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VOLUME I – Methodology and Findings

FINAL REPORT

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16. Abstract

The overall objective of this research was to identify and assess examples of local government and public transportation agency partnerships and the funding mechanisms used to improve or expand public transportation. In addition, the research sought to identify what needs to be done to ensure successful partnerships can be pursued on a continuous programmatic basis. A comprehensive literature review, identifying partnerships developed through the use of value capture strategies, both within and outside of public transit was performed.

A survey of State Departments of Transportation and Transit Agencies was performed to identify and assess both successful and not so successful partnerships developed to finance public transportation improvements. The survey identified 12 partnerships and case studies of these partnerships were performed. An assessment of the partnerships showed successful partnerships had elements such as: Strong leadership skills of project champion; Support from stakeholders; Innovative enabling legislation; Scale of the project was appropriate to meet the specific need; and Public partner was responsive to private partner's time schedule and needs.

The research provides recommendations regarding project identification, statutory environment and capacity building that should be in place to ensure successful partnerships can be pursued on a continuous programmatic basis. Volume I contains the research approach and findings, Volume II contains the detailed case studies of select partnerships.

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EXECUTIVE SUMMARY

This research sought to identify an approach for utilizing partnerships, value capture and other funding strategies for improving public transit in a more systematic and strategic manner. The intent was to identify successful partnership endeavors, and determine the basis for their success.

The overall objective of this research was to identify and assess examples of local government and public transportation agency partnerships and the funding mechanisms used to improve or expand public transportation. In addition, the research sought to identify what needs to be done to ensure successful partnerships can be pursued on a continuous programmatic basis.

The focus of the research was on identifying and studying successful partnerships. To accomplish this objective involved performing a survey of State Departments of Transportation and Public Transit Agencies to identify these partnerships. Through the survey, successful and not so successful partnerships were identified and focused interviews performed to gain insights into these partnerships.

Exemplary partnerships were further studied to identify the essential elements within a partnership that make them successful. Recommendations on strategies to ensure partnerships are pursued on a continuous programmatic basis within NJ Transit were then prepared.

SUMMARY OF LITERATURE REVIEW

The overall objective of the review was to determine the current state of the practice of partnerships within transit agencies and other governmental agencies. The literature review provides a first attempt to identify partnerships that can further be studied through contact with the partners involved. Specific objectives were to provide a high-level review of existing partnerships. Identify partners, enabling legislation, forms of partnership and funding mechanisms.

Historically general tax revenues and user fees supported public transit. These revenue sources no longer keep up with infrastructure needs (Transit Cooperative Research Project 1998)[1]. Jurisdictions have increased their use of partnerships to develop projects and deliver services [2, 3]. A partnership occurs when multiple organizations cooperate and share resources to achieve mutually agreed on ends. A public-private partnership (PPP) occurs when one of the partners is a governmental entity and at least one is a private organization, whether from the business or nonprofit sectors.

There are advantages to partnerships including: cost reduction [4]; access to new resources [5]; and risk sharing [6]. Not all studies of partnerships find cost advantages. A strong majority using PPPs found cost savings but some also experienced declines in the quality of operations [7]. Project size influences rate of success. Projects costing more than one billion dollars are particularly likely to have performance problems based on underestimating costs and inflating expected benefits.

Success requires careful assessment of what an agency wants from a partner. There must be an understanding of which values the agency wants to maximize and whether various partnership arrangements can help do this [8]. Public agencies have to be careful to look at the project's impact on various constituencies. There is a need for partners to understand where the interests of each entity coincide and where they diverge in given matters. Writing an appropriate contract is key to a successful project. Agencies have to specify outcomes they desire and how performance will be monitored over a long period.

PARTNERSHIP LEGISLATIVE REVIEW

To better understand the legislative structure enabling partnerships in other States, a review of State and Federal legislation and regulations regarding the use of partnerships was performed. In 2006 fewer than half the US states had passed legislation enabling PPPs (P3s) and 38 allowed design-build. Seven years later, as of 2013, 33 states and Puerto Rico have enacted such laws relating to highway and bridge projects. 21 include transit projects.

The United States is relatively late to the Public Private Partnership game compared to parts of Europe, Asia and elsewhere. With an economy six times smaller than that of the US, the United Kingdom invested $50 billion in Public Private Partnerships between 1990-2006 compared to the US investment of $10 billion. This represents 32.5% of total UK public infrastructure investment. In Portugal such spending represents 22.8% while in the US it accounts for less than 3%[14].

Public Private Partnerships are advanced by federal legislation. Some federal programs pilot, model or advance aspects of public private partnerships. But public private partnerships are enabled primarily through state law, as many states have legislation that inhibits key aspects of public private partnerships such as low bid requirements, or prohibitions against design-build arrangements or co-mingling public and private funds.

The federal government has encouraged the use of public-private partnerships through pilot programs, guidelines for federal highway funds and informational resources. The most relevant federal legislation is Public Law 109-59 the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA- LU). Also referred to as the Surface Transportation Act, its current reauthorization defines changes such as eligibility for private activity bonds, additional flexibility to use tolling to finance infrastructure improvements, and broader Transportation Infrastructure Finance and

Innovation Act (TIFIA) and State Infrastructure Bank (SIB) loan policies that aid public private partnerships.

State legislation varies in the breadth of types of public private partnerships they authorize and whether they include transit. Other notable element of state legislation include the ability to accept unsolicited proposals, the granting of lower level agencies public private partnership authority, whether public private partnerships require the approval of the state legislature, the ability of the public sector to hire technical staff, inclusion of non-compete clauses and details of availability payments/shadow tolls.

In NJ, only NJ Transit has public private partnership authority, granted by the New Jersey Public Transportation Act of 1979 (N.J.S.A. § 27:25-1 et seq.). It allows NJT to award contracts based on competitive proposals, to the proposer that submitted the proposal determined to "be the most advantageous to the State, price and other factors considered." This authority has led to the state's only two public private partnerships found in the review, the Hudson-Bergen LRT and River Line DBOM projects.

SURVEY PEER STATE DOTS AND PUBLIC TRANSIT AGENCIES

To help identify a broad range of partnerships and gather information on best practices regarding partnerships, a survey was conducted of state Departments of Transportation and transit agencies. The survey was administered in a two-phase approach with an initial survey of Departments of Transportation and targeted transit agencies to identify public private partnerships including those involving innovative financing schemes. Based on the information received in the first phase, a second phase involving a more focused survey was performed to gather detailed information about identified partnerships.

Completed surveys were received from the 15 states. Over 60 percent of respondents indicated there was no entity or person in charge of PPPs. The types of PPPs used by these agencies included: Design Build (36%); Build-Operate-Transfer (10.5%); Any long-term asset lease of toll road(10.5%); Operations and Maintenance (O&M) or Program and Financial Management Fee Service Contracts (15.8%); and Other (26.3%). "Leadership" was identified by 80% of participants as extremely critical in determining the success of public-private partnerships. Having an appropriate contract and understanding each entity's desires and objectives were also ranked by 70 percent of participants as also being extremely critical to the success of partnerships. Specifying outcome and performance and the impact on the constituencies were ranked by only 30 percent as being extremely critical to the success.

The initial survey yielded 18 partnerships which were then reviewed by the Research Panel to determine whether case studies should be developed. From these 18 partnerships, 12 were selected for further study. The partnerships represent a broad range of cases to demonstrate successful and not so successful partnerships as well as partnerships covering transit, roadway and non-transportation projects.

CASE STUDY DEVELOPMENT

For the partnerships identified for further study, case studies were developed by first gathering detailed written information on the partnerships, followed by interviews with key individuals involved in the partnerships to gather additional details. Four types of cases are presented covering: Rail transit projects, roadway projects, transit center/transit naming projects, and non-transportation projects. The case studies include:

- Case Study 1: Streetcar - Portland, Oregon
- Case Study 2: West Burnside Couch - Portland, Oregon
- Case Study 3: NO-MA Gallaudet U. Station, WMATA - Washington, D.C.
- Case Study 4: Dover Transit Center – Dover, Delaware
- Case Study 5: US 36 Managed Lane/BRT Project – Denver-Boulder, Colorado
- Case Study 6: I-495 Capital Beltway – Fairfax, Virginia
- Case Study 8: Hudson County Open Space Tax (Hudson County, New Jersey)
- Case Study 9: NJT Hudson-Bergen Light Rail DBOM
- Case Study 10: United Water Company – Hoboken, New Jersey
- Case Study 11: NJ Transportation Development District Act of 1989, New Jersey
- Case Study 12: North/Clybourn Station – Chicago, Illinois

ASSESSMENT OF EXEMPLARY PARTNERSHIPS

The case studies present useful information to address the research objective of identifying what is needed to ensure successful partnerships can be pursued on a continuous programmatic basis in New Jersey. To identify components of these partnerships that were critical to their success and to determine the potential for similar partnerships in New Jersey an assessment of the case study partnerships was performed. The assessment sought to identify for each case study partnership:

- **Lessons Learned**
- **Reasons for Success/Failure**
- **Local Champion**
- **Scale of the Project**
- **Project Status**
- **Statutory Environment**

General lessons learned from the assessment include:

- Complex projects require leaders who can assemble a public/private team committed to project success.
- Complex projects require the ability to assemble a coalition strong enough to support implementation.
- Success comes with support from strong, political leaders.
- Private partners can be successfully lobbied for their participation even in slow economic times.
- Private partners look for both financial and non-financial benefits in selecting partnerships.
- Long-term partnerships can be maintained, however they can be limiting if changes in the partnership agreement are needed.
- Shifting economic times may hinder development of projects conceptualized in more prosperous times.

RECOMMENDATIONS

The assessment of the case study partnerships provides guidance on what should and should not be done in New Jersey to ensure successful partnerships. Two themes emerge from the case study assessment in determining what should be done in New Jersey to ensure successful partnerships. The themes surround the adequacy of existing legislation and the leadership needs for partnership project directors. New Jersey should:

1. Evaluate the adequacy of existing state laws to enable innovative funding mechanisms to sufficiently fund projects. State officials should consider whether existing partnership legislation maximize innovative idea contributions from the private sector. Currently, New Jersey is unable to engage in many of the value capture mechanisms identified in this study.

2. Increase its organizational capacity to respond to private sector interests in partnership. Project leaders for partnership projects should be people wholly committed to success and knowledgeable about how to interact with other people and organizations involved in the project. Before advancing project conception prospective champions should have a good political feel for potential supporters and opponents. Project champions should understand how to assemble a coalition capable of advancing the project.

3. Project plans and expectations may need to be modified to fit within existing or future statutory environment, as well as within leadership strengths and based on the overall economic climate.

To avoid problems that may derail the partnership, New Jersey should:

1. Provide transparency in the process to avoid perceptions that the contract may be overly lucrative for the private partner.

2. Avoid being blindsided by opposition to the project. This would require understanding the situation on the ground and being ready to minimize the opposition's influence. Work with neighborhood and environmental groups before starting the project to minimize their objections.

3. Avoid long-term partnerships without opportunity to make changes to the agreement without penalties. Longer partnership agreement terms make it attractive and profitable for the private partner, but make it difficult to respond to system changes.

Final Recommendations

Based on the research performed, the following recommendations are proposed.

Recommendation 1: To ensure successful partnerships can be pursued on a continuous programmatic basis, public agencies must proactively identify projects that meet criteria that indicate a partnership would be a viable project delivery alternative.

Partnerships grow out of a mix of conditions where the right project is matched with partners with strengths to accomplish the project goals. Not all projects are suitable to being performed through a partnership. The project must have a mixture of elements including:

- Limitations exist on the part of the public agency to successfully complete the project on its own;
- Opportunities exist for the private partner to contribute to successfully complete the project; and
- Financial benefits, now or in the future, must exist for the partners.

Recommendation 2: Value capture strategies with enabling legislation must be pursued to ensure partnerships can grow on a continuous programmatic basis.

The case studies reviewed identified a broad range of financing mechanisms used to fund the projects involving partnerships. Federal, State and private funds were used in various combinations to meet the financial needs of the projects. However, a larger number of partnerships utilized value capture strategies in combination with funding through loans, earmarks or other state or federal funds. The use of these value capture strategies required state enabling legislation. NJ's public-private partnership legislation is described in New Jersey Public Transportation Act of 1979 (N.J.S.A. § 27:25-1 et seq.), which allows New Jersey Transit (NJT) to award contracts based on competitive proposals, to the proposer that submitted the proposal determined to "be the most advantageous to the State, price and other factors considered." This legislation was used in the NJT Hudson-Bergen LRT and River Line DBOM projects. The limited use of this legislation indicates that the legislation needs to be revised to promote partnerships within the state. Legislation that include the ability to accept unsolicited proposals and

granting additional agencies, including lower level agencies partnership authority are aspects of legislation that may increase the use of partnerships in New Jersey.

Recommendation 3: To grow partnerships on a continuous programmatic basis requires changes in agency capacity to increase employees with expertise and skills necessary to promote, evaluate and implement partnerships.

