



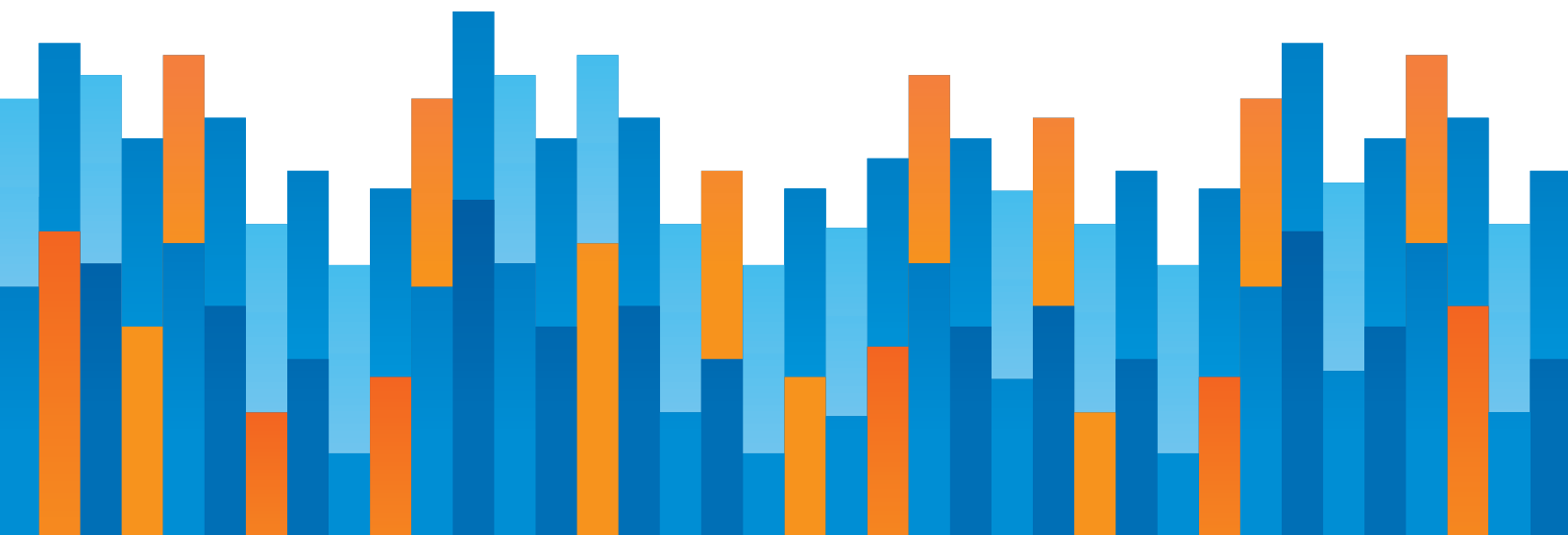
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REASON HOW-TO GUIDE

HOW TO IMPLEMENT A HIGHWAY PUBLIC-PRIVATE PARTNERSHIP

by Baruch Feigenbaum

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INTRODUCTION

U.S. highways are facing a perfect storm of infrastructure nearing the end of its design life, growing travel demand, and an increasingly unreliable revenue stream. By tapping into private capital, public-private partnerships (P3s) provide one tool to stretch existing state department of transportation (DOT) resources further. But P3s provide many additional advantages. They help shift risk from taxpayers to the private sector. In the current inflationary environment, speeding up project delivery could reduce costs as well as bring innovation and new ideas to roadway construction. Finally, P3s provide long-term asset management and performance.

This how-to guide for implementing a highway P3 is designed both for states that have appropriate enabling legislation but have implemented few P3s (most states) as well as states that lack enabling legislation.

This guide has the following components:

- An explanation of P3s, detailing what P3s are and what they are not, as well as why transportation agencies would want to use them;
- How to set up a dedicated transportation P3 program in a state, including enabling legislation, a P3 Office, and a P3 steering committee. States with dedicated P3 Offices have more robust and successful P3 programs;
- How to differentiate between solicited and unsolicited proposals, and to prioritize projects and implement screening;

- Project stage development, including analyzing value for money;
- An explanatory roadmap and useful checklist for a project procurement process;
- An examination of a state's responsibilities after a project reaches financial close but before it opens to the public; and
- A P3 state review and audit process for ensuring the private party meets the terms of the contract.

P3 projects include many terms and acronyms not used in traditional transportation projects. Readers can refer to Appendix B for a comprehensive glossary of terms and acronyms.

WHAT IS A P3?

P3s for highways, bridges, and tunnels are long-term contractual agreements between the state DOT and one or more private sector design and construction firms to carry out projects traditionally handled in house by DOTs.¹

Well-written P3s agreements seek to balance risks to benefit DOTs, private partners, and taxpayers. Optimally allocating risk among different partners creates incentives for the private provider to deliver and operate infrastructure more efficiently than if the project were undertaken via traditional design-bid-build procurement. With design-bid-build procurement, the owner (the state) procures the design and build stages separately from each other. The owner assumes all the risks, particularly financial.²

States and local governments are using P3s to deliver new transportation capacity and modernize existing capacity, thereby improving highway infrastructure while reducing risks to taxpayers. P3s come in many forms, including both development of new infrastructure (“greenfield” projects) and maintenance and improvement of existing infrastructure (“brownfield” projects).

¹ Baruch Feigenbaum, “Risks and Rewards of Public Private Partnerships for Highways,” Reason Foundation, December 2011. https://reason.org/wpcontent/uploads/files/public_private_partnerships_for_highways.pdf (9 Apr. 2022).

² “Design-Build vs Design-Bid-Build What You Need to Know,” *asd-usa.com*, ASD, 9 Feb. 2021. <https://www.asd-usa.com/blog/design-build-vs-design-bid-build/> (22 July 2022).

P3 projects offer governments a way to address problems of aging infrastructure, increasing demand, and constrained budgets. Compared with conventional delivery mechanisms, P3 projects have five significant advantages:³

- **Ensuring successful delivery and operation of needed transportation infrastructure:** P3s offer a way to long-term finance the construction and operation of highway projects that otherwise would not be built until years later or not at all. Many states are facing a “perfect storm” of growing demand for road transportation and declining revenues from conventional sources. DOTs often lack the resources to adequately maintain and renovate existing systems to states of good repair (the principle adopted by most DOTs of Fix It First), leading over time to deferred maintenance problems. Traffic congestion is also getting worse.⁴ With long-term P3s, the private sector takes on much or all the responsibility and risk for financing major highway project construction and operations for decades, enabling governments to reserve existing funds for functions better handled by DOTs, such as smaller projects and routine highway maintenance.
- **Raising large, new sources of capital for toll projects:** Rebuilding and modernizing our Interstates and other freeways will be very costly. The long-term P3 model can raise significant investment capital for new and reconstructed highways because it appeals to various types of equity investors, including infrastructure investment funds, pension funds, banks, and insurance companies. However, some dedicated funding either through tolls or long-term annual appropriations is needed.
- **Shifting risk from taxpayers to investors:** P3s parcel out duties and risks to the parties best able to handle them. The state remains responsible for public rights-of-way and environmental permitting. Private companies typically assume the risks associated with construction cost overruns, late completion, deferred maintenance, and possible revenue shortfalls from tolled projects. Shifting these risks to parties that have strong financial incentives to contain costs increases the likelihood that the project will be completed on time, and costs will be kept within budget.
- **Providing a more business-like approach:** Compared with government-run toll agencies, private toll road operators are less susceptible to pressure from narrow political special interests and tend to be more customer-service-oriented. They are quicker to adopt cost-saving and customer-friendly technology products and

³ Feigenbaum, “Risks and Rewards of Public Private Partnerships for Highways.”

⁴ “Urban Mobility Report,” *Texas A&M Transportation Institute*, mobility.tamu.edu, 2022. <https://mobility.tamu.edu/umr/> (18 Oct. 2022).

services. For example, by modifying the design of the I-495 high occupancy toll lanes in Virginia, the private developer/operator was able to add four express lanes for 25% less than the budget originally proposal by the state.⁵

- **Enabling major innovations:** Another important advantage is the private sector's motivation to innovate to solve difficult problems or improve service. Variable pricing (also known as value pricing) works very well to reduce traffic congestion during peak periods, maximizing throughput while maintaining high speeds. A private toll company in California took the initiative to introduce and perfect variable pricing, which is now standard on many modern P3 toll facilities, especially express toll lanes.

