Jack Lettiere knew that some of their most congested regions crossed jurisdictional boundaries and that no amount of additional road building could ameliorate their transportation problems.

Guidance alone has little effect on localities unless there are local champions, but Biehler added some strength to the program by creating a competitive funding program, the Pennsylvania Community Transportation Initiative, to incentivize coordination between regional authorities. The selection committee awarded MPOs funding for transportation projects that were land-use efficient and could demonstrate interagency participation, and the program ultimately generated more pedestrian, cycling, and multimodal

ALLEN BIEHLER, FORMER SECRETARY OF TRANSPORTATION, STATE OF PENNSYLVANIA.
ASSOCIATED PRESS.

transportation projects than a typical TIP in the state's history (State Smart Transportation Initiative 2011). In the Pittsburgh region, the Southwestern Pennsylvania Commission (SPC) received three separate grants for sidewalk, transit, and highway improvements. Nonetheless, in the absence of coordinated local leadership, the program only marginally affected the transportation landscape in Pittsburgh.

It was another state-level campaign that cast the first political shake-up in sharp relief. As the Pittsburgh region mobilized yet again to negotiate with the state capital of Harrisburg for transportation funding in 2012, this time it had an unlikely advocate in its county executive. Rich Fitzgerald had a vision for the region's transportation system as he entered office in 2010 but quickly grew frustrated with PAT's inability to respond to his directives for more real-time transit information, better way-finding, and other service improvements. PAT seemed to "resist" even looking into Fitzgerald's instructions, but in truth, after years of navigating budget and service cuts, PAT bristled at Fitzgerald's input regarding what it considered to be its day-to-day operations. Though PAT receives significant funding from the county, it has operated as a nominally independent agency since its inception.

In 2012, as PAT faced another potential 35 to 40 percent service cut in order to balance its budget and negotiations with the state stalled, Fitzgerald decided that the county executive was not going to sit it out, and he muscled his way into the discussion. He found additional county funding to bring to the table and invited the unions to start negotiating long before they thought they would have to enter the discussion. For the first time, the southwest region's coalition for more transportation funding had an elected official join in the fight, one who was politically savvy and knew how to appeal directly to state legislators.

Fitzgerald did not limit his involvement to the crisis. With transportation funding secure, he immediately redefined the PAT Board of Directors' bylaws so that he could appoint four new directors and acted quickly to remove the general manager, whom he viewed as an obstacle to improving the region's transit system. General manager Steve Bland was not incompetent; in fact, under his leadership, PAT received the Organization of the Year award from Bike Pittsburgh for the addition of bike racks to buses. Unsteady negotiations with state legislators and the agency's refrain about prioritizing a cut of 35 percent in transit service, however, left him vulnerable to Fitzgerald's ambitions. As Jack Brooks, former chairman of the PAT Board, said after the 5–3 vote to remove Bland, "What did he do? He didn't do anything wrong. The problem with Bland is [that] he's an administrator, not a politician." To all involved, though Bland did nothing wrong, it was Fitzgerald who was instrumental in getting the deal with the state done.

A different form of politics is taking root in Pittsburgh as new, progressive candidates challenge the longstanding political machine, one that mirrors the political turnover that Portland, Oregon, experienced in the early 1970s. It started in 2009 for Pittsburgh, when then-twenty-nine-year-old Natalia Rudiak ran for a seat on City Council to represent what she described as "one of the most socially conservative districts" in the city (Meyerson 2014). She won. In 2013, Bill Peduto—a progressive who served for nineteen years on City Council, a self-proclaimed urbanist, and an early supporter of Bike Pittsburgh—won the mayoral election. On the same ballot, a few other seats on City Council faced progressive challengers. This de facto progressive caucus happened to come together with the

help of seasoned political operatives who were fresh off John Kerry's presidential campaign in 2004, eager to apply their polling savvy and data analytics to a progressive cause. (Meyerson 2014)

Not only has a new crop of candidates now replaced incumbents, a new type of government partnership has formed. Peduto and Fitzgerald have a close working relationship, developed from organizing the first City Council/County Council Summit years ago, when both served on their respective councils. They supported each other's campaigns for mayor and county executive. And within eighteen months since Peduto's election, they addressed more transportation issues than had been addressed in the previous five years. Fitzgerald led a forty-person delegation to Cleveland to study the BRT HealthLine (a trip funded by the Rockefeller Foundation). Fitzgerald and Peduto visited Copenhagen (with Bricker, head of Bike Pittsburgh, and funded by PeopleForBikes, a foundation) to experience a cycling city firsthand. Fitzgerald's announcement of the opening of bike lanes on three Pittsburgh bridges (maintained by the county) was complemented by Peduto's announcement of his plan to add more than five miles of bike lanes in two years. Pittsburgh plans to launch a bike-sharing program in 2015. This partnership bodes well for a city that had for so many decades been disjointed in its governance. "Having them working hand-in-hand on transportation improvements is the only way to be successful," says Jeremy Waldrup, executive director of the Pittsburgh Downtown Partnership.

Peduto and Fitzgerald know that these improvements are possible only with the active support of the burgeoning class of civic organizations. Both are open about reforming political practices, of turning the "top-down on its head" and making room for citizen-led approaches. Peduto noted on a radio interview that Bike Pittsburgh now has more members than any single Democratic Party organization in the city. (He won without any endorsements from major Democratic Party backers, though he ran on the Democratic ticket.) Because the mayor's office had developed a reputation for nepotism, he welcomed anyone who wanted to serve on his transition committees and then turned over the appointments to foundations and recruiting firms. He has created the city's first Bureau of Neighborhood Empowerment, though its impact has yet to be proven.

BIKE PITTSBURGH HAS MORE MEMBERS THAN ANY SINGLE DEMOCRATIC PARTY ORGANIZATION IN THE CITY.

Champions in the Institutions

Though the mayor and county executive are seasoned political operatives with ambitious agendas, they are bringing in new, nonpolitical staff to carry out their transportation agenda. They will be aided by planning

director Ray Gastil, who grew up in Seattle, served as Manhattan's planning director from 2005 to 2009, and was the founding director of the Van Alen Institute, an architecture and urbanism civic organization based in New York. The city's bicycle and pedestrian coordinator is Kristen Saunders, who worked with Jan Gehl Architects in San Francisco. Gehl was instrumental in Denmark's transformation from a car and parking city to a cycling city starting in the mid-1960s. Peduto also installed a new sustainability director, Grant Ervin. And in 2014, Scott Bricker from Bike Pittsburgh was appointed to the Southwestern Pennsylvania Commission, the region's MPO, to serve as a Pittsburgh representative.

