

Country case study: United States

WHY READ THIS CASE STUDY?

- A** Although the private sector has always played a large part in the provision of public infrastructure in the USA (especially in the water and waste sector), the private participation has been rather slow to develop in transportation, in comparison with other countries. However, because of the increase in demand for highways and the lack of state funding, various PPP (Public-Private Partnership) methods have been recently developed.
- B** The Federal funding regulatory framework began to change in 1991 and is now more encouraging for private sector involvement using innovative highway financing. The use of federal funding has now allowed non-interstate toll roads, state infrastructure banks to be established, Design and Build contracts for highways to be developed and federal loans/guarantees to be offered to cover a part of PPP projects costs. Moreover, in 2005, USD 15 billion in tax-exempt private activity bonds were introduced by the Federal Government to encourage PPPs for highways.
- C** Despite this encouraging "PPP" federal legislation, private financing development has been rather slow in the transportation sector. The PPP reform process has recently developed in the different US states, starting in Virginia and California in the 1990's. Since their enactment, these states' PPP legislations have been mainly reviewed in order to adapt their framework on the basis of results achieved.
- D** The US market is now considered to provide a good opportunity for the private sector to invest in transport infrastructure.
- E** Providing better information to, and consulting with, decision makers and the wider public may be needed to encourage greater acceptance of the PPP concept.

Background

The year 2006 marked the 50th anniversary of the interstate highway system in the United States (which represents more than 74,000 km from North to South and from East to West). The system was created under the Federal Aid Highway Act in 1956 which included the establishment of the Highway Trust Fund (HTF) as a key element to build a network of federal aid highways.

This act created special revenue, sourced from the federal gas and motor vehicle user taxes, which aimed to guarantee a self-financing program. This 1956 Act laid down the

principles of the national highway system based on a progressive ("pay as you go") payment.

Unlike most countries, tolls were expressly forbidden on federal-funded roads (although they were allowed on bridges and tunnels). State funding could come from public bond issues (which are tax exempt) and issued either by the state or a specific public authority. Today, more than USD 30 billion is spent on the federal surface transportation system each year.

In 2002, USD 135.9 billion was spent on highways by all levels of governments in the USA: almost 24% by the federal government, 51% by the states and 25% by local governments. Total highway expenditures by all levels of governments increased by 33% between 1997 and 2002, especially for maintenance and operations use (PIARC).

Currently, the highway transportation sector faces a fiscal challenge due to the gap between available funding and the costs of providing and maintaining the infrastructure. High costs have resulted from several causes such as deterioration and obsolescence related to the advanced age of much of this equipment, the increasing movement of freight over the highway system, the rising costs of construction materials in recent years, public opposition to higher fuel taxes and no solution to the lack of state funding.

The traditional Transportation Trust Fund, which was specifically dedicated to provide for the maintenance of highways, no longer provides sufficient resources and prompts the policymakers to think about new financial models like PPPs. The US department of Transportation is now encouraging its state and local counterparts to consider PPPs as an opportunity for national highway development and their preservation program.

PPPs in Highways

PPPs in transportation have been relatively slow to develop in the United States, when compared to other nations around the world, especially in Asia, Europe and some developed countries in South America.

Putting public-private partnerships into practice can be difficult at state level when existing state laws and policies hinder the formation of these partnerships. Procurement regulations, design-build laws and regulations and state enabling laws impact the relationship between the State's Department of Transportation and a private entity.

In many states, such as California, Washington, Arizona and Minnesota, the first PPP attempts did not provide a good track record for them.

