

Moving Forward on Public Private Partnerships: U.S. and International Experience with PPP Units

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Summary

In a time of constrained public budgets, leveraging private-sector financial resources and expertise to deliver a range of infrastructure projects has growing appeal. However, these public/private partnerships (PPPs) are often complicated contracts that differ significantly from project to project and from place to place. In the United States, many states lack the technical capacity and expertise to consider such deals and fully protect the public interest. To address this problem, countries, states, and provinces around the world have created specialized institutional entities—called PPP units—to fulfill different functions such as quality control, policy formulation, and technical advice. This report recommends that U.S. states should:

- **Establish dedicated PPP units to tackle bottlenecks in the PPP process and protect the public interest**
- **Pass legislation and change the procurement culture to a more transparent and outcome-based project selection process**
- **Work with the federal government to address technical assistance gaps on PPPs, on an as-needed basis**

I. Introduction

With its emphasis on consumption rather than production, the Great Recession unveiled an American economy dangerously out-of-whack. During the sluggish recovery that has followed, national, state, and metropolitan public and private sector leaders continue to push for investments in infrastructure to put Americans back to work and rebalance the economy.

Despite the attention, infrastructure has proven to be a challenging and complex solution to implement given current fiscal austerity and restraint. Declining resources and an apparent political unwillingness to raise additional public revenue or target infrastructure spending to put the economy back on solid footing means the enthusiasm to invest in U.S. infrastructure is not matched by the same level of investment activity.

One approach frequently offered to potentially break the logjam is to use contractual agreements between governments at all levels and the private sector to design, build, operate, maintain and/or finance infrastructure. Whether repairing, upgrading, or augmenting an existing asset or building new, the intent is to leverage private sector financial resources and expertise, improve project delivery and to better share responsibilities and costs between the public and private sector.¹ The evidence from other countries—some with less friendly business environments than in the United States—shows that these arrangements, if designed and implemented correctly, do have the potential to improve on infrastructure delivery.²

“Dedicated PPP units help governments develop and expedite the PPP market, while at the same time protecting the public interest.”

However, these public/private partnerships (PPPs) are complicated contracts that often differ significantly from project to project and from place to place. As the challenges to infrastructure development throughout the United States become more complex, there is a constant concern in the United States that public entities are ill-equipped to consider such deals and fully protect the public interest.³ From poor procurement incentives to lack of coordination, expertise, and information to potentially high transaction costs, PPPs remain the next great idea to our infrastructure woes always on the horizon.

To address these concerns, countries around the world have created public/private partnerships (PPP) units. A PPP Unit is an entity designed to fulfill functions such as quality control, policy formulation and coordination, technical advice, standardization and dissemination, and/or promotion of PPPs.

This study analyzes the particular potential of this institutional solution for the infrastructure PPP market in the United States. For a better understanding of the role of a PPP unit, the paper starts by explaining the concept and characteristics of an infrastructure PPP, focusing mainly on transportation, and analyzing the PPP activity in the United States to date. It then discusses the notion of a PPP unit, based on international experience. After turning back to the United States to analyze existing PPP legislation and potential PPP units at the state level, it concludes with a range of implications for policymakers at all levels to consider.

II. Background: What is a Public/Private Partnership for Infrastructure?

At its core, a public/private partnership (PPP) is a contractual agreement between a public agency and a private sector entity resulting in greater private sector participation in the delivery and/or financing of infrastructure projects.⁴

PPPs differ significantly from sector to sector and from project to project. They also differ from country to country given the contracts are based on different legislative frameworks across the world. For example, the U.S. Department of Transportation considers both contracting out operations and maintenance, as well as the arrangement for design and construction of a project by a single contractor (known as “design-build”), as a PPP. In other countries, this is generally outside of the definition for PPPs.⁵

There are numerous ways to classify PPPs, but the most important from a public policy perspective is based on the sharing of responsibilities and risks.⁶ The simplest form of a transportation PPP project, for example, involves contracting out of individual operations, such as design, paving, or maintenance. On the other end of the continuum, the private sector would build, own, and operate a new piece of infrastructure, with the government providing maybe tax-exempt status for the project but no direct funding. In reality, there is a plethora of combinations of PPPs that mix different elements and transfer different types of risk to the private sector.

Traditionally in the United States, a public entity in transportation (a state government, local government, or transit agency) decides, plans, and finances the construction of a new piece of infrastructure and ultimately maintains and operates it. Different private entities (e.g., an engineering firm and a private contractor) bid for the individual tasks of first designing then, later, actually constructing it.⁷

In a design-build arrangement, these operations are bundled into one fixed-fee contract with a private entity that assumes the delivery of these services. The Bay Area Rapid Transit extension to the San Francisco International Airport is an early case of design-build.⁸ A design-build-operate-maintain contract adds private entity responsibilities after construction, in terms of the operation and maintenance of the asset. In these cases, the public entity is in charge of financing and assumes all the risks related to operating costs and revenues. The Hudson-Bergen light rail system in New Jersey is one example. Some PPPs include a private finance component. The Denver Eagle Commuter Rail project has a design-build-finance-operate-maintain arrangement. In such projects the private party is also responsible for all or a major part of the project’s financing and is generally paid through revenues directly related to the project itself (e.g., tolls or fares) while the public sector retains ownership.⁹

Much popular attention is directed to PPPs that are Long Term Lease Agreements such as the Chicago Skyway. In this case, a private company is granted a lease on a piece of infrastructure for a certain amount of time, for which it pays an initial concession fee. The private entity operates,

maintains and collects revenue from a fees charged to users of the facility. The public entity maintains ownership over the infrastructure.¹⁰

The sharing of risks and responsibilities of a PPP project attempts to attain the goal of asset maximization, which is the optimal distribution of risks and value between the public and the private sector for a specific project.¹¹ Further, PPPs may be a useful mechanism to deliver a portion of the procurement of a piece of infrastructure at a lower cost than through traditional infrastructure provision. Through a Value for Money analysis, a public entity can assess whether the traditional method (the Public Sector Comparator) or the private sector bid costs less for the outsourced stage of procurement.¹²

PPPs may be a tool towards better sharing of risks and costs of infrastructure provision, but most governments have pursued them for other reasons. Governments in developed and developing countries see PPPs as a way to access new sources of funding and push some of the infrastructure financing off-budget.¹³

However, it is important to note that PPPs are a financing tool, not a new source of funding. Project funding is still derived from the public entity or directly from the users of the facility, who will pay the private party for its services in the PPP project. It is true that PPPs often involve direct revenue streams (such as tolls), therefore helping to better match the benefits and costs of the use of a facility and shift the funding burden from the government to the users. In addition, if the public entity pays periodic disbursements to the private party for post-construction services (i.e. availability payments), the public organization gets a piece of infrastructure, while paying for it over time, relieving some of the pressure on the annual budget. Thus, PPPs should be a tool for better risk and cost allocation, and not merely a way to fill in budget gaps.¹⁴

Lastly, despite the considerable attention to them, the evidence on PPPs is frustratingly sparse. This is partly because infrastructure PPPs are long term arrangements and most have only been implemented in the last few decades. Therefore, there are few projects that have completed their life-cycle, allowing for ex-post analysis. Further, it is difficult to construct the hypothetical alternative to a PPP, which is the outcome in the absence of the PPP.¹⁵ At a more basic level, there is evidence from the United Kingdom and Australia that PPP projects do achieve efficiencies in comparison with traditional procurement. “In 2009, the UK National Audit Office found that 65 percent of UK PPP construction projects were completed on budget, compared to 54 percent of public construction projects delivered to the contracted price.¹⁶ Based on an analysis of 21 PPP projects and 33 traditional projects undertaken since 2000 in Australia, the PPP projects had a 1.1 percent net cost overrun, in comparison with 15 percent in the case of traditional procurement.¹⁷

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II. Transportation PPPs—Experience to Date

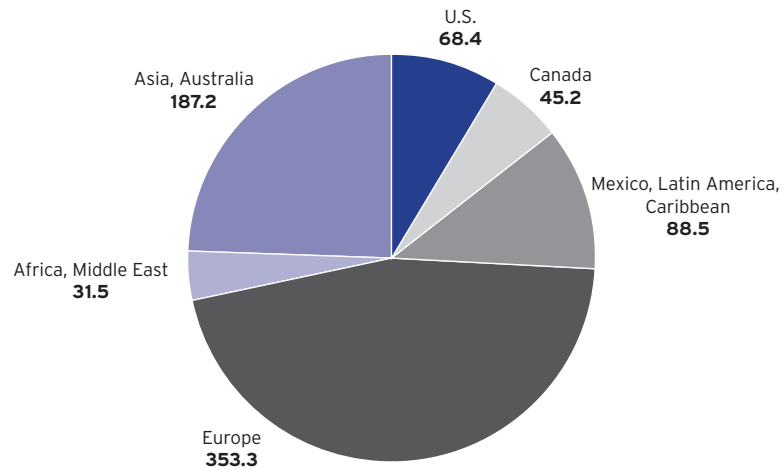
It is difficult to estimate the total value of transportation PPP projects given the various definitions of PPPs across countries and sectors. “Private investment in infrastructure” does not equal PPP funding, because it may include privatization contracts, while not all PPPs have a private financing component, as explained in the previous section.¹⁸ *Public Works Financing* maintains a database of PPPs from around the world and uses the British Private Finance Initiative PPP definition for cross-country comparisons.¹⁹

By any measure, the United States is a laggard in terms of PPP projects. Between 1985 and 2011, there were 377 PPP infrastructure projects funded in the United States, only 9 percent of total nominal costs of infrastructure PPPs around the world. Europe leads the infrastructure PPP market, concentrating more than 45 percent of the nominal value of all PPPs (Figure 1).

