Challenges Mount for Traditional Transportation Funding

Are Public–Private Partnerships a U.S. Solution?

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Public–private partnerships (PPPs) increasingly have become a way for public agencies around the world to build or upgrade infrastructure, including facilities for transportation, government, health care, schools, and water and wastewater. According to some estimates, PPPs have enabled 10 percent to 20 percent of government infrastructure projects worldwide. The arrangements are much more prevalent outside of the United States, and the merits are debated vigorously.

In the U.S. transportation arena, PPPs are still developing, although some of the earliest implementations started at the end of the 1980s. Considerable misinformation surrounds the use of PPPs, in part because the arrangements are complex, and each is unique. The question persists: Can PPPs offer a solution to the challenges of funding transportation infrastructure needs in the United States?

Infrastructure Needs

The United States has underinvested significantly in transportation and other infrastructure, particularly in the past 15 years. A key source of revenue, the federal fuel tax, stands at 18.4 cents per gallon and has not increased since 1993. With decreasing growth in automobile travel and increasing fuel efficiency, the Highway Trust Fund revenues in the next federal reauthorization may necessitate a significant cut in spending.

Other consequences of insufficient investment include traffic gridlock, which causes 4.2 billion hours of travel delays and wastes 2.9 billion gallons of fuel annually, according to the Texas Transportation Institute. Congestion reduces business productivity and has a negative impact on the environment. At the status quo, Americans can expect to spend the equivalent of four work weeks each year in traffic

PHOTO: TOM SAUNDERS, VIRGINIA DOT

Declining Highway Trust Fund revenues and underinvestment in transportation infrastructure have led to increased traffic congestion, among other consequences.

congestion by 2035, according to the American Road and Transportation Builders Association.

The American Society of Civil Engineers reports that use of transit increased by 21 percent between 1993 and 2002—a rate faster than that of any other mode. Yet the Federal Transit Administration estimates a funding shortfall of $14.8 billion annually to maintain conditions or $20.6 billion to improve to good conditions.

As stated in the final report of the National Surface Transportation Financing Commission:

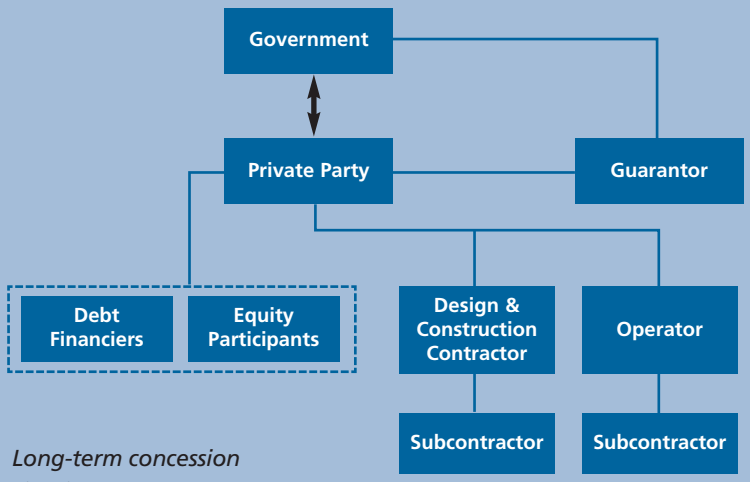
> Over the last few decades, we have grown complacent, expecting to be served by high-quality infrastructure, even as we devoted less and less money in real terms to the maintenance and expansion of that infrastructure. Not only have we failed to make the needed and substantial invest-

What Is a Public–Private Partnership?

Public–private partnerships (PPPs) comprise a variety of project financing and delivery methods that can expedite projects, relieve the public of certain risks, and leverage public funds. In the construction of infrastructure, PPP arrangements have evolved from design–build to design–build–finance–operate–maintain, with many options in between, representing a continuum between public and private funds, along with public and private responsibility (see figure, below).

The United Kingdom has one of the longest-standing comprehensive national PPP programs, extending across all aspects of infrastructure. In 1992, Prime Minister John Major's government established the Private Financing Initiative (PFI), and more than 625 PFI transportation and other projects have been inked, with a total capital value approaching £60 billion. This is a centralized approach, with major transportation projects funded directly by the government; each ministry vets candidates for PPPs as part of the normal procurement process.

Other successful models for PPPs can be found in Canada and Australia; in both nations, the arrangements were initiated at the state or provincial level, and national organizations built on that success. In 2008, Canada created PPP Canada as a government corporation to promote PPPs at the provincial level and committed $1.25 billion for up to 25 percent of the initial construction costs. A typical international concession structure is shown in the figure above.



Long-term concession structure.

