The Urban Partnership Agreement: A Comparative Study of Technology and Collaboration in Transportation Policy Implementation

Final Report

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The problems faced by today's public managers are often too large to be solved by a single entity and require collaboration across government, nonprofit, and business sectors. As new technologies and systematic approaches transform the transportation field, cross-sector collaboration has become an increasingly important policy development and implementation approach. Particularly within the transportation field, an assemblage of technologies is often critical to implementing system-wide strategies aimed at, for example, mitigating traffic congestion. In many cases, designers and implementers of effective transportation policies must combine a variety of technologies with deft relationship building and management. Through the development of comparative case studies of three of the Urban Partnership Agreement initiatives, this research study will examine how technology and collaborative processes may be combined to achieve important transportation goals and create public value more generally.

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Executive Summary

The Urban Partnership program (often referred to as “Urban Partnership Agreement” or “UPA”), a federal transportation initiative, infused approximately $1.1 billion into a competitive funding program aimed at reducing traffic congestion in major urban areas. Five urban regions (Minneapolis-St. Paul, New York City, San Francisco, Miami, and Seattle) were initially selected to participate in this innovative program designed to integrate four key strategies: transit, highway pricing, technology, and telecommuting.

This report will focus on the implementation phase of the program in the Minneapolis-St. Paul metropolitan area of Minnesota (“Twin Cities metro area”) and serves as a follow-up to our original report that documented the development of the program at the national level and in the Twin Cities metro area. In order to provide a comparative perspective, the report also documents the development of the program in two of the original cities, Miami and New York City (NYC).

Our second year’s research re-confirms a number of conclusions and lessons found in last year’s research and the literature on collaborations, but this year’s comparative approach adds some deeper understanding and nuance. Collaboration, indeed, on the scale of the UPA projects is a very complex assembly of human (individuals and relationships) and non-human (technologies, artifacts, laws and procedures) elements. Collaboration is not an easy answer to hard problems but a hard – and not always successful – answer to hard problems. Collaboration so far has worked in Minnesota and Miami; specifically in terms of UPA, it did not succeed in NYC, although there have been some important positive outcomes.

Introduction

The Urban Partnership program (often referred to as 'Urban Partnership Agreement' or 'UPA'), a Federal transportation initiative, infused approximately $1.1 billion into a competitive funding program aimed at reducing traffic congestion in major urban areas. Five urban regions (Minneapolis-St. Paul, New York City, San Francisco, Miami, and Seattle) were initially selected to participate in this innovative program designed to integrate four key strategies: transit, highway pricing, technology, and telecommuting.

This report will focus on the implementation phase of the program in the Minneapolis-St. Paul metropolitan area of Minnesota ("Twin Cities metro area") and serves as a follow-up to our original report that documented the development of the program at the national level and in the Twin Cities metro area. In order to provide a comparative perspective, the report also documents the development of the program in two of the original UPA cities, Miami and New York City.

The report begins with a narrative description of the implementation phase of the Urban Partnership program in the Twin Cities metro area from June 2008 through August 2009; the development and ultimate unraveling of the program in New York City; and the development and implementation of the Miami program. Subsequent sections cover the methodology, findings about key aspects of the UPA collaboration in Minnesota, New York City, and Miami, and conclusions and implications for transportation policy, planning, and implementation, as well as collaboration more generally.

Background

In this section, we continue to develop the story of the Minnesota UPA project as it transitioned from its development stage into project implementation. We also cover the story of the Miami UPA as well as the ultimate demise of the New York City UPA project.

Implementation of the UPA in the Twin Cities Metro Area

Calling the Minnesota UPA a "project" conceals its complexity. In fact, the Minnesota UPA is comprised of twenty-four individual projects, including converting highway lanes and shoulders into congestion-priced lanes, equipping a technologically-advanced bus fleet with lane-guidance technology originally developed by the University of Minnesota, and building park and ride lots.

Our original report on the Minnesota UPA followed the planning and development stages of the project from early 2007 through summer 2008. Our story now picks up again during summer 2008 when the first of twenty-four projects began being implemented and follows the UPA through the bulk of the implementation phase until September 2009, when the first set of project components deployed.

The implementation phase of the Minnesota UPA was fairly uneventful, seemingly void of common problems that could mire the coordination of a project of this size and scope. The phase reveals a complex interplay between the two powerful partner agencies: the Minnesota Department of Transportation (Mn/DOT) and the Metropolitan Council (Met Council) and their transit operator, Metro Transit. Intersecting with this central partnership are relationships with local, regional, and state governments, including a very important partnership with the City of Minneapolis that in less than one year tore up and rebuilt its bussing routes, transit signage, and streetscapes on two of its busiest downtown streets.

Communications and outreach to key stakeholders and the general public became an important focus at this stage. A communications and outreach committee comprised of members from partner agencies and the University of Minnesota met on a monthly basis to develop strategy and coordinate efforts. The committee struggled with the fact that, to the public, UPA doesn't mean much. For the most part, all they see are a variety of highway projects. So the question becomes, what do you call it? How do you package it into one message? During the implementation stage, communications were mostly focused on the construction itself rather than the final product. Communications were made harder as a result of the Federal response to the collapse of much of the global financial system in 2007 – 2009. Federal stimulus funding was pumped into other Minnesota transportation projects, stealing much of the UPA's thunder. As one interviewee put it, "The public attention and agency attention is not where it should be. It's not a focus. The stimulus is taking all the focus, but this [UPA] is going to be more visible [ultimately]."

The organization of the UPA project was evolving during the implementation stage. The UPA Steering Committee was no longer an active or central governing body. This was seen by many as a natural change, "The appropriate role for them was really to set up the framework." Its inactivity was also a testament to an overall smooth implementation. The smoothness also meant that the project agencies and actors mostly returned to their "silos" to get their individual pieces done. The communications and outreach committee remains a core active piece of the collaboration, and seems to be a key contributor to the general success of the UPA at what could have been a potentially troublesome stage in the project.

New York City

New York City (NYC) Mayor Michael Bloomberg (R), wanted to reduce traffic congestion in Manhattan, and he had a plan to do it. His proposed plan was originally a part of his broader vision for NYC, called PlaNYC, and centered on congestion pricing, which had been shown to be effective at reducing traffic congestion in other cities like London. The plan proposed to "cordon" off part of downtown Manhattan and charge a fee on vehicles that entered. This plan would have reduced traffic (measured in Vehicle Miles Traveled) in New York City by an estimated 6.8% and would have raised billions of dollars that would be dedicated to improving mass transit systems.

Bloomberg introduced the plan in April 2007, and it quickly gained support from state Republican senators as well as Democratic governor Eliot Spitzer. However, Democrats were the majority in the State Assembly, and many were from outlying New York City boroughs surrounding Manhattan. They were skeptical of the project on the grounds that they believed the costs would fall disproportionately on their constituents, with the benefits going to the more wealthy residents of Manhattan. Mayor Bloomberg attempted to alleviate this perception by promising to increase transit service to outlying areas before implementing the congestion pricing system. Nevertheless, the plan was seen from outside the city as a "tax" on the outer boroughs, in part because they doubted the ability of the Metropolitan Transportation Authority (MTA; somewhat analogous to Metro Transit in the Twin Cities metro area) to improve transit service.

Republican Senate Majority Leader Joe Bruno supported the plan but recognized that it was unpopular outside the city. Therefore, he sought to gain support from Senate Democrats because a bipartisan effort would reduce the electoral vulnerability of Senate Republicans. Further, while State Assembly leader, Democrat Sheldon Silver, implied that he personally supported the plan, he felt that Democrats had been excluded from the planning process. Therefore, Silver's efforts to rally his party on the issue were ambivalent at best.

This tension was inflamed by accusations of arrogance and condescension on the part of Mayor Bloomberg, who had a short timeframe within which to assemble the political coalition necessary to approve the project in the assembly. Opponents felt that Bloomberg had not reached out to them, but rather had engaged in "hardball tactics" and last-minute threats; there was also a perception that he had attempted to buy votes rather than gain support on the merits of the plan. Following a meeting with the Democratic conference, Speaker Silver announced that the bill lacked the votes to succeed and therefore would not be heard on the assembly floor.

Proponents of the bill were disappointed and angry. The funding that would have gone to New York City was now to be divided up and distributed to congestion-pricing projects in other major US cities. Mayor Bloomberg called it a "sad day for New Yorkers and a sad day for New York City," and attributed the failure to cowardice on the part of the assembly. Various public interest groups also decried the loss. But some Democrats held firm, saying that they were proud to vote according to the interests of their constituents.

This defeat was a major blow to Mayor Bloomberg's legacy. He vowed to continue other components of his PlaNYC, aimed at improving traffic congestion and quality of life in New York City, and expressed hope that a congestion pricing system would be implemented at some point in the future.

This failure cost New York City $354 billion in Federal funding, which was badly needed to improve the city's inadequate transit system. This problem persists, and stakeholders are still looking for solutions. Currently, the MTA is discussing big fare hikes on users of public transit.

In addition, policymakers are considering a proposal that would charge a toll for private commuters crossing bridges entering Manhattan. As the city's traffic increases and transportation infrastructure deteriorates, the debate continues about who should pay to fix it.

The New York City UPA projects never reached the implementation stage. Planning for implementation involved a great deal of inter-agency discussion, however, and the resulting positive relationships ultimately may result in improved transportation. The Port Authority and MTA sought to collaborate with the New York City Department of Transportation (NYCDOT), largely because any unilateral decisions by NYCDOT would have impacts on other NYC agencies' jurisdictions and plans. For the same reason, other states took a great deal of interest in the project, particularly New Jersey. This may have led to friction with the non-Manhattan NYC boroughs, at least regarding the cordon area congestion pricing. Ultimately, the mutual interest in UPA from major agencies—and USDOT, who advocated for the congestion pricing piece vigorously—could not overcome political obstacles in Albany, and USDOT opted to cut the funding.

Miami

In the Miami UPA our interviewees indicate that there was a more centralized implementation process than is seen in Minnesota, with the Florida Department of Transportation (FDOT) and two of its district offices playing the lead roles. The FDOT-centered operational structure apparently was decided upon "very early on in the project development phases." The original project teams largely carried over from the planning to implementation phases. These structures originated in the project applications. South Florida Commuter Services, a program of FDOT, was charged with running the tolling registration process, as well as handling outreach for the telework part of the UPA project. In spite of this level of planning, some interview respondents from other UPA sites pointed to Miami's experience as a partially negative one. Because of an inadequate public information and communication process, implementation of some High Occupancy Tolling (HOT) lanes resulted in a number of crashes. The problem has since been fixed.

Methodology

Three senior faculty members from the Public and Nonprofit Leadership Center at the Humphrey School of Public Affairs were selected by the Intelligent Transportation Systems Institute to study the Minnesota UPA process. ITS was especially interested in examining how technology and collaborative processes may be combined to achieve important transportation goals, catalyze institutional change, and create public value more generally. This report covers the second year of a three-year study of the Minnesota UPA. Included in the second year of data collection is an expansion to include comparative case studies in two other UPA recipient cities, New York City and Miami.

The Conceptual Framework

The conceptual framework guiding the research is presented in John M. Bryson, Barbara C. Crosby, and Melissa M. Stone, "Designing and Implementing Cross-Sector Collaborations: Propositions from the Literature," *Public Administration Review*, 66, Special Issue, 2006a, pp. 44 – 55. The literature review on which the paper is based covered the fields of cross-sector collaboration, leadership studies, and network governance and resulted in a set of testable propositions. The propositions were operationalized in the form of a survey instrument and interview protocol. This framework was then tested by applying the survey instrument to more than twenty cross-sector collaboration case studies from various policy fields. Virtually all of the propositions were supported, although not all were strongly supported (Bryson, Crosby, & Stone, 2006b). For the UPA study, additional attention was devoted to research and theory in the areas of congestion pricing, public financing of transportation policies, and technology implementation. The conceptual framework was supplemented at the midway point in the interview process by the identification of some tentative themes that appeared to be emerging from the interviews.

Definition of Collaboration

We believe that collaboration occurs in the midrange of how organizations work on public problems (Crosby & Bryson 2005, pp. 17 – 18). At one end of the continuum are organizations that have little to do with each other when it comes to public problems that are beyond their capabilities. At the other end are organizations that have merged into a new entity meant to address the public problem through merged authority and capabilities. In the midrange are organizations that share information, undertake coordinated activities, or develop shared-power arrangements such as collaborations in order to pool their capabilities to address the problem or challenge. We thus define collaboration as *the linking or sharing of information, resources, activities, and capabilities by organizations to achieve jointly an outcome that could not be achieved by the organizations separately* (Bryson, Crosby & Stone, 2006a, p. 44). Note that by this definition the power sharing in a collaboration does not imply equal power, nor does it necessarily imply much in the way of shared interests and goals. Indeed, in our experience collaboration typically involves uneven power and mixed motives.

In contrast, other authors use a more restrictive definition of collaboration that requires extensive sharing of information, resources, and power; broad participation by all stakeholders; joint determination of goals and plans; and decision making by consensus; anything less doesn't count as "real" collaboration (e.g., Bentrup, 2001; Innes, 2004; Innes & Booher, 1999; Margerum, 2002). Based on case study research, these authors also argue arrangements that have these characteristics demonstrate better performance in terms of outcomes than those that fall

short on one or more dimensions. An important difference between their studies and ours is that theirs are focused on what Himmelman (2002) calls *community empowerment* situations; these typically are more bottom-up exercises without clear mandates imposed from above and with looser timeframes. The UPA case, on the other hand, fits what Himmelman calls a *community betterment* situation, in which a goal, mandate for collaboration, and often a tight timeframe are imposed from above. We have chosen a looser definition of collaboration in order to encompass both situations.

General Expectations

Based on our conceptual framework, we began this research with a number of general expectations. Midway through our interviews, the team added explicit attention to a number of interview themes that had emerged by that point. Our general expectations were shaped by our literature review and conceptual framework. That work identified five main categories of inquiry: initial conditions; process; structure; contingencies and constraints; and outcomes and accountabilities.

In terms of *initial conditions,* we expected the Minnesota UPA to have been formed in a somewhat turbulent environment; that sector failure would have preceded it; and that the UPA effort, if it were to succeed, would rely on powerful sponsors, a variety of linking mechanisms, formal and informal networks, and general agreement on the problem. We expected the UPA *process* to involve a variety of initial agreements and that the way those agreements were formulated would have an effect on the outcome of the process. The process would also depend on leadership of many kinds, including having powerful sponsors and champions. Success of the process would also depend on its legitimacy in the eyes of key stakeholders, the creation and maintenance of trust, and effective conflict management and planning.

We thought that the *structure* of the collaboration would depend on the context and system stability, that the structure likely would change over time, and that what had to happen "on the ground" would affect the structure. Governance was also a focus and we assumed that formal and informal governing mechanisms would influence the effectiveness of UPA. In terms of *contingencies and constraints,* we assumed that since the first phase of the UPA involved system-level planning, there would be extensive negotiation; we assumed there would be less negotiation in later phases. While we certainly did not expect equality in power sharing, we did expect that for the UPA process to succeed, there would have to be mechanisms and resources built in to deal with power imbalances and unexpected shocks. Finally, we expected there to be some conflicts in terms of competing institutional logics and that these would affect the process and outcomes of collaboration (Thornton & Ocasio, 1999).

In terms of *outcomes and accountability*, We assumed that the UPA would create public value to the extent that it built on individual organizations' self-interests and characteristic strengths, while minimizing or overcoming the organizations' characteristic weaknesses. Finally, we assumed that the UPA's success would depend in part on its having an accountability system that tracked inputs, processes, and outcomes; used a variety of methods for gathering, interpreting, and using data; and used a system that relied on strong relationships with key political and professional constituencies.