Though the practices that continue to guide the work of most city and state employees have not yet changed, there is at least the Smart Transportation Guidebook at the state level, which proposes a more progressive framework.

New Policies Reinforce Gains

With a growing, engaged civic community disconnected from big business interests but still committed to regional revitalization, a new political partnership free from past strictures, and several new state policies already in place, the future of sustainable urban transportation is bright for Pittsburgh. Because the changes are so new, it is too soon to wonder about durability.

Four major pieces of policy—two created years ago—will be critical tools for Pittsburgh's new leaders. The first new policy is, of course, state-level funding for transit over the next several years. This offers a level of stability and removes the possibility of more service cuts to the transit system, allowing Pittsburgh to advance on other fronts. The importance of the urban interests of Pittsburgh and Philadelphia being in alignment to an otherwise rural state is essential for transit to be taken seriously in the state capital.

The second is the state DOT competitive fund that rewards regional coordination in land-use and transportation planning. With local champions who can now utilize this tool to its highest potential, Pittsburgh may reap more benefits from the Smart Transportation Program. The Commonwealth of Pennsylvania provides a healthy if rare example of a state government transportation department pursuing pro-urban policies.

Third, the Pittsburgh Development Fund established by former Mayor Tom Murphy in the mid-1990s, a revolving loan program that helps seed capital investment in the city, could ease the way for more innovation. This fund already helped Pittsburgh launch several revitalization projects before there was the strong alignment in government that exists today.

Finally, in early 2015, Pittsburgh announced that it adopted a complete street policy. Our analysis has clearly shown that the mere adoption of policy is insufficient to guarantee implementation, but with the engagement of a growing civic group, new leadership at the city transportation department, and reform-minded agency staff joining the commitment, Pittsburgh has bettered the odds that it will achieve its ambitions.

From symbolism to implementation

4 Chicago

In less than four years, Chicago has catapulted from a city making iterative progress in transportation to one that has captured national attention. Between 2011 and 2013, Chicago added forty-two miles of protected or buffered bike lanes to its network, launched the second-largest bike-share system in the nation, established a zero-fatality policy, opened over 600 data sets, and is poised to invest heavily in grade-separated bus rapid transit. For two decades under Mayor Richard M. Daley, the city made gains in some visible aspects of its livability and sustainability agenda such as green roofs and selected parks. Yet the Chicago Department of Transportation (CDOT), an agency he established, was not able to make innovative leaps forward in transportation until he left office. Though Mayor Daley made some major symbolic changes, he lost momentum when reform efforts had to confront challenges stemming from internal agency culture and practices, among the most difficult challenges there are. Sustainable transportation goals have been on the advocacy and agency agenda for years, but they received a significant boost by outsider leadership planted at CDOT. Commissioner Gabe Klein implemented a clear vision and was empowered to take risks by Mayor Rahm Emanuel, the first incoming mayor in twenty-two years.

CHICAGO DOWNTOWN.
STEVE TULK/FLICKR.

Recent Alignment in Civic Priorities

Chicago has a robust civic sector of both businesses and advocates engaged in transportation, but their priorities were originally different from each other. After initial gains by bicycle advocates early in Daley's tenure, business interests gained greater influence in defining transportation priorities by the time he left office. Bicycle advocates, however, never stopped applying pressure. When Daley left office, these advocates seized the opportunity to shape the agenda of Rahm Emanuel, Daley's successor.

Chicago has a long history of civic organizations interested in urban development. For more than 100 years, Chicago's business community has promoted the city not only as the crossroads of America, but as a global capital. To shape Chicago into a "Paris on the Prairie" and accommodate rapid population growth, the Commercial Club of Chicago commissioned the Plan of Chicago in 1909, better known as the Burnham Plan. From the plan came eighty-six successful bond initiatives for new boulevards, a new waterfront, and world-class museums and parks that set the tone for future plans and initiatives: grand and ambitious.

In 1934, as the Great Depression brought the Burnham Plan to a halt, the Metropolitan Planning Council (MPC) was established as a non-governmental entity to address the city's housing needs and carry out the plan's vision. It grew to become an influential

As Chrissy Nichols, Metropolitan Planning Council's Director of Research, describes it, "We need to be two steps ahead of government . . . with ideas that are realistic and palatable."

civic organization dedicated to planning, occupying the role of a regional liaison that convened and coordinated seven counties around housing and transportation issues.

The collapse of Chicago's industrial base in the late twentieth century changed the direction of Chicago's carefully drawn plans and created a new need for Chicago's civic organizations. Mayor Harold Washington viewed empowering neighborhoods as a way to lift Chicago's economic fortunes, and he helped to start a number of small community groups that coalesced around neighborhood transportation issues. Two of these were the Center for Neighborhood Technology (CNT), founded in 1978, and the Chicagoland Bicycle Federation, founded in 1985.

With the Federation leading on grassroots bicycle advocacy and CNT supporting it with knowledge applied to timely issues in order to influence policy, advocates netted early wins with Daley. These included the creation of the Mayor's Bicycle Advisory Committee (MBAC), the Mayor's Bicycle Ambassadors program, Chicago's first bike plan in 1992, and the installation of thousands of bicycle racks. These progressive initiatives solidified the relationship between Daley's MBAC and advocates, which Luann Hamilton, a twenty-seven-year veteran of CDOT, described as "close and collaborative," and bought Daley support from bicycle advocates for the rest of his tenure.

Meanwhile, in response to the effects of deindustrialization that had started in the 1970s, the business community had a growing ambition to make Chicago globally competitive, but its focus was on large transportation investments. In 1999, the Commercial Club created Metropolis 2020, a consulting, research, and advocacy organization that lobbied successfully for the expansion of O'Hare International Airport and won Mayor Daley's support for a downtown circulator, elevated train extensions to the region's airports and improved rail freight connections – all perceived as economic imperatives more important than transportation reform.