With regard to just transportation projects, *Public Works Financing* records 104 PPPs (including design-build), between 1989 and 2011.²⁰ Most of them (81 percent) are for highways, bridges, and tunnels both in terms of number of projects and value. The rest are for rail projects, save the construction of International Air Terminal at John F. Kennedy Airport in New York, which is the nation’s only airport PPP project.

The design-build form of PPP has been the most intensely used over the years in the United States representing 67 percent of the total number of PPPs, but only 52 percent of the cumulative value of

Figure 1. Public/Private Partnerships (PPPs) Worldwide, Nominal Total Costs (in billions \$USD), 1985-2011



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

Source: PWF, 2011

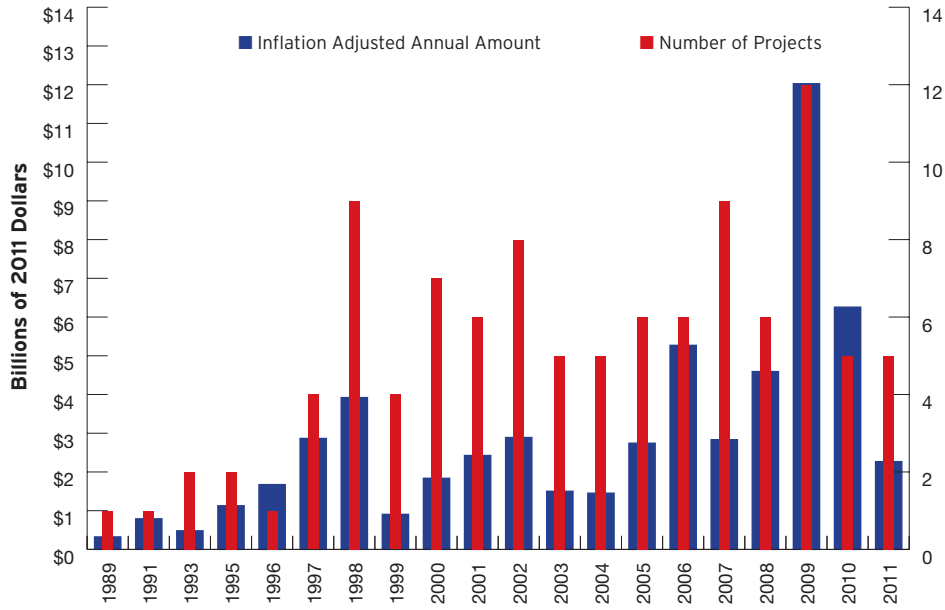
the projects. More complex versions of PPPs where the private partner designs, builds, finances, operates, and maintains the facility (a DBFOM project type) show a reversed trend, with only 12 percent of projects, but 24 percent of the contracted amount. Showing the increasing sophistication of the United States market, seven of the twelve projects of this type have been implemented between 2008 and 2010 (Figure 2).

Twenty-four states undertook at least one transportation PPP project, including design-build, between 1989 and 2011. Western and Southern states tend to be at the forefront on PPP adoption accounting for 34 and 38 percent, respectively, of the number of PPP projects over the last 23 years. Florida (16) has the largest number, followed by California (12), and Texas (9). These three states, along with Colorado and Virginia, were responsible for 56 percent of the total amount of all U.S. transportation PPP projects from 1989 to 2011. By contrast, the Midwestern and Northeastern states have been slow in implementing PPPs (Figure 3).

Most of the transportation PPP projects are located in the top 100 metropolitan areas, reflecting the higher demand for transportation services. Eighty-two percent of all transportation PPPs contracted between 1989 and 2011 are located in 32 of the top 100 metro areas (Appendix A). These projects represent 88 percent of the total value of U.S. transportation PPP investment over the last twenty-three years. As found in the state analysis, most of the projects are located in Southern and Western metros, with only six Northeastern and Midwestern top 100 metros having contracted any PPP projects.

While metropolitan Los Angeles holds the top spot in terms of the number of transportation PPP projects, Washington, D.C. dominates when it comes to the total value of PPP projects. The transportation authorities in this region have been developing PPP projects since 1993, pursuing not only design-build projects, but also the complex DBFOM projects. The eight PPP transportation projects in the Washington metro area, two which are rail projects, are worth \$7.2 billion in total. In general, PPP projects are found in the largest metro areas including New York, Dallas, Miami, and Chicago. However, there is no one-to-one relationship between the value of the PPP contracts and metro economy size. For example, top 10 metro economies such as Houston, Philadelphia, and Atlanta have not contracted

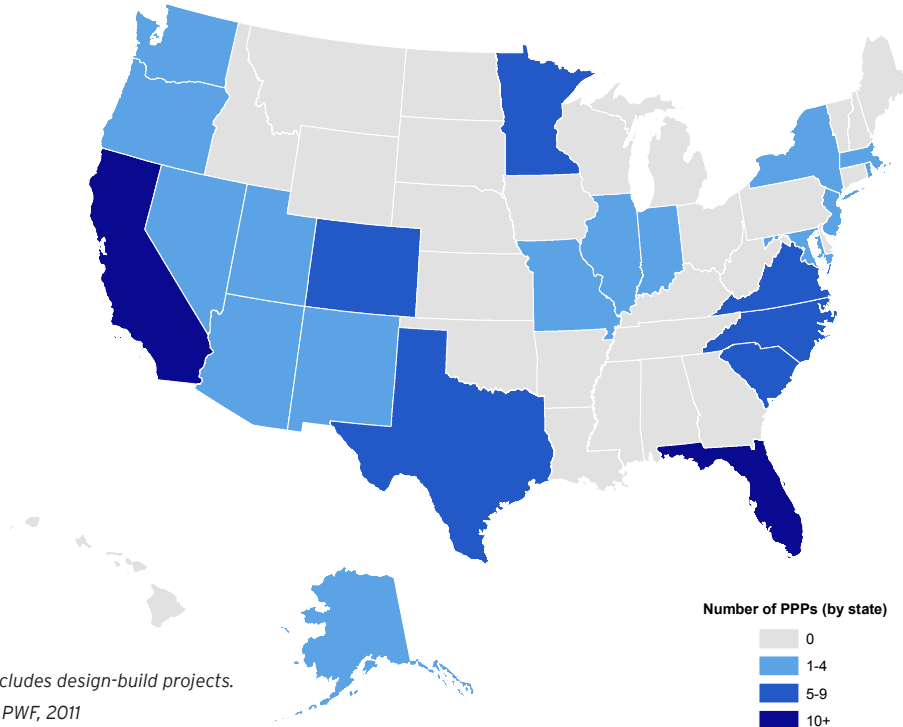
Figure 2. Transportation PPPs in the United States, 1989-2011



Includes design-build projects.

Note: Annual totals in 2011 billions of dollars. The nominal values of the cumulative contract amounts were adjusted using the GDP price deflator. Source: PWF, 2011; BEA, 2011

Figure 3. Transportation PPPs by State, Number of Projects, 1989-2011



Note: includes design-build projects.

Source: PWF, 2011

No less than 31 countries currently have a PPP unit at the national or subnational level.

any while smaller metros like Denver and Austin have projects worth billions of dollars.

Despite this activity, the data shows that the United States has been slow to pursue PPPs in comparison with European and Asian countries. There appear to be several discrete, but related, reasons. In some cases, there is lack of institutional capacity and expertise in some cities and states to properly promote the benefits and costs of PPP deals. In Pittsburgh, an arrangement to lease the city's parking operations to a private entity collapsed when the city council voted against the transaction. At the same time, the deals are getting more complex, politically heated, and cumbersome as some stretch across jurisdictions, and even international borders as is the case with the New International Trade Crossing intended to connect Detroit to Windsor, Ontario. And with state and municipal finances under strain, the public sector is also trying to transfer greater responsibility to the private sector, including project financing.

In this regard, the U.S. Government Accountability Office recently noted that while the United States has done much to promote the benefits of PPPs it needs to do more to assist states and metro areas to think through potential costs and trade-offs, as well as assessing national interests.²¹ A possible solution is the creation of specialized institutional entities to assist with the expanding opportunities for PPPs. The next section discusses how these so-called "PPP units" fulfill different functions such as quality control, policy formulation and coordination, technical advice, standardization and dissemination, and promotion of PPPs.

IV. Public/Private Partnership (PPP) Units—International Experience

Countries and subnational governments around the world have been developing institutional structures for the promotion, development, and management of PPPs for several decades. None are precisely alike and they serve different functions depending on the needs, cultures, and traditions of the nations in which they operate. For this analysis we focused on international examples in developed countries that would possibly provide the most relevant models for the United States. No less than 31 countries currently have a PPP unit at the national or subnational level (Appendix B).

A. Definition of a PPP Unit

Similar to the lack of uniformity in PPP definitions, there is no strict definition of a PPP unit. The World Bank defines a PPP unit as "any organization designed to: promote or improve PPPs [...]; [and] has a lasting mandate to manage multiple PPP transactions, often in multiple sectors."²² One study emphasizes this role as servicers on PPP-related matters to public entities "within or connected to government that provides services related exclusively to PPPs to other governmental bodies [...]."²³ Another describes a PPP unit as "any organization set up with full or partial aid of the government to ensure that necessary capacity to create, support and evaluate multiple public/private partnership agreements is made available and clustered together within government."²⁴

Based on these studies and the evidence from around the world, several characteristics emerge:

A PPP unit is a public entity (government, public/private corporation, or nonprofit) that supports other government agencies to procure projects through a PPP process; it is not the procuring agency. It is a "dedicated" agency, meaning that it has a permanent structure dealing with multiple projects versus ad-hoc teams put together in ministries and departments to deal with procurement through a specific PPP project. It may support government agencies in procuring PPP projects that span multiple sectors or in just a specific sector, such as transportation.