The survey performed as a part of this research to identify potential partnerships found 80 percent of responders identifying leadership as extremely critical to the success of partnerships. In addition, having an appropriate contract was also highly ranked as critical to the partnership success. Some of the skills needed to promote partnership include skills in planning, project management, finance, law and technical matters. International experience suggests that establishing an office within the state focused on partnerships can remove bottlenecks and lead to increased use of partnerships across the State.

INTRODUCTION

Transportation agencies are looking to innovative financial strategies to support requests from local governments and developers for new and improved transit services. Research shows that land and housing values tend to increase with proximity to a transit station. Transit-oriented development, which may include expanded housing opportunities and other amenities near transit, have been instrumental in promoting transit-supportive land use near stations and increasing ridership. Agencies have seized the positive impact of transportation investments on land values as a source for financing transportation projects through value capture and other cost-share strategies. In many cases these funding approaches are utilized through the development of partnerships that may be required to successfully continue to meet the transportation demands.

Despite the recognized need for partnerships, public agencies may face challenges forming successful partnerships. Several factors can facilitate or hinder transit agencies' and state and local government from entering into partnerships agreements that utilize value capture and cost-sharing strategies. The US General Accountability Office [(9)] performed a review of the extent to which transit agencies and local governments use joint development to fund or finance transit. The review found the level of coordination and support from public- and private-sector entities, the transit project location and design, and state laws, all play a role in determining the feasibility and efficacy of public transportation partnerships.

This research seeks to identify an approach for utilizing partnerships, value capture and other funding strategies for improving public transit in a more systematic and strategic manner. The intent will be to identify successful partnership endeavors, and determine the basis for their success. The research will identify and assess the efficacy of each partnership in meeting the expectations of involved parties, the components of the partnership including the partners, the transit improvement sought, the type of partnership, challenges to implementation, unique conditions and replicability, and the results and longevity of the partnership – with research aimed at guiding future partnership initiatives.

RESEARCH OBJECTIVES

The overall objective of this research was to identify and assess examples of local government and public transportation agency partnerships and the funding mechanisms used to improve or expand public transportation. In addition, the research sought to identify what needs to be done to ensure successful partnerships can be pursued on a continuous programmatic basis.

Specific objectives of the research included:

- To perform a comprehensive literature review, identifying partnerships developed through the use of value capture strategies both within and outside of public transit;

- To identify and assess both successful and not so successful partnerships developed to finance public transportation improvements. These partnerships will be identified through a survey of State Departments, Transit Agencies and local governments; and

- Develop procedural approaches for developing, assessing and maintaining successful partnerships within Transit in the state of New Jersey.

RESEARCH APPROACH

The tasks performed to achieve the objectives include the following:

PHASE I – Conduct a literature search of state-of-practice

PHASE II – Research Approach

Task II-1: Develop Research Exit Criteria.
Task II-2: Refined Literature Search
Task II-3: Review Legislation and Regulations Regarding Partnerships
Task II-4: Survey Peer State Departments of Transportation and Public Transit Agencies
- Sub-Task II-4.1: Identify Survey Candidates
- Sub-Task II-4.2: Design Survey Questionnaire
- Sub-Task II-4.3: Conduct Survey
- Sub-Task II-4.4: Synthesize and Catalog Survey Results

Task II-5: Assessment of Exemplary Partnerships
Task II-6: Recommendations
Task II-7: Prepare quarterly and final reports.

The research began with a comprehensive review of the literature covering the current state of the practice of partnerships with transportation and transit agencies as well as with private organizations. The literature review sought to provide a high level review of existing partnerships and the mechanisms used to achieve successful partnerships. In addition to the literature review a review of State and Federal legislation and regulations regarding the use of partnerships in public transportation, transit and other

governmental agencies was performed to better understand the legislative structure enabling partnerships.

The focus of the research was on identifying and studying successful partnerships. To accomplish this objective involved performing a survey of State Departments of Transportation and Public Transit Agencies to identify these partnerships. Through the survey, successful and not so successful partnerships were identified and focused interviews performed to gain insights into these partnerships.

Exemplary partnerships were further studied to identify the essential elements within a partnership that make them successful. Recommendations on strategies to ensure partnerships are pursued on a continuous programmatic basis within NJ Transit were then prepared.

SUMMARY OF LITERATURE REVIEW

To identify and assess examples of local government and public transportation agency partnerships and the funding mechanisms used to improve or expand public transportation, a Phase I literature review was performed covering the current state of the practice of partnerships within transit agencies and other governmental agencies. The literature review provides a first attempt to identify partnerships that can further be studied through contact with the partners involved. The review sought to analyze, describe and critique pertinent domestic and international literature on local government-public transit partnerships, value capture strategies and other mechanisms used for financing public transportation initiatives. A high-level review of existing partnerships is provided including information on the partners involved in the partnership, the legislation enabling the partnership, the form of the partnership and other factual data.

For more than a decade jurisdictions throughout America have realized that although historically general tax revenues and user fees supported public transit, these revenue sources no longer keep up with infrastructure needs [(1)]. Because governments are financially challenged to maintain transportation infrastructure [(10)], jurisdictions have increased their use of partnerships to develop projects and deliver services [(2,3)]. As one state transportation department explained in unveiling its partnerships to upgrade interstate roads, the innovation "will bring much-needed transportation projects to Georgia, the size and scope of which would not be possible through traditional processes" [(11)].

Partnership Definition

A partnership occurs when multiple organizations cooperate and share resources to achieve mutually agreed on ends. A public-private partnership (PPP) occurs when one of the partners is a governmental entity and at least one is a private organization, whether from the business or nonprofit sectors. Public-public partnerships involve cooperation between two or more public entities such as local-state partnering to build infrastructure. In New York State, for example, the Town of Cape Vincent and the Village of Cape Vincent combined efforts to purchase a single water tank to serve both communities. This decision resulted in better water pressure for all users from the larger tank [(12)].

The literature recognizes that partnership structures vary in terms of which entity handles each of the five components of infrastructure projects: design, construction, operation, maintenance, and finance [(13)]. Partnerships range from contract relationships where one entity specifies the problem, solution and desired product all the way to interactive coproduction where the parties collaborate in decision making from the project's start [(3)]. In some PPPs, private firms lease a standing piece of infrastructure. In others, private firms get contracts to design and build the structure but the government finances, maintains and operates it. In other PPPs, government agencies work with one

private firm that makes the initial capital investment and has responsibility for operating and maintaining the project--which is likely to give the firm an incentive to build in a way that minimizes operating and maintenance costs [14]. Government also has the option to use one private organization to finance the project and another to build it as Massachusetts did with the reconstruction of Route 3; the state legislature created a nonprofit organization to issue bonds and awarded the construction contract to a for-profit firm[15].

The United Nations Economic and Social Commission for Asia and the Pacific [16] separate projects on four dimensions: who owns the capital assets, who has responsibility for investment, who assumes risk, and the duration of the contract. It notes that each structure has its own advantages and disadvantages. The design-build model's advantages, for example, are that it is traditional and well understood. Its disadvantages are that it assigns risk to the public agency after the construction and installation phases.

Partnership Advantages

Studies in a wide range of governmental functions find that advantages of partnerships can include cost reduction [4], access to new resources [5], and risk sharing [6]. When South Lake Tahoe combined transit services offered by various providers into one centrally dispatched system, evaluation showed customer satisfaction with the new offerings and efficiency gains [17]. Ithaca, New York's transit system combines private, nonprofit, and government providers. They share garage and maintenance facilities and plan routes together; researchers found that this arrangement creates "a seamless regional transit system that would not be possible with public dollars alone" [18]. Chicago's Skyway saw an 11% drop in operating costs under a PPP lease, primarily because of lower labor costs [14].

The National Council for Public Private Partnerships notes a number of successful agreements in water infrastructure. Camden, New Jersey, for example has a 20 year agreement with United Water where the private firm manages, operates and repairs the city's water treatment, distribution and wastewater collection systems. This agreement saves the city over $2 million dollars in annual operating costs while improving water quality. The private firm collects greater revenue per year than the city was able to while water and sewer rates have not increased [19]. Indianapolis, Indiana and Great Falls, Montana have similar productive contracts with Veolia Water [20, 21]. Gremsey and Lewis [22] discuss successful water agreements outside the United States.

However, not all studies of partnerships find cost advantages. The literature suggests that individual partnerships may or may not leverage public funds to improve infrastructure. A study of 500 transit agencies found that a strong majority of those that used PPPs found cost savings but some also experienced declines in the quality of operations [7]. On the other hand, a 2004 study found anecdotal evidence that PPPs improved quality especially when the private sector got involved early in the project [23]. Little [24] concludes that project size influences rate of success. He finds that

megaproject partnerships, that is to say those for projects costing more than one billion dollars, are particularly likely to have performance problems based on underestimating costs and inflating expected benefits.

Elements of Successful Partnerships

Designing an effective partnership requires careful assessment of what an agency wants from a partner. The agency has to understand which values it wants to maximize and whether various partnership arrangements can help do this [8]. Research reported in Hodge and Greve [25] found British road building partnerships had positive outcomes while British partnerships in schools actually showed higher costs and lower building quality. Value capture financing arrangements also showed case sensitive results [26]. Buchanan[26] notes that in England such arrangements resulted in public savings for bus systems but did not effectuate the same savings in railroads.

For public agencies successful partnerships require more than simply lowering costs and using high quality materials. Government agencies must ensure a higher level of public accountability and involvement than has been the traditional obligation of private firms. Transparency is a particular concern for government actors [27].

Public agencies also have to be careful to look at the project's impact on various constituencies. When California decided to use private companies to replace Doyle Drive, a road leading to the Golden Gate Bridge, the state engineers sued to stop construction. The engineers said that it was illegal for the state to give such work to foreign firms--in this case companies from Germany and Luxemburg[28]. The Texas DOT switched from negotiating with a Spanish consortium over improvements for state highway 121 and established a partnership with the local toll road authority after citizen discontent with the original plan caused the legislature to disallow it [29]. Kim and Wachs [30] questioned the advantage of lowering public agency costs if the savings were at the expense of worker wages and benefits which they found to be the case in a study of 12 bus agencies. A comparative multi-state investigation of arrangements for allocating wastewater treatment construction funds found those states that involved private finance actors tended to skew their choices to more affluent localities--that is to communities which were better risks for loans-- rather than those with the greatest infrastructure needs [31]. The issues of whether to work with foreign firms, use lower-cost workers and do business in higher-income communities would not be issues at all in most strictly private projects. Thus, PPPs need to be studied on a case by case basis with an eye to how the arrangement affects various political constituencies and public equity goals; one size certainly does not fit all situations. Ashley et al [32] discusses the importance of partners understanding where the interests of each entity coincide and where they diverge in given matters.

Jurisdictions learn about what works in partnerships by examining successful and unsuccessful cases. Such examination can include international scanning. As of July 2008, 23 American states had legislation authorizing highway PPPs [33]. Some

examples existed of long term leases on toll roads (e.g., the Chicago Skyway and the Indiana Toll Road) and a few examples of design-build-operate-maintain contracts (such as Utah DOT's reconstruction of I-15). Nevertheless, comprehensive PPPs for highways were relatively rare in the United States in comparison to the United Kingdom, Spain, Portugal and Australia where contracts are more likely to use private entities to build, operate, maintain, and finance a road in exchange for regular payments from the government. In the United Kingdom, for example, PPPs account for about a third of infrastructure investment [(14)]. The government has a specific set of procedures for performing a value for money analysis on PPPs [(34)]. The USDOT, therefore, has studied aspects of highway partnerships in those countries.

The conclusion from cross-country scanning is that writing an appropriate contract is key to a successful project. Agencies have to specify operationally the outcomes they desire and how performance will be monitored over a long period. PPPs thus require changes in agency capacity. Agencies need to acquire employees with skills in writing contracts[(35)]. In using PPPs, agency managers may also need to have skills in banking and finance, abilities that were not important for them before the introduction of private players [(31)].The United Nations Economic and Social Commission for Asia and the Pacific [(16)] says that agency members involved in PPPs need skills in planning, project management, finance, law and technical matters. It finds that some agencies may need to hire transaction advisors as consultants for drafting contracts and preparing bid documents.

Romzek [(36)] cautions that the record of current success is uneven because individual public agencies lack the skills to adequately monitor new private stakeholders. As Boarnet and Dimento [(3738)] noted, "Agencies that have been construction managers will have to become regulators in a complex environment. This will require new skills, changes in agency culture, and a willingness to seek practical solutions."

Engel, Fischer and Galetovic [(14)] offer the following advice for designing contracts:

1. Use competitive auctions rather than bilateral negotiations for transparency.
2. Write present-value-of-revenue contracts.

An example of a present-value-of-revenue contract is what the United Kingdom used for the Queen Elizabeth II bridge on the Thames River. The agency sets the discount rate and user fee schedule. The private firms bid present value user fee revenue they desire and the lowest bid wins. The contract ends when the company has collected the user fee it demanded in the auction. This arrangement leads to variable franchise terms; the franchise is of longer duration if fewer people use the infrastructure, shorter if toll revenues accrue more quickly.