As the business community's priorities took center stage during the early 2000s, bicycle and public transit advocates began to shift their approach. With the creation of a strong public sector metropolitan planning organization (CMAP) in 2005, the Metropolitan Planning Council shifted its focus to proposing ambitious ideas for the Chicago region. As Chrissy Nichols, MPC's Director of Research, describes it, "We need to be two steps ahead of government . . . with ideas that are realistic and palatable." The Chicagoland Bicycle Federation has expanded beyond bicycle advocacy to include walking and transit, rebranding itself as the Active Transportation Alliance (ATA), and began providing consulting services to CDOT on its bicycle programs.

Throughout the 2000s, advocacy organizations continued to lay the groundwork and build broad support for future transportation initiatives. One such proposal, MPC's 100- mile, ten-route bus rapid transit (BRT) plan was informed and justified by CNT's housing and transportation affordability index and was championed by the ATA. In 2008, the plan gained widespread support from the Chicago Transit Authority, the Chicago Department of Transportation, and the U.S. Department of Transportation but lacked the necessary support from the Daley administration to implement it.

When Daley announced his intention not to campaign for another term in 2011, advocates seized the opportunity to shape the incoming administration's transportation agenda. Before the election, the MPC, ATA, CNT, and six other environmental and transportation organizations jointly developed the Sustainable Transportation Platform, building

IT TOOK FOURTEEN YEARS TO DRAFT A SUCCESSOR TO THE 1992 BIKE PLAN. STEVE VANCE/ FLICKR.

on years of advocacy with various communities in the region. Ron Burke, the ATA's executive director, said the platform told the future mayor and the city, "This is what you should shoot for, now go do it." In response, Mayor-elect Emanuel placed many reformers on his transportation transition team and adopted the bicycle, BRT, and transit-oriented development recommendations for his Transition 2011 plan, which ultimately informed the official Chicago Fast Forward plan.

New Leadership Relinquishes Old Ways

Daley viewed Chicago as a global city, and he prioritized transportation initiatives designed to raise the city's global profile or ones that were politically expedient, as demonstrated by his administration's lack of resolve on many of his ambitious proposals.

As mayor, his leadership on transit was focused on a few large projects, which is not surprising for a city with an aging rail system. In office when the system hit its lowest ridership in 1992, Daley focused on the rehabilitation of Chicago's elevated lines. He concentrated on creating better connections between the region's airports and improving circulation in the Loop, goals closely aligned with the business community's priorities and directly supporting his efforts to bring the 2016 Olympics to Chicago as well as his 2005 Climate Action Plan.

The mayor and the department were initially progressive on bicycling, yet his leadership on the issue waned. He created the Mayor's Bicycle Advisory Committee, the Mayor's Bike Ambassadors program, and launched Chicago's first bike plan three years into his tenure. Daley reorganized the public works department in 1991 and created the Chicago Department of Transportation (CDOT) to manage the city's streets. During his first two terms, his administration and CDOT were aggressive at obtaining newly created federal Congestion Mitigation and Air Quality Improvement (CMAQ) Program funding for bike parking, painted over 100 miles of lanes, and advocated for the Bloomingdale trail. This work bought him goodwill with bicycle advocates that lasted his entire administration, somewhat paradoxically despite what seemed to be the Mayor's waning interest in actual implementation.

In Daley's second decade in City Hall, after gaining the support of the biking community, his administration seemed to rest on its laurels and bike infrastructure and policy fell as a priority. The Bloomingdale trail proposed by CDOT in 1997 was never realized, and CDOT's budget for bike infrastructure remained minimal under his administration. It took fourteen years to draft a successor to the 1992 bike plan. And after requesting proposals in 2007 for what would've have been the nation's first bike-share program, his administration never followed through with the idea, even as programs launched in other cities such as Minneapolis and Washington, D.C.

CHICAGO MAYOR RAHM EMMANUEL'S TRANSITION TEAM INCLUDED SEVERAL PROGRESSIVE TRANSPORTATION ADVOCATES.
CORBIS.

REBEKAH SCHEINFELD WAS NAMED TO SUCCEED GABE KLEIN AS HEAD OF THE CDOT.
CDOT/FLICKR.

As ethics scandals roiled the later years of the Daley administration, the mayor moved his CDOT commissioners to other agencies, leaving the department without a consistent leader. From 2005 to 2011, there were five different CDOT commissioners. Miguel d'Escoto, a close Daley aide and commissioner from 2001 to 2005, was forced to resign over a federal investigation into his department. D'Escoto was followed by a series of interim and deputy commissioners who appeared uninterested in transportation and lacked the management skills to operate an agency.

More recently, it appears that Mayor Rahm Emanuel shares Daley's vision of Chicago as a global city competing for global talent, but unlike Daley, has committed to following through with a more holistic and detailed rethinking of the city's streetscape as key to achieving that goal. Emanuel expressed his belief that these improvements could attract global talent, stating "I expect not only to take all of their [Seattle and Portland's] bikers but I also want all the jobs that come with this, all the economic growth that comes with this, all the opportunities of the future that come with this."

Emanuel's inclusion of many progressive advocates on his transition team, his adoption of many elements of their 2011 platform, and his choice for transportation commissioner empowered the advocacy community. During his time as chief of staff in the Obama administration, Emanuel met Gabe Klein, the Washington, D.C., Department of Transportation commissioner and former CEO of Zipcar who had demonstrated a passion for reform and sustainable transportation. After his election, at the recommendation of reform advocates, Mayor Emanuel brought Klein onto his transition staff to aid the development of the Chicago 2011 Transition Plan. Soon after, Klein was named to lead CDOT.

Klein was given the task of getting the Chicago 2011 Transition Plan off the ground and, in comparison to past commissioners, was given a long leash. Emanuel was outcomes-focused and wanted quick wins to add to his record. To achieve these wins, agency staff were encouraged to take risks and utilize pilot projects to implement changes quickly.

Similar to his predecessors, Klein didn't serve long, staying only two years. Yet in contrast to past commissioners, Klein's tenure was planned to be brief from the beginning. Empowered by the mayor and supported by an engaged civic sector prepared for this policy window, Chicago's innovation was rapid and impressive.