P3s are a financing and risk management tool, not a revenue source, per se. However, many highway P3s include tolling, which is a revenue source. P3s may also use some revenue from gas taxes, sales taxes, or the general fund, depending on the type of P3 model used. Financing tools raise the capital needed for a project up front and pay it off over time via contractually agreed payments. This is the way nearly all Americans purchase their homes and most of their automobiles. Financing enables major facilities to be constructed now, rather than decades in the future, as long as there is a reliable revenue stream to repay the investors—either generated by the project itself or set aside contractually by government.

Full P3s have five components: design, build, finance, operate, and maintain, commonly abbreviated DBFOM. However, some P3s have only four of the five components, typically lacking the financing or operations components.

THREE TYPES OF DBFOM HIGHWAY P3S

1. Toll concessions
2. Availability payment concessions
3. Hybrid concessions

⁵ Benjamin Perez et. al., "Priced Managed Lane Guide 2012," Federal Highway Administration, *fhwa.gov*, Oct. 2012. <https://rosap.ntl.bts.gov> (29 Sep. 2022).

There are three types of DBFOM highway P3s: toll (revenue-risk) concessions, availability payment concessions, and hybrid concessions. In all three types, the winning developer, based on a detailed concession agreement, enters the capital markets to finance the deal, raising the entire construction cost up front. In toll concessions, highway tolls provide the revenue to service the debt and provide a hoped-for return on the private party's investment. In availability payment concessions, the company receives a schedule of payments from the state over the life of the concession. In a hybrid agreement, tolls provide part or all of the revenue, but the government sets the toll rates and collects the tolls and makes annual availability payments to the concessionaire.

Given their high procurement costs, DBFOM concessions are most valuable for large projects (\$500 million or more). For smaller projects, the costs of doing the procurement may exceed the cost and quality improvements resulting from a P3.

SETTING UP A STATE P3 PROGRAM

This part examines state P3 enabling legislation and how to create a state P3 Office and steering committee.

OVERVIEW OF P3 AUTHORITY

Thirty-eight states, the Port Authority of New York and New Jersey, and Puerto Rico have at least limited P3 enabling authority,⁶ but only 11 states have entered into full P3s. Table 1 categorizes state P3 statutory authorities. States with broad authority do not limit the use of P3 procurements to certain types of projects or sponsoring agencies, whereas states with limited authority do.

⁶ “State P3 Legislation.” Center for Innovative Finance Support, *fhwa.dot.gov*, 2018. www.fhwa.dot.gov/ipd/p3/legislation/ (15 Feb. 2022).

TABLE 1: STATES BY P3 AUTHORITY

Broad Enabling Authority	Limited Enabling Authority	States Entering into Full P3s
Arizona Colorado Delaware Florida Georgia Illinois Indiana Kentucky Louisiana Maine Maryland Massachusetts Michigan Mississippi Missouri New Hampshire New Jersey North Carolina Ohio Oregon Pennsylvania South Carolina Virginia Washington West Virginia	Alabama Alaska Arkansas California Connecticut Minnesota Nevada Oklahoma Tennessee Texas Utah Vermont Wisconsin	California Colorado Florida Indiana Maryland Michigan North Carolina Ohio Pennsylvania Texas Virginia
Other Bodies with Broad Enabling Authority		Other Bodies Entering into Full P3s
District of Columbia		Port Authority of NY/NJ Puerto Rico

Source: Center for Innovative Finance Support: State P3 Legislation. *FHWA.DOT.gov*.

Only 29% of states with P3 authority have entered into P3s, largely because these states have either unworkable P3 enabling legislation or they lack interest in obtaining political support—or both. This might result from compromises made in the legislative process,

changes in state law and policy since the P3 act was enacted, or poorly conceived legislation. For example, some legislatures have placed a cap on toll rates, which can reduce or eliminate interest for concessionaires who can enter into projects in other jurisdictions. Other states may have passed legislation that requires the legislature to approve the project multiple times, creating significant political risk.

Some states naturally have a larger number of highway P3 opportunities than others. Specifically, states with urbanized areas that are growing rapidly, Interstate corridors in need of modernization as well as widening, and highly populated metro areas will have more P3 opportunities. But every state can use P3s, even in rural areas. For example, in the Rapid Bridge Replacement Program, Pennsylvania used an availability payment DBFM P3 to rebuild more than 550 of its rural bridges. Most of the bridges had fewer than 500 vehicles per day using them, so toll revenue would have been far too low to permit toll revenue bonds to be issued.⁷ Further, toll collection equipment costs would not have been justified based on such low traffic counts.

P3 REBUILDS 550+ RURAL BRIDGES IN PENNSYLVANIA

In the agreement between PennDOT and Plenary Keystone Partners, the concessionaire was responsible for demolishing and replacing the existing bridges, maintaining traffic during construction, and then maintaining the new bridges for 25 years following construction. Most of the bridges range from 40 to 75 feet in length and are located in rural regions on the state highway system. PennDOT chose the P3 structure to accelerate the replacement of the bridges and facilitate efficiencies in design and the construction of bridge components. This has resulted in a 20% cost savings over the life of the concession period compared to PennDOT's replacing the bridges itself. Prior to the P3, Pennsylvania had the second highest percentage of deficient bridges in the country.⁸ Today, Pennsylvania has the fifth highest percentage of deficient bridges.⁹

⁷ "Project Profile: Pennsylvania Rapid Bridge Replacement Project," Federal Highway Administration, Center for Innovative Finance Support, *fhwa.dot.gov*, 2022. https://www.fhwa.dot.gov/ipd/project_profiles/pa_rapid_bridge.aspx (2 Mar. 2022).

⁸ David Hartgen and Ravi Karanam, "16th Annual Highway Report," Reason Foundation. 1 June 2007. <https://reason.org/policy-study/16-annual-highway-report/> (2 Mar. 2022).

⁹ Baruch Feigenbaum and Spence Purnell, "26th Annual Highway Report," Reason Foundation, Nov. 2021. <https://reason.org/wp-content/uploads/26th-annual-highway-report.pdf> (2 Mar. 2022).

The success of the Rapid Bridge Replacement Program also negates one reason that states give for not using P3s: a lack of traffic congestion. The Rapid Bridge Replacement Program focused on rural bridges, some used by fewer than 100 vehicles per day.¹⁰ If a P3 can be used in this situation, a P3 can be used on every state's highway network.

P3 ENABLING LEGISLATION/LEGISLATIVE MODIFICATIONS

Each state has dedicated statutes to govern the procurement process in that jurisdiction. But first, in order to procure a P3, states need to have enabling legislation.¹¹ To create P3 enabling legislation best suited for their state, policymakers must consider the scope of authority, desired regulations, and process guidelines. This guide uses Virginia as a model because it is widely considered to have the most robust bipartisan P3 law.

To increase P3 feasibility, both states without P3 enabling legislation and the 29 states that have P3 authority but have not entered into any P3s need to write or revise their enabling legislation. Since state constitutions and legislative frameworks differ, the framework will be slightly different for each state. But ideally, all P3 enabling legislation should include the following components:¹²

- Enable each of the three different DBFOM P3 delivery methods: revenue-risk toll concessions, availability payment concessions, and hybrids if possible (some states are unable to enter into availability payments because they cannot legally obligate future revenue to a specific project). In toll concessions, tolling is used as the revenue source and the revenue risk is transferred to the private partner. In availability payment concessions, another revenue source such as gas taxes or sales taxes is used, and the revenue risk remains with the government. In hybrids, tolling is used as one of several revenue sources and some or all of the revenue risk remains with the government. Toll concession P3s are the best alternative when feasible because they include a new revenue source and transfer the revenue risk to the concessionaire. However, the concessionaire may be unwilling to take the full

¹⁰ "What is the Rapid Bridge Replacement Project," *parapidbridges.com*. Plenary Walsh Keystone Partners, 2019. <http://parapidbridges.com/projectoverview.html> (2 Mar. 2022).

