NCSL FOUNDATION
for State Legislatures

NCSL Foundation Partnership

Public-Private Partnerships (P3s or PPPs) for Transportation

Transportation Funding Options for State Legislatures: A Focus on Public-Private Partnerships

NCSL Spring Forum Pre-Conference Meeting

April 22 – 25, 2009

Washington, D.C.

Meeting Summary

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Executive Summary

The NCSL Foundation Partners Project on Public-Private Partnerships (P3s/PPPs) exists to link legislators, legislative staff and interested private sector entities to analyze legislators' needs and to develop nonpartisan, balanced, useful materials to aid legislators' decision-making regarding PPPs in transportation, both in their respective states and as they consider state-federal relationships.

One purpose of this 18-month Project is to develop and offer educational sessions. This pre-conference meeting on public-private partnerships at NCSL's Spring Forum in Washington, D.C., examined the place of PPPs in a state legislature's toolbox of transportation funding options. This meeting will inform the Partners Project Steering Committee as it embarks on a year-long analysis of PPPs with the goal of developing a toolkit for state legislatures to use as they assess the appropriateness of PPPs for addressing transportation infrastructure needs.

After opening remarks from *Senator Pamela Gorman of Arizona*, *Fred Lewis of the West Virginia Legislature* and *Jennifer Aument of Transurban*, the pre-conference was comprised of six educational sessions. The first was a **Transportation Funding Overview** relating to reauthorization, the urgent problem of funding shortfalls and a summary of the fresh ideas offered by the recent report of a SAFETEA-LU mandated commission. To begin the session, the moderator, *Pete Nonis (AAA)*, gave a summary of issues and trends in federal transportation funding. *Joung Lee (AASHTO)* then spoke about trends impacting the Highway Trust Fund and AASHTO's policy, finance and funding recommendations for surface transportation reauthorization. *Rob Atkinson (National Surface Transportation Infrastructure Financing Commission)* closed the session with a review of the findings of the Commission regarding the transportation funding crisis and what to do about it, with PPPs as one financing opportunity and a federal funding system based on more direct "user pay" charges—such as a vehicle miles traveled (VMT) fee—as the long-term recommendation.

The second session, **Public-Private Partnerships 101**, moderated by *D.J. Gribbin (Macquarie Capital)*, provided information on the basics of PPPs from legal, finance, procurement and operations viewpoints. *Pamela Bailey-Campbell (Parsons Brinckerhoff)* presented on the many PPP options available, infrastructure as an asset class, the contexts for PPPs in the United States and internationally and several case studies. *Karen Hedlund (Nossaman LLP*)* then reviewed key elements of authorizing legislation and authorized agreement provisions, legislative obstacles to PPPs and the PPP model legislation developed by Nossaman and introduced in Arizona this year as SB 1463. *John B. Miller (Barchan Foundation, Inc. and Patton Boggs LLP)* concluded by discussing PPPs worldwide, the ABA model procurement code and options for where the money can come from as well as—perhaps more importantly—how a project is delivered. He remarked on the typical cost savings of 40 percent for combined project delivery methods.

Session three, **International Perspectives on Transportation PPPs**, was moderated by *Len Gilroy (Reason Foundation)*, who remarked that the United States is now rediscovering—and can learn from—what is being done with PPPs globally. *David Epperson and Elizabeth Jones (Center for Finance Strategy Innovation, University of Texas at Dallas)*, authors of the Texas 2008 *Report of the Legislative Study Committee on Private Participation in Toll Projects*, reviewed international highway PPPs and PPP providers, project types, advantages and risks, best practices, lessons learned and critical and emerging issues—as well as why the United States is the last industrialized country to look seriously at PPPs. *Cameron Gordon (City University of New York—College of Staten Island and University of Canberra, Australia)* presented the case study of Melbourne, Australia, a leader in privatization of

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[*] **Editor update: Ms. Hedlund joined the Federal Highway Administration as its new Chief Counsel on June 15, 2009.*

multimodal transportation systems, "for better and worse," and he discussed what principles and policy lessons can be learned from that example.

Over two dozen states have laws allowing PPPs, though only a few have made PPPs a key part of their transportation infrastructure process. In the session on **State Experiences with Transportation PPPs**, moderated by *Geoff Segal (Macquarie Capital)*, we heard about Pennsylvania and Virginia, two states that have moved aggressively on PPPs with very different results. *Michele Mariani Vaughn (Pew Center on the States)* discussed her March 2009 report, *Driven by Dollars: What States Should Know When Considering Public-Private Partnerships to Fund Transportation*, which analyzed Pennsylvania's failed 2007 attempt to lease the Pennsylvania Turnpike. She recommended that in dealing with PPPs, state policymakers should be well-informed and adopt a long-term perspective, while making sure they have enabling legislation, transparency and accountability, realistic assumptions and a plan for spending the proceeds. *Thomas Pelnik (Virginia Department of Transportation)* presented a very different state perspective, discussing Virginia's extensive experience with PPP projects since the state passed the Public-Private Transportation Act (PPTA) in 1995. He described how PPPs have been one component of the state's integrated transportation program and advised states only to develop projects that are financially feasible with or without private funding, as "a financially healthy organization can make better decisions for the public interest."

Numerous analyses have been completed recently reviewing various aspects of the PPP approach and giving advice to states on how to protect the public interest. In the **Evidence-Based Lessons Learned on PPPs** session, moderated by *Dennis Houlihan (AFSCME)*, two new studies were presented by their authors. *Jeffrey Buxbaum (Cambridge Systematics)* discussed the report he co-authored with Iris Ortiz, *Public Sector Decision Making for Public-Private Partnerships (NCHRP Synthesis 391)*, which examined what information is needed to evaluate the benefits and risks of PPPs, the reliability of this information and how it can be used during decision-making and how the public interest can be protected during the process. Mr. Buxbaum advised the public sector to keep motivations in the right place, to stay involved with monitoring and oversight and to use revenue for appropriate purposes.

Phineas Baxandall (U.S. PIRG) then presented his 2009 report, *Private Roads, Public Costs: The Facts About Toll Road Privatization and How to Protect the Public*. He described criteria that are necessary for the privatization of public functions to make sense and the challenges that transportation PPPs have in meeting such criteria. He advised that the public is best protected by retaining public control, ensuring fair value, having legislatures approve the final deals, as well as by having shorter deals, state-of-the-art standards and complete transparency and disclosure. This session inspired lively debate.

Senator Pamela Gorman (Arizona) presided over the sixth and final session, the **Steering Committee Roundtable on Next Steps**, which featured a facilitated debriefing discussion in which *Bob Johns (Center for Transportation Studies, University of Minnesota)* acted as respondent to the two days' events. It also included a brainstorm session about topic and emphasis suggestions for the next Partnership Project meeting at NCSL's Legislative Summit in Philadelphia this July.

NCSL thanks all of the public and private sector participants in the Partnership Project for their contributions to this event and to the ongoing work of the Project.

For more information about the meeting, including PowerPoints, see http://www.ncsl.org/?tabid=17216

For more information about the NCSL Foundation Partnership for PPPs for Transportation, see http://www.ncsl.org/default.aspx?tabid=17528

Meeting Summary Contents

Opening Remarks and Introductions

<u>Speakers</u>

- Senator Pamela Gorman, Arizona
- Fred Lewis, West Virginia Legislature
- Jennifer Aument, Transurban, Virginia

Opening Remarks by Senator Pamela Gorman, Arizona

In her opening remarks, Senator Gorman welcomed everyone to this pre-conference seminar, which has been designed to give state legislators an in-depth understanding of the context, the role and the utility of public private partnerships as they make decisions about improving our transportation infrastructure, which is so vital to the nation's economic well-being.

The seminar is being sponsored through a partnership of the Foundation for State Legislatures and our eight private partners (including AAA, the American Federation of State, County and Municipal Employees [AFSCME], American Road Transportation and Road Builders Association [ARTBA], American Trucking Association [ATA], Americans for Transportation Mobility Coalition and the U.S. Chamber of Commerce, Macquarie Capital, the Reason Foundation and Transurban).

Over 18 months, this group of sponsors along with a selected group of state legislators, legislative staff and technical experts will make up a steering committee that will analyze legislators' needs and develop nonpartisan, balanced and useful materials to aid legislators' decision-making relative to P3s, both in their respective states and as they consider state-federal relationships.

The P3 steering committee will meet at each scheduled NCSL meeting. The activities of the project include educational sessions on P3s such as this one. And the group will work closely with the NCSL Transportation Committee. The end product will be a tool kit of resources for use by state legislators and legislative staff to evaluate P3s in the context of transportation funding options.

Senator Gorman expressed her pleasure to be part of this national effort, as she has been sponsoring P3 bills and working to educate fellow legislators in Arizona on this for years. This year, she sponsored SB 1463, an extensive bill to allow P3s. Another P3 bill, HB 2396, has just been passed out of the House (sponsored by a previous naysayer) with only one "no" vote. *(Editor update: HB 2396 passed the Arizona Senate on June 22, 2009. At the time of writing it has gone back to the House for concurrence.)* Senator Gorman expressed her hope that this is the year for Arizona to finally pick up this valuable additional tool for solving our infrastructure problems and her hope that this will give people the tools to pass similar legislation in their own state.

Senator Gorman directed attendees to the meeting folder, containing the agenda, a roster of our steering committee and an NCSL compilation of P3 bills under consideration this year and let everyone know that a detailed meeting summary and all of the PowerPoint presentations will be made available on the project web site after the meeting.

Comments by Fred Lewis
Policy Analyst, West Virginia Legislature
Staff Chair, NCSL Foundation Partners Project on PPPs for Transportation

Fred Lewis thanked everyone for coming, especially in these economic times. He also thanked the speakers, the foundation partners and NCSL staff. He then gave an overview of the agenda.

Mr. Lewis remarked that many people come to the table predisposed with certain opinions about PPP opportunities. The PPP Partners Project toolkit will help people evaluate the merit of these proposals and improve the quality of decision-making—not only for sitting legislators, but for the future. The goal of this project is to have that toolkit by the December meeting and to report to Transportation Committee in July.

Comments by Jennifer Aument
Director of Public Affairs, Transurban

Jennifer Aument expressed, on behalf of Transurban, her appreciation of the opportunity to provide the private sector perspective. She explained that Transurban works to help governments meet their transportation needs.

Rarely do we see transportation challenges as complex as what is going on in the United States right now. The Federal Highway Administration estimates that congestion costs $78 billion per year, not to mention its effect on quality of life. In addition, the American Society of Civil Engineers says it would cost $1.6 trillion over the next 5 years to bring our transportation infrastructure back up to good condition.

PPPs are not a silver bullet solution to the challenges we face, yet if they are delivered responsibly, they can play an important role in meeting those challenges. The private sector can help by providing private capital and innovative financing. It can assume risks, it is incentivized to use new technologies which improve safety and the user experience and it can attract top industry talent to work with government teams.

As a long-term operator, Transurban is accountable to communities and customers as well as to the financial market and profit margin. In order to serve the community well, we have to serve not only today's needs but we must also be adaptable as needs evolve. For example, Transurban is currently in partnership with Virginia on the Beltway HOT lanes project, which is a nearly $2 billion project that covers 14 miles and will add 4 new HOT lanes, replace bridges and overpasses and provide HOV and carpool to the Beltway—streamlining improvements in that corridor, while protecting the public interest and allowing the private sector to make a reasonable rate of return. There is also a stringent performance regime in this first-of-its-kind revenue-sharing agreement. Beyond providing congestion relief and transportation choices, this project also provides an economic boost by injecting $1.54 billion of construction money into the local economy—nearly twice the ARRA funds for Virginia.

This is a PPP success story. But there have also been missteps in PPP delivery, both here and abroad: contracts that have not gone far enough and risks that should not have been taken. Programs like the NCSL Partnership allow opportunities for user groups and lawmakers to learn from past successes and failures of PPPs. This learning helps ensure that PPPs are delivered responsibly and can be a viable part of the solution to the challenges we face.

Session 1: Transportation Funding Overview

Moderator

- Pete Nonis, American Automobile Association (AAA), Washington, D.C.

Speakers

- Joung Lee, American Association of State Highway and Transportation Officials (AASHTO), Washington, D.C.
- Robert Atkinson, National Surface Transportation Infrastructure Financing Commission, Washington, D.C.

Editor update: There have been some developments in the reauthorization process since this meeting took place. On June 18, 2009, James Oberstar (D-Minn.), chairman of the House Transportation and Infrastructure (T&I) Committee, joined Highways and Transit Subcommittee chairman Peter DeFazio (D-Ore.), T&I ranking member John Mica (R-Fla.) and Highways and Transit Subcommittee ranking member John J. Duncan, Jr. (R-Tenn.) to release the "Blueprint for Investment and Reform" of the surface transportation program. The Committee Print of the reauthorization bill (known as the Surface Transportation Authorization Act of 2009, or STAA) was released a few days later and marked up in the Highways and Transit Subcommittee on June 24. The bill proposes a program of $450 billion over 6 years, leaving the House Ways and Means Committee to resolve the funding question. The bill, an executive summary, and documents on program consolidation and high speed rail are available on the Committee's website, http://transportation.house.gov.

Meanwhile, on June 17, 2009, U.S. Transportation Secretary Ray LaHood proposed to delay reauthorization, in a statement available on the U.S. DOT website at http://www.dot.gov/affairs/2009/dot8209.htm. Citing "the reality of our fiscal environment," LaHood recommended an immediate 18-month reauthorization to replenish the Highway Trust Fund, allowing time for Congress to address infrastructure investments using a "smarter, more focused approach." LaHood received support for this plan from U.S. Senate Committee on Environment and Public Works Chairman Barbara Boxer (D-Calif.), who also released a statement on June 17 applauding the White House for moving quickly to fill the anticipated gap in the Trust Fund and giving "the necessary time" to pass an authorization with "stable and reliable funding sources." A copy of her statement is available at http://epw.senate.gov/public/index.cfm?FuseAction=PressRoom.PressReleasesandContentRecord_id=f02eb7e8-802a-23ad-4046-78d2dbaace77.

Introduction by Pete Nonis
Congressional Relations Manager, American Automobile Association (AAA)

In his introduction, the moderator, Pete Nonis, thanked all participants for coming and braving the weather. He then introduced the speakers for this session before giving an overview of relevant transportation funding issues at the federal level.

Federal Transportation Issues

It is helpful to start by looking at where things are going generally in terms of transportation funding and then to look more closely at PPPs as one available option.

Timing is especially relevant now. As state legislators deal with funding challenges at the state level, it may be helpful for them to know that the same difficult conversations and decisions are happening at the federal level.

There are a few interesting things going on at the federal level:

- ARRA (American Reinvestment and Recovery Act): The transportation community has come out well in the process of implementing the ARRA, demonstrating that we can be good stewards of taxpayer dollars and make meaningful improvements that benefit the public.

- Highway Trust Fund: The Highway Trust Fund (HTF) was depleted last year, requiring an infusion of $8 billion last September. That $8 billion was meant to last until this September, when (ideally) the new surface transportation act would be passed. Perhaps, optimistically, the reauthorization *will* be passed by this September, but it is unlikely that the Fund will be able to last until then. Therefore, the HTF will need to be revisited this summer, which will complicate the issue of reauthorization.

- Reauthorization and the House of Representatives: In the House, Representative James Oberstar (D-Minn.) has been very vocal about getting a surface transportation reauthorization bill through the Transportation and Infrastructure Committee by Memorial Day. The House Ways and Means Committee will be relevant on the tax side, as it will have to figure out how to come up with the money that Oberstar and others are looking for over the next few years. This committee will be more involved than in the past. Though the conversation about funding may not have happened internally yet, there are some transportation advocates on Ways and Means. For example, Representative Earl Blumenauer (D-Ore.) has talked about $100 billion per year of federal money for reauthorization, which comes close to Oberstar's figure of $450 to $500 billion over six years.

- Reauthorization and the Senate: In the Senate, reauthorization does not have the movement that it has in the House. Jurisdiction for the highway title is broken up between two committees. The main committee that will be involved is the Committee on Environment and Public Works, chaired by Senator Barbara Boxer (D-Calif.). This committee also spearheads climate change issues in the Senate, but has indicated that reauthorization issues will not be hampered by its other work on climate change. *(Editor note: See update on page 8.)* The Senate Finance Committee, chaired by Senator Max Baucus (D-Mont.), will be involved on the tax-writing side. *(Editor note: Other Senate committees to be involved with the non-highway titles of reauthorization include the Banking, Housing and Urban Affairs Committee, which will address transit and rail, and the Commerce, Science and Transportation Committee, which will address freight and safety.)*

- Reauthorization and PPPs: PPPs are among the issues that Congress is considering in the reauthorization conversation. Secretary of Transportation Ray LaHood, when speaking before a Congressional committee recently, advocated going into the reauthorization debate with an open mind and spoke of the need to look at all funding options that could help get us to the goal.

- Reauthorization and the Obama Administration: The Obama administration is publicly opposed to an increase to the gas tax. Last July, during the presidential campaign, AAA interviewed both Obama and McCain. Then Senator Obama opposed a gas tax increase at that time. While he did not offer his rationale at that time, his current rationale is that we are in a recession and a gas tax increase is off the table until we're out of the recession. Instead, tolling, PPPs and the infrastructure bank are currently on the table as ways to get there (although it is unclear how much of the infrastructure bank investments will be used for transportation). For the time being, we will have to just see what happens and how Congress moves the process forward.

Government Spending and Transportation Program Reform

The public is deeply skeptical about the government's ability to spend any money wisely, especially transportation dollars. (The "bridge to nowhere" didn't help, but this skepticism goes deeper.) ARRA is helping on the PR side by communicating to the public what transportation can do for them, what it can do for maintaining the United States' global role and what it can do to improve environmental impact and safety for motorists. However, we can't just keep throwing money at the program as it currently exists, so the House of Representatives is working to build a new and reformed program first and *then* find the funding to get there.

The Continuing Role of AAA

AAA represents individual motorists, with over 50 million members in the United States and Canada. AAA will work to keep Congress focused on transportation as a national priority and on the importance of funding the transportation program adequately to meet its needs.

Transportation Funding Overview: Challenges and Opportunities
Presentation by Joung H. Lee
Senior Analyst for Transportation Finance and Business Development, American Association of State Highway and Transportation Officials (AASHTO)
Deputy Director for Operations, Center for Excellence in Project Finance

To begin his presentation, Joung Lee thanked NCSL for inviting him to present at this event. He remarked that this is just one of many AASHTO-NCSL joint efforts in Washington, D.C. He directed participants to http://www.transportation.org/ for more information about AASHTO.

Funding vs. Financing

There is a distinction between funding and financing. *Funding* refers to actual revenue sources, in terms of cash available in hand; *financing* refers to the many mechanisms for turning funding into actual programs. For example, bonds are not actually new revenue.; they are a financing mechanism. There has been much enthusiasm about PPPs as a way to solve both funding *and* financing problems, despite the turmoil in the market, which is encouraging.

Current Trends Impacting the Highway Trust Fund

We can *set* targets, but one of the greatest challenges we face in transportation is *meeting* those targets.

- Vehicle Miles Traveled (VMT): VMT directly correlates with Highway Trust Fund receipts, in terms of federal gas tax revenues. (The more miles traveled, the more gas is used, which means more gas tax revenues, which are paid into the Highway Trust Fund.) The trend in VMT has been negative for much of the last year; VMT is still going down on a month-to-month basis (January to February 2009), but the trend may be flattening and perhaps hitting bottom.

- Truck, Buses and Trailer Retail Tax Receipts: These receipts are also falling drastically, going from nearly $4 billion in 2007 to $1.4 billion in 2008.