Additional Themes

At the midway point in our first-year interviews, the team met to identify any tentative emerging themes. There were several and they helped inform subsequent analyses. First, we were all struck by the relevance of John Kingdon's (1995) work on policymaking at the Federal level. Kingdon

identifies policy change as occurring when a public problem is linked with a viable solution and supportive politics in a window of opportunity. The fact that Kingdon's model had been used to help explain the success of the MnPASS project reinforced our view of the model's relevance (Hardy, 2007). Second, power was a pervasive theme, although power was of many different sorts and varied throughout the process. Third, we came to see collaboration and hierarchy as both occurring in the shadow of the other; each played a strong role. Fourth, in a related way we started to focus on spatial and temporal organizational ambidexterity. For example, sometimes fluidity and sometimes stability were required of the same organizations; sometimes informality and sometimes formality were required; and so on. To do both required a kind of ambidexterity, meaning doing different things in different places or at different times. Lastly, it was hard not to see the UPA process as a kind of "assembly" of human (people, groups, organizations) and non-human (roads, bridges, technologies, cars, buses) objects. (Latour, 2005). The collaboration was obviously not just about people, but about objects and technologies as well and the various elements had to be assembled – and often reassembled – over time. For example, the fluidity needed during the planning phase had to be created (assembled) in a situation otherwise dominated by hierarchy. The return to hierarchy involved a reassembly. Project sponsors and champions played crucial roles in the assembly and reassembly process.

In fact, technologies and their interactions with collaborative processes, structures, and outcomes, became an important additional theme for this phase of the research. In general, our research findings demonstrated how technology, viewed as a dynamic ensemble or web of people, equipment, techniques, and practices (Orlikowski & Iacono 2001; Kellogg, Orlowski & Yates 2006) significantly influenced collaboration success. Technology was a motivator for potential participants because of its potential for innovation. It advanced collaborative work by facilitating rapid communication among stakeholders under significant time constraints. Technology was even an actor in its own right in the sense that it made a difference (Latour, 2005); for example, it helped transform politically contentious perceptions of "tolling" into a new systems view in which "dynamic pricing," coupled with new transit, signage, and roadway technologies facilitated smooth traffic flow in transportation corridors.

Action Research

We have employed a form of action research methodology, partnering with key practitioners in the local transportation field to incorporate their unique perspectives into the research design and analysis. This included convening an Advisory Group comprised of leaders from each of the primary UPA partnership organizations. The Advisory Group responded to our questions surrounding the UPA. The Advisory Group also reviewed earlier drafts of this report, and will work with us to suggest and design venues to disseminate our findings to a larger audience of practitioners.

Examining Minnesota's experience with the UPA collaboration required going straight to the sources and interviewing those closely involved in advocacy, conceptualization, and management of the implementation of UPA in our state. We conducted semi-structured interviews with 43 individuals involved in Minnesota's UPA. A note-taker was present at each interview to record the interviewee's comments verbatim. Those interviewed were chosen using a snowball sampling technique. In selecting our sample we paid careful attention to gaining perspectives from individuals at multiple levels of government and with varying levels of responsibility and authority over the UPA implementation, including Federal officials, state

legislators, local government officials, Mn/DOT and Metro Transit staff, policy advocates, and conveners of intermediary organizations and their participants [See Appendix A].

The New Sites

To conduct the comparative case study analysis with New York City and Miami, a similar methodology to the Minnesota UPA was employed, although not nearly in as much depth and without the action research component. Members of the research team travelled to New York City and Miami to conduct in-depth interviews with key project stakeholders. Five individuals were interviewed in New York City and eight individuals in Miami (five of these via email) [See Appendix A].

During this second year of data collection, USDOT began their own evaluation of the Minnesota UPA, including an evaluation of non-technical success factors of the UPA project. Our research team received a sub-contract from the research firm, Battelle, contracted to carry out the USDOT UPA evaluation. Under this sub-contract, our team received funding to conduct interviews with key project stakeholders using our conceptual framework to guide the interview protocol. The analysis in this report includes interviews conducted with two somewhat different versions of an interview protocol, both guided by the same conceptual framework [see Appendix B].

The interview protocols included questions related to the individual's background in the transportation field, the initial conditions leading up to the UPA collaboration, the process of decision-making, and the outcomes and accountability processes involved in this regional policy implementation [see Appendix B]. Verbatim notes from these interviews were imported into the qualitative analysis software program, QSR NVivo version 8. A thematic coding structure was developed based on the original cross-sector collaboration framework, input from the Advisory Group, and modified to reflect the emerging and cross-cutting themes from an initial analysis of interviews. NVivo coding involves creation of a number of nodes (buckets) and sub-nodes (sub-buckets) that have names tied directly to the categories of search, in our case the categories that came directly from the conceptual framework [see Appendix C]. Researchers then allocated snippets of interview text to whichever node or sub-node most clearly reflected the content. The software thus allowed us to conduct our qualitative analysis thematically by analyzing the information assigned to each node and sub-node. (We were also able to break down our thematic results into categories based on the characteristics of interview participants, such as their organizational affiliation or position in the hierarchy; but saw little additional explanatory power coming from this analysis.)

In addition, archival research on newspaper articles and other publications formed the basis of a secondary data collection effort; this review focused on capturing the story of UPA development and implementation as reported by local newspapers and publications in the recipient states, with particular emphasis on the legislative and political processes necessary for successful implementation of the UPA policy.

This study constitutes the second stage of a larger research effort. We will continue to interview key stakeholders in the Minnesota UPA over the course of the next year using similar methodology, allowing for an in-depth analysis across time.

Initial Conditions

As noted in the first report, collaborations occur most frequently in turbulent environments – that is, environments that are both complex and dynamic (Emery and Trist, 1965; Thompson, 1967). Organizations that have a stake in a complex public problem like urban traffic congestion have incentives to partner with other affected organizations in order to pool resources and coordinate their efforts to tackle the problem. Moreover, these partnerships are likely to bridge different governmental levels and jurisdictions as well as different sectors when – as is typically the case – the previous efforts of a single sector (government, business, or nonprofit) or level of government have failed to remedy the problem. Clearly, some collaborations are pursued in much tougher conditions than others and the tougher the conditions the less likely the collaboration is to succeed (Weber, 2009).

Collaborations that are launched in turbulent environments are shaped by a combination of driving and constraining forces (Sharfman, Gray & Yan, 1991). The chances that they will respond effectively to the drivers and constraints are enhanced by direct antecedents, such as general agreement on the problem to be solved and prior satisfactory working relationships among collaborating partners.

Environmental Turbulence and Sector Failure

Our initial report discussed the growing awareness among citizens, policy makers, and planners that traffic congestion was a growing and serious threat to the Minneapolis-St. Paul economy and to the quality of life for citizens in the region. The problem worsened throughout several decades despite government projects, special taxing districts, business-endorsed carpooling, and nonprofit advocacy. Many of these projects brought improvements, while others came to naught; they simply did not add up to an effective campaign to halt urban sprawl and change commuting habits.

In New York, traffic congestion in Manhattan was an ongoing and serious problem, while increased demands on the bus and underground train system in the midst of budget cuts was driving the transit system toward crisis. One interviewee argued that the "vibrant and strong economy" of New York City was directly related to significant improvements in the regional transit system during the 1990s. Thus, the looming crisis in the transit system posed a definite economic threat. (The interviewee placed some responsibility for the crisis on the MTA and its lack of transparency, until recently, about its financial systems; the interviewee also faulted the media for not helping the public understand the agency's operation.) As in Minnesota, there were previous failures to remedy traffic congestion. For more than 30 years, various proposals had been formulated for tolling more bridges or charging drivers entering Manhattan south of 60th Street. Citizen resistance in boroughs outside of Manhattan often contributed to the proposals' defeat.

Transportation planners in the Miami region, like their Minneapolis-St. Paul counterparts, had previously tried high-occupancy-vehicle (HOV) lanes as a solution for traffic congestion and found them wanting. One interviewee noted, "South Florida has some of the worst traffic congestion in the nation and based on projections, it will continue to grow."

Driving Forces

Driving forces at the Federal level are explored more thoroughly in our first TechPlan report. Here we might add that the national economy was doing well when the UPA program was announced, proposals were prepared, and initial implementation began. A short time later when

the economy spiraled down as a result of the 2007-2009 financial crisis, the haste to put together Federal transportation stimulus projects might have undermined a reform-oriented program like this one. Be that as it may, interviews with participants in the Minnesota, Miami and New York UPA processes indicated that an important driving force was USDOT's decision to launch an exceptionally well-funded project that mandated multimodal approaches and required results in a short time period.

As a Miami interviewee noted, putting together local projects that integrated highways, tolling, and transit dictated broad collaboration. The requirement for an integrated approach, said a Minnesota interviewee was "like a shotgun marriage forcing people to sit down and talk to each other." Minnesota interviewees noted that the short time frame fostered a general sense of urgency and sped up approvals from elected officials. One commented, "Initially, I thought the timeframe was a negative. I was skeptical, but I came around to believing it was positive because …I saw people come together to produce solutions that I didn't think they could do."

Several Minnesota interviewees emphasized the critical attraction of unusually generous funding – as one interviewee put it, "a boatload of cash." They noted that the amount of funding was crucial in obtaining the buy-in of top elected officials such as the governor and some legislators. The size and scope of the grant also meant that some projects that would otherwise have had to be done sequentially now could be meshed, thus producing some synergies. There may have been more driving forces at work at the state level in Minnesota, compared to the other two sites. In the original round of Minnesota interviews, several people cited Mn/DOT's strong national reputation as a transportation innovator and reliable project implementer. They also noted that key legislators supported UPA participation from the outset, and that advocates of participation convinced the governor and Mn/DOT commissioner to support Minnesota's submission of an Urban Partnership application. One of the Florida interviewees noted that projects already envisioned in the state transportation plan could be fit into the Urban Partnership framework.

In New York, the strongest driving forces were at the local and regional level. Just before the Federal Urban Partnership program was announced, Mayor Michael Bloomberg had embraced congestion pricing as a way to deal with the pressing need for transit improvements in his city. Influenced by recommendations in a study conducted by a group called Partnership for New York, Bloomberg included a call for combined congestion charges and transit improvements in his PlaNYC. (New York City is extremely dependent on its transit system, which carries 8.5 million riders daily. Funding for improvements in the underground system and buses had not kept pace for increased demand in recent years. By instituting new charges for commuting into Manhattan during peak traffic hours, Bloomberg hoped to generate substantial new funding for transit infrastructure and operations.)

Driving forces at the regional and local level were also important in Minnesota. Our initial study highlighted the important role of the Metropolitan Council in prompting a regional approach to transportation (and especially transit) planning. Local governments and special transportation authorities and commissions also were already planning and studying a number of projects and technologies that could be plugged into the UPA. One interviewee commented about one such project: "We spent time working with the University of Minnesota, even when we had no idea how we would pay for implementation. And then once we found this funding opportunity, we were able to redefine the project to fit the guidelines." Earlier collaborative work among university experts and state, local, and regional transportation bodies, also gave the region a national reputation for advances in "Intelligent Transportation Systems."

Our initial study highlighted the importance of Minnesota's successful congestion pricing project on I-394 (MnPASS) in convincing USDOT officials that Minnesota could design and implement an effective tolling component. The research and public education generated by the project also were favorable factors for instituting new congestion pricing schemes and obtaining needed support from legislators. In Minnesota, the prospect of extending MnPASS transponder technology and experimenting with advanced bus lane guidance systems and advanced electronic signage systems was a definite driver for some of the interviewees' support for the UPA. The New York interviewees were less excited about the use of these technologies, in part because transponder systems had long been operating on many major highways in the northeast. Florida also had prior experience with transponder technology. No matter what, the existence of systems that allowed transportation agencies to charge motorists for peak time highway use without cumbersome toll booths definitely improved the practicality and appeal of congestion pricing projects.

Constraining Forces

The USDOT mandates embedded in the Urban Partnership program constituted constraints as well as drivers in these cases. The tight time lines prevented the sort of careful planning that transportation professionals prefer. The time lines also prevented much citizen engagement, which may have been an important factor in the unraveling of New York City's UPA. The requirement for sizable state matching funds meant that projects could not proceed without support from enough legislators to approve the funding. Legislators also would have to approve any changes needed in state law to accommodate UPA innovations.

Our initial study highlighted the unusual concentration of power over transportation policy in Minnesota's Governor, lieutenant governor (who at the time was also transportation commissioner), and senior management at Mn/DOT. Along with some legislators, all of these people were at times skeptical about pursuing or implementing the UPA, although implementation certainly was facilitated once they were on board and concentrated power was focused on implementing adopted solutions. In New York City, Mayor Bloomberg, an erstwhile Republican, had testy relations with the powerful Democrats who controlled the State Legislature. The New York City project also was constrained by popular frustration with the massive Metropolitan Transportation Authority (MTA). The agency was becoming more transparent in its practices (especially in relation to its complicated funding system), but public mistrust lingered. Crucially, residents of outlying boroughs harbored longstanding resentment that their areas had no underground service and inadequate bus service and doubted the MTA's ability to improve transit service to their areas. The MTA is a state-created regional authority governed by gubernatorial appointees from New York City and surrounding counties. The Port Authority of New York and New Jersey is another powerful, relatively independent player in regional transportation policy and services. It manages bridges, tunnels, airports, and rail lines serving the city.

In all the cases, geography and settlement patterns provided constraints, in that any transportation project had to deal with particular concentrations of residences and businesses and with physical limitations. For example, Manhattan being surrounded by water and thus accessible only by bridges, ferries, and tunnels would facilitate charging owners of motor vehicles for peak time access, but it also meant that citizens driving in from the north who had not previously paid a bridge toll would now have to pay just like those using the other bridges and tunnels.

While prior regional and local transportation planning facilitated the design of the Urban Partnership projects, the official plans often had to be modified to accommodate particular UPA elements. Minnesota interviewees, in particular, noted that the process of seeking waivers and modifications in these plans was very time consuming. A final constraint that affected all cases is simply the tendency of government agencies to operate on their own when they can. As one interviewee noted, "Everybody has lots of work they can do. Unless there's a critical project that has to get done, they will all work in their own interests."

In our initial study, we noted that the collapse of the I-35W bridge across the Mississippi River in 2008 might have been a factor in strengthening support (among Federal, state and local officials as well as citizens) for Minnesota's UPA application. One interviewee in this round, though, noted that the bridge collapse prompted one Federal official to ask whether the state wanted to pursue a UPA project when it would need to focus so much attention on reconstruction of the bridge.

Direct Antecedents: Initial Agreement on Problem, Conveners, and Pre-Existing Networks

Interorganizational collaboration is more likely when the partners have a general agreement about the nature of a shared problem (Gray, 1989; Waddock, 1986). In all three cases, partners agreed that traffic congestion was a major regional problem. Interviewees most often cited congestion's economic and environmental costs when elaborating on the problem. In New York City, the untenable mismatch between transit service demand and supply seems to have been at least as important as concern about traffic congestion. The requirements for putting together a successful Urban Partnership application also forced partners to agree on fairly specific remedies. One of the Minnesota interviewees commented, "We agreed that something had to be done, as well as on what had to be done. The application really helped with that, making sure that everyone was signed on and committed. We had to realize what it was going to take going into it, and make sure that stakeholders and partners were willing to commit."

Powerful sponsors and neutral respected conveners can provide legitimacy for a collaboration and bring potential partners together (Bryson, Crosby & Stone, 2006a). As noted in our initial study, Minnesota's UPA application process was endorsed by powerful if reluctant sponsors (e.g., the governor and administrator of the Metropolitan Council) and was championed by a number of university transportation experts who acted as neutral conveners of initial discussions. Mayor Bloomberg was the most visible sponsor of the New York City initiative and had already organized a multi-stakeholder Steering Committee to work on congestion pricing as part of his administration's PlaNYC. The committee was then able to provide considerable input for the UPA application. In Florida, both the governor and head of FDOT were enthusiastic sponsors.

Pre-existing relationships and networks were initial factors emphasized by interviewees in all three cases. Our first report highlighted the extent of previous ties and joint working experiences among Minnesota partners and ties between some of the Minnesota participants and national congestion pricing advocates. In this round of interviews a city engineer when asked what was key to launching and sustaining the UPA process, responded, "It was our pre-existing relationships. They [the other partners] knew us and we knew them; we had already worked with them on multiple projects. If these were new relationships it would have been very different." In contrast, some interviewees in this round also noted that representatives of the Minnesota Valley Transit Authority (MVTA) and the far south suburb of Lakeville had somewhat prickly prior

relations due to the bus authority's efforts to persuade the city to join the taxing district that funds MVTA facilities and services.