¹¹ "Guidebook on Financing of Highway Public-Private Partnership Projects," Federal Highway Administration *fhwa.org*, Dec 2016. https://www.fhwa.dot.gov/ipd/p3/toolkit/publications/other_guides/financing_of_highway_p3_projects/ch_1.aspx (20 Oct. 2020).

¹² "Public Private Partnership Model State Legislation," Bipartisan Policy Center, Dec. 2015. <https://bipartisanpolicy.org/download/?file=/wp-content/uploads/2019/03/BPC-P3-Enabling-Model-Legislation.pdf> (2 Mar. 2022).

revenue risk in certain tolling projects, requiring the government to retain some or all of the risk. Finally, not all P3s are suitable for tolling. The Pennsylvania Rapid Bridge Replacement Program is one such example.

- Create a state office dedicated to providing P3 expertise and assistance. Section 3.3 details how to create such an office. A P3 Office contains staff whose sole or primary job is to evaluate and enter into P3 projects. The office can focus solely on transportation projects or include water, broadband, and other projects.¹³
- Create a board or steering committee to oversee P3s, also covered in Section 3.3
- Ensure the legislation requires a value for money analysis. A value for money (VfM) analysis compares the financial impacts of a P3 project with those of the traditional public delivery option.¹⁴ Section 4.1.1 provides more details on conducting a VfM analysis.
- Ensure the project meets the state’s transportation goals. Most states have a long-range transportation plan that includes a list of projects and priorities that meet the state’s transportation goals.¹⁵ Section 4.1.2 discusses aligning P3 projects with state transportation goals.
- Ensure the legislation addresses the following legal topics:¹⁶
 - Affected jurisdiction;
 - Dedication of public property;
 - Powers and duties of the private entity;
 - Comprehensive agreement;
 - Federal, state, and local assistance;
 - Material default and remedies;

¹³ Baruch Feigenbaum, “Annual Privatization Report: Surface Transportation,” Reason Foundation, June 2021. <https://reason.org/wp-content/uploads/annual-privatization-report-2021-surface-transportation.pdf> (2 Mar. 2022).

¹⁴ “Value for Money Analysis for Public Private Partnerships,” Federal Highway Administration, Center for Innovative Finance Support, *fhwa.dot.gov*, 2022. https://www.fhwa.dot.gov/ipd/fact_sheets/p3_toolkit_03_vfm.aspx (11 Mar. 2022).

¹⁵ “NC Moves 2050 Plan,” North Carolina Department of Transportation, *ncdot.gov*, Feb. 2021. <https://www.ncdot.gov/initiatives-policies/Transportation/nc-2050-plan/Pages/default.aspx> (11 Mar. 2022).

¹⁶ “2013 Code of Virginia, Title 56 Public Service Companies, Chapter 22 Public Private Transportation Act of 1995,” *law.justia.com*, Justia US Law, 2022. <https://law.justia.com/codes/virginia/2013/title-56/chapter-22> (11 Mar. 2022)

- Condemnation;
- Utility crossings;
- Police powers; and
- Dedication of assets.

States might not pass P3 legislation on the first attempt. P3 champions and transportation agencies may need to create an education campaign to explain to elected officials and taxpayers the advantages of using P3s as a highway delivery option. It is critical that the legislation address as many of the components in this section as possible. It is better to wait and pass good legislation than to pass incomplete or confusing legislation that must be amended in subsequent legislative sessions. It's also important to note that enabling legislation merely allows agencies to enter P3s. It places no obligation on them to do so.

CREATING A STATE P3 OFFICE

After a state passes or revises its P3 statutory authority, it should create a dedicated P3 Office. States with P3 Offices are far more likely to implement successful P3s than states without such an office. Virginia provides a good model.

When Virginia passed the Public-Private Transportation Act in 1995, it created a P3 Office to oversee all P3 projects. The office was tasked with using analytical tools such as cost-benefit analysis and VfM analysis to determine if a project worth building makes sense to procure as a P3.

The office works with potential private developers in all stages of the P3, from request for information (RFI) to request for qualifications (RFQ) to request for proposal (RFP) to commercial and financial closings. It coordinates P3 activities on behalf of taxpayers among the state legislature, the state transportation board, the P3 steering committee, and the private developer. The office also helps address political concerns from the legislature while ensuring that the executive branch makes the final decisions.

CREATING A P3 STEERING COMMITTEE AND STAFFING IT

After a state passes or amends its P3 legislation and creates a dedicated P3 Office, it should also create a state P3 steering committee. Most steering committees are a mix of DOT officials, state transportation board members, members or staff of the state legislature's finance and/or transportation committees, state financial experts, and private-sector transportation experts. Virginia's P3 steering committee consists of seven members:¹⁷

- A deputy secretary of transportation (Virginia has two), serving as chairperson;
- Two members of the state transportation board (called the Commonwealth Transportation Board in Virginia);
- The staff director of the House Committee on Appropriations, or a designee;
- The staff director of the Senate Committee on Finance, or a designee;
- The chief financial officer (CFO) of the state DOT; and
- A non-agency public financial expert, as selected by the secretary of transportation.

In Virginia, the steering committee chooses the P3 Office executive director. The executive director is responsible for overseeing all phases of the P3 program: project identification and screening, project development, procurement, and implementation. These tasks also include ensuring compliance with applicable policies, regulations, and statutes; conducting public outreach and stakeholder engagement; and acting as the liaison to the P3 industry.




The board is also responsible for creating a general P3 framework. P3s are unlike conventionally procured projects in that multiple state and outside legal, financial, design, and engineering experts must work together during all stages of the procurement. As a result, there is no single organized flowchart that describes work processes.

After states have passed P3 enabling legislation, created a P3 Office (if included in the enabling legislation), and a P3 steering committee, they move onto the next step, detailed in Part 4, which is developing a process for project identification and screening for both solicited and unsolicited projects.

¹⁷ "PPTA Implementation 2017 Manual and Guidelines," Virginia Department of Transportation, *p3virginia.org*, Oct. 2017. https://www.p3virginia.org/wp-content/uploads/2017/12/2017-PPTA-Manual-and-Guidelines_FINAL.pdf (2 Mar. 2022).

The following checklist encompasses the main steps each P3 procurement should take. Note that financial and risk analyses continue throughout the process with increasing information on costs, risks, innovations, design options, etc. This process accounts for the fact that P3s offer a chance for the private sector to weigh in on state-of-the-art innovations, or simply unforeseen conditions, that may affect financial and risk assessments. This is a generalized checklist. Each part of the process should be tailored to the type of procurement considered.

FIGURE 1: P3 PROJECT CHECKLIST

<p>PART 1: PLAN THE PROJECT IDENTIFICATION AND SCREENING</p> <ul style="list-style-type: none"> ✓ <i>Project goals:</i> What is the purpose of the project? ✓ <i>Value for money (VfM) analysis:</i> Compare the financials between options. ✓ <i>Risk assessment:</i> Identify risks for both public and private sector. Which party is best equipped to manage which risks? ✓ <i>Determine local support/Decide to move forward:</i> Based on technical characteristics and local perspectives, decide whether/how to move forward. 	
<p>PART 2: PLAN THE PROJECT DEVELOPMENT</p> <ul style="list-style-type: none"> ✓ <i>VfM analysis, continued:</i> Compare the financials between options. ✓ <i>Risk assessment, continued:</i> Identify risks for both the public and private sectors. Which party is best equipped to manage which risks? ✓ <i>Determine project delivery method:</i> Compare P3s with other delivery methods. ✓ <i>Market sounding:</i> Discussion between the DOT and potential concessionaires. ✓ <i>Formal request for information (RFI) from the potential concessionaires</i> ✓ <i>Report project development details to Steering Committee</i> 	
<p>PART 3: PLAN THE PROJECT PROCUREMENT</p> <ul style="list-style-type: none"> ✓ <i>Formal request for qualifications (RFQ) to concessionaires:</i> Post a draft RFQ, evaluate responses, assess the financial elements, and present this info to state officials. ✓ <i>Request for proposals (RFP):</i> Issue the RFP, evaluate proposals, and select a preferred proposer. ✓ <i>Material changes:</i> DOT may change the procurement, notifying concessionaires. ✓ <i>Update final VfM analysis</i> ✓ <i>Update risk assessment</i> ✓ <i>Award preferred proposer</i> ✓ <i>External party conducts audit</i> ✓ <i>Report to State Transportation Board</i> ✓ <i>Legal agreement and financial close of P3</i> ✓ <i>Final risk assessment</i> ✓ <i>Report full details of all proposals to Steering Committee</i> 	

PROJECT SCREENING AND IDENTIFICATION

A screening process identifies which planned transportation projects make sense as P3s, and which unsolicited projects (detailed in section 4.1.2) are in the best interest of taxpayers. Several P3 project analyses might be started in one stage and then refined in another. For example, value for money (VfM) analysis typically occurs in the project identification, project development, and the project procurement phases.