- Purchasing Power Loss of the Highway Program: From 2003 to 2008, inflation increased by 60 percent, meaning we needed spend $51.8 billion on the highway program in 2008 to have the same spending power as the $32.5 billion spent in 2003. However, we only actually spent $42 billion in 2008, falling short of that purchasing power by $9.8 billion. The Young-Oberstar proposal to spend $55 billion in 2008 would barely have kept up with inflationary pressure.

- Reduced Highway and Transit Program Levels Beyond 2010: Based on current trends, the highway program will need to be cut by 50 percent in 2010 and transit by 50 percent in 2011[1].

- Gap Between Federal Funding and System Needs: There is a significant, growing gap between actual baseline spending patterns and the federal share of highway investment (assumed to be 45 percent of total needs) needed to improve or even to maintain the surface transportation system.

AASHTO's Policy Recommendations for Surface Transportation Authorization

Overall, AASHTO recommends a restructured transportation program, supporting the National Surface Transportation Policy and Revenue Study Commission's push for program and process reform to address the national needs.

Between 2010 and 2015, AASHTO recommends that Congress should fund a $545 billion multimodal program comprised of a highway program funded at $375 billion (2015 level = $75 billion), a transit program funded at $93 billion (2015 level = $18.5 billion), a freight program funded at $42 billion (2015 level = $9 billion) and an intercity passenger rail program funded at $35 billion (2015 level = $7.0 billion). The funding levels for AASHTO's proposed transportation authorization would ramp up each year, moving from $72.5 billion in 2010 to $109.5 billion in 2015, for a total of $545 billion.

Other AASHTO legislative recommendations for the next authorization bill include maintaining the current **federal share** (45 percent) for highway and transit capital programs, **restoring purchasing power** by addressing the impact of inflation in setting investment levels, **eliminating or drastically limiting earmarking** in federal transportation programs, developing policies that **support maximum flexibility**, **strong accountability measures**, a long-range movement towards a **distance-based user fee** and assuring that any **climate change** legislation that creates a new revenue source— either through a carbon tax or cap-and-trade—provides funding for transportation. Indeed, since transportation creates 30 percent or more of greenhouse gases in the United States, 30 percent of such revenue could be used to fund transportation.

AASHTO's recommendations for expanding existing federal financing tools for the next authorization bill include removing or increasing the national volume cap on the amount of **Private Activity Bonds** for transportation projects, enhancing and recapitalizing **State Infrastructure Banks**, reforming the **Transportation Infrastructure Finance and Innovation Act (TIFIA) program**, expanding the **Railroad Rehabilitation and Improvement Financing (RRIF) program** and removing federal limitations on state and local governments to **raise toll revenues** and to apply the toll revenues to multimodal transportation.

[1] See http://www.fhwa.dot.gov/highwaytrustfund/index.htm for a regularly updated graph of the HTF balance.

How to Fund This Proposal: Potential Resources for Investment

Right now, all of our eggs are in one basket: the gas tax. We need to expand our funding options. AASHTO has identified **over 20 possible revenue sources that could raise over $1.3 trillion from 2010 to 2015**. These include: VMT fees for cars and light-duty vehicles, highway user vehicle fees, carbon taxes or cap-and-trade, container tax, diesel tax increase plus indexing, existing highway trust fund (HTF) sources, gas tax increase plus indexing, general fund support for intercity passenger rail, general fund transfers for transit, indexing existing HTF sources, indexing heavy vehicle use tax retroactively to 1997, interest on HTF balances, motor fuel tax exemption reimbursement (retroactive and future), sales tax on motor fuels, share of U.S. customs revenues, tax credit bonds for highways and transit, tax credit bonds for intercity passenger rail, ton freight charge (all modes and truck only), ton-mile freight charge (all modes and truck only), U.S. freight bill (all modes and truck only) and vehicle sales tax on new and new/used passenger cars and light-duty trucks.

Paving Our Way: Funding Highways and Transit in the Future
Presentation by Rob Atkinson
Chairman, National Surface Transportation Infrastructure Financing Commission

Rob Atkinson directed the participants to http://financecommission.dot.gov for more information about the Commission and for the Commission report, *Paving Our Way: A New Framework for Transportation Finance*.

History and Purpose of the National Transportation Infrastructure Financing Commission

The National Surface Transportation Infrastructure Financing Commission was created in the last authorization bill and first met in March 2006. There were 15 Commissioners, appointed by Congress or the Secretary of Transportation, representing a wide variety of views. However, after two years of meeting—and arguing—the Commissioners came to a basically unanimous consensus.

The research questions for the Commission were how to think about this funding crisis and what to do about it. It addressed not only *how much* money we have, but also *how* we raise the money we need. The Commission, however, did not address how to *spend* the money. Specifically, the Commission was to identify funding levels to maintain and improve highway and transit systems—funding levels that do not decline in real terms—and mechanisms or funds to augment the current approach.

Initial Concerns and Observations: "It's All Bad News"

Each year, we can barely afford to maintain, let alone expand, surface transportation infrastructure. The transportation system is predicted to slowly worsen every year. (In Mr. Atkinson's words: "In the late 1970s, we decided to degrade our infrastructure faster than we could replenish it and then pass it on to our children in a degraded state—and that is our national policy today.") By not indexing to inflation, our national policy is also essentially to reduce the gas tax every year.

Initial concerns and observations of the Commission included that system demands are outpacing investment, system maintenance costs are competing with capacity expansion, fuel taxes at the current rate are not sufficient, more revenue and investment is needed—and it should be collected in ways more directly related to system costs—and more *intelligent* investment is also needed.

Who Pays Now?

Right now, the average user pays 3¢ per vehicle mile traveled (VMT) in fuel tax, but that user on a congested highway generates 10¢ to 29¢ per VMT in cost. Gas taxes pay a small share of typical new construction of urban freeway capacity and heavy vehicles generate more cost than they pay in taxes and fees. The gap between motor fuel taxes and the real cost of using the system sends a mixed signal to users. In a sense, this gap basically results in a kind of subsidy for using fuel. In addition, a breakthrough in non-gas-powered vehicles will reduce gas tax revenues even more dramatically.

The Federal Funding Gap

The Highway Trust Fund (HTF) at current tax levels will receive about $32 billion per year over the next 25 years (2008 dollars). To support a reduced, focused level of investment, federal funding needs to increase by over $25 billion per year. To grow and improve the system at the current federal share of total highway and transit needs, federal funding needs to increase by over $64 billion per year. The total system needs an additional $130 billion per year. This estimate of the gap in federal funding means that we would need the equivalent of *three federal stimulus packages (ARRAs) per year* to address the shortfall.

There are many other indicators for the funding gap:

- The ratio of constant funding to VMT has decreased by 48 percent from 1957 to 2006.
- The purchasing power of gas tax receipts has declined by more than 30 percent since 1993.
- Preliminary numbers for 2008 Highway Trust Fund/Highway Account (HTF/HA) revenues—at just over $31 billion—fall below projections.
- Predictions are that the gap between HTF/HA outlays and receipts will reach $15 billion by 2015. The balance will zero out in 2009 and the deficit will exceed $60 billion by 2015.
- Forecasts for HTF revenues from 2008 to 2035 show a modest increase in nominal dollars and a substantial decrease (from just over $35 billion to around $25 billion) in 2008 dollars.
- Without policy changes, federal, local and state revenues will be 39 to 57 percent of what is needed to maintain the highway and transit systems and 29 to 40 percent of what is needed to improve them.
- Without policy changes, the gap between federal revenue and what is needed to maintain the highway and transit systems will be $46 billion annually; to improve them, $64 billion.
- The gap between federal investment needed to improve the system and the baseline forecast of HTF revenues is $400 billion from 2010 to 2015 and $2.3 trillion from 2010 to 2035.

Funding and Financing Guiding Principles

We need to build a sustainable system that helps all users, which all users pay for. The funding framework should support enhancing the mobility of all users, generate sufficient funding to meet investment needs on a sustainable basis, encourage efficient investment, incorporate equity considerations and support energy and environment goals. In addition, users should bear the full cost of using the transportation system to the greatest extent possible.

Commission Findings and Recommendations

There is no “silver bullet”: We’re in bad shape and it’s likely to get worse before it gets better.

The Commission's findings and conclusions include that the current federal funding structure is not sustainable and is likely to erode quickly; the current indirect user fee system based on fuel taxes provides only weak price signals to users to use the transportation system in more efficient ways; short-term, effective and feasible options are limited; federal actions can help expand the options; and financing approaches are not a substitute for solving funding problems.

The problem is so severe that it's time to set ideology aside. Yes, we have to raise the gas tax, we have to have tolls, we have to have PPPs—we have to have *lots* of things on the table. Near-term recommendations include increasing and/or indexing current HTF taxes as well as increasing tolling at state and local level. The long-term recommendation is a federal funding system based on more direct forms of "user pay" charges, in the form of a **vehicle mile tax system (VMT)**.

VMT, which connects use and funding directly and allows pricing to be dynamic, is a long-term solution that could replace virtually all other HTF taxes and fees. Also, VMT is revenue neutral; the federal system cost is 1.4¢ to 2.7¢ per mile for cars. Resolvable issues regarding VMT include privacy, implementation and administrative costs, tax levels, technology standards and the disposal of the fuel tax. Other issues relating to privacy, rural issues and environment and emissions issues can largely be resolved by the technology.

Oregon's VMT pilot project demonstrates a simple, easy-to-use system. The system may need to be tested and proved, but not developed—the technology is already relatively robust. The pilot program also shows that popular opinion starts out negative but can become positive with experience. This model is also in use in Europe. In Holland, it will be in place for every vehicle by 2014; in Denmark, by 2016.

Funding, Not Financing, Solves the Problem

Funding, not financing, solves the problem. Funding sources include fuel tax, vehicle fees, general fund support, direct and indirect user fees and other sources. Financing options include general obligation debt, grant anticipation borrowing, user fee revenue bonds, federal credit assistance/infrastructure bank, toll road concessions and asset leases. PPPs are another financing opportunity. An estimated $500 billion is available in potential private investments. PPPs accelerate capacity growth, share cost risk and improve efficiency.

Federal Funding and Finance 2.0

Looking ahead to possible future federal, state and user roles: The federal role may be somewhat reduced, providing more incentive-based funding, less complexity and more use of TIFIA credit assistance, public activity bonds, state infrastructure banks and maybe a national infrastructure bank. The state role may increase, having more funding and financing options. And the user role will be more related to direct pay, with a greater correlation of cost and benefit.

Who Pays in the Future?

We still pay, but the question is: How much… when… and what do we get?

In the future, infrastructure will be built for economic growth, continued personal mobility, less congestion and safer travel. But we may pay higher taxes and tolls. If we don't build infrastructure, we pay with reduced mobility, lower productivity growth, more time on congested roads, a worse environment and a less safe travel experience. Financing can accelerate the availability of the improvements but it will still need a source of funding. The user will pay close to the cost of use, which will encourage efficient system use and the market will help improve system performance.

Let's do things in new ways. There are ways to deal with these problems, but it will take innovation, technology and, ultimately, leadership to move forward on this.

Session 2: Public-Private Partnerships 101

Moderator
- D.J. Gribbin, Macquarie Capital, Washington, D.C.

Speakers
- Pamela Bailey-Campbell, Parsons Brinckerhoff, Colorado
- Karen Hedlund, Nossaman LLP, Washington, D.C.*
- John B. Miller, The Barchan Foundation, Inc. and Patton Boggs LLP, Washington, D.C.

Introduction by D.J. Gribbin
Managing Director, Macquarie Capital

The moderator, D.J. Gribbin, introduced the speakers for this session.

PPPs 101
Presentation by Pamela Bailey-Campbell
Senior Vice-President, Parsons Brinckerhoff

PPPs: Overview and Definitions

Although we tend to rush in our thinking to "concession models" when thinking about PPPs, there is actually a wide variety of PPP options available, in terms of who provides the funds and who has the risk and responsibility. Many PPP options can be beneficial to the public.

A broader definition of PPPs is "an agreement between public and private sector parties that transfers infrastructure delivery functions to the private sector." Planning, design, financing, construction, operations and/or maintenance functions are candidates for private sector responsibility, even though most of these are traditionally regarded as public sector responsibilities in the United States. In all PPPs, there is a transfer of *risk* associated with transfer of *responsibility*.

On the "PPP continuum," PPPs vary along two axes (see Appendix C for diagram): public sector (direct) or private sector (indirect) **funding** and public or private **responsibility**. PPP options with **public funding and public responsibility** include design-bid-build (DBB), design-build (DB), construction-management (CM), service contract (O&M) and fast track (FT). PPP options with **public funding and private responsibility** include design-build-operate (DBO), design-build-operate-maintain (DBOM) and design-build-finance-operate(-maintain) (DBFO[M]) with availability payments. PPP options that have **private funding** and **private responsibility** include design-build-finance-operate(-maintain) (DBFO[M]) with user fees and build-own-operate (BOO, or

* *Editor update: Ms. Hedlund joined the Federal Highway Administration as its new Chief Counsel on June 15, 2009.*

privatization). Options that have **private funding** and **public responsibility** are limited to some high-tech components.

In general, as public responsibility increases, so does the tendency towards a **segmented delivery system**, in which different components of the project are handled separately, by different entities. Private responsibility generally tends towards a **combined delivery method**, in which different components of the project are integrated.

PPP options besides concession models can also include:

- Revenue sharing: A "return on equity" (ROE) model which has a smaller upfront payment and in which (like the availability payment model) the public sector controls private sector returns
- Shadow tolling: A model in which users pay no toll to the operators and the public sector pays the private sector based on the volume of road usage
- Innovative tax-exempt financing structures
- Blending various financing sources (including value capture)
- Creative use of design-build (DB)/DBOM to obtain innovation, cost efficiency, schedule and cost certainty. Do not overlook these solutions to transportation challenges.

Greenfields vs. Brownfields

Greenfields projects are new infrastructure. *Brownfields* are budget-balancing projects that reclaim existing infrastructure, e.g. by turning it into a PPP or a toll-road. Much of what upsets people about PPPs is about proceeds from brownfields deals. If a deal is focused on budget balancing, people want to see the money invested in transportation programs rather than elsewhere. Putting money from a deal into new capacity makes the connection and rationale for PPPs clearer.

PPP Project Definition

PPP project definition should move through these issues: 1) project needs and client objectives; 2) service output; 3) risk analysis; 4) market strategy/deal structure; 5) value for money; 6) contract structuring; 7) performance requirements; 8) transaction execution; and 9) contract management.

International Infrastructure: Cinderella Asset Class

Interest in infrastructure as an investment vehicle is increasing. This is taking place in the context of a widening investment gap. From 2005 to 2010, the estimated investment needs for global infrastructure totals $370 billion *per year*, which must be balanced against growing deficits and other demands.

The interest in infrastructure as a new asset class started with the need to invest pension funds in Australia; now, infrastructure is 5 percent of those investments. Infrastructure as an investment has several benefits: high entry barriers, inelastic demand, stable cash flow, long duration and high performance. From 2002 to 2007, infrastructure investments vastly outperformed other investment types. There are more challenges, however, in financing infrastructure investments today.

International Uses of PPPs

In Europe, as in the United States, governments struggle with public sector deficits. Financing in the European PPP market (excluding the United Kingdom) grew by one-third during the first half of

2007. There is also a new European PPP program that helps governments develop PPP projects and meet guidelines for the European Investment Bank and other European Union entities. But even in Europe, where PPPs are widely used, they did not "take over." European infrastructure projects are still primarily delivered via traditional procurement methods, and PPPs only fund an estimated 15 percent of those projects.

In Canada, most PPP activity is in British Columbia (via Partnerships BC). There, the main reasons for engaging in PPPs have been efficient delivery/cost certainty and innovation in design/delivery. In 2007, Canada announced a new infrastructure plan, which included a new $1.25 billion, national, merit-based PPP fund that can contribute up to 25 percent of eligible costs. A new federal PPP office has also been established to identify, oversee the assessment of and execute PPPs for projects funded from federal infrastructure initiatives.

<u>United States Context for PPPs</u>

Why is the United States behind in developing PPP projects? First, this country's **tax-exempt market** is unique; other countries routinely have **more bank involvement** in funding infrastructure assets. Second, other countries tend to set **policies at the national level**—such as the United Kingdom's Private Finance Initiative (PFI)—rather than at the state level. Third, the United States does not have **jointly privately and publicly owned corporations**; in other countries, there are such "mixed" corporations and true profit-sharing between government and private entities. Finally, internationally, there are **traditions of concession companies** delivering and financing projects.

But now, the United States context is one in which **record infrastructure needs are increasing public sector interest in PPPs**. This means that project sponsors are often less experienced than interested project investors and developers. In this country, there is also a **new level of infrastructure funding** available from international players with long-term expertise, interest and capital—as well as growing participation by U.S.-based financial firms.

In the United States, the context for PPPs also includes a **state-by-state approach**—with no national PPP framework or standards and a need for enabling legislation in each state—and a focus on **protecting the public interest**. Also, both the public and private sectors want **transparency**. Private entities want consistent, clear rules up-front that ensure competition on a level playing field, so they can decide whether to compete. Private entities do not want to enter a bid and *then* have the rules change, because bids are expensive. Therefore, legislatures should determine the process and criteria, but *not* be able to negotiate or overturn a contract later in the process, which reduces competition.

<u>United States Concession Model</u>

Characteristics of the United States private concession model include a **committed revenue source** (direct revenue or availability payments), continued **public sector ownership and oversight** of the asset, **equity investment plus debt financing or taxable bonds** (including public activity bonds and TIFIA credit assistance) and **transfer of construction and operating risk**. United States concession models also tend to have long-term lease agreements—35 to 99 years—because of our tax-exempt market. Long-term agreements convey "tax ownership" and depreciation benefits and enable the financing of expensive projects. These are in contrast to European concessions, which have 15- to 35-year terms on average and built-in renegotiation clauses.

Availability Payments

In an **availability payment structure**, private companies bid for annual payments from the public sector, which does not make payment until the project is open and available for use. After that, annual payments are made to the private company by the public sector based on the availability of the road. Ongoing performance criteria are set and evaluated by the public sector; if those criteria are not met, the private entity does not receive its total payment. For example, there might be deductions for closing the road. One example of an availability payment structure is Florida's I-595 project. This model may have potentially better public acceptance and is more easily financed.

United States Pension Funds and PPPs

United States pension funds are increasingly interested in infrastructure investments. Pension funds do not invest in tax-exempt debt, since they are already tax-exempt, so the Obama Administration is being urged to offer other incentives to encourage pension fund investment in infrastructure. There is also growing support for a National Infrastructure Reinvestment Corporation. In addition, changes in investment policy have led to infrastructure investments by CalPERS (1.5 percent target), the Alaska Permanent Fund Corporation (3 percent target), the Illinois State Board of Investments ($300 million/4 percent investment) and the Dallas Police and Fire Pension (potential $75 million investment).

Protecting the Public Interest

How can public officials decide if PPPs make sense? According to the 2008 GAO report *Highway Public-Private Partnerships*, the United Kingdom, Canada and Australia do a quantitative test of "Value for Money" (VfM) using the Public Sector Comparator (PSC). The PSC examines life cycle project costs over the concession term and seeks to quantify the value of various types of risk transfer. Partnerships Victoria has another model for evaluating PPP projects, which is a 4-part process that looks at raw PSC, competitive neutrality, transferable risk and retained risk. Evaluation of PPPs should happen as early as possible in the process. It is good discipline—especially as we move to a performance-based approach to infrastructure—and makes you look at all the risks and costs of delivering that project.