Florida interviewees emphasized previous collaboration among the partners on transit projects. Said one, "The primary partners have worked together frequently on cross-district/cross-county transit projects, including the current South Florida East Coast Transit analysis for use of the FEC corridor and SR 7 Fast Bus." In the New York City case, the congestion pricing Steering Committee included many people who had engaged with each other over previous transportation issues. One interviewee noted, "The Steering Committee tapped into already existing relationships, but the level of participation and collaboration increased because this was a hot-button issue, to be addressed in a short time frame."

Table 1: Driving and Constraining Forces at the Three UPA Sites

	Federal Level	**State Level**	**Regional/Local Level**	**Other**
Driving Forces	*All:* USDOT creates and funds UPA program. Program design necessitates multi-party collaboration. Sizable grants available. National economy okay.	*Minnesota:* Mn/DOT is powerful institutional player, and has national reputation as a transportation innovator. Key legislators are supportive. Powerful DOT Commissioner becomes supportive. Powerful governor becomes supportive. *Florida:* UPA fits elements of FDOT plans.	*Minnesota:* MetCouncil is powerful institutional player. Presence of knowledgeable and credible conveners and researchers. Extensive prior planning and research. Twin Cities seen as "smart" region in use of Intelligent Transportation Systems. *New York:* Mayor embraced congestion pricing as a way to deal with the pressing need for transit improvements in city.	*Minnesota:* Key battles already fought and settled through successful MnPASS Project. *All:* Availability of proven technology.
Constraining Forces	*All:* Power of USDOT as authorizing and funding entity. Requirement for state matching funds.	*Minnesota:* Governor, DOT Commissioner, and legislature at times resistant. *New York:* Political cleavages between mayor and legislators. Popular frustration with MTA.	*All:* Existing regional and local transportation plans. Settlement patterns and geography.	*All:* Ease of working independently.

Processes

Prior research indicates that complex collaborations are more likely to succeed if participants use various processes to bridge differences among stakeholders, create inclusive and functional structures, plan and implement the collaboration's activities, and balance power and manage conflicts (Bryson, Crosby, and Stone, 2006; Crosby and Bryson, 2010). Our initial report on the Minnesota UPA project found that these processes were broadly inclusive during the period in which project sponsors and champions were building the agreement to submit a grant proposal and then developing the proposal. Once the proposal was approved, processes were less inclusive as sponsors and champions focused on implementing parts of the proposal and winning legislative approval of matching funds and authorization for new solutions, especially pricing lanes.

Bridging Differences among Stakeholders during the Pre-Grant Phases – Minnesota

Our initial report highlighted the multi-stakeholder forums convened in Minnesota to consider participation in the Urban Partnership program and then to develop the proposal. These and other forums helped participants change their minds enough to reach shared understanding and agreement on how to proceed. Process sponsors and champions were necessary convenors of these forums and helped assure that the kind of needed learning occurred that helped people align their positions and move forward (Crossan, Lane, and White, 1999; Foldy, Goldman, and Ospina, 2008; Crosby and Bryson, 2010). The first major forum in this process was organized and conducted by nongovernmental champions of congestion pricing or transportation policy reform, i.e., representatives of the Citizens League and the University of Minnesota's Center for Transportation Studies (CTS) and the State and Local Policy Program (SLPP). A second major forum, convened after Mn/DOT and the Metropolitan Council had agreed to submit a UPA proposal, was sponsored by the heads of these two organizations, but facilitated by people from CTS and SLPP. While the two major forums were inclusive, they were by invitation only and the invited participants were predominantly elected local officials, legislators, and representatives from state and regional government agencies.

Smaller forums were held at CTS with key people from Mn/DOT, the Met Council, and Metro Transit plus consultants to hammer out strategies. Later forums were organized by the consultant hired by Mn/DOT to pull the proposal together; they were overseen by a Mn/DOT senior manager and the UPA Steering Committee that evolved from the earlier meetings.

One interviewee commented, "The [UPA] collaborative wasn't always strong; it went through a typical collaborative process with a lot of disagreement. But I think they realized there was a broader public good associated with collaboration, so they were willing to put their differences aside. I think the time frames really pushed them, and there was a goal right in front of them and they went for it."

Some key stakeholders were either excluded or not heeded in the forums convened at this stage. In its effort to break through the usual bureaucratic silos and levels, USDOT had designed the UPA process to bypass Federal regional highway and transit offices. The general exclusion of regional Federal transportation officials at this stage would be problematic during the implementation stage, when their approval would be needed to carry out some aspects of the project. Additionally, local transportation planners and engineers weren't prominent in the forums and thus their knowledge about feasibility of some proposal elements couldn't be tapped

easily. Finally, the average citizen or commuter was fairly unaware of the whole endeavor and would need educating later in the process if they were to help create desired outcomes.

Minnesota participants in the second round of interviews reinforced our earlier conclusion that the tight timeline for the grant application provided incentives to come to consensus about elements of the proposal. The time constraints also favored selection of the I-35W corridor as a major focus of the proposal, since local officials along the corridor had already formed the I-35W Solutions Alliance aimed at improving the corridor.

Also important in the Minnesota process (as in most complex collaborations) was developing shared understandings of the collaboration's purpose and the general nature of desired outcomes. As noted in the Initial Conditions section, key stakeholders generally agreed that traffic congestion in the Twin Cities metro area was a serious problem that required concerted effort to remedy. When they considered the main strategies -- the 4 T's of transit, technology, tolling, and telecommuting – required by the Urban Partnership program, however, they had disparate perspectives. Of the four strategies, tolling was the one that summoned up the most conflicting views. Investing in transit services and facilities was generally attractive, especially due to the potential combination with advanced technologies to create Bus Rapid Transit and other innovations. Telecommuting was a minor part of the package due to its relatively small funding. Tolling, however, was controversial. Some stakeholders saw it as charging for a public, or "free," good and was therefore distasteful.

On the other hand, quite a few of the Minnesota transportation experts had become converts to tolling, at least in the form called dynamic pricing – that is, charging motorists for highway use depending on levels of congestion. They had seen firsthand the success of dynamic pricing of previous HOV lanes on I-394 (the MnPASS project). In the UPA project, dynamic pricing of the I-35W corridor could take advantage of existing HOV lanes in the southern part of the corridor, but elsewhere it would have to be imposed on previously unrestricted lanes. A key stakeholder – namely the governor – was unwilling to take away "free" lanes. To overcome this significant difference, UPA champions came up with a compromise – dynamic pricing of shoulder lanes. The compromise enabled the Minnesota proposal to proceed, but it brought with it some safety risks.

Stakeholders attending the various forums were often attached to one of the 4 T's more than another. The forums helped them develop a more holistic perspective. For example, some participants who had opposed highway pricing but supported transit-related parts of the project came to understand the interconnections of increasing transit ridership and imposing fees on motorists at peak highway times. This holistic understanding of strategies along with pre-existing (and growing) "corridor" thinking and appreciation of traffic congestion and transportation as regional issues were crucial for bridging differences. Process sponsors and champions acted as "integrative leaders" (Crosby and Bryson, 2010) and "sense-givers" (Foldy, Goldman, and Ospina, 2008) to help push this more holistic thinking along.

Bridging Differences among Stakeholders during the Pre-Grant Phases – New York City

Deliberative forums leading up to New York City's Urban Partnership proposal were even more inclusive than those in Minnesota. An informal coalition of transit advocates, business people, elected officials, environmental and labor groups, and university-based research centers organized public discussions and issued reports on the growing harm of traffic congestion and the attractiveness of congestion pricing. They were able to frame traffic congestion as a massive

economic drain on the region, as well as a serious detriment to health and quality of life. By 2006, when Mayor Bloomberg began the year-long PlaNYC process to produce a 25-year sustainability plan for a "greener, greater New York," these groups constituted a diverse and strong constituency for congestion pricing in Manhattan. Their support, along with the availability of the Urban Partnership program, convinced the mayor to include in New York City's UPA proposal the PlaNYC proposed congestion fee for travelling into the core of Manhattan during weekdays. PlaNYC -- encompassing 127 initiatives for reducing air pollution, improving the transit system, promoting cycling, etc. -- was announced on Earth Day 2007. The public and press reaction to congestion pricing was "generally positive" probably because of the attractiveness of the overall plan. The mayor set up a Steering Committee to oversee the congestion pricing initiative and associated new investments in the city's transit system. The committee included representatives of the Tri-State Transportation Campaign; New York City DOT; New York State DOT; the MTA; and environmental justice, labor, health, business, civic, neighborhood, and community groups. The mayor's proposed congestion fee was submitted to the state legislature, which had to approve its implementation. Meanwhile, NYCDOT and the MTA prepared an Urban Partnership proposal that incorporated the congestion fee as a central feature.

Although the legislature adjourned in the summer of 2007 without acting on the mayor's proposed congestion fee, it did respond to pressure from New York media, City Hall, and civic groups by setting up a new multi-stakeholder forum called the Traffic Congestion Mitigation Commission, which was to consider pricing and non-pricing approaches to reducing traffic congestion in Manhattan. The commission included a number of the former Steering Committee members and in effect replaced it.

In the New York City case, the key excluded stakeholders appear to have been residents of outer boroughs, especially commuters from Queens, Brooklyn, and the Bronx, who used un-tolled bridges to enter Manhattan. The opposition of these stakeholders (and state legislators who represented them) would prove to be an important factor in the eventual unraveling of New York City's UPA.

Bridging Differences among Stakeholders during the Pre-Grant Phases – Miami

The meetings leading up to Florida's UPA proposal submission were the least inclusive of the three cases. Unlike the Minnesota case, the governor and the most senior executives in the state transportation department were eager to participate. After consulting with the affected DOT districts, FDOT settled on transforming HOV lanes on I-95 into dynamically priced lanes as the central feature of their proposal, which would also include additional transit services and facilities [along I-95]. As they fleshed out the proposal, FDOT sponsors and champions solicited input from other regional and local government partners, including the metropolitan planning organizations, and local transit agencies. One interviewee explained that sections of the draft proposal were circulated and discussed at multi-discipline and inter-agency meetings. Proponents had to win over local elected officials who had authority over the transit agencies and planning staff, including officials in Broward County, where the UPA didn't fit with existing transportation plans.

One interviewee noted that tolling I-95 was not initially popular, but research into pricing initiatives elsewhere won supporters. "People dug into it and saw it worked elsewhere like SR 91 in California and 394 in Minnesota."

As in Minnesota, the district office of FWHA was "not wholly in the loop." The tight timelines, noted one interviewee, prevented the involvement of some people who normally would have been consulted in such a project.

Bridging Differences among Stakeholders after the UPA Award – Minnesota

Once recipients received a UPA award, they faced yet another set of extremely tight timelines for finalizing and implementing their plans and obtaining legislative approval for the state matching funds and for tolling and other policy changes. In all the projects, the legislative and implementation strategies ran on parallel tracks.

In Minnesota the process became less inclusive and more confined to normal hierarchical channels within Mn/DOT and the Metropolitan Council. On the legislative track, senior Mn/DOT managers, the commissioner, governor, and top Metropolitan Council officials developed their strategy largely behind the scenes. On the implementation track, the multi-stakeholder Steering Committee became less and less important as working groups took over specific parts of the overall project. Mn/DOT appointed an experienced manager to provide overall ongoing coordination. Metro Transit appointed an experienced manager to perform similar functions.

As the working groups organized they involved people with technical skills and local knowledge who hadn't previously been involved in the UPA process. In other words, collaboration – often across organizational boundaries – was important further down the organizational hierarchies. Vendors of particular technologies became more important. In many cases, working groups had to renegotiate parts of the original UPA plan due to new information about technical feasibility or political barriers. Several interviewees suggested that systems thinking was necessary to help group members break down barriers among themselves and within participating government agencies. For example, one interviewee noted the importance of thinking of the I-35W corridor as a system in order to counter the tendency for Mn/DOT employees responsible for highway signage to focus on one or a few locations along a highway. Instead, signage workers had to shift their concern to how signs worked together to manage traffic flow along the whole corridor.

Sometimes working group members had to learn new language in order to work with other stakeholders in the UPA project. For example, local transportation planners had to translate unfamiliar Federal transportation phraseology to their own situations.

Finally, as UPA elements such as reconstruction of Minneapolis streets or improvement of I-35W began to interfere with normal traffic and commuting patterns, UPA champions began communicating with appropriate parts of the travelling public, often through the Internet, to keep them updated on disruptions and explain the value of those parts of the project. A public information campaign helped commuters in the south metro prepare for the extension of the MnPASS system to I-35W. A particularly delicate challenge was managing public expectations about the Bus Rapid Transit service planned for the Cedar Avenue corridor. The UPA project was only providing some parts of BRT, not full-fledged operation. The people responsible for this UPA component strove to excite users of the corridor about the potential of BRT, but also remind them that what they would experience early on wouldn't have the full benefit of a complete system.

Bridging Differences among Stakeholders after the UPA Award – New York City

The Congestion Mitigation Commission held fourteen public hearings during the second half of 2007 on Mayor Bloomberg's congestion plan and alternatives. Ultimately, the commission

recommended a modified version of the mayor's plan that responded to calls during the hearings for a fairer and simpler approach. Only two of the commission's thirteen members – both appointed by the Democratic speaker – voted against the plan.

Meanwhile an ad hoc interagency working group dominated by city appointees held weekly meetings to mesh different parts of the UPA proposal and deal with technical issues such as how to collect the tolls. One interviewee commented, "We worked intensively together over a period of months in order to turn out a product that was collaborative. [The process] was very much face to face, at least weekly meetings, and lots of email. The result was the 'collective opinion of operating agencies."

The commission's proposal was endorsed by the governor, the mayor, some suburban newspapers, the four major local newspapers, and a coalition of 135 civic, business, labor, environmental and advocacy groups. Reaction in the City Council, however, was mixed. The council did vote to send the Legislature a home rule message supporting the proposal, but the 30-20 split in the vote indicated significant opposition. Civic groups and elected officials in Brooklyn, Queens, and the Bronx still were unconvinced that the plan would produce benefits for their areas that would outweigh the cost of the congestion charge.

Bridging Differences among Stakeholders after the UPA Award – Miami

As in Minnesota, the UPA implementers had to intentionally build understanding among highway users about the new lane pricing system. Holding required public hearings was simply not enough. The consequences of not investing in public education became all too clear, when the implementers opened the managed lanes to traffic on an experimental basis in July 2008. The managed lanes ground to a standstill and a few serious accidents occurred. Subsequently FDOT organized a public information campaign, including a website and distribution of "Guidelines for using the 95 Express" to local media. Apparently the campaign was successful, because the full project opened without incident in December 2008.

Unlike Minnesota interviewees, those in Florida did not dwell on the need for working group members to develop shared understandings of the UPA project within the groups or with other parts of the transportation system. This difference may be due to the greater complexity of the Minnesota undertaking as well as an artifact of the smaller number of people responding to our questions about the Miami project.

The Process of Creating Inclusive and Functional Structures – Minnesota

The Steering Committee evolved from the initial meetings to consider and develop a UPA proposal. As emphasized in our earlier report, its membership during the proposal development phase remained fluid and inclusive. Once Minnesota's UPA application was approved, Mn/DOT and Met Council established a more hierarchical structure to guide and implement the project. A Leadership Team at the top was composed of the heads of Mn/DOT, the Met Council, the regional office of the FHWA, and a "project champion," who was Bob Winter, a high-level Mn/DOT official. In the UPA organization chart, the Steering Committee was placed below the Leadership Team and its membership and duties became more formalized. Below the Steering Committee was the Program Coordinator, Mn/DOT's Nick Thompson, who was also the project manager for the I-394 MnPASS project. He in turn oversaw department-like groupings including highway, tolling, and transit infrastructure, telecommuting, and public relations. Numerous working groups handled specific projects that sometimes crossed these categories. As noted above, these groups incorporated people with specific expertise, responsibility, and local knowledge that was needed to implement parts of the overall project. Interviewees indicated that

the implementation structure worked reasonably well in terms of coordinating the various UPA components and completing them within required timeframes and budgets. The diminished function of the Steering Committee was discussed above and will be discussed further in the structure and governance section of this report.