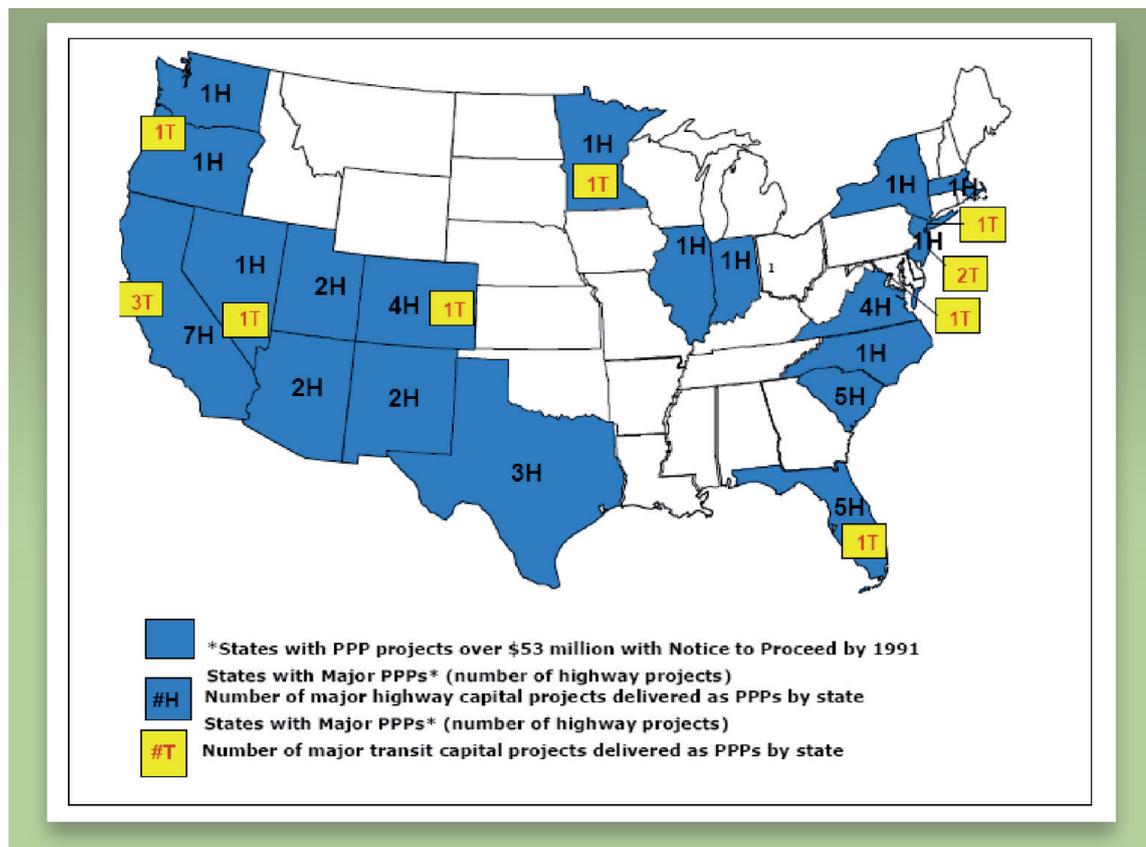
However at the end of the 20th century, PPPs for highway improvements were seeing a "rebirth," particularly in some states. As a result of the increased highway demand in the early 1990's, various methods of private sector involvement in highway construction were explored, especially in Virginia and California.

The Federal funding framework began to change with the ISTEA Act of 1991 (Intermodal Surface Transportation Act) which allowed federal funding to be used for non-interstate toll roads, in conjunction with state or private sector funding.

In 1995, the NHS Act (National Highway System Designation) allowed for the creation of State Infrastructure Banks. In 1998 the TIFIA (Transportation Infrastructure Finance and Innovation Act) encouraged the use of private sector financing for major transportation projects (more than USD 100 million): it offers direct federal loans and guarantees that up to 33% of project costs be covered.

A total of 44 highways (for an average cost of USD 53 million and a total amount of USD 22.4 billion) have used a PPP approach since 1991.