B. Functions of a PPP Unit

A PPP unit is the response to an identified institutional problem encountered by a government in managing its PPP program.²⁵ The government failures (or nonmarket failures) may include poor procurement incentives, lack of coordination among government agencies, lack of expertise or sufficient information, and high transaction costs in proceeding with PPP deals.²⁶ Given that governments face a diverse range of these failures in dealing with their PPPs, the PPP units fulfill different functions such as these identified by the World Bank:

Policy Formulation and Coordination. A PPP unit may act as a consolidator of information and policy regarding PPPs, overcoming the traditional siloed structure of government agencies. While this function has a wider applicability at a central level, it is still feasible in a specific department sector or ministry with numerous offices involved in the PPP process. For example, the UK Treasury's PPP Policy Team—part of Infrastructure UK—is responsible for formulating the national PPP policy guidelines. In Canada, Partnerships British Columbia, the PPP unit for that province establishes policies and best practices for PPP management.

A PPP unit may coordinate the stakeholders involved in the PPP program at different levels. In case there are multiple departments or ministry-led PPP units, the central PPP unit may serve primarily to coordinate an overall national policy framework. For example, Ireland's Central PPP unit chairs the Inter-departmental Group on PPPs, which brings together the PPP units from various ministries and representatives of other interested agencies. The coordination may also happen across levels of government, especially in a federal structure. The National Australian PPP forum, created in 2004, is a national coordination and cooperation mechanism among the federal, state and local governments on PPPs.

In addition, the PPP unit may coordinate not only with government agencies but also with other stakeholders. For example, Ireland's Central PPP unit coordinates the Public/Private Informational Advisory Group, formed by representatives of employers' organizations, unions, engineers' organizations and public sector.

Quality Control. PPP units may respond to poor PPP procurement incentives by acting as the first reviewer of the potential PPP project proposals. This may occur when agencies or ministries promote PPP projects without fully taking into consideration the long term fiscal impact on the government's budget. For example, South Africa's PPP Unit was created to prevent ministries from pursuing PPP projects that allowed them to avoid the national budgetary limits.²⁷ In addition, a PPP unit may verify whether the proposed project fulfills all the desired criteria set beforehand. Portugal's central PPP unit, Parpública SA, conducts a technical assessment of proposed PPP projects before the procurement phase and provides its recommendation to the Ministry of Finance.²⁸

Technical Assistance. One of the recurring problems in PPPs is the lack of adequate and necessary skill in the public sector to deal with PPP deals. This proficiency is not limited to financing issues such as the assessment of the Value for Money and the discount rate of the project, which may be contracted out to private consultants. More important is to understand the place of the PPP project in the government's long term plan, its fiscal consequences, the allocation of risk between the public and the private sector and what government reforms would be required for a successful implementation. While there is a role for private advisors in pursuing PPPs due to the complexity of the contracts, the public sector should be able at least to adequately provide oversight of the consultants to secure the public interest.

The creation of a PPP unit with the necessary technical skills to help procuring agencies would simplify the PPP process and allow for a more effective negotiation process. Further, it provides a consolidated authority in negotiations. This is especially important when the PPP project involves several departments of the procuring public client.²⁹

Most PPP units currently in existence provide technical assistance to public entities procuring projects through PPPs. This is one of the major reasons, Parpública SA was created in 2003. Portugal had a poor experience with PPPs in the 1990s, due to inadequate consideration of long term fiscal consequences, insufficient risk transfer to the private sector and rigidities in the procurement process.³⁰ The lack of public sector capacity in evaluating and managing PPP deals added to these problems.³¹ As part of the reform of the PPP process, the Portuguese government created Parpública SA not only to conduct quality control upstream but also to provide technical assistance in project procurement and management.

There is some concern about the potential conflict of interest in PPP units that provide both quality control and technical assistance. This would be similar with an accounting firm that provides both auditing and consulting services to the same client. The mix of incentives may lead to disastrous results as was the case with Enron's auditor, Arthur Andersen in 2001.³² While most PPP units do not have a direct profit motive, these two functions should be clearly delimited in the structure of a PPP unit.

The U.K. Experience with Supporting the Public Sector in the PPP process

A PPP unit may provide technical assistance to different members of the public sector, such as ministries, state and local governments, state agencies, and other public agencies involved in PPPs. The UK's relatively long history with PPP units provides a good example. In the summer of 2010, the U.K. government created Infrastructure UK (IUK), a Treasury unit responsible for implementing that nation's long-term infrastructure strategy and facilitating private investment across a variety of infrastructure sectors. This is the latest reorganization of PPP units since the UK started experimenting with this governance structure in the late 1990s. IUK consolidates two previous PPP units (Partnerships UK and the U.K. Treasury's PPP Policy Team) together with a newly created U.K. Treasury's Infrastructure Finance Unit.³³

IUK takes over the role of Partnerships UK (PUK), responsible for the technical assistance in procurement and management of PPP deals. Like PUK, IUK engages with central government ministries, departments, and other public bodies in a varied number of sectors including transportation, housing, defense, education, and information technology. It provides technical assistance to these entities at the procurement policy phase and downstream in individual projects. Its technical assistance in individual projects is comprehensive, from assessing Value for Money, structuring competitive bids, supporting negotiations with the private sector to designing quality monitoring systems. IUK has a team of 60 professionals from various infrastructure-related fields, including commercial and financial experts, lawyers, economists, and policy advisors.

At the municipal level, another PPP unit—Local Partnerships—also provides technical assistance on PPPs. It is a joint venture between the Local Government Association and the U.K. Treasury. Launched in 2009, Local Partnerships provides project support as well as other functions such as gateway reviews on projects considered for PPP, asset management reviews, and training to build local capacity. Its technical assistance to local governments on PPPs covers all the stages of a PPP project from development, structuring, and procurement, to execution and delivery. Local Partnerships' project support focuses on nine sectors, chosen based on funding availability for PPPs, priorities established by the Local Government Association and the latest national Efficiency Review report.³⁴ These nine sectors are: corporate property and regeneration, housing and sustainable communities, culture and sports, fire and police services, corporate and transactional services, social care, transportation and regeneration, schools, and waste management.

Standardization and Dissemination. In a PPP arrangement, the teams of bidders have to deal with myriad statutes and government regulations. Moreover, these regulations differ from state to state, in the case of a federal government structure. This contributes to substantial transaction costs related to the procurement of PPPs, for both the private sector and the government, estimated to be 10 percent of a project's capital costs.³⁵

A PPP unit may deal with these transaction costs by standardizing the procedures and requirements at different levels of the procurement process. This standardization process may take the form of documentation or recommended guidelines and best practices. The companies interested in PPP opportunities can see beforehand a standard of the contracts employed and the required PPP characteristics, reducing the uncertainty in the market. In addition, it reduces the costs incurred in filling the paperwork for the bid. The public agencies benefit from the cutback in costs and time. Standardized documentation requires less time to grant approvals, create the tender documents or negotiate the contract with the bidders.

Standardization complements the other functions of a PPP unit. By providing standardized documentation, the PPP unit helps public entities to avoid pitfalls in structuring and managing the PPP contract. Further, it provides another level of assurance that the contracts pursued fulfill the standard requirements and protect the public interest. In addition, it helps the promotion of PPPs, because it creates certainty and legitimizes the PPP market.

Québec's PPP unit, L'Agence des partenariats public-privé du Québec (PPP Québec), established in 2005, created a series of guidelines to be followed by the public sector in dealing with PPPs. For example, public bodies are required to use the criteria set up by the unit in evaluating the potential of a PPP proposal. PPP Québec recommends that public agencies use their standard assessment methodology in selecting a PPP project.³⁶ Upon request, the unit may provide technical assistance to the public sector along the procurement process.

Promotion. The creation of a PPP unit increases the credibility of the government's commitment to PPPs. Further, a PPP unit may act as a consolidator of information on PPP opportunities, given that investors are not always aware of the projects that the government would consider ripe for PPPs. Both developed and developing countries have used PPP units as means to increase private interest in PPPs. The Flemish PPP Knowledge Centre provides the private sector with information on PPP policy and possibilities. Partnership, BC also serves as a resource for the private sector interested in PPPs in British Columbia. The Philippines' PPP Unit—the Philippines Build Operate Transfer Centre—has among its functions the promotion of the PPP Program to potential investors.³⁷

Incorporating both promotion and advisory functions in a PPP may lead to a conflict of interest problem. If the PPP unit is considered successful by the number of PPP deals completed, the PPP unit may have an incentive to accelerate the process and not do full diligence on the projects. The optimal arrangement is to split the functions in different entities or have the promotion department of the PPP unit reporting to different government bodies.

Based on their functions, PPP units may be categorized as review bodies, full service agencies and centers of excellence.³⁸ The review bodies limit their activity to a gateway quality control function and provide recommendations on the feasibility of PPP proposals to decision makers. The full service agencies fulfill additional functions to the quality control responsibility of the review agencies. The Centers of Excellence consolidate information and disseminate research and best practices regarding PPPs.