The Process of Creating Inclusive and Functional Structures – New York City

PlaNYC had been developed with the assistance of a public advisory council. The Steering Committee appointed by the mayor to support the congestion pricing and transit plan included in PlaNYC was broadly inclusive. Its successor, the Traffic Congestion Mitigation Commission was less inclusive, but the membership reflected political realities. The Governor, Mayor, heads of the majority and minority conferences in the Legislature, and the City Council speaker each named appointees to the group. The ad hoc working group was an effective structure for bringing together people from many different government agencies to hammer out implementation plans.

The Process of Creating Inclusive and Functional Structures – Miami

The sponsors and champions of UPA in the Miami metro area seem to have relied heavily on existing structures to develop and implement the proposal. FDOT's central office played an important role, as did the two local FDOT district offices. District 6 was designated the lead agency for implementing the 95 Express portion of the project. Various cross-functional, cross-agency teams were assembled to carry out various tasks such as designing and implementing the new charging system for I-95.

Planning and Implementing the Collaboration's Activities – Minnesota

The planning for UPA both during the proposal development and implementation phases has been highly pragmatic and oriented toward problem solving in order to deal with tight timelines and to produce results. During proposal development, said one interviewee, "we thought outside the box and people were willing to move things along quickly." Some ideas included in the proposal were not fully developed and many had to be modified substantially once the UPA project got underway. Yet, one of the top coordinators of the project commented as the project neared completion that "good front-end budget-setting and process forecasting" had enabled the overall project to succeed.

One interviewee offered the following vivid description:

> It's also a challenge for the mindset of the project managers—you have to break the mold as far as how things are running every day. There's much more to coordinate. For example, you have to be careful about environmental reporting at the same time as land acquisition. It's sort of one foot on the brake and one on the gas. It's hard because we were given some leeway from the Feds to go out of sequence, but we still need to keep things running smoothly. And we didn't want to upset things too much or the Feds could pull our funding. It's a balance between allowing project managers to have freedom, but still checking with them enough to make sure that we're doing what we have to be doing. It's also hard because the project managers are everywhere—both within Metro Transit and in other organizations. But we established communication lines, which has helped. We do that by hitting the brakes—immediately calling meetings on the fly and dealing with stuff right away. We call meetings on the fly with the appropriate personnel; those meetings tend to be affected by the complexity of the project. We like to deal with things quickly so that we can hit the gas again and stay on schedule. With the tight timeline, people will drop what they're doing to deal with stuff because of the urgency of the project.

Interviewees' descriptions of implementation in Minnesota are full of terms like "scrambling," "hard work," "renegotiating." The work of negotiating and renegotiating seemed to take the most out of many individuals. Several talked about the headaches involved with trying to match promises of eased Federal regulations with the immense amount of paperwork involved in obtaining Federal (and sometimes state) approvals for funds or purchases and in accounting for use of funds. The Metropolitan Council hired a consultant just to keep track of the money, which came from many different sources and flowed in many directions. Lots of renegotiation was required to obtain needed waivers (or to adjust project components) to local and regional government plans.

Speaking of the transit group, one interviewee commented:

> [T]hey just hammer issues. Some projects have had surprises, and they need to be upfront about budgets. Everyone had to raise issues. Minneapolis had issues with the [bus] shelters and the business community. They dealt with it with very regular meetings with the people responsible for components. Everyone had to be honest, expose issues, and work through it. There are a lot of people who didn't know about this two years ago, and now they're devoting major time to it. The workload has been incredible.

Sometimes the negotiations revealed better ways to proceed. For example, the group working on dynamic pricing realized that instead of the original plan to set up a new "back office" to handle the customer service, pricing, and billing, they could simply use the existing system set up for MnPASS. Not all concerns were resolved – the regional FHWA objected to what they saw as safety risks in some design elements of the priced lanes on I-35W, especially the use of shoulder lanes. For the most part, the lane design proceeded without the changes desired by FHWA.

Planning and Implementing the Collaboration's Activities – New York City

Planning for the New York project proceeded until the deadline for legislative action passed and the project was terminated (though the city would find some ways to continue with elements of the project). The inter-agency working group was assisted by a consultant who used a sophisticated computer modeling program to develop scenarios based on different assumptions about commuting habits etc. Group members had already begun negotiating for access to the E-ZPass system that was already being used to charge for use of the city's tolled bridges. They had come to the same conclusion as implementers in Minnesota that relying on the "back office" of an existing tolling system made more sense than setting up a new one.

Planning and Implementing the Collaboration's Activities – Miami

Interviewees in Miami agreed with their Minnesota counterparts that planning and implementation processes were far from business-as-usual. Said one: "We still had to follow the rules, but we weren't always sure which ones we would follow….Things were often out of the normal order. We were doing design, construction, operations, and planning at the same time." Another said, "We went from planning to contracts in a year and a half. We could have spent that much time [normally] to put a signal in. Software development alone would have taken three years." The implementers drew lessons from Minnesota's I-394 experience to plan I-95 Express. They learned from the problems with their early opening of the priced lanes on I-95 and made needed adjustments. As in Minnesota, interviewees mentioned considerable negotiation across agency lines during implementation. They too mentioned coordination as a key and time-

consuming function. Said one interviewee: "We put in significant time and effort over the last two years, including preparation of the application, coordination with three transit [operators], coordination of monthly status meetings, construction of capital improvements at park and ride lots, coordination of rolling stock purchases, and public meetings."

Balancing Power and Managing Conflicts – Minnesota

Because power (in terms of authority and other resources) typically varies considerably among the partners in a collaboration, champions of the collaboration will ensure that forums are structured in ways that amplify the access and voice of partners that have less power so as to benefit from their input and to build their commitment to the partnership. In Minnesota, such power balancing was accomplished in the stakeholder forums by having neutral conveners.

As the collaboration proceeds, conflicts between partners, especially those who have not been involved in initial phases are likely. They can be handled through negotiations as described in the previous section; when they cannot, the party with the most authority on his or her side may simply proceed without agreement or the conflict may be turned over to someone higher up a hierarchy. Both approaches were used in the Minnesota UPA case. The downside of the first approach is that the losing party may be disgruntled and valuable contributions may be lost.

Balancing Power and Managing Conflicts – New York City

An array of citizen groups in New York City used their own membership bases and alliances in order to be more powerful actors in the city's transportation policy making. The Tri-State Transportation Campaign, for example, organized in 1994 as an independent, nonprofit organization to be a watchdog on behalf of residents of the extended New York City region. Partnership for New York City, to take another example, is a coalition of large businesses that put resources into studying transportation and other issues and pressing for change. The extensive public consultation process in the New York case allowed many groups to put their mark on the final version of the congestion pricing plan.

Conflicts over elements of the UPA proposal and follow-up planning seem to have been worked out among participants in the city's ad hoc UPA. Since implementation did not get far enough to produce further conflicts, there is not much to say about conflict in that phase.

Crucial to the ultimate fate of the New York UPA project was the existing balance of power among elected officials – the Mayor, Governor, legislators, and the City Council. This aspect of the case will be discussed below in the section on power dynamics and other contingencies.

Balancing Power and Managing Conflicts – Miami

In the Miami case, power balancing was not much of an issue since the champions of the Miami UPA did not include a diverse array of stakeholders in the discussions leading up to submission of the proposal, nor during the implementation phase. Interviewees did not mention conflicts that could not be settled by negotiations within the implementation teams.

Structure and Governance

This section discusses the structural components of these collaborations for decision-making and implementation. Across the three sites, we see considerable variation in the degree of centralization versus decentralization of decision-making. For the Minnesota UPA, where we concentrated on its implementation phase, four themes concerning collaborative structure are important: the altered role of its Steering Committee and the potential rise of "proto-institutions" from partners' experiences with UPA, the addition of new decision-making structures at the local level, and the role of conflicting rules. Each of these themes is discussed below.

Cross-site Comparisons

There is a sharp contrast across sites in the degree to which the UPA partnerships emphasized centralized vs. decentralized structures for decision-making. The Miami site is an example of a centralized planning and implementation network – Florida's Department of Transportation (FDOT) and two of its districts in particular (Districts 4 and 6) were most involved in both the proposal development and implementation phases of the project. According to interviewees, FDOT made the initial decision to apply for UPA funding and then brought in transit agencies and Metropolitan Planning Organizations (MPOs) for endorsement. One FDOT district took the lead for the first phase of the project while the other district took the lead for the second phase. Even operational teams developed for specific elements of the project were maintained throughout both the planning and implementation phases. As one interviewee stated, "minor decisions were made by consensus, major decisions were made by FDOT upper management, sometimes in consultation with the districts."

By contrast, New York City's UPA experience was significantly shaped by a loosely knit and large coalition of broad interests, including environmental justice, labor, health, business (The Partnership for New York City), civic, neighborhood, and community groups, as well as university-based research centers and several elected officials (Schaller 2009). This group, the Congestion Pricing Steering Committee, formed several years prior to the UPA project and was aimed at improving the transit system service and capital improvements to reach more individuals. They held public forums and issued a series of reports that helped lay the foundation for Mayor Bloomberg's 2007 PlaNYC that called for major transportation reform.

Minnesota is an interesting case of upper level decentralization during the planning phase, upper level centralization during early implementation, and then devolution or decentralization at much lower levels as the specific projects rolled out. As we discussed in our first report, Minnesota's UPA project was structured around a Steering Committee of stakeholders that changed significantly from the proposal development to the implementation phases. Initially, the Steering Committee was a loose, horizontally-organized group responsible for making the major policy and operational decisions required for the proposal – for example, the Steering Committee was charged with deciding how to meet the tolling requirement and choosing the corridor and the transit projects to target. When project implementation began in earnest, both the governance structure and processes for UPA became more formal and hierarchical. The Steering Committee still existed, but was much smaller and its membership included only representatives from the two primary partner agencies, the University of Minnesota, and the affected cities and counties.

Evolution of Minnesota's Steering Committee

Throughout implementation, the Steering Committee continued to exist but meetings were infrequent and, as one interviewee described, "[a] one-way communication flow." In other words, the shape of the forums changed as the nature of the task changed. The two project leads from Mn/DOT and MetroTransit were the committee's leaders. Interviewees were mixed in their reaction to infrequent meetings -- some thought this represented people "going back into their silos," while others saw a reduced role for the Steering Committee as appropriate during implementation because middle managers and technical experts in the lead agencies were collaborating on the specific UPA projects. Communication among these middle managers and technical experts was key, as one of the two overall project managers described:

> Project managers are everywhere but we have established communication lines. We do that by hitting the brakes – immediately calling meetings on the fly and dealing with stuff right away. We call meetings on the fly with appropriate personnel; those meetings tend to be affected by the complexity of the project. We like to deal with things quickly so that we can hit the gas again.

According to top level officials, problems were being solved at the mid-levels of their bureaucracies and not even reaching them, an indication that collaborative decision-making was working well.

There were also some indications by top-level officials that new structures or patterns of collaboration across agencies were developing that might outlast the UPA project but build on the Steering Committee concept. We call these "proto-institutions." As one official stated:

> We meet at Mn/DOT on a monthly basis anyway, on a variety of issues. We did that before UPA but UPA added to the book of business and brought in new, common things, such as our strategic approach to the legislature, various communities, and various aspects. We're now thinking more strategically… There might be a second-generation where we start looking at how it might be replicated. That longer-term vision might be another reason for the Steering Committee to stick around.

Additional Structures for Decision-Making in Minnesota

An important theme in this second round of interviews concerns the extent to which implementation directly involved more stakeholders among the cities and counties affected by UPA projects along the I-35W corridor. For example, issues concerning transit stations, rights of way, commuter disruptions, and so forth had to be discussed across multiple city and county jurisdictions. As one interviewee stated, "in implementation, cities became decision-makers." Therefore, at the local level, structures were developed or activated for this decision-making. For example, the director of public works for one of the affected cities described his UPA work with Mn/DOT, the Met Council, the legislature, the I-35W Solutions Alliance, and the 494 Corridor Coalition.

At the county level, the structural complexity related to implementing UPA projects is even more impressive. A county engineer described how four different groups are involved in UPA decision-making in his county. The Dakota County Regional Rail Authority is "in charge" of the overall UPA project (where the members of the DCRRA are also members of the county's Board of Commissioners). Making recommendations to the DCRRA is also the Cedar Avenue Committee, consisting of elected officials and key staff from local agencies, who meet quarterly. The county engineer views this committee as a "sounding board for political direction and input,

recommendations." Under the DCRRA is a technical group that meets frequently with him and acts as a clearinghouse for all pieces of the UPA projects. But the DCRRA is the final authority.

Given this level of complexity at the local level, it is not surprising that several interviewees mentioned the need for a degree of centralization, in particular, the need for a single point person through whom all communication flowed. As the one director of public works stated, "I don't want three people; I want *one* person so that that agency is speaking with one voice. As far as collaboration, this is key" (emphasis ours).

Conflicting Rules

Another theme highlights the role of rules that emerged more strongly during implementation than during proposal development. Several officials at local implementing agencies complained that rules at the Federal level created bottlenecks for their work and that rules between the FTA and FWHA seemed to conflict. As one described, "Whose rules triumph? Instead of less, we got more and more… With a tight timeline, there was going to be recognition of the need for relaxed systems [on the part of the FTA]. That was completely false."

Power

Power has already been discussed above in relation to processes and structure, but here we want to focus directly on it. The UPA projects occurred within a complex of power centers and connections. The three cases were classic examples of shared power (Crosby and Bryson, 2005). Power dynamics in all three cases were shaped by hierarchy, especially within government agencies and across government levels, but also in implementation structures. Champions and sponsors would need considerable political skills to win over people with decision-making authority affecting the entire project or its pieces.

Our earlier report details the building of a coalition of support within USDOT for congestion pricing and an integrated approach to reducing urban traffic congestion. The USDOT secretary also was able to fund the Urban Partnership program so generously because Congress (unusually) failed to earmark a substantial portion of transportation funds.

The earlier findings, along with research conducted for this report, highlight the importance of collaboration sponsors and champions keeping in mind and working effectively with the full array of policy-making arenas that have authority over the progress and outcomes of their work. We found evidence that formal and informal leaders of the UPA projects needed to appropriately sequence attention to different arenas and keep in mind the interactions of different arenas. For example, in Minnesota, leaders of the UPA initiative put pressure on the governor to take responsibility for submitting an Urban Partnership application by offering a credible prospect that the legislature would do so if he did not. In New York City, supporters of the UPA were able to win enough support from the City Council, despite the opposition of council members representing Queens, Brooklyn and the Bronx. At the legislature, they failed, in part because that environment allowed representatives of these same boroughs to have more power to stymie a project they did not like.

Minnesota

The earlier report also traces the effort in Minnesota, especially by advocates from the Citizens League and the university, to gain support from the governor; upper reaches of Mn/DOT and the Metropolitan Council; the City of Minneapolis; and key legislators for submitting a UPA proposal. Once top Mn/DOT and Met Council decision makers agreed to submit the application,

the focus was on mediating among the interests of multiple local governments and constituencies that were affected by traffic congestion in the metro area. The locus of mediation was the forums discussed in the process section, where we talked about development of shared appreciation of the congestion problem and potential solutions. Here we note the importance of more "political" factors. The general agreement to focus on the I-35W and Cedar Avenue corridors (along with some smaller initiatives elsewhere) was fostered by the existence of the I-35W Solutions Alliance, a joint-powers organization made up of elected city and county officials along the I-35W corridor from downtown Minneapolis to Lakeville in the south. In effect, this group already was a coalition seeking to mitigate congestion and develop transportation systems that fostered economic development. Including reconstruction and reconfiguration of bus lanes in downtown Minneapolis solidified the support of the legislators and local officials who represent the biggest city in the region. Finally, the expectation of serial reciprocity mitigated the frustration of legislators and local officials representing other parts of the metro area.