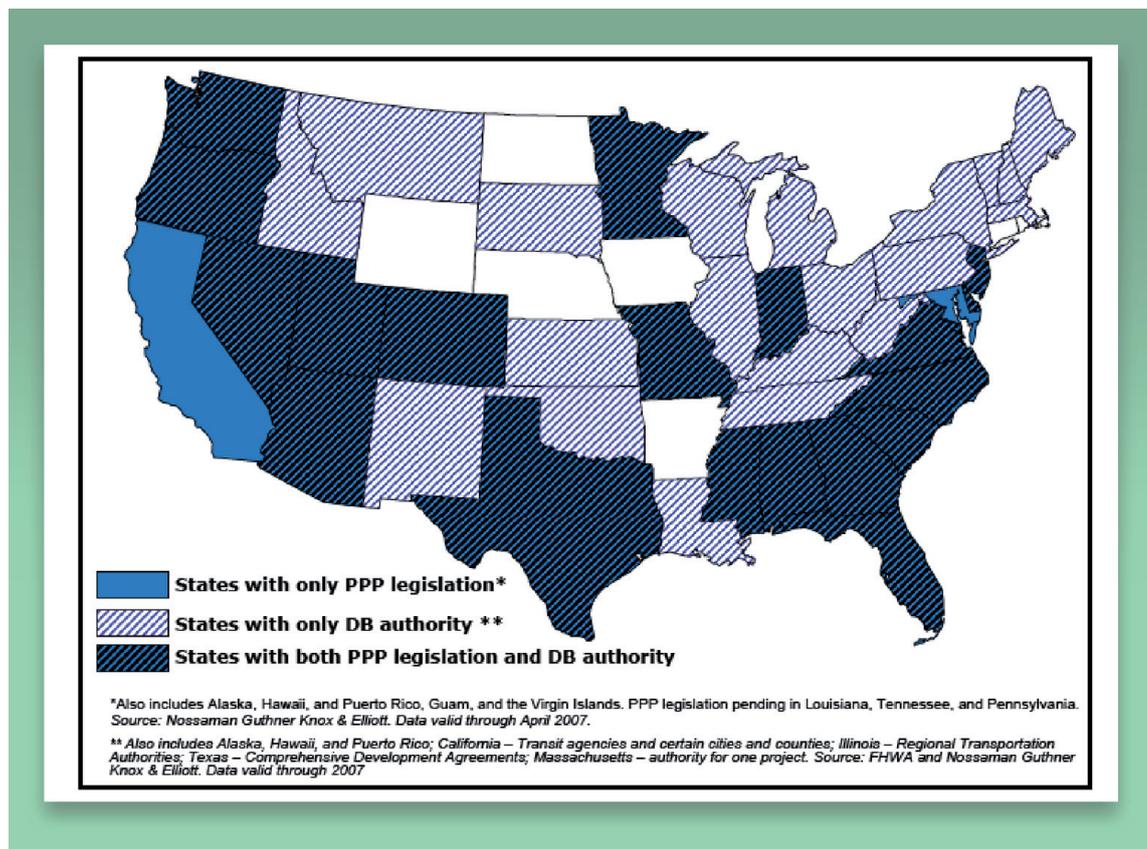
Since 1991, several US states have implemented PPPs to deliver major highway or transit projects.



Recently, the US Ministry of Transport announced a "National Strategy to reduce congestion in America". The continuing growth of congestion in the United States has a negative impact on the economy and the quality of life for all. One of the key elements of this plan encourages the growing interest of private sector capital investors in transportation systems.

Dealing with the same idea of using the leverage of private capital to supplement public funding, two senators (Dodd and Hagel) recently proposed a bill for a National Infrastructure Bank to have a bond-financed federal capital budget for infrastructure such as toll roads. Another draft bill has been prepared by two other senators (Thune and Wyden) in order to issue a USD 50 billion bond "to stimulate public and private investment in transportation infrastructure".

Many US states are currently considering PPP agreements for Brownfield or Greenfield projects, estimated to be over 70 at the end of 2006 according to the Federal Highway Administration PPP website, which also presents a map of the interested states in Highway PPPs in 2006.



Source: US PPP case studies (AECOM-2007)

The main types of PPPs used in this country include 70% DB (Design-Build) projects, 11% Concession agreements, 5% DBFO (Design-Build-Finance-Operate) projects and 5% DBF (Design-Build-Finance) projects. Most of the highway PPP projects have been delivered using the DB (Design-Build) and concession approaches.

Many states including Colorado, Iowa, Massachusetts, Michigan, Minnesota, Oregon, South Carolina and Texas have special commissions to identify new revenue sources for investments. In other states, such as Arizona, Nevada, North Carolina, Oklahoma, Washington state and Wyoming, special legislative committees are studying revenue enhancements to supplement existing transportation funds. Most of the infrastructure funds tend to favor investments in toll roads. Around twenty-two states are now considering the use of tolls to support road capacity expansion.

Examples of the PPP Reform process through summary Case studies (1988 to 2007)

The Capital Beltway I-495

As part of the Interstate Highway System, the Capital Beltway (I-495) is the busiest corridor servicing commuters in the National Capital Region. Despite the various improvements implemented since opening to traffic in 1964, this major transportation route has exceeded capacity and is in need of significant upgrade and preservation. Given the extent of the demands and the existing financial constraints at all levels of government, it is likely that any sort of expansion to the Beltway will entail utilizing an innovative and efficient method of project delivery.