The New York's Office of the State Comptroller [(39)] cautions that contracts must 1) be written clearly; 2) identify the full value of the public property; 3) not allow the private partner to use unfavorable pricing mechanisms that will burden the public with unreasonably high tolls (as the writer believes occurred with Chicago's Skyway lease); and 4) not take a quick present budgetary fix that pushes costs into the future and

potentially expands public debt. Birmingham, Alabama's sewer bonds and Harrisburg, Pennsylvania's incinerator debt are examples of deals that soured and led jurisdictions to the prospect of default [40].

A report from the Kentucky Transportation Center emphasizes that it is easier to write contracts when the outputs and outcomes are measurable. It also notes that effective contract monitoring requires agencies to design adequate evaluation tools [15].

A Need For New Resources

Governments can get resources for transit from general taxation or from levies on those who benefit from particular infrastructure. Political considerations limit the use of general taxation. This limitation is particularly true in our own era given the wide variety of government supplied services that must compete for funds and public dislike for high taxes. In addition, there is wide acceptance of the "benefit principle" which holds that systems gain efficiency when costs and benefits relate to each other [41].

The question for transit planners then is who benefits from transit? Riders clearly comprise one group of beneficiaries and fares are a common attempt to collect revenue from this population. Problems arise with this method, however, because limits exist on how far a system can raise fares without reducing ridership.

Fortunately, users are not the only people who benefit from transit. Litman's [422010] study of American cities found that transit benefits localities through improved traffic safety, decreased air pollution, and better health making it rational for jurisdictions to increase taxes to support better transit infrastructure. In addition, significant literature shows that station areas catalyze commercial and residential redevelopment and community revitalization both in America [See References 43, 44,45,46,47,48,49, and 50.] and internationally (e.g., Medda and Modelewska 2010[51]; Rolon 2008[52]). Transport positively affects economic development [Baum and Kurte 2002]. Every 10 million dollars spent on transport infrastructure, creates 314 jobs in the area [53]. The connection between transportation and development is so close that one consultant's report suggested Florida DOT should change its name to the Department of Transportation and Economic Development [54].

Traditionally, private firms can retain surplus value from commercial and residential redevelopment, but governments can recover at least part of it to distribute as public benefits through "value capture." Various value capture mechanisms exist including--but not limited to-- tax increment financing, joint development, developer impact fees, transportation benefit districts, local improvement/special assessment districts, transportation concurrency, and corporate sponsorship. Although all these mechanisms require state enabling legislation, each has its own set of administrators and resource contributors. Jurisdictions may use one or more in tandem. A recent study found that 33 out of 55 surveyed transit agencies used value capture strategies of some kind. This usage accounted for a small proportion of the agency's revenue but the added funds were crucial to building new stations [9].

Lari et al [41] suggest that agencies can evaluate the decision to use value capture mechanisms and which mechanism to use on economic efficiency, equity, reliability, and political feasibility grounds. The Center for Transportation Studies [55] suggests before using each mechanism administrators should ask: Does it promote or hinder economic development? How does it impact different parts of society? Is revenue predictable? How feasible is its adoption?

Strathman and Simmons [10] suggest as evaluation criteria: high yield or revenue potential, equity, encourages efficient production and use, administrative ease, transparent (easy to understand), and political and legal feasibility. Value capture mechanisms might not be an appropriate finance tool if analysis suggested that only low value could be captured in a given project [56].

The Maryland Department of Transportation [57] offers two other questions for agencies to consider: Who initiates and conducts the value capture analysis? Who implements the initiative and collects the revenues?

Value Capture Techniques

The remainder of the literature review examines reports on each value capture technique. A definition is given, reports on evaluation of the mechanism are provided, and examples of its use cited.

Tax Increment Financing

In the United States, tax increment financing (TIF) is the most widely used tool for financing economic development [58]. Here's how it works. A district is designated for TIF. Base tax rates at that time are ascertained and frozen. Debt is issued and the proceeds fund district improvements. The improvements should lead to higher tax revenue and these gains--the tax increment above the frozen base rate--repay the debt [59]. There are 1,000s of TIF districts but no national registry [Briffault 2010].

In general, cities with growing populations and property values use TIF. The advantage is that state constitutions tend to restrict local government debt but exempt TIF debt from municipal limits. Generally, states require TIF districts to show that development would not have occurred without the TIF, so municipalities must conduct initial studies that show this "but for" requirement is met and set the district's boundaries [60]. However, states generally accept the local government's "but for" case so it is a low hurdle to cross [58].

TIF is a highly decentralized tool in keeping with the relatively decentralized American political landscape. As one commentator noted, "TIF is applied differently in every jurisdiction and even municipalities with the same state, with the same enabling legislation, administer TIF in different ways" [60].

Potential problems occur however if tax revenues do not rise after development. TIF revenue is vulnerable to economic downturns and the financial risk of the bond is generally borne by the city [59,10]. An increase in taxes is not assured but fixed debt service must be paid every year [61]. Thus New York City's Independent Budget Office [62] cautioned planners of the Hudson Yard redevelopment to be aware that demand for office space in that area might fall short of expectations A need exists to investigate each arrangement thoroughly as even a brief literature review shows clearly that the specifics of the value capture arrangements are important to this technique's yield and reliability.

Texas law authorizes the creation of Regional Mobility Authorities (RMAs) to apply tax increment financing for every type of transportation network. Texas has eight RMAS which concentrate on building roads [63]. A 2007 Texas law also authorizes creating Transportation Reinvestment Zones to facilitate value capture of the tax increment from transportation projects. Vadali et al [64] note that the success of a TRZ will depend on project specific factors including land conditions in the vicinity and general regional economic conditions. Case-based research is essential in setting up a TRZ.

Minnesota TIF Districts

In 1998, Minnesota had 2,000 TIF districts each of which had to be approved by the government of the city or county within which the TIF was located [65]. Usually the development costs were financed with the proceeds of bonds but some developers paid the costs up front. They were repaid if and when the tax increment was generated. In short, the developer took the risk rather than the district.

Gateway Regional Center Light Rail Expansion (Portland, Oregon)

Portland, Oregon is widely considered a TIF leader and innovator [60]. It has used TIF financing for several infrastructure projects. The Gateway Regional Center light rail expansion and transit center redevelopment used TIF financing. Portland's streetcar project used TIF as one financing mechanism [10]. Between 1997 and 2003, the value of property on Portland's streetcar route increased between 44 and 112 per cent with raw land seeing greater gains than commercial and residential property [61]. Portland prefers issuing bonds with very short maturities that are sold to commercial banks [60].

Hudson Yards Redevelopment Project

New York City used a variant on TIF called PILOT to fund the Hudson Yards redevelopment project. In this TIF variant, developers enter into agreements with the city's Industrial Development Agency (IDA) which buys land from the developers for token amounts. This legal transfer means the land is owned by a governmental entity so it does not appear on the property tax rolls. Instead of paying property tax, developers make fixed "payments in lieu of taxes" (PILOT) to the IDA for 19 years. The city benefits by using this money to pay debt service charges on bonds floated to finance the project; the developer benefits by knowing their tax rate will not change in the PILOT period. At the end of 19 years, the land returns to the developer who resumes paying property taxes (New York City Bar Committee on New York City Affairs 2007). Unfortunately, the PILOT program did not lead to the public sector savings originally envisioned. New York City's spending on the Hudson Yards project was greater than envisioned by 2013. This development emphasizes once again the case sensitive nature of outcomes.

Some commentators have flagged a problem with this arrangement in terms of supervision of the project by elected officials as the project does not need city council budget approval with these financing options. The city council does not get a chance to publicize the project's financing nor do elected officials get to trade off which money to spend on development and which to spend on schools, crime prevention, or other worthwhile areas [66,62].

Randolph/Washington Station

Chicago used TIF to finance transit projects such as the Randolph/Washington station [51]. However, recently with shortfalls in Chicago's funding for schools and police, some commentators are calling for using TIF revenue to fund general purpose city expenditures in the future [67]. In other words, debate occurs about whether it is expeditious to segregate tax increment money in advance for redevelopment purposes in one geographic area or to allow elected city officials to use revenue where it seems most needed at a given time; if complaints continue TIF could lose political feasibility over time.

Joint Development

Over half the transit agencies the U.S. Government Accountability Office (GAO) surveyed--32 of 55--used joint development, to create railroad stations [9]. Joint development occurs when a transit agency and a private entity partner to create development at a transit station. At its best, joint development is a win-win situation with developers improving their revenue stream through location near a train station and transit agencies gaining through cost sharing for construction, rehabilitation, and/or maintenance.

Eleven agencies were responsible for 115 of the 166 developments reported in the survey. These joint development leaders have formal joint development policies, in-house real estate expertise, and developable land holdings. Such agencies--e.g., Los Angeles Metro, Washington DC Metro, Metro Atlanta--generated between $184,000 and $8.8 million revenue from joint development while their total operating expenses stood between 374 million dollars and $1.3 billion dollars [9]. In the late 1990s, the Washington DC Metro generated about $6 million in joint development revenue per year [1].

Washington Metro Area Transit Authority

Any agencies using federal funds in a joint development project must follow FTA joint development guidance which requires coordination among state DOTs, local transit agencies, county and city governments, and private developers. Thus the Washington Metro Area Transit Authority [68] (WMATA) has to interact with executives, legislatures, and local planning authorities. Public hearings are held before contracts are signed. Developers must also meet with local governments and community organizations before submitting bids and share information with them.

The Transit Cooperative Research Program [69] calls WMATA "a textbook case of an entrepreneurial agency that recognized early on that it could recoup part of its investment costs by sharing in the value added to land by transit." Key to its success was forming a real estate division early on that purchased land on the open market and then made leases to developers. It should be noted that these strategies are not allowed under the NJ Transit enabling legislation.

WMATA [68] markets to developers property interests it owns or controls. The aim is to have the developer commit resources for transit oriented development projects on land leased from WMATA. The initial lease term is generally from 50 to 60 years [1]. WMATA leases air rights. It pioneered connection fees to construct passageways between train stations and retail/commercial properties with the first one connecting a station and the mezzanine of the Woodward and Lothrop Department Store.

Successful joint development projects not only bring in fiscal resources from the developer but they can increase ridership as well so that the agency collects a greater amount in fares [1]. However, reviewing proposals and selecting developers puts an administrative burden on the agency. A review of WMATA's process found that the agency only received 2.1 proposals from developers per station. To improve the interest in writing proposals a task force suggested that WMATA should move from a complex RFP process to a two step RFQ/RFP process. The Task force said that the agency also should participate more in the land use planning processes of adjacent local governments. WMATA should let developers and citizens know the names and contact information for people who will be reviewing applications. They should hold their public hearings early--before local governments give their approval. The Task Force noted the importance of WMATA's being clear about the goals of joint development. These goals might include to get additional money or to facilitate Transit Oriented Development. Sometimes these aims build on each other but at other times they might conflict [70].

New York Metropolitan Transit Authority

Recently New York's Metropolitan Transit Authority (MTA) has tried to fix budget deficits by renting out its real estate. In March 2011, the MTA said it would explore renting part of the 3 million square feet of office space it controls on Madison Avenue. The agency is signing 10 year leases for restaurant owners and other retailers to take over stations in suburbs such as Peekskill and Mt. Kisco [71].

Developer Impact Fees

In the past twenty years, developer impact fees or one-time charges applied to new development, have become more popular as value capture financing mechanisms moving from their original use in Florida and California to other states as well [72]. A recent US Government Accountability Office [9] survey of 55 transit agencies found that a third used impact fees to finance railroad stations.

Impact fees are based on actual and projected costs of providing transit with the understanding that the developer should pay a proportional share of capital--not operating-- costs [73]. Most impact fees are paid over time after construction is permitted. The idea is to create a security, borrow against it and use the impact fee money to make the required payments [72]. For localities to use impact fees state enabling legislation is required.

Impact fees are thought to perform well on efficiency grounds [73]. They have the political advantage of financing extension of services with less burden on existing residents. They have relative administrative ease as they do not require setting up a new jurisdiction. However, state law generally limits their use to capital purposes relating to growth; they cannot be used to fund operating costs [76].

The literature notes that an equity problem may result from use of this technique if developers shift the cost to new home buyers thus limiting the amount of affordable housing offered to low-income clients. Altshuler and Gomez-Ibanez [74] and Peddle and Lewis [73] consider developer impact fees more regressive than most other local taxes or user fees.

The Transit Cooperative Research Program [1] notes that as impact fees are unpopular with developers, localities must write statutes that can withstand possible court challenges. This means the originating agency must include a justification and indication on how proceeds of the impact fee will serve the development itself into the statute.

Transportation Benefit or Improvement Districts (TIDs)

Transportation benefit or improvement districts are areas designated as special funding districts to provide transportation infrastructure; they are governed by their own Boards of Directors. Scope and authority vary by state as would be the case with school districts or any other single-function governments [10]. New Jersey allows TIDs through the New Jersey Transportation Development District Act of 1989 [75]. This is the only currently viable value capture system in New Jersey. However, by July 2000, only four counties had engaged in a planning process under this act [76].