During the post-award phase, supportive legislators such as Steve Murphy, chair of the Senate Transportation Committee, along with Mn/DOT representatives and other champions pressed legislators to approve the dynamic pricing arrangement and state matching funds. Relations between the Democratically controlled legislature and the Republican governor were tense, and metro and rural legislators had long been divided about allocation of transportation funds (especially rural highways vs. urban transit services). Yet all were aware of a developing consensus among Minnesota citizens that the state's transportation systems were in dire need of improvement. One source of friction during this phase was disagreement about allocation of revenues from UPA's lane pricing. Metro Transit wanted to be sure that transit would benefit; Mn/DOT had other plans. Eventually, Sen. Ann Rest helped negotiate a formula that was acceptable to all.

Ultimately, the legislature approved the required matching funds and tolling authority without major battles. Several interviewees noted that familiarity with the MnPASS program on I-394 was a contributing factor in legislators' comfort with the UPA plans. Additionally, one interviewee noted that no opposition group emerged "to make things more difficult."

During the implementation phase, the power of local government officials became more of an issue, since they had to give consent for the specific UPA parts that affected them. In some cases, plans were modified and elements added to obtain those officials' approval. Working groups were a decentralized locus of power during implementation, but they were always answerable to the UPA coordinator and to the rule enforcers at Mn/DOT, Met Council, and the Federal transportation administrations. The shadow of USDOT's power loomed over the entire project; and Mn/DOT and Met Council decision makers were powerful arbiters of disputes – for example, who would be in charge of new structures or systems. As the project neared completion, legislators were less and less involved. They tended to deem it a success because they were hearing no complaints, but some were frustrated by not being kept in the loop, and they were skeptical about the ultimate impact of the project.

Clearly some tradeoffs made to win over officials in the UPA project were problematic. Of special concern to some stakeholders was the overriding of safety concerns to allow dynamically priced shoulder lanes. Overall, it appears that the locus of authorization for collaboration can shift over time along with the structural forms (lateral or hierarchical). Those shifts, in turn, require that the leaders of a collaborative develop the political ambidexterity to navigate multiple (and sometimes conflicting) authorizing forums simultaneously and

sequentially. This happened in the Minnesota UPA case, but not in New York City, where the mayor's and governor's efforts at the legislature failed.

New York City

As in Minnesota, the New York City case involved an array of powerful government players – the mayor, New York City Department of Transportation, MTA, Port Authority, the City Council, the governor, and legislators. The Tri-State Transportation Campaign (TSTC) and the Partnership for New York City were also especially powerful as members of the coalition advocating congestion pricing and transit improvements. Mayor Bloomberg decided to back the UPA proposal because it furthered his agenda and an unprecedented coalition of diverse civic and advocacy groups, along with New York government transportation experts, supported its basic elements.

The ultimate plan that was presented to the legislature not only had the backing of Mayor Bloomberg, the governor of New York, a majority of the City Council, the civic coalition, and major newspapers; it was also endorsed by suburban officials. The key opposition to New York City's UPA plans was from Democratic state legislators representing the New York City boroughs of Queens, Brooklyn and the Bronx. They were not convinced that their constituents would benefit from the UPA plans. Moreover, Democratic legislators, including the powerful speaker of the Assembly, had a prickly relationship with the mayor. Indeed, media accounts of the legislature's failure to approve UPA funding and tolling authority blamed the clash between Bloomberg and Democratic legislators. Our interviewees offered a more complex assessment. One offered two main reasons that the UPA legislation was defeated:

> Number one was politics. Mayor Bloomberg has a give-and-take relationship with the state legislature in Albany. They have successfully collaborated in the past, but on this occasion, the way the mayor's priorities around congestion reduction were perceived by the elected officials led to their inability to separate the merits of the UPA plan from the issues they had with the mayor himself. In other words, the pragmatism of the UPA project could not outweigh the negative politics between the mayor and the legislature.
>
> Number two was general lack of understanding. When this proposal process was happening two years ago, there was not a perceived financial need for the MTA and for New York City's transit system in general. Also, the legislature and general public did not fully understand the need for and usefulness of congestion pricing as a solution to congestion.

Given the multitude of powerful players in the New York City case and their history of conflict, the amazing thing is how close the UPA package came to being implemented. Even though the UPA package was defeated, city officials, the MTA, and the legislature have continued to struggle together over the issue of traffic congestion and transit improvements and have adopted some proposals to improve transit service.

Florida

Politics in the Miami UPA case were considerably simpler and less conflictual than in the other two. The cast of powerful players was smaller, and the early and continued support of the transportation secretary and assistant secretary was crucial in gaining the governor's blessing and winning over local officials. Contributing to the lack of political conflict was the relative

simplicity of the project: once FDOT settled on the pricing of I-95 lanes as the UPA centerpiece, fewer stakeholder groups were affected, compared to Minnesota or New York.

Collaborative Leadership and Related Competencies

As we noted in our initial report, leadership by a host of committed sponsors and champions is typically required if complex cross-government, cross-sector collaborations are to form and function initially. Sponsors have formal authority that they can bring to bear in securing political support and other resources for the effort. Champions, who often lack formal authority, supply ideas, energy, and determination to help stakeholders define public problems, evaluate alternative solutions, and push for the most promising solutions.

Sponsors and champions, who may also together be called policy entrepreneurs, help build and nurture collaborations by exercising visionary and political skills, in particular. Among visionary skills, our initial report highlighted the ability to help stakeholders frame a public problem and potential solutions in ways that can appeal to multiple interests and neutralize opposition. Another important visionary skill is championing innovative solutions. Probably the most important political skill is coalition building, that is, assembling enough key stakeholder support for a proposed policy change that policy makers will adopt and implement desired policies, programs, and projects.

Effective champions (and to a lesser extent effective sponsors) are also skilled in the *sine qua non* of collaboration, which simply might be called "working well with others," or relationship-building. In projects like the UPA, champions must be sure that they also have the technical skills to oversee project planning and implementation and that they recruit other project champions with technical and relational skills as needed.

Our initial report described the leadership of sponsors and champions at the national level in the Urban Partnership program and in Minnesota during the preparation of the UPA proposal and in the months just after the state was selected as one of five UPA sites. This report adds findings about leadership in the Miami and New York projects and about leadership during the project's implementation phase in Minnesota. Project management competence is a particularly important leadership skill during implementation of collaborative projects.

Florida

The transportation secretary was a committed sponsor throughout, and an assistant secretary was an important champion. One interviewee noted that these officials worked hard to help elected officials see the UPA project as "the right thing to do." Once the award was approved, the locus of leadership moved to the two FDOT districts with implementation responsibility. Alice Bravo, director of transportation development for District 6 was the initial project leader, followed by the director of traffic operations, Deborah Rivera. A consultant, Alan Brick-Furing, who worked with the HNTB consulting firm, was an important champion who played multiple roles. One interviewee said, "He broke the project down functionally in terms of what needed to be done, then got people from individual organizations with the needed skill sets into work groups." Rory Santana, District 6 ITS Manager also was key to pulling all the pieces of the UPA together.

Interviewees suggested that the chief collaborative skill exercised by these sponsors and champions was coordination and communication between the central and district FDOT offices as well as consultation with FHWA and other parties. Champions may have had less need, compared to Minnesota, to nurture relationships and negotiate with diverse stakeholders because of the relatively narrow scope of the project, the strength of FDOT's authority, and a political culture that accepts more forceful action (as one interviewee said a bit facetiously, "Minnesota Nice versus Miami Mean").

New York City

In the New York City case, the most powerful sponsor was Mayor Bloomberg, which had considerable advantages and disadvantages. He could direct city agencies to deploy expertise and other resources on behalf of the project and he could give it high visibility among an array of constituencies. As a successful former businessman he could appeal to business leaders and win them over as champions of the UPA plans. He also exercised visionary skills in launching the PlaNYC process and giving the resulting plan a high-energy launch. Yet any New York City mayor is likely to be a lightning rod for critics of how the city is functioning, and Bloomberg had had his share of controversy. The biggest disadvantage that he brought to the UPA project was difficult relations with Democratic legislators, some of whom charged him with arrogance and condescension during the intense fight to win their support for UPA funding and tolling authority.

Champions of the New York City project represented many key stakeholder groups and they helped ensure that the final congestion pricing and transit package submitted to the legislature would appeal to most of them. Many of these representatives served on the Steering Committee that the mayor appointed to oversee the congestion pricing and transit initiatives contained in PlaNYC. The Steering Committee thus became a powerful champion that, as one interviewee noted, "provided knowledge around the needs and wants of New York City and its surrounding boroughs—especially providing representation for those who don't have access to transit. We also knew that better transit service was key to gaining broad public and political support; it was needed to win support all around." Champions within the transportation agencies worked together to develop the UPA proposal and to fast-track planning once New York City was selected as a UPA site.

While the Mayor and numerous champions were successful in framing congestion pricing and transit improvements as attractive from an environmental and economic standpoint, they were never successful in providing residents of outer boroughs a sense that their interests would be served by the plan. Especially problematic was their view that the mayor's plan benefited elite Manhattanites and that they would have little choice about accepting new burdens (chiefly new tolls) without real improvements in their commuting experience.

Although Mayor Bloomberg and numerous champions were successful in winning over enough city council members to support the final pricing and transit package and though they worked hard to win over enough state legislators, they ultimately fell short. One key player needed as a sponsor was Sheldon Silver, the Democratic speaker of the Assembly. He implied that he personally supported the package, but also charged that Democrats had been excluded from the planning process. Therefore, Silver's efforts to rally Democratic legislators in support of the package were ambivalent at best. Following a meeting with the Democratic conference, Speaker Silver (D) announced that the bill lacked the votes to succeed and therefore would not be heard on the assembly floor.

Minnesota

Several interviewees remarked on the sizable number of sponsors and (especially) champions involved in the Minnesota UPA and the relative stability of the group over the period from pre-application through implementation, though some champions changed roles during the process. (Of course, some of the stability was attributable to the project's short timeline.)

The most important change among the sponsors was the replacement of Carol Molnau as secretary of transportation, when the Minnesota Legislature refused to confirm her in early 2008.

Her successor was Thomas Sorel, the former regional FHWA administrator. Though the regional FHWA office had been unhappy with being largely left out during the design phase of the Minnesota project, Sorel as transportation commissioner was a whole-hearted supporter of UPA and touted its success around the state. He is a firm believer in collaborative approaches to transportation planning and implementation and enjoys great professional respect among his peers. He sees Mn/DOT as playing a strong formal leadership role during implementation, while needing to remain quite collaborative.

At the Mn/DOT senior management level, Bernie Arseneau remained, in the words of one interviewee, "the key point person to make this whole thing happen." Other important champions included Arlene McCarthy at the Met Council, and Beverly Miller at MVTA. They were crucial point people in their organizations; certainly Miller used her authority as MVTA executive director to keep the Cedar Avenue portion of UPA moving along during implementation despite a number of unforeseen headaches.

Local officials also may have seen themselves as using their authority to ensure that the parts of the project directly affecting their communities were carried out appropriately. Said one:

> [O]ne of the things we're doing is holding peoples' feet to the fire to make sure that agreements are honored; if it was part of the funding, then it needs to be part of the project. It's very easy when costs get out of hand, and then things get taken out of the project, such as sound walls. And I'm not going to let that happen.

Several interviewees cited the partnership of Nick Thompson at Mn/DOT and Craig Lamothe at Metro Transit as crucial champions for successful UPA implementation. One interviewee said of the pair, "[T]hey both value professionalism and they get excited about innovation so it's been fun to watch [them]." The pair came from two notably different organizations but they were able to build a strong working relationship. They developed a "dog and pony show" that they presented on demand to numerous community groups in order to foster understanding of the project during implementation. At one point they were presenting about one a week. One interviewee said of the two:

> Craig Lamothe is doing a great job and has worked really hard. He keeps everyone on task and lets us know when there are glitches. You really need that kind of point person – not a point agency – who can devote their life to the project and know everything that's going on. Otherwise, there are so many things in your daily activities that it's easy to get pulled away. Nick has also been an asset—particularly on community engagement around 35W.

During the implementation phase, the telecommuting part of the project became more prominent. Adeel Lari from the University of Minnesota's Humphrey School remained the chief champion, but new ones became involved from agencies focused on commuter services. Lari, said one interviewee, is "an eternal optimist, which can be frustrating, but also brings encouragement to continue." Also important was John Doan of SRF Consulting, whose team is pulling together a lot of the pieces of the telecommuting project.

During the implementation phase, the chief champions worked together effectively as an entrepreneurial team. Said one interviewee:

> In addition to the political leadership, it's also important to have a team of managers who are technically competent and empowered by their leadership to do this project. They need

> entrepreneurial spirit. That includes Bernie Arseneau, Nick Thompson, [Metro Transit General Manager] Brian Lamb, Craig Lamothe … Adeel Lari…. So you've got some pretty innovative people who aren't afraid to move forward. And they seem to work well together. There's not a lot of turf concern—it's more about getting the project done.

To summarize, sponsors and champions who were crucial to the development and post-award strategizing and planning for Minnesota's UPA remained, for the most part, committed during implementation. The governor and legislators faded in importance, while local officials and project managers became more significant. New champions joined the initial group. Cross-boundary relationship building was, if anything, a more crucial skill for these champions as they encountered unanticipated implementation challenges, exacerbated by the inability to do thorough pre-planning. Thompson and Lamothe especially exercised visionary leadership as they tirelessly promoted the central UPA idea of congestion reduction through lane pricing and transit improvements. They also were called upon to be supreme coordinators – one interviewee referred to them as *uber* project managers. Champions at the working group level also were often required to have technical and technological competencies that enabled them to mesh people, procurement systems, machines, and advanced computer technology to produce innovative controls, signage, or a simulator bus.

Technology

Technology in organizations, including both work procedures and specific tools or equipment, has more recently been conceptualized as part of an organization's social system (drawing on the socio-technical school of the mid-20th century) *and* as an actor in its own right (Latour 1987; Sandfort 2009). Technology is not simply "a thing" disaggregated from human work in organizations (Berg 1998) nor is it fixed and static. Viewed as technology-in-use (Orlikowski 2000), technology is an "ensemble or 'web' of equipment, techniques, applications, and people that define a social context…" (Orlikowski and Iacono 2001: 122). Within the UPA, both communication and specific transportation technologies fulfilled crucial two crucial roles: first, as facilitators of collaborative behavior; and, second, as nonhuman actors in the project's processes. Table 2 summarizes the highway and transit technologies used in the Minnesota UPA in order to help the reader understand references to these technologies below.