Virginia and Maryland have been studying methods for improving mobility on the Beltway since the mid-1990s. Recently, Virginia partnered with Fluor-Transurban, Inc. to expand and preserve the existing highway and develop new High Occupancy Toll Lanes on a 14 mile segment of the Beltway.

Under this partnership agreement, Virginia will retain ownership of the new lanes while Fluor-Transurban will design, build, maintain, operate, and finance the project over an 80-year concession period. For its part, Maryland has conducted extensive studies of its 42-miles of I-495 and is exploring similar lane management systems and the idea of partnering with the private sector. However, they continue to study the issue and have no firm plans for adding capacity to the Beltway. While both jurisdictions share responsibility for this 64-mile stretch of roadway, each faces unique challenges in adding capacity and coping with congestion.

At the request of the National Council for Public Private Partnerships (NCPPT), a graduate level research team from The George Washington University Trachtenberg School of Public Policy and Public Administration conducted a study to evaluate the approaches Virginia and Maryland are taking to add capacity to their respective portions of the Capital Beltway (I- 495).

The research team decided it would be beneficial to examine the inter-workings of this agreement and predict its long-term success using NCPPT's six criteria for a successful public-private partnership.

The research team used several methods to conduct the investigation, including reviewing applicable literature and interviewing over a dozen stakeholders, including past and

current government leaders, transportation officials, legal experts, and various other stakeholders.

To achieve the objectives of the report, the team developed the following research questions in consultation with NCPPP:

- 1 To what extent and how have Virginia and Fluor-Transurban satisfied NCPPP's six criteria for a successful public-private partnership with their effort to add capacity to the Capital Beltway? What areas do they need to improve on, if any?
- 2 What are the key challenges and obstacles Maryland faces for building additional highway lanes on their portion of the Capital Beltway?
- 3 If Maryland decides to pursue widening the Capital Beltway, do the conditions exist for Maryland to use a public-private partnership to finance, build, maintain and operate the additional lanes? If not, what conditions need to exist for a public-private partnership to be a viable option in Maryland?

Across the Potomac River, the team took an in-depth view of where Maryland stands on Beltway improvements and the challenges they face in building additional highway lanes. Since Maryland's plans to improve its portion of the highway are still in development, the team examined whether or not the requisite conditions exist to duplicate Virginia's PPP efforts. In the end, the research team uncovered thirteen key findings:

Key Findings:

Research Question #1

- 1 Virginia's partnership with Fluor-Transurban satisfies NCPPP's six criteria for a successful public-private partnership and we predict its success.
- 2 Since highway PPPs are still in their nascent stages of operation and no projects of this magnitude currently exist in Virginia, it is difficult to facilitate an equivalent comparison.

Research Question #2

- 1 Maryland's highest transportation priority is system preservation.
- 2 Given the limited financial resources for current projects, expanding the Capital Beltway is currently cost-prohibitive using traditional financing methods.
- 3 The potential environmental impacts of Beltway expansion and the resulting political opposition may create a contentious environmental approval process.
- 4 There is limited local support for expansion of the Capital Beltway in Maryland.
- 5 Montgomery County and Prince George's County have other transportation priorities.
- 6 There is a lack of political consensus on how to move forward with expanding capacity on the Capital Beltway.

Research Question #3

- 1 Maryland does not have adequate legislation to pursue public-private partnerships for highway projects.

- 2 Maryland does not currently have a political champion for highway related public-private partnerships.
- 3 Maryland's TP3 Guidelines prohibit unsolicited proposals for highway projects.
- 4 Maryland already has a tolling authority (MDTA) to help finance highway projects.
- 5 Local opposition to tolling will likely prevent Maryland from pursuing a PPP agreement for the Capital Beltway.

From these key findings emerged the following conclusions and recommendations:

Conclusion 1: Virginia has an extensive history of successful public-private partnerships that has enabled them to be a leader in this innovative method of constructing and financing highway projects.

Conclusion 2: Maryland does not have the support necessary to widen the Capital Beltway.

Conclusion 3: Maryland is not well-suited to enter into a public-partnership for highway projects.

Recommendation 1: NCPPP should continue its educational activities across all sectors to enhance knowledge of public-private partnerships and their applicability to transportation projects, specifically the expansion of the Capital Beltway in Maryland.