C. Institutional Design of a PPP Unit

From an organizational point of view, PPP units represent a way to delegate operational responsibilities regarding the provision of government services. While PPPs represent the most complex form of outsourcing government provision of public goods, the PPP unit is a devolved organization for the operational responsibilities.³⁹ Based on the model of devolution of government responsibilities in the provision of surface transportation, the structure of a PPP unit may vary from that of an office in a ministry to a private corporation.

The institutional structure of PPP units worldwide reflects a number of priorities: the goals of the PPP unit, the existing administrative structure in that country/state and the level of development of the country/state's PPP market.

At the lowest level of devolution, PPP units are in a ministry, most often in the Ministry of Finance due to the centrality of the department to the entire government structure. For example, Infrastructure UK and Partnership Victoria are part of the Treasury Department. This situation may be found in developing countries too. India's PPP Cell is part of the Infrastructure Division of the Department of Economic Affairs, located within the Ministry of Finance. A special case is Japan, with its Private Finance Initiative Promotion Office within the Prime Minister's Office. Few countries place their PPP unit in a line ministry, usually a department in charge of infrastructure policy. For example, the Danish Enterprise and Construction Authority is within the Ministry of Business and Economic Affairs and the PPP Task force in Poland is in the Ministry of Infrastructure.⁴⁰

Several countries or states have chosen to set up their PPP units as corporations, either publicly owned or with mixed ownership. For example, Partnerships BC is a company owned by the government of the Province of British Columbia with the Minister of Finance as its shareholder. Both the Czech Republic as well as Portugal's PPP units are similarly arranged. The German national PPP unit, Partnerships Germany (ÖPP Deutschland AG) is a mixed corporation. Created in November 2008, this unit is 60 percent owned by all the levels of government and 40 percent by a holding company. The holding company is 65 percent private and 35 percent public.⁴¹

The reasons for creating a PPP unit as a corporation are similar to the devolution of government responsibilities in infrastructure. The corporate structure allows for more political independence in comparison with ministries and public offices. In addition, the structure is more flexible in reacting to the changes on the PPP market. Another important reason is the higher potential to attract and retain employees with the necessary expertise in PPPs.⁴²

Whether a corporation or government agency, the PPP units are funded by the government through the budget of the public agency, department, or ministry to whom they report. Even autonomous PPP units—such as Private Infrastructure Investment Management Center (PIMAC) in South Korea—are funded by its overseeing agency. However, user fees levied upon procuring agencies that get project

PPP Canada: A National PPP Unit as a Corporation

The choice of an institutional form depends on existing legal and government structures that accommodate the new PPP unit. For example, the Canadian government created its federal PPP unit as a crown corporation in 2008. Owned by the federal government but functioning as a business, PPP Canada reports through the Minister of Finance to Parliament.⁴⁴ The corporation has an independent Board of Directors, formed by a Chairperson, the CEO, and six other private sector members. The Canadian government chose this institutional format based on the example of the Canadian provinces' PPP units, such as Partnerships BC and Infrastructure Ontario. Further, the corporate structure allows private sector oversight through the board of PPP Canada, higher administration flexibility and a business-like approach.

A unique characteristic of PPP Canada is its P3 Canada Fund, part of a multi-billion Building Canada plan for public infrastructure. PPP Canada has a mandate to identify and advise on federal PPP projects, and to work with public authorities at provincial, territorial, municipal, and national level to support greater adoption of PPPs. The P3 Canada Fund, with a \$1.2 billion, five-year budget, is the federal financial incentive to sub-national public authorities to consider PPPs. Any sub-national authority can apply for funding from the P3 Canada Fund in a variety of sectors: transportation, water, energy, security, solid waste, culture, sports, connectivity and broadband, maritime, aerospace, and tourism. The projects are selected based on merit, including Value for Money assessments, and the funding can take different forms, depending on the needs of the project. While the size of a project is not bound by any Fund condition, the Fund limits its financial contribution, together with any other direct federal financial assistance, to 25 percent of the direct construction costs of a project.⁴⁵ This arrangement is similar to the idea in the United States for the creation of a national infrastructure bank.⁴⁶

PPP Canada performs several functions. It creates policies and best practices for PPP management in Canada, which are optional for provinces and municipalities. Further, it works with provinces on their PPP best practices. PPP Canada's policy is not a standard, but allows variations, such as in the case of Value for Money assessments. The federal unit is also the first reviewer on projects submitted for funding to its P3 Canada Fund.

The biggest function of PPP Canada is technical assistance, both to federal agencies that are interested in PPP projects and to projects receiving funding from P3 Canada Fund. The federal agencies are not obligated to engage the federal PPP unit if they are pursuing PPPs. However, PPP projects are rather new at the federal level and the federal entities still need to build capacity. PPP Canada can provide technical assistance to federal agencies, but the procuring agencies are ultimately responsible for the projects.

PPP Canada has no authority to impose a standard on PPP management across all government levels, but the institution meets regularly with the provinces to share best practices and find areas for standardization. Dissemination of existing practice, especially to provinces and municipalities that are new to the PPP process, is more important for the federal PPP unit than mere standardization. Through this activity, PPP Canada educates public agencies about PPPs.

While operational only for the last two years, PPP Canada is already in the third round of applications to its P3 Canada Fund. This rapid growth has been helped by the robust staffing of the institution, with about three dozen employees, grouped in three units: business development, analysis and technical assistance, and administration.

support are also a source of income. PIMAC draws additional resources from this type of fees, whose level is regulated by the Ministry of Strategy and Finance. Partnerships Germany supports itself from user fees charged to the public entities to which it provides technical assistance.⁴³

A PPP unit may be located at the national or subnational level of government, depending on the government structure. Most of the PPP units surveyed in this study are in unitary government systems, so the PPP unit is only at the national level. The UK may present a possible exception in the future. While the UK is a unitary state, it has undergone substantial regional devolution since the 1980s. In February 2009, the Finance Committee of the National Assembly of Wales recommended the Welsh government to create a PPP unit.⁴⁷

In federal systems, the states are often the first to experiment with PPP units. As in the United States, states are usually in charge of infrastructure development, so they are the most interested in alternative ways of project delivery.

Australia: A Federalist System of PPP Units

The state of Victoria is a pioneer in PPPs, creating one of the first subnational units—Partnerships Victoria—in 2000. Victoria is Australia's most urbanized state, with 70 percent of its population concentrated in the Greater Melbourne Metropolitan area. Partnerships Victoria was established in the Commercial Division of Victoria's Department of Treasury and Finance. It is the PPP unit and the name of the state of Victoria's PPP policy. The PPP unit is a full service agency, providing all the functions of a PPP unit.⁴⁸

Partnership Victoria was preceded by a 1980s PPP program created mainly to move a series of infrastructure projects out of the state's budget. In the 1990s, the focus changed towards risk transfer to the private sector and higher economic benefits from PPP projects. Building on this program and experience from the UK's Private Finance Initiative program, Partnerships Victoria was created with the goal of better infrastructure delivery, better financing options for the government, both in terms of amount and risk transfer, and more private competition for the PPP bids.

Victoria requires that any infrastructure project proposed by state agencies to have a procurement analysis done early in the project planning process. This analysis has to consider alternative ways of delivery of the project considered, including a PPP option. The state PPP unit creates the policy framework for all the state agencies and provides standards ("guidance") on a series of elements of the procurement and management process, such as the state's risk position ("The Standard Commercial Principles"), the Public Sector Comparator in determining Value for Money or the use of the discount rate. The public agencies contracting PPPs have to follow these standards and any deviation from them needs strong justification.⁴⁹ In addition, Partnerships Victoria provides technical assistance during contract management, but the initiating agency is responsible for implementing the PPP contract.

An independent review of the activity of Partnerships Victoria in 2004 considered the program effective. Due to the short period of operation (three years when the review started), only eight PPP projects were reviewed, of which only two were operational. The review concluded that the state saved about nine percent, on average, by contracting these projects to the private sector in comparison with public sector procurement.⁵⁰ Between 2002 and 2010, Partnerships Victoria PPP projects have accounted for approximately 10 percent of annual public investments.⁵¹

Due to its early creation and successful operation, Partnerships Victoria became a model for other states interested in PPP units. South Australia modeled its PPP unit and policy on Partnerships Victoria as well as the New South Wales' Treasury Privately Financed Projects policy. Partnerships BC in Canada combines elements of the PUK and Partnerships Victoria.⁵²

On the national level, Infrastructure Australia was created by federal legislation in 2008. This institution is not primarily focused on PPPs, but on the larger infrastructure system, needs and policy across all the levels of government in Australia. In addition, it evaluates and advises the Ministry of Infrastructure on projects submitted to Build Australia Fund, a fund created in 2009 to finance capital investments in infrastructure sectors, such as transportation, energy, communication, and water.⁵³

This statutory independent body has a Council, formed by twelve members: five from the private sector, three from the federal level, three from the state level and one member representing the local governments. The Chair is Sir Rod Eddington, former CEO of British Airways, who chaired in 2006 a landmark report on reforming the UK transportation sector.⁵⁴ The Council members are appointed by the Federal Minister for Infrastructure and Transport, to whom they report on Infrastructure Australia's operations.⁵⁵ Through this Minister, the Council reports regularly to the Council of Australian Governments.⁵⁶ Infrastructure Australia is funded through the Australian Department of Infrastructure and Transport and had an initial appropriation for three years.⁵⁷

As part of its functions, Infrastructure Australia created a national PPP policy framework and a national standard for PPPs late 2008, together with the National PPP Forum. The National Public Private Partnership Policy and Guidelines range from procurement options, commercial principles for social infrastructure, to specifics on the Public Sector Comparator and the discount rate methodology. In addition, this new PPP policy establishes that the federal, state and territory governments will have to consider a PPP alternative for any project with a capital cost in excess of \$A50 million.⁵⁸

While Infrastructure Australia has no decision-making authority, the National PPP Guidelines were endorsed by the Council of Australian Governments. As a result, they replace all the PPP policy and standards implemented previously by the states and the federal government. However, the agency created a guide on how these national PPP guidelines apply to the federal government and each state and which deviations are allowed from the national standards.⁵⁹ For example, the guidelines may not necessarily apply to federal national security projects. The federal government also retained its power over guidelines on the creation of the business case for PPPs by federal departments, agencies and commissions.⁶⁰

Beyond PPP policy guidance and standardization, Infrastructure Australia promotes the Australian PPP market. It publishes a list of contracted PPPs, pipeline of PPP projects, and potential PPPs across Australia. As of November 2010, Australia had eleven projects in the PPP pipeline.⁶¹

Also in Australia the National PPP Forum, a ministerial forum of all the Australian levels of governments (federal, state and territories), works in conjunction with Infrastructure Australia on PPP policy and PPP promotion.⁶²

Thirty-one states have PPP enabling legislation for highways, roads and bridges and 21 have PPP legislation for transit projects.