Table 2: Minnesota UPA Technologies

	SYSTEM	PURPOSE	IMPLICATIONS	OTHER NOTES
ROADWAY	MnPASS dynamic toll lanes	Create a congestion-free option for drivers willing to pay. Rate ranges from $.25 to $8.00 based on traffic density (free for carpools, transit, and motorcycles).	Provides more choices for commuters, improving overall traffic flow. However, fighting "Lexus Lane" labels continues to be a challenge.	Paying users must opt in before use (by leasing a transponder from Mn/DOT). This differs from systems using license-plate video capture technology to bill users after use. *Includes Priced Dynamic Shoulder Lane (PDSL) on I-35W North.*
	MnPASS enforcement system	Enforce correct HOT lane usage (fine solo drivers without a MnPASS transponder).	HOT lanes are enforceable, while most other managed lane system pieces are advisory.	Video enforcement not legal in Minnesota. System reads radio frequency identification (RFID) tags in MnPASS transponders, transmits results to squad cars.
	Managed lane system	Communicate with road users to improve traffic flow and safety.	More efficient use of existing infrastructure, but dependent upon public acceptance and understanding.	Sign information includes advised speed limit by lane, lane closures, lane status (e.g. general or HOT).
CUSTOMER INFO	Variable message signs (aka blackout signs)	Provide drivers with context-appropriate instructions ("Do Not Enter", "Buses Only", "Share the Road", etc.) dependent upon time of day and direction of approach.	Easy to make adjustments to rules as needed, though not just limited to rules: used for advisory messages, parking availability, recommended driving routes, etc.	Expanded from limited pre-UPA usage near Minneapolis convention center, to a total of over 60 (18 on Marquette and 2nd Avenue corridor, with the others around downtown).
	Roadway signs with Park & Ride availability info	Efficiently distribute commuters. Makes Park & Ride easier to use.	Makes multi-modal commutes easier for customers.	
	Time comparison signs (transit vs. driving)	Communicate transit advantage, if any; enhance predictability for potential transit users.	Could encourage people in single-occupant vehicles to switch to transit if roads are congested.	Likely left blank when transit/HOT time is equal to SOV.
	Real-time bus arrival/departure signs	Predictability for transit riders (no uncertain waits)	Could attract more choice riders. Sets new expectations for transit customers	
TRANSIT	Transit signal priority	Enhance transit reliability by shortening red lights (or extending green lights) for behind-schedule transit vehicles	Encourages use of transit through greater predictability for users	While UPA project focuses on reliability, other TSP systems (including Cedar Avenue in south Metro) emphasize speeding up express routes
	Driver assist system	Keep buses in center of tight lanes/shoulders	Useful as marketing tool (e.g. "Bus 2.0" wraps on MVTA vehicles). Enhances reliability and safety, especially in winter months	Used by MVTA buses on Cedar Avenue in the South Metro
	Advanced bus simulator	Train drivers, especially for use of new technology (e.g. driver assist system), in controlled environment	Access to simulator could mean easy roll-out of other technologies in future due to low-risk environment for trial and training	Hosted by MVTA in Dakota County, but initially planned to be at U of M

Technology and Collaborative Behavior

In the first report, we discussed how technologies influenced the collaborative behaviors of MN UPA partners, including its role as a motivator, facilitator of the work itself, and as a relationship builder. In fact, we described the Minnesota UPA as "a technology-assisted motivating or attractor force" (p. 22). Through this current round of interviews, these were all re-confirmed, not only in Minnesota but also in Miami and New York City.

The prospect of learning and using new technologies to meet UPA project goals was an important motivator to induce stakeholders to the table. In New York City, bus rapid transit, bus cameras, better signaling and so forth were credited with helping to gain the support of commuters themselves. In Minnesota where we previously documented how technology caused excitement and interest at regional and state levels, the same kind of excitement now moved to county and local levels as these officials worked to implement specific UPA projects. For these officials, UPA-related technologies, such as the bus driver assist system and use of driver simulators, were important opportunities that they could now seize.

Technologies also facilitated the work of the collaboration itself. Certainly common communications technologies, such as email and web sites, made coordination among implementation partners easier and faster. These communication technologies also allowed local officials to communicate with constituents about the progress of the project and alert them to road and lane closures and delays.

As a relationship-builder among partnership members, technology allowed or forced people to integrate across boundaries, both within their own agencies or across different agencies and organizations. One interviewee from Miami summed up this role very well: "Merging of highway, transit and toll applications, dictates broad collaboration." Another said that "enhancements in technology allowed partners to work together to develop solutions that would impact each organization," including the need for partners to modify existing systems so that these systems could work together to produce the desired result.

In New York City, a different picture emerges. While the technology associated with the proposed UPA project necessitated collaboration between the Port Authority of New York and New Jersey and the MTA, its integration with the existing E-ZPass was complicated and made collaboration more difficult. The E-ZPass system is one of the largest interoperable toll collection systems in the world (a single system of tolling for the heavily travelled New York City/New York suburbs/New Jersey area.) However, in order to implement the UPA project in Manhattan (which would require 18 million transponders), E-ZPass would have made enforcement and other infrastructure details very, very difficult. The New York City example stands in stark contrast to Minnesota's experience, as documented in our first report, where interviewees clearly described technology as moving the project forward, not holding it back (p. 45).

Technology as Nonhuman Actor

By "nonhuman actor," we mean that technology played specific roles beyond simply motivating partners and facilitating partnership work. This is perhaps an unusual use of the term actor, but in sociology of science studies "anything that does modify a state of affairs by making a difference is an actor" (Latour, 2005, p.71). Our analysis of interview data suggests that technology: 1) provided solutions and presented a systems view of transportation that surpassed perceptions of individual actors; 2) was a significant policy mechanism and political factor; 3)

was essential to changing public perceptions; and, 4) could stimulate internal organizational changes.

As described in our earlier report, technology provided a solution once congestion pricing was the policy response. Congestion pricing is not feasible without technology for electronic enforcement, collection of fees, and road signage. As one interviewee in Miami said, "Operating the variable tolls requires extensive data collection in the form of traffic volumes, speeds, etc., to create operating profiles for the highway. The effective use of this data depends on its accuracy, the communication equipment in place used to transfer it and the software to analyze and process the data." Additionally, technology presented a systems view of transportation that was ahead of policy and administration. Current thinking kept highway technologies separate from transit technologies, replicating fragmented policies and government agencies. However, managed lanes, dynamically priced shoulders, enforcement and incident controls, real-time bus arrival/departure signs, and bus driver assist technologies could be integrated across agencies to offer commuters a system of efficient, reliable, and safe transportation options. As one transportation official in Miami said, "we needed new turnpike tolling, incident management, signs, lanes, to determine prices, run equipment between agencies…All of this had to fit together. That's where the work was." In Minnesota, top ranking Met Council and Metro Transit officials emphasized how "rolling transit technology into roadways at the same time" allowed them to look at corridors in terms of multi-modal systems and solutions. At the local level, county officials described how technology allows for "seamless transitions across corridors" for commuters. In other words, the ability of various technologies to coalesce into a coherent roadway and transit system remained latent (the uses of technology were never by themselves confined by agency boundaries) until technology was clearly established as central to this project.

Technology's role as a policy mechanism and political actor was also described in our first UPA report. Here we documented how dynamic shoulder pricing technology helped politically in Minnesota because tolling skeptics, including the governor and some members of the state legislature, could see tolling in a more benevolent light – that is, it would not take away an existing highway lane and drivers could choose whether to pay or not. Interviewees from the current phase of the project confirmed this finding – for example, a Republican state senator said how important it was to view congestion pricing as a "market-based solution" that then made "sense to me and my Republican colleagues."

At the local level, technology's role in politics was also evident. County officials, for example, described the risks elected officials were taking with some of the new technologies in use, especially in light of the current fiscal crisis: it is "really hard for elected officials to stand in front of naysayers and explain that this untested, multi-million dollar project is going to be 'good for you.' It is really an act of faith." Technology, however, also helped create effective, local efforts among politically contentious parties. A city public works director gives an especially good example:

> Location of bus shelters along the stretch here was a very controversial issue that I got involved in about a month ago. The business community was just outraged and very upset because we're gonna be placing all these very large bus shelters along the corridor and they thought they were ugly, distracting, and they didn't want them. Metro Transit felt they needed them to handle the volume of people we're going to deal with. At a meeting with the downtown business community group and Metro Transit and us, we realized that with the ability to do real-time display (with GPS and so forth they can add a bus stop and say your bus is 5 minutes away)… the

> businesses offered, "what if we put those into our foyers, into our atriums, into our lobby areas? And so people don't have to wait outside in the shelter; they can wait in the Wells Fargo lobby and you can have your display in there and then people can go out and get on the bus." So through that technology and then collaboration and with people we were able to eliminate some of the issues that people had concerns about. But it was the technology, the ability to use technology. *What I found fascinating about this whole thing is that the technology was always going to be there but no one kind of thought about how to apply it and that applying it in this manner would actually help us reduce infrastructure.* (Emphasis ours)

The hope and the ultimate goal is that UPA and its use of technology will change public perceptions about commuting and ultimately lead to less traffic congestion. As one project lead for the Minnesota UPA explained, the project provides commuters with a package of options and with information to make choices. More specifically, as one technology expert explained, "driver assisted technology could have an impact on how transit is viewed regarding reliability. By providing wireless service on buses, employers could even credit time spent working while on the bus." However, it is a challenge to communicate that travel during certain times on certain roadways is not free and a lingering question concerns whether commuters will make a mode shift when confronted with the information and options. According to several interviewees, for this to happen, "the technology really has to work perfectly."

Finally, there is some indication that technology as it has been applied in UPA's collaborative structure is changing the internal workings of partner agencies. For example, the director of a regional bus operation stated that the agency's experience using new UPA-related technology has created a more innovative and energized staff: "I make more of an effort to look at technology now… it's a great learning opportunity. Simulator, lane guidance, left turn off Cedar Avenue. [These are] all new and we can experiment, which is a good role for a medium-sized regional transit operator. It's easier to try new stuff than if you are Metro Transit with 800 buses, and [it is] exciting for staff. This wouldn't have happened without UPA." The state commissioner for transportation in Minnesota also reported the impact of technology on Mn/DOT's future work:

> When we started discussing our I-94 corridor, we sort of fell back into our conventional ways of thinking; then, we had to remember the UPA work we have done. It's really the technology we have. Our leadership is especially important because of the technology piece. There's some really creative stuff going on out there, such as LED lighting in the pavement. I'm not sure there is anyone else who could guide that, but it's not done on our own. Even that is collaborative.

To summarize, technology was one of the four T's in the national UPA project, along with tolling, transit, and telecommuting. In the eyes of most of the people interviewed, technology may have emerged as the most important "T" because of its ability to stimulate needed collaborative behavior and then follow through with practical and politically viable solutions. Successful implementation of UPA goals requires systems level thinking, not fragmented responses from siloed agencies. Roadway and transit technologies, along with communications technologies, were critical promoters of just such thinking.

Accountabilities and Outcomes

As noted in our initial report, accountability is an especially problematic concept in collaborative projects, because of the multiple nodes of responsibility and authority over project outcomes. In the case of the Urban Partnership program, the local or state agencies that submitted and signed a UPA with the USDOT were the prime locus of formal accountability. Yet responsibility for implementing parts of each UPA was spread widely through local government departments, local officials, regional agencies and governments, state agencies, and regional offices of Federal transportation agencies. In Minnesota and Florida, the governors also had endorsed the UPA and had direct executive responsibility for the operation of their state transportation departments, which were formal UPA partners. During implementation, however, accountability pressures were probably most intense on project coordinators and working group leaders. The gross measures were fairly simple: Were they and their collaborators able to bring in their parts of the UPA on time and within budget?

Many normal accountability processes – such as multi-level agency reviews of compliance with existing transportation plans, environmental impacts, and safety requirements – were waived or truncated in order to design and implement a high-impact project quickly. Several interviewees emphasized the benefits of this approach, but others (connected to the Minnesota case) were extremely concerned that safety concerns were not given enough attention. Meanwhile, paperwork requirements for obtaining and tracking Federal funds for particular parts of the UPA projects remained in place. When several Federal transportation funding streams were involved, the multiple accountability requirements placed considerable pressure on local agencies. Said one interviewee:

> There should have been more consideration of the time required. Not only is it more complex, but a tight timeline. Personally I don't want to do it again under the same conditions…. We didn't get more staff to do this in the short amount of time. I just think that the Federal side should have given more because they didn't really live up to the expectation of relaxing their rules and regulations. I'm a little frustrated with that.

Evaluation of Project Outcomes

Considerable resources were built into the Urban Partnership program to evaluate the effectiveness of program processes and products. Interviewees agreed that the chief general indicator of success would be reduced traffic congestion in the areas where UPAs were implemented. Several mentioned related indicators of success: increased transit ridership, better bus service, more carpooling, more telecommuting, and "new travel options for motorists." A few mentioned additional indicators: improved safety, new economic development, and improved air quality.

Some interviewees described very specific success indicators related to traffic congestion, transit use, and telecommuting. In the case of converting HOV lanes to HOT lanes, as was done in Minnesota and Miami, such indictors might be: cost per lane mile added, actual traffic versus projections, operating speed in the managed lanes, and operating seed in the general use lanes. Major increases in carpool registrations, commuters working at home, or public awareness of the new UPA facilities were cited as other specific indicators.

Ultimately, the test of a collaboration that takes on a complex public problem like urban traffic congestion and its related ills is whether or not it produces substantial public value (Bryson, Crosby, and Stone, 2006; Moore, 1995). By public value we mean fulfilling the

collaboration's overarching and subsidiary purposes, meeting applicable mandates, and achieving lasting and widespread benefits at reasonable cost that no single organization could have achieved alone. This somewhat abstract term can perhaps best be understood as encompassing: direct, or immediate effects, of collaboration; intermediate outcomes; and long-term outcomes, or what Innes and Booher (1999) call first-, second-, and third-order effects.

Interviewees from all three sites identified numerous positive immediate effects and some intermediate effects of their UPA projects. The long-term effects could only be predicted at this point. Some mentioned or predicted negative effects.

Immediate Outcomes

An immediate effect of the UPA projects in all sites was that people forged new, positive ties across agency lines at the local and regional levels. In Minnesota at least, the relationships between state and regional transportation officials and people in the regional offices of Federal transportation agencies were somewhat strained. Another important immediate effect was a commitment among a diverse array of stakeholders to undertake an integrated, intensive strategy for dealing with traffic congestion. A less positive effect was disappointment on the part of some stakeholders that a project element they wanted was not included in the project or that the project simply did not include plausible direct benefits for them. (The latter would prove to be a major stumbling block in New York.)

Intermediate Outcomes

For both Miami and Minnesota UPA partners, the completion of their projects essentially on time and within budget was a major outcome. In Minnesota, they pointed to concrete creations: dynamically priced shoulder lanes, a technologically sophisticated bus simulator, new technology for keeping buses in lane, expanded downtown bus lanes, HOT lanes, Bus Rapid Transit, park and ride lots, new signage, a smoothed-out traffic bottleneck. One Miami interviewee said the first new HOT lanes (from south of Miami to the city center) had already had the desired effect: "Before [the UPA project] average speeds were 18 mph and the journey took 20 – 30 minutes. Now with tolling it takes 6 minutes with an average speed of 44 mph in the afternoon peak period." In Minnesota, interviewees cited an expanded transit tax district as an intangible accomplishment. Several interviewees mentioned the resulting personal pride in these achievements.

Minnesota interviewees emphasized the strengthening of relationships among UPA partners. One commented, "Through this process we've gotten to know each other, that we share common goals, and we are communicating more. There's a new atmosphere about how we communicate, and how we approach these challenges." Another interviewee noted that the process had brought the transportation management organizations (TMOs) together, saying:

> [We worked] as a cohesive group to deal with something that's external that we didn't understand. The ambiguity created a need for us to clarify within our group. And that has really helped our ongoing relationships with each other. It's gone from 'me versus you' to 'us versus them.' It allows us to use our own respective strengths.

Some Minnesota interviewees also cited individual and organizational learning that resulted from the UPA project. Some participants gained a new appreciation of the value of supporting a process that helped stakeholders work out solutions together; one interviewee appreciated being exposed to issues he wouldn't have otherwise encountered. One interviewee

said one of the more beneficial outcomes was simply "teaching agencies that you need to collaborate, you need to work together and that's in the public's best interest." A number of interviewees pointed specifically to a more collaborative approach on the part of Mn/DOT, though at least one attributed that to the new transportation commissioner rather than to the UPA experience. Some interviewees expected the strong relationship that developed between the UPA project coordinators from Mn/DOT and Met Transit to continue to pay off, especially in Mn/DOT's consideration of transit and UPA technologies as integral parts of its metropolitan transportation strategy. One interviewee noted that Mn/DOT planners focusing on a highway corridor that was not included in the UPA project initially "sort of fell back into our conventional ways of thinking; then we had to remember the UPA work we'd done. It's really the technology we have. It's also about communities coming together to provide a solution. So I think we're using those concepts more than we have in the past." Several interviewees noted that thinking about transportation in a holistic way seemed to have gained momentum in local, regional, and state agencies.