Recommendation 2: NCPPP should continue its relationship with the Trachtenberg School of Public Policy and Public Administration at The George Washington University as a means of furthering research into topics relating to the Beltway and PPPs. Topics recommended for future research include:

- The politics of PPPs: Exploring the roles and positions of the executive and legislative branches in implementing PPP transportation projects
- PPPs and the Maryland General Assembly
- Issues and options pertaining to a comprehensive approach to regional congestion management (e.g. highway expansion, smart growth, transit options, etc.).

The Capital Beltway and Public-Private Partnerships. Prepared for The National Council for Public-Private Partnerships by M. Brown, T. Cronin, S. Lall, J. Lataille, and M. Sacks. December 2007.

Dulles Greenway, Virginia (1988)

This is one of the first US projects to embody the basic concept of project revenue financing based on enabling legislation, authorizing private development of toll roads. The Greenway is also the first toll road to feature variably priced tolls.

In the late 1980's, the first PPPs were single purpose legislation for particular projects with a limited number of "demonstration" projects. For example, the Dulles Greenway legislation was enacted in 1988 for a single private road using a particular regulatory model (the company was organised as a utility and the tolls and rate of return were decided by the State Corporation Commission. In 1994, Virginia enacted further legislation also based on the public utility model. The Dulles Greenway in Virginia is considered the first

PPP modern toll-road project in the USA, but it ran into financial problems when traffic was below **forecasts**¹⁸ and a major financial restructuring of the project was necessary.

Legislation was revised in 1995 by using a more "market-based" and a more open approach to PPP in transportation. The Virginia Public Private Transportation Act no longer regulates such projects on the utilities model, as was the case with the initial 1988 Greenway project. Significant new features included:

- the tolls and user fee rates were decided on a project-by-project basis.
- there was no regulation by a public utilities body, such as the SCC in the Dulles Greenway case.
- there was no limit of number of projects, as was the case in legislation in other states at that time.
- the act did not limit PPP projects to highways by including all modes of transportation. It also included opportunities for the operation and maintenance of projects, not only capital projects.
- lastly it allowed unsolicited proposals alongside solicited projects.

In 2005, five proposals were submitted to the Virginia state to take over the Dulles Toll Road (a 37 km road between the beltway and Dulles airport near Washington DC). Many offers of more than one billion USD were presented from which a portion of money was to be used to pay the state's portion of a parallel PPP to build the rail extension to Dulles airport.

The concession was sold to new investors, the MWAA (Metropolitan Washington Airports Authority), which submitted a proposal to take over the Dulles Toll Road and the construction of the Dulles Rail project, assuming all responsibilities for both projects.

The track record established by Virginia laid the foundation for other states to take another look at PPP legislation.

The recent innovative Texas PPP legislation

In 2003, Texas enacted the House Bill 3588 which provided several new tools to assist in delivering transportation projects, especially PPPs.

This Bill, among other things, allows:

- the creation of regional mobility authorities (RMA),
- expansion of the tolling authority of the state,
- comprehensive development agreements (CDA)

18 When the Greenway opened to traffic in September 2005, tolls were USD 1.75 each way, but when traffic fell short of projected levels, it was reduced to USD 1.00. This attracted more users but did not increase revenues. So, tolls were increased again in July 1997 and the speed limit was also increased (65 miles per hour) on the facility. Since September 2004, tolls could increase or decrease according to varied peaks.

- flexibility in funding the Trans Texas Corridor.

The RMAs (Regional Mobility Authorities) allow one or several counties to develop a regional approach to transportation needs. RMAs may issue bonds or collect tolls, including converting an existing road section of the state highway system to a toll road with the approval of the Texas Transportation Commission. RMAs can purchase or lease portions of the land for non transportation purposes. They also may use the largest part of its revenues for other transportation projects.

The Texan legislation also provides greater tolling authority. This state may associate toll revenue with State highway funds to build public and private toll roads. Pass-through toll agreements ("shadow" tolls) are also allowed. It means that a local or private entity makes highway improvements using its own funds. It is then reimbursed by the State based on the number of vehicles which use the highway.

The legislation also allows the use of a DB (Design-Build) approach for a highway's construction by CDAs (Comprehensive Development Agreements). A CDA can include project design, construction and financing, land acquisition and highway operation and maintenance. It is defined and requires a popular vote for any conversion from free lanes to tolled ones. It also limits toll franchises to fifty years in most circumstances.