The project identification and screening phase helps assist state P3 officials in determining the desirability, suitability, and feasibility of delivering a highway project as a P3 (or accepting an unsolicited P3 project). The P3 review process uses qualitative and quantitative criteria to identify and screen projects. Projects should meet common highway objectives such as improving safety, reducing congestion, accommodating increased travel demand, and enhancing economic efficiency.

Legislation should also allow states to receive and evaluate unsolicited proposals from the private sector. Unsolicited proposals are more likely to introduce innovation and new technologies into a project.¹⁸ However, the unsolicited proposal process needs guardrails.

¹⁸ Robert Poole, "Availability Payment or P3 Concessions? Pros and Cons for Highway Infrastructure," Reason Foundation, Nov. 2017. https://reason.org/wp-content/uploads/2017/11/infrastructure_availability_payment_revenue_risk_concessions.pdf (16 Mar. 2022).

An unrealistic unsolicited proposal could serve as a distraction. Unsolicited proposals can also take resources away from core priorities.

In most states, entities interested in formally submitting an unsolicited proposal should let the DOT know ahead of time. Solicited projects are evaluated differently from unsolicited projects. In the next three parts, some subsections refer to solicited projects, some refer to unsolicited projects, and some refer to both. If the subsection refers to only solicited or unsolicited, that information is included in parentheses next to the heading.

PROJECT GOALS

A qualitative screening process examines whether a project meets state policy goals, such as reducing congestion, providing transportation alternatives, and improving safety. The criteria may also consider whether the project is new construction (greenfield) versus modernization (brownfield), as well as the type of DBFOM P3 (toll concession, hybrid tolling, availability payment). If the findings from the qualitative screening process indicate that the project is suitable for P3 project delivery, the next step in the process is for the P3 Office to examine the technical and financial feasibility of the project under a quantitative screening process.

4.1.1 VALUE FOR MONEY ANALYSIS

Typically, the P3 Office, the DOT secretary or DOT commissioner, and the secretary of finance/treasurer are responsible for conducting a VfM analysis. It helps determine whether a project delivered as a P3 is a better overall approach compared to a traditional procurement.¹⁹ It uses a project lifecycle approach to compare the financial impacts of conventional and P3 delivery methods. A VfM analysis should be conducted prior to deciding to advance the project as a P3.

The VfM is an ongoing analysis that begins during the quantitative project screening and continues in the project development and project procurement phases until the private party and DOT agree to a deal. During quantitative project screening, the public sector comparator (PSC) or option, is defined based on available public funding and financing

¹⁹ Robert Poole, *Rethinking America's Highways: a 21st Century Vision for Better Infrastructure*, (Chicago, University of Chicago Press, 2018).

options. The PSC is used to set a maximum amount of public contribution to the proposed project. The PSC helps compare delivering a project via P3 versus conventional methods.



The VfM is an ongoing analysis that begins during the quantitative project screening and continues in the project development and project procurement phases until the private party and DOT agree to a deal.



The VfM must include comprehensive risk analysis. DBFOM toll concessions transfer all construction, finance, maintenance, and operations risk to the private sector in addition to traffic and revenue risk. Availability payment concessions do not include the transfer of revenue risk, which remains with the state. Design-bid-build contracts transfer very few risks. While P3s can have slightly higher overall costs, the value or risk transfer may provide a greater benefit. Therefore, the value of the various transferred risks must be estimated in the VfM analysis.

Another element of VfM analysis is called a competitive neutrality adjustment (CNA), which helps account for tax streams the public sector loses if it chooses traditional project delivery. It also adds costs implicitly assumed by taxpayers in conventional procurements (the PSC), such as liability insurance and employee retirement benefits. The CNA is added to the public sector comparator when it is compared to a P3.

4.1.2. POLICY REVIEW (UNSOLICITED PROJECTS ONLY)

When the DOT receives an unsolicited proposal from a potential concessionaire, the P3 Office should, within a certain timeframe, initiate a policy review. The policy review is a brief evaluation of the unsolicited proposal's concept and benefits to determine that it is in accordance with the state's transportation policy goals.

States typically use multiple criteria to assess the project. Virginia's P3 Office has seven policy review screening questions.²⁰

²⁰ "PPTA Implementation 2017 Manual and Guidelines," Virginia Department of Transportation.

- Does the proposal conform to the state's transportation goals and the policy objectives of the administration?
- Does the proposal satisfy the taxpayers' need for timely development and/or operation of a transportation facility?
- Does the proposal address a demonstrated need as identified in state, regional, and/or local transportation plans?
- Does the proposal align with existing and planned transportation systems?
- Is the proposal developed enough that a procurement process can be run including some level of price competition?
- Is the proposal consistent with federal requirements and potential agreements for federal funding and/or approval for P3 projects?
- Is the proposal currently on the list of proposed solicited projects?

4.1.3. RISK ASSESSMENT

As part of the quantitative project screening, the P3 Office will hold an initial risk workshop to identify and assess risks relating to the development, procurement, implementation, and operation of the project. Virginia's office uses a risk regulator, which is a tool to capture risk information, consequences, responses, and potential risk allocations. Risks identified during this phase will be refined as the project moves through the process.

4.1.4. DETERMINING LOCAL SUPPORT

As part of the qualitative project screening, the P3 Office should coordinate with relevant local governments and private businesses to determine the extent of stakeholder support for the project. Projects with a higher level of local support are more likely to win approval from the state.

Once state DOT leaders have determined that they want to move forward with an unsolicited P3 project, it must go through the same development process as a solicited one. This process takes the information learned in the identification phase and uses it to flesh out more detailed information about the project.

PROJECT DEVELOPMENT

After the state decides to proceed with a P3, the P3 Office needs to find out more about the project's cost, design, feasibility, compliance requirements and scope, among other critical, more detailed factors, before it starts the procurement phase. Much of the preparation builds on activities outlined in Part 4.

Just as with conventional projects, each P3 project needs a DOT project manager, who is responsible for getting the project ready for procurement with assistance from other DOT offices and external advisors, if necessary. The P3 Office executive director is responsible for coordinating with other agencies, the steering committee, and the state transportation board throughout the project development phase, and for providing project information such as budget, scope, and schedule to the leader of the P3 Office. Every P3 project is different; if you've seen one P3, you've seen one P3. The following activities typically occur during the project development process:

- Defining project scope, design concept, and phasing schedule;
- Analyzing compliance with environmental and transportation planning requirements;
- Analyzing technical feasibility and operations and maintenance evaluations;
- Refining project cost, revenue estimates, and lifecycle costing of alternatives;
- Submitting funding and grant applications;

- Performing outreach, coordinating public involvement, and building stakeholder support;
- Defining an approach to risk allocation and management;
- Continuing the VfM analysis initiated at the project identification and screening phase;
- Soliciting information from the private sector through a request for information (RFI); and
- Soliciting comments/feedback from the public through the P3 Office website.

For P3 projects requiring federal action, the P3 Office or other initiating agency needs to follow federal laws to ensure that decisions regarding location, user fees, and capacity are made after consideration of alternatives to address needs and impacts of the project. Federal actions include environmental reviews under the National Environmental Policy Act (NEPA) and financing reviews for Transportation Infrastructure Finance and Innovation Act (TIFIA) loans and Private Activity Bonds (PABs).