As compared with providing transportation through municipal tax levies, the TID has advantages and disadvantages. One important advantage is that the TID has its own taxing authority which depending on the state can result in revenue from property and sales taxes and vehicle license and development impact fees. A disadvantage is that the city council must set up a new government. The process is not as straight forward as having the municipality directly handle transportation finance. There is now another entity for the city to monitor.

In the state of Washington, the majority of TID taxes must be approved by the affected electorate. These taxes sunset after 10 years which is politically popular as it gives electorates some sense of control over the imposition of new taxes and a sense that the requisition will not continue after it loses popular affirmation [77].

Local Improvement/Special Assessment Districts

All states allow the formation of local assessment districts where property owners will have a special tax assessment to develop transportation projects. Local improvement districts (LIDs) or special assessment districts are created when a group of such state's property owners need infrastructure improvements and a majority (or super majority depending on the state) agree to pay for their costs through the special assessment. Who pays what can depend on property size or distance from the improvement. This financing mechanism requires a group of well capitalized property owners who can pay the assessment and are willing to vote approval to do so--conditions that are not routinely met [61]. The Maryland DOT [57] cautions that special assessments are difficult to establish. In addition, municipalities should remember that LIDs cost money to administer [78].

State statutes specify rules for creating LIDs that last until the improvement is completed and the debt is paid [10,75]. Such rules might include:
1) Given an application for a LID, the state transportation commission holds hearings.
2) The governing body of every impacted city or county must approve the corporation.

A LID was created in Portland, Oregon to help finance its streetcar project. It generated $14.6 million dollars or 16% of total capital costs [79].

Transportation Concurrency

In 1985, Florida enacted a Growth Management Act that stipulated that infrastructure must be congruent with growth [80] an idea subsequently embodied in Maryland, New Hampshire, and Washington statutes as well. This doctrine known as transportation concurrency means that if the locality believes new development will swamp available infrastructure, the developer must provide the infrastructure (or money for it) or wait until government builds what is needed before proceeding with its original project [10]. This stipulation is similar to reported instances of governments requiring developers to create a Homeowners Association that will assume a significant part of the service burden before the jurisdiction approves the development [77].

An advantage of a concurrency statute is that it forces local governments to do long-range planning about the effects of new development. However, this enactment leads to equity problems where developers pass the costs of paying for infrastructure on to home buyers thus hurting the chance for low income people to find affordable housing. It also encourages sprawl by leading developers only to seek out places with enough infrastructure [10]. Koppenjan and Enserink [81] note that governments can expend time and effort trying to get private entities to invest in public infrastructure without paying sufficient attention to whether this participation will create affordability problems for users.

Broward County in Florida has been a concurrency leader. In 2003, it divided the county into 10 concurrency districts with each having its own levels of service standards. Some districts were labeled standard concurrency districts with concerns centered on roadway improvement; others were designated as transit concurrency districts where standards also reflected mass transit needs. Prior to applying for building permits, developers must get a Transportation Concurrency Satisfaction Certificate from the county. Developers procure the certificates by paying concurrency assessment fees when the standards suggest that their projects will overwhelm available infrastructure [82,76].

Corporate Sponsorship

Some environmental activists and scholars argue that because corporations have an interest in a viable transit system they may also have an interest in sponsoring transportation infrastructure [79]. One New York activist explained, "If you let companies adopt a subway station like they're allowed to adopt highways--not for advertising but to care for it--I bet that would make a difference" [83].

Chicago's transit agency recently brokered a deal with Apple that gives the corporation naming rights to the North/Clybourn station--which is near an Apple store--in exchange for $3.9 million and station refurbishment[84]. The details of this deal are provided in this report as a case study of the North/Clybourn Station. In that deal, Apple agreed to refurbishing the exterior of the station adjacent to the new Apple store in return for the rights to an exclusive lease of plaza area between the station and the new store.

A Need for Leadership

Implementing partnerships of all types requires leadership at the highest political and administrative levels to convince multiple stakeholders that a project will bring benefits to them. The type of leader needed is the transformational leader who can inspire followers and have a profound effect on the outcome of the project through how they evaluate situations. One example of the leadership needed can be seen in Hudson County in New Jersey where even in a time of citizen calls for lower taxation, New Jersey's Hudson County Executive Tom DeGise and the Board of Chosen Freeholders were able to spearhead a successful referendum to levy a tax one cent on every $100 of assessed property value for open space acquisition and park maintenance. One advantage the campaign had was to get buy-in from various environmental groups such as New York/New Jersey Baykeeper and the Hackensack Riverkeeper. Another was that towns and NGOs with support of their municipalities could apply for funds from the money raised by the levy thus securing the support of local officials. A third was that the tax burden was low on individuals; actual charges average $25 per property owner each year. Learning more about Hudson County's strategies would be useful information for other local executives and legislators [85].

PARTNERSHIP LEGISLATIVE REVIEW

To better understand the legislative structure enabling partnerships in other States, a review of State and Federal legislation and regulations regarding the use of partnerships was performed. Provided here is a brief history of partnership development across the nation and the economic and legislative climate to support continued partnership development. Both a national and state overview of legislation enabling local government-public transit partnerships is provided.

States Enabling PPPs and Value Mechanisms

In 2006 fewer than half the US states had passed legislation enabling PPPs (P3s) and 38 allowed design-build. Seven years later, as of 2013, 33 states and Puerto Rico have enacted such laws relating to highway and bridge projects. 21 include transit projects. The National Conference for State Legislation provides a comprehensive compendium of Public Private Partnership information for Transportation Projects including the map shown in Figure **1**.

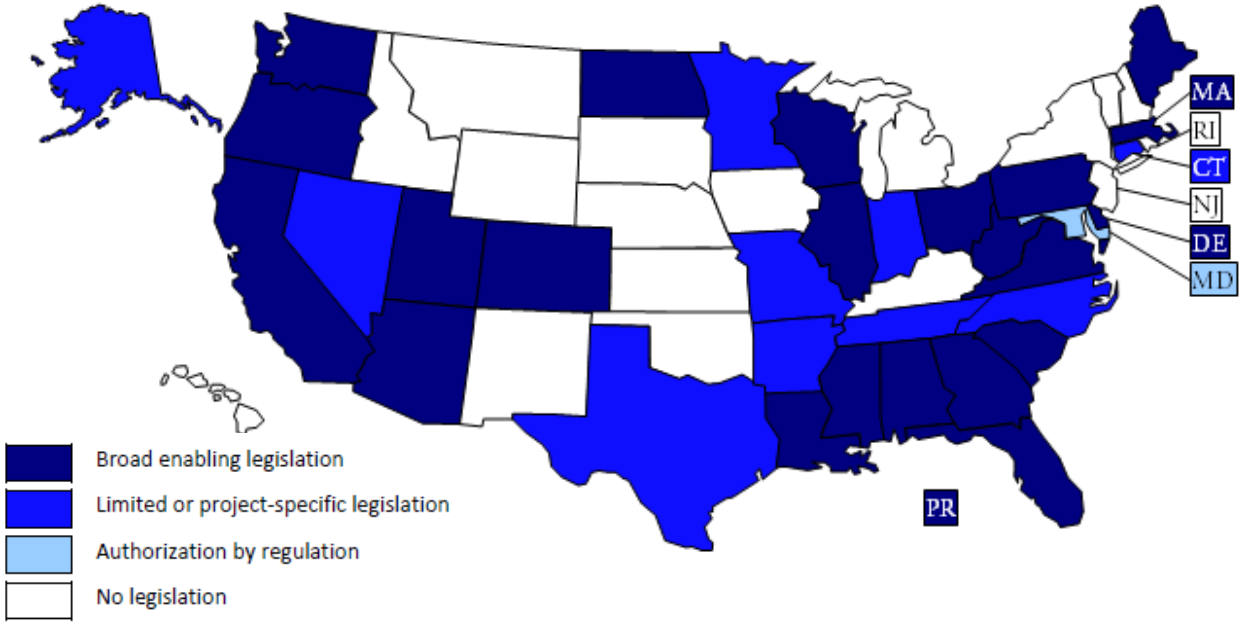
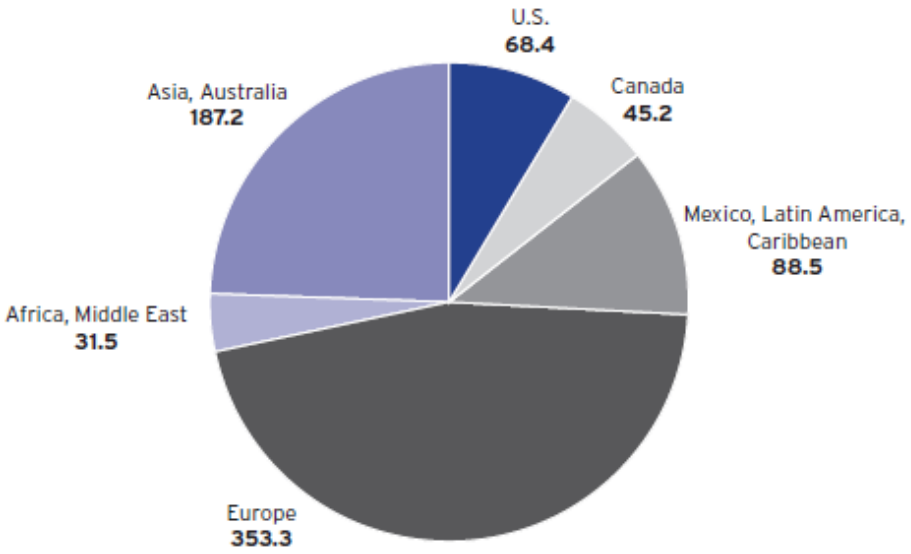


Figure 1. States with PPP Enabling Legislation as of 2013[86]

The United States is relatively late to the Public Private Partnership game compared to parts of Europe, Asia and elsewhere.
Figure **2** shows cost associated with partnerships worldwide for projects between 1985 and 2011. With an economy six times smaller than that of the US, the United Kingdom invested $50 billion in Public Private Partnerships between 1990-2006 compared to the US investment of $10 billion. This represents 32.5% of total UK public infrastructure



Note: Includes funded road, rail, buildings, and water projects through October 2011 in nominal dollars converted into U.S. dollars at the time of financial close. Excludes U.S. design-build projects.

Source: PWF, 2011

investment. In Portugal such spending represents 22.8% while in the US it accounts for less than 3%.[14]

Figure 2. Public Private Partnerships Worldwide, Nominal Total Costs (in billions $USD), 1985-2011[87]

Figure 3 shows the number of public private partnerships projects undertaken in the United States.

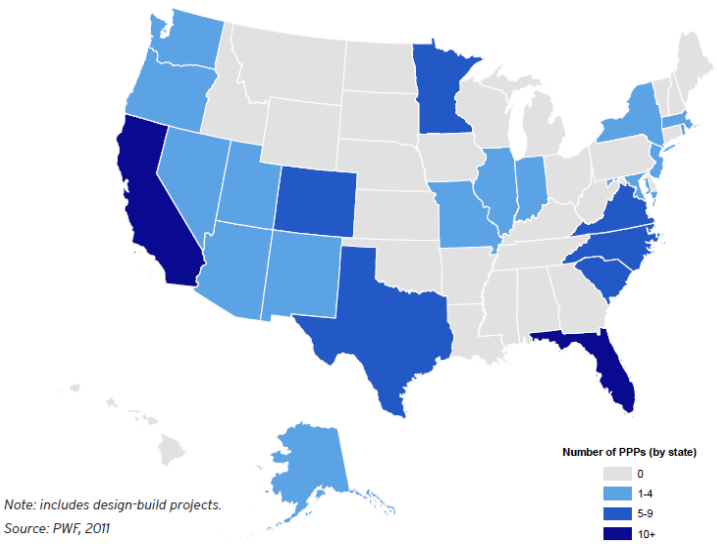


Figure 3. Transportation Public Private Partnerships by State, Number of Projects, 1989-2011[14]

Federal Legislation & Regulation

Public Private Partnerships are advanced by federal legislation. Some federal programs pilot, model or advance aspects of public private partnerships. But public private partnerships are enabled primarily through state law, as many states have legislation that inhibits key aspects of public private partnerships such as low bid requirements, or prohibitions against design-build arrangements or co-mingling public and private funds.

The federal government has encouraged the use of public-private partnerships through pilot programs, guidelines for federal highway funds and informational resources. The most relevant federal legislation is Public Law 109-59 the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA- LU). Also referred to as the Surface Transportation Act, its current reauthorization defines changes such as eligibility for private activity bonds, additional flexibility to use tolling to finance infrastructure improvements, and broader Transportation Infrastructure Finance and Innovation Act (TIFIA) and State Infrastructure Bank (SIB) loan policies that aid public private partnerships.