The international market of PPPs operates in a financial environment different from that of the United States. In Europe, governmental entities typically deal with banks for project financing, and the corporations that undertake the projects have both public and private owners. With the arrival of the long-term concession model in the United States, the primary participants have been international firms—few domestic firms have had the opportunity as yet to develop the expertise for these projects.

— Pamela Bailey-Campbell

Development	Delivery	Operations	Maintenance	Finance	
Public	D-B-B	Public	Public	Public	Design–Bid–Build (D-B-B)
Public	D-B-B	Private	Public	Public	Private Contract Fee Services
Public	D-B-B	Private	Private	Public	
Public	D-B	Public	Public	Public	Design–Build (D-B)
Public	D-B	Private	Private	Public	Build–Operate–Transfer
Public–Private	D-B	Private	Private	Public–Private	Long-Term Lease Agreement
Private	D-B	Private	Private	Private	Build–Own–Operate

RISK/CONTROL: Public (top) – Private (bottom)

PPPs

Risk–responsibility matrix: options for private-sector involvement—a continuum of risk transfer and control.

Photo: Tom Saunders, Virginia DOT

The Pocahontas Parkway near Richmond, Virginia, opened in 2002 and was leased to a private entity in 2006.

ment; we have failed to pursue the kind of innovation necessary to ensure that our infrastructure meets the demands of future generations. (*1*)

Although innovative finance and delivery cannot substitute for new funding, PPPs can offer an effective and productive solution.

Early U.S. PPPs

In the U.S. transportation arena, PPPs gained attention in the 1990s. Some of the early applications of design–build were introduced in association with PPPs, to address requirements for greater certainty in design and construction costs.

A few of the early PPP transportation projects employed a tax-exempt finance model. The E-470 toll road in Colorado, for example, used a success fee for up-front development, combined with tax-exempt toll revenue bonds; and the Pocahontas Parkway in Virginia, the Greenville Connector in South Carolina, and the Las Vegas Monorail in Nevada used nonprofit corporations.

California's 1989 legislation, AB 680, was one of the earliest U.S. programs for concessions under a design–build–finance–operate–maintain (DBFOM) arrangement. The program produced the SR 91 High-Occupancy Toll (HOT) Lanes, later sold to the Orange County Transportation Authority, and the SR 125 toll road, later renamed Southbay Expressway—although SR 125 recently entered bankruptcy, it remains in full operation.

The latest headlines about concessions have focused on the monetizing of toll road assets by awarding extremely long-term concessions of 75 to 99 years in return for large up-front payments. Examples include the Chicago Skyway and the Indiana Toll Road. The Chicago Skyway arrangement generated controversy when the City of Chicago applied the excess revenues after debt payment to nontransportation programs.

Successful U.S. Programs

Although international programs offer many valuable lessons, a distinct difference prevents any PPP program in the United States from resembling the Private Finance Initiative in the United Kingdom. In the United States, the control of infrastructure funding and the laws affecting its delivery and financing rest at the state, not the federal, level. This increases the variations and frequently frustrates the involvement of global PPP participants comfortable with greater centralized control and standardization.

PPP activity varies substantially across the states. According to the National Conference of State Legislatures, 28 states and Puerto Rico had PPP-enabling statutes as of March 2010, but the parameters for private-sector participation in public projects were not uniform.

One international approach gaining adoption by U.S. PPPs is the use of public-sector comparators (PSCs) and value-for-money (VfM) analysis. A VfM analysis independently validates that a proposed PPP project would provide more value to the public sector than other available financing and delivery options. The PSC is a key to the analysis, establishing the cost and schedule of the public-sector delivery option for comparison. Canada and New Zealand offer several examples of applying the VfM method. A consistent and thorough application of this tool provides a transparent vetting process to assure that the PPP is upholding the public interest.

Recent innovations in PPP configurations have incorporated federal sources of assistance, including loans under the Transportation Infrastructure Finance and Innovation Act (TIFIA)[1] and tax-exempt transportation Private Activity Bonds (PABs)[2]. Also of

[1] TIFIA is a U.S. Department of Transportation (DOT) credit assistance program for large transportation infrastructure projects. The assistance includes secured loans, loan guarantees, and lines of credit. U.S. DOT makes the awards based on a project's merits and fulfillment of statutory requirements. Details are available at http://tifia.fhwa.dot.gov.

[2] PABs allow states to issue and transfer to private companies up to $15 billion in tax-exempt bonds to finance qualified highway, freight, and transit projects. The U.S. Secretary of Transportation allocates the $15 billion.

interest is the availability payment model, which offers long-term financial incentives for private-sector involvement. Availability payments are made annually by the public sector throughout the course of the agreement and form the basis for private-sector financing.