Concessions are forming a large proportion of the Trans Texas Corridor; a new road and rail network, estimated to cost up to USD 180 billion, is probably the world's largest PPP program. Under this Texan Bill, the Trans Texas Corridor is authorized to finance the corridor through bonds and sets funding caps in view of reserving funding for other transportation projects. It means that this authority provides some financial flexibility to construct this corridor without being obliged to sacrifice funds for other highway projects.

In 2005, the state signed such development agreements with private investors relating to TTC-35 which covers 960 km from Dallas Forth Worth to the Mexican border. In 2006, a similar agreement was also reached to build the state's first privately-financed highway, the SR-130 near Austin, at a cost of USD 1.3 billion (for the 78.8 km four lane road extension with toll facilities and major interchanges). It is the largest element of the Central Texas Turnpike program which should cost, in its entirety, USD 3.66 billion. This SR-130 highway has been developed under a Comprehensive Development Agreement (CDA) allowing the work of property acquisition, design and construction to be undertaken simultaneously.

The current Texas Governor said recently that "[he is] convinced that private dollars, administered through public-private partnerships, are a significant part of the answer to [the US] transportation infrastructure challenge"(Annual Meeting of the Texas Transportation Forum, April 22, 2008). But, although several new Texan toll projects are moving forward, a two-year moratorium on PPPs in Texas has also shown the level of opposition to tolling and private sector involvement.

South Bay Expressway (SR-125) Toll road, San Diego county, California (1991-2007)

This was made possible through an innovative PPP. It was the first TIFIA loan provided to a private toll road development.

The South Bay expressway (formally known as SR 125 South toll road) is a 9.5 km highway alignment which is planned to connect the US-Mexico border in San Diego (the commercial port of entry) to the regional freeway network. After much delay (its planning originated in the late 1950's), it was scheduled to open to traffic in 2007.

It is a four-lane toll road with six interchanges, a major toll plaza and a bridge crossing the Otay river. Its design allows for expansion to additional lanes (three or four) in each direction to meet future traffic increases.

This new toll highway is expected to achieve the following goals: complete a missing link in the San Diego freeway network; reduce traffic congestion and drive time especially in the suburbs of San Diego including the city of Chula Vista; improve regional mobility in the South Bay; and give residents and businesses access to employment centres on both sides of the US-Mexico border.

The concession was awarded in 1991 under the California Assembly Bill 680 to be constructed as a privately financed and operated toll road (under the DBFO, Design-Build-Finance-Operate scheme). It granted the California Transportation Ventures (CTV) consortium a 35-year franchise to operate the facility once it opened to the public, at which time control would transfer to Caltrans at no cost (but the Californian state will not control this toll road until the franchise expires in 2041). But in 2002 and 2003, CTV, which sought to limit their investment, was sold to new investors, the Australian Macquarie Infrastructure Group (MIG), which remains the majority shareholder today. Construction on SR-125 South began in September 2003 and was opened to traffic in 2007.

It cost USD 635 million and had a 35 year concession period: USD 400 million in bank loans, USD 140 in federal loans and the rest as private equity capital from Macquarie. Financing will be mainly repaid through tolls (but rates have not been yet announced) along with a regional tax revenue and federal funds.

Planning a facility for this corridor was adopted by the California Transportation Commission in the early 1960's. But due to lack of funds, it was dropped from the plan in 1976. In 1984, the San Diego Association of Governments (SANDAG) and the region's Metropolitan Planning Organization added it again to the Regional Transportation Plan but without having identifying funds to construct it. In 1988, a new tax was voted to support the "TransNet" transportation projects. It provided funding for the north ending part of SR-125 (San Miguel connector) but not for the **SR-125 South itself**¹⁹. After having reached an agreement in 1991, this project took nine years just to receive final

19 SANDAG estimated that this public tax would not provide its necessary funding before 2020.

environmental **approval**²⁰. This is the reason why the CTV consortium decided to sell its shares to new investors (Macquarie), who subsequently built the facility.

It has to be stated that California was one of the first legislatures (in 1989) to initiate a PPP Act. It specified four privately-financed pilot projects but only two of them (including the SR-125 South toll road) advanced. The others failed due to lack of financial resources (this act did not allow federal money to fund the projects mentioning that tolls should be the main source of revenues for the PPP projects; in this case, the part financed by a federal loan was only accepted as being used to pay the debt service costs, as that was not considered as being direct state funding).