SAFETEA-LU includes innovative legislation in support of public private partnerships in the following areas addressing federal aid fund management, debt financing and credit assistance. Within SAFETEA-LU includes a number of value mechanism tools and resources enabled at the federal level for public private partnerships. Several of which were new when the legislation (or subsequent updates) were passed. The four broad areas including 1) value mechanism tools such as Private Activity Bonds (PABs) and Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance; 2) federal aid fund management tools such as advance construction cash flow tools, federal aid matching strategies, and pass through tools; 3) federal debt financing tools

such as Grant Anticipated Revenue Vehicles (GARVEE bonds) and Grant Application Notes (GANs); and 4) more detailed federal aid matching strategies of flexible match, how federal funds count as a match and third party donations.

State Legislation and Regulation

In completing public private partnership projects, Florida and California lead the nation. Each has over 10 completed projects. Next in terms of numbers are Colorado, Minnesota, North Carolina, Texas, South Carolina and Virginia which each have between five and nine projects. These are followed with states completing between one and four projects each: Alaska, Arizona, Illinois, Indiana, Massachusetts, Maryland, Missouri, Nevada, New Jersey, New York, New Mexico, Oregon, Rhode Island and Washington.

State legislation varies in the breadth of types of public private partnerships they authorize and whether they include transit. Other notable element of state legislation include the ability to accept unsolicited proposals, the granting of lower level agencies public private partnership authority, whether public private partnerships require the approval of the state legislature, the ability of the public sector to hire technical staff, inclusion of non-compete clauses and details of availability payments/shadow tolls.

In NJ, only NJ Transit has public private partnership authority, granted by the New Jersey Public Transportation Act of 1979 (N.J.S.A. § 27:25-1 et seq.). It allows NJT to award contracts based on competitive proposals, to the proposer that submitted the proposal determined to “be the most advantageous to the State, price and other factors considered.” This authority has led to the state’s only two public private partnerships found in the review, the Hudson-Bergen LRT and River Line DBOM projects.

National best practices and recommendations for states include the National Council for Public-Private Partnerships recommends eight factors for successful public private partnerships. The National Conference for State Legislation has created a significant capacity with its P3s Partners Project including a 2010 National Conference for State Legislation report entitled Public-Private Partnerships for Transportation: A Toolkit for Legislators which provides a range of resources, among them a typology of public private partnership approaches (including notes on Brownfield Long-Term Lease conditions), guidance on public framing of the political issues, how State Government can pursue public private partnership legislation (including Legislative and Executive Branch roles), 9 Principles for State Legislators, and several detailed appendices with state by state specific legislative details.

International experience suggests to the US that establishing a unit within the state focused on public private partnerships and with sufficient capacity to aid in their promotion, evaluation and implementation. To date, California, Colorado, Georgia, Michigan, Virginia and Washington have established such specialized units.

SURVEY PEER STATE DOTS AND PUBLIC TRANSIT AGENCIES

To help identify a broad range of partnerships and gather information on best practices regarding partnerships, a survey was conducted of state Departments of Transportation and transit agencies. The survey was administered in a two-phase approach with an initial survey of Departments of Transportation and targeted transit agencies to identify public private partnerships including those involving innovative financing schemes. Based on the information received in the first phase, a second phase involving a more focused survey was performed to gather detailed information about identified partnerships.

Identifying Survey Candidates

The survey candidates for the first phase of the survey included: (1) State Departments of Transportation; (2) Transit Agencies; (3) Transportation Management Associations (TMAs); and (4) Infrastructure Associations. To gather contact information from State Departments of Transportation, individuals involved in Public-Private Partnership (PPP), Innovative Finance, Program Delivery, Research or Planning were identified through the State's websites. The transit agencies identified for surveying included transit agencies operating fixed-guideway systems including commuter rail, heavy rail, light rail, streetcar, and bus rapid transit. The 30 largest US bus agencies are also identified for surveying. The most appropriate person to receive the survey at transit agencies came from a variety of Departments including Community Relations, Marketing and Innovative Finance, to name a few. Contact information was also obtained for nine TMAs in New Jersey. Most TMA websites provided limited contact information for Departments or individuals working at these organizations making it difficult to identify the most appropriate person to contact for completing the survey.

Survey Design

Appendix I includes a copy of the survey form used. Included in the survey are five questions including:

1. Is there an entity (office, division) or person who is in charge of public private partnerships (PPP) in your organization?
2. Has your agency considered any types of PPP in the past 5 years?
3. Please name three PPP cases involving your organization:
   Project Name:
   Project Location:
   Partners:
   - Initiator:
   - Partner:
   - Partner:

   Enabling Legislation:
   Form of Partnership:
   Funding Mechanism

4. What are the critical elements of successful partnerships in your experience?
5. Any suggestions for a public transit agency in regarding to forming PPP?

Survey Results

Completed surveys were received from the 15 states and represented by the following organizations:

- Alaska DOT & Public Facilities
- Arkansas State Highway and Transportation Department
- Capital Metro (Texas)
- Colorado DOT
- Cross County Connection TMA (New Jersey)
- CyRide (Iowa)
- High Performance Transportation Enterprise (Colorado)
- Illinois DOT
- Iowa DOT
- Kansas DOT
- Maine DOT
- Memphis Area Transit Authority
- Minnesota DOT
- North Carolina DOT
- Oklahoma DOT
- Virginia DOT

The following provides a brief summary of key survey questions.

Types of PPPs Used

Figure 4shows the responses received to the question “Is there an entity (office, division) or person who is in charge of public private partnerships (PPP) in your organization?” Over 60 percent of respondents indicated there was no entity or person in charge of PPPs.

Figure 5 shows that 60 percent of agencies responded they had considered the use of PPPs within the last five years. The types of PPPs used by these agencies included: Design Build (36%); Build-Operate-Transfer (10.5%); Any long-term asset lease of toll road(10.5%); Operations and Maintenance (O&M) or Program and Financial Management Fee Service Contracts (15.8%); and Other (26.3%). The types of PPPs used under “Other” included:

- Financial Cost Sharing for Capital Improvement Projects via Cooperative Agreements
- Finance
- Design, Build, Finance, Operate and Maintain
- Non-Infrastructure Partnerships; Working with Private Sector Employers.

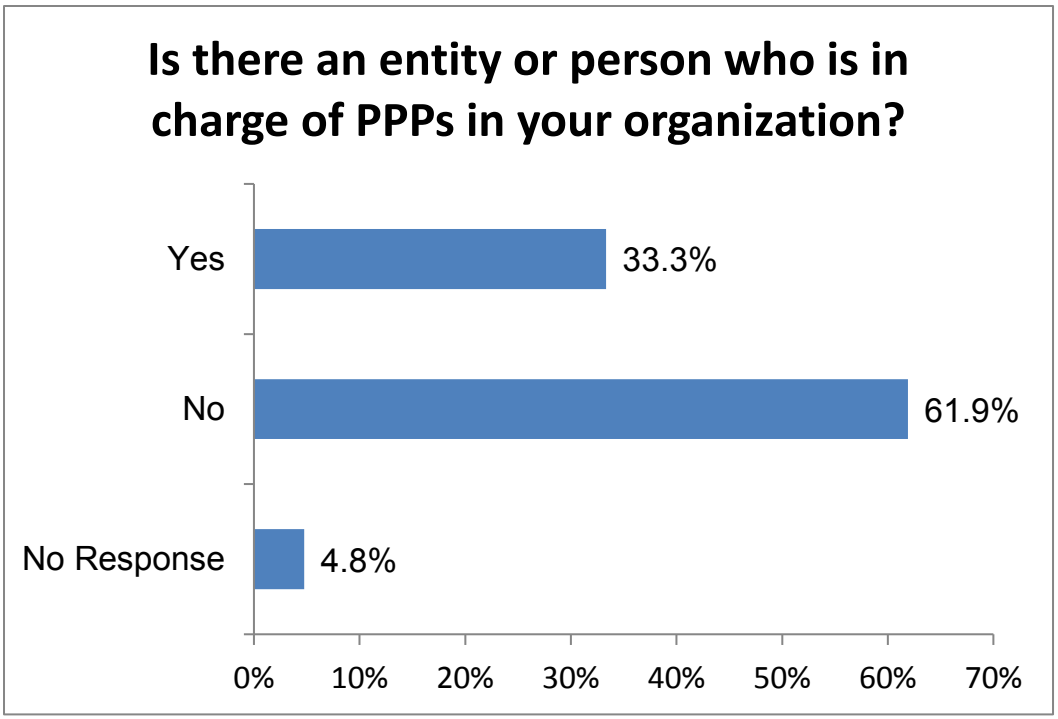


Figure 4. Summary of Survey Question 1 Responses

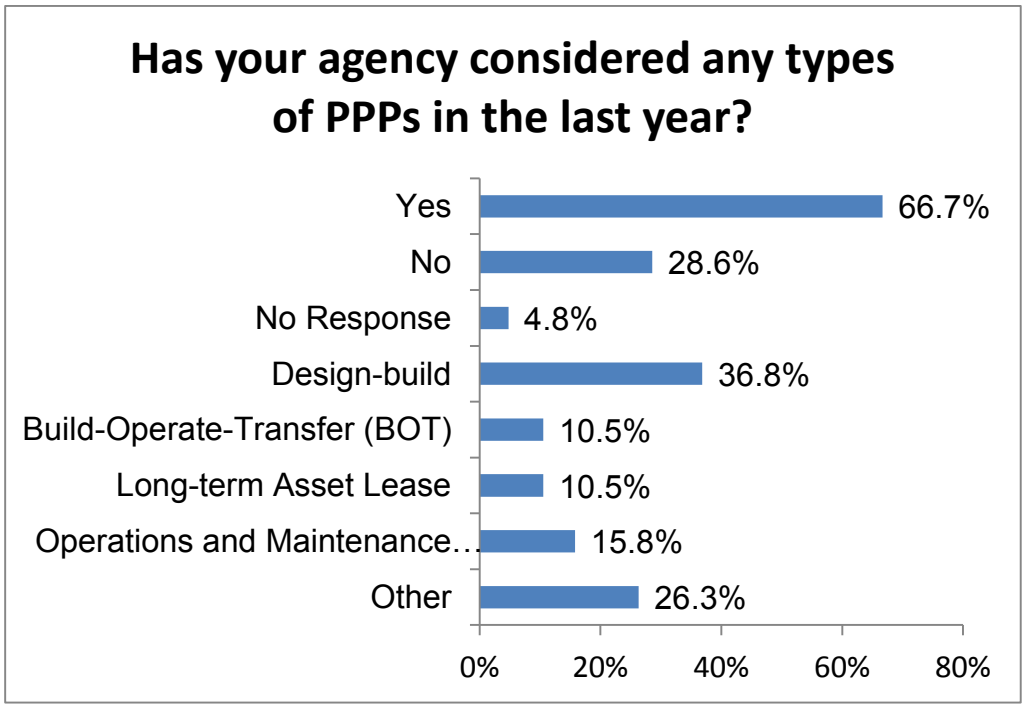


Figure 5. Summary of Survey Question 2 Responses

Elements of Successful Partnerships

The survey asked "What are the critical elements in successful partnerships in your experience?". The participants were asked to rank each element listed from "not critical" to "extremely critical". Figure 6 summarizes the responses showing that "Leadership" was identified by 80% of participants as extremely critical in determining the success of public-private partnerships. Having an appropriate contract and understanding each entity's desires and objectives were also ranked by 70 percent of participants as also being extremely critical to the success of partnerships. Specifying outcome and performance and the impact on the constituencies were ranked by only 30 percent as being extremely critical to the success.

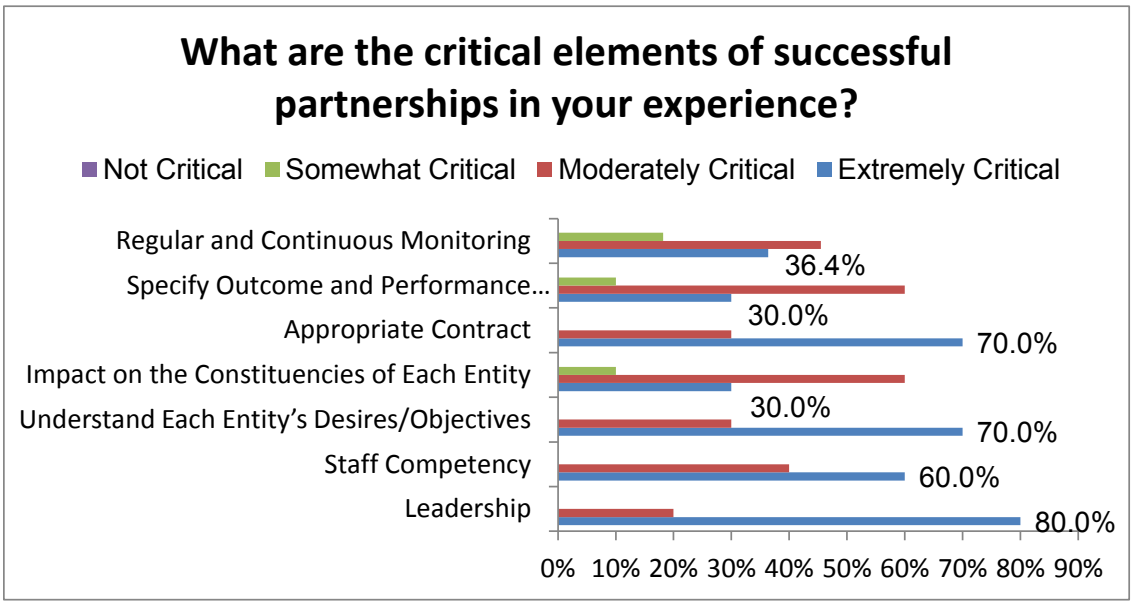


Figure 6. Summary of Survey Question 3 Responses

Survey Respondent Suggestions on PPPs

The survey also asked "Any suggestions for public transit agency with regard to forming PPPs?" The responses received included:

- Communication early and often throughout the project.
- Seek expert advice unless you have extensive experience in all aspects of the proposed deal in-house.