Leveraging Lessons on PPPs: United States Case Studies

The United States has several PPP case studies from which we can learn. They include:

- **California: SR 125/South Bay Expressway Project** ($600 million 12-mile greenfield toll road project; opened in 2007; 35-year concession model; first TIFIA loan for a private project)
- **Florida: I-595 Managed Lanes Project** ($1.2 billion project; 10.5 miles of new express lanes; 35-year availability payments; first U.S. availability payment deal; FDOT retains control of tolls; financed as a *club deal*, in which banks agree ahead of time to jointly finance the project, rather than *syndication*, in which one or a few key investors recruit other banks after the deal is closed)
- **Virginia: Capital Beltway HOT PPP Project** (14-miles; 4 HOV [high-occupancy vehicle]/HOT [high-occupancy toll] lanes added; ORT [open road tolling] and dynamic pricing; 80-year concession agreement, with protection against excess HOV usage and revenue sharing with VDOT after 12.98 percent return on equity; $1.937 billion project financing)
- **Oregon: Portland MAX Airport Extension Project** (5.5-mile LRT [light-rail transit] extension to airport; combined port, city and private funding)

- **Washington, DC: Dulles Corridor Rail Project** (not yet closed; leveraging several different sources of public funds; intermodal; Metropolitan Washington Airport Authority took over leadership of the project in 2007; total project cost: $5+ billion)
- **California: High-Speed Rail Project** ($40 billion, 800-mile, 220 mph rail service from San Diego to San Francisco; annual revenue of $2.4 to $4 billion; expectations to operate without public subsidy and generate private investment; bond approved 2008; combined federal, state, local and private financing plan)
- **Illinois: Chicago Midway Airport Privatization** (sponsored by City of Chicago; first privatization of a major U.S. airport; 99-year lease; $2.52 billion bid, of which $1.3 billion will repay debt, 90 percent of remainder will go to infrastructure and pension liability and $100 million will be unrestricted; financing uncertain). *(Editor update: At the time of Ms. Bailey-Campbell's presentation, financing for the $2.52 billion deal to lease Chicago's Midway Airport to a private operator was uncertain. By the end of April 2009, the deal had fallen through because the investors could not secure the necessary financing. Midway would have been the first major U.S. airport to be privately run under the Federal Aviation Administration's Airport Privatization Pilot Program, created by Congress in 1997.)*

PPP Model Legislation
Presentation by Karen J. Hedlund*
Partner, Nossaman LLP

Karen Hedlund started by introducing Nossman LLP, which has represented state agencies and municipal and county governments in PPPs and innovative financing. When representing governments, Nossaman has often been asked, "Is there model legislation?" In fact, states have different PPP legislation. Virginia had an early statute—now copied in several states—which focused largely on unsolicited proposals. This is how PPPs began in Virginia, but now more states are looking at solicited proposals. Pennsylvania handled PPPs with a one-paragraph statute. Texas has a very detailed statute on PPPs and innovative procurements that has been amended a few times and probably will be again.

Nossaman LLP looks at what legislation *should* have. This is a work in progress. The model bill can be used for greenfields and brownfields projects, but does not address issues that often come up in large brownfields transactions, such as the labor issues that arose with the Indiana Toll Road. For more information on those issues, the Illinois bill that authorized the Midway transaction has a good piece on protecting existing labor.

<u>Advantages of PPPs</u>

The basic advantage of PPPs is shifting risk for revenue and operating costs to the private sector. The advantages of traditional procurement are total government control over the design, competitive initial construction cost, high transparency and low political risk. The disadvantages of traditional procurement are no guarantee of the lowest ultimate price, limited cost control over the design process, "overdesign," exposure to change orders and 100 percent public funding. Also, life cycle cost is not taken into account in traditional procurement.

The advantages of delivering new projects through long-term PPPs include large, new sources of capital and minimized dependence on public revenues. Also, the developer assumes revenue and

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operating cost risks, as well as more environmental and development period risks. One disadvantage of delivering new projects through long-term PPPs is that for-profit entities require taxable financing—for which public activity bonds are now available. Also, there is less public control over operations and limits on rates and charges must be set by contract.

Key Public Sector Objectives

Key public sector objectives must be considered in the development of PPP legislation. These include: effective competitive procurement methods; maximizing private sector investment and risk sharing; limiting public financial exposure; reasonable user fee structure and profits; opportunities for revenue sharing; quality design, construction, operations and maintenance; effective assurances of performance; and effective remedies.

The Need for Special Legislation

Special legislation is needed for transportation PPPs. Otherwise, procurements are limited to the low bid. Also, without special legislation, project revenues can't be shared, public funds can't be contributed and the project will be subject to ad valorem and property tax. Local property tax may make sense for a PPP-funded public building, but on a 20-mile highway that has a very large footprint, property taxes could be enough to sink the project or to raise tolls to unfeasible levels. Also, traditional procurement assumes that the state is providing the design and the only thing that will be bid is construction, which prohibits contracting for final design *and* construction.

Essential Elements of Authorizing Legislation

The first essential element of authorizing legislation is its **scope**. For example, what level of agency will it cover (state, regional, county, municipal)? Specified projects? Types of projects: water, transportation, public buildings? The model bill authorizes agencies at each level to enter into PPPs. In reality, some states have chosen to authorize agencies at just at one level (e.g. Virginia authorized VDOT) while other states have authorized particular agencies for particular projects.

The second element is the **type of contracts authorized.** This can include authorization to contract with a private party to design, build, finance, operate and/or maintain (DB, DBO, DBFO, DBOM and concessions). For any type of PPP, it is important that everything *must* be done in accordance with performance specifications that the agency or owner is going to set.

The third element is **procurement methodology**: solicited proposals, unsolicited proposals with opportunity for competition, or best value/quals-based selection. The model bill provides for both solicited and unsolicited proposals. In reality, some states (e.g. Florida) have legislation that only allows for solicited proposals. With either solicited or unsolicited proposals, there must be competition and the request for proposals (RFP) should include evaluation factors and weight. While some state laws (e.g. Virginia and Oregon) detail everything that ought to be in an RFP, the model bill is more general.

Other **special provisions** to consider when creating PPP legislation include: evaluation fees, financial and legal consultants (and who pays for them), no delegation of condemnation power—meaning that the public entity can condemn property to be leased to the private party—and stipends for the right to use a qualifying proposal on that or any other project (which the model legislation allows). Authorizing legislation can also address alternative dispute resolution, which is appreciated by the private sector. In some states, if alternative dispute resolution is not specifically authorized, you may not do it.

Authorized PPP Agreement Provisions

The model legislation allows for certain kinds of provisions in PPP agreements. It allows a public agency to **enter into an agreement** with a private company and it also allows the private party to **collect and enforce fees**. Otherwise, the public sector may be forced to collect and/or enforce fees, which makes the agreement more difficult. Also, it allows the public sponsor to **share development costs, revenues and project risks**. Other provisions relate to right-of-way (ROW) acquisition, reconstruction and renovation, limits on the return on investment, defaults and remedies, recordkeeping and audits, exemptions from property taxes, performance security (100 percent performance bonds) and "hand-back" clauses (setting standards for an asset's quality for the time when the contract will expire and the asset will be "handed back" to the public sector).

The model legislation also allows for provisions for competing facilities. The current approach is that the public sector may compensate for lost revenues due to the construction of competing facilities, but *the agreement cannot bar the public entity's right to build any facility regardless of location*.

Transparency and Confidentiality

There is a need to balance the public's right to know with the integrity of the procurement process. RFPs may be publicly accessible. Also, proposers must comply with open records requirements. However, proposals (except for Executive Summaries) should be confidential and protected from release until after the award.

State Example: Arizona Proposed Legislation

The model legislation was introduced in Arizona this year by Senator Pamela Gorman as **SB 1463**. Another Arizona bill, **HB 2396**, also had transportation-specific provisions relating to PPPs. It covered highways, rail, bus rapid transit, ferries and intermodal transportation. It authorized private parties to collect tolls, with toll increases based on formula, variable tolls and high occupancy toll (HOT) lanes, a limited return on investment and a refund of motor fuel taxes. *(Editor update: HB 2396 passed the Arizona Senate on June 22, 2009 and at the time of writing has gone back to the House for concurrence.)*

Legislative Obstacles to PPPs

Legislative obstacles to PPP agreements include required legislative approval of the final contract, removal of tolls upon termination, 100 percent payment and performance bonds, no ad valorem property tax exemption and a short and inflexible maximum term, as most projects need 50 years to pay down the debt. Another obstacle is a regulated utility model for setting tolls; it is better to deal with toll increases through the contract. Restrictions against foreign investors and operators—which are really under the purview of the federal government—are also an obstacle. Mississippi's statute presents one possible solution to this by requiring projects to follow the federal committee's rules and not have investors who are on the terrorist list. This seems to work for most people.

See http://www.nossaman.com/infrastructure for more information on Nossaman LLP, including a link to the model legislation (PDF).

"Public-Private Partnerships" 101:
Keep Track of the Money, Know How Your Project Will be Delivered
Presentation by Dr. John B. Miller
The Barchan Foundation, Inc. and Patton Boggs LLP

Introduction

The issues that legislators are facing in the United States are the same issues that are being faced around the world. The Barchan Foundation exists to track these issues and worldwide trends in the delivery and finance of public infrastructure.

The world of PPPs is an "acronym-crazed environment" but really, it's not that complicated. There are two things to keep in mind:

1) Keep track of where the money is coming from and
2) Keep track of how the project is being delivered.

Project Finance Sources and Delivery Methods

Most conversations about PPPs are about money and how the project will be financed. However, the more important question is, how are we going to deliver the project? These two issues—the **source of project finance** and the **project delivery method**—define the two axes that define different models of PPPs in the MIT Framework (see Appendix C for diagrams) (*Source: Miller, Principles of Public and Private Infrastructure Delivery, 2000*).

Sources of Project Finance

Sources of project finance can be direct or indirect. In a **direct method of payment**, the government pays for the project with public resources that come from taxes, user fees, funds borrowed by the government from private capital markets (typically bonds or bond anticipation notes), or grants from other governments made available through taxes, user fees, or funds borrowed. In an **indirect method of payment**, the government attracts the private sector to pay with private sector resources. Typically, this is done by ceding specific control over a public infrastructure asset to create a revenue stream which the private sector uses to return capital invested and earn a profit. Revenue comes from user fees paid to the private sector, funds borrowed by the private sector from private capital markets (typically bonds or other debt), or equity invested. Funds are borrowed based on the project's ability to produce sufficient revenue to repay borrowed funds with interest, pay for operations and maintenance (O&M) and profit. Money is borrowed, whether by public or private entities, from the same private capital markets, typically bonds.

"Progress payments" by public entities are public, not private, financing. This is standard practice in federal, state and local contracting over at least the last 100 years. Regular cash payments allow the contractor to perform without "using" its resources and without "borrowing". Examples include Route 3 North (Massachusetts), Northumberland Bridge (New Brunswick, Canada) and the Canada Line rapid transit project (British Columbia, Canada).

Project Delivery Methods

Project delivery methods can be combined or segmented. The traditional **segmented delivery method** delivers the project elements separately from each other—"piecemeal"—and usually receives all financing from public sources. A typical scenario is that the government designs the project, the contractor constructs it, there is a lot of argument about what was in the original design document and then O&M sees the design and construction for the first time when the system is handed over. In contrast, the **combined delivery method** delivers the three key elements of infrastructure projects (design, build and operate/maintain) in an integrated way and can receive financing from public or private sources, depending on the project.

Beware of "poor ways" to obtain life cycle services. Combined delivery doesn't just mean integration from one company, or from different departments that are pushed together, or a single contract managed through a single broker where there is still no meaningful integration of project elements. It means *real*, conceptual integration throughout the process. Design happens differently if one is designing with cost and ease of construction and O&M in mind, and construction happens differently if the cost of repairs, replacements and O&M is being considered.

PPP options that have **direct funding sources** and **segmented delivery methods** include design-build (DB), operate and maintain (O&M) and design-bid-build (DBB) with construction management at risk (CM@Risk). PPP options that have **direct funding sources** and **combined delivery methods** include design-build-operate-maintain (DBOM) with mixed public/private funding and DBOM with all public funding. PPP options that have **indirect funding sources** and **combined delivery methods** include DBOM with no public funding. Barchan Foundation data from before the current economic crisis showed this as the most common type of project worldwide.

DBOM with all public funding is an underutilized option, but its use may expand given the current economic climate. It has the advantage of the cost savings of a combined delivery method without the perceived disadvantages of privately funded PPPs (DBFOM).

Why Use a Combined Delivery Method?

With the "traditional" (DBB) segmented delivery method, for every $1 spent on design, $10 is spent on construction and at least $100 is spent on O&M, repairs and refurbishment over the typical life cycle of an infrastructure facility. *Typical life cycle cost savings for combined delivery is 40 percent.*

Not integrating design and construction with O&M, where the majority of costs are, creates problems. In these cases, O&M costs become a crushing burden, especially in highly developed sectors like transportation in the United States. Overall, there is too much focus on choosing good design and construction teams, but not enough attention paid to O&M costs. Governments will willingly fund initial delivery but do not properly fund long-term O&M, as shown by deferred maintenance problems in Britain and the United States. PPPs can be helpful here.

Failure to deliver long-life facilities on a "life cycle" basis is costly. Given the pavement deterioration curve, it can take a fairly short amount of time for pavement to move from "fair" condition (in which rehabilitation would cost $1) to "serious" condition (in which rehabilitation costs $4 to $5). In Dr. Miller's words: "We are not just in the design and build business. We are in the transportation systems delivery business."

ABA Model Code

The ABA Model Code was updated in 2000 and again in 2007. The full Code deals with all kinds of procurement; the smaller version deals with public infrastructure procurement only. The ABA models assure transparency, competition, integration and flexibility. These models address pure operations and maintenance (pure O&M), design-bid-build (DBB), design-build (DB), design-build-operate (DBO) and design-build-finance-operate (DBFO) projects. A few methods have become best practice in the United States: "low bid" and requests for proposals (RFPs). The Model Code allows for evaluation factors, pre-qualifications, stipends, listings, and best and final offers. Payment and performance bonds cover the construction period and a 5-year renewable operations bond covers the O&M period.

Top "Myths" about PPPs

- *PPPs are new to the United States.*
- *PPP road projects are different, requiring different procurement practices.* Reality: The same procurement practices can be used for wastewater projects, container projects, etc.
- *Concession periods longer than 35 years are typical across the world*. Reality: Only in the United States are concession periods over 35 years typical (and even here, they are only used on a handful of projects). In the rest of the world, if it takes 99 years to get your money back, it's a bad project!
- *Transparent, head-to-head competition is too hard to do for certain PPP projects.* Reality: Competition for PPPs can be done and done well.
- *Public and private entities have to spend millions of dollars on transaction costs relating to PPP projects.* Reality: The reason we're not doing more PPP deals (and why transaction costs can be high) is because we've made them all one-off projects. The purpose of the Model Code is to standardize the procurement process, so it can be done transparently and regularly.
- *Life cycle cost savings of 40 percent can only be achieved with privately funded PPPs.*
- *Large up-front payments by the private sector to the government are not passed to users through tolls/charges.* Reality: Large up-front payments *must* get passed to users through tolls/charges. In any case, the focus should be on design and O&M issues and how to give the best deal and experience to users.

The ABA Model Procurement Code addresses these myths and concerns.

Resources

- ABA Model Procurement Code for State and Local Governments (Adopted by the ABA House of Delegates as ABA Policy) (http://www.abanet.org/dch/committee.cfm?com=PC500500)
    - 1979 Edition authorized Design-Bid-Build (DBB) and Construction-Management
    - 2000 Edition adds Design-Build (DB), DBOM, DBFOM and Pure O&M
- Related ABA Models:
    - ABA 2007 Model Code for Public Infrastructure Procurement (MC PIP) is a condensation of the 2000 MPC for infrastructure
    - ABA 1980 Model Procurement Ordinance for Local Governments is a condensation of the 1979 MPC for cities and towns
- Barchan Foundation (www.barchanfoundation.com): "Comparing and contrasting infrastructure delivery strategy across the world."

Session 3: International Perspectives on Transportation PPPs

Moderator

- Len Gilroy, Reason Foundation

Speakers

- David Epperson and Elizabeth Jones, University of Texas at Dallas
- Cameron Gordon, University of Canberra, Australia

Introduction by Len Gilroy
Director of Government Reform, Reason Foundation

The moderator, Len Gilroy, began by thanking NCSL and the partners in the PPP Partners Project. He referred back to the presentation given by Pamela Bailey-Campbell in the PPPs 101 session and the good overview she gave of how PPPs have evolved in the international context, reiterating that what the United States is discovering (or rediscovering) is being done globally. He then remarked on how Dr. Miller pointed out that the United States has been doing these for over 100 years. Mr. Gilroy went on to say that in Texas and Pennsylvania, there were issues about competition between the public and private sectors, as well as protecting the public interest. As we look at these issues, there are lessons from international projects that we can import.

Mr. Gilroy introduced the speakers and concluded by recommending to all attendees that they read the Texas Legislative Study Committee on Private Participation in Toll Projects report authored by David Epperson and Elizabeth Jones (the first presenters).

International Perspectives on Transportation Public-Private Partnerships
Presentation by David Epperson and Elizabeth Jones
Center for Finance Strategy Innovation, University of Texas at Dallas

See ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/tta/sb_792_report.pdf for the *Report of the Legislative Study Committee on Private Participation in Toll Projects* (Texas), December 2008, co-authored by David Epperson and Elizabeth Jones.

David Epperson remarked that the United States is accustomed to being an innovative pioneer, but it is the last major industrialized country to look seriously at the PPP model. Ironically, PPPs began in Europe. Despite Europe's generally higher regard for the public sector, they are ahead of us with PPPs because their traditional sources of financing fell short earlier—something that is happening now in the United States. Today's talk will introduce international highway PPPs including relevant learnings and best practices.

A Brief Overview of International Highway PPPs

Spanish road concessions began in the Franco era in the 1960s and the "modern era" of PPPs began in the United Kingdom in the early 1990s. The PPP model spread to Canada, Australia and Western Europe and is now global, both in the developed and developing world. Currently PPPs are used for a wide variety of infrastructure including highways, transit, social infrastructure, hospitals, schools and prisons. Today, the focus is on highways, primarily in the developed world, although the principles of sound management remain the same the world over.

The top 30 PPP road projects by value (outside the United States or Canada) total $84 billion (USD). They are located in Brazil, France, Germany, Mexico, Poland, Portugal, Spain and the United Kingdom and include greenfields, brownfields and mixed projects. Of those top projects, the greatest in value are the Mexican Motorway Concessions from 1980 to 1997 ($13 billion), the Autoroutes du Sud de la France ($11.8 billion) and the Autoroutes Paris-Rhin-Rhone, also in France ($8.5 billion) (*Source: Public Works Financing*). Other notable PPPs include the Edmonton Orbital, ETR 407 and Sea to Sky Highway (Canada), the Autopista Central (Chile), the Melbourne CityLink and EastLink (Australia), the Sydney Westlink M7, Cross City Tunnel and Lane Cove Tunnel (Australia), the N4 from Pretoria to Maputo (South Africa) and the Trans-Israel Highway.

The top 30 PPP providers have a total of 550 projects operating or under construction worldwide. Of these 30 providers, the largest is ACS/Iridium, based in Spain, and only 2 are based in the United States: KBR and Fluor. One concern expressed in Texas was that "foreign companies will take over our highways". Foreign companies are more involved because PPPs have been in use for decades overseas, but have only recently arrived here. There was a recent consolidation of companies, so most of these companies are consortia which form cooperative networks for specific projects.