Institutional Change

Since its creation in 1991 by Daley, CDOT was an agency that rarely had the leadership or guidance to pursue change on the street. Plagued by corruption and other political scandals and without a leader to articulate a vision and empower the staff, what little reform the agency could accomplish happened in a piecemeal manner.

As Rob Sadowsky, the executive director of the ATA from 2004 to 2010, said to the *Chicago Sun-Times* in 2010, "Things have been happening in other cities, like Minneapolis and New York, that really made strides we're not even coming close to. Part of that is a strong presence from the Department of Transportation's commissioner level and strong backing from the mayor. We're kind of lacking that in the city right now."

In a city with a rich history of ambitious plans, CDOT was noticeably lacking one. In its twenty years of existence under Daley, CDOT had never drafted or implemented a comprehensive plan. Even CDOT's vision statement, drafted at its

Advocates, staff, and leadership coalescing under a mayoral mandate led to rapid innovation at CDOT and in Chicago.

creation, was not made public until 2011. Although it had a bike plan, a complete-streets policy, and street design guidelines, it lacked a unifying document. Furthermore, without a strong DOT commissioner who was given a mandate to pursue reform, agency staff would have little reason to risk doing things differently.

The election of Emanuel and the installation of Gabe Klein empowered reformers within the department. Klein's appointment was short by design, and he was charged with getting many projects off the ground. First, Klein quickly created a clear, comprehensive plan unifying the department's work that served as a mandate for the department. Klein described the 2011 Chicago Fast Forward plan as ". . . a plan for [CDOT]. This is more of an internal document, but we want to make it public, so people know what we're working on." It created a new mission statement for CDOT and committed the agency to the goals set out in the Chicago 2011 Transition Plan, many of which came from the ATA's transportation platform. These benchmarks included 100 miles of protected bike lanes, the Divvy bike-share system, and bus rapid transit.

Part of this success came from framing these actions in terms of safety. Chicago enacted a zero-pedestrian-fatality plan (three years before New York City Mayor de Blasio embraced Vision Zero) and called for the department to act with urgency.

Although reform-minded CDOT staff had struggled without strong leadership, many were prepared when Gabe Klein took office. Under the previous commissioner, the fully funded Stony Island protected bike lane was scheduled to be completed in three years. After Klein's appointment, staff opened the similar Kinzie Street protected bike lane within weeks. This new leadership quickly made an impact by empowering the staff and signaling that there was a new CDOT in charge.

Durability

The durability of these innovations is not secured, but the hiring of Rebekah Scheinfeld to succeed Gabe Klein is a strong start. The appointment of Scheinfeld, the planner behind the Ashland Avenue BRT project at CDOT and the Chicago Transit Authority, signals Emanuel's commitment to that project. Although some key staffers have left—deputy commissioner Scott Kubly was chosen to head Seattle's DOT—many other long-term staffers like Luann Hamilton, the deputy commissioner of project development, have stayed.

Under Klein, CDOT committed to publicly releasing annual updates of the Chicago Fast Forward plan to measure how the department is meeting its goals. The first update in 2013 showed the department far exceeding some and falling short on others. Klein reflected on the influence of Chicago Fast Forward, saying, "Publish a plan, even if people don't read it, because it instills confidence in people that it's been thought about and it shows transparency." Longtime CDOT director Luann Hamilton attributes recent success in Chicago to having the "right resources at the right time." Advocates, staff, and leadership coalescing under a mayoral mandate led to rapid innovation at CDOT and in Chicago.

In 2015, Emanuel faced his first reelection campaign and narrowly won. While his polling numbers were low and he faced a competitive election, transportation has not become a polarizing issue of the campaign, a testament to the popularity of the programs. In fact he made a point of campaigning at El stations. With his win, Chicago's civic advocates and reformists have another few years to ensure that the Mayor and CDOT build on the momentum already underway. This time, with new leadership at CDOT, the chances of overcoming the challenges of internal practices are even greater.

Big capital commitment to transit and road mega-projects is followed by finer-grained street redesign.

5 Denver

Over the last fifteen years, downtown Denver and the region as a whole have seen dramatic changes in transportation behavior and land use. The first phase of change occurred in the 1980s and 90s, when the Denver region faced growth-management and congestion challenges. Regional mayors and businesses banded together to build a new culture of collaborative problem solving, creating new institutions like a Metro Mayors Caucus and a regional economic development corporation to address those problems. Significantly, in the 1990s and early 2000s, they forged consensus that regional transit—and land use that supported transit—was essential to Greater Denver and succeeded in multiple campaigns to raise funding for transit. Unlike our examples from New York, Portland, Chicago, Pittsburgh, and elsewhere, transportation reformers in Denver had to reach an accommodation with road interests in order to attract widespread regional support for a multimodal transportation package that included a significant expansion of highways. This singular infusion of significant capital from one big ballot measure on one election day is also of a different character than the more incremental approaches we saw elsewhere. Also in contrast to those other case studies, the Denver example involved the engagement of suburban officials, not only those of the core city.

With transit and land-use improvements underway as a result of that single ballot measure, the city of Denver only more recently turned toward active transportation on city streets, this time advanced by a different coalition of Denver civic leaders, elected champions, and agency staff than the coalition that had championed the transit and road mega-projects. Spurred on by the success of a temporary bike-share system opened for the 2008 Democratic National Convention, Denver Mayor John Hickenlooper and many civic leaders worked to establish a citywide bike-share program. The city followed through by making important staff hires that advanced safer biking infrastructure, while grassroots advocates gained enough strength to keep active transportation on the city's agenda even after a change in the mayoral administration. Today more than half of downtown Denver employees get to work via transit, biking, or walking—a remarkable change for a place that two decades ago was a quintessential western U.S. auto-oriented conurbation.

DENVER BUS.
IAN FREIMUTH/FLICKR.

FasTracks: Regional Business and Politicians Come Together

Denver is known for having one of the most collaborative regional politics in the country. But it wasn't always that way. As Bruce Katz and Jennifer Bradley write in *Metropolitan Revolution*, city-suburb relations

The Denver example involved the engagement of suburban officials, not only those of the core city.

reached a low point during the "annexation battles" of the 1960s and 70s. At the time, Denver was engaged in the active annexation of unincorporated territory at its borders in order to grow its commercial tax base and add white families to its school system. Many suburban residents resisted, first by incorporating into new jurisdictions, and then by proposing and passing the so-called Poundstone Amendment, a state constitutional amendment that severely limited Denver's ability to annex land. The overall effect of this era was pronounced fragmentation in the region.