V. Public/Private Partnership Units: U.S. Experience

While the U.S. PPP market is maturing, it is still only moderately sophisticated. Improved public entities' ability to contract, execute and manage PPPs is an essential part of advancing the growth of these arrangements.⁶³ Having the statutory allowance to get into contracts with private partners is also an important condition.

A. State PPP Legislation

Other than the obvious enabling authority, PPP legislation sends a strong signal that a state is open to private involvement in infrastructure financing and delivery. It provides predictability for the private sector engaging in a partnership with the public sponsor.⁶⁴ PPP legislation sets the rules of engagement and reduces transaction costs by outlining main principles in the statute, thereby creating a more transparent and criteria-specific environment for negotiations between parties on bidding and contract specifics. On the other hand, the lack of state PPP legislation can prove a real hindrance to the development of the PPP market. The 2007 failed \$12.8 billion bid for the lease of Pennsylvania Turnpike would have benefited from a state PPP legislation in place before the negotiation began.⁶⁵

Thirty-one states have PPP enabling legislation for highways, roads and bridges and 21 have PPP legislation for transit projects.⁶⁶ The state PPP transportation legislation generally refers to PPP delivery models that allow the public sector to contract with a private entity to design, construct, repair, expand, operate and/or finance highway, road or bridge projects.⁶⁷ Sometimes, the state PPP transportation legislation includes provisions referring to design-build projects, such as in the case of the PPP legislation in Alabama, California, Colorado and Massachusetts.⁶⁸

As illustrated in Appendix C, state legislation enabling PPPs varies greatly across several factors: **Broad application of PPP legislation.** Twenty-two states with PPP legislation allow eligible public authorities to engage with the private sector on infrastructure projects beyond highways and roads, such as ferries, pipelines, and rail or other public facilities. The states with narrowly defined PPP eligibility have confined PPPs only to roads. Roads-limited PPP legislation is often the result of states adopting a law related to a specific project, to "test the waters" for private involvement before defining a broad set of modes for investment.⁶⁹ However, the more modes are included in PPP eligibility, the more private sector interest it will attract.

Unsolicited and solicited proposals. States differ as to whether they will accept unsolicited proposals from bidders for a specific project. Solicited bids outline the public sponsors' priorities and evaluation criteria, creating a predictable foundation for all those bidding for the PPP contract. Further, they increase accountability and transparency by outlining the contract objectives and impact that the project is expected to have on the community. Unsolicited bids, conversely, do not have criteria to meet from a request for proposals, as well as are not part of a process where there are other competitive bids. Their benefit is that they provide the public sponsor with new ideas that they may not previously have considered.⁷⁰ The majority of states with PPP legislation allow for unsolicited PPP proposals.

Availability payments and shadow tolls (pass-through tolls). The option to provide availability payments or shadow tolls to the private sector can be useful in structuring a PPP when user fees are insufficient to make the project financially viable or they are not feasible. Availability payments are reimbursements made by a public entity to a private concessionaire for its responsibility to design, construct, operate, and/or maintain a facility for a set period of time. Shadow tolls, or pass-through tolls are similar payments by a government agency to a private operator, but their rates are based on the traffic on the leased road and agreed rates per vehicle and vehicle type. The use of payments or shadow tolls increases the variety of projects that can be entered into, but in some cases increases the risk borne by the government because they guarantee the traffic and revenue risk.⁷¹ Only eight states allow for these types of payments as part of their PPP legislation, and only two (Texas and Florida) have used them.

PPP authority for lower level agencies. The authority of lower level transportation agencies to engage in PPPs is of particular interest in larger states, such as California, Florida and Texas that have numerous projects in large metropolitan areas (Figure 3). For example, the 2009 California PPP legislation allows for regional transportation agencies to enter into PPPs, alone or with the California Department of Transportation.⁷² Fifteen states provide PPP authority for lower level public entities,

allowing for bottom-up innovative project development and attracting private involvement that can be tailored to the needs of local communities.

Prior state legislature approval. In nine states, PPPs need prior approval by the state legislature before they can be developed. For example, in Tennessee if the state DOT wants to pursue the development or operation of a tollway by a private entity, it has to obtain the approval of the legislature for the proposed project.⁷³ Legislative approval for a project can be seen as a public mandate in favor of the PPP project and render the politicians that voted in favor of the PPP deal accountable for guaranteeing success of the project. At the same time, waiting for legislative approval may be seen as too burdensome and unpredictable to the private sector as costs associated with the bidding process are sunk and public relations campaigns have to be launched to garner public support for the project.⁷⁴

Besides state legislature approval, PPP legislation may allow lower levels of government to reject a proposed PPP project. For example, the Minnesota PPP legislation specifies that “the governing body of a county or municipality through which a facility passes may veto the project within 30 days of approval by the commissioner.”⁷⁵ Minnesota Trunk Highway 212, the only project that has been attempted under Minnesota’s PPP legislation, was stopped by the veto of the city of Eden Prairie, one of the four communities on the toll road project’s right of way.⁷⁶

Overall, most PPPs need some type of approval before they get implemented. However, this approval usually comes from executive branch agencies such as the state transportation commission (California, Oregon), the Board of Public Works (Maryland), or Special Public-Private Partnership Infrastructure Oversight Commission (Massachusetts).⁷⁷

Non-compete clauses. Some state PPP legislation expressly allows or prohibits a non-compete clause, article added in the PPP contract for a privately built or operated toll road. A non-compete clause stipulates that the public entity will not build another facility that would directly compete with the PPP toll road. Among the 31 states with PPP legislation, four specifically allow while five expressly prohibit the inclusion of this type of clause. For example, the Arizona PPP legislation specifies that the private operator of a toll road cannot sue for the construction of an alternative public road that was planned at the time of the PPP contract.⁷⁸ The existence of some type of non-compete clause is attractive to the private sector because it lowers the risk of competition from substitute assets.⁷⁹ However, a strict non-compete clause paralyzes the state from building new assets in the public’s interest. Over time, the non-compete clause structure has changed, allowing narrow competition, such as the construction of small access roads parallel to the toll road.⁸⁰

Outside technical and legal consultants. As discussed, the lack of adequate skill in the public sector to consider PPPs is one of the recurring problems in developing projects and one of the main reasons for the creation of PPP units. About 14 out of 31 states with PPP legislation expressly allow public agencies to hire outside consultants to help with PPP evaluation and implementation. For example, the Louisiana PPP enabling legislation specifies that the public authority may use the advice of internal staff or external consultants for evaluation of proposals.⁸¹ As explained in Section 3, the PPP market is still rather undeveloped in the United States and public agencies have not had the opportunity to deal with a substantial number of PPP projects to build sufficient expertise. Therefore, the use of private sector consultants is necessary to develop the proper design and implementation of PPP projects. In the same time, PPPs are complex ventures and states need to strike the balance between public and private expertise.

B. PPP Units in the United States

As in the case of PPP projects, the United States is a late comer in the field of dedicated PPP units. While some states created PPP offices in their departments of transportation as far back as 2003, it is only in the last three years that U.S. states have established dedicated PPP units. Today, seven states have a PPP office though only three can be considered to be dedicated PPP units, based on characteristics identified in Section 4 and also Table 1.