VALUE FOR MONEY ANALYSIS

The VfM analysis that was started in Part 4 continues. The P3 Office refines project cost, revenue estimates, and lifecycle costing of alternative scenarios under both a traditional procurement and a P3 delivery model. The analysis is supplemented with data on risk allocation and (for projects using tolling) projected traffic and revenue. Different projects will require different methodologies: For example, the analysis for revenue-risk concessions will differ from an availability payment concession in which the DOT retains some or all of the revenue risk. The analysis should be applied to all P3 projects in the project development phase to ensure that the P3 delivery method continues to offer the best value.

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... the analysis for revenue-risk concessions will differ from an availability payment concession in which the DOT retains some or all of the revenue risk.

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RISK ASSESSMENT

During the project development phase, the P3 Office should conduct an interim risk workshop to update the risk register. The Office updates the risk register by conducting a quantitative assessment of all risks identified, analyzing the corresponding risk response, and examining the preferred risk allocation. The P3 Office develops a risk management plan to detail actions taken to manage project risks and identify the minimum contingency levels needed to minimize risk exposure.

DETERMINING IF A P3 IS THE BEST PROJECT DELIVERY MECHANISM

During the project development phase, the P3 Office determines whether a P3 delivery method is the best choice for the project. Traditional DBB procurements prioritize the lowest construction cost while P3 projects prioritize the best value over the lifecycle of the asset, including decades of maintenance. Determining the best value is far more complicated than determining the lowest cost, and has multiple components:

- A description of the financial benefits for the DOT through developing and/or operating the highway, including person throughput, congestion mitigation, safety, economic development, environmental quality, and land use;
- An analysis of the public contribution necessary for developing and/or operating the facility identified under the VfM, including a maximum public contribution that will be allowed under the procurement;
- A description of the benefits for the DOT through a P3 procurement compared with developing and/or operating the transportation facility through other options;
- A statement of the risks, liabilities, and responsibilities to be transferred, assigned, or assumed by the concessionaire, and those to be retained by the DOT;
- A discussion of whether revenue risk will be transferred to the concessionaire and the degree to which any such transfer may be mitigated through other provisions in the interim or comprehensive agreements;
- The determination of whether the project has a high, medium, or low level of project delivery risk and a description of how such determination was made. If the project is considered high risk, a description of how taxpayers will be protected through the

transfer, assignment, or assumption of risks or responsibilities by the preferred proposer; and

- If the DOT enters into an Interim or Comprehensive Agreement using competitive negotiations (otherwise known as a progressive P3), information and the rationale demonstrating that proceeding as a P3 is more beneficial than using competitive sealed bidding.

MARKET SOUNDINGS

A market sounding is a structured dialogue between the DOT and the potential concessionaires.²¹ The sounding tests the viability of the project and allows the private sector to provide feedback on the project's viability. Effective soundings include both prospective bidders and supporting entities such as lenders and legal advisors. The typical sounding includes an in-person meeting, written communications, or a presentation. Soundings include multiple aspects including scope, technical risks, payment mechanisms, risk allocation, financial assumptions, and timetable.

The sounding tests the viability of the project and allows the private sector to provide feedback on the project's viability.

REQUEST FOR INFORMATION (RFI)

To obtain more information from the private parties and other interested stakeholders, the P3 Office or DOT may issue an RFI. The agency can also conduct public and industry briefings to discuss project elements. These forums offer opportunities for public comments and private sector input to improve or refine the scope, risk allocation, and technical requirements of the project. The agency overseeing the project may also conduct one-on-one meetings with the potential private partners to solicit additional feedback. DOT will

²¹ "How to Conduct the Market Sounding," *ppp-certification.com*, APMG International, 2022. <https://ppp-certification.com/ppp-certification-guide/91-how-conduct-market-sounding> (10 June 2022).

often conduct a market sounding or a request for information. But conducting both has value, as a market sounding can help the DOT decide what information to include in an RFI.

REPORT TO STEERING COMMITTEE

At the conclusion of P3 project development and before initiating the project procurement phase, the P3 Office should present the VfM analysis at a meeting of the steering committee. At this meeting, the steering committee will determine if the following criteria have been satisfied:

- Assumptions regarding the project scope, benefits, and the VfM analysis are developed and reasonable;
- Financing costs and valuation of both financial and construction risk mitigation included in the VfM are accurate and reflect the best value to taxpayers; and
- A terms sheet that includes all steps of the project development, demonstrates that a P3 project is the best choice, and confirms that the DOT is ready to move to the procurement stage.

The P3 Office may also brief the DOT on studies and activities, including the results of an RFI, an initial schedule for project delivery, preliminary procurement documents, activities related to risk assessment, an initial estimation of the cost, the potential economic benefits, and the preliminary business points to determine whether the project should continue to the procurement phase.

At this stage the P3 Office determines whether it will proceed with a P3, procure the project through conventional means (such as with a design-build process), or not proceed with the project at all. Part 6 explains how a P3 Office procures a P3.

PROJECT PROCUREMENT

Procuring a project as a P3 is complicated. Several states have been tripped up—not because they chose the wrong project to procure as a P3, but because they did not have the necessary staff, design, or controls. This part details the series of steps needed to procure a P3.

PROCUREMENT PROCESS

For many states with robust P3 programs, the P3 Office or initiating agency is the primary point of contact for procurements. The P3 Office director is responsible for managing a consistent, transparent, competitive, and well-defined procurement process. P3 procurement typically consists of issuing a request for qualifications (RFQ) and a request for proposals (RFP).

Over the last five years, there has been a growing trend of using pre-development agreements (PDAs) or progressive P3s. Pre-development agreements have increased in popularity due to contractors' reluctance to accept financial and other risks at such an early stage in the process.²² If states want to attract bidders, the PDA helps. Compared with a typical P3, PDAs involve the design-build contractor earlier in the process.

²² "P3 Pre-Development Agreements/Progressive P3s—Design Build Opportunities and Challenges," *dbia.org*, Design Build Institute of America Learning Center, June 2022. <https://education.dbia.org/products/p3-predevelopment-agreementsprogressive-p3s-design-build-opportunities-and-challenges> (28 June 2022).

However, PDAs may not be advantageous with a RR (Revenue Risk) toll concession because of the wide range of toll revenues that may be forecasted. For toll concessions, competition may be more appropriate than negotiation.

REQUEST FOR QUALIFICATIONS (RFQ)

The P3 Office initiates the first stage of the P3 procurement process by issuing an RFQ. The primary objective of the RFQ is to define a pool of qualified, potential proposers for the project. Private parties interested in participating in procurement respond to an RFQ by submitting what's typically called a statement of qualification (SOQ). In procurements where multiple types of delivery models are being considered, the RFQ may require the submission of a conceptual financial proposal (CFP).

6.2.1 DRAFT RFQS

Before an RFQ is issued, the P3 Office should post the RFQ in a draft format on the website. Potential bidders and the public can provide comments by using the website comment form during the procurement. For RFQs, most states provide a 30-to-60-day completion period and include information regarding the scope, nature, and timing of development as well as the operation of the project.

6.2.2 SOQ EVALUATION

The RFQ documents specify the criteria and evaluation methodology. Financial criteria (including the overall cost for constructions and operations) needs to be weighed against project benefits (such as a reduction in hours of congestion). Ultimately, the winning project should provide the most benefits at the lowest overall costs.

The DOT needs to explain to the private sector bidders how it will evaluate their qualifications. In procurements involving multiple project delivery models, proposers may choose to submit an SOQ for each delivery model or all delivery models at once. If the state receives only one SOQ, then the agency office entering the P3 can modify the procurement and ask the parties to rebid or terminate the P3. Governments should be very cautious evaluating P3s with only one proposer, because the value to taxpayers may be limited and the process may undermine public trust.

6.2.3 QUALIFICATION OF PROPOSERS

Scoring of qualifications and any ranking of the SOQs should not be carried over to the evaluation of the final RFP responses. The DOT should short-list between three and five proposers who submitted SOQs. The DOT should invite these proposers to submit a conceptual finance proposal (CFP). The P3 Office will notify all proposers in writing whether they have been qualified. The P3 Office will inform other state and federal agencies, local governments, and other stakeholders that concession teams have been qualified and invited to submit a CFP.