Other opportunities may be generated by the direct investment in infrastructure by pension funds. The Dallas Police and Fire Pension fund, for example, financed the I-635 LBJ project in Texas. States are using all of the financing tools available to validate and perfect PPPs. Virginia and Texas have the longest-standing U.S. programs, which have yielded many successful projects.

Virginia Initiatives

Virginia's Public–Private Transportation Act (PPTA) started in 1995 to promote private-sector innovation and investment in transportation projects. Virginia has completed three PPTA projects, including Route 288 and the Pocahontas Parkway near Richmond and the Jamestown 2007 improvements near Williamsburg. The state has six projects in development, including the Downtown Tunnel–Midtown Tunnel Project in Hampton Roads, the I-495 Capital Beltway HOT Lanes in Northern Virginia, Route 58 near Hillsville, and the Coalfields Expressway in the Bristol District. Two PPTA proposals are under consideration: Route 460 and the I-95–395 HOT Lanes.

The Metrorail extension to Dulles Airport also is being developed as a PPTA project. Construction has begun on the Capital Beltway with $2 billion of project financing leveraged from an initial $409 million public investment. Governor Bob McDonnell has announced plans to establish a separate multimodal PPTA program office at Virginia DOT.

Texas Projects

In Texas, the Comprehensive Development Agreement (CDA) program has allowed the state to invest approximately $3.5 billion since 2002 to leverage and return more than $10.5 billion in long-term transportation improvements. The projects are highlighted in Figure 1 (above). Texas DOT and local-level Regional Mobility Authorities can enter into CDAs.

The program has generated controversy; by statute, Texas DOT lost its general authority to enter into CDAs on August 31, 2009, retaining limited authority on specifically exempt projects and conditions until August 31, 2011. Texas DOT has indicated an interest in continuing the program, which has accelerated project delivery and has closed gaps in funding. In 2009 and 2010, the CDA program attracted more than $6 billion in private investment in state infrastructure.

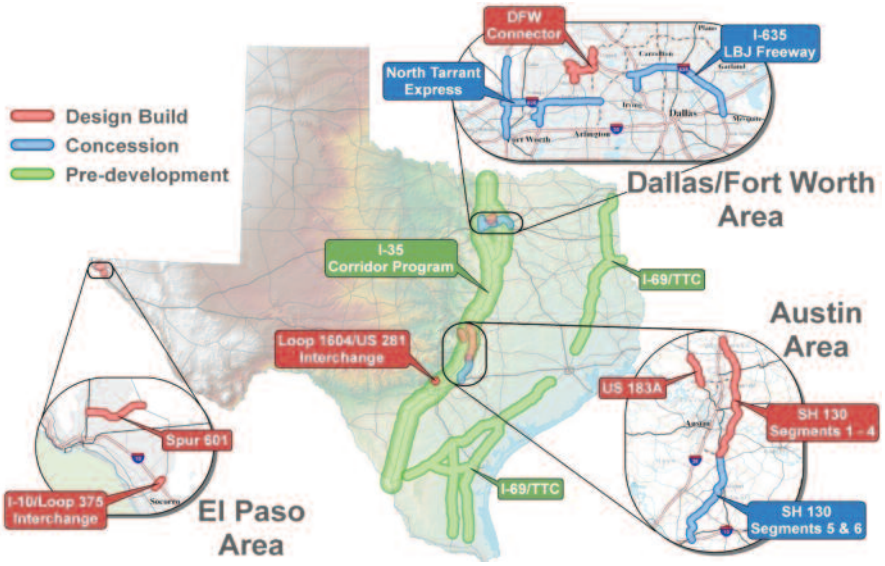


FIGURE 1 CDA projects in Texas.

Two recent Texas projects—the I-635 and North Tarrant Expressway managed lane PPP—used tax-exempt PABs and low interest TIFIA loans as sources of debt capital, amounting to more than $1 billion of PABs and $1.5 billion of TIFIA loans.

Other Active Programs

Florida is among the states most active in transportation PPP programs, with two successful projects, the Port of Miami Tunnel and the I-595 Managed Lanes, both financed under the availability payment model. Georgia recently reactivated its program, issuing three separate RFPs in 2010. In 2009, Arizona adopted PPP legislation, and the state DOT is drafting program guidelines and beginning to screen projects.

California adopted the PPP legislation SBX2 4 in 2009, despite long-standing opposition from public employee unions. The state has moved rapidly and reached commercial close on a PPP contract for the Presidio Parkway project in San Francisco. The Los Angeles Metropolitan Transit Authority is conducting an in-depth analysis of potential PPP projects in the transit and highway modes and expects to initiate its first procurement in 2011.