Project Types

Projects range from *pure greenfield*, in which a new asset is created (such as SH 130 in Texas or EastLink in Melbourne) to *pure brownfield*, in which an existing asset is monetized (such as the Chicago Skyway or the Indiana Toll Road). There is also the option to improve or rehabilitate an existing asset by adding capacity (e.g. more lanes); this option is a mix of greenfield and brownfield.

Project types can also be conceptualized along 2 axes (see Appendix C for diagram): **private sector risks** and **private sector involvement**. The project type that has both the **lowest private sector risks** and the **lowest private sector involvement** is the traditional model, in which the government bears all risks (government owns-operates/design-bid-build). Project types with **increasing private sector involvement and risks** are those in which the cost risk is transferred to the private sector (design-build), those in which the cost and operational risks are transferred to the private sector (design-build-operate-maintain), those in which the cost, operational and financing risks are transferred to the private sector (design-build-finance-operate-maintain) and those in which there is some private ownership (build-own-operate-transfer, build-own-operate). The project type that has the **highest private sector risks and involvement** is full privatization, in which the private sector owns and operates the asset.

Advantages of Using PPPs

PPPs expand the scope of resources available to fund highway construction by bringing in new money. They also have lower life cycle costs. For example, DBFOM allows projects to be developed as unified systems, eliminating inefficiencies. PPPs also have advantages in project management, risk management and risk transfer. Further, studies from Australia, the United Kingdom and the Netherlands found that PPPs were significantly better at completing projects on time and under budget. This is partly due to "scope creep," which is especially insidious for traditional projects. Because details for a PPP are worked out ahead of time, once the contract is awarded, scope creep doesn't occur as it does with traditional procurement.

Project Management: Best Practices and Risk Mitigation

PPPs drive the use of project management best practices, which carry over to all infrastructure development. These best practices include how to decide whether a project should be a PPP at all or whether traditional procurement makes more sense in that particular case. As for risk mitigation, remember the 5 Ps: "Prior Planning Prevents Poor Performance." Having clearly defined responsibilities, greater accountability for specific, measurable results and up-front consideration of project risks allows for less costly and more timely mitigation of risks. This requires organization, skilled personnel and a sufficient budget.

No Need to Re-invent the Wheel

Other jurisdictions have been at this for over 15 years and have developed an extensive set of best practices. Partnerships Victoria, Partnerships BC, Partnerships UK and the European Union "Competitive Dialogue" Directive all have well-developed processes. Partnerships Victoria has the most helpful set of tools; see http://www.partnerships.vic.gov.au for an example of an effective management process.

The Public Sector Comparator (PSC) and Value for Money (VfM)

The Public Sector Comparator (PSC) began in the United Kingdom and has evolved as global best practice. PSC is a multiple step process leading to a final Value for Money (VfM) conclusion. It compares public sector project delivery to PPP project delivery in terms of direct and indirect costs, transferable risk, competitive neutrality and retained risk. PSC promotes full cost pricing at an early stage in the procurement process; acts as a key management tool during the process; focuses attention on output specification, risk allocation and development of a comprehensive costing of the project; provides a reliable means of demonstrating value for money; and encourages bidding competition by creating confidence in the rigor of the evaluation process (*Source: Partnerships Victoria*). PSC offers a way to partially de-politicize PPP decisions, especially when the analysis is carried out by an outside agency—though public employee unions have asserted that the PSC process is rigged in favor of PPPs.

See http://www.partnershipsbc.ca for an example of a PSC/VfM analysis from Partnerships BC. In this case, the PPP contract exceeded the PSC cost, but the analysis concluded that the benefits from the PPP's additional safety and capacity improvements provided the highest value for money.

Risks in All Tolled Highway Projects and Additional Risks in PPPs

Risks in *all* tolled highway projects include operating risks that mostly occur in the construction phase (e.g. bad weather, delayed permits, labor strikes, rising prices or political forces), financial and performance risks (e.g. resistance to toll increases or optimistic revenue forecasts) and financial risks related to market and credit (e.g. the bond market, individual credit risks or changed perceptions of an asset class). Risks in PPPs should be borne by whichever party is most able and motivated to do so.

Additional risks for the private party in PPPs include the "bankability" of a project, changes in credit markets, shareholder/financial structure/secondary market risks and country/political risks. Risks to the public entity are that the private party will be incapable or unwilling to fulfill contractual duties, risks will not be truly shifted to the private concessionaire, or poor transaction structure will lead to bad outcomes and losses to the taxpayer.

Lack of transparency and bad project design and management discredit the PPP concept in the minds of the voting public. Once public perception is there, right or wrong, it is hard to overcome. The negative public perspective of the Cross City Tunnel in Sydney was a factor in its failure; there was also negative public perception in Texas.

How do state legislators manage risks? By clearly allocating them. Partnerships BC's risk allocation summary for the Sea to Sky Highway makes it clear which risks are allocated to the public sector (e.g. property acquisition, changes to certain types of laws and repairs after significant natural events), which to the private sector, including sub-contractors (e.g. design and construction, environmental factors and many O&M risks) and which are shared (e.g. requirements for moving utilities and increases in future insurance premiums).

<u>Tolling Mechanisms</u>

Not all PPPs use **traditional tolls** (in which users pay tolls that cover the full construction and operating costs of the road) as the primary revenue source. **Shadow tolling**, in which the government pays the operator a toll-equivalent and revenues depend on traffic volume, is another option. The current trend is towards **availability payments**, in which the government pays the operator based on traffic lanes and revenues are *not* tied to traffic volume. Some toll roads use **hybrid systems** that blend these mechanisms. For example, some penalize the operator if traffic speeds fall below a specified level. Hybrid systems may make sense in high growth suburban areas. It is good to start them now—while right-of-way can be acquired inexpensively—then transition to another model later.

In PFI road and tram projects in the United Kingdom, the trend has been away from volume-based payment mechanisms towards those using availability or performance—or both—to determine the reimbursement to concessionaires. Portugal, on the other hand, has relied extensively on shadow tolling. However, the government recently concluded that its liabilities for shadow tolls were unaffordable, and 2008 concessions proposed funding via a mix of shadow tolls and availability payments (*Sources: Standard and Poors, PPP Credit Survey, 2005; Reason Foundation, Annual Privatization Report, 2008)*.

<u>Impact of Toll Rate Increase Mechanisms (based on United States data 1955-2007)</u>

The measure used to calculate toll rate increases (e.g. indexing to GDP or CPI, or an annual percentage increase) can cause wide variations in toll rates, especially toward the latter years of a project's expected life span.

<u>Actual Toll Revenues vs. Forecast Revenues: Optimism Regarding Toll Revenue is Universal</u>

Standard and Poors' studies of traffic forecasts have concluded that there can be an optimism-bias of, on average, about 30 percent. This means that actual traffic volumes are about 70 percent of projections. Applying this research to volume-based transportation projects, projects subject to full or partial volume risk clearly incorporate more uncertainty in their underlying revenue assumptions.

A study of 23 United States toll projects found a marked difference in forecasting accuracy depending on the type of area in which the project was located. High-congestion suburban projects had the highest accuracy, while projects in the least developed areas had the lowest (*Source: Transportation Research Board of the National Academies, NCHRP Synthesis 364: Estimating Toll Road Demand and Revenue, 2007*).

Lessons Learned from International PPPs

- **Toll Rates and Concession Terms (Mexico)**: Projects were awarded in the 1990s on the basis of the shortest concession term (10 years). Concessionaires had less interest in long term operations (life cycle costs) and to recover their investment over such a short time frame, they raised toll rates to unsustainably high levels. This drove traffic away and the project failed. In the late 2000s, the concession term was extended to 30 years, resulting in a lower toll rate. Now, companies also have significant equity stakes, making defaults less likely if initial traffic falls below projections.

- **Traffic Shortfalls and Properly Shifted Risk (Sydney, Australia)**: Forecasts for the Lane Cove Tunnel overestimated traffic by 30,000 trips per day and Harbour Tunnel revenues fell 10 percent from 2007 to 2008. Traffic for the Cross City Tunnel fell short or projections by *55,000 trips per day* (forecast: 90,000, reality: 35,000) due to popular resistance to high tolls, local grievances against surface street changes and poor community outreach. The project was placed in receivership in 2006. The receivers auctioned it to another consortium for A$700 million, the lenders received their money back in full, the equity investors recovered 10 to 20 cents on the dollar and the road still operates.

- **Doing it Wrong: London's Metronet (United Kingdom)**: The key factor in the Metronet situation was that the risk that was supposedly transferred did not *stay* transferred. In 2003, Transport for London (TfL) signed a £15.7 billion PPP agreement with the Metronet consortium to upgrade two-thirds of the London Underground. By 2007, cost overruns reached £1 billion and Metronet was placed in bankruptcy with debts of £1.7 billion. The problems were that TfL had agreed to guarantee 95 percent of Metronet's loans—leaving taxpayers exposed—and each of the consortium's members had only £70 million equity in the project, which was not enough to properly align incentives.

- **Additional Pitfalls (Spain)**: PPPs are partnerships that need to be managed and maintained over time. "The Spanish government has relied almost exclusively on the market and private initiative to achieve the benefits of PPP ... It shows little evidence of having accepted its role as an active public manager and partner." (*Source: Allard and Trabant, Public-Private Partnerships in Spain: Lessons and Opportunities,* International Business and Economics Research Journal, 2 *(7), 2008*). Also, in Spain there tends to be fierce competition for projects, resulting in a growing trend to bid low and then renegotiate. Finally, the Spanish government does not make either an official project register or details of biddings publicly available.

In a decentralized country like the United States, state and local governments must take care to learn from the best practices and mistakes of other entities, or else risk (as in Spain) entering into complex negotiations without the necessary tools.

Critical and Emerging Issues in Managing the PPP Process

Information on the project development process is available from Partnerships BC. Critical issues in managing the PPP process are high bid costs, long tendering periods (2 to 4 years) and complicated contracts. For example, the contract for SH130 in Texas was over 1,000 pages. Also, "project teams have continued to plan less well than they should for the amount of professional advice needed for a PFI deal." (*Source: National Audit Office [United Kingdom], Improving the PFI Tendering Process, 2007*). There is a need for skilled personnel and a dedicated organization.

Emerging issues include bidding cost (remuneration to private companies for the greater investment of time and resources required for PSC or Competitive Dialogue bids, even if they do not win the project) and confidentiality (balancing transparency and public disclosure against protecting trade secrets). Recommended disclosure guidelines for PPPs are also available from Partnerships BC.

Final Points

Policy choices reflect local conditions. There is not a "right or wrong" answer. Also, it is critically important to get the first project right, as PPP transactions will receive intense public scrutiny. The first project will set a precedent, either as an example of wise stewardship or as ammunition for those critics who want to kill the entire concept.

Managing Mobility Markets in Melbourne
Presentation by Dr. Cameron Gordon
John J. Marchi Visiting Scholar in Public Policy, City University of New York—College of Staten Island
Senior Lecturer in Banking and Finance, University of Canberra, Australia

Cameron Gordon began by saying that he is not an ideologue for or against PPPs; he believes in looking at the evidence. In Dr. Gordon's words: "Not everybody who talks looks at the evidence; that's the problem with the debate on both sides."

Rationales for Transport Privatization

Why privatize? The general arguments are well-known. It is often asserted that privatization yields private market efficiencies, taps into new sources of private capital, increases competition and institutional vibrancy and is more responsive to consumers and users. Is this true or false? Does privatization yield such benefits? More specifically, is private transport better than public transport? Of course the answer is "it depends," but that answer is not much use to policymakers. What are some principles that governments can use to make transport privatization decisions?

A query: How can privatization be based on public interest? Sometimes people (especially private operators) talk as if the private sector and the public sector have the same interests. They do not, nor should they. Private interest has to include profitability. However, the two sectors may have overlapping interests and opportunities for cooperation and partnership for mutual advantage.

The Case of Melbourne, Australia

This presentation will look at a leader in privatization, for better and worse: the city of Melbourne in the Australian state of Victoria. Victoria has privatized much of its transport system over the last 15 years and its triumphs and travails provide some interesting policy lessons.

Background History

Privatization began in earnest in Victoria in the 1990s, when state Premier Kennett successfully turned over Victoria's electricity generation to private enterprise. He then turned his attention to transport. Melbourne's trams and trains were first liberalized and then privatized. The construction of the new Melbourne arterial road, CityLink, was also bid out to the private sector under Kennett and this road used e-tolling exclusively. The Kennett government also privatized freight rail. Meanwhile, the federal government had privatized Melbourne Airport.

Point #1: Transport is a System

Victoria is an interesting example because of the scale and scope of its privatization. Except for a recent re-nationalization of the relatively insignificant freight rail system, all major modes and means of travel are privately operated and sometimes outright privately owned (the lease and franchise being the primary means of public to private transfer).

Its experience is not necessarily an endorsement for or against going "whole-hog" but is a reminder that transport is not just about a single mode, especially in urban areas. *Transport is a system* and all of the modes should work together.

Point #2: There is a transport market and its product is mobility.

This raises a second point: Transport, unlike some public goods and services, is a marketable commodity, and what people buy through its purchase is the desired outcome of mobility. This is important for public leaders to keep in mind when either resisting or promoting privatization.

Melbourne Transport: One System but Many Arrangements

- The CityLink arterial was a greenfield investment with a long-term (35-year) lease.
- The trams and trains were brownfield projects conducted through franchise agreements.
- The freight line was a straight brownfield sale to a private operator. (Freight rail was thought to be very different economically from roads, transit and passenger rail.)
- The airport was a long-term brownfield lease through the federal government.

Point #3: Think sytemically, but deliberate locally

Why these different arrangements? Although there is one system for providing mobility through transport facilities and services, the politics, economics, histories, needs and institutions may be quite different for different elements of that system. For example, passenger rail has different economics than freight rail and airports are different from highways. In Melbourne, for the urban arterials, new capacity investments were clearly needed but financing capacity was limited. For transit, the immediate need was improved operation and lowered public subsidy of the existing system. The lesson is that it is important to deliberate locally.

A Surprise Election Result And Trouble Down The Road

Privatization continued to be embraced after Bracks' Labor Party government won power in Victoria in 1999. However, Melbourne trains and trams soon hit difficulties, mainly because increased ridership estimates—upon which public subsidy and franchise performance requirements were based—did not materialize. By 2001, the franchisees were expressing concern about their financial position, and in 2002—during renegotiations initiated by the government—one of the major operators, National Express, defaulted on its contracts. However, the government was able to rely on the remaining two franchisees, Connex Melbourne and Yarra Trams, and the transition was seamless. Note that *there is never a guarantee that original franchisee will continue to hold the asset*; companies transfer and sell assets all the time. This is common in the infrastructure business.

Point #4: If you privatize, first prepare, prepare, prepare

The Kennett government had made a number of operational changes to the public transit system prior to privatization. Public subsidy was reduced through service cuts and negotiations with the transport unions that trimmed back inefficient work-rules. Between 1992 and 1996, staff and taxpayer cost of the public transit system was cut in half, yet ridership increased. The subsequent Bracks government, also prior to privatization, created new high-level government bodies to study the issues, create model service agreements, manage the negotiations and oversee implementation. This points to the fact that *privatization is no replacement for government management and policy capacity before, during and after*. As another example, one reason there were multiple franchisees in the first place, rather than one system operator as system economies of scale might dictate, was because Kennett task forces had considered the possibility of operator default.

Now about the Roads

The roads of Melbourne are a different kettle of fish than the trams and trains. Of course they are different sorts of facilities, with different modes, different sorts of economics (and politics) and different kinds of users, though there is clearly an overlap as well. In this particular case there is also the big difference that the roads were built by the private sector from scratch.

CityLink, the first tollway private greenfield expansion of urban arterials, is owned and operated by Transurban. This company has since built the Western and Southern Links. Since then there have been improvements in and around that corridor, especially the Monash-CityLink-WestGate upgrade and there has also been completion of EastLink, which is run by ConnectEast.

These various roads have, in many ways, been successes, in that they have added substantial capacity to Melbourne's urban arterials in a relatively short time. CityLink opened in 2000 and now there have been the new expansions already mentioned. These investments did not require substantial up-front public money since toll revenues are supposed to finance construction and operation.

On the other hand, these roads have had issues that are common to many greenfield toll roads. One problem from the public's perspective are the tolls themselves. The standard proposition is that people are willing to pay for new value-adds but not mere monopoly rents. The roads are clearly new, but there are, as always, questions about how much travel time users actually save compared to alternatives. The operators of both CityLink and the newer EastLink have sometimes been perceived as having excessive tolls, a perception which the companies obviously resist. (ConnectEast estimates the "average" cost to users of its EastLink at $2.91, with Transurban averages estimated at $4).

Diversions and Alternatives

To maximize toll revenue, private operators obviously prefer to have as few alternative routes available as possible. The PPP contract allows Transurban to make a claim against the state government if the government does something that reduces the number of cars that could use CityLink. In 2001, Transurban sued the State of Victoria over the construction of Wurundjeri Way through the Melbourne Docklands on these grounds—a doctrine that potentially could also be applied to expansions of capacity of other roads or rail routes parallel to CityLink. (Some existing local streets have also been closed to avoid "rat-runs.")

The issue in these public-private court cases was the conflict of the public's right to increase capacity for users, versus the private sector's interest in having assumed reasonable risk based on reasonable estimates of return. Of course, no one likes monopolists, but private operators also need to make a profit and the public needs their roads operated. If traffic falls short of estimates this can threaten the viability of the operator, in the worst case throwing the road into receivership (bankruptcy).

Point #5: Risk allocation is everything (and types of risk)

"The basic principle of optimal risk management … is that risk should be allocated to the party best able to manage it. In the case where risk arises entirely from the possible actions of one party to a contract, that risk should be internalized, that is, borne by the party able to affect it. This principle provides immediate guidance on the appropriate risk allocation for the 'standard' infrastructure project, in which it is necessary to construct a piece of infrastructure that will then form part of a network used to provide publicly-funded services. … Four main components of risk may be identified. The first is **risk associated with the construction phase**, such as the possibility of delays due to strikes or equipment breakdowns. The second is **operational risk**, such as risk associated with the cost of repairs and maintenance. The third is **demand risk**, associated with the quantity and value of the services actually provided by the infrastructure asset. The fourth is **ownership risk**, that is, the pure risk premium associated with risky capital investment." (*Source: Quiggin, Private Financing of Public Infrastructure,* Dissent*, 8, 13–17, 2002*).

Point #6: The contract is paramount

This leads to a critical point: Once the public sector engages the private sector to deliver transport services and/or infrastructure, the agreements between those two parties need to contain all the salient points and contingencies. If the contract doesn't look good or doesn't work, you're stuck.

For example, the current state government is considering some form of congestion pricing to ease Melbourne's road traffic (and also improve its transit performance, since trams share city streets with cars). However, Transurban is resisting this because it doesn't want to muck up its traffic volumes.

A generic "PPP" includes many players in a typical private sector consortium: the government and the government advisors, the private party and the private party's advisors, the guarantor, the debt financiers, the equity participants, the design and construction contractor, the operator, funding advisors and sub-contractors. The question is: Have they all read their contract?

Has privatization in Melbourne worked?

Is Melbourne a success? How do we measure success versus failure for PPPs?

It clearly is not a failure in that new roads have been built with little new public investment, while transit has generally performed well—though without the dramatically reduced public subsidy once anticipated. However, the public has definitely paid for these results, especially with tolls (less so with fares). And there have been significant crises along the way, especially with transit.

A new crisis may be brewing with the international credit crunch and the stress that this has put on the road operators especially.