Virginia. Virginia has had a transportation PPP program (the Public Private Transportation Act) since 1995, with the offices of innovative finance and project delivery involved in implementing the program. A review of the PPTA program in 2010 recommended the establishment of a dedicated PPP office to create a unified leadership team on PPPs, more accountable and more cohesive across several disciplines, and able to deal with multiple transportation modes.⁸²

Table 1. State PPP Offices

State	Name of the PPP office	Location in the State Government	Dedicated PPP unit	Type	Year Created
Virginia	Office of Transportation Public-Private Partnerships (OTP3)	Department of Transportation	Yes	Public agency	2010
California	Public Infrastructure Advisory Commission	Business, Transportation and Housing	Yes	Commission/ Advisory Board	2010
Michigan	Office For Public-Private Partnerships	Treasury Department	Yes	Public agency	2008
Oregon	Office of Innovative Partnerships and Alternative Funding	Department of Transportation	No	Public agency	2003
Colorado	Colorado High-Performance Transportation Enterprise	Department of Transportation	No	Government-owned business	2009
Georgia	P3 Program	Department of Transportation	No	Public agency	2009
Washington	Transportation Partnerships Office	Department of Transportation	No	Public agency	2005

In December 2010, Virginia created the Office of Transportation Public-Private Partnerships (OTP3). On June 6, 2011, the staff moved into permanent offices and officially opened.⁸³ The purpose of the office is to develop, implement and administer state PPP projects across all modes of transportation. In this way, OTP3 serves as the authority on state transportation PPP projects across all modes. While housed by the Virginia Department of Transportation, OTP3 works closely with other state agencies (Department of Transportation, Department of Rail and Public Transportation, Department of Aviation, Virginia Port Authority, and Department of Motor Vehicles) to procure P3 projects. Virginia's PPP unit also works in coordination with the multi-modal Secretariat of the office of the Secretary of Transportation on PPP policy.⁸⁴ As with international PPP units, the responsibility for the PPP project remains with the procuring transportation agency. OPT3 has nine employees and a budget for operational purposes provided by the Secretary of Transportation.⁸⁵

California. As part of its 2009 PPP legislation, California created a Public Infrastructure Advisory Commission (PIAC) to advise the California Department of Transportation (Caltrans) and regional transportation agencies on developing PPP projects.⁸⁶ Located in the Business, Transportation and Housing (BTH) agency, PIAC was created to facilitate and encourage the development of PPP projects. A group of 20 commissioners from academia, industry and government, provide feedback on transportation PPP projects proposed by California transportation agencies. The commissioners examine the business case of a proposed project, its financial soundness, its Value for Money, how it impacts state funding, and provide a recommendation on the best way to move forward.⁸⁷ PIAC is funded by the BTH agency but has no line item in its budget.

The Presidio Parkway was the first project reviewed by PIAC. After several meetings, the commissioners recommended the California Transportation Commission to allow the public entities in charge of the project (Caltrans and the San Francisco County Transportation Authority) to pursue it as a PPP. After the PPP contract was concluded, PIAC provided an additional set of comments on its benefits and weaknesses and lessons for future PPP agreements in California.⁸⁸

Michigan. In July 2008, Michigan created the Office for Public Private Partnerships to promote the development of PPPs in the state. The office is a statewide dedicated PPP unit in charge of helping state agencies to procure projects across all sectors. Similar to international PPP units, Michigan's office is located in the Treasury Department. This allows for flexibility in dealing with projects from any sector.

One of the innovations in the organization of the Michigan Office for PPPs is its funding structure. The unit was set up with the goal to become self-sustaining by including its expenses into the closing costs of PPP projects. Until the unit has operational PPP projects, it is funded through a loan from the Michigan Economic Development Corporation. The purpose of this type of structure is for the Office not to depend on state general funds and to also show performance and accountability.⁸⁹

These three dedicated state PPP units differ in terms of functions performed. While Virginia's and Michigan's offices are full service agencies, California's PIAC is a mix of a review body and center for

excellence. PIAC is focused on providing high-level reviews on the business case and on promotion of PPPs through the creation of a pipeline of potential projects. The projects in the PIAC pipeline are categorized based on their level of readiness for a PPP process. In addition, PIAC acts as a resource center of best practices and news on PPPs around the world.

Virginia's and Michigan's offices perform most of the functions of a PPP unit but while Virginia's helps only transportation agencies, Michigan's has jurisdiction over all sectors. Both units affect policies and best practices for PPP management, Virginia through its implementation manual of the PPTA program and Michigan through recommendations on policy and use of PPPs. They are reviewers of PPP deals proposed by agencies under their jurisdiction and they also provide them with technical assistance.

States are rapidly learning that they need to build capacity for development of PPP projects. Large and complex, PPP projects require expertise from the public sector in a range of fields. Virginia, California and Michigan understood this gap and set up dedicated PPP units in the last three years. While too early to tell if they are successful, these three PPP units are an experiment in new governance structures in developing the PPP market in the United States.

VI. State and Federal Policy Implications

This analysis found that for infrastructure PPPs to be considered appropriately, the private sector needs to approach projects with a strong sense of commitment and understanding of the public interest. This will not happen without a shared sense and clarity of objectives, clear understanding of roles and responsibilities, and consistency of decision-making. State and federal action is needed.

To date, the interest in PPPs for infrastructure focuses mainly on procurement, finance and project delivery. Yet in addition to the infusion of capital that accompanies some PPP arrangements and apart from the projects themselves, there are significant policy issues that must be part of the discussion to both take advantage of the private sector funds ready to be invested and achieve other national goals and objectives.

A. States should establish dedicated PPP units to tackle bottlenecks in the PPP process and protect the public interest

Most of the countries with well-developed PPP markets have dedicated PPP units that help them design and implement their PPP projects.⁹⁰ Given their primary role in infrastructure development, states and provinces in Australia, Canada and Germany are some of the early adopters of the PPP unit model. The federal PPP units are rather recent, and are often built on models that proved successful at the state level. Several lessons for U.S. states emerge from the international experience with PPP units:

First, it is clear that most often governments start developing the PPP market with the primary goal of offloading the budgetary burden of certain projects. However, they soon realize the complexity of PPP projects and the potential negative consequences if the PPP agreements are not properly assessed and the sharing of risk and revenue not well understood by all parties. Dedicated PPP units help governments develop and expedite PPP markets, while at the same time protecting the public interest, by addressing any identified gaps in dealing with PPPs from the public side.

Second, the location of the unit in a central agency is essential to its mandate. Most PPP units are in the department of finance/treasury or report to this department, which allows agencies from any sector to benefit from the PPP unit's services. Further, not setting the unit in a procuring agency prevents any potential conflict of interest between audit and technical assistance functions and procurement incentives.⁹¹

Third, there is no single model or type of functions of a PPP unit. Whether the PPP unit is an agency, independent body, or a public/private venture depends on existing legal and government structures in a specific country or state. Few PPP units are full service agencies, such as Infrastructure UK and Infrastructure Ontario. A recent review of PPP units in OECD countries revealed that technical assistance and policy guidance are the most prevalent functions. Most also perform PPP promotion.⁹² In addition, the functions and legal status of a PPP unit change over time, with the increasing maturity of the PPP market, the expertise of the institution and changes in the economy.⁹³

B. U.S. states have recently started to develop capacity to deal with PPPs, but most still need to pass legislation and change their procurement culture to a more transparent and outcome-based selection of projects

Beyond dedicated PPP units, states have different agencies procuring projects through a PPP framework. As shown in Table 1, three states have dedicated PPP units and four others have offices in charge of PPPs in their departments of transportation. Others have tolling authorities contracting and implementing the state PPP road projects. Further, some transit agencies have the authority to bundle design, construction, finance, operations and maintenance into a single contract without special enabling legislation. For example, New Jersey Transit concluded its contracts based on the agency's existing authority, not through state legislation.⁹⁴

These state agencies face numerous barriers in developing PPP projects: institutional, legislative, political, and financial.

First and foremost, there is little expertise with respect to PPPs in most state agencies, legislatures and the public. Often, state legislatures and executive bodies look at PPPs only from diametrically opposed two points of view: as a funding source, to plug in budget holes or as asset stripping of the state. PPPs should instead be considered a risk and revenue sharing arrangement between the public and private sector in developing a project. Further, PPPs are a business for the private entity; therefore it should be expected that the private entity seeks out profit from the PPP venture.

Many state agencies do not have the institutional mindset and the organizational framework to pursue PPPs. They will need to change their procurement culture towards a more transparent and outcome-based selection of projects.⁹⁵ The PPP process, with its Value for Money evaluation and the estimation of the Public Sector Comparator is part of this new type of procurement. While state transportation agencies have well-developed engineering teams, they often lack the financial expertise, which is essential for developing PPP projects. Internal policies and project prioritization should reflect this outcome-based procurement system.

Existing statutes or regulations may preclude state agencies from fully developing the PPP potential of their projects. State fiscal rules may not be fully applicable for PPP projects which are often more complex than projects purchased through traditional procurement. While designed to support PPPs, PPP statutes are not necessarily enabling PPP contracts. Sometimes, PPP legislation may become the largest hindrance to the development of PPP projects. Minnesota is a case in point. The state has had PPP legislation since mid 1990s, which allows a private entity to partner with a transportation authority to develop, finance, design, construct, improve, rehabilitate, own and/or operate toll facilities.⁹⁶ In 2008, in the wake of the long term leases of Chicago Skyway and Indiana Toll Road, the Minnesota legislation passed a new PPP statute that limits severely private involvement in toll facilities, the object of the existing PPP legislation.⁹⁷ As a result, new PPP-enabling legislation would be required for any significant PPP road project to take place in Minnesota.⁹⁸

The absence of state PPP legislation hampers the ability to function of dedicated PPP units. While both California and Virginia have PPP enabling legislation, Michigan lacks a PPP statute. Without PPP legislation, Michigan Department of Transportation cannot procure projects through the PPP process.⁹⁹ Therefore, the ability of the state to fulfill its functions in the transportation sector is limited.

Support from the legislature and governor's office is essential in developing PPPs. Given all the controversies around PPPs and the lack of education of policymakers on the subject of PPPs, state agencies need to provide well-developed business cases for the projects proposed for procurement through PPPs. A governor's support alone is not sufficient; legislatures are indispensable, because they authorize and appropriate the state's transportation funding, including funds that would go towards PPPs.