This highway faced some of the most serious difficulties related to any transportation project in the United States. The two main impediments were:

- ① the non availability of project funding which delayed the project for fifty years. The main reason was that the PPP financing model was too strict and allowed little flexibility to adapt it during the follow-up of the project (only public funds were permitted); and
- ② a too long and too costly environmental clearance process (nine years) which was considered afterwards as insufficient risk assessment. This experience suggests that the public sector is in a better position to handle the environmental impact assessment and the land acquisition process.

When the Californian 680 bill was enacted, it was firstly considered as "ground-braking" legislation which would enable private involvement in the development of a public-use highway infrastructure. Subsequently it was considered as a bad PPP legislative model which should be avoided and was repealed in 2002 for the two main reasons:

- ① it placed all project risks on the private sector and,
- ② precluded the use of public funds for the PPP projects. In 2006, California enacted new legislation enabling four state-sponsored transportation PPPs.

The two main lessons learnt are the following:

- Have more flexible PPP state legislation to propose different PPP models allowing both private and public funding (as it is the case in Virginia and Florida).
- The risks to the private sector partners are significantly reduced when proper due diligence is conducted by the State before tendering for private investment. The public sector should assume responsibility for environmental and other permit clearance, with possible compensation from the winning bidder.

Because of this particular project, it should be noted, that due to public scepticism about PPPs, a recent Californian bill failed to establish an Office of Public-Private Partnerships to promote PPPs among local agencies and to permit the use of public-private partnerships in infrastructure development.

20 Seventeen alignments were assessed which were subject to an intense public review.

Chicago Skyway, Illinois (2005)

Is the first long-term lease agreement of an existing toll road in the United States. One of the new elements, which has also transformed the PPP market, has been the sale of fixed-term franchises in Brownfield toll roads. Buyers could obtain a franchise (which was in public sector ownership) to operate the road and collect revenues for a fixed term. The private investors pay for continuing maintenance obligations, to be financed by future tolling revenues.

On the public sector side, the purpose is to generate funds for the general public sector budget.

In terms of ownership, contracting and financial structure (although the private sector is not investing in new infrastructure) it is considered as a new PPP facility.

The first franchise sale was realised for the Chicago Skyway by the city of Chicago in 2004. This 99-year concession skyway is an elevated toll road extending 12.8 km from the Indiana State line (I-90 toll road) to the Dan Ryan Expressway (I-94) in South Chicago which had been operating for 50 years by the city of Chicago Department of Streets and Sanitation.

The new entity, the Chicago Skyway LLC is owned by Cintra and Macquarie, two international toll operators who paid the city USD 1.83 billion, and who took full responsibility for operation, maintenance and reconstruction but with the right to all toll and concession revenue (up to USD 2.5 billion until 2008 and up to USD 5.0 billion in 2017). This facility carried approximately 50,000 vehicles per day in 2005. This operation funded a USD 500 million long-term and USD 375 million medium-term reserve for the city of Chicago (with USD 100 million for human and business infrastructure over a five-year period).

Other State Highway PPP Projects

In March 2006, the Governor of Indiana also signed landmark state legislation authorizing a concession of the 252.6 km **Indiana Toll Road** for the Macquarie-Cintra consortium for 75 years. In exchange, the state will receive a payment of USD 3.8 billion which should be used to finance a program of highway improvement across Indiana (called "Major Moves").

The Indiana Toll road is also a long-term lease agreement which establishes toll rates and possible increases, and places limits on the return on investment for the concessionaire.

This toll road has been in operation since 1956. It provides the main connection to the Chicago skyway and downtown Chicago. It also links the largest cities on the Great Lakes with the Eastern seaboard. It carried approximately 46,000 vehicles per day on its western end and 25,000 vehicles per day in the east.

This toll road was operated by the Indiana Department of Transportation (INDOT) for the first twenty-five years. But in 2005, the Governor asked the Indiana Finance Authority to explore the feasibility of leasing it to a private entity. Four teams submitted proposals in October 2005. The lease concession was awarded to ITR Concession Company (50% Cintra-50% Macquarie) which submitted the highest bid of USD 3.8 billion. This lease

transaction was possible upon authorizing legislation: the "Major Moves" law (House Enrolled Act 1008) was enacted in March 2006 to allow the execution of this concession agreement.

The above noted concession fee will provide funding for the Major Moves program aiming at supporting two hundred transport projects around the state, including the beginning of construction of the I-69 road between Evansville and Indianapolis. The proceeds will also fund projects in the seven toll road counties and provide USD 150 million over a two year period to all the state's ninety-two counties for roads and bridges.

