

Public–Private Partnerships (P3s)

Transportation Finance Innovations

Quick Facts

- P3s include any contractual arrangement in which the private sector takes on more risk.
- P3 goals may vary from raising funds from lease of an existing facility (brownfield), to constructing a brand-new facility (greenfield).
- P3s do not necessarily involve toll facilities.

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PUBLIC–PRIVATE partnerships (P3s) are contractual agreements between a public agency and a private entity that allow for greater private participation in the delivery of transportation projects. Typically, this participation involves the private sector taking on additional project risks, such as design, construction, finance, long-term operation, and traffic revenue. At present, there are more than 40 current or anticipated P3 projects involving private financing in the U.S. portfolio. Generally, the value of each of these P3s ranges from a few hundred million dollars to a few billion dollars.

How Do They Work?

Under traditional procurement, private contractors construct projects based on a public design with public financing and turn them over to the public upon completion for operations and maintenance. More recently, Design-Build procurement—under which the private sector is responsible for designing and building projects for a fixed price—has been increasing. Under P3 models, the private sector may also participate in design, finance, operations, and maintenance.

Alternative Payment Models for P3s

In addition to differing risk allocations, P3s also feature different compensation arrangements. In some cases, the private sector can receive compensation through obtaining the right to collect the tolls on a facility. In that case, the concessionaire is also accepting “traffic risk”—the risk that the facility’s traffic will not be sufficient to provide adequate revenue. Another model involves availability payments, in which the concessionaire receives a payment based on the availability of a facility at the specified performance level. In this case, the concessionaire accepts operational and appropriation risks—the risks that (a) the concessionaire does not meet the contractual



I-595 corridor roadway improvements.

performance targets or (b) the public sector does not receive sufficient appropriation to make the required payment.

The chart on side 2 of this fact sheet presents a sampling of payment models for P3s; States can create other compensation structures that provide incentives to achieve their goals.

What Are the Benefits?

P3s can provide access to private capital, reduce costs borne by transportation agencies, accelerate project delivery, shift project risk, spur innovation, and provide for more efficient management.

Long-term concessions can improve asset management—the same party that constructs the project is responsible for long-term operation. This creates incentives to build a higher quality facility that is easier to maintain.

How Is It Used?

P3s are undertaken for a variety of purposes. In some cases, the purpose is to use existing assets to generate funds (asset monetization), such as with the Chicago Skyway. In other cases, P3s are used to develop greenfield (i.e., new construction) projects (e.g., North Tarrant Express in Ft. Worth, TX) or to rehabilitate and expand existing facilities (e.g., the Capital Beltway high-occupancy toll lanes in Northern Virginia). It is important to note that P3s are a procurement

Private Risk Under Typical Procurement Structures

P3 Structure	Design Risk	Const. Risk	Financial Risk	O&M Risk	Traffic Risk	Revenue Risk
Traditional Design–Bid–Build		×				
Design–Build	×	×				
Design–Build–Finance–Operate–Maintain	×	×	×	×	Yes, if traffic-based payment (i.e., toll or shadow-toll payment structure)	Yes, if performance based payment (i.e., availability payment structure)

Note. Const. = Construction; O&M = Operations and Maintenance.

Alternative Compensation Models for Public–Private Partnerships

Model	Description
Toll Concession	Private partner takes on project in exchange for receiving tolls. Public sector usually limits rate of toll increase in some way.
Shadow Toll Concession	Private partner receives payment for each vehicle that uses the facility. Sometimes payment is adjusted based on safety, congestion, or pre-established floors and ceilings.
Availability Payment	Private partner receives payment based on availability of the facility at a specified performance level.

option, not a revenue source. Although P3s may increase financing capacity and reduce costs, the public sector still has to identify a source of revenue for the project.

Potential Advantages

- May accelerate delivery.
- May enable longer term view of asset management.
 - May provide access to additional capital.
 - May reduce public cost and/or debt requirements.

Potential Limitations

- Require considerable administrative cost and time to develop, analyze, procure, and monitor.
 - Although P3s can offer access to capital, they do not provide States with new revenue; in fact, P3s need a revenue stream to work.
 - May not be the most cost-effective or appropriate procurement model for projects

if the public sector can deliver better value without it.

Considerations

- Difficult to determine appropriate level of return on investment for the private sector and to ensure fair rates for users.
 - Enabling State legislation may be required.
- Procurement involves difficult financial, legal, and technical issues. States need to acquire the technical and institutional capacity to develop and oversee P3s and will need to hire outside expertise to help in various phases, including planning, project feasibility evaluation, and contract negotiations.
 - Most countries with P3 programs require rigorous analysis, such as a “value for money analysis,” which evaluates the relative value of delivering the project through a P3 versus a more traditional procurement model.



PROGRAM AREAS OF THE OFFICE OF INNOVATIVE PROGRAM DELIVERY

IPD provides a one-stop source for expertise, guidance, research, decision tools, and publications on program delivery innovations. Our Web page, workshops, and other resources help build the capacity of transportation professionals to deliver innovation.

PROJECT DELIVERY

IPD’s project delivery team covers cost estimate reviews, financial planning, and project management and assists FHWA Divisions with statutory requirements for major projects (e.g., cost estimate reviews, financial plans, and project management plans).

PROJECT FINANCE

IPD’s project finance program focuses on alternative financing, including State Infrastructure Banks (SIBs), Grant Anticipation Revenue Vehicles (GARVEEs), and Build America Bonds (BABs).

PUBLIC–PRIVATE PARTNERSHIPS

IPD’s P3 program covers alternative procurement and payment models (e.g., toll and availability payments), which can reduce cost, improve project quality, and provide additional financing options.

REVENUE

IPD’s revenue program focuses on how governments can use innovation to generate revenue from transportation projects (e.g., value capture, developer mitigation fees, air rights, and road pricing).

TIFIA

The Transportation Infrastructure Finance and Innovation Act (TIFIA) program provides credit assistance for significant projects. Many surface transportation projects—highway, transit, railroad, intermodal freight, and port access—are eligible to apply for assistance.