The bottom-line is that transportation privatization does not remove the key public sector responsibilities of accountability to citizens, wise management of public resources and overall strategic policy vision. Overall, the state government brought these elements to bear on its privatizations, avoiding debacles and managing progress relatively well. But if it hadn't, the picture might have been much different.

<u>One Final Note</u>

Expect the unexpected. Do not expect that PPP will get rid of your problems, but that the problems may be different ones. Be ready to respond to those.

Session 4: State Experiences with Transportation PPPs

<u>Moderator</u>

- Geoff Segal, Macquarie Capital, New York

<u>Speakers</u>

- Michele Mariani Vaughn, Pew Center on the States, Washington, D.C.
- Thomas W. Pelnik III, Virginia Department of Transportation (VDOT), Virginia

Introduction by Geoff Segal
Vice President of Government Relations and External Affairs, Macquarie Capital

The moderator, Geoff Segal, thanked everyone for attending the event and introduced the speakers for this session.

Driven by Dollars: What States Should Know When Considering Public-Private Partnerships
Presentation by Michele Mariani Vaughn
Senior Associate, Pew Center on the States

For more information on the Pew Center on the States analysis of the Pennsylvania Turnpike and a link to the final report *Driven by Dollars: What States Should Know When Considering Public-Private Partnerships to Fund Transportation*, March 2009, authored by Michele Mariani Vaughn, see: http://www.pewtrusts.org/our_work_report_detail.aspx?id=50316

Michele Mariani Vaughn began by thanking everyone for coming. She then asked if any legislators in the room had been involved with PPP proposals and quite a few had.

<u>Introduction to the Pew Center on the States</u>

The Pew Center on the States is a division of the Pew Charitable Trusts, based in Philadelphia. The Center's main office is in Washington, D.C. It is a growing office that focuses on state policy, usually across all 50 states—so the study on PPPs, *Driven by Dollars: What States Should Know when Considering Public-Private Partnerships*, was unusual in that it focused on a single state, Pennsylvania. In cases in which the research is clear, Pew does also engage in some targeted advocacy efforts.

<u>Infrastructure Funding Overview</u>

There is currently a transportation funding crisis. For an excellent discussion of this crisis, see the National Surface Transportation Infrastructure Financing Commission report, *Paving Our Way: A New Framework for Transportation Finance*, discussed in session 1 by Rob Atkinson. In this crisis situation, states need to get creative. Everyone is at this pre-conference because PPPs are being considered more and more as an option.

Why Study Pennsylvania?: The Pennsylvania Turnpike as a State Case Study

The Pew Center on the States has a history of looking at infrastructure. There is a trend nationwide of declining infrastructure spending, resulting in problems for maintenance and new capacity. This trend also became apparent in Pew's backyard, in Pennsylvania. The PPP proposed there for the Pennsylvania Turnpike would have been the largest to date—$12.8 billion—so it would have been groundbreaking in that way. Pew also thought that there was a dearth of information. That is, in one sense, there is a wealth of information on PPPs, but there is a gap between that information and what policymakers are able to absorb. The question was whether policymakers know what they need to know to make sound decisions. That is why Pew took a closer look.

There are takeaway lessons from the Pennsylvania situation, as explored in the report. One can use the Pennsylvania example—what went right and what went not so right—in other states and also in Pennsylvania itself as it decides how to move forward.

The Pennsylvania Story

In 2006, Governor Rendell convened a Transportation Reform Commission to summarize the transportation needs of the state and to recommend solutions. The conclusion was that $1.7 billion was needed annually *on top of* what the state was already spending, in order to meet state transportation needs (highways and transit combined). The Commission put forward several policy options and solutions, including increasing taxes and fees, as well as PPPs.

Rendell suggested leasing the Pennsylvania Turnpike to a private operator in late 2006. But that suggestion took a backseat in 2007 as Act 44 came forward, passed the legislature and was signed into law by Rendell. Act 44 called for the Pennsylvania Turnpike Commission to continue operating the Turnpike and increase its tolls, and also to implement tolls on I-80, another key east-west route in Pennsylvania. I-80 is a federal highway, so tolling would require federal approval. Rendell was skeptical that I-80 tolls would be approved and indeed, so far, the Federal Highway Administration (FHWA) still has not approved them. Thus, in 2007 Rendell moved forward with the idea of leasing the Turnpike.

This did not sit well with everyone across the state, given that it came on the heels of Act 44, which was seen by many lawmakers as a groundbreaking step forward and on which they had thought they had the Governor's support. So it was surprising to some folks that the Governor would move forward with a lease proposal so quickly afterwards. Also, he moved forward without enabling legislation, even though he would have needed legislative approval at some point. The deal he proposed was a $12.8 billion lease to Abertis/Citi. The legislature did not approve the deal and in September 2008, Abertis/Citi withdrew. So at this point, there is no deal and no lease, and Pennsylvania is still facing a serious deficit for transportation needs.

Our Research Findings

Proceed carefully in four main areas:

- The decision-making process
    - Proceed carefully, not only in deal-making, but in the legislative process and in doing due diligence up front to decide whether PPPs are even the right direction for a state to pursue.
- The deal-making process
    - Is the deal-making transparent and competitive?
    - Are long-term interests being considered?
    - Is the right amount and right type of information being shared, so that everybody who needs to make decisions can?
- The financial analysis
    - Financial analysis is very important, when looking at so much money.
    - Also, it is important to have plans on how to invest and spend the proceeds.
- Oversight and management of the partnership
    - Protecting the public interest is not only an issue in the up-front contract, but in the ongoing process of working with that operator for the coming decades.

What Went Right in Pennsylvania?

- Pennsylvania thoroughly identified its needs: A capped increase on tolls (2.5 percent or CPI, whichever was greater), a 75-year lease, performance standards, no non-compete clause, ongoing operator audits and the ability to renegotiate standards with the operator over the coming years.
- The state conducted due diligence before negotiating with bidders.
- The bidding process was well run and produced the highest possible bid.
- Detailed performance standards were set for the life of the lease.

What Undermined the Deal?

Pennsylvania could have done things to position itself better.

- The Rendell Administration and many members of the legislature were often at odds.
- Enabling legislation was not in place.
- The financial assumptions for the deal (12 percent or $1 billion annualized return on investment and $30 billion payment to the state) were overly optimistic and not based in reality.
- There was no specific plan for how the proceeds would be invested and spent. Compare to Indiana, which had a clear plan on how to spend Toll Road proceeds on transportation projects.
- The oversight structure was seen as insufficient. All oversight was centered in the executive branch, which meant that the same people who were monitoring the operator would be overseeing investment and spending. This raised issues about transparency and accountability.
- A short-term perspective was applied to a proposal with significant long-term implications. The state did not look at long-term impacts on the state's economy, environment or taxpayers.

Pew is agnostic on PPPs. PPPs are not all good, or all bad; the devil is in the details. But there needs to be more attention paid to long-term implications of PPPs, in Pennsylvania and elsewhere.

Takeaway Lessons

Each state has different needs and different political climates in which these issues need to be decided, but there are lessons to be learned from other states and countries that have been at this for a while.

Lessons learned from Pennsylvania include:

- States should enact enabling legislation before considering specific proposals.
- Transparency and inclusion are crucial to achieving buy-in from policymakers, the public and other stakeholders.
- Decision makers need a clear understanding of the principal goals and trade-offs of a deal. For example, in Pennsylvania, people did not realize that a shorter lease and no non-compete clause would result in a lower up-front payment.
- A proposed deal must be based on realistic financial assumptions.
- States should consider a long-term lease's effects on the economy, the environment and future generations of taxpayers. The whole debate needs to take a longer-term perspective.
- A proposal should describe how lease revenues will be invested and spent and how the private operator's performance will be monitored. This information should be communicated to the public and to the legislature, which will lead to better debate and decision-making.

Final takeaway lessons include:

- Public-private partnerships can't be generalized as all good or all bad.
- These partnerships can supplement—but not substitute for—public investment in infrastructure.
- The complexity and implications of these deals require that state policymakers be as well informed as possible as they pursue them.
- The better informed policymakers are, the better they will be able to continue protecting the public interest.

At the end of Ms. Mariani Vaughn's presentation, the moderator, Geoff Segal, asked how many legislators in the room had existing toll roads. The answer: A few. He then asked how many states had new transportation needs for which they might not have funding. The answer: All of them.

VDOT's 3P Program: Successes and Lessons Learned
Presentation by Thomas W. Pelnik, III, P.E.
Director, Innovative Project Delivery Division, Virginia Department of Transportation (VDOT)

Thomas Pelnik started his presentation by asking how many people in the audience "grew up" in the transportation industry and had worked in a DOT or another transportation department? Answer: One or two. Any engineers? Answer: Three, including Mr. Pelnik. How many attorneys? Answer: A few. There were also a few finance and business people in attendance. Mr. Pelnik pointed out that the cross-section at this presentation reflected the diversity of participants represented in any PPP deal.

Overview

People say that "the engineering's the easy part." But it's also the expensive part, which is why you look to find funding to do the engineering part—to get new capacity or a better operated system.

The gas tax is not indexed to inflation and has not been adjusted in over 20 years. Vehicle miles traveled and fuel purchases have also declined. In Virginia, the state's Public-Private Transportation

Act (PPTA), passed in 1995, is seen as the main option for moving forward—whether or not that is true. In the past decade, the Virginia Department of Transportation (VDOT) has completed 4 new highway projects and 2 maintenance contracts worth a combined value of over $900 million. Route 460 between Norfolk and Suffolk is currently in the procurement process.

There were also 2 procurements that did not result in contracts (Hampton Roads Crossing and I-81). I-81 would not have been financially viable, as it was not revenue positive. The worst thing is to have deals that fail; if you want industry interest in your projects, you need a history of successful deals.

<u>VDOT's 3P Program</u>

The 11 current VDOT PPTA contracts for projects that are complete or underway are worth over $3 billion. There are also more than 50 project proposals worth almost twice that value currently under discussion. Successes of VDOT's 3P program include four new projects delivered early. These 4 projects are worth over $600 million, with over $300 million in private financing.

If we look at the value of VDOT's PPTA program beyond the dollars of the contracts, the PPTA also enables VDOT to complete projects for which public sector funding is insufficient and that are unlikely to be completed under its traditional program.

Further, transportation is about people and should provide congestion relief, improved quality of life and improved processes. The completed works offer new options to travelers and have provided congestion relief to northern Virginia and the Hampton Roads regions. The Capital Beltway HOT Lanes project, currently under construction, will add four additional lanes to the western half of the Beltway and will provide a viable option for transit operators and HOVs (high-occupancy vehicles). This project has $1.5 billion total construction costs. VDOT did not have adequate funds to construct the project and is contributing less than one-third of the total cost of the project.

VDOT's current PPP projects are predominantly located in high traffic corridors, near interstates in northern, central and southeast Virginia. Rarely do states think about the potential for PPP *for a particular corridor* and this is where real improvements can happen.

VDOT has several types of projects: Development (I95/395 HOT Lanes), Design-Build (Rt. 288, Rt. 28, Rt. 199 and Rt. 58), Design-Build-Finance (Rt. 895, Coalfields Expressway), Operations and Maintenance (O&M) (variable message signs/VMS), O&M Concession (Rt. 895) and Design-Build-Finance-Operate-Maintain (DBFOM) (I-495 HOT lanes). The I-495 DBFOM is the first Virginia PPP to include long-term operations and maintenance; it will also expand the existing HOV facility.

The Route 895 PPP Project in Virginia is an example of a privately financed toll road and is the first greenfield project in Virginia. The new roadway started construction in 1998 and opened in 2002 for a contract value of $346 million (in 1998 $). Approximately five percent of the contract price was paid by public transportation funds. Most funds were provided by a privately operated 63-20 corporation—the Pocahontas Parkway Association—which was state sponsored and which issued bonds in anticipation of toll revenue. This was innovative financing in 1998. The design-build-finance (DBF) project was operated by VDOT during the period 2002 to 2006. In 2006, the project was refinanced by Transurban, a private company, which contracted for financing, operations and maintenance for 99 years (finance-operate-maintain, or FOM).

VDOT's more current PPTA projects look toward a design-build-finance-operate-maintain (DBFOM) model of project delivery.

Stages of Project Development

There are four phases of a project's life: development, design, construction, and operations and maintenance (O&M). These phases often don't "talk" to each other. Prior to using combined delivery methods, VDOT was issuing around 500 contracts per year; now it is issuing around 300. Studies nationwide suggest that with design-build contracting, states have gotten fewer claims and for fewer dollars, although there may be a higher up-front cost. There are no current studies proving that design-build is lower cost overall than design-bid-build; it is impossible to make a valid comparison of the costs without comparing the 2 processes on 2 identical projects. But in terms of price certainty, schedule certainty and claims reduction, design-build is working better.

Why Pursue PPPs?

Like many states, Virginia now must address the costs of aging infrastructure. An increasingly larger share of VDOTs annual budget is spent on maintenance of the existing system. This year O&M is approximately 44 percent of the total budget, whereas 26 percent of the budget is allocated to Highway Systems Construction. In addition, there are needs for additional road capacity that exceed the state's limited resources. In short, the system is broken: Are PPPs part of the solution?

Policy Objectives for Virginia's PPTA

The PPTA has been amended several times since 1995. The basic premises of the act require that a PPP project must address a public need identified in the state's transportation plan, There is some flexibility—the PPP does not need to be exactly the same project as what was identified in the plan—but it does have to meet a similar public need.

Further, the private sector must provide resources or accept risks that are otherwise not available through conventional methods, and the PPP must be found to be in the public interest. That may be because private development or operation is more timely, more efficient, or less costly, or that in some other way traditional methods are inadequate. In any case, the public sector must show that other options are not feasible and a PPP is appropriate. This is in keeping with Michele Mariani Vaughn's advice that the public must *first* consider the need for and benefit of a proposed PPP project.

Observations: The Funding Source is not the Primary Factor

There is a huge impending gap between income and needs. VDOT would need more than $1 billion just to stabilize deteriorating pavements, let alone all of the other needs. However, PPPs are not a silver bullet or "the" answer. It is estimated that PPPs may satisfy only 10 to 20 percent of the needs. Certainly PPPs are not appropriate for most projects and most roads are not appropriate for tolling. To pursue a PPP, the private sector must perceive investment opportunities, characterized by high traffic volume, limited access highways, a need for more capacity or more efficient operations, and procurements that result in contracts.

It is important to develop priority projects that are *financially feasible under a variety of funding schemes*. Goals for the project should be set first, and then the agency should decide what the best financing options are for achieving those goals. Goals might include optimal risk transfer and sharing and/or optimal congestion mitigation and system maintenance. Deal flow will improve when agencies can regularly choose PPPs for primary benefits other than a lack of funds.

Recommendations

Virginia's lessons learned since the PPTA was passed in 1995:

- If you have long-term needs, PPPs may be a useful component of your overall program.
- Focus on outcomes and include the possibility of changing O&M standards.
- Private companies are willing to spend money on proposals for which they have a one out of three chance of getting a contract, as long as they're sure that *somebody* will get a contract.
- If you are trying to convince a legislator that you need authority, the transportation agency should have a plan about what they intend to do with that authority.
- There is already extensive public involvement in taking a project from idea to implementation. The folks who appropriate funds should not also decide with whom you enter into a contract. The legislature should not be involved with each deal or contract, but should give overall approval to enter into such contracts.
- *A financially healthy organization can make better decisions for the public interest.* For example, on one project in British Columbia, the agency decided that private financing was not a good idea in this economic climate, so it decided to finish the project by continuing to use the design-builder but funding the project publicly. If you are a financially healthy agency, you can consider a variety of options for blending private and public funding (e.g. combined delivery methods, availability payments, or shadow tolls) and you can consider projects with or without private money.

"If I were starting a program now…,"a few radical ideas:

- Begin at the beginning: Document the policy objectives of your program, identify project candidates early in the process and establish a planning process that considers project costs/benefits, risk management and delivery methods.
- Focus on what you want at the end.
- Keep lifecycle and operations issues in mind during project development, rather than segregating the construction and maintenance phases.
- Start procurements that you can finish.

For Additional Information

- VDOT P3 Homepage: http://www.virginiadot.org/business/ppta-default.asp
- VDOT Policy and Procedures Memoranda: http://www.virginiadot.org/business/bu-ipd-memo.asp
- VDOT Info Center: http://www.virginiadot.org/info/default.asp
- VDOT Business Center: http://www.virginiadot.org/business/default.asp
- VDOT FY2010 – 2015: http://www.ctb.virginia.gov/resources/2009/3_FY_2010-15_SYIP_3-18-09.pdf
- VDOT current budget: http://www.ctb.virginia.gov/resources/2009/jc_2A_FY_2010-2014_Budget_Maintenance_Outlook_0216_update.pdf
- FHWA/AASHTO scan: http://international.fhwa.dot.gov/links/pub_details.cfm?id=642

Session 5: Synthesis: Evidence-Based Lessons Learned on PPPs

Moderator

- Dennis Houlihan, American Federation of State, County and Municipal Employees (AFSCME), Washington, D.C.

Speakers

- Jeffrey Buxbaum, Cambridge Systematics, Massachusetts
- Phineas Baxandall, U.S. PIRG, Massachusetts

Introduction by Dennis Houlihan
Labor Economist, American Federation of State, County and Municipal Employees (AFSCME)

The moderator, Dennis Houlihan, explained how AFSCME represents public employees. He remarked that in today's presentations, there have been several references to "public interest," but it is not always so clear what "public interest" really means. He then introduced the speakers for this session, who have thought a great deal about public interest in relation to PPPs.

Public Sector Decision Making for Public-Private Partnerships (NCHRP Synthesis 391)
Presentation by Jeffrey N. Buxbaum, AICP
Principal, Cambridge Systematics, Inc.

For Jeff Buxbaum and Iris N. Ortiz's 2009 report *NCHRP Synthesis 391: Public Sector Decision Making for Public-Private Partnerships*, see
http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_391.pdf

To begin his presentation, Mr. Buxbaum referred to the Pew study (presented by Michele Mariani Vaughn in session 4) and how it laid out some of the issues on which Cambridge Systematics went into more detail later. Also, the presentation by Thomas Pelnik of VDOT (also in session 4) describes some PPPs that are not "splashy, headline projects worth billions of dollars; they're just boring stuff that gets stuff done."

Motivations for Public-Private Partnerships

Why do people want to do PPPs? In simple terms, you want an infusion of cash and you want to save money. Given the state of the economy, people are trying to find creative ways of getting infrastructure built.

Overview of the Cambridge Systematics Study

The objectives of the study were to determine what information is needed to evaluate the benefits and risks of PPPs, the reliability of that information and how it can be used during decision-making, and how public interests are protected throughout the process. The methodology included a literature review and interviews with state DOTs and others.

Topics included **project selection and delivery** (criteria, unsolicited proposals, roles, risk allocation, rates of return and valuation tools), **transparency** (public participation, adequacy of legislative review and perceptions of foreign control and the role of local contractors) and **terms of agreement** (asset control/ownership, toll policy, noncompete and unanticipated event provisions, use of proceeds and revenue sharing, maintenance standards and hand back provisions, environmental safeguards, labor relations, length of agreement and so on).

PPPs Come in More Shapes, Sizes and Colors than You Might Think

When talking about PPPs, it is important say at the beginning of the conversation, "Let's make sure we're all talking about the same thing." Most people assume this means long-term concessions, which are big money, "sexy", exciting projects that get all the attention. But there are many other types of projects, such as design-build (DB), design-build-operate-maintain (DBOM). There are projects that may not involve tolls but are still PPPs. Even if you are not interested in long-term concessions, you may still be interested in other models.