6.2.4 ASSESSMENT OF CONCEPTUAL FINANCIAL PROPOSALS

If multiple project delivery methods are being considered as part of the RFQ stage, the proposers will be invited to submit CFPs for the project delivery model for which they have been qualified. The CFPs may include information on a preliminary financial model, sources and use of funds, and pricing. Or proposers may choose to hold this information until they present a detailed technical proposal.

6.2.5 VALUE FOR MONEY ANALYSIS (CONTINUED)

The information in the CFPs is used for the next step in the VfM analysis.

6.2.6 PRESENTATION TO STATE OFFICIALS

At this stage, the DOT determines the preferred delivery model and then briefs the steering committee on that delivery model and the results of its evaluation of the SOQs and the CFPs. Before issuing the draft RFP, the DOT will also present the results of its evaluation of the SOQs and the CFPs, as well as its determination to continue with, terminate, or pursue a modified procurement. If the steering committee believes the proposals serve the taxpayers' interest, then the procurement moves forward.

REQUEST FOR PROPOSALS (RFP)

The second stage of procurement consists of issuing the RFP, evaluating proposals submitted pursuant to the RFP, and selecting a preferred proponent based on their submission of what is deemed the apparent best-value proposal, meaning the proposal that offers the best combination of cost and quality (value) to taxpayers.

6.3.1 DRAFT RFP

The DOT may choose to issue the RFP in draft format to shortlisted concessionaires and hold proprietary one-on-one meetings to solicit feedback and provide an opportunity to submit alternative technical proposals. The draft RFP will be issued together with the draft comprehensive agreement (CA) 30 calendar days prior to the final RFP documents being issued. The DOT must post the draft comprehensive agreement (CA) and provide an opportunity for public comments.

6.3.2 FINAL RFP

After the DOT receives and considers feedback and comments, it may then make changes to the RFP. After those changes are made, the P3 Office or DOT will issue the final RFP to shortlisted RFQ respondents.

6.3.3 EVALUATION OF RESPONSES TO FINAL RFP

The office initiating the P3 evaluates responses to the final RFP based on the scoring criteria outlined in the standard RFP document. The P3 Office may ask shortlisted proposers to make minor modifications to their proposals (sometimes called best and final offers).

For unsolicited P3s, if after the application window DOT receives less than three valid proposals, the P3 Office can conduct an assessment to determine if the proposals received are in the best interest of the public. The DOT may decide to continue, terminate, or modify the procurement. Unlike for solicited proposals, it may make sense to proceed with a project proposed by only one concessionaire.

MATERIAL CHANGES

If DOT modifies the procurement documents, the agency will report changes to the P3 steering committee and seek permission to continue the procurement with the material changes. The report will include an assessment on the original and modified procurements.

VALUE FOR MONEY ANALYSIS (FINAL)

Before awarding the contract, the initiating P3 Office will perform a final VfM analysis that takes into account new information since the initial PSC was developed. This final VfM analysis compares the DOT's PSC option and the apparent best-value proposal. The final VfM analysis confirms that awarding the project as a P3 is in the best interest of taxpayers.

SELECTION AND AWARD OF PREFERRED PROPOSER

The DOT should choose the apparent best-value proposal based upon which proposal is in the best interest of the taxpayers, after considering all costs, benefits, and adherence to RFP instructions and relevant scoring criteria. A proposal meets these conditions if:

- The preferred proposer can develop and operate the transportation facility or facilities with a public contribution amount that is less than the maximum public contribution determined under the VfM analysis;
- The transportation facility or facilities are needed and they meet the transportation goals specified in the statewide transportation plan;
- The apparent best-value proposal is anticipated to have significant benefits as determined under the finding of public interest (FOPI);
- The apparent best-value proposal will result in the timely development and operation of the transportation facility or facilities or their more efficient operation; and
- The risks, liabilities, and responsibilities transferred, assigned, or assumed by the preferred proposer provide sufficient benefits to the public to not proceed with the development and/or operation of the transportation facility through other means of procurement available to DOT.

The steering committee will also consider the recommendation of the agency office procuring the P3, the evaluation criteria, and the VfM analysis when selecting a preferred proponent. The P3 Office will inform the preferred proponent that it has been selected and finalize the terms of the comprehensive agreement (CA) or project agreement (PA). The P3 Office will notify all other proposers in writing regarding the steering committee's decision to award the project to the preferred proposer.

RISK ASSESSMENT (CONTINUED)

During the project procurement phase, the P3 Office will conduct a risk workshop to again update the risk register and the risk management plan to reflect new project information, mitigations that have been carried out, and market factors.

P3 OFFICE AUDIT REQUIREMENTS

For projects suitable for a P3, the preferred proponent may be required to pay for an independent audit of any and all traffic and cost estimates associated with their proposal, and a review of all public costs and potential liabilities to taxpayers. This may include improvements to other transportation facilities that may be needed as a result of the proposal, ones resulting from a failure by the preferred proponent to reimburse DOT for services provided, and the potential risk and liability if the preferred proposer defaults on the comprehensive agreement or on bonds issued for the project.

REPORT TO STATE TRANSPORTATION BOARD

After the completion of the P3 Office audit, the office will report the following to the state transportation board:

- The final schedule for project delivery;
- The risk management plan;
- The final VfM analysis;
- The projected final, total project cost (including the projected public contribution for the project);
- The updated economic benefits; and
- The major business points in the draft comprehensive agreement.

During the briefing to the state transportation board, the P3 Office executive director will seek support for executing the comprehensive agreement through the board's endorsement of the certification to the governor and legislature. The P3 Office's briefing documentation and the board's endorsement of the certification to governor and legislature should be posted on the P3 Office website for public awareness for a set period of time before the surface transportation board's meeting.

COMPREHENSIVE AGREEMENT FINALIZATION AND AWARD

Prior to developing or operating a P3 project, the preferred proponent must enter into a CA with the DOT. Ideally, the P3 Office executive director will have the statutory authority to enter into the CA. If, at any point during contract finalization, the executive director determines that the preferred proposer will not provide services in the best interest of the public, then they may suspend or terminate the procurement or choose to finalize a contract with the next highest ranked proposer. This process will continue until the executive director reaches an agreement. During contract finalization, no changes to the major business terms in the draft CA will be permitted. The final authorization to develop and/or operate any P3 project is contingent upon the successful finalization and execution of the CA between the preferred proposer and the executive director.

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If, at any point during contract finalization, the executive director determines that the preferred proposer will not provide services in the best interest of the public, then they may suspend or terminate the procurement or choose to finalize a contract with the next highest ranked proposer.

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6.10.1 RISK ASSESSMENT (FINAL)

During contract finalization, the P3 Office updates the risk register and risk management plan with information from the selected preferred proposer. The P3 Office director certifies,

and the CEO endorses, the current risk register and risk management plan for use during the project implementation phase.

REPORT TO STEERING COMMITTEE

Within 60 days of the execution of the CA, the P3 Office executive director, will, in a closed session, brief the P3 steering committee on the details of the final proposals received and the details of the evaluation of such proposals.

PROCUREMENT FOR UNSOLICITED PROPOSALS

Once the P3 steering committee agrees with the VfM analysis, the DOT may decide to accept the unsolicited proposal and initiate procurement. Within 10 days from the acceptance of the unsolicited proposal, the P3 Office will post the unsolicited proposal on the DOT website. Other entities have up to 120 days to submit competing proposals. The DOT will notify those entities of any specific information regarding the nature and timing of the unsolicited proposal and outline the opportunities that will be provided for public comments during the review process. At the end of the 120-day period for submission of competing proposals, DOT will evaluate all proposals identically, whether solicited or not.

Procuring the P3 is one of the most complicated parts of the process. However, as Part 7 details, the state's role does not end after the P3 closes. Rather, the state needs to monitor and review activities after the P3 closes.