But starting in the 1980s, when the region's economy was suffering from the effects of an energy bust and a nationwide recession, Denver-area business leaders and politicians began a concerted effort to knit the region back together. In contrast to established forms of regionalism in Minneapolis-St Paul and Portland which were constituted entirely by government, regionalism Denver-style originated in the private sector. Business leaders created a new institution, the Greater Denver Corporation (later renamed the Metro Denver Economic Development Corporation) and set explicit goals of stopping conflicts between local economic development offices and positioning the region to compete globally. Complementing the business elite's efforts, Greater Denver–area politicians created another institution, a Metro Mayors Caucus, in 1993. The caucus, which has grown to include forty members, has no formal power but is an influential political force because it is not only a forum for discussion but regularly takes positions on issues. The caucus makes all decisions by consensus, allowing the region to speak with one voice on critical state issues.

Both the Metro Mayors Caucus and business leaders came to a consensus early on that an expanded transit network was key to the region's growth and that increases in revenue to pay for such a network were justifiable. This added substantial weight to what had been an often quixotic effort by the Denver Regional Transportation District (RTD) to build fixed-route transit. RTD had been advocating for a regional transit network since 1970 but had managed to scrape together funding for just one light rail line, which opened in 1994.

The Metro Mayors Caucus took up this cause as well. Its first effort was to back RTD's 1997 Guide the Ride initiative, which would have raised a regional sales tax by 0.4 percent to pay for transit expansion. The initiative, however, failed at the polls. Many observers blamed fundamental tactical errors or lack of confidence in existing institutions; it was unclear what RTD would spend the new money on or why it chose the investment corridors it did. Another factor was a strong distrust of the agency, in large part because its elected board of directors comprised a dysfunctional mix of "cranks, transit activists and semi-retired politicians," in the words of a local journalist. Not helping matters, RTD's board chair, Jon Caldara, was an outspoken opponent of rail and campaigned against the Guide the Ride initiative.

In response to public distrust of RTD, mayors and businesses supported a new civic organization called the Transit Alliance, which advocated for new transit and bolstered public support by cultivating civic leaders supportive of transit expansion, several of whom went on to win election to the RTD board over anti-rail incumbents.

The combination of mayoral, business, and Transit Alliance support turned the tide for rail in Denver. Voters approved new bonds for the Southeast Rail Line in 1999 and in 2004 passed a regional sales tax increase for FasTracks, a program of seven rail lines and an overhaul of Denver Union Station to be

DENVER UNION STATION.
GETTY IMAGES.

Denver is known for having one of the most collaborative regional politics in the country.

completed by 2017. FasTracks was approved by voters despite opposition from Governor Bill Owens and state Republicans, who had called for what they considered a "more balanced" approach that combined highway widening with fewer new transit lines.

Mayors were willing to pair transit expansion with road spending if doing so seemed necessary to win over voters, especially in the more road-oriented suburbs. In 1999, the Metro Mayors Caucus and the Transit Alliance campaigned not only for the light rail measure, but also for a ballot measure that widened a parallel highway. In 2009, they supported a state law that raised car fees to fund bridge repair, local roads, and transit. As of 2015, the caucus is backing a proposal for a statewide tax dedicated to both roads and transit, known as MPACT64.

This regional consensus for transit has held together even during difficult times. In 2008, it became clear that FasTracks was running into problems: the sales tax was bringing in less than forecasted, projects were hitting cost overruns, and the program could not be completed on time without additional revenue. Two years of bad headlines followed, but regional support for transit did not wane. The Metro Mayors Caucus rejected an RTD proposal to shorten planned lines in order to save money and instead announced it would support new efforts to raise revenue for transit. (Subsequent polls have shown lukewarm public support for a new regional tax despite high approval of FasTracks. The caucus has delayed mounting a campaign and instead supported the measures described above.)

The region's mayors have also been steadfast in their support for transit-supportive land use, which is consistent with Denver's culture. Growth management and preservation of open space have been priorities of governors and citizens since the 1960s. But the general desire has yielded limited results. While there is a cultural appetite for smart growth, Coloradans have a libertarian streak that tends to prioritize a small government role, especially regarding so-called property rights. The result

has been voluntary regional agreements, such as a nonbinding growth boundary established by Denver-area municipalities. State laws enable, but do not require, localities to plan and manage growth. Suburbs in the Denver region also began experimenting with New Urbanism in the 1990s, relatively early in the movement's history.

In the years prior to the passage of FasTracks, Denver made a significant decision to adopt new zoning to allow higher-density, mixed-use development around transit stations. FasTracks was always described as both a transit and land-use program, and this has been backed up by policy. In 2006, the city developed an overall transit-oriented development (TOD) strategic plan and began developing several station-area plans. RTD began publishing annual TOD Status Reports in 2005. The region's metropolitan planning organization, the Denver Regional Council of Governments, maintains a database of TOD developments.

In 2010, the city finished a complete overhaul of its zoning code, replacing a 1950s standard with a form-based code that has made mixed-use development "simpler, less contentious, and cheaper," according to the Denver Business Journal. These policies have had a clear effect: population density in Denver grew from 3,050 people per square mile in 1990 to 3,922 in 2010.

In recent years, transit advocacy has moved beyond a simple pro-transit message and now encompasses broader issues of community leadership, environmental justice, and equity. The Transit Alliance, which was originally created to support the FasTracks plan, has taken on a new role of educating community leaders about transit. In 2010, local and national foundations created Mile High Connects, a partnership of public, private, and nonprofit organizations that works to increase access to housing, jobs, schools, and services via public transit and provides financing instruments for TOD.