Project types, from the highest to lowest degree of private sector responsibility and risk, include the following (*Source: Federal Highway Administration, User Guidebook on Implementing Public-Private Partnerships for Transportation Infrastructure Projects in the United States, 2007*): asset sale, full service long-term concession or lease, multimodal agreement (public-public partnership), joint development agreement (JDA—pre-development), transit-oriented development (TOD—post-development), build-own-operate (BOO), build-transfer-operate (BTO), build-operate-transfer (BOT), design-build-finance-operate (DBFO), design-build-operate-maintain (DBOM), design-build with warranty (DB-W), design-build (DB), construction management at risk (CM@Risk), contract maintenance and fee-based contract services.

Calling it all "PPP" is confusing. There is a contrast between traditional project delivery (in which the government is responsible for each phase of the process) and the concession approach, which many think of as synonymous with "PPP", in which the government only has oversight of each phase. Also, though, there is *life cycle project delivery,* which bundles some of the tasks that normally or should go together, to make better use of the system and deliver services more effectively.

The government role in life cycle project delivery can continue to include selecting projects, setting performance standards and deciding the revenue stream; the private role can include the design, build, operate and maintain phases (DBOM). Financing can be mixed.

To PPP or Not to PPP?

When deciding whether or not a project should be a PPP, there should be an **objective valuation** of the PPP option compared to alternatives (using a consistent framework and a Value for Money analysis by skilled government employees), **consideration of appropriate risk transfer** (including who can best manage which risks and how contractual terms will handle that) and **transparency and public participation**. It is also critical to recognize the unavoidable complexity. Every situation is unique and there are relatively few examples to follow. While there is a desire for speed, there is also a need for care in these complicated deals.

The decision on whether to toll is really a separate decision from whether a project should be a PPP. Again, most people think of tolling as synonymous with "PPP", but that is not true—there are lots of different options. If you decide to pay for something with tolls, that is one decision; then you can think about procurement and how (or whether) to bring the private sector in on that.

Participants in decision-making may include public sector decision-makers, state or public toll authorities, equity participants (integrated transportation companies, international construction companies, funds, developers and concessionaire), lenders, design and construction firms and operating companies.

Protecting the Public Interest

To protect the public interest, keep the motivations in the right place. Investors have a profit motive, while government ("the people") wants value for money. Toll setting (if the project is tolled) needs to reflect this tradeoff and preservation needs to be monitored and enforced.

Also, the government must be prepared to monitor safety, maintenance and other standards. Government cannot walk away from responsibility for operations and maintenance for a facility that it owns. Government needs to stay actively involved, and costs and attention must be paid to make that happen. Further, environmental standards and fair labor practices must be maintained. Most concerns can be addressed through the contract terms.

Lastly, revenue should be used for appropriate purposes. Like tolling, how to spend the money is also a separate decision from whether to make it a PPP or not, but these decisions often get mixed up. The decision about spending is really more related to government's role in setting public policy and spending revenue in appropriate ways.

Misperceptions can be a Distraction from the Real Issues

Misperceptions about PPPs include:

- *Noncompete clauses are always part of a PPP with a long-term lease component.* Reality: Noncompete clauses are not very common anymore and "limited compete" clauses are now more likely.
- *PPP = tolls (and runaway, uncontrolled toll increases and windfall profits for the concessionaire).* Reality: Tolls do not have to increase out of control; contracts can now deal with that carefully.
- *Public sector loses control.* Reality: Public sector control can be *managed* in the contract, rather than *surrendered*.

An open process can build trust and support. Having an open process takes time, but that's just the way it is. You will not have a project right away, but you will have a good process.

PPP Trends in the United States

The expected avalanche of big deals after the Chicago Skyway and Indiana Toll Road deals did not materialize. In fact, those two may be the last big projects of that kind. There have been a few small "brownfields" projects, but new "greenfields" are practically nonexistent and a struggle. However, even though these big, high profile projects were rather atypical, they defined public response and backlash over whether the public interest was protected.

Other trends include: dialogue that tends to be ideologically driven and emotional; caution prevailing over bold action; and a slow process of education. But despite the inevitable risks—highlighted by current economic conditions and failed projects such as the Port of Miami Tunnel and the Missouri bridges—infrastructure is still seen as a good investment for private capital.

In the United States, "Life Cycle Delivery" approaches—with the option of availability payments—will become an attractive middle ground. These approaches will put incentives in the right place. Also, they don't look like "handing over the keys" to the private sector, have clear performance measures and will keep the public sector clearly in charge of rate setting (if applicable). The private sector has the responsibility to set the price through bidding, but the public sector has the responsibility to set performance standards and rates.

New Breed? I-595 Express Project (Broward County, FL)

The I-595 Express Project is a $1.8 billion HOT (high-occupancy toll) lane project for which the deal closed in March 2009. The concessionaire and the banks are providing 55 percent of the funding, for which they will receive annual availability payments of $65.9 million. In this case, there is toll revenue, but it is being kept by the state. Reversible toll lanes and other improvements will be added. This is not a headline-grabbing project, but it may be the direction in which we are moving: a life cycle, availability payment, smaller project model.

Reading List: Recent Arrivals

- *NCHRP Synthesis 391: Public Sector Decision Making for Public-Private Partnerships*, Jeffrey N. Buxbaum and Iris N. Ortiz, Cambridge Systematics, Inc.
- *Protecting the Public Interest: The Role of Long-Term Concession Agreements for Providing Transportation Infrastructure*, Keston Institute for Public Finance and Infrastructure Policy, Jeffrey N. Buxbaum and Iris N. Ortiz, June 2007.
- *Driven by Dollars: What States Should Know When Considering Public-Private Partnerships to Fund Transportation*, The Pew Center on the States, March 2009.
- *Private Roads, Public Costs: The Facts about Toll Road Privatization and How to Protect the Public*, U.S. PIRG Education Fund.

Privatized Toll Roads: Synthesizing the Evidence
Presentation by Phineas Baxandall
Federal Tax and Budget Policy Analyst, U.S. PIRG (Federation of State Public Interest Research Groups)

For Phineas Baxandall's report, *Private Roads, Public Costs: The Facts About Toll Road Privatization and How to Protect the Public* , see http://www.uspirg.org/home/reports/report-archives/transportation/transportation2/private-roads-public-costs-the-facts-about-toll-road-privatization-and-how-to-protect-the-public#3pG2XMKXeIYaFFuxlxSFiw

Phineas Baxandall began by saying that he wanted to establish outright that he is neither an opponent nor a proponent of PPPs and in fact, he thinks that's the wrong question. If we really think about it, there has always been and always will be a partnership between the public and private sectors. Mr. Baxandall asked us to imagine two extreme poles of political possibility: one, a world in which all roads could be seized by private entities and could operate them as they wished, including policing; on the other end, a world in which every vehicle on the road would be publicly owned and every person in the rest stop serving you a hamburger would be a state employee. In fact, neither of these is the case. All reality in which we live is a form of public-private partnership. So asking whether partnership is a good idea doesn't really make sense.

Three Questions about PPPs

1) What gets privatized?

2) When is privatization a good idea? The PIRG research focuses on whether privatization is a good idea at all, rather than having already decided it is a good idea and pursuing how to get it done.

3) How to protect the public?

When Does Privatizing Public Functions Make Sense?

1) Ongoing market competition: If you're relying on market discipline, you need to make sure there really *is* market discipline. Ongoing competition needs to be in place, either through contract periods or parallel service providers.

2) Comparative advantage: You need to be able to identify how PPPs are "value-added."

3) Well-defined public needs and criteria for success: It is important that needs are well-defined and specific, and that they can be predicted and success can be measured.

The Problems with PPPs

PPPs face challenges in meeting these three criteria for privatization.

1) There is *not* ongoing competition. Highways are natural monopolies and contracts sometimes even guarantee monopoly status. The more monopolistic a highway is, the better it is for the private investor. Also, the leases are too long to be subject to market accountability. Even if the Chicago Skyway folks are doing their best, they're not really angling for the contract renewal in 2104—especially if they have already securitized risk into the future.

2) PPPs outsource tasks the public does best.

Funding and financing

The public sector raises long-term capital more cheaply (in terms of debt, equity and transaction costs, as well as the issue of profit margins). Private costs are almost unambiguously higher than public costs. At any given point in time, interest rates for the public sector taking on debt are always better than rates for the private sector. Why? First, the public sector does not have recourse to bankruptcy. The debt is backed by the state, so lenders are willing to take lower interest rates from public entities. So it is problematic to outsource to more costly providers with higher interest rates. Equity has the same issue. There is also the concern about additional costs for the public sector for engaging in PPPs. For example, VDOT has a staff of 30 working on PPTA alone, including consultants, people working on conflict resolution and those who are working to improve the other roads that will receive the traffic that will be diverted from the toll roads.

Planning and Policy

The public sector can provide planning and policy that is integrated, contingent and guided by the public interest. There are real concerns about having a fragmented transportation system. In reality, what happens on one road affects what happens on another. For example, the Pennsylvania Turnpike affects traffic on I-80. So if you start carving up functions to separate entities, you lose integrated, big-picture planning.

3) **Public needs and risks *cannot* be anticipated.** People are doing their best with very detailed contracts. But the contracts are just too long in duration (over 50 years) and cannot predict how the world (in terms of population, technology and society) will change. For example, a detailed contract 99 years ago would have covered issues about gravel, salt and dead horses, which would be wildly inappropriate for the transportation world of today. So detailed contracts are not the solution for protecting the public interest.

<u>What Makes Sense?</u>

PPP projects have four components: Financing, construction, operations and toll revenue. Not all of these phases are always included in all projects. For example, brownfields projects do not include new construction and availability payments do not include toll revenue. The new trend is to integrate more of these components, so that people with construction and operations responsibilities now have an interest in toll revenue. For which of these components do PPPs make sense? Not financing and toll revenue. That leaves construction and operations as possibilities, but construction is already largely private and there are few potential cost savings and little private interest in PPPs for operations.

<u>How to Protect the Public?</u>

1) **Retain public control**: No non-compete clauses or forced compensation. Long contracts do not effectively retain public control. It should not be possible for the public sector to be sued just for doing what would be normal public policy.

2) **Fair value**: At least match what public borrowing could generate with same tolls. An analyst who works for the New Jersey Turnpike says that there is a 30 percent difference in what rate of tolls you need if you do this privately. It was also found in Texas that tolls needed to be higher in PPPs. If the public sector can do a project by borrowing more cheaply—let alone dealing with having to make a profit for shareholders—the project won't need the higher tolls.

3) **Shorter deals:** 30 years maximum. Other countries have maximum terms for contracts, such as 25 or 30 years. The reason contracts are longer in the United States is because of federal tax subsidies that allow for accelerated depreciation. Federal law will have to change to facilitate shorter deals.

4) **State-of-the-art standards** for safety and maintenance, not just average standards.

5) **Complete transparency and disclosure**.

6) **The legislature must approve the final deal**, not just authorize deal-making. It is not good enough to say, "This is proprietary information." If you think about the kind of deals these are, they are almost like international treaties, in that they make deals about major infrastructure. These deals are important enough that the legislature should have to stand by the text of the final deal, rather than just trusting that the deal will be okay. The whole deal and bidding process should be set up ahead of time, even if that makes it harder for a company and its interest in protecting proprietary information. It is far more important to protect the public interest for generations to come.

Session 6: Steering Committee Roundtable on Next Steps

Comments and Response to Pre-Conference Presentations

Presiding

- Senator Pamela Gorman, Arizona

Respondent

- Bob Johns, Center for Transportation Studies, University of Minnesota

Introduction by Senator Pamela Gorman, Arizona

Senator Gorman indicated that the purpose of this session was to discuss what we had learned so far about PPPs and then what we would all want to see as we move forward with the Partnership Project.

Response by Bob Johns
Director, Center for Transportation Studies, University of Minnesota

Mr. Johns started by pointing out that usually a respondent has a break between the last presentation and the response…! He thanked all of the moderators and speakers for wonderful sessions and thanked NCSL staff for putting together a comprehensive, balanced program—a "crash course" on PPPs, which enlightened the participants. He indicated that when all of this information is posted on the NCSL website, it will be a tremendous resource for states wanting to look more deeply into PPPs.

This is a very dynamic time in transportation funding and finance. The Center for Transportation at University of Minnesota is doing research for legislatures on "value capture" (how to capture the increase in property value from transportation investments) and VMT fees. The Center has been asked to be a resource on these issues for the Minnesota State Legislature, but also for Congress via Senator James Oberstar (D-Minn. and chair of the House Transportation and Infrastructure Committee). Mr. Johns expressed that this is an exciting and stimulating time for researchers, but probably a very challenging time for legislators and decision-makers to make the kinds of transportation decisions that need to be made.

The purpose of this session was to address two subjects: First, what have we learned and then, what needs to be done as we move forward to the next meeting? This session was described as a "facilitated debriefing", so Mr. Johns started by encouraging other participants to share the highlights of what they had learned in the last few days, before offering his own thoughts.

Other session participants shared the following highlights:

- Life-cycle costs: John Miller's presentation highlighted long-term maintenance and operation costs, which often get overlooked, even though 40 percent of costs is ongoing O&M. This is important information to incorporate into the report for the task force.

- Role clarity: There is an overall theme here about distinction of roles, in that the government or public sector controls the agenda, sets policy and makes trade-offs in deciding how much risk to take or shift, while the private sector can price these trade-offs to achieve their goals.

- Risk shifting: People seem to be getting better and more knowledgeable about shifting risks and monetizing investments at the capital, up-front end. But what is missing is a discussion about risk shifting and monetization of operations costs moving forward and whose risk that actually is. Is it a private, public or partnership risk?

Mr. Johns then gave his précis of the pre-conference sessions.

Conference Opening Remarks and Introductions

In the opening remarks, **Senator Pamela Gorman** reminded us that our goal in this process was enlightenment and **Jennifer Aument of Transurban** presented the perspective that we are facing complex transportation challenges and PPPs are simply one way to help us meet those challenges.

Session 1: Transportation Funding Overview

This session gave us information that many of us were aware of, but it was very explicit about the funding challenges that we face. **Joung Lee of AASHTO** talked about trends, in that transportation funding is not keeping up with infrastructure needs, which is being exacerbated by a decline in vehicle miles traveled, the decline in sales tax revenues, inflation and so on.

Rob Atkinson of the National Surface Transportation Infrastructure Financing Commission laid out the challenges we face: Our needs are *double* what is coming in, in terms of revenue. Rob also let us know that PPPs are one strategy to deal with this gap; $5 billion is available for private investment in transportation infrastructure (based on some estimates), but we must protect the public interest.

Session 2: Public-Private Partnerships 101

This session provided information about the variety of PPP approaches out there. **Pamela Bailey-Campbell of Parsons Brinckerhoff** began the session by presenting to us many examples of PPPs, including European models. This gave us a great overview of what is going on in the United States and differences from other countries' models, for example that in the United States we set PPP policies at the state level rather than at the national level. The explanation of availability payments—meaning that a bid from the private sector interacts with payments from the public sector— as an alternative to tolls was also important.

The next presenter, **Karen Hedlund of Nossaman LLP**, talked about needs in model PPP legislation.

Finally, **John Miller of Patton Boggs LLP and the Barchan Foundation** has been tracking PPPs and what he specifically looks at is not only the source of funding, but *how* a project is delivered—that perhaps delivery is more important than the dollars and that by combining the project delivery phases (DBOM), costs can be reduced by up to 40 percent. Also, he clarified that we are not talking about using PPPs for a large percentage of projects (up to 25 percent at most and the rest would be traditional projects); Tom Pelnik of Virginia DOT (VDOT) said in a later session that the percentage of PPP projects was even lower in practice.

Session 3: International Perspectives on Transportation PPPs

David Epperson and Elizabeth Jones of University of Dallas at Texas—fellow academics—have done research on best practices for PPPs around the world. The point here is that the United States is lagging in considering PPPs and that Spain, Australia, Canada and other western European countries are using PPPs, not only for transportation but for many other infrastructure needs. Also, almost all PPP providers are *not* American companies. Partnerships Victoria and other Canadian examples can be useful to us, including their use of the public-sector comparator, which looks at value for money. Also, they shared with us that negative public perceptions are very difficult to overcome if things are done wrong.

Cameron Gordon of the University of Canberra, Australia, went over the Melbourne model that he has researched and reminded us that although there is tremendous possibility for public-private integration, one cannot forget that public interest is not the same as private interest. There were a couple of additional points to highlight from his presentation:

- The need to look at transportation as an integrated system, not just as individual parts.
- If PPPs are considered, it is important to *prepare, prepare, prepare*.
- The government role should not be underemphasized; leadership roles and decision-making capacity are very important and public roles cannot be replaced by the private sector.
- "Expect the unexpected"; a contract is permanent and even if you have a project that is going well, you need to be prepared for change and future contingencies. One example of this is how Melbourne was considering congestion pricing, which conflicted with the Transurban project.

Session 4: State Perspectives on Transportation PPPs

Overall, the sequence of presentations over the course of this pre-conference was impressive, as we built on previous presentations as we went along.

Michele Mariani Vaughn of the Pew Center on the States focused on what decision-makers need in order to make sound decisions on PPPs and specifically four factors that need to be dealt with up front: the decision-making process, the deal-making process, the financial analysis and oversight and management of the partnership. She also presented us with a model of what *not* to do: In Pennsylvania, the governor moved ahead and negotiated a deal, but then the legislature did not approve it and the bidder withdrew. One key lesson from this is to have enabling legislation—and transparency.

Tom Pelnik from Virginia DOT (VDOT) presented to us the long, impressive list of PPP projects that Virginia has accomplished. Yes, they've had failures, but they've had such success with PPPs that it might be said that PPPs are their *only* successful strategy, given the current decline in funding for transportation projects. (Even in Virginia, though, only 10 to 20 percent of projects are PPPs.) Again, we were presented with the importance of looking at PPPs in integrated ways and as part of an integrated transportation system—to put it another way, that we should look PPPs as part of a *program*, not as isolated *projects* and that we should begin at the beginning and evaluate up front whether PPPs are appropriate. He also advised us to enter into a procurement process with fairly good certainty that the process is going to finish, as failure to complete a deal may inhibit future bidding from the private sector. Also, deals may be better when they are driven not *only* by considerations of lack of funds, but rather by looking at all factors; it is important to approach these options from a position of financial health.

Session 5: Evidence-Based Lessons Learned on PPPs

Jeff Buxbaum of Cambridge Systematics reinforced several things we had been hearing, particularly on the issue of protecting the public interest. He also reminded us that how we define PPPs is very important and agreed with John Miller that the real savings come from bundling together the delivery phases. He also raised the importance of objective evaluation and echoed Cameron Gordon by remembering that there are different motivations for entering into PPPs. We're in sort of a period of caution right now: There is no big avalanche of deals, there is a bit of public backlash, the economy is acting in way we had not expected and there is emotionality and ideology in this area—but there is still private capital to be invested. In this context, we can consider a new "middle ground" approach: a life cycle delivery approach, with strong performance criteria and availability payments, as exemplified by Florida's I-595 project.

Phineas Baxandall from U.S. PIRG presented a bit of a counterpoint, but it was not as dramatic as it seemed. It is not that he was against PPPs, but his question is: What should shift to the private sector and when should things be privatized? The answer is that there need to be well-defined public needs, a competitive advantage and so on. Where this presentation *did* differ from the others was in saying that construction is already private and that private entities have no interest in operations—which denies the advantages mentioned by previous speakers of bundling the delivery phases. But in the end, his ideas were focused on issues that were similar to those of previous speakers: the public interest and making sound decisions.