ACTIVITIES AFTER P3 CLOSING

DOTs have several activities they need to conduct after a project reaches commercial and financial close and during the construction period. P3s are long-term agreements, and the public sector continues to play key roles during the CA's term after it is signed. There are two different closings: commercial and financial. Commercial close occurs when the P3 deal is agreed to and signed by both the government sponsor and the private concessionaire. It may include final legal opinions. Financial close occurs when the funding documents, security documents, and lending agreement are executed. There may also be an update to the value for money analysis, which has been used throughout the process.

There are two different closings: commercial and financial.

POST-COMMERCIAL CLOSE

Once the P3 Office executive director and the preferred proposer execute a P3 project CA, the P3 Office begins preparing for the transition from leading project procurement to supporting the responsible DOT district project manager leading the P3's implementation. During this transition phase, the P3 Office will also continue to lead coordination efforts related to achieving financial close.

POST-FINANCIAL CLOSE

After financial close is reached, project design and construction begins as a partnership with the DOT district project manager. The P3 Office project manager assumes a supporting role during this phase, assisting with contract interpretations and documentation submittals. The P3 Office develops a checklist to ensure that the appropriate party (e.g., Federal Highway Administration, state DOT, Transportation Infrastructure Finance and Innovation Act (TIFIA) office, etc.) receives timely submittals or evidence of commitments addressed as stipulated in the CA, and other contract documents. The DOT develops a database during the project procurement phase to house all appropriate project documentation. This database will continue to be maintained during the project's implementation phase. The concessionaire and the DOT will store documents in the database.

MANAGING A P3

After a P3 agreement is signed, the public agency must manage and monitor its specified performance standards, in the construction as well as in the operating portions of the agreement, as well as technical performance during construction and operations, to ensure efficient service delivery.²³ The performance monitoring and oversight phase will require building a strong set of skills within the public agency due to the need to maintain these oversight responsibilities in-house. This monitoring and managing demands developing needed contract management skills.

SETTING PERFORMANCE STANDARDS

P3 agreements can create efficiencies through establishing long-term DBFOM partnerships that include outcome-based performance specifications. Such specifications focus on what a facility needs to achieve rather than prescribing methods and materials for accomplishing that goal. Using outcome-based performance specifications makes service delivery more efficient and possibly harnesses innovation by allowing the concessionaire flexibility to decide how best to achieve the intended results.

²³ “Monitoring and Oversight for Public Private Partnerships,” Federal Highway Administration Center for Innovative Highway Support, *fhwa.dot.gov*, 2017. https://www.fhwa.dot.gov/ipd/pdfs/fact_sheets/p3_toolkit_07_monitoringandoversight.pdf (19 Apr. 2022).

However, there is a natural tension between flexibility and accountability in performance management. If the contract does not detail required performance standards, the project may fall short in meeting taxpayer objectives. If a standard is inflexible, it may not adapt to changing technology needs. For example, one contract set a performance standard for customer service on a tollway that was based on how quickly the concessionaire responded to phone queries. By the time the concession was active, most of the customer queries were received online, which were not included in the performance standards.

MONITORING TECHNICAL AND FINANCIAL PERFORMANCE

Management and performance monitoring procedures can include self-reporting procedures, independent audits, regular meetings and reports, and using intelligent transportation systems that automate data collection and reporting processes.

8.2.1 ASSESSING PAYMENTS AND PENALTIES FOR PERFORMANCE

Typically, the concessionaire provides periodic reports to the owner that include notices of any breach of contract. Typically, the DOT will keep track of any concessionaire failure to meet the standards specified in the agreement, and assign default points. Once the default points reach a specified level, oversight may increase, the DOT may perform its own work and bill the concessionaire, work may be suspended, and in worst-case scenarios the agreement may be terminated. Typically, the concessionaire forgoes some toll revenue or receives a smaller availability payment as a penalty.

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Typically, the DOT will keep track of any concessionaire failure to meet the standards specified in the agreement, and assign default points.

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8.2.2 MANAGING DISPUTES

P3 concession agreements typically specify dispute resolution processes to reduce the risk of legal conflict over technical issues or differences in interpretation of the agreement's terms. Alternative dispute resolution processes may include mediation and third-party arbitration following a period of time allowed for both parties to make good faith efforts to resolve the dispute themselves.

Prior to mediation or arbitration, dispute resolution processes often define tiered systems of problem identification and resolution through negotiation to encourage solving problems at the lowest levels. For example, the agreement may give parties a specified time period to seek ways to resolve their dispute before elevating it to their respective managers.

8.2.3 MANAGING INFRASTRUCTURE HANDBACK PROVISIONS

P3 concession agreements generally specify the required condition of the facility at the end of the agreement's term. A facility's condition at handback depends on the maintenance and operation procedures employed throughout the facility's lifecycle, so the agreement typically requires the concessionaire to develop a capital replacement or asset management plan for equipment, systems, and assets. To manage the financial risks associated with handback, some P3 agreements require the concessionaire to establish a handback reserve account that begins to accrue toward the end of an agreement and may be used for unplanned repairs required prior to or shortly after handback of a facility to the public owner.

P3 concession agreements generally specify the required condition of the facility at the end of the agreement's term.

8.2.4 EFFECTIVE P3 GOVERNANCE

Public agencies can promote effective contracting practices by facilitating knowledge sharing between the procurement team and the project management team, planning for skill and knowledge retention over the period of the concession, and balancing the use of internal capacity and external advisors to ensure retention of that knowledge and skill. For some public agencies, the best way for the concession management team to understand and manage agreed-upon provisions is to involve team members in developing and negotiating the agreement. Public agencies can also support effective governance practices by documenting decisions and processes, and ensuring that succession planning takes place.

Mechanisms such as regularly scheduled face-to-face meetings can help develop an effective relationship between the DOT and the concessionaire. To maintain this relationship, enforcement mechanisms should be used consistently and proportionally.



Mechanisms such as regularly scheduled face-to-face meetings can help develop an effective relationship between the DOT and the concessionaire.



Managing the concession is an integral part of every P3. Management does not stop at procuring the project; P3s are a long-term partnership and will not succeed without actively monitoring the contract. DOTs need to more than manage P3s. They need to evaluate whether the P3 is working well for all stakeholders and whether it was the best delivery method. Part 9 details the evaluation necessary for successful P3s.

AUDITING/EVALUATING A P3

Agencies should always prioritize auditing and evaluating P3s throughout the process. In the design/construction phase as well as the operational phase, the goals, performance metrics, and milestones specified by the agreement should be evaluated. As P3 agreements typically last decades, waiting to evaluate progress until the end of P3 agreement does not provide sufficient taxpayer protections. By regularly assessing and re-assessing goals and project performance, agencies and their partners can address performance shortfalls together to adhere to the project's larger goals and visions.

While “auditing” is used to describe this sort of self-assessment, its mechanics are simpler and less invasive than formal accounting audits. At the end of the day, periodic evaluations can answer the question, “Are we achieving what we set out to accomplish?” Evaluations require taking data from everyday monitoring to assess whether the project is meeting performance goals, as well as re-assessing the current performance against the long-term vision. After the project concludes, a full audit of all phases of a P3 may be appropriate. This is best reserved for a full “ex post” analysis that tries to fully flesh out every aspect of comparing projections with actual results.

A well-functioning monitoring program should inform the higher analysis of ensuring the operational and management structure and its duties, goals, and assessment techniques put

in place by the P3 agreement are meeting the project's vision. The narrower evaluation/self-auditing exercises need not happen after a phase is completed, especially, in the operational phase of the project especially. But if there's a problem that only a self-evaluation or auditing would reveal, it can make sense to know earlier rather than later.

Phase-specific assessments (planning, construction, operating) will differ in their inputs, but should be largely consistent with what an auditor would be looking for (such as financial inconsistencies), and follow best practices for procurement and monitoring. The ability to assess or audit the planning and procurement phase is more limited. It includes overseeing and assessing whether the adopted timeline was adhered to, as well as maintaining an open and transparent procurement process where all parties stay on the same page about what the agency wants. While agencies' ability to assess planning and procurement processes before the construction phase may be limited, value may be added to other active projects in identifying procurement issues earlier.