Civic Urbanism Grows in Downtown Denver

Colorado has long been known as a hotbed for biking, hiking, and other outdoor pursuits, and the Denver region was already well known for an extensive trail network. But this interest in biking as recreation did not translate into biking and walking as everyday transportation. Denver's most successful bike advocacy group, BikeDenver, was created in 2001 but struggled to make headway despite an ambitious city bicycle plan. The city had a Mayor's Bicycle Advisory Committee, but former committee chair John Hayden says that when he first started attending meetings, "there was little interest from anyone other than hard-core bicycle advocates" and the meetings "had a distinctly fatalistic view of bicycling in Denver." In 2005, the League of American Bicyclists, which had named Denver a Silver Bike-Friendly Community, downgraded the city's rating to bronze, citing Denver's failure to fulfill promises made in the 2001 bicycle plan.

From there, Denver made significant strides to improve biking and walking, spurred on by advocates and champions within government. Business organizations again played an early role, recognizing that the regional transit build-out approved in 2004 could be transformational. In 2005, the Downtown Denver Partnership convinced the city to cooperate to develop a Downtown Area Plan. The plan, released in 2007, served as a full-throated call for urbanism. "The development of both FasTracks and a complementary local transit system will make transit-based living possible in Downtown," the plan says. It called for downtown Denver to build around Union Station and Civic Center

2008 CONVENTIONEERS MAKE USE OF FREEWHEELIN BIKE SHARE PROGRAM. GETTY IMAGES.

Active transportation has stayed on the city's agenda in part because grassroots advocates have continued to grow in strength.

Station, the creation of a free-fare zone downtown, expanded bus connections to adjacent neighborhoods, designation of the downtown area as a "pedestrian priority zone," conversion of one-way streets to two-way, and accommodation of bicycles on all downtown streets.

Denver was then selected to host the 2008 Democratic National Convention, creating an opportunity to put these recommendations into practice. In the run-up to the convention, Hickenlooper challenged advocates and civic leaders to make the DNC the greenest convention in history. One of the resulting initiatives was a temporary bike-sharing program, Freewheelin, created by the health insurance company Humana and the bicycle-focused philanthropy Bikes Belong (now called PeopleForBikes).

Freewheelin was used over 5,500 times during the four-day convention, becoming an eye-opener for many. According to Piep van Heuven, who at the time was a Bikes Belong volunteer manager, "the project was so visible" and changed bike sharing from a "wacky idea" into a success story that "stamped Denver as a bike-friendly place."

Advocates described Freewheelin as an eye-opener for Mayor Hickenlooper as well. Before the system opened, he told advocates that Denver should aim for 10 percent of commuting trips to be by bike by 2018. After the convention, Hickenlooper told his staff he wanted Denver to be the first U.S. municipality with a citywide bike-share system and enlisted his sustainability office to advance the project. The Convention Host Committee donated one million dollars toward a permanent bike-share system. Parry Burnap, who had led the convention's Greening Initiative, was hired to lead Denver Bike Sharing, a nonprofit created to roll out and manage that system.

Biking and walking became a higher priority in city departments as well. The public works department hired a senior city planner dedicated solely to bicycle and pedestrian projects, Emily Snyder. Both advocates and the media have called her a "driving force" for biking in the city. "She brought passion and an ability to create new relationships" both with external advocates and other city staffers, said Aylene McCallum of the Downtown Denver Partnership.

Grassroots and business advocates were also becoming more powerful. After the convention, Piep van Heuven was hired as BikeDenver's first professional executive director. In 2009, the Partnership organized a fact-finding trip to New York City for advocates and city staffers, including Emily Snyder and traffic engineer Justin Schmitz. After returning from that trip, Denver staff designed the city's first buffered bike lane on Champa Street, which opened in 2010.

B-Cycle launched in 2010 with 500 bikes, making it the largest municipal bike-sharing program in the country at the time. Later that year, Hickenlooper was elected governor of Colorado. Michael Hancock, a Denver City Council member, succeeded him as mayor. Under Hancock, the public works department has built on the progress made under Hickenlooper, proposing and building bolder street designs.

Transit and bicycle advocates say that the sense of urgency present during the Hickenlooper administration was not initially present under Hancock. In response, they cultivated members of the city council. "We asked ourselves: How do we fund a bike project in every council district? The city council's now asking the questions [BikeDenver] used to ask" in budget hearings and public meetings, van Heuven said.

Active transportation has stayed on the city's agenda in part because grassroots advocates have continued

to grow in strength. BikeDenver now has over 500 dues-paying members, compared to fewer than 100 in 2008. The city now has a pedestrian advocacy group, WalkDenver, which was founded in 2011 and convinced the city to create a Mayor's Pedestrian Advisory Committee in 2014. The region also boasts popular livable streets and urbanism blogs like *DenverUrbanism* and DenverInfill.

In 2011, the city adopted the Denver Moves strategic plan, which set even more ambitious goals than the 2008 plan, including reaching a bicycle commute share of 15 percent and putting every household within a quarter-mile of a "high ease-of-use" route. It called for striped bike lanes on more than a dozen downtown streets. A 2014 plan update (which has not yet been adopted) would replace nearly all of them with physically protected lanes. Planners have also proposed cycle tracks and bus-only lanes in neighborhoods outside downtown.

Change is happening on the street, too. The city opened its first protected bike lane in May 2014, on 15th Street. Pressure from BikeDenver and other advocates helped convince the public works department to make the lane physically separated, after the initial design called for a buffered lane. Mayor Hancock took the inaugural ride down the lane and celebrated the lane—as well as public transit, transit-oriented development, and the bike-share program—in his 2014 State of the City address.

DENVER LIGHT RAIL.
CORBIS.

Durability

Denver is still an emerging region when it comes to transit and people-oriented streets. For one, local mayors have often proved willing to accept or even demand new road spending as a necessary political trade for transit revenue. To the extent that this money goes to widen highways, it could be counterproductive for the region. Furthermore, the city of Denver has not yet experienced a "bikelash" of media and public criticism of sustainable-streets infrastructure. As the city adds to its one protected bike lane and does more to reconfigure street space, public backlash could surpass anything officials have dealt with so far. That would be an important political test for both civic and elected leaders.

That said, Denver leaders have already overcome several potential hurdles that could have knocked the region off its path toward transportation sustainability. Both urban and suburban mayors have been steadfast in their support of the FasTracks vision for regional transit, even when the program faced a crisis in 2009. Mayoral support for sustainable streets in Denver has also survived the change in administration from Hickenlooper to Hancock. The public works staff remains empowered, incorporating ambitious biking infrastructure into neighborhood plans and embracing more dramatic mode-share targets.