States need to better connect with the lower levels of government to ensure a broader understanding of the benefits and drawbacks of PPP projects. As seen from the example of the failed Minnesota Trunk Highway 212 project, local governments can have a major role in the approval of a PPP. In addition, most of the current transportation PPP projects are in large metropolitan areas. While states have the capacity to develop PPP projects, these projects happen in the jurisdiction of cities and counties.

Finally, states often lack the funding to participate in a PPP project. Any PPP project, with private financing or not, requires a revenue source for paying the private partner. This may take the form of

availability payments, pass-through tolls, regular tolls, local or federal funding, or fees from land value capture. Each has its benefits and drawbacks. For example, availability payments are a solution when it is not feasible to introduce user fees and the state is willing to provide general funding over several years. However, availability payments are a long term public subsidy, obligating a certain part of the state budget over a certain period of time.

With all the barriers ahead, states should learn from other states' experiences with building PPP capacity. Best practices can be transferred through connections with public officials in cities and states that have numerous experiences with PPP projects, and hold the bulk of future potential for PPPs. Some states have managed to develop a significant number or amount of PPP projects, such as Texas and Florida, others have created very supportive PPP legislation, such as Arizona; and several like Virginia, Michigan and California created their own PPP units. Creating better coordination among these states and others that are in the initial learning stages will pass on lessons across different regions.

Other states should start incrementally by educating policy makers about PPPs and building support around this new type of procurement. For example, the Minnesota Department of Transportation, together with the University of Minnesota's Humphrey School created a P3 taskforce in 2011. It consists of approximately 30 high level stakeholders, including legislators, local elected officials, transportation executives, union, business and environmental representatives. The goal is to build understanding and support for PPPs among the group, and to develop shared principles to guide future PPP legislation, evaluation and implementation. This taskforce approach is modeled after a successful 2004 taskforce created to evaluate the conversion of the first High Occupancy Vehicle lane in Minnesota into a High Occupancy Toll lane facility.¹⁰⁰ Since 2008, the National Conference of State Legislatures (NCSL) Working Group on Transportation PPPs has undertaken education efforts and created guiding principles for state legislatures to use when considering PPPs for transportation.¹⁰¹

C. The federal government could help the development of the PPP market by providing technical assistance on PPPs, on a request basis

As the experience of other federal structures shows, federal PPP units appear later in the process of building PPP capacity, given that states are in charge of procuring transportation projects. Yet a federal PPP unit would be useful in providing technical assistance to states and other public entities that cannot develop internal capacity to deal with the projects themselves. This does not exclude the assistance of private consultants, but it provides a guarantee that public sector employees who are experts on the matter have reviewed the business case. This type of assistance should come on a request basis rather than regulations or conditions for federal funding, which will make it even more difficult for state agencies to pursue PPPs.

The Federal Highway Administration has started building capacity in the Office of Innovative Program Delivery (IPD) in this direction. Upon request, staff from IPD could provide a general first presentation on alternative financing for a project proposed by a state agency. IPD can present in a workshop how the project would be financed under several alternatives, including the PPP option. They show the pros and cons of the financing options considered and present different types of PPP, appropriate for that specific project (design-build, long-term concession, etc.) In addition, they provide examples from other states on PPPs conducted. While this is a start, IPD does not have the resources and the staff to assist other public entities in the procurement and management of a PPP.¹⁰²

An important lesson for the United States is that some national PPP units are integrated in agencies in charge of overall investment and infrastructure strategy. PPP units help other agencies to procure projects through a PPP process, ensuring well-defined procurement processes with clear performance indicators. For best results, any capital project should be assessed for alternative financing, procurement and delivery methods, in order to ensure best Value for Money. Therefore, the work of a PPP unit is integral in the capital strategy of a state or national government. Following this principle, both the UK and Australia have integrated the functions of a PPP unit into newly created institutions in charge of the country's infrastructure strategy.

VII. Conclusion

During this sluggish economic recovery public agencies in the United States have to find out new ways to achieve efficiencies from operations and delivery.

Public/Private Partnerships could contribute to how we pursue infrastructure investments in the United States because they represent a sharing of responsibilities and costs between the public and private sector in project finance and delivery. A dedicated PPP unit is a mechanism to build capacity to develop and implement PPPs. All the countries and states around the world with well-developed PPP markets have built such units to help with quality control, technical assistance, standardization, promotion, and policy guidance. The U.S. is a latecomer in the area of PPPs, but states have been very active in the last three years both in building capacity and in closing PPP deals.

There is no one-size-fits-all design of a PPP unit, but U.S. public entities could learn from experiences of other countries or from the growing track record in several states. A PPP unit reflects not only the needs of a particular PPP program, but also the administrative capacity and political structure of a specific government. Ultimately, a successful PPP unit is an entity that contributes to the successful implementation of an overall PPP program.

Appendix A. Value of Transportation PPP projects in the 100 Largest Metropolitan Areas, 1989-2011

Rank	Metro Area	PPP Cumulative Value in Nominal Dollars, 1989-2011 (in billion dollars)	PPP Cumulative Value, 1989-2011 (in billions of 2011 dollars)	Number of PPP projects	PPP value, as share of U.S. Total
1	Washington-Arlington-Alexandria, DC-VA-MD-WV	6.7	7.2	8	10.8%
2	Los Angeles-Long Beach-Santa Ana, CA	5.2	6.7	10	10.1%
3	Dallas-Fort Worth-Arlington, TX	6.3	6.5	4	9.7%
4	New York-Northern New Jersey-Long Island, NY-NJ-PA	3.9	5.2	5	7.9%
5	Denver-Aurora-Broomfield, CO	4.3	5.1	6	7.7%
6	Miami-Fort Lauderdale-Pompano Beach, FL	3.5	3.7	8	5.5%
7	Seattle-Tacoma-Bellevue, WA	3.3	3.5	4	5.2%
8	Austin-Round Rock, TX	2.9	3.3	3	5.0%
9	Salt Lake City, UT	2.5	3.0	2	4.5%
10	Chicago-Naperville-Joliet, IL-IN-WI	1.8	2.1	1	3.1%
11	St. Louis, MO-IL	1.1	1.2	2	1.8%
12	Minneapolis-St. Paul-Bloomington, MN-WI	0.9	1.1	4	1.6%
13	Cape Coral-Fort Myers, FL	0.9	1.0	2	1.4%
14	Richmond, VA	0.8	0.9	2	1.4%
15	San Diego-Carlsbad-San Marcos, CA	0.8	0.9	1	1.4%
16	Providence-New Bedford-Fall River, RI-MA	0.6	0.8	1	1.2%
17	Las Vegas-Paradise, NV	0.6	0.7	2	1.1%
18	San Francisco-Oakland-Fremont, CA	0.5	0.7	1	1.1%
19	Charleston-North Charleston-Summerville, SC	0.5	0.7	1	1.0%
20	Raleigh-Cary, NC	0.6	0.6	2	0.9%
21	Portland-Vancouver-Beaverton, OR-WA	0.4	0.5	3	0.7%
22	Boston-Cambridge-Quincy, MA-NH	0.4	0.5	1	0.7%
23	Phoenix-Mesa-Scottsdale, AZ	0.4	0.4	3	0.6%
24	Tampa-St. Petersburg-Clearwater, FL	0.4	0.4	1	0.6%
25	Albuquerque, NM	0.3	0.4	1	0.6%
26	San Antonio, TX	0.3	0.3	1	0.5%
27	Provo-Orem, UT	0.2	0.3	1	0.4%
28	Greenville-Mauldin-Easley, SC	0.2	0.3	1	0.4%
29	Jacksonville, FL	0.2	0.2	1	0.3%
30	Charlotte-Gastonia-Concord, NC-SC	0.1	0.1	1	0.2%
31	Orlando-Kissimmee, FL	0.1	0.1	1	0.2%
32	Virginia Beach-Norfolk-Newport News, VA-NC	0.1	0.1	1	0.1%
Top 10 Metros (as ranked by total PPP contract amount)		40.5	46.5	52	69.6%
Top 100 Metros (by population) with PPPs		51.0	58.6	85	87.7%
U.S.		58.2	66.8	104	

Notes: Includes design-build projects. The metros are ranked by the inflation-adjusted value of cumulative value of the contract amount of their PPP projects. Based on PWF, 2011. BEA, 2011.