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In the construction phase, many cost and risk considerations come into play: cost overruns, materials and work quality issues, adherence to a defined schedule, and assessment of performance-based payments for achieving goals. Looking at their determinants, their application, and their effectiveness and adherence to the agency's project vision should all be included to assess the project's success in this phase.

While the operational phase eliminates or reduces many of the risks embedded in P3s, the long period (often five to 10 times longer than the construction phase) places significant importance on a few key risks. Preventing deferred maintenance is especially vital in ensuring that highway P3s deliver value (as defined by the VfM analysis) over more traditional procurement methods.

Effective communication between agency and concessionaire through the construction phase is challenging. Ensuring effective communication throughout the P3 requires

overcoming turnover, new technologies, and other unforeseen difficulties. But effective communications allow more-seamless operational tweaks and other changes.

Procurement and construction typically only last several years, so waiting until after those phases are completed might make more sense. One exception might be extremely large projects that require several construction phases, allowing for earlier stages to be evaluated as later ones are undertaken.

All P3s are different, but they share common traits such as transfer of risk and innovation in project design, construction, and management. As a result, potential P3 projects can learn from existing or completed projects.



Evaluations should also serve as an opportunity to adjust goals and metrics.



Evaluations should also serve as an opportunity to adjust goals and metrics. This process fosters effective communication between the agency and the partner. Merely monitoring and otherwise waiting for the end of the P3 term to evaluate the project wastes valuable opportunities to adjust and adapt to constantly changing conditions, as well as to potentially identify problems that might otherwise go unnoticed until too late. Even when agreements are too rigid to allow for all helpful adjustments, they can inform future projects or ones in earlier stages of procurement.

As with most parts of the P3 process, successful evaluation builds upon work from earlier process stages. The initial hashing out of vision, goals, risks, and standards of performance works as a foundation for evaluation. The VfM analysis builds upon that foundation, providing a quantitative framework to assess the economic viability of projects, while also incorporating formalized standards to assess performance.

In 2015, the Canadian Audit and Accountability Foundation released a discussion paper trying to address the much-underdiscussed issue of how to effectively audit P3s.²⁴ The paper identified an adequate VfM analysis; governing and decisioning making processes leading to P3 projects; reported, reliable, and effective performance objectives for systems and processes; the ability to effectively monitor contracts internally or through a dedicated agency office; and appropriate transparency and fairness in procurement processes all as important metrics to consider including in their own audits.

For effective highway P3s to emerge as well as flourish over time, agencies should already have effective means to answer many of those questions. The report also notes the importance of developing and acquiring agency expertise in managing P3s and alternative procurement arrangements, which becomes easier when agencies assess their projects and practices effectively.

Since no U.S. highway P3 project is more than 27 years old, it's too early for any P3s to have undergone a full audit after the concession term concludes. However, completing incremental audits can help DOTs improve their P3 process. Further, DOTs can identify how to use their own resources or contract with companies that evaluate government practices to ensure future P3s meet their long-term plans and goals.

²⁴ Pierre Fréchette, "Auditing Public-Private Partnerships - A Discussion Paper," *CCAF-FCVI*, January 2016. https://www.researchgate.net/publication/307855769_Auditing_Public-Private_Partnerships_-_A_Discussion_Paper (accessed 24 June 2022)

CONCLUSION

Since the first U.S. highway P3 was implemented in 1995, 11 states have entered into more than two dozen DBFOM P3s. While that number is not overwhelming, P3s tend to be used for the largest, most complicated projects valued at more than \$500 million (termed mega-projects). However, compared to other countries, the U.S. lags in P3s. Most of the P3 activities have occurred in a handful of states because those states have better, clearer legislation and less political interference. While overall population is a factor (with more populous states entering into more P3s), Virginia (the 12th most populous state) has entered into more P3s than any other state. New York (the 4th most populous state) has not entered into any P3s.

With declining fuel tax revenue, growing miles traveled, and aging infrastructure, the U.S. can no longer depend on government funding alone. Similar to other countries and other types of infrastructure, the U.S. must finance highways over the long term. P3s provide an appropriate financing vehicle for large projects, along with innovative funding sources such as tolling, and financing tools including TIFIA loans and PABs. These tools allow DOTs to stretch existing resources further.

It can be challenging for a state to enter into its first P3. But it can also be very rewarding. States that use this how-to guide will be rewarded with infrastructure that is built sooner and remains in good condition during the life of the infrastructure.

APPENDIX A: CREATING VIRGINIA'S P3 OFFICE

In the early 1990s, Virginia's transportation infrastructure was falling behind peer states. Population and employment growth, particularly in the Washington, D.C. suburbs, was causing severe congestion for multiple weekday hours as well as during the weekend. The state's pavement quality fell below the U.S. average with rough surfaces and potholes prevalent on most highways. Political leaders were not interested in raising gas taxes, but they were facing pressure from taxpayers and the business community to do something. For several years the General Assembly studied several innovative approaches to procuring transportation projects. Finally, it passed the Public-Private Transportation Act of 1995, which allowed public entities to enter into agreements with the private sector to build and operate transportation infrastructure. The legislation directed Virginia to focus on transparency, competitiveness, and public engagement. Unlike many states with P3 enabling legislation, Virginia is allowed to accept solicited proposals and unsolicited proposals. Virginia is also able to enter into all three types of P3s (toll concessions, availability payments, or hybrids). As such, the state has one of the most expansive P3 laws in the country. Virginia's approach has served as a model for Arizona, Florida, Maryland, and Texas.

APPENDIX B: GLOSSARY

Availability Payment P3: P3 in which the state compensates the private provider with annual payments of tax money

Best and Final Offer (BAFO): Process where the DOT requests each concessionaire make its last, best, and most comprehensive offer

Competitive Neutrality Adjustment (CNA): Quantitative assessment that accurately weights the difference between a public offer and a private offer

Comprehensive Agreement (CA): Comprehensive deal between the DOT and the concession team addressing all aspects of the P3 project (sometimes called a “project agreement” (PA))

Conceptual Financial Proposal (CFP): Detailed analysis of the P3 project that helps the DOT determine the value of the proposal

Design-Bid-Build (DBB): Traditional procurement method that requires public funding, operations, and maintenance as well as separate steps for designing and building the project

Design-Build-Finance-Operate-Maintain (DBFOM): The five formal components of a full P3

Finding of Public Interest (FOPI): Assessment that the project is a net benefit for the state’s taxpayers and should move forward

Handback Provisions (HP): Terms governing how a P3 highway is returned to the state, as well as its condition when the long-term agreement expires

High Occupancy Vehicle (HOV) Lane: Highway lanes that limit access to vehicles with a set number (typically two or more and sometimes three or more) of people

Hybrid Concession: P3 in which tolls are collected by the public sector, which retains the revenue risk, while the concessionaire is compensated via availability payments

Preferred Proposer: The concessionaire team that the DOT determines offers the best overall value for the taxpayers

Public Private Partnership (P3): Formal long-term agreement that includes financing between a state DOT and a private concessionaire, including four or more of the five elements of DBFOM

Public Sector Comparator (PSC): Assessment of the cost of public sector delivery used to provide an accurate comparison between traditional delivery methods and P3s

Request for Information (RFI): Formal request issued by DOTs to obtain more information from the private sector about potential P3 project(s)

Request for Proposals (RFP): Formal request issued by DOT to obtain plan submissions from potential P3 partners

Request for Qualifications (RFQ): Formal request issued by DOT asking potential concessionaire teams to document their qualifications to undertake a P3 project

Revenue Risk (RR): A DBFOM P3 in which the revenue risk is transferred to the concessionaire

Risk Register: Product of assessment of a P3 project's risks

Risk Transfer: Shifting a project risk from one party to another (e.g., revenue shortfalls, construction cost overruns, etc.)

Statement of Qualifications (SOQ): Formal response to an RFQ from the potential concessionaire teams

Toll Concession: A P3 in which the revenue risk has been transferred from the public sector to the concessionaire

Value for Money (VfM): Evaluative process used to compare the benefits and costs of a P3 project versus a traditional delivery alternative

Unsolicited Proposals (UP): A written application for a new or innovative P3 submitted by a private consortium to the state DOT

ABOUT THE AUTHOR

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