Reply from Senator Pamela Gorman

Senator Gorman thanked Jim Reed of NCSL for putting together this event and also thanked all of the public and private participants who had shared their expertise.

Reply from Jim Reed, NCSL

Mr. Reed thanked the other NCSL staff members and he also thanked the Partnership Project's group effort to put ideas together for this event. He also shared that detailed notes from these sessions will be posted on the NCSL website, along with the PowerPoint presentations.

Session 6: Steering Committee Roundtable on Next Steps

Committee Discussion

Presiding

- Senator Pamela Gorman, Arizona

Committee Discussion

Senator Gorman asked session participants what would be useful as the Steering Committee moves forward—and especially for the next event in July, at the Legislative Summit in Philadelphia.

Ideas included:

- A panel of state legislators who have actually worked on PPP issues. It was mentioned that it is sometimes funny to hear the media or so-called "experts" talk about what happened to legislation, as legislators think, "That's what *you* think happened!" This panel could give information about the political process for those who are wanting to sponsor, defeat, or lobby for PPP legislation.

- The FHWA Office of Innovative Program Delivery, which was recently reorganized, on their current perspectives on PPPs.

- House Transportation and Infrastructure Committee staff on reauthorization issues.

- T2 (the Transportation Transformation Group)—an alliance of DOTs (including Florida and Texas), concessionaries, think tanks and academics that looks at many kinds of innovative financing to close the gap, not just PPPs—could talk about the bigger picture.

- A presentation on public relations issues surrounding PPPs, perhaps given by experts on messaging, on which programs worked and which did not. It was mentioned that in Virginia (with the HOT lanes project) and in Florida, there was very little negative press in highly charged situations; these could be casebook examples of how this can work well. Geoff Segal offered that by July, it may be possible to discuss the process that Macquarie Capital is current engaged in with VDOT and related PR efforts. Public relations in this case are being managed in partnership, not just by the private company.

- Hearing more from the other point of view: PPP *opponents*. The last session in this pre-conference was praised for being more provocative. It was also indicated that legislators need more debate and that it is a disservice if we do not bring in the opponents and skeptics as well as the PPP "salespeople." The question needs to be asked: "What are the options?" It was also mentioned that Texas has a website about problems with PPPs, which might be relevant. Senator Gorman reiterated that it is healthy to have the debate and that sometimes hearing opposition is the most useful thing that can happen, even if you are a proponent.

- A presentation on state enabling for transit and multimodal PPP projects, beyond just highway construction. Even if these are not directly state issues, states may be able to enable metropolitan areas for these projects. It was also raised that multimodal projects are often "boondoggled" and that private sector involvement could be beneficial in these cases.

- More information on environmental concerns, including greenbuilding techniques and the joint development of transit and highway projects.

- A discussion of rural-urban issues.

- Discussion about equity issues/equitable access, which are concerns that play into the politics around PPPs; both opponents or proponents will play on equity issues, especially regarding tolls.

- Fred Lewis of West Virginia raised the possibility of examining more varied kinds of PPP arrangements and innovative projects. For example, in West Virginia, they are looking at mining companies using tailings to build road beds and then donating the land, with the road beds already completed, to the state in return for lower reclamation costs. Are there any other creative types of PPP projects to learn from?

- As we broaden the scope, we could also talk about PPPs for road maintenance; there is a lot of history of using this model for road maintenance (in Florida even more than in Virginia, which has also done a lot).

- It was also suggested that the committee should talk in depth about PPP issues in Texas, since it is likely that, as soon as legislators go out with the PPP toolkit and return to their states, somebody will raise the Texas issue.

    - It is important for legislators to engage with that issue, the players and the problems—to know what went wrong.

    - However, it was also noted that Texas has had $6 billion of PPP deals in the last six months, so the idea that "Texas didn't work" is not really the fact.

    - Legislators who were suggested as possible presenters on this topic included Representative Linda Harper-Brown, who has been very involved, as well as Senator John Carona, Senator Robert Nichols and other legislators who participated in the Texas Legislative Study Committee on Private Participation in Toll Projects.

    - It was said that NCSL provides the right kind of forum for an engaged and complex discussion like this, in which not all participants agree.

    - David Epperson and Elizabeth Jones from University of Texas, Dallas, who presented at this event, also did the study for the Texas Legislative Study Committee, which one participant suggested should be in the PPP toolkit.

    - In any case, Texas is a complex situation, but one that is crucial for us to look at.

- Roy Kienitz, who is now Undersecretary for Transportation Policy at U.S. DOT and who was previously involved with the Pennsylvania Turnpike as Governor Rendell's deputy chief of staff, to cover the process of the Pennsylvania deal (how it became, where it went, PR issues and the politics of it on each side), rather than the deal itself. It was suggested that this kind of concession deal might be a small part of the future of PPPs, however.

- A discussion of ongoing issues with the federal recovery act (ARRA), including what states are doing with the funds and creative ways of pulling in extra federal funds for greenbuilding and other related projects.

Ending Remarks

Senator Gorman and Jim Reed thanked all attendees for their participation and their good ideas.

Appendix A
Presenter Biographies

Session 1: Transportation Funding Overview

Joung H. Lee (Senior Analyst for Transportation Finance and Business Development, American Association of State Highway and Transportation Officials [AASHTO] and Deputy Director for Operations, Center for Excellence in Project Finance) reviews surface transportation policy and legislative matters with state DOTs, Executive branch and Congressional staff. In addition, he develops and uses financial models to examine highway and transit funding scenarios, evaluates options and proposals for innovative financing of federal highway projects, works with capital market representatives to facilitate capital project funding and delivers funding and financing presentations to interested parties. His prior positions include transportation planner and analyst positions with the Federal Highway Administration Headquarters and Division Offices in Connecticut and New Jersey and assignments at the Federal Transit Administration, the Metropolitan Transportation Commission in the San Francisco Bay Area and the Office of the Secretary of Transportation. Joung holds a Bachelor of Urban and Environmental Planning from University of Virginia and a Master of Governmental Administration degree from the University of Pennsylvania.

Dr. Robert Atkinson (Chairman, National Surface Transportation Infrastructure Financing Commission) is also the founder and president of the Information Technology and Innovation Foundation, a Washington, D.C.-based technology policy think tank, as well as the author of the State New Economy Index series and the book *The Past and Future Of America's Economy: Long Waves Of Innovation That Power Cycles Of Growth*. Before coming to ITIF, Atkinson was Vice President of the Progressive Policy Institute, Director of PPI's Technology and New Economy Project and Project Director at the former Congressional Office of Technology Assessment. He received his Ph.D. in City and Regional Planning from the University of North Carolina at Chapel Hill in 1989.

Session 2: Public-Private Partnerships 101

Pamela Bailey-Campbell (Senior Vice-President, Parsons Brinckerhoff) is Market Leader for Private Sector Investment and public-private partnership initiatives for PB Americas and a nationally recognized leader in the assessment, financing and implementation of major transportation projects that are developed using PPPs. Ms. Bailey-Campbell has successfully coordinated numerous initiatives covering all aspects of the procurement process, including development of policies and procedures, screening and performance criteria, operations and maintenance standards and hand-back requirements, contract negotiations and risk management. She has served as CEO, CFO and COO of the E-470 Authority, a project developed as a public-private partnership in Denver, Colorado. More recently, as CFO of the Northwest Parkway Authority, Ms. Bailey-Campbell led an initiative to procure a private concessionaire to operate and maintain the Parkway under a long-term agreement.

Karen J. Hedlund (Partner, Nossaman LLP) leads Nossaman's East Coast practice, advising project owners nationally and serving as an expert on federal policy initiatives. She specializes in the structuring of public-private partnerships, including concession arrangements for highways and transit systems. Karen has also played a leading role in developing state and federal legislation to facilitate public-private partnerships, including federal laws related to private activity bonding to encourage private equity investments. She is currently advising transportation agencies in Virginia, North Carolina, Georgia, Mississippi, Florida, Texas and Puerto Rico on PPP projects. Karen received her

J.D. from Georgetown University Law Center and her A.B. from Harvard University. *(Editor update: On June 15, 2009, Karen Hedlund joined the Federal Highway Administration as its new Chief Counsel.)*

Over the last thirty years, **Dr. John B. Miller** (**The Barchan Foundation, Inc. and Patton Boggs LLP**) has had one professional foot in procurement policy and the other in the construction industry, focused on practical solutions to the world's burgeoning infrastructure needs. Professor Miller's NSF funded research at MIT produced a comprehensive analysis of America's 200 years of experience with PPPs. His work with industry produced the 2000 ABA Model Procurement Code for State and Local Governments and the 2007 ABA Model Code for Public Infrastructure Procurement. His textbooks on these topics are available from Springer. He has received a B.S., M.S. and Ph.D. from MIT and a J.D. and L.L.M. from Boston University.

Session 3: International Perspectives on Transportation PPPs

David Epperson (**Resident Fellow, Center for Finance Strategy Innovation, University of Texas at Dallas and President, Briarwood Enterprises, LLC**) has spent the past fifteen years helping companies with complex issues related to strategy, organization, finance and operations. He has worked both independently and in affiliation with leading global consultancies. Mr. Epperson has dealt extensively with logistics and supply chain issues, engineering and maintenance improvements, cost control and expansion strategies. In the public sector, Mr. Epperson has served as General Counsel to the Texas House Judicial Affairs Committee and was a co-author of the 2008 report of the Texas Legislative Study Committee on Private Participation in Toll Projects. Mr. Epperson received a J.D. from the University of Virginia School of Law and an M.B.A. from the University of Texas at Austin, completing his studies at the London Business School.

Elizabeth F. Jones (**Deputy Director, Center for Finance Strategy Innovation, University of Texas At Dallas**) is an adjunct professor and executive-in-residence at the University of Texas at Dallas (UTD) School of Management, where she also serves as the Deputy Director and Co-Founder of the Center for Finance Strategy Innovation. In addition to her graduate teaching and research activities, she leads UTD advisory projects in private equity finance, public investment and public-private partnerships. Recent projects have studied and project-managed private equity fund development, structured public-private partnership investments and accelerated technology innovation commercialization. She also co-authored the study report for the 2008 Texas Legislative Committee on Private Participation in Toll Projects. Elizabeth's professional finance career spans more than twenty-four years as a financial advisor and principal investment banker, including having financed public utilities, housing, roads and airports. She received her B.A. in Economics and Political Science from Wellesley College and an M.B.A. in International Finance and Strategic Management from RSM Erasmus University (Netherlands).

Dr. Cameron Gordon (**John J. Marchi Visiting Scholar in Public Policy, City University of New York—College of Staten Island and Senior Lecturer in Banking and Finance, University of Canberra, Australia**) is currently is on the faculty of the School of Business and Government at the University of Canberra. He is also an Associate with the National Institute of Governance, an international research institute based in Australia and a Principal Investigator with the University Transportation Research Center Region 2 (City College of New York). Prior to entering academia, Dr. Gordon had a long public service career. He also was Executive Director of the American Council on Intergovernmental Relations, a non-profit organization devoted to the study of public governance in a federal system. Dr. Gordon holds a Ph.D. in public economics and has extensive experience in issues of transportation finance and corporate and public governance and administration. His current research focuses on privatization of public infrastructure assets, especially the recent leasing of the Chicago Skyway and the Indiana Toll Road to private consortia.

Session 4: State Experiences with Transportation PPPs

The research of **Michele Mariani Vaughn** (**Senior Associate, Pew Center on the States**) focuses on issues related to states' fiscal health, economic competitiveness and government performance. She came to Pew from *Builder* magazine, where she covered the residential construction and real estate industries as senior editor for business. Prior to joining *Builder*, she spent several years as a senior special project reporter at *Governing* magazine and in 2007 co-authored *Governing States and Localities*, an award-winning introductory college textbook on state and local government. She graduated from Syracuse University's S.I. Newhouse School of Public Communications and Maxwell School of Citizenship and Public Affairs with a dual degree in magazine journalism and public policy and is a master's in public policy candidate at the George Mason University School of Public Policy.

Thomas W. Pelnik, III, P.E. (**Director, Innovative Project Delivery Division, Virginia Department of Transportation** [**VDOT**]) is responsible for implementing a statewide program for design-build contracting and public-private partnerships. Prior to joining VDOT in March 2000 he was an engineering consultant in Boston, Massachusetts and in Richmond, Virginia.

Session 5: Synthesis: Evidence-Based Lessons Learned on PPPs

Jeffrey N. Buxbaum (**Principal, Cambridge Systematics, Inc.**) has 28 years of experience in transportation planning and policy analysis with a particular specialization in finance and tolling policy. He was the principal investigator for a 2007 study for the USC Keston Institute study called *Protecting the Public Interest: The Role of Long-Term Concession Agreements for Providing Transportation Infrastructure* and the just-published study for the National Cooperative Highway Research Program called *Public Sector Decision Making for Public-Private Partnerships*. He led statewide toll policy studies in Washington State and Connecticut and supported the Massachusetts Transportation Finance Commission in their efforts to create a sustainable transportation finance system for the Commonwealth. Mr. Buxbaum was also a key contributor to recent studies for the Federal Highway Administration (FHWA), the Hudson Institute, the U.S. Chamber Foundation and NCHRP related to the future of transportation finance in the United States.

Phineas Baxandall (**Federal Tax and Budget Policy Analyst, U.S. PIRG**) oversees policy and strategy development for state PIRGs' tax and budget campaigns throughout the United States. He comes to the PIRGs from Harvard University's John F. Kennedy School of Government, where he assisted in directing the Taubman Center for State and Local Government as well as the Rappaport Institute for Greater Boston. He has authored several reports, academic journal articles, or magazine features on a variety of issues in political economy, including *Private Roads, Public Costs: The Facts About Toll Road Privatization and How to Protect the Public*. He received a Ph.D. in political science from the Massachusetts Institute of Technology and a B.A. in Economics from Wesleyan University.

Session 6: Steering Committee Roundtable on Next Steps

Robert Johns (Director, Center for Transportation Studies, University of Minnesota) was appointed to his current position in 2001. The Center works with over 70 faculty members and researchers at the University to carry out research and education programs that advance ideas and innovations in a variety of transportation-related topics. The Center also provides interdisciplinary education programs for transportation students and offers training and outreach programs for transportation professionals and policy leaders. Johns previously served as the Center's deputy director and associate director. Prior to joining the University in 1988, he worked in research and management positions for the Metropolitan Council of the Twin Cities Area, the Minnesota Department of Transportation and the Atchison, Topeka and Santa Fe Railway. He earned a B.S. in Engineering Operations from Iowa State University and an M.B.A. and M.A. in English from the University of Iowa. Nationally, Johns is active in the Transportation Research Board (TRB) of the National Academies. He currently is chair of the TRB Technical Activities Council, providing oversight to TRB's 200 technical committees that address all aspects of transportation.

Appendix B
Question and Answer Sessions

Session 1: Transportation Funding Overview

Question: What does AASHTO think about public versus private oversight of operations and maintenance? These questions should come up in relation to accountability and performance standards and AASHTO's perspective has influence on DOT policies.

Joung Lee: States vary a great deal in this regard. The U.S. DOT came up with pilot program (which was not adopted) in which five states would come up with performance standards and in return, would be able to manage their own federal program without federal regulatory oversight. AASHTO believes that the system should allow for state flexibility, so that states would be able to set targets for themselves to meet their own goals, rather than following a national, top-down standard.

Question: Did the Dutch repeal the gas tax when they implemented a VMT fee?

Rob Atkinson: The Dutch kept a motor fuel tax, but started to treat it like a carbon tax. They did repeal sales tax, as well as registration fees which were previously very high (hundreds of dollars per vehicle registration).

Question: How would a VMT fee work?

Rob Atkinson: In the Oregon study, the VMT fee was paid at the gas pump: The gas tax was deducted from the bill, the VMT fee was added and then the user paid the gas bill and the VMT fee together. For the foreseeable future, folks will be driving cars that use at least some gasoline and so they will continue to pay at the pump. For completely electric cars, it will be likely that there will be a system that automatically debits one's account when it reaches a certain dollar amount, or at a certain time of the month (like EZ Pass). The payment system can be done in an automated way.

Question: Who develops the infrastructure for a VMT fee system and who maintains it?

Rob Atkinson: For this to work, there would have to be a national standard that cars need to have the VMT unit and that it would need to be interoperable. There would need to be software and a payment system that states could plug into. The expectation is that there would be a procurement process for a contractor to build and run this system for set amount of time; the feds can't build the system, but they can in theory operate it.

Question: Was the Commission meant to approve PPP projects at the federal level?

Rob Atkinson: No. The Commission was set up to look at wide array of options and provide a menu of choices. The Commission felt that it was inappropriate for the federal government to restrict PPPs, which should be done at the state level. The U.S. DOT should have oversight, though—for example, in dealing with the interstate commerce issues with Delaware tolling highways that are 80 percent out-of-state use.

Question: What groups were included in the estimate of $500 billion of available private investments for PPPs? And is that money still available?

Rob Atkinson: The report was released in March, so we were already into this credit bubble. Those funds are still there and the capital market should rebound fairly quickly.

Session 2: Public-Private Partnerships 101

Question: You said that if one cannot get one's money back in 99 years, it is a bad deal. What is a good number of years (or duration to investment ratio) to make it a good deal? What about renewal options after a certain amount of time?

John Miller: One good example is the Hong Kong harbor crossing. It was originally a 35-year concession, then it reverted to the government, then the government leased it back out, but there was no debt at that point. Around 30 to 35 years is a good starting point. The present value of that income in the 99th year is almost zero anyway, so why does the government need to tie itself up for that long?

D.J. Gribbin: The government owns the infrastructure again at the point that the asset reverts to them, so it can choose what to do: whether to extend, re-lease, or re-compete. A way to think about it is, the higher you are trying to drive the concession payment, the longer the agreement has to be. But you don't want to legislatively cap the number of years, which may limit the type or complexity of PPP projects.

Question: This presentation seemed to start with assumption that we are going to move forward with PPPs. But how do you decide whether to do them in the first place?

Pamela Bailey-Campbell: We advise our public sector clients: "If you can't establish to yourself and those to whom you are accountable that you are getting better value by doing a PPP agreement, you shouldn't do it." You need to ask, what is this really going to cost me? Life cycle cost analysis is very important, especially because people tend to over-focus on what happens up front. If you're only motivating people to get something constructed as quickly as possible, that is all they will do. You need to include requirements for operations and maintenance in the contract, along with penalties for not meeting those requirements. And you can have different penalties for the private operator not living up to those performance standards, such as reduced availability payments, penalties to be paid to the owner, or—if the problems are egregious—cancellation of the contract.

John Miller: DBOM is not a crazy change in project delivery.

D.J. Gribbin: Nobody would say that you don't want to do a public sector comparator. You need to compare PPP options against the traditional delivery system, for the sake of your constituents and for the quality of your own decision-making.

Session 3: International Perspectives on Transportation PPPs

Question: For long-term concessions, how often can you increase the rates? For example, in Puerto Rico, one 15-year project has raised its tolls twice.

David Epperson: Rate issues are a matter of negotiation on the contract for that particular deal. One thing we found in the Texas report was that there is an advantage to setting the toll rates by contract, so that there are small increases over time (e.g. small annual raises or raises by formula every 5 years). This is in contrast to something like the New Jersey Turnpike, where the tolls have not been raised since the early 1990s; this means that to raise them now to appropriate levels, the rates would need to double, which is politically unpalatable.

Follow-up question: So rate increases should not be addressed in legislation, they should be addressed in contracts?

David Epperson: It is a mistake to include that in legislation; you would be setting firm limits that would be much harder to change later.