The rollout of new projects and policies, combined with a strengthening civic sector, will help keep Denver on the path. Four new rail lines are scheduled to open in 2016, connecting large swathes of the region to downtown Denver via transit. The Denver rezoning and regional TOD policy will make it easier for walkable and transit-friendly development to continue throughout the region. Denver's biking and walking advocates have professionalized and grown in their influence, and business interests have embraced urbanism. Transit advocacy is growing to include issues of affordable housing near rail stations, social equity, and community engagement. The accomplishments of Denver's past transportation leaders—and the continued commitment of its current ones—have positioned the region well for future transportation innovation.


NINE MILE
27
106
RTD
FARE
PAID
ZONE


Major rail projects completed but potential impact muted by lack of systemic reform.

6

Charlotte

Like many of our other case studies, Charlotte's interest in urban development stems from the pursuit of economic growth by both government and business interests and their desire to transform the city from a crossroads for rural trade into a global financial marketplace. In its pursuit of sustainable transportation, the city itself seems to be at a crossroads when we analyze it through our theory of change.

Charlotte stands out because its highly visible rail projects have not been matched with systemic reforms to the streetscape. The attention it garnered for its municipal leadership and initiatives to improve public transportation and infrastructure is well-deserved, but stands in contrast to most of the local stakeholder interviews that describe a human-scale transportation movement still emerging. Although it has invested in multiple transportation modes, comprehensive reform has yet to surface. This may be a result of the relative newness of Charlotte's civic advocates, many of whom are in stark contrast to Charlotte's longest-standing advocates, its corporations. It is still too early to tell how much influence the fledgling civic groups "will have over the corporate giants. As one of the ten fastest-growing regions in the country in terms of population and per capita income in the last twenty years, Charlotte's success feeds its ambitions while it simultaneously attracts a new class of professionals that could fuel a wholly different form of advocacy and civic engagement.

Business-Based Civic Leadership

Similar to the situation in many other cities across the United States, Charlotte's civic environment has been historically dominated by corporations. In this case banks were the primary drivers of the city's economy. Over the last thirty years, these global corporate entities wanted to attract global labor and thus "needed to feel that they were in a headquarters city." They have tended to support big infrastructure projects, though in Charlotte, they did place quality-of-life issues and public transportation high on their list of city must-haves (Smith and Graves 2005).

Unlike other case study cities, the business elite did not initially form an independent organization that conducted urban planning studies on behalf of their interests. For decades, there was no Regional Plan Association or Metropolitan Planning Council or Allegheny Conference on Community Development as there is in New York or Chicago or Pittsburgh; the business elite in Charlotte simply met individually or through the Chamber of Commerce. A non-governmental, non-private, regionally oriented civic organization still does not exist in Charlotte, leaving a vacuum of civic leadership that is balanced, regional and mode agnostic in outlook. Perhaps worse, the strong role of corporations limits opportunities for community-based groups to lodge any input about neighborhood-level desires.

CHARLOTTE DOWNTOWN.
ALEX G/FLICKR.

CHARLOTTE CENTER CITY PARTNERS PRESIDENT MICHAEL SMITH (LEFT), WITH CHARLOTTE MAYOR ANTHONY FOXX, FORMER PRESIDENT BILL CLINTON, CHAIRMAN, CEO OF CISCO JOHN CHAMBERS, AND CEO OF DUKE ENERGY JIM ROGERS. CHARLOTTE WON AN AWARD FOR ITS PUBLIC/PRIVATE ENERGY EFFICIENCY PROGRAM. ASSOCIATED PRESS.

Even without a strong civic organization advocating for public transit, the public consistently supports sustainable transportation.

The corporations' historic preference for large infrastructure solutions narrowed the scope of the urban development agenda. Center City Partners (CCP), largely launched by Bank of America in the late 1990s, is the public-private business partnership for the central business district of Charlotte. Its agenda tended historically to focus more on the building footprints of its largest members—their key assets—and on large infrastructure projects and historically paid less notice to other fine-grained issues, such as walkability, street design, and parking management.

Charlotte's most successful coalitions were public-private partnerships to fund infrastructure. A multimodal hub planned for the Center City neighborhood was initiated at the behest of Bank of America and matched by state and federal funds. The light rail Lynx project was the result of a feasibility study funded by corporations. Streetcar and light rail projects were initiated by businesses. When there was an elected official who shared the vision of the corporations, the project moved forward. The existing light rail projects were the result of the corporations working with former mayors Pat McCrory (now Governor of North Carolina) and Anthony Foxx (now U.S. Secretary of Transportation) and with all parties viewing transit projects as a boon to their city's image, making Charlotte more "like a headquarter city." (Smith and Graves 2005)

Preferences are now shifting. More recently CCP has become more engaged in making Uptown and South End more pedestrian-friendly, promoting placemaking (a people-focused approach to creating public spaces) on the Rail Trail alongside the Lynx Blue Line light rail and supporting a bike-share program. Its 2020 Vision Plan includes a section on sustainable transportation, a new goal compared to past plans.

The lack of civic organizations to broadcast the public support for sustainable transportation may have hindered the execution of big plans. Though there is corporate support for the light rail lines, corporations did not give similar weight to bike lane additions that would complement the light rail network. In the past, organizations that were focused on small-scale aspects of transportation found it difficult to survive. The Charlotte Area Bicycle Coalition, a result of renewed interest in bicycling in the 1990s, is nearly defunct. Even in its heyday, it maintained a relatively narrow focus on bicycle safety education and did not venture into advocacy for new street designs. The regional transportation system is fragmented as a result. The bicycle network continues to lack crucial links between destinations and along popular corridors.

In fact, some scholars speculate that because business ambitions loom so large and strong in Charlotte there appears to be "no sustained need for citizens in general to actively engage civic leaders on most issues" (Bacot 2008). It's not that Charlotte's leaders do not innovate—civic and government leaders in Charlotte often apply private-sector management tools, such as doing away with sector-focus agencies like "housing services" in favor of goals such as "improving shelter" with performance benchmarks, and they often launch new programs focused on urban renewal. Rather, citizens tend to withdraw from proactively offering input and seem to be "confident that the decision makers are serving their interests" (Bacot 2008). But if neighborhood-level pedestrian and bicycle improvements are not on the agenda of the region's corporations, concerns about walking and biking will fall to the side, especially if there are few other forums to highlight topics of local interest to neighborhoods.