- It is critical that the project have the proper balance of public and private contributions. Public contributions may be helpful to the private concerns (such as loan guarantees or lease agreements) but cannot replace the private sector's responsibilities to have enough equity in the project to support the economics of the project.

- Articulation of a sound business plan along with relevant examples of other similar successful PPP's involving transit agencies.

- People and organizations tend to drift a lot while discussing the potential benefits of PPP's. Have someone in a leadership role be very specific on the form and purpose of the PPP to keep all participants focused on the outcome and goals.

Identified Partnerships

The initial survey yielded 18 partnerships which were then reviewed by the Research Panel to determine whether case studies should be developed. From these 18 partnerships, 12 were selected for further study. The partnerships selected for further study include the following:

Case Study 1: Streetcar - Portland, Oregon
Partnership between the City of Portland and the Portland Streetcar Inc. for Portland Streetcar to design, manage and operate the Streetcar.

Case Study 2: West Burnside Couch - Portland, Oregon
Partnership between Portland Bureau of Transportation and private firm. Used innovative private cost sharing design for urban design, traffic and street improvements. Public sector designs and manages project. Private firm builds.

Case Study 3: NO-MA Gallaudet U. Station, WMATA - Washington, D.C.
Partnership between WMATA and District of Columbia. Used innovative public-private financing partnership in a design build model.

Case Study 4: Dover Transit Center – Dover, Delaware
Partnership between Delaware Department of Transportation, Delaware Transit Corporation and the City of Dover.

Case Study 5: US 36 Managed Lanes/Bus Rapid Transit Project - Between Denver & Boulder, Colorado
Partnership between US 36 Mayors and County Commissioners and DOT in a DBFOM project.

Case Study 6: I495 Capital Beltway – Fairfax, Virginia
Partnership between Virginia DOT and Fluor-Transurban in a DBOMF project. Fluor-Transurban is financing, designing and building the project. VDOT will provide the

environmental review and oversight. Once completed, Transurban will operate and maintain the 495 Express Lanes.

Case Study 7: Norfolk and Portsmouth Downtown Tunnel
Partnership between Virginia DOT, Elizabeth River Crossings Opco, LLC and Construction Joint Venture (design-build members).

Case Study 8: Hudson County Open Space Tax, New Jersey
Being studied to understand the climate for public financing of open space/transit.

Case Study 9: NJT Hudson-Bergen Light Rail DBOM
Being studied to identify the elements of a successful partnership in New Jersey.

Case Study 10: United Water Company – Hoboken, New Jersey
Partnership between the City of Hoboken and United Water to manage the city's water supply.

Case Study 11: NJ Transportation Development District Act of 1989, New Jersey
Addresses why have only four counties in New Jersey engaged in this Act since 2000.

Case Study 12:North/Clybourn Station – Chicago, Illinois
Partnership between Apple and Chicago Transit Authority in anticipation of the opening of a new Apple store.

The partnerships represent a broad range of cases to demonstrate successful and not so successful partnerships as well as partnerships covering transit, roadway and non-transportation projects.

CASE STUDY DEVELOPMENT

For the partnerships identified for further study, case studies were developed by first gathering detailed written information on the partnerships, followed by interviews with key individuals involved in the partnerships to gather additional details. Information about each partnership was gathered in six areas:

- **Motivation/Initiation**: Who initiated the project? For what purpose?
- **Project Structure**: Which stages are controlled by public authorities and which are the responsibility of private partners?
- **Financing Mechanisms**: How is the project financed?
- **Project cost** (approximate).
- **State legislation Covering Partnerships**: What is the basic framework of this state's law?
- **Project Impacts:** Impacts on mobility, economic growth, etc.

A summary of the case studies are presented here with detailed case studies included in Appendix II. Four types of cases are presented covering: Rail transit projects, roadway projects, transit center/transit naming projects, and non-transportation projects.

Rail Transit Projects

Partnerships involving rail transit projects were included in three of the case studies. These case studies include projects where rail transit stations or services were implemented and include:

- Case Study 1: Streetcar - Portland, Oregon
- Case Study 3: NO-MA Gallaudet U. Station, WMATA - Washington, D.C.
- Case Study 9: NJT Hudson-Bergen Light Rail DBOM

Table 1 summarizes these case studies. Case Study 1, Streetcar Project, is one of two partnerships developed as case studies that are located in Portland, Oregon, which has a long history of successfully using innovative financing to support mass transit and urban design. Case Study 1 describes the partnership between the City of Portland, TRIMET and the Portland Streetcar Inc, with the goal to reintroduce streetcar service in Portland. In the partnership, the city of Portland owns and operates the Streetcar with TRIMET, and the private partner, Portland Streetcar Inc, designed, built, operated and maintained the system. The partnership was made possible through tax increment financing (TIF) and location improvement district (LID) funds. The partnership demonstrates the impact of leadership on a successful partnership.

Table 1 - Rail Transit Case Studies

Case Study Name	Case Study 1 Streetcar - Portland, OR	Case Study 3 Washington Metropolitan Area Transit Authority NO-MA Gallaudet U. Station - Washington, D.C.	Case Study 9 NJT Hudson-Bergen Light Rail DBOM
Project Description	Partnership between the City of Portland, TRIMET and the Portland Streetcar Inc.	Partnership between WMATA and District of Columbia. Used innovative public-private financing partnership in a design build model	Partnership between NJ TRANSIT and 21st Century Rail Corporation.
Motivation/Initiation	Initiated by the City of Portland as a transportation alternative and as catalyst to downtown area economic growth and housing development.	Initially proposed in 1996 as part of greater improvements of New York Avenue. Built to revitalize the area.	Rapid redevelopment on the waterfront threatened loss of transportation right-of-way. Transit easements made available by developers also presented an opportunity for the project.
Project Structure	City owns and operates the Streetcar. Portland Streetcar Inc. (PSI) designed, built, operated and maintained the system.	First WMATA station built with a mix of public and private funds.	DBOM (Design-Build-Operate-Maintain)
Financing Mechanism	Tax increment financing (TIF) and local improvement district (LID) funds.	Used Federal money and a special tax assessment	Funding ranged from state transportation trust fund to federal earmarked program. NJ TRANSIT pays annual fee to Operator.
Project Cost	Major funding sources for the 2001 loop included: parking garage bonds ($28.5 million), a LID ($9.6 million), TIF ($7.5 million), federal government money ($5 million), and city owned garage revenues ($2 million).	The final cost was $103.7 million.	$2.2 billion

Case Study 3 looked at the partnership used in the development of the Washington Metropolitan Area Transit Authority (WMATA) NO-MA Gallaudet University Station. This project was the first WMATA station to be built with a mix of public and private funds and is selected for further study as it combined both private and public funds at multiple stages, involved large number/types of stakeholders and carried the project to fruition. The partnership was between WMATA and the District of Columbia and used federal money and a special tax assessment to finance the project. The partnership demonstrates how consensus building was key in the partnership being successful.

Case Study 9 evaluated the partnership between NJ Transit and the 21st Century Rail Corporation in the development of the Hudson-Bergen Light Rail line. This project was one of the pioneer guideway transportation projects in the US using Design-Build-Operate-Maintain (DBOM) through a private-public partnership arrangement. Its application in New Jersey provides information useful for continuous service expansion and for other partnerships within the state. The partnership used funding from the state transportation trust fund and federal earmarked money. The partnership demonstrates an example where private finance was not key in a successful partnership.

Roadway Projects

Partnerships involving roadway projects in three of the case studies. These case studies included:

- Case Study 2: West Burnside Couch - Portland, Oregon
- Case Study 5: US 36 Managed Lane/BRT Project – Denver-Boulder, Colorado
- Case Study 6: I-495 Capital Beltway – Fairfax, Virginia

Table 2 summarizes these case studies. Case Study 2, West Burnside Couch, is the second Portland, Oregon partnership studied and demonstrates how government agencies can engage private stakeholders for their involvement in partnerships. The case study involves a partnership between Portland Bureau of Transportation and business and neighborhood leaders to improve the design and operational problems of Burnside Avenue. Despite extensive support from neighborhood constituencies and a positive vote from the City Council, the project had problems during its implementation and represents a case where a partnership was not as successful as originally anticipated. The case study demonstrates a not-so-successful partnership and elements that should be avoided in developing partnerships.

Case Study 5, US 36 Managed Lane/BRT Project, involves a partnership among the communities along US 36, the county commissioners and Colorado Department of Transportation (CDOT). The goal of the project is to increase traffic flow, add managed lanes and a bus-rapid transit system. Funding is provided through a TIFIA Loan, coupled with a contribution from the Regional Transportation District and other State and local contributions. The partnership demonstrates a unique combination of highway

Table 2 - Roadway Projects Case Studies

Case Study Name	Case Study 2 West Burnside Couch - Portland, OR	Case Study 5 US 36 Managed Lane (Denver – Boulder, Colorado)	Case Study 6 I-495 Capital Beltway – Fairfax, Virginia
Project Description	Partnership between Portland Bureau of Transportation and business and neighborhood leaders.	Partnership among the communities along the US 36, the county commissioners and Colorado Department of Transportation (CDOT).	Partnership between Virginia DOT and Fluor-Transurban.
Motivation/Initiation	To improve design and operational problems.	The goal of the project is to increase traffic flow, add managed lanes and BRT.	Fluor submitted an unsolicited proposal for construction of HOT lanes.
Project Structure	PBOT and TRIMET designs and manages project. Portland Streetcar Inc operates streetcar.	This is a Design Build Finance, Operate and Maintain (DBFOM) project.	This was a DBOMF (Design, Build, Operate, Maintenance, Finance) project.
Financing Mechanism	About $3 million from LID assessments, $5.7 mil from a TIF request and parking related bonds.	Funding provided through a TIFIA Loan, coupled with a contribution from the Regional Transportation District and other State and local contributions.	Used tax exempt private activity bonds, TIFIA loan, a Virginia grant, private equity.
Project Cost	$18 mil	To be determined	Approx. $1.4 billion

and transit and a planned array of partnerships along all stages of the project development.

Case Study 6, I-495 Capital Beltway Project, involves a partnership between Virginia Department of Transportation and two private companies, Fluor and Transurban. The project was initiated by Fluor who submitted an unsolicited proposal for construction of High-Occupancy Toll (HOT) lanes within the median of the I-495 beltway. The partnership structure is a Design, Build, Operate, Maintenance, Finance (DBOMF) project and uses tax exempt private activity bonds, Transportation Infrastructure Finance and Innovation Act (TIFIA) loan, a Virginia grant and private equity. The case study provides insights of high-cost, complicated partnerships.

Transit Center/Transit Naming Projects

Partnerships involving the development of a transit center and transit naming projects were studied in two case studies. These case studies included:

- Case Study 4: Dover Transit Center – Dover, Delaware
- Case Study 12: North/Clybourn Station – Chicago, Illinois

Table 3 summarizes these case studies. Case Study 4 evaluates a partnership between Delaware Department of Transportation, Delaware Transit Corporation and the City of Dover to make transportation improvements and improvements to the transit center. It is intended that the project will incorporate PPP into design, build, finance, operate and maintenance. The first phase of the project was funded using ARRA (American Recovery and Reinvestment Act, 2009) funds. The case study demonstrates a project that changed in scope due to the economic downturn.

Case Study 12, North/Clybourn Station, looks at a partnership between Apple and Chicago Transit Authority (CTA) in anticipation of the opening of a new Apple Store. The partnership involved CTA and Apple performing renovation to the station through an ordinance approved by the CTA board. This partnership looks at the details of one transit naming project.