A few interviewees cited more problematic intermediate outcomes of the Minnesota UPA project. One noted that people in other parts of the Twin Cities are already expressing interest in UPA-like approaches to corridors in their areas. "Our challenge," he said, "is really about managing expectations for other corridors." Other interviewees noted that the UPA hadn't produced full-fledged Bus Rapid Transit because it did not include all the needed infrastructure. (They noted that the UPA project's full impact on congestion would not occur until the I-35W Crosstown Commons project was completed and full BRT was implemented, at least two and possibly 10 years in the future.) A few legislators remained highly skeptical that the desired results would emerge from the UPA project. One said the project would be judged on "whether it eases congestion and produces better transit service. If one or none of those things happen, then this will be the first and last corridor we do. There's already talk about I-94; I think that's premature. It has to be proven." Some interviewees complained about the projects that weren't done because of the attention and money flowing to UPA efforts. Some deplored the forfeiting of consistency in safety requirements. People from Lakeville noted that residents of their city would have to pay higher taxes as a result of the project.

Despite the aborting of the New York project, interviewees there cited positive new relationships that have persisted after their UPA unraveled. Referring to the Steering Committee appointed by the mayor to support implementation of transit improvements and congestion pricing, one interviewee said, "To this day, this same group still works together on solving transportation issues – especially on capital operating needs of transit system." Increased public awareness of the public investment needed to improve the MTA and less blaming of the MTA for poor service were other positive outcome. One interviewee noted that even though congestion pricing as incorporated in the UPA had been defeated, the UPA process "resulted in the public's seeing how all the pieces fit together. That has remained – whether it's parking fees or [improvement of] public spaces [especially streets]. There is a much larger constituency who see it's right for the city, and right for the earth."

Long-term Effects

At this point, only predictions are possible about long-term effects of the UPA projects. "More of the same" is the phrase that captures several interviewees' predictions. Even in New York City, they predicted more public acceptance of pricing as a means of controlling congestion on major highways or in certain areas. (Solo driving on freeways during peak hours might come to be seen

as a privilege that costs money.) In Minnesota and Miami they also predicted that once the public experiences the effects of the UPA improvements in bus service, travel times etc., they and their elected representatives will demand more projects like UPA – quicker (but less "perfect"), more technology intensive, multimodal, corridor-focused, and more collaborative. One Minnesota interviewee expected that as with the earlier MnPASS project on I-394, the public would note the decreased congestion and see the elements of the UPA project working together:

> Public officials should be quick to notice that, which would help make it more likely for the future.… If it's successful, people will want to do more of it. That should be true at both the state and Federal level. That goes for the collaboration as well as the technical innovations that are brought into it.

Interviewees recognized the possibility that individuals and agencies that had collaborated successfully on the UPA project would revert to less collaborative modes in the future, but most predicted that collaboration would persist because of its demonstrated effectiveness in the project.

The most optimistic of the Minnesota interviewees saw the Minnesota UPA project as a "model for our future" and a "beacon for the rest of the country." They predicted that the innovative thinking and experimentation prompted by the project would persist. Said one:

> We're trying to push some of the innovations out where they have potential. They might not be UPA, but hopefully these ideas become mainstream enough that you see them percolating in other projects. There are several things we're trying to do; we're trying to ratchet up these context-sensitive solutions, meaning that you're building the highway in the context of its community; thinking about public value, etc. I'm trying to push that through to construction and maintenance. And I think the UPA is very conducive to thinking like that. So I think it can have an impact.

One Minnesota interviewee believed learning from the UPA would enhance safety measures in the future; another hoped for additional innovations, such as reduced peak-hour fares on mass transit; another believed that the role of TMOs in promoting transportation options would be more appreciated. Focusing on Federal transportation policy, some interviewees predicted (and certainly hope for) a continuation, not of the Urban Partnership program per se, but of funding tied to measurable results. Others expected that Minnesota partners' success with UPA would lead to further funding for research and experimentation.

A few interviewees feared that UPA might have lasting harmful effects. They were concerned about the lack of attention to impacts of freeway pricing on local roads, the devotion to speed over careful planning, and the stress of trying to do so many project elements concurrently rather than sequentially. One person worried that reducing congestion and improving transit would increase urban sprawl.

If the positive long-term effects of UPA are to be realized, determined leadership will be required, said at least two interviewees. One commented:

> I hope [the UPA] will be the start of a positive and truthful cross-agency communication and pursuit of common goals. I do not think that is going to happen naturally by itself. It requires continued political leadership and leadership from upper management (who takes it from political leadership). But it will not sustain itself. Scales will not fall from people's eyes; love will not spring up across the land; and the common sense of this approach is not going to be self-evident.

> People go back to their corners quickly. It's going to take some fundamental change in policy as well.

Another interviewee noted that a possible long-term outcome will be the need to use a multimodal approach, engage in cross-jurisdictional partnership, and communicate. As the interviewee said:

> Get used to the idea of involving all of the modes because you really need the support of all the modes and it makes sense to solve common problems…Be ready to partner with as many jurisdictions and agencies as possible. And the communications, I mean, be ready to compromise, to understand where people are coming from and to make sure that everybody gains something, even if they have to give something…

Still another interviewee offered a good summary quote:

> Who knows what the outcome will be, but to be involved on a project with a new approach to unique challenges: it's cutting edge, and it's really exciting if you're in the transportation industry. It's better than traditional approaches. It provides us the opportunity to serve more people with a minimal level of impact. This way we've taken a systems look and brought in things that can grow over time without adding too much infrastructure. I don't know what the outcomes will be, but I hope it's successful. There's no safety net; it's never been tried before. But I think the opportunity and potential benefits are worth the effort.

Conclusions and Lessons Learned

Our second year's research confirms a number of conclusions and lessons found in last year's research and the literature on collaborations, but this year's comparative approach adds some deeper understanding and nuance. Collaboration, indeed, on the scale of the UPA projects is a very complex assembly of human (individuals and relationships) and non-human (technologies, artifacts, laws and procedures) elements (Latour, 2005). Collaboration is not an easy answer to hard problems but a hard – and not always successful – answer to hard problems. Collaboration so far has worked in Minnesota and Miami; specifically in terms of UPA, it did not succeed in New York City, although there have been some important positive outcomes.

The difficulty of crafting an effective collaboration arises because of the complicated array of factors that need to be in place for a collaboration to succeed (Bryson, Crosby, and Stone, 2006). For example, the Minnesota, Miami, and New York City collaborations were facilitated by pre-existing, supportive networks; powerful sponsors and champions; a variety of competencies; an alignment of policy ideas, favorable politics, and general agreement on the nature of a significant problem to be addressed (Kingdon, 1995); and strong incentives. In Minnesota and Miami, the presence of these factors and their alignment was enough to succeed at both planning and (so far) implementation. In New York City, there was not enough support and alignment to get through the planning and authorization stage. The politics were not supportive enough and there were enough doubts about MTA's ability to deliver better services that the New York state legislature could not agree to provide necessary funding and legislative changes.

People, processes, structures, power and politics have all played significant roles in creating needed support and alignment. People included a vast array of actors, including particularly in Minnesota and New York City neutral conveners and policy entrepreneurs. Interviewees consistently described the significant neutral convening role in Minnesota played by the Citizens League, the University's Center for Transportation Studies and the Humphrey School's State and Local Policy Program. (Note that when we say neutral, we mean neutrality regarding specific details of the proposal, not neutrality about the virtue of congestion pricing.) In New York City, nonprofit advocacy groups played the same neutral role advocating for congestion pricing as a solution to New York City's congestion problem. (In Miami it is less clear whether such groups were important actors.) Also critical was the fact that policy entrepreneurs existed at multiple levels, particularly at the federal, state, and local levels. In Florida, the alignment and support of policy entrepreneurs was strong and consistent throughout planning and implementation. In Minnesota, these policy entrepreneurs made the structures and processes work and helped nudge a reluctant Mn/DOT along during the early discussions. In New York City, there were many supportive policy entrepreneurs, but they were not able to overcome the last political hurdle to gain needed financing and legislation from the state legislature. Absent these entrepreneurs, it is unlikely the collaboratives could have been assembled, let alone succeeded.

Key components of process in the planning and implementation at all three sites included an ongoing practice of regular meetings among major subgroups of key stakeholders and included the use of longstanding forums that existed outside of the UPA project. Multi-stakeholder meetings continued during implementation, especially to address implementation difficulties as they arose. Process elements also included an important political dimension. For example, in Minnesota project proponents and implementers started to get ahead of the

Minnesota Legislature and high-level people within the Pawlenty administration. Some legislators and other politicians who played important roles leading up to the grant proposal felt left out. In the end, the legislature and administration provided what was needed, but that was not a foregone conclusion. Even as legislative politics were settled, the managers and technical personnel were toiling over the implementation details on a mainly separate parallel track. In Florida, efforts had to be made to secure agreement with officials in Broward County before implementation could proceed, but implementation details were being worked on throughout. In New York City, the technical track proceeded until a dead end was reached on the political track.

The second year study drew us back to some long-standing traditions in organization theory that have been under-attended in the collaboration literature. The strongest historical link is to James D. Thompson's (1967) classic description of pooled, sequential and reciprocal interdependence. In pooled interdependence, each organizational unit contributes to the whole but in a discrete manner. Standardization coordinates the units. Sequential interdependence is serial and ordered where unit X's outputs are the inputs for unit Y. Coordination by plan is necessary here. Reciprocal interdependence includes pooled and sequential interdependence but each unit is penetrated by others and each unit poses a contingency for the other. That is, the actions of each unit must be adjusted to the actions of one or more of the others. As a result, the coordinative mechanism for reciprocal interdependence is mutual adjustment among units. It is, Thompson concludes, the most complex form of interdependence. The UPA's planning stage clearly involved mutual interdependence and understandings and agreements had to be worked out in cross-boundary forums. These forums were also necessary to coordinate much of the sequential interdependence laid out in adopted plans. Much of the implementation phase involved dealing with sequential interdependencies as the various parts of the plan were operationalized in the necessary order. Mutual interdependence occurs on the boundaries of activities, but essential existing hierarchies each managed implementation of their respective parts of the plan. When the system is finally up and running, pooled interdependence takes over and is managed by existing hierarchies.

A particularly important aspect of the process was the early effort key actors put into framing the UPA in such a way that support was increased and opposition was decreased. Getting people to accept a market-based solution and to see it as capacity building was a major political achievement. Strong monetary incentives clearly helped, but the framing mattered, too, as it helped make an unusual policy solution more palatable politically. Implementation clearly was easier once the basic framing of the solution was accepted and legitimized. This reframing was a clear example of what Foldy, Goldman, and Ospina (2008) call *sense-giving leadership.*

Another key aspect of the process that also involves power and politics was the opening of a window of opportunity (Kingdon, 1995). Had earmarking in Congress not been curtailed for a year, the UPA program would have been very small at about $120 million for the whole nation. The window got a whole lot bigger when US DOT was able to put $1.10 billion on the table. The tight timelines dictated how long the window would be open, but also heavily favored those, such as Minnesota, who were close to ready to go, regardless. In Miami, too, they were able to take advantage of the window because much of what they were proposing was already in the works and because the proposed solution was less complicated than either Minnesota's or New York City's. In New York, the windows closed too quickly; advocates came close to succeeding, but in the end not close enough. In New York City the tight timeline clearly helped, but there was a curvilinear relationship; that is, it helped up to a point, but ultimately the timeline was too tight for advocates to work out a deal (assuming one was possible) with opponents. Wilson and

DiIulio (1998) help clarify the problem in New York City: They point out that when benefits and costs are highly concentrated, but on different groups, *interest group politics* occurs and that such politics typically are quite conflictual. The Queens commuters who wanted to avoid the charge to drive into Manhattan would have to rely on the MTA to provide an alternative means of transportation. They didn't trust the MTA to deliver the good, and so saw themselves as having to bear a high price for the benefit of Manhattanites, including the wealthy residents of the Upper East and West Sides. Quite predictably, serious conflict arose. If there had been some way to buy off or mollify the Queens commuters, then a way forward might have been found. This did not occur, and the UPA fell apart as a result.

One interviewee offered the following lesson regarding windows of opportunity, indicating you have to be prepared for when lightning strikes: "You've got to be ready for money to suddenly become available. Have some projects ready—foundation plans. Have some projects in the pipeline, so when money drops from the sky, you have something to work on."

Structural components at all three sites included a complex intergovernmental system with various concentrations of power (e.g., US DOT, governors, state legislatures, state DOTs, regional governing bodies of various sorts, and local governments. Within this intergovernmental system, some elements fostered innovation to the benefit of the UPA. For example, several interviewees stated that the tight timeline mandated by the US DOT and the direct role played by the Secretary's office made possible, and even required, going around normal channels and various organizational, functional, and budgetary boundaries. One normal channel could not be avoided during the planning and authorization stage, however, and that was the need for state legislative approvals; these were received in Minnesota and Miami, but not in New York City. On the other hand, during implementation in Minnesota and Miami many normal processes and boundaries re-emerged and needed to be managed well, including going through channels to get needed approvals and paying attention to repairing damaged relationships.

Given the challenges of gaining needed support and alignment, at least some people had to be able to connect (however tenuously) the various pieces of the puzzle into a good, comprehensible, and manageable pattern. In all three sites, several actors at the Federal, state, and local levels were critically important. Mainly these were sponsors and champions intent on exercising what Crosby and Bryson (2010) call *integrative leadership.* The sense of efficacy and commitment on the part of others was nonetheless crucial and gave diverse people a sense of ownership.

Next we review some themes discussed in the first report that are relatively new to the collaboration literature. These include: the important role of technology; linkages connecting high level Federal policy making to local, operational implementation details; emphasis on multiple roles played by sponsors, champions, neutral conveners, process designers, technical experts, and high-level project managers; the importance of specific competencies; the role of rules and routines as drivers of collaboration; and the importance of ambidexterity both spatially and temporally.

First, technology served as a solution, motivator, facilitator, and positive political factor. As a source of *solutions*, technical advances enabled dynamic pricing and other elements of the UPA package to be pragmatic, practical solutions to the problems of congestion; in other words, the technology works as a congestion reducer. Technology also *motivated* people by attracting and exciting them about being involved in cutting-edge work locally, nationally, and even internationally. Technology *facilitated* the UPA process in a number of ways tied to communications by enabling people to work together in parallel and in sequence on a complex

project on very tight timelines. For example, technologies such as email, the internet, electronic calendars, project management software, PowerPoint, Word, and Excel allowed participants to display work (rendering it visible to others); represent work in such a way that it was understandable to others; and assemble work into operational project components that fit together in a functional way and met project requirements (Kellogg, Orlikowski, and Yates, 2006). Finally, dynamic pricing technology also helped *politically* because tolling skeptics could see tolling in a more benevolent light – that is, it would not have to be something that slowed traffic with cumbersome tollbooths; drivers could have a choice about whether to pay or not; and the charge could vary with levels of congestion, etc. The fact that key technological components of UPA solutions had worked already in other places also was extremely helpful in overcoming political obstacles.

Second, the UPA was different from many cross-sector collaborations in that it existed primarily within a complex intergovernmental system. This sort of vertical and horizontal planning, implementation, and governance challenge is well-recognized in the implementation literature, but is relatively new to the collaboration literature (Hill and Hupe, 2009; Agranoff, 2007). Both horizontal *and* vertical relationships were critical. For the UPA to succeed, connections and partnerships had to be maintained and/or developed vertically from the Federal level to critical state agencies and the legislature, to regional authorities and to local cities and counties. Multiple and overlapping jurisdictions created tensions that had to be managed, and, as the project evolved, different roles and tasks had to be handled by staff at different levels in these hierarchies. Fortunately, in many cases, pre-existing, horizontal relationships among agency staff existed and facilitated their work; nevertheless, key actors at higher levels had to maintain a clear view of the overall project and all of its moving parts. Clearly, governance in the UPA cases must be seen as a multi-level nested phenomenon involving vertical and horizontal relations across planning and implementation phases. Forums and arenas had to be adjusted as the nature of the task changed in order for this complex, multi-party, multi-level system to work.

Third, the roles of sponsors, champions, neutral conveners, process designers, technical experts, and project managers all had to be played and played well for the collaboration to succeed. We particularly want to emphasize the process need for carefully designed and managed forums that further promote and stabilize horizontal relationships. The role of process designer was one that Mn/DOT was not in a good position to play, but others were, such as SRF Consulting, and still others were willing partners in producing a successful design. During implementation, regularly scheduled and as-needed meetings were also crucial for working out important details that required effective coordination. Project managers were crucial designers and managers of these meetings.