The Denver Regional Transportation District Eagle PPP project, one of the most successful transit PPP projects, completed financial close in August 2010 with FTA funds, PABs, and private equity. The arrangement will deliver three separate commuter rail projects under the DBFOM model. PPPs also are a cornerstone of the delivery and funding strategies for the high-speed rail programs in Florida and California.

Rules for Success

The delivery of transportation infrastructure can benefit from PPPs in many ways, by accelerating projects, transferring risk to the private sector, and bringing innovative and creative solutions to the public sector. Effective use of PPPs for transportation projects adheres to the following rules:

1. PPPs are only part of the solution and cannot overcome systematic underinvestment in infrastructure. Attempting to avoid difficult decisions by shifting responsibility to PPPs or to any other financing mechanism is "ostrich politics."
2. Not all projects are good candidates for a PPP. Carefully assess and screen potential projects and then determine that the PPP approach will add value. Develop PSCs and complete a VfM analysis to evaluate a PPP arrangement against the more traditional options.
3. Focus the PPP on delivering new or enhanced infrastructure, not on monetizing an asset to pay down a deficit in the operating budget of the general fund.
4. Establish clear, realistic goals, whether for a single project or an entire PPP program. If the PPP approach cannot meet the goals, postpone or halt the process. A PPP is a tool, not a goal in and of itself.
5. Make sure that the public-sector participants have the knowledge and expertise to develop the procurement effectively and to evaluate and negotiate the agreements.
6. Create procurement processes that maximize opportunities for the private sector to exercise innovation and creativity.
7. Conduct fair, open procurements that are transparent, that focus on achieving the best value for the public, and that ensure fairness for the private participants.

Three Actions

With those seven rules for PPP success in place, three actions can assist in making PPPs a more valuable tool in delivering transportation infrastructure in the United States:

1. Create PPP Information Resources.

Create PPP clearinghouses and organizations that can offer support through information on best practices, key legislative elements, and templates. The Federal Highway Administration's Office of Innovative Program Delivery and Infrastructure Australia offer models. These resources can be housed at the federal level, within state DOTs, or at separate entities such as the Public Infrastructure Advisory Commission in California. The goal is to provide clear, unbiased information for public officials and government employees.

These resources could provide valuable information to public entities—particularly to smaller transit agencies or municipalities—that are starting to

PHOTO: PRESIDIO PARKWAY PROJECT

Currently under construction, the Presidio Parkway project was developed soon after California adopted PPP legislation in 2009. Successful projects have made use of information resources and available financial tools.

IMAGE COURTESY OF DENVER RTD

The Denver Regional Transportation District Eagle PPP financed the development of three commuter rail lines in Denver, Colorado. The East Rail Line, pictured here in a rendering, is scheduled to open in 2016.

explore PPPs. For example, some state DOTs have called on Partnerships BC in Canada for help in assessing PPP approaches and programs.

2. Supply Financial Tools.
At the federal level, programs such as TIFIA and tax-exempt PABs have proved important for PPP projects. These tools not only lower the cost of financing PPP projects but can make the difference on proceeding.

- The flexible, subordinated financing of TIFIA allows for greater leveraging of project-related revenue. The addition of a revolving fund—making funds that are repaid available for future projects—could greatly increase TIFIA's value. The TIFIA loan program, however, is oversubscribed—more than 39 applications were received in 2010—and more capacity is needed. TIFIA originally focused on encouraging private investment; the evaluation criteria for TIFIA applications should continue to encourage private-sector involvement.
- Similar structures could be created at the state or metropolitan levels, following the revolving loan model of the Infrastructure Bank.
- PABs would benefit from an increase in the current $15 billion cap and from an expanded ability to issue a variation of Build America bonds.

3. Provide Seed Money.
A source of seed money or matching funds for PPPs is needed at the federal and state levels, similar to that offered through PPP Canada. These funds would provide incentives for public entities that need financial assistance to pursue innovative PPP solutions.

The Bottom Line

Can PPPs offer a solution to the mounting challenges to fund transportation in the United States? Yes, but PPPs are only a solution, not the solution. Pushing the approach too far will harm the ability of PPPs to fill their intended niche.

Nonetheless, failing to consider the use of PPPs is like a mechanic throwing out the 3/4-inch wrench from the toolbox, declaring it unnecessary without considering future needs. The seven PPP rules and three actions presented here can ensure appropriate and beneficial use of PPPs to aid in solving U.S. infrastructure challenges.

Reference

1. *Paying Our Way: A New Framework for Transportation Finance*. National Surface Transportation Infrastructure Financing Commission, Washington, D.C., February 2009. http://financecommission.dot.gov/Documents/NSTIF_Commission_Final_Report_Advance%20Copy_Feb09.pdf.