LYNX LIGHT RAIL SYSTEM.
DOUG CLOUSE.

There is promise. First, public opinion swings in the transportation innovation direction. Even without a strong civic organization advocating for public transit, the public consistently supports sustainable transportation. In 1998, Mecklenburg County voters agreed to a half-cent tax to finance the 2025 Integrated Transit/Land-Use Plan, which included many of the light rail projects that were constructed as well as zoning for transit-oriented development. Even when a small anti-tax campaign tested the appeal of the transit tax in 2007, Mecklenburg residents voted again to keep the tax, with 70 percent voting for it compared to 30 percent against. True to form, major corporations (Duke Energy, Wachovia, Bank of America) and other firms that would directly benefit from the transit investment (Parsons Brinckerhoff, McDonald Transit Associates, Siemens) funded the campaign to keep the transit tax. This does not mean that the public did not also support the plan. A 2012 poll of 800 Mecklenburg County voters conducted by Public Opinion Strategies and Fairbank, Maslin, Maullin, Metz & Associates found that voters continued to support public transit investment over cars, with 61 percent of those polled more willing to invest in public transportation than in building new roads, which garnered 25 percent of the votes.

Second, new voices are emerging and are rapidly gaining strength. Sustain Charlotte and its Transportation Choices Alliance, launched in 2014 after a year of research and interviews, enjoys growing popularity. A number of small civic groups that employ tactical urbanism strategies are building on the sidewalk and complete-streets programs that were started in the late 2000s (discussed in more detail below). The Knight Foundation has funded Center City Partners to work with Gehl Studio to create a public space framework for Uptown. Groups are working on programming for vacant blocks and temporary street closures. These efforts are starting to diversify the perspectives on Charlotte's urban development, and they now include a strong sustainable transportation angle, though it is too early to judge the overall impact.

Political Leadership

Charlotte has benefited from strong mayoral and city council leadership in support of sustainable transportation, but its focus tends to emphasize corporate preferences, which largely favor large infrastructure projects. The Gateway Station Project, the multimodal hub initiated by Bank of America, stalled when former mayor Anthony Foxx left Charlotte to join the federal government (it has since been reinvigorated).

Relative to reform, the city government is not opposed to restructure or change but has done so with varying degrees of success. The motto of the city has been "The Business of Charlotte is Business" since the 1970s, and many political leaders have recognized that a business-friendly city with global aspirations requires transit and attention to quality-of-life issues. The City Within a City Initiative, created in 1993 by the city manager to focus on quality-of-life issues and address neighborhood fragmentation, was accompanied by a departmental reorganization in which twenty-six city departments became nine key departments and four supporting government-run businesses. Even with a community-oriented department such as the Office of Neighborhood Development, transportation can fall between the cracks.

An effect of this kind of restructuring is that it dilutes how much the mayor can hold staff responsible for specific programs. Danny Pleasant, the current head of Charlotte DOT is credited as an effective leader for transportation innovation and is active with the National Association of City Transportation Organizations. At the same time, there is potential to add more reform-minded staff that can find ways around the state bias for roads and highways and local inertia. The DOT's transportation plans could be further connected to the neighborhoods and provide a visionary framing. Furthermore, without the civic sector's mouthpiece, a reform-minded DOT can only make limited progress.

Agency Changes

In Charlotte, many progressive transportation policies were put in place decades ago, but still lack implementation today. There has been insufficient critical mass from within the city and agencies to enact progressive policies or local ambitions.

Case in point, North Carolina issued the first state-level bicycle policy in 1974, when it required the North Carolina Department of Transportation to recognize the bicycle as a vehicle that had the right to be on the road. North Carolina issued bicycle design guidance in 1993. More recently, the state DOT created a full department of bicycle and pedestrian transportation with its state transportation policy update in 2011. This state department is part of the transit/rail/aviation department, however, rather than the street planning department, which limited its understanding of how to effectively aid cities. As a result, the state DOT's funding formulas continue to make local bicycle and pedestrian project funding very difficult. Without municipal political and civic leadership and broad-based local public support to find ways to direct that funding more appropriately, state-level policies could not be translated into local action.

Relative instability among the government administration may also play a role. Charlotte has a short mayoral term of two years, resulting in administrative changeover relatively frequently. The Charlotte Area Transit System, the city's transit authority, was created only in 1999. The city adopted its first city transportation plan in 2006 and followed that with urban street design guidelines in 2007 to change city ordinances in order to encourage more human-oriented designs. Many state legislative seats turned to Republicans in the 2014 election and the overall state government has just become very anti-urban, posing greater challenges to Charlotte's advocates and political leadership. The Charlotte Department of Transportation has a strategic plan, but the department has to overcome a long history of car-oriented views

CHARLOTTE BIKE LANE.
GEHL STUDIO.

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elsewhere in the community, at the state DOT level, and at the state legislative level.

With this fragmented environment, Charlotte makes spotty progress. It has a complete-streets policy, and its DOT redesigned East Boulevard into a model complete street, winning the Environmental Protection Agency's 2009 award for Smart Growth Achievement. The city has constructed $88 million worth of complete streets since the ordinance change. In spite of all the policies in support of complete streets, walkability continues to be an issue and according to the 2012 Charlotte Quality of Life Survey, 76 percent of the city still commutes by single-occupancy cars. To encourage walking, a sidewalk program created in 1999 was redesigned, relaunched in 2011, and the city devotes $7.5 million per year of its annual budget to build new sidewalks. Again, the impact is still to be determined. The city recently hired a pedestrian/bicycle manager to shepherd more walkability projects, yet the longstanding city policy of not requiring sidewalks and maintenance for most developments means that the dedicated staffer plays catch-up.

In sum, some critical policy pieces for transportation innovation are in place, but a stronger and more dynamic civic voice that can represent public support for politicians and boost their courage, a voice that can match that of corporations, is much needed in Charlotte. With its civic movement still emerging, Charlotte is still searching for stable footing that would propel it to its potential.

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