Fourth, a variety of competencies were crucial to the success of the collaboration, including skills of collaborative leadership referenced immediately above. As mentioned in our prior report, also important were competencies in issue framing and persuasion, building coalitions, collaboration itself, technical competencies, grant writing and the organization that goes into it, understanding how the transportation field works, and understanding how to make use of the competence (or technology) markets have to make rational resource allocation decisions. During implementation the importance of competent project management came to the fore. Sponsors and champions still mattered, but so did project managers. It helped when they, too, were champions, as was true in Minnesota and Miami.

Fifth, within this complex intergovernmental system, rules and routines from the various public agencies actually helped the collaboration at critical points. For example, on the one hand,

the extraordinary UPA RFP process drove innovation and new collaboration, while on the other hand, the decision by the Minnesota and Miami UPA partners to use their normal planning, decision making, and accountability mechanisms as much as possible reduced the need for change on the part of the time-constrained collaboration (Feldman, 2000, 2002; Feldman and Pentland, 2003).

Finally, the UPA collaborative process demonstrated a kind of ambidexterity (Raisch and Birkinaw, 2008) over the course of its development. The ambidexterity involved managing a host of tensions, including: stability versus change; hierarchy versus lateral relations; the existing power structure versus voluntary and involuntary power sharing; formal networks versus informal networks; and existing forums versus new forums. Sponsors and champions played key roles in this process of tension management. Managing the tensions typically involved separating the elements of the tension in time or space, but sometimes both aspects of the tension were present. For example, actors tried to keep stable as much as they could while changing other things; this was the strategy of spatial separation. Alternatively, the application process relied a great deal on lateral relations, informal networks, new forums, and more power sharing, while the implementation process saw a re-emergence of the importance of hierarchy, formal networks, existing forums, and less power sharing; this was the strategy of temporal separation. Managing the tensions was not always easy; for example, Mn/DOT and the Met Council were not always keen on sharing power with other actors, but there were times when they had no choice. In Miami, there was less tension, as there were fewer actors and a clearer chain of command. An important area for future research is to explore what kinds of ambidexterity are necessary in large, multi-actor collaborations, and how best they might be managed.

It is worth noting that the whole UPA process in Minnesota and Miami was relatively invisible to the public during the planning and authorization stage. In addition, at least in Minnesota, media reporters and editors did not pay much attention to the process other than announcing the award. Lack of attention means that media have not contributed to the process of building (or undermining) trust, and the media also have not provided the accountability function that they often do. No doubt, key players have had in mind the bad press they would face if they let this opportunity slip through their grasp.

As noted in our first report, the UPA's invisibility in Minnesota may well have been beneficial on balance. However, attention to public education has been emphasized in Minnesota during the move to actual operations. In part, this is a consequence of seeing the difficulties Miami faced during its initial operational period as a result of not enough attention to public education and preparation for the transition to the new system.

New York City represents an interesting contrast. There the media were generally quite supportive of the UPA proposal and helped educate the public about the benefits of congestion pricing. On the other hand, they also tended to highlight conflicts between major players. The ground was thus partially prepared for project implementation, but the project never got that far.

To conclude, our view is the UPA process in Minnesota and Miami to date must count as very large-scale collaboration successes of the "community betterment" sort (Himmelman, 1995). Pulling together such a complex assembly of human and non-human elements clearly was not easy, but appears to have been necessary if Minnesota and Miami were to put together winning proposals. Said differently, it is difficult to imagine how the same results would have come from the UPA process had those with the greatest power simply moved forward without engaging other stakeholders. Our interviews indicate that while those with the most power may have wished to engage less with other key stakeholders, particularly in Minnesota they had to if

they wished to win the UPA competition. These other stakeholders may not have had as much power overall, but they clearly had blocking or veto power that could have stopped the more powerful partners in their tracks.

We also believe the UPA collaborations in Minnesota and Miami appear headed for further success. Whether or not the desired outcomes of the collaboration are fully achieved, a number of important lessons can be learned from the effort so far that may help in other areas in the future with addressing their transportation challenges.

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Appendix A: Interviewee Characteristics

Title/Rank	Organization	Location	Policy Field Area	Policy Field Level	Policy Field Type	Elected/ Appointed
Planning Director	Minnesota Valley Transit Authority	Minnesota	Transit	Regional	Public	No
Chair	Met Council	Minnesota	Transit	State	Public	Yes
Council Member	Met Council, District 8	Minnesota	Transit	State	Public	Yes
Director	Center for Transportation Studies	Minnesota	Academic	State	Academic	No
Director of Public Works	City of Bloomington	Minnesota	City Government	City	Public	No
Director	Metro Transportation Services, Metropolitan Council	Minnesota	Transit	State	Public	Yes
Executive Director	MN Valley Transit Authority	Minnesota	Transit	Regional	Public	No
Planning & Research Program Director	St. Paul FHWA	Minnesota	Transportation	Federal	Public	No
Transit Specialist	Dakota County Office of Transit	Minnesota	County Government	County	Public	No
Commissioner	Mn/DOT	Minnesota	Transportation	State	Public	Yes
Lobbyist & Staff Member	I-35W Solutions Alliance	Minnesota	Advocacy	Regional	NGO	No
Regional Administrator	Met Council	Minnesota	Transit	State	Public	No
Council Member	Met Council, District 16	Minnesota	Transit	State	Public	Yes
Area Engineer	St. Paul FHWA	Minnesota	Transportation	Federal	Public	No
City Manager	City of Bloomington	Minnesota	City Government	City	Public	Yes
Value Pricing Program Manager	Mn/DOT	Minnesota	Transportation	State	Public	No
Director of Policy Development	Citizens League	Minnesota	Advocacy	State	NGO	No
Senator	Legislature	Minnesota	Legislature	State	Public	Yes
MnPASS program director	SRF Consulting	Minnesota	Private	Regional	Private	No
Senator	Legislature	Minnesota	Legislature	State	Public	Yes
Director, Intelligent Transportation Systems Institute	Center for Transportation Studies	Minnesota	Academic	State	Academic	No
Council Member	City of Bloomington	Minnesota	City Government	City	Public	Yes
Former State Legislator	Value pricing task force	Minnesota	Transportation	State	NGO	Yes

Title/Rank	Organization	Location	Policy Field Area	Policy Field Level	Policy Field Type	Elected/ Appointed
City Council Member	City of Minneapolis	Minnesota	City Government	City	Public	Yes
Representative	Legislator	Minnesota	Legislature	State	Public	Yes
Representative	Legislator	Minnesota	Legislature	State	Public	Yes
Mayor	City of Burnsville	Minnesota	City Government	City	Public	Yes
Public Works Director	City of Minneapolis	Minnesota	City Government	City	Public	No
Transportation Director/County Engineer	Dakota County Transportation	Minnesota	County Government	County	Public	No
General Manager	Metro Transit	Minnesota	Transit	State	Public	No
UPA Transit Project Manager & Facilities Planning Manager	Metro Transit	Minnesota	Transit	State	Public	No
Research Fellow	Humphrey School	Minnesota	Academic	State	Academic	No
City Administrator	City of Apple Valley	Minnesota	City Government	City	Public	Yes
Executive Director	494 Commuter Services	Minnesota	TMO	Regional	Quasi-Governmental	No
City Administrator	City of Lakeville	Minnesota	City Government	City	Public	Yes
Senior Fellow	Humphrey School	Minnesota	Academic	State	Academic	No
Senator	Legislator	Minnesota	Legislature	State	Public	Yes
Senator	Legislature	Minnesota	Legislature	State	Public	Yes
Research Fellow	Humphrey School	Minnesota	Transportation	State	Academic	No
Director, Intelligent Vehicles Laboratory	ITS Institute, University of Minnesota	Minnesota	Academic	State	Academic	No
Operations Manager	Mn/DOT	Minnesota	Transportation	State	Public	No
Director of Engineering & Facilities	Metro Transit	Minnesota	Transit	State	Public	No
Executive Director	Downtown Minneapolis TMO	Minnesota	TMO	Regional	Quasi-Governmental	No
Assistant Director, Tunnels, Bridges & Terminals	The Port Authority of NY & NJ	New York City	Transportation	Regional	Public	No
General Manager, Regional Transportation Policy Development, Planning Department	The Port Authority of NY & NJ	New York City	Transportation	Regional	Public	No
Deputy Commissioner, Planning and Sustainability	New York City Department of Transportation	New York City	Transportation	City	Public	Yes

Title/Rank	Organization	Location	Policy Field Area	Policy Field Level	Policy Field Type	Elected/ Appointed
Assistant Commissioner, Planning and Sustainability	New York City Department of Transportation	New York City	Transportation	City	Public	Yes
Associate Director	Tri-State Transportation Campaign	New York City	Advocacy	Regional	NGO	No
District ITS Manager	Florida Department of Transportation, District Six	Miami	Transportation	Regional	Public	No
Transportation Planner, Planning and Environmental Management Office	Florida Department of Transportation, District Six	Miami	Transportation	Regional	Public	No
District Secretary	Florida Department of Transportation, District Four	Miami	Transportation	Regional	Public	Yes
Project Director	South Florida Commuter Services	Miami	TMO	Regional	Quasi-Governmental	No
District Planning, Project Development, and Environmental Administrator	Florida Department of Transportation, District Six	Miami	Transportation	Regional	Public	No
Director of Transportation Development	Florida Department of Transportation, District Six	Miami	Transportation	Regional	Public	No
Mobility Manager	Florida Department of Transportation, District Four	Miami	Transportation	Regional	Public	No
Project Manager, 95 Express	Florida's Turnpike Enterprise	Miami	Transportation	State	Quasi-Governmental	No

Appendix B: Interview Protocol

TechPlan Protocol:

Introduction

PNLC
Purpose of project and our role
Confidentiality

1. Tell me about your history with this collaboration

2. What do you see as the purpose of UPA? What problem(s) is it trying to solve?

3. Who are the primary partners? Secondary partners? Had they ever worked together before? If so, how much? Example?

4. What do you see as the role of technology, broadly conceived, in this partnership? How is technology affecting who is in collaboration? How partners work together?

5. Describe the process of assembling your UPA proposal. Was there something circulating amongst the preparers of the proposal? If so, how was it circulated?

6. Let's get a bit more specific here. How does UPA actually get its work done?
    a. How is it organized?
    b. Where are important policy decisions about UPA made?
    c. How about operational or implementation decisions?
    d. How does UPA decide "who should decide?"

7. Accountability can be tricky in partnerships. How does UPA hold partners accountable?
    a. Outcomes can also be hard to determine/measure. How has, or will, UPA determine successful outcomes?

8. Anything else you would like to add that I haven't asked?

Battelle Protocol:

1. Please describe your agency's role and your personal role in planning, designing, and implementing the Minnesota UPA projects.

2. What is your agency's objective(s) in participating in the UPA? What benefits did you expect to be realized when you decided to participate in the UPA? Have these expectations changed at all during the planning and pre-deployment process? If so, what has changed and why?

3. What would constitute success from the UPA projects for you and your agency? What about the UPA overall? Has your view of what constitutes success changed during the planning and pre-deployment process? If so, in what way and why?

Institutional Arrangements

4. Have you and your agency worked with the other partnership agencies, organizations, and individuals before? If so, what has been the focus of this work? How would you classify past working relationships – successful, unsuccessful, mixed? (Check for all partners – Mn/DOT, Metropolitan Council, Metro Transit, MVTA, City of Minneapolis, and Anoka, Dakota, Hennepin, and Ramsey counties. Also check for CTS and the HHH School at the University of Minnesota, legislators, and other local communities).

5. What do you think were the keys to bringing all the agencies and jurisdictions together to develop the UPA partnership and to implement the UPA projects? What do you think will be the keys to maintaining the partnership throughout the deployment and operation process?

6. Have there been any changes in the partnership agencies and jurisdictions, including yours, that have influenced implementation of the UPA projects? If so, how have these changes been addressed?

7. Do you feel there have been any changes in the commitment to the UPA projects on the part of your agency/jurisdiction or other agencies/jurisdictions? If yes, please explain the nature and the potential causes of these changes.

8. What have been the biggest challenges during the implementation process? How have these challenges been addressed by the partners, including your agency/jurisdiction? Have they been effectively overcome?

9. Were there any specific institutional issues that had to be addressed? If so, how were they addressed by the partners, including your agency/jurisdiction? Have they been effectively overcome?

10. Were there any specific policy or political issues that had to be addressed? If so, how were they addressed by the partners, including your agency/jurisdiction? Have they been effectively overcome?

11. How will the decision on how revenues will be allocated or reinvested be made? What do you think the plan should be for use of the revenues?

12. Were there any technical or technology-related issues that had to be addressed? If so, how were they addressed by the partners, including your agency/jurisdiction? Have they been effectively overcome?

Outreach Activities

13. A variety of outreach activities have been used to engage policy makers, the public, and other groups in the implementation of the Minnesota UPA projects. What do you feel have been the most successful activities? Have you been involved in any of these activities? If so, what has been your experience? Are there other outreach activities you feel would be of benefit? Do you anticipate any issues or concerns with public acceptance of the HOT lanes or the PDSL, the telecommuting programs, or other project elements?

Lessons Learned

14. Based on your experience to date, would you do anything differently if you were beginning to plan and implement the same projects in a different corridor with the same funding? What if the project as a whole had twice the funding? What if the project as a whole had half the funding?

15. What do you feel are the key experiences or lessons learned so far to share with individuals in other areas?

16. Are there any other topics you would like to bring up related to the UPA?

Appendix C: Coding Structure

Major coding categories (i.e. parent nodes)	Description
Initial Conditions	1) General environment: Turbulence; Competitive and institutional elements. 2) Sector failure. 3) Direct antecedents: Conveners; General agreement on the problem; Existing relationships or networks.
Project Structure & Governance	1) Collaboration: This describes who are the major collaborators, whether and how they have changed, how they communicate, and their impressions of the positive/negative nature of working together. 2) Formal & Informal: Membership; Structural configuration; Governance structure.
Project Processes	1) Building and exercising leadership; 2) Forging agreements; 3) Building legitimacy; 4) Building trust; 5) Managing conflict; and 6) Planning
Leadership & Competencies	The skills, background, and attitudes people and organizations bring to the success (or failure) of the project.
Power & Politics	1) Power imbalances; and 2) Competing institutional logics
Outcomes	1) Implementation: The time period for this node is the post-award construction phase of work on the UPA project. It describes how the implementation phase is going (i.e. strengths and challenges). It includes any value statements an interviewee gives on what is happening right now on the project. 2) Effects of UPA: This describes the effects the UPA project has had on both individuals (personal, professional--how they do their work and how they think about their work) and organizations (both their own and others). Examples of this may include the personal impact UPA has had on an individual's career and whether they would do this kind of project again; the project's ability to leverage more money and greater investment in the corridor; the impact of the short timeline. This may come out in language such as, "I have/We've learned this" or "I/We now do 'x' differently because of UPA." 3) Long-term impacts of UPA: This describes the long-term impacts of UPA on traffic congestion, on collaboration, on public policy, on public perception, on themselves and their organization, etc. 4) Lessons learned/Reflections: This is a general bucket

	for comments interviewees make on their reflections of the UPA project and lessons they've learned for moving forward.
Role in UPA	This describes the "who" and "what" of an individual's or an organization's role in the UPA project in the past, present and future. For example, "I have done this." Or, "We are doing that."
The Story of UPA	This includes any narrative given by interviewees on the sequence of events of the UPA project both past and present. This node will be most useful as a way to organize the story of the UPA project as told through the interviewee's perspective. It may also include when interviewees express 'their version' of the project. The purpose of this categorization is to be able to combine everyone's stories into a combined story of the UPA project in Minnesota.
Technology	Broadly defined to include any and all uses of technology in the UPA project and its effects.
Communication/Outreach	This describes how UPA is interfacing with the public and what effects, if any, it's having (e.g. is it changing public perception, is there public outcry or support?). It also includes specific outreach and engagement strategies utilized by individuals and organizations.