Elizabeth Jones: Don't constrain yourself too much at the front end; leave yourself flexibility. You may not be able to estimate future market conditions. Also, the way of doing tolling now—with technology—offers the ability to adjust the price in real time. Legislation that identifies firm rates does not take these variations and new ways of tolling into account.

Cameron Gordon: Also, putting rate issues in the legislation could preclude you from getting a better deal.

Question: What about the costs of back-end management?

David Epperson: We have not seen studies assessing the cost of back-end management. The two best companies out there in this area are Partnerships Victoria and Partnerships BC, in terms of having a formal process that is open and transparent. Partnerships Victoria has lots of material online.

Cameron Gordon: In Australia, at the province level and at the commonwealth level, there is a lot of soft money and hard money for managing PPPs. It is not intended that they would just do the deal and then walk away.

David Epperson: In Spain, the government tended to use a "fire and forget" method and try to wash its hands of the project. In terms of Partnerships Victoria or Partnerships BC, a project takes years to create. The public sector was hiring away people from the private sector as consultants.

Cameron Gordon: But if you are thinking of hiring people from the private sector, keep in mind possible conflict of interest issues. Know who you are bringing in.

Question: The PSC model is trying to do an apples-to-apples comparison of public and private delivery systems (or at least compare them as closely as possible), even though they aren't really the same. The comparison can also be rigged in favor of traditional public sector delivery models. How do they go about looking at this? What are the big items or techniques used to develop this kind of assessment?

Cameron Gordon: This is a case of garbage-in, garbage-out. There are lots of systems and metrics that can be purchased or gotten from a website. They are useful for organizing your thinking, but the real question is, what is the performance data? We don't really have a lot of ex-post evaluations of how these projects worked or didn't work. Some models are good, but if the data isn't good, it can be rigged.

Elizabeth Jones: This was an issue in Texas. On SH121, there was a bid between a public entity and a private entity on the same project. PSC is a better evaluation model, because it is a comprehensive way to normalize a large number of factors and it is a fair and transparent process, as well as being more logical and managed. It is more fair when you have a tool that is transparent that can normalize issues for the two sectors.

Cameron Gordon: Transparency is all well and good, but it doesn't mean much if you have bad data.

Elizabeth Jones: In Texas, third-party evaluators are typically used, who are not connected to any party. In Texas, another issue that is struggled with is that private entities fund multiple projects, which adds complexity to the comparison process.

Session 4: State Experiences with Transportation PPPs

Question: Michele said that the Governor's group was the wrong group to make the decision. But who would be the right group? The whole legislature? A smaller committee? What is the right-sized group and who should be there?

Michele Mariani Vaughn: The group that got a lot of scrutiny was the governor's oversight group, which would have included the governor, the budget director and the transportation director and would have managed oversight, management and expenditures. There were questions about accountability. In 5 years, the people holding those positions will be different and in 25 years they will be substantially different. In the Pennsylvania case, there would have been no legislative representation there. In Indiana, though, the oversight group has state employees on it and public representation and very specific ways of following the private operator. I'm not sure there is one good way, since each project is different and has different needs. In terms of overall decision-making, however you decide to involve the legislature, there needs to be robust public debate and opportunities for public input, given the effect a project will have on the public. There need to be executive-legislative discussions, also.

Question: Could you move us through the process of a Virginia PPP project?

Thomas Pelnik: VDOT has implementation guidelines on its website (and many of its policies and procedures are there to be downloaded, used and/or complained about). The context of the process is whether the project has been decided through PPTA or through an unsolicited proposal. If unsolicited, there is a period of competition with public notice. All proposals and contracts are posted on the website and publicly available. The law specifies how a private entity can request that certain elements of its proposal be treated as proprietary or confidential, under the Virginia Freedom of Information Act.

The process includes these steps:

1) A general review.
2) The Secretary of Transportation appoints an independent review panel. This panel includes the Chief Finance Officer, the Chief Engineer, public officials (typically representatives of localities where the facility will be built), members of the Transportation Board, and it probably will now include the Chief of Operations. All meetings are public.
3) The Transportation Board hears recommendations and the Commissioner decides whether or not to advance the project.
4) A request for detailed proposals is posted on the webpage. At this point, specific information about pricing and dates becomes confidential; the process becomes like any other bid process until the contract is awarded.

5) Recommendations are made about detailed proposals. Before entering contract, there must be a 30-day public comment period by law. A public presentation must be made to the Transportation Board regarding the business elements of the proposal.
6) VDOT enters into a contract.

Public support is important. When developing any corridor, you will get a lot of public and legislative support and debate about the merits of that project.

The Virginia Transportation Commissioner, under law, has the authority to enter into a contract. The way agencies are set up in Virginia, the Governor has a Cabinet which includes the Secretary of Transportation, who heads the Commonwealth Transportation Board; the Transportation Commissioner acts as the Secretary's assistant on that board.

Audience comment (Len Gilroy, Reason Foundation): PPTA was viewed as such a success that it was extended to PPEA and so now in Virginia PPPs are now used for all kinds of things, like psychiatric hospitals and schools. Virginia has a long and robust history of public-private partnerships. Other legislators here also should not limit their scope to transportation only.

Question: Can private entities fast-track past certain processes and only be required to follow the laws, or must they follow all existing procedures?

Thomas Pelnik: All PPP contracts include that the private operator must follow all applicable federal and state laws; however, the contract can also include other, additional things such as existing labor agreements and technical procedures. We have never had a problem discussing with developers that they comply with existing laws related to acquisition, relocation, or NEPA.

Question: What about PPPs for public transit and rail?

Thomas Pelnik: In Virginia, public transportation and rail are handled by a sister agency to VDOT, DRPT (Department of Rail and Public Transportation). DRPT staff are also assigned to the HOT project and are involved in how those facilities will be integrated, as well as in discussions with local transit providers on a regular basis about the requirements and best locations for intermodal transfer stations.

Question: There was a proposal to increase tolls on Dulles Road and there was a lot of tension about this. When in the process does toll information come out for public discussion? After the legislature has already allowed for a deal or given authorization? And if so, what recourse does the legislature have around pricing issues? We have been hearing that legislatures should just give blanket authorization and step back from the specifics of a deal, but legislatures may want to have input around tolling and pricing.

Thomas Pelnik: At VDOT, a decision has already been made to develop projects in a certain way. And HOT projects are different, in that they are based on congestion pricing. There is a responsibility to maintain the existing standard of service (50 MPH within the Beltway and 60 MPH outside the Beltway), but the business model is that private operators can sell the extra capacity not being used by HOV users, and that to maintain the average level of service, they will adjust tolls to essentially meter the amount of traffic on the facility. So an HOV user can always ride for free. Then, as traffic increases, traffic slows down, but a certain speed optimizes throughput. As more vehicles enter the facility, tolls go up and are adjusted dynamically. The private entity's risk is in assuming that there will be enough people who will want to pay that toll at that time to result in revenue. So HOT lanes are a bit different.

As for "hard toll" projects, typically, VDOT handles that contractually. There is a great deal of discussion about what tolls are necessary to maintain project and what increase factor will be reasonable—though this can be hard to predict that far in the future, but we can discuss whether it should be capped or whether it is appropriate to use inflation or local GDP.

Investors are not coming to build road for free; it is an investment. They need some flexibility to adjust their tolls to achieve reasonable return on investment. So the question is, are we better off building this facility and allowing tolls to increase by whatever manner is in the contract, or are we better off building it ourselves?

As to whether you want the legislature to debate toll rates or not, I leave that to you. Certainly, it *is* appropriate to discuss it in the public arena at some point, but I am not sure if that is a lawmaking issue or a public hearing issue, or whether it is up to the DOT or the MPO in making that project go forward.

You should take the estimate of traffic volume, needed revenue and toll price per vehicle; this should balance. This should be determined and be put into the long-range plan. If the project is going to go forward and the agency wants to *cap* toll rates, then the shortfall will need to be worked into the budget. It is appropriate to handle this up front—that is, to decide whether to have high tolls, or to cap tolls and make up for that with availability payments and revenue risk—rather than leave it until later in the process.

Question: You said, go ahead with PPPs even if you don't need private funding. But why would you enter into a PPP at all if you didn't need private funding?

Thomas Pelnik: To clarify: We should only start procurements that we can finish with or without private money. None of us have enough money for all of our needs. If you can develop a project that is attractive to private investors, you can take public funding that otherwise would have gone into that project and spend it on projects that are not attractive to private investors.

For example, for the Hampton Roads Crossing project, Virginia did not have sufficient public money to support project and private investors knew that. We can learn from British Columbia, when they decided that they could finance the project better themselves and that project is still going forward. This is better than thinking a project is revenue positive and then getting proposals in that show that a significant shortfall still needs to be covered by the public side, which can't be covered; *that* is an enormous waste of time.

Session 5: Synthesis: Evidence-Based Lessons Learned on PPPs

Question: One reason for doing PPPs is to achieve lower wages. I was wondering about the law that outsourcing public services requires review by a public auditor to see if money will be made without cuts in pay? Could that be made a requirement for PPPs?

Jeffrey Buxbaum: Ultimately, it is advised to go through the numbers and analysis and PSCs to see if a particular project will make sense as a PPP. Massachusetts law makes it almost impossible to get a PPP done, which is worth looking at. It makes a lot of sense, though, in principle.

Phineas Baxandall: The general principle of this law, regardless of the details—that if you are going to do this, you should know if you could do it better without the private “middle man"—is just good sense, and it is shameful that it is not done more widely.

Question: Does it matter what the cost of debt is to the private entity, as long as the state has no more debt on the project?

Phineas Baxandall: The state is free of debt, which is great, but it is just as if the money had been raised with a gas tax, in that the citizens of the state are really paying for the project. So the question is whether they are paying for it with purely public tolling, as would have been the case with Pennsylvania's Act 44, or with a private middle man in that process.

Follow-up question: But the Virginia project has a cap on tolling, so the public can only be charged to a certain limit anyway. The legislature—the Commonwealth—is free of debt and clear and public can only pay so much. So what does it matter?

Phineas Baxandall: It matters because of where the money is going. Whether the extra money is going to shareholders or interest payments, or to other infrastructure in the state, matters.

Follow-up question: But the state is debt-free, so it has additional money to pay for infrastructure *now*.

Phineas Baxandall: In the short-term, yes. But in the long-term, the public is paying tolls, which are not going to state coffers; they are going to shareholders of Cintra.

Follow-up question: But that is the deal you made: to be debt-free and have funds available now for infrastructure and to let the tolls be managed elsewhere. So why is this even an issue?

Phineas Baxandall: Compare this to a mortgage. You can have a mortgage borrowed for you by your parents at a rate of 5 percent, or through a sub-prime lender at 10 percent. Sub-prime may seem like a good option at first because of the lower payments, but over time, more money will be going out. So it isn’t actually a good deal.

Jeffrey Buxbaum: This is interesting, but it is not a complete question or complete answer. Different scenarios exist, with hundreds of aspects; in some cases, up-front payments, capital costs and so on will balance out in different ways. So there needs to be a clear, comprehensive analysis of all of the aspects of the deal.

Follow-up question: So you are saying, it depends on the deal?

Jeffrey Buxbaum: Yes.

Phineas Baxandall: If you are outsourcing borrowing and raising tolls, you had better make sure that is made up for in other ways.

Follow-up question: Maybe the deal is longer?

Jeffrey Buxbaum: Ultimately, the question is whether this procurement approach going to provide better value over time and a lower cost to the state, compared to other approaches.

Follow-up question: Well, the purpose of the agreements is that the government probably does not have the financing capability to do a project, so it looks to the private sector, which will be running a risk by doing it. So how do you add that risk into the equation and make sure that the government really needs to build it, but doesn't have bonding capability, perhaps, so it goes to the private sector to do it? Phineas, what you are saying about the higher rate for private borrowing, it just doesn't matter if the public sector simply doesn't have the financing capability at all.

Jeffrey Buxbaum: Tom Pelnik, the speaker from Virginia, said that you should decide whether you can afford a project first and then decide whether to do it as a PPP. That puts you in a better position. What you really need to be asking is, are you getting more bang for the buck by using private delivery for this project? There is no free money. Money has got to come from the citizens somewhere, whether through taxes or tolls. Regardless of the finance mechanism along the edges of that, you need to decide on the source of revenue.

Question: What about the government that signs the PPP? How should they manage the revenue that comes in the up-front payment from the private entity?

Jeffrey Buxbaum: That is a whole other question that needs to be decided locally and which is not unique to privatization. The only difference here is that you have a lump sum that needs to be dealt with up front. But otherwise, issues of equity for the poor, good and responsible use of revenue and so on, must be dealt with as any other similar public policy.

Phineas Baxandall: You have a limited bonding capacity, but if you have tolls, you can borrow against tolls and increase your bonding capacity. Bond America allows localities to increase their capacity to bond.

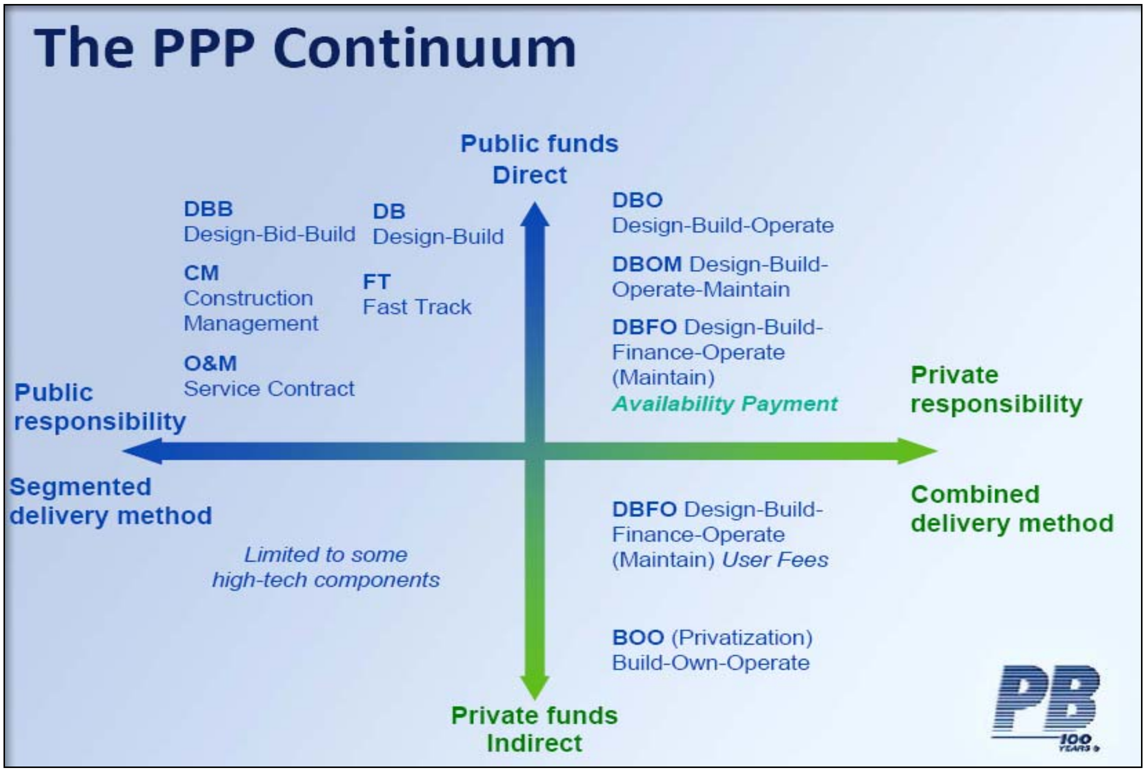
Audience comment (Len Gilroy, Reason Foundation): I wanted to comment on Phineas's six recommendations at the end. Given this market, if you buy into any one of those recommendations, you might as well send investors running. Legislators, write this down: *Political risk is financial kryptonite.* Why would a private entity bother spending millions of dollars and then end up where Pennsylvania did, with no deal? Also, contracts are set up where if the private entity does not perform, it can lose the contract—including losing the up-front payment, which can run into billions of dollars. This is what keeps companies accountable, regardless of the duration of the deal.

Phineas Baxandall: People made a lot of similar arguments about why we had to relax sub-prime mortgages and you're right, it did expand the market, but with what other effects?

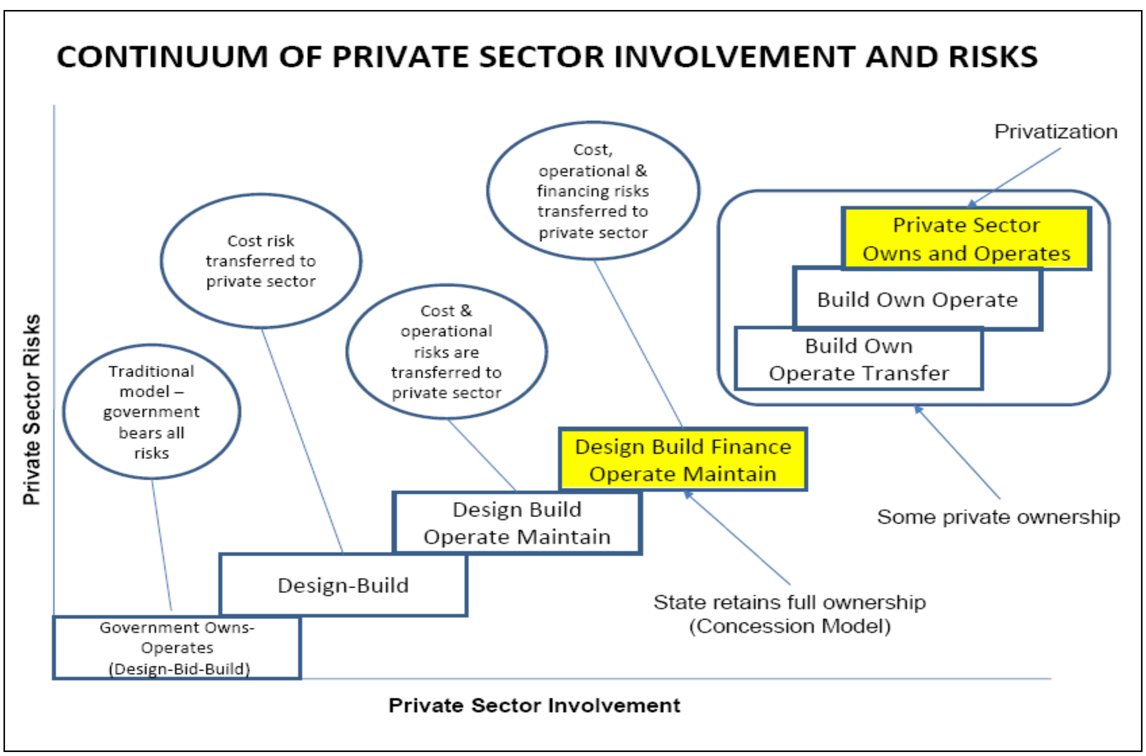
Len Gilroy: Your analogy of PPPs to sub-prime mortgages is appalling—and also stretching it a bit. A better analogy is the comparison of an FHA loan to a conventional loan, where you can either put less money down or have a lower interest rate. A family with not a lot of immediate cash to lay down might use a loan that has a lower down payment and higher interest rate over time, in order to be able to actually get a house given the situation they're in. That is, there are different tools for different folks in different situations to actually get the house. This is a better analogy for PPPs versus public sector financing.

Appendix C
Frameworks for Characterizing Different PPP Models

From Pamela Bailey-Campbell's presentation (p. 15).



From David Epperson and Elizabeth Jones' presentation (p. 26).



Both of the following diagrams are from John Miller's presentation (p. 22).