Table 3 -Transit Center/Transit Naming Projects Case Studies

Case Study Name	Case Study 4 Dover Transit Center – Dover, Delaware	Case Study 12 North/Clybourn Station – Chicago, Illinois
Project Description	Partnership between Delaware Department of Transportation, Delaware Transit Corporation and the City of Dover.	Partnership between Apple and Chicago Transit Authority in anticipation of the opening of a new Apple store
Motivation/Initiation	To make transportation improvements and to utilize land adjacent to the improved transit center.	Renovation done in anticipation of the opening of a new Apple store at the station.
Project Structure	Has the potential to incorporate PPP into design, build, finance, operate and maintain phases.	CTA completed refurbishment of the platform and interior of station. Apple paid costs of the exterior, interior, and platform refurbishment.
Financing Mechanism	Contract supported outcomes. Landlord/tenant relationship.	Ordinance approved by the Chicago Transit Board
Project Cost	First phase funded by ARRA grant via FHWA for 3.4 million. The second phase projected at 13.3 million.	$3.9 million

Non-Transportation Projects

One of the initial goals of the research was to look at partnership development outside of transportation. Although many of the partnerships included in this research are associated with transportation projects, three case studies were performed looking at non-transportation partnerships or involved related studies. These case studies included:

- Case Study 8: Hudson County Open Space Tax (Hudson County, New Jersey)
- Case Study 10: United Water Company – Hoboken, New Jersey
- Case Study 11: NJ Transportation Development District Act of 1989, New Jersey

Table 4 summarizes these case studies. Unlike the previous cases discussed, Case 8, Hudson County Open Space Tax, does not demonstrate the features of a public-private partnership. It does, however, demonstrate a case of public funding in New Jersey. Hudson County was the last county in New Jersey to approve an open space tax, which was passed through a referendum in 2003. In recent years, due to the economic climate, the open space tax has been reduced in many counties in New Jersey with some counties using the collected taxes to maintain county park system, rather than for open space acquisition.

Case Study 10, United Water Company, provide details of the partnership between the City of Hoboken and United Water to manage the city's water supply. The partnership was initiated to avoid high rate changes to cover a large deficit and to identify innovative financial solutions. In the partnership the city retains ownership of the infrastructure and of the rate-setting responsibility, while United Water is responsible for operating the city's water supply. The partnership demonstrates the advantages, as well as, disadvantages of long-term partnership agreements.

Case Study 11, New Jersey Transportation Development District Act 1989, like Case Study 8, is not a case study on an existing partnership, but looks at the New Jersey Transportation Development District Act of 1989 to better understand why so few counties in New Jersey used this Act. The Act created special provision for financing transportation improvements. A brief summary of reasons for the effectiveness of the Act is provided.

Table 4 - Non-Transportation Case Studies

Case Study Name	Case Study 8 Hudson County Open Space Tax	Case Study 10 United Water Company-Hoboken
Project Description	Being studied to understand the climate for public financing of open space/transit.	Partnership between the City of Hoboken and United Water to manage the city's water supply.
Motivation/Initiation	Provided a dedicated source of open space funding, required for funding programs through an open space tax.	To avoid high rate changes to cover a large deficit, Hoboken looked for innovative financial solutions.
Project Structure	n/a	Hoboken retains ownership of the infrastructure, United Water responsible for operating and maintaining the system.
Financing Mechanism	The tax is set at one cent per $100 assessed property value beginning in 2004.	United Water paid $13.2 for the initial agreement and receives much of the water-bill revenue.
Project Cost	$3,095,225.38 available in 2012 for Open Space Acquisition	$13.2 million

ASSESSMENT OF EXEMPLARY PARTNERSHIPS

The case studies present useful information to address the research objective of identifying what is needed to ensure successful partnerships can be pursued on a continuous programmatic basis in New Jersey. To identify components of these partnerships that were critical to their success and to determine the potential for similar partnerships in New Jersey an assessment of the case study partnerships was performed. The assessment sought to identify for each case study partnership:

- **Lessons Learned**
- **Reasons for Success/Failure**
- **Local Champion**
- **Scale of the Project**
- **Project Status**
- **Statutory Environment**

Tables 5 through 8 summarize the assessment for each of the case studies. The following provides a discussion of the assessment measures and begins to provide guidance on strategies that can be used in development successful partnership in New Jersey.

Lessons Learned

Leadership

Complex projects require leaders who can assemble a public/private team committed to project success.
The case study assessment clearly shows strong leadership or having a local champion as key in the success of partnerships. The success of the partnership in Case Study 1, Streetcar Project, lies clearly with Vic Rhodes, who was head of the Portland Department of Transportation. In this role, Vic Rhodes made two decisions which proved to be essential to the project and partnership. The first was making Streetcar development and implementation a priority on his agenda. The second was hiring Vicky Diede whose private-sector sales background made it relatively easy for her to recruit and interface with private sector partners necessary for the project's functioning. The case study demonstrates that leaders with the ability to promote the project and build teams with skills needed to execute the contract are essential to the success of the partnership.

Table 5 - Rail Transit Partnership Assessment

Case Study Name	Case Study 1 Streetcar - Portland, OR	Case Study 3 Washington Metropolitan Area Transit Authority NO-MA Gallaudet U. Station - Washington, D.C.	Case Study 9 NJT Hudson-Bergen Light Rail DBOM
Lessons Learned	Complex projects require leaders who can assemble a public/private team committed to project success.	Partners may come in many different shapes and forms	PPP may not necessarily involve private finance all the time
Reasons for Success/Failure	Success depended crucially on the political/leadership skills of project champion who brought on board TRIMET and private partners.	Strong leadership role.	Strong support from all stake holders: government, state, NJT and private contractor
Local Champion	Vic Rhodes, then head of Portland Department of Transportation.	The dedicated organization Action 29 and its leadership.	NJ Transit, politicians and various stakeholders
Scale of the Project	Project composed of a 4.8 mile streetcar loop in 2001 with subsequent extensions. Construction costs were $103.15 million.	110 million	2.2 Billion
Project Status	Functioning with contemplated additional extensions.	Completed	Completed
Statutory Environment	Oregon state law enabled Portland to tap into innovative funding sources including garage parking bonds, tax increments, LIDs, and system development charges.	Particular Legislation for DC	Earmarked

Table 6 -Roadway Projects Partnership Assessment

Case Study Name	Case Study 2 West Burnside Couch - Portland, OR	Case Study 6 I-495 Capital Beltway – Fairfax, Virginia
Lessons Learned	Complex projects require the ability to assemble a coalition strong enough to support implementation. Shifting economic situations may hinder development of projects conceptualized in more prosperous times.	Innovative ideas generated in the private sector can be useful for public entities as well. Project success or failure partially depends on general economic climate as well as leadership skills of supporters and opponents.
Reasons for Success/Failure	City officials were not able to assemble a coalition for success after some residents objected that the couplet would bring additional traffic to their neighborhood	Project was implemented because of innovative Virginia statutes and good leadership.
Local Champion	Mayor Sam Adams originally supported the couplet but retreated in the face of resident opposition from some people living close to the proposed project.	A private company originated the idea.
Scale of the Project	$18.754 construction costs	Project comprises two additional HOT highway lanes.
Project Status	Couplet constructed on east side but not on west side where resident opposition manifested itself.	Implemented in 2012.
Statutory Environment	Oregon law allows innovative financing mechanisms such as TIFs to construct a couplet.	Virginia's Public-Private Transportation act of 1995 allows private entities to submit innovative projects to state agencies for consideration.

Table 7 - Non-Transportation Projects Partnership Assessment

Case Study Name	Case Study 10 United Water Company-Hoboken
Lessons Learned	Long-term partnerships can be maintained, however they can be limiting if changes are needed. Future system upgrades should be included in setting rates for service.
Reasons for Success/Failure	The partnership was initially successful because it brought in revenue to the City while improving the efficiency of Hoboken's water supply system. In later years, the City of Hoboken could not terminate the agreement without incurring penalties.
Local Champion	The partnership agreement was negotiated through the efforts of the City's Mayor at the time of the agreement, Mayor Anthony Russo.
Scale of the Project	In total $13.2 million payment was made by United Water to Hoboken.
Project Status	The water supply system in Hoboken continues to be operated and maintained by United Water.
Statutory Environment	The partnership was developed under the County and Municipal Water Supply Act (N.J.S.A. 40A.31).

Table 8 - Transit Center/Naming of a Transit Station Partnership Assessment

Case Study Name	Case Study 4 Dover Transit Center – Dover, Delaware	Case Study 12 North/Clybourn Station – Chicago, Illinois
Lessons Learned	Larger economic background may have great impact on individual projects.	The financing mechanism is key in establishing partnerships. Corporate partners are not just interested in financial benefits, but also interested in showing they are "good neighbors". Despite the success of the partnership, CTA was criticized for not soliciting any bids or analyzing the value of the agreement. The result was CTA recognizing its need to provide greater transparency in any similar partnerships.
Reasons for Success/Failure	First phase succeeded due to its small scale and local need.	CTA was responsive to Apple's time schedule and needs.
Local Champion	DART and DelDOT	No clear local champion
Scale of the Project	4.5 Million	Apple spent $3.9 million in renovating the North/Clybourn station
Project Status	Completed phase I, put phase II on hold	Renovation is completed. CTA intends to hire a consulting firm to help develop a "revenue-generating corporate sponsorship program" which would allow companies the naming rights to CTA train lines, train stations and bus routes.
Statutory Environment	State legislative approval	The partnership was accomplished through an ordinance approved by the Chicago Transit Board.

Complex projects require the ability to assemble a coalition strong enough to support implementation.
In Case Study 2, West Burnside Couch, the lack of strong leadership contributed to the project not being completed as originally planned. Despite the fact that the project received extensive support from neighborhood constituencies and a unanimous vote of approval in 2002 from the city council, opposition arose that led to the current Mayor calling for more analysis and continued citizen input that eventually led to a change in scope of the project. The failure to move forward, or a lack of leadership, was key in the partnership's not completing the project as originally intended.

Success comes with support from strong, political leaders.
In Case Study 6, I-495 Capital Beltway, political leadership from the governor's office was crucial in the development of enabling legislation used to ensure funding of the project through a partnership. The present and former governors pushed hard to secure an expansive PPP program and to ensure that the commissioner appointed to the Virginia Department of Transportation (VDOT) was sympathetic to public-private initiatives.

Private Partner Participation/Agreement Duration

Private partners can be successfully lobbied for their participation even in slow economic times.
In Case Study 3, Washington Metropolitan Area Transit Authority NO-MA Gallaudet U. Station, the station was being proposed surrounding a time in Washington, D.C. when the city was suffering from slow job growth, insufficient new investment and development, population losses and declining government revenues. Requests by neighborhood residents led WMATA to build the station. It took a year of discussion, persuasion and consensus building for private owners to agree to pay $25 million (amortized over 30 years). Recognition by the private partners that the station would result in economic improvement to the neighbor led to a successful partnership with the private sector.

Private partners look for both financial and non-financial benefits in selecting partnerships.
Apple's partnership with the Chicago Transit Authority to complete the renovation of the North/Clybourn station in Case Study 12, was motivated by the anticipated opening of a new store at that station. The company also showed it was not just interested in the financial benefits, but demonstrated a willingness to participate with the community and to have the station represent the company.

Long-term partnerships can be maintained, however they can be limiting if changes in the partnership agreement are needed.
In Case 10, United Water Partnership, the initial partnership agreement was for a period of 10 years. This agreement was later renegotiated to be a 20 year agreement. The renegotiated agreement maintained the level of funding in capital improvements found in the original contract. The agreement between Hoboken and United Water came into question when the city was plagued with water main breaks with elected officials critical of the short-sightedness of the original agreement to include more funding for improvements.

Economic Impacts

Shifting economic times may hinder development of projects conceptualized in more prosperous times.
The economic times during which the partnership is formed was cited as critical in the success or failure of several of the case study partnerships. In Case Study 2, Burnside Couch Couplet, the changing economic climate between 2002, when the project received unanimous approval, to 2008 when a project scope was determined, made it difficult for the full project to be completed. Cases Study 6, I-495 Capital Beltway, and Case Study 4, Dover Transit Center, also demonstrate that the economy has a large impact on the success of partnerships.

Reasons for Success/Failure

Many of the lessons learned from the review of case studies are similar to the reasons for success or failure. Some of these reasons include:

Elements of Successful Partnerships	Elements of Unsuccessful Partnerships
• Strong leadership skills of project champion • Support from stakeholders • Innovative enabling legislation • Scale of the project was appropriate to meet a specific need • Public partner is responsive to private partner's time schedule and needs	• Inability to assemble a coalition supporting the project • Lengthy partnership agreement without opportunity to accommodate change • Formed under declining economic conditions

Keys to Successful Partnership[88]

The elements stated for successful partnerships are similar to what the National Council for Public-Private Partnerships recommends as essential for partnership success. While they point out that there is not a set formula or an absolute foolproof technique in crafting a successful PPP, each of these keys is involved in varying degrees.

1. Key Public Sector Champions
Recognized public figures should serve as the spokespersons and advocates for the project and the use of a PPP. Well-informed champions can play a critical role in minimizing misperceptions about the value to the public of an effectively developed PPP.