Like Chicago and Indiana, Florida and Pennsylvania are proceeding with plans to lease existing infrastructure assets. A concession bid has been launched for the Pennsylvania Turnpike and the Florida Department of transportation is considering a long-term private concession for the Alligator Alley toll road (I-75).

Care is being taken with such long-term private concessions, such as the Chicago Skyway and the Indiana toll road, as it is not so clear how strong long-term interest will be at state and local level. Public support for such initiatives could vary between jurisdictions, but state and local governments could consider their leasable assets as a considerable source of new revenue. Opposition also exists against diversion of lump sum lease payments for non-transportation projects.

For example, the New Jersey governor has abandoned his plans of "monetizing" the New Jersey Turnpike due to public opposition and lack of legislative support. Instead he has proposed creating a new public agency which would issue bonds backed by higher tolls on New Jersey toll roads.



More information is available on a comparative analysis of states' legislation:
<http://www.fhwa.dot.gov/PPP/legislation.htm>

Conclusions and lessons learnt

Although scepticism about PPPs and questions about the proper role of the private sector in infrastructures development persist in the USA, there is a continuing interest in private sector participation in the roadway network of the United States.

It is being actively encouraged at federal and state levels. New PPP arrangements, new legislation and tools are providing public financial resources that can leverage significant private sector resources.

Worldwide experience shows that PPPs can meet that challenge but the need is for all parties to understand PPP relationships that respect the interests of each other while meeting the financial needs of the US surface transportation system. Therefore, the complexity of PPP arrangements should be limited and it is imperative that the risks between the public and private sectors are shared appropriately and fairly. Public control should also be secured to take control for ensuring the continued delivery of services to the community.

To meet these needs, state enabling legislation is a key element in providing opportunities for private participation through PPP. The legislative and regulatory framework must be sufficiently flexible to expedite delivery of a needed transportation project in a cost-effective manner. In fact, almost half the states in the USA now have a legal authority for PPP transportation projects (particularly highway agencies).

Another important element is the political will and the strong involvement from the public sector to encourage the private partners to enter into a relationship for a PPP highway project. Local support is necessary to support the facility.

It can be stated that other states (other than those presented in the case studies) are currently considering opportunities for concession agreements or public-private ventures.

For example, there is a proposal in New Jersey to sell an interest in the New Jersey Turnpike and the Garden State Parkway. There is also a measure under consideration in New York to allow investors to rebuild or replace the Hudson River's Tappan Zee Bridge.

The State of Virginia has also announced that it will lease a toll road outside of Richmond to a private firm for USD 522 million. In 2006, Oregon signed a development agreement with private-sector investors on three toll-road projects.

While some states such as California, Texas, Florida and Pennsylvania have chosen private tolling concessions, others prefer to choose the more traditional way of municipal bond financing, through their departments of transportation or through special public toll authorities.

In conclusion, both the United States and foreign investors are now looking at the emerging US market as an opportunity for investments in infrastructure. An increasing number of private equity funds are willing to invest in public infrastructure assets and tend to favor their long-term investment in toll roads (this should be not affected by the recent credit crisis).

With regards to the US existing transportation infrastructure needs for rehabilitation, modernization and expansion, private capital and toll revenue financing should play a major role in funding future transportation infrastructure.

Further information



AIPCR PIARC internet dossier (www.piacr.org) "RoutesRoads 2006- N° 332";



US Department of Transportation- Federal Highway Administration- "Case Studies of Transportation Public-Private Partnerships in the United States" Final Report (work order 05-002) prepared by AECOM Consult team for the Office of Policy and Governmental Affairs. (July 7, 2007).



US Department of Transportation- Federal Highway Administration- "Manual for using Public Private Partnerships on highway projects" (2006)



US Department of Transportation- Federal Highway Administration- "Issues and Options for increasing the use of tolling and pricing to finance transportation improvements" Final Report (work order 05-2002) prepared by AECOM Consult team for the Office of Transportation Policy Studies. (June 9, 2006).



Public- Private Partnerships. Principles of Policy and Finance. E.R. Yescombe. 2007.



A fresh look at the role of Private Investment in Transportation Infrastructure. Kenneth Orski. 2008.



PPP Case studies by the U.S. Federal Highway Administration
(http://www.fhwa.dot.gov/PPP/case_studies.htm)