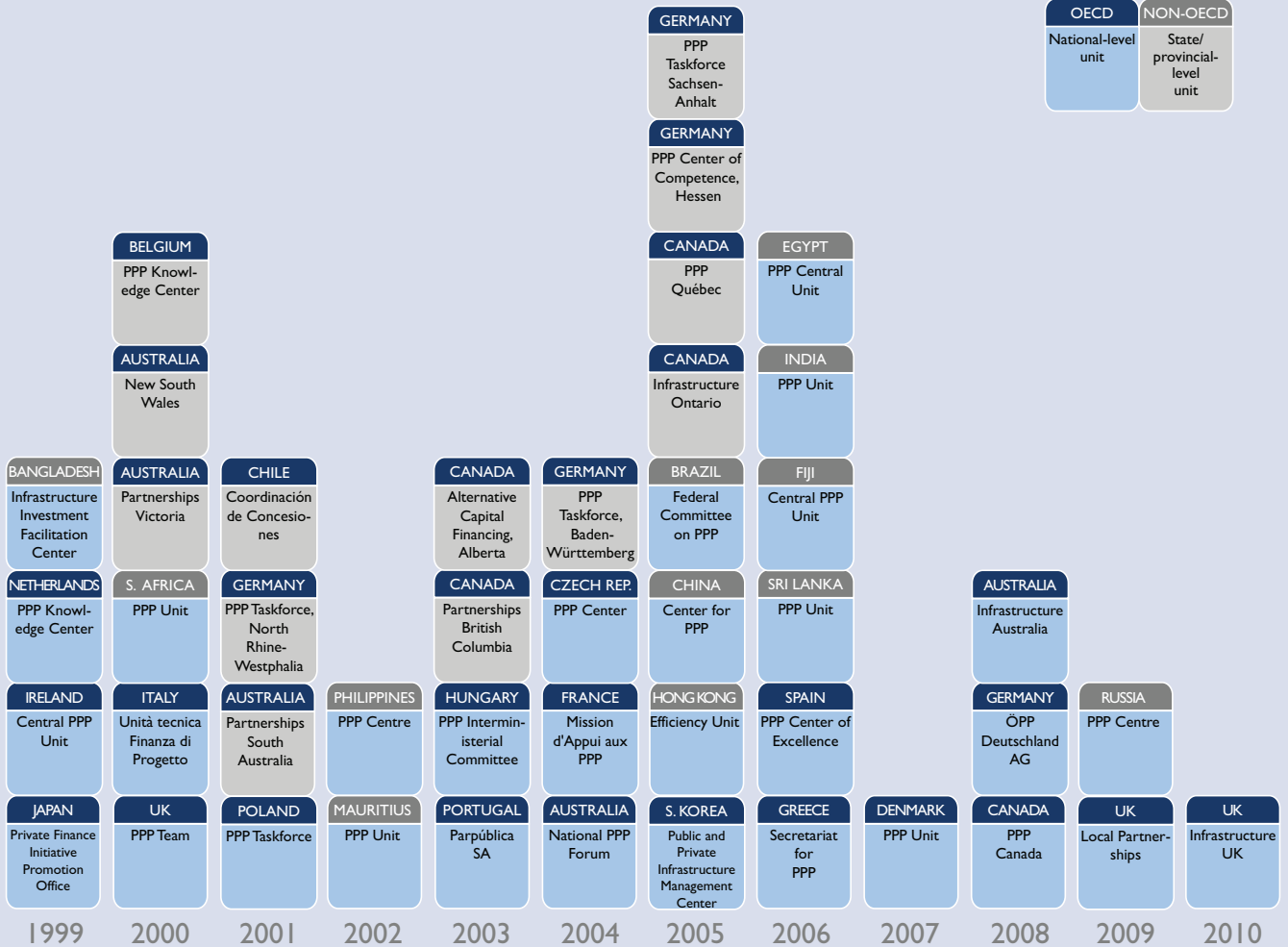
Based on the project maps, most PPP projects in the *Public Works Finance* database are located entirely in a metropolitan area or in non-metropolitan areas.¹⁰³ There were six instances in which a project crosses several metropolitan areas or a metropolitan area and non-metropolitan areas. In these cases, the PPP project was allocated to the area in which the majority of the transportation asset lies. Further, to avoid overestimation of PPP projects in the largest metropolitan areas, for cases in which a PPP project is situated in a rather equal manner in a top 100 metropolitan area and a smaller metro area, this study assigned the PPP project to the smaller metropolitan area. There are six cases with mixed spatial identification:

- The Indiana Toll Road crosses seven counties: two in the Chicago metro area, three in smaller metro areas, and two in non-metro areas. The project value was assigned to the smaller metro areas because the Toll Road crosses the seven counties in fairly equal parts.
- There are two PPP projects on I-75 in Collier and Lee counties, FL which are in two different metropolitan areas: Cape Coral-Ft Myers, which is a top 100 metro area, and Naples-Marco Island, which is a smaller metro. Based on the project maps, a larger portion of I-75 is located in Lee County; therefore, this study assigns these projects to the Cape-Coral metro.
- A 1998 PPP project on US 550 (formerly SR 44) in New Mexico crosses three counties, each located in different metro areas: Albuquerque (top 100 metro), Farmington (other metro), and Espanola (non-metro.) Most of the road lies in Sandoval County, and thus the project was assigned to the Albuquerque metro.
- Triangle Parkway in North Carolina crosses two counties, located in two different metropolitan areas: Raleigh (top 100 metro), and Durham-Chapel Hill (other metro.) Triangle Parkway is part of a larger Triangle Expressway project broken up into three parts: Triangle Parkway, Northern Wake Expressway, and Western Wake Freeway. The Triangle Parkway section lies predominately in Durham-Chapel Hill area and is assigned to that metro.
- The CPTC 91 Express Lanes in California is a 10-mile project that crosses two counties located in two different metropolitan areas: Riverside and Los Angeles, both top 100 metros. The project was assigned to the Los Angeles metro area, given that most of the project is located in Orange County.

Appendix B. Foreign PPP Units at National and Subnational Level

LEGEND

OECD	NON-OECD
National-level unit	State/provincial-level unit



Note: As of December 2011. These are examples of PPP units around the world according to the definition that this study adopted. Depending on the definition considered, there may be other agencies/departments/teams that function as PPP units.

Appendix C. Characteristics of state PPP legislation, as of December 2011

	Broad application of legislation ¹⁵	Unsolicited proposals ⁴	Availability payments/ shadow tolls ³	Gives lower level agencies PPP authority ⁷	Prior state legislature approval needed ¹	Non-compete clauses ^{3 6}	Public sector agency can hire its own technical and legal consultants ²
Alabama	•		•	•		•	
Alaska							•
Arkansas				•		N	
Arizona	•	•	•	•		•	
California	•	•		•		•	
Colorado	•	•		•			•
Delaware	•	•			•	•	
Florida		•	•	•	•	N	•
Georgia	•	•	•				•
Illinois	•		•				
Indiana	•			•	•		•
Louisiana	•	•	•	•			
Maine	•	•			•		
Maryland	•	•					•
Massachusetts	•	•					•
Minnesota		•		•			
Mississippi		•		•		N	•
Missouri	•	•		•	•		
Nevada	•	•		•			
North Carolina	•	•			•	N	•
North Dakota	•	•		•			
Ohio	•	•					
Oregon	•	•	•				•
South Carolina							
Tennessee					•		
Texas	•	•	•	•		N	•
Utah		•					•
Virginia	•	•		•			•
Washington	•	•			•		•
West Virginia	•				•		
Wisconsin							

1. NCSL, 2010: Appendix B.
2. PriceWaterhouse Coopers, "Public-Private Partnerships: The US Perspective" (June 2010).
3. Wagner, 2011.
4. PriceWaterhouse Coopers, 2010 for legislation through May 2010; Wagner, 2011 for legislation passed thereafter.
5. Brookings Metro Program analysis.
6. A column with an "N" indicates that statute explicitly forbids PPP agreement from containing a non-compete clause.
7. Brookings analysis of Jaime Rall "State Transportation PPP Enabling Statutes Relevant to Localities," National Conference of State Legislatures, March 2011; and Wagner, 2011.

Note: While in Utah, prior state legislature approval is not needed to engage in a PPP contract, legislative approval is needed to establish or operate a tollway on an existing highway. Maryland PPP legislation requires legislative review of proposed PPP projects, instead of state legislative approval.

Endnotes

1. For more on the benefits of PPP projects in the United States, see William Reinhardt, "The Case for Public-Private Partnerships in the U.S.," *Public Works Financing*, Vol. 265, November 2011.
2. One study ranks countries such as Australia, France, and South Africa—that are very active in the PPP market—lower than the U.S. in terms of ease of doing business. The World Bank and the International Finance Corporation, "Doing Business 2012," Washington: 2011.
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4. U.S. Department of Transportation, "Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance Report to Congress," 2009.
5. This is because the traditional transportation provision in the U.S.—"Design, Bid, Build"—limits itself only to the separate contracting of design and construction to the private sector. See U.S. DOT, 2009, exhibit 6-19.
6. PPPs can be categorized based on six criteria: new or existing business, new build or refurbishment, the involvement of private upfront financing, delivery of services to single or multiple users, and different sources of project revenue. See Jeffrey Delmon, "Understanding Options for Public-Private Partnerships in Infrastructure," The World Bank Policy Research Working Paper 5173, 2010.
7. William J. Mallett, "Public-Private Partnerships (PPPs) in Highway and Transit Infrastructure Provision," Washington: Congressional Research Service, 2008.
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9. Government Accountability Office, "Public-Private Partnerships: Terms Related to Building and Facility Partnerships," GAO/GGD-99-7, 1999.
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13. World Bank and the Public-Private Infrastructure Advisory Facility (PPIAF), "Public-Private Partnership Units- Lessons for their Design and Use in Infrastructure," 2007; and OECD, 2008.
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15. OECD, 2008.
16. UK National Audit Office, "Performance of PFI Construction," 2009.
17. Allen Consulting Group, "Performance of PPPs and Traditional Procurement in Australia," Report to Infrastructure Partnerships Australia, 2007.
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19. Public Works Financing (PWF), "2011 Survey of Public-Private Partnerships Worldwide," 264, 2011: 1-24. PWF defines a PPP as one of the following "three types of long-term arrangements: the introduction of private sector ownership, full or partial, in state owned companies; arrangements where the public sector contracts to purchase quality services on a long-term basis so as

- to take advantage of private sector management skills incentivized by having private finance at risk. This includes concessions and franchises, where a private sector partner takes on the responsibility of providing a public service, including maintaining, enhancing or constructing the necessary infrastructure; and selling government services into wider markets, and other partnership arrangements where private sector expertise and finance are used to exploit the commercial potential of government assets.”
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