2. Statutory and Political Environment:
A successful partnership can result only if there is commitment from "the top". The most senior public officials must be willing to be actively involved in supporting the concept of PPPs and taking a leadership role in the development of each given partnership. A well-informed political leader can play a critical role in minimizing misperceptions about the value to the public of an effectively developed partnership. Equally important, there should be a statutory foundation for the implementation of each partnership.

3. Public Sector's Organized Structure:
Once a partnership has been established, the public-sector must remain actively involved in the project or program. On-going monitoring of the performance of the partnership is important in assuring its success. This monitoring should be done on a daily, weekly, monthly or quarterly basis for different aspects of each partnership (the frequency is often defined in the business plan and/or contract).

4. Detailed Business Plan (Contract):
You must know what you expect of the partnership beforehand. A carefully developed plan (often done with the assistance of an outside expert in this field) will substantially increase the probability of success of the partnership. Most often, plans will take the form of a detailed contract, clearly describing the responsibilities of both the public and private partners. In addition to attempting to foresee areas of respective responsibilities, a good plan or contract will include a clearly defined method of dispute resolution (because not all contingencies can be foreseen).

5. Guaranteed Revenue Stream:
While the private partner may provide the initial funding for capital improvements, there must be a means of repayment of this investment over the long term of the partnership. The income stream can be generated by a variety and combination of sources (fees, tolls, shadow tolls, tax increment financing, or a wide range of additional options), but must be assured for the length of the partnership.
6. Stakeholder Support:
More people will be affected by a partnership than just the public officials and the private-sector partner. Affected employees, the portions of the public receiving the

service, the press, appropriate labor unions and relevant interest groups will all have opinions, and frequently significant misconceptions about a partnership and its value to all the public. It is important to communicate openly and candidly with these stakeholders to minimize potential resistance to establishing a partnership.

7. Pick Your Partner Carefully:
The "lowest bid" is not always the best choice for selecting a partner. The "best value" in a partner is critical in a long-term relationship that is central to a successful partnership. A candidate's experience in the specific area of partnerships being considered is an important factor in identifying the right partner. The listing of NCPPP members (provided under Council Members on this site) provides a logical starting point for the identification of potential partners or services that might be required in the development of a partnership.

Statutory Environment

The partnership assessment included a review of the statutory environment under which the partnerships were formed. Table 9 summarizes the legislation associated with each partnership. The table shows broad differences in the statutory environment between the case study partnerships. Oregon state laws enabled the formation of partnerships for both Case Study 1, Streetcar, and Case Study 2, West Burnside Couch. The state law allowed Portland to tap into innovative funding sources including garage parking bonds, tax increments, LIDs, and system development changes. The innovative financing approaches enabled by the state's legislation encourage public agencies and private industry to utilize public private partnerships.

Case Study 6, I-495 Capital Beltway, was also enabled by state legislation. Virginia's Public-Private Transportation act of 1995 allows private entities to submit innovative projects to state agencies for consideration. VDOT has expansive authority to consider PPPs under Virginia's Public-Private Transportation Act (PPTA) of 1995. This act opened a new way to bring innovative ideas into the system by enabling private firms to submit unsolicited proposals for projects rather than only allowing them to respond to VDOT requests. Such unsolicited proposals increase innovation. In addition, the 1995 Act gives VDOT flexibility in negotiating with private entities because the state does not have to accept the lowest bid.

Although partnerships were feasible in states without enabling legislation, some of these states required legislative approvals specific to the project. This approach requires strong backing from a variety of sources thereby limiting the formation of partnerships and the success of the partnership.

Table 9- Statutory Environment for Case Study Partnerships

Case Study	Statutory Environment
1: Streetcar - Portland, OR	Oregon state law enabled Portland to tap into innovative funding sources including garage parking bonds, tax increments, LIDs, and system development charges.
3:NO-MA Gallaudet U. Station - Washington, D.C.	Particular Legislation for District of Columbia
9: NJT Hudson-Bergen Light Rail DBOM, NJ	Earmarked
2:West Burnside Couch - Portland, OR	Oregon law allows innovative financing mechanisms such as TIFs to construct a couplet.
6: I-495 Capital Beltway – Fairfax, Virginia	Virginia's Public-Private Transportation act of 1995 allows private entities to submit innovative projects to state agencies for consideration.
10: United Water Company-Hoboken, NJ	The partnership was developed under the County and Municipal Water Supply Act (N.J.S.A. 40A.31).
4: Dover Transit Center – Dover, Delaware	State legislative approval
12:North/Clybourn Station – Chicago, Illinois	The partnership was accomplished through an ordinance approved by the Chicago Transit Board.

RECOMMENDATIONS

The assessment of the case study partnerships provides guidance on what should and should not be done in New Jersey to ensure successful partnerships. The following summarizes these findings and also provides recommendations based on the research performed.

What should be Done

Two themes emerge from the case study assessment in determining what should be done in New Jersey to ensure successful partnerships. The themes surround the adequacy of existing legislation and the leadership needs for partnership project directors. New Jersey should:

1. Evaluate the adequacy of existing state laws to enable innovative funding mechanisms to sufficiently fund projects. State officials should consider whether existing partnership legislation maximize innovative idea contributions from the private sector. Currently, New Jersey is unable to engage in many of the value capture mechanisms identified in this study.

2. Increase its organizational capacity to respond to private sector interests in partnership. Project leaders for partnership projects should be people wholly committed to success and knowledgeable about how to interact with other people and organizations involved in the project. Before advancing project conception prospective champions should have a good political feel for potential supporters and opponents. Project champions should understand how to assemble a coalition capable of advancing the project.

3. Project plans and expectations may need to be modified to fit within existing or future statutory environment, as well as within leadership strengths and based on the overall economic climate.

What should be Avoided

To avoid problems that may derail the partnership, New Jersey should:

1. Provide transparency in the process to avoid perceptions that the contract may be overly lucrative for the private partner.

2. Avoid being blindsided by opposition to the project. This would require understanding the situation on the ground and being ready to minimize the opposition's influence. Work with neighborhood and environmental groups before starting the project to minimize their objections.

3. Avoid long-term partnerships without opportunity to make changes to the agreement without penalties. Longer partnership agreement terms make it attractive and profitable for the private partner, but make it difficult to respond to system changes.

Final Recommendations

The overall objective of this research was to identify and assess examples of local government and public transportation agency partnerships and the funding mechanisms used to improve or expand public transportation. In addition, the research sought to identify what needs to be done to ensure successful partnerships can be pursued on a continuous programmatic basis. Based on the research performed, the following recommendations are proposed.

Project Identification

Recommendation 1: To ensure successful partnerships can be pursued on a continuous programmatic basis, public agencies must proactively identify projects that meet criteria that indicate a partnership would be a viable project delivery alternative.

Partnerships grow out of a mix of conditions where the right project is matched with partners with strengths to accomplish the project goals. Not all projects are suitable to being performed through a partnership. The project must have a mixture of elements including:

- Limitations exist on the part of the public agency to successful complete the project on its own;
- Opportunities exist for the private partner to contribute to successfully complete the project; and
- Financial benefits, now or in the future, must exist for the partners.

Although partnerships are initiated by both the public agency and private partners, the case studies reviewed indicated that in more cases, the partnership began with the public agency identifying a project and the private agency responding to the project. In all cases, the project addressed a need identified by either the public agency or through local businesses and residents. In few cases was the project solely generated by the private partner. In several cases, the project was used as a catalyst for economic growth, housing development, to revitalize areas, or projects where the private partners saw direct benefits not only for them but benefits to the community or region in which the project was targeted.

To implement this recommendation, short-term goals may include:

1. Criteria be developed for use in the pre-planning stages of projects to determine if the project has potential for being delivered through a partnership. FHWA provides a Checklist to be used as a guide by decision-makers in providing an

initial high-level evaluation on whether a project is best delivered through partnership. These type of tools can be modified for use by the public agency.

2. Provide a mechanism for potential partners to be aware of projects in the pre-planning stages that meet the criteria for being delivered through a partnership.

3. Provide a mechanism for citizen groups and other private organizations to connect with potential partners in initiating transit projects.

4. Create a centralized group within the public agency with responsibilities to identify projects with potential for delivery through partnership and to provide out-reach to partners and the community.

Statutory Environment

Recommendation 2: Value capture strategies with enabling legislation must be pursued to ensure partnerships can grow on a continuous programmatic basis.

The case studies reviewed identified a broad range of financing mechanisms used to fund the projects involving partnerships. Federal, State and private funds were used in various combinations to meet the financial needs of the projects. However, a larger number of partnerships utilized value capture strategies in combination with funding through loans, earmarks or other state or federal funds. The use of these value capture strategies required state enabling legislation. NJ's public-private partnership legislation is described in New Jersey Public Transportation Act of 1979 (N.J.S.A. § 27:25-1 et seq.), which allows NJ Transit (NJT) to award contracts based on competitive proposals, to the proposer that submitted the proposal determined to "be the most advantageous to the State, price and other factors considered." This legislation was used in the NJT Hudson-Bergen LRT and River Line DBOM projects. The limited use of this legislation indicates that the legislation needs to be revised to promote partnerships within the state. Legislation that include the ability to accept unsolicited proposals and granting additional agencies, including lower level agencies, such as local and county agencies, partnership authority are aspects of legislation that may increase the use of partnerships in New Jersey.

Bills have been introduced in the New Jersey Assembly to establish public-private partnership demonstrations projects. The latest is Bill A1558, introduced in January, 2014, authorizing the Commissioner of Transportation to select transportation projects as demonstration projects using public-private partnership agreements. The bill authorizes a public partner, either the Department of Transportation (DOT) or the New Jersey Transit Corporation (corporation), to solicit proposals from private or public entities, or consortia of these entities, to plan, design, construct, equip, operate, finance, improve, or maintain demonstration projects. Passage of this Bill will be a step in the direction towards increasing the use of partnerships in a continuous programmatic basis. The Bill is currently pending review by the Assembly Transportation and Independent Authorities Committee.

To implement this recommendation, a short-term goal may include:

1. Evaluate how the passage of this bill would impact NJDOT, NJ Transit and partnerships.

Capacity Building

Recommendation 3: To grow partnerships in a continuous programmatic basis requires changes in agency capacity to increase employees with expertise and skills necessary to promote, evaluate and implement partnerships.

The survey performed as a part of this research to identify potential partnerships found 80 percent of responders identifying leadership as extremely critical to the success of partnerships. In addition, having an appropriate contract was also highly ranked as critical to the partnership success. Some of the skills needed to promote partnership include skills in planning, project management, finance, law and technical matters. International experience suggests that establishing an office within the state focused on partnerships can remove bottlenecks and lead to increased use of partnerships across the State.

To implement this recommendation, short-term goals may include:

1. Public agency should identify a target number of partnership projects or project dollars and a time horizon for achieving this target.

2. Analyze how the public agency should go about recruiting, selecting and training new and existing employees with partnership-related skills.

3. Assess the staffing or capacity building needed to grow partnerships to the targeted number of partnership projects.

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APPENDIX I: PUBLIC PRIVATE PARTNERSHIP SURVEY FORM

In these uncertain economic times, transportation agencies are looking to innovative financial strategies to support requests from local governments and developers for new and improved transit services. In our effort to help NJ Transit identify an approach for utilizing partnerships and value capture mechanisms for improving public transit in a more systematic and strategic manner, a research team composed of NJIT faculty and students would like to ask your assistance in answering the following questions.

1. **Is there an entity (office, division) or person who is in charge of public private partnerships (PPP) in your organization?**
   - ☐ No.
   - ☐ Yes. Please provide the contact person's
     Name_____
     Title _____
     Phone Number_____
     Email _____

2. **Has your agency considered any types of PPP in the past 5 years?**
   - ☐ No.
   - ☐ Yes, please specify the types that apply:
     - Design-build
     - Build-Operate-Transfer (BOT)
     - Any long-term asset lease of toll road.
     - Congestion pricing (e.g., cordon tolls) with a PPP element Operations and Maintenance (O&M), or Program and Financial Management Fee Service Contracts
     - Other (please specify).

3. **Please name three PPP cases involving your organization:**

*Please list the initiator first.

Case 1:
Project Name:
Project Location:
Partners:
- Initiator:
- Partner:
- Partner:

Enabling Legislation:

Form of Partnership:
Funding Mechanism

Case 2:
Project Name:
Project Location:
Partners:
- Initiator:
- Partner:
- Partner:

Enabling Legislation:
Form of Partnership:
Funding Mechanism

Case 3:
Project Name:
Project Location:
Partners:
- Initiator:
- Partner:
- Partner:

Enabling Legislation:
Form of Partnership:
Funding Mechanism

4. What are the critical elements of successful partnerships in your experience?

a. Leadership □□□□
b. Staff Competency □□□□
c. Understand each entity's desires/objectives □□□□
d. Impact on the constituencies of each entity □□□□
e. Appropriate contract □□□□
f. Specify Outcome and Performance Measures in advance □□□□
g. Regular and continuous monitor □□□□

5. Any suggestions for a public transit agency in regarding to forming PPP?